

A No sir, I haven't the least idea.

Q Well, there is comparatively only a few acres, isn't there?

A There is only a few acres that is watered I think, from the Factory Race, but I couldn't say just how much or just how many city lots.

Q If the Factory Race runs to the extent of its capacity, there would be a good deal of the water below the mills that would not be used for irrigation, wouldn't there?

A Yes sir.

Q You remember when the factory was put in operation, don't you?

A Yes sir.

Q In the early 70's? A. Yes sir .

Q Don't you remember anything about the use of the water here prior to that time?

A About the use of it?

Q Yes.

A No, I don't Judge.

Q Don't know whether it was all generally used in low water?

A No, I couldn't say.

Q By the farmers and by the little mill that was there?

A I couldn't say whether it was or not.

Q You were asked about the enlargement of the Factory Race. Wasn't it enlarged at or about the time that the factory or present woolen mills were built?

A I don't know a thing about it being enlarged, Judge. All I know when the woolen mill was built there that they put a dam in across that Factory Race and built it up with rock for several blocks above there. That is all I know about them enlarging it, but below the mills I don't think it was ever enlarged at all.

Q Below what mills?

A Below the woolen mills.

Q Yes, I am not speaking of that so much as above. Enlarged for the purpose of the increasing of the supply of water for the factory?

A Might have been, but I don't know of it. A<sup>1</sup> I knew was just as I tell you, the banks was raised all along there.

Q Did you work on the canal?

A No sir, I did not, I wasn't here at that time.

Q You say originally there was a natural stream there?

A Yes sir.

Q Was it a stream or a natural low swale?

A Always a stream of water there.

Q Running on the same course as the Factory Race runs now?

A Yes sir.

Q You say that you took the water with the consent of the factory?

A Yes sir.

Q Whose consent did you get?

A Well, we generally got the superintendent's consent.

Q Whose consent, what particular individual do you have in mind that you got the consent of?

A I think Bassett was in charge there. Reed Smoot had charge of the mill and Mr. Bassett was general superintendent there, while Smoot was away, and he is the man that let me have the water.

Q You didn't ask for the water until it got down to the point where the farmers really needed it, did you?

A No sir.

Q And then you always got it? A. Yes sir.

Q There ain't any question about that?

A There was no question about it.

Q The city council would direct you to go take it sometimes wouldn't they, when it was getting low?

A They would what?

Q Wouldn't the city council direct you to go take it when the water was getting low?

A I don't think they ever did.

Q You did it without being instructed when it was needed?

A Yes sir.

Q Well, how did you come to take it if you were not instructed

to take it?

A Well, the water master generally knew when the farmers needed the water and we would go and make arrangements ourselves. I did myself, made it with Mr. Bassett, he was chief clerk in the factory.

Q You would just notify Mr. Bassett that the farmers needed the water?

A Yes sir, that we needed it.

Q And tell him that you wanted it?

A Needed it at night.

Q I am talking about sometime when you took it in the day time.

A Never took it in the day time.

Q Never did?

A No sir, took it Sundays, every Sunday.

Q Did you need it?

A You bet we did.

Q In the day time? A. Yes sir.

Q Didn't take it?

A Sir?

Q Never took it in '95 and '96 in the day time?

A Only on Sundays.

Q You say you needed it?

A Sir?

Q If you needed it why didn't you get it as you had got it?

MR. JACOB EVANS: I don't think he understands you

Q If you needed the water for farming purposes, really needed it, why didn't you take it?

A Why didn't I take it?

Q Yes.

A We did take it, we took it at night with a mutual agreement from the factory people.

Q Why didn't you take it in the day time if you needed it?

A Because they had to have the water, I suppose.

Q You knew though water master had taken it in the day time wha

they needed it in low water, didn't you.

A No, I didn't.

Q You didn't know that? A. No sir .

Q Was you ever deputy water master? A. No sir.

Q This was in '95 and '96, what kind of years were they for water?

A Well, in the forepart of the season I think we had plenty of water to irrigate with.

Q I am talking about the average through, the average water all through the season. I want to know how they compared, whether they were ordinary or little better than usual?

A I think in '96 the Council asked me to go to Provo Valley and see -- they had a tight dam across the river and asked me to go up and see if they would not cut that dam and let the water down to us.

Q Are you sure about that now?

A Am I sure about that now?

Q Yes, you say you think.

A Yes sir, I know.

Q What time of year was that?

A I wouldn't be sure whether it was in August or September.

Q Very low water? A. Yes sir.

Q Did you go up?

A I did.

Q And got water? A. Yes sir.

Q How low was the water when you went up?

A There was no water below their dam in the river at all, but I don't know what the capacity was in the river. I know we had to have more water down here for to irrigate with.

Q Do you know about how much water you had here then as compared -- comparing it now with the 500 miner inches you speak of, how much would there be in the river?

A Well, I couldn't say Judge, good long while ago.

Q You don't have any idea how much you were running?

A No, I didn't, I know we were pretty low or they would not have had me went up there.

Q Was the factory running in the day time then?

A I couldn't say as to that either, I suppose it was though.

Q Well, I don't want your supposition, asking for facts if you can give them?

A I couldn't say.

Q Do you know if they were running at night?

A No, I know they were not running at night, for we were using the water.

Q Does the factory ever run at night that you know of?

A Yes, I have known it to run at night.

Q When was that?

A I think one year here they had a contract and they run it day and night too.

Q Don't remember what year?

A No, I could not.

Q Has it been in recent years, or was it in the early days?

A I think it has been in late years, I think it has been Knight took the mill.

Q How long were you in Idaho.

A Ten years.

Q How long has Knight had the factory?

A I couldn't say that either.

Q Has he had it ten years?

A He might have done.

Q But you don't know whether he had it before you left or not?

A No sir, I know he bought it after I left.

Q Bought it after you left?                   A. Yes sir.

Q Then you don't know anything about Knight having a contract and running the factory nights, you were in Idaho?

A No sir, only what I saw in the papers.

RECROSS EXAMINATION by Mr. Ray.

Q Mr. Alred, were they irrigating more or less land under the Provo City system when you were water master than they are at the present time?

A I don't think so, not under the city.

Q Irrigating about the same?

A I think so.

Q You think that has not changed much?

A I don't.

Q Do you know of any new land being brought under cultivation in the last thirty years in substantial quantity?

A No sir, I don't.

Q Do you know of any old lands that were irrigated that now have ceased to be irrigated?

A No sir, I don't.

Q So that the quantity has remained substantially the same during the past thirty or forty years?

A I suppose so.

Q What do you know about it?

A I don't know of a thing about it.

REDIRECT EXAMINATION by Mr. Corfman.  
water

Q Do you know whether or not when you were <sup>water</sup> master and made division of the water between the several users at the mouth of the canyon, whether or not Provo Bench had the same acreage as it has now?

MR. RAY: Object to that as improper redirect, going into the acreage of the Provo Bench.

THE COURT: Objection is overruled. It is not proper redirect, but I will permit him to recall the witness for the purpose of asking that question.

MR. RAY: I would like to ask the witness a question to found an objection on.

THE COURT: I think he may answer this question whether he knows.

MR. RAY: The question has an assumption in it, this man dividing the water at the mouth of the canyon during certain years, and I understand that to be not the fact, and if he didn't, then the question has no foundation. Read the question.

A I didn't have nothing to do with dividing the water.

Q When the water was divided during the low water season by the water users taking water at the mouth of the canyon, what do you say whether or not the acreage on Provo bench was as much as it is at the present time?

A I couldn't say a thing about that, because I don't know anything about provo bench.

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GEORGE W. GEE, called by the defendant provo City, being first duly sworn, testifies as follows?

DIRECT EXAMINATION by Mr. Thomas.

Q State your full name?

A George W. Gee.

Q Where do you reside?

A Provo City.

Q How long have you resided in Provo?

A Since '58.

Q How old were you when you came to provo?

A About seventeen.

Q Have you ever held any official position in Provo City?

A Yes sir.

Q What?

A Water master for one.

Q When did you begin your duties as water master?

A It was in '72.

Q '72 or --

A '82.

Q '82? A. Yes.

Q How long did you continue as water master?

A For about seven years.

Q Didn't you continue up until 1890?

A I believe I did, come to think about it. Mr. Thurman succeeded

me.

Q Then you continued, you were water master then really from 1882 up to 1890? A. Yes sir.

Q Both years inclusive? A. Yes sir.

Q I want you to state if the Provo system, referring to the irrigating ditches and canals, is practically the same now as it was when you began your duties as water master?

A You mean the canals running around the farm land and down through the city?

Q Yes.

A Yes, sir, they are practically the same.

Q Now, I want to direct your attention, Mr. Gee, to the ditches and canals that were in existence when you came here in 1858, what ditches were then in existence and carrying water to the lands for irrigation purposes?

A Well, beginning on the west there was what we call Little Dry Creek and the next what we call Tanner's Race which was built on what we call Big Dry Creek and next is the Holdaway Race or City Race, next is the Factory Race, next is the East Union.

Q They were in existence when you came here?

A Yes sir.

Q Can you now state what the length of those ditches were, I have now reference to their present length, whether they are as long or longer or shorter then than now?

A Longer or shorter then than now?

Q Yes.

A Well, the Union Ditch, the water has been taken down a little farther since that than what it was previous to that.

Q To what point did the -- when you say Union Ditch do you mean the East Union?

A East Union Ditch, yes.

Q To what point did the ditch, that is the East Union ditch come when you came here in 1858?

A As I recollect it it went down to what we now call the Slate

Canyon road, or little below that, and then it run down to the east side of what is now the county road, and then run down on the east side of the county road to the land just this side of what we call Spring Creek and irrigated that.

Q That was in 1858?

A Yes sir -- now, hold still, no, it was a little later than that before it was extended down that far, and then afterwards it was taken out above and run down as far as Mr. Randall's.

Q Its present terminus?

A Its present terminus, yes sir.

Q When you say taken out above, just what do you mean?

A What I mean, it was graded a little higher up.

Q On the mountain side?

A Yes, on the east side.

Q Of where it was then?

A Yes, of where it was then.

Q And is that its present location?

A Yes sir.

Q Now, can you state the year when it was changed to its present location.

A No, I don't know that I can, it was previous to <sup>me</sup> being water though. If I remember correctly, it was while Robert T. Thomas was water master.

Q Do you remember the time, or was there a time when the East Union canal ended at what was known as the Turner farm, or just immediately west of the State Mental Hospital?

A Well, no; it run farther south than that.

Q How far south of that?

A I say it went down somewhere about opposite Slate Canyon and then run down to the east side of the state road and then there was a ditch that run down farther south on the east side of the county road running by the land that Mr. Alred used to own and Mr. Gray used to own. Mr. Strong used to own a piece along there.

Q Now, with reference to the size of that canal, what do you say

as to that compared with its present size?

A Well, it was about the same. There have been some changes made in it this way, where there was some low sags in it and some high places, the high places either been taken off or it has been changed a little so as to get an evenner grade. In '82 -- yes, in 1882 when I first went in there was a sag out here what they call the East Union ditch and started in up here to Mr. Britton's land that is pretty close to Mr. Foulks place. up north here, and I had Mr. Davis survey it so as to give me the grade and we made it new to the point of this bench here that year, and the following year we carried it on to -- well, about half a mile north from the Mental Hospital, in order to take the sag out that was in the ditch.

Q What year was that?

A That was --

MR. JACOB EVANS: J<sup>u</sup>st a moment, it seems to me we will object to this on the ground it is incompetent and immaterial under the issues in this case to go back into these old records and take the time of the court in that matter. These old rights, so far as we are concerned, as between the parties have all been adjudicated and determined by two decrees of this court. There is no dispute, as I understand it, between the plaintiff and these defendants concerning those old rights. There has been a substantial agreement as to the acreage and it seems to me that it is merely killing time and making a record here that will not serve any purpose in this case. So far as the plaintiff is concerned, I cannot see how it will affect its rights and so far as the defendants between themselves I cannot see how it will affect their rights, because they have already been determined and decreed and decree rendered between them.

MR. THOMAS May it please the court, I take serious issue with my brother upon that unless the plaintiff is ready now to say that the rights or the amount of water which has

heretofore been distributed to Provo City under the decrees to which he refers is the amount they are now entitled to.

MR. JACOB EVANS: I didn't say that at all.

MR. THOMAS Just a moment.

MR. JACOB EVANS: Let me correct you, I didn't say that at all. If I did, I didn't intend it.

THE COURT: Mr. Thomas did not assume you did.

MR. THOMAS: I made no such assumption. If my brother will permit me to continue.

THE COURT: He said if you were willing to concede that.

MR. THOMAS: Which is a vastly different thing. As I understand the position of Provo Bench -- if I am in error counsel can correct me -- there is a position which I understand they take -- that they are taking, that the decrees heretofore given have not rightfully determined their claims to the water out of Provo River.

THE COURT: Provo Bench?

MR. THOMAS: Provo Bench. I understand that to be their position and by reason of their -- I probably should not say, -- I will say resistance and objection to the decree that they now claim a right, and by reason of those objections that their rights ought to be determined as of in the first instance now, that their rights are certainly superior to certain other rights which are given correct quantities of water in the former decree. That is as I understand it substantially.

MR. COLEMAN: Timpanogo I think makes the same claim.

MR. THOMAS: I have in mind now certain questions which counsel has propounded in cross examination, which, <sup>as</sup> I would understand them, tend to show an increased appropriation of some of these canals and ditches which were awarded a greater right than was the Provo Bench under the decrees and such presumably attempted enlargements of appropriation came at a time when Provo Bench was still resisting an encroachment, or alleged encroachment upon their rights; so that this testimony we

believe to be pertinent and material and certainly competent to show the continued and ancient use and appropriation of the water and to show as we hope and offer to show by this witness that there has been no substantial increase but a constant use of the water as from the beginning practically to the present time, and practically the same amount; and that the decrees, while they vary slightly from the former uses, virtually confirm the ancient uses of Provo City and its inhabitants, so that this testimony is very material unless, as I stated, counsel for plaintiff will concede that now. If that is done then Provo City and its inhabitants and those receiving water and rights under its control and care have no further contention, but unless that should be granted wholly I opine it will not, then we regard this testimony as materially pertinent and certainly competent and as far as burdening the record is concerned, I don't regard that as an objection well taken because we are making our record as though there was no record as far as the plaintiff is concerned. Because they say they are not bound by the decree we are proceeding upon the theory we must make our claim as though no other presentation of our rights had ever been made.

MR. A. C. HATCH: The plaintiff in the opening of the case stated that it was bound by the decree so far as it affected any rights that it had acquired by purchase from parties or acquired under title of parties who were parties to the suit in which the decrees were rendered, the Blue Cliff right and Wright estate water rights we are bound by.

MR. THOMAS: I understand that exception.

MR. A. C. HATCH: You stated we were ~~as~~ in no wise bound.

MR. THOMAS: I accept the correction of counsel and understood that position of their's at the time.

MR. JACOB EVANS: I don't see there is any materiality to this as far as the plaintiff is concerned, unless there is

some controversy between the defendants themselves. I think it is merely taking time and killing the record with something that will not aid the court in determining this matter, and my own personal view is that the parties to the old decree are bound by the old decree.

THE COURT: I am unable to see upon what theory it could be contended they are not. Of course, I don't know what the contention may be, but it is hard for the court to see any other theory upon which the parties to the action are not bound by the decree.

MR. RAY: If your honor please, that is a question upon which I intended and desired to be heard earlier in the proceeding and I may state briefly now the attitude which the Provo bench takes as to that matter. Your honor will remember that the decrees in those cases were a matter of stipulation which does not affect the verity of the decree at all, but affects --

THE COURT: I didn't know that was true with reference to the Chidester Decree.

MR. RAY: No, I say the original decree was a matter of stipulation, the Morse decree. The Chidester decree was a matter in which the parties to this case, except minor parties, were joint plaintiffs and did not affect in any way, as I view it, the relative rights of the parties as adjudicated in the Morse decree. The Constitution provides and the statute provides that the right to the use of water shall be predicated upon a beneficial use and the decrees state that the rights herein adjudicated are dependant upon a beneficial use which I take it would be the law, irrespective of that provision in the decree. This is then brought against all of the parties, the plaintiff having succeeded to certain of the rights -- all parties whose rights were fixed by those decrees and the decree as originally pleaded in answer to the complaint of the plaintiff, each of the parties filed a separate answer, and the Provo bench sets up as to the plaintiff the history of its water right.

Provo City comes in and sets up as the source of its water right in a counterclaim and cross complaint and then affirmative defense which is pleaded as against the plaintiff and each of the defendants, the decrees -- makes them an issue in this case. We then enter into a stipulation that those answers are all denied with the further provision that if any of the parties desire to plead specially to those answers they may do so at any time. It appears already in this case that the acreage of Provo City in the Morse and Chidester decrees, which acreage, so far as the decrees are concerned was an acreage brought to the court by agreement or stipulation and not determined by any evidence, I think. that the acreage of Provo City was as given as high as 3595 acres and claimed prior to these decrees, and the acreage of the Provo Bench at least was less than the acreage which the parties to this suit have agreed upon.

MR. THOMAS: Pardon me, less than they agreed at that time.

MR. RAY: That they agreed upon at the present time, which is the time of beneficial use. There is then raised, your honor will see, this anomalous situation. We deny the verity of that decree and will later plead specially certain things as to the verity of the decree, and ask that it be so modified to conform to the facts in order that there may not be two decrees in this case as finally determined. You honor suggested earlier in this proceeding when one is enjoined by a court from interfering with an adjudicated water right that cannot be interpreted as a voluntary abandonment of his claim. Our necessities remain the same and as one witness has testified in this case at least we got all the water we could all the time.

A Assume that in this case it shall be determined that the necessities of the parties under the original decrees have materially changed leaving the acreage the same, that for some reason their necessities have change, they can no longer make a beneficial

use of the water which was adjudicated to them in those decrees. It might be by sub-irrigation, might be by lands changing as to their character of water level, or good many reasons. There is then put back into Provo River, so far as beneficial use is concerned, a given quantity of water. Since 1865 the Provo Bench Canal Company has been attempting to complete its appropriation. It built its canal, it has its land there, I say, and has attempted to get that. Now, our contention of course is that as against Provo City <sup>we</sup> ~~whale~~ were enjoined from interfering with their use rightfully or wrongfully, we were still attempting and trying to complete that appropriation and that whenever there is some water in the river -- that is I mean water not devoted to a prior use we are permitted to take that water and under our denial of the decree as assumed in this case, we denied the continued and present beneficial use of the water adjudicated to them in the Morse decree.

THE COURT: I don't think so, Mr. Ray. My view is that if you seek to raise that issue it must be specially and specifically pleaded.

MR. RAY: As I suggested to your honor, it is my intention to specifically --

THE COURT: I don't think we ought to proceed with this case with as important an issue as that not made. The court cannot rule upon this evidence intelligently if there are as important issues as that remaining unpleaded, unstated. Of course, I can understand if you have raised that ~~ixxi~~ issue by a specific plea, that is, it is in the nature of an abandonment, you plead that by virtue of the changed situation, they have abandoned, that is by reason of the fact they no longer have a beneficial use or necessity for that water, that constitutes a legal abandonment.

MR. RAY: I shall approach that if your honor will permit an interruption in two ways. In the first place they never had the acreage --

THE COURT: No, that is concluded, I don't think you can at this time raise that question, I think you are entirely foreclosed as to that question.

MR. RAY: The other would involve exactly the same conclusion if acreage is the basis.

THE COURT: Possibly not, because the assumption would be and the court will assume if they have not the acreage now that it was decreed they had at that time that the situation has changed. You cannot at this time dispute any fact found by the court as a basis of that decree as I understand the law, even though, as a matter of fact, it might be erroneous.

MR. RAY: Your honor and I would arrive at the same conclusion in that assuming it to be the fact it is an abandonment.

THE COURT: It is a change.

MR. RAY: It is a change whether it appears it was the fact or not. Now, I perhaps should have pleaded that as an earlier date, but I was not as familiar with the stipulation which was made as to answers here until I came into court, and I felt certain I would be given time because of the limitation upon this hearing to plead that prior to the presentation of our own case.

THE COURT: Even then -- this discussion of course is for the purpose of enabling the court to properly pass upon this objection. With that issue made clear out in the pleading what materiality is there in this evidence that would bear on the question as to a change in the requirements for all the water that was awarded in that decree.

MR. RAY: I am not, I wish your honor to understand, contending for the materiality of this evidence. I was merely stating my position.

THE COURT: I am unable to see just why you should go into details at least into the questions you are going

into now, Mr. Thomas.

MR. THOMAS: I have stated our position and stated our grounds and submit it to the judgment of the court.

THE COURT: I don't want to curtail you in the least in any matter that will in any way aid the court in any contention made, but as I understand the plaintiff they make the objection they are not bound by this decree except in a limited way and make the objection and waiving any question that might be involved in it. I take it they cannot be heard to complain that you have not shown the situation that you are now seeking to show as between yourself and any party to the decree. I cannot see any materiality whatever in it.

MR. THOMAS: That has been our position.

THE COURT: If you are not entitled as between yourself and those other parties to that decree, you are not entitled to the quantity of water decreed to you by those decrees it, is because of something that has occurred since the rendering of the decrees and what occurred prior would not bear upon that question at all.

MR. THOMAS: That Has been our view as to the effectiveness of the decree and yet understanding that there would be some such special plea made and anticipating that it would be an economy of time to present our case now as against this coming in some other time to offset any such charge that might be made, was the reason we presented this evidence, so as I have stated, we have submitted our arguments and leave it to the judgment of the court.

THE COURT: If there was an issue raised which would permit you to go into the validity of the decrees that is, as to the sufficiency of the evidence supporting it, and I can imagine a case very readily that might be presented that would permit it, then this evidence would be very material, but I don't understand it is contended at all that the other defendants or the plaintiff either has presented here a case involving issues which would render evidence of what occurred prior to that

decree material.

MR. THOMAS: If I may understand now -- the court will pardon my obtuseness

THE COURT: There may be, however, if there should arise a question, unless it is all agreed between the parties, there might be between the city and the power users very material evidence along the lines of what the use has been for years, because, as I understand it, that decree did not affect the power users at all, and this decree will, because they are parties now.

MR. THOMAS: The court will pardon me if I may ask for information that I may more correctly understand it. I understand the ruling now as to the materiality of the evidence being presented with reference to co-defendants, would that not be permitted -- let me put it this way, do we understand even that the plaintiff is bound by the use of Provo City had of the water at the time that the decrees were rendered?

THE COURT: That question has not been presented to the court;

MR. THOMAS: Having that in mind, your honor, isn't this evidence material now to show an ancient and constant use and appropriation. That was why --

THE COURT: It might be if the plaintiff was contending for that position, but in view of the fact that plaintiff has suggested that your right has been determined and that this evidence is immaterial I don't know why you contend it is material with that statement in the record.

MR. RAY: May I make one further suggestion. Since the rendition of the two decrees referred to there has been a further change in the material conditions here. As the court will remember Mr. Wentz's testimony the mean river has increased something in the neighborhood of 33 per cent. The decrees in those cases were not strictly upon the basis of necessity except as the river was figured as a constant. We

were given percentages. Now, our rights in that case were made subject to the rights of Provo City and there certainly was some percentage at which the rights of Provo City would be more than satisfied on the basis of some reasonable use. We now have a river approaching 300 second feet which was not the case at the time of rendering the decrees because of the irrigation of far less quantity of land in the upper valley, that effectively changed the situation, not as to the net quantity of water but as to the relative rise of the river.

THE COURT: Yes, I can see it might very materiality provided the ~~use~~ issue is presented. My view is this with reference to --

MR. RAY: Mr. Wentz advises me there is 101 more second feet in the mean river now than then.

THE COURT: My view with reference to such suggestion would be this, that matters of that kind must be very particularly and clearly pleaded where a decree has been rendered and has become final by the lapse of time so that it cannot be appealed from and is now a final decree as these two decrees are. If you seek to take yourself out from the operation of those decrees the facts upon which you rely to relieve you from the binding force and effect of the decrees must be very clearly and specifically pleaded, but I merely suggest that because I didn't have it in mind until it has been suggested now, your theory, because it has not been presented.

MR. CORFMAN: May it please the court, if such a plea is contemplated by the defendant Provo Bench Canal & Irrigation Company, Timpanogos or any of the other water users we think we ought to be advised of it and not be proceeding here in anticipation of what they may plea.

THE COURT: I might make this suggestion, Mr. Corfman, that in putting in your case you would not refer to that at all anyhow, even though it was plead. That is a matter for them to first introduce evidence upon. You would be permitted to

introduce no evidence except your decrees and then this affirmative defense, the burden is upon them and you would not be required to introduce any evidence on that phase of it until it came to your defense of their affirmative case, but I think as you suggest, that you ought to be advised of it long enough in advance to be permitted to prepare for it, and when we take the adjournment now I expect to suggest proper amendments ought to be made quite quickly so that parties may be prepared.

MR. RAY: In order that the court may understand-- I think Mr. Corfman will agree with me -- that I have stated though not in the form of a bill my theory of those decrees both to Mr. Corfman and Mr. Thomas. Now, there were pending matters between us which I thought might obviate this necessity and I have operated in good faith.

THE COURT: That is commendable if you are seeking to adjust them. Of course the court wants to encourage and facilitate any adjustment that can be made.

MR. COREMAN: We plead ignorance whether they are going to claim an abandonment on increase in the water or change conditions.

THE COURT: Whatever it might be called any change which reduces the beneficial use that you have or which increases the basis upon which the percentages were computed beyond the requirements of course in effect would be an abandonment. That is, the law abandons for you, if you have no use. Now, with this expression of use by the several parties I think you need not proceed further with this line of evidence. You have quite a complete record made on that anyhow before the objection was made.

MR. THOMAS: Then I can sum Mr. Gee's testimony up very quickly.

Q Mr. Gee, state if you are familiar with the present system and condition of ditches and laterals under the provo system?

A Yes sir, I think so.

Q What would you say as to the duty of water now being used under the system as compared with the time that you were water master?

A Well, it is practically the same.

Q What would you say as to ~~the~~ the manner in which it is being used at the present time with reference to its benefit and economy?

A Well, I think that the water is being used just about as economically --

MR. THURMAN: Object to that as calling for his conclusion.

THE COURT: It is calling for his opinion, his judgment.

MR. THURMAN: Well, ~~wh~~ he is asked now the very question that this court is to decide what he has to say as to whether the water is being used with economy without giving a single fact upon which that opinion is based.

THE COURT: Technically that is true, and you may inquire whether there is any weight and from that the court must determine the other question.

MR. A. C. HATCH: For information, what years did the Union canal was carried to the point about half a mile north of the Mental Hospital?

A What year?

MR. THOMAS. Just ask the question.

MR. A. C. HATCH: What year was that?

A I don't remember, that was <sup>at</sup> the time Mr. Thomas, Robert W. Thomas was water master. That was previous to my time.

MR. A. C. HATCH: Prior to 1882?

A How?

MR. A. C. HATCH: Prior to 1882?

A Yes sir, prior to that.

Q Now, will you kindly read the question which I asked.

(Question read)

MR. THURMAN: We ask that answer be stricken out, I didn't know he had answered quite so far.

MR. THOMAS: The court passed on your objection.

MR. A. C. HATCH: Sustained it, I understand.

MR. THOMAS: I understood the court to say technically your objection would be good.

THE COURT: It was sustained. I suggested if they desired you would be required to state whether it was wasted or not from which the court would conclude --

MR. THURMAN: Then I ask the answer go out.

MR. THOMAS: That may go out because I misunderstood the ruling of the court.

Q Mr. gee, what would you say as to waste of water under the system at the present time under the provo System?

A I don't know of any waste, that is, during low water season. Of course, in high water season there may be some that runs away.

CROSS EXAMINATION by MR. Thurman.

Q You commenced in '92, Mr. gee?

A '82.

Q '82? A. Yes sir.

Q And run until '90?

A How?

Q And run until '90? A. Yes.

Q Do you remember if you continued through '90, or just run up to '90?

A I think I run up to March, '90, if I remember correctly.

Q March was about the time of the appointment of a new water master?

A Yes sir, I believe the first appointment was in March, if I remember correctly, I may be mistaken about that but that is my recollection.

MR. THOMAS: Judge Thurman, will you permit an

interruption?

MR. THURMAN: Certainly.

MR. THOMAS: I want to ask one question, I don't know whether it will be deemed to come within the ruling of the court or not, but it can be determined.

DIRECT EXAMINATION by Mr. Thomas continued.

Q Mr. Gee, what system of distribution did you have in 1882 under the Provo system. Don't answer, because the other side may object.

MR. JACOB EVANS: No objection to that. I think I can answer that, it has been answered before.

A Well, in 1882 I had a deputy water master issue time cards for each city lot and I had two deputy water masters, one for the east part, east of the Factory Race and one for those that was living west of the Factory Race and they issued the time for each city lot, beginning at the top of the race, north side of the town and running down to the south side, giving each one an hour and a half to a lot. A lot was six rods by twelve. We allowed them an hour and a half to water that lot in beginning at the top and going down to the bottom. We so arranged it so as to teach through just once a week on the city lots and the farm lands that was divided out by the deputies as they needed it and they applied generally to the deputy water master and he told them when they could get the water and how long they could use it for the amount of land that they had, and it was divided out from one to the other that way so that each one got an equal amount of the water and equal length of time in proportion to the amount of land that they had to irrigate.

Q Was this a system that you have followed and found in your office?  
A. Yes sir.

Q Who instituted that system if you know?

A I believe I was the one that instituted that.

Q Then you misunderstood my first question. I asked you if it was

a system you found had been established by a predecessor.

A No, I misunderstood your question then, no sir, I established that. previous to that whenever there was a lack of water in any of the canals from the mouth of the Provo Canyon down the water master having charge of any of these canals both those to the city and Provo canals they simply went to the river and turned in whatever they wanted, previous to that.

Q What did you take into consideration making out these time tickets for Provo City lots?

A Why, I took into consideration that the amount of water that was in one of these side ditches if properly used they could irrigate their lot six by twelve in an hour and a half's time, and we figured it out to them according to that rule and found that it just run through, reached them once a week. Afterwards it was changed by Mr. Thurman, instead of beginning at the top he began at the bottom and I began at the top for the reason that if the second man was to take the water from the first man he wouldn't have far to go and get it in case the first man didn't turn it down or shut it off at the time his time expired, but if he begun at the bottom and went to the top and the man on the north of the street didn't turn the water off in sufficient time for it to run to the man on the lower side, lower end of the ditch, the man at the lower end of the ditch, his time would be gone before his water got there. That was my theory of it, but their's was different, they turned it the other end to.

Q With reference to the number of lots occupied and unoccupied, what did you take into consideration in the distribution of water?

A Well, the number of them do you mean?

Q Yes, occupied and unoccupied, cultivated and uncultivated.

A We gave the water out to every city lot right straight through in our division. Of course with this understanding though that there was some few lots at first that were not being irrigated, but there was most of them irrigated a little. That

is what I mean by that is this. A man might have a lot and irrigated part of it but not all of it and as time went on there was more of these lots and -- well, there hasn't been a great deal of change in regard to that in the last five or six years, not a great deal.

Q State if most of those lots then were occupied with buildings and the like?

A Yes sir, the greater portion of them were, not all of them.

Q Then you took into consideration in distributing this amount of water, the cultivation of the land that was not actually occupied?

A Yes sir.

MR. THOMAS: That is all, thank you.

CROSS EXAMINATION By Mr. Thurman continued.

Q You figured, as I understand it, that such a stream of water as was distributed to the city lots would be sufficient ordinarily to irrigate a six by ~~twelve~~ twelve lot in an hour and a half? A. Yes sir.

Q That is a little less than half an acre?

A Yes sir.

Q And about what size stream, Mr. Lee, if you have a judgment, did you undertake to distribute to each tier of lots or blocks?

A We had no way of measuring it, it was turned out from the main canal where it was turned out, and was guessed at.

Q You have learned since, have you not, something about a second foot stream of water?

A Yes sir, a little. We measured it at that time, whatever measurement was done was measured with a weir dam so many feet per minute instead of second feet.

Q So many feet per minute?

A Yes sir.

Q You remember about how many feet per minute by your weir measurement you would allot to one of these city ditches?

A Well, about a half a minute foot to a lot I would judge, that

is counting three streams equal two irrigating streams for the farm.

Q I see. You probably don't mean a half a minute foot, that would be a very small quantity, half a second foot perhaps is what you mean?

A I guess likely that is what.

Q Say thirty minute feet would be half a second foot.

A Yes, that is about what it was.

Q Now, did you figure that the amount you distributed would irrigate one of these lots?

A Yes sir, we thought so if properly used.

Q Yes, you figured on it being used economically?

A Yes sir.

Q The rows in these gardens are generally short runs, aren't they?

A Yes, generally, it is owing to which way the lot runs. Sometimes there are twelve rods, sometimes there are six rods, owing to the way the lot runs.

Q But it is rather the rule isn't it that a man doesn't irrigate all of his lot?

A Yes sir, as a rule he does not.

Q Certain amount covered by residence?

A By residence.

Q And corzals and barns? A. Yes sir.

Q And that portion of course is not irrigated?

A No sir.

Q I will ask you if that was about the average of the size stream that you turned into the city ditches or was there some of them that had more?

A There was some of them that had more because they had to irrigate two tiers of blocks from the one ditch where they took it out of the main canal, and where that was the case we generally aimed to put twice the amount of water in, so as when it was divided they would have an equal amount for each person.

Q Do I understand that one of these city ditches was supposed to

irrigate at least one tier of blocks or just a tier of lots on the side where the ditch was?

A Well, where the land lay in a shape so that you could, we would irrigate the tier of blocks.

Q That would be the eight lots on the block?

A Yes, that would be the eight lots on the block, but where they were, where they laid in a shape so you could not water only part of them from one side of the block and part from the other, then we gave them the time down through each ditch from the ditch they irrigated from.

Q But it figured out an allowance of about twelve hours to the block? A. Yes sir.

Q Be an hour and a half?

A Be an hour and a half to the lot.

Q Hour and a half to eight lots would be twelve hours?

A Yes sir, twelve hours to the block.

Q And were they supposed to irrigate night and day?

A Yes sir, they had their time given to them night and day.

Q And there was just about enough blocks running through the town to bring the water back once a week?

A Once a week, yes sir.

Q Well, did you find that system and that quantity of water as a rule sufficient to supply?

A Yes sir.

Q The city lots?

A Yes sir, I believe they are using the same plan and system to the present time, merely copying from the schedule which I made out.

Q Now, did those streams running through the city to water lots, did they also water some of the farm lands at the lower end or either end?

A Well, in some places they did, but as a general thing they did not. Now, for instance, this tier of blocks that is on the west of Academy Avenue there isn't any farm land below that that is irrigated, but when you come to the tier of blocks on

the east side of Academy below here there is land down there below the city that is irrigated, but that is brought in from other places, it is not irrigated from the streams that irrigated the city lots.

Q Do you remember any exceedingly dry years more prominently, <sup>say</sup> than others during the period of your being water master?

A Yes sir, in 1883 and '84 water was quite scarce.

Q You remember going up the river in '83?

A Yes sir.

Q Shingle Creek?

A Yes sir, I believe I remember who was along with me.

Q At that time you went up, or we did, mainly to look after the new Wasatch Canal, didn't we?

A Well yes, we went up to see who was using water out of Provo river.

MR. RAY: Your honor please, I can't see the materiality of this under the objection of counsel themselves.

THE COURT: I hardly see the object of it.

Q During that year you speak of what -- I will withdraw that question, simply wanted to show my prominence is all.

MR. RAY: I withdraw the objection.

THE COURT: The court takes judicial notice.

MR. THURMAN: I thought counsel would be more generous than that. With all becoming modesty I withdraw the effort to table my connection with the Provo Water system, I do want to ask about that dry year.

Q Do you remember anything about the quantity of water that reached the system down here as compared with the ordinary years?

A The amount that was in each canal, you mean?

Q Yes, or as a whole. In the river, the best way you can get at it comparatively.

A No, I don't remember exactly the amount, but as near as I can remember now it got down as low as about ten thousand cubic feet per minute in the river. I won't say now I am correct

about that, but that is the best of my recollection, about that, and Big Bench Canal I believe claimed one-eighth.

MR. THOMAS: Mr. Gee, pardon an interruption, by Big bench Canal you mean the Provo Bench?

A Yes sir, we always call it the Big bench canal, because there is a smaller bench on the east and we call that the Big Bench.

Q You say they claimed one-eighth? A. Yes sir.

Q Was that a matter of dispute at that time or was it conceded that was their portion, if you remember?

A There was a little dispute in regard to the matter, and as I now remember it this dispute continued, and one would turn in what he thought he was entitled to and another, and then the others would go and turn it back, and finally an order to settle that matter the various <sup>boards</sup> ~~boards~~ of the various corporations and canals and the city met together and made a distribution of the waters of Provo River, allowed so much to this canal --

Q Just name, as nearly as you can, the names of those members or any others?

MR. RAY: I object to it as irrelevant and immaterial under the objections of counsel themselves.

THE COURT: I hardly see the materiality of it unless Judge Thurman you can indicate what the object of it is.

MR. THURMAN: Well, the purpose of it is to see what these parties agreed upon among themselves if he knows at that time.

MR. A. C. HATCH: At a time when there was only 166 feet of water flowing in the river Provo City claiming to be the original appropriator and first right to the use of the water conceded, as I understand it, at that time that certain other parties, now parties to this action were entitled to a portion of that water and it will show the portion that it needed or was using at that time, and there has been no material change in its acreage or its system and irrigating since, and I think it is quite material to the issues as between the

plaintiff and all of the Utah county defendants.

THE COURT: I can see that it would be, but I am unable to see how it can be under the objection made by the plaintiff to the direct examination, because the objection is based upon the fact that those matters have been determined up to a certain time, of course up to the time of the decree.

MR. A. C. HATCH: Now, if the court please, the objection was made without conference. I will say that I ask that it be withdrawn. At the time it was made I thought it was a mistake. I think it is a material -- that the evidence is all material to this plaintiff upon the theory that I have advanced. Now, I am speaking without having conferred with my associate counsel, expressing my view of it.

THE COURT: The court doesn't want to embarrass counsel at all, and I will suggest that you need not go into this matter at this time, ~~gentlemen~~ gentlemen, until after the noon adjournment, and if you desire to recall Mr. Gee for further cross examination you may do it then.

MR. THURMAN: I withdraw the question with that understanding without prejudice.

THE COURT: After consultation among yourselves you may announce what your position will be along that line, and if you take the position other than that the court understood you to take at that time, the court will permit Mr. Thomas to proceed further, if he desires, with his examination. If you have any other cross examination, you may proceed with it, otherwise you may call another witness.

Q Mr. Gee, do you know approximately about how many streams of water you used in the city at one time during your period of administration as water master?

A No sir, I don't.

Q Could you by the afternoon, if you should be recalled for further examination, could you think that matter over and see if you could not give us an approximate estimate of it?

A I think likely I could.

Q farmstreams and city lot streams.

A Yes.

Q I will waive that for the present.

MR. RAY: We don't care to waive, but we would prefer to await the development of the issue between the plaintiff and the city.

MR. JACOB EVANS: Before another witness is called, I want to state that my object in making the objection that I did was they were inquiring about the construction of old canals made in early days, as to the enlargement of those old canals as to the capacity of those old canals, and my objection went to the question of whether or not it was necessary, it seemed to me that was wholly immaterial as to the size of the canals in 1882 or when they were enlarged. It seemed to me that was <sup>a</sup> matter that was not within the issue in the case at all, and when I suggested that I thought the parties to that old suit was bound by that decree. I did not in any way mean to infer or to be understood as having stated we were in any way bound by that decree or that we could not show that the water that any of them had been using was in excess of their necessities. I didn't want to be understood as cutting off any proof we might want to introduce upon that line, but it was going back to the construction of the old decrees, to the construction of the old ~~in~~ ditches and old canals. Our position has been all along if they are using water in excess of their necessities notwithstanding they had a decree for it, that they are not entitled to keep it.

MR. THURMAN: Notwithstanding they have a large ditch

MR. JACOB EVANS: As against the plaintiff.

THE COURT: As to the plaintiff I think your position is of course with reference to that would be correct. That is, I mean you could show that without any specific pleading with reference to it, probably because you are not bound by the decree and will not have to raise an issue which would entitle

you to show the decree was not at this time binding because you are not bound by it at all, except in some particulars where you have succeeded to the interest of parties who were parties. You are bound to the extent they were bound.

MR. JACOB EVANS: Yes, but in making the objection we were not in any manner cut off from showing they were using water in excess.

THE COURT: No, I think in stating the grounds of your objection you went a little farther than you are going now, stated it a little broader, at least the court so understood you. However that may be you may discuss among yourselves during the noon hour just to what extent you care to eliminate the necessity of going into the whole matter.

MR. JACOB EVANS: I merely wanted to save time and save the record from being filled with something immaterial.

THE COURT: The court so understood it.

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ABRAHAM L. SMITH, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Your full name.

A Abraham L. Smith.

Q Where do you live?

A I live on 5th West, 921 North.

Q Provo City? A. Yes sir.

Q How long have you lived in Provo?

A All my life.

Q Do you own land under the Provo City irrigation system?

A Yes sir.

Q How long have you owned these lands?

A Well, I think about -- oh, fourteen or fifteen years, that is, owned it myself.

Q Were you acquainted with the same land prior to that time?

A Yes sir.

Q How many years before you acquired it did you know this land?

A Well, as long as I remember anything.

Q How old are you now?

A I am forty-seven.

Q About how many years have you a knowledge how this land was used and water applied to it.

A Anyway thirty years.

Q How many acres is there in the tract?

A In the whole piece of just what I have?

Q What?

A Just the whole piece of just what I have.

Q What you have now?

A I have ten acres and two-thirds.

Q You say you have been farming that ten or fifteen years last past?

A. Yes sir.

Q What crops have you been raising on this land?

A I have raised beets, potatoes, ~~marsh~~ squash, onions, carrots, cabbage.

Q Pasture?

A pasture, strawberries.

Q What ditch do you get the water from?

A I get it from the city ditch, what they call the city ditch.

Q From the City Race?

A City Race, yes.

Q Are there other water users on that same lateral you take the water from?

A. Yes sir.

Q In 1915 did you use the water?

A. Yes sir.

Q What do you say with respect to having or not having sufficient water in 1915?

A No sir, I didn't have enough.

Q Did that affect your crops?

A. Yes sir.

Q How?

A Why, I didn't get so much, didn't get so much, such a heavy crop

as I would if I had had more water.

Q What season of the year <sup>didn't</sup> did you get as much water as usual?

A Why, it would be along in July and August.

Q What crops were affected by reason of your failure to get as much water as usual?

A My beets and my pasture.

Q How many acres of beets did you have?

A Let's see, something like about three acres, I think it was something like that.

Q Do you know how many tons of beets you raised on the ground?

A I think they went something like between fourteen and fifteen tons to the acre.

Q Had you had that same land to beets in previous years?

A Yes sir.

Q How did that tonnage compare with other years?

A That is about the lightest tonnage I ever had.

Q How many tons have you raised on the same land?

A I have raised as high as twenty-two.

Q And from twenty-two tons per acre down to fifteen last year?

A Yes sir.

Q Ordinarily about how many acres or tons have you raised on those lands?

A I generally raise about twenty tons.

Q You say you didn't have sufficient water?

A No sir.

Q What did you do, did you investigate and try to get more water when you needed it?

A Yes sir.

Q What did you do?

A I went to the water master and commissioner.

Q Were you able to get it?

A What?

Q Were you unable to get it? A. Yes sir.

Q You spoke about your pasture not having sufficient water last year?

A Yes sir, my pasture went awful dry, I took the water and watered my other stuff with it as far as it would go.

Q Now, in regard to how you handled the beets and cared for them. What was your custom with reference to cultivation?

A Well, I always cultivate once a week, and most of the time I try and get to them twice.

Q Did you do that last year? A: Yes sir.

MR. THURMAN: Always cultivate them --

MR. JACOB EVANS: Once or twice a week.

A Yes sir.

Q As to the other, the garden part you mentioned there, what do you say as to their having sufficient water?

A No, my onions, I tried to keep them wet up because whenever you don't have water on onions right there, you don't get no crop. That is of course with all -- it is a little worse with onions, I believe than some of the other crops. I tried to keep them going and let the beets and the other stuff go a little shy.

CROSS EXAMINATION by Mr. Thurman.

Q What kind of land is your ground, Mr. Smith? the soil?

A Well, it is a kind of a gravel and sand underlaid with rock and gravel.

Q What ditch do you say you use?

A The City Race.

Q The City Race?

A Water from the City Race.

Q Where is this land that you speak of, the ten and a third acres?

A It is on 5th West and 921 North, that is where my house is, my house is right on the land.

Q Who else used water from the same lateral that you use water from?

A Why, Warner and my brother.

Q I don't care so much either about the names of the persons, but how many use it?

A I think about seven, I ain't certain. Six or seven, something like that, on that one particular ditch that I have.

Q Do you irrigate by turns each of the seven using the entire lateral at a time?

A How was that?

Q Did you take turns in the use of this lateral the stream flowing in it?

A We had time issued to us.

Q Did you take it in turn, in rotation?

A Yes sir, we would take it in rotation, yes, as our turn come on.

Q Did any more than one use the ditch at a time?

A No.

Q How much water was distributed to that ditch?

A Well now, I don't know, I don't know how much it would be in feet, or anything of that kind, because I don't know anything about measuring water.

Q Don't you know what an ordinary size stream is?

A No sir.

Q As you have understood it to be?

A No sir, I was never around much where they measured water, I don't know what it would amount to.

Q What was the size of the ditch, the width and depth.

A The width -- oh, I don't know, I don't know what it would be, the width of it.

Q Well, were the others on that lateral as short as you were?

A I don't know.

Q Is their land similar to yours in quality?

A Yes sir, practically the same.

Q How?

A About the same thing, that is generally.

Q Are you near the top of the lateral or the bottom, where is your land?

A Well, I am close to the bottom as I am to the top, I am not right on the lower end, little closer to the bottom.

Q Who adjoins you on either side? from this same lateral whose

land is adjacent to you that uses from this same lateral?

A Mr. Snow on the north, he comes next to me.

Q He takes water from this same lateral?

A Yes sir.

Q What kind of crops did he have in on his land?

A Now, I don't know what he raised, I know he had a few berries in there, I saw them as I walked through, and some corn.

Q Did he have any beets?

A Not on there, his place is just a small place there, probably an acre or so, I don't know what he has got there, small place, he never raised no beets.

Q Did anybody besides you using water from that lateral have beets in last year?

A No, I don't think they did.

Q You are the only one you know of that had beets?

A On that particular creek.

Q Did any of them have as large a tract of land as you did on that lateral?

A No sir.

Q You had the largest? A. Yes sir.

Q How many hours time did you have each irrigation for your ten and a third acres?

A Now, if I remember right it is something like about eleven hours somewhere along there.

Q Would that be every week or every two weeks?

A Yes sir, every week.

Q That would be an average of about an hour to the acre, wouldn't it?

A Yes sir, somewhere about that.

Q Once a week. Well, you say you don't know how your neighbors fared for water? A. No sir.

Q On that same lateral?

A I didn't take any notice.

Q For all you know you are the only one that suffered?

A I know I suffered for water, yes.

Q Did you try to get the water over the entire tract each watering?

A I could not get it over it all each watering.

Q I say did you try?

A Yes sir, I tried, you bet I did,

Q Well, you didn't try to put it over half of it one week and half of it the next?

A I tried to get it over all I could each week.

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12:00 Noon, Recess to 2:00 P. M.

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MR. JACOB EVANS: If the court please, with respect to the objection that was made this morning by myself, I will say that the attorneys for the plaintiff have conferred during the noon hour and we still believe that the evidence that was being introduced at that time concerning the enlargement and extension of the canals was immaterial and that the statement which followed concerning the decree should not be considered as any part of the objection made, or as being taken as any contention on the part of the plaintiff as to the force and effect of any of those decrees so far as the plaintiff is concerned.

MR. THOMAS: Just where are we at, if I may ask. I am not as wise now under statement as I was before they objected to the materiality of the evidence. Are they trying to hedge now and qualify the objection. If so wouldn't it be safest to have them make a formal objection now, either withdraw the former objection and let us be in statue quo or make such objection as would cover the issues, then presented by that testimony.

MR. JACOB EVANS: If that will do counsel I haven't any objection to withdrawing the objection.

MR. THOMAS: I don't care whether you withdraw it or not as far as I am concerned.

MR. JACOB EVANS: I think the objection was misunderstood by the court and many of the counsel.

THE COURT: I based what I said almost entirely upon the remarks made by counsel in support of the objection, and I appreciate the fact that probably counsel stated it a little broader than he intended to.

MR. JACOB EVANS: Yes, I did, Your honor I think, and in order that the matter may be cleared up and straightened out, I now ask that the objection be withdrawn.

THE COURT: It may be withdrawn. The witness Mr. Smith was on the stand being cross examined, I think.

ABRAHAM L. SMITH - - - - -

CROSS EXAMINATION by Mr. Thurman continued.

Q Mr. Smith, your land down there like most of the farm lands, will stand a good watering, <sup>reasonable</sup> good watering, once every two weeks, won't it?

A No sir, every two weeks --

Q How?

A Once every two weeks on the most of my land won't grow a crop.

Q How much of your land did you get watered with the water you had in a week with the stream you had, how much of your ten and on e third acres did you get watered?

A Well, I don't know, Judge, I never took particular notice how much I did get water over, which I would try to run it over a little more than half of it.

Q Little more than half of it?

A Yes.

Q Then if you had watered half of it one week well with what you had instead of trying to get it over it all, and water the other half good next week, wouldn't that have been a more

economic use of the water and more profitable to you?

A No sir.

Q Why?

A Because it wouldn't stand, I tell you the underlayer of gravel will -- leaks that water out faster than the evaporation from the top. It drops right out.

Q How much of your land is of that kind?

A Well, practically all of it, little bit of it underlaid with river gravel and cobble rock.

Q Is your land worse than that of your neighbors?

A Worse?

Q For watering.

A Well, I don't know whether it is or not.

Q You didn't notice them suffer materially last year?

A No sir, I didn't notice anything about my neighbors.

Q And don't <sup>you</sup> think they watered a little more systematically than you did.

A I don't hardly think so.

Q You had as much water for each acre of land as they had, didn't you?

A I don't know about that.

Q Didn't you all get two hours or an hour a week for an acre?

A I don't know what my neighbors get.

Q That is what you got isn't it?

A That is what I got.

Q You understand, don't you that you got as much per acre as they did?

A Well now, I don't know, I haven't looked up the record to see what they got, anything about it.

Q Isn't your right the same kind of a right as their's?

A Yes sir, my right is just as old as others.

Q And you mean to say you have not been guarded enough as to your rights to see whether your neighbors are getting more or similar rights as you got?

A That is what I say, I didn't know whether my neighbors got more than I got or whether they didn't.

Q You understand they have the same right per acre?

A Should have.

Q And you supposed, didn't you, that is what they got?

A Yes, I supposed so.

MR. THOMAS Just a minute, I object to this as improper cross examination, calling for a supposition of the witness.

MR. THURMAN: Sometimes a supposition is more pertinent than others. Here is a man with a group of men on a lateral who knows whether his rights are similar to his neighbor's rights. What I want to understand from this witness in this case -- I should have used exactly the words whether or not he didn't understand he was getting as much water as his neighbor was getting.

MR. THOMAS: That would be objectionable.

THE COURT: Objection is sustained, I don't think it it is material what he understood. If he don't know his rights were the same as the others, it is immaterial what his understanding was.

Q Do you know of any reason why your neighbors should receive more water per acre than you do, if they did?

MR. THOMAS: Object to it it as immaterial.

THE COURT: Objection sustained.

Q Did you irrigate the same piece of land each week that you watered the week before, or did you change it onto other land?

A Part of it I irrigated each week, as far as I could go.

Q Was there some of your land that you just abandoned for the season and didn't irrigate at all?

A Well no, not at all. I watered some of it, I would try to water it all.

Q Was there any of it that you just gave up for the season and didn't water at all?

A No sir.

Q You tried to get it over all of it?

A I tried to but I couldn't get it over it. I would get it over all I could.

Q You understood the city ordinance provided for irrigating once every two weeks, farm land, didn't you?

MR. THOMAS: Object to this as immaterial.

THE COURT: I fail to see any object in it at all. If you will indicate to the court what the object is, the court will possibly overrule the objection.

MR. THURMAN: Well, it is not of enough importance to me, your honor, to take up the time of the court to discuss it.

THE COURT: The objection is sustained then.

MR. THURMAN: There is some little matter of information here, why he undertook to water the whole land twice or once each week when he knew he couldn't do it.

MR. A. G. HATCH: And when the ordinance under which the water was distributed to him provided to the contrary. In other words he could irrigate it only once in two weeks.

THE COURT: That is a matter you may argue to the court, the effect of it, but I see no materiality in ascertaining his motives in reference to it.

Q How long a run did you make with your water in irrigating this land?

A About thirteen rods was the longest.

Q How wide a strip did you put over at a time?

A Oh, that, I couldn't hardly answer that, because some strips would be wider and some narrower. It is owing to where I had the water, what part of the land.

Q How long did it take to run the thirteen rods?

A Let me see, that thirteen rods, if you put -- scatter the water out as we usually do, it would take it about four or five hours to run through, scattering your --

Q Would it be as wide as that?

A Wide as what?

Q As thirteen rods? or wider?

A No, I could not scatter the stream on that much and make any head way at all.

Q Well, you would be then, would you say you would be watering an acre at a time, thirteen rods long and as wide as necessary to make an acre?

A Would I be watering that much?

Q Yes, at one time?

A No, I could not run it an acre, could not run it all at one time on an acre.

Q You say it would take you five hours to make that run?

A It would take five hours if I didn't double it up. I didn't try to run so. You want to know if I run it on an acre. It would take about three runs to run that stream on an acre and get it through, that is, and get out --

Q Then you could not water over two or three acres in the time you had with the water you had, could you?

A On this thirteen rods.

Q What?

A On that one acre I could not, it would take me about -- maybe I am getting kind of -- take me about five hours on that one acre to make that run.

Q You had only about eleven hours in all, water about two acres of your land, would that be about right, or a little over?

A Why, if I understood you right you asked me about how long it would take me to water that acre?

Q Yes.

A Was that the way of it?

Q Yes, and you say five hours.

A That is what I say.

Q Then would it take you as long to irrigate another acre as it did that acre?

A Not hardly as long to water the next acre.

Q How much of your land could you water during the turn you had

it with the stream you had, how many acres of your son and a third.

A I believe I told you I tried to get over a little more than half of it.

Q But you tell me you couldn't, it would take you five hours to water one acre?

A That is what I said, I say that yet.

Q Then you didn't -- so that all the water you had, or did you have it running in two places, did you have it divided?

A No sir, I had it all on that one acre.

Q Took you five hours? A. Yes.

Q How in the world --

A You don't see what I was driving at.

Q What?

A I say you don't understand what I was driving at there.

Q No, I don't, I guess.

A I said it took about five hours to water that first acre, didn't I?

Q Yes.

A Four to five hours, about five hours.

Q Yes.

A And I said I tried to get it over half my land or a little better each week.

Q Yes.

A That is what I say yet.

Q How did you get it over the other nine and two-third acres?

A Because it is a little easier watering.

Q Is there a difference in the soil?

A Yes sir.

Q I thought you said a while ago the soil was all about alike?

A I said practically all about alike.

Q What is the difference in the soil of this one acre and the other nine acres.

A The gravel is little closer to the top.

Q In the first acre?

A How?

Q The one that took you five hours to water?

A Yes.

Q Is that closer to the top?

A Yes.

Q Well, that water was all wasted then in the gravel, wasn't it?

A Why no, if I hadn't got it over this top soil I wouldn't have got anything, it would have burned up.

Q Couldn't you have rushed it over by narrowing up the width of your space you were irrigating?

A Not very well.

Q And put water on and rush it through for that thin soil land?

A I rushed it all I could.

CROSS EXAMINATION by Mr. Ray.

Q Mr. Smith, you got along pretty well, didn't you, until in July last year?           A. Yes sir.

Q Didn't have any trouble in June?

A No sir.

Q Or May?           A. No.

Q Ever measure these three acres of beets?

A How?

Q Did you ever measure how much land you had in beets?

A No, I never measured it.

Q Might be a little less than three acres?

A Might be a little less, or maybe a little more, I don't know.

Q What did you have it planted in in 1914?

A Beets.

Q What did you have it planted in in 1913?

A Beets.

Q What did you have it planted in 1912?

A Now then, it is hard to tell whether I had beets or whether -- there was two or three years I didn't have no beets in, I planted it into other stuff, but I forget what years that was.

Q What year did you raise twenty-two tons on this land?

- A Twenty-two, that has been seven or eight years ago, something like that, I couldn't tell you the year.
- Q You have had it in beets ever since, haven't you, practically?
- A All but two or three years there I didn't have it in beets.
- Q And you say your average has been about twenty, what is the lowest you ever had? What did you have on this land in 1914?
- A I had about somewhere about eighteen tons.
- Q What did you have in '13?
- A Well, it would range somewhere along there, eighteen, maybe a little better than eighteen, eighteen or nineteen.
- Q The highest crop you had was about eight years ago, wasn't it?
- A It might possibly have been a little longer than that, I couldn't hardly tell.
- Q 1914 was a year of exceptionally high water, wasn't it?
- A 1914 I don't know.
- Q Year before last?
- A I don't know whether it was much higher, I never took any notice of it.
- Q Never took any notice of it ?
- A I don't remember now. It is something I don't take any notice of, and I don't remember how it was.
- Q You had plenty of water in 1914, didn't you?
- A Well not -- no, not all the time, no.
- Q Is your ditch big enough to carry plenty of water for you for the ten acres?
- A I could use more if I could get it out of the ditch.
- Q The ditch is too small?
- A If there was water to put in it.
- Q But the ditch is too small if there was plenty of water, isn't it?
- A. Yes.
- Q Isn't four or five or six years a pretty long time to grow beets on the same ground year after year?
- A Well no, they will grow pretty well that many years.
- Q But you do finally change it don't you?
- A Yes sir.

Q Rotate crops?

A How?

Q Rotate your crops, don't you?

A I try to yes.

Q On these three acres what have you planted this year?

A I have got it in beets.

Q Don't you think it is about time to give the land a change and put something else on it?

A Be a good idea, yes.

Q It would have been last year, wouldn't it?

A I don't know as it would, not last year, that had only been in two or three years in beets.

Q I thought you said you had beets there as far back as 1912?

A I said I did that far back.

Q Every year?

A No sir, I didn't, I said I laid it two or three years.

Q I went back one year after another to 1912 and you said you had beets there back as far as 1912, didn't you?

A Well now, no, I don't think so. Didn't I say -- you asked me about 1913.

Q Said you had beets, didn't you?

A I believe I said I had beets, then you asked me for 1912 or something, I don't know whether I had beets then or not.

Q But the crop has been getting less each year from eighteen down to twenty, twenty to eighteen and eighteen to sixteen, hasn't it?

A No, not until last year, I have always growed about from eighteen to twenty ton, as high as twenty-two.

Q Didn't you tell me in 1915 you had fifteen or sixteen tons, and in '14 you had eighteen ton and in '13 you had about twenty tons, isn't that what you said?

A I said about eighteen to nineteen tons or twenty. I have run to twenty tons, yes sir.

Q Wasn't last year a bad year every place for beets?

A I don't know as it was.

Q You don't know that? A. No.

Q Did you have any leaf miner last year?

A I didn't on mine.

Q Most people did, didn't they?

A I don't know.

Q People had wilt, didn't they?

A I have heard some of them say they had wilt.

Q Quite generally.

A I don't know how much they had, I heard some of them say they had wilt.

Q As a matter of fact fifteen tons was a good deal more than an average crop of beets for this locality for the year 1915, wasn't it.

A I don't know.

Q You don't know?

A No, I don't know what the average yield was.

Q So far as you know it was?

MR. THOMAS: I object to that, he has already said he don't know.

THE COURT: Objection is sustained.

CROSS EXAMINATION By Mr. A. C. Hatch.

Q I understood you to say that you didn't know the quantity of land that you had into beets last year?

A The quantity?

Q Am I correct?

A How is that?

Q Read the question.

(question read)

A Why, I said I didn't know just exactly to the rod, no.

Q Do you know to the half an acre?

A Did I know there was a half an acre?

Q Do you know to within half an acre the quantity you had?

A Yes, right close there.

Q And did you keep an account of the weight of the beets

7 harvested?

A Did I keep an account of it?

Q Yes.

A I had an account of it once, yes.

Q And do you know now the number of tons of beets harvested?

A Not exactly, no.

Q Not knowing exactly the amount of harvest and not knowing exactly the amount of land, how do you fix the tons per acre raised?

A I just there was about somewhere close to three acres, way I figured it I had ~~xxxx~~ between fourteen and fifteen tons to the acre.

Q But you don't know the area or number of tons, do you?

A No sir.

Q You don't know the quantity of land?

A No, not exactly.

Q Now another question, if you had abandoned the one bad acre of your farm or had abandoned it you could have irrigated the other nine and a third acres nicely with the water you had and the time you had, couldn't you?

MR. THOMAS: Object to this as improper cross examination and immaterial.

THE COURT: Objection is overruled.

MR. THOMAS: Exception.

A Well, I might have possibly got it over if I had throwed one acre clear away, I might have got it over,

Q If you had thrown that bad acre away you could have irrigated the other nine and a third acres each week with the water you had and time you had, couldn't you?

MR. THOMAS: Just a moment, I object to that as assuming a state of facts that is not proven. There is no evidence here there was a bad acre, there is evidence it was a gravelly acre.

MR. A. C. HATCH: I refer to it as bad for irrigating purposes.

MR. THOMAS: Let me ask if counsel are going to require water users and land owners to abandon land which in their judgment may be deemed to be poor as a basis of the use of water on the part of the defendants, and if they don't abandon those acres which may be poor, do they intend to work that as an abandonment on the part of defendants?

THE COURT: I don't think you had better take the time of the court to answer the question. You may proceed with the examination.

A I possibly could, but that there acre I was telling you was so hard, I raised as much on that, and little bit more, than I did on some of my other.

Q Was it your land that Mr. Swan made a test upon?

A Yes sir.

Q Was it this bad acre from which he took the soil he testified?

A No, it run over on some place else.

Q Didn't he make a test of the bad acre or any part of it?

A How is that?

MR. THOMAS: I object to the question, as no evidence before the court there is a bad acre, and it is evident it is being put in by counsel for an ulterior purpose.

THE COURT: Objection is overruled, it seems Mr. Smith understands what acre is referred to.

A Part of it, yes.

Q Did you go to the ditch to get your water or did the watermaster turn it to you at the time you irrigated?

A They turned it to me.

Q On that ditch the watermaster takes out the dams and turns the water to each of the irrigators, does he?

A How is that?

Q On that ditch the water master takes out the dam and turns the water down to each irrigator in his turn, does he?

A He raises the gate, yes.

Q And do you know whether or not the water was turned down to you at the times your ticket designated?

A At the time my ticket called for?

Q Yes.

A Yes, the water was generally there when my time was on.

Q And continued until the time was up?

A Yes sir.

Q Did you time it yourself?

A Why yes, I would watch when my time run up, sure.

Q And then the watermaster would come and turn the water from you down to the user below you on the lateral?

A No, the man right below me would -- if I didn't shut it off he would take it. Generally it went above me though, generally, but sometimes I don't know whether it is below me now or above.

REDIRECT EXAMINATION by Mr. Corfman.

Q In answer to Mr. Ray you said that you changed or had a rotation of crops on your lands for the purpose of benefiting and keeping up its productiveness?

A Yes, I try to do that.

Q Anything else you do to accomplish that?

A Yes, I fertilize.

Q How often.

A As long as I have had that land I have always put fertilizer on it every year, all of it.

Q Now, in regard to the area there of this particular best tract that you had in this particular tract that you had in beets in 1915, was it the same area that you had in previous years?

A Well now, not altogether the same. There was some of that same and some wasn't the same land.

RECROSS EXAMINATION by Mr. Ray.

Q Mr. Smith, where do you get your fertilizer?

A By taking around the city what I don't make from my own.

Q How many stock do you keep on your farm?

A How many stock? Well, I generally have two -- oh, four or five head.

CROSS EXAMINATION by Mr. Bagley.

Q This ditch that you use to irrigate your land and through which you took the water and which you say was not adequate to carry what you needed is the same ditch that was used by Mr. Swan in making his experiment on your place, isn't it?

A Yes.

Q Mr. Swan run the water through the same ditch that you use to irrigate the rest of your land? A. Yes.

Q And was the ditch ordinarily full when you irrigated?

A Yes, all it would hold.

Q All it would carry? A. Yes.

Q And did you have it that way during the whole summer?

A No, not in the latter part of the summer, no.

Q It wasn't full in the latter part of the summer?

A No.

Q Well, about what proportion of the ditch was full?

A Well, I don't know hardly what proportion it would be.

Q Were you there when Mr. Swan made his experiments?

A Yes sir.

Q Did he have the ditch full?

A Yes, he had the ditch full.

Q He had all it would carry at that time? A. Yes.

Q About how much of the irrigation season did you have a full irrigation ditch?

A Oh, I don't know, along the latter part of June maybe might have ran into July I had it filled, but along the latter part of June I should think.

Q Then would it be three-fourths full after that?

A Well, sometimes, sometimes it would not be quite that much.

I guess about three-fourths, maybe not quite that.

Q Did you ever get as low as half of a ditch full?

A Well no, I don't know that I did, not as low as half quite.

Q You think three-fourths to full would be about?

A Yes.

Q What you had?

A Something like that, maybe not quite three-fourths.

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GEORGE W. GEE recalled

DIRECT EXAMINATION by Mr. Thomas.

Q Read the last question.

(question read)

Q Did you hear that question? A. Yes sir.

Q That was with reference to the East Union canal?

A Yes sir.

Q What was your answer?

A It is practically the same.

CROSS EXAMINATION by Mr. Thurman.

Q Mr. Thomas asked you, Mr. Gee, if you had seen any waste water sometime, I forget what particular time you referred to, I understood you to say you had seen none except in early season?

A No, I don't call to mind any particular time that I saw any water running to waste during the low water season of the year.

Q What I want to ask you is what you mean by waste water in the sense in which you are using it?

MR. THOMAS: If this is general cross examination permit me to go on with the direct examination.

MR. THURMAN: It is a question I meant to ask him before. I thought you would like to come back with your redirect and cover it all.

MR. THOMAS: I am not through with the direct. I am putting Mr. Gee on now as though no cross examination had been made.

MR. THURMAN: You had gotten through with the direct

MR. THOMAS: I had gotten through with the direct after the court sustained your objection, but after the objec-

tion was withdrawn I understand I am where I was before that objection was made.

MR. THURMAN: I see your point. All right, I will this matter.

DIRECT EXAMINATION by Mr. Thomas continued.

Q As to the acreage under the East Union Canal, Mr. Gee, what do you say as to the acreage now and then?

A There is very little if any difference, it may vary a little one way or the other, but not much, not to any great extent.

Q I want to direct your attention now to the ditch or the canal known as the Factory Race. Was that canal or that Factory Race in existence and carrying water when you came to Provo?

A Yes sir.

Q In 1858? A. Yes sir.

Q Please tell us all the conditions that were existing then relative to that race and the lands or rather the use to which the water was being put in that race?

MR. JACOB EVANS: Object to it as immaterial.

THE COURT: Objection is overruled.

Q Go on, Mr. Gee.

A Father John Mills, as we used to call him, had a mill where the ice plant is now located.

Q That is Provo Ice & Cold Storage company?

A Yes sir, Cold Storage Company, father John Mills and his son owned a saw mill there at the time. They afterwards added the grist mill and Richard Smith, Dick Smith, as they used to call him, owned a grist mill that stood here on the factory block. That is all the machinery that was on that race at that time.

Q That was in 1858?

A That was in 1858.

Q You have no knowledge, that is, you cannot state of your own knowledge how long prior to that time they had been there?

A No sir, I don't know.

- Q You may state what other use that water was being put to at that time?
- A Oh, the water, after it passed by here they took it out and watered some city lots, and water some of the farm lands, and watered some of the First Ward Pasture.
- Q State if any land was irrigated above the factory, that is, what is now known as the woolen mills?
- A Out of that ditch?
- Q Yes, at that time?
- A Yes sir.
- Q Could you state, have you any means of knowing what acreage was actually being irrigated at that time?
- A No, I don't exactly. When I say out of that race, now I suppose I ought to qualify that a little, because at the time that the factory was built and started up above there they cut a ditch across over through the Clark field from the Factory Race over to the City Race. They divided the water there and part of it came south and west and then ran back into the Factory Race again, so that in case there wasn't water enough in the Factory Race for the factory that they could, if it wasn't needed, they could draw some from the City Race, and Mr. William D. Roberts -- Dick Roberts owned a piece of land --
- Q A little louder, Mr. Gee.
- A Mr. William D. Roberts owned a piece of land, I think neighborhood of seven acres right close to where the water was divided from the city race, that came back into the Factory Race which he irrigated from that.
- Q Now, was the City Race in existence at the time you arrived here in 1858?           A. Yes sir.
- Q Can you state to what use the waters were put at that time in that race?
- A Well, they were used for irrigating the farms and the lands below.
- Q State if any power uses were made of the water at that time?

- A Yes sir, Mr. Holdaway had a mill down there where the foundry now stands.
- Q On Center Street?
- A On 5th West, 5th West and Center.
- Q Do you know if that power use has been continued since that time?
- A I believe it has to the best of my recollection, either by him or other parties that he sold to.
- Q Can you state what other power uses the waters of the Factory Race and the City Race were subsequently put to and in what years, if you know?
- A The City Race, you say, and the Factory Race?
- Q And the Factory Race, what years, if you know?
- A Well, the Factory, I believe, if I remember correctly was started in '71, if I remember correctly, and the machinery on the Holdaway Race was there. That is the City Race, we used to call it the Holdaway Race, and that is the only piece of machinery there was on that at that time, but later Mr. Clark put a thrashing machine up there that he run by this same race of water, two or three blocks north from the Holdaway Race, from the Holdaway machinery or the foundry, and he used to thrash wheat there in the fall of the year. Farmers would come in with a load of wheat or two loads of wheat, want to get it thrashed out and then take it over to the Tanner's mill and have it ground into flour.
- Q Where was the Tanner Mill at that time?
- A The Tanner mill was over on what we used to call Big Dry Creek, near the northwest corner of the town.
- Q What name is given to that now, the Tanner Race?
- A Well no, they used to call it the Big Dry Creek, and what we now call the Little Dry Creek was the one west of it. That used to be called the Big Dry Creek, and I have forgotten the man's name, maybe I can think of it after a while, that built a mill there and Tanner bought the mill of him.
- Q Was that on what is now known as the Tanner Race?

- A Yes sir.
- Q Do you remember when they ceased to use power for the mill on the Tanner Race?
- A I don't know that I could tell it exactly.
- Q Approximately?
- A I think it was in about '86, I think.
- Q Do you know if since that time any power uses have been made of the water in the Tanner Race?
- A No, not that I know of unless it was George D. Peay. He had a water wheel that he brought out from Tanner's Race straight down here on Center Street and run it west there on the south side of what we now call Center Street, and he had a water wheel there that he run some planes and some machinery there for a short time.
- Q Do you know when the other power uses were established on the Factory Race than the ones you have just described?
- A No, I don't remember the date of them. The Ward Mill down here was the next one, I believe, after the factory and then the Smoot Lumber Mill Company came in next.
- Q You spoke of the factory or the woolen mills being established about '71, what use had been made of the water for power purposes at that site prior to that time?
- A They run a grist mill with it. It belonged to Mr. Taylor and he bought it from Richard Smith.
- Q Of your knowledge can you say the power uses there then were continued from 1858? A. Yes sir, the factory bought Mr. Taylor's mill out when they established the factory there, and they ran -- they ground grain there for a period of time, and finally had a fire one night and burned up and haven't had any there since.
- Q Can you state what other uses -- I will ask you a question I don't know whether I asked or not -- what other uses was the water put to in the Factory Race other than for power purposes?
- A On the land and lots.

MR. THURMAN: We will admit the Factory Race, Tanner Race and City Race have been used both for power and irrigation purposes. It is in here now by a dozen witnesses, I don't think it is necessary to encumber the record with all these witnesses what use it was put to.

THE WITNESS: John Shelton was that man's name I was trying to think of that built the Tanner Mill.

MR. THOMAS: Does counsel admit its use was made under claim of right, appropriation.

MR. THURMAN: How is that?

MR. THOMAS: Does counsel admit these uses and for power purposes and irrigation purposes were made under claim of right and by reason of appropriation and constant use, develop that right?

MR. THURMAN: There is a question in our mind about a claim of right, absolute right of <sup>the</sup> a power interests, in particular the factory. If you want to prove that you had better do it.

MR. THOMAS: Then I think we had better put in our case in our own way then.

THE COURT: You need not take the time of the court to prove what has been admitted. You may proceed and assume those facts exist which have been admitted.

Q Comparing the Factory Race of the present date with the Factory Race in the period of 1858, what do you say as to its size?

A It is larger now than it was then.

Q When was it enlarged and where, if you can tell?

A Well, in '70 I remember correctly in '70 the race was made up higher, made a rock wall out on each side and dirt was a hauled out of what we call the adobe factory of the adobe yard, where the park is not west of the Hoover Mill. There was rock and gravel hauled there and there was dirt hauled from the adobe yard and lined it all on the inside and on the top, so as to raise it up to get a little more fall to it, and they raised it up as high as they dared raise it without destroying

the flow of the water where the peebe Mill now stands. And the race farther above, farther up is pretty much the same now that it was then in size.

Q Was the canal enlarged at the intake?

A Not that I know of, I don't remember of it being.

Q To your knowledge has it ever been enlarged?

A No sir, not that I know of.

Q Then the only enlargement of the Factory Race occurred just ~~as~~ at the point of discharge over the wheel at the factory mill?

A Yes sir, and from there up a couple blocks water was raised so as to have a bigger fall.

Q You say about a couple blocks?

A Yes.

Q Near the mill?

A Nearly two blocks.

Q Can you state if the Factory Race has been enlarged at any point below the mill?

A No, not that I know of, not that I remember of, it has been strengthened some. I know in an early day here the water would go down and would strike over maybe to one side towards the street, then it would shoot back into the side of the lot, side of the lot and places like that, it has been repaired and strengthened.

Q Within the platted portion of the city?

A Yes sir.

Q Can you state if any of the other ditches have been enlarged since 1858, I am now speaking of the enlargement of the canal at the point of intake, so as to appropriate more water than was appropriated in 1858?

A No sir.

MR. A. C. HATCH: If the court please, there I think we ought to object for this reason, it is in evidence by the testimony of Alred and others these were natural streams running through Provo City.

MR. THOMAS: Not all of them, Judge.

MR. A. C. HATCH: All of them but the East Union Canal, and that the farmers simply in using made ditches from the natural stream and diverted the water to and upon their lands. Now, counsel in asking this question is assuming that there was a made canal from the Provo River leading to Provo City, and that the head of that canal or its intake from the Provo River was enlarged. My understanding of the testimony is that the intake of the Factory Race from the original stream was right where they commenced to build the race itself as defined by this witness, and he has already said that that intake was enlarged. That is the intake, as I understand it, of the Factory Race from the original natural stream that flowed through the city? Object to the question upon that ground, assuming something that did not and does not exist.

MR. THOMAS: Now, Judge Hatch is either slightly mistaken or I am. I asked the witness specifically if the Factory Race had been enlarged at the intake and he said it had not. The Factory Race was enlarged about two blocks from the mill and rocks had been hauled there and adobe dirt put in so as to increase the fall at the mill.

THE COURT: I don't think it makes much difference one way or the other. The question as framed and answer to it would not mean a great deal. In your question you are assuming that an enlargement of the canal itself, intake would enable you to take more water through it. That is an assumption that of course may be very erroneous. If the canal at its intake, if the intake of the canal was its smallest part of course the enlargement there would enable you to take more water. It might be at its intake five times as large as was necessary to convey the water which you are taking through it or could take through it and enlargement there then would not increase your capacity at all. To increase the capacity of any canal it must be increased at its smallest point. Of

course that is palpable, needs no explanation, so that your question whether it was increased at its intake so as to enable it to appropriate more water, the assumption is not correct. The enlargement of a canal at its intake would not necessarily result in its being able to take more water.

MR. THOMAS: I thought your honor -- this is not by way of argument, but I thought by framing the question as I did so as to enable it to appropriate more water, did take more water, that carried that very assumption, it was taking the larger amount to the smallest possible point.

THE COURT: No, it would not, but he may answer the question if he understands it. Objection is overruled.

MR. A. C. HATCH: Take an exception.

THE COURT: But I merely made the suggestion it was not doing the court any good because it doesn't tend to prove at all the capacity of the canal was increased or was not increased.

MR. THOMAS: I will withdraw the question.

- Q Can you state, Mr. Gee, if the canals were enlarged at any time since 1858 for the purpose of increasing their carrying capacity?
- A Not to my knowledge they have not.
- Q During your two term of watermaster, how did you distribute the water over the East Union system?
- A It was distributed by the deputy watermaster dividing it out to the different individuals.
- Q By time or in turn?
- A In turn.
- Q Just what authority did the deputy watermaster exercise under your direction with reference to the distribution of water?
- A Why, he had control of it and distributed it out to the farmers as they needed it, and where any man's farm was needing water he as applied to the watermaster in case the watermaster in case the watermaster didn't happen to run on to

him, he would go and see the watermaster and apply to him for the water, and he would tell him when he could get it and the amount of water that he should draw from the canal.

Q And that system was followed?

A Yes sir, that was followed right along.

Q What system was followed under the other ditches, Tanner, City Race and Factory Race?

A So far as the farming lands was concerned, it was principally the same way. Some short ditches where they had time given them, but the long ditches where the heavy flow was, was distributed to them in that way.

Q You began your service as watermaster in 1882?

A '82.

Q What control of the provo River did provo City exercise at that time?

A Well, they pretended to own all the water there was in the river clear to the mouth of the canyon.

Q How was the water distributed?

A As they claimed that the corporation of provo City reached from the lake across opposite the mouth of Provo Canyon and south here to the dividing line between here and Springville and then up against this mountain.

Q Those were the boundaries at that time, were they not?

A Yes sir.

Q They were the actual boundaries of the city ?

A Yes sir.

MR. THURMAN: The top of the mountain?

MR. THOMAS: May have been the top of the mountain whatever the boundaries were.

MR. THURMAN: That is what it was.

Q What water was taken by Provo city during your term as watermaster?

A At what point?

Q At the intake of its canal.

A All of them totalled together, you mean? or total that was under Provo City do you mean?

Q Yes.

A As I recollect it it was 4300 feet.

Q Now, Mr. Gee, how do you arrive at that proportion? Isn't it 43/100 of the river?

A 43/100 of the river, that is what I mean.

Q How long did you distribute that or how long did you take that amount of water or that proportion of the river as water-master?

A We took that proportion as long as we could get it.

Q When did you cease to get it?

A Why, when the other canals drew it out above.

Q When was that?

A Oh, they began along in latter part of June, forepart of July.

Q Of each year?

A Yes sir, right away after the high water. The high water generally lasted until the latter part of June.

Q State if you had any --

A Then the river began to receded.

Q Did you ever arrive at any understanding as to what proportion of the river Provo City should have with the other companies?

A Well nothing only what was agreed upon.

Q Now, when was it agreed upon?

A That was in '84, I believe.

Q Will you state the circumstances of that agreement?

A What brought that agreement around was this, that the races, Factory Race, City Race all these lower races down here was lacking in water, and I would go to the river and turn it in as long as there was any to turn in to these different races, then when there wasn't water I would report it to the committee on irrigation.

Q Of the City Council?

A Of the City Council, and whatever advice they gave me in regard

to that I generally tried to carry it out. Sometimes little hard to do it, fellows would go up there, for instance, go to the Big Bench Canal --

Q That the Provo Bench?

A Yes sir. They had a big long tree there at one time clear across the stream that run around the front of their canal, had brush laid on it, some rock and so forth, and they would shut off and turn into their canal what we considered then was more than they were entitled to at that time. George M. Brown was city attorney at that time and so I appealed to him what he thought was the best way to do, and he told me to take an axe, go up there and chop the log in two and let the water down. Well, I told him I didn't think that would --

MR. RAY: Your honor please, I object to this as irrelevant and immaterial and hearsay. It is interesting but fills the record.

THE COURT: Yes, if you have an agreement --

Q Just go to the agreement, Mr. gee, please?

A Then I made a proposal to the committee on irrigation in the city council. They called the board of each one of the canals together and in connection with the committee from the city and agree on some division of the waters of the river, for at that time nobody knew the amount of water they were using in each one of these canals. There had not been any division made any time, any measurements taken of it, and nobody knew the amount of water they were using, and I recommended, <sup>that,</sup> I believe that Myron Tanner was chairman of the committee on irrigation at that time and that was carried out; the committee from each one of the various canals and irrigation committee of the city council met together and they made a division of the water of Provo River.

Q Can you state who constituted that committee?

A No, I cannot, all of them.

Q Can you state what division of the water was made, that is,

what division of the river was made?

MR. RAY: Just a minute, may I ask a question here your honor, was that agreement, if such there was, reduced to writing at the time?

A I believe the minutes of their meeting was taken down in writing, if I remember correctly.

MR. RAY: And signed by the parties?

A Yes sir, as I understand it, as I remember it.

MR RAY: Object to this as not the best evidence, your honor.

THE COURT: It is just the same matter that was testified to by Mr. Strong the other day.

MR. JOHN E. BOOTH: Mr. Thurman.

MR. RAY: By Judge Booth, I think.

THE COURT: Judge Booth and Mr. Thurman.

MR. JOHN E. BOOTH: I happen to know about it.

THE COURT: Your objection is well taken, of course, but in the interest of time if it is material do you desire to wait --

MR. RAY: Your honor please, if he wants to dispute Mr. Thurman and Judge Booth it is all right, but if it is just the same it is in for what it is worth as hearsay, but I prefer the original agreement if we have to keep repeating it.

THE COURT: Under the statement made by Mr. Gee that it was reduced to writing and signed by the parties, the objection will be sustained.

Q Can you state if you as watermaster distributed the water thereafter under that agreement?

A Well, they appointed a commissioner that measured it distributed it by that agreement.

Q Do you remember who the commissioner was?

A If I remember correctly it was John E. Booth, the first one.

Q You may state now if the water as distributed, or if the water then was distributed by the commissioner under that agreement?

MR. RAY: Your honor please, I object to that as calling for a conclusion of the witness and hearsay.

THE COURT: Objection sustained. He may state how it was distributed and it will be for the court to determine whether that was in accordance with the terms of the agreement.

Q You may state how the water was distributed?

A The first was done by measurement, first they measured the width and depth of the water in each one of the canals and so far above, and throwed a chip in and timed it to see how long it would take to float down a certain distance.

Q Was any weir ever built?

A Yes, afterwards, but not at first.

Q When was a weir built?

A The following year, I think, if I remember correctly.

Q What year was that that the weir was built?

A That there was, I believe in '85, I ain't positive about that.

Q What kind of a weir if you know?

A Why, it was what was a called a level weir then.

Q Who built it?

A I did,

Q Who installed it?

A I did, that is in the city races here, not in the other ditches.

Q What proportion of the river then did you have there up to the time of the expiration of your term of office?

MR. RAY: Your honor please, I object to that upon the ground it does not appear the witness knows except by hearsay, that he ever made any measurement to determine it.

THE COURT: He has al-ready testified without any objection to the fact that he had 43/100 of the river. The objection is sustained because it would be merely a repetition.

MR. THOMAS: All right, I shall not press it.

Q In reference to the amount of water that you turned down these laterals in the city, what do you say was the amount of water that you turned in as compared with the amount of water that

is now being turned in?

A It is practically about the same.

CROSS EXAMINATION by Mr. Thurman.

Q You stated that in low water you knew of no waste water -- I desire to repeat my questions I asked a while ago when interrupted, as to what you mean or have in mind by waste water?

A That would be water that would run through the whole length of the canal that was not appropriated.

Q Water that was not used --

A Used on any land

Q Running off?

A Yes sir, running down in through into what we would call the tail race.

Q Now, there can be waste water when it doesn't run off the surface, can't there?

A There can be what might be termed waste water off a man's piece of land when he is irrigating, which cannot be avoided very well.

Q Well, I am speaking now, aren't there some lands particularly with an indefinite depth of gravel subsoil that can have water poured on it unnecessarily and be in effect a waste?

A That is easy cured.

Q I say can't there be such?

A Oh yes.

Q A case as that? A. Yes.

Q Where that occurs, you say that can be cured?

A Yes.

Q How would you cure it?

A By turning a larger stream on it so as to throw it over quick.

Q If such land is not watered that way there is quite sure to be more or less waste, isn't there?

A Yes sir, you can turn a small piss stream of water out on a piece of land of that kind, say in half a dozen places, and

it wouldn't run any distance at all until it would all sink down, it wouldn't go over the ground at all, but if you put all those half a dozen streams into one then you could crowd it over a strip.

Q And to water is that way as you have described it would be just as effectual a waste of water as it would be to run it through a field and then let it run off?

A Yes sir, I would call that a waste anyway just as much so as through it run through the whole length of the canal.

Q Now prior to the erection of the factory and the enlargement of the race, where did the water go to and for what purpose was it used in that same race?

A Which, the Factory Race?

Q Yes.

A It was used on some city lots and some farm lands and irrigated a portion of the First Ward Pasture.

Q But there wasn't as much water run through then, in fact, couldn't get through, as goes through now when the factory is -- the race is running to its capacity.

A No sir, there was no need of it.

Q There was not need of it? A. No sir.

Q But the water that did run in the race, being a smaller amount, was used below the mill on city lots, farm lots and farm lands?

A Yes, to some extent, not all of it.

Q Now, there must have been some more water turned into that race after the Factory Race was enlarged so it would carry it, was there not?

A Yes sir, there was more water turned into it than what there was.

Q Where did that water that was turned into it go before, do you know, in the low water season?

A Well, at that time I think it run right down into the lake.

In low water? A. Yes sir.

Q That early? A. Yes sir.

Q I mean that late?

A Yes, that late.

Q So that up to '71, I am speaking now of low water, you had no scarcity of water?

A No sir, I don't think there was any scarcity of water to speak of up to that time. In fact, best of my recollection, there was some water that run down the river into the lake all summer long.

MR. THOMAS: What year was that?

A '71.

Q Now, the canals have not been enlarged since that time?

A No, but there has been more of them built.

Q In Provo City?

A No, not from the river.

Q I am speaking now about Provo City, all of this relates to this.

A No, Provo City is just about the same as it always had been.

Q The canals have not been enlarged in Provo City since that time?

A No sir,

Q And if I understood you right you said the use of water had not been increased since that time?

A No, it has not been increased only what would be in a small proportion where there was a little more land taken in. a good many years ago at the lower end of the East Union ditch. Mr. Randall, I believe, had a piece of land taken in, the last one.

Q You don't have any recollection, I suppose of the quantity of water that prevailed in the East Union ditch, for instance, prior to '71?

A No, not from any measurements.

Q Well, have you from any estimate that you made, your judgment?

A Well, there was somewhere near the same amount of water that is flowing there now.-

Q And that would be the same with all the races?

A Practically, yes.

Q Except the Factory Race, which you say was enlarged in '71?

A The race was enlarged down here, but at the intake the race is just the same today as it has been all the time, and it is so situated that if you were amind to you could turn three times the water into the intake of the Factory Race today that is running there, so far as the intake is concerned.

Q Is it true as stated here, suggested by somebody, that the intake from the river was a natural channel?

A Yes sir.

Q How far down does that extend?

A Oh, that runs plumb through the city here at one time.

Q Now, that was enlarged for the purpose of carrying more water, wasn't it?

A Ye s sir.

Q The race?

A That is down here.

Q The race itself?

A At the intake it wasn't enlarged that I know of.

Q Prior to that enlargement of course it didn't carry the quantity of water it can carry to day? A. No.

Q Did you, during your period as watermaster, Mr. Gee, did you use the water nights and Sundays from the Factory Race?

A With the Factory Race.

Q The water of the Factory Race, did you use it nights and Sundays?

A Yes sir, used to turn the water off at half after five at the head in low water time, and distribute it amongst the various canals that were under the city, half after five every night, and turn it back the next morning at six o'clock, or as near that as could be so that it would start the mill power here at the time they began to work at seven o'clock; and Saturday afternoon it was turned off and left turned off and divided amongst the various canals until Monday morning.

Q Is that the only time you ever took the water of the race,

nights and Sundays, the hours you have named?

A Oh, that is all the time there was any necessity of changing the flow in any of the canals.

Q How is that?

A I say there was no necessity of changing the flow in any of the canals during high water time.

Q I am talking about low water?

A Low water time, that is all the way we had of doing in order to reach the demand.

Q I say is that the only time you took it from the Factory Race, nights and Sundays? A. Yes sir.

Q never took it in the day time?

A No sir.

Q Was there water running to waste in the lake at the time when you would take the Factory water at night and Sundays?

A No sir.

Q At the time you speak of when the water was running to waste, would be before that period, of time? A. Yes sir.

Q Down to what time would you say the water would run to waste during the summer, low water time, just your best recollection of what -- about what time that ceased?

A I don't think there was any of the water that run down trough the river into the lake after the cummer of '82.

Q '82? A. Yes.

Q Now, that was the first year that you commenced, wasn't it?

A Yes sir.

Q As watermaster? A. Yes sir.

Q Well, you think that it run -- the custom was for it to run down all through the low water down to the time you commenced?

A Well, yes sir, there was no division of the river, everybody went and helped themselves, and to the best of my recollection there wasn't all the water appropriated at that time.

Q Was there any extra quantity of land brought in at that time making a greater demand on the stream?

A Under the city?

Q That you know of, yes.

A No, there was no extra land brought in under the city to speak of.

Q Was there any brought in under any other canals that you know of?

A Yes sir.

Q Extra land, I speak of?

A Yes, that is, there was new land brought in under cultivation.

Q Where was that?

A Oh, in most of the canals, in what was called the Brown, called Huber Canal, Tkmpanogos, Upper East Union and whole pile of them.

Q They began to spread themselves about that time?

A Yes, it began to be necessary to have something to live on so that we could pay taxes.

CROSS EXAMINATION by Mr. Ray.

Q Mr. Gee, did you ever make a measurement of Provo River yourself? A. No sir.

Q At no time? A. No sir.

Q Any testimony that you have given relative to the proportion received by Provo City is dependent upon the statement of some other person?

A No, that was by the measurement.

Q It is what somebody else told you about the measurement, wasn't it?

A I was there and seen it done.

Q Saw it done?

A Yes, but I didn't measure it.

Q Did you check the correctness of the measurement?

A Well, sometimes I did, if the water wasn't there in the canal where I was interested then I was a little particular about it.

W. A. NUTTALL, called by the defendant Provo City,  
being first duly sworn, testifies as follows.

DIRECT EXAMINATION by Mr. Corfman.

Q Your full name?

A William A. Nuttall.

Q Where do you live?

A About a mile and a half south of Provo City or this court?

Q How long have you lived in Provo?

A Eight years, little over.

Q How old are you?

A Thirty-eight years old.

Q What business are you engaged in?

A Farming and dairying.

Q How long have you farmed?

A I have farmed all my life, that is, ever since I was <sup>large</sup> enough to  
do any kind of work.

Q You farmed, I understand you, about ten years here at Provo?

A Yes sir.

Q Under the Provo City water system?

A Yes sir, and the Upper East Union.

Q That is included in the Provo City water system.

A I didn't know whether it was or not.

MR. THURMAN: And the Upper East Union?

Q You said the Upper East Union?

A Yes sir.

Q How long have you farmed under the Provo City water system?

A Eight years.

Q Where is the land you farmed.

A Just about a mile and a half southeast of here.

Q How large a tract.

A Why, I had four acres of my own and I run Mr. Roundy's farm  
for two years, just about twelve acres, I suppose under the  
provo City system.

Q Were those lands all irrigated?

A Yes sir. Then I might say too I farmed seventeen acres of city property belonging to Provo City.

Q Where is that situated?

A That is situated just south of the Provo Cemetery.

Q And have you irrigated land practically all your life?

A Yes sir, well, ever since I was large enough to do farm work, after fifteen years anyway, after I was fifteen years old.

Q Now, you were farming then in 1915?

A Yes sir.

Q What lands were you then farming?

A I was farming about thirteen acres of city property and twenty acres of my own and about seven acres of railroad land.

MR. THURMAN: When was that?

A 1915.

Q Were those parcels of land all irrigated in 1915?

A Yes sir.

Q And under what canal?

A Under the East Union.

Q Had you farmed any of these parcels prior to 1915?

A Yes sir.

Q For how many years?

A I believe I have farmed the city cemetery property there about six years.

Q Prior to 1915?

A Yes sir, five or six, I wouldn't be positive.

Q Any of the other parcels that you farmed prior to 1915?

A I own some of this same land with the railroad land that I am renting of the railroad now, and I farm that.

Q How long have you irrigated that land?

A I will modify that a little, I haven't watered that from the East Union water, I watered that from subirrigation water, the water that seeped through from under the cemetery.

Q How many acres was there in that parcel?

A There was ten, but it is divided now by the interurban railroad,

- and I was only using about seven acres, I guess, last year.
- Q Was <sup>all</sup> that land sub irrigated?
- A It is watered from the water that is running out of the waste from the sewer here of Provo City and seepage water.
- Q What crops did you raise in 1915?
- A On my own ground or on all of it?
- Q Yes, on your own ground?
- A I raised hay and grain, wheat and corn and beets and potatoes and some fruit, but the frost got nearly all the fruit.
- Q And have you cropped those lands for several years now?
- A Yes sir.
- Q How did the supply of water under the East Union that you had for those lands compare in 1915 with previous years?
- A Why, it was very short in 1915, in fact, there wasn't more than half delivered to me what I had other years.
- Q Did your crops suffer?
- A Yes sir.
- Q Which particular crop suffered?
- A All of them.
- Q During what months?
- A They began suffering from the middle of July until October.
- Q Were you able to raise the same quantity of these lands you had in previous years?
- A No sir.
- Q What particular crops were affected most?
- A My hay crop was affected more and my grain.
- Q And as I understand you by reason of their being shortage of water?
- A Yes sir. I might state too, if I had had a fruit crop it would have suffered also, but I only had a small amount of fruit on account of the climatic conditions.
- Q What did you do then with the orchard?
- A I watered it just enough to keep the trees alive but they were damaged from drought.
- Q Showed the effects of it?

A Yes sir, they show it today.

Q What did you do with the water ~~that~~ you took from the trees?

A I put it on the hay ground and grain. Of course the grain only needed one watering during the time of the shortage of water until it was ready to harvest, but it suffered during — and cut me short about twenty bushels per acre.

Q And your hay crop was short?

A Yes sir. I might state that the other two previous years, my hay crop ~~last year~~ was ~~that~~ a third less than it was the two previous years.

Q And what would you say as to the other farms?

A Why, my potatoes suffered, I only got about two thirds of what I ought to have got, what I would have got if I had had water to water them. My beans was only about half a crop.

Q Did you make any effort to get the water through the water-master that was on that ditch?

A Yes sir, I applied to Mr. Thompson, I wouldn't be positive how many times, but good many times, each time that I irrigated or tried to irrigate.

Q Now, as to the other, what other lands did you water in 1915 under that ditch?

A I watered the city cemetery property.

Q With East Union water? A. Yes sir.

Q What kinds of crops was grown on those lands?

A It was pasture ground.

Q Did you have sufficient water?

A I had sufficient water on the east half.

Q How about the other half?

A But because of it being sub irrigated during the months of June, July and August, sub irrigates through the irrigation above, but the west half I didn't get watered and it nearly burned up. In fact some of the grass was killed out.

CROSS EXAMINATION by Mr. Thurman.

Q How much of that land is subirrigated?

A Which is that, the city cemetery, property, why it starts in to sub irrigate about this time of the year. I have to irrigate it first two months of the year during May and most of June, then after the latter part of June it sub irrigates through July and August then commences to dry up and I have to water it then the latter part of the season again.

Q Was there any land besides the cemetery land you speak of that sub irrigated in that neighborhood, if you know?

A No, I don't know as there is that the water is not appropriated. There are a number of acres, a few acres that subirrigate for perhaps a month or two months during the year, but they all have to be irrigated during the season, any that I know of in that locality.

Q Did you suffer more than your neighbors did that year you know of?

A Well, not particularly, I believe I got my share, I tried to, and I believe the water master was as liberal as he could with me. I know he tried to get the water to me, at least I thought so, or I would have been seeking higher authority for it.

Q Was it given to you on time or on turns.

A On turns.

Q You made requisition on the watermaster for the water?

A Yes sir.

Q How much of a stream did you have when you were using it, did you have a sufficiency?

A I would state I never got the water at all in the day time of last summer, not one time in the day time after the middle -- after the first of June and the exact amount in second feet I couldn't give you, but it was not sufficient for an irrigation stream. My land is of a gravelly nature, limestone and sediment from the mountain, it is bench land out here and it absorbs water very readily, and you have to have a reasonable stream to

irrigate. You can just run it so far, and just go home and go to bed if you have a small stream because you cannot confine it to barely enough space to push it over any ground unless you have an irrigating stream, and I don't believe in my judgment I had more than two second feet at any watering after the first of June last year.

Q How much do you consider a convenient irrigating stream?

A For that land in that locality a man ought to have at least four second feet.

Q He can handle that, can he?

A Yes, he can handle ten on a twenty acre farm, more than that I guess, man that understand how to handle water to the best advantage.

Q How is the subsoil there on this land, gravelly?

A Why, there is wells dug in that locality as far down as thirty feet the soil is the same, it is a mixture of gravel and settlement from the mountain, just layer after layer been washed off them. It is thirty feet we know. We don't know how much deeper this gravel is. Some places there is streaks of gravel maybe two feet thick. It is very gravelly, and then be a layer of soil and gravel in it, not quite so much gravel in it. That is the nature of the bench.

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GEORGE GRANEMANN called by the defendant Provo City,  
being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q How long have you lived in Provo?

A Fiftyone years.

Q How old a man are you?

A fiftyone years.

Q What business are you engaged in?

A In farming and fruit raising at the present time.

Q How long have you been a farmer?

A I have farmed myself ten years?

Q prior to that time -- the last ten years?

A Yes.

Q prior to that time had you farmed for others?

A No sir, I was contractor and builder for twenty-five years.

Q You have only farmed during the last ten years?

A Yes sir.

Q Own land?                    A. Yes sir.

Q Where?

A I<sup>n</sup> the southwest part of the town or field.

Q Under what ditch?

A Under the Tanner Race, I believe it is called.

Q ~~How~~ How many acres do you own?

A I own eighteen acres.

Q Do you irrigate it all?

A No sir.

Q What part do you?

A I irrigate thirteen acres.

Q What kind of crops do you grow?

A I grow, hay, beets, potatoes, beans and apples.

Q Is that the class of crops you raised in 1915?

A Yes sir, with the exception of apples. Frost got those.

Q And Mr. Granemann, what lateral from the Tanner Race are you on?

A Well, I believe I am on the main ditch, on the tail end of it.

Q Of the Tanner Race?                    A. Yes sir.

Q And are some city lots irrigated from that race?

A Not that I know of.

Q But you are at the bottom of the canal?

A Yes sir.

Q Lower end of it?

A One man below me on the ditch.

- Q And you have been living on that land for ten years?
- A Yes sir.
- Q And irrigating it?
- A Yes sir.
- Q In 1915, how was your supply of water?
- A It was very short.
- Q Did your crops suffer?
- A Some of them did.
- Q Did you raise less to the acre than usual?
- A Some part of it.
- Q Living on the lower end of the ditch how do you manage to supply your lands with water for irrigation?
- A Whenever my turn comes on a Monday morning the last two years first thing I do is take my shovel and go up the ditch, see that there is no leakage anywhere. As soon as I get back and my time commences at nine o'clock, I turn the water on. I stay with that water until I am through until my turn is up and use it to the very best advantage. I never leave the field during that day, and after my turn is gone or man above takes my water, I keep my dams in there if I need any more water which I did last year, don't take my dams out until it has to go to the man below.
- Q You keep your dams in after your turn or time is up?
- A I kept them in practically all summer last year.
- Q Did you get some water that way?
- A I got just a little once in a while.
- Q And in previous years what do you -- how did you compare the quantity of water that you got by that means with previous years?
- A Well, I have never had to do that previous years, keep my dams in entirely.
- Q Did you sometimes?
- A Sometimes I did, yes sir.
- Q What would you say as to the quantity going down that ditch in previous years as compared with last year?

A As a whole, you mean, during my wateringturn and everything?

Q Yes.

A Well, it was considerably shorter, I couldn't state any definite.

Q Not so much. A. No.

Q7 Do you know whether that has been the practice of your neighbor still below you on this ditch?

A At sometimes, yes sir. I did once or twicetake my dams out to let him catch waste water that come down, being as he needed as bad as I did.

Q Now, how often do you get the water?

A Once a week.

Q What crops did you notice were affected by not having sufficient water.

A My hay crops was pretty light, my best crop was rather light. I took the water from my orchard nearly entirely to use on my beets and potatoes to keep them growing.

Q Still theywere light? A. Yes.

Q You raised no apples? A. No.

Q If you had an apple crop could you have done that?

A No sir, I would have saved my apples probably in preference to some other crop.

CROSS EXAMINATION by Mr. A. L. Booth.

Q How many hours do you get to water every week?

A I get to water thirteen hours a week.

Q What is the character of your other five acres?

A Why, it is bottom ground.

Q Used for pasture or meadow?

A Meadow, and I have a piece of cultivated ground, low ground, there is no water for it.

Q Do you know anything about the measurement of water?

A No sir, I don't.

Q You couldn't say what size stream you have?

A No sir, not in feet.

- Q That is what I mean, do you know whether you get, say about the same size stream as the man above you? and the man below you when watering?
- A As far as I know I do what I have seen in the ditch at different places.
- Q Who is the man below you?
- A Peter B. Johnson.
- Q Who is the man next above you?
- A It is the Taylor & Roberts farm. Mr. Willard is farming it at present.
- Q Is your land similar to the Taylor & Roberts land?
- A Yes sir, generally speaking it is.
- Q Did you see any of the experiments that were carried on on that farm last year, Taylor & Roberts?
- A In what way?
- Q BY the city engineer. A. NO sir.
- Q So far as you know you get a stream about the same as the Taylor & Roberts farm? A. Yes sir.
- Q When they irrigate?
- A (No audible response.)
- Q What difference in the amount of hay did you find last year from the year before?
- A Well, I have found probably a ton to the acre on the last two cuttings. The first cutting of course we don't cut any thing practically speaking.
- Q Wasn't the weevil pretty bad last year?
- A On the first cutting, yes sir, but not on the other two.
- Q You say you had plenty of water for the first cutting?
- A After the first cutting generally we have plenty of water.
- Q And you say your beet crop was light?
- A Yes sir, they were short.
- Q How much difference were they from your bean crop of other years?
- A Well, they were about half, I wouldn't charge it all to the water, I had a little poorer stand of beans.

Q Was that due to frost?

A No, they didn't come up good.

Q You didn't replant them?

A No, and I didn't replant them.

Q Were there any other crops besides your hay and beans that were short?

A Not that I could notice. My beets were probably a little short of other years, ton or two per acre.

Q Would you lay that to the lack of water?

A Well, I could lay it to the lack of water as well as anything else. There was no other cause for it I know of, no blights.

Q Did you have beets on the same land last year as you had years before?

A. No sir.

Q How many acres of beets did you have there?

A I had two acres of beets.

Q Is that about what you have each year?

A On that irrigated ground, yes sir.

Q That is what I mean? A. Yes sir.

Q Beets were short all over last year, were they not?

A Why, I don't know, I couldn't say as to that.

Q I mean outside of Provo District entirely?

A The average probably was a little lower than it has been other years.

Q And you think yours was more short than the average in the whole county from what you have heard?

A Well, I don't know just what the average of the county was.

Q Haven't you heard the beet farmers talking about the shortage?

A Yes, to a certain degree or figures.

Q Who turned the water to you?

A I suppose the water master does.

Q You found the water coming down every Monday morning?

A Water comes down to us every Monday morning at five o'clock, supposed to.

Q And your neighbor takes it at five and you take it at nine?

A I take it at nine.

- Q What is the shape of your land? is it in a square or is it in a long piece?
- A Why, it is forty rods by thirty-six, one piece, and then I have my hay ground on the side of that. That is -- well it is in an oblong shape.
- Q How long, the length of the waterings?
- A Thirty-six rods on my farmground.
- Q How long on your alfalfa?
- A Why, it will run there from six to twelve rods long.
- Q You have to change it over --
- A Yes, I have to be there and change it every little while.
- Q Do you find that it is advantageous to have the short waterings of twelve rods on your alfalfa or the long watering of thirty-six rods on your other crops?
- A Well, I cannot get away from either proposition. The condition my land is in I cannot get away from it. I cannot lengthen out the short rows and I don't see how I can shorten the long ones on the lay of the land.
- Q Can't you put a head ditch down half way through your ground?
- A I could do it if I was mind to cut my farm into ditches I could do it, yes sir.
- Q Wouldn't that enable you to get over your ground much better if you did that?
- A No sir, I don't think so.
- Q Think you can run the water 36 rods just as soon as you could run it twice 18, do you?
- A Good slope to my ground, I have no trouble watering when I have got the water.
- Q Did you try to water all the ground every irrigation week?
- A No sir.
- Q Just half of it?
- A I couldn't water half of it last year.
- Q Well, generally do you try to water it all every week?
- A I always water every row and every foot I can every time.
- Q Every week?

A Every week.

Q Other years then you try to water all your land every week?

A No sir, I have never tried to do that because it is an impossibility, I couldn't do it.

Q That land will go two weeks without suffering very much, won't it?

A You ought to go down there and see it after it goes two weeks, part of it, I have got some gravel down there that will burn anything up in two weeks time.

Q Is your land mostly gravel?

A There is about one third of it, I have a streak of gravel running diagonally through the piece.

Q This that<sup>is</sup> not gravelly, however, will last two weeks?

A That will last ten days and gets a good watering, but in order to water that gravel I have got to run it over some of the other ground.

Q When did your scarcity of water begin in 1915?

A About the middle of July.

Q Up to that time you had reasonably sufficient?

A Yes sir.

Q And did it continue short until the end of the irrigation season? A. Yes sir.

Q From then on? A. Yes sir.

Q Did you harvest any of your crops before the end of the irrigation season?

A No sir, I don't think so.

Q All of your crops were gathered late?

A Yes sir.

Q That you raised?

A Yes sir, gather them in the season we generally gather our crops.

Q Those crops that you have been raising you irrigate very early in the spring until late in the fall?

A Well, I don't irrigate my beets very much in September, probably one irrigation is all, first part of September, that is all.

Q How about your beans?

A Well, we don't water the beans after they begin to ripen, that ain't along until about the first of September.

Q Then after the beans and beets don't need irrigation were you short of water also?

A Why, I had to water my ground again before I could plow it.

Q You watered it in order to enable you to plow it in the fall?

A Yes sir, to get fall plowed I had to water all of it.

Q Did you fall plow it? A. Yes sir.

Q How soon in the spring did you begin irrigating?

A I irrigated my beets last Monday, week ago yesterday for the first time.

Q I mean in 1915?

A 1915 I don't remember the date exactly, but not near as early as I did this year. We did have a little rain last spring, it was somewhere along about the first of July, I believe, when I commenced.

Q You watered some of the other crops before July first, didn't you?

A I watered my hay, yes sir.

Q Is that the only one?

A I had watered my orchard.

Q Your hay and orchard are the only ones you watered until about the first of July?

A That is practically about all, yes.

MR. A. C. HATCH: Was that last Monday, Monday of this week?

Q Was it yesterday you referred to as your first watering this year?

A No, week ago yesterday on my beets. That is the first watering on my beets.

Q Did you irrigate your land for fall plowing while the crops were on? A. No sir.

Q And about how late was it when you did irrigate them for fall plowing.

A Well, I don't just remember, sometime in October.

Q Now, you didn't have a shortage of water for fall plowing, did you, you got all you wanted then?

A During the fall plowing?

Q Yes.

A Well, <sup>yes,</sup> there was water enough then.

Q Other people had stopped irrigating ?

A Some they had.

Q There was no difficulty about getting all you wanted for your fall plowing?

A I got my ground watered for fall plowing.

Q Why couldn't you water your last crop of lucern if your beans and beets didn't need watering?

A Well, I suppose I did, my lucern didn't burn up entirely, I give it all the water I could spare, all I could give it.

Q How many acres of lucern have you?

A Well, I think about three acres of lucern.

Q How much did you get off that piece during the whole season?

A Well, it is hard to tell, first crop was practically nothing.

Q How much did you get the other two crops?

A The other two crops I practically got six or seven tons.

Q Off of the two acres. A, Yes sir.

Q Three acres?

A Three acres.

Q How many tons of beets did you harvest?

A I harvested about fourteen tons to the acre.

Q Fourteen ton to the acre? A. Yes sir.

Q You have harvested more than that before?

A Yes sir, generally run me about eighteen ton.

Q Was there any other year when your beet crop has been short?

A Not that short, no sir.

Q How short has it been.

A I think sixteen is about the lowest it has ever been before.

Q What season was that?

A That is about four years ago.

- Q Do you know whether the water was short that year you got only sixteen ton?
- A No sir, I don't remember very much about that.
- Q You didn't lay it to a shortage of water then?
- A That was not -- the shortage was last year. Eighteen tons is about as much as I ever raised on that ground.
- Q So sixteen would be about the average?
- A That is about the average, yes sir.
- Q You say you don't put the beets on the same ground each year?
- A Yes sir, try to do it.
- Q And do you fertilize your ground? A. Yes sir.
- Q For beets or for the other crops?
- A For beets and the other crops as well. Usually fertilize for potatoes if I can and then follow up the potatoes with beets.
- Q What kind of fertilizer do you use?
- A Barn yard manure.
- Q Did you fertilize these two acres of beets the year before?
- A Yes sir.
- Q That was in 1914? A. Yes sir.
- Q That is the way you do generally? A. Yes sir.
- Q The second year after -- or the year after the fertilizer you put the beets on? A. Yes sir.
- Q Have you had a shortage of your other crops before last year?
- A No sir, nothing to speak of.
- Q Have you ever had any shortage of water before last year?
- A Well, sometimes I have, but not as serious as it was last year.
- Q When you had these other shortages compared with the flush years of water, did you crops -- did you get that much less crops?
- A Why yes, generally speaking we would, naturally would.
- Q You know last year is the lowest year it has been for many years for water?

- A Yes sir, lowest year since I have been on the farm.
- Q As far as you know it is the lowest we have had at all, isn't it?
- A Yes sir, I believe so.
- Q Did you know -- by the way, I will ask you another question first, did you ever go to the watermaster and ask him for more water?
- A. Yes sir.
- Q What did he tell you?
- A He said he would get it if it was possible.
- Q Did you ever hear that there was water that was being taken other places?
- A. Yes sir.
- Q Where?
- A I have heard several times that the canal up here had more water than belonged to them, they had our water.
- Q Which canal?
- A The Provo Reservoir Company had water that rightfully belonged to us, as a matter of fact, talked between neighbors was all, just hearsay.
- Q That is the only canal you heard had your water?
- A I don't know, there has been other canals mentioned, probably too.
- Q Don't you know as a fact the Provo Reservoir Company got only the water that was turned out of its reservoirs and turned out by the commissioner less the loss?
- A No sir, I don't know anything about it.
- Q And during the low water period?
- A No sir, I don't know anything about it only by hearsay.
- Q The people generally charged their troubles to the reservoir company?
- A Probably.
- Q Because of the shortage of water?
- A They do.
- Q Although they were under a commissioner of this court?
- A So I understood yes sir.
- Q Now, when you heard the commissioner was giving more water to the reservoir company, did you ever complain to him?

A I don't know, I have heard it in that way, that the commissioner was giving them more than they were entitled to nor I don't know they were, that they had more than they were entitled to .

Q You just heard it?

A I just heard it, I don't say anybody had more than they were entitled to. I just heard it that way, just simply hearsay.

Q

CROSS EXAMINATION by Mr. Ray.

Q Mr. Granemann, you live at the tail end of the race with just one irrigator below you? A. Yes sir.

Q How many irrigate above you of the same system do you know?

A Why no, not for certainty, but I should judge there was about twenty.

Q And last year you were required to keep your gates in the to catch flood water?

A Yes sir, I did it.

Q Any of the <sup>quantity</sup> ~~quantity~~ above you would have had the same privilege if they needed it?

A Yes sir.

Q Still it passed them all?

A What I got of course did pass them, but I don't know how much they got, I don't know anything about it.

Q At least there were substantial quantities, that is, quantities that were useful to you that passed the other eighteen head gates and you picked up next to the ~~land~~ last man for irrigation purposes?

A What little I picked up last summer didn't do me much good, was willing to take what I could get.

Q If you pay attention to the question, whatever you did pick up passed the other eighteen head gates?

A It must have done it.

Q I understood you to say in answer to your counsel that by the use of this waste water you were able to get along fairly well, although you suffered some?

A It helped me, yes sir.

Q And it would have helped them if they had taken it?

A Yes sir.

Q And if they had needed it?

A Yes sir.

Q Now other years you have not been required to do that?

A Not as much as I did last year. I have done it other years.

Q But ordinarily not? A. No.

Q Left your head gates open? A. Yes sir.

Q And the water passed on down?

A If there was any, yes sir.

Q There was some, wasn't there?

A I didn't stay out there to watch the ditch when my turn was done, and I had my ground watered, I paid no more attention to the ditch until it was my turn to water again.

Q Do you know whether some did pass?

A Yes, there might have been some, when we had a stream or something.

Q You say the water come down the ditch in the very driest year you have known? A. No sir.

Q To you? A. No sir.

Q You don't understand my question, Mr. Granemann, you say water come down the ditch to you which you got with your head gate last year, didn't you?

A Very little, very little.

Q Was some?

A I don't believe it would have watered half an acre of ground altogether that I got during the season.

Q Other years there was more than last year, wasn't there?

A Yes, generally speaking.

Q And sometimes you got it and sometimes you didn't?

A Yes sir.

Q How much per ton do you usually get on your second crop, hay per acre?

MR. COREMAN: Object to this as immaterial, let me

understand the question.

- Q How many tons per acre do you usually get on your second crop of hay?
- A Why probably two and a half tons.
- Q How much on your third?
- A That will run maybe ten and a half.
- Q How much on your first when you don't have weevil?
- A Well, I have raised as high as three ton on the first crop.
- Q So that would be about eight tons to the acre?
- A During the season.
- Q That is a very unusual yield, isn't it?
- A Well, I have raised it on new ground, and new hay.
- Q Seven tons that would be -- when did you cut your first crop last year?
- A I don't just remember, somewhere along about the middle of June, I think, from the tenth to the twentieth.
- Q Your second crop?
- A Well, that generally comes on about six weeks later.

RECROSS EXAMINATION by Mr. A. L. Booth.

- Q Don't you cut the first crop early if the weevil is bothering you?
- A I have done, yes sir, the last two years, cut it a little early.
- Q So that gave you a better growth for the second crop and the third?
- A Well, yes.
- Q By reason of cutting it early?
- A Give a little advantage that way.

CROSS EXAMINATION by Mr. A. C. Hatch.

- Q I would like to ask one question for information, do you know whether or not cutting the hay before its maturity has a tendency to retard the growth for the second crop?
- A I don't know that it does.
- Q Do you know that it does not.                      A. No sir.

Q And you have only recently commenced to cut it so early, and that on account of the weevil?

A Yes sir.

Q That is true, isn't it? A. Yes sir.

Q Now, can you say that your second and third crop was reduced in quantity wholly by reason of the lack of water?

A Well, I believe it was to some extent.

Q It might have been injured by reason of cutting the first crop so early and thereby retarding its growth, might it not?

A Well, I couldn't say as to that.

CROSS EXAMINATION by Mr. Bagley.

Q Mr. Granemann, are you able to say whether there was -- whether all the water in the city system was being used last year when you were short?

A Whether it was all being used in the whole system or not?

Q Yes.

A No sir, I couldn't say.

Q And you are not able to say that if all the water in the city system had been properly distributed that you would not have suffered?

A I could not say that right, no sir.

RECROSS EXAMINATION by Mr. A. C. Hatch.

Q There is one other question, if you have -- when you have had plenty of water, if your second and third crops of lucern have been as great as they were before you commenced to cut the first crop so early on account of the weevil?

A Well, I don't know as I ever noticed any difference because I don't weigh my hay. I just simply go out and put it on the wagon, what I can conveniently handle, haul it up and put it in the barn, and I don't really have any idea what I do raise when it comes right down to the pound, because I never weighed any of it, use it all myself.

Q I thought probably your experience since the weevil first came

to the crops here would be such that by calling your attention to the matter we might determine whether that cutting early could actually retard the growth of the second and third crops?

A I haven't come to any judgment on that matter whether it has or not.

RECROSS EXAMINATION by Mr. A. L. Booth.

Q From your experience, which of these crops that you have been raising would you say takes more water to mature?

A I believe the beets take more water than any other crop that we raise.

Q And do you think that the amount of water that would mature a crop of beets would also mature any of these other crops people raise on that land down in your neighborhood?

A Yes sir.

---

DAVID S. KLING, called by the defendant, Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q What is your full name, Mr. Kling?

A Davis S. Kling.

Li

Q live in provo? A. Yes sir.

Q How long?

A Twenty six years.

Q Farmer? A. Yes sir.

Q How long have you farmed?

A Twelve years.

Q Own land? A. Yes sir.

Q How long have you owned it?

A Twelve years.

Q Is it within the provo City water -- A. Yes sir.

- Q Irrigation system? A. Yes sir.
- Q Have you irrigated it? A. Yes sir.
- Q For the last twelve years? A. Yes sir.
- Q How many acres?
- A There is about eighteen acres.
- Q Under what canal?
- A We get our water out of Tanner's race, or Dry Creek, some calls it.
- Q What crops do you raise on your land.
- A Why, hay is my principal crop. Hay and beans and potatoes.
- Q Any fruit?
- A Yes sir, apples and some pears and small fruit like raspberries.
- Q You attended the irrigation of your farm personally in 1915?
- A Yes sir.
- Q What would you say as to the amount of water that you had for the use of the land in 1915 as compared with other years?
- A Compared with other years I should say it was at least a third less.
- Q What effect did ~~you~~ it have upon the crops that you were raising?
- A It had a very bad effect ~~my~~ ~~has~~ on the crops that I took the water off of to help other crops.
- Q Was it necessary to take it from some crops?
- A Yes sir.
- Q And apply it to others?
- A It was.
- Q Now, can you tell the court just how you managed to irrigate your land and results you had?
- A I have got two acres and a half, about that, in a orchard and truck ~~patch~~ patch and berries. I keep that orchard alive with two artisian wells that I have and I only give my wheat two waterings. It ought to have had one more watering, but I took it off of there to keep my lucern growing. I wanted some hay and I found that my wheat fell short in bushels to what it should have went, what it averages.

Q In other years?

A In other years.

Q How much?

A About twenty bushel to the acre.

Q Were any of your other crops short?

A Well, my beans were short.

Q Why.

A I think it was on account of the shortage of water.

Q Did you have as much water last year as usual?

A No sir.

Q Did you make an effort to get more water when you found you were short?

A I did.

Q What did you do?

A I went to the watermaster and asked him if he couldn't give us any more water. He said he would do the best he could for us, and I believe the man did.

Q Who was your watermaster?

A The deputy is Walter Peay.

MR. BAGLEY: Move to strike out "we believe that he did".

THE COURT: That may go out.

Q When did you first notice the shortage in the supply of water? from what you usually had had?

A About the middle of July, ~~before~~ but I noticed a shortage before that but I didn't really suffer much until about that time.

MR. RAY: What date was that?

A About the middle of July.

Q How long did it continue?

A It continued during the balance of July and August.

CROSS EXAMINATION by Mr. A. G. Hatch.

Q You say you have two artesian wells on your place?

A Yes sir.

Q What is the flow of those wells?

A I don't know by inches.

Q About how much do they flow?

A I have never attempted to measure them.

Q Flow sufficient to irrigate your orchard last didn't they?

A It was sufficient to keep about two acres and a half in -- well, from dying.

Q Is this the same ditch that the former witness --

A No sir.

Q -- uses the water from?

A No sir, I water out of 8th and 9th West.

Q How many are there on that ditch above you?

A There is a good many, I don't know.

Q Approximately?

A Oh, you see now you are getting into the platted district of Provo.

Q Yes.

A Well, there isn't very many --

Q That irrigate from the same ditch.

A How many?

Q Yes, who irrigate from the same ditch?

A Yes sir, we all, all those that live on 8th West irrigate from the same ditch or ditches.

Q What is what is called a farm ditch, isn't it?

A A what?

Q A farm ditch?

A I don't know what it is called.

Q It carries more water than that which runs down the ditches east of Academy Avenue, does it not, within the platted portion of the city?

A Well, I don't know as to that whether it carries more or not.

Q When you are irrigating your farm land do you know whether or not there is an increased quantity of water put into that ditch, the ditch from which you irrigate?

A Well, I don't know that I can answer that whether they increase

the flow of water in there.

Q For the farm lands such as your farm land?

A Yes sir.

Q Or what is called farm lots?

A It is acres. Now the ditch, I believe the ditch is a little bit larger, but the cement pipe is not a bit larger on the ditch that I get my water through than they are on the side that the city lots are watered.

Q But the cement parts are never filled with water in the platted portion of the city, are they?

A I don't know, I couldn't answer that.

Q You say you took the water from your wheat crop to put it upon your lucern? A. Yes sir.

Q Now, the wheat needed only one more irrigation in order to properly mature it, did it, at the time?

A I think so.

Q What do you mean by that, you think it needed more?

A Yes, one more.

Q Just one more?

A I think <sup>one</sup> more would have been sufficient.

Q Now did you, at the time you took the water from your wheat crop to put upon your lucern crop, consider whether or not it would be advantageous?

A I did.

Q That you took the chance of losing twenty bushels per acre of your wheat in order to increase in a small quantity the amount of lucern?

A I didn't know that I was going to lose twenty bushels to the acre.

Q You felt at the time you took the water from the wheat that it would go through without that extra irrigation, didn't you?

A I thought that in a pinch it would be more beneficial for me to use it on the lucern than it would be on the wheat.

Q Then it was simply a mistake in your judgment as to the necessity

of the wheat having water, wasn't it?

A Well, is it possible that is right.

Q Had you known the result you would have applied the water upon the wheat instead of putting it on the lucern, wouldn't you?

A I needed the hay pretty bad.

Q When did you harvest the wheat?

A Why, along in August.

Q And when did you irrigate it last?

A Why, about the first of July, if I remember right.

Q Then between that and the time you applied it upon the lucern you had had how many turns of water?

A I water my land about once every twoweeks.

Q And the wheat is irrigated once in two weeks also, isn't it, or does that go longer?

A I don't know, I would rather risk wheat to go three weeks than  $\tau$  would lucern.

Q The scarcity of water didn't come until after the fifteenth of July, did it?

A Yes.

Q I thought you stated that your crops didn't suffer until after the fifteenth of July?

A Why, I live down here on the lower end of that water ditch, it gives me an advantage over a whole lot of people, because these people up on those city lots most of them have artisian wells they use. If it had not been for that I would not have raised anything scarsely last year.

Q& Do you mean to say by that statement that the people up in the city have more water than they need to apply upon the city lots?

A I mean to say that they use their artisian water and they pay their city taxes on their other water and if they want to use it they do so. If they don't --

Q Then they didn't use it last year, is that what you mean?

A Well, there was a good many of them that didn't yes.

- Q And by reason thereof you got what would be termed waste water from these city lots and used it upon your farm?
- A I don't know whether it was waste water. It wasn't when I got through with it.
- Q But it was so far as those above you on the ditch whose right it was to use it was concerned, as to them it was waste water, wasn't it?

MR. THOMAS: Object to this as calling for a conclusion of the witness.

- Q Or a surplus?

MR. THOMAS: Same objection.

THE COURT: Objection is sustained, I think it is plain.

- Q Why didn't you, if your wheat needed water, irrigate it again before the fifteenth day of July when the water began to get scarce.
- A How is that?
- Q When you watered the first of July?
- A I am a little hard of hearing.
- Q I say, having watered your wheat on the first of July why didn't you water it again before the fifteenth of July when the water got scarce?
- A I was using it someplace else.
- Q There was plenty of water to have used upon all your land up to the fifteenth of July, wasn't there?
- A I don't know there was plenty, no.
- Q And had your wheat been irrigated say on the fourteenth day of July, it would have matured a full crop, wouldn't it, last year?
- A Well, it would have helped it, I think.
- Q It is not usual for the wheat harvest in this vicinity to go until August, is it?
- A Wheat?
- Q Yes.
- A To be harvested?
- Q Yes.

A Yes, plenty of it.

Q Isn't the harvest usually in July?

A Well, latter part.

Q And the forepart of August the wheat is all harvested in this vicinity, isn't it?

A I don't know -- no, it is not, there is wheat and grain harvested down here way late.

Q Well then it is such as is put in a way late, isn't it, about the first of June?

A I don't know when they put it in, I guess they do put it in rather late, some of them.

CROSS EXAMINATION by Mr. Ray.

Q Mr. Kling, how many bushels of wheat did you get per acre last year, or altogether last year?

A Per acre?

Q No, altogether, what was your total?

A About ninety bushels.

Q On how much land?

A Two acres.

Q Ever measure the two acres?

A Not by a surveyor.

Q Do you know whether it was a full two acres?

A Well, yes, I generally allow pretty fair acres.

Q Forty-five bushels to the acre is a pretty good stand of wheat, isn't it.

A Not for down there.

Q You think sixty-five is just an average stand down there?

A That is a good fair crop.

Q Isn't it a little better than the average?

A Well not for a fellow that farms. They have raised eighty-six bushels, my neighbor has, down there.

Q Isn't sixty-five better than the average crop of wheat down there?

A Well, I expect it is for taking them all around.

Q What is about the average?

A I don't know.

Q Fifty.

MR. THOMAS: Object to it, he says he doesn't know.

Q I am suggesting whether --

A I cannot tell.

MR. THURMAN: He ought to know, he says he lost.

A Do you mean for myself?

Q No, I mean for crops in your vicinity?

A Oh, I don't know that.

Q How much wheat did you raise in 1914, how many acres?

A 1914?

Q Year before last?

A Year before last I raised two acres and a half is all.

Q How many bushels did you have in 1914?

A I had one hundred and fifty odd.

Q From two and a half acres? A. Yes sir.

Q That would be sixty bushels to the acre?

A It was better than sixty bushels, and still wasn't as good as where I had the wheat last year.

Q Who thrashed your grain last year?

A The Robinsons.

Q How much toll did they take?

A They didn't take any.

Q Paid them cash?

A Yes, I had them paid before they thrashed for me.

CROSS EXAMINATION by Mr. Jacob Evans.

Q I would like to ask a question. As I understand it you used the water that runs down the irrigation ditch which runs through the city on 8th West? A. Yes sir.

Q And you were on the extreme lower end of that ditch?

A No sir, there is one man below me.

Q And that ditch is used for the irrigation of city lots as it runs through the city?

A Yes sir.

Q And you get your turn once every two weeks, do you?

A Once a week.

Q And how many hours do you get per acre?

A I get two hours for each acre.

Q Two hours for each acre? A. Yes sir.

Q Once a week? A. Yes sir.

Q You have the same size stream to irrigate your lot that I do, that is usually turned for the city lots, do you not?

MR. THOMAS Object to this as not proper cross examination.

THE COURT: Objection is overruled.

MR. THOMAS: Exception.

A That is used by the city lots?

Q Yes.

A Well, I get my water right through the same ditch. I don't suppose they could distinguish between them and me.

Q So that your understanding is that you use the same size stream to irrigate your farm lands they have to irrigate their city lots?

A No, I don't say that.

MR. THOMAS: Object to this as not cross examination.

Q Do you know of any place in the ditch where the watermaster would have an opportunity of enlarging the stream after it runs through the city and before it reaches your land?

MR. THOMAS: Object to this as improper cross examination.

THE COURT: I will hear from you if you are serious in your objection.

MR. THOMAS: I am serious, he is asking something in the first place, that was not gone into on direct examination.

THE COURT: I understand you went into the size of these lands and shortage of water.

MR. THOMAS: From the city ditches. comparison with those streams I didn't so understand.

THE COURT: I have my notes he was short of water in

'15 and was short twenty bushels of wheat to the acre.

MR. THOMAS: I withdraw the objection.

A Now, will you allow me to make an explanation?

Q Yes, certainly.

A Now, when the water goes across Center Street on Monday morning, from seven Monday morning until two o'clock in the afternoon, that water that goes down 9th West and 8th West belongs to me. Now, if I have a shortage of water I turn that all into one stream. That is why I have more water than a city lot would have certainly.

Q Then I say you get two streams then, do you, two city streams?

A I could do, but have to turn it one watering. I rob Peter to pay Paul.

Q Do you get the two streams combined together and use them together in the irrigation of your land?

A I have a right to combine them because I am supposed to have one stream used on the west.

Q And the other stream on the east? A. Yes, but I combine them in a shortage. I combine them so it gives me some flow to do something with.

Q Then in reality you do have two city streams to use two hours each irrigation every two weeks?

A No.

Q Every week, I mean?

MR. A. C. HATCH: Two hours per acre.

A I have it on the west, you see the farm has got to be watered from both ways, you cannot water it from one ditch, all of it, and on the west I have it for twelve hours and on the east ditch I have it for twenty four, and shortage of water I combine them streams so that I can do something with them.

Q That is what I am trying to find out. Now, prior to 1915 you say you have some benefit by reason of being on the tail end of the ditch? A. Yes sir.

- Q prior to 1915 did you catch a good deal of water that was not used by the irrigators above?
- A I have caught some, yes sir, there isn't a year but what I do.
- Q There isn't a year but what water runs down and you catch it?
- A Yes sir.
- Q That is during the <sup>whole</sup> irrigation season, isn't it?
- A No sir, not the whole, but at times, of course irrigated more when I don't need it.
- Q Than you do when you do need it, it is waste, this waste water?
- A There is more that goes when I don't need it.
- Q Do you get any of that water during the months of July and August that is not used above?
- A A little, yes sir.
- Q And you do, you catch some of that water every year, do you?
- A Yes sir.
- Q Did you get any of it during 1915?
- A A little, yes sir, all I could.
- Q There was some coming down to you in 1915?
- A Yes sir.
- Q In both of the ditches?
- A Not very much on the 9th West, because there was very few wells on that stream.
- Q You got more from the 8th West ditch than you did from the 9th West ditch?
- A I did.
- Q You think your shortage was approximately one-third less than it would be during other years, do you?
- A Yes sir.
- Q And that continued during the late water season?
- A Yes sir.
- Q In July and August, is that right?
- A That is right.
- Q During the month of May you got what water you wanted, did you?

A I don't use much, hardly ever water in May. I don't begin to use it until I have to.

Q And that is about what time of the year?

A Well, depends on the crop. I don't want to put any water on a cultivated crop until along about the first of July.

Q Now, during the average year in low water season do you sometimes allow water to run beyond you to your neighbor below?

A Yes sir.

Q Water that is not used by the people above?

A Yes sir, if there is any there and he wants it he gets it.

Q You and he are neighborly and divide that water up between you that comes down from above?

A Yes sir.

Q And you get some every year, don't you?

A Yes sir.

Q And did get some last year?

A Yes sir.

CROSS EXAMINATION By Mr. A. L. Booth.

Q Whereabouts is your land, Mr. Kling?

A It is situated south of 6th South Street and 8th West.

Q Is it anywhere near what is known as the Taylor & Roberts farm?

A It is way this side of that.

Q How far?

A Well, it don't -- the nearest point would be forty or fifty rods, maybe sixty.

Q You don't water out of the same ditch?

A No sir.

Q Do you know whether your ground is similar to that of the Taylor & Roberts farm?

A I don't know, but I believe it is, that is similar to some of it, but I don't know, I have never been over the Taylor & Roberts place.

Q Have you ever seen the stream of water that goes down to the

Taylor & Roberts place, and Mr. Granemann?

A Yes.

Q How does that compare in size with the stream that goes to your place?

A Well, I don't know, it may be a little larger.

Q That is the Taylor and Roberts, A. Yes.

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5:00 P.M. Recess to 9:30 A. M., June 27, 1916.  
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HENRY W. CROCKETT, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Your full name?

A Henry W. Crockett.

Q How old are you?

A Forty.

Q Where do you live?

A Provo.

Q In what business are you engaged?

A I am the superintendent of the State Mental Hospital farm.

Q How long have you been such?

A For a little over four years.

Q As superintendent of the State Mental Hospital farm, what are your duties in connection with the operation of that farm?

A I am in charge of the entire farm, the raising of farm crops and the looking after of the live stock.

Q You have general supervision of the farm?

A Yes sir.

Q And give it your personal attention? A. Yes sir.

Q Including irrigation of the farm? A. Yes sir.

Q Prior to your engaging with the State Mental Hospital as a farmer, what preparation had you for attending -- had you made for attending to those duties?

A I spent two or three years, about three years at the Agricultural

College and then went to work on the farm first as a laborer, then as the foreman of the horticultural department and later as assistant horticulturist in the experiment station.

Q At the State Agriculture College?

A Yes sir.

Q Now the farm is under what -- the hospital farm is under the what ditch?

A Under the East Union Ditch, that is the greater part of the farm.

Q How many acres do you irrigate from the east Union Ditch?

A One hundred and twenty three.

Q What crops do you raise?

A We raise potatoes, alfalfa, some bats, mango beets and great many vegetables, different vegetables that are required for the feeding of the people there, and pasture, of course raise some pasture.

Q How often do you get the water for the land?

A We get it at no regular interval. We get it or try to get it when we need it when the crops are needing it.

Q You notify the water master under that ditch?

A Yes sir.

Q And what did you would you say as to the amount of water that you had in 1925 as compared with previous years?

A During the forepart of the season we got along fairly well. Along about July, along in the month of July we begin to run short of water, that is, the watermaster wouldn't grant me what water we needed, especially the latter part of July and along into August.

Q Short through that season?

A Yes sir.

Q Did it affect the crops that were growing?

A It did, it affected the potato crop more than anything else.

Q In other years since you have been there how about the supply of water you have had from the East Union?

- A The supply of water seemed better the years previous to 1915. There wasn't -- we usually got the water about when we wanted it. In 1915 there was a lapse of several days, little over a week, I think a time or two that we needed water that we couldn't get it, and in addition to that we used water most of the season at night when we could not really get the best service out of it.
- Q Now, you understand the method that was adopted under that ditch for the servicing of the farming community with the water?
- A. Yes sir.
- Q That is by turn?
- A At regular intervals, do you mean?
- Q No, it is not -- you are not timed?
- A No, I don't understand that.
- Q And the custom as I understand you is, when the land needs the water to call for the water?
- A. Yes sir.
- Q And do you give some notice before time?
- A Usually a day or two, twenty-four hours.
- Q And during the season of 1915 did you serve notice on the watermaster?
- A Yes sir, I served notice on him repeatedly a time or two I would speak to him almost every day.
- Q Now, from your experience as a horticulturist and farmer, what would you say as to the feasibility of the plan that is now adopted and used by the East Union in distributing the water to the land?
- A I would say the plan is as near ideal as it can be made. I never did approve of the plan of giving water at stated times.
- Q Why?
- A Because you may get the water when you don't need it and be compelled to use it because before another turn came the crops would be suffering, therefore it would be necessary to apply water when it was not really needed at time or the water might go to waste.

CROSS EXAMINATION by Mr. A. C. Hatch.

- Q You say you have one hundred twenty three acres, is that all told, or just what you irrigated under the East Union Canal?
- A That is the land that comes under the East Union Canal.
- Q How much have you altogether?
- A We have about fifty acres more than that.
- Q From what source is the remainder irrigated?
- A Comes from the Upper East Union.
- Q Was the conditions under the upper canal any better than under the East Union?
- A No, they are not, we have a regular turn under the Upper Canal
- Q The water, the quantity of water is about the same in both of them?
- A No, during the latter part of the season in the Upper Canal, there is more shortage than there is in the lower, seems to be.
- Q That is the general rule?
- A I think it is.
- Q Later canal? A. Yes sir.
- Q You say your potato crop suffered more than any of the other crops?
- A more than a nything else, yes sir.
- Q How often do you irrigate potatoes?
- A Why, just as they need it, at times oftener than other times, depends good deal on the weather conditions.
- Q Do you know about what would be the average irrigation?
- A It would average about every two weeks during the season after irrigation commenced.
- Q And you have plenty of water up until the latter part of July?
- A Up until say the first or shortly after the first of July.
- Q And when did the water again become plentiful that season?
- A Of course, we didn't -- after the shortage, after the period of shortage then we began to discontinue watering later.

Q Let the crops go?

A No sir, we required less water after that along about, say along the latter part of August; we didn't apply the water, the amount of water that we had before.

Q Your lucern crop did all right last year?

A Lucern crop did all right, yes sir.

Q And all your crops except the potatoes?

A Except the potatoes, potatoes were the only crop --

Q How many acres did you have in potatoes?

A About twelve.

Q About what was the shortage in the crop if you can say?

A It would be hard to estimate the shortage. The yield was fair & fair but would have been better had they had water at the particular time they needed it.

Q What particular time was it that your water could not be had when you needed it?

A It was along the latter part of July, I don't remember the date exactly.

Q Do you know whether you could not have had the water?

A The watermaster said he could not let me have it.

Q Someone else was using it?

A Well, possibly that or there wasn't enough water to meet the requirements.

Q Under such a system as you have there the crops usually need irrigation at about the same period of time, do they not?

A Well, not exactly, you mean at stated intervals, you mean?

Q I mean that the crops, crops are usually planted about the same time in the spring?

A Yes sir.

Q And those crops under that canal all need irrigating about the same time after planting, do they not?

A That would depend on the character of the soil.

Q I am speaking of the land under that particular canal?

A Well, of course, that would depend on the character of the soil, some land is heavier and retains the water longer than

other land does.

Q Under your system do you have the water for one crop at one time? and for another crop at another time as you need it, or do you have your turn and go over all your crops at one turn?

A Go over all that needs it, not over the entire farm at the same time, no sir.

Q Well then, your potatoes didn't need water at the time <sup>you</sup> had your turn immediately before?

A If the potatoes didn't need water when the alfalfa did, the alfalfa would get it and potatoes would not.

Q Then if only ~~w~~ one needed watering say this week, that is all you would irrigate.

A That is all the water we would ask for.

Q Then you would depend upon the watermaster or other users when you could have it again, wouldn't you?

A Depend upon the water master, yes sir.

Q And the water master would depend upon other users as to whether or not he would have water to distribute to you?

A I suppose he would.

Q Now, how long was it after you asked for the water before you got it?

A At one time it was about ten days.

Q How long prior to that that you last had had it, prior to asking for it?

A How long -- repeat the question, please.

Q you say it was about ten days after asking for the water before you got it at one time. How long before you asked for it had you had it?

A Why, about ten days or two weeks before that.

Q Then do you mean to say that there was twenty-four days or twenty days between the periods of your irrigation on that farm last year?

A Yes sir.

- Q What time of year was it?
- A It was along the latter part of July.
- Q Well, the twenty day period would be from the tenth of July or first of July or when would it begin?
- A It would begin after the tenth.
- Q And would run until the first of August?
- A About the first of August, yes sir
- Q Now, that would be, that twenty day period would be because of your system, would it not, if you had the water in regular turns once a week as they have it -- or once in two weeks as they have it in other parts of this irrigation district, you would have received your turn in less than twenty days, wouldn't you?
- A Yes sir, but --
- Q Then why do you say that is an ideal system as compared with one where you get your water at stated intervals?
- A I take it this way, if we had an abundance of water, if there was all the water that could possibly be used and water to spare, then the weekly turn would be all right.
- Q But you know that such condition does not exist as you have described in any part of the arid west, don't you?
- A Yes sir.
- Q And we are speaking now of conditions as they actually are.
- A Ordinarily with plenty water we water sufficient to irrigate the farming district. The only time it is needed is when the crops are requiring it. The only time it is wanted is when the crops are requiring it, and with a regular turn you would get water undoubtedly at times that it was not needed, and it would necessitate a waste of water.
- Q But you would always get the water?
- A Always get some water.
- Q And if there was sufficient to irrigate the land you would get sufficient to irrigate ~~at~~ your land, wouldn't you?
- A If there was more than was needed you would get plenty to water

- the land if you got it in regular turn, but I believe --
- Q Now, the only system, the only condition that could supply the water as it is needed would be a reservoir system where the stream could be increased when several wanted it at once, wouldn't it?
- A That would remedy it, I would think.
- Q And without that you could not have the water under the system of the East Union Canal just when you need it every time, could you?
- A Unless there was plenty of water to go around.
- Q Unless there was twice the quantity of water flowing in the canal that was necessary for the irrigation of the land, isn't that true?
- A No sir, I wouldn't take it that way. As I understand the system adopted here that the farmer -- the crops that need it the worse gets it and during the shortage last year I was told by the watermaster our crops were not suffering as badly as others.
- Q Where were many who needed it at the same time?
- A There seemed to be at that particular time.
- Q And your's didn't need it according to the judgment of the watermaster as bad as some of your neighbors?
- A No sir.
- Q And the watermaster's judgment was correct, was it not, in that regard, you raised good crops all but the potatoes and the potatoes were a fair yield even last year, isn't that true?
- A Yes sir, we had less blight last year than the years previous. Our potatoes were better in that regard and that is responsible for the yield we got.
- Q Didn't you raise as great a yield last year per acre as you did the year before?
- A Our crops was better per acre last year, but we didn't have the blight to contend with.
- Q Well, take the year before that.
- A The year before that we we-re troubled with blight.

- Q But you attribute the increased quantity of your potato crop last year to the lack of blight? A. Yes sir.
- Q But still you say it would have been more if you had had that watering in July when you wanted it?
- A Yes sir.
- Q Did you water your potatoes when you got the water?
- A When we got the water,
- Q Yes. A. Yes sir.
- Q First irrigating you did was upon the potatoes?
- A Yes sir.
- Q Don't you know as a matter of fact that potatoes would grow and make a good crop upon the land where you had potatoes last year without any irrigation whatever?
- A No sir.
- Q Have you ever experimented in dry farming potatoes?
- A I have seen them grown under the experiment station.
- Q And are you acquainted at all in Eastern Utah, what is known as the Blue bench? A. No sir.
- Q On the Reservation -- old Reservation country?
- A No sir.
- Q Are you acquainted with the Juab County dry farms?
- A No sir, not directly, I have heard it discussed considerably.
- Q Do you know whether or not they raise potatoes down there without water at all?
- A No sir.
- Q And good yields? A. No sir. There is this condition of course that exists. A dry farm crop will do better on land that has never been irrigated than on land that has previously been irrigated.
- Q You state that as a matter of fact of your own knowledge?
- A Yes sir.
- Q What is the reason?
- A I don't know the particular reason.
- Q You don't know whether or not there was a shortage of water in the Provo River last season, do you?

- A Not only by hearsay.
- Q Of your own knowledge?
- A No, I don't know, I haven't visited the river.
- Q Do you know whether there was a shortage or whether you received a less quantity of water with which to irrigate when your turn came under the East Union Canal last year than you had received the year previous?
- A The quantity didn't vary much.
- Q So the quantity you received last year was approximately the same as you had received other years?
- A I would say the quantity was -- that is, the quantity at the particular time, the total quantity for the year of course was less.
- Q Because of your failing to get it that one turn?
- A Yes sir, one or two, there was at least two periods.
- Q Otherwise your quantity of water furnished you in your lateral was approximately the same quantity?
- A It was the amount we needed - yes, about the same as before, only difference being the time.
- Q You say you don't use the water, that is, you are not timed in your use of your water under that canal?
- A No sir.
- Q They don't give you two hours per acre and time it?
- A No sir.
- Q Have they ever done that while -- during the four years you have been superintendent?
- A No sir, the only time we have for vegetables, for the small vegetable crop we have, we have a certain time that we can use the water, it doesn't interfere with the water users below on the same ditch. On the East Center ditch we try to water there a certain time so that it won't interfere with the people below on the same ditch.
- Q You have some spring water that you use for irrigating purposes also, don't you?

A No sir, just a very small stream that is not -- well, it is not large enough to use for irrigation purposes. We haven't used it.

Q Not sufficient to run in one row of potatoes, is it?

A It is not where it can be used for irrigation purposes, it is down in the lower part of the pasture.

Q You don't have any water coming out of the mountain above?

A No sir.

Q There is a spring above the buildings on the mountain side, isn't there?

A There is a small spring there I understand is used for culinary purposes in the building.

Q piped into the building?

A I am not positive about that, it has been my understanding when the flow was the greatest it was used simply in the building?

CROSS EXAMINATION by Mr. Ray.

Q Mr. Crockett, you say your potatoes were troubled with blight in 1914 and in 1915? A. Yes sir.

Q What kind of blight?

A It was the ordinary potato blight, blight that is called rhizoctonia.

Q Any fusarium?

A Fusarium wilt?

Q Yes sir. A. Yes sir.

Q You had both rhizoctonia and fusarium wilt?

A Yes sir.

Q As a matter of fact, potatoes suffering with ~~as~~ rhizoctonia and fusarium wilt suffer <sup>more</sup> from over irrigation than from any other one thing, don't you?

A It is likely they do.

Q go that the reason you got a good crop, better crop in 1915 than in 1914 or '13 is likely because you applied that water to your potatoes and thereby retarded the wilt, isn't it?

Q Don't think so?

A No, the blight affects the potatoes before that period.

Q Before what period?

A Before the period we were short of water.

Q Blight affects the m all through the season, doesn't it?

A Yes sir.

Q Kills the vines. You had fewer vines die last year than any other year?

A. Yes sir.

Q Otherwise your crops were all right? That is all.

CROSS EXAMINATION by Mr. Jacob Evans.

Q I would like to ask a question. You say the system under which they irrigate there is what you call an ideal system?

A It is what should be an ideal system if the watermaster carries out his part of it.

Q That of course is assuming that he at all times has a constant supply to supply that ideal system?

A Yes, I would think that would be one of the necessary things would be to have enough water.

Q In other words, in order to make the system of distribution an ideal system you would have to have an ideal quantity of water to use with the system, would you not?

A Naturally, yes sir.

Q Such a distribution of water would be very much more ideal if it was furnished from a reservoir system where you at all times had a sufficient quantity of water to draw from, wouldn't it?

A If it increased the water flow, of course it would improve conditions.  
where

Q But, you are depending upon the flow of a river and where your canal is five or six miles long and you have not a sufficient quantity of water to first use it at one end of the canal and then at the other and then at different point along the canal, would you say then that that was an ideal system to distribute it in the manner in which it is distributed?

- A I would think it would be the best system that could be adopted because there is less waste when the water is applied to the ground that needs it it does more good and does away with the waste. People often would use water where they are timed -- they would use the water because they are entitled to it.
- Q Let us suppose now this canal is five or six miles long, that enough persons today require the use of the water at or near the intake of the canal and that water is distributed to those persons because they need it, let us assume then that the next day somebody four or five miles down the canal needs the water, would you then turn it down and run it down to those people four or five miles and use it down there?
- A Well, that would depend. It would not ordinarily happen you had reverse one end of the canal to the other and back and forth again.
- Q Wouldn't that be the effect?
- A Might happen that way at times, but it wouldn't happen that way very much.
- Q If you bring it to an ideal system now that you are talking about you would have to turn the water to the person that needed at that particular moment, irrespective of where he might be located on that canal, wouldn't you?
- A Not necessarily.
- Q And if you did that wouldn't you of necessity had a good deal of waste water in there switching it first from the top to the bottom and back again?
- A There might be a little waste in that way, but it would not ordinarily happen it had to be switched from one end to the other. In the judgment of the watermaster he would give his water as nearly together as he could.
- Q I know, but you are talking of an ideal system.
- A Comparison was made between the two systems and I insist that the system that is now in use is far superior to the time system.

Q What is assuming also you have an ample supply of water at all times?

A Well, in either case water will go farther if it is applied -- it will irrigate more ground if it is applied to the crop that is needing it, the crops that are needing water rather than to issue it at stated times and give it to men that doesn't want it.

Q That would depend entirely, however -- suppose everybody needs it at once at the same time, and you have not sufficient water to supply them all?

A It would take a large reservoir to hold it.

Q And if you had that large reservoir and those ideal conditions then you could work out your system, couldn't you?

A Of course with more water you can reach more people at the same time.

Q Now suppose you have a period where nobody needs the water, then what are you going to do with it when you have to turn it into the ditch and let it run somewhere?

MR. THOMAS: Are you speaking of a Pennsylvania condition or Utah condition?

MR. JACOB EVANS: I am speaking of the conditions that exist here under this system.

A I don't know of that condition existing under this system when there is a time noone needs the water during the irrigation season.

Q Did you measure your water last year to determine the quantity of water you used on your different crops?

A No sir.

Q Have you ever done that since you have been at the institution?

A No sir.

Q And when you say your streams last year were about the same size as the streams in former years you based that judgment on merely an observation of the streams without any measurements?

A Yes sir.

MR. RAY: Just a minute, may I have the record as to

my last question to Mr. Crockett. Counsel advises me that the answer did not go in the record.

(question read)

MR. RAY: To that ~~you~~ answer yes, did you, if you answered. Now answer so that it goes into the record.

A Yes sir.

CROSS EXAMINATION by Mr. John E. Booth.

Q How long do you say you have lived at the Mental Hospital?

A Little over four years?

Q During that time have you ever known of a heavy rain coming after the irrigation commenced?

A Yes sir.

Q And at that time was irrigation going on for three or four days after that same as it was before?

A We never stop irrigating for a rain storm.

Q Irrigate just the same?

A Yes sir, we irrigate, especially alfalfa, such crops as that, we don't stop for a rain storm.

Q But did you need it the same as you would have done had there been no rain?

A Almost the ~~was~~ same. The rains have not been heavy enough to take the ~~grass~~ place of an irrigation.

Q Has it been heavy enough to postpone the need of irrigation for a day or two?

A It possibly would be.

Q In that case that would interfere with this ideal system you have been talking about, wouldn't it?

A No sir.

Q Wouldn't at all?

A I don't believe that would interfere with the system in any way.

Q What would become of the water during the time?

A The water would be used.

Q Where?

A It would be used on the crops just the same. You mean at the time that irrigation might be delayed?

Q Yes.

A Well, complete irrigation cannot be delayed, for instance, it may delay the irrigation of small crops some, the lighter crops, those that feed upon the surface it might delay them some, but there is no rain storm heavy enough to delay the irrigation of alfalfa or potatoes, pasture or pasture land.

Q Would it make any difference at all in the system of irrigation if there should be a big rain?

A Very little.

Q Would there be any?

A On the lighter growing crops it would hold them off for a few days longer.

Q Would that interfere at all with this ideal system?

A I don't believe it would. I don't believe it would be sufficient to interfere with that.

Q If it is ideal it would go just whenever -- the water was there, have water enough, and you would have water ready to use and so much, if a rain storm come would you give it exactly the same as if there had been no rain.

A We would continue the irrigation, the rain would make very little difference. The rain during the irrigation season has not been sufficient enough to take the place of an irrigation.

Q Let us suppose the rain was sufficient enough.

A Then we wouldn't need our canals.

Q I mean just during one storm, not for the whole season?

A If the rain was sufficient, <sup>we</sup> would not give them more water, no sir, if it answered the same purpose as an irrigation, we wouldn't give them the extra water.

Q Then you wouldn't use the water during that irrigation time, would you?

A Not if it continued raining for a lengthy period of time and gave the same amount of water an irrigation gave. It would be folly to apply the water.

- Q So your opinion a big rain doesn't amount to anything at all?
- A It amounts to a little, it doesn't answer as an irrigation.
- Q Would it answer, suppose it would rain an inch, would that make any difference?
- A An inch of water would soak up a crop fairly well, but it would not give us thorough irrigation, crops like alfalfa.
- Q About an inch of rain would soak how far in the ground? in such ground as you have up there?
- A possibly go three inches.
- Q Three inches.
- A Three inches, I think.
- Q And in your ideal system of irrigation got an inch of rain it would make no difference, you would go on just the same in your irrigation as without?
- A Yes, I believe I would.

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CHARLES N. REDFIELD, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Thomas.

- Q State your name?
- A Charles N. Redfield.
- Q Where do you live?
- A I live in Provo City.
- Q How long have you lived here?
- A I have lived here, made my home here since '64, most of the time.
- Q Do you own lots in the city?
- A Yes sir.
- Q How many?
- A I own two.
- Q Are they irrigated?                      A. Yes sir.

Q What is the character of the soil?

A Sandy.

Q What ditch do you receive your water from?

A I receive from the East Union ditch.

Q What laterals, that is, what ditch carries the water from the East Union to you?

A Ditch on 2nd East, I don't know whether it has any name that I would know it by, it is the ditch that runs down 2nd East.

Q What crops do you raise on your lot?

A I raise mostly carrots, I raise vegetables.

Q Garden truck generally?

A Yes, garden truck generally.

Q How long have you been cultivating it and irrigating it ?

A Oh, I have owned it forty years or more.

Q During all that time have you received water through the same ditch?           A. Yes sir.

Q Did you have enough water last year to irrigate your land.

A No, I did not.

Q How much did you receive, how much water did you get?

A Well, I could not state the quantity, I can merely say I didn't have enough. Of course, I had no way of measuring it, couldn't tell the exact quantity I did get.

Q Did your crops suffer?

A Yes, carrot crop was short.

Q Compared with other years, state whether you had more or less water in 1915?

A I had less water in 1915.

Q You may state if you at any time have had sufficient water to properly irrigate your lot?

A Not last year, I didn't, 1915.

Q Have you at any time been able to properly irrigate your lot ?

A Not last year, I didn't, 1915.

Q Have you at any time been able to properly irrigate your lot with the water which was allotted to you in the time allotted

to you on that ditch?

A. No.

MR. RAY: You mean any year?

Q No, not any year, not any time they irrigate the lots thoroughly.

CROSS EXAMINATION By Mr. A. C. Hatch.

Q You say you never have been able to irrigate your lots with the water that was allotted to you?

A Not on the time that was given to me.

Q no time in the year?

A No time.

Q You have had a ditch full of water?

MR. THOMAS: I don't think he heard you, you will have to speak louder.

Q You have had a ditch full of water, haven't you?

A At times, yes.

Q And even with a ditch full of water you could not get over your lots and properly irrigate them within the time given?

A Not in the time given, no.

Q How much time is given you?

A Given about three hours.

Q Do you take all of the water that is in the ditch when you irrigate?

A Yes sir, all I can get.

Q And the ditch is not large enough to ~~max~~ carry water sufficient to irrigate your lots in three hours, is that right?

A Yes, it is large enough, very seldom the ditch is full though.

MR. THOMAS: Did you understand the question, Mr. Redifled, did you understand the question Judge Hatch just asked you?

A I don't know, perhaps I didn't.

Q I asked if the ditch was large enough to hold sufficient water to irrigate your lot in three hours?

A Yes, I think it is, but it isn't there, the ditch ain't full, I never saw the ditch full.

Q They fill it in the spring of the year don't they?

A No.

Q Then it is not because of lack of water in the system that you don't irrigate your lots, is it, it is because they don't give you sufficient quantity?

MR. THOMAS: I object to that as presenting two problems in percentage, not being proper cross examination. The judge has assumed, the substance of it is it is because there was enough water in the city but it wasn't given to him. There was no such problem presented, no such question asked.

THE COURT: The whole matter is involved in the statement being short of water, and never at any time did he get sufficient water to water his two lots in the time allotted.

MR. THOMAS: That is his testimony.

THE COURT: It is proper cross examination on that.

MR. THOMAS: Exception.

Q Do you understand the question, Mr. Redfield?

A Well, the question is it is not the lack of water in the city as I understand.

Q Simply because they don't turn enough down the race from which you irrigate?

A I cannot answer that, I don't know whether there is a lack of water in the city or not.

Q Do you never go outside of the city?

A Yes sir, sometimes.

Q You have been outside of the city on the river this year?

A I ain't for the last two years, no.

Q You don't know that there has been large quantities of water flowing into Utah Lake for the past month down the Provo River?

A No, I don't know anything of the kind.

Q But you have not been able to get water sufficient this year to irrigate your lots within the time of three hours, is that right?

A That is right.

- Q What kind of lots do you have, or soil?
- A It is sandy lots.
- Q And how long are the rows?
- A How is that?
- Q How long are the rows that you irrigate?
- A The rows -- oh, the rows run different direction, this way and that way, four or five different directions. It takes four or five changes.
- Q To irrigate them?
- A Yes sir .
- Q What is the greatest length of rows, twelve rods?
- A There ain't no twelve rod rows, perhaps six rod rows, I don,t think there is any any longer.
- Q And the soil is a sand, is it?
- A Soil is sandy.
- Q No clay mixed with it? A. No sir.
- Q No vegetable, decomposed vegetable matter, just plain sand?
- A Just plain sand.
- Q Do you ever fertilize it ?
- A What is that?
- Q Do you ever use, put any fertilizer upon it?
- A No sir, nothing more than the corral manure.
- Q You put that upon it? A. Yes sir.
- Q And have been doing for thirty or forty years?
- A Yes sir.
- Q Well, then there is a vegetable matter mixed with the sand, some vegetable matter.
- A There may be I couldn't tell you that.
- Q Do you know how deep the sand is?
- A Oh, I have dug down fourteen feet.
- Q Is it sand the full depth of that?
- A It is quick sand down fourteen feet.
- Q Quick sand at fourteen feet? A.Yes sir.
- Q No hard pan under your lot?

A No sir, I never struck no hard pan.

Q And no gravel?

A There is one corner, one little corner of the lot there is a little streak of gravel. There ain't five rods altogether.

Q Do you irrigate all of the two lots?

A Well yes, I do.

Q Don't you have your dwelling upon the lots, these lots?

A My what?

Q Your dwelling house, your home?

A Oh yes.

Q And barn yard.

A Yes, I have a barn.

Q That occupies so me ground?

A Oh yes.

Q About how much?

A Well say twenty five or thirty feet square.

Q Feet?

A Yes, feet.

MR. THURNMAN: Mr. Redfield, you don't mean to say, do you your houses, your house and corrals occupy only twenty five or thirty feet square, do you -- each of them?

A Each.

MR. THURMAN: D<sup>o</sup> you mean twenty five or thirty feet square for the dwelling and same amount for the corral?

A Yes.

CROSS EXAMINATION by Mr. Ray.

Q Have you any lawn. A. Yes.

Q How much?

A Oh, probably got four or five rods square.

Q How do you irrigate that, from the pipe system?

A I irrigate it from the ditch.

Q Don't you have any city water for it, sprinkling system?

A No,

Q Have you any orchard?

A No, I have a few scattered trees, maybe six or eight.

CROSS EXAMINATION by Mr. Bagley.

Q Do you ever catch any waste water, Mr. Redfield?

A No, I don't.

Q Is there any going by there that you could catch?

A Well, perhaps there is, I took from your question that you meant water running from other lots?

Q I mean water running down the 2nd East ditch. unused past your place?

A Oh yes, I think I do.

Q you catch some of that?

A I think so, yes.

Q With that do you get an adequate supply for your lot?

A Well, I have got along fairly well yes. Last year I was short.

Q So that you have not suffered any?

A Not materially, no.

Q In the growth of your crops, all you mean by your testimony is that the water which the city supplies you is not sufficient to irrigate your land within the three hour period?

A That is what I mean.

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O.W. BAILEY, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Your name is O. W. Bailey?

A Yes sir.

Q Live at Provo? A. Yes sir.

Q Lived there all your life? A. Yes sir.

Q Have you ever had to do with the irrigation of land under the

Provo City water system? A. Yes sir.

Q Since early youth? A. Yes sir.

Q What business are you engaged in now?

A Mercantile business.

Q Do you own any city lots in Provo? A. Yes sir.

Q Where are your lots situated?

A On 4th East, 167 north.

Q On 4th East? A. Yes sir.

Q Between 1st North --

A And second.

Q And 2nd North. How long have you lived on this property, Mr. Bailey?

A Fifteen years.

MR. RAY: One or two lots there?

A One lot.

Q Have you irrigated your lots since you have lived there, have you irrigated your lot since you have lived upon it?

A Yes sir.

Q What kind of products have you grown there?

A Well, all garden vegetation.

Q About what portion of your lot have you irrigated?

A About two-thirds.

Q You have your dwelling house and out buildings on the same premises? A. Yes sir.

Q You think you have had about two thirds of the lot --

A Yes sir.

Q Under cultivation?

A I just judge about two-thirds.

Q Are you familiar with the conditions and the amount of ground that is irrigated throughout the block on which you are situated?

A Yes sir.

Q About what proportion of the entire block would you say is irrigated during the irrigation season?

A About half.

Q There are some property owners on that block that don't use the water?

A Yes sir.

Q Now, you have given the watering of this lot your personal attention, have you? A. Yes sir.

Q What do you say as to the sufficiency of the water that you have been able to get for the watering of your lot since you have been there?

A Well, for watering my own time, I have been short.

MR. THURMAN: I couldn't hear that.

A The water I have had to use on my own time, I would have been short.

Q Have you used any other water than on your own time?

A Yes sir.

Q Whose water have you used?

A Some of Mr. Whitecottons, some of Mrs. McDonald's, Mr. Farnsworth.

Q You spoke of whitecotton, are the whitecotton premises -- know the size of it?

A I think it is three by six.

Q Has water been used on there at all?

A No sir.

Q Has water been used on the Farnsworth premises?

A No sir.

Q How much area is included in that?

A Well, that is six by twelve.

Q You spoke about McDonald's.

A I think Farnsworth is nine by twelve.

Q You spoke about McDonald premises? A. Yes sir.

Q Has water been used on that since you have been there?

A Very little.

Q Now, what have you done in times of scarcity in order to have sufficient water that you have attended to?

A I have gotten to water that belonged to these other lots, the time.

Q And used it? A. Yes sir.

Q And did you then have more than sufficient. A. No sir.

Q Are you familiar with the -- who lives immediately south of your premises?

A Mr. Corfman.

Q Acquainted with the premises there?

A Yes sir.

Q Do you know about what proportion of those premises have been irrigated?

A About, I would judge, one half.

Q And there is how large an area in the Corfman premises?

A Nine by twelve.

Q And do you know whether -- you have seen the land that is there attended to, have you? A. Yes sir.

Q What would you say, did you observe whether there was sufficient water all the time that is allotted for those premises to irrigate in the low water season?

A There has not been in low water season?

Q Where has not been? A. No sir.  
do

Q And, you know whether it has been necessary to take water from the neighbors, McDonald, Whitecotten and Farnsworth premises?

A Yes sir, like me, we have used the water on -- Mr. Cluff has been irrigating Mr. Corfman's ground, and used some of the water same as I have.

Q You have seen him do that? A. Yes sir.

Q Would you say in your judgment it was necessary that --

A Could not have gotten over the ground if he hadn't, that is, in the low water season.

Q Now, Mr. Bailey what has been your custom with respect to cultivation, how have you handled your garden?

A My garden is irrigated every week after the water time commences and my garden is cultivated every week after watering, so that it takes does with just as little water as is possible to do.

CROSS EXAMINATION by Mr. A. L. Booth.

- Q during what part of the irrigation season have you been short of water, Mr. Bailey ?
- A July and August.
- Q Any other part?
- A Not so much so in the early part.
- Q Have you been short at all in the early part?
- A No sir, because don't irrigate as much in the early part; keep the water off as long as possible.
- Q Are you on the same block as the Whitecotton ground?
- A Yes sir.
- Q And McDonald? A. Yes sir.
- Q And Corfman? A. Yes sir.
- Q All on the same block? A. Yes sir.
- Q Now what time of day does your irrigation turn come?
- A Four o'clock.
- Q In the afternoon? A. Yes sir.
- Q Has it been that way for some years?
- A No sir, every year is different.
- Q Every year is different?
- A Yes sir, comes just as the water master gives it to you.
- Q Which part of the block do you live on?
- A East front, facing east.
- Q On the corner?
- A On the middle.
- Q On the middle? A. Yes sir.
- Q Will you just go around the block one way or the other from your premises and state who owns each lot?
- A Yes, sir, on the west north of my property facing East, Hyrum Ruper owns it now, J. William Knight owned it.
- Q Just mention how large, if you know, for each one?
- A It is six by twelve rods.
- Q And the next one? How much of that six by twelve is irrigated?
- A How much of it?

Q Of Ruper's, yes.

A About half of it this year.

Q Next to him?

A Is Mr. Olsen.

Q How much does he own?

A He owns three by nine.

Q How much of that is irrigated?

A About half of it.

Q Go around, you are going around --

A Going around to the north.

Q Joining Mr. --

A Mr. Whitecotton.

Q How much does he own.

A I think it is three or four by six.

Q He is on the corner, isn't he?           A. Yes sir.

Q Does he irrigate any?           A. No sir.

Q And then south of Mr. Whitecotton?

A Mr. Farnsworth.

Q How much does he own?

A He owns nine by twelve, I think.

Q Nine by twelve, isn't there a lady by the name of Twelves lives next to Whitecotton?

A Yes, that is right she lives there.

Q How mach does she own?

A Must be three by -- I am not positive whether she owns three by twelve or whether she owns three by six.

Q Do you know how much of that is irrigated?

A I don't think there is any of it.

Q How long since it was irrigated?

A It has been three or four or five years.

Q Then comes the Farnsworth lot?           A. Yes.

Q That is a nine by twelve, you say?

A I think that is nine by twelve or nine by nine. There is a little strip in there I think is owned by somebody, I am not positive.

Q How much of that is irrigated?

A There isn't any of that irrigated with the exception of some shade trees.

Q The lawn is irrigated with the water works, isn't it?

A Yes sir.

Q They have an artesian well also?

A They have an artesian well.

Q So that you think outside of the artesian well and the sprinkling there isn't any of the Farnsworth property irrigated?

A I hardly think so .

Q Then who joins Farnsworth?

A Then comes McDonald.

Q J. H. McDonald?

A J. H. McDonald.

Q How much does he own?

A It is three or four by nine or twelve, I am not positive.

Q Is he on the southwest corner?

A He owns the south center.

Q How much of the McDonald lot is irrigated?

A I don't think there is any.

Q How long since it was irrigated?

A Ever since I lived there, fifteen years.

Q Fifteen years, this Farnsworth piece has never been irrigated?

A Ben Bochman owned it before him and no irrigation was done.

Q Then next?

A Mr. Corfman.

Q How much does he own?

A I think it is nine by twelve.

Q How much of that is irrigated?

A About half.

Q You join Corfman?

A No sir, there is another strip that Corfman did own. I think Spalding -- yes, Dr. Spalding.

Q How large a piece?

A Three by twelve.

Q How much of it is irrigated?

A None of it.

Q How long since it was irrigated?

A It was irrigated last year.

Q Had it been irrigated every year up to --

A Not every year.

Q How much of it was irrigated when it was?

A It was all irrigated, that is, half of it was irrigated, but last year it was all irrigated.

Q Last year it was all irrigated? A. Yes sir.

Q There isn't any building on that place then?

A No sir.

Q Does that bring it around?

A Brings it around to me, yes.

Q How much do you own?

A Six by twelve.

Q You say you have used water from Mr. McDonald?

A Yes sir.

Q And Mr. Whitscotton? A. Yes sir.

Q And part of the time Mr. Corfman?

A Yes sir, part of the time Mr. Corfman.

Q What?

A You say Mr. Corfman?

Q I understood you to say you used Mr. Corfman's turn part of the time? A. No sir.

Q You and Mr. Corfman get the water from these other pieces that are not irrigated? A. Yes sir.

Q When they don't water. You and Mr. Corfman have the best gardens in Provo, almost, don't you?

I have  
A I think, as good as any.

Q Doesn't Mr. Corfman have as good as you?

A Yes, pretty good, most of his is fruit.

Q He has a first class garden, doesn't he?

A Yes, sir.

Q Neither you nor Mr. Corfman has every been short of water you

know of, have you, I mean by taking --

A We have got along, yes.

Q Turns of these other people? A. Yes sir.

Q Do you know the property around in your neighborhood on other blocks?

A No sir -- I know the property, yes sir.

Q Would you say your block is a fair sample of the blocks adjoining you as to the proportion of the ground that is irrigated?

A In my neighborhood?

Q Yes.

A I would say it is a fair sample of the block south of us.

Q How about the block east of you?

A I don't know.

Q And the block north?

A That I couldn't say.

Q Nor the block west? A. No sir.

Q Nor either of the blocks diagonally from you?

A I haven't paid any attention to that.

Q You get the water for an hour and a half a week, do you not. on your own turn?

A I think it is -- I don't think it is that much, if I remember right, I am not positive.

Q You say you own six by twelve.

A Yes sir.

Q Under the watermaster's schedule each lot six by twelve calls for an hour and a half a week, doesn't it?

A I think, if I remember right, that the water in being distributed would call for an hour and a half a week, that the ditch is split, divided between, but I think forty-five minutes, if I remember right, this season in giving us all the water.

Q Do you get water from two streets? A. No sir.

Q And don't you know they turn -- they take twelve hours to each block for one stream of water, one full stream all through the system where they have lots?

- A I am not familiar with that.
- Q Have you got your time ticket?
- A Yes sir.
- Q You cannot say whether that goes from four o'clock until four forty-five or from four o'clock until five thirty?
- A I am not sure.
- Q Don't you turn your water off when your turn is up?
- A Yes sir, but I remember whether it is forty-five minutes or longer.
- Q You just take the water and use it until you get through, don't you?
- A No sir, I turn it off.
- Q Have you irrigated this season?                   A. Yes sir.
- Q What time do you turn it off?
- A If I knew I could tell you.
- Q What day do you have it?
- A Thursday.
- Q You don't remember what time you turn it off then?
- A No sir -- maybe it is an hour and a half, I am not sure.
- Q Do you know whether you get about the same size stream as other streams running through the streets of the city?
- A I don't know anything about the other streams.
- Q Don't you go across the streams as you go down town?
- A Yes sir, but I don't measure them.
- Q Have you noticed them.
- A Noticed them as I go along there, seems to be about the same amount of water in the ditch.
- Q You say you have gone short of water sometimes?
- A No, I have had enough water.
- Q You have always had enough water from the beginning, have you?
- A From the beginning of the season?
- Q From the beginning of the time you lived there until the present time and during all parts of the season?
- A Why no, I haven't had enough water. I have had to use my neighbors

water to get enough.

Q I mean actually you have turned enough on your lot to give you sufficient?

A Yes sir, I have got along all right.

Q You have never had any of your neighbors complain of your taking it?

A Taking the water?

Q Yes.

A No sir, I have asked for it.

Q And you have never complained with the watermaster<sup>to</sup>?

A I took it up with Mr. Thompson last year.

Q Last year? A. Yes sir.

Q But you know last year was an exceptionally scarce year for water all over the country, do you not?

A I don't know anything about the country, I know it was short with me.

Q You never heard anybody else talking about the shortage of water?

A You hear that every season.

Q Every season? A. Yes sir.

Q Did you hear it anymore last year than you ordinarily do?

A I don't know that I did.

Q By this method of taking the neighbors water with their consent, of course, you never had any water troubles to speak of have you?

A I got along all right.

Q Do that you have not had occasion to go and examine and see whether anybody else had more or less than you did?

A Well, I haven't had any business to?

A That is what I say, your water has been reasonably sufficient so that you had no occasion to go and investigate whether other people were getting more or less than you?

A No sir, it wasn't any of my business.

Q Did you get anybody else's turn besides Mr. Whitecotton's and Mr. McDonald's?

THE COURT: He testified he got Mr. Farnsworth's.  
MR. A. L. BOOTH: I didn't remember. That is all.

CROSS EXAMINATION By Mr. Ray.

Q Mr. Bailey, you don't know actually what time is allotted to you?

A No sir, I am not positive,

Q Then you don't know whether the time actually allotted to you would go over your entire crop, do you?

A Well, I know I get along all right.

Q Did you ever determine whether or not in the early season the stream running in your lateral and applied upon your garden would go over the entire garden in the time allotted to you?

A In the early season, yes sir.

Q As the season progresses your garden takes less water for irrigation, doesn't it?

A No sir.

Q Takes more?

A The ground takes more, more times you water it. The warmer the weather gets drier the ground is.

Q I am not talking about crop requirements, Mr. Bailey, I am calling your attention to the fact whether or not it is not easier to get the water over the ground later in the season?

A Depends entirely on the cultivation of it, I think, that part of it. Ground is properly cultivated it takes just as long to irrigate it later on as it does early.

Q If it is properly irrigated it doesn't take quite as frequent irrigation, does it?

A No sir.

CROSS EXAMINATION by Mr. A. J. Evans.

Q Mr. Bailey, who owns the southeast corner of the block on which you live?

A Southeast corner?

Q southeast corner.

A Dr. Spalding, I think.

Q Is that a fair comparison of the balance of the block as to the quality of soil?

A Well, I would judge it would be a fair average of the block according to the irrigation.

REDIRECT EXAMINATION By Mr. Corfman.

Q Have you ever examined the soil in the southeast corner of the Spalding tract?

A Well, I have never examined it, Mr. Corfman, I have just saw it as I go by, couldn't perhaps judge from the amount of water whether that would be --

Q You have been over the Corfman premises?

A Yes sir.

Q Is it the same kind of soil there in the southeast corner of Spaldings as it is on the Corfman premises?

A I would think it would be very similar.

Q Do you know of the rocky condition there in the southeast corner of the block?

A I think not.

Q How is it on the Corfman premises?

A Well, on the Corfman premises there is some gravel, on the north of me there is some gravel.

RECROSS EXAMINATION by Mr. A. L. Booth.

Q Have you ever calculated about how deep it would put the water over your lot if you used your own turn and turn of Mr. White-cotton and turn of Mr. Farnsworth and turn of Mr. McDonald?

A I don't know how deep it would put it, I know how much irrigation to get out of it.

Q You don't use this supply in the scarce part of the season?

A No sir, I don't need it in the early season.

Q Do you know what size stream comes in the latter part of the season, know anything about the measurement of water?

A I know there is enough to run in about four rows of potatoes.

Q Do you know anything about a second foot?

A No sir, I don't.

Q How long have you actually used water on your lot in the low water season when you have borrowed water and your own?

A I would judge in the late water season I would use as much as I could get on two hours or more.

Q Two hours or more?

A Yes sir, all I could get.

Q You don't use it all the time from Mr. Whitecotton, Mr. Storrs and Mr. Knight?

A I let Mr. Cluff have some of it, that is, he is entitled to as much as I have, on Mr. Gorfman's ground.

Q Do you know who uses Twelves' water?

A The watering we have been doing with the Twelves' water since it leaves the block on the south of us, them that are entitled to the water on the other block and people not using it, of course we use it.

Q You sometimes then get the Twelves' turn?

A Yes sir, if we need it.

Q And any other lot that is not irrigated for one season, you would perhaps take that too, if you needed it?

A Yes sir, that block would be entitled to it.

Q When you have a good stream of water in the early part of the season, how long does it actually take you to irrigate that two-thirds of your six by twelve.

MR. THOMAS: Object to this as having been answered, he said about two hours of time.

THE COURT: No, I don't think so.

A In the early season I can water on my own time.

Q You don't know what that is?

A No sir, I am not positive as to the time.

Q I want to know if you have any judgment, or rather, how long it takes you to irrigate that forty square rods when you have

the water in the early part of the season?

A About, in my judgment about an hour. I will tell you what I think, my judgment is clear, last season we had the ditch, half of it, divided between two of us, and I think it was an hour and a half, and I took it up with Tom Thompson, the watermaster, about shortening the time and give us all the stream, for this reason that the party above me had gone up to see about the water. I had enough to run two or three rows and Mr. Keeler, Charles Keeler was watering, he had half the stream, and I guess he had half of it all right from the looks of it. That is what made a bad condition, the fellow below didn't get any water, the other fellow had it all.

Q I am talking now when there is plenty of water, Mr. Bailey.

A I was just trying to relate to you the time we were watering, I think it is forty-five minutes this year with the full stream and hour and a half last year. That is my judgment.

Q You don't understand my question yet.

A All right.

Q I want to know how long it takes you actually to water your ground when you had the full stream?

A About an hour with the full stream in the early season.

Q That is what I mean, that is all.

CROSS EXAMINATION by Mr. Bagley.

Q You stated that you had different times to begin to use the water in different years? A. Yes sir.

Q Have you ever have had your time assigned to you at night?

A Yes sir.

Q How late at night?

A Nine o'clock.

Q As late as nine o'clock? A. Yes sir.

Q Have you ever had it any later than that?

A I haven't, never had it any later than nine o'clock on my turn.

Q How early in the morning have you ever had it assigned to you?

A Since I have been living there?

Q Yes.

A Five o'clock.

Q Five o'clock is the earliest in the morning?

A Yes sir, this year four o'clock in the afternoon.

Q Then you say you get it two hours, is that your time, or is it an hour and a half?

A Hour and a half.

THE COURT: He has said repeatedly he doesn't know what the time is.

MR. BAGLEY: I understood him to mention forty-five at one time.

A The reason of that, Mr. Bagley, is this, I think we are getting a full stream this season, we are getting forty-five minutes if my memory is right. Last year we had hour and a half with half a ditch.

Q After nine o'clock be the longest period hour and a half, that would make it ten thirty? A. Yes.

Q Then from ten thirty to five o'clock, as far as you know, the water is not used?

A Yes sir, used above.

Q Do you know about that?

A Well, it is shut off.

Q You have never had occasion to use it, however, later than ten thirty or earlier than five o'clock in the morning?

A I am not the last one to irrigate.

Q I am asking about as far as you know, you have never been called upon to use the water later than ten thirty or earlier than five o'clock?

A No sir, I have not.

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F. H. MERRIWEATHER, called by the defendant, Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Thomas.

Q State your name?

A F. H. Merriweather.

Q Where do you reside?

A 1013 West Center.

Q IN this city ?

A in Provo City.

Q How long have you resided here?

A It will be seven years coming the first day of September coming.

Q You have lots here in the city?

A No, sir,

Q You have land here in the city?

A Yes sir, acreage.

Q Under what ditch do you take your water?

A The Tanner Race.

Q You have been an irrigator during the time you have been here?

A Yes sir.

Q Had any experience in irrigating prior to your coming here?

A Yes sir.

Q Where?

A Scofield, on a ranch, on hay.

Q What do you raise here?

A Garden provisions and truck, I truck garden the whole thing.

Q What have you raised during the six years you have been here?

A Everything in the truck line.

Q Do you have orchard?

A Well, some little orchard, yes sir.

Q What is the character of your soil?

A Well, the majority of it is gravel, gravelly soil.

Q Well, how deep is the gravelly soil?

A Well, in many places the gravel is right to the top and in

other places it is covered possibly with a layer or dirt of soil from six inches to two feet.

Q What is the character of that soil, is it sandy?

A Sandy loam.

Q Sandy loam. A. Yes sir.

Q Could you state what portion of your six acres or your -- how large is it?

A Nine and a quarter, I think it is or nine and a third, nine and a third acres.

Q Can you state what portion of your acreage is sandy loam and what portion gravelly?

A There would be about -- let's see, about five acres of sandy loam and the balance, four and a quarter acres would be a gravelly nature.

Q Is that part that is called sandy loam pretty even in depth?

A Fairly so.

Q Does it vary?

A It varies, yes sir.

Q As to the gravelly soil, state if that varies?

A Well, I have found gravel as far as I have dug, and I have dug four feet and is it gravel all the way from the top, so I presume it would be gravel still farther down.

Q And under the sandy loam have you found subsoil?

A I haven't found any soil on my place deeper than four feet. anywhere, that is close down by the creek bed.

Q During the time that you have been there what amount of water have you received. Let me preface that by asking you if you received your water under a time ticket?

A Yes sir.

Q Do you know what amount of water is allotted to your acreage?

A The time you mean?

Q Yes, what time.

A Fifteen hours?

Q How frequently?

A Once every week, every seven days.

Q How large a stream, what did you have?

A Well, I have never measured it, but judge from the size of the pipe, I should think we would have somewhere little less than two second feet of water.

Q How large is the pipe?

A It was -- it is fifteen inches.

Q Where is that pipe.

A Where is it?

Q Yes.

A It runs a little northwest from the north side of the street, right across the street under the interurban track right onto my land.

Q It is a pipe that carries the water from one of the ditches into your land?

A Yes sir, Ditch No. 1, I believe they term it.

Q Are you at the end of your lateral?

A Yes sir.

Q You are the lowest man down?

A I am the last man takes water out of the ditch.

Q During the time that you have been there have you had sufficient water to irrigate your acreage?

A No sir.

Q Did you have sufficient water to raise your crop in 1915?

A No sir,.

Q Did you lose any crop in 1915 by reason of your having insufficient water?           A. Yes sir.

Q What?

A On my onion crop.

Q What did you lose?

A Well, I lost about a third. of my onion crop by not having sufficient to properly mature them, therefore causing a blight or rapid ripening of the onions before they were fully developed.

Q Did you have sufficient water in 1914?

A No sir.

Q In 1913?                   A. No sir.

Q In any of the years you have been there?

A No sir, I have never been able in my fifteen hours to irrigate my farm right through as it should be.

Q What plan do you follow to irrigate your farm?

A Extensive cultivation, I do lots of cultivation and there is very little -- it is very seldom, if any waste water goes down the ditch because there is plenty looking for it above, consequently I don't get a chance for anything to come down, because I am the last on the ditch, and if it did it would possibly be only a few minutes duration until someone would take it that was entitled to it, therefore, I have to put up with what I get and water as I can each week; sometimes I let a crop go one week or two weeks to water them, and next week visa versa as I see that requires the water the worst, I water every other week.

Q What is the length of your rows?

A My place is fifty rods each way, and I water to the center, catch my waste water and water from there down to the bottom.

Q Making two general streams?

A Yes sir, of about twenty-five rods.

Q Do you find that to be the most economical way of handling it?

A It is the only way I can save my water because if I didn't, by running it the other way the upper portion would get too much water and the lower portion wouldn't get any because it would be too long a distance to run it, therefore I divided divided it up and caught my waste water in the middle ditch and I can handle it so much nicer to run it through the balance and then I can shut off what I haven't finished in the one ditch and turn my water down and finish up at the last, therefore not losing any water, not giving my neighbors a chance to get any of it, that's the idea.

Q Have you had any water off your land and waste?

A No sir.

Q Does any water go off your land?

A Oh possibly there might be a little where one ditch would, one

furrow would get through a little faster than the other, but when I detect it, it is reduced and put down the others that requires it.

Q How much time do you give to your irrigation when your time arrives?

A I give the whole time allotted to me, fifteen ~~hours~~ hours.

Q Who is in charge of the water at that time?

A Me.

Q Do you stay there the entire time?

A Yes sir.

Q And give it your personal attention?

A My personal attention. No one has ever watered my place since I owned it but me, but I have had the boys help me, of course, little fellows, and possibly hired man help, but I do the watering in fact all the time.

CROSS EXAMINATION by MR. A. G. Hatch.

Q You say you never have been able to irrigate your land since you have lived there?

A Not the whole nine and a quarter acres, no sir.

Q And that is by reason of the capacity of the ditch not being sufficient to carry water to irrigate it, isn't it?

A Well, if the ditch would carry all that -- if there was all the water in the ditch that the ditch is capable of carrying, I would have sufficient.

Q What about this pipe through which the water runs, it is full, isn't it?

A No sir, I have never seen that pipe full, not since I have been on the place.

Q Do you know of any reason why the ditch should not have been full during the past month?

A No sir.

Q It has not been because there wasn't plenty of water to have turned into it?

A Of course, I don't know, the watermaster attends to that, turn t

the water in, give us our portion of the water.

Q Ever cross provo River bridge out west of town here?

A No sir, I have no business over there, therefore I have not went there to see what was in Provo River.

Q Have you crossed over the Factory Race coming to town during this season?

A I cannot quite understand what you say.

Q Read it to him, please.

(Question read)

A Yes sir.

Q Saw a large quantity of water flowing down that, do you not?

A Yes, there is a nice stream of water.

Q Do you know that is going on to the lake, not being used, don't you?

A No sir, + don't, I don't know what the purpose of it is.

Q Don't you know there has been a <sup>very</sup> large stream of water flowing down the Provo River into Utah Lake for the past month?

A Well, I was over to the Provo river on one occasion and I didn't see but very little. I ~~was~~ could wade any part of it a week ago without getting my ankles wet, without exception of holes, of course.

Q How large was it?

A What ?

Q How wide was the stream?

A Oh, scattered over quite a large area, possibly some place be forty or fifty feet wide, maybe more than that.

Q Large stream of water goes down your ditch, wouldn't it?

A Well, if that was going down the ditch yes, it would help someone out, help me, I know.

Q Did you make any inquiry of the watermaster to learn why you couldn't have more water when it was so plentiful?

A Yes sir, I have asked for more water and I was informed I was getting all that I was entitled to and all they could possibly put in the ditch for me to use.

Q This season have you asked for more water?

A No sir, so far this season I have had fairly good amount of water.

Q Have you irrigated your land during your time this season?

A Yes sir.

Q Then you were mistaken when you said you never had been able to irrigate it?

A I have irrigated what portion I have irrigated. There is some I have not irrigated yet.

Q That was because it didn't need irrigation?

A That's it exactly.

Q Isn't that the reason you haven't heretofore irrigated all of your land on your turn?

A No sir.

Q Is there any time in one week when all of your nine acres and over require an irrigation at the same time?

A Yes sir.

Q What time of the year?

A During the months of June, July and August, or part of June, all of July and August.

Q It all requires irrigation at the same time every week?

A Yes sir.

Q You have never been able to irrigate it while you have been there?

A No sir, not the whole thing.

Q Do you know whether your neighbors are able to irrigate theirs?

A I don't know about my neighbors, I have all I can do to attend to looking after my own, I don't know anything about my neighbors, in fact, I haven't any very close ones.

Q Did you hear Mr. Bailey testify?

A Yes sir.

Q About the man above him on the ditch being the reason of the shortage of the water down at his place?

A I heard Mr. Bailey talking, yes sir.

Q Is there any such occasions as that on your ditch?

A I don't know just what you are referring to. He made a good many statements relative to using other peoples water and so on, I don't know what you refer to.

Q The one I refer to is when he went up the ditch and found the man taking half of it out above, and he said he was sure getting half.

MR. THOMAS: Object to this as improper cross examination and immaterial.

THE COURT: Objection is overruled.

Q Now, have you ever gone up the ditch yourself to find out whether you were getting the water that was turned to you.

A Yes.

Q Clear up to the head of it?

A Yes sir, up to where we take it out of the Tanner Race.

Q Did you find any water coming out of the ditch?

A I found on one or two occasions, found some of my good neighbors up above using a little bit of it, because their garden was burning up and said they required a little, so to be neighborly of course, we let them have it.

Q And you let them keep it even after you found they had it?

A No, no, not on your life, no sir.

Q Now, Brother, did you ever go up the fat ditch its full length without finding some of your good neighbors diverting a little water through necessity?

A Yes, I have went up and found all coming down that was in the ditch.

Q Dams was all intact.

A Dams all in tight.

Q That would be immediately after the watermaster had been along?

A Possibly so, I ain't watching the watermaster.

Q I will ask you if you know-- you have lived in several communities in this state, haven't you?

A Yes.

Q Have you ever lived in one where the fellow at the head of the ditch didn't get plenty of water?

A Well, I guess he would be foolish if he didn't, if he needed it.

Q You say you get fifteen hours for nine acres?

- A Nine and a quarter, yes sir.
- Q They treat it as ten acres and give you an hour and a half per acre?
- A I don't know how they treat it, that is what I pay taxes on.
- Q Your's farm lots or farm lands.
- A Mine is farm land, sira
- Q You get it fifteen hours once a week?
- A Yes sir.
- Q Then you get half time more than is allotted to the ordinary farm land, don,t you?
- A I don't know.
- Q The rule, as I understand it, is two hours every two weeks on one hour each week per acre for farm lands under that ditch, you get it more than an hour and maxx get it every week?
- A Yes, I get littleover hour and a half.
- Q Do you know why they give you that extra time then within which to irrigate your land over and above that which is given to other usersof water?
- A I don,t know anything about it.
- Q On the same ditch?
- A I don't know anything about it, looks like as if they would like to help me out you know.
- Q Because you had the tail end of the ditch and loss of water above during your turn?
- A Possibly so, you can't always tell what they are figuring on.

CROSS EXAMINATION by Mr. Bagley.

- Q Did you enough water during any year that you have been farming down there?
- A Not enough to irrigate my whole farm at one time, no sir.
- Q To mature your crops?
- A Well, I have had to let some go that was not fully matured, that would have made better if I had had more water to give to them at the proper time.
- Q Have you taken note of the supply of water in the river during

the years you have been farming?

A Yes, I have passed over the river sometimes I have seen it there, and in the spring of the year I have seen it a raging torrent.

Q I mean have you taken note of the precipitation so you could tell whether a year was one of big supply of water for irrigation or whether it was a year of shortage?

A Well, I have noticed that, and I<sup>have</sup> noticed the rain has been very scarce, had very little rain, consequently I presume there would not be much precipitation.

Q I mean the snowfall?

A Yes, I have noticed, I have thought many times there would be plenty of water this year owing to a nice lot of snow in the mountains, but just an optical illusion.

Q Do you recall the year 1914, whether that was a year of abundance of water, or was it a year when there was a shortage of water?

A No, I think there was fairly good supply of water in 1914, 1915 was the year that was the shortage.

Q 1914 you think --

A I think there was a fairly good supply of water.

Q You think there was a fairly good supply of water in the river?

A I think so, I ain't quite positive.

Q Did you get enough water in 1914?

A No sir.

Q How did what you got in 1914 compare with what you got in 1915?

A I got more in 1914 than I did in '15.

Q Was it much more or just a little bit more.

A Well, it was -- well, was a bit little bit more.

Q Was there enough difference to make a difference in your crop?

A Yes sir, there was quite a difference to make a difference in the crop.

Q How about the year 1913, how did it compare with 1915?

A Fairly well.

Q Just about the same?

A With '15?

Q Yes.

A My memory serves me right, I think it compared favorably with '14, but '15 was an exceptionally dry year, we were very short of water.

Q Now, you mean that was a dry year with you or it was general?

A That is the dry year with me and I presume it was with everyone else.

Q You don't know of other people?

A I heard a good many people complain of the shortage of water, in fact, most everybody.

Q What I mean, about the supply in the river?

A I am only interested in what comes down the ditch that I have any water contact with, that does me a benefit, the river, I have nothing to do with the river only what is taken out above where my ditch, where my water comes out at the head, what comes down I am not interested in because I know nothing about that.

Q I know that, but have you had any other year since you have been farming where the supply you received was comparable in amount with what you had last year?

A Last year, 1915, you have reference?

Q Yes.

A I was short in '15, very short, other years was better than 1915.

Q You had never had a year preceding 1915 that the supply was the same as 1915?

A No sir, not as small a supply.

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LARS E. EGGERTSEN, called by the defendant Prove City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Your name is Lars E. Eggertsen? A. Yes sir.

Q How long have you lived in Provo?

A I was born here.

Q How old are you?

A Fifty.

Q What is your profession, Mr. Eggertsen?

A Teacher.

Q You have charge of the Provo City school system as superintendent?

A Public, yes sir.

Q You own land within the Provo City water irrigation system?

A Yes sir.

Q Do you own any farm lands?

A It is partly in acreage, I presume that would be so considered.

Q And some city lots?

A Yes sir.

Q Do you say where your lands are situated, including the city lots?

A Just north of 8th North and east of Academy Avenue, bordering on to Academy Avenue and north of 8th North.

Q All of your situated there?

A Except what I have on Grove Bench as far as Provo City is concerned.

Q How many acres have you in Provo City?

A It would be eight acres and about eighty-seven hundredths, something like that.

Q Is it cultivated land?

A Yes sir.

Q All of it? A. Yes sir.

Q What crops are raised upon it?

A On the -- just north of 8th North and east of Academy, alfalfa, oats, corn, wheat. I am mentioning now what I have raised on it, and then garden truck.

Q Takes water for irrigation, do you? A. Yes sir.

Q Through what canal?

A That I don't know, it is the ditch, what would be termed the

Canyon Ditch on 1st East.

Q That is the ditch that runs up by Mr. Poulson's place?

A 1st East and then -- yes, Poulson. The man that has the machinery up there.

Q That is from the East Union?

A Yes, if it is the Poulson that lives up there.

Q How many years have you irrigated this land, Mr. Eggertsen?

A Since I owned it, that would be 1899.

Q Have you given the land your personal attention?

A Yes sir.

Q What do you, <sup>say about</sup> having sufficient water for the irrigation of these lands during the time that you have had them?

A There has not been a year since I owned the property but what it has been necessary for me to ask the watermaster for additional time to water my land.

Q Did you always get it?

A Well, not always.

Q In 1915 how was the water supply?

A That would be last year, I think -- I will put it this way, I asked for water more times last year than any previous time.

Q Did you need more last year than ordinarily?

A I did, at least I thought so very strongly.

Q Did any of your crops suffer last year?

A They would have been better if I had had more water.

Q Has that sometimes been true in previous years?

A Yes sir.

CROSS EXAMINATION by Mr. Thurman.

Q You irrigate yourself, do you, Mr. Eggertsen?

A Yes sir.

Q How much time do you have for your eight acres?

A Six hours on the one piece and nine hours on the other. Six hours on the piece north of 8th North and east of Academy Avenue.

Q How much is that, in that piece.

A That is 2.80 acres.

Canyon Ditch on 1st East.

- Q That is the ditch that runs up by Mr. Poulson's place?
- A 1st East and then -- yes, Poulson. The man that has the machinery up there.
- Q That is from the East Union?
- A Yes, if it is the Poulson that lives up there.
- Q How many years have you irrigated this land, Mr. Eggertsen?
- A Since I owned it, that would be 1899.
- Q Have you given the land your personal attention?
- A Yes sir.
- Q What do you, <sup>say about</sup> having sufficient water for the irrigation of these lands during the time that you have had them?
- A There has not been a year since I owned the property but what it has been necessary for me to ask the watermaster for additional time to water my land.
- Q Did you always get it?
- A Well, not always.
- Q In 1915 how was the water supply?
- A That would be last year, I think -- I will put it this way, I asked for water more times last year than any previous time.
- Q Did you need more last year than ordinarily?
- A I did, at least I thought so very strongly.
- Q Did any of your crops suffer last year?
- A They would have been better if I had had more water.
- Q Has that sometimes been true in previous years?
- A Yes sir.

CROSS EXAMINATION by Mr. Thurman.

- Q You irrigate yourself, do you, Mr. Eggertsen?
- A Yes sir.
- Q How much time do you have for your eight acres?
- A Six hours on the one piece and nine hours on the other. Six hours on the piece north of 8th North and east of Academy Avenue.
- Q How much is that, in that piece.
- A That is 2.80 acres.
- Q You have six hours for 2.80 acres?

A Yes sir, once a week.

Q That is substantially two hours to the acre?

A Yes, that is shortly figured about that way.

Q How much land have you on the other piece?

A Five and a fraction of an acre.

Q How long do you get it of that piece?

A Nine.

Q You get a little more proportionately on the small piece than you do on the larger piece, don't you?

A I think so, yes.

Q Is there any reason for that?

A Beg your pardon.

Q Is there any reason for that?

A Not as I know of, I have never paid any attention to it at all that way.

Q You irrigate it yourself?

A Yes sir.

Q Isn't there a difference in the soil?

A There is.

Q Which is the more difficult to water?

A The one on the east side.

Q That is the small piece?

A That is the small piece, that takes more water than the one on the other side.

Q Consequently takes more time?                   A. Yes sir.

Q And probably that is the reason you get the additional time?

A I presume that it is just metely the matter of dividing it up, I don't know as to that.

Q Well, you understand, do you not, Mr. Eggertsen, that if the conditions are the same why you would get the same amount of time for each acre of land, would you not?

A I judge so.

Q There is some system here I take it. Now, what kind of crops do you raise on the small piece, the east piece?

- A I mentioned corn, potatoes, alfalfa, oats, wheat and garden truck.
- Q Which crop in your experience, which character of crop requires the most water during the time of its being irrigated.
- A The potatoes, they call for more than any of the other.
- Q Do they -- does the ground, potato ground, dry out quicker than the other ground after irrigation ?
- A That is my experience.
- Q You water your potatoes of course in rows?
- A Yes sir.
- Q But you commence to water potatoes ordinarily as early in the spring as you do grain, do you?
- A No sir.
- Q How many irrigations does your potatoes need?
- A Well now, I have never figured that out.
- Q Well, about how many, we can get at it another way probably. About how long does it take for your potatoes to mature, or at least get sufficient water from the time you commence irrigating until you cease?
- A I would begin watering -- well, put it this way, I will begin watering in the first part, my potatoes, first part of June and then will water until latter part of September.
- Q About four months?                   A. Yes.
- Q Once a week?
- A No, I will not water them once a week, I will water them perhaps every two weeks.
- Q Twice a month?                   A. Yes sir.
- Q Think you give them about eight waterings?
- A Yes sir.
- Q Seven or eight waterings?
- A Something like that.
- Q Do you know what size stream you have on that measured in second feet ?
- A No, I don't know.
- Q Haven't you any approximate idea?

A It is called a fourth of a stream that comes down the ditch, that is about all I know about it.

Q A fourth of the stream?

A Yes, we are allowed to take one fourth, that is a small, little irrigation stream.

Q Is it the same size as the stream that irrigates the city lots?

A Yes sir, just about the same, that is what it is exactly, city lot stream, just an ordinary ditch that is running down here on our street.

Q And you get it with that stream on your land, you get it for six hours on the 2.50 acres each week?

A Yes sir

Q Each week?

A Each week.

Q What do you raise on the land on the west side?

A At present it is in wheat and potatoes.

Q How has been your irrigation up to the present time this year, have you had sufficient water?

A Yes sir. Let me just describe that, I have had sufficient water, but I have applied to the watermaster twice this year for water on the east side of my -- on the small piece, didn't have enough to get through.

Q Not to get through?

A Without getting additional water.

Q Additional time.

A Additional time.

Q Well, that is the way he does, it, give you additional time?

A That is when he can.

Q Is it additional time or additional quantity of water?

A Well, it is both, it is time for the water and it is water.

Q Well, if you get <sup>it</sup> additional time, the water is all timed, timed out along these lots, ain't it, one end to the other?

A As I would understand it it would be this way: There is a time that the water would have to go to the lower end of the ditch after all had watered, and right in there there is a little

space that he can arrange for a person to get --

Q Margin of safety?

A just for a margin of safety, I think.

Q And on that occasion you sometimes get a little additional water?

A Additional water.

Q Are you the first man on the ditch above?

A Yes sir, in that sense I am the first man, I am right at the head of the ditch, but there are one,-two -- there is perhaps seven that have their -- that are right there in that particular neighborhood, so that they could all be considered at the head of the ditch.

Q Seven of you that are equal in your right to the first --

A Take the water right from the original stream.

Q You have some system among yourselves?

A Yes sir.

Q You seven, don't you, who gets it.

A When you said if I was the first to take it, it is a question in my mind whether I am or not. I am either first or second, I don't know whether the -- because there is one puts in the dam and then I get the water from him.

Q At what time last year did you suffer most?

A I suffered most in the month of August.

Q What crop?

A That was my garden and the finishing up of my potatoes.

Q Small truck?

A Yes, small truck.

Q You suffered --

A And the fruit trees, I didn't mention that.

Q You suffered on account of a shortage in the size of the volume of the stream?

A Yes sir, particularly so.

Q The stream wasn't large enough within your time to irrigate the crops?

A That is correct.

- Q You have one of these streams that is used to irrigate city lots, most of which are covered more or less, that is in part with houses and barns; have you got houses and barns on your's?
- A Yes sir.
- Q How much of your 2.80 acres is covered with houses and coralls unirrigated land?
- A Unirrigated, there would be about 60 square rods.
- Q 60 square rods? A. Yes sir.
- Q You irrigate --
- A That I don't irrigate, that is occupied by the house and barn.
- Q I take it that you irrigate more than three fourths of your entire 2.80? A. Yes sir.
- Q You irrigate, do you not, much <sup>larger</sup> percentage of your piece of land there than the residence do of their city lots throughout the town, their six by twelve lots?
- A That would be true, from the fact that the place is so much larger.
- Q I say I just want to get the idea? A. Yes.
- Q You are watering with the same size stream that is allotted to them? A. Yes sir.
- Q And being allotted to them for the purpose of irrigating their land the same stream allotted to you, you irrigating a larger percentage of your land area shortens you up, don't it?
- A That's just it, yes sir.
- Q For that reason.
- A Take a person who has just a lot, what we call a three by twelve.
- Q Practically half of it occupied by residence and coralls?
- A Yes sir.
- Q Now, it is a fact, and I take it that it wasn't last year, but as a rule with that stream you don't have enough to irrigate your land?
- A That has been true ever since 1899, since I owned it, but it is true too of course particularly last year.
- Q You give it careful attention, do you, and irrigate it so that there is no waste water?

A Oh yes, I can easily do that because it is close to the head, and as quick as the water is there I will know it.

Q Is it land that irrigates easily, that is, it lays so that the water runs over it?

A Yes sir.

Q What kind of --

A Perhaps runs over it too good, because it is in such good slope. That is one piece.

Q What kind of surface soil did you say that is?

A It is gravelly, most of it.

Q How long runs do you have for your water?

A Sixteen rods, that is for the one piece and about eleven for the other.

Q Have you a subsoil different from that?

A Some part of it is different.

Q What kind of a subsoil have you?

A That would be clay and -- it is not sandy loam it is more clay than the other.

Q How deep is that below the surface?

A The clay on this particular -- on part of it that would be quite deep, but the gravel part, it is gravel all the way down as far as I have been yet in the digging.

Q Where there is a clay subsoil reasonably close, say within foot and a half to three feet below the surface, you don't -- it don't take up the water?

A No sir.

Q Quite so much, does it?

A No sir.

Q But the gravelly land, you have to rush it over rapidly, do you, to get it through at all?

A And then, <sup>you</sup> must water quickly again so that your crop is all right.

Q Now, on your west side, what stream of water do you have there,

A 1st West, water from the 1st West ditch on 1st West.

Q Is that the same size stream?

A

A I think that is a trifle larger, I would judge that would be a little larger, carries more water.

Q How much of that land do you irrigate?

A All of it, 5.22 acres.

Q Don't have any buildings?

A None at all.

Q Or corrals on it? A. No.

Q So that is all cultivated and still irrigate that with one of these city streams? A. Yes sir.

Q If it is a little larger, how much larger would you say the stream would be?

A Oh, an eighth.

Q An eighth larger? A. Yes sir.

Q You can give no judgment about the stream, whether it is a second foot or more?

A No sir, I don't know.

Q Is the land on that side about the same?

A No sir, much different.

Q You can irrigate it easier?

A Well, it is not -- I would have to put it this way, prior to last year it was pasture, I pastured it and broke it up last year. It is just in the formation period now of being farm land, there is that difference, that makes quite a difference. You would recognize this that when it was pasture, needed considerable water for pasture purposes then it was very difficult, but farming it it has made quite a difference, and will make quite a difference, I fancy.

Q It will be easier to irrigate than the land on the east side, won't it, when you get it in good condition?

A It will now after getting it in farm trim, but during the period that I pastured it, since 1899 up to a year ago, then I needed all the water I could put onto it for the purpose of making meadow out of it and it needs more water for meadow or pasture, whatever we want to call it, than it would now.

Q Have you the same kind of crops in that now --

- A It is in wheat and potatoes now.
- Q That you have on the east piece.
- A Wheat and potatoes now.
- Q Are you able to get over that piece of land with the stream of water you have?
- A This year?
- Q Yes.
- A That has not been fairly tested yet.
- Q Have you irrigated it?
- A It is owing to the fact of the frost coming and it just seemed to -- on account of the loose soil it froze the roots of the wheat, and I have been undecided about watering it.
- Q You have not watered it?
- A No, I just tried it last time, I just watered last week, just watered part of it last week.
- Q The thing I want to know is whether you could get over it with that stream of water, irrigate your five acres of land there, or whatever it is, with that stream of water?
- A I believe that stream of water will water it when it is in proper farm trim, that is, if it keeps up the way it is now. That is if it keeps up the way it is now the stream that is there, but it would not have done that if it would have been in pasture.
- Q Pasture requires more water?           A. Yes sir.

CROSS EXAMINATION by Mr. John E. Booth.

- Q Mr. Eggertsen, you are acquainted with the land surrounding yours?
- A Somewhat.
- Q You know the Buckle, William Buckle piece?
- A Yes sir.
- Q That is how far north of you ?
- A just joins mine, that is, father Buckle.
- Q The original Buckle?
- A Yes, and he still owns a little piece just north.

- Q Say take twenty rods north of yours, wouldn't that require less water than yours?
- A Part of it will, that that is on the same ditch as mine will require just as much.
- Q Take where William Buckel Lives.
- A That would not require as much.
- Q That would not require as much?
- A No sir.
- Q Now, take south of you, the next block south, that would not require as much water as yours.
- A I would judge that would require more than mine; where Mr. Smart lives?
- Q Yes.           A. Yes.
- Q West of you would require less under some conditions, wouldn't it?
- A Over across the road?
- Q Yes, across the street west, take that tract west of -- right west of yours.
- A There are two conditions there. There is a part of that that is farther west over toward the track, it has a spring that is up in Mr. Haas land that has some effect upon quite a part of that low land there.
- Q The water comes much nearer the surface, the sub water?
- A Oh yes, over there.
- Q Where your place is was originally quite a knoll, gravelly knoll?
- A Yes, very much so, and it is there today.
- Q Taking nothing else into consideration but just the ground there, yours would require more than almost any ground that is surrounding you, wouldn't it?
- A I think so except that one by Mr. Smart's, that is affected just the same as I am.
- Q That would go how far down?
- A Oh, it runs down to Brigham Young University.
- Q Just a narrow strip in there ?

A Yes sir.

Q East of that strip and west of that strip wouldn't require as much as yours?

A No, I don't think it would.

Q That is east of Academy Avenue? A. Yes.

REDIRECT EXAMINATION by Mr. Corfman.

Q You spoke of the Buckle property?

A Yes, just north of me.

Q Did you observe the crop conditions in 1915 on that land?

A Well, I observed them.

Q Do you know whether or not those crops needed water that season?

A I judge so; Mr. Buckle and I incidently talk that way every once in a while when we were watering.

Q Would you say they did from looking at them?

A I thought so. He had corn and potatoes same as I did. That was piece of land just north of me, just the fence separates us.

Q Was the crop suffering for water, were the crops there suffering for water on the Buckle tract last year?

A The last year?

Q Yes.

A I think so, that is my --

Q That is all.

RECROSS EXAMINATION by Mr. John E. Booth.

Q I want to ask one question, there is a drain running in front of your property, isn't there, on Academy Avenue?

A On Academy Avenue, on the opposite side of the street, the drain is there, you mean that large ditch?

Q Right in front.

A Right in front, yes.

Q previous to the construction to it of that drain the land to the north of you and west of you was swampy, wasn't it?

A If they were I don't remember. At no time do I remember that, that is on Academy Avenue being swampy.

Q Don't you remember the street itself used to have quite a pond of water in it?

A Where?

Q Above your place?

A Up by Mr. Haas's?

Q No, between yours and Haas'. They had to fill up the swamp to make a road across it, don't you remember that.

A I don't remember that part, that is before 1899, before I bought. It is swampy now right up there by the Haas's.

Q Doesn't that swampiness extend more or less down until you get to the drain that has been constructed in front of the Buckle premises and north of there on Academy Avenue?

A I think that you would find it that way, there would be some swamp there even now.

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JAMES B. SNOW, called by the defendant, Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Give your full name?

A James B. Snow.

Q How long have you lived in Provo?

A Sixty odd years.

Q Own property? A. Yes sir.

Q Well, I have owned city property and acreage.

Q Do you own city property now? A. Yes sir.

Q City lots or acreage?

A Well, little of both, I believe, in a way.

Q How many city lots have you?

A If you take the Cook and Berry Addition there is quite a property three by nine, but that I think comes in as acreage.

Q You own some city lots?

A I own three -- I own two full city lots, that would be twelve by twelve, and then I own five by twelve.

Q The twelve by twelve is where your house stands?

A Yes sir.

Q You cultivate those lots?

A I do, those that I live on, only the ground that takes my house and door yard.

Q You get water for irrigation for them do you?

A Yes sir.

Q About what proportion of these two lots on which your residence is situated do you cultivate?

A Well, I hardly know, it might be one eighth of an acre that I don't cultivate, might be more.

Q From what ditch do you get the water for these lands.

A Let me see, the way those ditches is numbered I think it is the second, No. 2 Ditch on 5th East.

Q How far north?

A Well, it divides on 6th North. We have two irrigating streams for city lots.

Q And are you allotted time? A. Yes sir

Q How much time have you for those two city lots?

A Three hours.

Q And what kind of crops do you grow on the premises?

A I have a little patch of clover, I have a few apples trees and the rest is ordinary farm products, produce.

Q Vegetables? A. Yes.

Q You water the entire area outside of where your barn stands?

A My barn is on another lot that I don't irrigate at all, I pay for three lots.

Q How many do you irrigate?

A Well, two, with the exceptions of my house and door yard.

Q Why don't you irrigate them all?

A Simply because ordinarily I don't have the time.

Q What do you mean by the time?

A I mean that it takes ordinarily, that is, up until this year, my time ticket shows four hours and I won't say a half, but a fraction. For years I have paid that, and I have used it on the two lots. I will say this, I never had more water -- that is, I never had -- I never got through short of my turn time.

Q On the two lots?

A On the two lots.

Q Then you have taken the water from the other lot and applied on these two?           A. Yes sir.

Q By reason of your not having sufficient time to irrigate it all. What would you say, speak out loud.

A What was the question.

Q Read it.

(Question read)           A. Yes sir.

Q What do you say as to the supply of water you had in 1915 as compared with other years?

A Well, it was short. Last year, as I understand it, by observation and hearsay.

Q By observation?

A Yes, Provo River was very low early in the season. We had no <sup>water</sup> what we call a big supply, early in the spring or in that period which we should have, for the lack of moisture in the mountains, snow and rain during that period lays up water for the season. I would just like to mention this, in the early days, earlier days, however, before the timber was chopped out at the head of the river, we used to have out high water along about the fifteenth of June, from that until the Fourth of July, when it would recede. Since then if we have any high water it comes much earlier, and if I recollect right, in 1915, we were all looking at this Sheep Canal up here, sign for high water, when that was half or two thirds gone. If we don't have no high water why the farmers would begin to throw up their hands. That was the case in 1915, that was last year.

Q Have you experienced any shortage in previous years than 1915?

A Yes sir, I have occasionally, we have a great and good storage in the mountains, I know from Mr. Lytle, sheep engineer of the Reclamation, I often have a chat with him.

MR. RAY: We object to the chat with Mr. Lytle, your honor please.

Q Now, did you have sufficient for the two lots?

A Not last year, no sir.

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JAMES B. DANIELS, called by the defendant, Provo City, first being duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Your name is James B. Daniels? A. Yes sir.

Q Lived in Provo all your life?

A Yes sir, pretty much all my life since I was a baby.

Q Present mayor of Provo City? A. Yes sir.

Q Own lands under the Provo City irrigation system?

A Yes sir.

Q How long have you?

A Some of them for between thirty-five and forty years.

Q Use water for irrigation? A. Yes sir.

Q On all of them?

A Yes sir.

Q Where are your lands situated?

A Southeast part of the city or southeast of the city.

Q How many acres of farm land have you there?

A I don't remember the exact amount, between fifty and fifty-five acres.

Q From what canal do you get water for irrigation?

A From the East Union.

Q What crops do you raise?

A Various agricultural crops.

Q General agricultural?

A General agricultural.

Q Take water from the East Union Canal?

A Yes sir.

Q For all of these lands? A. Yes sir.

Q What do you say as to the supply of water that you had for irrigation on these lands in 1915 compared with other years.

A It was rather shorter than usual.

Q In previous years did you experience any shortage?

A At some time.

Q What crops, if any, suffered in 1915?

A My hay crop and also beet crop.

Q Along about what season of the year?

A The hay crop suffered some in May and July and August.

Q You take water in turns, do you? A. Yes sir.

Q Did you --

A Distributed by the watermaster.

Q Did you endeavor when you found that you were getting short of water that the crops needed, to get the water?

A Yes sir.

Q What did you do?

A Asked the watermaster for the use of the water.

Q Did you then get it?

A I did when he could get around to me.

Q How long would it take him to get around to you?

A Sometimes it would take as high as-- it would take as high as a week after asking for it before I could get it.

Q How often did you get the water, Mr. Daniels, for your land?

A Well, it would vary as to that, but we aimed to water in the irrigation season about every two weeks, when things are normal and regular, it gets around about every two weeks.

Q When do you say it varies?

A It varied in May and July and August.

Q Now, you said that it took sometimes a week after you applied to the watermaster for the water to get it?

A Yes sir.

Q How long in that case, how long before had you applied, how long was <sup>it</sup> before you had used the water on the land?

A Well, we wouldn't usually apply until our turn would come. Probably two weeks, or when two weeks had past since we had irrigated and then make application for it, and in several instances, it was a week before we could get the water.

Q On those lots about what acreage that was in crops suffered during the year 1915?

A The best crop I had in there was about in the neighborhood of eight acres.

Q That suffered?

A That suffered.

Q How much of the hay?

A And the hay I should say about fifteen acres.

Q You own city lots? A Yes sir.

Q Live upon a city lot that you own? A. Yes sir.

Q What ditch or street is your home situated on?

A On 4th East and 4th South, I irrigate from the ditch on 4th East.

Q Did you experience any difficulty in getting sufficient water for those lots in 1915?

A Yes sir.

Q Have you in previous years?

A Not very often before.

Q How large an area is there in your home premises?

A Why, there is nearly -- there is something over a lot and a half.

Q How much of it do you irrigate?

A Not quite a lot, not quite one lot.

Q Were you able to irrigate it all in 1915?

A Several times I wasn't, with the time I had.

Q Did you take any steps to get water outside of your regular turn to supply your premises with water?

A No sir.

- Q Do you know of any<sup>of</sup> your neighbors that were short of water in 1915?
- A Well, only from report.
- Q Did you see any of your neighbors suffering?
- A Yes sir.
- Q Who?
- A Mrs. Jean Johnson.
- Q Do you know whether or not she had the water for them.
- A She had the water at times, and at times there wasn't sufficient water there to irrigate it.
- Q How large a lot had she?
- A She had about one lot.
- Q About what proportion of that did she irrigate?
- A She irrigated about one lot. They have two lots.
- Q They have two lots? A. Yes.
- Q Was the other lot irrigated? A. No sir.
- Q Not at all? A. No sir.
- Q Do you know why?
- A I might state a part of it was in lawn, it was irrigated.
- Q From city water?
- A Quite a portion of it wasn't irrigated at all.
- Q That portion in lawn irrigated from city water works?
- A Yes sir.
- Q Do you know whether or not she used all the water for both lots on the one lot she raised crops on?
- A Yes sir.
- Q She did do that?
- A Yes sir.
- Q Has that been her custom for years?
- A Yes sir.

---

12:00 Noon, Recess to 2:00 P. M.

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CROSS EXAMINATION by Mr. Thurman.

Q Mr. Daniels, you are Mayor of the city, aren't you?

A Yes sir.

Q Elected at the last city election? A. Yes sir.

Q You lived in Provo practically all your life?

A Yes sir.

Q And own lands under the East Union ditch?

A Yes sir.

Q How long have you owned that land?

A Part of it I have owned in the neighborhood of forty years, I guess, part of it I bought later years.

Q You irrigate it yourself?

A Yessir, part of the time. Part of the time I have rented it to some others and had some hired men irrigate it.

Q Did you irrigate it last year ?

A Yes sir.

Q I understood you to say your system there was for the water user to notify the watermaster when he wanted the water?

A Yes sir.

Q How long has that system been in vogue?

A For a good many years.

Q How long, as a rule, does it take water to get around to you after you ask for it?

A I oftentimes get it the next day, sometimes the same day, be owing to how many had spoken ahead.

Q As a fact that might happen very often, mightn't it?

A Yes sir.

Q That several would be wanting to get the water at the same time?

A Yes sir.

Q In that case somebody would be delayed in getting it?

A Yes sir.

Q And if they need the water about the time they ask for it, every day's delay does a slight injury to the crop, or presumably so?

A If they don't ask before the crop really requires it, it certainly would.

Q Have you ever tried any other system there that you know of?

A Not that I remember of.

Q That same system is not adopted in other sections of the town, is it?

A I don't know as to that.

Q For instance it is not adopted on the city lots, is it?

A I believe not.

Q You have tickets and time for them? A. Yes sir.

Q And you don't know how it is on the west side, I mean in the farming land over there?

A No, I don't know exactly how it is there.

Q Under the system you have it there of taking turns under the east union ditch, when you get your turn, are you limited to so many -- to time according to the acreage you have got?

A Sometimes. Sometimes you are notified by the watermaster when you speak for it, that such and such a person has engaged it at a certain hour and will take it from you at that time.

Q Well, do you sometimes -- what is the average time per acre that you have it up there?

A Well, there is no fixed time, usually use it until we get through with it, over the ground, unless it has been arranged for someone to take it. Sometimes it has been that way.

Q Now, do you think that is an economic system of using water?

A Why, I think so in many respects.

Q And won't it sometimes lead to the very result that you complain of last year, of being delayed too long in getting the water after you asked for it?

A Yes, I think probably it does.

Q Don't you think a system which would require you to take the water, say once every two weeks, or half the quantity or time every week, you would know exactly when you had to take the water, that you would not have the disadvantage that you worked under last year. You might not need the water so

badly, but you would use it, and that would tide you over until it come around again, wouldn't that be better than having to wait your turn when probably there is ten or a dozen people needing it as bad as you and you got to wait?

A No sir, I don't think so.

Q Why not?

A Well, for the reason that my turn might come when I didn't need it, or when I couldn't possibly use it .

Q Yes.

A I might have a crop of hay out and some storm come and little shower come and would not be able to get it off the ground in time for my turn and if I didn't -- missed my turn, then I would have to go two weeks before I could get my proper turn again.

Q Now, don't you think in an emergency of that under a system, under such a ditch as the East Union, if you knew your time was fixed and other men's times were fixed, if such an emergency as you mention arose , you could make an exchange with somebody for his turn and let him take yours?

A Yes, I presume I could if I could find somebody that was willing do do it.

Q You sometimes do that way on city lots , don't you, where your neighbor is going to use the water?

A Well, I have never made an exchange of that kind myself, but I presume it is done oftentimes.

Q Well, in any event, you are in as bad a fix having to wait a week or ten days after your crop needs it and you make your request, if as you would be if your had your lucren down, or something, and didn't want to take it at that time?

A Yes, possibly, but it is not often we have to wait that long.

Q One thing I want to know, is there any peculiar condition under the East Union Ditch that requires this differat system up there than over all the rest of the system?

A I don't know that there is.

Q You know of no such condition ?

A. No.

- Q You are somewhat acquainted with other lands in the city than those under the East Union ditch, aren't you?
- A Yes sir,
- Q What crops did you say suffered last year under the East Union, which crop?
- A Hay crop and beet crop.
- Q Lucern hay?
- A Yes sir, both lucern and grass hay.
- Q Which cutting of your lucern suffered, or did it all suffer?
- A A portion of the first cutting and portion of the second cutting.
- Q Did you have weevil in your wheat last year?
- A Yes sir.
- Q First cutting? A. Yes sir.
- Q Didn't that affect the first cutting?
- A Yes sir
- Q And wasn't that really the cause of the injury to that?
- A Cause of the big injury to the crop?
- Q Yes.
- A Yes sir.
- Q About what time did you make the first cutting?
- A Along in June.
- Q Did you get any water at all on your first crop of lucern?
- A Yes sir.
- Q More than one? A. Yes sir.
- Q How many?
- A I think I watered it three times before I cut it the first time.
- Q That would be along in May?
- A I commenced in May.
- Q And did you get pretty good waterings? A. Yes sir.
- Q So, so far as your first crop was concerned, you could not come plain for shortage of water?
- A I got good water when I got it, but I was delayed in getting it at one time until it burned.
- Q You were delayed because of this very system you are talking about, weren't you?
- A I suppose so, or shortage of water, I don't know what was the

- delay, what caused the delay.
- Q Whole lot of other people in your fix that wanted to water about the same time?           A. Yes sir
- Q Probably got their demand in before you got yours in?
- A I presume so.
- Q So in that case it wasn't so much, was it, on your first cutting the scarcity of water in the system as the was the system itself?
- A I think there was a scarcity of the water. During May the water was very scarce for a while and they could not get it in the ditch, so the watermaster claimed.
- Q You mean it was low in the river?
- A Low in the river.
- Q That was due then to the climatic condition and the lack of precipitation during the winter and storing up of snow and so forth?
- A Yes sir, I think so.
- Q In fact last year was about the -- the river was about the lowest, take it generally, that you have ever known it, wasn't it?
- A It was the lowest in May I have ever known it.
- Q Lowest in May?
- A That I ever remember of.
- Q Had it been an ordinary season last year usually the chances are, you would not have suffered any in May?
- A Not in May, very unusual thing.
- Q When did you next suffer?
- A In July.
- Q That is your second crop?           A. Yes sir.
- Q Or third?
- A Second.
- Q When did you cut in July?
- A How?
- Q When did you cut your second crop?
- A The second crop, I couldn't tell you about exactly the date, but it would be somewhere about the forepart of August, I think.

Q Do you know how many waterings you gave that crop?

A I think I gave it two waterings.

Q Did you get good waterings when you did get it?

A When I did get them I got good waterings.

Q Now, was the same trouble in July that there was in May, your not getting the water just at the time you wanted it?

A That was one of the reasons.

Q That was again due to the fact that probably several wanted it about the same time?

A Well, the watermaster informed me he couldn't get it around to me, that water was scarce and couldn't get it around to me at the time I called for it.

Q Now, as a fact, that system of yours to be an ideal system under that ditch you would have to have sufficient water so that whenever a man thought he needed it, was going to need it, and demanded it, there would be water there to give him, wouldn't it ?

A It would if we had an ideal system.

Q Under that kind of a system it would require just that condition, wouldn't it?

A I presume it would.

Q Have water to give to him, but you know, <sup>that</sup> to work out successfully that kind of a system not having a reservoir to draw from means that there would be more water flowing in that ditch than that ditch is entitled to where water is like it is at Provo River, all more or less in demand ?

A No, I don't so understand it.

Q Now, throughout, how many people use water on the East Union ditch?

A I couldn't answer that question, I don't know how many.

Q How many laterals are there running out from it?

A I am not posted on that either, there is quite a good many.

Q In any event you know there are several people?

A Yes sir, great many people.

Q As many as twenty or twenty-five hundred there anyway?

A I think so.

- Q I mean on the farming land? A. Yes sir.
- Q And possibly a good many more than that?
- A Possibly more than that.
- Q Now, to keep water in that ditch so that any of those men at any time he wanted it can make a demand and get it means on the face of it to keep water in that ditch that will some time go to waste, isn't that true?
- A It might do at times.
- Q Because if there is only twenty-five men there and ten or fifteen of them should want it all at the same time, they cannot get it, can they?
- A No, they wouldn't get it.
- Q Somebody has got to be delayed.
- A Generally ~~trus~~ try to take it as near in their turn as possible. Of course --
- Q Well now, if you are coming around to the question of turns, I thought you didn't have any system except to get it when you requested it from the watermaster?
- A You misunderstood me then, I didn't mean to convey that idea.
- Q What do you mean now then by turn, qualified in that way that you get it say about every two weeks?
- A It usually gets around about every two weeks, in that neighborhood.
- Q Then if it usually gets around about every two weeks, you could adopt a ticket system by which you would take it every two weeks, couldn't you?
- A Could do.
- Q But if you take it as you have first stated it, just when you needed it, or when you think you are going to need it, say next day, and happen to run up against a condition where ten or fifteen of these twenty people need it and have got their demand put in for it, you are going to suffer ain't you?
- A Yes sir.
- Q Now, about your city lots, how many lots do you say you have?

A I have one and a fraction.

Q One and a fraction? A. Yes sir.

Q And how much of that one and a fraction lot, what percentage of it do you irrigate?

A I irrigate about one lot.

Q How is your fraction, is it a large fraction or small fraction?

A Well, be a large fraction over a half.

Q You irrigate over half of your --

A I irrigate over half of my ground.

Q Your area?

A About half, little over half, probably.

Q You irrigate probably a little bigger percentage of your area than the average, don't you?

A I presume I do.

Q And how long did you have the water when your turn came?

A Hour and a half, I believe.

Q Hour and a half for the whole area?

A Yes sir.

Q Do you know why you didn't get it an hour and a half to the lot?

A I don't.

Q Isn't an hour and a half to the lot the custom or system here?

A I believe it is.

Q Didn't you find out whether you were not getting according to that system?

A I never inquired.

Q You don't know of any reason, <sup>then</sup> why you didn't get water according to the system which I believe it is even in accordance with the ordinances of the city?

A No, I never inquired. As an ordinary thing I can get through with it in the time allotted me if the ditch is full.

Q Is an hour and a half the usual time that you have had it on those lots in other years?

A My recollection of it is that that is about what I have had for a number of years.

- Q And you are on 4th East and 4th south, ain't you?
- A Yes sir.
- Q Do the other people on that lot irrigate about the same -- on that block irrigate about the same percentage of their land as you do?
- A I don't think there is anybody on the same block that irrigates from the ditch except me. I might state that probably I have a little advantage over some of my neighbors there on account of it being a big levy on the ditch, the ditch is on the opposite side of the street from my place, there is quite a big levy there and the neighbors on the other side of the street have to raise it up high to get it into their lot, and I can drain that levy dry running into my lot because it is much lower than the ditch, and that would probably assist me in getting along with less water than the others can get out of the same length of time.
- Q You mean by that that you are so situated that you would get during a given time a larger --
- A I get more water in the given time than some of my neighbors can on the opposite side of the street. They have to force it up and fill that ditch full to get it into their lot. My turn comes immediately after them, and I can get the advantage of all that accumulated water, it acts as a reservoir for my lot.
- Q So ordinarily that enables you to get through with your acre and more than a half with an hour and a half watering?
- A My lot.
- Q Your lot I mean?
- A Yes sir.
- Q You water above or below the people you are speaking of?
- A I water right across the road east.
- Q They are on the other side of the street?
- A I am west from them, they are on the opposite side of the street. Both of the Johnson water the half a block on the east side

of that street from that same ditch.

Q How much did you lack last year of watering up your lot with the water you had in the time you had?

A Well, I don't think I lacked very much in watering my lots last year. The lots -- there was once or twice the water was scarce in the ditch.

Q Now, things of that kind sometimes happen when there is really plenty of water going into the system?

A There might be, I never went up the ditch to see. Chances are somebody had taken it above.

Q You spoke of a Mrs. Johnson, how many lots did she have?

A She had two lots.

Q She had two lots, and about what percentage?

A I should judge about one lot.

Q About half of her acreage? A. Yes.

Q You see the water was short?

A Yes sir

Q For her? A. Yes sir.

Q Do you know if any of her crops suffered?

A Yes sir.

Q What was it suffered on her lot?

A Her garden truck suffered some.

Q Was it a general injury all over the patch she irrigated, or was there some of it that went without any water at all?

A Well, some of it she didn't get water over in the turn that came to her.

Q Now, in her turn did she have to fill up this big levy you speak of? A. Yes sir.

Q Before she can get it? A. Yes sir.

Q Then when she gets it she don't get as much as you did?

A No sir.

Q Because it is too high.

A It is so high she cannot force it up there.

Q So she is at the disadvantage which results in an advantage to you?

A In an advantage to me, yes sir.

Q That is probably what accounted for her loss?

A That helped to account for it.

CROSS EXAMINATION by Mr. Ray.

Q Mr. Daniels, how many tons of beets did you get last year per acre?

A I don't remember now just what it was, it was in the neighborhood of ten ton.

Q The beet crop all over this district was light, last year, was it not?

A I think so.

Q Did you have any wilts in your beets?

A Some little.

Q Some leaf miner?

A I don,t know that I had any.

Q Do you know whether you did or not?

A No, I don't.

Q As a matter of fact, there was considerable loss in all the beet fields of the state last fall because of leaf miner, wasn't there?

A I don't know as to that, I know in some places there was a shortage, quite a shortage.

Q You don't know how much your beet yield was affected by wilt or leaf miner, do you ?

A No sir.

CROSS EXAMINATION by Mr. Bagley.

Q Do you own any land under the Upper East Union Canal?

A Not now.

Q You have had?

A I have had in the past, yes sir.

Q At the time you owned that land, did they use a season ticket system of distribution in the Upper East Union?

A I don't remember, but I don't think they did, been some years

since I sold it, I don't remember having any --

Q They took it for a fixed turn and you knew just when you were going to get your water?

A I knew about when it came.

Q Well, the conditions under the upper East Union are almost the same as they are under the East Union, aren't they?

A Quite similar.

Q The canals are only a few hundred yards apart?

A That is all.

Q And the lands are practically the same?

A Well, the land I owned there was not the same. I could explain that if you desire. The land I owned under the Upper East Union --

MR. JACOB EVANS: If the court please, I desire to object to this as not proper cross examination. I take it when we get to the Upper East Union in all probability the evidence will refer to the water used under the upper East Union. I think it will only be a repetition probably of what we are getting into the record now, and I do it for the purpose of saving time.

THE COURT: I think it is proper cross examination of the statement made by this witness that he regarded the plan of taking water and distributing water under the East Union as an economical and proper plan.

MR. JACOB EVANS: I didn't have that in mind, withdraw the objection.

MR. BAGLEY: That was my purpose, will you read the question, please?

(Question read)

A Land I owned under the upper East Union was principally clay soil without any gravel in <sup>it</sup> and that between the two ditches was a gravelly soil. That watered under the Upper East Union a gravelly, loamy soil which made it much harder to water and required more water to get over it than the other.

Q That was true about your particular land?

A My particular land that I owned there.

Q The same character of land is found under the Upper East Union throughout the course of the canal as would be found under the East Union throughout the course of the canal?

A Yes, sir, I owned about eleven acres under the Upper East Union and about fifteen acres under the Lower East Union adjoining.

Q If a system of season tickets or taking the water on time or in turns would, <sup>be</sup> the most satisfactory manner of distributing the water on the Upper east Union, the same rules would apply under the East Union, wouldn't it?

A I think so.

REDIRECT EXAMINATION by Mr. Corfman.

Q Mr. Daniels, do you know whether there is time tickets issued for all of your land in the platted portion of your city lots by the watermaster ?

A No it is not all time tickets issued, I don't think.

Q You spoke about time that you had for city lots?

A Yes.

Q As I understood you you had time issued for one lot an hour and a half?

A I think that is the time that is issued to me.

Q Do you know that is the time that was issued to you for your full acre and a half?

A I don't know that it was issued for the full acreage, but my recollection of it is that is the time allotted to me for this season.

Q For 1916?

A For 1916, and was for last season.

Q Just have one lot?           A. Yes sir.

Q Aren't you allowed any time for your other lot?

A I should have been, I presume, but I don't think I was.

- Q Are you sure of that?
- A I am quite certain. I could produce the receipt.
- Q I wish you would produce the receipt and let us see it.
- A I may be mistaken, but that is my recollection of it.
- Q That is all.
- A I will bring that receipt then.

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S. H. GOODWIN called by the defendant Provo City,  
being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Thomas.

- Q State your name, Mr. Goodwin ?
- A Samuel Henry Goodwin.
- Q Where do you reside?
- A 1075 South 5th West.
- Q In this city. How long have you resided in provo?
- A Be eighteen years in October.
- Q What is your business?
- A It would be pretty hard to state it in a word, teaching and farming.
- Q During your residence here what portion of the time have you done farming?
- A Five years.
- Q Where is your land located, is it in what is called the acreage or is it in the city lots?
- A It would be acreage field is the term used.
- Q Under what ditch, Mr. Goodwin, do you receive your water ?
- A For eleven acres I receive the water from Ditch No. 5, the ditch on 5th West.
- Q Let me interrupt you there. From what race.
- A The foundry.
- Q That is the City Race? A. Yes.
- Q And have you other acres besides the eleven.

A We have three acres under Ditch No. 7 I think it is.

Q Does that receive its water from the same Race, from the City Race?

A Yes, it is taken out at about 4th South, I think, corner of 4th South and 5th West.

Q What is the character of your eleven acre tract with reference to the soil?

A I would call it a sandy loam with a touch of clay especially at the north end of one part of it.

Q Is it uniform in character?

A I should call it so.

Q What is the depth of that soil?

A If I might say I call it so with here and there a gravel spot. There is, of course, in addition to the description which I gave -- why, I have made two excavations, one for an outside cellar and we went to a depth of four and a half feet of soil without gravel. Then some ten rods, I would say, I have not measured it, we made an excavation of some five and a half feet for an outhouse, and we hadn't quite two feet of soil there before we came to what I would call coarse gravel without soil, that is, in among the stone.

MR. THURMAN: You say you had a depth of two feet?

A Yes, two feet of soil then came to gravel where the rocks, little stone touched each other.

Q There seemed to be a limited amount of soil in that gravelly condition?

A Yes, no soil at all, it was fine gravel and coarser, some stones as large as that and from that to the smaller.

Q When you say as large as that, that would be about what size, size of your hand?

A Yes, only not necessarily that big.

Q What do you raise upon that eleven acre tract?

A Why, I had about nine acres of it in strawberries until the frost operated on it.

Q This year?

A This year, yes.

Q What did you have, what have you in the other two acres?

A Why, ~~beans~~ beans. I had beans and corn and small tract of buckwheat. After the frost I plowed up two acres of strawberries and put beans and potatoes in that.

Q What did you have last year, 1915?

A We had -- let me see, corn and potatoes and a few beans and the same ground in strawberries.

Q In 1913?

A Then we had three acres less of strawberries.

Q In 1912?

A I had two acres, let me see, two acres in strawberries I put out that year.

Q 1911?

A I bought the ground -- that is half of it, six acres of it.

Q Have you been -- in 1911 you bought six acres of the ground?

A Yes.

Q And cultivated the whole of it that year, did you?

A No, because I bought it in the latter part of May, and it already had been rented, but I bought out the crops and plowed them up.

Q From then and beginning with 1912, have you sought to cultivate the whole of that tract? A. Yes sir.

Q Have you had it under cultivation? A. Yes.

Q Whole of each year? A. Yes.

Q The harvest season of each year? A. Yes.

Q During what we call the high water season have you had sufficient to irrigate the whole of those acres?

A Well, at first I tried to irrigate the entire tract, first of course, an hour to the acre, and for the six acres would be six hours. I was not able to get it, get the water over the entire tract, and yet possibly I could have done so, depending upon the crops very much. Take it for example, cultivation follows each irrigation, that makes a difference in the length of time required to put the water across in a satisfactory

msnmr.

Q During the low water season were you able to irrigate your land?

A No.

Q With the amount of water that you had there?

A No, I found it necessary to divide the time, or rather divide the land. I would irrigate part of it one week and part of it the next. At no time was there water enough to begin to cover it, and at times not enough to irrigate half of it.

Q During 1915, Mr. Goodwin, what was the condition with reference to the water?

A Well, we had a decidedly wet May, and by arrangement with my neighbor, I was able to because strawberries was the principal crop, I was able to part of the time to get water on my strawberries twice a week. They should have it at least twice or oftener. Then a little bit later, running through July and August, I found it difficult to get water enough to keep my crops growing. Occasionally, that is, several times, I finally made record of one instance in which we had no water at all, and that was only one of several. I reported several of them to the mayor and to the watermaster. The young man who worked for me by the day reported in the middle of the day about two thirty that he hadn't water enough to water one row of strawberries that should have had water until five thirty. He reported at two thirty there had not been since twelve o'clock water enough for one row of strawberries. That was one of several instances and I was a good deal ~~discouraged~~ <sup>disturbed</sup> because of the conditions of the plan. I endeavored to keep them, give them every advantage and opportunity for growth after the crop is taken from them.

Q With reference to that eleven acre tract, would you say that you have had sufficient water during the low water season at any time that you have had it to irrigate the ground sufficient to produce crops?

A No, if you mean the entire ground.

Q Now, with reference to the three acre acre tract, what do you

raise there?

A I have at present the entire three acre tract is set in apples trees with a few peach trees. One acre of it, the west acre, the south half, I have dewberries and north half raspberries among the trees. The east two acres I had in clover last year and have in potatoes this, that is, the space between the rows of trees.

Q What do you say as to the sufficiency of water there during 1915?

A I had trouble after what would be called the high water time. I had trouble so that at no time could I by using all the time get the water over my piece of clover that was two acres at no time, so that there were places where the clover died.

Q I want to direct your attention now to the eleven acre tract, you said in answer to my question that you didn't have sufficient water if I had reference to the entire area each irrigation. How many hours of water have you?

A The assignment has an hour to the acre.

Q Well, eleven hours?

A Eleven hours.

Q Can you, with eleven hours use, constant use of the stream allotted to your lot irrigate that land in any one application?

A At what season of the year?

Q In the low water season? A. No.

MR. RAY: Mr. Thomas, will you kindly get, if you can, from the witness the size of the stream, because without that --

MR. THOMAS: Yes, I shall, Mr. Ray.

Q What size stream do you have, Mr. Goodwin? to irrigate the eleven acres?

A The statement is delightfully indefinite, it is the water that is in the ditch, that is the statement, sometimes we have enough so that the pipe under the sidewalk through which water passes to reach our land from the main ditch -- that pipe I

believe is a 24 inch pipe, I haven't measured it, but I was told that. There are times, take it now, for example, by using canvass we can fill that pipe taking all of the water, but that represents a pipe 24 inches in diameter.

Q Would that amount of water give you sufficient to irrigate your eleven acres? in eleven hours?

A It would not.

Q During the season or low water season --

A That is what I -- and so far as my experience is gone, I used to try it and gave it up, and adopted the other method of half and half, or one portion one week and the other the next.

Q During your residence there have you had that pipe full of water during any part of the low water season, I am referring now to this 24 inch pipe which carries water from the main ditch to your land?

A I had no special occasion for noting, but I would say that at no time during the low water mark. I have had it full at high water mark.

Q At no time during the low water season?

A No sir.

Q How large a stream do you have to irrigate your three acre tract, Mr. Goodwin -- I understood you didn't irrigate it from the same lateral you would the eleven acre tract?

A No, that is the ditch taken from the same main ditch. It is rather difficult to state. I would say that ditch it may be used, comes to my ground and turns, it may be two feet across, and possibly eight or nine inches deep, maybe ten, that is simply, is just guess work.

Q Never have measured it?

A Simply an estimate.

Q What loss of crop did you suffer last year?

A For obvious reasons that would be rather difficult to say, places in my clover died. To what extent for example my failure to

get water for my plants, keep them growing as they should have grown on the occasion to which I refer I could not place any estimate on that.

Q Would you say, Mr. Goodwin, that there was a loss of crop by reason of insufficiency of water?

A Unquestionably so with reference to the west piece, the three acres, and my experience and observation convinced me that there must be, if the plants haven't water, for example, my strawberry tract doesn't have the water it should have at any time either in crop time or afterwards, if it doesn't have the water it should have had there is loss. Of course, in keeping a plant in the condition that it should be kept to resist insects and do the work it should do in preparation for the next years bearing.

Q There would be some loss then though you could not estimate it exactly?

A Yes, I have no question on that score in my mind.

CROSS EXAMINATION by Mr. Ray.

Q Mrs Goodwin, as a matter of fact, the ditch from which you take your supply of water has not sufficient capacity so that you can irrigate all of your eleven acres in the time allotted to you, has it?

A I would say so.

Q I understood you to state --

A I would say so, when there is water to put in.

Q I may have misunderstood you, but I understood you to say when you put canvas in and filled the pipe you could not then irrigate the full eleven acres each week?

A That was my experience when I tried it and I said also that I had given up and was using the other method.

Q Then do I understand you to say that the capacity of the ditch or the pipe is not sufficient that you could ~~not~~ irrigate the full eleven acres each week if the pipes were filled?

A No, I think you didn't understand me to say that, at least, if

I did it was an inference, I didn't so state it. That is not my recollection of my statement.

Q If you had the pipe full, Mr. Goodwin could you irrigate eleven acres or nine acres in nine hours?

A Judging from my experience with my <sup>acres and</sup> six, later when I tried it on the five I should say not. The times when I most needed it, I could not get the pipe full of course, because there wasn't the water for it.

Q There are crops which can be grown very well on an irrigation once in two weeks? A. Yes.

Q And as a matter of fact, it is the general rule, is it not, of the irrigators in your vicinity to divide their farms and irrigate part of their land one week and part the succeeding week?

A I think that a good many do, some have stated that for the reason that I have given they came to do that.

Q There would be no reason for irrigating a crop every seven days which only required water every fourteen, would there?

A Certainly not.

Q And on much of the land, such crops as alfalfa, grow very well upon a watering every two weeks, don't they?

A I would say it depends much on the soil, but I think that perhaps once in ten days or two weeks is as often as they water that. I have had but one experience with alfalfa.

Q Strawberries require an excessive amount of water in comparison with other crops at the time they are producing the berries, do they not?

A I would say so.

Q And under the slip which you received from the city a water turn is not provided for you oftener than every seven days?

A I take it it is, yes sir.

Q There is no provision for the irrigation of the same crop oftener than that by the city that you know of, is there?

A There is not so far as I know.

Q Do you know of any other strawberry patches of the size of yours?

A Not in that vicinity, no sir.

Q Or under the system?

A No, not as large acreage as ours.

Q So that the provisions made by Provo City are made to meet the ordinary conditions as they find them?

A Yes, I would say so.

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JOHN COCHRAN, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman?

Q Your full name?

A John Cochran.

Q Where do you live?

A At 10 South, 820 West.

Q How long have you lived there ?

A About twenty years.

Q Own land in that locality?

A Not at the present time.

Q On any land at the present time in Provo? A. No sir.

Q Did you own land there in 1915? A. Yes sir.

Q For how many years previous?

A Well, about nineteen years, twenty years.

Q How much land did you own?

A Seven acres.

Q Did you irrigate it? A. Yes sir.

Q What crops did you raise ?

A I raised strawberries and raspberries and fruit of all kinds, apples and peaches and pears.

Q From what ditch did you get the water?

- A The city ditch, west side.
- Q Did you irrigate this tract in 1915? A. Yes sir.
- Q Any other tract? A. Yes sir.
- Q Where was that?
- A Across the street a little west.
- Q In the same canal?
- A No sir, out of the same canal, but not the same ditch.
- Q How large a parcel of land was it that you used across the street?
- A Six acres.
- Q Rented land? A. Yes sir.
- Q How long did you rent that land?
- A I think somewhere neighborhood of seven years.
- Q What kind of crops did you raise on it?
- A Most all kinds, some beets some years and some potatoes and some beans and hay.
- Q The soil about the same on both tracts?
- A No, little more sandy under the six acres, mine is more than gravelly soil.
- Q What kind of crops did you have out in 1915 on these two parcels?
- A Well, I had, on the six acres I had beans and beets and potatoes and hay.
- Q What on the other tract?
- A Strawberries and raspberries and dewberries and fruit of all kind, that is, apples.
- Q Did you have sufficient water?
- A Last year not ~~sitx~~ after the high water.
- Q About what time was that?
- A Right along about July and August.
- Q Did it affect the crpp?
- A Some extent, yes sir.
- Q What particular crops is affected?
- A Why, raspberries and dewberries.
- Q What?
- A Raspberries and dewberries principally.

- Q About how long were you short of water.
- A Well, as long as July and August.
- Q Did you make an effort to get more water?
- A Yes sir.
- Q Were you able to do so ?           A. No sir.
- Q Now, going to the other tract across the road that you rented, what do you say as to the condition of that tract?
- A Well, little more shorter there than I was on my home place.
- Q It was more short?
- A Little shorter yes, during the twomonths, July and August.
- Q Did it affect your crop?
- A To some extent.
- Q What particular crop do you think suffered for the lack of water?
- A My potatoes.
- Q You farmed those two parcels of land for several years last past?
- A Last past about seven years, yes.
- Q Any other seasons have you experienced a shortage in water?
- A Not so much so.
- Q Have you some?
- A In 1913.
- Q Any time since you have been there on this tract of land, six acre tract where you had your home for nineteen years, have you had any more water than you could use to advantage and benefit?
- A No sir, not in the latter part of the season principally.

CROSS EXAMINATION by Mr. Jacob Evans.

- Q You had plenty of water in May you say?
- A Yes, up to July and August.
- Q Does it take more water for raspberries and dewberries than other crops?           A Yes sir.
- Q What time do they require water.
- A July and August, principally, June, July and August, not so

much for strawberries in August though.

Q How many people irrigate above you?

A I couldn't tell you.

Q Have any idea of the number?

A No, I don't exactly. Quite a lot of city lots above me and several farms.

Q Ever follow up the laterals to see whether or not anyone was using the water above you when it was your turn to use it?

A Yes sir.

Q Ever find anyone using it?

A None that I could find.

Q Did you go clear to the head of the ditch?

A I did sometimes, not every time.

Q But never found anybody using it? A. No sir.

Q What time are you speaking of you went up the ditch to see if anyone was taking it?

A That would be when I commenced irrigating.

Q I mean what year, what time of the year.

A Most principally last year.

Q And you didn't find anyone using it last year?

A No sir.

Q How often do raspberries require water?

A How?

Q How often do raspberries require water?

A They ought to have it twice a week if they could get it.

Q What was the time allotted to you for the irrigation of those two tracts?

A How much time?

Q Yes.

A Well, on that ditch, small ditch, we had two hours to the acre.

Q Every two weeks?

A What?

Q Every two weeks?

A Every week.

- Q You had two hours to the acre every week?
- A Yes sir.
- Q And you say that is on the small ditch?
- A Yes sir.
- Q What did you have on the other ditch?
- A Hour to the acre.
- Q Do you get twice the water in the ditch where you have --
- A Sometimes do, sometimes you don't., but mostly more water in the ditch.
- Q Your streams vary a good deal, don't they, with each irrigation?
- A In the forepart of the season.
- Q Don't they in the latter part of the season?
- A No sir.
- Q Usually about the same size latter part of the season?
- A As they do in the forepart?
- Q No, no, say beginning now in July then on until you cease irrigation, do you get about the same size stream?
- A No, it is less.
- Q Continues to get less all the time?
- A Through the season, yes.
- Q During the entire season? A. Yes sir.
- Q Was that true last year? A. Yes sir.
- Q Then you had more water along about the first of July than you did after the first of August?
- A No, I said I had less along in July and August than I have the first.
- Q I am asking you, you say it begins to get less?
- A Yes, gets less in July.
- Q As the season advances now, you get less water then about the first of August than you have had on the first of July, don't you?
- A Sure.
- Q And you get less water during the entire month of August than you do during the entire month of July? A. Yes sir.
- Q And it continued to diminish all the time? A. Yes sir.

Q And has that been your experience not only last year but all other years?

A Last year -- no, not so much other years as last year.

Q I take it you don't know as a fact whether the city in its system is getting as much water in August or more than it was in July, do you.

A What?

Q You don't know whether the city in its system was getting as much or more water in August than it was in July, do you?

A No I don't.

Q All you know is you didn't get as much?

A Yes.

Q And if the city got the same quantity they didn't distribute it to you?                   A. No sir.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q Did you irrigate your berries twice a week?

A I did, if I got water, but I didn't get water enough to do it.

Q Did you in 1914 irrigate them twice a week?

A I don't recollect. I irrigated them twice a week whenever I could get it every year.

Q Up to what time in the season did you irrigate twice a week?

A What time of the season?

Q Yes, in 1915.

A The raspberries.

Q Yes, any of your crops?

A Along in July and August, mainly, it varies.

Q Twice a week?

A If I could get the water.

Q Did you get the water?                   A. No.

Q In July and August?                   A No.

Q Or twice a week?                   A. No sir.

Q Did you up to the beginning of July get it twice a week?

A I don't think I did, no.

Q Now, how do you arrange to get the watertwice a week under the

city regulations?

A I could not get it unless some waste water.

Q Find some waste water coming down occasionally?

A Jo sir, not last year.

Q Well, ordinary years you do, don't you?

A Not often.

Q Sometimes you find waste water going down the ditch?

A There is so many above me that use it if there was any coming I don't get it.

Q But you do get it sufficiently so that you irrigate your berries twice a week some seasons, is that right?

A I have been by dividing up the water, what I was getting.

Q Dividing it, do you exchange with your neighbors, take part of their turn, how do you do it to get it twice a week?

A What I mean by dividing it, divide it on the place, water part one week and part of the next.

Q I was asking about irrigating twice a week.

A I never irrigated twice a week up in July and August.

Q Did you in other months irrigate twice a week?

A No sir.

Q Never did irrigate twice a week?                    A. No sir.

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W. T. SCOTT called by the defendant Provo City,  
being first duly sworn, testifies as follows:

DIRECT EXAMINATION by MR. Corfman.

Q Mr. Scott, you live at Provo?                    A. Yes sir.

Q Lived here all your life?                    A. Yes sir.

Q What is your name?

A W. T. Scott.

Q How old a man are you?

Forty years old.

Farmer?                    A. Yes sir.

Q Farmed all your life?                    A. Yes sir.

Q Own land under the Provo City water system?  
A Yes sir.

Q Irrigated the land? A. Yes sir.  
Q Own land.  
A Yes sir.

Q How much land do you own now?  
A About nine acres.

Q Under what ditch?  
A The Little Tanner Ditch.

Q What part of town?  
A Southwest part.

Q What kind of crops do you raise on this land?  
A I generally raise beets, grain and potatoes.

Q What did you have the land in in 1915, planted to?  
A Beets, grain.

Q What kind of grain?  
A Wheat.

Q Did you have sufficient water to irrigate the crop in 1915?  
A I did in the forepart of the season but the latter part I didn't have enough.

Q What months did you have enough?  
A To about the middle of June.

Q From that time on did you have enough?  
A No sir, I didn't get enough.

Q Did it affect your crops? A. Yes sir.  
Q How?  
A They burned up.

Q All of them?  
A Well no, portion of them that I couldn't get watered.

Q Did you make an effort to get the water?  
A Yes sir.

Q What did you do?  
A I went to the watermaster, tried to get him to send me some, but he said he couldn't do it because there wasn't enough.

Q Speaking of your wheat, did the entire field suffer?  
A No sir.  
Q What portion did not?  
A Just the portion on the lower end I didn't get the water on.  
Q How was that part of the field affected?  
A Well, the wheat was so short that we could not very well cut it.  
Q Where you did get the water what result did you get?  
A I got a good crop where I got the water.  
Q Now, your beets, how were they affected?  
A The beets were affected on the lower end, they were just dried right up.  
Q Get any crop there at all?  
A Very small.  
Q Was that the portion that you were not able to get the water over?  
A. Yes sir.  
Q What result did you get from the upper end where you had the water?  
A I got good results there.  
Q Now, do you know of any<sup>of</sup> your neighbors short of water?  
A Yes sir.  
Q Who were they?  
A William Peay, there is two William Peays.  
Q Which one do you refer to?  
A Both of them were short.  
Q In what kind of crops?  
A Their grain crops and beets.  
Q Do you know what caused the shortage?  
A They didn't get the water on, didn't get it, just like me.

CROSS EXAMINATION by Mr. Thurman.

Q Did you know they tried to get it?  
A They said they did.  
Q Just got that from what they told you?  
A Yes sir.

Q What kind of land did you have, Mr. Scott?

A Kind of a sandy loam, little clay gravel underneath.

Q What ditch do you say you water under?

A From the Tanner Race, I think they call it.

Q Was your land all the same pretty much ?

A Pretty much all the same.

Q How long a run did you make watering your land?

A Why, about twenty and thirty rods.

Q Thirty rods on that kind of land is pretty lengthy, ain't it?

A Well no, it has got a good slope to it.

Q Did the water get over it?

A When I have enough I can send it right over it.

Q Well, with the water you had weren't your runs too long?

A No sir.

Q Water all sink in the ground before it would get to the lower end?

A Yes sir.

Q That is why the lower end of your piece suffered?

A Yes sir.

Q Couldn't you have gotten it over by cutting that run in two?

A Well, I couldn't very well do it.

Q Why?

A My land lays in such a shape that be all ditches.

Q Oh no, just the one ditch, wouldn't say that is all ditches, would you ?

A Pretty much all ditches.

Q Just run one ditch, cutting a thirty rod strip in two turn over the land all into ditches, is that right?

A It wouldn't cut it all into ditches, but then --

Q That is what you said, wasn't it?

A Well,--

Q That is all.

Q Would it be practical to cut any more ditches on the land?

A Well, I would have to run the water from the main ditch to the middle of my land and then take it down through for about fifteen rods and then take it both ways across.

Q What effect would that have ?

A It would take up more of my land and I don't think I could water any more land.

Q Than you do now?

A Than I do now.

CROSS EXAMINATION by Mr. Ray.

Q Just a question. When did you say you commenced to notice the real shortage in water?

A Along sometime in the middle or latter part of June.

Q Up to that time you had had plenty?

A Well, once I didn't get enough water in May .

Q But after May the water rose again, didn't it?

A It rose and got a little more water.

Q So that after the shortage in May for a few days, you had plenty of water up until sometime late in June, didn't you.

A Yes sir.

Q And up to that time you had been able to water your grain and beets to the lower end, hadn't you?

A Well, yes.

Q How often do you have to water grain down there?

A About every two weeks.

Q And when do you harvest your grain?

A Well, we commence along the first of August.

Q When did you harvest it last year.

A Latter part of July.

Q About the 20th of July, was it?

A No.

Q What date then?

A I couldn't tell you the date, but I was cutting small fall grain

along about the 24th. Our spring grain was later.

Q Which grain was it that suffered last year, your spring or fall grain?

A I didn't have any fall grain, my grain was all spring grain.

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C. H. WARD, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Your name is C. H. Ward? A. Yes sir.

Q How old a man are you?

A Forty-eight.

Q How long have you lived in Provo?

A Twentyseven years.

Q What business are you engaged in?

A Lumber and planing mill.

Q Do you own property in Provo City? A. Yes sir.

Q A home? A. Yes sir.

Q How large a city lot have you?

A Three and a half by twelve rods.

Q On what street?

A Third South between Academy Avenue and First East.

Q Between Academy Avenue and first East?

A First East, yes sir.

Q And is any part of your city lot irrigated?

A Yes sir.

Q You attend to that yourself?

A Yes sir, generally.

Q About what portion of your lot do you irrigate?

A About half of it.

Q Grow the usual garden products on it?

A Yes sir.

Q Did you have a garden there in 1915? A. Yes sir.

Q What do you say as to having sufficient water or not during 1915, for the irrigation of that garden.

A The early part of the season I got along nicely, but later it was short.

Q Did the garden stuff suffer?

A Yes, some.

Q Did you make an effort to get more water?

A I went after the watermaster a number of times to put more water in the ditch.

Q Were you able to get it always? A. No sir.

Q Did you ever get any water from your neighbors?

A At times I got some waste water in it from my neighbors.

Q In 1915? A. Yes.

Q It has been your custom to do that in other years?

A That is the only way I could water it in the latter part of the season, was to watch my chance and get a little waste water happened to be coming down.

Q In other years as well as 1915? A. Yes sir.

Q What lateral or street ditch do you take the water from for your lot?

A I think they call it Ditch No. 1, it is on the west side of 1st East, ditch that runs past the court house.

Q That is the same street that the court house premises are situated? A. Yes.

Q And the jail?

A Same one.

Q And a block north? A. Yes sir.

MR. A. C. HATCH: Block north of here?

MR. JACOB EVANS: Block south.

A Three blocks south of here.

MR. A. C. HATCH: That is what I ~~mist~~ understood he said a block north.

MR. CORFMAN: That was for the purpose of identifying the ditch, Judge Hatch, that is all the same ditch that takes

water or that flows to water the block north of this block.

MR. A. C. HATCH: I understand now.

CROSS EXAMINATION by Mr. Thurman.

- Q I understand you get some waste water?
- A Occasionally I catch some waste water.
- Q That enables you to raise some kind of a crop ordinarily?
- A Yes sir.
- Q Now, if a system was inaugurated by which there wouldn't be any waste water comparatively, and that same water turned to a man on his time, you would be able to water your garden in your turn, wouldn't you?
- A If they had enough in the ditch, the ditch is usually short.
- Q The ditch is usually short? A. Yes.
- Q You mean that is so every year?
- A Has been for the last five or six years.
- Q Last five or six years. Well, does that ditch get as much as the other ditches that is watering city lots, do you know?
- A I don't know.
- Q What?
- A I don't know as to that.
- Q Do you have any idea of the size the stream is, Mr. Ward, that flows in that ditch, measured in second feet or fractions of a foot?
- A No, I have never measured it or heard anybody judge it.
- Q About what size ditch have you got as to width and depth?
- A Well, the pipe that the city put in under the pavement where it goes into my lot is 15 inch vitrified pipe cut in two, it is just half of that.
- Q Just half of it?
- A Yes sir.
- Q Make a little flume of it, flume with the top open?
- A No, the round side up and left the bottom, it would be sort of an arch, 15 inches wide at the side and six or seven.
- Q What leads the water up to that pipe?

A How is that.

Q What leads the water up to that pipe?

A The ditch running down the sidewalk. I have a head gate and put a gate in and that forces the water through the pipe?

Q What is the size of your ditch before you get to that pipe?

A Just --

Q Width and depth.

A This ditch here is probably fourteen and fifteen inches wide and a foot deep.

Q Do you if that generally runs full?

A No, it doesn't.

Q Half full?

A I should say half full the early part of the season, but later it is very much less than that.

Q You say you irrigate about half of your lot?

A Yes sir.

Q Half of three by twelve? A. Yes sir.

Q About eighteen square rods, what kind of crops?

A Just an ordinary vegetable garden.

Q Garden crop? A. Yes sir.

Q How long have you had the water ?

A One hour.

Q One hour? A. Yes sir.

Q Can you get it over your crop in that time?

A If I have a good stream I can barely force it over the lot in that time. If it is a thin flow I don't get it all watered.

Q Do others on that lot block that this lot is on irrigate about the same portion of their land you do yourself?

A I think so.

Q Do they all irrigate their lot or portions of it, or some don't irrigate at all?

A I think they all irrigate on that block.

Q In what way did you lose crops, what was the way in which it was manifested?

A Well, just that the crops wouldn't mature as well by being short of water, I don't know how much I would lose.

Q Sure it is on account of being short of water?

A Yes sir.

Q Might not be due to some other cause in part?

A No, I think not.

Q When did you get the water, what hour of the day usually?

A Last year I had the water from three fifteen to four fifteen A. M., every Tuesday morning.

Q I<sup>n</sup> the forenoon?

A Yes sir, on the morning.

Q What would be during the night?

A It would be in the early morning.

Q You get up and attend to it, would you?

A yes sir.

Q Or sleep a little while and let it take care of itself?

A No, I spent a good deal of time in my gardens evenings, and of course I don't want to lose it in night watering, and I used to get up and look after it. This year I am getting from six fifteen to seven fifteen.

Q In the morning ?            A. Yes sir.

Q If one can handle it usually the night time is the best time for watering?

A I don't know as to that.

Q Make better stream?

A The stream in the latter part of the season was short. At times I didn,t have enough to go half way over it.

Q Gets over the land?

A How is that?

Q Gets over the land better, doesn't it, at night than it does in the day time?

A I haven't noticed any difference<sup>as</sup> to that.

Q Did you get as much water in August as you did in July last year?            A. No.

Q You didn't?            A. No sir.

- Q no you know there was more water turned into the city in August last year than there was in July?
- A No, I didn't know that.
- Q Did you notice the stream whether you were getting your proportion of water in that ditch that come in to the city?
- A I got all there was in the ditch each time it was my turn.
- Q But you don't know how that compared with other ditches?
- A No sir.
- Q You understand the Factory Race water is usually turned into that ditch at night, don't you, into the East Union ditch which supplies that ditch?
- A I know it is turned into the canal, I don't know which one.
- Q You don't know whether you get your dividend out of that increase or not?
- A I didn't appear to last season.

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E. V. VINCENT, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

- Q Your name is E. V. Vincent? A. Yes sir.
- Q How old are you?
- A Sixty-two.
- Q How long have you lived in Provo?
- A Sixty-two years.
- Q Farmer? A. Yes sir.
- Q Farmed all your life? A. Yes.
- Q Irrigated lands? A. Yes sir.
- Q Where do you now own land?
- A Here in the southwest part of town.
- Q Under what ditch?
- A I think it is No. 7.
- Q No. 7 takes the water from what canal?

A The main ditch, we call it, I believe they call it the City Creek now.

THE COURT: CITY Race?

A City Race, I think so.

Q How many acres do you own?

A Twelve acres.

Q How long have you owned it?

A I believe about twenty or twenty-five years.

Q Who owned it before you?

A I got five acres of Mr. Bochman.

Q How long have you had knowledge of this land being irrigated under the Provo system?

A Ever since I have owned it.

Q Ever since you have owned it?

A Yes.

Q Did you know anything about it before that time?

A No, I don't.

Q You have owned it how many years?

A Twentyfive years.

Q Attended to the irrigation of it personally?

A Yes sir, myself.

Q What do you raise on the land?

A The last five or six years I raised apples and alfalfa.

Q Any other kind of crops?

A I had about a half an acre of potatoes.

Q You have general garden produce?

A No sir.

Q In 1915, how was your water supply ?

A Why, it seems to me like in May that I had a very hard time, I didn't get it over it all, over all of the land, but after that until about the 15th, or along the first of July, why, I had good water up until we have not.

Q Then what?

A Well, I done the best I could with it, sometimes I could water

it all and sometimes I could not.

Q What would you say as to having as much as in other years?

A Why, it seemed like I really hadn't had enough to go over the whole piece in the last five or six years.

Q You say it seems -- do you know.

A Yes sir.

Q Do you notice any difference between last year and previous years?

A Why, I don't remember any difference.

Q About the same?

A I think just about the same.

Q And during the last four or five years are we to understand you have been short of water ?

A Why maybe I had better explain it. I have been short on my turn, but my neighbors next to me, they plowed their alalfa up and put in wheat and that crop matures the first or last of July and I generally get their water.

Q They let you take it? A. Yes.

Q And then did you have all that was necessary?

A I had a pretty good supply of water after that.

Q Did you have all that was necessary in 1915?

A Just like I tell you about these neighbors.

Q Did any of your crop suffer in 1915? A. No.

Q Had all the water you needed in 1915?

A Through my neighbors, you know.

Q And if it it had not been for that condition would <sup>you</sup> have had sufficient supply?

A No sir, I would not.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q It seems you had plenty of water all the time in 1915?

A I didn't catch what you said.

Q It seems you had plenty of water in 1915, and but for five or six years prior to that you were short, is that right?

A I was short, might say pretty near every few years, some years

better than others.

Q But 1915 was no different from foremer years, so far as you know?

A 1914 and '15 was about the same, I believe.

Q Did you ever have enough water since you have lived there during the twenty-five years?

A I believe so, yes.

Q What year.

A I don't remember what year it was.

Q Do you remember 1907? A. Yes sir.

Q Exceedingly high water year?

A I don't know what year it was in, but I have had sufficient some years.

Q Have you had more than three years during the twenty-five?

A The last three years?

Q No, more than thdre years of the whole twenty five have you had sufficient water so that you thought you had enough ?

A I couldn't answer, I have forgot.

Q But your present impression is that there is always just a little bit of a shortage of water, isn't that right?

A Well, I know that I was short of water.

Q All the time except two or three years?

A Yes, except two or three years, I think close about that, I don,t remember.

Q You raise alfalfa between the apple trees?

A No sir. Well, some little too, I will ~~tk~~ take it back.

Q How do you irrigate your apples, flooding?

A I had to flood the whole country <sup>so</sup> though the apple trees are twenty-five fet apart I will have a bank and run it down that twenty-five feet.

Q Then you plow it and cultivate it between irrigations, do you?

A I haven't the last few years.

Q Prior to that you did? A. Yes sir.

Q Why haven't you the past few years ?

A Why, the apple trees has got so big and limbs comes over and I didn't think it needed it.

Q Doesn't require so much water now as it formerly did?

A I believe it does.

Q Do you use just as much upon it?

A Sir?

Q Do you use just as much upon it now? A. Yes.

Q As in former years? A. Yes.

Q The ground is pretty well shaded now, isn't it?

A Yes sir.

Q All over it?

A That four acres is all the apple orchard.

Q And you aim to keep it damp all the time?

A Once every two weeks if I can get it over it.

Q And that keeps it damp all the time, doesn't it?

A I think it does.

Q How many hours do you have the water for each acre of ground?

A Two hours.

Q And do you know as to the quantity of the stream?

A No sir.

Q How large is the ditch?

A I believe it is about two feet across it.

Q Wide? A. Yes sir.

Q How deep?

A It varies, some places it is deeper, some places it ain't so deep.

Q I mean the depth of your ditch?

A It might be six or eight inches, but in some places, some places foot and a half.

Q How deep is the water usually in there when you irrigate?

A I could not answer that because the ditch fills up with moss so often it holds the water there, and varies so I could not estimate it.

Q Where is your farm situated?

A It is on 10th South, about 8th West.

Q You say the ditch fills up with moss?

A Yes sir.

Q So that it flows sluggishly?

A Yes, they clean it out often.

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J. T. WILLIAMS called by the defendant Provo City,  
being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q You live at Provo, Mr. Williams?

A Yes sir.

Q Your name is N. S. Williams?

A J. T. Williams.

Q How old a man are you?

A Fifty-eight years old.

Q Have you had any experience in irrigating lands under the  
Provo City water system?

A I have.

Q What is your business?

A Deputy sheriff now.

Q of Utah county ? A. Yes sir.

Q Is your land city lots? A. Yes sir.

Q What portion of the city is it situated in?

A It is the corner of 1st North and 4th East,

Q between --

A Between 3rd and 4th East on 1st North.

Q You are on the northeast corner of the block?

A I am on the northeast corner of the block, yes sir.

Q How much ground have you there?

A I have six by seven and a half rods.

Q What portion of it is irrigated?

A I got a water ticket for six by six, and I water twenty rods.

Q Is six by six all the land you own there?

A No, the lot is six by seven and a half, I don't get a ticket for all of it for some reason, I don't know why.

Q You just get --

A I just get six by six.

MR. THUMAN: Get a half a lot.

A Yes sir.

Q How much time have you for irrigating?

A Forty-five minutes.

Q Your home is situated on the same premises?

A Yes sir.

Q Six by six lot? A. Yes sir.

Q And have you some lawn there also?

A I have ten rods of lawn in front of my house, yes sir.

Q And you take the water from what ditch on what street?

A On the east, east side of 3rd East.  
how

Q And, often each week?

A I get the water once a week, Thursday, nine o'clock in the morning.

Q Now, can you tell the court how you use the water and what result you get from it?

A Yes, sir; I take the water out of the 3rd East lateral at the corner. I get the water first on the block at nine o'clock Thursday morning. I go out and turn the water down take all the water in the ditch. It takes from five to seven minutes to get down to my lot. I turn it in and flood my lawn. I flood my lawn and then I have the other half is in square rows, ten ~~rows~~ rods of lawn and ten square rods of rows, and I flood the lawn first and then let it go down the rows, and make it a point to get it over the lawn first because I want that a little the best and then what water runs off the lawn goes to the lower end of the garden, and I have to use it judiciously in order to get it over in the time. Forty-five minutes is not very long. If I have any bad luck with it, don't get it over.

Q Now, have you ever -- did you have the same time allotted to

you in years past?

A Yes sir, it has been the same all the time.

Q What has been your experience during the months of July and August?

A Well, sometimes the stream is very small in the ditch and I don't always get through on time.

Q What do you do to help out?

A Well, being the last one on the block I see my neighbors and if they don't use it all I keep taking the gates out and get what they waste.

Q Can you irrigate your entire six by six rods all the time?

A Could I?

Q Yes.

A No sir, I could not. If my house wasn't there and had to irrigate six by six, I couldn't do it in the forty-five minutes.

MR. RAY: You say sixty-six rods?

A Six by six.

Q What is your custom in regard to cultivation?

A Why, I cultivate my garden every time I water it.

Q Before or after?

A Just after, next day after. It gets just dry enough so that it cultivates nicely.

Q Do you know whether or not all your neighbors on that block take the water?

A They all take it on that side of the block and Mr. Phillips on the corner, I think his block is all occupied by -- no, he has a little garden too, about two rods square I think. His water goes through there, they all water on the north side.

Q By the way, have you ever cultivated land elsewhere than here in the city lots?

A Yes sir.

Q Where?

A Mapleton.

Q How many years did you irrigate land there?

A Well, altogether about twenty years. Fourteen years on my own land. I farmed my father's land before.

CROSS EXAMINATION by Mr. Jacob Evans.

Q You irrigate all your lot, don't you, except where your house stands, Mr. Williams?

A No, not all of it, I don't have the time for all of it for some reason, they cut me off a rod and a half on the south end. The lot is seven and a half rods deep, but I get a ticket for six.

Q You attempt to irrigate it all except where your house stands?

A I water all I do water out of the ditch, but about twenty rods I water. I have measured it.

Q Twenty square rods?

A Twenty square rods that I water, yes sir. Ten rods along the front of the house I flood that.

Q You say everybody on your block on the north side of the block uses the water from that ditch?

A Yes.

Q They don't use it to irrigate their entire lots, do they?

A No.

Q None of them? A. None.

Q You use more water in proportion to the amount of land that you own than anyone else, don't you?

A I believe I do, yes sir.

Q And that is true with respect to the entire block, is it not?

A Yes sir.

Q Take it on the south side of the block there, Mr. Mangum doesn't use any water at all, does he? A. No sir.

Q He has a little more than a six by twelve?

A Yes.

Q Hasn't used it there for more than ten years, has he?

A I think it is that long or longer.

Q Who lives next to him?

A Mr. Parry.

Q they don't use water there?

A They don't water there.

Q Who lives next?

A C. A. Headolift.

Q Does he use any water? A. No.

Q Who lives next to him?

A Why, Mrs. Dr. Clift, the widow Cliff lives there.

Q Do they use any water on that lot?

A I don't know, I am sure, I don't believe they irrigate all.

Q Who lives next to Mrs. Clift on the west?

A Joe Cheever lives on the next at the corner.

Q Do they use any water there?

A Yes, they irrigate some.

Q How much?

A Very small piece, they have a raspberry patch and little garden right in the rear next the street.

Q Mr. Cheever doesn't irrigate one fourth of his lot, does he?

A Oh no, he don't irrigate a fourth of it.

Q And Mr. Phillips up on the -- there is nobody that lives on the west, that is, that faces the west, is there?

A No.

Q So that there is no irrigation on the west side of the block at all? A. No.

Q Now, lets start then at the north corner! Mr. Phillips, he doesn't use any water?

A I think he does, Mr. Evans, he has got a little garden, I don't know whether he waters it out of the hoses or out of the ditch, I am inclined to think he waters from the hoses.

Q It is very small?

A It is very small though.

Q It wouldn't one-tenth of the lot?

A No, there is about a rod or two rods square.

Q As a matter of fact, his whole lot practically is covered with buildings and garage? A. Yes dr.

Q Now the next lot to him, who lives there to the east?

Q Also Mortensen.

Q What proportion of that lot is irrigated?

A About half of it.

Q How large is that lot?

A It is four by twelve.

Q Who lives next to Mortensen to the east?

A A. Young Sutherland.

Q A. Young Sutherland?

A I think so, yes. He rents the place. That is a three by twelve

Q Is that irrigated?

A Yes, about half of it.

Q Who lives next?

A The next place is Thomas Ashton, that is a rented place, I don't know who owns it now, but they water about half of it. That is a three by twelve.

Q Who comes next then?

A Prescilla Swenson and she has a three by twelve, three by seven and a half, same as mine. Also Mortensen has a place in the back there. I think her's is seven and a half feet three wide.

Q How much?

A Seven rods and a half feet and three wide. She waters about half of that.

Q Then your place is next?

A Then mine, and Joshua Hodman has three south of me, that took the south end of my twelve.

Q How much does he irrigate?

A He had three by seven rods there, he irrigates half of it.

Q About half of it?

A Except the house covers about half and he irrigates the other.

Q So that if you would actually calculate the amount of land that is irrigated on that block there probably wouldn't be more than one-fourth of the entire block that was irrigated?

A I don't think there would.

Q Probably not that much?

A Not that much.

Q Now, if you don't get enough water in forty-five minutes to irrigate your lot, you would have no difficulty whatever in getting water from your neighbors, would you, that don't use water at all?

A No, they don't hesitate to let me have it.

Q So that you don't suffer any for water do you.

A I have not.

Q Always had all you wanted?

A I have always managed to get my little garden watered, yes sir.

Q And even if you don't get it watered at your turn, you have no trouble in taking one of the other turns, do you, and irrigating?

A Well, I couldn't say that. It is not a sure thing I could get it. Of course, they don't -- if a man don't use his water he don't care who uses it.

Q If there is less than one fourth of the block actually irrigated you would have no difficulty in getting use of the neighbors water when they are not using it, would you?

A I don't think so.

Q Don't you think your block is about an average of all of the blocks in Provo as to the quantity of land irrigated?

A No, no, no, east of there, northeast some of those blocks are all irrigated except what is covered by buildings. That block is, the south half is covered by buildings, and of course they couldn't water where the buildings are.

Q In that locality you are getting pretty well towards the eastern outskirts of the city, are you not?

A Yes, close in, just four blocks from the center.

Q When you go farther east the territory is not so thickly settled as it is as you go west from your place?

A No, the houses go thinner and smaller.

Q In going west you would find substantially the same condition

with respect to irrigation, lands and blocks west, that you would  
on  
have your block, wouldn't you? A. Yes.

Q But if you go east you get out into the fields and of course  
there they are irrigated more? That is all.

MR. A. G. HATCH: He didn't answer that last question.

MR. EVANS: He said yes, as I understood him.

THE WITNESS: Yes sir, I did.

REDIRECT EXAMINATION by Mr. Corfman.

Q Mr. Williams, have you ever observed the parcel of ground  
immediately north of you across the street?

A Yes sir.

Q Do you know whether that has been irrigated, how it has been  
irrigated for the last eight or ten years?

A Yes sir.

Q How?

A It has been irrigated from the ditch that comes through from  
the northeast corner.

Q Has it been irrigated regularly each year?

A No, I don't think it has, I think it has been neglected, been  
planted a time or two but then poorly attended.

Q Do you know whether it has been planted every year?

MR. JACOB EVANS: What lot are you referring to now?

MR. CORFMAN: Where you took your soil sample about  
the southeast corner on 1st North.

A It has been planted every year up to this year, I think it is  
not planted now.

Q Wasn't there some years it has not been planted?

A Well yes, I think four or five years back it laid vacant for a  
while without any cultivation.

Q And then again it has been?

A And then it has been again.

Q And did you observe that in your immediate neighborhood that is  
often the case? A. Yes sir.

Q That a lot owner sometimes will not put out as much garden or none at all, as in other years? A. Yes sir.

RECROSS EXAMINATION by Mr. Jacob Evans.

Q That lot that you speak of across the road from your lot?

A Yes sir.

Q Mr. Corfman's lot?

MR. CORFMAN: No, that is not my lot.

MR. JACOB EVANS: You used to own it. No, I guess not, I am the fellow that owned it.

MR. CORFMAN: You owed it.

Q All right, that lot has no buildings on it at all, has it?

A No sir.

Q It is a corner lot about three and a half or four by twelve, isn't it?

A I think it is three by twelve.

Q Never has had any building on it for more than ten years, has it?

A No sir.

Q The last buildings that were on there was the old planing mills?

A George Nicholson mill.

Q Now, then, when you get to your block which is just opposite that, the buildings that is on that block are residences, they are permanent, are they not?

A Permanent.

Q permanent buildings, yes. A. Yes sir.

Q And they irrigate their little garden spots about the same each year, don't they? A. Yes sir.

Q Now, the lot that is spoken of across the street north from you happens to be a vacant lot, and sometimes it is rented, sometimes it <sup>is</sup> not ~~is~~ rented? A. Yes sir.

Q But so far as the quantity of land irrigated on that block except that particular lot, they usually irrigate about the same quantity each year, don't they?

A I think so.

Q In other words, when a person lives on a lot he generally has a

little garden spot?

A Mostly.

Q Generally put that little garden spot in each year?

A Most people do, yes sir.

Q This particular lot across the street from you is an exception to that rule, that is, sometimes the whole lot is put in when it is rented and other years when it is not rented no part of it is put in?

A That is right.

Q But that would not be the same condition as exists generally throughout the city, would it?

A No, that is not the rule.

Q For instance, you would take Mr. Mangum's lot, he has no provision made for a garden, has he?

A No, he has a garden there.

Q And irrigates, does he not, from a well?

A He has a flowing well, yes sir.

Q But he never takes any water at all?

A No, he don't take any.

Q And Mr. Cheever usually irrigates the same little strip of ground each year?           A. Yes sir.

Q One year after the other. That is all.

REDIRECT EXAMINATION by Mr. Corfman.

Q Mr. Williams, you are acquainted with the quarter of the block, the two full city lots lying north and east of you diagonally across the street?           A. Yes sir.

Q Now, what do you say as to those. You have known those premises good many years?           A. Yes sir.

Q What do you say as to those premises being irrigated each year?

A Well, there has been an attempt made by somebody to irrigate them.

Q Every year?

A Not every year.

Q Some years --

A Some years they have and some years they have not.

Q Have not?

A Been a number of years and that lot has been grown up to weeds without any irrigation, and next year somebody would be there and farm it. It has been changing from one renter to another.

RECROSS EXAMINATION By Mr. Evans.

Q Where people generally live in their home they have their little garden spots, and those garden spots are usually put in each year? A. Yes.

Q The same size garden spot?

A Yes, I think where they stay in their home steady.

Q Now, the lot that Mr. Corfman refers to just east of you there is a lot where they have no permanent residence isn't there?

A They have now, but number of years they didn't.

Q When they didn't have those permanent residences some years it would be irrigated and other years it would not be irrigated?

A Yes sir.

---

JOHN E. BOOTH recalled by the defendant Provo City, testifies as follows:

DIRECT EXAMINATION by Mr. Thomas.

Q In the course of cross examination the other day you mentioned the division of the Provo River prior to the Mores decree and referred to the division that was made about 1884. Were you ever commissioner under that arrangement?

A My recollection I was for two years.

Q Do you recall what two years?

A I believe it was 1886 and 1887.

Q How was the water divided by you at that time, during those years?

A What is in the ratio of division, you mean?

Q Yes.

A Or the physical division?

Q No, in the ratio.

A It was divided according to that agreement.

Q Now, I have a tabulation here, I don't know whether this is correct or not, I will ask you <sup>to</sup> look that over and see if that is as you have read it heretofore?

A May I make a little explanation leading up to that. The agreement was made on the beginning of 1884 --

MR. BAGLEY: Now --

A If there is any objection to that I won't state it.

MR. BAGLEY: We are going to object to the agreement.

A I wouldn't state how it was divided. Do you desire I should read.

Q No, I asked you to look at that to refresh your memory, if that is in anywise different from the tabulation which you gave I want to know it. I understand it is the same. Once in, there is no need of producing it again.

A I regard that as being as I give it.

Q During your term of office as commissioner did you divide the stream in the <sup>ratio</sup> way that you stated the other day in the cross examination of Mr. Thurman?

A As near as I could.

Q As nearly as you could give it.

MR. THURMAN: I wish you would give that.

MR. JACOB EVANS: Let's have ~~to~~ the figures.

MR. THOMAS: The figures were given before, but because there has been objection by counsel to it, to introducing evidence heretofore introduced, I will ask the Judge to take this tabulation in hand and read the figures and names that are thereon given.

Q Directing your attention to the Provo Bench, ask you to state what division of water was made to the Provo bench.

A One-eighth.

Q Follow down the list, Judge, please.

A Hooper Ditch one-fifteenth. Enterprise, one fifteenth.

Q May I interrupt you there and ask you if the Hooper and Enterprise are not now known as the West Union?

A Yes sir, they consolidated some years afterwards and the West Union now succeeds to any rights.

Q That is as I understand. Kindly proceed.

A Lake Bottom Canal, one-fifteenth. I find one error here when I come to look at them. Timpanogos Irrigation Company is marked here one-fifteenth, it should be one-fiftieth.

Q That is as you gave it the other day?

A I gave it as one-fiftieth the other day. I see it is here one-fifteenth. Timpanogos Irrigation Company one-fifteenth it is marked here and that is in error.

MR. A. C. HATCH: What is it ?

A One-fiftieth. Upper East Union Irrigation Company one-twelfth. East Union One-tenth; Factory Race three-twentieths; Tanner Race one-tenth; City Race two-twentyfifths; Little Dry Creek one-twentieth; River Bottoms 919/10000.

Q During your two years that was the division that you followed?

A Endeavored to, yes sir.

Q Who preceded you as commissioner?

A Peter M. Wentz.

Q He is not living? A. No sir.

Q Who succeeded you?

A As I recall it, it was A. L. Booth.

Q Do you know whether Mr. Wentz acted as commissioner after that, after the term of A. L. Booth had expired?

A It seems to me he did for another term, But I am not very positive.

Q That is the best of your memory ?

A That is the best of my memory.

Q Let me understand again, Judge, you operated in 1884 and '5, was it?

A. No.

MR. THURMAN: '86 and 7.

THE WITNESS: I desire to make a little explanation there, but it was up to -- Mr. Wentz, as I recall it, was in 1885. There wasn't any commissioner in 1884, the year the agreement was made. That was a year of good water.

Q You followed in 1885 and '86?

A Mr. Wentz then followed in 1885, as I recall it, I had it 1886 and 1887.

Q Best of your memory A. L. Booth in 1888?

A 1888 and 1889, then I believe Mr. Wentz had it again in 1890, although I am not positive about that.

Q Do you know, and can you state Judge, whether or not that division that is in that ration continued until the More decree was put in effect?

A Why, in theory, yes. Not always in practice.

Q You may state if that was the basis?

A That was the basis, yes sir, that was the basis.

Q And there was no other basis so far as you know.

A No sir, not ever agreed upon.

Q And then this basis of division was succeeded subsequently by the adjudication known as the More decree?

A Yes sir.

CROSS EXAMINATION by MR. Ray.

Q Judge Booth, have you access to the copy of the agreement of '84, or, where I could get access to it?

A You can find the report of the committee on irrigation in the city record of January 14, 1884.

Q January 14th?

A January 14, 1884.

MR. THOMAS: I will state for the benefit of counsel Judge booth is reading from a copy of those minutes.

THE WITNESS: I will state I believe I have in my possession the original paper that was agreed upon in George M. Brown's handwriting, but I don't know just where to find it -- at the original meeting at which it was done. I have compared

it, however, I am quite certain this is a correct copy of those original notes.

MR. THOMAS: Then the notes made, let me ask if Mr. Brown was secretary of that meeting where all of the water companies met together to determine upon the basis of division?

A I couldn't say whether he was the actual secretary or not, but I believe he was, anyway they were in his figures, as I compared them in his writing.

MR. THOMAS: Can you state whether he was the secretary or the scribe for the committee appointed by that meeting?

A I am inclined to believe he was the city attorney, but I was not present at the meeting so that I could not tell.

MR. THURMAN: What year are you speaking of, Judge?

A 1884.

MR. THOMAS: After this agreement had been arrived at, you saw estimates or figures in the handwriting of Mr. Brown?

A Yes sir.

MR. THOMAS: I understand that you have compared those original figures made at that time as the result of that conference with the report of the committee on irrigation on file in the office of the City Recorder in Provo City?

A Yes sir.

MR. THOMAS: Under date of January 14, 1884?

A I have.

MR. A. C. HATCH: January 24th, wasn't it.

A No, January 14th.

MR. THOMAS: Now, I wish to offer at this time in evidence the minutes or rather the report of the committee on irrigation of the Provo City council, under date of January 14, 1884. I have only the copy here, but I can have prepared and entered a certified copy of those minutes.

MR. RAY: We object to it, not upon the ground it is not a certified copy, but it is itself, incompetent, irrelevant

and immaterial to prove any -- this is merely the report of a city committee. If there was an agreement I wouldn't object to that.

THE COURT: Let me see it if you have it.

MR. THOMAS: The copy, your honor, is this one Judge Booth has.

MR. A. C. HATCH: We would like to have them produce the original agreement.

MR. THOMAS: I would be very glad to do that if it is in existence. If it is not we will have to produce evidence of its destruction. We expect to go just as far as we can along that line, I will state,

THE COURT: The objection is sustained, I don't think this is material or competent. Does not purport to be an agreement, merely purports to be a report of the committee, and then on motion the Recorder was instructed to notify parties interested to appear at a later date to discuss the matter and see whether they would be in favor of the matters contained in the report.

MR. THOMAS: Note our exception.

REDIRECT EXAMINATION by Mr. Thomas.

Q Judge Booth, was any agreement made in writing as to the division of the water in the ratio which you have given?

A I never have seen any.

MR. A. C. HATCH: If the court please, one of their witnesses yesterday testified it was and signed by the parties sometime during this week, so testified, if I remember correctly. That was why I was insisting they produce the original or show it was lost.

MR. THOMAS: We cannot do everything in a minute, and we expect to do that. I haven't seen the agreement and if it is in existence we are going to get it. Just as I stated to Judge Hatch a moment ago, we expect to produce evidence of its loss and destruction.

THE COURT: You may proceed, I don't understand there is objection to that. Judge Booth stated it was not in writing.

A I never either saw or heard of an actual written agreement and signed by the parties.

Q Now, Judge Booth, what was the nature of that agreement and when was it made, in mass meeting or otherwise?

A Well, personally I don't know, for I wasn't present.

Q Can you state who was present, or do you know who was present.

MR. RAY: Now, your honor please, it is apparent he doesn't know. I object to it.

A Only by hearsay.

THE COURT: Objection sustained.

Q Do you recall when that meeting was held, or did you know of its being held?

A Only hearsay, I didn't attend it, I wasn't in the city at the time. I could only tell from what was told me.

CROSS EXAMINATION by MR. Jacob Evans.

Q Judge Booth, this division of the water as you have given it here, disposed of the entire river, as I understand it?

A Yes, suppose it did, there was no limitation.

Q Was there any fixed amount of water at which this division was to be made? A. No sir.

Q It intended to dispose of the entire river, irrespective of the quantity of water in the river?

THE COURT: These figures show one hundred per cent.

MR. JACOB EVANS: I understand, that is what I am asking, but whether or not that was fixed at the point in the river when they would come to this division?

THE COURT: In other words, whether there was some stage of the river at which this was not to apply?

MR. JACOB EVANS: That was the point.

A I can tell you what the actual fact was, I don't know as to the meeting.

Q All right.

A Whenever anybody was short, then they called for a division, and some years we went without any division at all. In 1884 I think there was no division.

Q There was no determination then?

A Oh no.

Q As to the volume of water in the river when this division was made?

A But this was based on a ten thousand minute feet, this division, and in 1883 it got below ten thousand, according to out way of measuring and then that was the first time there was any difficulty about the water, in 1883, when it got below ten thousand feet in the river then people begin to see they were short.

Q When it got below ten thousand this division was entered into, that is, it was divided according to that division?

A According to that ratio.

Q According to that ratio?

A But anybody could call for a division.

Q Even above that?

A Above that, oh yes. But I will say from year to year they called sooner, until it got up to they would call at about fifteen thousand, up to about 1890 they got to calling at fifteen thousand.

REDIRECT EXAMINATION by Mr. Thomas.

Q That was after your term of office?

A That was after my term of office, but I was interested, President of the canal company, and knew about it.

Q Judge, what system of measurement was in vogue at that time when you were commissioner?

A Why, we would -- the system was what we call feet measurement. Shall I explain that ?

Q If you would for the purpose of the record.

A We would lay off, -- find a place in the canal as near as we could

that was uniform in size and grade and depth, we would cross section, we would then measure off a hundred feet in length with a tape, then throw in a stick, let it float down and note the time accurately as we could by a watch, and take perhaps half a dozen such tests as that and then average them up and that would show the amount of water that run that hundred feet in the time. We would then measure all the canals in that way, then we would measure the whole river in that way, take the cross section of that and put it up. Our detailed measurements always amounted to more than the river measurement. Of course, that was not absolutely accurate, but it was relatively accurate. It was about as fair for one as the other, and we could account in a measure for its being more in detail than in the whole, by reason of a number of places that water ran into the river below the main mouth of the canyon and before it got into the canal heads.

Q Yet, throughout your measurement, crude as the system was, did you maintain the ratio which you have heretofore testified to?

A Yes sir, that was the endeavor to do that.

Q And state how the various parties to this, or who were taking water under this system, treated that division?

MR. RAY: I object to that as calling for a conclusion of the witness, how the parties treated it.

MR. THOMAS: I will change the form of the question then.

Q State what complaints were made as to the insufficiency of the water?

MR. RAY: Your honor please, I object to that.

Q Let me finish the question. Please state what complaints were made as to the insufficiency of water received by the various people under this division with reference to that ratio.

MR. RAY: During what period?

MR. THOMAS The period of Judge Booth's administration as commissioner.

A As I recall it, the first year was agreeable. The second year I think it was not so agreeable. The Timpanogos and the Provo bench particularly claimed that they ought not to be limited as their requirements were more according to the division than were others. I remember that, but I insisted on giving them the water according to the agreement and they accepted it.

Q Was any action instituted in court to compel you to give a greater amount of water ? A. No sir.

Q Then you did give? A. No sir.

Q By anybody?

A Not by anybody.

CROSS EXAMINATION by MR. Bagley.

Q There was sufficient controversy that it did finally culminate in the action in which the Morse decree was rendered?

A Yes sir, about 1891.

MR. THUMRAN: 1901.

A Or 1901, I mean.

Q What you meant then by your answer was that there was no controversy or legal proceedings instituted during the time you were commissioner?

A And not until the controversy that arose that the Morse decree grew out of.

-----  
HYRUM F. THOMAS recalled.

Q Please state your name again?

A Hyrum F. Thomas.

Q You were commissioner, were you not, Mr. Thomas, of the court under the Morse decree? A. Yes sir.

Q State if you distributed the water to the various parties to that decree? A. Yes sir.

Q And as the decree determined it? A. Yes sir.

Q Beginning what time, Mr. Thomas?

A I began in the spring of 1902.

Q Continuing up to what time?

A To and including the year 1911.

Q During the latter part of that period, however, another decree came into existence, did it not?

A Yes sir.

Q The Chidester decree? A. Yes sir.

Q State if you acted as commissioner under that decree?

A I did.

Q State if you distributed the water to the parties interested in those decrees during your administration?

A Yes sir.

Q Up to and including 1911? A. Yes sir.

Q Who succeeded you?

A I think it was Thomas J. Farrer.

Q Mr. Thomas, when plaintiff was putting on its case you were asked with reference to certain springs up the Provo River which had been turned into the river, and you testified to a certain amount of water which you turned out of the river for the benefit of plaintiff subsequently.

A Yes, I testified in that case.

Q I will ask you if you have since that time, since you testified, visited Provo Canyon? A. Yes sir.

Q I will ask you if you have seen the pipes flowing from the north side of the canyon to the south side of the canyon, carrying water into the Provo system? A. Yes sir.

Q I will ask you if you have seen there a spring which is piped by the city, and whose waters are carried into the Provo water works system?

A I did, yes sir.

Q Is that spring the one which you had reference to when you testified on your former testimony?

A It is not.

Q What springs did you testify or have in mind when you were

A I testified as nearly as I can remember to the springs enumerated under the decree as the Steele spring.

Q The Pony Steele spring, they are sometimes called?

A I don't think they are called that in the decree. Leander Steele and small springs mentioned also in the decree upon the Heiselt farm and three or four other springs that exist upon that same premises of Mr. Heiselt, and what was known to Mr. Heiselt as the Maple Hollow spring, just above his premises, those are what I meant in my testimony.

Q But neither of those are the spring which you have seen conveyed into the provo system?

A Neither of them.

Q Were those springs known as the Steele Springs and the Heiselt Springs, springs which went into the river?

A I believe they all find their way into provo River, yes sir.

Q During what season of the year?

A Well, I had reason to believe they had been used upon that farm certain seasons of the year. The day that I saw them last when I made the last distribution they were all running into the river.

Q Prior to that time state if you had seen them used upon the land upon which they raise?

A I never saw the Steele spring used upon the lands.

Q Was there at that time an orchard or any cultivated area there on the Steele ranch?

A As I remember it, there was an orchard.

Q Do you know from what source that orchard received its water for irrigation purposes?

A Not personally, I don't no sir.

Q Did you ever make any investigation yourself, Mr. Thomas, to determine that?

A Why, the day on which I testified that I made that distribution the evidence they had used that water upon that orchard from the spring.

Q Prior to the time that you had diverted, or prior to the time

at which you first testified, would you say that those springs have been used upon that land adjacent to the river?

A Evidence pointed to that fact they had been sometime.

Q During the non irrigating season state where those waters were going, if you know?

A I believe that is the same thing I testified to, they would all find their way into the Provo River.

THE COURT: Let me ask so that I may understand. Mr. Thomas, when you refer to the Steele springs, are those the same springs that are referred to as the Pony Steele Springs?

A I believe they are so known.

THE COURT: They are the same?

A Yes.

THE COURT: My notes of your former evidence I had it referred to the Pony Steele Springs.

A I did not testify as to the Pony Steele.

THE COURT: But they are the same springs?

A Yes.

MR. JACOB EVANS: The man Mr. Steele was known by the name of Pony, Pony Steele.

A Yes sir.

MR. THOMAS: This is not for the record, his name was Leander?

MR. JACOB EVANS: Yes.

MR. THOMAS: And the nick name was Pony.

MR. JACOB EVANS: Yes.

CROSS EXAMINATION by Mr. Jacob Evans.

Q Mr. Thomas, the land where the orchard was irrigated on the Steele farm and also on the Heiselt farm is twenty-five or thirty feet above the surface of the water in the river immediately below those farms, are they not?

A I didn't quite catch your question.

Q I don't know whether I made it clear or not, read it.

(Question read)

A I don't know as that much, but they are higher.

Q They are up on a bench, aren't they?

A Comparatively speaking, yes sir.

Q And must be fully from thirty to fifty feet above the surface of the water of the river?

A I wouldn't think so.

Q What would be your judgment as to the difference in elevation?

A I could not form any amount, I think there is a gradual slope from there to the river.

Q Do you know of any water ditch that is taken out directly from the river that would irrigate those two farms?

A No sir.

Q Then, if they are that much above the river and no ditch is taken out, they must have been irrigated from those springs?

A That was my conclusion, yes sir.

Q Could not have been irrigated in any other way, could they?

A They could take water from the river and I not know it.

Q There was no ditch, was there, leading to those farms from the river directly?

A There is a pipe line there, but I don't know whether it was connected with the river or not.

Q Referring to this spring which was taken into the pipeline of the system in 1915, do you know whether or not that spring rises on Mr. Heiselt's property?

A No, I don't.

Q You don't know whether it does or not?

A No sir.

Q Neither do you know whether it was any part of the Blue Cliff water, do you?           A. No sir.

Q The water would run from those springs naturally into the bed of the Blue Cliff canal, wouldn't they?

A Why, I kind of think they would.

Q In taking the springs into the pipe line don't they have to cross the Blue Cliff Canal and go a little ways up the hill and take the springs above the Blue Cliff canal?

A My recollection serves me that it is true.

Q You have been there recently, haven't you?

A Yes sir.

Q If they have not been taken into this pipe then they would have of necessity run into the bed of the Blue Cliff canal, wouldn't they?

A I guess that is true.

RECROSS EXAMINATION by Mr. A. C. Hatch.

Q There is another question I would like to ask. You say when you went up to measure the water first in allowing to the Provo Reservoir Company a quantity for these springs you found them all running into the river?

A My recollection was they were all finding their way into the river that day.

Q You know what is called the Maple Spring up there?

A Yes, it is known to Mr. Heiselt as that. I didn't find anybody else who knew it by that name.

Q You know the spring that he calls the Maple Spring?

A Yes sir.

Q That is the first spring above his place, is it not?

A Yes sir.

Q And the spring that was taken into the city pipe line is the next spring that you come to up the river from what Heiselt called the Maple Spring, or the second spring above Heiselt's place?

A I think that is true, yes sir.

Q Now, when you went there to measure this water, did you not find this water from the spring that the city took flowing down the Blue Cliff canal to and joining the stream flowing from the Maple Spring?

A No, I did not.

Q certain of that?

A No, I am not certain of it, I don't know where the springs had

their source or where they run together or whether they did run together.

Q But you measured the stream that went into the river at what Heiselt called the Maple Spring?

A I made an estimate of it, yes sir.

Q All the water that came into the river at that point was estimated by you in making the allowance to the plaintiff herein of the one and a half second feet?

A That was included in my testimony, yes sir.

Q Then, if this spring that the city took did at that time flow into and connect with the Maple Spring Branch, it was estimated by you in that one and a half second feet?

A Yes sir, if that is true.

Q But you don't remember now whether it did or not?

A No.

Q Flow down the Blue Cliff to and connect with the Maple Spring water before flowing into the river?

A No, I don't.

CROSS EXAMINATION by MFL Ray.

Q Mr. Thomas, while you were commissioner of the court for the distribution of the waters of Provo River, how did you measure the water relative to Spring Creek, did you include that in the total which you divided?

A I don't know which one you mean as Spring Creek .

Q Well, are there several spring creeks?

A Why, I didn't have anything to do with one called Spring Creek. There is a Spring Creek south of the city here, which is only a spring, as I understand it, rising on certain individuals farm.

Q I mean the Spring Creek over on the north here or the --

A Lake Bottom Canal?

Q Lake Bottom Canal.

A Yes sir, we always included that in the total of the river.

- Q Always included it in the total? A. Yes sir.
- Q You are sure of that? A. Yes sir.
- Q Now, you divided the river then on a basis as set forth in those decrees in percentages? A. Yes sir.
- Q When did you commence the division, at what stage of the river?
- A Well, I don't know now without consulting the record, I kept a record of every measurement I made.
- Q Well, about what stage of the river, I don't want great accuracy.
- A "I never made any division until they were less than the carrying capacity of the canals for the purpose of distribution I didn't make any.
- Q Up to that period the canals from the early season were filled?
- A Yes sir.
- Q And when the river so receded that the canals could not all be filled you then commenced a division upon the basis of percentages as set forth in the Morse and Chidester decrees?
- A Yes sir.
- Q Did you take into consideration any other elements than those percentages? A. No sir.
- Q You didn't take into consideration the question as to whether the water distributed under that decree was being put to a beneficial use? A. No sir.
- Q Whether it was being wasted? A. No sir.
- Q Whether the parties to whom you distributed it had any necessity for it at all? A. No sir.

CROSS EXAMINATION By Mr. Bagley.

- Q I want to ask a question or two about the Steele Springs. As I remember your testimony the Steele springs were used by Mr. Steele or whoever owned the property there, to irrigate some land
- A That is part of my testimony. Of course, I never saw him use the water on the land.
- Q There was land there that appeared to have been irrigated?
- A Yes sir.

- Q Bearing orchard on it? A. Yes sir.
- Q And some alfalfa?
- A There may have been a little alfalfa, I don't remember that.
- Q Where did that orchard and land which appeared to have been irrigated from those Steele Springs lie with respect to the old Blue Cliff Canal? Was the land above the canal or below the canal?
- A I think it was below the canal, if my memory serves me right.
- Q So that the water from the Steele Spring, if it were applied upon this land of Steele's, or the Steele Ranch, either would have to pass over the or through the Blue Cliff Canal to irrigate the Steele Land?
- A No, my testimony was different from that. I said the spring, if I remember right the spring was below the canal.
- Q The Steele Spring then is below the Blue Cliff Canal?
- A That is my belief of it, yes sir.
- Q And never did run into the Blue Cliff Canal?
- A I don't think so.
- Q I understood you, your testimony to be it was above that the springs were above the canal?
- A No.
- Q Then where would the water, after being applied on the Steele land go to?
- A Go into the river, Provo River.
- Q That would be the natural direction of the drainage into the river?
- A Yes sir.
- Q Were there any springs above the Blue Cliff Canal which were classed as Steele Springs, as far as you know?
- A No, I don't remember of any being above the canal.

RE-CROSS EXAMINATION by Mr. Jacob Evans.

- Q Suppose the Steele Springs were not large enough to irrigate the orchard that they had on the Steele land and run off into the

river, there wouldn't be any water go into the river, would there?

A What is that?

Q Suppose there is only sufficient water flowing out of the Steele Spring to irrigate the orchard and the other land they had under cultivation on the Steele ranch, no part of the water then would go into the river, would it?

A Nothing but the seepage of it.

Q That you don't know where it would go, do you?

A No.

Q You only know the natural drainage would be toward the Provo River?  
A. Yes.

Q But as to where it did in fact go, you could not see, could you?

A No canal that it run into I could remember.

Q Where are your books showing the division of Provo River?

A In the possession of Mr. Wentz, present commissioner.

RECROSS EXAMINATION by MR. A. C. Hatch.

Q Mr. Thomas, you don't have a recollection of whether those springs were above or below the Blue Cliff Canal?

A Well, I never examined it for that purpose at all, Judge. My recollection is they are entirely below the canal. I think the canal is above them.

Q I understand all of those springs are above the canal?

A How?

Q My understanding is they are all above the canal and would flow directly into the Blue Cliff canal if undisturbed?

MR. BAGLEY: Unless Judge Hatch is sworn as a witness I will object to that statement.

MR. A. C. HATCH: I said it to call the witness's attention to the fact he has been there, to refresh his recollection. I don't know where they are.

MR. THURMAN: You don't think the judge has to be

sworn to get the truth out of him, do you?

MR. A. C. HATCH: Or that you would come any nearer getting the truth if he was sworn?

MR JACOB EVANS: I think the difficulty here is there is a lot of little springs rising along there and none of us know what particular spring we are talking about.

MR. BAGLEY: You call them the Pony Steele Springs.

MR. JACOB EVANS: That hasn't anything to do with the spring the committee put in its pipe line, it is different entirely.

REDIRECT EXAMINATION by Mr. Corfman

Q Mr. Thomas, when you say the springs, when you are speaking of certain springs being below the Blue Cliff Canal, what springs have you in mind?

A All of those that I testified to except possibly the Maple Hollow.

Q Have you in mind the Pony Steele Spring?

A Yes sir.

Q And the spring that rises above there on the Heiselt land, have you got that in mind?

A Yes, that is one of them.

Q You think those springs are below or above the Blue Cliff canal?

A I say I was not certain, but my belief is they are all below the canal.

Q Do you remember Mr. Goddard, as watermaster representing the city, coming to you and asking you after the high water stage to not permit those springs to run in or be retained in the Blue Cliff Canal and ordering they be turned out so that they would run into the river, you remember that?

A No, I don't remember that.

Q Don't remember it? A. No.

Q You remember of ever turning them out of the Blue Cliff canal?

A Not the springs, I remember turning water out of the Blue Cliff Canal.

Q Let it run into the river? A. Yes sir.

Q Where did that water come from?

A Out of the river.

Q During the low water stage? A. Yes sir.

Q Do you know whether that <sup>water</sup> was mingled with the spring water that came in the Blue Cliff Canal or not?

A I think part of it was spring water.

Q where did that come from?

A That came from the springs above the --

Q What springs above?

A I don't know them by their name.

Q Do you know whether those springs are taken now in the pipe line?

A I think some of them are yes sir.

Q Do you know whether that is true with respect to this last spring that is taken in by the city.

MR. A. C. HATCH: I can't hear a word that is being said, because of the noise outside, either of the witness or counsel.

Q Do you know whether the water that was commingling with the river water was ordered to be turned out, part of that water was water recently taken into the pipe line?

A I think that would be included.

Q You think that would be included?

A Yes sir.

Q And did you turn that out?

A Yes sir.

Q Now, speaking of Pony Steele Springs and the springs rising on the Heiselt land, it is on the same water shed or drainage area of the Grove River, isn't it?

A Yes sir.

Q Right in the immediate vicinity of the banks of the river, is it not?

A Some of it I think is closer than other points.

Q About how far from the river would it be?

A Some of it would be in close proximity to the river.

Q How close?

A I think the Steele Spring would be included within a hundred yards of the Provo River.

Q And the slope of the Steele land there is directly into the river?

A Well, it is pretty steep, as I remember it.

Q Toward the river? A. Yes sir.

RECROSS EXAMINATION by Mr. A. C. Hatch.

Q The railroad is between the river and any of this land, is it not?

A Yes sir, I believe that is true.

Q Did you say that at the request of Goddard or at the demand of Goddard or anyone else, you turned these waters flowing from those springs into the river away from the users.

Which spring did <sup>you</sup> have reference to?

Q The Heiselt Spring, or the Steele Spring or the Maple Spring or the spring that the committee put into its pipe line?

A I testified that some of the springs that the city has in its pipe line was included in the amount running into the Blue Cliff Canal, and included in the water which we turned out of the canal.

Q At the time you turned water from the Blue Cliff people?

A Yes sir.

Q Did you ever turn any of those springs from the Provo Reservoir Company without compensating them by allowing them to divert the water out of the river again into their canal?

A Why after they had purchased in there, they and their engineer and I got together and had an understanding about what they thought ought to be distributed to them in lieu of those spring waters, and I remember making a distribution to them in their

canal in lieu of that spring water. That is the one I testified to.

Q By that spring water you meant to distribute all the water that had formerly been used upon those two farms, the Heiselt and Steel farms and spring water that had been used by the Blue Cliff Canal Company?

A Yes sir.

-----  
5:00 P.M., Recess to 9:30 A.M., June 29, 1916.  
-----

HEBER DUKE 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 Heber Duke.

Q Where do you live?

A 24 East 5th South.

Q In this city? A. Yes sir.

Q How long have you lived here?

A About forty-six years.

Q What is your business?

A Well, up to the last year I have been truck gardening.

Q What are you doing now?

A I am hostler at the Rio Grande.

Q How long were you continuously in the truck gardening business.

A About eighteen years?

Q In this city? A. Yes sir.

Q Where was your land located?

A Oh, I have rented lots of land near to my place.

Q In what part of the city?

A In this part.

Q This part, that is in the southeastern part of the city?

A Yes.

Q During that period that you were engaged as a truck gardner can you tell how many lots you had rented?

A Four.

Q What was the character of the soil in those lots?

A Sandy loam.

Q Were they all about the same?

A Pretty near.

Q Did you ever have occasion to examine the subsoil?

A No, I did not.

Q Did you ever do any digging at all?

A I put a foundation in one place right next to where I was gardening, but it appeared, <sup>the same</sup> all the way down.

Q At that time?

A Yes sir.

Q Were you gardening there in 1915? A. Yes sir.

Q On what lot were you gardening in 1915?

A 1915 on the Stewart lot.

Q Could you locate them a little more clearly?

A Those are on 5th South and 1st East.

Q In Provo City? A. Yes sir.

Q In the platted area? What were you raising last year?

A Radishes, lettuce, turnips, beets, carrots and onions.

Q For the market? A Yes sir.

Q What kind of crops did you have?

A I didn't have any hardly.

Q To what do you attribute the loss?

A Lack of water.

Q How much land did you have in under cultivation last year?

A Two city lots, twelve by twelve.

Q Did you have any water during the earliest part of the season?

A Yes, some during the earliest part.

Q And during the low water season?

A I didn't get any, not enough for anything.

Q During the other years that you were a market gardener, tilling land there in that vicinity? Mr. Duke, what would you say as

to the sufficiency of water received?

A I was successful in gardening, plenty of water.

Q State if you had plenty of water in every season?

A Yes sir.

Q In every season?

A Every season.

Q But during last year you didn't have sufficient water?

A No sir.

Q You received your water under the city system?

A Yes sir.

Q And through what ditch?

A No. 1.

Q That is a lateral?

A Right here, yes.

Q That is the one immediately east of the block on which this building is located?

A Yes, I think they call that No. 3.

Q Do you know what canal this ditch receives its water from?

A Well, I don't know what they call it, I think they call it the City Canal.

Q They are all city canals in that sense. Do you know whether it is the East Union or not?

A It is what they used to call the Lower East Union, that is a city ditch.

Q It is now known as the East Union? A. Yes.

CROSS EXAMINATION by Mr. Thurman.

Q You say you cultivated four lots? A. Yes sir.

Q What size, regular size of city lots?

A Regular size, six by twelve.

Q You cultivated all of the ground on the lots, did you ?

A No sir, you cannot cultivate all of the ground.

Q Is it occupied by --

A No, but there is a certain amount around the fence you cannot

cultivate, can't get to it.

Q What is it?

A Well, can't plow right up against the fence, and consequently there is a strip all around that you don't get the use of.

Q That is what you mean when you say you don't cultivate it all, you mean because you cannot cultivate right up to the fence?

A Yes.

Q You cultivate the rest of it, do you?

A Yes sir.

Q When you have water. You say last year you had two lots only?

A Yes sir.

Q That would be pretty near an acre?

A That would be pretty near an acre, yes.

Q How much time did you have for those two lots?

A Three hours.

Q Three hours for the two lots? A. Yes sir.

Q You say it is sandy loam? A. Yes sir.

Q How long did you have a sufficiency of water last year?

A Now, I don't know, but it wasn't very long. Just as soon as the river dropped, then my crops begin to go because of no water.

Q Don't you know about when it was?

A Well, I suppose it was somewhere along in June.

Q I understood you to say you didn't have any water?

A How?

Q I understood you to say you didn't have any water after that?

A After that I said I didn't have sufficient.

Q You said you didn't have any; you mean you had some but not enough?

A I didn't have sufficient water for the crops after the high water.

Q Did you have the same stream that was used by others on that tier?

A Yes sir.

Q Who was your nearest neighbor there?

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Q What is it?

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A After that I said I didn't have sufficient.

Q You said you didn't have any; you mean you had some but not enough?

A I didn't have sufficient water for the crops after the high water.

Q Did you have the same stream that was used by others on that tier?

A Yes sir.

Q Who was your nearest neighbor there?

A Mrs. Stewart.

Q Mrs. Stewart?

A Just on the corner above.

Q Did she irrigate?

A Well, there is a fellow there irrigating, tending her piece for her.

Q He used the same stream?

A Same stream.

Q Irrigate the same amount of ground? A. No sir.

Q Irrigated just a part of the lot, is that right?

A About four by six rods.

Q About 24 square rods?

A About four by six rods square, something like that, I know it is just a little piece.

Q They raise garden stuff?

A He had it in corn.

Q Raise a crop of corn. A. Yes.

Q Good corn?

A I guess it was.

Q You just had water for two lots and tried to irrigate all the lots you could inside of the fence?

A Yes sir.

Q Were they the same lots you had theretofore irrigated years before? A. Yes sir.

Q And you dropped two of your lots last year?

A Yes.

Q What other two lots had you used before, where were they?

A Why, I had used on up on second east and -- well, two on 2nd East, one on each side of the road and my own lot.

Q Did you notice to see whether you were getting as much water for your lots as was distributed to other lots in the vicinity?

A Well, I used to make it a point to go up the ditch about an hour and a half before watering time.

Q I know, but I asked you if you noticed--

A No, I never noticed.

Q whether you were getting your share as others were getting ?  
A No, I got all that was in the ditch.  
Q You tried to get it over all the ground, did you?  
A No sir.  
Q How much did you try to get it over?  
A I tried to get it over just about what I thought it would do,  
how far it would go .  
Q Did you succeed in getting it over what it would do?  
A Very little, two or three rods wide.  
Q What?  
A Two or three rods wide, eleven rods long.  
Q Eleven rods long?  
A That is all I figured on planting.  
Q Did you get it over that much ?  
A Pretty near every watering day.  
Q Did you succeed in watering that much during the low water  
season, three by eleven? A. Yes.  
Q How?  
A Sometimes I could get it over and sometimes I could not.  
Q Did you succeed in raising a crop on that much of your ground?  
A No, not an extra good crop.  
Q Not an extra good crop?  
A No, it was a failure pretty near, I should say.  
Q Did you raise an average crop?  
A No, sir.  
Q The rest of your ground on those two lots you didn't irrigate  
at all, do I understand?  
A Didn,t try to.  
Q Did you have it all planned? A. Yes sir.  
Q All of the two lots? A. Yes.  
Q In what kind of stuff?  
A In radishes, lettuce, turnips, beets, carrots.  
Q You don't know whether you were getting your share according  
to other people in the city here, or not, do you?  
A I got all that was in the ditch, full stream.

Q You say you went up the ditch, how far did you go?

A I would go plumb to Academy.

Q Did anybody have charge of that ditch at all.

A The watermaster.

Q The city watermaster? A. Yes.

Q You don't have deputies on these tiers of blocks, do they?

A I don't know.

Q What hour of the day or the twenty-four hours did your watering turn come?

A Last year?

Q Last year?

A I think it was five o'clock, I ain't positive.

Q Afternoon or morning?

A Afternoon, or from four thirty until --

Q Did any waste water ever go down at any time?

A Not last year.

Q You usually do get some waste water ordinary years, don't you, if you don't get quite through?

A No, there is very little <sup>waste</sup> water comes.

CROSS EXAMINATION by Mr. Jacob Evans.

Q The Stewart lots are on the extreme lower end of this ditch are they not? A. Yes sir.

Q Last row of blocks irrigated from this ditch ?

A No.

Q In the city there is one little short row?

A No.

Q Beyond that, isn't there?

A That ditch runs a block west on Academy Avenue and then goes down Academy Avenue and waters some places down there.

Q Now, who lives next to you, Maggie Stewart?

A Yes sir.

Q How much of her lot does she irrigate?

A About three by six rods.

Q She had a six by twelve, didn't she?

A. Yes.

Q Who lives next to her on the west?

A I don't know who lives there.

Q How much ground did they irrigate?

A Just a little piece.

Q How much?

A Well, I don't know how much, I haven't been over there to measure it, looked to me maybe two or three rods.

Q Square?

A Two or three rods long and maybe a rod wide.

Q Who lives next west from there.

A I don't know who lives there.

Q Who lives in what is known as the old Raypeck place on the corner there?

A I don't know.

Q Any portion of that lot irrigated from that ditch?

A I don't know whether it is or not.

Q Never saw anybody irrigate it have you?

A No.

Q Does Peter Stubbs use any water from that ditch?

A I don't know.

Q Is there anybody else on that block that uses any water from that ditch besides yourself?

A I said I didn't know, I am not around there when their turn comes.

Q You pass by there going to your work every day, don't you?

A No sir.

Q What time do you go to work? in the morning?

A Six o'clock in the evening.

Q What time do you go to work in the morning?

A I went to work in the evening.

Q What time do you go to work at night then ?

A Six o'clock.

Q You work to what time in the morning?

A Six o'clock.

Q You did that last summer, did you?

A No sir.

Q What time did you go to work last summer during the irrigation season?

A I went to work at seven o'clock.

MR. THOMAS: I object to this cross examination as improper.

THE WITNESS: I don't think that has anything to do with the water.

MR. THOMAS: Don't make any comment, Mr. Duke. I object to this as improper cross examination. It is certainly not material.

THE COURT: Objection is overruled, it seems to be proper cross examination.

Q What time did you go to work during the irrigation season?

A Seven o'clock.

Q And what time did you quit in the morning?

A You were asking me about day work last summer.

Q I mean at night.

A At night, I go to work at six at night and quit at six in the morning.

THE COURT: Last summer?

A No, this summer.

Q No, I am asking you about 1915.

A I said I worked in the day time.

Q Tell us what time you went to work?

A I went to work at seven o'clock.

Q In the morning?

A In the morning.

Q And quite at seven at night?

A No sir, I quit whenever the train come in, sometimes be ten, sometimes be six, seven, eight and nine, all times, we had no regular time getting in.

Q Your duties required you to remain there as hostler?

A No, I was working on the railroad.

Q What were you doing on the railroad?

A Picking up steel.

Q Where?

A Out along this line here.

Q How far from provo?

A Oh, from ten to fifteen and eighteen miles.

Q Were you working on the section? A. No sir.

Q What do you say?

A I was working on the railroad.

Q Well, what were you doing, with a train gang?

A Yes sir.

Q Or section gang?

A Train gang.

Q Did that train gang have any regular time to quit work at night?

A No, we did all we could, we got overpay for it, overtime.

Q paid extra time? A. yes.

Q Now, were you employed at that work during the entire latter part of the irrigation season of 1915, that is, last year.

A Yes, pretty near all the time.

Q Pretty near all the time?

A Yes.

Q Now, I understood you to say that you went up the ditch about an hour or so before each irrigation?

A Yes.

Q As far as the Academy. Did you get off from your work on the railroad each day when your watering turn come?

A My watering turn come in the evening.

Q I understood you to say your watering turn come --

A About four o'clock.

Q About four thirty ?

A Four or five, something like that, I don't know what time it was.

Q Wouldn't you be employed on the railroad at that time?

A Sometimes I would, sometimes I wouldn't.

Q When you were employed on the railroad and were at your work on

the railroad you wouldn't go up the ditch, would you?

A No, my boy would go.

Q Well, you don't know whether he went or not, do you?

A Yes, I do.

Q Could you know that when you were on the railroad?

A I know when I ask him to do a thing and tell him to do it he does it.

Q That is the way you know he went up.

A Yes sir.

Q When you go to the Academy to see about your water, why do you stop there?

A I never stopped at the Academy.

Q You said you went up to the Academy.

A Yes, I have went by.

Q That is not the head of the ditch, is it?

A Pretty near the head of it.

Q Well, but two or three blocks, isn't it, to the head of the ditch?

A You can tell whether there is any water in the ditch when you get that far or not.

Q Don't you know there are other ditches taken out about at the same place where this ditch is taken out.

A I know there is.

Q And that the method of taking the water out at that point, that there is no measuring devices there to measure the water-- Now, Mr. Duke, I am trying to be perfectly fair with you in this matter, just want to know what the facts are.

A I have told it to you.

Q I want to know if you went up to the main ditch where the water was taken out into the ditch that you used for irrigation purposes?

A. NO sir.

Q Did you ever go to that point?

A I have been there lots of times.

Q Were you there last summer at any time?

A No.

Q There are some ditches that are taken out there that go to the east, are there not?

A Yes sir.

Q In fact, at that point the stream is divided into three ditches, isn't it?

A I believe it is.

Q One going down 1st East Street and one 2nd East and I think one 3rd East, and they are all divided right under the hill near the memorial building, is that right?

A Yes sir.

Q You didn't go to that point at any time last summer to see whether or not your ditch was carrying its pro rata share of the water that was divided between <sup>the</sup> three ditches, did you?

A No.

Q Then you know nothing about what was going down these other ditches?

A Not only the water.

Q I say you know nothing about the quantity in the other ditches?

A No.

Q So far as your knowledge goes there might have been ample water in those ditches and none in your ditch or comparatively none. That is all.

MR. RAY: He didn't answer in the record at all.

MR. JACOB EVANS: I would like to have some answers to these questions.

Q Did you ever make any complaint to the watermaster?

A Yes sir.

Q Who did you complain to.

A Thompson.

Q Now, you may state whether or not you know ~~was~~ whether you were getting the pro rata share of the water in the main ditch that should have been turned in your lateral during 1915?

A No, I don't know how much water was run in the ditch.

Q You never went to investigate, did you?

A No.

Q How old is this boy of yours you speak of?

A Seventeen past.

Q What was his employment other than being around home.

A Well, he was doing very little or nothing, only practicing music.

Q He is not engaged in any steady employment?

A Not at that time, no.

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JOSEPH I. BULLOCK, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Coffman.

Q Your full name, Mr. Bullock?

A Joseph I. Bullock.

Q How old are you?

A Fifty-seven years old.

Q Where have you lived all your life?

A Provo.

Q Own land under the irrigation system?

A Yes sir.

Q In what part?

A Southeastern part.

Q Under  
In what ditch.

A The East Union.

Q How many acres of land do you own?

A About six acres under that ditch.

Q Under the East Union? A. Yes.

Q Do you own land under other ditches in Provo City?

A No.

Q What do you use this land for?

A Pasture.

Q Has it ever been used for any other purpose?

A Yes sir.

Q What?

A For farming purposes, raising all kinds of products.

Q All kinds of farm products?

A Except beets, never had beets on it.

Q How long has it been in pasture?

A About six years.

Q And what kind of grasses are you growing upon it ?

A Well, it is mostly this here rye grass now, lawn grass. It was lucern.

Q And you have a water right to the land under the East Union?

A Yes sir.

Q Have always irrigated from that canal?

A Yes sir.

Q In 1915, what do you say as to the amount of water that you had from that ditch?

A I didn't have any along in July and August.

Q Were you able to irrigate your pasture?

A No sir.

Q What was the consequence.

A Now?

Q What was the consequence?

A There wasn't no water.

Q Well, how did it affect your crop?

A It just burned up, the grass burns right up. I had my horses in there and had to take them out, couldn't get water enough for them to drink, let along water for pasture.

Q Did you make any attempt to get more water?

A Yes sir.

Q Who did you apply to for it?

A Watermaster Mr. Thompson.

Q Did you get it then?           A No sir.

Q Did you get any water at all?

A Not after along about the middle of July, never pretended to, wouldn't have done me any good if I had.

Q How long have you used these lands?

A Oh, ever since I can remember.

Q Was last year the first year you were short of water?

A Oh no, been short, but last year was the worst year.

Q Do you know of any other lands in that locality that were short of water in 1915?

A Yes, there was Price, my neighbor right there.

Q Did you see his crops? A. Yes.

Q Do you know whether or not they suffered?

A I should say they did.

Q Do you know of any other person in that locality?

A My brother Ben Bullock.

Q How many acres did he own under the East Union?

A I don't know exactly how much he does, he has got quite a farm there.

Q What would be your judgment as to the acreage he has under the East Union?

A I should think thirty-five or forty acres.

Q What kind of crops was he raising in 1915?

A Grain and hay and potatoes and fruit.

Q Did you note their condition? A Yes sir.

Q What was the condition of his crop?

A Burned up condition.

Q Did it affect the production on his land?

A Yes sir.

Q Materially? A. Yes.

Q Now, do you know of any other lands that were short of water in 1915?

A Well no.

Q Do you know whether the Price land and your brother's land had been short in other years?

A I suppose they had.

Q You don't know as to that?

A No.

MR. RAY: Move to strike out his supposition.

MR. COREMAN: That may go out.

Q You have farmed all your life, have you? A. Yes sir.

Q Used water for irrigation?

A Pretty much.

Q And it was necessary to have water on your land in order to raise a crop of grass?

A Yes sir.

Q Or anything else? A. Yes.

Q And that was true of Price and your brother as well?

A Yes.

CROSS EXAMINATION by Mr. Jacob Evans.

Q Where is your land from the old Bullock home?

A Right south, joins there by the infirmary.

Q It is on the south side of the road, is it?

A No, on the east side.

Q On the east side of the road?

A Yes, that is one. I have got about an acre on the west side of the road.

Q It is above the Bullock Springs, is it?

A It is right south of the big house there.

Q But the bullock Springs don't irrigate that ?

A Oh no.

Q It is above in elevation? A. Yes.

Q Now, that is almost to the county infirmary, isn't it?

A Yes.

Q Your land joins the county infirmary? A. No.

Q How much land is there between you --

A Moreton has a little strip in there between me and the infirmary.

Q That is almost on the extreme lower end of the East Union, isn't it?

A Oh yes, there is the infirmary and Egans below  $\frac{1}{2}$  me.

Q But there is very little land irrigated below you on the East Union?

A Quite a lot.

Q About how much?

A Oh, I don't know; Egans, they irrigate their land, the infirmary irrigates their's, Price irrigates quite a lot of his, I don't know how much.

Q Do you know whether or not they got water when they applied to the watermaster for it during 1915?

A I was just talking to Price this morning, he said he didn't, he could not.

Q Did you see their crops there?           A. Yes sir.

Q Did they burn up completely like yours did?

A I noticed Price.

Q Did it burn up completely ?

A Pretty well, pretty well burned up.

Q You don't have any regular turn down there, do you?

A Why, no, we don't have no regular schedule turn.

Q You simply make application to the watermaster?

A Yes.

Q For what water you want from time to time?

A Yes.

Q And he is supposed to turn it to you?

A Yes, if there is any to turn.

Q Now, people all north of you got water, didn,t they?

A I don't know anything about it, I never went up to see them.

Q You didn,t see any of their crops that were destroyed like yours were by reason of drought, did you?

A No, I never went up, bothered about them at all.

Q You never investigated the canal to know whether it had plenty of water in it?

A Only on my own land, I went up and put a tight dam to catch water and never come -- wasn't enough come, by gosh, to get out of the ditch.

Q You have the same right to the use of water on the East Union Canal that any other people owning land under the East Union Canal have, don't you?

- A I guess I do, according to my acres.
- Q Your right down there in proportion to the acres you have is entitled to the same right and same quantity of water as though you lived near the head of the canal, isn't it?
- A I suppose so.
- Q yet you say you got none at all?
- A I got none at all. He told me twice he had it down there and wanted me to put in a tight dam. There wouldn't be much, but what little there was might irrigate part of it. I done it, but there wasn't enough come down, by George, to --
- Q You know the mill right was taken out every night and every Sunday?
- A What?
- Q You know the Mill Race carrying approximately thirty-five to forty second feet of water was taken out and the principal portion of it turned into the East Union Canal every night and every Sunday, didn't you?
- A No sir, I didn't know nothing about it.
- Q You made no inquiry about that at all?           A. No sir.
- Q You just let your crops die for want of water, because you thought there was no water.
- A Just pasture there, five acre pasture.
- Q Five acres of pasture. Now, in coming into the city, I take it you come in quite frequently, don't you?
- A What?
- Q In coming in from your home -- you live out in that vicinity, don't you?
- A Yes.
- Q In coming in from your home you pass along the main road from the infirmary into the city which is all irrigated under the East Union Canal, isn't it?
- A Oh, I could see a whole lot of it, yes.
- Q And for a distance of a mile and a half or two miles or possibly a little more the land is irrigated from the East union canal

between your home and Provo City? A. Yes.

Q You come in frequently to the city, didn't you, during the summer season.

A Come into the city?

Q Yes. A. Yes, I live in the city.

Q Did you notice whether or not the crops along the road that you traveled into the city was suffering for the want of water?

A No, I never.

Q They looked apparently about the same as they looked in other years, didn't they?

A As far as I am concerned they did, I never noticed?

Q Really --

A It was none of my business.

Q All you know about it is you didn't get any water on your land?

A Yes.

Q And you don't know why?

A That's it, because it wasn't there and I couldn't get it.

Q Did Mr. Egans get any water below you?

A I don't know a thing about it, I never went down to see whether he did or not.

Q Did the infirmary people get any water?

A I don't know.

THE COURT: I understand he says he don't know about anybody.

Q Don't know about anybody?

A Except myself, I know I never got any. I know if it come I would have got it. He said it was not to be got. He said "I am going to send down what it was, he said you don't have to do anything Sunday but irrigate.

Q But he didn't send it?

A It didn't come.

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RICHARD OLSON, 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 Richard Olson.

Q How old are you?

A Fifty-one.

Q Where do you live.

A 442 South 7th East.

Q What part of the city is that in?

A Southeast corner.

Q Do you own land there?

A I own a couple city lots.

Q What ditch do you get water from?

A East Union.

Q Just a little louder?

A East Union.

Q What do you raise.

A Why, little garden for the house, strawberries.

Q What is the character of the soil?

A Sandy loam.

Q Have you ever made any examination to determine its depth?

A Why, it is about eighteen to twenty inches to the hard pan,  
and after that it is quick sand below as far as I have ever  
dug.

Q Do you receive water for your lot through one of the city  
ditches and laterals?

A Yes sir.

Q Did you in 1915 get sufficient water during the late water  
season to irrigate your lots?           A. No sir.

Q Did you get sufficient water during the high water season to  
irrigate your lots?

A Yes, during the high season I did.

Q What do you say to 1914 in the low water season as to the

sufficiency of water?

A I had pretty well water that time.

Q As to the previous years?

A I have never been short until last year, 1915.

Q That is during the low water season?

A Not to speak of, might have been a little less than high water season but generally managed to get over the ground.

Q As a matter of fact, it is less in the summer season than it is in the spring?

A Yes sir.

CROSS EXAMINATION by Mr. Thurman.

Q How many lots do you irrigate?

A Why, I own equal to twelve by twelve rods.

Q That is two lots? A. yes sir.

Q Do they lay together? A. Yes sir.

Q How much of it do you cultivate?

A It would be in the neighborhood of two-thirds of that land.

Q That is, you attempt to cultivate about that much?

A yes sir.

Q What kind of crops do you have in?

A Well, general garden house for the house, and strawberries is the main crop.

Q What is your time of irrigating?

A It was in the evening last year.

Q Commencing at what hour?

A I could not give you the exact hour, it was somewhere in the neighborhood of six oclock if my memory serves me right.

Q You would irrigate in the summer months practically all in the day time? A. Yes sir.

Q How many ~~hours~~ hours did you have for this -- for that ground?

A It is in the neighborhood of two hours and fifteen minutes.

Q Didn't you have three hours? A. No sir.

Q Hour and a half to the lot? A. No sir.

Q Do you know why? A. No sir.

Q You understand that is what is allotted to each city lot, don't you, an hour and a half?

A I didn't know it.

Q Is yours in what they call city lots or farming lots?

A City lots.

Q occupied with dwellings? A. Yes sir.

Q Corral? A. Yes sir.

Q How far south is your --

A Right on the corner of 4th South.

Q 4th South?

A West side of Sprinville road.

Q How much of your land did you get irrigated of this two-thirds that you attempted to irrigate last year?

A Well, I got part of it irrigated, I couldn't say exactly how much. There was some of it I didn't get irrigated but what the drought affected it most, my strawberries.

Q Suppose you had had it forty-five minutes more, couldn't you have watered your land?

A I couldn't say as to that.

Q Well, give your best judgment according to what you--

A According to the stream I had I could not.

Q But you don't know how much of what you had in you did water ?

A No, I couldn't get through so as to get it soaked up and watered sufficiently but what the drought hurt me.

Q Is your lot that you were irrigating on the side of the block next to the ditch that you used from?

A The ditch runs right in front of it, yes sir.

Q And how many are there below you that irrigate on that same lateral?

A Well, I don't know, there is a good many, it runs down in there, I have never counted them.

Q There is a great many above you of course, on that lateral?

A No sir.

Q Isn't there?

A There isn't very many of us.

Q How does that lateral run?

A It runs over, we take it in from what they call the Berdman Road, that lime kiln road, and take it past the cemetery, running north to my place into the city.

Q You don't run a lateral to the tier of blocks here.

A No sir.

Q How far is your lot from the East Union Ditch, canal?

A I could not say, I have never measured it.

Q How is that?

A I have never measured that distance. Straight south, it is quite a little ways.

Q You can approximate, I don't as you to be exact?

A I would say the water runs about a half a mile, I should judge, before it gets to me in the ditch.

Q From the East Union ditch?

A Where we take it in, pretty close to half a mile.

Q Does anybody else use water out of the ditch leading from the east union to your land above you?

A Yes sir.

Q Do you know who it is?

A Why, if I could think of the name -- Mrs. Wright, my south neighbor, Mrs. Zimmerman, I believe, uses it out of there.

Q Do you know whether that ditch is the same size as one of these city laterals that runs through the town?

A No sir, I don't.

Q Have you any judgment on the subject?

A It looks like about the same to me, I couldn't say.

Q Does the stream running in it seem to be about the same as one of these city streams?

A It looks to be pretty much the same

Q Are there only two people above you that use out of that ditch?

A No, there is more, but I don't remember their names, all of them.

Q Did you ever follow the ditch up?

A. Yes sir.

Q To the canal? A. Yes sir.

Q Would there be water running in the canal below the point of diversion of this ditch?

A Very little. at times, I have been there when it has been entirely dry.

Q Did your ditch have water in it all the time, or was it just intermittent?

A No sir, it didn't.

Q Well, what proportion of the time did your ditch have water in, if you know?

A About three days in the week.

Q About three days in the week?

A Yes sir.

Q Who waters first, you or the ones above you?

A The one at the end of the ditch wherever they are, I don't know. They would start in about Sunday.

Q But you don't know who is at the end of the ditch?

A No sir.

Q Nor do you know below you? A. No sir.

Q Don't you have any idea? A. No sir.

Q Do you have stated times to irrigate, commencing at a certain hour? A. Yes sir.

Q You have a ticket given you?

A Yes sir.

Q Fixing the time you shall take the water?

A Yes sir.

Q And think you took it about six o'clock last year?

A I believe so, if I remember right.

Q You remember what day of the week?

A Tuesday.

Q Now, did the water usually reach you at the time that your ticket called for?

A Yes sir, if there was any there.

Q Well, were there times when there wasn't any there?

A Yes sir.

Q How often did that occur?

A It occurred about four times last year.

Q Well now, do you know whether that was some irregularity or fault in the system of use or what that was due to. Did you try to find out?

A No sir, I asked the watermaster and I couldn't find out.

Q Who was the watermaster?

A Mr. Thompeon.

Q What kind of crops did you raise?

A Garden truck and strawberries, just for my house use.

Q Strawberries require a good deal of water, don't they?

A Yes sir.

Q How often did you water your strawberries?

A I couldn't water but once a week, couldn't get it.

Q Well, did you manage to keep them alive by watering them once a week?

A Yes sir, I managed to keep them alive, but that was all.

Q Didn't raise any strawberries?

A Last year they fell off, didn't hardly have any strawberries compared with the year before.

Q You say the soil of your lots there is a sandy loam from -- did you say a foot to eighteen inches?

A Yes sir.

Q Or down to the hardpan, is that right? A. Yes sir.

Q Now, do you know whether the water goes through that hardpan or not?

A No sir, I don't.

Q Only about a foot or foot and a half of soil to the hardpan?

A Yes sir.

Q Ought not to take a great deal of water for that, ought it? That is, not as much as if it was a gravelly subsoil?

A I couldn't say about that. I find it takes all I can get for it.

Q What time did you harvest your strawberries?

A Month of June.

Q Didn't you have water all right down to the month of June?

A I had water once a week.

Q Plenty of it?

A Nothing to brag on.

Q Well, we are not bragging on anything.

A I had enough to go over the berries.

Q Well, you watered them fairly well during the high water, didn't you?           A. Yes sir.

Q And didn't you water them fairly well down to the harvest time?

A I watered them pretty fair during the harvest time.

Q Then you raised a pretty fair crop, didn't you?

A No sir.

Q It wasn't due then to the shortage of water, was it?

A Yes, to a certain extent it was.

Q How do you know that?

A Because I didn't have water enough, see, to keep them going.

Q Now, you had a stream of water once a week for these strawberries?           A. Yes sir.

Q How many strawberries did you have in, how many rods?

A I had in about six rods wide by about nine rods long.

Q Of strawberries?           A. Yes sir.

Q That would be pretty near a full lot?

A Yes sir.

Q You had no great trouble getting the water through the rows, did you?           A. No sir.

Q You watered the long way?           A. Yes sir.

Q Six rods?           A. Yes sir.

Q Nine rods, I should say.

A That is, my shortest rows are nine rods, run on the angle of the Springville road.

Q How long is your longest?

A Be neighborhood of twelve rods.

Q Have you any idea how much water you had in the high water at

one time in second feet or fraction of a second foot?

A No sir, I have not.

Q How wide was your ditch and how deep was the ditch that water come to you in.

A Why, the intake to my ditch<sup>is</sup> about fourteen inches wide.

Q How deep?

A About eight or ten inches.

Q Do you know that was about the size of the ditch, average all the way through?

A Yes, but I am not entitled to the water in the ditch, I am entitled to only half of the water in that ditch. There is two of us irrigating at the same time out of the ditch.

Q You would be entitled to about seven inches wide, and how deep did you say it was?

A Eight to ten inches.

Q How many rows could you run that in when it was running that much?

A Why, I don't know. All right enough if it was a full ditch, but if there ain't, I couldn't run it in but a very few rows.

Q How many rows.

A About ten rows.

Q At one time, how many rows did you have?

A I don't remember.

Q How close are your rows together?

A They were about twenty inches.

Q How long would it take you to get through the rows?

A All depends on how they were cultivated. If they are freshly cultivated it would take an hour to go through, unless I wanted to wash the soil.

Q Pretty good slope, haven't you?

A No sir, pretty near level, I can run the water almost any way on my lot.

Q You harvested your crop, didn't you, of strawberries?

A What there was of it, yes sir.

Q How much of a crop did you harvest?

A Just what we used at the table and had about forty quarts of fruit in the cellar out of the crop last year.

I have no idea

Q Well tell me, how much you use at the table.

A We used about four quarts to a meal, from ten to twelve quarts on the table a day, then we had what we had in the cellar put up. That takes about two quarts to one.

MR. A. C HATCH: How long have you farmed that lot?

A About seven years.

CROSS EXAMINATION by Mr. Ray.

Q Mr. Olson, you said you had plenty of water in 1914 and '13, and prior years? A. Yes sir.

Q And that your strawberries required water twice a week?

A Yes sir.

Q How did you get water under your weekly ticket twice a week during 1914, '13 and '12?

A I didn't say I had it twice a week.

Q Well, if you didn't you didn't have plenty of water, did you?

A If I have got plenty of water at the time I water I can irrigate that so that it will be irrigated, keep moist, but if I haven't got water enough I can only just drain it through and it don't irrigate.

Q So that your strawberries only need a good irrigation once a week, don't they?

A If you have a good one, yes, it can do.

Q Now, strawberries don't fall off from drought, do they?

A I don't know, looked like it by mine.

Q As a matter of fact, the drier the ground gets the tighter the strawberry clings, isn't it, it dries up and clings to the vine instead of falling off?

A I haven't found it that way.

Q Yours drop off?

A Mine dropped off. when I picked them off, what there was.

Q Oh yes, I assume that, That is all.

REDIRECT EXAMINATION by Mr. Thomas.

Q Mr. Olson, what size crop did you have as compared with other years?

A I had nothing, comparatively speaking, I had nothing in 1915 compared with the year before.

Q You say you had several quarts per day and put up a certain number of quarts? A. Yes sir.

Q Could you state in round numbers about what you harvested in quarts last year, two or three hundred quarts?

A Well, during the months we had them at the table there anywhere from ten to twelve quarts a day, and had fifty quarts in the cellar.

Q That would be about four hundred quarts you had raised then on your patch?

A I haven't figured it up.

Q That would be on your estimate, about four hundred quarts; what should you have raised, normal season?

A Year before I sold eighty-two dollars worth in cash out of it, and had hundred quarts in the cellar, and take off what I sold in matching the year before.

Q A hundred quarts in the cellar. A. Yes.

Q Besides eating what you wanted?

A Besides eating what we wanted at the table.

Q How many quarts did you sell for a dollar?

A I sold them seventy-five cents a crate.

Q How many quarts in a crate.

A Now, they are figured, I think it is ten quarts, I am not positive.

CROSS EXAMINATION by Mr. John E. Booth.

Q How was your crop this year?

A I had none at all then.

Q Have you had plenty of water?

A No sir. Oh, I have had this year, but they dried out last fall until they didn't yield, I had maybe ten quarts all told.

CROSS EXAMINATION by Mr. Bagley.

Q Didn't the frost have something to do with your crop this year?

A They may have, I don't know, they took part of it, I think.

Q Don't you think, Mr. Olson, the frost had something to do with the failure of the crop this year?

A I believe it had a little to do with it this year.

Q Think if you had plenty of water this year --

A I would have had a good crop this year, that is my honest opinion.

Q Without regard to the frost? A. Yes sir.

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WILFORD PERRY, 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 Wilford Perry.

Q How do you spell it?

A P-e-r-r-y.

Q Where do you reside?

A 483 North 8th West?

Q In Provo City? A. Yes sir.

Q How long have you resided there?

A Either six or seven years.

Q Have you resided elsewhere in Provo City?

A Yes, at 213 North 7th West.

Q How long have you resided at the last named place?

A I think about twenty years.

Q Are those two places in the same vicinity?

A Pretty well, they are in the west part of town, northwest.

Q From what ditch do you receive your water?

A From a lateral that comes out of the Holdaway ditch.

Q Do both tracts receive water from the same race?

A Yes.

MR. RAY: The Holdaway Race --

MR. THOMAS: Is the present City Race.

Q What did you raise on your first tract, that is the one you last named, one you lived longest?

A We used to have a little more grain there than what we -- we used to have a street and used to raise garden stuff and seeds. Then later we sold the street out to the city.

Q Is that your business raising seeds?

A Yes, that is part of it.

Q What is the other part of it.

A Grocery business.

Q How long have you been in the business of raising seeds.

A Seeds, we have grown them for about between twenty and twenty-five years.

Q In provo City? A. Yes.

Q And you market the seedd.

A Yes.

Q Now, what class of crops have you been raising for the purpose of raising seeds?

A Well, we have raised quite a lot of garden stuff and then on our perenial stuff, stuff we have to set out next year, we would save the true stuff and market the rest, set out the ones that came true to name and raise our seeds from it.

Q Do you have a nursery? A. No.

Q You raise no trees?

A I have a few apple trees.

Q In the orchard?

A Yes, we have close to two acres, I think in fruit trees.

Q Directing your attention to your old residence when did you leave that?

A When I bought this other place, between, I think it is between six and seven years ago.

- Q Have you been cultivating the old residence property since you left it?
- A Well, we have at times. We have rented it quite a little bit, and last year the people rented a little garden there but didn't do anything much with it.
- Q Did you see it?
- A Yes, this year no body attempted to cultivate it at all.
- Q During that time that you were there how did you get along for water during the summer season, low water season?
- MR. JACOB EVANS: Which place are you speaking of?
- MR. THOMAS: The old place, we are talking of.
- MR. JACOB EVANS: I understand he rented that to someone else.
- MR. THOMAS: I understand that is what he testified to.
- THE WITNESS: Rented it since we moved to the other place. Do you mean while we were living there?
- Q Yes.
- A Well, I can't remember when we ever did get enough water in the low water season. Have pretty well for our early crops and then later we couldn't get enough.
- Q Were you ever able to cultivate all your ground during the low water season? A. No.
- Q What portion of your ground were you able to leave uncultivated during the low water season on your own place?
- A I think about two-thirds of it.
- Q That would run about the average from season to season, would it?
- A Just about.
- Q On your present place, how much land have you there?
- A We have eight city lots, three and three-fifths acres.
- Q That is the whole of one block, isn't it?
- A That is the whole of one block.
- Q To what use do you put that?
- A Just the same, garden stuff and have a little fruit over there.

That is where we had put these two acres of orchard, that is not included in the old place.

Q Give again the description of the acreage you had in your old lot?

A I just had a six by twelve there, but we were renting the street on the south, and I rented the lot on the west of me, give it about, I think, about twelve by twenty-four rods to that altogether.

Q Did that include the street.

A Yes.

Q That afterwards was given over to the city?

A Yes.

Q Coming back to this present place where you are living, during the six years that you have been there what has been your experience for water during the high water season?

A Well, we have had plenty of water up until the water began to get short in the low season and then we would have to drop off our land and try to keep the tree rows watered, maybe a raise maybe raise a little on the rows at the side of the trees.

Q You spoke of two acres in trees, do you have any land cultivated in between the trees?

A Yes, cultivated in between, that is in the long part, there is half of the block in to young trees, <sup>and</sup> there is an old orchard on part of the other block.

Q Do you cultivate any of the land in between the trees in the old orchard? A. No.

Q Just the new orchard?

A Just the new orchard.

Q Now, at what time has the high water season usually extended, has it varied in different years?

A I think along until April, latter part of May.

Q Then begins your low water season?

A Then begins the low water season.

Q During your residence on your present -- at your present home,

what has been your experience there with reference to water during the low water season?

A We just have to drop cultivating as fast as the water fails, drop some crops, sometimes a crop wouldn't mature. Raising early garden stuff of course you are suppose to raise four or five crops a year on the same ground, but lots of times it would get short and we couldn't water it all, have to drop some of them.

Q Going over your past six years, what has been your experience with the ~~land~~ amount you would have to drop from cultivation and consequent irrigation.

A What was on it, on an average pretty well two-thirds of it.

MR. THURMAN: Drop that much?

MR. THOMAS: About two-thirds.

THE WITNESS: About two-thirds.

Q Take on an average during the low water season what was your experience during the year 1915, similar to the other preceding years?

A Well, 1915 we couldn't water scarcely anything, hardly keep our trees alive.

Q Owing to the scarcity of water, was it?

A Yes, I would go to the watermaster ask him what was the matter, couldn't get some water, wanted to get my trees watered, and he said "There is no water, you are getting all there is." I went to him several times last year.

Q Now, during the low water season -- let me withdraw that question -- comparing the stream that you have been receiving during the low water season with the stream that you got in the high water season, what proportion do you think one would bear to the other?

A Well, we have enough in the high water, but in the low water looks like you would have to have as much again as what we get or more.

Q Let me understand, you should have as much again or more in the low water season.

A As we do get.

Q As you do get? A. Yes.

Q If you had as much more, that is double the quantity that you have been getting in the low water season, would you then be able to cultivate?

A We would have to have more than as much again as what we are getting.

Q More than as much again? A. Yes.

Q State about how much more?

A I think at least two thirds as much, that is --

Q As much again would be just double the quantity?

A Twice as much.

CROSS EXAMINATION by Mr. Thurman.

Q You say you have been irrigating these lands twenty-five -- twenty or twentyfive years? A. Yes.

Q Is that one piece of land a full block?

A Well, the full block, we have been irrigating I think it is between six and seven years, that is, since we moved onto that. The other piece --

Q Is that an unoccupied block, unoccupied by houses, all devoted to cultivation?

A There is just one house, my one house.

Q Your house? A. Yes.

Q How much do you occupy with your dwelling and outhouses?

A I think about one city lot.

Q You say you never have had enough water to irrigate in low water?

A No, not in the low water season.

Q Did you ever know it to have enough to irrigate in low water?

A I don't know much about it before I bought it.

Q If it never had enough at any time--

A I couldn't say as to that.

Q Then it may be your attempt to irrigate it all is attempting

to do something you have not appropriated water for, if you never did have it?

A We paid for the water for the whole eight lots.

Q You probably did, but you say it never did have enough.

A Not since I had it, no.

Q And don't know it ever had enough at any time?

MR. THOMAS: Witness has already stated he didn't know what it had before then.

MR. A. C. HATCH: What we would like to get at is the quantity appropriated by him and what he is entitled to. He is not entitled certainly to any more than he had.

MR. THOMAS: I will state now we are not claiming Mr. Perry has made an independent appropriation. Neither does the complaint include Mr. Perry as one of its defendants, so on that score it would be precluded, I take it, from alleging what Mr. Perry has or has not appropriated. Mr. Perry is a water user under the city system.

MR. A. L. BOOTH: What you claim is the city was entitled to more for Mr. Perry's ground than had been used?

MR. THOMAS: I am not on the witness stand.

MR. A. C. HATCH: The counsel states he is not a defendant. That is true in one sense, but in another he is. Our contention is neither the parties using the water nor the city is entitled to any more water than they have appropriated and beneficially applied to the land. If the contention apparently assumed by Mr. Thomas is true we can probably just as well lay down now, because there are thousands of acres of land out here under canals that have never used water -- never had enough, so that no water has been applied upon it, and we are contending that they are entitled to only the water they have diverted and beneficially used.

THE COURT: You may read the next objection so that I may know what to pass upon.

(Statements read)

THE COURT: Proceed with the examination.

MR. THOMAS: I object to the question on the ground it is improper cross examination, immaterial.

THE COURT: What question are you objecting to?

MR. THOMAS: As to what water he had appropriated.

MR. A. C. HATCH: The question doesn't go to that, as to what water has been applied on this particular piece of land.

THE COURT: Read the question, I didn't understand he had asked about an appropriation, Mr. Thomas.

(Question read)

THE COURT: Do you object to that question?

MR. THOMAS: No, I won't object to that question.

THE COURT: There is nothing before the court then, proceed with your examination.

Q You may answer that question.

THE COURT: Answer the question if you understand it.

MR. THURMAN: Read it again.

A If it ever did have enough water, is that the question?

Q Yes.

A I couldn't say as to that before I got it.

Q You don't know then but what you are attempting to cultivate more land than you had water for?

A Oh no, I had water. The man I bought it of had water for the whole of it.

Q You said you hadn't had water for all of it?

A We have had the water, that is, we were entitled to it, but couldn't get it.

Q I am not talking about that. That is just what we are trying to find out what that lot is entitled to. Have you ever had it in any season except in the high water?

A We have used it right straight along.

Q Had enough to go over the block?

A No, not in the low water season.

Q That is what I am talking about now, you didn't have enough in

the low water, and never have had enough and you don't know that that block ever did have enough in the low water, ain't that true?

A Well, it was entitled to it, but there was no water.

Q I ask that be stricken out. Do you know if it ever had enough in low water, or has had it?

A No, I couldn't say as to that.

Q Did you put crops all over it?

A Yes.

Q Then you say you have had to drop about two-thirds of your crops at the end of the high water, didn't you?

A We had pretty well all the crop up until the water begin to go down I think the latter part of May, then we had to begin dropping out our crops.

Q That means you stopped irrigating part of them?

A Yes.

Q Entirely? A. Yes.

Q Never harvested that part, did you?

Q So in effect you irrigated only about one third of the block except possibly some early crop on the water, down to the end of the high water?

A That is as near as I understand it, about one-third.

Q What crop did you succeed in maturing, if any, before that drop came?

A Now, we could get off the early crop of radishes.

Q Yes.

A We could mature those, and maybe the next crop wouldn't make, sometimes we could get off a crop of peas, sometimes we couldn't, sometimes they wouldn't mature.

Q Anyway during the low water you only had about sufficient for a third of a crop?

A Just about a third.

Q And that has been the rule in previous years?

A Yes.

Q How much did you have last year?

A Last year just about kept our trees alive, about all we could get. Sometimes be two weeks before we could get any water onto them.

Q Do you know whether your neighbors there got any more than you did?

A No, I don't.

Q Didn't you give any attention to see whether you were getting your share of the water?

A I heard several people complaining.

Q Nevermind what you heard. Did you give any attention to their crops or the streams flowing to them?

A No sir.

Q Gave no attention to that. Did you personally irrigate this land yourself with the water you had?

A Yes sir.

Q You would leave your grocery store long enough to do that?

A Yes.

Q What time did you have, period of time for irrigating this land?

A I think about twelve hours.

Q Twelve hours? That would be an hour and a half to a city lot?

A An hour and a half to the lot.

Q When did your turn commence and when did it end?

A If I remember, six thirty on Monday until six thirty on Tuesday.

Q That would be during the night?

A During the night.

Q Did you stay with it all night, attend to it?

A Practically.

Q How?

A Practically we did.

Q What do you mean by practically?

A Sometimes if there wasn't much water we would go to bed and leave it. If there was plenty of water we would stay until we got through.

Q The land in condition it would water itself pretty well?

A Pretty well, when there wasn't any water.

Q You give it more attention when you had plenty of water than when you had little ?

A Well of course, really didn't give it as much attention, we had to stay with it pretty well when we didn't have any water until we would get it on the trees and then we would let it run on them during the night. Sometimes it wouldn't go half way down all night long.

Q How long did it take you to get through when you had a good stream, would it take the whole twelve hours?

A Well, pretty well all the twelve hours when we had it all cultivated.

Q How near are you to the head of the ditch there?

A We are pretty well to the lower end of it.

Q Pretty well to the lower end?

A Yes.

Q How far are you from the city race, or the Holdaway ditch, as you call it?

A I think about three blocks to where it comes out of the race.

Q Well, do you know how many people take water above you?

A No, really I don't.

Q You don't irrigate this new place you speak of from the Holdaway Race, do you?

A Yes, it is called that, the Holdaway ditch on my time sheet.

Q Isn't it the Tanner Race you get your water from?

A One that comes down by the foundry, I suppose that is the old Tanner -- no, that is not the old Tanner.

Q That is the City Race ?

A That is the City Race.

Q Isn't your new place irrigated from what is called here the Tanner Race?

A Yes, I believe it is.

Q Have you been up --

A Doesn't that part come out of the same race at the head?

Q I don't know.

- A I think it does.
- Q There is here what is called the City Race and the Tanner Race.
- A I think the Tanner Race comes out of the City Race, doesn't it?
- Q I understand not, I don't know, have you ever been up to the head of the Tanner Race?
- A No, I don't believe I have.
- Q Have you been to the head of the lateral that leads to your lot from the Tanner Race?
- A Yes.
- Q You say that is about three blocks?
- A You mean to the old place?
- Q No, I am talking about these eight lots, this block.
- A I think that would be somewhere about three blocks, as near as I can think now.
- Q Did you ever know anybody to take your water above you before it got to you?
- A Oh yes.
- Q That is a common thing, ain't it?
- A Yes, goes right up the ditch, I think the man next to me takes it when I get through.
- Q I don't mean that in that sense, somebody taking water on your turn, did you ever know anything of that kind?
- A Well, I have noticed that too.
- Q Water would break over, get onto your property?
- A No, I don't think anything like that would happen.
- Q They would just take it in self defense?
- A Take it because they wanted a little more water, I guess, over what they were getting.
- Q Does the water go down that stream all the week or just certain days?
- A Certain days.
- Q Certain days? A. Yes.
- Q How many days does it run down there, do you know?

- A Really I haven't noticed, but there isn't many days it comes down.
- Q Does it just water those three blocks you say between you and --
- A Oh no, it waters lots of country in through there.
- Q How many are below you watered by that ditch, do you know?
- A Four or five.
- Q You take all the water of that ditch, or is the ditch divided?
- A Yes, all the water in that ditch.
- Q Do you know what the subsoil is of <sup>your</sup> ground there, what kind of material?
- A Some parts of it is a clay and some part it is a gravel, it is different.
- Q You don't know how much of it is clay?
- A No, I couldn't say, I think about half of it though.
- Q What is the depth of the soil down to the clay?
- A About a foot, little more.
- Q That ought to be quite easy to water, oughtn't it?
- A Ought to be which?
- Q Quite easy to water?
- A Yes, it is quite easy to water.
- Q Doesn't lose as much as it does in the gravel, does it?
- A No.
- Q About how long are your water runs on that block?
- A How long does it run on it?
- Q How long are your water runs, or rows you put the water into, how long does it have to run?
- A The longest rows, I judge would be about -- well, the tree rows would be twenty rods and then we run the water down to about -- oh, some places half way, some places third of the way, and out it over into the next row, run two rows in together.
- Q Twenty rod run is a pretty long run, isn't it?
- A It is all right where you have got a good ditch right down your tree rows it will go down that pretty well.
- Q Does that run over your gravelly land or the clay land?

- A That runs over the clay land. I couldn't get it t t far over the gravelly part.
- Q Goes over the clay pretty well when you have a fair stream?
- A Yes.
- Q Did I understand you to say some of your trees died, all died, or something?
- A Some of the trees died at the lower end, that was on this place.
- Q Was that for the want of water?
- A Yes.
- Q When did they die, last year?
- A No, I think it was about two years, either two or three years ago.
- Q Seems to be, if I understand your testimony, Mr. Perry, it has been the habit and custom in your experience there to lose practically about two thirds of your crop that you put in every year. How was it you keep putting --
- A Two thirds of the later planting, not of the first planting.
- Q Well, do you put in a second crop?
- A Yes.
- Q Every year? A. Yes.
- Q And lose it?
- A No, we lose sometimes a third and fourth crop. That is not particularly lose them but couldn't plant them.
- Q You just take a chance on getting water although your experience has been you don't get it.
- A We plant as much <sup>ground</sup> as we can get water for. After the water begins to fall we quit planting.
- Q How is your experience this year as to the water?
- A Well, this year we have had plenty so far.
- Q It is now nearly the first of July. Have you had more water this year than has been your experience in previous years so far?
- A Yes, I believe we have.
- Q Mr. Perry, haven't you put that failure of the high water a little bit early, if you stop to think a moment, doesn't it last

a little longer than the latter part of May?

- A Well, you see we start planting about the first of April, and it takes about six weeks to mature the first crop. No, I don't think I put it too early.

CROSS EXAMINATION by Mr. Ray.

Q Have you dropped any of your crops this year?

A No, we haven't dropped any yet.

Q Botthe whole eight acres or eight lots under cultivation except your house now?

A Well, there is some parts of it there we haven't got planted. That is not on account of water.

Q I know. How much of it is there that you have not planted this year?

A Probably one quarter.

Q Now. A. Yes.

Q When you have plenty of water? A. Yes.

Q As a matter of fact, the profitable market of the vegetables that you raise is the early market, isn't it?

A Early market.

Q And if you had plenty of water it would not be profitable for you to continue to raise many of these vegetables all summer, would it.

A Later on we could raise our seed crop if we were sure we could get the water.

Q How late?

A All the season.

Q Aren't you raising seed crops this year on that one quarter?

A We didn't raise them last, in order to run them over, carry them over to plant them this year.

Q You could get seed, couldn't you, to plant ?

A How?

Q You could plant it?

A We could plant seeds, yes, but in raising seed crops, lots of it

is perennial stuff, you have to raise it the year before and seed it out again, and we didn't grow it last year enough to set it all out.

Q You know the carrying capacity of your ditch in second feet when it is full ?

A No.

Q Is it about the size stream that runs along the streets here east of the court house lot?

A Oh no, it is larger than that.

Q Larger than that, how much larger?

A Why, I would think two or three times.

Q So that you think you have two or three second feet of water running in your ditch, would you, if this has one second foot?

A I couldn't tell you anything about second feet.

REDIRECT EXAMINATION by Mr. Thomas.

Q Just one question, Mr. Perry, did I understand you aright on your cross examination when you said your buildings occupied about one city lot?

A Just about one out of the eight.

Q So that you are using seven out of the eight for agricultural or garden purposes?

A Yes. Now, we have a lawn that we suppose to flood over with the irrigation water on this other lot, around the house.

Q That is on your old homestead?

A No.

Q On your present place? A. Yes.

Q How have you covered your one lot -- your house is there?

A Yes.

Q Barns?

A Barn in another place.

Q Sheds?

A No, have no sheds, have a poultry house.

Q So that the buildings as you have them arranged occupy about one of the city lots? A. Just about one.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q Mr. Thomas, have you examined the springs at the mouth of the canyon, up in the canyon, known as the Pony Steele Springs, and the Maple Springs and the Heiselt Springs, since you testified yesterday? A. Yes sir.

Q Now, how did you find these springs as to being above or below the Blue Cliff Canal?

A I find their source, the source of all the springs above the canal except possibly the Heislet spring.

Q That is the spring that is carried to the Heiselt place in an iron pipe line? A. Yes sir.

Q All of the springs claimed by the plaintiff you found to be at a source above the Blue Cliff Canal?

A Yes sir.

Q And so that they would flow down and into the Blue Cliff canal?

A Yes sir.

CROSS EXAMINATION by Mr. Bagley.

Q The water from these springs, if it were applied for irrigation on the Steels land or Heiselt land would have to be carried across the Blue Cliff canal then?

A Yes sir, they would go into and through the canal.

Q Before the canal was built the water ran over the section now occupied by the Blue Cliff Canal to the lands they irrigated, if the water was used in irrigation.

MR. JACOB EVANS: Maybe he knows nothing about that at all.

MR. THOMAS: Let's find out what he knows.

A I never knew them before the canal was built, and any remembrance now they have been running into and out of the canal.

Q And into the canal then out again, to irrigate the lands lying below the canal?

A Yes sir.

Q And the drainage from these lands is towards the river?

REDIRECT EXAMINATION by Mr. Thomas.

Q Mr. Thomas, what do you designate as the Maple Spring, so called by the plaintiff?

A It is a small spring located about three hundred yards easterly of Mr. Heiselt's house, coming in -- its source is above the Blue cliff canal, but the waters are visible down near the railroad close to the river. That is where I saw the spring.

Q It is alongside of the railroad track there?

A Yes sir.

Q How far to the north of the railroad track does it seem to have its origin?

A Well, I don't know, I presume likely it would be about three hundred yards above the track.

Q Isn't that the spring that Mr. Heiselt at one time piped down to his place?

A I think not.

Q Isn't that the spring that is near a pipe that is now visible there.

A No sir, I don't think that ever entered into the pipe.

Q Is it above that point?

A Yes sir.

Q And is there any -- is that spring now running directly into the river, this Maple Spring?

A Well, its tendency is toward the river. It is very small at the present time.

Q It gets as far as the railroad track and seeps under there, doesn't it?

A Yes sir.

Q And you can't find any place where it really runs in a direct stream into the river?

A Not at present.

Q Did it ever?

A I think so, yes sir.

- Q Well now, of your knowledge, Mr. Thomas.
- A My recollection is at the time I made the estimate of 1911, that it was crossing through the railroad tracts, through a sort of a flume that runs through the track. There is evidence of it there now, the old flume.
- Q When was your attention first drawn to that spring?
- A Why, I think it was <sup>at</sup> the time I gave this testimony.
- Q You misunderstand me. When was your attention first of all drawn to the spring? When did you first see it?
- A At the time I made that distribution.
- Q About 1911?
- A Yes sir, I think the date was July 31, 1911.
- Q From the topography of the country and position of the spring and position of the river, what is your judgment whether or not that spring was one of the tributaries of the river?
- A It had its origin of course above the canal, but its tendency is toward the river, and it is a very steep country right there.
- Q Would you say that it was one of the tributaries of the stream, Prove River?
- A I would think so.
- Q That is your judgment?
- A Yes sir.
- Q Now, the Heiselt Springs are those only which are rising on the place where Mr. Heiselt now lives, are they not?
- A I believe so, yes sir.
- Q And this Maple Spring rises on Mr. Heiselt's property, doesn't it?
- A I believe that is on his land, yes sir.

CROSS EXAMINATION by Mr. Ray.

- Q What do you mean, Mr. Thomas, when you say the spring has its origin above the Blue Cliff Canal?
- A The source of all these springs is above the Canal except the Heiselt.

- Q What do you mean by the sources?  
A The beginning of it.  
Q Mean that is where they come out of the mountain?  
A Yes sir.

REDIRECT EXAMINATION by Mr. Thomas.

- Q Just one other question. During your term as water commissioner did you ever turn the water from these springs out of the Blue Cliff Canal during the low water season?  
A I don't think I ever made any diversion of those springs below Mr. Heiselt's place at all, I don't remember of it.  
Q Then you have no remembrance now of ever having turned these springs out of the Blue Cliff Canal during the low water season?  
A No sir.  
Q Do you know of anyone having done it?  
A No, I don't.  
Q After the Blue Cliff canal had drawn its water from the Telluride pressure pipes did you make any allowance or any allotment for those springs to the Blue Cliff Canal?  
A Nothing more than as specified by the decree.  
Q That is the Morse decree?  
A Yes sir.  
Q And subsequently the Chidester decree?  
A Yes sir.

THE COURT: Did the Morse decree provide for those springs?

MR. COLEMAN: I don't think so.

MR. RAY: No.

- Q Do you base your opinion that these springs were tributary to the river on any other grounds than that they are situated on higher ground and slope is toward the river?  
A Why, that is the particular reason, yes sir. As I stated before, in 1911 that one spring was running across the track at a point near the river.  
Q Do you know who made the flume across the track?

A No, I don't.

REGROSS EXAMINATION by Mr. Hatch.

Q The one spring you refer to is the Maple Spring?

A Yes sir.

Q It came down into the Blue Cliff Canal, did it not and then flowed along the canal for some distance to where it was diverted under the track to a flume?

A Well, I don't know as to whether it ran into the canal any distance or not, but it would have to run through it before it could get to the railroad.

REDIRECT EXAMINATION by Mr. Thomas.

Q Do you know just when that spring was diverted from the Blue Cliff Canal?           A. No sir.

Q Do you know what season of the year it was diverted?

Q Know what year it was diverted?           A. No sir.

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CHARLES H. TAYLOR, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Your full name?

A Charles H. Taylor.

Q Live in Provo?

A Yes sir, 174 East 3rd South.

Q How long have you lived in Provo?

A Since August '66, that is, I have been out -- I was out--

Q 1866?

A 1866.

Q Did you ever live in Wasatch County?           A. Yes sir.

Q At what place?

A At Wahburg, that is the ranch at the lower end of the valley.

Q What is that valley known?

A Round Valley, usually.

Q How many years did you live there?

A From 1901, I closed out my last interest in 1914.

Q 1901 to '14?

Q 1901 to '14 I was interested.

Q You owned a ranch there? A. Yes sir.

Q Acquainted with the waters that irrigate the lands in Round Valley?

A Pretty well, yes. sir.

Q What water is it that irrigates the land in that valley?

A Well, it is called Round Valley Creek.

Q Where do those waters arise.

A Well, the main canyon comes in from an easterly direction up to the north and east of the Strawberry Peaks. Then there is two forks of what we call Hobble Creek right and left hand forks of the two Hobble Creeks. In the town there is a large spring that is pretty good size spring, but from the town on down there are numerous springs that empty into the creek.

Q Known as Round Valley Creek?

A Known as Round Valley Creek.

Q And what do you say as to where the waters that are not intercepted by Round Valley Creek would flow?

A Into the Provo River, tributary to Provo River.

Q Then Round Valley and Round Valley Creek would be tributary to the Provo River? A. Yes sir.

Q Now, have you observed the use and application of <sup>the</sup> water of Round Valley Creek to the land in that Valley?

A Yes sir.

Q When they are diverted at the head where they are used for irrigation purposes, what becomes of the water that is applied to the land there?

A If you will allow me to explain, the Valley runs in rather a northeasterly and southwesterly direction, is the general course or line of the Valley, and there is a canal or ditch on

both sides, on the north side of the Valley and also on the south side of the Valley. They are taken out of the main canyon on the east side. The west side of the Valley, west and south, use Hobble Creek, what is called the left hand fork, and the right hand fork, they come together near the town of Wallsburg, those two.

Q Is the water applied to the land at that point?

A Yes sir.

Q Before they come together?

A On both sides and in the valley, running right down the main creek to the valley.

Q Now, below Wallsburg, is the water applied directly to the land.

A There is a spring in connection with a part of the water particularly from the main creek after it gets to the town goes on the east or north side of the valley, and one about the same point, taking out immediately up the -- oh, probably few hundred yards below out on the west and south side of the valley.

Q And does the water applied to the land, have you noticed whether it again rises and goes on down toward the Provo River?

A Yes, sir.

Q And as you go down the canyon from Round Valley towards Provo, what do you say as to the water rising on the lands and being used successfully by the land owners?

A Well, they have met with very fair success.

Q Does it raise? A. Yes sir.

Q When it is applied to one piece of land above does it seep through to the lands below?

A Yes sir, we find it back --

MR. A. C. HATCH: If the court please, we object to this testimony as not being material or relevant to any of the issues in this case.

MR. CORFMAN: D'n't you claim all the waters of Round Valley?

MR. A. C. HATCH: We claim certain quantities of the water of Round Valley Creek under the decree, and as to the balance of the waters, they are not in issue in this case.

MR. CORFMAN: Don't you claim the right to take that water and divert it at your diversion canal in Provo Canyon?

MR. A. C. HATCH: Yes, but that hasn't anything to do with the irrigation system in Wallsburg anymore than it would have with the irrigation system down in Salt Lake Valley, so far as I can see.

MR. CORFMAN: If the court please, we are offering this testimony to show when the water is used on lands in Round Valley, and has been used there, that it has been used there, that it would seep and percolate down into the Provo River and be a source of supply of Provo River, and that it has always done that way. Now they, as I understand it, claim the right to take the water --

THE COURT: Take that same water?

MR. CORFMAN: Take that same water at the mouth of the river.

MR. A. C. HATCH: We have a decree providing we are entitled to certain quantity of water from Round Valley Creek, xxxx diverted upon the Wright Ranch which is located right on the bank of the river, Provo River, not in Round Valley at all, and I can't see the relevancy of the testimony as to percolation and seepage up in Round Valley, miles away, to anything connected with this case. Provo City was a party to the decree.

THE COURT: They were a party to that suit ?

MR. A. L. BOOTH: Yes, Chidester decree.

MR. A. C. HATCH: Chidester decree awarded to the Wright estate certain water rights. We are claiming now a right to carry that water instead of using it on the Wright land to carry it down to our present gate and divert it and use it elsewhere, but with that, I don't understand percolation up in Wallsburg has any relevancy whatever to the case.

MR. CORFMAN: We will get down to the Wright ranch if you will let us keep coming down the canyon, and show that is one of the sources of the Wright ranch.

MR. A. G. HATCH: I will say I waited a long time thinking there would be some relevancy. Why not get to the Wright ranch at once?

MR. CORFMAN: And further, your honor, we don't waive the right to show in this case the source of supply of Provo River, method in which the water is used on land by water users that are on the same water shed, that the court may be enabled to fix the use of the water to those places, being used there and through seepage and percolation afterwards becoming the a source of the Provo River and source of our supply. If the right was fixed to the use of the water independent of the rights of Provo and the water users here at the mouth of the canyon we could be deprived of that seepage water. It is the same condition existing there practically as in Wasatch county, where the water is used upon the lands and we are entirely dependent upon it for seepage and percolation in the latter months of the season, and if those rights, relative rights of Provo City in the use of the water there in connection with the use made by the owners in that valley is not fixed and determined, we might be deprived of the right to take the seepage --

THE COURT: Is there any controversy between Provo City and users of water in this Round Valley?

MR. CORFMAN: I don't know but the rights will be adjudicated and determined ultimately in this decree.

MR. JACOB EVANS: They are not parties to this action at all.

THE COURT: If they are not parties to the action the court cannot --

MR. CORFMAN: I supposed they were parties to the action.

MR. A. L. BOOTH: The Round Valley people, no, none of them.

THE COURT: I will suggest, Mr. Corfman, you might direct your evidence to some evidence that will indicate that the water that is claimed by the plaintiff and has been shown they have succeeded under the Wright estate, that that water at some time or in some way you are entitled to have the benefit of seepage from. Any evidence that would tend to show that I am inclined to think would be material in the case, but evidence that you are introducing now, so far as the court understands, has no relevancy to any issue in the case.

MR. CORFMAN: We take the view this Wright water is the same water.

THE COURT: You may proceed to the Wright water and determine that. I think you should show that first before you take the time of the court. I don't know how far it is away, that this irrigation you are having with the witness testify in relation to is from the Wright land, or in what way it affects it. You might show the connection between the Wright claim and this before you introduce it.

MR. HATCH: Of course, we don't want to object to anything that is properly connected with the issues in the case. There is a large valley up there, numerous farms and several hundred users of water. The water, except in the flood season, is all, or practically all diverted. If there is an excess of water at the Wright Ditch over and above the quantity decreed -- the decree now in evidence provides that the plaintiff's predecessors should have all of the waters of Round Valley Creek not exceeding a certain quantity, I think it is.

THE COURT: If I understand the position of the plaintiff and Mr. Corfman, the plaintiff claims to have succeeded to the right of the Wright Ditch, and claims now the right to change the place of use, that is, claims the right to put that in the river and take it out in their system below here. That is as I understand it.

MR. A. C. HATCH: Yes.

THE COURT: Your contention I infer from what you have

said here that the change of place of use cannot be accomplished without injury to you, is that the idea?

MR. CORFMAN: That is very true of the Wright Ranch water, but I understood the plaintiff in this action claimed the waters of Round Valley Creek.

THE COURT: I<sup>n</sup> addition to the Wright.

MR. CORFMAN: I<sup>n</sup> addition to the Wright.

MR. A. L. BOOTH: That is part of the water.

MR. A. C. HATCH: The Round Valley water we claim is by virtue of succeeding to the Wright estate and that only; and the excess of water, if there be any over and above that decreed to the Wright estate flows into the Provo River continuously.

MR. CORFMAN: D<sup>o</sup>n't you claim it?

MR. A. C. HATCH: No, we only claim the amount of water from Round Valley Creek that is decreed to us.

MR. RAY: N<sup>o</sup>w, if your honor please --

MR. A. C. HATCH: That is it shall not exceed a certain amount.

THE COURT: It seems to me there is no difficulty about this at all. It seems a very plain issue and you may introduce evidence on the subject. I understand your contention is that a change of the place of use would injure you?

MR. THOMAS: yes sir.

THE COURT: Would interfere with your right. You may introduce evidence tending to show that I take it, because that is a plain issue.

MR. RAY: I was going to call your honor's attention in view of Judge Hatch's statement what the decree provides. Section 5. "Joseph R. Murdock administrator as aforesaid and for the uses and purposes aforesaid is the owner and entitled to the use of all the waters of Round Valley Creek during low water season," and then limits the amount of it and mentions several springs.

THE COURT: I take it that is at some point.

MR. RAY: Yes.

THE COURT: The objection is sustained as to this use above.

Q Mr. Taylor, are you acquainted with what is known as the -- mentioned as the Wright estate in wasatch county?

A Yes sir, I have known of the Wright estate good many years.

Q Do you know of the irrigation of those lands from Round Valley Creek?

A Not particularly, I know it has been irrigated, that they raise crops there every year, have for many years.

Q Do you know whether those lands are on the water shed of Provo River?

A Yes sir, those lands are on the water shed of provo River?

Q And they have been irrigated in times past?

A Yes sir, I have always seen crops grow there for many years.

Q And this waste water percolation and seepage from those lands, where would that go?

A Well, from the Wright Ranch -- the Provo River runs through the Wright Ranch, so does the Round Valley creek. There is part of the Waters from the Round Valley Creek that get back into the Round Valley Creek after being taken out. Part of the waters get back into the river.

Q And those waters that would be applied to the Wright estate or the Wright ranch, where would the percolation, seepage and waste water shed into?

A Into the Provo River, as I have stated and into the creek before it enters into the river in many instances. The mouth of the round Valley creek is on the Wright Ranch.

Q That is true of the water that would be applied to that land from Round Valley Creek, it would also get into Provo River?

A Yes sir, I believe it would get in.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q You say the waters, all the seepage waters from the Wright land

would find their way into Round Valley Creek?

A Yes sir, in some instances the land, if it is watered above, runs back into the creek.

Q That is on the Wright Land.

A Yes sir, on the Wright land.

Q If there was any waste or overflow it would find its way into the Round Valley Creek and into Provo River?

A The waters that are applied at the upper end of the Wright ranch running up the Round Valley Creek gets back into the Round Valley Creek before the Round Valley Creek empties into the river. Part of it crosses the road and gets into the river, the <sup>waste</sup> water, or the water off of the land, and the same is true on the west side. All the waters appropriated from the Round Valley Creek on the west side of the Round Valley Creek, part of those waters go back into the Round Valley Creek and part of them into the Provo River, the waste water, draining or overflowing over the land. There isn't a great deal of the lands of the Wright place there that is-- well, there is more really on the west side than there is, I would judge on the north and east.

Q The creek runs almost due east and west at that point?

A Yes sir, pretty nearly.

Q When you speak of ~~that~~ west side you mean the north?

A Well, north and east and west and south.

Q Is there any of the lands at all of the Wright ranch to the south under cultivation, to the south or east of Round Valley Creek where it goes through the Wright ranch?

A South and --

Q South or east, cultivated lands on the Wright ranch either south or east of the Round Valley Creek?

A Where do you locate the buildings, Judge?

Q They are north, I will put them north of Round Valley creek about a quarter of a mile?

A Well, we will call it north there then. The lands there, I

would say there was about the same amount then on the south side?

Q On the other side of the creek?

A Yes sir, from my observation going over the lands, I have been to them.

Q D<sup>o</sup> you know whether those lands are irrigated from the waters of Round Valley creek or from the waters of the Provo River that is, taken from the creek or taken from the river?

A I would say they were watered from the Round Valley creek on both sides. It would be impossible --

Q That is all.

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THOMAS J. FARRER recalled

DIRECT EXAMINATION by Mr. Thomas.

Q My notes show I didn't ask the question relative to your distribution of water under the Morse decree, my impression is I didn't ask that. Mr. Farrer, you were commissioner of the river under the Morse decree, were you not?

A Yes sir, and Chidester decree.

Q Let me ask you if you made a distribution to Provo City during your term as commissioner under those decrees?

A Yes sir.

Q When were you acting as commissioner?

A 1912 and part of 1913.

Q Whom did you succeed?

A H. F. Thomas, Hyrum F. Thomas.

Q Who succeeded you, if you know?

A Mr. Wentz, I believe.

CROSS EXAMINATION by Mr. Bagley.

Q Mr. Farrer, in your distribution of the water under these decrees, did you take into consideration the number of acres

- that was irrigated under each canal? A. No sir.
- Q Or the amount of water that was needed to irrigate the acreage under each canal?
- A No sir.
- Q Or any of the needs of any of the owners of land under these canals? A. No sir.
- Q Did you take into consideration any of the water that was wasted by any of the parties? A. No sir.
- Q Or any seepage water that came into any of the canals below the point where you measured?
- A No sir.
- Q Your distribution consisted entirely of trying to divide the water in controversy with the percentage of the river division contained in the first three or four paragraphs of the decree?
- A Yes sir.
- Q And you paid no attention whatever to that part of the decree, particularly the Morse decree which said that the waters awarded under that decree should be economically used and applied to beneficial purposes?
- A Yes sir, that was the understanding of the decree. I measured it in the various flumes or measuring devices there was.
- Q You don't understand the question, you paid no attention to that clause in the decree which said that the water should be applied economically and without waste, and to beneficial purposes?
- A I didn't go over the land to see whether it was or not.
- Q You didn't make any distribution with that clause of the decree in mind, did you?
- A No sir.
- Q You never went over the land to see how the water was applied?
- A No sir.
- Q Or where? A. No sir.
- Q Had you read the decree in its entirety?
- A Yes sir, I have read it over, but I haven't seen it for several

years, I could not call to mind.

Q But you were controlled entirely by the provisions in the second, third and fourth paragraphs of the decree, which sets forth the percentages? A. Yes sir.

Q That each party to the decree should receive from the flow of the river?

A If I remember right, I don't remember just what the decree says now, I haven't see the decree.

Q I am not asking you what it said, but you followed --

A To my knowledge, yes.

Q The schedules as set forth in that decree?

A The amounts, yes.

Q And went no farther than that?

A No sir.

REDIRECT EXAMINATION by Mr. Thomas.

Q Do you know, Mr. Farrer, whether the water was put to baneficial use or not, through the system?

A No.

MR. A. C. HATCH: If the court please, he has just stated that he never went over the land.

THE COURT: Do you object to it?

MR. A. C. HATCH: Yes.

THE COURT: Objection is sustained.

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A. L. BOOTH, called by the defendant, Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Thomas.

Q Your name is A. L. Booth?

A Yes sir, Mr. A. L. Booth. I would like the same statement made that I am called by the defendants and not by the plaintiff, being one of the attorneys for the plaintiff.

THE COURT: Don't need any statement, the record shows who called you, Mr. Booth.

Q Mr. Booth, were you ever commissioner for the distribution of water under the Provo River system at any time?

A Yes sir.

Q When?

A 1897 and 1898.

Q Let me ask by whom were you appointed?

A There was a meeting of the City Council, irrigation committee, with the representatives of the various canals taking water from Provo River, and they voted they would have me for commissioner for those two years, that is each year separately.

Q Can you state now who did, what companies were present that is, what companies were represented rather?

MR. RAY: I would like to ask just a question. Were you at these meetings, Mr. Booth?

A No, I wasn't at the meeting where the appointment was made, but I was furnished with a copy of the minutes, or with the original minutes, rather.

Q Have you the original minutes?

A No, I haven't the original, I made a copy of them and the original got misplaced. It was on a loose sheet of paper and I copied it into a book that I used for my report.

Q Have you that copy? A. Yes sir.

Q Have you made search to ascertain where the original is if it be in existence?

A Yes, I have looked for it.

Q Can you find it? A. No.

Q Do you believe it to be lost? A. Yes.

Q And is this copy which you have a true and correct copy of that said original? A. Yes.

Q Now, will you state then from your record and information you have received as you have stated it, what companies were present at the meeting whereby you were appointed commissioner?

MR. RAY: Object to it as incompetent, calling for hearsay.

THE COURT: Objection sustained.

Q When did you receive your appointment as commissioner?

A On July 1, 1897.

Q For whom did you make the distribution of water?

A For Provo City, Provo Bench Canal & Irrigation Company, Timpanogas Canal Company, Upper East Union Canal Company and Faucett Field, River Bottom, The West Union Canal Company, Lake Bottom Canal Company, Little Dry Creek, Fort Field, Mr. Park and Mr. Roberts, as I remember.

Q How did you make that distribution with reference to the proportion of the river that you allotted to each?

A As nearly as practicable we gave on a basis of 10000 minute feet Provo City,  $4300/10000$ , Provo Bench Canal -- I can give it better in minute feet -- out of ten thousand minute feet forty-three hundred minute feet. Provo Bench Canal & Irrigation Company  $1/8$  or 1250 minute feet; West Union Canal Company  $2/15$  or  $1333 \frac{1}{3}$  minute feet;

Q Let me ask before you go further, in minute feet what did you give Provo City proportion?

A 4300 minute feet.

MR. THURMAN: In decimals what did you give Provo bench?

A One-eighth.

MR. A. C HATCH: West Union, what did you give that?

A West Union  $2/15$  of the river or  $1333 \frac{1}{3}$  minute feet.

Q Let me go back there, Mr. Booth, you gave the ratio and also the minute feet.

THE COURT: Ratio and minute feet are the same always, of course.

THE WITNESS: It is on the basis of ten thousand.

THE COURT: 4300 minute feet would be  $4300/10000$ , would make the decimal and amount just the same.

Q After the West Union?

A Lake Bottom Canal company  $1/15$  or  $666 \frac{2}{3}$  minute feet; Timpanogog Canal company  $1/50$  or 200 minute feet; the Upper East Union  $1/12$  or  $833 \frac{1}{3}$  minute feet; Little Dry Creek  $1/20$  or 500 minute feet; the River Bottom and the Faucett Field and Park & Roberts Ditch --

MR. A. C. HATCH: Were they combined?

A They made up ~~about~~ the balance, but I never could get any agreement as to who should furnish the Faucett Field water. That is, out of which fraction it should come, whether it should be included in the Upper East Union or in the River Bottoms, and it was the same way with the Carter & Park Ditch. I will state, however, in low water season that the Lake Bottom Canal was furnished exclusively from spring waters and we also divided the water among the other canals up at the mouth of the canyon as though the Lake Bottom Canal were not included, because all the water going into that canal below where we diverted it into these other canals and in that way we were able to furnish some of these disputed amounts without taking from the streams that I have given.

MR. RAY: What was the fraction which you gave to the last number.

A I didn't give it, it is enough to make ten thousand, however. It is 998 or something of that kind, I haven't got the figure down here now, but I recollect that.

Q Then you charged the seepage in the lower canal which you have just mentioned as though the water had been taken originally from the river?

A We furnished the Lake Bottom and Fort Field, I think, mostly, and also Little Dry Creek, great deal of it in low water season was furnished from seepage. Part of the time, however, we turned to Little Dry Creek, but as I remember it, Little Dry Creek usually had a dry dam or tight dam and then the seepage in the river below that furnished the Fort Field, so that we

we didn't reckon the Fort field in our distribution.

Q Did you follow that distribution through the second year of your administration?

A As nearly as practical, yes.

Q Were there any substitution changes in the distribution?

A No.

Q What did you do in dividing the waters of the river when the river fell below the ten thousand feet?

A We took the same proportions, amounts, and gave to the various companies, as nearly as we could.

Q Was the water in the when the river was running above ten thousand and minute feet divided upon that basis?

A Yes, there was no change at any time from those fractional amounts while I had the commissionership.

Q Mr. Booth, you were not present, were you, at the first meeting of the board of directors and members of the City Council held in '84 to determine the basis of distribution of water of the river?

A. NO sir.

CROSS EXAMINATION by Mr. Jacob Evans.

Q Was there any distribution when the water was above the ten thousand?

A. Oh yes.

Q Up to what point did you distribute it under that basis?

A The first measurement I made in 1897 was on the 2nd of July, and showed that the river had running then just below the mouth of the canyon -- no, that includes Lake Bottom, including the Lake Bottom, the spring water 15,568 minute feet. Now, in 1898, on the 15th of June, there seemed to be in the river 18,071.4 minute feet.

MR. RAY: Were those your first measurements in each year, Mr. Booth?

A Yes sir.

Q Why did you make the measurements at these two dates in '97 and '98?

A In '97 the city was reported short of water and it was at the instigation of the city this meeting was called, and I was requested to go immediately and make a measurement so as to make the distribution. In 1898 they wanted me to measure when the canals were full and I did so as soon as I was requested and my notes here show that some of the canals were not full at that time.

Q And some water was running on down the river?

A No, I think not, I think that the river was dried off at the West Union dam when I made both of those measurements.

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12:00 Noon, Recess to 2:00 P.M.  
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A. L. BOOTH - - - - -

RECROSS EXAMINATION by Mr. Jacob Evans.

Q Mr. Booth, you said you made a measurement of the water in 1898 on the 15th of June, I think it was, in which the river showed a volume of 18000 minute feet?

A Yes sir.

Q Was that measurement made because of any division being called for by the parties?

A No sir.

Q What was the purpose of that measurement?

A That was to find out the purpose, the capacity of the canals that were taking water from the river.

Q How long was it after that before a division of the water was called for among the parties?

A Two weeks.

Q And what was the stage of the river at that time?

A I find here on June 30th that a measurement showed 14,952.78

minute feet.

Q Now, from then on was the river divided in the proportion that you have heretofore stated?

A Well, we attempted to divide it in those proportions, we did not always succeed.

Q Now, did you in your distribution make any division among the canals of Provo City, for instance, the East Union, the Mill Race, the Tanner Race, the City Race?

A Yes.

Q What were the divisions that were given to those canals?

A You mean the fractional part of the river?

Q Yes.

A The East Union --

MR. RAY: What year?

A This was both years, whenever we divided the water after coming into the city. The East Union  $1/10$  of 1000 minute feet on a basis of 10,000. City Race  $2/25$  or 800 minute feet on a basis of 10,000. The Factory Race  $3/20$  or 1500 minute feet on the basis of 10,000 in the river. The Tanner Race  $1/10$  or 1000 minute feet on the basis of 10,000 minute feet in the river. I might say, however, that there was times when the water got scarce that the Factory Race was diminished from the  $3/20$ .

Q What was done with the water when you diminished the water in the Factory Race?

A Now, I wasn't the watermaster, but it was turned into either the Tanner Race or the City Race or the East Union, I don't know what proportions.

Q Now, in arriving at the measurement of Provo River, when you first commenced, what method was used in determining the quantity of water flowing in the river?

A At that time there was a government measuring station just above the mouth of the canyon, and we went to that first so as to make a sort of an estimate. I found out, however, that we always showed more than we could find when we measured each

canal. Then after going to that station we would go down to the weirs of the different canals and take the measurements over those weirs.

Q Did you have good, standard weirs installed so that you could determine accurately the quantity of water flowing in the various canals?

A Well, they were moderately good, except, I think, Tanner's Race didn't have one and Little Dry Creek didn't have one. The River Bottoms people had none in their little ditches and Mr. Park and Mr. Roberts, I think, didn't have weirs.

Q Then what method did you use in measuring the water in these canals which had no weirs installed?

A We would take a measurement of the depth of the stream at a distance of about a foot apart across the stream and then would also take floats and calculate how far they would go in a given time, and put those similar distances across the stream and by putting the two calculations together the average depth and the average flow, then taking 80 per cent of that so as to allow for friction, we arrived in that way at the flow in these streams that didn't have weirs.

Q You say the Tanner Race had no weir?

A Now, I am not certain about that, I think it did not have the first year, they may have one the second year. It is a little indistinct in my recollection now about the Tanner Race.

Q Did the East Union have a weir?

A Yes.

Q And the City Race? A. Yes.

Q And the Factory Race? A. Yes.

Q And you are not sure about the Tanner Race as to the first year?

A I am not right certain about that now.

Q Do you know, or can you give any reason why you would get more water at the government measuring station than you would get at the different weirs?

A Well, I was not familiar with the government measuring station.

It had a weir stretched across the river, I think it was intended one should take the measurement in the sameway we have been taking the float measurement down below, but we were not equipped with proper apparatus to do that, and on the side of the river there was a board that had figures giving showing the depth of the water. Then we would try to get the measurement of the entire stream. Then I don't recall now -- It was just an estimate that we made, we didn't depend on it at all with the information that I had, but it was approximate, and yet always above what we actually found down below.

Q When you say the water was above at the government station, that was based upon the measurements and calculations that you made and not based upon the government measurements?

A No, it was just on our estimate from the slight information I had regarding the --

Q And you don't --

A Installation of that measuring device.

Q You don't mean to say that you were equipped so that you could accurately measure the water at the government station?

A Oh no.

CROSS EXAMINATION by Mr. Ray.

Q Or any place else, there was no place else that you could accurately measure the flow of the river, was there?

A You mean any one stream?

Q Any one stream? A. No.

Q When you found the river two have on June 15th, 1898, 18,071.4 minute feet of water, the canals were not full, were they?

A No.

CROSS EXAMINATION by Mr. Bagley.

Q You said there was always some controversy on the stream about who should supply the Faucett Field with water and also that the Lake bottom Canal water was supplied from springs,

and was disregarded in your measurement. If that was disregarded, the Lake Bottom water, who got that in the distribution, or was it parceled out pro rata among the other canals?

A I didn't intend to say it was disregarded, I said it was not calculated in the distribution at the mouth of the canyon, but we did take measurements of it all the time. Now, at the measurement or at the distribution we would always give the other canal companies this proportion of the water at the mouth of the canyon that otherwise would have been measured to the Lake Bottom, if it had not been supplied with spring water. In other words, we measured or distributed all of the river to these canals above the Lake Bottom Canal, and then the Lake Bottom took from seepage whatever amount there was. There was one time, however, when the representatives of the Lake Bottom Canal came up and went to the river and got some extra water. I think that was in 1898 when the water became extremely low, and Mr. Scott and Mr. Taylor and one other man whose name I forget now, came and complained of the small amount of water in the Lake Bottom Canal, and they went up to the head of the canal and took some from the river, but I think that lasted only for a short time until the seepage began filling up the Lake Bottom Canal, and there was no more trouble after that for the Lake Bottom people.

RECROSS EXAMINATION by MR. Jacob Evans.

Q You say the canals were not all full, do you know what particular canals were not full and what particular canals were full?

A I think not any of them were full to their full carrying capacity. It was designed that it should be a high water measurement but they did not call for me to go quite early enough and there could have been some more turned into all of them, every canal, but I don't know how much.

Q How low was the lowest the water got at the time that you made a measurement during the low water year?

A Of '98?

Q Yes.

A It seems on August 8, 1898, the total amount flowing down in all these ditches was 7709.47 minute feet.

DIRECT EXAMINATION by Mr. Coleman.

Q Mr. Booth, you said on June 30, 1898 there was call for a division of the water, did you not?

A I believe so.

Q And that there was approximately 15,000 minute feet at that time, or accurately, 14,952.78 minute feet?

A Yes sir.

Q Now, there was a necessity then for a division at that point, was there?

A Yes.

Q And you divided the waters in the proportions that you have stated, that is the East Union or the Provo City would get forty-three hundredths of that 15,000 minute feet?

A Yes.

Q And the others according to the fractional part that you have given here?

A. Yes sir.

RECROSS EXAMINATION by Mr. Evans.

Q You say there was a necessity for a division; you may state whether or not there was a necessity or whether the people called for a division because it was believed there was a necessity?

A Well, I think that it doesn't come to my knowledge of there being a necessity. I might say I think almost without exception it was the city who called for a division, and almost without exception it was found that the city had less than its proportion when we took the measurements.

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ALBERT M. CARTER, CALLED BY THE defendant Provo City,  
being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Give your full name?

A Albert M. Carter.

Q You have been connected with Provo City in any official  
capacity?

A Member of the City Council.

Q What years?

A From 1900 to 1903.

Q 1901, '02 and '03?

A 1901, '02 and '03, yes, and 1907 and 1909.

Q How?

A 1907, '08 and '09.

Q Now, when you were councilman in 1900, '01, '02 and '03, were  
you committeeman at that time?

A Yes sir.

Q And of what committee?

A Irrigation.

Q Chairman of the committee? A. Yes sir.

Q As such did you have anything to do with certain springs in  
Provo Canyon near what is known as the Heiselt Ranch, at  
the mouth of the canyon. A. Yes sir.

Q Were you acquainted with what is known as the Blue Cliff Ditch?

A Yes sir.

Q And do you know what was commonly known as the Pony Steele  
Springs?

A Well, yes sir, I have been there probably once or twice.

Q And the Heiselt Spring? A. Yes.

Q And some springs further up the canyon?

A Not very well acquainted with them, I have been there and been  
on the ground.

Q Now, during those years that you were chairman of the committee

on irrigation, did you have anything to do with those springs arising there in the canyon above the Blue Cliff Canal?

A Yes sir, we had something to do with it.

Q At what point?

A Right across the river from the Spring Dell bridge, north there.

Q And were those springs above the canal?

A Yes sir.

Q And had they been flowing into the canal?

A Yes sir.

Q What did you do?

A We turned them out.

MR. A. C. HATCH: Just a moment, I think there is no contention about the springs up as far as Spring Dell, the springs we are claiming are way below that.

MR. COREMAN: Perhaps that is getting a little too far up the canyon.

Q There are some springs coming in below Spring Dell there, do you remember those springs?

A Yes sir,, I have been to them.

Q At what point now have you the springs in mind?

A I have been to those of Pony Steele's and those that was known as Carter, what is called Heiselt's and some above Heiselt's there, they call them Oak springs, but they were not named then.

Q Called the Oak Springs?

A They call them that now, but wasn't named then.

Q Did those springs come out above the Blue Cliff Canal?

A Part of them, some of them.

Q Did you have anything to do with the turning of those springs in?

A Why, yes sir.

Q What did you do?

A Turned it out.

Q Did you turn it out -- out of what?

A Out of the canal through Pony Steele's into the river.

Q What time of the year?

A In July.

Q What year?

A In 1901 or '02, I won't be sure which year.

Q When you say you turned them out, where did you turn them?

A Turned them down through Steele's into the river again.

Q Did you turn them out after that?

A No, only that once. I believe that was in '02. I won't be sure whether it was '01 or '02.

Q And that was after the high water season?

A Yes sir, somewhere along in July.

Q Why did you turn them out.

A Because the water was low and the city and canal companies claimed the water at 18000 feet. When it got below that, why we turned them out.

CROSS EXAMINATION BY Mr. A. C. Hatch.

Q There was a commissioner at that time, was there not?

A Sir?

Q A court commissioner at that time, was there not?

A A commissioner?

Q Yes, a court commissioner, a commissioner appointed by the court to distribute the water?

A I don't know, I don't believe there was at that time.

Q Was that before the Morse decree was entered?

A Yes, 1901 when the Morse decree-- 1903, wasn't it?

Q 1902 I understood you turned the water out?

A Yes, I think it was 1902, I won't be sure.

Q Prior to or after the entry of the decree?

A I could not tell you just exactly, but it was about that time.

Q At that time the city claimed everything in the river up to 18000 feet?

A Yes sir, the city and canal companies jointly.

Q What canal companies?

A The Fort Field Irrigation Company, Little Dry Creek Irrigation

Company, Lake Bottom Irrigation Company, West Union Canal Company, Big Bench Canal Company, Upper East Union Company and Timpanogos Canal Company.

Q Did the Blue Cliff Canal Company claim some of the water of the river too at the same time?

A They claimed something but we didn't recognize their claim at that time.

Q When did you first commence to recognize the claim of the Timpanogos, that is, prior to or after 1902?

A I think it was prior. We had a commission appointed, organized from all of these companies to look after it in 1903, up until in '02. It was when we had this trouble with the Blue Cliff.

Q Was Pony Steele residing up there at the time you turned the water? A. Yes sir.

Q Do you know how long it remained running in <sup>to</sup> the river after you had turned it down? A. No sir.

Q Don't know whether Steele immediately turned it back?

A No sir.

Q Or whether the Blue Cliff Canal company turned it back into the canal? A. NO sir.

Q Were you there again during that year?

A I believe I was once.

Q Where did you find the water?

A There was no water in the canal then, running in it.

Q Where was the Pony Steele springs being used?

A Pony Steele was watering in there below the canal in his orchard.

Q With those springs?

A Yes sir, with some of them.

Q Now, you say you only remember the spring just opposite the Spring Dell bridge, above Heiselt's?

A That was way up to the Spring Dell bridge where we turned it out.

Q Is that the spring you call the Oak spring?

A No sir.

Q Where is the Oak spring?

A The Oak spring is right there by that mud slide above Heiselt's.

Q Above or below the mud slide ?

A I believe it is right below, there is a seepage there, you can hardly see the water. It come down off the hill there, it seeps in there by the railroad track, you could see it.

Q It is quite a bushy timbered little canyon running up there, isn't there? A. Yes.

Q It is the first spring above Heiselt's place?

A I believe it is.

Q The spring -- do you know where the Heiselt spring is, the one that is now run in the iron pipe down to Heiselt's home?

A On the point of that hill, yes sir.

Q Sir?

A Yes, sir, on the point of that hill, I have been there.

Q And the spring you call the Oak Spring, was the first one above that? A. Yes sir.

Q IN the canyon. Do you know of any other spring between that and the spring you speak of as the one opposite the Spring Dell bridge?

A The Spring Dell bridge along there, there is a good many all along there for some feet.

Q You have no particular recollection of any others except that one just north of the bridge, have you?

A Well yes, I have been along there to them all.

Q I didn't hear.

A There were several springs all along there from Spring Dell, all along that hill.

Q Above spring Dell?

A Some above and some a little below.

Q There are springs all along up and down the canyon?

A Yes sir.

Q Clear up to the Wright place? A. Yes sir.

Q On both sides of the canyon? A. Yes sir.

CROSS EXAMINATION by Mr. Evans.

Q During the time that you were watermaster --

A Watermaster, I never was watermaster.

Q I understood you to say you were watermaster in 1900, 1901, '02 and '03 -- oh, member of the City Council, you were never watermaster?

A I was chairman of the committee on irrigation.

Q No question then.

MR. THOMAS: We wish now to offer in evidence Exhibit No. 69.

MR. THURMAN: We object to it as incompetent and immaterial.

MR. THOMAS: It is a restraining order issued at the commencement of the suit which afterwards resulted in what is known as the Chidester decree.

THE COURT: What do you claim for it, what materiality or competency?

MR. THOMAS: A restraint upon the claim of the Blue Cliff Canal Company and other defendants against the rights of the plaintiff in that case, and the prevention of any exercise of any alleged rights until the rendition of the Chidester decree.

THE COURT: Yes in glancing over that I saw what it was. I was merely asking you what you claimed for it, merely a restraining order, temporary in its nature for the purpose of preserving the then status until the case could be heard and matter determined. The determination of the controversy is contained in the decree I take it. I see no materiality in it at all unless you can indicate what effect you think it would have.

MR. THOMAS: I cannot indicate anything further, your honor, simply our viewpoint it is a link in the chain of constant use and ownership, claim of ownership in the waters. It is true that the decree over-shadows it and embraces all we subsequently sought to do.

THE COURT: You wouldn't claim that the time during which you had water under an injunction or restraining order would be part of the time of adverse use, would you?

MR. THOMAS: No, I wouldn't do that.

THE COURT: So I can see no object in it. The objection is sustained, I see no materiality to it at all.

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HENRY J. W. GODDARD RECALLED.

DIRECT EXAMINATION by Mr. Thomas.

- Q Mr. Goddard, you took some soil samples under the provo System, did you not?           A. Yes sir.
- Q Who was with you at the time those samples were taken?
- A The first samples was George Swan and Thomas E. Thompson and myself.
- Q Those samples are the ones that were testified to and described by Mr. Swan himself, were they not?
- A Yes sir, part of them.
- Q The second samples were taken by whom?
- A By myself and Mr. Thomas E. Thompson.
- Q Mr. Thompson described the method of your taking those samples. That you made notes while he called the classifications of soil?
- A Yes sir.
- Q That is true, is it?           A. Yes sir.
- Q Were you present at the time?
- A I was.
- Q State if you saw the soil as it was described by Mr. Thompson?
- A I did.
- Q Were the classifications as he announced them?
- A Yes sir, as near as I could tell.
- Q Did you make notes of them at that time?           A. Yes.
- Q And were those notes afterwards compiled and copied?
- A Yes.

- Q I will hand you herewith a list and ask you if this a true compilation of the notes which you then made?
- A Yes sir, I believe they are.
- Q Do you know they are?
- A They are.
- Q Have you compared that sheet with your notes, and with Mr. Thompson's statements?
- A I did at the time we compiled them and got this out.
- Q Now, I will direct your attention to the --, beginning with what is marked here as nO. 5, the sample taken from Taylor & Roberts land, did you take a sample from that? A. Yes sir.
- Q From that land? A. Yes sir.
- Q What was the character of soil?
- A It was a gravelly loam, top soil about ten inches deep, and rocky subsoil below.
- Q Speak a little louder?
- A Rocky subsoil below.
- Q Now, direct your attention to the sixth item from the Arthur Durant land, describe the soil you there found?
- A Soil was a sandy loam about fifteen inches deep, subsoil coarse and gravelly.
- Q The next item, number seven, John Sampson land?
- A That was similar to the Durant land.
- Q Where was that located, the Sampson land?
- A It was located west of the Scott lane.
- Q That is at the point where you took the sample?
- A Yes sir.
- Q What part of the city is that?
- A Southwest part of the city.
- Q Number eight, W. C. Peay's land, what was the character of the soil there?
- A That was kind of a sandy loam, about two and a half feet deep where that sample was taken.
- Q What was the character of the subsoil?

A Gravelly subsoil.

Q Number nine, W. B. Peay's land?

A That was another sample on the same land in a different place, towards the north end of his farm, southwest part of the city.

Q Have you described all you have to say in relation to his land?

A This other sample was a coarse gravelly soil right from the surface down.

Q That was the second sample on Mr. Peay's land? A. Yes.

Q Sample Number 10, F. B. Merriweather, where is his land located?

A On the south side of Center Street, west of the city.

Q Western part of the city, or west of the city?

A Western part of the city.

Q What is the character of that soil?

A It was gravelly soil, top soil about fifteen inches deep, subsoil open and gravelly.

Q The eleventh sample, Mr. Pierpont's land?

A That was west of Merriweather's land on west Center street, that was similar to Mr. Merriweather's land, about fifteen inches top soil gravelly, and subsoil open and gravelly.

Q What do you mean by open and gravelly?

A No sandy soil to fill the voids.

Q What is sometimes called porous soil?

A Porous soil.

Q Number 12, Niels Rasmussen's land?

A That is situated on Ninth West street, between Second and Third North Street, that was about eight inches of coarse, sandy top soil and open gravelly subsoil.

Q The thirteenth sample, Mr. Wood's garden?

A That was on 5th North street, west of the Tanner Race, eleven inches of coarse sandy soil, one foot of sandy gravelly soil, and from there down open rocky soil or open rock gravel twenty-three inches deep. That is as deep as we went with that excavation.

Q The fourteenth sample?

A Fourteenth is Abraham Smith's land, west of 5th West street, northwest part of the city, about eight inches of coarse gravelly

top soil, open rock and gravel sub soil.

Q Fifteenth?

A Fifteenth was D. O. H. Bean's land, north of the ice plant road. Eight inches of gravelly top soil and open rock subsoil.

Q The sixteenth sample?

A Sixteenth was Amassa Penroid's land, six rods west of the canyon road. That is a clay loam topsoil about one foot deep, and sandy clay subsoil.

Q Seventeenth sample?

A Seventeen was on R. T. Thomas's land, about ten rods north of 3rd South street, near the East Union Canal, top soil was gravelly, about twelve inches deep, and open gravelly subsoil.

Q And eighteenth sample?

A State Mental Hospital lands, similar to R. T. Thomas.

Q Number nineteen?

A Number nineteen was from E. D. Sutton, south of the county infirmary. That was similar to the State Mental and Thomas lands.

Q The next?

A Twenty was James Gray's, east of the county road about thirty rods. Two feet of coarse gravelly top soil and open rocky subsoil.

Q Twenty-first sample?

A Twenty-one, was William Nuttall, about the same as the Gray land.

MR. A. C. HATCH: What is that?

A The Gray land.

MR. A. C. HATCH: The Nuttall land.

A Southwest part of the city, right under the Union ditch.

MR. A. C. HATCH: I mean the kind of soil you found there?

A It was gravelly soil, and subsoil was coarse, gravelly.

MR. A. C. HATCH: May I ask if that is the man who testified here yesterday of day before with reference to his land?

Q Was he the gentleman who testified yesterday?

A Yes sir.

Q Were these samples, Mr. Goddard, in your judgment fairly representative of the localities from which you took them?

A Yes sir.

Jacob  
CROSS EXAMINATION by Mr. Evans.

Q You took one sample from Abram Smith's land?

A Yes sir.

Q Which you said was about eight inches of coarse gravel gravel and balance was coarser gravel?

A yes sir.

Q Was this taken off of the tract of land where the experiments were made by Mr. Swan as to the duty of water?

A yes sir.

Q And it was taken off that particular acre that Mr. Smith himself testified required, <sup>about</sup> as much water as the balance of his nine acres, was it ?

A I don't know as to that.

Q You remember Mr. Smith's testimony, don't you?

A This was taken off, I think the strawberry patch. There was a strawberry patch there.

Q This same Smith, Abram Smith, that you took this sample, that you took the sample from, his land, testified here the other day?      A. Yes sir.

Q And you heard his testify that it took about as much water for that one acre as it did for the ~~ixk~~ balance of his nine acres, didn't you.

A I heard him testify it took a lot fr that one acre, but whether this is the same acre --

Q Didn't you take this sample off that particular acre?

A I couldn't say.

Q But you could say you took it off the acre the experiment was made on.

A That the strawberries was raised on. I didn't see them measure the water at all or make the experiment with water.

THOMAS J. FARRER recalled.

CROSS EXAMINATION by Mr. Jacob Evans.

Q Mr. Farrer, during the time that you were watermaster for prove City, did you keep any records of the quantity of water that you turned in the East Union Mill race, the City race and Tanner's race?

A Yes sir.

Q Where are those records?

A I couldn't say now, I have been looking them up. I left them all here with the city.

Q I believe I asked you before to produce them?

A Yes sir, I have not been able to find them.

Q You have been unable to find them?

A Yes sir.

MR. THOMAS: If you ask Mr. Wentz I think you will find them.

A No, I have asked Mr. Wentz, he didn't get them -- he got the measurements but not that.

Q Did you attempt, while you were city watermaster, to keep the division of the water in those different canals in proportion to the amount of land irrigated under each of the canals?

A Yes sir, as near as I could.

Q Didn't you sometimes take water out of one and add it to the other?

A Yes sir, according to the needs of the locality.

Q Now, were you governed more by reason of what you regarded as the needs of the people than you were the quantity of land irrigated under the different canals?

A In some sections, yes, that is, according to the land.

Q You didn't attempt then at the beginning of the season to give each canal its proportion of the water? and carry it through the entire season, depending upon the acreage irrigated under each of those canals, did you?

A Well, practically took the acreage, number of acres, and dis-

tributed that water out where we could time that water.

Q But you changed the water first from one canal to another, did you not, as necessities of the people required it?

A Yes sir.

Q So that you didn't attempt to make a division of the water in proportion to the land irrigated, did you?

A No sir, not where it was required the most. In case of one canal getting watered up and the other side was needing more in proportion, why --

Q And in the distribution of the water, was you governed by the city ordinance which provided that each acre of land should have it two hours to the acre and each city lot an hour and a half, city ordinance provided that?

A We were governed by that.

Q Did you distribute it as you thought best for the farms?

A I distributed it for the best use of the farms.

Q And disregarded the city ordinance entirely, didn't you.

A To some extent, yes.

Q Wherever you thought it required ignoring, that is the ordinances, why you ignored them? and distributed it as you thought best?

A The city ordinance required an hour to each acre and in some localities here it would require more.

Q The city ordinance provided for a distribution of two hours to an acre?

A Every two weeks.

Q Two hours to an acre every two weeks?

A Yes sir.

Q Now, in distributing your water you varied that and frequently distributed it one hour to the acre every week, didn't you?

A Yes sir.

Q And in some instances you give them less than one hour to the acre each week, and in some instances more, didn't you?

A Well, I don't know I give them less, but give them more.

Q In some instances you would give one person twice the size stream

you would give another person for the same time and same acreage, wouldn't you?

A ~~Just~~ Yes sir, Just depend on the locality and quality of the ground.

Q You say you did that? A. Yes sir.

Q So that under that system some people would get double the water that others would get for the same length of time and for the same number of acres?

A Well, by doing that there was some land, by doubling the stream that you could accomplish more getting it over the surface where it was a gravelly subsoil by putting the two streams together you could put that water over to the best advantage.

Q Whenever you found those conditions, you disregarded the city ordinances entirely

A We had to in order to accomplish the needs of the city.

Q That is what I am trying to get at; in other words, instead of following the ordinances, you followed your judgment as water-master according to what you thought the necessities of the people were in the different localities?

A yes sir.

CROSS EXAMINATION by Mr. Ray.

Q While you were court commissioner, Mr. Farrer, when you measuring the river, did you measure the water rising in Spring Creek and flowing down to the point of juncture of Spring Creek and the Lake Bottom canal?

A I measured the Lake Bottom Canal and Spring Creek is above there, I never did measure that.

Q Spring Creek takes out of the river up at the John --

A Forsyth, I believe.

Q Rises up at the John Carter place, doesn't it?

A Those springs along up in there, yes sir.

Q Do you know about how much water flows in Spring Creek?

A No, sir, I have never measured it.

Q About 15 second feet, isn't it, this season of the year.

- A I couldn't say.
- Q And between the point up at Carter's where Spring Creek rises and at the point of measurement at the Clyde farm, there are several hundred acres of land in there, are there not, on the west of the river?
- A There is quite a lot of farm land in there, I don't know just what there is.
- Q That farm land is all watered from the Spring Creek water?
- A Practically, yes, I believe it is.
- Q And disregarding those springs and not measuring them, you still distributed under the decree, did you not for the residence of the River Bottoms, jointly and individually, 875/10,000 of the river?
- A I never did measure that so that must have been in that distribution.
- Q That is the way you did it?
- A Yes sir.
- Q Did you distribute all of that 875/10,000 to the people on the east side of the river? A. No sir.
- Q Who did you distribute it to.
- A There was part of that taken out on the Park & Nuttall, but there was never no distribution made of that, they could not decide on what amount each one claimed on that and so much measured to each one of those, the Park & Nuttall ditch and one ditch above there.
- Q Barton & Young.
- A Barton and Young.
- Q So because of that difficulty you gave them all the water flowing in Spring Creek and the 875/10,000 besides?
- A Well, if Spring Creek was included, I didn't understand it that way. If Spring Creek was included as part of the river it would be divided that way.

REDIRECT EXAMINATION by Mr. Thomas.

- Q Mr. Farrer, under whose authority were you acting when you acted

as water master in the city, who was your immediate supervisor?

A Why, there was different heads of irrigation, I believe Mr. Ray was the first.

Q Was it the committee on irrigation of the City Council?

A Yes sir, committee on irrigation had charge of the irrigation district.

Q Did you ever make any change in the water regulation except by their direction?

MR. A. C. HATCH: Just a moment, we object to that as being wholly immaterial and irrelevant for any purpose. The city had no more right to violate the city ordinances than he had, and it would be no excuse, in my view.

THE COURT: I don't hardly see what you claim for, what is the object of it?

MR. THOMAS: I won't guess it, the other side seem to lay such great stress on it.

THE COURT: It is not always the best to cross examine on matters just because they lay stress on it, because great stress is laid upon matters that are absolutely immaterial.

MR. JACOB EVANS: I desire to say I didn't ask any questions along that line at all for the purpose of reflecting upon the character of the witness. It was merely to show the system that was being used, that was all.

Q You may state if in your distribution of water in the system, you distributed it to its greatest beneficial use?

A Yes sir.

#### CROSS EXAMINATION by Mr. Bagley.

Q All this water which in the Morse decree is awarded to the residents of the river bottoms jointly and undivided, 875/10,000 of the river, you distributed only to the Martin Ditch and the Park & Nuttall ditch on the west side of the river?

A Yes.

Q And all the rest of that share went on the east side?

Between the east and west, that is where it was divided while I

was commissioner.

Q What I want to find out, how much of this proportion went on the west side of the river, was there any <sup>other</sup> ditches on the west side of the river than the Barton and Young ditch and Park and Nuttall ditch? A. No sir.

Q Just those two?

A Just those two.

Q What didn't go in those two ditches went on the east side of the river? A. Yes sir.

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JOHN E. BOOTH, recalled by the defendant Provo City.

DIRECT EXAMINATION by Mr. Thomas.

Q Were you present at a meeting held July 1, 1897 in Provo City, where the representatives of the various canal companies were present?

A I remember a meeting, I should say that was the date, I wouldn't be sure without looking, that is my recollection of it.

Q Were you secretary of that meeting?

A I was.

Q Did you keep a minute of the proceedings of that meeting?

A I did.

Q Have you that minute, or those minutes?

A The original?

Q The original?

A I have not.

Q Do you know where they are?

A Well, after the meeting, my best recollection is after the meeting, A. L. Booth was appointed commissioner, I handed the minutes to him to copy in his book and then they were -- the minutes were taken on slips of paper, sheets of paper and after that I didn't pay any more attention to them. I regarded that as a permanent record.

Q You have seen those minutes that were copied by A. L. Booth.

A Yes sir, I have seen them.

Q These are the minutes as they were copied?

A Yes sir, I read them over a little while ago.

Q Have you compared them at any time with those slips?

A As I recall it I compared them at the time, not since, because I don't think I have ever seen the ~~xx~~ slips since.

Q You have read those minutes as they have been copied by Mr.

A. L. Booth? A. Yes sir.

Q Do they in anywise refresh your memory as to the facts as they occurred at that time?

A They do.

Q I will ask you if those minutes are a true and correct copy of the account of the proceedings of that meeting?

A This is copy of what I took down, and I meant to take it as it occurred, and I think I did. Yes, that is my best recollection. Of course, I didn't take down all that was said at the meeting, I think I took down the result of what was done.

MR. THOMAS: I now offer in evidence those minutes.

MR. RAY: Judge Booth, may I ask a question as foundation for an objection. Do you know whether those minutes as originally taken were ever submitted to the Provo Bench Canal Company as to their correctness or approved?

A No, I don't think they were after the meeting was over. They were there at the time.

MR. RAY: I mean the minutes that you --

A No.

MR. RAY: Object to them as incompetent, irrelevant and immaterial.

THE COURT: Objection is overruled.

MR. BAGLEY: Object to it as not ~~as~~ the best evidence of what occurred at the ~~met~~ meeting if there is a present a living witness who heard it.

THE COURT: Objection is overruled.

MR. RAY: Take an exception.

MR. THOMAS: I will read them into the record.

Minutes of a meeting of representatives of the parties interested in the waters of Provo River, held July 1, 1897 at Provo City, Utah. At a call of Thomas Beesley, chairman of the committee on irrigation of Provo City Council, asking the representatives of the several irrigation companies and persons owning water interests in Provo River to meet. The following named parties were present in the following capacity: Thomas Beesley, Myron Tanner and Myron C. Newall, Committee on Irrigation, and William J. Taylor, City Watermaster of Provo City. James A. Lovelace, president of Provo Bench Canal Company. John G. Jones president Upper East Union. J. E. Booth, president West Union Canal Company. J. H. Klingern vice-president Lake Bottom Canal Company. Fred Ferguson from Provo River Bottom. Meeting was called to order by Thomas Beesley, Myron Tanner was elected chairman and J. E. Booth secretary. On account of several parties and interests not being represented, the meeting took a recess until eleven A. M.

Eleven A. M. Meeting resumed. A. P. Walker and P. N. Wentz of Provo Bench came in. J. A. Lovelace placed in nomination for commissioner to measure and distribute the waters of Provo River Earnest D. Partridge. Myron C. Newall placed in nomination A. L. Booth for the same position. A. L. Booth received a majority of the votes, and on motion of J. A. Lovelace, A. L. Booth was elected unanimously. On motion of Thomas Beesley the commissioner was instructed to measure and distribute the waters of Provo River in accordance with the facts and figures as agreed upon as shown by the city records of Provo City, January 14, 1884. The vote was unanimous in favor except that the Provo Bench Canal company votes No. On motion of J. A. Lovelace, the chairman of the committee on irrigation was instructed to notify the commissioner that he should prepare and submit to an adjourned meeting to be called by said chairman the report of his work for the year.

Carried. On motion of N. C. Newall, the expenses of said commissioner be paid by the parties in interest in proportion to the waters claimed and distributed under said agreement of January, 1884. The commissioner was instructed to meet with the several superintendents for distribution of water on Friday, July 2nd, 1897, at 11 A. M. at the mouth of the canyon. The meeting adjourned until Saturday, July 3rd, at 1:00 P.M. J. E. Booth. Copied by A. L. Booth from the original minutes.

MR. THURMAN: I would like to ask for information, if the court please, as to the purpose of this document. I appreciate<sup>I</sup> am a little late, but I have been unable to see what it is for. Does counsel claim a right here now based on that old settlement, or do they admit, as good lawyers ought to, that was merged in a decree later.

MR. THOMAS: Now, that is part of our contention, but we didn't understand that was your contention. We were putting in this evidence sometime ago when counsel for the other side objected to it on the ground of its immateriality, and this is part of the testimony that was being presented, and then the counsel, after their conference withdrew the objection, and then we proceeded with this chain of use and this division prior to the entering of the Morse decree. This shows a division of water that was recognized and established and acquiesced in by practically all and at least all of the waters of the river were distributed under this until the time of the Morse decree. It is part of the res gesta, it is part of the history. It is part of the transaction, and since you people are saying at one time you are not bound by the decree, we can only rely then upon the history of the case to bring in such matters as may bind you.

MR. THURMAN: D<sup>o</sup> you think that binds us any more than the decree does. We were not parties to it.

MR. THOMAS: I don't say it does, but it is part of my case.

MR THURMAN: My serious objection is this, unnecessarily encumbering the record and taking up the time of the court.

THE COURT: Well, it is in the record now, and any objection except as to its competency -- did you make a further objection?

MR. THURMAN: No, I didn't, I wanted to stop this kind of work, that is the main thing.

MR. THOMAS: I will give you another chance to stop something then. I now offer to present the report of the city council of January 1, 1884 as was presented the other day. I was about to present it when objection was made. These minutes and this agreement or this meeting, rather, refers directly to the proceedings as recorded by the committee of irrigation January 1, 1884.

MR. A. L. BOOTH: January 14th.

MR. THOMAS January 14th.

MR. RAY: Object to that, your honor please, if it is now offered.

MR. THOMAS: We now offer it.

MR. RAY: Object to it as incompetent, immaterial, hearsay and not the best evidence.

MR THURMAN: We join in that.

THE COURT: Objection is sustained, report of the committee to the council.

MR. THOMAS: yes, your honor, my reason for that is set out here, that the basis of the agreement here in this meeting of July 1, 1897 was based upon the facts and figures as agreed upon and shown by the city records of Provo City, January 14, 1884.

THE COURT: Objection is sustained.

MR. THOMAS: Note our exception. This is the report as referred to in the offer just read.

THE COURT: If it refers to the report of the com-

mittee it does not make the report of the committee material or competent. I supposed it referred to the action of the city council when you read it, it seems to.

MR. THOMAS: May I beg pardon, just a moment. On motion of Thomas peesley the commissioner was instructed to measure and distribute the waters of Provo River in accordance with the facts and figures as agreed upon as shown by the city records of Provo City January 14, 1884. Surely we would have the right to show now what those records were, make it part --

THE COURT: You may offer the records if there is any objection to them I will pass on them. This objection to the report of the committee is sustained.

MR. THOMAS: To the report which I have just offered?

THE COURT: Yes, it has nothing to do with this, so far doesn't appear to have.

MR. JOHN E. BOOTH: May I be allowed to make a slight correction in my testimony of yesterday since thinking it over?

THE COURT: Yes.

MR. JOHN E. BOOTH: I believe I stated yesterday, that I divided the water during the two years I was commissioner according to that agreement that I referred to. I want to make a correction --

MR. THOMAS May I ask if the agreement you refer to was this agreement of January 14, 1884?

MR. JOHN E. BOOTH: Yes sir, I desire to make this correction, that during those two years the Lake Bottom Canal Company was supplied from springs and seepage, and they did not participate in the division at the mouth of the canyon, and the part, the 1/15 that was awarded to them under that agreement was divided pro rata among all the others except the Lake Bottom. It was taken there as if the Lake Bottom Canal Company was not a party to it at all.

MR. THOMAS: I now offer in evidence the report by the committee on irrigation to the city council of Provo City under date of January 14, 1864, or dated January 14, 1864.

MR. THURMAN: We object to it as incompetent, and immaterial.

THE COURT: Objection is sustained.

MR. THOMAS Take our exception, and may I for the purpose of record now make tender of the -- or make offer of introduction thereport of the committee, by the committee on irrigation of the Provo City Council under date of January 14, 1864, which defendant Provo City claims to be the report referred to in the minutes of the meeting held by the water users July 1, 1897.

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THOMAS E. THURMAN recalled .

DIRECT EXAMINATION by MR. Thomas.

Q In your testimony the other day you stated there was an agreement between the water users in the various canals in the Provo River system whereby they determined their proportion of the river that each was to have, you made such a statement, didn't you, in substance.

A If I did I didn't intend to.

Q Now, when you referred to the agreement what did you mean ?

A I meant when I was appointed commissioner in 1890 it was done by the water users of Provo River below the mouth of the canyon, at a meeting held in the fire hall, and was instructed by them to distribute the water in accordance with the agreement that was required of 1864.

Q 1864?

A I mean 1864.

Q Now, what agreement or record did you refer to or did you have

in mind when you spoke?

A I meant the record that we have been talking of here agreed to by the water interests in 1884 that is report of the committee.

Q Did you have refereme to the minutes or areport of the committee on irrigation to prove City Council January 14, 1884?

A Yes sir, that is what I had reference to.

Q And did you understand that any agreement had been written out and signed by every individual water company?

A No sir.

Q If you said that do you want to correct that statement now?

A Yes sir, I do.

Q How do you want it understaad?

A I want it understood that I was to distribute the water according to that arresement or to that report of the committee of January 14, 1884.

Q Then if you said that there was an agreement in writing that had been signed by the various water companies were you in error?           A. Yes sir.

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GEORGE W. GEE recalled.

DIRECT EXAMINATION by MR. Thomas.

Q You have already been sworn, Mr. Gee?

A Yes sir.

Q You testified the other day about this meeting which was held in Provo January, 1884, at which the water users under the Provo System were in attendance?

A Yes sir.

Q Did you attend that meeting?

A Yes sir, that is my recollection of it now.

Q Can you state whether the various water users under the Provo River system were present at that meeting?

A Yes sir.

Q They were? A. Yes sir.

Q Can you state whether those water users representing the various canal companies under the Provo system agreed to a distribution of water at that time?

A Yes sir, they did.

Q Was that distribution made of record afterwards by a committee representing the city council of Provo City present at that meeting?

A That is my recollection of it.

Q And have you seen or read that report of the committee?

A Yes sir.

Q January 14, 1884? A. Yes sir.

Q And does that report of the city council, that report to the city council --

MR. THURMAN: If the court please, I am going to ask a question for information. What is the purpose of encumbering the record with this evidence.

THE COURT: I don't know.

MR. THURMAN: We let Judge Booth state substantially what that agreement was when he was on the stand the other day. Don't seem to be any great question.

MR. THOMAS: I don't regard this as an encumbrance of the record.

THE COURT: What do you claim for it.

MR. THOMAS: We claim it establishes an ancient use and constant use on the part of Provo City to the waters and distribution of the waters of Provo River under an agreement to which these water users were parties. It certainly is vital to the interests of the defendants in this case.

THE COURT: I don't think so, Mr. Thomas, I take this view. The court has permitted it and permitted, I think, an abundance of evidence to show why and upon what theory and how it came to be divided as it was, and for that purpose it was admitted. You don't contend this is such a contract as is

binding on the parties now.

MR. THOMAS: Oh no, not now.

THE COURT: I didn't suppose you would contend that at all. That being the case, the only purpose for which it can be competent or material merely to show why Mr. Booth, when he divided the water, why he divided it as he did, and why Mr. A. L. Booth divided as he did from time to time leading up to this decree; and having shown that, I think you have gone as far as there is any necessity for going. You are now introducing evidence as though you were attempting to show a valid, binding contract, and going into the details of it.

MR. THOMAS: No, your honor, that is not the purpose of it.

THE COURT: I understand it is not the purpose.

MR. THOMAS: But I do think it ought to be permitted as against the plaintiff in this action. Their theory, upon which they have been proceeding is there has been no appropriation of certain waters of Provo River antedating their claim. This evidence is introduced for the purpose of showing that very appropriation.

THE COURT: If that is the object of it, objection is sustained. It doesn't tend to show that at all. This is merely showing the court the transaction between the several users of water down here who assume to have appropriated all the river.

MR. THOMAS: And who did.

THE COURT: Yes.

MR. THOMAS: They did appropriate all the river.

THE COURT: This doesn't show any appropriation.

MR. THOMAS: You cannot show the whole thing by one witness I understand, we may be able to show by a number of witness the various acts which in themselves compete a chain of circumstances.

THE COURT: Certainly, no question about that, the

objection is sustained in the interest of time.

MR. THOMAS: Note our exception.

THE COURT: The court has permitted you to go into it rather further than I should.

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FRANK W. DEMING called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by MR. Thomas.

Q State your full name?

A Frank W. Deming.

Q Where do you reside?

A Provo.

Q How long have you resided here?

A Nine years.

Q What is your business?

A Civil engineer.

Q Where were you educated?

A University of Utah.

Q What degree did you receive, if any?

A I did not receive a degree.

Q What course of training did you have at the University of Utah?

A I was in the University of Utah five years altogether, two years in the preparatory department and three years in the engineering department, commonly called the State School of Mines. I studied along the lines of civil engineering.

Q Since you left your school, what has been your business?

A I have been during the first five years following 1907, I was employed by the late W. B. Searles, who formerly practiced engineering in Provo. Since that time I have been practicing myself along general engineering lines, irrigation and mining, some mining work. I hold a commission as a deputy United States

mineral surveyor.

Q Mr. Deming, you were at one time water commissioner, appointed by this court, were you not ?

A Yes sir.

Q On this very suit? A. Yes sir.

Q What year?

A During the irrigation season of 1914.

Q You may state if you have -- if you have made any examination of the irrigation system of Provo City?

A I have?

Q Have you made any examination of the ditches and laterals of the city ?

A I have,

Q Have you made any examination of the ditches and laterals of the Provo water system to determine losses in transmission?

A I have.

Q When did you make those examinations?

A During May and part of June of this year, part of May and part of June.

Q Did you make any data report of your proceedings?

A I did.

Q Will you please state how you made your investigations and where you made them and what the results were of your investigations?

A My first determination of conveyance losses in the Provo system was in the street laterals, small laterals serving the lots within the platted portion of the city. The measurements of discharge in these determinations were made with two trapezoidal weirs known as the Cypolletti weir. They were made of sheet metal approximately an eighth of an inch in thickness with the bottom and sides of the crest filed to a knife edge. The length of the crest was twelve inches and the slope of the sides of the crest was one horizontal to four vertical. These weirs were set in the natural channel of the ditches to be measured and the leakage around and under was stopped with sod

and earth placed with the hands. The head was measured on a small angle iron rivited to the up stream face of the weir level with the crest and about four or five inches from the corner of the notch. In setting these weirs to make the measurements the weir was first placed in the channel and by slowly stopping the leakage and under the sheet of metal the water was made to rise slowly above the face of the weir until it almost reached the crest, and from this level surface of the water the crest of the weir was set level and then the rest of the leakage stopped by placing material with the hands and making sure there was no water running under or around the weirs. These weirs were identical in construction. One of them was placed at the upper end of the section upon which the loss was to be determined and the other one at the lower end of the section. All out-go from the section was stopped and the readings of head on the two weirs was taken every five minutes from thirty minutes to an hour and some cases an hour and forty or fifty minutes. The object of this series of measurement was to determine a period of steady flow in the canal. In some cases this would be obtained in a short time, other cases it would be necessary to be take readings for an hour or hour and forty or fifty minutes. Then after this condition of steady flow was obtained at the upper end of the section and the corresponding steady flow at the lower end of the section, the flow during that steady period was taken as the flow or discharge of the ditch at the upper end and at the lower end of the section, and the difference taken as the loss. In some cases there was inflow from flowing wells into these laterals. Where it was possible this inflow was measured with a vessel and deducted from the -- Or added to the flow at the upper end of the section, or that water was treated as though it flowed in and flowed out. It was not considered in making the calculation of loss. The losses shown in those cases are seepage and evaporation losses. In other cases there

was inflow from flowing wells which it was impossible to measure. In some cases the pipes were broken, the water arose around the outside of the pipe and flowed out into the ditch in very flat channel making it impossible to measure it either with a weir or with a vessel. In those cases the loss shown is less than the seepage and evaporation loss by the amount that was running in, which was impossible of determination.

Q Before you leave that phase of it, Mr. Deming, what did you do to determine the velocity of the stream?

A For the purpose of correcting any errors in the measurements due to velocity of approach above the weir in each setting of the weir the surface velocity for a distance of ten feet above the weir was taken by means of a float. The float was placed in the stream and timed with a stop watch to determine what the surface -- usually the maximum surface velocity was; and eight-tenths of this velocity in seep per second was taken as the average velocity of approach in the channel above the weir and in every case the difference between the velocity of approach at the upper weir and the velocity of approach at the lower weir was so very small that it was negligible, so that the discharge as indicated by the weirs was not corrected for velocity of approach. In this way a total of 12.6 miles of small street laterals were measured and the loss determined.

Q Will you state before you leave the measurement, Mr. Deming-- I don't think you stated how frequently you took these measurements?

A At five minute intervals.

Q Now, you may proceed.

A The first lateral which is located on the west side of Academy Avenue was discharging at the upper end .843 cubic feet per second.

Q Just state that again?

A 0.843 cubic feet per second.

THE COURT: What lateral do you say?

A Lateral No. 1, which is on the west side of Academy Avenue.

MR. A. L. BOOTH: What cross street was it you measured at, first North?

A The upper weir was located near what I call the Canyon Road. I don't know what it is. It is about 12th or 13th North. I will give you the length of the section a little later, if that is what you want. The discharge at the lower end of the section was .725 second feet, making a loss of .117 second feet.

MR. A. C. HATCH: Just a moment, you said 12th or 13th North?

A I don't know what it is called. It is the street running east from the state road bridge in the northwest part of town. It is outside of the platted portion of the city.

MR. A. L. BOOTH: Used to call that 20th North, but I think it is not as far north as would make that.

A It is, as I remember it, twenty-six hundred and some odd feet north of 8th North. This weir was located approximately fifty feet south of the south side of that street.

MR. THURMAN: What did you say the loss was?

A 0.117 second feet.

MR. A. L. BOOTH: You didn't give the length of that section.

A I will give it in just a moment. The length in miles was 1.379, making a loss in second feet per mile of .085 second feet.

Lateral No. 2, which is located on the west side of 1st East Street--

MR. A. C. HATCH: Where was the lower point of measurement?

A .725.

MR. A. L. BOOTH: No, where was it, the lower weir?

A I don't remember, it was somewhere near 3rd or 4th South, just north of 3rd South, I think.

MR. THOMAS: The distance is given.

A The distance between the two points is given. Lateral No. 2 on the west side of 1st East Street, the discharge at the upper

end of the section was 1.190 second feet. At the lower end of the section .820 second feet, making a loss of .370 second feet. The length in miles 1.088. The loss in second feet per mile .340.

MR. JACOB EVANS: May we inquire, Mr. Deming, is there could be some copies of this paper made so as to save us all taking these records, if you could do that.

A I think they could be made.

MR. RAY: We will make them if we can get the original to make them from.

THE WITNESS: There are four copies somewhere.

MR. A. C. HATCH: Mr. Deming, you will give us in your statement the places where you made these observations?

A I can give it to you, I have it.

MR. A. C. HATCH: Localities within the city, I mean, where the weirs were set.

A I have that information in my field book, can give it to you each time, if you desire.

MR. A. C. HATCH: We would like to have that.

Q What was the last loss per mile?

A .340.

MR. A. C. HATCH: If he will add the locality to each one.

MR. THOMAS: I think Mr. Deming can do that.

A I gave you the approximate location of the upper weir on Academy Avenue. The lower now was located about half way between 2nd and 3rd South.

MR. A. L. BOOTH: When you make out these new copies couldn't you add those localities where you made the measurements to that.

A They may be added.

Q Now, Mr. Deming, if you will kindly proceed with the reading of your report there?

A Lateral No. 3 located on the east side of 1st East Street, the discharge at the upper end of the section .915 cubic feet per

second] at the lower end of the section .640 cubic feet, making a loss of .275 second feet. The length in miles is 1.062 miles, the loss in second feet per mile is .259.

Q Will you be kind enough to give the percent as you have estimated it there?

A I can give those, but they don't tell very much. That is the reason I left them out. I have computed the percentages into feet, per cent of loss per mile, but it doesn't show anything. I don't regard it as very useful quantity.

MR. A. L. BOOTH: wouldn't that be useful, <sup>if taken</sup> in connection with the height of the ditch, Mr. Deming?

A No, the loss depends upon the area of ditch exposed to the water or the wet area in contact with the water, and if you regard it in the light of a loss in per cent per mile, theoretically if you had a loss of ten per cent per mile in ten miles you wouldn't have any water as shown by your estimate of ten per cent per mile, but actually you would because this ten per cent of the discharge at the upper end of the section would have to be considered in an infinite number of places. In this case it would be a mile and wouldn't give you the true value in making an estimate. I can give it if you desire it.

Q I only suggested it inasmuch as you had it already computed, but if you don't regard it as of any value I don't.

A I don't see any reason for reading it into the record.

Q The fourth now?

A The west side of 2nd East Street, the discharge at the upper end of the section was .835 second feet, at the lower end of the section .652 second feet, making a loss of .183 second feet. The length in miles .882 miles, the loss in second feet per mile is .208 second feet.

No. 5, the east side of 3rd East street, discharge at the upper end of the section .976 second feet, at the lower end of the section .885 second feet, making a loss of .091 second feet, the length in miles .930 miles, the loss in second feet per mile is .098. In this case there was some inflow that

was not measured, the inflow from a flowing well. I may state that I assumed that it was flowing. Later I found this same well flowing into this ditch and made another determination of the loss, measuring the inflow and deducting it. The other determination of the same section of canal, the discharge at the upper end was .884 second feet.

MR. THURMAN: What lateral is this?

A No. 5, the same section of canal. Discharge at the lower end .760 second feet, the loss .124 second feet.

MR. JACOB EVANS: You didn't give us the points where you made the measurements above and below.

A You asked me to put that in my report. I can give them to you as I go along, if you desire it.

C You had better do that. Number 6.

A I haven't given number 5 yet. The length in miles was .930 and loss in second feet per mile .133. In this case the inflow was .017 second feet.

Number 6, which is the east side of 4th East Street, the discharge at the upper end .915, at the lower end .640, loss in second feet .275, the length in miles .900. Loss in second feet per mile .305;

Number 7 is a canal which diverts water from the City race at the intersection of 5th North and 5th West street and flows a distance of 1948 feet, where it divides into two streams, one flowing south on ~~the~~ 6th West and one south on 7th West street. In this case the discharge at the head of the canal was measured with a current meter and a small Cypolletti weir placed in the small branches below the point where the canal divided into two streams. The discharge at the upper end was 2.258 second feet, at the lower end 1.925 second feet. This 1.925 is the sum of the discharges of the two laterals. The loss is .655 second feet. The length in miles which is the total length of the two small branches and the other main ditch is .740 miles, the loss in second feet per mile .885 second feet.

Ditch Number 8 located on the east side of 9th West street, the discharge at the upper end .472 second feet, at the lower end .446 second feet, the loss .026 second feet, the length in miles .154, the loss in second feet per mile .170 second feet.

Number 9, the west side of 4th West Street, discharge at the upper end .459 second feet, which includes an inflow of .027 second feet, the discharge at the lower end .580 second feet. That last quantity is wrong. The discharge at the lower end is .347 second feet, making a loss of .112 second feet. The length in miles .952, the loss in second feet per mile, .114 second feet.

MR. A. C. HATCH: Just a moment, Mr. Deming, this was the loss per second foot or the actual loss from the quantity of water then found to be flowing in the canal?

A I don't see what you mean, this loss given is the difference between the discharge at the upper end of the section plus the inflow, if it was measured, and the discharge at the lower end of the section divided by the length of the section in miles.

MR. A. C. HATCH: I understand it now.

Q The inflow for Number 9, Mr. Deming, please .

MR. JACON EVANS: .459.

A The inflow is .027.

MR. A. L. BOOTH: That is for Number 10, isn't it?

A That is for number 9. Number 10 I haven't given. Number 10, east side of 5th West street, the discharge at the upper end .617 second feet, at the lower end .580 second feet, making a loss of .037 second feet. The length in miles .955 . The loss in second feet per mile, .039. In this case there was inflow from two flowing wells which it was impossible to measure. However, it was quite well concentrated in the pipes where it run under the sidewalk, and I estimated it at .022 second feet.

MR. A. L. BOOTH: Did you include your estimates in the figures as you have read them here?

A The estimate is included in the first discharge given. Number 11 is the east side of 4th West street, the discharge at the upper end .611, which includes an inflow of .031, discharge at the lower end .526, the loss .089. The length in miles .953. Loss in second feet per mile .093.

Number 12, east side of 6th West street, discharge at the upper end, which includes an inflow of .046 is 1.013 second feet, at the lower end .915. Loss .098 second feet. The length in miles .654, the loss in second feet per mile .150.

13, the east side of 8th West street, discharge at the upper end .765. In this case there was an inflow from several flowing wells which it was impossible to measure. The discharge at the lower end was .790 showing a gain of .025 second feet. The length in miles .255 showing a gain per mile of .098 second feet.

Number 14, the west side of 8th west street, discharge at the upper end .421 second feet, discharge at the lower end .421 second feet, loss nothing. Length in miles .243. In this case there was some inflow from flowing wells which could not be measured.

MR. THURMAN: The inflow balances the loss.

A The inflow and outflow were equal.

Number 15, the west side of 9th West street, the discharge at the upper end which includes an inflow of .130 is .601 second feet. The discharge at the lower end .472 second feet, making a loss of .130 second feet. The length in miles .493, making a loss in second feet per mile .262 second feet. The average loss in second feet per mile for these 12.6 miles is .190 cubic feet per second.

The second series of measurements were made on larger laterals, carrying from two to five second feet in most cases serving farm lands. In these cases the weirs used were made

of two inch plank and were of what is ordinarily called the rectangular weir with end contraction, that is, it consisted of a notch out in the plank two and a half feet long, and one and a half feet deep. The distance from the bottom of the weir gate to the top of the crest on the weir was one and a half feet. The edges, the ends and bottom of the notch were chamfered off to half an inch in thickness. Two of these weirs were used as in the other experiments. They were identical except that the carpenter in making one made it a hundredth of a foot longer crest than the other one. These were placed in the channel at the upper and lower ends of the section to be considered. The crest was leveled with a Y level and a peg was driven in the channel six to ten feet above the weir and a nail driven with its head level with the crest of the weir as shown by the Y leveling rod, and upon this level the head was measured. The method was similar to that employed in the other cases, except that in most cases in order to make definite the time of passage of the water from the upper weir to the lower weir, quantity of shavings, ordinary shavings from the planing mill were placed in the stream at the upper weir and the time of passage to the lower weir noted, so that the stage of water at the one weir could be determined and measured at the lower weir. The velocity of approach was obtained in the same way as the other cases. Most of the water usually turned out of the canal while these weirs were installed. In some cases it was impossible to turn it all out but generally it was most all turned out until the weirs were installed and made water tight. The readings of head were taken every five minutes and all outflow stopped during the time of the measurements.

The first farm lateral is that diverted from the City race canal at 5th West and 6th South Street, the upper weir was located approximately 150 below the head of the canal. In these measurements the velocity of approach at the upper weir determined as I have described by taking the surface velocity and eight

tenths of it was .54 feet per second, and at the lower weir .80 feet per second. The observed head on the upper weir from 2:55 P. M. to 3:30 P. M. was  $9 \frac{3}{8}$  inches. The correction for velocity of approach  $\frac{1}{16}$  of an inch. The observed head at the lower weir from 3:40 to 4:15 P. M. was  $8 \frac{7}{8}$  inches. The correction for velocity of approach  $\frac{1}{8}$  of an inch in the head.

MR. A. LL BOOTH: Right there, Mr. Deming, was that correction made so as to show more or less water for this velocity?

A Shows more. The head due to the velocity of approach is added to the observed head. The discharge at the upper end of the section was 5.446 second feet. At the lower end of the section 5.083. The length in miles 1.014, making a loss per mile of .360 second feet.

MR. THURMAN: I want to ask for information: First you give up here  $9 \frac{3}{8}$  inches, you give it in inches.

A That is the observed head on the weir.

MR. THURMAN: Now, you are giving the decimals quantity in second feet same as before.

A Yes.

MR. BAGLEY: You are not giving us the loss in the section.

A .363.

Q That is per mile.

A No, that is the total loss in the section. The loss per mile is .360. In this case the length of the crest of the upper weir 2.51 feet, the lower weir 2.50 feet.

The next lateral is what is known as the Warner Ditch, diverts water from the City race canal on the state road about a quarter of a mile east of 5th West Street. The velocity of approach at the upper weir .53 feet per second. At the lower weir .44 feet per second. In this case they are so near alike that no correction was made to the observed head. The observed

head of the upper weir from 11:30 until 12:10 was  $5 \frac{1}{8}$  inches. The maximum head measured on the lower weir between 11:10 and 12:20  $4 \frac{5}{16}$  inches, giving discharge at the upper end of 2.267 second feet, at the lower end 1.752 second feet. Loss .515 second feet. The length of the section in miles .228, loss per mile 2.26 second feet. In this case the loss was not all due to seepage and evaporation. These canal banks are built above the surrounding ground and the gophers or rats or other rodents have drilled a lot of holes through the bank, so that possibly a large percentage of this loss was due that cause rather than ordinary seepage and percolation through the soil. This is not a normal condition of the ditch, however, because the placing of the lower weir backed the water up for a considerable distance, raised it above its ordinary level, and caused a great deal more of it to flow out through these holes, so that the results of this don't show seepage and percolation loss.

MR. JACOB EVANS: Will you give me the discharge at the intake and lower end?

A 1.752.

MR. JACOB EVANS: I want both the upper and lower.

A Upper one was 2.267

MR. A. C. HATCH: That loss practically all the water in the ditch.

A In a mile theoretically it would.

MR. A. C. HATCH: Lost it all in a mile?

A Yes, practically 100 per cent.

MR. A. C. HATCH: You only measured part of a mile.

A I had a very small -- I had .228 miles.

The next one is the county road ditch, diverts water from the East Union Canal about quarter of a mile south of the city cemetery, runs northward along the state road. The velocity of approach in this case, <sup>at</sup> the upper weir was .34 feet per second, at the lower weir .30 feet per second. They were so nearly

alike in this case that no correction was applied.

MR. A. L. BOOTH: If you know is that the ditch from which Mr. Richard Olson who testified this morning, irrigates his land?

A From his testimony I think it is, I am not sure.

MR. A. L. BOOTH: I judged it was from your description, and if possible would like to identify his ditch.

A The observed head on the upper weir from 9:40 A. M. to 10:50 A. M. was  $4 \frac{1}{4}$  inches. On the lower weir from 10:00 to 10:45 A. M.  $4 \frac{5}{16}$  inches, giving a discharge at the upper end of 1.726 second feet, at the lower end 1.746 second feet, or a gain in the section of 0.020 second feet. The length in miles of the section .315 miles or a gain per mile of .063 second feet. The gain in this section was probably due to irrigation of the lands on the east side of the county road immediately above and in my judgment the percolation loss was very small, also due to the high velocity of the water through the section. The canal is quite steep in the section under consideration.

MR. A. C. HATCH: What was the nature of the soil at the bottom and sides of the canal?

A The upper two thirds of it, I think, was rather of a rocky nature, considerably clay, I didn't examine it very thoroughly, but my memory is it was quite rocky and rocks were mixed with clay and possibly a little sand. For a short distance on the lower end of it I think the section was in sandy loam soil.

The next loss determination was made on the East Union Canal -- I might state that it was not the next in point of time, I was working on these at different times during the time I was making these other experiments. For the purpose of making these loss determinations, the canal was divided into four sections. The length of each, beginning at the upper end were 7037 feet, 9421 feet, 9226 feet and 3479 feet respectively. For the purpose of making measurements of discharge gauging

stations were established at the lower end of each of these sections except the last. These were selected where the stream bed and bank and channel were fairly uniform cross section above and below the point of measurement. At each of these stations a plank was placed across the channel firmly spiked to stakes to hold it firmly in place, and its up stream edge divided into half foot sections to be used in making the measurements of discharge. The gauges consisted of a half of an ordinary yard stick spiked to the two by four stake driven into the side of bottom of the channel near the station; a profile of the section and canal at the station was taken in each case, with a Y level, and the elevation of the top of the gauge was taken to give the maximum reading so as to get the relation between the elevation at point in the channel and reading of the gauge. Before the experiments were made a number of measurements were taken at each of these stations with a current meter Number 1962 of the Price pattern, manufactured by W. W. and L. E. Gurley, New York. This meter was rated by the Bureau of Standard, Washington D. C. March 25, 1916. At each of these measurements of discharge the height of the gauge was noted and from these data a rating curve of each station was drawn, so that the discharge at each station could be determined by simply reading the gauge and referring to the curve. In addition to this where it was possible, during the time of the experiments -- that is, where the gauging height constant at the station for a sufficient length of time an additional measurement of the discharge was made with a current meter during the time of the experiment. The discharge at the head of the canal, the upper end of the first section was measured over a rectangular weir without any contraction the length of which is 7.76 feet. Height above the bottom of the channel one foot, set in the lower end of a wooden flume approximately fifteen feet long. The measurements of head were made approximately seven feet above the crest of

the weir up stream from the crest of the weir. In these determinations the time of passage of the water from one station to the other was determined by placing quantity of shavings in the stream, noting the time at the upper station and time at the lower station in order to be sure that the same stage of water was measured at each point. This was so in all cases except in the first section. The observations on the first section were made May 18, 1916. The discharge at the upper end of the section or at the head of the channel from 10:35 A. M. to 10:55 A. M. was 26.42 second feet. The discharge at the lower end of the section which is 7037 feet below was from 11:25 to 11:40 twenty-six second feet, making a loss in the section of .42 second feet. During the time of this experiment there was a small stream flowing into the canal from the Upper East Union Canal. It came in at the west side of the canyon road where the canyon road crosses the <sup>East</sup> Union Canal. There was also a small outflow near that point into what is called the Canyon Road ditch under the gate which it was impossible to stop entirely and impracticable to measure. These were approximately the same in quantity so that neither the inflow or the out flow are considered in this determination.

The observation on the second section was made May 19, 1916. The time of passage of the water from the upper station to the lower station determined as I have described was one hour and seven minutes. The discharge at the upper station from 9:20 A. M. to 10:15 A. M. 19.3 second feet. The discharge at the lower station from 10:30 A. M. until 11:25 A. M. was 17 second feet, making a loss of 2.30 second feet. The length of the section in miles 1.784 making a loss per mile of 1.290 second feet. In the determination of loss on the first section and this section and every other section of this canal all out flow, visible outflow from the canal was stopped at the various points of diversion of the laterals. The observations on the third section were made on May 22, 1916, the time of passage of the

water was one hour and twelve minutes. The discharge at the upper end of the section from 2:15 P. M. to 2:40 P. M. 12.6 second feet. The discharge at the lower end of the section from 3:25 P. M. to 3:50 P. M. was 10.17 second feet showing a loss of 2.43 second feet. The length of the section in miles 1.747, making a loss per mile of 1.40 second feet.

The summary of the loss in the entire length of the three sections was 5.15 second feet, total length being 4.864 miles or an average loss per mile of 1.065 second feet.

MR. A. C. HATCH: How do you make that?

A I add together the loss in the first, second and third sections, divide it by the total length of the three sections in miles.

Q Have you now given your observations, or the total of your observations?

MR. A. L. BOOTH: I was going to ask you before you leave this, did you take into account the different amounts flowing into a canal or just took the absolute amounts as they came?

A Flowing into the canal .

Q Did you take into consideration the inflow?

A There was no inflow, visible inflow.

MR. A. L. BOOTH: What I mean is this, on one experiment you had 26 second feet?

A Yes.

MR. A. L. BOOTH: And another you had 19?

A Yes.

MR. A. L. BOOTH: And another you had 12?

A Yes.

MR. A. L. BOOTH: Did you make any calculation as to whether there would be more or less loss when you had more or less water in the canal?

A These determinations were made when the flow was as indicated here, each section individually.

MR. A. L. BOOTH: Yes, but you bunched them up.

A I would like to say that in my opinion the discharge in these various sections as given here approximate very closely the average condition of flow in the canal, at least, I attempted to make my result show that as nearly as possible.

MR. A. C. HATCH: The loss you give in these three sections would be approximately one-third of the quantity, average quantity of water flowing in the canal, and I cannot understand it. Let me say further, before you answer, you measured only a short distance on the canal, say one-half of its length, and as I got the understanding as showing the loss is about one third of the water?

A I was just going to give you what the percentage was.

MR. A. C. HATCH: Very well.

MR. THOMAS: I think if you will let Mr. Deming proceed with his report you will get all the information you gentlemen are seeking. I think it covers that very thing.

A In the first section the loss was --

MR. A. C. HATCH: I have the loss by <sup>sections</sup> ~~second~~ in second feet, summary of the loss, I didn't get, five and something.

A 5.15. The average loss in per cent per mile based on the discharge at the upper end of the canal is four per cent per mile.

Q Give the average loss per mile in second feet as you have estimated there.

A 1.065 second feet.

MR. A. C. HATCH: 4 per cent per mile?

A Yes, based on the discharge at the head of the canal.

Q Does that conclude your estimates and your measurements, Mr. Deming.

A I made some other measurements that I attempted to make other determinations, the results of which were not reliable and I have not included those in this report.

Q Now, did you make an estimated loss in the lateral system based upon your investigations?

A Yes.

Q Will you kindly give that assuming the length to be 50 miles.

A Assuming the length of small street laterals within the city to be fifty miles as I may state that as shown by the map presented by the city engineer the total milage of laterals in the system of 71 miles. I have estimated that fifty miles of these are all approximately the same wetted area per foot of length as those upon which I made these first determinations. Assuming that to be true, and taking the average loss in second feet per mile as given in my tabulated results and assuming that one half of this total milage is in use at all times, the total loss in the street laterals is twenty-five miles times .190 second feet per mile or --

MR. JACOB EVANS: I didnt get that.

Q If the loss in second feet per mile is .190 as shown at the average of my results and the total length of these laterals in use at all times is twenty-five then the total loss, continuous loss in the system would be 25 times .190 or 4.75 second feet.

Q with reference to the farm laterals and milage there.

A I would like to state that these quantities here, for instance, the total length of laterals in use at all times is impossible of exact determination. It varies from day to day and in order--  
n't  
I would say it is impossible of exact determination, but it is very impracticable and would involve a great amount of work to determine just how many miles in the city have the average wetted area to foot of length that these 12.6 miles have which I measured, so that these results are based on -- the result as to street laterals and farm laterals are based on an estimated wetted area and upon an estimated number of miles in use at all times, or the average in use constantly. The small laterals upon which I made the measurements have an average wetted area of about three feet, three square feet per linear foot. The farm laterals of which there was approximately twenty-one miles in the system have an average wetted area of approximately five square feet per foot, so that other things being equal the loss

in second feet per mile in the street laterals and in the farm laterals would be directly proportional to their wetted area per foot or per mile whichever way you figure it, so that if the small laterals have an average loss of .190 second feet per mile with a wetted area of three feet, the farm laterals have an average loss in second feet per mile of approximately .30 second feet per mile. Assuming that half of these twenty-one miles of farm laterals are in use constantly the loss, continuous loss in second feet is 10.5 times .30 or 3.15 second feet, giving a total loss in the lateral system of 7.90 second feet.

MR. A. CHATCH: Let me hear that last statement again.

A 3.15.

MR. A. C. HATCH: I have that, the total.

A 7.90.

MR. THURMAN: Is that the loss in all the laterals?

A What is the estimated continual loss in all of the system, assuming that half of the laterals are in use at all times.

MR. A. L. BOOTH: Would that be practically the same whether the ditches are reasonably full or only small amount running in them.

A As I said, the loss, other things being equal depends upon the area of canal exposed to the water, so that if your canal is narrow and deep an increase discharge does not materially increase the loss. If your channel is wide and flat and velocity low, the same increase in discharge will very materially increase the surface of the canal bed exposed to the water and therefore increase the loss.

Q Did you seek to obtain <sup>an</sup> ~~the~~ average then for the purpose of your experiment or your investigation?

A I did. In the case of the laterals, I took them just as I found them and as it came convenient for me to make the determination.

MR. THOMAS: I will ask counsel now if the gentlemen will stipulate that the population of Provo City is approximately

ten thousand. There is testimony now in as to the census, last official census.

MR. RAY: Prove Bench will, your honor!

MR. A. C. HATCH: If that be the fact.

MR. THOMAS: I understand, Judge, it is the fact, and it will save a great deal of time and expense bringing in witnesses to establish it from various countings and computations.

MR. JACOB EVANS: It is approximately that.

MR. A. C. HATCH: Then we will admit it.

THE COURT: It may be admitted then that the population of Provo at this time is approximately ten thousand.

MR. THOMAS: Now, we have no other witnesses except those involved in the power interests, to determine the value of the products, beneficial use and so forth, continued use by the power interests.

MR. A. C. HATCH: If the court please, if the witness or counsel will furnish us with copies of the data from which the witness has testified adding thereto the points at which, the localities within the city limits at which these different measurements were made, we don't care to make any cross examination.

THE COURT: Very well.

MR. A. C. HATCH: The purpose of cross examining the witness would be simply on my part to fill in the data that I have not obtained during the examination.

THE COURT: I take it that can be done. Now, with that eliminated, with the cross examination of Mr. Deming eliminated, is it the desire of counsel we attempt to finish the city case tonight so that we may suspend.

MR. A. C. HATCH: That is the pleasure of the court.

MR. COREMAN: I will say to the court and counsel, so far as the mill owners and the city are concerned that heretofore they have been treated as one in the matter of

litigation, and we have entered into a stipulation as between the city and the power companies that sofar as the purpose of this case as between the city and the power owners practically settles any matter that would be litigated in this case. We may present that stipulation for the benefit of court and counsel at this time or after the recess.

THE COURT: Is it reduced to writing?

MR. CORFMAN: Yes.

THE COURT: You might furnish counsel with a copy of it, and then they may have the benefit of looking it over during the recess for dinner.

MR. THOMAS: It may be offered now?

THE COURT: Yes, it may be offered at this time, it need not be read.

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5:10 P. M., Recess to 7:30 P. M.

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JOSEPH I. BULLOCK recalled.

CROSS EXAMINATION by Mr. A. G. Hatch.

Q what is your first name?

A Joseph Bullock.

Q Mr. Bullock, in your testimony the other day you said that you would take your horses out of the pasture because you could not get water for them in the pasture?

A Why yes.

Q That is, the ditch or canal runs through your pasture, does it?

A Yes.

Q The main canal. Answer so the reporter can get it -- and part of the time it was dry, that is, there was no water in the main canal where it passed through your pasture?

A Yes sir.

Q For how long a period was that condition?

A I don't know how long it would be, when I fetched my horses

out there was no water in the canal at all, not in my field, not a bit.

Q You took them out and watered them and then put them back in the pasture?

A I done that a time or two before, day or two before that, and there was a little stream in the ditch then when I fetched them back the next day or that night some water come down. Of course, it would be enough for my horses to drink.

Q When there was a good stream in the canal who was using it below you?

A I don't know anything about who was using it below me.

Q It was after the time you had asked the watermaster if you could have it, wasn't it?

A I asked the watermaster?

Q It was after the time that you had asked the watermaster to give you a turn of water wasn't it?

A I didn't understand you then.

Q You say you took your horses out of the pasture and then you put them back and found a good stream of water in the canal?

A No, I didn't find no good stream, I didn't find enough to take out on my land, I found enough for them to drink.

Q It was running water in the canal, was it?

A It was just about moving, that was all.

Q It was dry before, was it?

A Yes, it was dry before.

Q Do you know how long it remained dry at that time?

A No, I don't.

Q You didn't go to the canal to determine whether or not water came down after you took your horses out?

A There was water come down after I took my horses out.

Q You didn't try to irrigate your pasture again that season, did you?           A. No.

Q You abandoned the pasture?

A Yes -- well, the watermaster told me I could get some water now,

I told him I didn't care whether I got it or not, the grass was all burned up and wouldn't do no good for the season.

Q That is high bench land?

A Yes.

Q And very hard place upon which to grow grass?

A It takes lots of water to keep it growing.

Q It is not natural grass or pasture land, is it?

A Well, it ain't natural without water.

Q It has to have water quite often? A. Yes.

Q Oftener than grain or lucern would require it?

A Yes.

Q And how long had it been in pasture, or had you been trying to make a pasture out of it?

A About six years, between six and seven years.

Q And until last year was there always ~~an~~ water running in the creek?

A Lat year?

Q In the canal, until last year was there always water running in the canal?

A No, there had been shortage of water before.

Q During the six years? A. Yes.

Q What year?

A I have had charge of the water there several times.

Q How long prior to the time you asked the watermaster for water was it that you had had water for this pasture, how many days?

A I think it was close to two weeks, ten days anyway.

Q You usually asked him a day or two in advance of the time you thought you would want to use it?

A Yes, I would ask him when I could have it.

Q And theretofore sometimes you had to wait aweek after you had asked for the water?

A Yes, sometimes longer.

Q Before you could get it, is that right?

A Yes, sometimes longer.

Q So that the condition last year wasn't materially different from what it had been in years before?

A Well, yes, it was too, because I couldn't get the water at all when I wanted it.

Q You say you couldn't get it sometimes for longer period than a week?

A I had.

Q After asking for it?

A I wouldn't think I would really need it for maybe couple of weeks.

Q Do you mean to say that grass or pasture land on that bench down there doesn't require water oftener than every two weeks?

A No I don't. I mean to say you can water three times a week and take all the water.

Q Three times a week? A. Yes.

Q And do you mean to say that you can keep it alive, the grass roots by watering it once in two weeks?

A Yes.

Q You think that is possible, do you?

A Yes sir.

Q You don't know how long it was before that you had had the water do you?

A No, I never kept track of it.

Q It might have been two weeks before you asked him, might it not?

A Yes, might have been two weeks.

Q Then if you had to wait another week, that would be three weeks?

A Yes.

Q Under the system that you had formerly.

A How?

Q That would be the condition under which you had formerly had other years, would it not?

A Farming it.

Q Oh no, formerly had in irrigating it?

A Oh well, never until last year, I had never had any bother about getting water, I would ask the watermaster if I could get it. He said "Well, you may have it tomorrow or tomorrow night; something of that kind.

Q But perhaps sometimes you wouldn't get it for a week?

A That was last year.

Q That was former years, I understood you?

A Oh no, last year was that.

Q And when you could have got it you didn't want it?

A Well no, I wouldn't spend my time, I was busy at other things.

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JOHN H. STRATTON called by the defendant Provo City,  
being first duly sworn, testifies as follows:

DIRECT EXAMINATION by MR. Thomas;

Q State your full name?

A John H. Stratton.

Q Where do you live?

A Provo Bench.

Q How long have you resided there?

A Thirty years.

Q Are you familiar with the Blue cliff Canal?

A Yes sir.

Q Did you have anything to do with the making of that canal?

A Yes sir.

Q What was it?

A I acted as a member of a committee of three to let contracts and inspect work, receive work at the end of the month and I also had a contract on the canal excavating and building of the canal.

Q And you did some of the excavating and some of the building of the canal, did you? A. Yes sir.

Q Whereabouts did you do your work?

A Well, commencing about 80 rods from the intake and running up within about 20 rods of the intake or thirty.

Q Before you began your work what was the topography of that place.

A Why, it was principally a springy, wet, moist country there, cottonwoods and other timbers, growth of timber along, and brush.

Q Did the ground slope up from the river to the mountainside?

A Yes, very steeply.

Q I didn't hear that, very what?

A It was very steep from the level of the river bed.

Q Where you did the work? A. Yes.

Q And it was there you found this boggy place.

A It wasn't all boggy, the country was wet most of the places and then springs come across the canal line and then one little flat there, there was a hundred yards or four hundred feet of a little bench ground, evidently had slipped there sometime or other and it was springy with grass and stuff, there was also a little stream of water running across it in one place.

Q State if that water flowed into the Provo River?

A Well, it flowed right off from that little slope there about 20 feet above. Well, I will say from 10 to 25 feet above the natural level of the river bed and in against the hill. Outside of the river bed about fifty yards, out from the river about fifty yards, there was a little spring creek that caught up all these seeps and springs and it flowed into that. Down below about 40 rods it flowed into the river.

Q The Spring creek flowed into the river?

A Yes sir.

Q What became of these waters that were flowing or seeping into the river after you dug the canal?

A They went down the river.

Q Still went down the river. Did the cutting of the canal or making --

A Why the cutting of the canal across this flat, do you mean?

Q Yes.

A We developed a little water there, about one quarter to a second foot, I should judge in making the cut about four feet deep across this little flat and we let it run down the canal to a convenient place to turn it out and then turned it back into Little Spring Creek.

Q Were there any springs that were developed in the canal other than what you have stated?      A. No sir.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q Do you mean by that to say that there was no other water developed in digging the canal along its entire course?

A Yes sir, none that I know of. I never seen any.

Q Did you help to dig it all the way out to the mouth of the canyon?

A I went up and down it at least once a month.

Q I asked if you helped to dig it all the way out to the mouth of the canyon.

A No, I helped at digging it and it was dug most of the way through during the time, and before that I was there.

Q And you say you saw no water that was going into the canal in seepage or otherwise by digging the canal except at this one place where the slide was?

A That is all that I seen. This here would not commonly be called a slide, because it had slid there at some long time before and caused a sort of little bench there by the side of the river, and in through that springy place there the only place I seen any water that come down to the canal with the exception of that little Maple Hollow spring in below there just above Mr. Heiselt's about a quarter of a mile.

Q That came down and flowed in to the river, did it, Maple Spring?

A Yes, I think that was going down --

Q And the Heiselt Spring, do you know where that is?

A Yes sir.

Q That flowed into the river?

A I believe it was running on Mr. Heiselt's place.

Q What about the several springs below Mr. Heiselt's place that rise above the Blue Cliff Canal?

A I didn't see them.

Q You didn't see any?

A No.

Q Don't you know there are four or five springs arising above the Blue cliff Canal and flowing down to it?

A There was only one at that time, that was the Pony Steele Spring, it rose above the canal or right close to it.

Q Do you say there was only one spring of the Pony Steele springs, only one spring?

A That is all that I noticed as high up as the canal.

Q Have you ever been over that country about there above or below the line of the canal?

A No, I have never been out --

Q You just followed along the canal bed, did you?

A Yes sir.

Q And you didn't see the springs that arise above the canal, if there are any there?

A I never seen any, no.

Q And that flow down to and across the canal?

A Only this little spring that comes down Maple Hollow and Pony Steele spring that came out there right close to the canal line.

Q Going on up to the head of the Blue Cliff, where was the head of the Blue Cliff Canal or intake from the river?

A Well, it was just ~~above~~ about opposite Spring Dell, I don't know whether exactly opposite, but right close.

Q It was about a half a mile above Spring Dell, was it not?

A I don't think so.

Q On the north side of the river?

A Yes, it was on the north side of the river.

Q And for the first half a mile the country is quite ledgey, isn't it?

A Not where the intake was then.

Q From the intake down the first half a mile is quite ledgey. You went around ledges with your canal, didn't you?

A No sir.

Q No ledges at all? A. No sir.

Q And until you get to the Heiselt place it is practically ledges the entire distance, wasn't it?

A No sir, there was two points --

Q And from the Heislet place --

A There was two points where there was a ledge made out so that it made the appearance on the side of the canyon there. One was right down just below Spring Dell somewhere near the city waterworks there where the canal made around the point there and one was what they call the hanging rock, a projection point that stood up like my hand, down below there half way, I guess, from there down to Mr. Heiselt's. That is the only ledges I seen, the one right in there by Mr. Heiselt's, just about his house there, around there.

Q Just above the Heiselt house and the Steele farm, I will ask you if it is not true that just above the Heiselt house and following then on down the canyon through the Steele farm, if that is not the only portion of the ditch that could be built with plow and scraper?

A Well, I believe that was the only portion that was built with a plow and scraper.

Q All the balance of it had to be made with pick and shovel or with blasting, did it not?

A Yes, principally pick and shovel. We done all our work with pick and shovel.

Q Now, don't you know, Mr. Stratton, as a matter of fact, that for about four or five hundred yards from the intake of the canal, Blue Cliff canal down the river, there is a drip and seepage of

water all along the course of the canal? and into the canal?

A If the intake it where it was when I was on the canal the first about four hundred feet was in the river bed, made up with gravel and rock like is commonly in the river bed. Then it took against the side hill there and if my memory serves me right, there was one little shaley point there might be termed a ledge, but I am not sure about that. From then on down sixty rods there was no point of rock at all. There was no point of rock for considerable distance longer than 60 rods, but from there on down was my contract. We never struck nothing only a few large loose boulders come in the way of the canal that we could not move.

Q Coming on down the canal where was the first water, you found spring water rising above the canal and flowing down to the canal?

A Why, it has been about twenty-five years since I was there. I have never been since we quite work there, but as near as I can remember after the canal approached and struck on the dugway of the hill, begin to climb the side hill, it was then within a couple hundred yards of where it entered on the side hill, there was a spring come across there.

Q Was that above the Maple Spring as you call it?

A Oh yes, that was --

Q Sir?

A I don't know just how far, between three quarters and half of a mile, half a mile or a mile above the Heiselt place or above the Maple Spring, I should say.

Q That would take you up to opposite Spring Dell, wouldn't it?

A Yes, just about opposite Spring Dell.

Q You say you haven't been there for about twentyfive years?

A No sir.

Q And you only remember one spring on that territory from Heiselt's place down to the mouth of the canyon?

A That was not what you asked me awhile ago, Mr. Hatch.

- Q I was asking you about the Pony Steele.
- Q You asked me about springs crossing the grade below there.
- Q Crossing the canal.
- A Crossing the canal. There was this one spring, and I believe one other that flowed right across the road, across the canal line and still farther down about -- well 60 or 70 rods from the intake there was this flat that I was speaking about where we developed a little water there and turned back into the Spring Creek and right on there there was a little spring come across there run into Spring Creek.
- Q Coming on down to the Heiselt place, do you know where Heiselt's pipe line is?
- A No, I have never seen it.
- Q Do you know where the Heiselt house is?
- A Yes sir.
- Q Where his dwelling house is? A. Yes sir.
- Q Now, did you not -- did you find more than one spring flowing down the Blue Cliff Canal arising above the canal and to the west of Heiselt's house?
- A I never noticed no springs in there, the springs I noticed on the Heiselt place was to the east and north of the Heiselt house, came out of that ledgey country along there along the side.
- Q You don't now remember any spring at all on the west and north of Heiselt's house?
- A The Pony Steele Spring there.
- Q Just the one spring?
- A That is all I seen that was above the canal.
- Q That is all you remember having seen?
- A That is all I seen.
- Q Sir?
- A That is all I seen.
- Q And you say you went along the bed of that canal at numerous times after it was completed? A. Yes sir.

REDIRECT EXAMINATION by Mr. Thomas;

- Q What do you designate as the Maple Spring, Mr. Stratton?
- A Right above Mr. Heiselt's house, the river takes to the north, following up to the river takes to the north and then turns a bend. It was right opposite that bend the spring comes down the side hill, just up around that bend rather the spring comes down the side hill from the north.
- Q Does it rise in a sort of ravine?
- A Yes sir.
- Q Filled with trees, some maple and some cottonwood?
- A Yes, that is what I took to be the Maple Spring.
- Q That spring was running right into the river?
- A Yes.
- Q You have not been up there since the city has piped any of those springs?                   A. No.
- 

T. F. WENTZ recalled by the defendant Provo City.

DIRECT EXAMINATION By Mr. Thomas.

- Q Mr. Wentz, did you make any measurement to determine the head of the various power plants or the water going to the various power plants?                   A. Yes sir.
- Q I think you have set it out on page 62 of your report of 1914?
- A Yes sir.
- Q Have you made any other measurement than that which is designated in that report?               A. No sir.
- Q Could you please tell us when that report was made, or those measurements were made and what they were?
- A They were made in the fall of 1914. The heads were, of the Provo Pressed Brick Company 14 feet, Provo Ice & Cold Storage Company 14.25 feet; Hoyer Brother Company 8 feet; Knight Woolen Mills 16 feet, Ward & Sons 7 1/2 feet; Smoot Lumber

Company 14 feet; Provo Foundry and Machine Company 8 feet, and Hans Poulson Mill 13.5 feet.

Q While acting as water commissioner, Mr. Wentz, did you make any examination of the waters arising in Round Valley and flowing through Round Valley to the Provo River?

A I made some measurements of the Round Valley Creek as it came into the river during the low water stage, but haven't made any examination of the valley.

Q Have you made any examination of the Wright farm?

A Yes, I have observed the Wright farm.

Q And have you made any examination to determine or form any judgment as to whether or not the waters used and coming from the Round Valley and across and through the Wright farm are tributary to the Provo River?

A Yes, the waters that are applied on the Wright farm and not retained are tributary to the Provo River as the other lands along the river are.

Q Would you say that the return seepage on the farm the Wright farm, would be quick to the river or otherwise, Mr. Wentz?

A Yes, very quick. The flow in the Provo River, the returnage as near as I can determine, travels about a thousand feet a week. My first investigation along that line I thought was about -- waters returned in about twenty days. That is counting the average use from the river at a mile, but later in the two years, later, I find twenty days is too short a time. My conclusion last year is that it is about thirty days. That is the water applied back a mile from the river in May -- return seepage reaches the river in the month of June and so on through the season.

Q The return seepage then of course would be quicker or would increase in time with the shortening of the distance of application to the river?

A Yes, I think the travel, I say, is about a thousand feet a week

Q How close is the Wright farm to the river?

A It is right on the banks of the river.

Q Then application of water to the Wright farm of course would be very much less than the time that you have designated for a mile distant?

A Yes, the mile distance is about the average distance on the whole valley.

Q Are you familiar with the Hoover place on Provo River?

A Yes, sir.

Q What would you say as to the application of water on that land?

A That is practically the same as the Wright ranch, right on the banks of the river.

Q Would you say the returnage would be quick in that case?

A Yes.

CROSS EXAMINATION by Mr. Thurman.

Q Mr. Wentz, do you know how much there is, land in the Wright estate?

A No, I don't.

Q Large tract apparently, ain't it?

MR. RAY: I object to that, the witness testifies he doesn't know. I think there is a deed to the land in the record your honor, the secretary testified to it.

MR. A. C. HATCH: I think that is right.

THE COURT: Yes, I think Mr. Murdock presented a deed.

MR. THOMAS: Will you permit a question now.

MR. THURMAN: Yes.

MR. THOMAS: Mr. Wentz, do you know what wheels have been installed in the respective power plants along the Factory race?

A No, only by the reports of the power users.

MR. THOMAS: To you?

A Yes.

CROSS EXAMINATION by Mr. Ray.

Q Mr. Wentz, are you familiar with the character of the soil on the Wright and the Hoover places?

A Yes.

Q Is that soil of such character that a substantial part of the water necessary to be applied for irrigation is not returned-- is not retained?

A Well, the soil will hold just so much, just like a gallon jug will hold so much and all that it doesn't hold goes back.

Q Is it necessary to apply more than the soil will hold in order to properly irrigate<sup>it;</sup> that is, in practical irrigation is there a loss? A. yes.

Q Is that a substantial loss in comparison with the amount retained?

A On that class of land or all classes?

Q On that class of land.

A On that class of land why the loss is less than it is on a loose soil. This is a clay sedimentary soil, and the loss is very much less than on a loose sandy soil.

Q Is it a substantial loss in comparison with the amount applied in proper irrigation?

A I don't know what you mean by substantial.

Q Well, <sup>maybe</sup> I can make it concrete. In order to get a sufficient quantity of water into the soil to mature the crop, in your opinion what percentage of water would be lost and go back to the river in seepage?

A About one half.

Q About fifty per cent. What do you mean, Mr. Wentz, when you give these heads. Do you mean that is the quantity of water you found them using?

A No, that is the difference in elevation of the water above the wheel and below the wheel ~~was~~ when the wheel is operating.

Q Did you ever made any determinations as to the quantity of water necessary to run the machinery at these different places?

A No.

MR. THOMAS: May it please the court, I now wish

to direct the court's attention to --

MR. THURMAN: You gave us a paper, we took the paper to look over, did you make an offer of it, or did you?

MR. THOMAS: I did not, I thought it had been done.

MR. A. C. HATCH: The stipulation you were going to offer.

MR. THOMAS: This is a stipulation. I was going to read this into the record. Mr. Corfman stated the substance of it, but we will now read it into the record. "Stipulation. In this cause it is hereby mutually agreed and stipulated by and between the defendant Provo City, a municipal corporation, and the defendant E. J. Ward & Sons Company a corporation; Provo Ice & Cold Storage Company, a corporation; Knight Woolen Mills Company, a corporation; Upton Hoover, William Hoover, Webster Hoover and Frank Hoover, copartners; and Smoot Investment Company, a corporation; that the waters heretofore distributed by the several water commissioners under the Morse decree and theretofore to Provo City are owned by Provo City by rights of appropriation and decrees of court, and that the other defendants above mentioned using water for power purposes have the right to the use of said waters under grants from Provo City in the proportion now and heretofore distributed by the several watermasters of Provo City to what is commonly known as the Factory Race; and that the exchange of water heretofore made by Provo City as between the said users of water for power and irrigation has been made by Provo City for the mutual benefit of its said water users, and by mutual arrangements therefor". This is a stipulation entered into by counsel for Provo City and for the parties hereto named.

MR. THURMAN: Does that pertain to any water except the Factory Race? What we know in this case as the Factory Race?

MR. THOMAS: That is all that is referred to. These are the only parties made ~~is~~ defendant.

MR. THURMAN: There is the Hoover and foundry.

MR. THOMAS: The foundry is not made a defendant and

its interests will be covered by the city's claim direct.

MR. RAY: May it please the court this stipulation is one in which we are only indirectly interested, but as I view the stipulation it has something in it which occurs to me as legally uncertain, and we ought to know what the purport of it is, and that is that the city owns water under appropriation, and that it has granted to certain people the right to the use of water. Now, I cannot understand any ownership remaining after there is a grant of the right to use, because I understand that to be a full title to water, is the right to the use of water. I don't know what counsels thought is upon that, but it may become material.

THE COURT: As I understand the record and stipulation, it is not asked by the city and the other defendants that the other parties to the suit join in this stipulation. This stipulation, as I understand it, is merely ~~to~~ between those named in the stipulation as read and consequently has no binding effect upon any of the other parties.

MR. RAY: That is correct.

THE COURT: That being the case, I take it the other parties to the suit are not particularly interested in the language they have used in their own stipulation. That is the way I view it.

MR. RAY: Yes, I think your honor is right.

MR. THOMAS: Further, the matters presented by Mr. Ray are purely matters of law to be discussed in the final argument, I take it?

THE COURT: Yes.

MR. THOMAS: I now direct the court's attention to the ordinance to incorporate Provo City, passed February 6, 1851, by the general assembly of the State of Deseret. The ordinance is found on pages 52, 53, 54, 55, 56, 57, 58, 59 and 60 of Compiled Laws of the State of Deseret, the first and only edition published.

Now, the first laws, your honor, published and enacted by the territory of Utah on the 6th day of March, 1852. That is the date of this amendment to this Act and appearing on page 175 of the Acts, Resolutions and Memorials passed by the first annual and special sessions of the Legislative Assembly of the Territory of Utah, began and held at Great Salt Lake City, on the 22nd day of September, A. D. 1851.

Also the Constitution of the United States and Act organizing the Territory of Utah, published by authority of the Legislative Assembly, G. S. L. City, Ut. 1852. Brigham H. Young, Printer.

Reading as follows: An Act to amend certain sections in Great Salt Lake, Ogden, Manti, Provo and Parowan Cities charters.

Section first. Be it enacted by the Governor and the Legislative Assembly of the territory of Utah that the word April in the fifth section of the above named charters be stricken out and the word March be inserted in its stead.

Section 2: That the word eight in the 35th Section be erased and the word three be inserted in its stead.

Section 3: That the word shall in the 39th Section of the above named charters be stricken out and the word may be inserted instead.

Approved March 6th, 1852.

Now, your honor by comparison of these old statutes, the first law affecting Provo City passed by the territorial legislature is the law which I have just cited and it refers to the law which I have just previously cited in the State of Deseret, which charter was the only existing charter until 1864; and there was enacted,--and the act was approved January 21, 1864 by the Governor and the Legislative Assembly of the Territory of Utah-- a Provo City charter, and I direct the court's attention especially to the Sections 17 and 26, and I now offer in evidence the revised ordinances of Provo City, containing the ordinances especially with reference to the matter

of irrigation, and I am reading from the title page the Revised Ordinances of Provo City, containing all the ordinances in force on the first day of February A. D. --

MR. THURMAN: Have you <sup>pleaded</sup> ~~summarized~~ those ordinances?

MR. THOMAS: I think we have, but whether they were or not, I offer them as material. I think under some conditions the courts do take cognizance and judicial notice of the ordinances and I am inclined to believe the court may take judicial notice of the ordinances of this city in this case. I left off reading -- containing all the ordinances in force on the first day of February, 1877, and the rules and order of business of Provo City Council; to which is prefixed the organic Act of Utah.

MR. THURMAN: Are you going to offer those?

MR. THOMAS: No, not tonight. And the City Charter with amendments thereto--

MR. THURMAN: Just a moment, I object.

THE COURT: I understand Mr. Thomas is merely identifying the volume from which he intends to offer some part, he is reading the identification now.

MR. A. C. HATCH: I understood they did not intend to offer it.

MR. THOMAS: No, indeed, I cannot understand why you say that. I spoke of the Organic Act of Utah, then you asked if you were going to introduce the Organic Act and I said not at this time. What I may do after you get through I don't know. The City charter with amendments therefo, revised, consolidated and published by authority printed at the Deseret News Steam Printing Establishment, Salt Lake City, Utah, 1877.

I now offer in evidence the ordinances, or rather from these ordinances which are herein cited or herein mentioned, Chapter 3 on irrigation, being Sections 94 to 103 both inclusive, of the Revised Ordinances as identified.

I also offer in evidence from the same published volume Chapter 2 on Page 129 being a grant to Provo Manufacturing Company, being Sections 261 to 264 of the Revised Ordinances.

both inclusive;

Also Chapter 3, being a grant to Myron Tanner of waters from the Provo River through the City race, being Sections 265 to 268, both inclusive;

Also Chapter 4 page 132 and page 133, being a grant to George T. Peay of certain waters out of the Provo River through Tanner's Race and other canals, being Sections 269 to 272, both inclusive;

Also Chapter 5, Page 103 of the afore mentioned volume, being a grant to George Beebe of water from Provo River through the City race or other canals to run his mills and machinery, being Sections 273 to 276, both inclusive.

These are offered on the part of the defendant Provo City.  
desire to

MR. RAY: May it please your honor, I object to these ordinances in so far as the grant to the Provo Manufacturing Company, Myron Tanner, Peay and Beebe are concerned, upon the ground that they are incompetent, irrelevant and immaterial, it not appearing that Provo City had any right or authority to grant the water, it not appearing that it had appropriated the water itself for any beneficial use. I don't mean to contend by that that the use of the water under even this color of title might not ripen into some title in some way, but I do contend these grants cannot --

THE COURT: The objection will be overruled without passing upon the effect of these ordinances at all. They may be received and become a part of the record and the effect or force of them may be the subject of argument later.

MR. JACOB EVANS: I desire to add further an objection to the grant to Myron Tanner under the Tanner Race and to George T. Peay under the Tanner Race for the reason that it is immaterial, because they are not made parties and there is no controversy in this action concerning those defendants.

MR. THOMAS: This is merely for correction. If I said in reading the grant to Myron Tanner as being through the

the Tanner Race it should be the City race. I think I so read.

THE COURT: Are these parties not parties to this suit?

MR. A. L. BOOTH: Tanner and Peay are not.

MR. THOMAS They are successors in interest. The Beebe interests, I think, are those interests which precede Hoover.

MR. A. C. HATCH: There is a further objection that there is no power now being operated under the grant. It is not claimed, as I understand it, that there is, and the parties as power users are not made parties to the suit, that is, under that City race, am I right?

MR. THOMAS I did not think it necessary to read one or two sections providing for renewals of certain grants. I am not fully advised as to just which of these original grants, your honor, are now in existence through their successors. Some of them are. I don't consider that material and pertinent, that they be recorded in their entirety, with the charters as originally given.

THE COURT: I see no theory upon which the court can regard any entirety ~~to~~ of the grants the city may have made if some have become inoperative, yet I will overrule the objections and these various grants which you have referred to and offered may be received. If, however, upon the sifting out of all this evidence it appears those grants have ever become inoperative or are not used now, why, the court, of course, will not give any consideration to them will not award to anyone some rights which have long since been abandoned or forfeited or gone.

MR. THOMAS: I assume that would follow, of course, and so far as those things may be developed. We offer them solely for the purpose of showing the full exercise by prove City of its appropriated and control powers.

Now, we had hoped, if the court please, to have some witnesses with reference to the use of water and scarcity of water during the season, but owing to the fact we have all been hurrying to bring our matters to a close, and not produced evidence that might be deemed cumulative, Provo City at this time rests, with the exception of having certain testimony introduced on the part of the power defendants

MR. A. C. HATCH: That I may understand, the situation now is, as I understand it, that none of these mill owners claim any right by virtue of appropriation or use of the water, but rely wholly upon their grants from Provo City and Provo City appropriation in their behalf. If I understand the stipulation correctly, that is the only claim that any of these mill owners make to the water.

MR. CORFMAN: Certainly not.

MR. A. C. HATCH: That is the way I read the stipulation, and I want to be put right on it if I haven't it correct. They have no rights except by virtue of the grant from the city, don't claim anything by virtue of their use except to the city.

MR. THOMAS: There is nothing in the stipulation to indicate that, Judge Hatch.

MR. A. C. HATCH: I cannot read it any other way.

MR. THOMAS: That is a matter for the court to determine subsequently.

THE COURT: The stipulation is in the record. The effect of it will be a matter of argument. I understood you to suggest the city had some further evidence with reference to the power rights.

MR. THOMAS: Yes, your honor, there is one other thing, counsel are not fully determined yet upon the presentation of certain minute and certain ordinances of Provo City. There has been a great mass of them and some of them I am certain would not be material, and the presentation of those ordinances which we might subsequently deem worthy of presentation to the court, I should like leave to present subsequently because they would

be substantially the same character as those ordinances offered tonight. They will be nothing new in character and nothing that would in anywise call forth any further evidence, I think, than that which has been presented.

THE COURT: very well.

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OSCAR W. FLYGARE, called by the defendant Provo City being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Your full name, Mr. Flygare?

A Oscar W. Flygare.

Q What is your business?

A Master mechanic.

Q Of what?

A Knight Woolen Milles.

Q How long have you been connected with the Knight Woolen Mills?

A Thirty-one years past.

Q Continuously? A. Yes sir.

Q In the capacity of master mechanic?

A No, just the last twenty-six years.

Q Been master mechanic for twentysix years? A. Yes sir.

Q As master mechanic, what department of the mills have you had to do with?

A The power and of the machinery.

Q And you attend to those duties? A. Yes sir.

Q What kind of water wheels are installed at the Knight Woolen Mills?

MR JACOB EVANS: I object to that as immaterial and incompetent under the stipulation made here by the plaintiff and the defendants.

MR. A. C. HATCH: Further immaterial in any event. The question before the court is the water appropriated and

used by the wheel. Kind of wheels are wholly immaterial. The wheels might allow to flow through several hundred feet of water. The question before the court is the water they have had and flowed through the wheel. Kind of wheels and their capacity are wholly immaterial.

THE COURT: I hardly agree with you Judge Hatch. I am of the opinion that the mere fact that water is run through the wheel would not constitute a beneficial use unless the quantity of water that was run through was necessary to turn the wheels. I think the capacity of the wheels is very important and material question, where it is claimed a beneficial use consists in the operation of machinery. In other words, it is not a beneficial use to attempt to run a hundred second feet through wheels that can only use twenty second feet. That is the view I have. Objection is overruled. I think it is competent evidence. And upon the other proposition that under the stipulation it is not material, I am inclined to think it is. I am inclined to think such a use, if we assume that Provo City has shown an appropriation of the water and taking of the water, I think it is material to show that the use of that it has been put to is beneficial; whether they use it as a municipality or whether they merely control it for some other persons to use it. Objection is overruled.

MR. A. C. HATCH: Note an exception.

A There is two. One is a forty inch standard Leffel and one is a thirty-six inch Ridsen wheel.

Q Do you know the rating horse power of those wheels?

A The manufacture's rating is horse power.

Q Do you know what they are? A. Yes sir.

Q What are they?

A The rating --

MR. A. C. HATCH: Just a minute, we object to that, if the court please, as being immaterial under the ruling of the court; further the rating is hearsay.

THE COURT: That is another ground of objection. I am inclined to think that the rating is hearsay. I don't think this witness can testify what the rating is from the manufacturer.

Q Do you know what the horse power of the Leffel wheel that you have mentioned is?

A That<sup>all</sup> depends on what water we have got.

Q How?

A It all depends on what water you have got behind the wheel.

Q When you have a full head as it is now installed?

A Yes sir, we have a full head it would give us fifty horse power.

MR. JACOB EVANS: Wait. He asked if you knew what the horse power was.

A Yes sir.

Q Now, you may answer what is the horse power?

MR. JACOB EVANS: We object to that as incompetent and immaterial what the horse power is.

THE COURT: Objection is overruled.

MR. JACOB EVANS: Exception.

Q Is that the capacity?

A That is the capacity.

Q What is the capacity of the other wheel?

A It is thirty horse power.

THE COURT: What is that other wheel?

A It is a Risdon-Alcott water wheel.

THE COURT: Do you know the number of second feet that the mill race carries?

A I don't know anything about second feet, I always go by the cubic feet.

THE COURT: How many cubic feet is it?

A When we have plenty of water there is from forty to forty-five hundredths second feet.

THE COURT: How?

A From forty to forty-five hundred second feet.

MR. JACOB EVANS: Minute feet?

A Cubic feet, I mean, yes.

Q From forty to forty-five hundred?

A Yes.

Q Now, what seasons of the year since you have been connected with the mill have you had that quantity of water in the Mill Race?

A We have had it from September to latter part of May.

Q And from that time on until September about what?

A Well, we have had from one to two thousand feet, might be twenty two hundred feet of water.

Q Now, is there ever a time in the operation of the mills there when you could not utilize all the water that flowed through the mill race in your mills?

A Always utilize the water there is in the race.

Q What is the power that is developed by your wheels and water applied to?

A To machinery.

Q What machines?

A Spinning, carding, picking, bolting mills.

Q And has that been done continuously since you have been connected with the mills?           A. Yes sir.

Q During the low water stage of the river what has been the custom with respect to the use of the water during the night time, that flowed in the race?

A It has been turned to the farmers.

Q At what time?

A Well, we always had the water until six and just right after six, then the water is gone down, we always had to use steam from seven to six.

Q Each day?

A Yes sir, except Sundays and holidays.

Q And then when it was turned off at night and following day again turned on?

- A Yes sir.
- Q Has there been any additional water turned to the mill during the low water season when it is taken away?
- A This was in 1902. There was something done of course -- I was intending to get a wheel to put in a small penstock, carrying about two thousand feet of water, and then we wouldn't have none at night and double in the day.
- Q And did you get that amount?
- A I got the wheel and put it in and the water was there for one wheel.
- Q Double the amount you had had during the day?
- A Yes sir, that is double the amount what we had had before.
- Q And that was during the low water stage of the river or months of irrigation?           A. Yes sir.
- Q Does the mill use any of the water of the Mill race for any other purpose than that of propelling machinery?
- A Yes sir.
- Q What other purpose?
- A For scouring, dyeing, cleaning and washing the cloth; for the boilers and for the engines, condenser on the engine.
- Q And after that use where does the water go?
- A It returns in the tail race.
- Q Is the water put to any other use than that of washing and dyeing and uses you have already mentioned below the tail race of the mill?           A. No.
- Q How about the sewage from the mill and washings and dye?
- A That returns in the tail race.
- Q What becomes of it?
- A It goes down in the tail race.
- Q Carried away?           A. yes sir.
- Q Now, has this use of the water been continuous for thirty years last past in the mill?           A. Yes sir.
- Q And for the purpose that you have mentioned?
- A Yes sir, I would like to correct some -- there was from

1905 to 1910 the mill wasn't in operation.

Q None of the time?

A None of the time.

Q And then the work work was resumed in the mill? A. Yes sir.

Q After that period? A. Yes sir.

Q With that exception the water has been used continuously for the purposes that you have testified?

A Yes sir.

Q Do you know about what proportion of machinery of the mill is propelled by this power? A. Yes sir.

Q About what proportion?

A The carding, spinning, picking, dressing, finishing and the dye house.

CROSS EXAMINATION by Mr. Thurman.

Q My. Flygare, I didn't understand one thing in your testimony, and that is the number of feet of water when you have a full head.

A From forty to forty-five hundred cubic feet a minute.

Q Cubic feet a minute? A. Yes sir.

Q That is what I didn't get before. That is from September until May? A. Yes sir.

Q And then you gave some figures again from May until September.

A From May to September we have about two thousand feet. Sometimes might be a little below and other times it might be a little above, but the average was that.

Q Two thousand minute feet? A. Yes.

Q During the time this exchange of water is taking place, that is, when the farmers take it at night, and you take it in the day double the amount, is it all taken out of the race at night?

A As far as they can, exception they have to let some go down to irrigate different places.

Q Lots? A. Yes sir.

Q Do you know about how much that is that goes down at night?

A No sir.

CROSS EXAMINATION by Mr. Ray.

Q Mr. Flygare, isn't there enough seepage water coming into the Factory race to take care of the night needs for irrigation ?

A No, I don't believe.

Q Do you know whether there is or not?

A Well, I don't know, because the race never been shut up.

Q In 1902 you put in a new wheel with a capacity of about two thousand cubic feet per minute, did you?

A Twenty-two hundred feet a minute the wheel capacity was.

Q How small a quantity of water can you use through that wheel?

A To get any benefit?

Q Yes.

A The lowest be about nineteen hundred.

Q Now, prior to putting in that wheel, what was the lowest quantity of water which you could use beneficially through the factory wheel?

A It was eleven hundred.

Q Eleven hundred? A. Yes sir.

Q And what was the maximum that was required for the wheel, which would operate on eleven hundred?

A Twenty-eight hundred.

RE-CROSS EXAMINATION by Mr. Thurman.

Q What was done with that water during the five years that it was not operating the mill?

A Where was it going?

Q Yes, where did it go in the day time?

A Well, the mill used it, Hoover --

Q How?

A The other mills on the race used it.

Q Do they use as much as the woolen mills do?

A I believe they do.

Q Each one of them? A. Yes sir.

Q One further question. In September, isn't that about as

dry a month as August, and aren't the farmers needing and using water in September the same almost as in August?

A That is, <sup>in</sup> the latter part of September we generally have water.

Q Who did.

A The mill for the wheels.

Q The latter part of September? A. Yes sir.

---

JOHN W. HOOVER, called by the defendant, Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Your name is John W. Hoover? A. Yes sir.

Q Were you at one time connected with the mill now owned by Hoover Brother, co-partners, one of the defendants in this suit? A. Yes sir.

Q How long have you known that mill?

A Why, I have known the mill ever since it was built.

Q When was it built?

A I think in 1876.

Q Do you know if it has been in continual operation since that time? A. Yes sir.

Q What use was made of the power generated by the wheels that are used at the mill?

A Well, we used the power all the time with the exception --

Q What for?

A To make flour.

Q Since the mill was built? A. Yes sir.

Q What kind of a wheel have you got installed at the Excelsior Roller Mills?

A What they call a forty-four inch special Eiffel wheel.

Q Do you know how many horse power this wheel generates?

A No, I am not certain of it, I think around thirty horse power.

Q Do you know how many horse power it takes to operate your mill?

A Well, of course that is according to what we grind.

Q Ordinarily?

A Ordinarily it takes about that horse power to operate it.  
Of course there is times they can operate with less.

Q And this is on what is known as the Mill race, Provo City water system?           A. Yes sir,

Q And the water of that race is used in the wheel for making Power for that mill?

A Yes sir.

Q And has been continuously used for that since the mill was built?           A. Yes sir.

Q Do you know what the annual production of the mill is?

MR. JACOB EVANS: Object to that as immaterial.

THE COURT: Objection is sustained, I see no materiality.

MR. CORFMAN: If the court please, we think that it is material for this reason. It shows the beneficial use of the power, that it is used for the purpose of manufacturing flour.

THE COURT: He testified to that. He testified it had been used ever since it was built for the purpose of manufacturing flour.

MR. CORFMAN: We think the amount of production is material for the purpose of beneficial use.

THE COURT: The objection is sustained. I don't think it is material at all. The right is just as effectual a right for a small mill as it would be for a large mill, if you have a right at all to the quantity you claim.

Q Now, you have been connected with this mill for the last thirty years, I understand you?

A Since 1885.

Q Down until what time?

A Until 1912.

Q And been familiar with the use of the water there since that time?           A. Yes sir.

- Q Do you know whether it has been put to the same use as when you were there?
- A I think so.
- Q Now, do you know what proportion of the water in the race is necessary to operate your wheel?
- A Well, it would take about half of the water that the race will hold.
- Q Do you know what the capacity of the race is in second feet?
- A No, I don't, I never figured it in second feet. We always figured it in minute feet. About four thousand or forty-five hundred feet.
- Q Do you know, in the operation of the mill, utilize all that water for power?
- A No, about half of it.
- Q About half of it?           A. Yes.
- Q You can operate then with about how many minute feet?
- A Well, about two thousand or twenty-two hundred.
- Q During the low water state of the river and when the water of Provo River has been used for the purpose of irrigation, about what quantity of water did you have for the operation of your mill since you have been connected with it?
- A Well, that was different different years. Some years we had scarcely any.
- Q Ordinarily what would you have during the irrigation season?
- A Well, it would vary every year of course when they would trade, when we would trade water with the city.
- Q And when did you commence to trade or exchange water with the city?
- A Well, that would be according to when the water would go down in the spring of the year.
- Q Do you remember about how many years ago it was that practice was commenced?

MR. RAY: I object to this as irrelevant and immaterial under the stipulation they had no water to trade apparently.

It was what the city gave them.

THE COURT: I don't understand the stipulation is binding upon anyone except these parties.

MR. RAY: I mean the proof is in upon that point by stipulation.

MR. A. C. HATCH: The question is settled as between them and the city, and as to all the other parties --

THE COURT: I am inclined to think it is admissible under the evidence of the plaintiff. The plaintiff went into it in great detail, the matter of this exchange of water. I don't know whether you expect to contradict it or not. The last witness you put upon the stand you went into in some detail, proving exactly the same thing that the plaintiff took nearly a day to prove. Do you expect to contradict the evidence as it now stands.

MR. COREMAN: No, we don't expect to contradict the evidence, simply offering this line of testimony showing the use of that was made.

THE COURT: That use has been proven by the plaintiff very completely. Unless you expect to contradict the evidence of the plaintiff-- if you do, the court will permit you to proceed.

MR. COREMAN: I understand the evidence is in about how the water was used in the Mill race and it may be that this evidence is cumulative; and if the court takes that view of it we will not put it in.

THE COURT: It would be unless you expect to contradict it. If you expect to prove the same state of facts as testified to by Mr. Wentz and the other witness, I take it it would be hardly necessary to take the time of the court to introduce other evidence along the same lines, but if you expect to dispute that --

MR. COREMAN: It is only for the purpose of emphasizing it.

THE COURT: It is not necessary to emphasize it, and

if it is attack by any of the other parties on rebuttal, you might be permitted possibly to show, but so long as you don't dispute what they have proven so completely, that is in such great detail, I would not introduce evidence on the same line.

Q I will just ask one further question. Mr. Hoover, this power that has been ~~grated~~ generated through the wheel that you have testified to, was used for manufacturing meal products?

A Yes sir.

Q And grain? A. Yes sir.

CROSS EXAMINATION by Mr. Jacob Evans.

Q I just want to ask one question. The Hoover mill succeeded to the rights of the Beebe mill, did it not -- the Hoovers I say succeeded to the rights of Beebe?

A Yes sir.

CROSS EXAMINATION by Mr. Thurman.

Q One question. Did you always have water in the summer time in the day time to run your mill? A. No sir.

Q Why?

A Because there wasn't enough some years to run the mill. We run an engine several years.

Q How?

A We run steam engine there several years account of low water.

Q Where did the water go when you were running the steam engine?

A Well, the first year there wasn't very much water to go anywheres. I think it was 1886, if I remember right.

Q Well, did it run through the race, all there was, go down the race?

A Some little spring water going down through the race, The rest of it was used on the farms.

Q Used on the farms? A. Yes sir.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q Did you put your steam engine in the year that you became

connected with the mill in 1886?

A I didn't hear you?

A Did you put the engine in the year you became connected with the mill in 1886?

A I became connected with the mill in 1885.

Q Well then it was in 1886 you put the engine in?

A Yes sir.

Q Do you have it there yet?

A No, it was just a temporary portable engine.

Q What additional power do you now have other than the water?

A I don't know what they have now, I think they have electric power.

Q They did have when you --

A They didn't have when I was there.

Q It has been put in since you disposed of your interest?

A Yes sir.

---

FRANK HOOVER, called by the defendant Provo City being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Your full name?

A Frank Hoover.

Q Are you one of the defendants in this case?

A Yes sir.

Q Member of the co-partnership of Hoover Brothers?

A Yes sir,

Q And how long have you been operating the Excelsior Roller Mills?

A I have been connected with it as a partner about five years.

Q You succeeded to the interests of John W. Hoover, that has just testified?

A. Yes sir.

Q You and your associates?

A. Yes sir.

Q And you have been operating the mill since that time?

A Yes sir.

Q Continuously? A. Yes sir.

Q It is now in operation? A. Yes sir.

Q For the grinding of wheat and flour? A. Yes sir.

Q And about what proportion of the water do you use in the operation of the wheel that you had installed?

A We use about forty-two to forty-five second feet.

Q And how much -- could you do with less?

A We could run by throwing off some of the machinery, run little less than that.

Q What is the least you can operate with?

A Probably thirty-five or thirty-two, something like that.

Q Since you r connection with the mill, have you had that, have you had that use? A. Yes sir.

CROSS EXAMINATION by Mr. Jacob Evans.

Q You have not had any more water than what the Knight Woolen Mills have had, have you? A. No sir.

Q Goes through your wheel before it reaches their's?

A Yes sir.

REDIRECT EXAMINATION by Mr. Corfman.

Q Since you have been connected with these mills, what has been the practice with respect to the night use of water?

A There was some arrangement, I am not familiar with the arrangement that was made with the city, the understanding I got though, they should use the water -- that is, when it was low, in low season, they should use the water at night and we should get double the water in the day time?

Q Has that been the practice? A. Yes sir.

CROSS EXAMINATION by Mr. Thurman.

Q Turn your mill at night at any time?

A Yes sir.

Q When did you run it at night?

A Different times in the year, been mostly in the fall and some times in the spring of the year when we had the water, when it has been in the creek at night, in the race.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q When you got double the quantity in the day time, did you get more than the forty or forty-five second feet?

A No sir.

Q So that without that exchange you would not had sufficient water to turn your wheels in the daytime or at night time either?

A No, in the low stage of the water, why we could not operate the mill.

Q That has been the condition ever since you have been connected with it, has it not?           A. Yes sir.

Q During what is called the low water season?           A. Yes sir.

Q And do you know of your own knowledge of the quantity of water that is necessary to turn your wheels, that is, operate, properly operate the mill?

A No, I have never made a test or anything.

Q Why do you say it takes that quantity then?

A Sir?

Q Why do you say then that it takes forty to forty-five second feet.

A Well, we know what the wheel is built for, what it will do.

Q Under a certain head?

A Under a certain head, yes sir.

Q You only know by the rating the manufacturers give you, do you?

A Yes sir.

Q That is all the knowledge you have?

A And through the testimony of some of the watermasters that has given us, told us that amount of water was in there.

Q Their statements made to you?           A. Yes sir.

Q What was the condition last year as to operating the mill, any different from what it had been theretofore?

- A Yes sir, the water was very low last year.
- Q You had sufficient by making that exchange to run your mill?
- A No sir.
- Q In daytime?
- A No, we installed an electric motor last year. We run probably two months and a half with a motor.
- Q Then you didn't use the water at all during last year?
- A We run it in connection with the water, what water we had, and run the motor in connection with the water.

REDIRECT EXAMINATION by Mr. Corfman.

- Q Did you receive any notice from the court commissioner, Mr. Wents, at any time, that he was taking any water from the mill race and distributing it among the water users for irrigation?

MR. JACOB EVANS: Object to it as immaterial and incompetent.

MR. CORFMAN: He testified to it and I think we ought to be permitted to deny it.

MR. JACOB EVANS: No, he did not, he simply testified he sent out a certain notice how the water should be distributed.

MR. CORFMAN: He testified --

THE COURT: What is the materiality of it. I don't see any materiality. I understand there is no controversy between the city and power users as to the taking of the water from the power company for the use of the farmers.

MR. CORFMAN: But this water was not only taken from Provo City, but was taken and distributed among the other water users.

THE COURT: Outside --

MR. CORFMAN: Outside of the city.

THE COURT: I don't think it is material this man should have a notice. Under your stipulation and theory of the case any notice given at all it would be to Provo City, wouldn't it?

Q Did you receive any such notice?

A I don't remember receiving that notice.

DIRECT EXAMINATION by Mr. Thomas.

Q How often would you get into a period of very low water so that you could not run your mill?

A That was practically only two months and a half, that is practically all the time in the two months and a half we were operating with an electric motor. That period of time there wasn't enough water to operate the mill.

Q Was it during that time that the water was taken at night and given to you in double quantity in the daytime?

A Yes.

Q Does that continue through the irrigation season?

A Yes sir.

CROSS EXAMINATION by Mr. Jacob Evans.

Q Mr. Webster Hoover is the man who takes charge of the books, isn't he?           A. Yes.

Q And receives the mail and notices?           A. Yes sir.

Q He might have received that notice and you not know anything about it?

A Possibly, yes.

Q You said you run the mill sometimes at night?

A Yes sir.

Q Before you made this exchange of water you never did that during the low water season, did you?

A Not at night, no, in the low water season we couldn't run. Usually low water season, we began about September when the farmers would get through with it.

Q And during the months of say July, August and September, as a rule you never run down during these months, did you?

A No sir.

Q At no time?           A. No sir.

ORSON P. SMOOT, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Your full name?

A Orson P. Smoot.

Q Connected with the Smoot Investment Company?

A Yes sir.

Q One of the plaintiffs in this case? A. Yes sir.

Q What position do you occupy with that corporation?

A Manager and treasurer.

Q How long have you been such?

A For twelve years.

Q Have you general supervision of the operation of the business?

A Yes sir.

Q How many years have you been connected with the business?

A Twenty-three years.--

Q Do they operate a planing mill?

A Yes sir.

Q On what stream of water in the Provo City system?

A Commonly known as the Factory race.

Q How long has that mill been built upon that race?

A Well, since, ever since I have been there.

Q And how many years ?

A Previous --

Q How?

A I think it has been built some thirty-six or thirty-seven years.

Q Is the water from the race used for power purposes?

A Yes sir.

Q What kind of a wheel have you got installed at this mill?

A Forty inch Leffel Sampson.

Q And it is used for -- the power is used and applied for what purpose?

A General woor wörking manufacture.

- Q Have you used it continuously for that purpose since you have been connected with the mill? A. Yes sir.
- Q Now, during the low water stage of the Mill race, I will ask you if it is necessary to use the entire flow of that stream?
- A It is for the capacity power of our wheel, yes.
- Q And during the low stage of Provo river, is all the water diverted into your race? A. Yes sir.
- Q Is any part of it permitted to flow down during the daytime while you are in operation in any other branch of the race?
- A No sir, there is a few irrigators below us that are entitled to water and we have made arrangements with them here the last year or so that they take the most of the water at night and give us the water in the day time.
- Q You take it all during the day?
- A We take it all during the day.
- Q And at night do you operate the mill? A. No sir.
- Q And the water is then taken from the race?
- A Taken from the race.
- Q By whom?
- A I think by prove City. It has been mutual agreement between the mill owners and the Provo City they should take the water.
- Q And they return it when?
- A They return it in time for us to start in the morning, 7:30.
- Q Do you know the capacity of the wheel you are operating there generating horse power?
- A Rated ninety horse.
- Q Did you ever test it to find whether that rating was correct?
- A Tested it up to about eighty-per cent capacity of that.
- Q When you get the water do you utilize that horse power, generate that horse power and utilize it in the mill?
- A We do.
- Q And you have been doing that since you have been operating there?
- A We have during high water.
- Q And are you operating under a grant from the city? A. Yes sir.

C. H. WARD, called by the defendant Provo City,  
being first duly sworn testified as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Your name is Charles Ward? A. Yes sir.

THE COURT: C. H. Ward, is it?

A Yes sir.

Q Are you connected with the E. J. Ward & Son Company?

A Yes sir.

Q One of the defendants in this case?

A Yes sir.

Q What position do you occupy with them?

A I am manager and treasurer of the company.

Q Do you operate the planing mill on what is known as the  
Factory race in Provo City? A. Yes sir.

Q How long has that mill been in operation?

A It will be twenty-seven years this fall.

Q What kind of a wheel have you got installed?

A Leffel wheel, forty --

Q What power?

A Forty-four inch.

Q Leffel wheel? A. Yes sir.

Q You know the horse power?

A Thirty by thirty-two.

Q How long has the wheel been in operation?

A Since we began.

Q That was twenty-six years --

A That is we had a forty inch wheel and took the other one in  
and put in this forty-four several years ago, and the  
forty inch wheel, supposed to use it in the other side of  
the race. We have it already, but have not used it.

Q Now, has it been in operation continuously in using water  
power? A. Yes sir.

Q For what purpose?

A For the manufacture of building material.

- Q You have heard what has been testified to concerning the turning of the water out at night? A. Yes sir.
- Q And using it for irrigation? A. Yes sir.
- Q And return of the water for working hours the following day?
- A Yes sir.
- Q That applied to your mill as well as the others?
- A Yes.

CROSS EXAMINATION by Mr. Thurman.

- Q You use the same water that the woolen mills use?
- A Yes sir.
- Q Subject to the same fluctuations on account of the changing at night?
- A Yes, just the same.

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OLIVER S. OLSON, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

- Q What is your name?
- A Oliver S. Olson.
- Q You are connected with the Provo Ice & Cold Storage Company, one of the defendants in this action? A. Yes sir.
- Q What position do you occupy with them?
- A Manager and secretary.
- Q How long has it been?
- A It has been -- well, I have been connected with it since 1905.
- Q In what business is this defendant engaged?
- A Manufacture of ice.
- Q Have you a plant situated on what is known as the Mill race under the Provo City water system? A. Yes sir.
- Q What kind of a wheel have you installed there?
- A We have a 36 inch Leffel.

- Q Use the water of the Mill race for generating power through that wheel?           A. yes sir.
- Q And power used for turning machinery and in the manufacturing of what?
- A Ice.
- Q Do you know what proportion of the water of the Mill race you use or can use in the operation of your wheel?
- A Why, I cannot use it all at certain times.
- Q What times of the year can you use it all?
- A During the winter and fall.
- Q You don't use it all at that season?
- A No, I don't know how much comes down.
- Q Do you know about how many second feet of water is necessary to use your wheel to the highest efficiency?
- A Why, no, I don't . I know that we need about fifty horse power. I don't know how many second feet that would mean.
- Q Does your wheel generate fifty horse power?
- A Our wheel will practically generate more than that, but that is the capacity our plant would take.
- Q does that wheel operate your plant?           A. Yes sir.
- Q And in what season of the year do you have sufficient water to do that with?
- A Why, we only have sufficient water during the spring and fall.
- Q And do you use other power during the low water stage of the river?
- A Yes, we use a steam engine.
- Q You have heard what has been testified to with respect to taking water from the Mill race and exchanging for water for the irrigators, have you?           A. Yes.
- Q Is that true, does that apply to the use of the water at your plant as well?
- A Yes, that has been , at times it has not been continuous.
- Q It has not been continuous ?           A. No sir.
- Q You are operating under a grant from Provo City?
- A As I understand it, yes.

Q Do you know how long the mill has been where you are now operating?

A Since 1904 or '05.

Q Do you know whether there was a mill there before you went ?

A I understand there was.

MR. RAY: We object to what he understand.

MR. CORFMAN: That may go out.

Q You don't know of your own knowledge.

A I just tore down a mill there.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q You say you are operating under a grant from the city?

A As I understand it.

Q When did you start operations under that grant?

A Why, this plant was built in 1905. A<sup>2</sup> I say there is a mill, was a mill standing there that I just tore down, old flour mill.

Q It had not been used for twenty years before you started your operations at it?

A Why, I don't know, there was a mill there, I don't know when it was used. Former owners would know that.

Q Who was the the grant to that your mill operates under, if you have one?

A Why, I don't remember.

Q You don't know whether you have any grant at all?

A Yes, I have seen it.

Q Sir?

A I have seen it, yes.

Q You don't remember who the grant was to, whether it was Provo Ice & Cold Storage, or someone else?

A I know it wasn't Provo Ice & Cold Storage, I remember the date, the date was somewhere along about 1859.

Q Long before your company was in existence?

A Yes.

Q You don't know whether it has any connection whatever with

your company, that grant, do you?

A All I know it was on the stream there.

CROSS EXAMINATION by Mr. Jacob Evans.

Q Your plant is located outside of the city limits of Provo City, isn't it? A Yes sir.

Q Always has been since it has been located there?

A Yes sir.

MR. CORFMAN: You say do you know whether it has always been located outside of the city, do you know where the city limits have always been?

MR. JACOB EVANS: I said since the mill had been there since the ice plant had been there.

MR. CORFMAN: You said always had been.

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LEROY DIXON called by the defendant Provo City, first being duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Your name is Leroy Dixon? A. Yes sir.

Q Connected with the Provo Ice & Cold Storage Company, one of the defendants in this action? A. Yes sir.

Q What position do you occupy with that company?

A I am president of the company.

Q How long have you been such?

A I think I have been president for the last time probably a year, or nearly so.

Q Well, altogether.

A I was president of the company first when we purchased -- the incorporation of the company.

Q How many years ago has that been?

A That must have been ten or eleven years ago.

Q Was that when the present plant was constructed?

A When it was first begun, yes sir.

Q Do you know what the cost of the present plant was?

MR. JACOB EVANS: Object to it as immaterial.

THE COURT: Objection sustained.

MR. CORFMAN: Note an exception.

Q Do you know whether your company is operating under a grant from the city?

A Yes sir.

Q And claim a right to use that water?

A Yes sir.

Q Do you know the capacity of the wheel that operates there?

A I don't, I think it develops about forty horse power, I am not certain, however.

Q It has used machinery in the running of the plant?

A What is it?

Q It is used for propelling machinery operating the plant?

A Yes sir.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q You say you claim the right to the use of the water?

A Yes sir.

Q Well, by what action or grant or otherwise do you claim the right to use it?

A Directly through a purchase from the previous owner.

Q Do you know how long it had been that the previous owner had used it for power purposes prior to your purchasing it?

A Only a very short period.

Q Hadn't it been about twenty years?

A No sir.

Q What was it being used for?

A As a saw mill.

Q Did the saw mill use fifty horse power?

A I don't think so.

Q About how much horse power did the saw mill use?

A I haven't an idea, I never had any experience.

Q Aren't you a party to the stipulation that was filed here, your

A Company?

A I think so.

Q Isn't that you claim the right by grant from Provo City, don't you?

A Yes sir, we naturally received the title that came to the previous owners from by purchase.

Q You then obtained a grant from Provo City with a right to use probably three or four times the power that had formerly been used?

A Our grant has been recognized without disturbance for a number of years since our plant was erected.

Q Since the plant is erected?

A Yes sir.

Q That is, your grant from the city?

A The grant from the city as I suggested was a number of years back, probably in the '60's or '80's somewhere, I don't remember the exact date.

Q But it was not for a fifty horse power that your wheel is now generating?

A I think it was for the identical wheel which we are using, or that wheel was used by the previous owners for years before we got it.

Q By the saw mill?

A I don't know for what purpose, but for whatever purposes they put it to. I think they operated a flour mill first as well, joint use.

Q Where was no flour mill there when you purchased, was there?

A The mill was there but it was not in operation.

Q Had it been in operation within twenty years prior to the time you --

A I think so, I am not sure, however.

Q Who was the owner, from whom did you purchase?

A The Smith estate, the James Smith estate.

Q Do you know the fall to the Smith wheel?

A No, I don't.

Q You don't know anything about the power, horse power that was necessary to operate either the grist mill or the saw mill?

A I do know that we increased the horse power by -- I should think double by changing the site for the use of the mill to its present location. It was used -- property was three hundred yards further north up near the intake than where we are using it, and we have developed a great deal more power through the additional fall and putting it down where the present turbine is located.

MR. CORFMAN: I think, if the court please, we have no further evidence to offer at this time, but later like to reserve the right to offer the several grants and ordinances effective--

MR. THOMAS: I mentioned that. I mentioned those ordinances because there are some late ordinances as well as some of the older ordinances that will be introduced. I mentioned that.

THE COURT: Then with that exception you rest at this time.

MR. CORFMAN: With that exception we rest.

MR. THOMAS: With the further, the fact it develops through the suggestion of the court that proper allowance would be made to the defendants to introduce such testimony as might be needed by way of rebuttal. Should such matter --

THE COURT: Certainly you will be permitted to introduce rebuttal when the time comes.

OMISSION.

Discussion as to amendment in re Provo Bench Canal & Irrigation Company and Timpanogos Irrigation Company.

Discussion as to holding court at Heber City.

Proceedings had at Heber City, August twenty-first and twenty-second.

Proceedings at opening of court at Provo, August 28, 1916.  
Discussion as to Wasatch County stipulation.

MR. RAY: I would like to ask counsel whether among  
the <sup>Statutes</sup> ~~statements~~ to which they made reference and have introduced,  
they called attention to the charter of prove City?

MR. THOMAS: That was introduced, as I remember.

MR. RAY: And it is in the record now?

MR. THOMAS: As I remember it it is.

OMISSION.

OPening statement by Mr. Ray on behalf of Provo Bench  
Canal and Irrigation Company.

HENRY J. W. GODDARD, called by the defendant  
Provo Bench Canal & Irrigation Company, testifies as follows:

DIRECT EXAMINATION by Mr. Ray.

- Q You have been heretofore sworn in this case?
- A Yes sir.
- Q How long have you been familiar with the irrigation system of Provo City?
- A About sixteen years.
- Q What would you say as to whether or not the present acreage of Provo City both as to farm acreage, farm lots and city lots has been substantially the same during the past twelve years?
- A Well, they are hardly the same as they were number of years ago.
- Q Has it increased?
- A Decreased.
- Q How much?
- A That is in the stipulation we entered into with Mr. Steward and the reservoir company there is quite an area that is watered from seepage that was not at that time.
- Q How long has that area been watered by seepage?
- A The city has dug drains and conserved this water and applied it on certain lands which heretofore got it direct from the river.
- Q And it don't now need it from the river?
- A No sir, we are watering that from the seepage.
- Q And how long have you watered that from the seepage?
- A Probably ten or twelve years, fourteen years, probably.
- Q And other than that the area is substantially --
- A There is some ground, I think the railroad ground we cut out, belongs to the Oregon Short Line or San Pedro.
- Q Which is not being irrigated at all?
- A It has not been irrigated for several years, still they have their water time given to them and pay their tax on it.
- Q But it has not been irrigated?
- A East of the Factory Race has not been irrigated.

Q And it is land which is covered with buildings and railroad yards and tracks, is it not?

A Railroad yards, yes sir.

Q Nothing growing upon it? A. No.

Q And there has not been for many years, has there?

A No sir.

Q Now, have there been any other decreases in the acreage of Provo City of the character you have mentioned?

A Yes sir.

Q State them?

A There is the Cluff and Dixon land at the north end of our system.

Q Why has that been eliminated from the Provo City acreage?

A It was decreed jointly and undivided with Provo City and under the arrangement with Mr. Stewart, <sup>we</sup> that out all together.

Q So that you don't consider that part of the land of Provo City?

A No sir, it is above our measuring devices and so we didn't take that into consideration.

Q Has it ever taken water directly from the Provo City system

in its history? A. Yes sir. That is, we claim the canal, city creek that takes the water from, we take it in at the mouth of Provo Canyon, runs down City Creek to our measuring gate.

I think there is about ~~xi~~ eight or ten acres of the Pressed Brick land or the Dixon land that is on our schedule yet,

watered below our measuring device.

Q But all the other land is above it ?

A Yes sir.

Q How much acreage is there in the Cluff and Dixon property ?

A Well, Pressed Brick claims about eighty acres, I think.

Q Is that the total?

A I wouldn't be certain as to that, I don't know how much they water of it, either.

Q How much -- then whatever they do water is out of the city system?

A Yes sir, except ten acres.

Q How much is there in the railroad yards?

- A I think about eight acres.
- Q How much is there in the land which you refer to as irrigated by seepage?
- A I think the total is somewhere close to a hundred acres that we cut out with what we have on our schedule.
- Q That is a total of about 180 acres. Are there any other lands then which have ceased to draw water from the Provo City system, which drew water from the Provo City system ten or twelve years ago?
- A No, I don't know of any other, although Provo City owns more land. They own about thirty-five or forty acres right opposite the Pressed Brick Company land.
- Q But that is not --
- A Along the river bed, which would come under the river bottom.
- Q I say under the Provo City system?
- A No sir, I don't think of any more.
- Q Otherwise the acreage has remained the same?
- A Except when we got the decree, I think the First Ward Pasture was taken into that acreage.
- Q The decree will show, I think, the First Ward Pasture was the City Race?
- A No, I don't think it shows that, that was known as Provo City.
- Q And there they use the Mill race water largely, do they not?
- A Yes sir, for a great portion of it, and this drain water the city has developed digging these drains they use mostly that.
- Q All they claim direct from the river they get through the power race, do they not? A. Yes.
- Q Which is used for power purposes? A. Yes.
- Q Have you been in charge of the water during the 1916 season for Provo City?
- A Yes sir.
- Q What quantity of water have the mills used during this season, if you know?
- A I could not tell you the dates. They had a full head of about

75 second feet, 75 to 80 second feet, as long as it was in the river. When it got down to the intermediate stage they decreased, and we had to turn the race off at night and exchange with them, give them a flow of about forty to forty-five second feet during the day time of twelve hours.

Q They have always had their day time flow during the season of 1916, have they?

A Yes sir, I think every day.

Q That has been the custom ever since you have been familiar with the Provo City system, and it has worked the same this year?

A No, there were some years a constant stream run down the race day and night, one or two years I recollect there was water enough the stream running direct to the lake in the river. I think that was in 1907.

Q But there has been no time during the season of 1916 when the mills have not had their day time supply?

A Not that I remember.

Q And that was true in 1915?                   A. Yes sir.

Q My associate has some question as to whether or not I have made clear the matter of acreage. Except for the quantity you have mentioned, Mr. Goddard, the areas have remained the same during the past ten or twelve years?                   A. Yes sir.

THE COURT: Mr. Goddard, did I understand you to say the railroad lands were eighty acres or eight?

A About eight acres that has not been watered for a number of years, although they pay their water tax.

THE COURT: I didn't understand whether it was eighty or eight.

A Eight, somewhere in that neighborhood, I wouldn't say to the acre.

CROSS EXAMINATION By Mr. Corfman.

Q Mr. Goddard, you say the mills have had their full quote of water in 1916?

A No sir, not that we claimed under the decree.

Q You say the mills have been running continuously during the present season of 1916?

A No, I didn't say that.

Q I understood you to answer counsel that the mills had had during the day time sufficient water for operation.

A When we had it.

Q Well, was there any time you didn't have it?

A Yes sir, in 1916 we have not had it.

Q What times have you not had the water sufficient to operate the mills in 1916?

A There was several days that we didn't get the water down to the mills until about nine to ten o'clock in the day time, and there was one day we didn't have enough for the farms and they have been short of that amount for the last month, except on seeps, but they have water, what I meant, they have had water in the race.

Q Yes, but have they had sufficient to operate their mills?

A No sir, they have not.

Q And isn't it true just a few days ago that the mills were entirely idle?           A/ Yes sir.

Q And you could not get the water?

A Yes sir.

Q And that condition has occurred several times during the season?

A Part of the day it has yes.

Q And at the same time, under the Provo City water system the farmers were suffering for the want of water?

A Yes sir.

Q Isn't that true also of 1915?

A We suffered to some extent in 1915, but I don't think that we turned the race entirely off of them, off the mills.

Q But it has been turned off entirely off in order to supply a portion of the farms with water?           A. Yes sir.

Q And then the farmers did not have sufficient?

A No sir.

Q During 1916?           A. Yes sir.

Q You spoke of eight acres not being irrigated, now belonging to the San Pedro Railroad Company? A. Yes sir.

Q How long, how many years has it been since that land was irrigated?

A I should judge seven or eight years.

Q When were the lands occupied by their buildings and their tracks?

A It has been irrigated since then?

Q How?

A It has been irrigated since then; the buildings were on there, oil houses and so on.

Q You refer, when you speak of the eight acres, you refer to the eight acres immediately south of where the old station used to be?

A Yes sir.

Q You say it has been seven or eight years since that land was irrigated?

A As near as I can remember.

Q What kind of a tract of land is that?

A It is kind of a gravelly tract.

Q Is it in condition for cultivation, or is it occupied with buildings?

A There is portions of it that could be irrigated and farmed today.

Q The greater portion of it is an open field there, is it not?

A There is a "Y" runs down on that tract.

Q There is a "Y" track runs into it, but that is all on that tract of land?

A The oil houses are at the lower end, and they have the stock yards between the legs of the "Y".

Q The greater portion of the land is subject to irrigation, is it not?

A It could be farmed, yes.

Q You speak of the Cluff and Dixon land, eighty acres as not being watered by Provo City, do you know from what source in the division of the water of the river Cluff and Dixon lands gets its portion?

A

A They get it from City Creek, what is known as City Creek,  
above our measuring device.

Q How long since that eighty acres was taken from Provo City?

A Since the decree of 1902, I think.

Q Since then?

A Yes, it was included in Provo City's water at that time undivided.

Q When it was taken from Provo City's water did Provo City continue  
to draw the same amount of water?

A No sir, I think the commissioner cut that much off.

Q Do you know that to be the fact?

A Yes sir.

Q It was taken out of the supply of Provo City?

A Yes sir.

Q And since that time Provo City has not had it --

A No sir.

Q The water these lands take for irrigation.

A No sir, I think that has been done last two years.

Q What lands is the hundred acres of land that you referred to  
as having taken water, the seepage water for irrigation?

A It is scattered around in different places. There is on  
the east part of town, there is a tier of blocks and also  
some acres and some land under the State Mental and some down,  
I think, next to Bullock's.

Q Do you know the source of supply of this seepage water?

A It is percolating waters from the lands irrigated above.

Q How long has that condition existed?

A Well, it did at one time run into that drain, what seepage there  
was, but of late years, I believe it has been increasing, it  
is not the same every year, there is more when there is a wet  
winter, snow and heavy irrigation from the canyon.

Q It varies?

A It varies.

Q And if there is not sufficient to supply the seepage, or  
sufficient seepage water to supply these lands, from what source  
are they taking the water?

- A From the river, direct flow of the river, the East Union Canal.
- Q And when this seepage water is used and the lands on the San Pedro Railroad Company fails to use the water has Provo City had more water than it could use beneficially at any time.
- A No sir.
- Q Notwithstanding that --
- A Except in the high water season when the Factory Race run direct through the race.
- Q During the high water season?
- A During the high water season that stream run right through.
- Q And that is ordinarily what season of the year?
- A Oh, about 20th of June, first of July.

REDIRECT EXAMINATION by Mr. Ray.

- Q Then Provo City has had more water than it needed up to the 20th of June or 1st of July, during each year?
- A During the high water, yes, night water of the Factory Race.
- Q I wish you would state to me on what days the factory was closed down during the year 1916 for want of water?
- A I don't just remember the date, it is last week though.
- Q Only one day, wasn't it?
- A One day and several mornings until nine or ten o'clock that the mills could not start up.
- Q You don't know whether that was a defect in the distribution of water or whether it was lack of quantity of water?
- A It was lack of quantity of water in the city race.
- Q Was it a lack of quantity of water in the total system?
- A In the river system?
- Q Yes.
- A I think not. I know it wasn't so.
- Q Was it a lack of quantity of water in the Provo system?
- A It was lack of quantity of water in the Provo system distributed to Provo by the commissioner.
- Q As a matter of fact, do you know whether or not on those mornings that the factory was closed down there was water running from

many of your ditches directly to the lake and wasting?

A No sir, I don't.

Q You don't know whether it is true or not. If it was and that water had been applied to the Factory Race or irrigation of the land, it would have relieved your situation somewhat, wouldn't it?

MR. THOMAS: Just a minute, object to that as not proper redirect, and assuming a condition of facts not yet established.

THE COURT: Objection overruled.

MR. THOMAS: I don't know whether there was any water I don't think there was, I didn't go over the tail of every ditch every day. Our water master could better answer that question.

CROSS EXAMINATION by Mr. Thomas.

Q Mr. Goddard, can you state whether or not the water which has heretofore been awarded to Provo City under the decree has been wasted?

A It has not to my knowledge.

Q Do you know if the -- can you state of your own knowledge whether Provo City has abandoned any of its water right decreed to it under the Morse and Chidester decrees?

A They have not.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q You stated that the Dixon property was eighty acres?

A That is what they claim, I think eighty acres in the Dixon farm, and I don't know just the amount that Cluff claims.

Q You don't know the acreage?

A No, I don't.

Q Of your own knowledge of either of the farms?

A No sir.

Q Do you know the quantity of water that was taken out to irrigate them?

A No, I don't.

Q The land above the intake of the city system?

A I could not state the amount, they take out sometimes more and sometimes less.

Q D<sup>o</sup> you know whether it was --

A They go and help themselves. without any regulation, always have done.

Q Do you know whether the water they took was deducted from the quantity distributed to the city?

A So I have been told by the commissioner, That is deducted from the city's portion.

Q How much was it?

A I could not say exactly, four or five second feet, I think.

Q You could not say approximately, could you?

A They don't have a constant stream all the time. They take it different intervals.

Q They take it when they need it and as much as they want?

A Yes sir.

Q Then there was no regulation as to the demands, and could not be?

A No sir.

Q You say you don't know the acreage?

A No, I don't, only what they claim.

Q Who claims?

A Provo Pressed Brick Company claims about eighty acres.

Q Who?

A The Pressed Brick Company, successors of the Dixon property.

Q What about the Cluff?

A I don't know what acreage they have -- some twenty, something like that.

Q That would be a hundred acres?

A In the Cluff and Dixon property, yes.

Q You testified in answer to Mr. Corfman as to all of it being eighty acres?

A I was counting the Pressed Brick Company land.

- Q You don't know but the Cluff tract might be forty acres instead of twenty?
- A No, I don't know.
- Q You say not to your knowledge has the water been wastefully used by Provo City? A. No sir.
- Q What do you mean by that?
- A As far as I know.
- Q You don't know whether they have wastefully used it or not?
- A I know their crops have suffered and they have complained of being short of water, and I have been across the tail end of the ditches time after time, and never saw any going to waste. Might be a spurt for half an hour, something that way, go by, but no continuous flow.
- Q How long did you say you had resided in Provo City ?
- A I was born in Provo City fifty-eight years ago.
- Q Do you know of a year during that time within your recollection, when the people of Provo City were not complaining of shortage of water, except during an ordinary high water season?
- A Well, I couldn't say as to that, I wasn't connected with the water.
- Q You cannot remember one season, can you, during that fifty-eight years when there wasn't the same complaint about shortage of water?
- A I know at one time <sup>that</sup> at Provo City or the water users of Provo City never had to irrigate at night.

RECROSS EXAMINATION by Mr. Corfman.

- Q What condition has not been since the rendition of the Morse and or Chidester decree?
- A No sir, not since the decree. They have taken their turns night and day with the balance of the water users,
- Q And you make this interchange with the mills?
- A Yes sir.
- Q In order to afford the farmers sufficient to irrigate their crops? A. Yes sir.

T. F. WENTZ, recalled by the defendant Provo Bench Canal & Irrigation Company.

DIRECT EXAMINATION by Mr. Ray.

Q Your name is Frank Wentz?

A T. F. Wentz.

Q You are the commissioner of this court and have heretofore been sworn and testified? A. Yes.

Q Have you, Mr. Wentz, had charge of the distribution of the waters of Provo River during the year 1916? A. Yes.

Q Are you able to state the quantities of water which you have relatively distributed to Provo City and Provo Bench?

A Yes.

Q Will you so state?

A To Provo City the distribution has been 81 second feet, that is, including the Factory race, and the Provo Bench it has been 68 second feet.

Q Now, the distribution which you refer to is the distribution made since --

A 20th of July.

Q Since the 20th of July. What does the 81 second feet to Provo City include.

A 24 second feet for municipal rights and platted portion, 19.3 second feet to the Factory race, 35.1 second feet to the acreage. I have used the old acreage, the 2454 that was used last year.

Q I wish you would compute for me, Mr. Wentz, the duty of water which that would be if you allowed 15 second feet for the Factory and 5.35 second feet municipal uses and take the acreage as 2058.6 acres plus 350 acres?

A Forty acre duty.

Q You placed upon the black board in your original testimony in this case a schedule, which you set forth, in which you set forth your idea as to the requirements of the respective lands under the Provo system for water. Did you make your distributio

in the 1916 season upon that schedule?

A Based upon that schedule except to Provo City.

Q What variation in that schedule did you make as to Provo City?

A Well, I have added some additional acreage to Provo City. I have used the old acreage to Provo City and have added the 4.3 to the Factory race, using the old amount, and I have continued the 24 second feet to the municipal rights, as I did last year instead of the 5.35 and 50 acre duty on the portion that is irrigated in the city which would be 12 second feet under the schedule, and assuming that they irrigate half of the seven hundred acres I have allowed 24 second feet for that amount.

Q What would have been the quantity of water distributed to Provo City at the stage mentioned under the old decrees, eliminating from consideration paragraphs 14 and 15 of the decrees which refer to the necessities.

A The average during this season since July 20th to the present time, discharge from Provo River at the mouth of the canyon and into Utah Lake Valley is 370 second feet. Eliminating Sections 15 -- Section 14 and 15 of the Morse decree, Provo City would have received  $3525/10,000$  or 130.42 second feet.

Q Now, taking that quantity of water you would figure what duty it would give upon the lands on the same basis as figured in your previous answer.

MR. RAY: Would your honor care to have me state the basis of that question, why I asked those figures?

THE COURT: Yes.

MR. RAY: There is a reason for assuming those figures, and I perhaps ought to make it clear now. I take the city acreage at 2058.6 as the stipulated acreage, then I take one half of the acreage in the city upon the basis that the testimony shows not more than a half and not a half is susceptible of irrigation of the 700 acres within the city. Then I take -- I add to that a mill right of 15 second feet as a con-

stand flow upon the testimony that the mills claim a necessity for 2100 minute feet for twelve hours per day for six days a week, which would be a constant flow of 15 second feet, figure it. Then I take for the municipal necessity 5.35 second feet of water to supply 10,000 people with a per capita allowance of 350 gallons per capita.

A The answer to the question is 19 acre duty.

Q Now, under the old decrees, eliminating again Paragraphs 14 and 15, what quantity of water would Provo Bench have received from that supply?

A 83.91 second feet.

Q And with an acreage of 4333 acres, what duty would she have worked upon?

A 51 acre duty.

Q Have you stated in the report of 1915 the quantity of water distributed during that entire year -- I think you have, haven't you?

A. Yes.

Q I don't care to put those into the record again. I will refer to them, however, later. In your report of 1914, I notice on page 16 that you figure the acreage of Provo City as substantially 3500 acres, where did you get your basis for that acreage?

A That acreage was submitted to me by Provo City.

Q Had you made any investigation at that time of the actual acreage of Provo City?

A No, I had prior to that a report from the Provo Reservoir Company on the acreage, and the city submitted an acreage in excess of the amount designated by the Provo Reservoir Company, and I used the city amount.

Q I asked you recently, Mr. Wentz, taking -- I withdraw that -- have you ever made a survey of the total area under the Provo Bench Canal susceptible of irrigation by it? A. Yes.

Q And what determination did you make there as to the total acreage?

A The total area under the Provo Bench Canal system is 6529 acres.

Q Mr. Wentz, I want to call your attention to Exhibit 100 on the black board, and ask you whether or not that Exhibit correctly delineates the acreage of the Provo Bench Canal, the north Union Canal and their relationship to the Provo River at the intake? A. Yes.

Q I notice upon that exhibit the word "dividing gate", what division is that?

A That is the division between the North Union Irrigation Company and the other users of the Provo Bench Canal and Irrigation Company.

Q Does the North Union Company have any way of taking water from the river, except through the main channel of the Provo Bench Canal? A. No.

Q Where is the main measuring weir upon the Provo Bench?

A It is just above the dividing gates about three hundred feet above the dividing gates, located near the center of the Southwest quarter of Section 13, Township 6 Range 2 East.

Q What is the approximate length of the Provo bench Canal above the dividing gates?

A Eight thousand feet.

Q And from the dividing gates, how far is it to the terminus of the North Union Canal, about?

A Five miles.

Q What other diversion channels are there carrying water below the division gates, I mean main channels, of course?

A There are two main channels leaving the branch at the different gates and the center one is divided later into five other laterals.

Q And those to some extent parallel the north union, the ones going to the north, and then others go to the south around the contour of the bench to water the lands sloping in the other direction? A. Yes.

Q What is the capacity of the Provo bench Canal, have you ever determined it?

A 143.31 second feet capacity. However, it has been run for one

day at 149 second feet at the station near the dividing gates.

Q How long have you been familiar with the provo bench canal?

A Twentyfive years.

Q How long has it been of substantially the same carrying capacity that it is now?

A As long as I can remember, there has been no changes on it in the last twenty-five years.

Q How is the canal as to grade?

A The grade is good, just enough grade to give the water sufficient velocity without cutting.

Q What benefit is there from a good velocity but reduced to the point where it will not cut and wash the canal?

A With the required velocity we don't get any deposits of silt in there, and velocity just so that it won't cut the banks of the canal. It is a medium between those two points.

Q That also reduces the percentage of percolation, does it not ?

A Yes.

Q And evaporation?

A Yes, cut the area of the wetted perimeter down.

Q Have you ever made an examination, Mr. Wentz, of the reports of the different commissioners who have operated on the Provo River since the Morse and Chidester decrees?

A Yes sir.

Q Are you familiar with the stream on the north side of the Provo River, known as Spring creek? A. Yes.

Q State to the court where that stream is and what land it covers, just in a general way, Mr. Wentz?

A Spring Creek rises on the west side of Provo River, just a little south of the south quarter corner of Section 24, meanders along the lower edge of the bench to the Carey's point measuring station of the Lake Bottom canal, and the Spring creek. There is a branch from the river that we divert some water from the river to the Spring Creek to supply the Lake Bottom canal. In this creek with the Lake Bottom supply and about four second feet from the river we have approximately 25 second feet

- at the present time.
- Q Do you know whether or not during the past years that condition has obtained?
- A Yes, that has been continuous, that creek has been continuous as long as I can remember.
- Q Do you know whether or not that flow of Spring Creek has been included in the estimation of the quantity of water in the river?
- A Never been included until 1914, '15 and '16. Before that time there is no record of any measurement on the Spring Creek.
- Q Was Spring Creek included in the quantity of water in the Morse decree if you know?
- A Yes.
- Q So that, as a matter of fact, without measuring that there has never been a distribution of the waters in accordance with the Morse decree?
- A No, there is not a single case where the distribution has been made according to the tabulations in the Morse decree.
- Q That is, either as to the tabulations or necessities?
- A Or except except Paragraph 15.
- Q You included in your report, as I remember it, in either '14 or '15, Mr. Wentz, a statement of the duties which had obtained under the Morse decree or the Chidester decree?
- A Yes.
- Q Will you kindly refer to those so that the court will turn to them.
- A I have tabulated those under the new areas.
- Q I want to get the court's attention called first to the old tabulation, then we will go to the new area.
- A That is in the 1914 report.
- Q In your report for 1914 as commissioner on Page 18, you have extended the calculations as to what the duties would be at the various stages under the Morse decree?
- A Yes.
- Q What areas did you take in that tabulation?

A The areas on page 17 of the same report.

Q How did you ascertain these areas, Mr. Wentz?

A They were submitted to my by Provo Reservoir Company and Provo City.

Q Now, have you made any calculation as to what the duties would be at the different stages of the river under the areas as now stipulated in the record? as to any of these companies, the irrigated areas? A. Yes.

MR. RAY: I desire before going into that in detail, to offer in the record specifically pages 17 and 18 of the record. I take it they are before the court. I want those parts specifically in of the report of T. F. Wentz, Commissioner for the year 1914.

Q Mr. Wentz, beginning at the stage of the river above 250 feet, I wish you would state what the duties would be?

MR. COLEMAN: Can those be put on the board.

MR. RAY: They will be too extensive, but I will undertake to have them typewritten so counsel need not make notes of them.

A The Lake Bottom Canal 94 acre duty;

Provo Bench, 75;

Timpanogos, 86;

Upper East Union 50;

Provo City, 38;

Little Dry Creek 63;

River Bottoms, 38;

West Union, 60;

Faucett Field, 26.

Those are for the duties.

MR. A. C. HATCH: Isn't that already in the record?

MR. RAY: I think no, I think Mr. Wentz will state he never has made such a computation before as that. He has made computation of the old decree with areas which are not the areas now in the record.

A This land and these duties are at the 250 second foot plus the Appropriation changing immediately below the 250 second feet.

MR. A. C. HATCH: And the areas are different from those formerly -- upon which you based your former statement?

A Yes, those were submitted in the report. The areas have been changed to meet the amount stipulated in this case.

Q When you drop immediately below the 250 foot stage, say 249.9 second feet, what would the duties then become?

A Lake Bottom Canal 86,

Provo Bench 96;

Timpanogos 95.

Upper East Union 46;

Provo City 34;

Little Dry Creek 52;

River Bottoms 38;

West Union 60;

Faucett Field 24.

Q So that with a variation of a fraction of a second foot certain companies would go on a much higher duty and others on a much lower duty? A. Yes.

Q Now, take the next stage of the river below.

A At the 200 second feet, just below the 200 second feet stage the duties are as follows:

Lake Bottom 100;

Provo Bench 150;

Timpanogos 146;

Upper East Union 54;

Provo City 42;

Little Dry Creek 59;

River Bottoms 46;

West Union 69;

Faucett Field 27.

Q And at or about the 300 foot stage, have you made that computation, Mr. Wentz?

A At the 300 foot stage:

Provo City 30 acres;

Timpanogos 71;

Provo Bench 63;

West Union 50;

Upper East Union 42;

Little Dry Creek 53;

River Bottoms 31;

Faucett Field 20;

Lake Bottoms 78.

Q Now, take the 300 foot stage of the river, have you an opinion as to whether or not the lands of Provo City during the entire irrigation season can economically and beneficially use water on a basis of one second foot for thirty acres of land?

A No, they cannot.

Q I will ask you whether or not, during the irrigation season, and the entire irrigation season, you have an opinion as to whether or not the Faucett Field can beneficially and economically use water upon the basis of one second foot of water for twenty acres of land?

A No, they cannot.

Q I will ask you whether, in your opinion, the River Bottom land can beneficially and economically use water on the basis of one second foot of water for thirty-one acres of land?

A No, they cannot.

Q Going to the 250 foot stage of the river, I will ask you whether or not, in your opinion, Provo City can beneficially and economically use water during the entire irrigation season upon a duty of 38?

A No.

Q Or the Faucett Field upon a duty of 26? A. No.

MR. RAY: Now, to save putting too much in the record, if it may be agreeable to counsel I will ask the privilege of compiling this data and serving upon counsel, and furnishing to the court a copy of it with the data upon which the duty result

is arrived at, for instance, the percentage basis, the area and duty in separate columns. I have not gone through all of that, because it will be tiresome. Is that satisfactory to counsel -- and then they may recall Mr. Wentz and cross examine on it.

MR. THOMAS: That is agreeable to us.

Q In your work as an irrigation and hydraulic engineer, have you ever had occasion, Mr. Wentz, to investigate the question of municipal necessities for water? A. Yes.

Q Are there works published which treat on that subject?

A Yes sir.

Q Have you consulted and read those works?

A Yes sir.

Q Are there statistics published upon the question?

A Yes.

Q Have you an opinion as to the maximum municipal necessities of Provo City? A. Yes.

Q I wish you would state that opinion and the facts upon which it is based.

MR. CORFMAN: If the court please, I think we will object to it as incompetent; witness has not shown that he has investigated in the city, or needs of this a city of similar proportion under similar conditions Provo City receives and uses as its water.

THE COURT: objection is overruled.

MR. CORFMAN: Note an exception.

A I have made a computation in two forms. In the first form I took the maximum capacity used by any tabulated city in the United States, that is Buffalo, New York, which uses 271 gallons per capita. To that amount I have added 25 per cent for seasonal variation, which makes 341 gallons per capita. Then I have added an additional nine gallons per capita, making 350 gallons per capita in round numbers. This was submitted in my previous testimony. I have also taken the amount in separate items.

MR. A. C. HATH: Just a moment, I think this is all testified to in heretofore, was it not?

A No, I gave only the amount.

MR. THOMAS: There was some testimony on it.

MR. RAY: But the basis of the testimony has not gone into the record.

A The items are as follows: Domestic use ranges from twenty to thirty gallons per capita. I have taken the maximum amount, thirty gallons. Commercial use, that is for laundries and such other plants within the city, ranges from ten to forty gallons per capita. For this item I have taken the maximum, forty gallons. Public use, such as drinking fountains, sprinkling flushing of sewers and gutters, ranges from three to ten gallons. I have doubled the maximum and made it twenty gallons for this amount. Loss of water ranges from five to fifteen gallons. I have taken the maximum of this amount of 15 gallons, making a total of 105 gallons per capita. For the monthly variation in the season I have added 25 per cent or 25 gallons. For whatever daily variation there may be between day and night I have added another 50 per cent of fifty gallons. For the hourly variation for the peak loads I have added 60 per cent or 60 gallons. And for fire protection I have used the standard formula which is ten gallons per capita, making a grand total for all uses and with these different percentages added or 250 gallons per capita, or 100 gallons less than the amount submitted, using the maximum amount used by any city and adding 79 gallons.

Q Mr. Wentz, taking that requirement and basing it upon a population of ten thousand, you get what for the municipal interest?

A 5.35 second feet.

Q That is assuming that the entire requirements of the city are met by a municipal supply of 5.35 second feet?

A Yes, that means all the requirements of the city.

Q With the eliminating of artesian wells or any other double use?

A Yes.

Q Can you state, Mr. Wentz, what quantities of water you have

distributed to the Provo Bench prior to the time when you commenced from the 68 second foot distribution?

A Prior to June 30th, the provo bench was running almost continuously at its maximum capacity. On the 1st day of July I cut the canal to 105.85 second feet; on the 3rd day of July to 98.1 second feet; on the 4th day of July to 94.1 secondfeet; on the 5th day of July to 86.6 second feet; on the 6th to 78; on the 10th, 79; on the 11th it was running at 88; on the 12th day of July it was running at 82; on the 23rd at 76; on the 25th of July 74, and since that time has run at the 68.

Q Now, these quantities which you have given are the net quantities which have gone to the Provo Bench Canal Company, exclusive of that which has run through their canal by the Provo Reservoir, is it?

A Yes, these are net quantities to the Provo Bench Canal Company.

Q I wish you would state briefly as you can upon Exhibit 100 the character of the soil upon the Provo Bench?

A There are three classes of soil on the Provo Bench, the loam, the gravelly loam and the sandy loam. The southern part of the bench is a loam and northern part of the bench under the North Union is a loam and clay loam, some clay loam up near the canal. The main body of the center part of the bench, excepting a strip along the west side if a gravelly loam. Running just a little east of the west side of the bench, extending for approximately three miles is a strip of sandy loam. I think that covers it.

Q What is the thickness of the top soil on the gravelly loam?

A From one and a half to two feet in depth.

Q That is an average? A. Yes.

Q As a matter of fact, there are many places where the soil is thinner than a foot and a half?

A Yes, some places along those water course, the soil is some places only six inches in depth.

Q And what is the sub soil or sub stratum?

- A The subsoil is a gray sand with round river rock mixed through it. There is just enough sand and coarser materials to fill the voids between the rock. Some places there is a little more of the finer particles, but there is no clay in that, it is sand and river rock.
- Q As you go down does the rock become larger and more numerous? and the sandy particles less?
- A Farther down you find more larger rock, but the general formation is about the same.
- Q How is this as to its water holding capacity, the subsoil?
- A Oh, it doesn't hold any water at all. I think a foot of it will only hold about  $\frac{3}{8}$  of an inch in depth. It is only a conveyor down. It doesn't hold any water, it is too coarse.
- Q Has it any capillarity for practical purposes?
- A No, it won't take a bit of water. I tried a 11 inch tube for six days, and it didn't take a particle of water.
- Q How uniform is this sub stratum over the bench area? Is that a uniform sub stratum?
- A Yes, that extends over the whole area. There is a little different formation of the subsoil on the north end of the bench. The north end of the bench subsoil is made up of small particles of shale. They are flat about the size of a half dollar. That is the subsoil there for a small portion on the extreme north end, but south of that it is all gravel and rock.
- Q Is that shale and broken rock?
- A Yes, it is small particles that are ground off about the size of a quarter of half a dollar.
- Q Is that a good conveyor of water?
- A Good conveyor downward, it has no capillarity.
- Q Are you able to state whether or not that there is upon the prove bench at any other place a water level which is at any time of the year available to plant life?
- A No, the water level ranges from 26 to 60 feet.
- Q What effect does a thin soil with a sub stratum such as you

have described, have upon the quantity of water necessary to mature a crop, I mean necessary to be applied?

A About double the amount has to be applied that you can retain. It takes a great deal more water for these shallow soils and loose soils than it takes for the clay type that are deep. In fact, on these shallow soils we lose more than half of it in the application, where on the desert soils that are of great depth, we lose very little by the application.

Q Does that condition have any effect upon the frequency with which water must be applied?

A Yes, it must be applied more often on those loose soils, they cannot hold the quantity and haven't the depth to store it and bring it to the plant root, where in the deeper soils why they store practically all that is applied and returns it again to the surface.

Q Now, in view of your testimony as to the municipal necessities of Provo City and its necessity for farm acres, will you kindly state why you have been distributing water to Provo City upon the basis which you have used during the 1916 irrigation season?

A I have not made the proper distribution in 1916, but the proper distribution would have been to use the areas and give the amount to Provo City that I have designated, but I have not had -- it has been more keeping peace on the river here until we could get the case to trial, until the case was tried, that I have been getting along, and I have in many cases given excessive quantities in order to keep this out of court until the case was tried.

Q And have you given what in your opinion was an excessive quantity to Provo City during the year 1916? A. Yes.

Q And 1915? A. Yes.

MR. THOMAS: I think we would prefer to wait with the cross examination until the tabulation is received.

THE COURT: very well.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q You stated there is no place under the Provo bench Canal system where the surface water is available to plant life, and I understood you to say that there was a clay soil up near the north end?

A There is a small area of clay there near the Whiteby tract in the east side of Section 3, that is underlaid by a white impervious clay, but that is only a very small area.

Q If there is sub surface water in that area it would be available to plant life, wouldn't it?

A Yes, on this area. I don't think there is any water goes through that white clay to the gravel, but that is a very small area.

Q You also gave a general statement as to the soil depth being one and a half feet over the bench, and then you stated it was only six inches?

A That is on the central part, on that gravelly soil. Now, the soils on the south end and north end are good depth.

Q And on the west?

A There are some places on the west that are fair depth.

Q Have you any idea of the areas of these respective classes, depth of soil?

A No, I could not say the depth, but the soils there lay generally according to those water courses, and very uneven, one field to another. I could illustrate that.

Q I think you did do that.

A There are some old water courses across the bench that don't show on the eastern rim of the bench, but they gradually get deeper as they cross to the west and at the west side of the bench there are two that are practically thirty feet below the bench. I will illustrate those by holes. At the ridges on the bench, at the anticline the soil is generally very shallow there and gravelly. Following down to the south near the break of the water course are the monocline. From that point back toward the anticline is a good deposit of clay, that is clay loam. That is where we find our clay, through the water course,

it is generally a light gravelly loam and on the immediate break just below the monocline is the very shallow type. The soil has been washed off and probably only six inches in depth.

Q Now, with regard to the waste of water in its application upon those lands, the shallow lands, what would be the necessary waste?

A What would be the necessary waste?

Q Yes in applying water?

A On those shallow lands on some tests that I have made they hold, actually hold about two inches, that is all they will hold when they are two feet in depth, that is all that soil will hold, and it is, on some tests that I have made, it is necessary to apply five inches to get that two feet. That is, you apply about eight inches on the upper end of your tract to get the two inches in to the lower end of the tract, but after this application is made and after a time of twenty-four hours on tests I have made, I found in every case that there is more moisture at the lower end of the field that had a two inch application than there is in the upper end of the field that had the eight inch application.

Q How do you account for that?

A Because the amount of water applied at the upper end had washed has washed away some of the finer particles in solution and the soil is not able to hold the capacity that the lower soil is, that is much finer.

Q So that an excess of the two inches applied is an injury to the land as well as a waste of the water?

A Yes, every time you apply --now for instance on an eight inch application that soil will hold --from its maximum capillar capacity of two inches , will hold approximately two inches more to bring it to complete saturation. That soil has been saturated with the two inches and been washed three times with the other six inches that pass through it. In other words, it has been brought to complete saturation and drain three different

times during that application.

Q What was the length of the runs in these applications where you made the tests.

A Two hundred feet, two hundred to two hundred thirty.

Q Then in order to save the land, runs should be made shorter, should they not?

A Well, the runs on those classes of soil should not be over two hundred feet. I would run the four hundred feet or five hundred feet. If you get up to say seven or eight hundred feet, your application is about eighteen inches. Your upper soil has maybe passed through it two and a half feet of water to get your two inches into the lower end.

Q On that length of run there would be sixteen inches of waste then to two inches of actually applied water?

A Yes, on an eighteen inch application there would <sup>be</sup> sixteen inches that would be lost in wasted.

Q What should be the waste under economical conditions and applications, the waste, necessary waste in applying the water on those lands?

A Upon the shallow lands, I think the five inch application on those crops is plenty and to get the two inch retained in the soil. On the deeper soils, on our clay soils and deeper soils a three inch application is sufficient and all of that can be retained in the soil. Now, on an experiment on the East Union soil, northeast of Provo City, three tenths of a foot was applied and every particle of that three tenths was found in the first three feet of soil. There was none of it went below the first three feet, and this amount of the three tenths kept the plants growing thrifty, and it was there all the time in good condition for twenty-two days, where on the lighter soils they will only last, two inch applications will only last at the greatest time fourteen days.

Q It ranges then, the waste in applying in water, from 60 per cent to nothing, is that right? A. Yes.

Q Now, as to Provo Bench lands, taking them as a whole, ~~have you~~

if you ever made a determination of it, what would you say would be the average waste in applying water, necessary waste.

A Well, I haven't thought of it in that light.

Q Economically used?

A I have looked at it more from a standpoint of duty.

Q Your answer to Mr. Ray was that the waste in application was about one half, that is, that it took double the amount of water on those shallow lands. For that reason, if I understood you correctly, it was to get at the fact or your best judgment in regard to that matter that I am asking the question, your experience and studies and tests that you have made.

A In that one half --

Q Mr. Wents, you may take time to consider that and I will repeat the question a little later. You made a statement as to trying a eleven inch tube, I didn't get your statement and understanding as to that. Will you repeat it please.

A We use for the testing of soils tools that are two inches in diameter and eleven inches high. With the loose soils of the subsoils on the Provo Bench, that is, the sand and gravel, eleven inches in those tubes with that lower end immersed in water three fourths of an inch doesn't take any water at all, no water goes up in that tube. Directly reversed to that we have some soils -- we have another soil under Dry Creek that will take its maximum amount of capillarity, in fact, after that tube has stood in water for twenty-four hours it is at saturation, and you can immerse the whole thing in water and it won't take any more water, but that is a freak soil.

Q But the soil you are testifying in regard to wouldn't take any at all?

A No, doesn't take any at all.

Q As to the 25 second feet of water in Spring Creek, you say until 1914 that was never counted part of the waters distributed under the Morse decree?

A The 25 second feet includes the Lake Bottom Canal also. On the 23rd of May there was 15 second feet that was rising in

Spring Creek. On the 24th of June, 1914. That amount has never been counted in the total of Provo River prior to 1914 and it is counted in the Morse decree.

Q Was there distributed to the Lake Bottom Canal its full quantity aside from this 15 second feet of Spring Creek?

A This 15 second feet of Spring Creek is used by parties above the Lake Bottom Canal, extended from Carey's point to the Tanner's farm. Mr. Clive and Brown and Forsyth and those people immediately west of the river bridge on the state road northwest of Provo.

REDIRECT EXAMINATION by Mr. Ray.

Q You refer to the soils on the extreme west of the Bench; as a matter of fact there is hardly any soil there is there?

A Right on the brink of the bench there is very little soil.

Q For some distance back it is largely gravelly, isn't it?

A It is gravelly loam and some sandy loam. There are spots that have some depth but, <sup>generally</sup> the soil along there is shallow until you get nearly the northwest side of the bench.

Q There are a lot of gravel pits along there, aren't there, commercial gravel pits? A. Yes.

RECROSS EXAMINATION by Mr. A. C. Hatch.

Q Those lands are not used for agricultural purposes, are they, those gravel pits and ~~px~~ lands that are gravel pits or may become so?

A No, they are not used for that.

Q Not included in the area that you gave us of the lands under the Provo Bench Canal?

A No, the gravel pits are just below the brink, and this area follows the top of the bench.

CROSS EXAMINATION by Mr. John E. Booth.

Q Mr. Wentz, you say this 15 second feet in Spring Creek supply Clive and others? A. Yes.

Q Did the Lake Bottom --

A Part of that of course goes to Lake Bottom Canal, I don't mean to say 15 second feet was all used there, but that 15 second feet rises on the west side in Spring Creek.

Q Did the Lake Bottom canal have its share during the time these people were using their part of that 15 second feet?

A Yes, Lake Bottom Canal generally -- Lake Bottom Canal -- I could give you those, the Lake Bottom Canal has ranged from a minimum of 8.57 second feet to a maximum of 17.92 second feet.

Q And the water they used was a part of Spring Creek and other waters that rose below the Tanner pond, they didn't get any direct from the river?

A Yes, we have been diverting from the river the whole season.

Q For these people? A. Yes.

MR. A. C. HATCH: Mr. Wentz, did you mark on that map approximately the boundaries of that shallow soil area under the Provo Bench Canal roughly?

A Yes, I could.

MR. A. C. HATCH: Will you do so with a pencil, red pencil.

MR. RAY: Judge Hatch, I might suggest here that we will later introduce a soil map completed and it would be much easier to examine Mr. Wentz as to that with areas marked on it, and it would save this exhibit for other purposes.

MR. A. C. HATCH: All right.

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11:50 P. M., Recess to 2:00 P. M.  
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T. F. WENTZ - - - - -

REDIRECT EXAMINATION by Mr. Ray.

Q Mr. Wentz, are you familiar with what is known as the Wright ranch in the South Fork of Provo Canyon or near the south Fork?

A The Wright ranch, yes, it is near the head of the canyon, main

canyon at the head of Provo Valley.

Q The south Fork is about half way down the canyon, comes in?

A Yes.

Q And the Wright ranch is at the head of the canyon.

A Yes.

Q What is the drainage of the waters applied to the Wright ranch, where do they go to?

A Provo River.

Q And going to Provo River become a part of the supply of water for the users below the ranch?

A. Yes.

Q What is the character of soil on the Wright ranch ?

A the soil is a clay loam, dark clay loam.

Q How deep is the soil?

A Well, it is exposed for about three feet along the river bed.

Q Do you know what the sub stratum is?

A No, not below that point.

Q Whatever drainage there is from irrigation on the Wright ranch would find its way into the river?

A Yes.

Q What is the fact in that regard as to the land in the south fork of the canyon?

A They contribute to the Provo River also.

Q So that if waters formerly applied<sup>up</sup> on the Wright ranch, or upon the lands in the south Fork were conveyed past those lands and diverted from the river and applied upon lands outside of this valley, it would diminish the supply of water to the users in this valley, would it not?

A Yes.

CROSS EXAMINATION By Mr. A. C. Hatch.

Q You don't mean to say, do you, all the water that is applied and put upon the Wright land would be returned to the river?

A No, not all.

Q Irrigation~~the~~ necessary use for irrigation, is a consuming use,

is it not? A. Yes.

Q And the return to the river would only be the excess that was put upon the lands? A. Yes sir.

Q That that was put upon the land which was not necessary to the irrigation of the particular tract?

A Well, there is some part of that water that is necessary to put upon the land, that is loss, that returns to the river. For that class of soil part of it would be loss. Say you desire to apply three inches, it would probably take a little more to make an application, three inches be retained in the soil, part of that water would be loss that would return to the drainage in Provo River.

Q Could you say as to how much, or what proportion of it would be consumed?

A My judgment is that I think possibly of the water applied on that land 50 per cent of it would return.

Q That would be about equal then to the Provo Bench lands, the thin soil lands?

A Well, it is a little better than the Provo Bench land. About 60 per cent of the Provo Bench land, of the water applied on the Provo Bench lands on the shallow two foot soils is loss.

Q What is the necessity for putting these particular lands such a quantity of water, say 60, 50 or 60 per cent of it is loss?

A Well, it ~~is~~ is impossible to make an irrigation through the length of run say a 200 foot run and get a proper amount in the lower end without losing a great quantity at the upper end and over the whole area.

Q That is, if it were economically used it would require a less run, in order to economically use the water, would it not, shorter run?

A Yes, in order to avoid some of that loss it would require a shorter run, but I don't think a shorter run than 200 feet is advisable. It would make too many ditches through the farm.

Q For practical?

A Yes, I think a two hundred foot run on those loose soils in the

practical.

REDIRECT EXAMINATION by Mr. Ray.

Q Do you know whether or not the Wright ranch was irrigated this year?           A. Yes.

Q Do you know whether it was irrigated last year?

A Yes.

Q Do you know whether it was irrigated in 1914 ?

A Yes.

Q Do you know whether or not the water distributed to the Wright ranch in those years -- not in those years, but but by the earlier decrees, was also turned to the plaintiff in this case?

A Two second feet has been turned to the plaintiff in this case, but the Wright ranch, the amount applied on the Wright ranch when we came to low water last year, they discontinued watering entirely, but this year our supply have been sufficient that we have supplied all the users along the Provo River, and I never asked the people at the Wright ranch to cease watering until last Wednesday.

Q But you have not then, Mr. Wentz, distributed a ~~quanty~~ quantity of water to the plaintiff for the Wright ranch and permitted them to use the same quantity on the Wright ranch, when any of the primary appropriators were getting less than their decreed rights, have you?           A. No.

Q What about the South Fork?

A Well, the South Fork, the amount transferred from the South Fork under the stipulation, that land has been idle in the two years before.

Q Has not been irrigated?

A Has not been irrigated.

CROSS EXAMINATION BY Mr. McDonald.

Q My, Wentz, you spoke of some springs or Spring creek it was called this morning, howfar are those springs below the plaintiff's point of diversion, or the canals of the parties who are

now on trial?

A Two miles and a half before the plaintiff's point of diversion.

Q Below the plaintiff's point?

A Yes, it is approximately three miles below the plaintiff's point of diversion, and two miles and a half below the Provo Bench point of diversion.

Q Where are the springs relative to James S. Clyde farm?

A They are north of the Clyde farm.

Q About how far?

A About three quarters of a mile.

Q Isn't the Clyde farm more than six miles below the plaintiff's point of diversion?

A No, the Clyde farm is about three and a half miles below the plaintiff's point of diversion.

Q As I understood you this -- you mean below the Provo Bench?

A No, below the Provo Reservoir's point of diversion. I will get that exactly for you. The Clyde farm is in the south half of Section 25. The plaintiff's point of diversion is nearly five miles above the Clyde farm.

Q Isn't it more than six, Mr. Wentz? However, it is immaterial, I thought about six miles.

A No, it is not more than six, it is about five miles.

Q Now, do you know whether or not, Mr. Wentz, some lands on what is called the river bottom can use water beneficially and economically at a duty of not exceeding thirty acres to the second foot?

A No.

Q You are not acquainted with any such lands?

A I am acquainted with all the lands on the river bottom.

Q And have you made actual tests of all of those lands to determine the duty of water.

A No experiments on the applications.

Q And what you are giving is theory?

A Yes, and sampling of the soils.

Q Well, that is theory, isn't it? A. No.

Q Is there any connection at all between the plaintiff or their system of use and that of Spring creek people?

A I don't understand your meaning on that question exactly.

Q I will ask you again whether or not there is any physical connection between the means of using water that is the canal of the plaintiff or the defendants who are on trial, and the springs of what you denominate as Spring Creek?

A Yes, we divert from Provo River enough to make up to the Spring creek users and the Lake Bottom canal, enough to make up what they need.

Q Where does that water come from; does it come from springs?

A It comes from springs and seepage below the mouth of Provo Canyon.

Q Below the plaintiff's point of diversion and below the defendants who are on trial today? A. Yes.

Q So that it will be impossible to get any of the water from Spring creek on to the lands of the plaintiff or on to the lands of the parties who are on trial today without pumping, wouldn't it?

A Well, it would be that idea, but if that water diverted from the river to Spring Creek were not used by the Spring Creek and Lake Bottom Canal, it could be turned to Provo City and supply Provo City with an amount of water, and that amount of water could be taken out in either the Provo Bench or the plaintiff's at the mouth of the canyon.

Q Can you tell me how it would be possible for Provo City to get any of the waters of Spring Creek.

A They can get the amount of water that is diverted from the river to Spring Creek.

Q How much is that?

A On May 10th, it was 11.45 second feet. May 26th --

Q Just wait, Mr. Wentz, did that water -- I am speaking now of the Spring creek users, did that go to the Spring Creek users?

A To part of the Spring creek users, there is one ditch that we have to divert entirely from the river to supply water to, and

rest of this amount is commingled with the waters of Spring Creek, and they divert in several diversions down as far as the heading of the lake bottom canal.

Q As I understand you, or did I understand you this morning, the waters of Spring Creek have not until recently been regarded as a part of the Provo River system?

A They were regarded as a part of the Provo River system in the Morse decree.

Q To what extent?

A They were given their amount in the tabulation as part of the river bottom, the pebble under the Spring Creek, the Spring Creek users were included as residents of the river bottom.

Q Well, under that plan doesn't the decree say the Spring Creek users or those residing in the river bottom shall use the water from the springs, and if the springs should fail then they could obtain water from the river and then designate the portion?

A No, it designates the proportion first and then if those springs should fail they are entitled to their proportion enough to make their proportion from the waters of Provo River.

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JOHN H. STRATTON recalled by the Provo Bench Canal & Irrigation Company, testifies as follows:

DIRECT EXAMINATION by Mr. Ray.

Q You have been sworn in this case before?

A Yes, I have testified in regard to the Blue Cliff.

Q What are your initials?

A John H. Stratton.

Q Where do you reside?

A Provo Bench.

Q How old are you?

A Fifty three years old.

Q How long have you resided on the Provo Bench?

A I think thirty-two years.

Q What is your occupation?

A Farming.

Q Are you a land owner under the Provo Bench Canal?

A Yes sir.

Q You own stock in the Provo Bench Canal? A. Yes.

Q How long have you owned land under the Provo Bench Canal?

A Thirty-one years.

Q Have you been yourself personally engaged during the period mentioned in the farming of that land?

A Yes sir, most of the time.

Q What is the land devoted to?

A I raise a little grain, considerable hay, alfalfa, hay, considerable fruit, I have a small tract of sugar beets.

Q Is your home located upon any of these lands?

A Yes sir.

Q How many acres of land do you now own on Provo Bench?

A Sixtyfour acres.

Q How many shares of water do you own in the Provo Bench Canal & Irrigation company?

A Well, up until a few months ago I owned thirty one shares, but I turned over three shares, also I intend to turn over a piece of land to my oldest boy.

Q And as you have minimized your water right by, <sup>the</sup> turning over of the three shares you will your land holding?

A Yes.

Q Have you ever had experience in irrigating any place else than Provo Bench? A. Yes.

Q Where?

A First irrigating I done when I was a boy at Cedar Fort. I have irrigated in Vineyard, I have a place there.

Q Where is Vineyard?

A It is just west of Provo Bench, down on the bottom. I have irrigated under the High Line Canal west of Benjamin.

- Q That is the Strawberry Project? A. Yes.
- Q Have you personally attended to the irrigation upon these different tracts?
- A Yes.
- Q What occasion have you had to examine the soils upon Provo bench and their depth.
- A Well, I had dug post holes, planted trees and dug cellars. Dug a couple weeks.
- Q As to your own lands, have you fenced those?
- A Yes.
- Q In fencing them how often did you dig a post hole?
- A About a rod apart.
- Q How many acres of trees have you planted?
- A Twentyfive acres.
- Q How far apart are the trees planted.
- A About a rod apart.
- Q At least one tree on each square rod?
- A Yes, about 150 trees to the acre.
- Q Have you observed the digging of post holes and cellars, trenches, wells, ditches and trees upon other lands on the bench?
- A Yes, sir, I have noticed them, also the neighbors planting of trees.
- Q Will you state whereabouts upon the bench your lands are located, and point out upon the map here, Exhibit 100, the piece marked John H. Stratton, 28.95 acres, is that one of your pieces?
- A Yes sir, that is in Sections 14 and 15. In addition to this 28.95 we have a piece there lapping into the county road, this piece here, that is three acres and a fraction.
- Q Have you any other land upon the bench?
- A Yes, I have the home farm there, thirty acres, that is in Section 26, I think.
- Q In Section 26, in the northeast quarter, marked John H. Stratton, is that where your home is located? A. Yes, sir.

Q Can you state, Mr. Stratton, how long since the Provo Bench Canal was enlarged to its present capacity?

A No sir, it was enlarged when I first came to the bench and was acquainted with it.

Q That is thirty-two years ago?

A Yes.

Q Been the same capacity ever since?

A Yes sir.

Q Are you familiar with the lands under the East Union Canal and Provo City?

A To some extent I am, yes.

Q Are you familiar with the lands along the west side of Provo City, down to the lake?

A To some extent, yes.

Q Will you explain to the court as briefly as you can the character of soils as you are familiar with them on Provo Bench?

A On the west end of the bench or on the south end of the bench, we have a mixture of silt, I call it, with some places three feet deep, and with gravel spots making their appearance at the top of the surface. Where those gravelly soils come up it is very gravelly and open, takes a great amount of water. The other lands will retain water better but those spots appear here and there all over. I should judge one fourth of the land would be this shallow gravelly nature and probably three fourths of it a little deeper.

Q Well, now, that just takes the south end of the bench?

A Yes,

Q And as you go north, what do you find?

A North of that when we get off the gravelly character of soil along the county road and east of the county road and some distance west, it is a gravelly clay loam soil, with a very shallow depth. That is, the major part of it. There is a little probably that would be a little deeper, and that extends about two miles, two miles and a half or three miles, I should judge. All east of the county road and about half a mile

west, along from half to three quarters of a mile west, there is a belt of sandy loam. It ranges all the way from a few inches to four or five and a half feet deep. West of that again we have a pea gravel, or small gravel that is very porous. It takes a greater amount of water than either one of the other two. It borders the bench and takes up the west end or west side of the bench.

Q Going north of that what do you find?

A Well, north of that it is considerably mixed up, as far as I am acquainted with it. There are some clay loams there that is pretty fair character of soil, but I don't know how deep those clay loams run. There is also some soils there with an open gravel, very porous gravel within from a foot to two feet depth. There is also some sand loam.

Q Now, what is the formation below the soil which you have described?

A Why, it becomes more rocky and at from twelve to sixteen inches it turns into an open gravel river rock and very fine gravel mixed with it,

Q Have you a well upon your place? A. Yes sir.

Q What is the depth of water -- to the water?

A My well at the south farm is fifty feet deep, and it was two feet and a half fown to gravel, we would take for cement gravel, rock and gravel, all the way from there down to the bottom. In the bottom there was boulders large as a stove pipe with a small blue gravel with it. The soil at the north farm, I should judge had about fourteen inches of gravel and clay loam, then turn into a pure gravel with cobble rock with it and gravel to the bottom fifty-five feet.

MR. THOMAS: Was that fifty-five feet to water?

A To the bottom of the well.

Q How far in each of these wells does the water come from the bottom, how close to the surface?

A In the winter season the wells at home quite often goes dry. In the summer season it gets as high -- it gets as much as ten

to twelve feet of water in it. The well at the north farm was dug last spring. I don't know whether it would go dry or not. We had about eighteen inches of water when we quit digging.

Q Are you familiar with other wells on the bench.

A Yes sir.

Q Do you know of any place on the bench where the water level is within closer than thirty or forty feet of the surface?

A There is one well in the hollow there by Farley's that the water is less than that. Outside of that -- it is down in a hole, and don't come up to the natural level of the bench, but outside of that, the shallowest wells I know of with the exception of Otto Olson -- he has a shallow well, outside of those two, the shallowest I know of is forty feet deep.

Q How deep is it to water in the Otto Olson well?

A I don't know, something like twenty feet, I think.

Q In the Farley well?

A Something like the same distance.

Q Now, were you irrigating upon the Provo Bench in the year 1915?

A Yes sir.

Q How many acres of crops did you have?

A I had about -- I had both of those places into crop that I could irrigate.

Q How many acres would that be that you could irrigate?

A I have forgotten. I had that tabulated, but I have lost it. Something like twenty-four acres on the north farm.

Q How many on the south?

A Well, I watered pretty much all of it, probably 28 acres.

Q How many shares of water did you have for it in the year 1915?

A I had 17 shares on the north farm, 14 on the south.

Q How many shares of stock are there in the Provo Bench Canal Company?

A Fifteen hundred and two-thirds shares, I think -- fifteen hundred and twenty and two-thirds shares.

Q Will you state your experience with your irrigation upon that

farm in the year 1915, upon each of your farms?

A Well, in 1915, I dropped -- let's see, seven acres, I think, and put ten acres of orchard. I only irrigated it just enough to keep it alive. The balance I cropped.

Q Why did you drop it as you say ?

A Because it was impossible to water it.

Q Why was it impossible to water it?

A Never had water enough to irrigate it.

Q Do you know whether or not during the year 1915 you got your proportion of the water according to your shares ?

A Yes sir, I got my proportion of the water, my share of the water that was in the canal.

Q That is what I mean. Now, how often does alfalfa require irrigation on your farm in order to get the best results?

A About every eight or nine days.

Q Will you state to the court, if you know, the method of distribution of the waters of the Prove Bench Canal to the stock holders?

A Our water is divided at the terminus of the canal at the brow of the bench when it is first delivered on to the bench, and it is divided by the board of directors and order from the board of directors to the superintendent, according to shares of stock. It is divided there at that division into three divisions one goes to the North Union, one what we call the Nickle Ditch of Center ditch, and South ditch runs to the south skirting the east and south ends of the bench, and that has a lateral that they issue water schedule from to stockholders that waters along it, and we make a schedule to have the water often enough to suit our purpose. We water there every eight days -- every seven days and twelve hours, I think, so that we water part of our crop each turn. Part of our crops over there -- did I say seven days and twelve hours?

Q Yes.

A We water part of our crops each turn and part of them every other turn. Crops that will go longer we water every other turn.

The farm over to the north there in the center of the bench that is operating about the same time, only we irrigate every seven days, and I don't know whether it is six or eight hours, and we irrigate the same there. We irrigate the crop that has to have it every turn each turn, and the balance of the crops as soon as we can irrigate them every other turn.

Q Will you state what the condition was as to the fruit crop on the provo Bench in '15 and '16?

A As far as mine was concerned, we didn't have any.

Q What was the fact as to the bench in general.

A General failure.

Q Your fruit trees require more or less water when bearing a crop?

A They require more water to mature and stage fruit than any other crop growing.

Q In a general way what proportion of Provo bench is planted to trees, fruit bearing trees?

A Large proportion of it.

Q Will you state as to the crops raised on the bench, which crops require frequent irrigation, more frequent?

A Berries of all kinds and fruit in the bearing season, to make a commercial article we have to irrigate that often.

Q How often?

A Well, every seven or eight days.

Q What about potatoes?

A Well, we would have to irrigate those every seven or eight days.

Q What about tomatoes?

A Tomatoes, some stages, some periods, will go further turn, two weeks.

Q What other crops besides those you have mentioned require irrigation every seven days.

A Well, you might say all fruits, potatoes, sugar beets and that is all.

Q Now, upon what proportion of the bench do they raise sugar beets?

A Well, a very small proportion. We have a few acres in the

south end. They raise some in the north end.

Q Why do they not raise beets in the central part of the bench?

A The ground is thin there and too shallow and too hot, beets wouldn't succeed there.

Q Beets are not a profitable crop there?

A No.

Q I wish you would state more specifically to the court just how you got along in the year 1915. You say you finally abandoned some of your acreage. Now, take the early part of the season how did you get along?

A We had enough to cover the grain and irrigate up until some time in June. We harvested one crop of alfalfa, or cut what there was to harvest rather. From then on to the end of the season, I dropped part of the alfalfa and from then on to the end of the season I practically dropped my orchard, just give it enough so as to keep it alive.

Q Did you have a supply of water such as it would have been sufficient if your orchard had been bearing a crop last year?

A No sir. Now, if my orchard had been bearing a crop last year, I would have taken all the water I had to have made a commercial article in the fruit.

Q And you would have had to abandon more of your other crops?

A I would have had to abandon more of my other crops, all my other crops.

Q What was your experience in the year 1916 through the season, begin at the beginning of the season?

A This year we harvested what hay we had in June. We irrigated everything up until June and we harvested more second crop of hay than we did last year. My orchard, what part I have left there, is going about the way it did last year, just enough water to keep it along.

Q During the last few weeks, have you had such a supply of water there that you could have kept all of your crops irrigated if your fruit had been bearing, your fruit trees?

A I could not

- Q Now you have more than one share of water for three acres there, haven't you?
- A Yes, I have one share of water for two acres.
- Q How do the lands which you own on Provo bench, as to their water requirements, compare with the lands at Benjamin and those at Vineyard?
- A I should judge they would take ten or fifteen times as much water as to the lands at Vineyard. In fact, we irrigated there last year and raised three crops of lucern with one irrigation during the season. The water, the surface water in the subsoil is four and a half feet down. Crop of beets we irrigated twice, I think twice or three times. The land at Benjamin for shallow rooting crop such as grain, will go twenty to twenty-four days or five days, and deep rooting crop, such as alfalfa will go six weeks, with water level at about fifteen feet.
- Q What is the effect upon alfalfa on Provo Bench if you irrigated only every fourteen days.
- Q It grows along nicely for about eight days and about nine days it begins to slacken up and stands still then and begins to get a little bit wilted before the end of the fourteen days.
- Q Is it your opinion then alfalfa to get the maximum crop should be watered every eight or nine days?
- A Yes sir, if you got the best kind of a crop you would have to water it every eight or nine days.
- Q What observation have you made as a practical irrigator, Mr. Stratton, as to the length of run, average length of run on Provo bench?
- A The length of runs we use.
- Q Yes, that you use?
- A The soil is so shallow on a large majority of the bench you could not level it, and we necessarily have to follow out on the highest ground. Some little higher than others. We water from a ditch put on a ridge, we will say into the swale, and that varies from four or five rods up to ten or fifteen rods.
- Q Are the great majority of the runs there under 15 rods then?

- A Yes, lots of them.
- Q I ask you not lots of them, what is the majority?
- A Yes, the majority is under 15 rods on my farm.
- Q What would be the effect if you attempt to make the lands on Provo Bench perfectly level?
- A Well, we would strip the surface soil off from half of it and dump it into the swales. We would have half the amount of land that could be irrigated that we have, or that could be cultivated, that we have at the present time.
- Q In order to irrigate your soils then, you are required to place your ditches on the ridges and irrigate both ways from them?
- A Yes sir.
- Q Now, is there any weir placed near either of your farms?
- A One at the north farm.
- Q Who directed the placing of that weir?
- A Water commissioner Frank Wentz.
- Q Do you take the water for the irrigation of your farm through that weir?
- A Yes sir.
- Q Has it been changed in any way since it was installed by Mr. Wentz.
- A It was not installed by Mr. Wentz. It was installed by a couple of our stockholders there under the direction of Mr. Wentz to install it.
- Q Has it been changed in any way since it was installed?
- A No sir.
- Q During any irrigation season have you measured the quantity of water passing over that weir? and applied to your land?
- A Yes sir.
- Q What year?
- A In 1915 we measured every irrigation from some time in April on to the end of the season.
- Q To whom did you report the measurement upon those irrigations?
- A I handed them to Mr. Knight, and he got Mr. Wentz, I think, to figure them out.

MR. RAY: Now, I will state to counsel these have been figured out and I will show later they were given by Mr. Knight to Mr. Wentz, merely for the purpose of calculation upon the question of duty.

Q Did you correctly report the measurements which you took as to the quantity of water used and applied?

A Yes sir.

Q Who attended to the irrigation?

A I did all of it myself with the exception of two or three turns. Those two or three turns I made a trip over and measured the weir during the time the irrigation was going on.

Q Now, you say in each case your water turn is six or seven days and a few hours, why do you do that, why do you add the few hours?

A That is the maximum limit of time that any crop will stand over there, time irrigating, and it is also the longest time that berries and potatoes, beets and fruit in its maturing stage will stand to go without water.

Q Does it also taking these few hours added fix it so that a man will not have to continuously water in the night time during the season?

A Yes, we would have it, you know, just every week and in that case, man would have to irrigate same time of the day each week. The man that watered in the night would have to water all the time, but we give it a few hours longer so as to break joints, and one fellow will have a turn in the night for a while and then the other.

Q What is your practice on the prove bench as to watering in the night?

A We take our lantern, at least I do, and shovel and go out and water, stay with it all the time.

Q Do you know whether or not that is true of your neighbors?

A Yes sir.

Q When you have been out watering at night have you seen other lanterns?

A Yes sir. I know also too, my neighbors could not irrigate any-

thing unless they did do it. We attend to it just as diligently at night as we do in the day time.

Q Has that always been true on prove Bench?

A Yes sir.

Q The experiments which you made during 1915 was on your north farm? A. Yes sir.

Q Will you state to the court the character of crops and length of runs upon that farm?

A My crops that I raised in 1915 was practically alfalfa.

Q What was the length of runs?

A They varied from four or five rods up to -- well, I have one small piece twentyeight rods long -- ten or fifteen rods.

Q Take your piece which is twentyeight rods long, what was it planted in?

A Alfalfa.

Q Is it practical as a farm to make the runs shorter upon that tract?

A Well, it would depend on -- depend somewhat on what size stream you were irrigation with. If you had a large stream so that you could crowd it it would go through and only have one run off at the lower end of your farm, and what water would get through would go off into the waste ditch. If you would split it in two the runoff you got from the upper end wouldn't do you very much good on the lower end, and you would have two rounds, so I don't believe there is so very much difference.

Q Have you made the runs upon your farm as economical as you could consistent with the lay of your land and your crops as an irrigator? A. Yes sir.

Q Have you taken into consideration the thought of getting the best results from your water?

A Yes sir. The length of runs is always governed by the fall of the land. If you got a heavy fall of land, got a steep grade you can use a longer run to good advantage. If your ground is practically flat, and especially that kind of soil, why the

shorter you can get it the better.

Q Which irrigation on prove Bench required the most water?

A First irrigation.

Q Why, if you know?

A Well, the frost heaves up the ground there and the bottom of the soil each winter it goes into the ground below all soils and it leaves it open and porous, and the first irrigation it needs a real large quantity of water to ever get over it at all, and also got to have quite a large stream to ever irrigate it at all, and the different applications as you go along through the season, it gets settled and gets a little tighter and little closer together, until after a while you can water with less water than you did the forepart of the season.

Q Now, take a do all the lands on the bench require irrigation at practically the same time in the spring, that is, those that are planted to the same crops?

A I think so, nearly all.

Q And in the early spring you require for the purpose of packing the land and getting over them a larger quantity of water?

A Yes, much larger. I might state that the lands under the High Line canal is different character of soil, but that same rule works there.

Q As the soil packs it requires less water?

A Yes.

Q During the past summer have you had occasion any time to observe the use of water in Provo City?           A. Yes sir!

Q When did you first begin to observe the use of water or the waste of water at prove City?

A On July 10th, morning of July 10th.

Q What time?           A

A About four o'clock, just after daylight.

MR. A. C. HATCH: What year?

MR. RAY: This year.

Q Four o'clock in the morning; who was with you if anybody?

A Mr. Knight and Mr. Frampton.

- A We went down below irrigation around the south and west, southwest and south, and in town and also across the south and out under the East Union.
- Q Did you find on that trip any water going from the ditches and into the lake below any point of possible use?
- A Yes sir.
- Q I wish you would state to the court what ditches and the quantity of water passing through them.
- A We found in the neighborhood of thirtyeight second feet of water going into the lake.
- Q Was that seepage water? A. No sir.
- Q Where did it come from?
- A Came from the different systems herein the town.
- Q Did you pass through Provo City that morning?
- A Yes sir.
- Q Did you see anybody irrigating? A. No sir.
- Q Did you see -- did you observe the outlet of the East Union near the Bullock land? A. Yes sir.
- Q Was there any water running out of that?
- A I have to refer to my notes here.
- Q Refer to them.
- A There was six second feet, we judged to be six second feet going down the county road running towards Bullock's farm and past the James Gray farm. It joined with the water in Spring Creek and went off to the lake.
- Q Did you follow it down to see whether it was used?
- A Yes sir.
- Q Was it used? A. No sir.
- Q That water came to the East Union? A. Yes sir.
- Q Now, were there any other waters going to the lake, and where, on that occasion?
- A At the south pasture that is off down in here.
- Q Down in here means off southwest?
- A Southwest of town; I think on something like Tenth West; I would not be sure; there was eight second feet

Q That would be from what stream, City Base, or Mill race or Tanner race?

A I think that would be from the Tanner race.

Q Was that water coming from the city ditches?

A Yes, it made down through the field there; we crossed it down there; we crossed it down in there and caught it again going through the fields, went down this road to the left.

THE COURT: How much do you say that was?

A About eight second feet.

Q Now, were there any other streams running to the lake?

A The South Meadows; that is, the bottom of Fifth West there was eight second feet.

Q Going through Provo City? A. Yes sir.

Q Where was it running to?

A Right down through City creek, down Fifth West to the lake.

Q Was there any other streams?

A At the South Ward pasture, or the First Ward pasture, there was about eight or ten second feet, I should judge eight second feet any way or more that was going down through the Mill race, and off into the lake there.

Q Any other streams?

A There was fourteen -- there was a lot of those town streams west of there, but they might have got into those others. There was, east of town where the water dumps over the hill down here, east part of town, there was five of those town streams, about one second foot to a stream dumping down in there, going to waste in the First Ward Pasture.

Q Now, when you give the second feet of water just tell the court how, in your own mind, you arrived at the quantity of the stream

A I witnessed a great many measurements made in open streams by an engineer; I have also had an engineer at the time he measured the water, quantity of the water in the weir at the farm over there, and I got the quantity that was going over the weir. I immediately after measured the ditch in the open stream below the weir to aid me in making a guess ~~basixat~~ the water.

Q These were estimates based upon your experience?

A Yes sir.

Q And you don't pretend they are absolutely accurate?

A No. For instance, a stream that is five or six and four tenths second feet going over the weir will make a stream five feet wide and eight inches deep with about an inch fall to a rod in an open ditch, or about seventy-two inches of water per second foot.

Q Now, were those all the observations that you made upon that trip, Mr. Stratton? A. Yes sir.

Q Did you make any other visit?

A Yes sir.

Q At what time?

A July 17th.

Q In company with whom?

A Mr. Knight and Mr. Frampton.

Q You came for this specific purpose, did you, of ascertaining what the condition was?

MR. THOMAS: Mr. Ray, will you permit a question here?

MR. RAY: Yes.

THE WITNESS: Yes, we came for that purpose, also for observing crops.

Q I will come to that later.

MR. THOMAS: Mr. Stratton, have you made any visits to determine the use of waste of water prior to 1916?

A No sir.

MR. THOMAS: If the court please, I move to strike out the testimony of the witness on the ground it is incompetent and immaterial and not within the issues raised by the defendant, Provo Bench Irrigation Company or Provo Bench Canal & Irrigation Company under its plea of abandonment on the part of Provo City.

THE COURT: The motion is denied.

MR. THOMAS: Exception.

Q Just state what you observed on your second trip; what time of day was this trip, first?

A It was about four o'clock in the morning.

Q Just state what you observed?

A We found forty-nine second feet on that trip.

Q Going to the lake? A. Yes sir.

Q Through these various ditches? A. Yes sir.

Q Where did it come from?

A Down at Carter's farm, that ditch that goes down by Carter's farm was four second feet.

MR. BAGLEY: What channel would that be from the city.

A That is Little Dry Creek, I think.

Q Give the next.

A South Ward Pasture, seven second feet.

Q Second Ward Pasture and Meadows?

A Second Ward pasture, seven second feet and South pasture, South Meadows, is the name given to me, seven second feet.

MR. THOMAS: That is another seven second?

and

A Yes, at the First Ward Pasture, going down through the Mill race, eighteen second feet.

THE COURT: Now, I have South Ward pasture seven second feet, Second Ward pasture seven second feet and South Meadows seven; have I too much?

MR. BAGLEY: You didn't get Carter's.

A Carter's four second feet.

THE COURT: Give from Carter's farm on.

A Second Ward pasture, seven; Second Ward Meadows seven, and down through the Mill race and through the First Ward pasture is eighteen. Six at Bullocks farm; three from East Union, taken out of the East Union out at Edenburg's farm; taken out there and across the road and about fifty or sixty rods north of the Bullock farm where that Spring Creek is, there was a stream going over there, three second feet.

Q Did you observe anybody irrigating at the time you were there at four o'clock that date?

A Yes sir, we seen one man.

Q Did you go through the city on that occasion?

A Yes sir.

Q Clear through it?

A We went down around the west side, across the south end, out there and back through the town.

Q Did you make any other visits?

A Yes sir.

Q When?

A In this here one, there was five second -- five streams east of Academy Avenue going over into the --

MR. THOMAS: When was that?

A July 17th.

MR. THOMAS: Five second feet?

A The next time I came down was July 24th.

Q What did you find on July 24th and what hour did you go there?

A Well, four o'clock in the afternoon, found forty-one second feet. Four at Carter's farm; Second Ward pasture seven; Second Ward Meadows, nine; First Ward Pasture, fifteen. I am mistaken on this date. The date is correct, but it was in the morning.

THE COURT: What time in the morning?

A Four o'clock in the morning, about four; Carter farm, four.

Q This is repeating the same date?

A Yes, this is repeating. Second Ward pasture, seven; Second Ward Meadows, nine; First Ward Pasture or Mill Race, fifteen. There was about one second foot going down from East Union, running around the cemetery and down the north side of the cemetery into the bottoms there, into the drain. Five streams east of the Academy avenue going off into the bottoms.

Q Did you make any visit after that? A. Yes sir.

Q Give the date and time of day and what you observed, and give them slowly enough so that counsel may get them.

A This time was on the 29th of July, 1915, found --

Q What time of day?

A I have these a little bit mixed up; I will just state that on the trips I come in company with Mr. Frampton and Mr Knight we came in the morning, early in the morning. I made two trips by myself in the afternoon. I got them mixed up; I wrote them here one after the other, but I might -- I forget the date; that is, I forget just which is each trip. Then once, as I was going along the county road going to Benjamin, on a trip to irrigate down there, I observed the wastage of the Bullock farm.

Q Did you make any other trips or any date that you can identify and remember?

A July 29, 1916, sixty-five second feet.

Q What time of day?

A That was in the morning in company with Mr. Knight and Mr. Frampton.

Q Where was that water coming from?

A That was in the ditch going past the Carter farm, Second Ward pasture nine; Second Ward Meadows four. I left my glasses; it is hard for me to read anything. Second Ward meadows twelve.

MR. THOMAS: You said four.

A That was Second Ward pasture. I believe I can see better; at the Carter's farm four; that is going past the Carter's farm. The Second ward pasture nine; I am reading this over again. At the Scott or below the Scott farm, in a ditch going down through the fields there into the tail race of Old Dry Creek, four; Second Ward meadows, twelve; First Ward pasture, or Mill race, twenty-five, Bullock farm, nine. There is two town streams going through the town on into the bottoms there and wasting in the Second Ward pasture.

Q Did you make any other visit?

A Yes sir.

Q What date and in company with whom?

A Next date, July 30th.

Q With whom?

A I went alone that time.

Q What time of day was it?

A It was four o'clock in the afternoon.

Q What did you observe?

A I found forty-one and a half second feet of water that I estimated to be that.

Q Where was it running?

A Running down out of a waste ditch of the East Union; there was six second feet and up this way and beyond the cemetery near Edenburg's farm, was about one-half second foot, small stream. Twenty-five in the Mill Race or First Ward pasture.

THE COURT: Twenty-five second feet?

A Yes sir, twentyfive or more; it was the one stream. The ditch seemed to be as full as I ever seen it. Five at Fifth West; that is, the lower end of Fifth West, the Meadow, South Meadows, and four at Second Ward pasture.

MR. THURMAN: How much at that Fifth West?

MR. RAY: Five, and four at Second Ward pasture, and six down the stream beyond Carter's.

Q Did you make any other visits? A. Yes sir.

Q When?

A July 31st, next day.

Q Did you find any of these streams still running?

A Yes sir, the stream at the west -- at the end of the East Union was shot over just before it got at the end of the East Union, come through the gutter, and that cut through the Bullock pasture. It run there continuous for three days; that is, each time we

Q ~~29th, you mean, don't you?~~ viewed it, it run on the 24th.

A Yes, 29th and 30th and 31st.

Q Now, on the 31st what did you observe?

A About sixty-two second feet of water.

Q Where was it coming from?

A There was eight at Carter's farm; six at the South pasture, eight at the South Meadows, and Old Dry creek, seven. First Ward pasture or Mill race, twenty-five. Out of the East Union

eight. That run 29th, 30th and 31st. This stream out of the East Union might vary a little in quantity, run six to eight second feet and run 29th, 30th and 31st.

Q What time of day was that last visit, the 31st?

A That was in the morning.

Q About four o'clock?

A Yes, it would be probably six o'clock by the time we got out there.

Q Now, the next, if there was a next?

A August 27th.

Q That was yesterday morning? A. Yes sir.

Q What did you observe?

A Seven second feet in South Ward pasture; South Meadows, three; First Ward pasture or Mill race, twelve; and Bullocks farm three second feet. That same morning had evidently turned on to his farm in the evening and went home and went to bed; there was three second feet doing down the waste ditch.

Q What time yesterday morning was that visit made, Mr. Stratton?

A That was about four o'clock, between four and five; we got home about seven or half past.

Q Was that the last visit you made? A. Yes sir.

Q Now, during all of these visits how many men did you see out irrigating at four and five o'clock in the morning?

A Just one man; I had went on July 25th, 1916 --

Q What did you observe then?

A Why, five second feet in Old Dry Creek dumping into the bull-rushes. 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.

MR. HATCH: How many in all?

A That is the trip that I made in the afternoon on the 11th, August 11th, 1916, on the way to Benjamin I observed three and a half second feet flowing through the waste ditches of the East Union at ten forty in the morning.

Q Are those all the observations you made?

A Yes sir.

Q Did you make any observations at that time as to the conditions of crops in Provo City? A. Yes sir.

Q State what was the result of that observation and what opinion you have whether or not they were suffering for water?

A Why, we rode along slowly ---

MR. CORFMAN: Is this August 11th?

MR. RAY: During the entire period this year.

A We drove along slowly and observed the crops as we went along, and also when we would stop, we would look at the crops near by. I never seen anything that needed water; I never seen anybody irrigating only the one man, seen one crop of corn that had had too much water, but as a rule the crops had been watered I think about right, about what was good for the crops.

Q Are there any waste ditches on the Provo bench?

A No sir.

Q Have there ever been any waste ditches on Provo Bench?

A No sir.

Q Now, are you familiar with the Wright farm at the head of Provo Canyon?

A To some extent I am, yes.

Q Have you ever observed irrigation upon it?

A Yes sir.

Q Just state to the court what your observation was as to that?

A Why, we used to pass up along, up and down there, hauling fruit to Park City, and we had a good road for the forepart of the season there for quite a while and early in the season before they had irrigated the piece of land above there. As soon as they irrigate the piece of land you could see the waste, the seepage water less than three days afterwards making its way right into the river, perpendicular bank, running right in.

Q Did that come out of the bank or on the surface?

A Come out of the bank, it was water that had been sunk on the

farm and it came out of the bank, and run into the river, and the same condition continued all through the season. Also made a mudhole in the road we used to get stuck in.

Q Where was that water run you say in the road, where would it find its way if you know?

A Find its way into the Provo River.

CROSS EXAMINATION by Mr. Corfman.

Q Mr. Stratton, when you made these observations you speak of, did you go to the head of the river, see what water was being turned to Provo City?

A No, we never went to the head of the river. Never was up there but once, that was last July or August.

Q Did you go to the gates? A. No sir.

Q Did you go to the gates where Provo City water was measured when you made these observations?

A We seen the streams as they come into town.

Q You went below the town, so you came through the town?

A Yes sir.

Q Did you make any observations to see whether any of this water was returned seepage?

A Yes sir, we noticed the stream from quite high up, made its way along.

Q Quite high, how high?

A Well, for instance, down Fifth West. There is not any return seepage that I could observe from up there by - at the upper end of the Third Ward clear down to where it goes into the pasture, after it gets to the pasture it is low ground and water is oozing out of the ground there nearly anywhere.

Q Did you make any observation whether any artesian wells were running into some of these ditches, ditches here in Provo City?

A There might have been enough artesian wells to make one-fourth of a second foot. I never seen any come in.

Q Did you examine to see?

A Looked along, sure, went down.

Q Did you see any?

A No sir.

Q Now, Little Dry creek, you spoke about making these observations, you saw some water running through Little Dry Creek that was not being utilized in return seepage to that creek?

A Well, there might have been there, I don't know.

Q Do you know concerning the Mill race, Factory race, whether or not any return seepage?

A There was very little in there.

Q How?

A Very little in there.

Q Did you observe to see how much there was?

A Never seen any.

Q Did you look to see?

A We looked along as near as we could, up on the banks of it. I couldn't see any.

Q Did you make any observation concerning the upper East Union or Timpanogos Canal to see whether any of the water was coming through their waste ditch ditches, feeding these streams, at the time you made this observation?

A The upper East Union used its waste water farther on than the East Union.

Q All of it?

A Couldn't come out of the waste ditches of the upper East Union and run into the East Union.

Q None of it at all?

A Not that I know of; there might have been a little waste water from the upper East Union, might make its way into the lower East Union, but if it did, it would create a muddy water, we could detect. We found the water the color of the river water.

Q Some of these streams you measured at the south part of town are continuation and have never been used and could not be used for irrigation, could they?

A No sir, there isn't any of those we measured, there are some streams down here we didn't measure; we never took any notice of, that is continuance.

Q Do you know where the East Drain is?

A Yes sir.

Q Did you make any observation as to that?

A No sir.

Q Didn't measure that?

A No sir, we didn't take any notice of that because part of it, biggest majority of it, is drain water.

Q About how long at each one of these times that you made these examinations, did you spend; you say you started at four o'clock in the morning?

A We started at about three thirty and go down there and we would get back from eight to eight thirty.

Q And go all over the city?

A Go to these three or four places. We did not go over all the city. If I had went and made a right good hunt I could have found lots more water coming down through Big Dry Creek. We only called on that twice and found it each time there was a stream running in there nearly -- well, that is as far down the road as we went.

Q Do you know where Little Dry Creel gets its water from?

A I think it is the Tanner race.

Q How?

A I think it is a portion of the Tanner race.

Q You think it is a portion of the Tanner race?

A Yes, I didn't follow it clear up.

Q Do you know whether it is fed by any springs, anything of that kind?

A I never seen any springs.

Q Do you know what quantity of water was being measured into Little Dry creek that day?

A. No sir.

Q Mr. Stratton, on July 10th you testified there was six second feet of water going down the county road past the Bullock farm.

- A Didn't run past the Bullock farm, Mr. Corfman, it run down the county road past the James Gray farm, and it entered Spring creek at the crossing of Spring Creek and went off into the lake.
- Q Do you know whether or not lands are irrigated below that point?
- A There is some land irrigated below, I never measured it; but I judge may be a hundred acres, but the Spring Creek is ample to water all.
- Q Did you see whether water was used and applied there that day?
- A Yes sir.
- Q You say you went down there?
- A Yes sir.
- Q And it was not?
- A No, it was not. It went into the rushes right there below the railroad track and into the slough?
- Q Did you go to see whether these lands down there that are cultivated were using any of the water?
- A Never seen any.
- Q Who did you go to see?
- A We never went to every piece of land down there. We went around, we went down in there about an hour looking around, we never saw them using any water.
- Q Did you observe that morning whether or not the Gray farm and Edenburg farm were using water or had the previous day or that night?
- A One of those farms was evidently using that stream, it had been turned on, I should judge in the evening on a short run that would run through in an hour. It was dumping off the other end of the farm that particular time.
- Q Did you notice the condition of the farms, whether land that would irrigate quickly?
- A Yes, it had a good fall in there.
- Q Can you state -- can you as a farmer, irrigate that land without some water running off of it?
- A It could be irrigated with lots less water running off from it.

I don't know as you could irrigate it without some water running off.

Q Necessarily some waste, wouldn't there be?

A There is no such stream as that ever gets off a farm unless it is left on a short run all night, and runs to waste three fourths of the time.

Q How much would you say in the irrigation of a farm would run off?

A That would depend on the length of time you left it on. You take a stream on that character of soil with a fall that has got, I should judge it would run through in an hour if you had a good size stream on, When it first begin to run off be a little bit and the longer it run off the more it would increase. When it saturated the ground until the ground had practically taken all it would you would get something like or less the amount it run off you would on to the other end.

Q Your observations were all made practically the same time, you don't know what the conditions were previous to the time you went to these places?

A You mean previous to this year?

Q Yes.

A I never went down there for the purpose of finding out; I passed by some of those places last summer, but I could not give the dates, but I found water running into the lake then, a year ago this <sup>last</sup> summer.

Q Now, you spoke of Little Dry Creek; that is an old abandoned stream, is it not?

A I couldn't tell you; I suppose it is an old channel that had run out through there in early days. There is probably a branch of the river wash or something and been used once for to run water in part of the way for irrigation, follows the stream part of the way and part of the way likely is not.

Q Don't you know the water users don't take water from that stream for irrigation?

A This water we seen coming in Little Dry Creek, the old bed of Little Dry Creek, of course the information I have about Dry

Creek I have been told that was Little Dry Creek, but this water was not coming down Little Dry Creek; it was entering Little Dry Creek about there at Carter's ranch and going down on each side of the road in a ditch that had been excavated and made, used for carrying water.

Q Was it below Provo City Irrigation system?

A I don't know where the irrigation system is.

Q These observations you made in order to determine the use of water, whether it was being applied beneficially and economically were all below Provo City irrigation system where the drainage would take place and <sup>the</sup> seepage and the waste.

A The streams --

Q Answer the question will you please?

A I don't know where your limits of your irrigation is.

Q You know the limits is practically where you went to make these observations.

A Yes, that is the limit, but the streams that followed down we knew came from the river, knew they came through your irrigation system, by seeing them up above and seen and keeping track of them each time. For instance, you go down to the end of Fifth West, water that runs down there, we know it comes through your irrigation system, and has to in order to get down.

Q But you didn't observe whether it came from return seepage or waste water from gardens?

A We can tell -- I can, at least; I can tell seepage water and spring water from river water. You can tell by the color of the water. It will take some time -- this here was river water in my judgment.

Q Can you tell seepage water from river water?

A Yes sir, seepage water at every place I have seen is clear, like any spring water. River water is not near so clear.

Q Did you make any observation or make any inquiry when you found the Mill race was carrying as high as twenty-eight, as you estimated it, twenty-five second feet, whether or not the mills were in operation that night?

A No, we never. We supposed -- that is, I did, I don't know what the other boys did, that the mill shut down every night; I never knew of them running at night.

Q You didn't inquire whether they did or not?

A No sir.

Q Did you observe whether or not preceding these visits you made to Provo City, whether there had been a rain fall?

A There had not been any rain fall the trips that we made <sup>was</sup> in the height of the irrigation season; that is at the time we started, the time of the last irrigation of grain at the time sugar beets have to have water, the time everything else should have been watered.

Q On none of these occasions <sup>you</sup> did not make observations there had been a rain fall immediately previous to your making the visit?

A There was one rain shower, I don't know how heavy they got it down here in Provo; there was one rain shower, but never came up our way sufficient to take the place of the irrigation or do any good in that way.

Q Was that true in Provo where you made the observation?

A I think it was about true. I don't think there was very much difference between the rain fall here and up at our place.

CROSS EXAMINATION by Mr. Thomas.

Q Mr. Stratton, during your visit in June 10th, do you know whether or not any of the crops looked as though they needed irrigation?

THE COURT: You are cross examining on behalf of whom?

MR. THOMAS: Provo City.

THE COURT: I thought Mr. Corfman was.

MR. THOMAS: I want to ask one or two questions.

THE COURT: You may do so.

Q At no time during all the observations we made did I see any crop I thought needed water. We observed the crops as we went along and when we had begun to get out and go through the

fields and see where some stream went through, we could observe crops then, and I never seen a crop from first to last that I considered needed any water.

Q Do you know whether or not prior to your visit, say two days prior to your visit through the city on July 10th, there had been a heavy rain throughout here?

MR. RAY: I object to that as having been asked by his associate counsel.

THE COURT: The objection sustained. Same question was asked by Mr. Corfman as to all of these dates.

MR. THOMAS: Then, that covers my cross examination.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q Who was the man, the one man that you saw using water for irrigation purposes on these several trips?

A I don't know who the gentleman was, he was down here in the field southwest of the town carrying a shovel, evidently irrigating; we never stopped to see who the man was.

Q Within the city limits or on the farm land.

A He was on the farm land.

Q Can you define what land he was on?

A I didn't make any note of it, it was along the land that runs down on Fifth West, or else it was on the land that ran down west of that, about Tenth West. It was down along there, I don't remember, I don't just recall which of those streets it was on.

Q What time of year was it when you made your observations of the irrigation of the Wright ranch?

A Along in June, well, early June, that has been a long time ago,

Q About how many years ago?

A Well, the first time it was probably twenty years ago.

Q And the last time?

A About four years ago-- two years ago.

Q When during the month of June?

A This time I am speaking of in particular was in the month of June,

it was about twenty years ago, sixteen years ago, maybe twenty.

Q That is when you made the observation of the percolating of water?

A Yes.

Q And seepage back into the river from the lands?

A Yes sir.

Q When you examined the Mill race down at the lower end of the city in the day time, can you state what time it was in the day?

A Why, the trip I made alone, and went down there it was 6:05 in the evening that I got to the Mill race.

Q 6:05?

A Yes, in the evening or about that time.

Q And where was it on the Mill race you saw the water?

A We noticed -- the Mill race divided and part of it goes through the field down there and part of it goes around to serve the power for Smoot Lumber Company, comes in the other way; this part that runs from Smoot Lumber Company always had a little water in it, but we never took any notice of that; the water that we took an account of was the water that come down the other way that was not used from the Smoot Company wheel. And just below where it dumps, where the First Ward pasture takes their water out. They take their water out on the west side of it and part of it is conveyed by a flume back over on the east side and part comes down on the west side, and it was the part that -- in below those intakes of those ditches that we made the estimate on, dumps over an old gate there.

CROSS EXAMINATION by Mr. John E. Booth,

Q Mr. Stratton, as I understood you m you say that Prove Bench & Irrigation Company has no waste ditches?

A No sir.

Q Nor no waste water?

A Not that I ever seen.

Q Do you live on the same street with that Thomas J. Patton lives on?

A Yes, I live on the east side of the main county road from Prove.

Q But it is on the same street running east and west, is it not?

A Yes.

Q East?

A No, I live half a mile this side of there.

Q Does Mr. Patton live on the same street as the north of the old McGraw place ?

A No sir, he lives on the county road, little further along on the east side of the county road.

Q I am speaking of junior, Thomas J. Patton, Jr.

A Oh, Thomas J., I thought you said William?

Q No.

A Yes, I am acquainted with that street.

Q Is that the street you live on?

A No sir, I live on the county road half a mile south of that street.           A. Yes sir.

Q Do you know of a large irrigation ditch running through there? do you?           A. Yes sir.

Q Running west?           A. Yes sir.

Q Now, suppose that the people on the upper end of that ditch don't use the water, water is in the ditch, then it will run down?           A. Yes sir.

Q And so on and so on; where will it go finally if nobody takes it out?

A Well, that is a thing that never happens only during a heavy rainstorm, continuous rain.

Q That is not an answer to my question, Mr. Stratton, I say where would it run if nobody takes it out?

A I think it would run right down and dump over a hollow into the West Union ditch.

Q Yes sir, and it would break it, wouldn't it, then when it broke that it would run on somebody else's ground?

A Yes sir.

Q Don't you know that thing occurred this year?

A No sir.

Q And shot a great gulley through the West Union Canal, through

Peter Old's land and El John Nuttal's? A. No sir.

Q You don't know about that? A. No sir.

Q If you would go there and see the place now where that gulley was washed, would you think any water was being wasted from there, or run over that field?

A If I would see the gulley had washed, I would have a pretty good idea water had done it.

Q I guess you would, it wouldn't be much trouble to go from your place down there and see that, would it, if there is anything there to see? A. No sir.

Q Is that a ditch belonging to the irrigation Company, or is that a private lateral?

A It don't belong to Provo Bench Canal company. It is a lateral of the Provo Bench Canal but belongs to the people up and down the ditch.

Q So that you people don't claim any responsibility after it gets into the lateral? A. No sir.

RECROSS EXAMINATION BY Mr. Corfman.

Q Are you acquainted with the road immediately south of the Beehive Store on Provo bench?

A South of the Beehive Store?

Q Yes. A. Yes.

Q Along about the 28th of July were you down that road -- or 28th of June?

A I don't know that I was, I don't remember.

Q You don't know the conditions as to the water being in the road there for a quarter of a mile so that it rendered it impassable?

A I never noticed any times.

Q Have you in previous years noticed that road being flooded practically from one end to the other?

A Not that one.

RECROSS EXAMINATION By Mr. Thomas.

Q Mr. Stratton, do you know whether any water has run to waste on

on the prove bench this year?

A Not that I know of.

Q Do you know what -- finish your answer.

A If is a fact there is a few users that irrigates right down to the road, but the ridge across the bench is a wash board shape, they haven't got any waste ditches, necessarily run out through the fence for a few minutes, but you cannot irrigate any piece of land and get it all through at the same time, some water will be a little ahead of others and run off. Lots of times when you -- will say was watering to the fence and reached just outside, when your first water arrives at the fence you shut it off right then there would be some run off going through the fence into the road. We have never had no water up thereto waste.

Q You haven't seen any in any of the streets running east and west and west of the county road?

A Not this year.

Q You have seen it other years?

A I seen it last year.

Q Streets were pretty badly flooded, weren't they?

A Not very badly. One street was flooded <sup>the</sup> cause of that was the company that lives up and down it got at logerheads and wouldn't clean out the ditch, and the farms was burning up at the same time they were flooding the ditch, because the ditch was clogged up. That condition continued for three years or four.

Q So for three or four years they were wasting water?

A Yes, they were wasting their own water, but they were suffering for it, because their crops were ~~bxn~~ burning. Neither one would give in to clean out the ditch until the others would. They couldn't agree.

CROSS EXAMINATION by MR. A. C. Hatch.

Q You stated that you had about twenty-five acres of trees, orchard, did you not?

A yes sir, I did have. Let me make that clear, I did have

twenty-five acres of trees. I planted out twenty-five acres of trees or a little more, but I have been pulling them up from time to time for the last three years, I haven't got near that amount now.

Q About how many acres of trees have you now?

A Well, less than twenty, about fifteen or sixteen.

Q Have you any land upon which you grow fruit exclusively without raising other crops between the rows?

A Oh yes.

Q How much.

A We never did raise any crops between the rows of trees after the first year of settling until this last year. Last year I chopped out every other row of peach trees in my orchard, in part of my orchard, rather, and sowed a tract of clover; cutting hay between the trees at the present time.

Q Do you own the land immediately south of the tract which was being experimented upon last year -- in 1914, rather?

A They made a --

Q Do you own that land immediately south of the strip that was being experimented upon by Deming ?

A That orchard was immediately south of where we made the demonstration on my farm?

Q Yes.

A I did own it up until now, I gave that part to my boy.

Q All of that had lucern growing between the rows at that time, didn't it ?

A No.

Q Sir?

A No, the pear orchard never has and hasn't today to any lucern in. The part we made the demonstration on had some trees growing of which we pulled out every other row, and part of it we pulled out every other tree in the row, that was left, but it was alfalfa and trees. That we made the demonstration on south of that never did have any alfalfa on.

N. J. KNIGHT, called by the defendant Provo Bench Canal & Irrigation Company, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Ray.

Q State your name, age and residence?

A My name is N. J. Knight, fifty-two years old and I reside on Provo Bench.

Q How long have you been a resident of Provo Bench?

A About forty years.

Q Are you an owner of land on Provo Bench?

A Yes sir.

Q How long have you owned land there?

A Ever since I was twenty-one, about thirty-two years.

Q How many acres of land do you now own?

A Thirty-two acres.

Q How many shares of water in the Provo Bench Canal do you own?

A Thirteen.

Q So that you have about one share for each two and a half acres?

A When the barn and yards around the house are taken out it isn't quite that much.

Q Will you kindly locate from the Exhibit 100 here your place.

A My place is in Section 14 and 15, my home place, right here.

Q Marked upon the map N. J. Knight?

A I have another ten acre tract, this is a twenty-two acre tract, I have another ten acre tract, I think in Section 22.

Q Marked upon the map the northeast corner, Newell J. Knight ten acres. How long have you been cultivating those two tracts of land, Mr. Knight?

A The twenty-two acre tract where I live, I have cultivated that for thirty years.

Q You have a home upon it?

A Yes sir.

Q And outbuildings? AL Yes sir.

Q Your family lives there?

A yes sir.

Q What is the character of that home? How large and what was the cost of it?

A Well, it is twenty-two acres of land in the tract. I have a house that cost me about four thousand dollars.

Q A new home?

A Yes sir, that is about five years old.

Q What are the class of crops raised upon your home place and upon the ten acres?

A On the home place I grow fruit quite extensively, strawberries and raspberries, potatoes and apples and cherries and pears and some alfalfa.

Q What upon the ten acre tract?

A Ten acre tract is grain and potatoes and alfalfa.

Q Have you personally attended to the irrigation of that tract during the past few years.

A Yes sir.

Q Have you observed the requirements of crops upon that soil as to water? A. Yes sir.

Q How often do the fruits which you raise upon your twenty-two acre tract require irrigation in order to obtain the best results?

A About once in eight days, about once a week.

Q What is the effect if the period of irrigation is extended?

A Why, the fruit don't mature naturally, and you cannot produce a first class article.

Q What is the difference in the market ability of fruit which is watered and has a high miscolor and good flavor and fruit which is raised with an insufficiency of water?

A Why, the fruit that has plenty of water is first class article, And fruit that is stunted for water is about a third class article.

Q How do you apply the water, by flooding or in rows?

A Both ways. I flood my alfalfa and water my orchard and berries

in rows.

Q What are the lengths of the runs upon your farm?

A Well, the longest run I have would probably be two hundred and fifty yards, two hundred yards would be the longest run, that is in raspberried in rows.

Q What is the average run upon your farm?

A I should think about two hundred feet.

Q What determines the length of run in your farming operation?

A Why, the distance that I run it from the head ditch to the bottom of these rows, or that tract of ground.

Q How do you determine how long you are going to make these runs?

A Why, according to the lay of the land. If the land is hilly and rolling I put the ditch on the higher ground and water through the lay of the ground on both sides.

Q In the making of the runs upon your place, have you taken into consideration your experience as an irrigator in order to make the water serve the most ground possible?

A Yes sir.

Q Have you ever irrigated any lands other than the lands on Provo bench?

A Yes, I did a little irrigating over in Riverton last year.

Q Have you observed the requirements of lands over there for water?

A Yes sir.

Q Comparing those lands with your lands, which requires the more water?

A Why, Provo bench land takes considerable more water than the Riverton land.

Q What is the depth of soil upon your Provo bench land?

A Why, it would run from eight inches to two feet, I should judge.

Q Does the finer soil require more frequent irrigation than the thicker soil?

A Yes sir.

Q Have you ever dug any post holes upon your place?

A Yes sir, my place is fenced and cross fenced about three times.

I have dug a good many holes in it.

Q What has been your observation from the digging of those holes?

A The top soil is a gravelly loam, down underneath the gravel is a loose gravelly rock.

Q Ever had a well on your place?

A Yes sir, I have a well.

Q What is the depth from the surface to the water?

A Well now, I think right now the water would be about ten feet deep. The well is sixtyone feet deep.

Q So that it would be fiftyone feet from the surface to the water?

A Something like that, yes sir.

Q DO you know of any water level on your farm which is closer to the surface than your well? A. No sir.

Q What is the necessary period of irrigation for alfalfa to ~~xxx~~ produce the maximum result?

A If you are going to get a maximum result at my place, it needs water often, I should say once in nine days.

Q Have you ever had occasion to observe crops immediately adjoining your place of alfalfa which have been watered once a week, and crops upon your place which have been watered once in fourteen days as to the relative yield in hay?

A Yes sir.

Q State your observation.

A My neighbor, Mr. Snow has a little patch of hay land alfalfa and clover, he only has a small tract about an acre, he has watered that every week.

Q This year?

A Yes sir, since early in May. His third crop is now a good heavy crop ready to cut. I have just got my second crop off.

Q How often have you watered yours.

A About every other week.

Q Have you watered it sufficiently when you did water it?

A Yes sir, I water is good when I do water it.

Q Have you made any observation as to how the alfalfa grows between waterings?

A Why, it grows right along for about nine days and then if it don't get water it stops growing. It won't die or burn up during the fourteen days, but it doesn't grow any after about nine days.

Q Well, with that experience why have you watered your alfalfa only once in two weeks this summer?

A I didn't have water enough to water it every week and take care of my other crops. I used nine shares of water on that twenty-two acres.

Q Will you state to the court what experience you had in the year 1915 as to the sufficiency of the water supply under the prove bench?

A Well, early in the season, way early in May, we had an awful low river, lowest I ever heard of at that time, and our ground-- at least my ground got quite dry during that period, and I was unable to keep up with my watering and my crops all the balance of that season I got behind early in the season and I couldn't catch up, didn't have water enough.

Q Well you compelled to abandon any of your crops or slight them?

A Yes sir, part of my alfalfa went dry the second crop.

Q Was the yield lessened thereby?

A Yes sir, the yield was short.

Q What is the system of irrigation on your ditch?

A We water every seven days and eight hours and we have our water ticket made in the spring and whenever it is my turn to take the water, I take it on my turn. My neighbor takes it from me on his ticket. We have no water master on our little lateral ditch.

Q How many irrigators are there on your lateral?

A Ten, I believe.

Q And you make your ticket out in the spring on a basis of seven

days and eight hours and each man takes it on his time?

A Yes sir.

Q So you irrigate at night?

A You bet I do.

Q Do you yourself attend to it? A. Yes sir.

Q How diligently?

A Just go with a lantern and stay with it all night.

Q How long has that been your practice on Provo Bench?

A Twenty-five years.

Q Do you know of any one on your lateral missing their water turn day or night during the years 1915 or '16?

A No sir, I don't know of such a person.

Q Is there any waste ditch from the end of your lateral?

A No sir, there is no waste ditch I know of.

Q Do you know of any waste ditches on Provo Bench?

A No sir, I don't.

Q Now, Mr. Knight, you recognize the fact there are exceptional storms occasionally in the summer when there isn't a great deal of irrigation, what provision has the Provo Bench regarding for guarding against floods at that time?

A Our superintendent is instructed to turn the water back into the river.

Q At the head?

A At the head.

Q And thereby avoid the necessity of waste ditches?

A Yes sir.

Q Did you have a fruit crop this year?

A Not very good, no.

Q Since say the 20th day of June of this year, have you had a sufficient supply of water in your lateral to have served all of your crops and mature a fruit crop if you had one?

A No sir, I could not mature it all.

Q Are you able to state whether or not you have had the proportion of water to which your stock would entitle you?

A Well, I think so, the gates were set last spring and I don't

know they have ever been molested. I think I had my portion of the canal flow.

Q What in the past has been the method of taking water through the Provo Bench? as to the quantity you took, say in the spring?

A Well, in the spring, as I remember, our division gate is something like fourteen feet wide. That is divided among 1522 shares. Then what we call the Center ditch runs down two or three hundred yards and is divided again. When it gets down to my ditch there is 84 shares of water in the lateral I water from. It draws its portion continually of whatever is in the Provo Bench canal.

Q That testimony is pertinent, but what I wanted to elicit was this, how much water do you take out of the river in the spring?

A Why about 140 to 150 second feet when the canal is running at its full carrying capacity.

Q Do you require a greater or less quantity of water in the early season than in the late?

A In the early season if we don't have a pretty good supply of water we never get our grain watered over, the ground is so loose.

Q Why?

A I judge the winter frost hoes it up. It is plowed and marked off and planted. When you come to water it it takes enormous amount of water to get over the first time. You can give it a little less the second time.

Q And still a little less the third?

A Yes, until you get down to what the crops actually have to have. Then if you can get along with less than that you do it at a loss.

Q Where were you born, Mr. Knight?

A Provo City.

Q Did you live here in the city for many years?

A Until I was thirteen years old.

Q Have you gone back and forth through Provo City since that

time frequently?

A. Yes sir.

Q Are you familiar with the streets and farms in a general way?

A Well yes, quite a little.

Q During the year 1915 and '16, have you taken occasion to visit Provo City and its vicinity to determine whether or not water was being wasted?

A. Yes sir.

Q In company with whom?

A Mr. Stratton and Mr. Frampton.

Q Did you make any notes at the time you made these visits?

A Yes sir.

Q I wish you would consult those notes and state to the court without the necessity of my questioning you the date on which you made the visit and time of day you made the visit and what you observed?

A In the fore part of July, I would say about the 5th or 6th of July, as I remember it, the commissioner cut down our water supply and I heard Mr. Swan and Mr. Thompson speaking of how they were suffering for water around Provo. So we thought we would see what was become of the water that Provo City was supposed to be drawing from the river. So on the 8th day of July at six thirty P. M., together with Mr. Frampton, we found about thirty second feet of water going through the First Ward pasture into the Factory race to the lake. Then again on July 10th, together with Mr. Stratton, Mr. Frampton and myself, we found thirty-nine second feet going through. Then on the 17th we found forty-nine.

MR. THOMAS: What time of day was that?

A That was about four thirty.

Q A. M.?

A A. M., yes sir. Then on the 17th again at about four thirty we found forty-nine second feet. On the 24th --

Q Read that a little slowly so counsel may get it.

A On the 24th, at about five o'clock A. M. we found forty-nine second feet. Then on the 29th at five o'clock -- four thirty to five --

A A. M., we found sixty-two second feet. On the 31st, we found sixty-two second feet, at four thirty o'clock A. M.; on August 3rd, me and Mr. Frampton -- this was at five o'clock P. M., August 3rd -- we found at the Carter farm about four second feet; going through the First Ward Pasture about twenty second feet; total twenty-four second feet. On August 27th, we found twenty-five second feet.

Q what time on that date?

A Five o'clock A. M. At the South pasture there was about seven second feet; South Meadow about three; the First Ward pasture, twelve. At Bullock farm about three; total twenty-five second feet.

Q Was that the last visit you made, Mr. Knight?

A Yes sir.

Q Now, I don't want to take the time to go through and segregate these figures; counsel may do that on cross examination if they desire, but what was the general location of the ditches which you examined; were they below the irrigation area?

A At the point where we made the note of it, it was below the irrigation, way down where it goes into the swamp. For instance, in the Second Ward pasture we went about a quarter of a mile below the pasture, get down into the swamp. The First Ward pasture went half a mile below the gate. Second Ward meadow we went about a quarter below the meadow gate.

Q So that you observed these streams at a point below which they could be used for irrigation? A. Yes sir.

Q And do you know where the water was going to?

A Going into the lake, into the slough.

Q That led to the lake?

A That led to the lake.

Q Do you know where the water was coming from?

A Well, it was coming directly through Provo City and through Provo City fields, main part of it was in the southwest and south part of the city.

Q Did you observe any of the regular irrigation ditches lately made for the irrigation of city lots, east of Academy Avenue on these visits?

A Yes sir, I noticed from Academy Avenue east to about Fifth East on two or three different occasions about a second foot of water at each street going -- still going south on Sixth South and on Fifth South.

Q And below the point of irrigation?

A Everything I think below Sixth South would be below the point of irrigation, goes right off into the swamp.

Q On these visits which you made in the morning, early morning, from four to six, did you ever see any irrigators?

A Just seen one man carrying a shovel one morning about four thirty over here on Tenth West. It would be on what used to be Nels Johnson's farm; I think that is on Tenth West.

Q What observation, if any, did you make, as to whether or not the crops in Provo City and vicinity were sufficiently irrigated?

A They looked to me like they were well irrigated.

Q Did you observe any crop that appeared to be suffering for want of water?

A No, I don't call to mind any that was burning or suffering for water.

Q Take the wastage of the East Union coming out near the Bullock farm, as I understand your testimony, you visited that on three consecutive dates, July 28th, 29th, or 29th, 30th and 31st?

A Me and Mr. Frampton visited that on the 29th and 31st. Mr. Stratton visited that alone on the 30th.

Q And where did the water go which was coming out of that waste ditch?

A It went into the Spring creek right at the Bullock farm.

Q How much water was running in Spring Creek?

A We judged that the normal flow of the Spring creek would be about six second feet. Whenever we charged it with more than that it was, whatever amount we charged it with, in addition to the normal flow of the springs.

- Q You didn't charge Spring Creek as waste water, did you, its normal flow?
- A No sir, we did not.
- Q About how many acres of land below the juncture of its wastage and Spring Creek are there susceptible to irrigation?
- A I don't know that I could give that, quite a little land down in the old Bullock farm.
- Q C<sup>o</sup>uld you estimate it, I don't want any great accuracy?
- A I would say in the neighborhood of a hundred to one hundred and twenty acres, probably.
- Q And there would be six second feet from Spring Creek to irrigate that, would there?
- A Yes sir.
- Q Mr. Stratton testified that he gave you certain data and measurements which he had made of the water over the weir at his place in 1915, do you remember his doing that?
- A Yes sir.
- Q What did you do with that information?
- A Why, I asked Mr. Wentz to figure out for me what that water would amount to in second feet.
- Q Did you give him that information for that purpose?
- A Yes sir, I just wanted to know how many second feet. He figured that for me and then I had him tabulate it.
- Q You gave it to him correctly as Mr. Stratton gave it to you, did you?
- A Yes sir, I had Mr. Stratton's original notes.
- Q And did you turn over to me the tabulation as you had it made up?
- A Yes sir.
- Q I show you marked for identification Exhibit 101, and ask you if that is the tabulation which you turned over to me?
- A Yes sir, that is the same.
- Q And you also turned over to me certain tabulations on the Frampton farm and the Colton farm.
- A Podlson farm.
- Q Poulson farm?                      A. Yes sir.

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IN DIST. COURT  
UTAH CO., UTAH.

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SEP 26 1921

*W. M. Hales* Clerk

*E. B. Dastuy* Deputy