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UNIVERSITY OF LONDON  
W.C.1.  
In the Privy Council.  
6 JUL 1953  
INSTITUTE OF JURISPRUDENCE  
LEGAL STUDIES

**VOL. 3**

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No. 72 of 1936.

**ON APPEAL**

**FROM THE COURT OF KING'S BENCH FOR THE  
PROVINCE OF QUEBEC**

**BETWEEN**

**WILLIAM I. BISHOP LIMITED and  
THE BANK OF MONTREAL**

(Plaintiffs and Cross-Appellants before Court of  
King's Bench) ... .. *Appellants*

**AND**

**THE JAMES MACLAREN COMPANY LIMITED**

(Defendant and Cross-Respondent before Court of  
King's Bench) ... .. *Respondent*

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**RECORD OF PROCEEDINGS.**

**VOLUME 3.—PLAINTIFFS' EVIDENCE (CONTINUED) AND  
DEFENDANT'S EVIDENCE.**

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**BLAKE & REDDEN,**  
17, Victoria Street, S.W.1,  
*For the Appellants.*

**CHARLES RUSSELL & CO.,**  
37, Norfolk Street,  
Strand, W.C.2,  
*For the Respondent.*

43, 1937

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-

*HENRY G. ACERS (for Plaintiff) Examination in chief.*

DEPOSITION OF HENRY G. ACERS

A witness produced on behalf of the Plaintiff.

10 On this twenty-third day of February, in the year of Our Lord, one thousand nine hundred and thirty-three, personally came and appeared Henry G. Acers, of Niagara Falls, Ontario, Consulting Engineer, aged 52 years, a witness produced on behalf of the Plaintiff, who being duly sworn, doth depose and say as follows:

Examined by Mr. St. Laurent, K. C., of Counsel for Plaintiff:—

20 Q.—I understand you are an Engineer?

A.—Yes.

Q.—And you have been practicing as such since 1903?

A.—Yes.

Q.—And you have had quite a large number of important hydraulic works under your professional supervision?

A.—Yes.

Q.—And you were, from 1911 until 1924 the Chief Hydraulic Engineer of the Hydro-Electric Power Commission of Ontario?

30 A.—Yes.

Q.—And if I am not mistaken, that was a period when there was very considerable development done in the Hydro-Electric Works of that Commission?

A.—Yes.

Q.—And you have since that time, to date, been the Consulting of that Commission?

A.—For some time, but not at the present time.

40 Q.—Were you not doing some consulting work for the Commission within the last few days?

A.—Yes, but I have not been on retainer.

Q.—But you have been applied to from time to time in connection with questions arising?

A.—Yes, for some years, subject to my leaving the Commission I was on retainer.

Q.—In order to save time we have had prepared a summary, of your qualifications, which I will ask you to file as exhibit P-102, instead of taking the time to put these details into the transcript of evidence.

*HENRY G. ACERS (for Plaintiff) Examination in chief.*

I understand you have just recently returned from investigation Hydro-Electric possibilities in India?

A.—Yes.

10 Q.—Were you requested by Mr. Bishop at any time to visit and express your professional opinion of the site in connection with the Cedar Rapids work?

A.—Yes, on several occasions.

Q.—When were you first called in?

A.—In the late summer of 1929.

Q.—Do you remember the exact date of that visit?

A.—It was not the late summer. As a matter of fact, it was about midsummer, July 2nd.

20 Q.—What was it that you were specially called upon to examine and report upon?

A.—The main point that Mr. Bishop wanted some enlightenment on at that time was, the matter about the material he found in the by-pass excavation.

Q.—What we have been calling the hardpan difficulty?

A.—Yes.

Q.—Then, did he accompany you on that visit?

A.—Yes.

Q.—And how long were you there?

A.—I was there the greater part of the day on July 2nd.

30 Q.—What investigation did you make?

A.—I particularly investigated this matter of the hardpan.

Q.—What conclusion did you come to?

A.—I came to the conclusion that his contention that it was hardpan, was correct.

Q.—Could you tell from the walls of the trench where there was a division between the hardpan strata and the strata above it?

40 A.—Well, it could be identified at various points. The line of demarcation continuous at that time because there was a certain amount of wedge in the overburden above.

Q.—Was there water passing through the by-pass at the time?

A.—No. There was a certain amount of seepage water, but the by-pass was not being used.

Q.—So you were able to see the floor of the by-pass?

A.—Yes, I could see a portion of the floor and I could see all of the banks.

Q.—And you came to the conclusion that was shown to you there, was hardpan?



*HENRY G. ACERS (for Plaintiff) Examination in chief.*

A.—Yes, it is the material that is known as hardpan.

Q.—What is the relative difficulty of excavating, on one hand, common earth, then hardpan, and then solid rock, or is that the order in which they would be placed with respect to the difficulty of handling them?

10 A.—Yes, it is. The difficulty in handling the classification known as hardpan, approaches more nearly the handling of rock than it does the handling of ordinary loose earth.

Q.—Is there something intermediate then, but nearer to rock, more comparable to the difficulties you meet with in rock ?

A.—Well, quite more comparable.

Q.—Thau with earth ?

20 A.—Yes, and the methods used for the removal of it are much more analagous than the method used to move rock and the methods used to remove earth.

Q.—What is the principal method that is similar, in removing rock and hardpan that you do not have in removing earth ?

A.—Of course, the understanding of it is, it has to be shaken up with powder to make it possible to excavate it with any degree of efficiency.

30 Q.—Did you see the orange peel that the contractor had on the job there ?

A.—No, I did not. At least, I cannot see it in my mind's eye at the present time. I probably did see it.

Q.—But you have no vivid recollection of it ?

A.—Oh no.

Q.—Did you examine anything else on that visit ?

A.—Nothing with any set purpose.

Q.—How did the general layout of the plant appear to you ?

40 A.—Oh, it was perfectly normal. It was functioning as a plant in that location and disposed of as it was, would naturally be handled by the contractor. The contractor had to work on two sides of the river simultaneously, and he had no heavy duty communications between the two shores of the river, so we would pre-suppose the fact that the cable work would be the total element of his plant layout.

Q.—He had a foot bridge ?

A.—Yes.

Q.—Hung across the river ?

A.—Yes.

*HENRY G. ACERS (for Plaintiff) Examination in chief.*

Q.—In a general way, did it look to you as if the job had been properly laid out, or otherwise?

A.—Oh yes.

10 Q.—I presume in your experience, you have had to do with the placing of works on more than one occasion in systems that were being used for the driving of logs?

A.—Yes.

Q.—What is usual in order to provide for the passing of logs during the course of work? How is that usually taken care of?

20 A.—It depends almost altogether on the — I won't say altogether, but to a large extent, on the nature of the water-way. If the water-way has a tortuous channel, and if the water supply is meagre, it is sometimes necessary for the contractor to supply artificial means for passing logs, like putting in a temporary log chute, or something like that. Perhaps he may have to put in a cofferdam to cover sufficient water. On the other hand, if the work is being done on a water-way where there is an ample supply and natural flow, and particularly during the driving season, where the stream is not unduly tortuous or tumultuous, the ordinary openings that the contractor leaves in his unwatering works from time to time would ordinarily be sufficient to look after the requirements of log transportation.

Q.—Did this river carry, what you would call, a plentiful supply of water?

30 A.—This was distinctly a case of the second instance I have just cited.

Q.—Were you on another occasion called upon to revisit the works, and to express your professional opinion?

A.—Yes. Another crisis appeared to have arisen in the fall of 1929.

Q.—And on what date did you return?

A.—I visited the works at that time on, I think it was, October 15th.

Q.—In connection with what were you brought in?

40 A.—When I got there, I found that the cofferdam across the main stream, which had not been developed to any extent when I was there previously in July, had been completed, and was not exercising its designed function, and the crisis had arisen due to the fact that the contractor was not able to unwater the site of the permanent works across the main stream.

Q.—On the occasion of your first visit on July 2nd, did you look at this part of the river there where the beginning of the cofferdam had been placed?

A.—Yes.

*HENRY G. ACERS (for Plaintiff) Examination in chief.*

Q.—Did you see these shore piers, and group No. 1, which appears to have been put in on the 15th June, 1929?

A.—I cannot identify it as group No. 1, but I undoubtedly saw it if it was there on this date, according to the evidence, and  
10 I remember every shore group. I can recollect that.

Q.—Do you remember whether or not at that time it appeared to you to be a normal job?

A.—Oh yes.

Q.—When you went back on the 15th October, had all the piers been placed, and had the upstream sheathing been put on?

A.—Yes.

Q.—Will you look at exhibit P-37 and say if you recollect whether it coincides with the form and shape as it was on the visit of yours?

A.—Well, this indicates the salient features of what I  
20 saw that was there on that date.

Q.—What was there unusual that struck as such, when you looked this thing over?

A.—Of course, the outstanding feature of the structure on the site, was the placing on this Wakefield pile of sheeting such an unusual distance from the face of the cribs. Ordinarily, any cofferdam I had ever seen before, sheet piling was up against the face of the cribs and followed the upstream profile of the  
cribs.

30 Q.—While we are on that point, does the placing of cofferdam, cribs, require a perfect alignment from one shore to the other, and is that what is obtained in practice, or are there irregularities, and if so, how are they overcome?

A.—There are always irregularities. They may vary in degree, but there are always irregularities.

40 The basic function of a crib in a cofferdam is to offer substantial backing, stable backing for the water-proofing element which is later applied in the form of sheeting and the solid anchorage so that the structure won't move when that pressure is exerted against it through the subsequent water-proofing and the effect of the sheeting.

Q.—With respect to that, would there be anything unusual in the relative position of the two shore groups?

A.—No, not necessarily.

Q.—Would there be anything unusual in the relative position of group No. 1 with respect to the north shore group?

*HENRY G. ACERS (for Plaintiff) Examination in chief.*

A.—No. It can be in the position in which it is shown, and still be susceptible of water-proofing conveniently through the flexibility of the wood piling.

Q.—This wood piling is put down vertically?

10 A.—Yes.

Q.—And how wide are the pieces?

A.—They are usually not more than ten to twelve inches wide.

Q.—What, in a crib cofferdam, are the things which create the impervious wall?

A.—The sheeting and the toe fill are usually the two elements of the cofferdam construction which are depended on for water tanks.

20 Q.—And the cribs are there because of their weight to hold these two other elements in place?

A.—They are there for their stability. The crib structure itself is inherently non-water-proof.

Q.—You found these cribs and the sheating in what you say is this unusual form. Were you able to ascertain why the cribs and sheatings were in that form?

A.—It was quite abnormal, and the story that was told to me is the story that had been adduced in the evidence.

30 I may say I was told the story that is so far deduced in the evidence in this case, which was briefly to the effect, that during the previous summer, when the construction of this cofferdam structure was under way, that masses of logs had been launched against the cribs from time to time in such a way that the alignment had been disturbed. Certain of the cribs had been pushed out of position, one crib particularly being pushed out to an abnormal extent; and due to the heavy suction drawn through these pervious cribs I mentioned a minute ago, they were not meant to be water-proof; these logs had been drawn down and had become  
40 nested in the interstices of the crib timbers, and were supposed to be lying on the bottom at various angles, and that the contractor had not been able to remove for other reasons which I think it is not necessary to go into — I think it is covered in the evidence.

Q.—Was this story something which, from a professional view-point seemed to coincide with what you were able to see with your own eyes.

A.—I could see very little at that time, because the sheeting was in. The toe fill was in, and of course, I could not see the logs.

*HENRY G. ACERS (for Plaintiff) Examination in chief.*

Q.—Would this story of there having been suction through the interstices of the cribs be something that would appear?

A.—I would know that from my own knowledge.

10 Q.—You would know that from your own engineering experience?

A.—Yes, of course.

Q.—You say at that time the sheeting and the toe fill had been put in?

A.—I don't know whether all the toe fill was in — No, I am wrong about that. I think all the toe fill was in at the time I visited the work.

Q.—Were you apprised of the visit which Mr. Ferguson had made about a fortnight before?

20 A.—I think Mr. Ferguson's visit was the primary cause of my being asked to visit the works on October 15th.

Q.—Were you informed that he had been there?

A.—Yes.

Q.—Were you shown the correspondence that had passed after his visit?

A.—Yes.

Q.—Did you express any professional opinion at that time as to what should be attempted?

30 A.—The situation at that time appeared to be this, that all summer they had been handling this unwatering problem in the main channel from the standpoint of the difficulty which they had been having with this mass of logs, which were, as I say, being launched against this work, and when the time came to place the sheeting, the story they told me, and the evidence is, to the effect that this sheeting could not be placed against the face of the cribs in the ordinary manner, and the contractor and his assistants had to consider what, so far as I know in my experience, was an unprecedented expedient, and that was to design an auxilliary supporting structure above, and against the upstream face of the cribs as placed, and to  
40 drive this sheeting at a point upstream, and remote from the face of the cribs sufficiently in their judgment to safely secure all these timbers that were nested in the lower courses of these cribs, and that accounted for the irregularity and offset appearance of this line of Wakefield piling.

After it had been placed, there was considerable doubt in the minds of everybody concerned as to whether this line of Wakefield piling placed as it was, and where it was, would

*HENRY G. ACERS (for Plaintiff) Examination in chief.*

exercise the function which a line of piling of that kind is supposed to exercise when it is placed in the proper position ; so they undertook to offset the hazard by putting in a main, an enormous toe fill of which I saw the upper portion, of course.

10

The toe fill I saw had the dimensions of an earth filled dam. It was more than a toe fill, in the sense usually employed in connection with cofferdam construction work.

Q.—Under normal conditions what toe fill would be required for a cofferdam in a river of that size, on a ledge bottom ?

A.—There would be two things that they would do in a cofferdam of that kind on ledge bottom ; if there was a ledge bottom and the sheet piling had been chamfered and broomed by driving on the bottom — chamfered means pointed off, bevelled, you would put what amounts to a chiselled edge on the lower portion. The contact with the ledge would be sufficiently good that a diver could inspect the toe, and instead of placing toe fill, might put a few cement bags or something like that just in the corner where the wood piling brooms on the rock.

20

If, on the other hand, the inspection showed that the piling was not sufficiently tightly engaged with the ledge rock to make that the best method of sealing the dam, the contractor would put a toe fill and allow some of the coarser material in the toe fill to carry into the small cracks in the piling, and under those conditions (I think this dam was not more than 130 to 140 feet long) I would not imagine that you would need more than half of the toe fill. Mr. Reiffenstein said 500 yards would be sufficient.

30

Q.—You think something like 500 yards would be sufficient to seal a wood sheating on a ledge bottom ?

40

A.—Yes, especially if the toe fill were dropped carefully over the brink of the dam as it went over, because the lighter portion of the toe fill would be carried into any small leaks on the face of the piling as it went down, and would seal the cracks of the piling by suction.

Q.—For a river of that width, what would 11,000 cubic yards of toe fill amount to ?

A.—It was really another unwatering structure which was made possible, owing to the fact that there was some backing for it in the top of the cribs and the Wakefield piling.

*HENRY G. ACERS (for Plaintiff) Examination in chief.*

Q.—When you went there on that day, did you look over the pumping installation?

A.—The pumping installation was there, but of course, not operating. That is why I was there.

10 Q.—Did you see how much pumping apparatus they had?

A.—Yes.

Q.—Was it adequate or not, in your opinion?

A.—It was quite extravagant, of course. There is no question about that.

Q.—Quite extravagant to what extent?

A.—Two of those pumps ordinarily would have been sufficient to have looked after the preliminary unwatering, and if the cofferdam had any efficiency as a protective structure at all, one small pump should have been sufficient to have kept that cofferdam on ledge rock pumped out.

20 Q.—You say that you saw the correspondence which had followed Mr. Ferguson's visit of the 1st October?

A.—Yes.

Q.—And you heard the discussion between Mr. Ferguson and Mr. Bishop as to whether the leaks were due to the faulty construction of the sheathing and toe fill, or due to the porous nature of the bed of the stream?

A.—Yes.

30 Q.—And you had seen this statement of Mr. Ferguson requiring additional toe fill to be put in, and expressing his opinion that he did not agree with this theory of Mr. Bishop's, that the leaks were coming through the porous bottom?

A.—Well, even as late as the first week in October apparently, the owner's Engineer, still maintained that the bottom on which the cofferdam was founded, was as shown on that plan B-2444.

40 Q.—After having examined this, were you able to form an opinion as to what was responsible for the leaks that were still coming through?

A.—All I could do, was to agree, with the contractors in theory, that there must be something else happening in that bottom other than the failure of the Wakefield piling, to function in conjunction with that toe fill. It did not seem reasonable to me, in view of the enormous quantity of fill that was there, that the presence of logs, and the offsetting of that line of sheet piling from the face of the cribs, on account of the logs in the bottom on the face of the cribs, that it could be the only cause of the trouble, although up to that date the works had been carried

*HENRY G. ACERS (for Plaintiff) Examination in chief.*

on apparently on the assumption that that was the controlling element to me, and as I say, Mr. Ferguson, even as late as October 1st, still apparently thought so himself.

Q.—Did you make any recommendation?

10 A.—I did not make a recommendation. I agreed in a recommendation.

Q.—And what was that recommendation?

A.—Mr. Bishop, Mr. Allison, Mr. Lindskog and myself considered this whole thing, and we knew that the deepest portion of the north section of the river was on the north half, and there had been a superficial leak discovered in the north end of the cofferdam, which was being handled by a box flume, which served as an approximate basis for the presumption that possibly the main leakage to the cofferdam, was coming through  
20 this deeper section of the main system, and although at that time it was not known that there was an over-burden superimposed on the ledge rock under the cofferdam, Mr. Bishop informed me that he was strongly suspicious that such a thing was there, and that that was one of the contributory causes to the impossibility of unwatering, and he said that as far as he could see the only way to prove that theory was, by driving some steel sheet piling to see if he could get some penetration in this suspected over-burden.

30 I agreed with him and said, as far as I could see, there was nothing else we could do, and we decided, in view of the fact that the deepest section of the river was on the north shore, to concentrate this steel sheet piling on the north side and spend as little money as possible in finding out where this leak was going to be, and that was the decision made previous to my leaving the work on that date.

Q.—I understand you did not go back there until the following summer?

40 A.—No.

Q.—When the cofferdam had been removed?

A.—Yes.

Q.—But assuming that the steel sheet piling was put in, as shown by line C-D, how would that conform with the decision which had been arrived at by you and the other gentlemen you mentioned, on the 15th October?

A.—That is what was decided to do, and what later transpired I am told, and the evidence shows that the initial



*HENRY G. ACERS (for Plaintiff) Examination in chief.*

units of piling driven had no effect, that as they approached that deep section the destruction began to manifest itself.

10 Q.—Will you look at exhibit P-38 which appears to be the profile of the bottom of the system as taken, plan B-2444, and the depth to which the steel pile penetrated, and will you say whether or not that confirms the theory you and the other gentlemen adopted as the most probable one on the 15th of October?

A.—Yes. I think it illustrates it completely.

Q.—You have heard the evidence here, and I will ask you to assume as a fact that this light steel sheeting was put in on the downstream face of the cofferdam in the manner shown on P-37?

A.—Yes.

20 Q.—And I ask you what could be the useful purpose served by driving in this sheet piling below the face of the dam?

A.—The necessity for that secondary line of steel sheet piling arose out of the fact that it transpired that there actually was a pervious stratum overlying the rock under the cofferdam cribs, and the evidence is to the effect — I say the evidence as adduced...

Q.—If it is true?

30 A.—If it is true. If the evidence is not true what I am saying has no weight — is to the effect that water under pressure was spurting through this pervious stratum and manifestly as the rate at which that water was spurting through this stratum was proportional to the static head against it in the pool above the cofferdam, anything that could be done to neutralize that head, would definitely reduce the volume of water coming through those pervious seams, so one useful function of this secondary line of steel sheet piling was, to build up a counter balancing head against the head on the other side of the cofferdam, and thereby reduce the amount of water being forced through by that head.

40 Q.—So one function would be to allow water to accumulate between the downstream face of the cribs and the light steel sheeting, which would reduce the net head, or the net difference between the elevation above the cofferdam and the elevation below it?

A.—Yes. Following that it came out to this logical conclusion, of course, if this line of secondary steel sheet piling were absolutely tight, and if it were carried up to a point above the level of the water in the pool above, there would be no leakage; there would be no water from above coming into the place below, consequently less steel sheeting.

*HENRY G. ACERS (for Plaintiff) Examination in chief.*

Q.—Do I correctly understand you that you would diminish the pressure of the water coming from this porous stratum by diminishing the difference in elevation between the upstream water and the water between the cribs and the light steel sheeting?

10 A.—Yes.

Q.—Would there be any other useful purpose that this light steel sheeting driven down to as far as it would go, would serve?

A.—It serves as a pump for the location of unwatering pumps.

Q.—Would it serve any useful purpose of preventing the shifting of light material in the interstices of the porous material under the cribs?

20 A.—It would form a settling basis for that light silt that might be carried through.

Q.—Will you look at this exhibit P-98 which shows the chart of the water levels inside the cofferdam?

A.—This is September 1929.

30 Q.—From September 25th to about December 19th I think they got the water completely down. Assuming that the trouble from the logs happened on the night of the 22nd to the 23rd of July and pushed this crib out of position, that without that trouble they had expected to get this cofferdam closed early in August; that it was only after your visit of the 15th October that there was any realization that there was anything else but the log situation that they had to cope with, and that the actual unwatering is correctly shown on the exhibit P-98, can you say what portion of the delay would be attributable to the log situation, and what portion to the porous nature of the bed of the stream? Also assume that by the middle of November they had the water down to a point where they were able to do some useful work in the bed of the stream?

40 A.—I don't know whether I can answer that question quite as you have asked it, because those two causes of delay were coincident. One was known and the other was not.

Q.—I am asking you to assume that without the log trouble we expected to get this dam finished in the first week of August, and that then we went along and attempted to cope with the difficulties arising out of the log trouble until after your visit of the 15th of October; then, after your visit of the 15th of October, we put in the sheet piling, and we got the water down far enough to do some useful work about the middle of November, and got it completely down by the middle of December: what portion of that

*HENRY G. ACERS (for Plaintiff) Examination in chief.*

period there is attributable to the delay caused by the porous bottom, or can you answer it in that form?

10 A.—I should say all of the delay was caused by the logs, for this reason, that although it ultimately transpired that there were two causes for the failure of that structure to function, the cause that was discovered after the cofferdam had been pumped out, was the cause that was completely screened and submerged by this unusual procedure that was imposed on the contractor all through the year in opening with what he thought was the one likely cause of trouble he was going to have with the water, and that was these nested logs in the piers.

Q.—I will perhaps put the idea in another way. Does there appear to have been anything useful done to cope with the porous nature of the river bottom before your conference of the 15th October 1929?

20 A.—No.

Q.—So what was done up to that time was directed towards overcoming the difficulties created by the logs?

A.—Of course, that is what I mean. The diagnosis of the ailment was clearly at that time log trouble.

Q.—And then, after the 15th October?

A.—By the 15th October I know of my own knowledge that suspicion had begun to grow in the mind of the concern that there was some other symptom for the ailment.

30 Q.—This exhibit P-38 shows the steel sheets that went down the furthest below the supposed line of the bed of the stream, were driven from the 11th to the 14th November inclusively?

A.—Yes. I think the steel sheet piling was ordered by wire either the day I was there or the next morning.

Q.—Is it your opinion that these piles that penetrated into that bottom are the things which really cured the difficulty?

A.—There is no question about that.

40 Q.—And until that cure was put in the delay that had been occasioned was directed to overcoming other difficulties?

A.—The driving of those piles was the element of the situation which cleared up the misapprehension under which all parties had been throughout the whole summer, as to what the whole trouble was in regard to the cofferdam.

Q.—And any method curing the misapprehension would cure the physical defect at the same time.

A.—Yes.

And it now being 12.30 the further testimony of this witness was adjourned until 2.30 P. M.

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*HENRY G. ACERS (for Plaintiff) Examination in chief.*

And at 2.30 o'clock in the afternoon, on this twenty-third day of February, 1933, personally came and reappeared the said witness Henry G. Acers, and his testimony was continued as follows:

10 By Mr. St. Laurent, K. C.:—

Q.—If at any time after your visit of October 15th, 1929, it became necessary to determine the elevation of the actual surface of ledge in the river bed under the dam, how would that have to be done?

A.—The only positive method of getting that information would be with core drills.

Q.—Is there any electrical apparatus that would enable you to determine it in any sort of reliable way?

20 A.—The only one I have heard of being used is an apparatus — I do not know the exact principle of its operation, but it is used principally for prospecting, to get indications of the mineral and the general direction of the strike and veins and things like that, in prospecting.

Q.—Is there any such instrument in practical use for determining the surface of ledge under water?

30 A.—I know of one recent instance where it was tried, on the Abitibi Canyon, but it was not relied upon for any precise information at all. All the precise information was got afterwards by a subsequent contract with the contractor to do the core drilling and the test boring.

Q.—Do you know from your own personal knowledge how the information (whatever it was) obtained by this electrical instrument compared with the positive information obtained from the core drills?

A.—Wherever the electrical determinations corresponded to where the ledge was finally exposed — the whole process was futile.

40 Q.—I understand your third visit to those works was some time during the summer of 1930?

A.—I think it was July 15th.

Q.—The work had been completed at that time?

A.—Yes. It had been completed to the stage where the gates were being operated, and the water was passing through the completed structure.

Q.—Will you look at the four photographs which were filed as Exhibit P-92, and say if they shown in a general way, the appearance of the job at the time of your third visit?

A.—Yes, they do.

*HENRY G. ACERS (for Plaintiff) Cross-examination.*

I remember the gatehouse was completed. I am not sure the stop log gates were in, but probably they were.

Q.—What conclusion did you draw from the general appearance of the job as it was at that time?

A.—It was a good job. It had been adequately constructed. The quality of the work was good, and there was every evidence it had been done by a competent contractor. There is no question about that.

Q.—If we take for granted that it was on the 18th or 19th December the water was brought down inside the cofferdam from elevation 78.5 to elevation 77.5 (as shown on Exhibit P-98), and then take for granted that exhibit P-27 shows properly the river bottom as it was uncovered, and the depth to which the excavation went at the stations 1+20 to 1+80; and if you also take for granted that the pouring days of the concrete as shown on Exhibit P-99 are correct and that the sections there were poured respectively on the 24th and the 26th December; would there appear to be any time lost between the water was got on there, December 18th or 19th, and the actual placing of the concrete?

A.—If I am to accept Exhibit P-98 as evidence, it shows that the water level behind the cofferdam had been depressed by December 19th sufficiently, I presume, to allow the contractor full facilities for the work he was supposed to do in the area you have mentioned.

Q.—You note the excavating of that area goes down to elevation 75?

A.—Yes.

Q.—If you assume that the pouring was December 24th, December 26th, and January 3rd, would there appear to have been any time lost there?

A.—No, he did not lose any time. He evidently did some pretty fast work in handling that. There is no over-burden.

Cross-examined by Mr. Geoffrion, K.C., of Counsel for Defendant.

Q.—By core drilling you mean drilling inside the rock?

A.—Drilling into the rock. Through the overburden, and into the rock.

Q.—I am putting it to you as somebody who does not know what it is.

*HENRY G. ACERS (for Plaintiff) Cross-examination.*

A.—Then, let us say by drilling through the overburden, if any, and into the rock .

Q.—How would you find out that you are in rock ?

A.—You can identify the cores as you pull them out. The  
10 cores are removable.

Q.—In other words, you drill into the hard material that you meet, and you extract the core, and you can see it in that way ?

A.—Yes, and you can always distinguish in those cores whether the core has you take it out has a fresh fracture, or whether there is a distinct seam.

Q.—How do you mean ?

A.—You often break a core in getting it out. Those cores  
20 are only about an inch and a quarter in diameter, and sometimes they break.

Q.—You mean you can tell whether the fracture was made in the drilling ?

A.—Yes.

Q.—Or, whether it already existed ?

A.—You can easily distinguish whether it is a fresh fracture, or a seam in the rock ; and if the core holes are sufficiently distributed, and put down systematically, you can trace the strike, the direction, and the thickness of water bearing seams.

Q.—And, that is the only way to find out if the rock is  
30 sufficiently hard to carry a dam ?

A.—That is the most positive.

Q.—And, that is how you know how much you must excavate in rock ?

A.—Yes.

Q.—That is the method of arriving at the level where the rock is hard enough to carry the burden ?

A.—Yes, and if the structure of the rock is such that it can be safely depended upon to carry a dam or structure in its natural state, or in some prepared state.

Q.—So, the purpose is not only to determine whether it  
40 is rock or not, but also to determine the quality of the rock ?

A.—Yes.

Q.—How far had the excavation advanced on your first visit to the by-pass ?

A.—To the best of my recollection substantially all the excavation of the dam structure had been finished. I am not sure it was taken out completely to grade, but it was substantially completed.

*T. F. KENNY (recalled for Plaintiff) Examination in chief.*

Q.—You do not know if there was anything taken out west?

A.—I am not sure about that, no.

Q.—Was the dam site itself excavated?

10 A.—A portion of the west was rather congested.

Q.—They had to leave some at the west, to hold back the river?

A.—Yes, that is true.

Q.—Then, was the dam site excavated to the by-pass level?

A.—Yes, I think the piers for the Stony Gates section were built.

And further deponent saith not.

20

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DEPOSITION OF THOMAS F. KENNY

A witness recalled on behalf of the Plaintiff.

On this twenty third day of February, in the year of Our Lord one thousand nine hundred and thirty-three, personally came and reappeared Thomas F. Kenny, already sworn, who, being recalled on behalf of the Plaintiff, deposes as follows:

30

Examined by Mr. St. Laurent, K. C., of Counsel for Plaintiff:—

Q.—You heard Mr. Small testifying about having gone down to Lièvre River about thirty miles from the Transcontinental?

A.—Yes.

Q.—About how far would he be from the dam site at Cedar?

40

A.—About 120 miles north.

Q.—I understand you have a large extent of timbers limits on the Lièvre?

A.—Yes.

Q.—How far up do they extend?

A.—They extend within probably about ten miles of the Transcontinental.

Q.—So, he had come probably twenty or thirty miles into your territory, if he came forty miles down from the railroad?

*T. F. KENNY (recalled for Plaintiff) Examination in chief.*

A.—If he came forty miles. I think he said thirty.

Q.—He said he canoed thirty to forty miles down.

A.—That would be about the upper end of our limits.

10 1929 Q.—That would be where the logs had been driven in  
had been cut?

A.—No. There were none cut up in that section.

Q.—Are they continuous limits?

A.—Practically. We have practically all on that river.

Q.—Do you remember how high up you were operating  
that year?

A.—The upper limit was probably 100 miles above the  
site of the Cedar Dam.

20 Q.—The wood had not all been taken, I presume, at the same  
place ?

A.—Oh, no.

Q.—Do you remember roughly what quantity you had?

A.—About half a million pieces. I am not sure of that.  
Roughly I should say about half a million pieces.

Q.—I suppose that might mean about, twenty million  
feet ?

A.—Perhaps about that.

30 That is the amount that came past the Cedar site. We  
had more below that.

Q.—Of course, I am only interested in what was above.

A.—Yes, I understand.

Q.—Those limits are the ordinary Crown Timber Li-  
cense ?

A.—Yes.

Mr. Geoffrion, K. C., of Counsel for Defendant, declares  
he has no cross-examination to make of the witness.

40 And further deponent saith not.

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*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

DEPOSITION OF HENRY CRAWFORD GRIFFITH,

A witness examined on behalf of the Plaintiffs.

10 On this twenty third day of February, in the year of Our Lord one thousand nine hundred and thirty three personally came and appeared Henry Crawford Griffith of the City and District of Montreal, Office Manager, aged 36 years, a witness produced and examined on behalf of the Plaintiff, who, being duly sworn, deposes as follows:—

Examined by Mr. Phelan, K.C., of Counsel for Plaintiff.

20 Q.—You are Office Manager for the Plaintiff Company?

A.—I was.

Q.—Are you in the employ of the Company at the present time?

A.—No.

Q.—In 1928, 1929, and 1930, during the period of construction of the Cedar Rapids Dam works were you in the employ of the Plaintiff Company?

A.—Yes.

Q.—What were your duties?

30 A.—The supervision of the office routine: that is to say, auditing and checking the records as submitted by the accountants on the various jobs or contracts.

Q.—Were you at work actually on the job at Cedar Rapids Dam?

A.—I was in that district. I travelled back and forth between High Falls and Cedars.

Q.—During the whole period of construction of those two works?

A.—Yes.

40 Q.—The accountants who were working there were under your supervision?

A.—Yes

Q.—And, it was your business to check over the work they did?

A.—Yes

Q.—Those accountants were engaged in keeping records of the cost of labor and cost of material entering into those jobs?

A.—Yes

Q.—Will you explain to His Lordship briefly what was your system for keeping account of your labor?

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

A.—The employees would report to the time office at the beginning of the shift, and they would draw a brass numbered check. This would be handed out by one of the timekeeping staff — either the timekeeper, or one of his clerks.

10

As this number was drawn, it was entered on a time checking sheet.

The man went to work, and twice during each shift the time checker would take this time checking sheet and make a tour of the works, checking, and would see that the man was actually employed.

20 At the end of the shift the man would return to the time office, and drop his brass check into the office, and the time office staff would then check the man off on the time checking sheet. The difference between the time he started, and when he quit, would show the number of hours he had worked that day, with the exception, of course, of the meal hour.

30 Then the employees' foremen would turn in a card each day, showing the number of the man, how many hours he had worked ; and on the back of this card would be a summary of the various locations the gang was working in. That is to say, the card would show the number of hours on each operation.

Q.—If I understand you correctly, the foreman's check of the work done each day would be a check against the number of hours entered on the time sheet?

A.—Yes.

Q.—So, you had the foremen making up daily sheets showing the number of hours worked, and the distribution of hours of the different shifts and the different jobs?

40

A.—That is correct.

By Mr. Geoffrion:—

Q.—The foreman's check gave the job?

By Mr. Phelan:—

Q.—The foreman's check gave the distribution of the work and the time spent on it?

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

A.—Yes : showing what the man was doing.

Q.—That was your daily operation?

A.—Yes.

10 Q.—What else was done to get a record of the labor cost?

A.—That daily labor cost was then summarized by the timekeeper, and it was entered on the summary which was made up twice monthly, that is at the end of each payroll period.

Also at the end of each day, for each day, a report or a summary of the day's labor was made up and sent in to the Superintendent for his use? or perusal, or checking, or whatever the case might be.

20 Q.—Or, for information as to the progress that was made from day to day?

A.—Yes.

Q.—So, twice monthly you had a time table made up showing the amount of time that was used up in the work for the period of fifteen days?

A.—Yes.

Q.—And, that was made up from those daily reports that were handed in by the foremen, and which were in turn checked on the labor sheet?

30 A.—Yes. One was checked against the other.

Q.—What was done with those payrolls and distributions when they were turned in twice a month?

A.—The payroll was then checked over by the accountant for discrepancies, and the labor distribution of course had to tally with the total amount of the payroll.

By Mr. Geoffrion:—

40 Q.—Where was the labor distribution?

A.—It was also on the recapitulation sheet of the payroll.

That was then vouchered. The summary shown on the payroll was shown on the voucher.

Then, of course, the cheques were issued against each man as shown on the payroll.

Q.—Cheques in payment of the labor?

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

A.—Yes. With the cheque numbers shown on the payroll also.

By Mr. Phelan, continuing:—

10

Q.—From that information was there a further step for the compilation of the total labor cost during the month?

A.—Yes. From the vouchers they were entered on a voucher record, and, in turn, went to the Monthly Summary of Cost. That was the final step in the records, for that particular period — for that month.

Q.—I understand that after the payroll was made up, twice monthly, then there were voucher records made of the costs as shown on that payroll?

20

A.—Yes

Q.—Those voucher records were intended for convenience of your own system, so to speak?

A.—Yes. In order to get at the ultimate cost.

Q.—If you wanted to turn up a matter quickly, you would know where to get it, and you knew that information was taken from the payroll and the cost distribution?

A.—Yes

Q.—And, your final step was your Monthly Summary?

A.—Yes

30

Q.—Which contained both the labor and the material cost for the month?

A.—Yes

Q.—And, that Monthly Summary was made up each month during the progress of the work?

A.—Yes

Q.—And, I understand the totals were carried forward from one month to another as the work progressed?

A.—Yes

40

Q.—What was your practice in the matter of charging up material?

A.—Material was invoiced directly from the dealers to the contract. The stores department received this material, or entered it on their records, and they checked the amount of material received, and submitted what was known as a material received report each day — that is, for the material received. They checked the invoices — that is the material received with the material as shown on the invoices. In the case of material such as cement, lumber, reinforcing steel, coal, or bulk materials

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

like that, they were charged into a stock account as the material and the invoices were received. In the case of what is known as small material, such as rope, wire, nails, and material of that type, it was also charged in the same way.

10

There was also material received which was earmarked for some particular operation — that is, which was chargeable direct. There was no necessity in charging it to a stock account. We knew it was for one particular operation, and in a good many cases went directly to it. In that case the distribution was shown, or the charge made, directly to the operation in question.

20

With regard to tools, and small material, as it was required on the job, the foreman at his own discretion or on instructions from the general foreman or superintendent would draw from the stores certain amounts of material. If he needed a keg of nails, or so many feet of rope, or material of that type, for instance, he would write out a stores requisition — that is, an order on the storekeeper — for the nails, or rope, or whatever it happened to be. He would sign this, and it would be turned into the stores on receipt of the material from the stores.

30

That, in turn, was summarized by the storekeeper, and submitted monthly to the accounting office, which, in turn, took the same steps as with regard to the labor. It was vouchered, and entered on the monthly summary of costs.

With regard to the sand, cement, and stone, the amounts were checked against the quantities poured for the period or for the month. That, in turn, was checked by our engineer, and the quantities taken off from that and charged to the operations as they went along.

40

Q.—And, that covered that portion of your system in regard to charging up your material?

A.—Yes.

Q.—You were asked to bring with you your vouchers, records and accounts, and I understand you have brought them?

A.—They are here.

Q.—Where did your supervision come in in the making up of those monthly statements ?

A.—The first operation was to check the expenditures as against the amounts shown on the summary of costs : that is

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

to say, when invoices were passed for payment I had to satisfy myself that they were properly recorded and shown, and that the various departments had a record of having received it, and distributed it to the operations concerned. I also checked the  
10 vouchers, in this way, I would go through them with the accountant, and satisfy myself that the charges were in order and that the computations were correct.

Q.—And, did that practice apply to the whole of the work at Cedar Rapids Dam?

A.—Yes.

Q.—You did it during the progress of the work, from the beginning to the end?

A.—Yes.

20 Q.—You were there to the end?

A.—Yes.

Q.—Were you also there at the beginning of the work?

A.—Yes.

Q.—Who issued the cheques in payment of the labor?

A.—They were issued from the jobs — in this case from Cedar — directly. The cheques were signed by the accountant and myself.

Q.—There were always two signatures to the cheques?

A.—Yes.

Q.—And, you were always one of the signers?

30 A.—Yes.

Q.—Are you in a position to state that all the amounts charged up according to your books, for labor, were paid by cheques of which you were one of the signatories?

A.—Yes.

Q.—Are you also in a position to say you have checked up on all material that has been charged in those various sheets following the progress of the work? In other words, that you checked up the material that was charged to the work during its  
40 progress?

A.—I checked the invoices back, yes.

Q.—I understand that in all cases the material is entered up at cost?

A.—Yes.

Q.—Taking up the claims made in the Declaration, the first claim to which I draw your attention is described as “Handling of Defendant’s logs”. The amount claimed for labor is \$2,858.59, and the amount claimed for material is \$136.83. Will you tell His Lordship what your records show in regard to the making up of those charges?

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

His Lordship:—What Paragraph is that?

Mr. Phelan:—Paragraph 13, your Lordship.

10      Witness:—The total of those figures is taken from the Monthly Summary of Costs, and they were shown under a distribution under account X-18, log driving.

By Mr. Phelan, continuing:—

Q.—I understand you used letters and numbers to indicate the different kinds of work that were going on?

A.—Yes.

20      Q.—And “X-18” would refer to a particular operation?

A.—Yes.

Q.—The operation of handling logs?

A.—Yes.

It is shown here as “Log Driving”.

On this final summary, under item X-18 we show labor total, \$2858.59, and material, \$136.83.

30      Q.—Those figures you have just mentioned are carried forward from the other sheet of the preceding month?

A.—Yes.

By Mr. Geoffrion: —

Q.—You have shown us the last one ?

A.—Yes.

By Mr. Phelan, continuing:—

40      Q.—What is the first sheet you have in connection with this particular item of \$2858.59?

A.—Summary No. 9, for the month of June, 1929, shows the first entry for that operation.

Q.—What does it show?

A.—Labor, \$300.49 ; material, \$90.86.

Q.—So from summary No. 9 to summary No. 19 those accounts, are just carried forward from month to month?

A.—Yes, and increase as they go along.

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

By Mr. Geoffrion:—

Q.—What month do you show me now?

A.—May, 1930.

10

Sheet No. 9 is June, 1929.

By Mr. Phelan, continuing:—

Q.—I understand you have slips made out by the storeman in connection with materials?

A.—Yes.

Q.—They are here?

A.—Yes, they are here.

20

By Mr. Geoffrion:—

Q.—I take it that on the foreman's daily report where the time for this amount for logging operations would appear you would have endorsed a figure meaning "Logging Operations"?

A.—Yes, either that or it would be written out by the foreman.

Q.—And, that is where we first find an indication that the man on that list were on that job?

30

A.—Yes.

Q.—I am shown stores orders with some marks in red pencil (at least there are marks on the one I have before me). Where is the earmarking on this to some particular job?

A.—Here it is charged to the upright boiler. That upright boiler was working on operation B-5-H.

Q.—Who put the red figures on?

A.—They are entered by the storekeeper, on the information he receives.

40

Q.—And, they identify the work?

A.—Yes.

Q.—What would be the entry for the material for the logging operations ?

A.—X-18.

By Mr. Phelan, continuing:—

Q.—Will you state what figures appear on the monthly summaries from No. 9 to No. 19 covering this \$2858.59?



*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

Witness:—Do you want each individually?

Counsel:—Take it month by month.

10 A.—No. 9, June, 1929 ; labor, \$300.49 ; material, \$90.86 ;

No. 10, July, 1929 ; labor for the month, \$238.80 ; no material charged ;

No. 11, August 1929 ; labor, \$2319.30 ; material, \$42.68 ;

No. 12, September, 1929 ; no labor charged ; material charged, \$3.29 ;

20 October, 1929, no charge ;

The total of these gives us the total of the amounts as shown. The total of labor is \$2858.59, and the total of material is \$136.83.

By Mr. Geoffrion:—

Q.—Can you give me the detail by days in July?

30 A.—Not without getting it from the records. I cannot give it to you offhand. It can be given.

Q.—And, you will get it for me for July and August?

A.—Yes, I will.

Q.—Could I also have the details of the \$90.86 material in June, and the \$42.68 of material in August, and the \$3.29 of material in September?

A.—Yes.

By Mr. Phelan, continuing:—

40 Q.—We now come to the claim under the heading of “Increased Cost of Cofferdams and Unwatering”. The first item in this claim is set out in the Declaration as \$22,045.89. Will you please give His Lordship what information you have in respect to the items making up that total?

A.—It is made up of accounts 2-A, 2-B, 2-B-1, 2-C, 2-C-1, and 2-E, as taken from the monthly summary. These are for labor and material. For instance, on the first one, 2-A, we have a labor total of \$2094.52 ; voucher No. 467, for the March payroll, 16-31,

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

\$175.19 ; voucher No. 392, for the payroll March 1st-15th, \$247.09.

For the February payroll, 1st-15th, voucher No. 239, labor, 10 \$206.40 ; February 16th-28th, \$18.05.

January payroll, 1st-15th, \$333.58 (voucher No. 134) ; January 16th-31st, voucher No. 194, \$671.86.

December 1st-15th, \$199.88.

Q.—For the present we will suspend your further testimony on this particular claim, pending the preparation of statements.

20

The next claim is under the heading of “Cofferdam, Lower End By-pass”, Paragraph 21. The item is \$4060.95, which is made up of labor, \$3670.94, and material, \$390.01. What have you in connection with that claim?

A.—It is shown under accounts 2-A-2, and 2-A-4. Is not the total \$3943.43?

Mr. St. Laurent:—There is another item, of \$117.22, for 30 removal.

A.—Yes, that is right. \$3553.72, under account 2-A-2, is labor.

It started April, 1929, summary No. 7. The first labor charge is \$412.26 ; material charged, \$44.74.

May : \$267.13, labor ; \$156.03, material.

40

June : \$767.68, labor ; \$67.17, material.

Bypass cofferdam, July : \$2080.22, labor ; no material.

By Mr. Geoffrion:—

Q.—Is that all building?

A.—Yes.

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

Then the removal was \$117.22.

Q.—When was the removal ?

A.—In the same month.

10 Q.—July ?

A.—July.

Mr. Geoffrion:—Here is a cofferdam which we are told by our clients is a bagatelle, but there must be some mistake in the charges, because they start in April, and the work continued throughout May. They spent \$400 odd in April, and \$267.13 in May, and \$767.68 in June, and \$2080.22 in July. The statement is this was a cofferdam to prevent spring floods. I would like some details in regard to it, unless I am told there is some  
20 mistake. As I see it it could not be in connection with the flooding.

By Mr. St. Laurent:—

Q.—Have you the information available for the by-pass ?

A.—It is with the records here.

Q.—Have you looked at it recently ?

30 A.—No, I have not.

By Mr. Geoffrion:—

Q.—I gathered from you that this by-pass cofferdam, as entered in your books, appears to have been begun in April, 1929, and finished in July, 1929 ; the largest expense being in July, and the next largest in June.

His Lordship:—In what month is the charge for demolishing it ?  
40

Mr. Geoffrion:—July. The same month as they finished it. They finished it, and demolished it immediately.

By Mr. Geoffrion:—

Q.—I understand you removed it in July ?

A.—That is according to the records here.

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

By Mr. Phelan, continuing:—

Q.—Dealing with the next claim, for additional cost of rock excavation, \$89,355.76, have you the summary before you?

10 A.—Yes, I have.

Q.—How is that work indicated in your summary?

A.—Under items 1-A and 1-A-1.

Q.—On what sheet is your first charge?

A.—December, 1928.

Q.—What amount have you charged up?

A.—1-A, \$239.99.

Mr. St. Laurent:—We will make up Statements showing the exact amount in detail with respect to each of these, and we  
20 will let my learned friends have them, and if there is any item on which they wish further details, we will get them. I know my friend Mr. Geoffrion will not put us to any unnecessary labor which he does not think will be useful to the Court. We will prepare the Statements with a reasonable amount of detail, and if my friend wants more we will get it for him.

By Mr. Phelan:—

Q.—I would like to get the detail concerning the structural  
30 steel. There is an item of 470.36 tons.

A.—November, 1929, 42.36 tons; December, .82 tons; January, 129 tons; February, 217.18 tons; March, 90 tons.

Q.—That makes a total of 470.36 tons?

A.—Yes.

Q.—Have you the information regarding the remainder of this claim, \$14,647.23, or will you make that up in the form of a Statement?

40 A.—That will have to be made up in the form of a Statement.

Q.—Under Paragraph 35 there is a claim entitled: “Cement for apron in by-pass channel”. I understand that is really the cost of hauling cement for the apron in the by-pass channel?

A.—Yes.

Q.—What details have you in connection with that claim?

A.—The total labor is \$267.54, plus tractor hauling, \$1835.66.

By Mr. Geoffrion:—

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

Q.—Tractor hauling of what?

A.—Cement.

10 Less an amount of \$468.56, if the cement had been hauled by teams at the contract price during good road conditions.

Q.—But, you have not the \$468.56 in your books?

A.—No. That is the credit we make.

Q.—What was the basis of that credit? Where did you get it from?

20 A.—That is basing the cost for hauling cement at \$8.50 per ton, which is what we paid teams during the months of December, January, and part of February. The cement could have been hauled for that price at that time.

By Mr. Phelan:—

Q.—The two items, of \$125.21 and \$142.43, were items paid out for hauling by teams?

A.—No. That was the labor in transferring and getting this material from the tractor in to the site at Cedar.

By Mr. Geoffrion:—

30 Q.—Would you not have had to do that in winter also?

A.—Under this claim, if we had known that this cement was required it could have been hauled in when conditions permitted the hauling at the lower rate.

Q.—But, you would have had the handling in the same way?

A.—No, sir. What happened was that the tractor could not get right into the site, and it was held up a number of miles from the site, and the cement had to be transferred.

40 Q.—Whereas, the teams could go?

A.—No, the teams could not go at that time either.

Q.—But, they could go in winter?

A.—Yes, in winter they could have gone right through.

Q.—And these items, of \$125.00 and \$142.00, are your charges for that?

A.—That is the labor, yes.

Q.—From your books?

A.—Yes.

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

By Mr. Phelan, continuing:—

Q.—Will you explain how you arrive at the figure of \$33.30 a ton?

10 A.—That was the unit on tractor hauling for the month of April. It was the labor and material cost of hauling in, based on the number of tons that were hauled.

Q.—And, you have taken that figure as the basis of your charge for this hauling by tractor for this particular work?

A.—Yes : over that particular portion

By Mr. Geoffrion:—

Q.—What does the \$33.50 include?

20 A.—That was the cost per ton.

Q.—But, what are the elements that go to make it up?

A.—It is taken from our sheets.

Q.—How do you make up the total?

A.—We took our labor and material expenditure for the month.

Q.—What material?

A.—Gasoline, oil, and material of that type, used in connection with the tractor hauling.

Q.—And, labor?

30 A.—Plus labor.

Q.—How much did the tractor haul that month?

A.—75 tons.

Q.—In all?

A.—Yes.

Q.—How many were hauled under this item? You charge for 55 tons.

A.—Yes.

40 Q.—Therefore, the tractor hauled 20 tons of other material?

A.—Yes.

Q.—The tractor was up there?

A.—Yes.

Q.—And, you had a regular staff for the tractor ?

A.—Yes, we had an organization to handle the tractor hauling.

Q.—Supposing you had not hauled our 55 tons, apart from the gasoline, oil, and so on, you would have had all the same expense? Supposing you had only hauled the 20 tons, you would have had the same expense apart from the gasoline and oil?

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

A.—No, I would not say that.

Q.—What was the increased expenditure occurred by your tractor in having to haul 75 tons instead of 20 tons during that month ? Can you put it on that basis ?

10 A.—I am afraid I do not understand you.

Q.—What increase in expenditure were you obliged to bear through having to haul 75 tons instead of 20 ? Supposing you had only 20 tons to haul, surely your unit of hauling would have been more much than \$33.50 ?

A.—I think I see what you mean now. In a case like that, with this other material, we could possibly have brought it in in another way. I could not tell from here just what those 20 tons consisted of, but it is quite possible it would not have had to be brought in in that way.

20 Q.—And, it is also possible it would ?

A.—Yes, but the fact that the tractor was going in helped to build up the road.

Q.—Where were you keeping the tractor at the time ?

A.—At Gracefield.

Q.—It was there already ?

A.—Yes ; that was the headquarters for the tractor hauling.

Q.—And, the tractor would stay there anyway ? It was there doing nothing ?

30 A.—It was doing nothing while there was nothing to be hauled.

Q.—Was it your tractor ?

A.—Yes.

Q.—When did you send it down ?

Witness:—You mean from Gracefield ?

Counsel:—Yes.

40 A.—If I am not mistaken it did not come down until the following winter.

Q.—Then, I come back to my question. In your \$33.30 do you charge any depreciation, or rental ?

A.—No.

Q.—What are the charges, exactly.

A.—It is a straight labor and material charge. There is a labor charge of \$1124.95 for that month, and a material charge of \$584.49.

*H. C. GRIFFITH (for Plaintiff) Examination in chief.*

Q.—What was that material ? Gasoline and oil ?

A.—Gasoline, oil, heating the garage, and various other items in connection with our tractor hauling.

Q.—You would have heated the garage in any event ?

10 A.—Not if the tractor was not in operation. If the tractor was not in operation it would not have been necessary to heat the garage.

Q.—Did you hire any men purposely ?

A.—In a good many cases those men were working by the hour, or by the day.

Q.—Were they special men for the tractor ?

A.—Yes.

Q.—How many men did you need for a tractor ?

20 A.—It depends on the work they have to do. In some cases they went in with two men, and in other instances, they had three or four men, if I am not mistaken. It would depend on the conditions of the roads.

Q.—And, you have nearly \$1200 wages for the month. That would represent probably about eight men ?

A.—Not necessarily. The roads were bad then, I should say.

Q.—Was this skilled labor, or unskilled labor, or what ?

A.—They had tractor drivers, and in some cases they had mechanics, and in some cases unskilled labor.

30 Q.—You kept those men on after ?

A.—Not after that, no. That was just about the winding up. Some of them worked for perhaps a month after that.

Q.—You used your tractor the following month ?

A.—No, sir ; if I remember rightly, we could not.

Q.—Did you use it again later ?

A.—Yes, it was probably out later on, in the month of June. I could not tell you that definitely.

Q.—Did you keep your men on the tractor the following month ?

40 A.—No.

In a good many instances those men were used to roads. We found work for a number of them.

Q.—You say “a number of them”. There could not be very much between two and four ?

A.—We had to increase the road gang, of course, when we came along.



*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

When I say two to four, if I am not mistaken in this particular month, April, there were a lot more than four men involved in the hauling at this particular time, because there was considerable trouble with the roads. There was rain, and thaw,  
10 and everything else, which made the hauling very difficult.

Q.—How many miles was it ?

A.—Twenty six miles, if I am not mistaken.

And further for the present deponent saith not.

And the further hearing of testimony in this case is continued to Friday, February 24th, at 10.30 o'clock in the forenoon.

20

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DEPOSITION OF HENRY CRAWFORD GRIFFITH

A witness recalled on behalf of Plaintiffs.

On this fifteenth day of March, in the year of Our Lord, one thousand nine hundred and thirty three personally came and reappeared Henry Crawford Griffith, already sworn, who, being recalled on behalf of the Plaintiff, deposes as follows:

30

Examined By Mr. Phelan, K. C., of Counsel for Plaintiff:—

Q.—You have already been sworn and examined in this case, on February 23rd, when you commenced your evidence regarding the calculations and the claims.

A.—Yes.

Q.—Your testimony was suspended, in order that Statement might be prepared giving details of the amounts charged  
40 for labor, and the amounts charged for material, claimed by the Plaintiff in this Action ?

A.—Yes.

Q.—And, it was understood the details of the labor would be taken from the semi-monthly payrolls, and as to the materials by reference to vouchers ?

A.—Correct.

Q.—And, that is the way the Statement has been prepared ?

A.—Yes.

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

Q.—The Statement now before you is the Statement you have furnished me, and a copy of which has been given to the Defendant's Attorneys?

A.—Yes.

10 Q.—You have already made reference to claim No. 2, handling of Defendant's logs (Paragraphs 12 and 13 of the Declaration). The Statement you now produce gives the details, taken from the payroll?

A.—Yes.

Q.—And, also from the vouchers ?

A.—Yes.

Q.—The vouchers appear by number ?

A.—Yes.

20 Q.—Have you with you in Court the vouchers that are referred to?

A.—Yes.

Q.—Dealing with claim No. 3, increased cost of cofferdam, you have made a Summary showing the amounts mentioned in Paragraph 19 of the Declaration?

A.—Yes.

Q.—And you have also indicated in the Summary, by symbols — figures and letters — the different items making up the whole operation?

A.—Yes.

30 Q.—The first item dealt with in Claim No. 3 is 2-A, \$2,782.21. It is made up simply of labor and material ?

A.—Yes.

Q.—And taken, as you have already explained, from your payroll and from the vouchers?

A.—Yes.

Q.—The same applies to 2-E, an item of \$75.89?

A.—Yes.

Q.—And, 2-B, an item of \$6,970.79?

A.—Yes.

40 Q.—And, 2-B-1, an item of \$3,417.72?

A.—Yes.

Q.—That is made up in the same way?

A.—Yes.

Q.—And, item 2-C, \$6,466.28 : made in the same way?

A.—Yes.

Q.—And, item 2-C-1, \$2,333?

A.—Yes.

Q.—That is an item for labor?

A.—Yes.

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

Q.—The next item 2-D, \$41,776.78?

A.—Yes.

Q.—Labor and material?

A.—Yes.

10 Q.—Made up in the same way?

A.—Yes.

Q.—Item 2-F, \$1,017.70?

A.—Yes.

Q.—And, item D-12, \$3,678?

A.—Yes.

Q.—The next item is under the heading of “Driving”,  
\$7,389.82?

A.—Yes.

20 Q.—On this Statement you have entered up charges from  
the first to the 15th of the month of November, and from the  
3rd to the 20th of the month of December?

A.—Yes.

Q.—Will you explain why those charges were entered up  
in this way, instead of giving one item from the payroll for from  
the 1st to the 15th of November?

A.—It so happened that the information was asked short-  
ly after this work was completed, and the accountant prepared  
this Statement, and in order to give the details we simply took  
this and reproduced it in the same form.

30 Q.—Have you verified that those items for labor, are,  
in fact, contained in your payroll for November 1st-15th, and  
likewise in December, from the 3rd to the 20th?

A.—Yes.

Q.—At the bottom of the Statement with which we are  
now dealing you have “Cost of Piling”. What do you mean by  
that?

40 A.—That is the cost of the piling as purchased from the  
Bethlehem Steel Corporation. It gives the quantity and the  
price.

Q.—That is the invoice cost to your Company?

A.—Yes.

Q.—And, it is included in voucher No. 1254?

A.—In the four vouchers, Nos. 1254, 1359, 1404, and 1443.

Q.—The next item explains itself: “Duty”. That was  
duty paid on the importation of that piling?

A.—Yes.

Q.—And, also “Freight”?

A.—Yes.

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

Q.—The next item is “Hauling 58.62 tons, at \$12.31 a ton”. Have you made a calculation showing the cost of \$12.31?

A.—I did not make it out personally. It was made on the job when the Statement was prepared, and some of the piling  
10 was hauled in in October, and some in November. The cost of hauling in October was higher than it was in November.

By Mr. Geoffrion:—

Q.—Why was it higher in October than in November?

A.—The roads were not as good in October as they were in November.

Q.—Do you mean they were not prepared, or not improved?

A.—There were the heavy rains in October, and there was  
20 more frost in November and the roads were harder than they were in October.

By Mr. Phelan, continuing:—

Q.—You have in your records the cost of hauling in the month of October?

A.—Yes.

Q.—Do you know the amount?

A.—I can obtain it. It is in the record.  
30

Q.—Is it available now?

A.—Yes.

The unit cost of hauling in October was \$19.18, and in November it is shown here at \$8.00.

Q.—What is the explanation of this figure of \$12.31?

A.—I would say the tonnage hauled in October, and that  
40 in November, were taken, and the average cost of hauling for the two months was taken, and divided, and the figure was arrived at in that way.

Q.—The rest of the material is accounted for by the vouchers which are shown on the Statement we are now discussing?

A.—Yes.

Q.—The next item is 2-A-3, \$51.053.54. That is made up of labor and material?

A.—Yes.

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

Q.—Prepared in the same manner as the others?

A.—Yes.

Q.—The next item, 2-A-5, \$2,043.56, is also made up of labor and material, and prepared in the same way?

10 A.—Yes.

Q.—The next item, 2-G, “Removal of cofferdams, \$13,-782.03”, is also made up of labor and material?

A.—Yes.

Q.—The next item is C-7, \$1,246.25 : made up of labor and material?

A.—Yes.

Q.—The next item is C-10, \$224.35 : also made up of labor and material?

A.—Yes.

20 Q.—That completes Claim No. 3?

A.—Yes.

His Lordship:—Item 2-G, removal of cofferdams : they would have to be removed in any event, would they not?

Mr. Geoffrion:—And, there are many other things charged here that have no connection with the claim.

30 His Lordship:—Even supposing there had been ledge, and everything else had been perfect, the cofferdams would have had to be removed in any event?

Mr. Geoffrion:—They had to be built, and they had to be removed.

40 Mr. St. Laurent:—The explanation is this : we are proving everything expended in connection with cofferdams, and we are crediting what we got. We say the fair way of arriving at the figure is to show the cost, and to claim from the Defendant the difference between what we were paid for under normal conditions and the total cost. In Paragraph 19 your Lordship will see \$49,050.20 is deducted from the total expenditure, this being the amount we received for the cofferdamming.

Mr. Geoffrion:—Of course there is an objection in law to that method, but that will come later.

By Mr. Phelan, continuing:—

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

Q.—Claim No. 4 (Paragraphs 21 et seq.) under the heading of “Cofferdam lower end by-pass”. You gave some figures in respect to this claim in your previous testimony. You have produced a Statement showing the cost of the cofferdam as  
10 \$913.06. That is under the claim headed 2-A-2?

A.—Yes.

Q.—And, under the claim 2-A-4, for the removal of the cofferdam, \$117.22?

A.—Yes.

Q.—Those two items, \$913.06 and \$117.22, making \$1030.28, represent the total charge for labor and material?

A.—Yes.

Q.—Will you state why you have made a change in the amount claimed under this heading?

20 A.—In the first place, there was one account allotted for this by-pass cofferdam, and all labor and materials were charged into this account. To the best of my recollection, there was no work done on any other section of this by-pass cofferdam while the lower section was being built ; and when that was completed they carried on with the upper section, and the charges were entered under the same account, and it was a question of the date they divided the lower section of the by-pass cofferdam and the work that was done on the upper section.

Q.—So, there were certain amounts which were erroneously  
30 ly charged to the work on the lower cofferdam?

A.—Yes. Those apply to the same locality, but they did not apply to the lower cofferdam.

Q.—The accounting you had of course kept track of your general cost from day to day ?

A.—Yes.

Q.—But, you had erroneously included a portion of that in this particular claim?

A.—Yes.

40 Q.—Claim No. 5, rock excavation (Paragraphs 22 et seq. of the Declaration). This claim is made under accounts 1-A and 1-A-1?

A.—Yes.

Q.—I notice on your Statement: “Total quantity excavated, 22,375 yards”. In Paragraph 25 of the Declaration you have the total cost of rock excavation, then you have “21,565 yards”. Will you explain the reason you have the total quantity here as 22,375 ?

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

A.—We took the total quantity of rock excavated as given on the Engineer's estimate, and as there was a claim for 811 yards entered under a separate claim we deducted it from the 22,375.

10 Q.—And, that shows on the Statement?

A.—That shows on the Statement, yes.

Q.—In the Declaration it really should have been 21,564 yards, rather than 21,565?

A.—We make a deduction on this.

Q.—A deduction of 811 yards leaves 21,564 yards?

A.—Yes.

Q.—The claim we are now dealing with, 1-A, and 1-A-1, is made up in the same way — labor charges, and material charges?

20 A.—Yes.

Q.—The next claim is No. 6 (Paragraph 27 of the Declaration) : "Handling and trimming excavated rock". This claim is entered up under the symbol 1-N, and amounts to \$1959.18. I notice in this claim that instead of referring to material by the voucher and its number you have the material given in detail. What is the explanation of that?

30 A.—The accountant had been asked to furnish a detail of the actual material used in this operation, and he made it up when the work was completed — that is, this particular operation — and the information is taken from that detail he made.

Q.—You have vouchers covering those items of material?

A.—Yes.

Q.—At the bottom of the Statement there is a charge of 15 days rental Clyde hoist, \$4.70 per day. Do you know where that figure of \$4.70 per day is taken from?

A.—That is the rental as laid down in the contract for a hoist of that type.

40 Q.—Then, I take it the Clyde hoist and the gas unit were employed during 15 days for this particular work?

A.—Yes.

Q.—There is not any provision made in the contract for rental of a gas unit, is there?

A.—No.

Q.—And, that figure has been taken as a reasonable charge for the rental of the gas unit?

A.—It is, in fact, a very reasonable charge. It is below what the actual rental charge should be on that type of equipment.

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

Q.—Do you know what the rental charge should be?

A.—It should be in the neighborhood of \$2.50 a day.

10 Q.—The next claim is No. 8 : “Work under winter conditions” (Paragraphs 31 and 32 of the Declaration). Evidence has already been given as to the quantities mentioned in this claim : 14,396 cubic yards Class 1 concrete, and 951 cubic yards Class 2 concrete. When you testified, some three weeks ago, you gave us the details by months of the 470.36 tons of structural steel?

A.—Yes.

Q.—You had taken those details from your records?

A.—Yes.

20 Q.—That was steel which entered into the construction of the dam?

A.—Yes.

Q.—Have you the information from which the figures \$3.21 are taken, as the extra cost of working concrete under winter conditions?

A.—Yes. That was taken from the Summary of Costs each month. It is taken over a period in the summer, as against a period in the winter ; and the difference is what we have charged here, \$3.21.

Q.—That is for Class 1 concrete?

A.—Yes.

30 Q.—Does a similar explanation apply to the item of \$6.61, for Class 2 concrete?

A.—Yes.

Q.—How is the item of \$7.56, for the structural steel, arrived at?

A.—In the same manner.

Q.—You have the records here, to which reference can be made?

A.—Yes.

40 Q.—Under the heading of “Camps, etc.” we have item “Fuel, \$5,722.40”. I take it the detail showing how that amount is made up is the second page of your Statement, under Claim No. 8 ?

A.—Yes.

Q.—You have “Cost of Labor and Material for fuel in winter months, for four months, January, February, March, April, total \$8,583.68”. That information is obtained from your records?

A.—That was estimated at the time. I have not been able to locate the actual figures on which it was prepared, but we had



*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

the Superintendent, Mr. Lindskog, make an estimate, and that is what he arrived at, as shown on this Statement.

10 Q.—The original estimate was \$5,722.40, and I notice at the bottom of the sheet you have \$5,722.80. That is the only discrepancy there was between the original estimate and the present one?

A.—Yes.

Q.—The information contained on the sheet to which I am now referring was prepared by Mr. Lindskog?

A.—Yes.

Q.—Under the heading of “Protecting Water Lines”, D-5-L, there is an item of \$1,529.50. Where are the figures taken from which make up this item?

20 A.—They were taken from the daily labor reports, which were made up daily, and the total of which made up the monthly charge against those particular operations.

Q.—You have those daily reports?

A.—Yes.

Q.—The next page is “Protecting Steam Lines”, D-5-M, \$3,826.96. Are those figures taken in the same way as you have just mentioned?

A.—Yes.

30 Q.—The next page, under the heading “Prepare Camps for Winter”, shows a total of \$1,212.16 : made up in a similar way?

A.—Yes, except when I checked back this particular item — you will probably find a different total ; probably \$1283.21. There is a difference of \$70 odd. I did not reconcile the totals by the amount of \$70 odd in the time I had at my disposal. In the time I had I could not make a more minute analysis of it, and I took this charge of \$1,212.16 as being as close as I could do it in the time I had at my disposal.

40 Q.—And that is the figure you submit, in place of the figures, \$1,283.31 as mentioned in Paragraph 32 of the Declaration?

A.—Yes. I satisfied myself those were the figures I could obtain from the daily records.

By Mr. St. Laurent:—

Q.—You could not find vouchers for the additional \$70?

A.—No. They are probably in some other matter.

Q.—And, instead of losing any more time on it you just deducted it from the Statement?

A.—Yes.

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

By Mr. Phelan, continuing:—

10 Q.—The next item is “Increased Cost of Lighting” (in Claim No. 8) — D-7 : \$2,264.36. The detail shown on this claim is the cost of lighting in the months of May, June, July and August, 1929, four months, \$3,514.15?

A.—Yes.

Q.—And, the cost for lighting in the months of January, February, March, and April, 1930?

A.—Yes.

Q.—And, to make a monthly average you have subtracted the summer cost from the winter cost, leaving a difference of \$566.09?

A.—Yes.

20 Q.—And you charge that amount per month, for four months?

A.—Yes.

Q.—Where did you get the figures for the lighting for the months of May, June, July, and August?

A.—Those were all taken from our monthly summary of costs. They were all expenditures each month.

30 Q.—There are two sheets making up Claim No. 8. The second sheet gives the details of what is set up on the first sheet. You notice in the column of “Labor” there is a calculation, for labor and material, of \$3,514.15, and another calculation showing \$5,778.52 ; the difference being \$2,264.37?

A.—Yes.

Q.—The next claim is No. 9, over-charge on logs. Will you explain to the Court how you have proceeded? The detail is shown here?

40 A.—This detail was revised from the one I had used originally, but the figures were taken from our vouchers for invoices that were paid. There is a Statement attached showing the voucher numbers, with the number of feet of lumber purchased.

Q.—You have here : “Total amount of lumber sawn and paid for to McCabe by us, 1,028,838 feet”. Does that represent all the lumber that was sawn by McCabe for your account?

A.—Yes.

Q.—That is all that was sawn, and all that was received?

A.—According to the best information I could obtain from our records.

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

Q.—You had other logs, which were taken from the river?

A.—Yes.

10 Q.—Taken as sawn lumber, the measure given here is 186,480 feet?

A.—Yes.

Q.—Where were those figures taken from?

A.—From the invoices of the James Maclaren Company.

Q.—That comes from the James Maclaren Company?

A.—Yes.

Q.—You are taking their own figures?

A.—Yes.

20 Q.—I understand those two quantities, 1,028,838 and 186,480 feet, represent, as far as you know, all the logs, or all the lumber, received from the James Maclaren Company?

A.—Yes.

Q.—You have applied the factor .7752 to determine the amount of sawn lumber of the first 1,028,838 feet, reduced to log measure under Quebec scale. What percentage have you taken as to over-run in order to determine that factor of .7752?

A.—That would be the difference between the 100 and .7752 : 22.48.

Q.—A little less than 22½%?

A.—Something like that.

30 Q.—Am I right in saying that for every foot of sawn lumber you should get, by the Quebec Log Scale, an amount determined by adding 29%?

Mr. Geoffrion:—Is the witness an expert in dealing with or measuring logs?

By Mr. Phelan, continuing:—

40 Q.—For every 77½ feet log measure you ought to get 100 feet of sawn lumber?

A.—That is the calculation that is made here.

By Mr. Geoffrion:—

Q.—You do not pretend to pose as an expert in that line?

A.—No, sir. This figure was given to me.

Q.—The question is put suggesting the answer that you ought to get a certain number of feet.

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

Mr. St. Laurent:—It is only to reconcile this with the 29% that we have on the other Exhibits. 29% of 77, added to 77, gives 100.

10 Mr. Geoffrion:—It is a mathematical proposition which can be checked.

Mr. St. Laurent:—Yes.

By Mr. Phelan, continuing:—

Q.—You have been billed for 1,100,318 feet. That is what has been claimed from your Company, or billed to your Company, by the Defendant?

20 A.—Yes.

Q.—And, you have paid for that at the rate of \$20 a thousand feet?

A.—Yes.

Q.—You have also paid the sum of \$3,729.60 for the 186,480 feet, at \$20 a thousand feet?

A.—Yes.

Q.—So, your total outlay was \$25,735.06 ?

A.—Yes.

30 Q.—Applying the factor to which we have referred, you should have paid only \$18,842.28 ?

A.—That is using the factor as submitted, yes.

Q.—And, you claim the difference, \$6,893.68 ?

A.—Yes.

Q.—The vouchers to which you refer are here ?

A.—Yes.

Q.—The third page of this Statement is a copy of the Exhibit produced by Mr. Kenny as D-4 ?

A.—Yes.

40 Mr. Phelan:—With reference to the claim of over-charge on logs, the amount claimed in the Declaration, \$7,220.19, is reduced to \$6,893.68.

Mr. St. Laurent:—Your Lordship will find it in Paragraph 34 of the Declaration.

By Mr. Phelan, continuing:—

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

Q.—The next claim is No. 10, “Cost of Hauling extra cement”. The amount claimed in Paragraph 35 for cost of hauling extra cement is \$2,239.45. That claim has been revised, and the amount now claimed, and shown by the Statement, is  
10 \$1,454.03?

A.—Yes.

Q.—The first item shown on the Statement is \$267.54. That is merely the total of the two items, \$125.21 and \$142.33, which are mentioned in the Declaration?

A.—Yes.

Q.—They are mentioned in the Declaration as hauling by teams from Whitefish Lake to works, and hauling by teams from Cameron Bay to works. Is there anything you wish to say to qualify that Statement?

20 A.—The charge is not wholly made up of hauling by teams. There was also labor in it, which is included in this amount. It should really read labor and teaming.

Q.—And, there is a voucher showing the labor and the teaming?

A.—Yes.

Q.—The other items mentioned there are taken from the payroll, for the labor, and from the vouchers, for the materials?

A.—Yes.

30 This is a detail of the manner in which this average cost of \$22.90 per ton for hauling in the month of April is arrived at.

Q.—On your former examination, testifying on this claim, you mentioned the figure of \$33.30 per ton?

A.—Yes.

Q.—You now have revised the charge to \$22.90 per ton?

A.—Yes.

40 Q.—Will you explain how the reduction has come about?

A.—The system of recording our costs was usually made up in order to ascertain the information as to the total expenditures made in connection with each operation. There was no effort made to single out any particular items, or to get them in each individual month, with any great amount of accuracy. By that I mean, we may have invoices which were not received during the current month, but which would come in the following month, and they would be charged under that month's operation. That is what happened in this case. Together with an item of \$425. for rental of the garage.

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

In checking this back since I was on the stand last, I find we have this \$425 entered under another claim.

10 There was also an item for gasoline and oil, which was received in the latter part of March ; but, in view of the fact that the invoice was dated in the latter part of March, I have taken it out of that item, in order to show nothing but the April charges against that hauling operation.

Q.—And, by taking those out you have reduced the net cost per ton ?

A.—Yes.

20 His Lordship:—Your Declaration asks for \$2239.46 ?

Mr. St. Laurent:—Yes, your Lordship.

His Lordship:—And the Statement is \$1,454.03 ?

Mr. Phelan:—Yes, your Lordship.

By Mr. Phelan, continuing:—

30 Q.—You have given credit on this statement for the cost of what had been hauled earlier by sleigh ?

A.—Yes.

Q.—Claim No. 12 : “Additional cost of plant removal”. (Paragraph 39 of the Declaration) I notice the first item in this Statement is the sum of \$425. Is that one of the items to which you have just referred in your explanation of the last mentioned claim ?

A.—Yes.

40 Q.—This is the rental for a garage which you had to acquire ?

A.—For an additional year.

Q.—I understand you have the lease here ?

A.—Yes.

Q.—The next item, \$219.50, is made up from your payroll and vouchers ?

A.—Yes.

Q.—That was work that had to be done ?

A.—In order to put the tractor into condition to be used for those additional trips. Under ordinary circumstances the

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

tractor would have been simply taken out, loaded on a car, and shipped out.

Q.—The next item totals \$556.10. The details making up that item are shown in the vouchers and the payroll?

10 A.—They are taken from the payroll, yes.

Q.—“Rental of lot to shore equipment, \$125.” Is that another lot you had to rent, apart from the one to which you have already referred and for which you paid \$425?

A.—Yes.

This lot was at Cedar, or Notre Dame du Laus. The one for which we paid the rental of \$425 was at Gracefield. This one was adjacent to the site of the works.

20 Q.—This item of \$125 is a valuation that you placed on a bungalow that was turned over to the lessor in payment of his rent?

A.—Yes.

Q.—The rest of the claim is made up by using the cost of hauling in March, the cost in January, and the amount of equipment hauled out in March, 58.45 tons, charged at \$6.55 a ton, being the difference between the January and the March cost of hauling?

A.—Yes.

30 Q.—And, the same operation, or a similar operation, is shown here in connection with the difference between the January cost and the April cost of hauling?

A.—Correct.

Q.—You charge \$14.49 a ton for your equipment hauled out in April?

A.—Yes.

Q.—On the second page of Claim No. 12 you have an item “W. H. Meighen, voucher, \$1,032.08”. Will you explain to what that refers?

40 A.—They were the expenses incurred by Mr. Meighen, the Plant Superintendent at the time, in order to bring out the material which had been left over to the following winter.

Q.—I see from the Statement this material was brought in February, 1931?

A.—From February on. February and March.

Q.—And the item of \$1,032.08 is the cost to the Company for removing this equipment?

A.—Yes.

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

Q.—You have given credit for \$243.89 — that is, if it had been hauled out in January, 1930, instead of February, 1931?

A.—Yes.

Q.—And, you charge the Defendant with the difference?

10 A.—Yes.

Q.—The other items are insurance on buildings and material, and on the tractor. Have you established those amounts were correct?

A.—Yes. The \$5,000 was the valuation placed on the buildings and materials that were left there?

Q.—For insurance purposes?

A.—Yes.

Q.—And, they were insured?

A.—Yes.

20 Q.—And, those amounts were actually paid out?

A.—Yes.

Q.—You have an item here “Plus 15%”. To what does that refer?

A.—That would be the loss of earning value that you could place on the equipment which was out of reach and not working.

Q.—Is that a normal, reasonable charge to put on equipment the use of which you are deprived of?

A.—Yes : it is taken as a standard figure.

30 Q.—And, that applies to the boiler, the crusher, the tractor, and cable ?

A.—Yes.

Q.—I take it those figures, \$1,200, \$4,000, \$5,000, and \$2,382.51, are valuations of the equipment?

A.—Yes.

Q.—From where are those valuations taken?

A.—They can be obtained from any equipment company ; or from the invoices that we paid for the equipment, if they are available.

40 Q.—As far as you know are they proper valuations?

A.—Yes.

Q.—Under Claim No. 12 “Additional Cost of Plant Removal”, I see the amount claimed in the Declaration was \$5,823.49. Your total revised claim is \$5,247.06. Is that correct?

A.—Yes.

Q.—What is the explanation?

A.—That comes in in this difference between the cost of hauling in April, \$33.30, and the \$14.29, with the difference in the tonnage.



*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

Q.—The other claim was made up on the basis of \$33.30 for haulage?

A.—Yes.

10 Q.— We now come to Claim No. 13. From where are the figures showing the lighting average for the months of July and August taken ?

A.—From the summary of costs for those two months.

Q.—I see the figures \$715.32, maintenance fuel camps, and \$3,420.90 general maintenance coal. From where are those figures taken?

A.—They are both estimated figures. They were computed some time during the work.

Q.—Were they computed by you?

A.—No.

20 Q.—You have taken them from computations made at the time?

A.—Yes.

Q.—Have you the sheets showing those computations?

A.—I have one that will show the coal, but the fuel for camps was made up from the same computation as the one previously referred to. It was checked against the estimate that was made up by Mr. Lindskog. They work in together.

30 Q.—There is an item of \$1,656.48, salaries paid to watchmen during the months of July and August, 1929. Those items are divided by two, to establish the cost per month?

A.—Yes.

Q.—The next item is water supply, \$717.90. Is that made up from any voucher, or from an estimate?

A.—That was made up from the payrolls. Those men were actually employed during that particular period, and they are shown on the payroll.

40 Q.—“General Standby Payroll”. We have the names of various employees who were in the service of the Company. I understand those different employees, from Superintendent down to time clerk, were in the employ of the Company at the time in question ?

A.—Yes.

Q.—And, those figures represent the salaries that were paid those men per day?

A.—Yes.

Q.—And, the same thing would apply to the following page, which is headed “General Standby Payroll Day Shift”?

A.—Yes.

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

Q.—And, likewise, to the following page, entitled : “Night Shift”?

A.—Yes.

Q.—I think that is the end of this Statement?

10

A.—Yes.

Q.—And, that is all the information you can testify to in connection with those accounts?

A.—Yes.

Q.—Under paragraph 41 of the Declaration there is a charge of 2½% on \$115,174 plant value, for three months, \$8,638.05. Have you information before you to establish the value of the plant?

A.—Yes, we have a plant list of the equipment on the job at that time, with values.

20

Q.—Is that plant list here?

A.—Yes, it is.

Q.—And the figures \$115,174 were taken from that plant list?

A.—Yes.

As a matter of fact, the list shows an amount slightly higher than that, due to equipment that was brought in after this period; but, they can be reconciled

Q.—What is this charge of 2½% per month?

30 A.—That is the plant rental charge which is charged against equipment .

Q.—In the account which forms part of Paragraph 41 there is an item of \$5,733.38, which is referred to as “Plus 15% Profit”. Will you explain to what that refers?

A.—It is standard practice to charge 15% profit for work that has been done. That is recognized as a contractor’s profit.

Q.—And, if there is unused standby to cover a certain period, is there any charge made on that standby?

40 A.—Yes, there would have to be. If you do not, you have a loss of your profit on the equipment and material, or labor, that is tied up over that period.

Q.—And, that is what this 15% item is intended to cover?

A.—Yes.

Q.—A standard charge on equipment?

A.—On expenditures. Not so much equipment, because equipment is shown below. Equipment is not taken into the 15%.

Q.—It is on the standby, which is made up from the pay-rolls?

A.—And other expenses, yes.

*H. C. GRIFFITH (recalled for Plaintiff) Examination in chief.*

Q.—Those, in fact, we have referred to as making up the item of \$21,030.30, the average cost?

A.—Yes.

10 Q.—In the claim to which we are referring, under Paragraph 41 of the Declaration, the Plaintiff has given credit for September work, \$38,772.26; October work, \$16,794.64; and November work, \$45,826.49. Do you know where those figures are taken from?

A.—They are taken from the engineer's estimates for the months in question.

Q.—Are those engineer's estimates here?

A.—I understand they are in Court.

20 Q.—We have also mentioned in this claim that the average of the resident engineer's estimates for July and August is \$84,580.10. I take it you have those estimates here?

A.—Yes, they are with the others.

Q.—I now show you the Resident Engineer's estimates from which the figures which have been referred to in Plaintiffs' Declaration have been taken. The estimate for the month of July shows work amounting to \$84,989.04, and the estimate for the month of August is \$84,171.17?

A.—Yes.

30 Q.—So, this average of \$84,580.10 is taken from these figures?

A.—The average of the two, yes.

Q.—I now hand you the Engineer's Certificates for the month of September, showing the amount of work as \$38,772.26; the month of October, showing work as being \$16,794.64; and the month of November, showing work as \$45,826.49.

A.—That is correct

40 Mr. Phelan:—Coming back to the claim under Paragraph 41, standby and over-head expenses, it appears we have charged 2½% per month, for three months, on \$115,174, plant value. Under the Plaintiffs' contract he has the right to make a charge for the rental of equipment. That is part of the contract.

Mr. St. Laurent:—We have made calculation on the per diem charge for each piece of machinery that was actually used, and we have it listed in detail. It works out to practically the same amount. It is simply bolstering the amount arrived at. Whether we go by one route or the other, it comes to the same thing.

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

By Mr. Phelan, continuing,—

Q.—Will you file, as Plaintiffs' Exhibit P-116, the general statement to which you have been referring?

10 A.—Yes.

Q.—And, will you produce, as Plaintiffs' Exhibit P-117, the Statement showing the charge of \$8,811.15 plant rental on the equipment for the cofferdams and unwatering?

A.—Yes.

Cross-examined by Mr. Geoffrion, K.C., of Counsel for Defendant.

20 Q.—I am sorry I will have to trouble you for some vouchers. Let us take, first, Claim No. 2. Have you the vouchers for June and August, 1929 ?

A.—Yes, I have.

Q.—X-18 is the identification mark for the log driving account?

A.—Yes.

Q.—Is "Log Driving" the title?

A.—Log driving is what we show

Q.—This is not something you bought: it is something taken out of the stores?

30 A.—In connection with these two vouchers, yes: they were taken from the stores. They were bought, and charged to stores, and then charged out from the stores.

Q.—I suppose no one can tell us what the amount of \$90.86 was for?

A.—Oh, yes, the slips will show it.

Q.—I would like to know what those two items. \$90.86 and \$42.68 in August were for?

A.—Here are 25 clips, and one flat file.

40 Q.—What are clips?

A.—Cable clips.

One anchor bolt; another anchor bolt; 15 galvanized cable clips; 450 feet  $\frac{5}{8}$  inch cable; one  $\frac{3}{4}$  inch cable clip; 5  $\frac{5}{8}$  inch cable clips; one pike pole.

Q.—That was used in building a boom?

A.—Not so much in building a boom as handling logs.

Q.—The clips would be for the boom?

A.—Yes.

Q.—I would say they are all for a boom, and only for a boom.

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

A.—That is quite possible.

Q.—Considering the nature of the items is there any doubt that everything, except possibly the pike pole was for building the boom?

10 A.—They might have used a cable to hitch on to those logs and pull them out of a jam.

Q.—They would need the cable anyway for their boom?

A.—They would have to use cable for it.

Q.—What are the dates of those orders?

A.—June 12th, June 12th, June 13th, June 14th, June 13th, June 14th, June 7th.

Q.—What was on the 7th?

A.—The pike pole.

Q.—The other things were all on June 13th and 14th?

20 A.—June 12th, 13th, and 14th.

Q.—Will you please give me the details of the \$42.68?

A.—10 36 x  $\frac{3}{4}$  inch machine bolts; 96 machine bolts; 110 flat washers; 30 pounds oakum; 3 gallons machine oil; 6 $\frac{1}{2}$  pounds oakum; one piece of belt 14 x 6, five ply; 3 gallons cylinder oil; 96 machine bolts; 192 flat washers; 1 keg 8 inch wire nails; 3 hacksaw blades; 4 nuts and 4 washers; one keg 6 inch wire nails.

Q.—What are the dates?

30 31st. A.—August 13th, 17th, 17th, 17th, 19th, 20th, 21st, 22nd, and

Q.—Those would all be for repairs to machinery?

A.—I would not say that, no.

Q.—Can you tell me what they were for?

A.—I could not tell you, no. Those items were turned into the stores, and the foremen have made their notes on the cards "Charge to log jam".

Q.—All you have is that they have it "X-18"?

40 A.—No. They wrote across the top "Work in connection with log jam".

Q.—On the 17th?

A.—There is one of the 13th.

Q.—"In connection with log jam" on the 13th, on the 17th, on the 17th, on the 17th, on the 17th, on the 19th, on the 19th—and I see one here "Sheet piling work in connection with log jam". The last one mentioned, August 19th, is entitled "Sheet piling work in connection with log jam." Then, on the 19th, "Work in connection with log jam"; on the 20th "Log jam"; on the 20th "Log jam"; on the 20th, "Log jam"; on the 20th, "Log

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

jam” ; on the 21st, “Log jam” ; on the 22nd, “Log jam” ; on the 19th, “Log jam” ; on the 19th, “Log jam” ; on the 31st, “Log jam, cofferdam”. Signed by various foremen, Trudel, Larue, and Charron, and so on?

10 A.—Yes.

Q.—As far as you are concerned, you do not know anything at all about these?

A.—No. They are records I have taken from our stores.

Q.—There is a pencil note “Log jam” on them?

A.—Yes.

Q.—I note that every one dealing with June is marked in pencil “Log booms”?

A.—Yes.

20 Q.—You have “Booms” marked on two for the 12th, two for the 13th, two for the 14th, and “Cofferdam” on the 7th?

A.—Yes.

By Mr. St. Laurent:—

Q.—The 7th is the pike pole?

A.—Yes. It is marked “Cofferdam”.

By Mr. Geoffrion, continuing:—

30 Q.—There is no means, of course, of identifying the purpose of the work in connection with the entries for wages? It would simply be charged to “X-18”? Or, would there be any indication? Perhaps you could show me an example. I do not want to ask you to split up every one of your labor items, but I will probably require the log items.

A.—There would be cards to cover each of those various payrolls.

Q.—You have not the cards here?

40 A.—I have the cards for the period from June 16th to June 30th.

Q.—How can the distribution be checked?

A.—It is shown on the backs of the cards.

Q.—I do not want to go through all the labor, but I would like to have you analyze the labor on logs per day : that is the item of \$2,858.59. There is nothing to indicate what particular subdivision (if I may call it a subdivision) of the log driving account those men would be working at? In the others I can get “Boom” in the one case, and “Log jam” in another, but would

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

there be anything more than the "X-18", or would there be an indication of the material?

A.—It would simply show, most likely, in the same manner as on the slips : "Working on log jam".

10 Q.—"Log jam" or "X-18"?

A.—It is the same thing. "X-18" and "Log jam" would be shown on the same.

Q.—"Log jam", "Log driving", and "Boom Building" may be the same thing to you, but it may not be to me.

By Mr. St. Laurent:—

Q.—Have you the cards for June 16-30, voucher 811?

20 A.—Yes, they are here.

Mr. St. Laurent:—Perhaps it would be better to see just what is on the backs of those cards before we start to discuss them.

By Mr. Geoffrion:—

Q.—Let us now take Claim No. 3, entitled "Timber for Cribs, and Labor, \$2,782.21". That was entered as 2-A?

30 A.—Yes.

Q.—I notice your dates go backwards on the labor side?

A.—Yes. It so happened when I made that up I started in that way.

Q.—I see the labor in this item stops at the end of March, but there is some material entered in May, June, August, and November. Is that explained by what you said before, that sometimes the accounts came in late?

A.—Yes.

40 Q.—The labor appears as of the date it was performed ?

A.—Yes, in the period.

Q.—By weekly periods?

A.—Yes.

Q.—The material would naturally correspond in date with the labor?

A.—Yes, but in some cases it might be months before we would actually receive the invoices.

Q.—And, it is entered in your books "Timbers for Cribs, and Labor"?

A.—Yes.

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

Q.—Would “Crossing Timber” (Claim No. 3) be the same thing?

A.—Yes; March and April.

Q.—It would be for building cribs?

10 A.—Yes, that would apply to the same thing. “Crossing timber” would be hauling it from one side to the other, in connection with the operation.

Q.—Then we come to the next two subdivisions of Claim No. 3, one building and trimming crib, 2-B, \$6,970.79; and the other building and trimming No. 2 crib, 2-B-1, \$3,417.72. Would the same remarks you made about material being late apply here?

A.—In the same way, yes.

Q.—And this would be entered as being labor and material for building those cribs?

20 A.—Yes.

Q.—There is something which is a mystery to me. You seem to suggest there are only two cribs.

A.—There are only two shown.

Q.—I note in your Exhibit you speak of two cribs, whereas we know there were several upstream and several downstream. Mr. Bishop’s suggested explanation to me is that probably the upstream cofferdam and the downstream cofferdam were each treated as one crib.

A.—That is it. They were referred to as one crib.

30 Q.—I presume the same remarks you have already made would apply to the loading with rock?

A.—Yes.

Q.—Coming now to the next item in Claim No. 3, sheathing and toe filling. This is not the steel sheathing : it is the original wood sheathing.

A.—The original wood sheathing.

Q.—Upstream, and downstream?

40 A.—That is No. 1 crib. As a matter of fact, No. 2 is not shown in there.

Q.—How is it labor begins as early as March, 1929, and material was brought as early as March, 1929, for sheathing and toe filling of the upper crib?

A.—It is possible, from the best information I can get, that they would start to sheath the shore cribs as soon as they were built.

Q.—Let us begin by the material items. September material, \$648.69; October material, \$369.86; November material, \$74.45; April plant, \$2,897.61. Can you give me the data on that?

A.—Yes, I will do so.



*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

Q.—What could that plant in April be?

A.—April, 1930, it may be plant that was rented particularly for that operation.

10 Mr. St. Laurent:—Instead of saying what it may be, if you are going to get the document you had better say from the document what it is.

By Mr. Geoffrion, continuing,—

Q.—Can you split up this account between sheathing and toe filling?

A.—I would not want to do that, and stand by it. You might shake it to pieces.

20

The sheathing and toe filling was all charged into the one operation, and it is quite possible the foremen may have used the same term.

Q.—As regards labor, you would have no indication as to what was sheathing and what was toe filling?

A.—Not to the total extent of it, no.

Q.—We may, or may not, have some help or information from the material?

30

A.—Possibly.

Q.—You do not know when they finished sheathing, and when they started toe filling?

A.—No, I do not.

Q.—The next item is “Driving Wood piles, and moving”. What is that?

A.—If I am not mistaken, that was driving wood piles to move the pile driver, or to support the pile driver, that drove the steel sheet piling.

40

Q.—I understand they built a pile driver?

A.—Yes

Q.—There is one item for which I see no vouchers, in regard to the pile driver: that is a large item of labor, October 16-31, \$2,157.52.

A.—The number has probably been omitted from that.

Q.—Can you find it?

A.—Yes, I am sure I can.

Mr. St. Laurent: It is voucher No. 1223. I may say we checked it last night and noticed it had been omitted, and we put the number on the copy which has been filed as an Exhibit.

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

By Mr. Geoffrion:—

Q.—I understand there are two vouchers?

A.—Yes

10 Q.—May I see them?

A.—They are Nos. 1223 and 1177.

(Counsel takes communication of the vouchers in question)

Q.—I now come to the unwatering, 2-A-3. There is a very large item of labor in this. Is it all for pumping?

A.—That shows in the unwatering charge. I could not definitely say whether it was actually for pumping or not.

20 Q.—What else might it be?

A.—It might be for handling pumps, or it might be for various operation in connection with the unwatering.

Q.—But, if I have to check it I would like to have an idea of what the other operations might be.

A.—We might get that from the cards.

Q.—Will you please look it up. I would like the information from the beginning of September, to say the end of February?

30 A.—Yes, I will.

And it being 12.30 o'clock the further testimony of the witness is continued to 2.30 o'clock in the afternoon.

And further for the present deponent saith not.

---

And at 2.30 p.m. personally came and reappeared: Henry C. Griffith, and his cross-examination was continued by Mr. Geoffrion, K.C., of Counsel for Defendant as follows:

40

By Mr. Geoffrion:—

Q.—I gather you have not been able to prepare statements from day to day?

A.—No.

Q.—But can you show me some of these labour vouchers in order to see whether there is anything that would help us beyond the date?

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

A.—Yes, we can get them from the cards we have in these boxes. Would you like to have them right away?

10 Q.—I simply want to know whether there is anything to identify the labour beyond the reference to log driving. No. 18, in the material vouchers, I have found something that did help to identify, but I don't know if there is anything in the labour. I would think there would not be, but I want to know whether there is or not.

Mr. St. Laurent:—We can take out a bundle and my learned friend can see some of the cards to see how the matter proceeds.

20 By Mr. Geoffrion:—

Q.—Give us June 1929?

A.—Yes, I have June here.

Q.—Moving Jams. What date was that?

A.—18/6/29.

Q.—When you make up your statement day by day, you had better put the endorsement on. How could a carpenter be called upon to move jams?

A.—That, of course, I could not state at the present time.

30 Q.—You see, carpenters are included in both cases. Have you got 18 and 19 where there is something about logs. Here, you have got watching logs, fifty hours out of 120 on the 19th?

A.—Yes.

Q.—On the 20th of June?

A.—It is dated the 19th.

Mr. St. Laurent:—Each foreman turns in a card, foreman's daily report. There may be other cards on the same day.

Witness:—One is an overtime card.

40 By Mr. Geoffrion:—

Q.—That is, on the 19th again?

A.—Yes

Q.—Driving, \$3.85, on the 19th again?

A.—Yes. That is all I have on that page.

Q.—Is the page from June 16th to June 30th?

A.—No.

Q.—Then, you will give me the distribution by date that I asked for this morning?

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

A.—By date, that is what you are asking for, is it not?

By Mr. Phelan:—

10 Q.—Distribution by date for the three months. What three months, are they?

A.—June, July and August.

By Mr. Geoffrion:—

Q.—You told me you could not separate the sheathing and the toe filling, except by guess?

20 A.—It is a question of getting it in the manner, as I said, it was lumped together, and we could probably take a great portion of each of the items, and segregate them, but as I said, you will probably have a charge for sheathing or toe filling, and which the foreman might put in under sheeting and toe fill or vice versa.

By Mr. St. Laurent:—

Q.—You would not attempt to get at it accurately?

30 A.—I would not care to do so. I have not been able to get that information.

By Mr. Geoffrion:—

Q.—Because you have not had enough time?

A.—I did not have time.

Q.—The same remarks apply to the material?

A.—Yes. I may have one of these items.

40 Q.—On September 29th, you have 35 cents, nails for cofferdam; September 30th, dynamite and electric caps, cofferdam, \$99.93. What was the dynamiting for. Have you the slightest idea?

A.—I could not tell.

Q.—September 29th, 48 cents, nails, cofferdam; August 16th, pipe, cofferdam \$109.08. You do not know what that pipe was for?

A.—No.

Q.—On the 3rd September, timber, \$71.68. What was that for?

A.—For cofferdam.

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

Q.—Who put those blue marks, “2 D”?

A.—The store keeper marked them in that manner.

Q.—The man whose signature is at the bottom is the superintendent or foreman?

10 A.—The foreman.

Q.—He is the man responsible for the classification?

A.—Yes, he give us the information.

Q.—Here, we have the 2nd September, B. M. lumber again?

A.—Yes, that is timber.

Q.—Timber \$22.18?

A.—Yes

Q.—And we have a scow. Is that to build a scow, 31st August, a new scow ; timber, \$152.10?

20 A.—Yes.

Q.—Another new scow on the 2nd of September, \$193.82?

A.—Yes.

Q.—You have an item of \$648.00. I want the other details of plant and material on that page?

Mr. St. Laurent:—You have the \$648.00, and you want the others?

30 Mr. Geoffrion:—Yes, I want the others.

Mr. St. Laurent:—Some of them are marked material, plant item.

By Mr. Geoffrion:—

Q.—And the two other material items. Can you tell me the date of that item of \$439.78 for material. Was it early in September or late in September, or when was it?

40 A.—I could not distinguish the dates it was charged out.

Q.—Is it possible to do so?

A.—It can be gathered.

Q.—I am coming now to the unwatering item. I asked you to get me the details by dates of the labour, September, October, November, December and January?

A.—Yes.

Q.—Then, you got the items of material that are substantial. I will take only those in September, \$597.00?

A.—Yes.

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

Q.—In October, \$644.00. I am leaving the cents out. In September you have two items, for \$187.00 and \$597.00 ; You have \$750.00, about, in two items there of material ; October, you have \$644.00 ; November, you have two items, \$186.00 and \$363.00, and in December you have \$2,318.00 ; Then, you have in January \$2,643.00, and in February \$792.00. You will have to give me by dates for February too, because I see you have a big charge for labour in February?

A.—Pardon me, Mr. Geoffrion, we have the material charges in connection with the 2 A 3. That first one, \$153.57 is material charged from High Falls. That will be in the form of an invoice.

Q.—But you cannot say what it is?

A.—It is not here. It can be produced ; voucher No. 20 1131.

Q.—\$597.87?

A.—Yes.

Q.—The two first items are the fifth and ninth September, \$99.00 and \$59.00?

A.—Yes.

Q.—And they represent small amounts for machinery in April, bushings.

A.—Pipe fittings.

Q.—And they are entitled, cofferdam pumps?

A.—Yes. 30

Q.—They are for small amounts also? They are entitled, “unwatering” ; another one of the 9th, a small amount entitled, “cofferdam pumps”. What is this one?

A.—Cofferdam boiler.

Q.—Cofferdam boiler, 3 cents. We won't lose any time on that. This is all in early September?

A.—Yes.

Q.—All these items are apparently in connection with pumps and boilers, or things of that sort, and were for small amounts in early September, and they are in connection either with cofferdam or unwatering? 40

A.—The unwatering charge, yes.

Q.—Can you give me in September by date. I don't care for the description of the thing, but simply by date. For September, all I want is for you to give it by dates.

Mr. St. Laurent:—I would like to be sure that we understand.

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

Mr. Geoffrion:—The total each day and so on.

Mr. St. Laurent:— If that is useful. It represents quite a lot of work. It represents making thirty separate packets of the thirty different days of the month and adding each account  
10 in each packet.

Mr. Geoffrion:—My learned friend is asking for \$400,000.00 and shows a method of making his claim in damages such that it requires very careful scrutiny?

Mr. St. Laurent:—We have each individual voucher here. It can be done, if it is going to be of assistance.

By Mr. Geoffrion:—

20

Q.—A flume. Why is flume mentioned there ?

Mr. St. Laurent:—The flume is a part of the cofferdam.

By Mr. Geoffrion:—

Q.—I will make it shorter. Extract such amounts as exceed \$25.00 and I will forget the others. Give me those by dates. If it is going to shorten the matter, you can ignore amounts under  
30 \$25.00. That would shorten it a great deal.

Mr. St. Laurent:—I am afraid we would not have much of anything left.

Mr. Geoffrion:—There are some big items here. Anything under \$25.00 I don't care about. Show me November, and I also want September, because I am more interested in the exact dates.

Mr. St. Laurent: — Any individual statement for an  
40 amount of more than \$25.00, and the same thing for November..

Mr. Geoffrion:—Yes, and for November. There is \$2,318.00 and \$2,643.00, but those are two things I am interested in.

By Mr. Geoffrion:—

Q.—What happened in that month to bring it up to \$2,318.00 of material. The steel sheeting was driven?

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

A.—That I would not care to state myself.

Q.—The steel sheeting was driven?

A.—It was driven during that month.

Mr. St. Laurent:—The upstream steel sheeting was driven  
10 in November.

Mr. Geoffrion:—The thing that cured the disease of the  
upstream steel sheeting.

Witness:—And also in December.

By Mr. Geoffrion:—

Q.—The water came from above, not from below?

20 A.—You would have to unwater the whole thing down below, whether you have the upper and lower out. That is just my assumption. The superintendent can probably give you more details on that.

Q.—Well, what you have there is a series of small amounts?

A.—Yes.

Q.—Charged by the foreman to unwatering?

A.—Yes.

Q.—On the various dates during the various months?

A.—Yes.

30 Q.—You cannot give me any information why we are being charged so much more money for unwatering after the thing that was supposed to have cured everything had been done, than before? You cannot state?

A.—No, I cannot state.

Q.—Except you are charging for all the cost of unwatering?

A.—Yes, we have charged all of the amounts against unwatering.

40 By Mr. Phelan:—

Q.—Could there be a delay in rendering invoices for material to your company?

A.—That is quite possible.

By Mr. Geoffrion:—

Q.—One of these amounts is \$54.40 for cylinder oil and the other is \$50.90 for bronze bushings?

A.—Yes.



*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

Q.—You claim in your suit \$49,050.20 for payment received. How do you come to that amount of \$49,050.20?

Witness:—In which claim?

10

His Lordship:—What paragraph is that?

Mr. Phelan:—Paragraph 19, my Lord. It is just at the end of the details of the figures, down where the figures are. There is a credit, less payment received, \$49,050.20.

Witness:—That represents payments shown on the estimates.

20

By Mr. Geoffrion:—

Q.—Have you the estimates there? Where are the estimates that you take that from?

A.—Mr. Allison will probably have those.

30

Mr. St. Laurent:—The amount of \$49,050.20 is arrived at by taking the whole of the contract sum shown on the estimates to cover the unwatering, which included the cofferdams in the main channel, and the excavating of the by-pass, and we deduct from that \$15,000.00 allowed on the estimates to cover the excavating of the by-pass, so that \$15,000.00 from \$64,050.20 leaves \$49,050.20 which we credit as having been received on account of the cofferdamming in the main stream.

By Mr. Geoffrion:—

40

Q.—In the distribution of your contract sum, where \$64,000.00 is given for cofferdam, and therefore, your \$49,000.00 for the cofferdams in the river, you have other items to take care of your overhead, for example, camps, transportation, removal of plant and sundries and stock account. In other words, you had very other items in addition to those that took care of your overhead.

Mr. St. Laurent:—I think you had better examine Mr. Allison on that. He is the one who went into that.

By Mr. Geoffrion:—

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

Q.—Assuming we are not liable on the basis you suggest, and for the amount you suggest, should you not credit us with 35 per cent of the profits on the overhead for the payment you received?

10

Mr. St. Laurent:—I submit that the witness is not competent to deal with that. We are claiming 37 per cent on the construction of the contract, which your Lordship will have to pass upon. There may be something in my learned friend's suggestions, but I submit that is something your Lordship will have to determine, with respect to which you cannot be assisted by the witness.

Mr. Geoffrion:—The only thing that will help the Court  
20 to pass on that would be a certificate....

Mr. St. Laurent:—Perhaps the final certificate would be the one which might be the most helpful.

Witness files as Exhibit P-118 the certificate No. 17, being for the month of February 1930 on which, with respect to the unwatering, the amount of work done to that date appears to be credited at \$60,000.00 and the amount in the by-pass appears to be credited at \$15,000.00.

30

By Mr. Geoffrion:—

Q.—Do you happen to have in your possession the estimate of costs based on the given quantities used by Mr. Bishop to prepare his tender?

A.—I have not got them in my possession here.

Q.—You have them in your possession somewhere?

A.—They are available, I should say.

Q.—Could you let us have them?

40

A.—Yes.

Mr. St. Laurent:—I submit, as they have been called for and examined it is only proper they should be filed.

Mr. Geoffrion:—I did not put them in because they did not seem to throw much light on the case from my point of view. If my friend wants to put them in on his examination, I will not make any objection. It does not give me what I expected.

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

Mr. St. Laurent:—That is what one would gather from your reluctance to put it in.

Mr. Geoffrion:—You are not higher. I was hoping you  
10 might be. In fact, I think you are one or two thousand dollars lower. No, I am wrong, I think I will put it in now.

By Mr. Geoffrion:—

Q.—The item in Mr. Bishop's tenders for unwatering and cofferdams.

Mr. St. Laurent:—Do not call it his tender, his calculations.  
20

By Mr. Geoffrion:—

Q.—The calculations on which he made his tender which have been supplied to me by Mr. St. Laurent, contains an item, cofferdams, unwatering, material \$17,081.00; labour, \$39,188.00?

A.—Yes.

Q.—Making some \$56,000.00 odd. That is what I was trying to elucidate. I have it now. In those figures, of course, you have apart from other items for the haulage of plant and materials, which I see is the sum of \$65,805.00, work, overhead and general expenses, which I see is \$83,264.00; temporary buildings, which is \$33,800.00; plant charge, \$60,000.00; fuel, \$18,000.00; electric lights \$1,800.00, plus ten per cent profit; so that this sum of \$56,000.00 odd would be exclusive of overhead and profit?  
30

A.—That is a statement I have not dealt with at all.

Q.—Can you read it?

A.—I would not want to testify.

Q.—Have I read carefully from these figures?

A.—Your reading is correct, from the figures shown here.  
40

Q.—Can you tell us, in respect of the claim for rock excavation how the \$87,316.00 which you credit us with, is arrived at?

A.—The process is to take it from the actual estimates signed by Mr. O'Shea. On the third sheet of P-118, you have, for rock excavation the following sums, \$17,500.00, \$13,946.10, \$1,906.60 On the following sheet you have \$3,150.00 and \$6,107.40. On the next one, \$2,107.00 and \$1,255.80. On the next one \$12,820.00 from which I am told \$88.00 has to be deducted. On the following sheet, \$350.00 and \$1,122.30.

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

By Mr. Geoffrion:—

Q.—I want to know from what items appearing on the first page of P-118 these things are included?

10 A.—On the first page of P-118, you have the information, spilling dam with a certain toe fill ; then, you have a sheet which gives the detail of that toe fill and you have Stoney Gate Section, log sluices, sluice gates, special log section, west abutment etc.

Q.—I want to know which ones exactly, and which ones are they, which of these included any part of the \$87,000.00?

His Lordship:—You want to know what items make up that amount of \$87,316.00?

20

Mr. Geoffrion:—Yes.

Mr. St. Laurent:—There is rock excavation included in each one of the items, in 104 to 110 inclusively on the first sheet of P-118.

Mr. Geoffrion:—And all the rock excavation claimed for is in that?

30 Mr. St. Laurent:—Some of it would not be carried forward in this No. 17, but would appear in the previous estimate No. 16.

Mr. Geoffrion:—Under what heading would it be? Are they included in the total to date. Are the total amounts in the schedules annexed to P-118 included in the totals of these headings 104 to 110?

40 Mr. St. Laurent:—Yes, and for the purpose of finding it more easily, we have here the listed amounts that we have extracted from the various estimates which can be filed as P-119 and which show with respect to each section described in the contract, north abutment and non-spilling section etc., how much rock excavation there was in the total of that section.

Mr. Geoffrion:—My learned friend can file it if he wishes, but what I want is the classification in justification of the amount. I am not interested in reducing the amount.

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

The witness files as Exhibit P-119 list of amounts extracted from the various estimates.

By Mr. Geoffrion:—

10

Q.—Claim No. 8 you have been examined about, the various items amounting to some \$14,000.00 in connection with camps?

A.—Yes.

Q.—I take it that you had nothing to do with the \$56,000.00 for cost of concrete and steel ?

A.—No.

Q.—That is an estimate that does not concern you, but what you are concerned with is the \$14,000.00 for fuel etc.? The first page deals with fuel. That is a mere estimate, and not from  
20 vouchers?

A.—That is an estimate.

Q.—You could not give us the actual vouchers for that?

A.—No.

Q.—Why?

A.—Because the fuel account was lumped, that is, we had one total account for fuel supply, and in order to get the thing from day to day for each month, you would have to estimate it, because we were getting in fuel, cord wood for the winter, during the summer months, which was charged to the  
30 fuel supply account.

Q.—You are not able to tell us with any degree of accuracy what your fuel bill for the winter would be?

A.—No. The estimate is the only way you could do it, and that, of course, is taken from the number of stoves and the locations they were.

Q.—Your cost for the four months, for labour, fuel etc., January and February and March is an estimate?

A.—Yes.

Q.—You are taking this on the basis that there would  
40 be no heating to do if the work had been finished? You would have gone?

A.—Yes, for these months.

Q.—You have protecting steam lines. Is that also an estimate?

A.—That is taken from the daily labour reports. We have the months, and then the date. On the 7th November there is a charge of \$6.97 and on the 9th \$6.37 and so on.

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

- Q.—Therefore, you have a special charge in your daily report?
- A.—Yes.
- 10 Q.—From the time-keepers?
- A.—Yes.
- Q.—Is that the same thing, protecting water line?
- A.—That is the same thing.
- Q.—Are you lighting costs actual or estimated?
- A.—They are taken from the actual expenditure. That is the total of it here.
- Q.—Why do you bring in May, June, July and August?
- A.—That is to show the difference between the summer and winter lighting.
- 20 Q.—Can you explain how it is, why the material increases over six times in winter from the summer — the labour decreases. Is there any explanation of that?
- A.—The superintendent could probably give a better explanation?
- Q.—What did you light with? Oil?
- A.—No, electricity.
- Q.—When you call it material, is that rental of electricity?
- A.—We had to develop the power ourselves.
- Q.—And with coal?
- 30 A.—In some cases with coal; in some cases it was with a gasoline engine — I should say oil engines; I would not want to qualify this as gas.
- Q.—I am dealing now with claim No. 9., You have not the slightest idea, if any, of the logs, or all the logs, that were delivered to you were measured in the log or in the board. You don't know yourself?
- A.—No, I could not testify as to that.
- Q.—You simply assume in your statement that they are all measured in the board?
- 40 A.—I should correct that. They were measured when they left McCabe's mill by McCabe's scaler, or somebody there.
- Q.—That is, the part that come from McCabe?
- A.—Yes, and they were also measured as they were received at the site.
- Q.—By whom?
- A.—By our own lumber checker.
- Q.—But you do not know anything about the other logs, apart from the McCabe logs, only that part of your logs came from McCabe?
- A.—The ones taken from the river, of course.

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

Q.—You know they were measured in the board, and not in the logs?

A.—I would take it that McCabe would charge us on the sawn measure. That is the usual way of charging for sawn lumber.

10 Q.—Your employer says the other way is the usual way.

Mr. St. Laurent:—Sawn lumber? We do not say that is not the usual way.

By Mr. Geoffrion:—

Q.—In addition to the figures here, there are other estimates. I want to know what you are responsible for. You referred to McCabe's bill, and you say, of course, it is figured on the actual board measure, and not log measure. All you know about that is, what you have just told us, is that it?

A.—Yes. As a matter of fact, this figure was revised, I understand, by Mr. Bishop, and I would not care to go into it too far.

Q.—On the next page you have a lot of statements here. Are you responsible for them, or who is responsible, as I want to examine him if you are not?

A.—They are from the James Maclaren Company. That is a statement submitted by them.

30

By Mr. Ayles:—

Q.—The second page of the three?

A.—No, they came under the same heading as the first one.

By Mr. Geoffrion:—

Q.—Then, you referred to Mr. Bishop for the remarks?

40

A.—Yes.

Q.—It is suggested that you got vouchers from us. Have you those vouchers?

A.—Yes, they can be produced.

Q.—While Mr. Kenny is looking at those vouchers, I will take you to claim No. 13. All you claim you are entitled to here is the cost of overhead during July and August?

A.—Yes.

Q.—Do you mean to say that during September, October and November, all these men that are mentioned there as being

*H. C. GRIFFITH (recalled for Plaintiff) Cross-examination.*

in your pay in July and August were being paid, and were not doing anything?

A.—No, I do not.

Q.—Some may have been dismissed?

10 A.—These men, we could not dismiss. We had to hold them. The men who are shown there, we had to hold on our pay roll, because, had we dismissed them or laid them off, we would have disorganized our whole organization for the work.

Q.—Does that also apply to the last few pages?

A.—Well, it applies to the whole lot.

Q.—You suggest there is not one man there who could not have been sent away and taken back?

A.—No. We would have lost them, if we had sent them away.

20 Q.—Were these men not utilized when the work was going on?

A.—It is quite possible.

Q.—And if they were there, their time would be charged to us?

A.—They may have been utilized on some work which they were not accustomed to.

Q.—But all the same we would be charged for that work?

A.—Naturally. Pardon me; in fact, that was charged there.

Q.—Which charge?

30 A.—In your question, as to the men being charged in here, they are shown as being charged at .601 of the expenditure, that is, they were charged at 60 per cent.

Q.—What do you mean by 60 per cent?

A.—Instead of our charging in the total amount 100 per cent of the amounts as shown in these details, they were charged in at 60 per cent.

40 Q.—Because you said there was some work, and you are charging some overhead, but if these men were working apart from that, I want to know whether they were working regularly, and if they were working regularly, they would appear in your time sheet?

A.—Yes.

Mr. Geoffrion:—My Lord, subject to a short investigation of the vouchers, as well as a question, which is not the biggest question in the case, and until I get the data that I have asked for which may or may not need further cross-examination, I am through with my cross-examination of this witness.

And further for the present deponent saith not.



*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

**Defendant's Evidence**

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10                    DEPOSITION OF DANIEL W. O'SHEA

A witness examined on behalf of the Defendant.

On this twenty seventh day of February, in the year of Our Lord one thousand nine hundred and thirty three personally came and appeared Daniel W. O'Shea, a witness already sworn and examined on behalf of the Plaintiff, who being now called as a witness for the Defendant, deposes as follows:

20            Examined by Mr. Geoffrion, K. C., of Counsel for Defendant:—

Q.—You were connected with the Cedar Rapids works in question in this case, and you have already been examined for the Plaintiffs, and have been referred to very frequently during the course of the evidence here?

A.—Yes.

Q.—You were the Resident Engineer?

A.—Yes.

30            Q.—Representing Mr. Ferguson?

A.—Yes.

Q.—Mr. Ferguson was the engineer under the contract ; and when I say the engineer under the contract I mean the engineer for the owner — the Defendant — because there was a staff of engineers also for the Government?

A.—Yes.

Q.—You are not in the employ of the Defendant Company: you are in the employ of Mr. Ferguson, I understand?

A.—I am in the employ of Mr. Ferguson.

40            Q.—With reference to your experience, you just hand me a typewritten list of the events in your past life. Does this statement correctly report your experience?

A.—Yes.

Q.—Will you please produce it as Defendant's Exhibit D-8?

A.—Yes.

Q.—I gathered from the testimony you gave when you were examined as a witness for the Plaintiffs that you were

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

present at the digging of five test pits at or about where the by-pass were supposed to be excavated?

A.—Yes.

10 Q.—Those test pits are shown on one of the plans filed, and have been referred to already?

A.—Yes.

Q.—Will you please tell His Lordship what material you found in those test pits?

A.—We found an overlying burden of loam and sand, to a varying depth of 5 to 8 feet, and then gravel and occasional boulders right down to the depth of the pits.

Q.—Did you find any cemented or partly cemented material between the boulders?

A.—No.

20 Q.—Or, in the material?

A.—No.

Q.—Are you positive as to that?

A.—Yes.

Q.—Testimony has been given in respect to a conversation you had concerning those test pits, among other matters, with Messrs. Bishop and McEwen, I think, on July 20th if I am not mistaken?

A.—Yes.

30 Q.—What did you say to those gentlemen about those test pits?

A.—Just what I said.

Q.—What was that?

A.—That there was a burden of 5 to 8 feet of sand and loam, and then gravel and occasional boulders to the bottoms of the pits.

40 Q.—You have already explained to us how this material was excavated when the test pits were being dug. Was there any reference in the conversation you had about the material being loose, or about the material not requiring picking, or about the material being easy to pick? I think those are the three things we have heard of so far.

A.—I said it required picking.

Q.—As a matter of fact, it had required picking?

A.—It had required picking.

Q.—Did you say anything else in respect to that? You have answered the second of my three points, namely, that you say it required picking. Was there any reference to the material being loose, or was there any reference to the material being easy to pick?

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

- A.—I could not have said the material was easy to pick.  
Q.—Was there any reference to the material being loose?  
A.—No: I never mentioned “loose”.  
Q.—When those gentlemen came to see you did you bring  
10 them to the field where the test pits had been dug?  
A.—Yes, I brought them on the site.  
Q.—Were there any trees there?  
A.—Not upon the site of the by-pass itself.  
Q.—I mean, where those test pits were dug.  
A.—No: they were in a pasture.  
Q.—It was a pasture?  
A.—Yes.  
Q.—It was in course grass, mainly?  
A.—Yes.  
20 Q.—In what condition were the tops of the test pits?  
A.—All the material had been put back into the pits, and  
the ground was heaped over the pits. The excavated material  
was heaped over the holes.  
Q.—Was there any grass on them?  
A.—No.  
Q.—The grass had not had time to grow?  
A.—No.  
Q.—So, those pits were visible?  
A.—Yes.  
30 Q.—Do you know if those gentlemen saw them and looked  
at them?  
A.—They must have.  
Q.—Was the material that was on top of the pits material  
of the same character as had been excavated?  
A.—Yes.  
Q.—It was the same material?  
A.—Yes, it was the same material.  
Q.—At that conversation was there any reference to the  
40 soundings of the river?  
A.—Yes.  
Q.—What was said?  
A.—I told them soundings had been taken the previous  
fall, and that they had been taken from a boat.  
Q.—As a matter of fact, they had not been taken by you?  
A.—No.  
Q.—Mr. Stratton had taken them?  
A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—I understand you kept a careful diary of all that happened both at Cedar and at High Falls?

A.—Yes.

10 Q.—I take it you were in charge of both works as Resident Engineer?

A.—Yes.

Q.—You have your diary here, I understand?

A.—Yes.

Q.—Coming back for a moment to the time you dug the five test pits. Did you meet any hardpan in those test pits?

A.—No.

Q.—Are you positive as to that?

A.—Yes.

20 Q.—How would you define hardpan ?

A.—It is a very compact mass of sand and gravel, cemented with clay.

Q.—Mr. Acers said in his testimony (and you were in Court at the time, I think) that hardpan required to be handled with dynamite. Would you agree with that?

A.—Yes.

Q.—Were you there frequently during the time the by-pass was excavated?

A.—I was there probably once a week.

30 Q.—You have notes in your diary of when you were there?

A.—Yes.

Q.—Can you give me a list of the dates you were there?

A.—I have an extract from my diary.

Q.—Have you the diary itself?

A.—Yes.

Q.—I have a note of the date November 10th. Were you there on that date?

A.—Yes.

40 Q.—I will suspend your testimony on this for the moment, and will come back to it later.

Did I ask you whether there was any hardpan in the excavation when the Bishop Company excavated the by-pass or the part of the dam that crossed the by-pass? Did you notice if they met any hardpan?

A.—No.

Q.—You did not notice any hardpan there?

A.—No.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—While you were there did you notice if they used dynamite before the winter season?

A.—I did not see dynamite used until in December.

Q.—Was the ground frozen then?

10 A.—Yes.

Q.—Was there a good deal of water in that ground?

A.—Yes.

Q.—Would that make the use of dynamite necessary or feasible?

A.—It would fasten the operation.

Q.—Do you consider a steam shovel would have excavated that material without dynamite, at least before the winter?

A.—Yes.

20 Q.—Do you know if a steam shovel is much more expensive than an orange-peel to operate?

A.—About the same, I think.

Q.—Do you know?

A.—I am not positive of it.

Q.—You said the top layer was softer, for about 5 to 8 feet or something like that?

30 Mr. St. Laurent:—I do not think the witness said that. He described the top layer, but he did not say whether it was softer or not.

Mr. Geoffrion:—I thought he said it was soft material.

Mr. St. Laurent:—He did not make any comparison. He described the two kinds of material, but he did not make any comparison between them.

By Mr. Geoffrion, continuing:—

40 Q.—From the point of view of relative softness how did the top material compare with the lower layer?

A.—It was quite soft.

Q.—How did the contractors proceed with their orange-peel in the beginning, with respect to that soft material?

A.—They started at the lower end of the by-pass, and removed practically all this soft material; and then worked their derrick up the cut.

Q.—They began by peeling off the soft material, or the bulk of it?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—At that time was the nature of the ground underneath exposed ?

A.—When they got down to the depth of about 14 feet they began running into harder material.

10 Q.—But, they took off the soft material first ?

A.—Yes.

Q.—They took off the soft layer which was over the hard material, exposing the harder material ?

A.—Yes.

Q.—When the harder material was exposed in that way, you said a steam-shovel could have excavated it. Do you know if a steam-shovel could have been brought in at that time ?

A.—Yes.

Q.—How do you know that ?

20 A.—The roads were still good.

Q.—Did you bring one in the following winter, for some other work ?

A.—Some other contractors got one in.

Q.—Can you tell me from memory, or if you prefer by reference to your diary, if you were there on November 10th, and if you noticed anything ?

A.—Yes, I was there.

Q.—You have your original diary before you ?

A.—Yes.

30 Q.—Kept from day to day ?

A.—Yes.

Q.—Will you please read what you have concerning Cedar under date November 10th ?

A.—(reading)

40 “There were about thirty eight men on both sides of the river. Have probably 1000 cubic yards excavated in by-pass ; mostly loam and yellow dirt. Down to 14 feet in one spot. Orange-peel is fairly effective in the dry earth, but about useless in wet earth. Have 6 dump carts hauling material to dump near Forget's house.”

Q.—Is that all you have in respect to the by-pass ?

A.—Yes.

Q.—Is that a correct statement of what you noticed then ?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—Generally speaking, and without repeating the question each time, you have your diary before you, and you are speaking from the entries you made in it as you went along?

A.—Yes.

10 Q.—And, does it correctly represent what you noticed and what you thought at the time?

A.—Yes.

Q.—And, what you still think?

A.—Yes.

Q.—Were you there on November 12th?

A.—Yes.

Q.—Did you notice anything in respect to the by-pass?

A.—Yes.

Q.—What was it?

20 A.—(reading)

“Went over job at Cedar with Mr. Bishop. The orange-peel works well for the first 14 feet, then strikes a layer of material through which the peel cannot penetrate, so they say. Our test pits show no indications of hardpan. Believe this layer of hard material is shallow, and below this material is soft.”

Q.—Is this all you have on that date?

30 A.—Yes.

Q.—Were you there on November 16th?

A.—Yes.

Q.—What is the note in your diary?

A.—(reading)

40 “Went up to Cedar this morning with Mr. R. M. and T. F. Kenny and Mr. Albert Maclaren. Orange-peel digging through hard stuff. Two of teeth broken, and parts on the way we are told. Noticeable lack of attention given to the Cedar job by Mr. Bishop and Mr. McEwen to date.”

Mr. Forsyth:—I understood the witness to be giving evidence in regard to observations he has made, but I submit conclusions he may draw are not to be read into the Record from his diary, as they are not responsive at all to the question. It is just a gratuitous comment.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Mr. Geoffrion:—The comment is not gratuitous: it is the opinion the witness formed at the time, and he was the Chief Engineer in charge of the work, on the spot. I do not suggest, of course, it is conclusive ; and I do not think it is even very  
10 important. I quite appreciate it must be substantiated if we are to rely upon it. At the same time, it is what the witness noticed at the time, as Chief Engineer in charge of the work. While I say I do not think it is very important, at the same time I suggest it is not immaterial. I could ask the witness for his opinion.

Mr. Forsyth:—I submit my friend should not. The diary, as such, is not evidence. It is only being used, and can only be used for the purpose of refreshing the memory of the witness  
20 as to dates and what may happened at the time. The conclusions he drew from any observations he may have made surely are not to be read from his diary. He may give his observations of facts, but not his opinions.

Mr. Geoffrion:—Of course the diary itself is not evidence, and is of use only when the witness cannot speak from memory. I submit it is the best supportive evidence conceivable. Of course, the witness must be prepared to swear to what he reads from  
30 it.

At the present moment I do not attach much importance to the question of opinion, unless something may arise later on where the opinion of the witness may be of importance, and I would not like to have it laid down as a principle that no opinion whatever can be given by this witness.

Mr. St. Laurent:—Whenever there is an opinion set forth in the diary, I think we had better discuss it and determine whether it should go in the Record, before it is read in. I think  
40 perhaps the witness might be cautioned that his record of observations of facts may go in, but if there is any opinion in his diary we should see whether it is a proper matter for inclusion in the Record.

Mr. Geoffrion:—I think that is quite fair, and I agree to it.

By Mr. Geoffrion, continuing:—



*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—When you come across any comments or opinions in your diary, will you please show them to me before you read them?

A.—Very well.

10 Q.—Had you completed reading the extract from your diary for the 16th November?

A.—Yes.

Q.—Were you there on November 23rd?

A.—Yes.

Q.—Have you any notes in your diary in regard to the 23rd?

A.—Yes.

20 Q.—Strictly speaking you are only entitled to testify by memory, if you can; but I would be surprised if you could do so.

Will you please read what you have in your diary in regard to the 23rd?

A.—(Reading)

30 “Had 100 men on job. No great progress made on cut since last Friday. Still working with two broken points on orangepeel. The new points and bolts are on the job, but I am told the burner is not here yet.”

Q.—What would be the purpose of the burner?

A.—For making changes on the points of the orangepeel.

(reading) “It is difficult to handle material at this dept of 14 feet with this partly disabled peel, but Mr. McIntosh and I believe it could be excavated if peel were in condition.”

40 Mr. Forsyth:—Clearly this is a matter of opinion, not only on the part of the witness but of Mr. McIntosh.

Mr. Geoffrion:—I have no objection to the reference to it being striken out.

Witness:—(reading) “In the meantime the derrick has backed up and has excavated so far that the lower portion will have to be cleared with either scrapers or by hand.”

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—Backed up where?

A.—Up the cut — up the by-pass.

Q.—Why had it to be cleared with scrapers or by hand?

10 A.—Because it could not reach to the other side or the by-pass. The machine had to stand on the higher level.

Q.—And the boom was too short too reach?

A.—Yes.

Q.—Is that all you have in your diary for that date?

A.—That is all.

Q.—Were you there on November 29th?

A.—Yes.

20 Q.—Can you tell us what you noticed then? leaving out any conversations you may have had with Mr. McIntosh. You may refer to what you got from employees of the Bishop Company, and what you saw, but leaving out any conversations you had with Mr. McIntosh, or your opinions?

A.—(reading) “Found that excavation was being carried out only in soft sand. They are not attempting to tackle the ground below 14 feet from the surface. Have backed the derrick too far now to be able to touch lower 150 feet of it. Have had a crew with picks and shovels excavating lower end of it since Wednesday noon.”

Q.—Were you there on December 11th, and, if so, what did you notice?

30 A.—(reading) “Saw that a little had been done since December 1st. Much time lost on account of breakdowns of derrick. Crew with pick and shovel excavation not accomplishing much. Derrick now in line of dam, and has unearthed a nest of boulders. some quite large. Points on peel have been replaced, but they broke a leaf a few days ago. The spare leaves on hand are for a lighter peel, and the hole for the pin has to be reamed to fit this shovel.”

Q.—You say the spare leaves did not fit the peel?

A.—Yes.

40 Q.—Was there a change of foreman then?

A.—Yes.

(reading) “McEwen up Wednesday afternoon to straighten things out. Have sent up a new excavation foreman, and replacing master mechanic.”

Q.—Who was the previous foreman?

A.—Crawford.

Q.—He was the one who went away?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—Who was the new foreman?

A.—Wallin.

Q.—You said there were some boulders. Was there any conversation between yourself, Mr. Bishop and Mr. McEwen at the  
10 time you met them as to how boulders would be paid for?

A.—Yes.

Q.—What did you say?

A.—They asked me how we would treat boulders, and I said boulders of half a cubic yard or more in volume we would treat as rock.

Q.—And, did you do that?

A.—Yes. That was within the line of dam, not in the by-pass.

Q.—Where you were supposed to pay for excavation?

20 A.—Yes.

Q.—You did not certify for excavation in the by-pass proper?

A.—No.

Q.—You certified for the price of excavation in the place where the dam crossed the by-pass?

A.—For boulders.

Q.—As being rock?

A.—Yes.

30 Q.—You treated boulders as rock?

A.—Yes.

Q.—Where you were paying for rock, you treated boulders of half a cubic yard or more as rock?

A.—Yes.

Q.—I think the next time you were there was December 17th. Did you notice anything then?

A.—Yes.

(reading) “Spent day at Cedar. Have been moving derrick since Friday noon. Worked at it every night also.”

40 Q.—“Since Friday noon” would be from what date?

A.—It would be about the 14th, I think.

(reading) “It is now placed parallel to the cut and at its lower end. Started excavating with it at 4 p.m. today, then face of the cut made by hand excavation. Seems to be easy digging. Had a crew of 19 men in the morning on hand excavation; this included 4 carts. The material was mostly sand, with some gravel, with an occasional pack to a mixture of clay. sand and gravel, which is the material which peel could not penetrate. Hand excavation shows this

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material to occur in layers, below which material is soft and easy to handle. Using dynamite loosen up the soil. Wallin does not see anything impossible to removing this stuff with peel."

10

Then there is an expression of opinion by Mr. Wallin, if you want me to read it?

Q.—Was that all on that day?

A.—(reading) "Some large boulders on line of dam and above it. Have a hole down to about elevation 96 on about line of dam, which is filled with water which seems to be at the same elevation as in the river."

Q.—Is that all?

20

A.—Yes.

Q.—I am instructed your next visit was on December 27th. Is that right : and what did you notice?

A.—(reading) "Excavation for by-pass has made much progress since my last visit. Now about 20 feet upstream from lower test pit of last summer. Orange-peel broke Friday : top ring casting broken. Understand a new peel is coming up."

Q.—Is there no reference to excavation by hand?

A.—I cannot find any.

30

Q.—Were you there on December 29th?

A.—Yes.

Q.—What did you notice?

A.—(reading) "Fair progress made in excavation since my last visit. The material is easy to excavate. Some rotten rock on west side of cut has to be blasted, but this is also not difficult. Received a peel from Gracefield in the morning, and it was being fastened to the derrick so as to be ready for operation in the afternoon."

40

there on those days?

A.—Yes.

(reading) "Cast iron shoe on foot of mast of derrick broken on Thursday night, though new one has been ordered by wire it is not in yet. Face of cut to grade is now about 35 feet below line of dam. Cut below this point has been widened to proper width. Had a very small crew on excavation this afternoon. Those were about 35 feet below line of dam, 75 feet north of station

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10 5, excavating to rock just near the surface. Building cribs in cut to line of dam. This is for the trestle on which derrick will run so that balance of cut can all be made with it. Lead from this trestle going to narrow excavation down to ledge on line of dam. Progress since first of month is fair."

Q.—Were you there on January 22nd?

A.—Yes.

Q.—What did you notice?

A.—(reading) "Excavation is at standstill. The trestle has been built across cut in the line of dam, and the derrick has been turned around parallel to the line of dam. With the present layout it is possible to complete the excavation in the cut from this set-up."

20 Q.—Were you there on January 29th?

A.—Yes.

Q.—What did you notice?

A.—(reading) "Derrick for excavation is about ready to go. Have not yet received foot-block, and have taken pieces from another derrick."

Q.—Were you there on February 14th?

A.—Yes.

Q.—What did you notice?

30 A.—(reading) "Excavation making good progress. Excavating rock and earth, loading on dump cars, and bringing cars with horses to a dump upstream along river bank. Very good arrangement."

Q.—I am instructed you were there on February 22nd, and that your diary does not refer to anything except a conversation with Mr. Bishop in which he threatened to stop excavation, and you advised him to write you and that you would advise Mr. Ferguson. I do not think there is any reference in your diary to the work?

A.—I think that is right.

40 Q.—He threatened to stop if you continued to treat only two kinds of excavation, earth and ledge?

A.—Yes.

Q.—And, you told him to write you, and that you would advise Mr. Ferguson?

A.—Yes.

Q.—Asking Mr. Ferguson to come up?

A.—Yes.

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By Mr. St. Laurent:—

Q.—I think it might be as well to have the reference in the record. Would you please read it?

10 A.—(reading) “Mr. Bishop advised me at breakfast yesterday morning that if I still was of the opinion that only two classes of excavation could be considered on the job he would stop all excavation in the by-pass channel on Saturday, and ask for an arbitration. Later in the morning he said he would not stop the excavation, but would still ask for an arbitration. I told him to write me, and that I would get Mr. Ferguson here next week.”

By Mr. Geoffrion, continuing:—

20

Q.—Were you there on February 24th?

A.—Yes.

Q.—What did you notice?

A.—(reading) “The trestle in the cut has all been removed, and the material left does not look especially hard to excavate. They have completed all uncovered ledge in the by-pass near elevation 93”.

Q.—Where you there on February 20th?

A.—Yes.

30

Q.—What did you notice?

A.—(reading) “Excavation of by-pass channel is down to ledge on line of dam, except for a small section in centre of cut. There seems to be no difficulty in removing the earth. Ledge exposed on northeast side of cut looks rusty. Now extending excavation beyond the by-pass for the balance of the Stony Gates section.”

Q.—You made other visits, of course, in March, April, May, and June ; but, as far as I can see there does not seem to be much reference to the question of hardpan. May I now take  
40 you to July 9th. The upper part of the by-pass being excavated then?

A.—Yes.

Q.—What is your note?

A.—(reading) “Arrived shortly after the boom of the travelling derrick broke at a splice. Water trickling through the by-pass since yesterday.”

I have other notes, which refer to something else.

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(reading) "The boom that broke was an old timber. They dismantled the other derrick, and are setting it up on the north shore."

Q.—Is that all you have on that date?

10

A.—Yes.

Q.—I understand you were there on July 12th?

A.—Yes.

Q.—What did you notice?

A.—(reading) "Excavation of by-pass is very slow. Large boulders at water level."

Q.—Were you there on July 16th?

A.—Yes.

Q.—What did you notice?

20

A.—(reading) "Excavation in by-pass is very slow. Last few feet are difficult excavation due to presence of large boulders. The spoil-bank is so close to the cut so that some of it is slipping back in. It is not the width of 75 feet anywhere yet. The shored boom he has on this derrick now after it broke last week limits the range of his throw, and he has some men on top levelling off the top of the pile."

Q.—Did you have a conversation with Mr. Lindskog there about the width of the by-pass?

A.—I do not recall it.

30

Q.—Where you there on July 18th?

A.—Yes.

Q.—What did you notice?

A.—(reading) "Pouring concrete in Stony Gate piers, and had resumed excavation on non-spilling flume. Lindskog has decided to abandon by-pass excavation for the present and take a chance on it. He has loaded the crib which ran into the bridge on Tuesday."

40 Q.—What do you mean by "abandon by-pass excavation for the present and take a chance on it"?

A.—The by-pass was not of the width required, and he decided to leave it as it was.

Q.—What was the width required?

A.—75 feet at the bottom.

Q.—And, what was the width at that spot?

A.—35 or 40 feet, probably.

Q.—Did they later excavate to the proper width?

A.—They did some excavation later on in the fall, yes.

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Q.—Only in the fall?

A.—Yes.

Q.—That would be in the fall of 1929?

A.—Yes.

10 Q.—Did you visit the place on July 22nd?

A.—Yes.

Q.—What did you notice?

A.—(reading) “Drove to Cedar in the afternoon. Got there a few minutes after they jammed in their cofferdam crib.”

Q.—By “jammed” do you mean placed?

A.—No, I do not mean placed.

Q.—What do you mean?

20 A.—I mean the cribs was wedged between the two adjoining cribs.

(reading) “They were dropping it into place between the crib which got loose last week and the north shore, when the chain block on one of the cables broke and the crib jammed itself in, to become distorted. Lindskog said he would fill it there, and build a crib in front.”

Q.—What do you mean by “distorted”?

A.—It was first built with corners that were at right angles to one another — in a rectangular shape. When it jammed between those piers it became twisted.

30 Q.—On your inspections of the cofferdam did you see any indications as to its probable water-tightness?

Witness:—In what way?

Counsel:—As to the likelihood of its being watertight, or not water-tight.

A.—They just had the centre crib, and the shore crib.

40 It did not look very promising, if that is what you mean.

Q.—Were you there on July 24th?

A.—Yes.

Q.—When you speak of the crib which was caught in between the other two, you mean the third one they were placing, but the second in order — that is, the one we call No. 2, and what they call No. 3?

A.—Yes: they call it No. 3.



*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—Were there any logs there when you went down on July 22nd?

A.—I did not see any.

Q.—Did you see any on the 24th?

10 A.—I saw some.

(reading) “The crib which was dropped on Monday afternoon some way or other got through the two cribs, and is now below and being loaded. The logs are building up above this crib, and I told Lindskog he should have a sheer-boom, but he says it would take a very heavy boom to hold the logs. Lindskog complains the logs are coming down in bunches, and make it very bad for him. I suggested he get in touch with Coyle and try to work out an arrangement whereby both could work to advantage.”

20 Q.—Have you any reference to the cofferdam on July 18th?

A.—That is the remark that Lindskog has decided to abandon the by-pass.

Q.—Were you there on August 3rd?

A.—Yes.

Q.—Have you any reference to the cofferdam?

A.—Yes.

(reading) “Closing section of the coffer is anchored a few feet above the line of the cofferdam, and they were trying to lift it and loosen it today.”

30 Q.—What do you mean by anchored?

A.—It seemed to be resting on something in the bed of the river.

Q.—Aground?

A.—Aground, yes.

Q.—That is all I wish to take up with you now in regard to your diary.

40 From your experience in the building of cofferdams with which you have been connected, can you tell His Lordship what is the practice as to taking soundings in the river before placing the cribs?

A.—Soundings are taken by the foreman over the side of the crib. The soundings are usually taken about two feet apart; and from that the foreman makes the bottom courses of the crib to conform with the irregularities in the bed of the river.

Q.—You say they are taken two feet apart. What would you think of them being taken about 10 feet apart?

A.—If the bed is at all irregular you cannot get as close a fit.

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Q.—The practice you have seen is to take those soundings two feet apart?

A.—A foot or two feet.

10 Q.—Have you any criticism to offer in respect to the upstream face of those cribs, from the point of view of fixing the sheeting on them?

A.—The cribs were irregular. They were not in line.

Q.—Is that a disadvantage?

A.—It makes it more difficult to place sheeting on them.

Q.—What is the preliminary precaution, if you know it, that is adopted before placing the sheeting above the cribs to make the cofferdam? The sheeting fits the bottom of the river?

20 A.—The custom is to have a diver go down and see what is on the bottom of the river, and each sheet is taken down and fitted to the bottom. If there is any over-burden it is removed so that the sheeting rests on ledge.

Q.—Did you see any difficulty in using a diver there when the sheeting was being placed?

A.—No.

Q.—The cribs were all located?

A.—Yes.

Q.—It has been suggested there would be danger in sending a diver down. You say there would be no danger or no difficulty. Why should there be no danger?

30 A.—Because the diver could always work behind the sheeting that had already been put in.

Q.—That is, follow the sheeting?

A.—Yes.

Q.—And, he would be protected by the sheeting already put in from the shore, and by the cribs?

A.—Yes.

Q.—What about the spaces left in between the cribs?

40 A.—He would have to use a little caution when he came there.

Q.—Could those have been filled in or blocked?

A.—Something had to be put in to hold the sheeting.

Q.—Was it possible to block those so that the diver could work without being in danger?

Witness:—You mean block those gaps?

Counsel:—Yes.

A.—Yes.

Q.—What is the purpose of sending a diver down in that way?

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A.—To determine the nature of the bottom, and to fit the sheeting to that bottom.

Q.—To fit the sheeting to the bottom of the river?

A.—Yes.

10

Q.—It must be a close fit?

A.—Yes.

Q.—What do you mean when you say the diver could determine the nature of the bottom?

A.—He would find out whether it is ledge, or sand, or boulders, or gravel.

Q.—Suppose the diver had gone down and discovered a porous over-burden over the ledge, what could be done?

A.—Take it out.

Q.—How?

20

A.—With an orange-peel, or clamshell.

Q.—Is it necessary to take out a very wide strip to put in sheeting?

A.—No.

Q.—If soundings had been taken every foot or two before placing the cribs, and if there had been overburden of a mixture of boulders and of softer material, would the soundings have indicated it?

A.—They should.

30 Q.—Unless whoever was taking the soundings landed on a boulder at each foot or at each two feet?

A.—Yes.

Q.—In swift water like this are the soundings taken with a rod, or with a line?

A.—It is difficult to say.

Q.—There are two ways of taking soundings, I understand?

A.—Yes.

Q.—A line with a lead?

A.—A leadline, or a rod or pole.

Q.—What have you to say to the best way in swift water?

40

A.—It depends on the depth.

Q.—Did the Bishop Company ultimately fill in the larger gaps between the cribs?

A.—Yes.

Q.—How?

Witness:—Just what do you mean?

Counsel:—How did they fill the gaps between the cribs?

A.—They filled them with stone.

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- Q.—They did not put in any retainer?  
A.—They built false-cribbing in front of all the cribs.  
Q.—I mean, between the cribs?  
A.—Yes, they built some.
- 10 Q.—After the sheeting had been placed did you notice anything in its appearance open to criticism?  
A.—The sheeting was not vertical all the way.  
Q.—Have you photographs which show that?  
A.—Yes.  
Q.—What do you mean by its not being vertical?  
A.—They started in a vertical plane from each shore, and as they got near the centre they assumed a decided angle.  
Q.—There was an angle?  
A.—Yes.
- 20 Q.—The planks or boarding of the sheeting got gradually away from the vertical?  
A.—Yes.  
Q.—And, the last ones ...  
A.—(interrupting) Were in “V” shape.  
Q.—There was an opening like a “V” at the top?  
A.—Yes.  
Q.—What would that opening indicate as to conditions below?  
A.—That the sheeting must have been meeting with some
- 30 obstructions in the bed of the river.  
Q.—I mean, from the point of view of water-tightness?  
A.—It would indicate opening in the sheeting.  
Q.—What should have been done when those irregularities in the sheeting began to appear?  
A.—A diver should have been sent down.  
Q.—That “V” shape would indicate leakage in the sheeting?  
A.—Yes.
- 40 Q.—Have you anything to say about the quality of the toe filling?  
A.—The toe filling against the north shore was made up mostly of broken rock from the excavation on the island.  
Q.—How was the rest of the toe filling?  
A.—It was good material.  
Q.—Is broken rock a good material for toe filling?  
A.—I do not think so, because it is porous.  
Q.—Apart from this rock filling in the river, what was there on the bank on the north shore?

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A.—There was a dump of excavated material from the island.

Q.—Did the water rise up to that when the cofferdam was closed?

10 A.—It did, eventually.

Q.—Was that porous, or non-porous, material?

A.—Porous.

Q.—Did you notice on which side of the river the leaks were?

A.—Yes. They were near the north shore.

Q.—What did you notice about them?

A.—That they seemed to be coming in between cribs 1 and what they call 3.

Q.—How could you see that?

20 A.—As they built up a head on the cofferdam you could see the water coming through more on that side than other places.

Q.—The steel sheeting that stopped the gates was on the north shore?

A.—Yes.

Q.—Where did they build the flume to try to take care of the water?

A.—Between crib No. 1 and their crib No. 3.

Q.—On the north shore?

30 A.—Yes.

Q.—It has been stated there were logs entangled in the cribs. You do not know that?

A.—No.

Q.—If the sheeting was put above those logs — clear of the logs — would the logs have played any further part in the leakage, provided the sheeting and toe fill were good?

A.—No.

40 Q.—It has been stated that the steel sheet piling put above the cofferdam does not justify the levels that appears to have been found by Mr. Stratton. What have you to say as to that?

A.—We find that two of Mr. Stratton's elevations agree very closely with the depth to which the sheet piling was driven.

Q.—Were there any levels given where the sheeting was placed?

A.—No.

Q.—How far was the sheeting placed from the nearest levels given by Mr. Stratton, or appearing on the plan?

A.—About 20 to 25 feet.

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Q.—Will you look at Plaintiff's Exhibit P-38, which purports to show the bottom of the river. This is merely taken from the contours, and not from any levels?

A.—It must be.

10 is? Q.—In any event, there are no levels where the sheeting

A.—No.

Q.—There are levels about 20 or 25 feet away, downstream?

A.—Yes.

Q.—And all you have on the plan is a base line plotted from the dotted contour?

A.—Yes.

20 ed? Q.—Those contours do not purport to have been sound-

A.—No.

Q.—You say, nevertheless, you find two levels of Mr. Stratton which, notwithstanding the distance, fit in with the base of the sheeting as driven?

A.—Yes.

Q.—Which are they?

A.—I could do it better on our drawing. 73.7, and 79.7.

30 the river on the plan B-2444 (that is the line from station 4 parallel with the top of the plan) are the two levels nearest to the north shore?

A.—Yes.

Q.—They are the two levels opposite the steel sheeting?

A.—Yes.

By Mr. Forsyth:—

40 where the steel sheeting went?

A.—We can get a plan of our own to show it.

Mr. Forsyth:—I would like the witness to show it to me on this one.

Mr. Geoffrion:—(to the witness) If you have a plan of your own, you may use it.

By Mr. Geoffrion, continuing:—

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—You have before you a sketch indicating the bottom of the steel sheet piling, and also Mr. Stratton's levels which you have just mentioned, but moved up about 25 feet?

A.—Yes.

10 Q.—And, you show where they meet?

A.—Yes.

Q.—Are there any other levels in line with the steel sheeting? Apparently there are not?

A.—No.

Q.—In other words, the steel sheeting does not go farther than those two levels?

A.—No.

Q.—Those are the only two levels taken by Mr. Stratton which are in line with the sheeting, 25 feet below. Is that  
20 right?

A.—Yes, as far as I can tell without examining the drawing very closely.

Q.—I am speaking of the line. Taking the line parallel to the face of the dam, you say the two levels you take are the two nearest to the north shore?

A.—Yes.

Q.—One is nearly on the edge, and the outer one is at the steel sheeting?

A.—Yes.

30 Q.—So, necessarily there are only two?

A.—It might line up with this third one.

Q.—Can you scale it, and say?

A.—Those are the only two.

Q.—Will you file, as Defendants Exhibit D-9, the sketch to which you have been referring?

A.—Yes.

Q.—Was this sketch made by you, or under your supervision?

40 A.—It was made under by supervision. I did not make it personally.

Q.—It was made under your instructions, and supervision?

A.—Yes.

Q.—By Mr. McIntosh?

A.—No; by another man.

Q.—Who is he?

A.—An employee of the James Maclaren Company.

Q.—What is his name?

A.—Mr. Armstrong.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—The point is the nearest level found by M. Stratton is approximately 25 feet away, downstream?

A.—Yes.

10 Mr. St. Laurent:—We object to the filing of Exhibit D-9 as evidence of the depths to which the steel sheet piling was driven. We admit, of course, it may be filed to illustrate the statements of the witness, but we do not agree that the depths shown are the proper depths.

His Lordship:—I will take it under reserve of your objection, Mr. St. Laurent.

By Mr. Geoffrion, continuing,—

20 Q.—Continuing on that subject, did you compare such other soundings of Mr. Stratton, shown on his plan, as are sufficiently near the place where the rock was found when the dam was built; and, will you tell us how they coincide?

A.—Yes,, I did. I have a plan here.

Q.—This is a plan prepared under your instructions?

A.—Yes.

30 Mr. St. Laurent:—The plan to which the witness is now referring is a plan prepared in February, 1932, and revised in February, 1933.

Mr. Geoffrion:—That is a matter of cross-examination. The fact in itself does not make the production of the plan illegal. My learned friends put hatching on a plan a few weeks before the case started, to represent the over-burden.

Mr. St. Laurent:—I am simply drawing attention to the dates on the plan now being discussed with the witness.

40 Mr. Geoffrion: The lines on my learned friends' plans were made long before the trial, but the hatching was only put on a few weeks before the trial.

By Mr. Geoffrion, continuing,—

Q.—This plan shows steel sheet piling, wood sheeting, the cribs, some piers, the line of the dam, the lower sheeting, the



*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Stratton levels or the levels appearing on B-2444, and the lower cofferdam?

A.—Yes.

Q.—Will you please file it as Exhibit D-10?

10

Mr. St. Laurent:—We object to the filing of the plan as any evidence of the distances or locations purporting to be shown thereon, unless proper evidence is made of the facts.

Mr. Geoffrion:—My learned friends may compare it with their own plans.

Mr. St. Laurent:—It is because we have compared them, and because they differ so substantially, that I am having the  
20 objection noted.

By Mr. Geoffrion, continuing,—

Q.—Was this plan prepared under your instructions?

A.—Yes.

Q.—By whom?

A.—First by Mr. McIntosh, and then by Mr. Griffith.

Q.—Who is Mr. Griffith?

A.—He worked for the James Maclaren Company.

30

Q.—Have you compared the soundings given by Mr. Stratton on the plan B-2444 with the levels of the rock as ascertained when the dam was built (whenever they are close enough), and if you have, will you tell us what is the result of your comparison?

A.—I have compared them.

Q.—Which ones have you compared?

A.—I have circled in red pencil on the drawing Exhibit D-10 ten instances where the variation between Mr. Stratton's soundings and the elevations of the rock as found is quite small.

Q.—What would be the maximum and the minimum limits  
40 of those variations?

A.—1.7 feet and .2 foot (one fifth of a foot).

Q.—What is the distance between the place where Mr. Stratton took those levels and the place where the soundings for rock were taken when the dam was built?

A.—It varies from 2 to 5 or 6 feet.

Q.—Therefore, in those ten instances the Stratton soundings are from 2 feet to 5 or 6 feet from the place where the levels of rock were taken for the building of the dam?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—And you find, with this difference in location, the difference in level varies from 1.7 feet to one fifth of a foot?

A.—Yes.

Q.—Would you consider that a reasonable check?

10 A.—I consider that a pretty fair check.

Q.—Did you pay any attention to the boom that was in the river on the 22nd and 24th of July, when the cribs were being placed and the log trouble occurred?

A.—I did not see it on the 22nd. On the 24th it was lying against the shore. It had been pushed against the north shore by the logs.

Q.—Where was it tied?

A.—Tied to crib No. 1.

20 Q.—At one end it was tied to crib No. 1, and at the other end it was tied to the north shore?

A.—Yes.

3? Q.—On the 24th there was no boom tied to either cribs 2 or 3?

A.—I did not see any.

Q.—Was crib No. 3 of the Plaintiff (our No. 2) tied to anything?

A.—I do not remember seeing it tied.

Q.—Was there anything holding it?

A.—It was filled, or being filled.

30 Q.—Were there any guy wires, or anything of the sort when you say it?

A.—I did not see any.

Q.—Were there any on the 22nd?

A.—Yes.

Q.—What was holding it?

A.—It was being fed down the stream by those wires or cables.

Q.—But, where were those wires tied? Were they tied to the shore, or to rock?

40 A.—They were tied to the front side of the crib — the up-stream side of the crib?

Q.—And, at the other end?

A.—To snubs on shore.

Q.—Were they at the level of the water, or above it, or below it?

A.—They were below the water at the crib end.

Q.—And, above the water higher up?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—Where they on both shores?

A.—I do not remember exactly. They must have been on both shores.

Q.—Did you ever receive any request to hold up the logs while the cribs were being placed?

10 A.—No.

Q.—What have you to say in regard to the shores of the river as indicating whether it was river likely to have an overburden or not?

A.—There was a rock cliff on one side, and there was an easy sloping shore on the other side showing ledge right to the river edge.

Q.—A rock slope?

A.—Yes.

Q.—Therefore, there was rock on both sides?

20 A.—Yes.

The trees or brush on the south shore did not start for some distance from the water's edge.

Q.—Was there any trouble with the pumps?

A.—Yes.

Q.—What happened?

A.—I would have to refer to my notes.

30 And it being 12.15 o'clock, the further testimony of the witness is continued to 2 o'clock in the afternoon.

---

And at 2.30 P. M. personally came and reappeared Daniel W. O'Shea, and his testimony in chief was continued by Mr. Geoffrion, K. C. of Counsel for Defendant as follows:

40 By Mr. Geoffrion:—

Q.—When we adjourned we were discussing the question of the pumps?

A.—In October, I have a note, "Three pumps down this morning, one being transferred to new location. Ten inch pump down with bent shaft and other one out of order also". On October 9th I have, "Pumps down some mechanics at work on them, the two eight inch pumps which are on the cofferdam are not being set up on the tail cofferdam".

Those are the only notes I have on breakages.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—It has been suggested that the breaking of pumps was due to overstraining them?

A.—The engines driving the pumps, or the boilers could be overstrained, but the pumps could not.

10 Q.—As far as the breaks you saw, are concerned, could these be due to overstrain?

A.—No.

Q.—Did you have any broken stone and excavation dynamited or otherwise, fall in the river?

A.—Yes, I saw some.

Q.—When.

A.—When the cofferdam was unwatered ; when the area was unwatered.

Q.—Did you see any being put in the river, before?

20 A.—I saw some being dumped upstream, in the spring, when they were removing the rock on the island, when they were blasting rock on the island.

Q.—Was that previous to the building of the cribs?

A.—Yes.

Q.—What happened then?

A.—They were blasting the surface of the island, and some of the rock fell in the river, and the other rock was disposed of by running it upstream and dumping it into the river.

Q.—In the river also?

30 A.—In the river also.

Q.—Do you know if there was a very large quantity?

A.—No, I could not say.

Q.—You told me before answering about that, that you had seen broken rock in the river after the river had been unwatered?

A.—Yes.

Q.—Where was that, as regards the cofferdams? Above or below?

A.—Below the cofferdam.

40 Q.—You saw broken rock?

A.—Yes.

Q.—It has been stated there were boulders there. What have you to say about that?

A.—There were some boulders also.

Q.—Was the over-burden found in the river, when it was unwatered, below the cofferdam, all boulders?

A.—It was boulders and gravel.

Q.—Was all the material boulders and gravel.

A.—No.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—That is what I am asking you. What else was there?

A.—There were boulders, gravel and some of that broken rock.

10 Q.—You mean there was broken rock below the cofferdam?

A.—Yes.

Q.—That is when the unwatering had taken place?

A.—Yes.

Q.—Did you see it?

A.—Yes.

Q.—The photographs filed will show you that, and you can tell me when we come to that.

A.—Yes.

Q.—Were you present when they were dredging below the cofferdam, for the site of the dam?

20 A.—Yes, I saw some.

Q.—Apart from the broken rock you have just mentioned, what was the character of the soil they dredged there?

A.—A mixture of gravel and boulders, and sand in it.

Q.—Can you tell us, or were your observations sufficient, to allow you to tell us whether the condition was leaky, or pourous material?

A.—It looked very compact.

Q.—Have you any personal knowledge of the meeting that took place on the 1st and 2nd of October, when Mr. Ferguson  
30 came up, about the difficulties in connection with the unwatering?

A.—Yes.

Q.—Were you at that meeting?

A.—Yes.

Q.—Who were there?

A.—Mr. Ferguson, Mr. Bishop, and Mr. Allison was there at Cedars, but at the conference the following day in High Falls, Mr. Ferguson, Mr. Bishop and I were the only ones.

40 Q.—Can you tell us what you know of that meeting?

A.—I can read my diary.

“October 2nd, Mr. Ferguson here yesterday and today. Spent yesterday at Cedars. Bishop there, sulking very much, but not very convincing. Presents a negative stand, and throws up his hands, says it is not possible to tighten cofferdam by ordinary means, claiming that water is coming through bed of river, making much of the fact that where drawing shows ledge, there seems to be an over-

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

10           burden of at least fourteen feet (his figure) of boulders  
sand, pebbles, etc. Mr. Ferguson unconvinced, and thinks  
coffer can be made reasonably tight by more toe filling.  
Spent all afternoon listening to Mr. Bishop. Dropped bags  
of hydrated lime, to see if it would color the water,  
but had no success, also tried color solutions, but these  
were ineffective. Also deposited two loads of fill op-  
posite leak near island about 100 feet above at what is sup-  
posed to be the toe of the fill. Had all pumps going ex-  
cept the 12 inch”...

be?           Q.—100 feet above where the toe of the fill is supposed to

20           A.—About 100 feet above at point supposed to be the toe  
of the fill.

                  “Had all the pumps going except the 12 inch. This  
made nine pumps. At about one p.m., water level below tail  
coffer was 93.5; inside 90.5, upstream about 106.5”.

Q.—Where is that 93.5?

A.—Below tail coffer.

Q.—Where is the 90.5?

A.—Inside.

30           “Had had water down about six inches lower earlier  
in morning.

                  Bishop said he was there to study means of handling  
flood water through by-pass (that is, referring to Mr. Alli-  
son was there)—“Bishop said he was there to study means  
of handling flood water through by-pass, and said he would  
widen the gap at the narrowest point. Had another session  
this morning...

40           Q.—I beg your pardon. The gap was still narrow?

A.—That was the gap in the by-pass.

five feet intended?

A.—Yes.

Q.—Of course, the by-pass took so much less water?

A.—Yes.

                  “Had another session this morning at High Falls.  
Bishop intimated that information on drawing B-2444

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

10 showing ledge was wrong and that consequently he feels he has done all his contract calls for, and should be paid for any more. Mr. Ferguson refused to decide on this saying it was a matter to be decided by others and that an arbitration was the proper means. Mr. Ferguson was very insistent that job should not be held up. Bishop ready to throw up, but surprised me by being less wild than I expected. Finally agreed that he would deposit more fill upstream where it was dropped when we were there yesterday. Mr. Ferguson spoke about three to four thousand yards, also agreed to dredge inside cofferdam with orange peel, not to pump until filling had been deposited. Said he would go to Montreal this afternoon and present a formal demand for arbitration, stating that he wanted (There is a word there I cannot read) but before leaving, would get in touch...  
20 Q.—What is the word?  
A.—I think it is “Arbitration”.  
“but before leaving to get in touch with Lindskog to instruct him to proceed”.

30 “He is asking for an extra order and the boss will not give it as he does not think the conditions are as hopeless as Bishop does. Mr. Ferguson feels that they have not yet exhausted all ways of drying up cofferdam.

“It was decided that core drilling on site of deep gates would be advantageous, and Mr. Ferguson said he would have the owners do this at once”.

Q.—Is there anything further?  
A.—There are some remarks, some comments.  
Q.—You have a note there to the effect, leaving aside comments, as my learned friends suggest, and perhaps rightly, that the material seemed to be packed?  
40 A.—Yes.  
Q.—Material dredged on the excavation of the dam seemed to be compact?  
A.—Yes.  
Q.—What about the steel sheet piling. Was there any mention of that?  
A.—Mr. Ferguson suggested a row of steel sheet piling above the present cofferdam in the toe fill.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

By Mr. St. Laurent:—

Q.—Is that mentioned in the diary?

A.—Yes.

10

By Mr. Geoffrion:—

Q.—It was suggested that some things were ordered by Mr. Ferguson. Did you hear any orders given?

A.—No.

Q.—From whom did Mr. Ferguson get his information as to the condition and facts before he came up?

A.—Mr. Bishop wired him.

Q.—But when he came up, as regards information as to what should be done, who gave him the facts?

A.—Who gave Mr. Ferguson the facts?

Q.—Yes.

A.—I described the situation to him on the way up.

Q.—He did not know anything personally, of course?

A.—No.

Q.—Had Mr. Bishop also explained the situation to him?

A.—Yes.

Q.—Were you present on the 24th or 25th of July at a conversation between Mr. Lindskog and Mr. Kenny, after the log jam in respect of which there is a complaint?

A.—Yes.

Q.—Do you remember what happened then?

A.—Mr. Lindskog was complaining of the logs. Mr. Kenny ask him why he did not see Coyle, and Mr. Kenny told him that whenever he wanted logs held up, he would give instructions to Coyle, to hold up the logs whenever Lindskog was to drop a boom. He also offered a boom to Lindskog if he wanted one. Lindskog said he did not want it.

Q.—Did he say it that way?

40

A.—A little more emphatic.

Q.—More emphatic?

A.—Yes.

Q.—By emphatic, you mean very emphatic?

A.—Quite.

Q.—You said that whenever Mr. Lindskog wanted to drop a boom?

A.—I mean a crib. I am sorry.



*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—A number of photographs were taken of the work at various dates?

A.—Yes sir.

Q.—By whom were they taken?

10 A.—By the Quebec Streams Commission.

Q.—Who took them?

A.—Mr. Dubreuil, I think.

Q.—Do you think you could recognize them?

A.—I think so.

Mr. St. Laurent:—Does my learned friend intend to prove them by Mr. Dubreuil?

20 Mr. Geoffrion:—Mr. Dubreuil will be examined or Mr. Chagnon and one of them will prove them.

Mr. St. Laurent:—They will be filed on the condition that those who took them will be available.

Mr. Geoffrion:—I will prove them generally. Mr. Dubreuil and Mr. Chagnon will be examined.

Witness:—I took two or three or four myself.

30 By Mr. Geoffrion:—

Q.—Apparently, the endorsement on the Quebec Streams Commission's photographs are in French, the language of this Province, and yours are in English.

A.—Yes.

Q.—You have extracted four of yours. Your four were taken in November 1928?

A.—Yes.

40 north Q.—Will you file as exhibit D-11, photograph showing the shore of the river, what is called the island?

A.—Yes.

Q.—What you call the island is the space between the by-pass and the river?

A.—The main channel.

Q.—It is an artificial island?

A.—Yes.

Q.—This photograph is to show the nature of the soil on the north shore?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—Look at exhibit D-12 which I ask you to file. I gather that is a photograph of the sort of excavating machine they had for the by-pass?

10 A.—The travelling derrick and orange peel for the by-pass.

Q.—And D-13 which I ask you to file, shows the river just where the dam was to be built?

A.—Yes.

Q.—You see the derrick for the by-pass across, and you see the island which is really showing the other side?

A.—Yes.

Q.—Now, we come to the Quebec Streams Commission's photograph. Here is a photograph dated 22nd August 1929. Can you tell us whether that shows the condition of the by-pass at  
20 that date?

A.—Yes.

Q.—It is looking upstream?

A.—Yes.

Q.—And you can see just beyond the piers, the narrowing of the by-pass, of which you spoke this morning?

A.—Yes.

Q.—Will you file that photograph as D-14?

A.—Yes.

Q.—Here is another photograph of the 27th July. Does  
30 this not show the by-pass looking downstream?

A.—Yes.

Q.—And with the same unexcavated obstruction?

A.—Yes.

Q.—Will you file that photograph as exhibit D-15?

A.—Yes.

Q.—To come to another subject : I find another photograph of the 20th April 1929. What does that show?

40 A.—It shows the cofferdam at the lower end of the by-pass.

Q.—It shows the cofferdam at the lower end of the by-pass for which a special claim is made?

A.—Yes.

Q.—Will you file this photograph as exhibit D-16?

A.—Yes.

Q.—And that was taken in April 1929?

A.—Yes.

Q.—Here is a photograph of the 20th March 1929 which shows the shore crib on the south shore. Will you file this photograph as exhibit D-17?

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

A.—Yes.

Q.—This photograph which I will ask you to file as exhibit D-18, of the 20th of April 1929, shows the suspension bridge of which we have heard and the south shore crib?

10

A.—Yes.

Q.—Here is another photograph of 20th April 1929?

A.—This shows the north shore crib.

Q.—And the bridge?

A.—Yes.

Q.—The downstream, is that right?

A.—Yes.

Q.—And the by-pass to be dug under the shore around what is called, the arrow?

20

A.—Yes.

Q.—Will you file this photograph as D-19?

A.—Yes.

Q.—Here is a photograph of the 22nd August 1929. This shows the cribs and the beginning of the sheeting taken from downstream?

A.—It shows the sloping sheeting also.

Q.—Taken from below on the 22nd August?

A.—Yes.

Q.—Will you file this photograph as exhibit D-20?

A.—Yes.

30

Q.—This photograph I now show you was taken on the 22nd August 1929 from upstream?

A.—Yes.

Q.—It shows the sheeting from upstream, and also shows it slanting?

A.—Slanting. It also shows them loading broken rock from the dump upstream of the island on to a scow, as toe fill against the sheeting.

Q.—Will you file this photograph as D-21?

40

A.—Yes.

Q.—It shows broken rock everywhere here?

A.—Yes.

Q.—On the same date, 22nd August, this is a photograph taken apparently from downstream?

A.—Yes.

Q.—And showing the beginning of the downstream crib which was not completed?

A.—No.

Q.—And the upstream crib?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

- Q.—What is that crib in the middle?  
A.—That is crib No. 3.  
Q.—It shows apparently the wash of the water coming from  
the north shore?  
10 A.—Yes.  
Q.—Will you file this photograph as exhibit D-22?  
A.—Yes.  
Q.—Here is a photograph taken on the 25th of July. That  
is from downstream?  
A.—That is from downstream.  
Q.—What does it show particularly?  
A.—It shows all the cribs in exhibit No. 4?  
Q.—Will you file this photograph as exhibit D-23?  
A.—Yes.  
20 Q.—This photograph of the same date, 25th July 1929,  
shows the same view from closer range?  
A.—Yes.  
Q.—Will you file it as D-24?  
A.—Yes.  
Q.—This photograph I show you of the 20th April 1929,  
shows the two abuttment piers with sheeting, and the bridge?  
A.—Yes.  
Q.—Will you file this photograph as D-25?  
A.—Yes.  
30 Q.—Here is a photograph of the 16th November 1929. It  
shows, if I gather correctly, from downstream, close quarters, the  
upper cofferdam partly unwatered?  
A.—Yes.  
Q.—Is there any indication there of the sort of material,  
part of which, at least, was to be found below, where the dam was  
excavated?  
A.—Yes, it shows broken rock at several places. It also  
shows gravel and boulders.  
Q.—It shows a combination of gravel and boulders and  
40 broken rock?  
A.—Yes.  
Q.—And it shows the condition of the cribs, and a partial  
view of the upper sheeting?  
A.—Yes.  
Q.—Will you file this photograph as D-26?  
A.—Yes.  
Q.—Here is a photograph of the 16th November. That is  
the same thing from a slightly greater distance?

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

A.—Yes. It shows the south shore crib, crib No. 4, No. 2, No. 3, No. 1. It also shows broken rock and gravel in the bed of the river.

10 Q.—Will you file this photograph as D-27?

A.—Yes.

Q.—Will you look at this photograph dated 22nd August 1929: this is looking from upstream, is it not?

A.—Yes.

Q.—It shows the pile of rock?

A.—Loose rock.

Q.—Loose rock on the north shore above the cofferdam?

A.—Yes.

Q.—And it also shows...

A.—The men loading that rock on to the scow.

20 Q.—For what purpose?

A.—For the purpose of dumping it against the sheeting.

Q.—And it shows the sheeting itself in a slanting, and not perpendicular, position?

A.—Yes.

Q.—Will you file this photograph as D-28?

A.—Yes.

Q.—Here is another photograph of the 16th November, being a view from upstream. You have here the pile of rock on the left?

30 A.—Yes.

Q.—You have first, the piers across the by-pass?

A.—Yes.

Q.—You have the piers above the by-pass, you have the pile of rock, the sheeting and then the toe fill?

A.—Yes. We also have the steel piers or the Stony Gates.

Q.—That means, the steel would have been erected before the winter?

A.—Yes

40 Q.—In other words, all the steel could have been placed before the winter?

A.—Yes.

Q.—Will you file this photograph as exhibit D-29?

A.—Yes.

Q.—The towers are erected?

A.—Yes.

Q.—These photographs I now show you, I am afraid you do not know anything about them, the two photographs of the by-pass jam, looking up above and looking downward from just about the dam. You don't know anything them?

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A.—I do not remember seeing them.

Q.—Do you remember seeing the situation ? You could not identify them yourself ?

A.—No, I would not try to identify them.

10 Q.—You referred to the steel gates, and said they could have been put in before the winter. Are you satisfied as to that ?

A.—The piers were up late in the summer, and once the piers were up, the towers could be put up. The bedded parts that were set into the piers could be set. In fact, some of them were set, and then, the bridge over the towers could also be erected and the gates could be assembled. The only thing left to do would be to set the sill beams for the four gates in the four spillways through which the water was passing.

20 Q.—That was the only part of the steel to be placed that was delayed by unwatering ?

A.—Yes.

Q.—That did not represent the whole work ?

A.—No.

Mr. St. Laurent:—We are not claiming for the whole of the steel work. We are only claiming for a small portion of the steel work.

30 By Mr. Geoffrion:—Mr. St. Laurent tells me that they claim only for a small amount of steel, the placing of 400 tons ?

Witness:—The bulk of the steel was in the Stony Gates. The structural steel was in the Stony Gates.

By Mr. Geoffrion:—

40 Q.—Then, would there have to be any unwatering in order to do that ?

A.—No.

Q.—Was there any structural steel to be placed in the dam in that part of the river itself ?

A.—No. That was cast iron lining. There was a cast iron lining in each sluice gate in the bed of the river. That could not be put in until the concrete was started.

Q.—The claim was, you say, as to steel. If there is any claim in that respect, it will be in respect to cast iron, would it ?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—And the figures would have to be considered ? Have you considered the figures of cast iron ?

A.—No, I have not considered them.

Q.—Nor the prices ?

10

A.—No.

Q.—It is not the same thing as steel ?

A.—No, it is not the same thing as steel.

Q.—A charge of seven dollars a ton extra for having the steel in winter, rather than in the summer is made. Are you able to express an opinion as to that ?

A.—It might be reasonable.

Q.—There is a claim in respect of rock excavation. It has been said that orders were given to take up the rock by two flat layers, something like that. Is that the way it was taken out ?

20

A.—No. It was taken out in layers of various thickness. There may be layers of two feet. There may have been three or four feet, depending on how the rock looked.

Q.—That was a matter of solidity or soundness of the dam ?

A.—It depended on the nature of the rock.

Q.—What was involved, was the solidity of the dam ?

A.—Yes.

Q.—That was a matter where the supreme judge was the Quebec Streams Commission's Engineer ?

30

A.—Yes.

Q.—Did they direct the process ?

A.—Yes.

Q.—Were their orders different or unusual from the point of view of ordinary practice, in your experience ?

A.—No.

Q.—We have had suggestions by some witnesses that there were five feet or four feet, and ten feet or even twenty feet. What would you say about that depth ?

A.—I would not like to see ten feet taken out at one time.

40

Q.—Why ?

A.—Because it would shake the whole foundation.

Q.—A claim is made in respect of the cofferdam at the lower end of the by-pass. You filed a photograph of that. Do you know when that was started ?

A.—Early in April.

Q.—An endeavour has been made to connect it with a seam of bad rock that was discovered at a certain time, and which the contractor was ordered to excavate to a considerable depth. When was that seam discovered ?

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

A.—The seam was discovered on the 17th May. Early in April, when we found that the rock in the Stony Gate section was not very sound, we decided to drive some grout holes on the line of dam, for the purpose of grouting the seams in the ledge, and  
10 the extra order was given for that, I think, on the 8th April.

Q.—That did not involve any deep excavation?

A.—No. It was to cut down excavation, and on the 17th May, while one of these grout holes was being driven, it uncovered that seam. Then, the Quebec Streams Commission's Engineers decided to open up the hole to see how deep the seam went, and what kind of rock there was.

Q.—Then, the building of the cofferdam at the lower end of the by-pass had nothing to do with that?

A.—No.

20 Q.—In view of the condition of the work in the month of April, was that cofferdam needed irrespective of the discovery of that seam?

A.—Yes.

Q.—Why?

A.—Because the water was rising below the island, below the line of the dam, and it would have backed up the by-pass and flooded their works.

Q.—What were the works that were going on then?

30 A.—They were still excavating. They were preparing the bed of the rock in the Stony Gate section for concrete.

Q.—What was the condition of the concrete in the by-pass at that time?

A.—When?

Q.—When they started that cofferdam?

A.—There was no concrete.

Q.—The concrete had all to be done?

A.—It was all to be done. The plant was not ready for the concrete.

40 Q.—Did they need that cofferdam to prepare the concrete?

A.—Well, they needed it to protect the lower section of the dam.

Q.—Up to what elevation?

A.—Up to about elevation 100.

Q.—And they were still far from that elevation?

A.—They had none at all.

Q.—Were they ready to start?

A.—No, they were not ready to start.

Q.—There is a claim in respect of trimming the rock pile towards the end. What was the purpose of trimming those rock piles?



*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

A.—So as to restore the ground as near to its original condition as it was before the work started.

Q.—You wanted to have it trimmed to what level?

A.—We wanted it trimmed below elevation 130.

10 Q.—Why?

A.—So as to keep it below the water level of the pond above the dam.

Q.—I think there is a reference to a conversation you had with Mr. Bishop in that respect?

A.—It was Mr. Lindskog.

Q.—Did you tell that to them early?

A.—That was either in January or February 1929 I told them that. I wrote them.

20 Mr. St. Laurent:—I object to any verbal evidence. If there is a letter it should be produced.

By Mr. St. Laurent:—

Q.—Have you the letter?

A.—The letter has been filed. I am referring to the letter that followed the conversation.

By Mr. Geoffrion:—

30

Q.—I am told that in July 1929 you wrote requiring them to lower certain rock piles. Mr. Lindskog referred to a conversation so I was thinking of the conversation?

A.—I am wrong as to that. It was on March 14th I had a conversation with Mr. Lindskog.

Q.—Your letter apparently was on July 7th. I show you exhibit P-50, letter of the 7th of July from you to Mr. Bishop reading:

40

“You have been instructed verbally several times since the beginning of this work, not to deposit the waste rock and earth excavated from the site of the dam beyond certain areas and heights definitely marked out by Mr. J.C. McIntosh and the engineers of the Quebec Streams Commission. You now have a pile of loose rock opposite the non-spilling dam higher than the finished dam, which will have to be lowered. It had been understood last winter that you were not to go above elevation 130 in this area.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

10 We note that you are depositing the excavated material from the by-pass in front of the Stoney Gates on the north shore, and that the height of this pile is considerably higher than we desire. We therefore wish to call your attention to this and point out that these piles of material will have to be lowered to below the future water level before the work is completed”.

This is a letter you wrote on July 7th to W.I. Bishop, Cedar Rapids. It would be Mr. Lindskog who would get it?

A.—Yes.

20 Q.—You stated you had instructed him verbally before, is that right?

A.—I had discussed it with him several times.

Q.—You referred to the understanding that he was to stay below 130?

A.—Yes.

Q.—And you want him to stay below water level?

A.—Yes.

30 Q.—Was there any mention, or did you discuss with him at any time, that this agreement of his was contingent on there being no more rock excavation than the amounts mentioned in the plan.

Mr. St. Laurent:—I object to the form of the question.

The Court reserves the objection.

A.—No.

By Mr. Geoffrion:—

40 Q.—A claim is made for excavation in the bed of the river as rock that was excavated in the winter?

A.—Yes.

Q.—It was frozen?

A.—Yes.

Q.—Was it rock?

A.—No.

Q.—Now, a claim I want to examine you upon, is the cement for the apron in the by-pass. Who required that apron?

A.—The Quebec Streams Commission.

*DANIEL W. O'SHEA (for Defendant) Examination in chief.*

Q.—When was it first discussed?

A.—It was discussed with Mr. Bishop on the 12th March 1930.

Q.—By whom? Who was there?

10 A.—Mr. Bishop was there, Mr. Lindskog, Mr. McIntosh and I, as I remember.

Q.—Was that on order of Mr. Dubreuil of the Quebec Streams Commission?

A.—Yes.

Q.—Had you received the order then?

A.—I had been told verbally by Mr. Dubreuil that he wanted the apron.

Q.—That was the 12th of March?

A.—Yes.

20 Q.—How were the winter roads up there during March?

A.—The roads were still good.

Q.—Do you know, as a matter of fact, or can you testify as to whether when the spring broke up, the winter roads disappeared, and the formal order was given, there was enough cement on hand to finish the work?

A.—The Apron was poured during the month of March. At the end of March the contractor had 335 barrels of cement on hand; in April, 301 yards were poured, which required 500 barrels anyway, so he did not have enough for his own work.

30 Q.—Was that apart from the Apron?

A.—Apart from the Apron.

Q.—The suggestion is made it was under calculated because he had taken some of the cement for the Apron?

Mr. St. Laurent:—That is what the witness says.

Witness:—But there was not enough cement to finish his own work in any case.

40 By Mr. Geoffrion:—

Q.—How is that? Give the figures. You do not answer my question. You say the Apron may require a thousand yards?

A.—The Apron required 245 yards.

Q.—245 yards, and 301.

A.—And 301 in April.

Q.—It is for you to answer. You know what I am asking. It is either yes or no. Your answer is unintelligible. I want to

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

know whether there was, independent of the apron, enough cement : assuming the order had not been given, would he have had enough cement to have gone on with his work.

A.—No, there was not enough cement.

10 Q.—Give the figures then. Your figures so far show nothing. If you don't know, say so, or check it up?

A.—I would have to check it up.

Q.—Check it up then.

Mr. Geoffrion:—I would ask my learned friends if they have the original of the letter from Mr. O'Shea of the 9th of March 1930 to the Bishop Company, because the answer to it has been filed.

20 Mr. St. Laurent:—We have not the original here. It was probably attached to the estimate.

Mr. Geoffrion:—There is no controversy about it at all. My learned friends do not object and I will file a copy of the letter in connection with the pouring of concrete without plums instead of concrete with plums as exhibit D-30.

By Mr. Geoffrion:—

30 Q.—Is that a copy of the letter you wrote?

A.—Yes, dated March 30th.

Q.—Will you please check up and satisfy us, whether or not, the cement on hand in the spring of 1930 was sufficient, or insufficient, to carry out the summer programme by the Bishop Company, assuming no order had been received in April, for completing the by-pass. Will you let us have that information tomorrow?

A.—Yes.

40 Cross-examined by Mr. St. Laurent, K. C., of Counsel for Plaintiff:—

Q.—With respect to this last matter, the letter D-30, I presume that was at a time when you made the change in the monthly estimates, and that it brought about this letter from Mr. Bishop, that there had been, \$45,000.00 deducted, against which he protested?

A.—Yes sir.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—Up to that time, the yardage of concrete with plums had been calculated at the figure mentioned in the contract, and from that time onward you made a new calculation, allowing only \$1.76 over the price of the concrete with plums?

10 A.—Yes.

Q.—As far as you know, there is no dispute about the actual figures?

A.—No, I do not know of any.

Q.—The dispute is about the price that will be paid for the quantity of concrete for plums in excess of the quantity in the estimate?

A.—Yes.

Q.—As you understand it our claim is, that the whole of the amount of concrete without plums which exceeds the estimated  
20 quantity, shall be paid at the price mentioned in the contract, while the other view is that a part of that extra quantity of concrete without plums is to be paid for only at \$1.76, because it replaced concrete that was estimated to be poured with plums?

A.—Yes.

Q.—Do you remember when the order was given for this concrete apron at the end of the by-pass?

A.—There was no order given for concrete. There was an extra order given for building the cofferdam required for the apron.

30 Q.—There was no order for building the apron itself?

A.—The order covered time required to protect the area where the apron was going.

Q.—Can you tell me when the contractor was told to go ahead and put in that apron?

A.—The order was given on the 13th March.

Q.—And it was done during the month of March?

A.—Yes.

Q.—And after it was done, from your information, the contractor had 335 barrels of cement left?

40 A.—At the end of the month.

Q.—And he had used up enough cement to pour 245 yards of concrete?

A.—Yes.

Q.—That would be roughly something like 367 barrels of cement?

A.—Yes.

Q.—In addition to his 335 barrels which he had at the end of the month, if he had not had the concrete apron to build, he would have had about 367 barrels more?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—Or about 700 barrels in all?

A.—Yes.

Q.—Are you prepared to say whether that would have been enough to finish the work that still remained to be done?

10 A.—Not until I go over my notes.

Q.—You are not prepared to say one way or the other at the present time, whether that would have been enough?

A.—No.

Q.—With respect to this excavation from the bed of the river, do you not agree that there was none such estimated in the contract. You said it was frozen material, and it was not rock. Is it not a fact, that in the estimate, there was neither rock nor earth provided for from the bed of the river?

A.—The list of quantities showed no earth excavation.

20 Q.—From the bed of the river?

A.—Yes.

Q.—The only excavation that the list of quantities showed, was such rock excavation as was expected to be required to anchor the dam?

A.—Yes.

Q.—As far as you know, there was nothing in the contract or specification specifying an elevation to which the spoil piles might go?

A.—No.

30 Q.—It was a matter of the general appearance of the finished job, what you had in view, requesting that this be kept, down to 130?

A.—Yes.

Q.—The cofferdam at the lower end of the by-pass became necessary, did it not, because it became apparent at the beginning of April, that the concreting would not be up to a sufficient elevation to do without during the high water period?

A.—Yes.

40 Q.—The concreting could not be started until the foundation was prepared and accepted by the Quebec Streams Commission. That is so, is it not?

A.—In the by-pass?

Q.—In the by-pass section?

A.—Yes.

Q.—Is it not a fact, that early in April, the foundation revealed a condition that it was attempted to deal with by core drilling and grouting?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—And that is something which the estimated quantities did not provide for?

A.—You mean core drilling?

Q.—Core drilling and grouting?

10 A.—But it was provided for.

Q.—It was provided that it might be ordered and done as an extra, but there was no quantity in the list of quantities?

A.—No.

Q.—This was ordered and started, and while it was being done it showed up a nasty seam, did it not?

A.—Yes.

Q.—And the Quebec Streams Commission ordered, that instead of dealing with that nasty seam by grouting it be excavated?

20 A.—Yes.

Q.—And that led to what some of the witnesses have called the cut-off trench?

A.—Yes.

Q.—And all that took five or six weeks, did it not, this grouting operation and excavation and the cut-off trench?

A.—The cut-off trench proper was not started until the seam revealed it.

30 Q.—But the cut-off trench was the second stage of the remedial works attempted, to deal with the unsatisfactory condition of the rock at that place?

A.—But there was nothing to prevent the contractor from pouring concrete on either side as soon as the rock was excavated.

Q.—But he could not pour concrete at this place where the core drilling and concreting was going on?

A.—It was not done until some time after the concrete was poured.

40 Q.—Could he, or could he not go ahead and pour his concrete on that foundation, say, on the 8th April?

A.—He may have poured some.

Q.—Could he have poured it across the by-pass so as to get out of the by-pass and not need a cofferdam?

A.—No.

Q.—In order to have a cofferdam he had to go right across up to an elevation of around 100 with his concreting, did he not?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—And it became apparent early in April that that could not be done before the high water?

A.—His plant was not ready.

Q.—When were you there in April?

10 A.—I was there on the 7th.

Q.—Did you stay over for the 8th?

A.—No, I was not there on the 8th. I was there on the 7th.

Q.—When you speak of the order having been given on the 8th to core drill for the purpose of grouting, that was from information you got from Mr. McIntosh?

A.—No, it was from my visit of the 7th. I wrote the order in High Falls.

Q.—Was that your order, or was it an order of the Quebec Streams Commission?

20 A.—It was an extra work order of my own.

Q.—But was it because of instructions you had received from the Quebec Streams Commission?

A.—No, because I decided myself. The Quebec Streams Commission had not yet arrived permanently on the site.

Q.—Mr. Dubreuil was not residing on the site at that time?

A.—He did not arrive until a few days later. He had been coming occasionally up to that time.

Q.—Coming from Montreal?

A.—Yes.

30 Q.—Then, it was as a result of your visit of the 7th, and from what you saw of the rock on the 7th, that you made this order?

A.—Yes.

Q.—When had you been there before.

A.—On March 28th.

Q.—Had you gone to that site on March 28th?

A.—Yes.

Q.—You had?

A.—Yes.

40 Q.—Can you say, either from memory, or from your notes if Mr. Dubreuil was there on the 28th?

I gather that he was not there on the 7th of April?

A.—No, he was not there.

Q.—On March 28th, did you happen to meet him there?

A.—I have no notes of meeting Mr. Dubreuil there on that day.



*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—Have you any recollection of having seen him and discussed this foundation with him, before you gave the order for the core drilling?

A.—Yes, I had discussed it with him on some of his visits.

10 Q.—Can you tell me when, and how?

A.—No, I have no record of it.

Q.—But it was some time before you made the order?

A.—Yes.

Q.—What would your best recollection be? Within a fortnight from the time you made the order?

A.—We had discussed the advisability of probably putting in grout holes if rock showed signs of becoming quite seamy, and my visit of April 7th made me decide that we had better put those grout holes in ten or twenty foot centers.

20 Q.—You had not discussed that merely theoretically: it was because you had both seen something which made you suspect that that condition might develop?

A.—Yes.

Q.—And would that be, from the best of your recollection, within one, two, or three weeks preceding your order?

A.—It might be. I don't remember enough.

Q.—You do not remember enough to fix it at all?

A.—No.

30 Q.—This is not really the same operation as driving cores for testing purposes, is it?

A.—No.

Q.—It merely means drilling a hole in the rock that is used for pouring fluid concrete?

A.—Yes.

Q.—I understood you to say that the photograph D-29 enabled you to state that all the steel work could have been erected before the winter?

A.—Except the sill beams for the gates.

40 Q.—My information is, that during the month of November 1929, there were erected 42.36 tons of steel. Have you any recollection about that?

A.—I have no recollection of the tonnage.

Q.—Have you any recollection what steel was erected during November 1929 and that might amount to something around forty tons?

A.—It would be those towers.

Q.—Which towers?

A.—The towers which are shown on this photograph D-

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—Is that steel work that is shown above the concrete piers?

A.—Yes.

10 Q.—And the date of the photograph is the 16th November 1929?

A.—Yes.

Q.—Would that look to you anything like forty-two tons of steel work? You would not like to say.

A.—No, I would not like to say.

Q.—Then, my information is that there were .82, or 82/100th of a ton erected in December. Have you any recollection what that was?

A.—It might be some beams in the stop-log section, in the floor of the stop-log section.

20 Q.—Then, 120 tons in January?

A.—That very likely refers to the cast steel lining in the deep gates.

Q.—Is that not something that was retarded until the unwatering was completed?

A.—It could not be done until the concrete was started in the deep gate section.

Q.—And the concrete could not be started in the deep gate section until the unwatering had been successfully completed?

30 A.—No.

Q.—Then, 217.18 tons in February. Would that be something more of the same character?

A.—No. That would be Stoney Gates, I think.

Q.—The gates themselves?

A.—The gates themselves.

Q.—Is it your statement that they could have been erected before winter?

A.—Yes.

Q.—When?

40 A.—This steel shown on D-29 could have been started earlier in the fall, and then the erection of the gates themselves would have followed immediately.

Q.—And 90 tons in March. Have you any idea where that was, or what it was?

A.—It was in Stoney Gates, also.

Q.—In your view, that was also in Stoney Gates?

A.—Yes.

Q.—That would appear, would it not, in the estimates?

A.—In our estimates?

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—It would not appear in your estimates?

A.—No.

Q.—So you would not have any record at all about that.

A.—No, we have no record.

10 Q.—Do you know how much steel and cast iron there was altogether?

A.—No.

Q.—Is it cast iron, or cast steel?

A.—Cast iron.

Q.—What difference is there between D-21 and D-28. I am sure I cannot find any?

A.—There is none, except that the description in one case is written; the other is printed.

20 Q.—The writing on D-28 is exactly the same as to text as the typewriting on D-21?

A.—Yes.

Q.—So we can be satisfied with pondering over one of the two. We need not bother with both?

A.—No.

Q.—On D-26, is not this wooden structure which appears to run downstream from the downstream face of the crib, a flume that was provided there?

A.—Yes.

30 Q.—That was run along the shore?

A.—Yes.

Q.—And for which a downward slope had to be provided?

A.—I don't know about that. I had nothing to do with the construction.

Q.—It was a flume to carry away the water, was it not?

A.—Yes.

Q.—And it had to be placed in such a position that it would carry away the water?

A.—Yes.

40 Q.—That is the photograph you spoke of as showing the broken rock. Is not the broken rock precisely rock that was moved along the bank there for the purpose of allowing that flume to be put in?

A.—There is broken rock there.

Q.—The broken rock is that which has the whiter appearance than the other?

A.—It has more ragged edges. There is some on this side.

Q.—You have not any personal recollection, have you, that would add anything to this?

A.—No.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—So that anyone with a good pair of eyes could look at it?

A.—Yes.

10 Q.—Were you aware of the tenor of the correspondence which had passed between Mr. Lindskog of Maclaren Company with respect to the driving of logs?

A.—I saw some letters.

Q.—You did not at that time see them all. You know what letters have been filed.

A.—I saw the letters that have been filed.

Q.—You saw all the letters that have been filed as exhibits in this case?

A.—Yes.

20 Q.—And you saw them at the time they were being exchanged?

A.—Yes.

Q.—I believe you read from your diary that Mr. Ferguson agreed that the core drills of the actual site of the dam in the river bed would be done, did you not?

A.—I do not remember the exact words.

Q.—If you will just turn up your note there I think you will find it?

30 A.—“It was decided that core drilling on the site of the deep gates would be advantageous and Mr. Ferguson said he would have the owners do this at once”.

Q.—The site of the deep gates is the channel of the river?

A.—Yes.

Q.—Was that core drilling ever done?

A.—Not in that form.

Q.—Well, a core drilling is, as I understand it, the manner in which is described a certain operation. Was the operation that core drilling is applied to, ever performed?

A.—Electrical soundings were taken.

40 Q.—Will you please answer my question. I am making it as plain as possible. Was core drilling ever done there?

A.—No.

Q.—If you wish to say that something else was done, what was the something else?

A.—Electrical soundings.

Q.—Those electrical soundings are a sort of divining rod operation?

A.—You could call them that.

Q.—You filed this morning as exhibit D-10, a plan which

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

you stated was prepared under your instructions by an employee of the James Maclaren Company?

A.—Yes.

10 Q.—And was thus prepared, I presume, at the date it bears, February, 1932, and was revised, and additions made to it in February 1933 : that is correct?

A.—Yes.

Q.—Did you, yourself, do any of the surveying, or take any of the measurements in accordance with which the plan was prepared?

A.—No.

Q.—So that you personally do not vouch for any of those figures which appear on it?

A.—No, I did not take them.

20 Q.—I am not asking you about accuracy. They may be quite all right, but you personally cannot swear to the accuracy of any of the figures?

A.—No.

Q.—The plan purports to indicate by a cross with a circle around it, the points at which elevations of rock, so the plan says, determined by electrical soundings?

A.—Yes.

30 Q.—I take it that that means, as to the conclusions, those who made these electrical soundings arrived, set them down on the plan opposite the cross with a little circle around it?

A.—Yes.

Q.—And the actual elevation at which rock was found when the bed was unwatered is shown by a figure above a cross?

A.—Yes.

Q.—The legend also refers to certain soundings on August 29th 1929. Do you know who made those soundings?

A.—Yes.

Q.—Who was it?

40 A.—Mr. Chagnon of the Quebec Streams Commission, Mr. McIntosh, and I think, Mr. Reiffenstein also.

Q.—The legend also refers to figures over a cross with a circle around both the cross and the figure as denoting the elevation from the survey of 1927 and drawing B-2444?

A.—Yes.

Q.—As a matter of fact, were they not taken from drawing B-2444?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—And whoever took them, assumed that what was on B-2444 was the result of the soundings of 1927?

A.—Yes.

10 Q.—Did you, or anyone by your direction, convey the result of these electrical soundings to the contractor at any time?

A.—I seem to remember sending a copy to Mr. Bishop.

Q.—A copy of what? Not a copy of this plan?

A.—Of drawing B-2444 on which the electrical soundings were shown?

Q.—Have you any note of that, or any correspondence about it?

A.—I will have to look through my correspondence.

Q.—Will you between now and tomorrow morning see if you can make yourself positive on that point?

20 A.—Yes.

Q.—Of course, if I were to ask you any questions about how these supposed electrical soundings compare with actual findings, you would have to read it from this exhibit D-10, would you not?

A.—Yes.

Q.—And anyone who would take the trouble to examine it carefully can make the comparisons as well as you can?

A.—Yes.

Q.—And personally you could not give any first hand knowledge about it?

30 A.—No.

Q.—At that meeting, I understood you to read from your note, that Mr. Ferguson wanted three or four thousand yards more of toe fill above the upstream cofferdam?

A.—He suggested that.

Q.—Will you let me see your diary of that date. Here is something which I do not think you read:

40 “Had another session this morning at High Falls. Bishop intimated that information on drawing B-2444 showing ledge was wrong and that consequently he feels he has done all his contract calls for and should be paid for anymore. Mr. Ferguson refused to decide on this, saying it was a matter to be decided by themselves and that an arbitration was the proper means. Mr. Ferguson was very insistent that the job should not be held up. Bishop ready to throw up but surprised me by being less wild than I expected”.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

You had anticipated that he might be more furious over the condition than he appeared to be?

A.—Yes.

10 Q.—So his contention was, was it not, that this water must be going through a porous bed existing at a place where B-2444 showed ledge?

A.—That was his contention.

Q.—And Mr. Ferguson still held that the water might be coming through the wall that the cofferdam was supposed to represent?

A.—Yes.

20 Q.—And that it would be of advantage to add three or four thousand yards more of toe fill to improve the condition of the wall?

A.—Yes.

Q.—On page 17 of your diary following this note with respect to the core drilling, you say:

30 “Both he (that is Lindskog) and Bishop are worked to such a pitch that they are magnifying their troubles. Bishop denied any suggestion made by H.S.F. sticking to his contention that the leaking is through the bed of the stream. This does not seem possible to Mr. Ferguson as material already dredged seems to be a compact mass of clay, sand, pebbles and small boulders, about a hardpan”.

A.—Yes.

Q.—There is a definition of hardpan which does not get very far away from the one our clients used when they were applying it to the material in the by-pass?

A.—No.

40 And it now being 4.30 p.m. the further testimony of this witness was continued until the next day, Tuesday, the 28th day of February instant at 10.30 a.m.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

DEPOSITION OF DANIEL W. O'SHEA (*continued*)

10 And on this twenty-eighth day of February, in the year of Our Lord, one thousand nine hundred and thirty-three, personally came and appeared Daniel W. O'Shea, and his cross-examination was continued by Mr. St. Laurent, K. C. of Counsel for Plaintiff as follows:—

Q.—Mr. O'Shea, you were to look up your notes with respect to that copy of B-2444 on which the electrical soundings had been shown?

A.—Yes.

Q.—Have you got it here?

20 A.—I have a copy of the letter to W. I. Bishop Limited dated October 31st.

Q.—Have you a drawing itself of B-2444 on which the electrical soundings were shown?

A.—Yes, I have one here.

Q.—May I see it please? Is it the figures that show up more prominently than the others?

A.—Yes, the figures, that show up more prominently. They are identified by a triangle.

30 Q.—I have a note here that were asked if you saw any broken rock fall in the river, and that you answered that you saw some being dumped upstream, in the spring which had been placed from the surface of the island: that is correct?

A.—Yes.

Q.—Did you wish to infer by that that this rock placed from the surface of the island, and which you saw fall into the river upstream, had been then moved down to the dam site?

A.—No. What I meant was, that when the top of the island was placed, some of the rock could not help but fall in the river.

Q.—But you did not mean any more than that?

A.—That is all I meant.

40 Q.—You did not mean us to infer that that was the rock in the cofferdam and constituting the over-burden on the ledge?

A.—Well, it constituted part of the over-burden on the ledge.

Q.—Inside the cofferdam?

A.—Yes.

Q.—How many pieces of broken rock did you see inside the cofferdam?

A.—I did not count them.



*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—Can you give us any approximate idea of how many you noticed there?

A.—No, I cannot.

10 Q.—Were they imbedded, or were they on the top of the other material?

A.—Those I saw were on top of the other material.

Q.—And some of them would be pieces of rock that had slipped in there when loading the cribs?

A.—Right next to the cribs, yes.

Q.—And could some of the others be pieces that had slipped in when preparing this place where the flume was put?

A.—I did not see the flume being built.

20 Q.—But you saw this photograph which shows pieces of rock beside it?

A.—Yes.

Q.—Speaking of the pumps, you had a note, I believe, in your diary, on the 9th October, that two of the eight inch pumps were being set up on the lower cofferdam?

A.—Yes.

Q.—But that was for use in the same basin, was it not?

A.—Yes.

30 Q.—So whether they were at one point or another, was just a matter of convenience?

A.—Yes.

Q.—They were pumping out of the same basin?

A.—Yes.

Q.—And on the 7th you had a note: "Three pumps down, one being transferred to new location". The same answer would apply to that?

A.—Yes.

Q.—The new location was merely for the purpose of convenience of dumping out of the same basin?

A.—Yes.

40 Q.—And in one of these notes you had a remark about the shaft of the pump being broken?

A.—Bend, I think.

Q.—Is not that something which could be brought about by forcing the pump?

A.—It would most likely be brought about by poor alignment between the pump and the engine driving it.

Q.—Could not that poor alignment even be the result of overworking the pump, forcing it?

A.—No, I do not think so.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—You said that the engines and boilers could be overstrained, but not the pumps. Why not?

A.—Because it is a difficult pump. It can only give a certain volume, a certain discharge at the velocity for which it is  
10 designed.

Q.—If it is run at a higher speed than that for which it is designed, is that not something which would wear it out?

A.—It might wear the pump out, yes, but if it wears out the pump you will get less flow out of it.

Q.—But pumps are like any other bit of machinery, they are immoveable parts, and if they are used at their utmost capacity, it takes more out of them than if they are handled more gently, does it not?

A.—Yes.

20 Q.—I believe you stated that the shores on one side consisted of a rock cliff, and on the other side consisted of ledge sloping towards the stream?

A.—Yes.

Q.—That is a condition which might very well indicate a continuous ledge under the bed of the river?

A.—Yes.

Q.—And it was also, was it not, a rapid stretch of river right there?

A.—Yes.

30 Q.—And is that also something which may be a little bit misleading, and induce one to believe there should not be anything over the ledge, that the rush of the water would be such that there would not be anything remaining over the ledge?

A.—If the bed of the river were uniform, that is, if there were no pockets or cavities in the ledge, you would not expect any over-burden to remain on it.

40 Q.—Is it a fact that when you first saw that, it gave you the impression that there was not likely to be any over-burden there?

A.—Or very little.

Q.—That was the first impression you got from the surface appearances?

A.—Yes.

Q.—Did you say you did not know about logs having become entangled or nested in the cribs?

A.—I don't remember exactly.

Q.—You said substantially that, did you not?

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

A.—I did not say they entangled in between the logs and the cribs.

Q.—In the intersticies between the logs and the cribs?

A.—Yes.

10 Q.—And you were there on the occasions you have stated, and probably on some other occasions as well, but you were residing at High Falls, were you not?

A.—Yes.

Q.—You were not there while any attempts were made, if any were made, to pull out logs from before these cribs?

A.—I saw them pull out that jam of logs that followed the basin of your crib No. 3.

Q.—You saw some of the work being done?

A.—Yes.

20 Q.—You did not remain there during the whole time they were attempting to do that?

A.—Oh no.

Q.—If a log still remained nested or entangled in the intersticies of those cribs, I suppose you would agree that that would prevent the sheeting being applied directly to the base of the cribs?

A.—Yes.

Q.—And if that condition existed, would it, or would it not in your opinion, make it unsafe for a diver to go down there?

30 A.—I do not think so.

Q.—You do not think that in that current if logs were entangled in those cribs, the air line and life line, would be apt to be swept into them, and endanger the safety of the diver?

A.—Not if the diver goes down right against the space of the crib and feels his way down.

Q.—But, if there are logs there, that is something which he could not do?

A.—Well, the surface logs would be removed first.

40 Q.—If there were logs right down to the bottom nested into the intersticies of these cribs, would that not, because of the current and suction there, make a dangerous situation for the diver?

A.—Not dangerous enough to not try sending him down.

Q.—Did you not say that the diver could work behind the sheathing?

A.—Yes.

Q.—I presume that what you meant was, that a certain

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

amount of sheathing would be put down, and then, that he would be upstream against that sheathing?

A.—Yes.

10 Q.—And would not venture down beyond the portion that the sheathing covered?

A.—Yes.

Q.—You did not mean that he would get between the sheathing and the crib?

A.—Oh no.

By Mr. Geoffrion:—

Q.—You mean, behind the progress of the sheathing?

20 A.—Yes.

By Mr. St. Laurent:—

Q.—But all that would depend on whether there were logs emmeshed in the interstices, and how many there were, and how bad a tangle it was?

A.—You mean over the sheathing?

Q.—Yes.

30 A.—Yes, but as that decreased with the sheathing he would run into these obstructions, those logs. He would find them.

Q.—But your first suggestion was, I thought, that before putting any sheathing down at all, a diver would go down and ascertain what the bottom was like, so as to make the sheathing fit?

40 A.—Oh, not quite. I said they would start from the shore, put in their sheathing, and place one sheet on at a time. The diver would go down and the planking would be dropped down; then, he would measure the bottom of the planking against the bed of the river and would mark it with chalk, and it would be brought up and cut to fit the bottom. Then, it would be sent back, and he would place it in position and nail it to the cribs.

Q.—This diver would work in a diving suit?

A.—Oh yes.

Q.—Which would require a life line and an air line?

A.—Yes.

Q.—Of course, all this must depend upon your being able to get sheathing down against the face of the crib?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—I believe I understood you to say that the worst leaks were apparently towards the north side of the stream?

A.—Yes.

Q.—And that there was a dump of excavated material which was porous, and against which water eventually was raised?

A.—Yes.

Q.—Am I to infer from that, that you intended to convey that this dump of porous material ultimately became a part of the cofferdam?

A.—It became part of the bed of the stream.

Q.—But not relied upon to hold back the water?

A.—It extended right to the cofferdam, right to the sheeting, and some of it was taken from that pile further up and dumped against the sheeting.

Q.—Did you see that being done?

A.—I do not remember exactly whether I saw it being done, but I know it was done.

Q.—Of course, you know, because of the faith you put upon the reports that were made to you, but those who made them will have to give their own evidence. You do not remember anything about that?

A.—No.

Q.—But this pump did not become at any time, did it, a part of what was holding back the water?

A.—Do you mean a part of the cofferdam?

Q.—Yes.

A.—No.

Q.—So I presume that the only inference that can be taken from your statement that it was porous material, would affect such part of it as was, according to reports used in making toe fill?

A.—Yes.

Q.—I have a note here with respect to the quality of the toe fill on the north side : it was mostly broken rock from the spoil pile, and the rest was good?

A.—Yes.

Q.—That would also be from information you obtained?

A.—I saw the other toe fill.

Q.—You saw the one that was good?

A.—Yes.

Q.—But you have no personal evidence to give as to that which, in your examination in chief, was stated to consist mostly of broken rock from the spoil pile?

A.—No.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—May I see your notes in your diary of July 22nd, July 24th and August 3rd, 1929?

A.—Yes (witness exhibits diary).

10 Q.—On the 18th there is some note about the width of the by-pass, and there was some examination in chief about that, that at one time during the summer while passing, the water was, I understand, at the narrowest point about thirty-five feet?

A.—Yes.

Q.—And was afterwards, before the high waters of the autumn, widened?

A.—Yes.

Q.—But after the cofferdam cribs were all in, and this sheathing placed and toe fill put in, is it not a fact that the by-pass was passing practically the whole volume of the river?

20 A.—It was.

Q.—So the only effect of the width might be some variation in the head accumulated in the upstream cofferdam?

A.—And in the possible flow of the river.

Q.—The river was flowing through the by-pass?

A.—Our reason for wanting a width of 75 feet at the bottom was, to take care of the fairly high flood.

Q.—But it was widened, was it not, before the flood waters of the autumn?

A.—Yes.

30 Q.—During the summer time the only effect of its being at 35 instead of possibly 75 feet wide, might be to increase the head above the by-pass?

A.—Yes.

Q.—But at that time although the space inside the two cofferdams was full, there was no substantial quantity flowing out of the cofferdam downstream?

A.—Only the leakage through the cribs.

40 Q.—I believe there was a note on the 22nd February about a threat of Mr. Bishop's to stop the work if you persisted in making only two classifications, one earth and one rock. Have you that note there?

A.—Yes.

Q.—Was there not some note also about your stating that you would have Mr Ferguson come up?

A.—Yes.

Q.—Did he come?

A.—Mr. Ferguson came.

Q.—Do you remember when?

A.—On the 3rd March.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—And did you accompany him to Cedars?

A.—Yes.

Q.—And looked over the state of the job at that time?

A.—Yes.

10 Q.—That would be a little more than two weeks then before the date of this letter of March 22nd, which Mr. Ferguson wrote, and which has been filed as exhibit D-1?

A.—Yes.

Q.—Were there any other visits made by Mr. Ferguson to the works while they were in progress?

A.—Mr. Ferguson was there in July.

Q.—July of what year?

A.—1929.

Q.—Have you the date?

20 A.—July 25th.

Q.—That would be three days after the date we fixed for this log jamming?

A.—Your crib No. 3?

Q.—Yes, crib No. 3.

A.—Yes.

Q.—Then, was he there on any other occasion?

A.—Yes, he was there October 1st.

Q.—And is that all?

A.—Yes.

30 Q.—March 3rd, July 25th and October 1st, 1929?

A.—Yes.

Q.—Did you state that no dynamite had been used in this material, which we claim as hardpan, until towards the end of December?

A.—I did not see any drilling being done for dynamiting the material in the by-pass until the end of December.

Q.—You did not see any?

A.—I did not see any.

40 Q.—Do you contend that your visits were frequent enough to enable you to say that there was no dynamiting done until that time?

A.—No.

Q.—Your visits were not frequent enough for that?

A.—No.

Q.—Was dynamite being used on any other part of the job?

A.—They were using dynamite to blow out boulders?

Q.—Was that in the by-pass?

A.—In the by-pass.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—And you do not know whether or not they had used any prior to the end of December?

A.—I have a note in my diary of their having used it before, but I did not see it.

10 Q.—Do you know how early that note occurs?

A.—Yes, on the 17th December I have a note.

Q.—You have not any prior to that?

A.—No.

By Mr. Geoffrion:—

Q.—What is the note?

A.—Using dynamite to loosen up soil.

20 By Mr. St. Laurent:—

Q.—If we have invoices for emergency purchases of dynamite in November from Jack McCabe, your personal knowledge would not enable you to say that it had not been used prior to December 17th?

A.—No.

Q.—You had one, or perhaps more than one, note in your diary with respect to the character of the material for the first fourteen feet down from the surface, in November?

30 A.—Yes.

Q.—Will you look at this cross section which has been filed as P-110. Assume that the solid green line shows the excavation that had been done to the 30th November 1928, and does not the first row show practically the fourteen feet before the occurrence of the dotted line and the hatching which Mr. Reiffenstein explained he had put on there to indicate what we were claiming for as hardpan? Do you not get practically the fourteen feet?

A.—You do from 100 east down.

40 Mr. Geoffrion:—Down the river, but up the plan.

By Mr. St. Laurent:—

Q.—It shows something like fourteen feet?

A.—Yes.

Q.—For the five first cross sections, that is, for the November excavation?

A.—Your November excavation, as I understand it, is the full line.



*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—But for the first five during the November excavation there is one where, for November excavation, the one at the foot of the first column where you get at the deepest point, about fourteen feet of the material that is not claimed for as hardpan,  
10 and you get some portion below the dotted green line?

A.—Yes.

Q.—Have you your diary of November 10th there? I made a note that you had a statement that the orange peel was good in the dry stuff and useless in the wet material. May I see that note? Why was this orange peel ineffective in that wet material?

A.—It did not seem to grab the material.

Q.—Is it not a fact that there seemed to be a soupy layer of stuff over something that the orange peel did not enter  
20 into?

A.—What do you mean by soupy?

Q.—That the orange peel had stirred up a muddy substance that flowed rather freely, and that it did not pick up, and that it would not go down into what was under this muddy stuff?

A.—It was not going down very easily into that stuff.

Q.—It was not going down below this soft stuff that it did not remove, because it was diluted?

A.—Yes.

Q.—Was that not water that had flowed into the hole from  
30 the surface?

A.—It was ground water.

By Mr. Forsyth:—

Q.—Surface water?

A.—No. Surface water and ground water are different.

Q.—What do you mean by ground water?

A.—The water that saturates the soil below a certain dis-  
40 tance from the surface.

By Mr. St. Laurent:—

Q.—What investigation did you make to determine it was that water, and not water that had flowed in from the top after the hole had been opened up?

A.—You could see it coming through the soil.

Q.—Coming through the top soil?

A.—No, the walls of the cut.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—Below this layer of the material you describe as the sand and loam?

A.—Oh, not between. I do not remember the distance below the surface that this water began.

10 Q.—Have you any other recollection than a recollection of the fact that when you were there on this date of November 16th, there was water in the bottom of the hole?

A.—Yes, there was water in the bottom of the hole.

Q.—Have you any other recollection than that?

A.—No.

Q.—Will you look at your note for the 11th of December. Did I understand you to say there was a leaf broken, and that it was too light for this kind of work?

A.—Yes.

20 Q.—Just what is the note with regard to that?

A.—(Reading) “Points of peel have been replaced, but they broke a leaf a few days ago, but spare leaves are on hand for a lighter peel and the holes for the pin have to be reamed”.

Q.—Am I to take from that that the spare leaves on hand were lighter than those that were originally on the machine?

A.—Yes.

Q.—What was the color generally of this first layer which you describe as sand and loam?

A.—Brownish.

30 Q.—Was there any difference between the color of the strata below it?

A.—It was darker as the excavation carried down.

Q.—Was there any point where it contrasted?

A.—No, I do not remember that.

Q.—You do not remember that there was any point where is contrasted?

A.—No.

Q.—And it remained brown right down to the bottom of the by-pass?

40 A.—Yes, as I remember it.

Q.—You noted somewhere, and expressed in your evidence, the opinion that there was some of this material which could have been more conveniently handled with a steam shovel?

A.—Yes.

Q.—And that you noted that you thought this layer was shallow, and that softer material would be found under it?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—Did you make any estimate of what yardage there might be in this harder material for which a steam shovel would have been more convenient in your opinion?

A.—No, I never made an estimate.

10 Q.—From the note you had there, is it not a fact that you thought it would be a relatively small quantity?

A.—Yes.

Q.—Did you make any estimate as to what it would have cost to bring the steam shovel in and take it out again?

A.—No, I did not.

Q.—You said that another contractor had brought a steam shovel in the following winter. Is it not a fact that the bridges had to be reinforced to get it through?

A.—I do not recollect that.

20 Q.—Do you know whether or not, in the autumn of 1928, the bridges would have been sufficient to allow a steam shovel to be brought in?

A.—Some bridges would have had to be reinforced.

Q.—Do you know what yardage the other contractor had to handle with the steam shovel that he brought in?

A.—No, but I could get it.

Q.—It was a substantial yardage, was it not?

A.—Substantial.

Q.—Give us an approximate idea?

30 A.—I would not like to express an opinion.

Q.—In the thousands of yards?

A.—Yes, in the thousands.

Q.—Would it be at least one hundred thousand yards?

A.—I do not want to express any opinion, because that contractor did a lot of excavation by scrapers also. The total amount removed was considerable.

Q.—You would not like to say whether or not the minimum would be one hundred thousand yards?

A.—No.

40 Q.—All you can say is, it was a large quantity?

A.—Yes.

Q.—Will you show me your note of the 12th November?

A.—Is that the note which contains the opinion that you think this layer will be shallow?

A.—Yes.

Q.—You were there on that day?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—And you went over the job and you saw material which the peel cannot penetrate?

A.—Yes.

10 Q.—And you follow that with the note, “Our test pits showed no evidence of hardpan”.

A.—Yes.

Q.—I presume I am correct in inferring from that, that what you saw that day was something different from what you had seen in your test pits?

A.—Yes, what I saw that day.

Q.—But your opinion was that it might be a shallow layer?

A.—Yes.

20 Q.—If I understood you correctly, you said that when you went to Cedars with Mr. Bishop and Major McEwen, this was on the 20th July 1928, the test pits had been refilled?

A.—Yes.

Q.—I presume they had been refilled much in the same way I have proceeded in my cross-examination, the first stuff out was the last stuff put back in the hole?

A.—Very likely.

Q.—So that what would be on the heaped up surface would be the material coming from the upper layers?

30 A.—Well, it depends very much how the pits were filled. The ground was heaped on four sides of it.

Q.—And then it was shovelled back into the hole?

A.—If they started shovelling from two sides, the other two sides would show material nearest the bottom.

Q.—Have you any personal recollection of how they proceeded?

A.—No, I have no recollection.

40 Q.—They threw it up in heaps, and then threw it back and if proceeded in the same way to put it back as they had taken out the stuff, what came from the bottom would go to the bottom?

Mr. Geoffrion:—You yourself, Mr. St. Laurent, suggested the contrary.

By Mr. St. Laurent:—

Q.—Is that not so?

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

By the Court:—

Q.—What would be on the top pile would go in first?

A.—Not all of it.

10

Mr. Geoffrion:—What comes out last goes in first.

By Mr. St. Laurent:—

Q.—You filed this composite plan prepared in February 1932 and February 1933, as exhibit D-10, and while in Court here you put red circles around certain of the elevations shown in the bed of the stream?

A.—Yes.

20

Q.—Will you look at this blue print which I propose to file as P-103, and say if it is a blue print of the same plan?

A.—Yes.

Q.—The reason I put this in, is because we have put some yellow figures on P-103, which I wish to refer to and with which I did not want to clutter up your plan D-10. Do these figures in yellow indicate the true depth of the rock below elevation shown on B-2444? This one about thirty feet east of the base of the dam which is surrounded with a red line shows 2.8, does it not?

30

A.—82.2, which is the rock soundings and 83.7. That is 1.5 to me.

Q.—Right beside that, have you not got about where the actual elevation was, 80.9?

A.—Yes, 80.9 here.

Q.—80.9, as compared with 83.7?

A.—Yes, but the distance between those two is quite a bit.

Q.—And the other is 80.9 as compared with 84. something?

40

A.—84.8 does not represent rock. It is a sounding.

Q.—84.8 does not represent rock. 82.2 represents rock?

A.—Yes.

Q.—And 83.7 represents rock?

A.—Represents rock. I have checked them all except that one.

Q.—You have checked them all except the one, 2.8?

A.—Yes.

Q.—The great part of the readings, you have put red circles around, are towards the south side of the channel?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—Was there not a rock saddle extending out from the south shore?

A.—That is the rock that was visible.

10 Q.—That is the rock that was visible before any work was done?

A.—Yes.

Q.—The difference you have checked there are 2.9, 8.2, 6.5 and 2.7?

A.—Yes.

Q.—That is, the differences between the actual finding and the depth shown by an electrical determination?

A.—As shown by the soundings, but in the case of the 8.2, the distance between the Stratton soundings and the rock elevation is larger than in the other case. It is about eight feet.

20 Q.—These are the differences, not between the electrical soundings I am told, but between the elevation shown on B-2444 on the actual finding?

A.—Yes.

Q.—Is it to your knowledge that there was some excavation attempted inside the cofferdam by means of this orange peel?

A.—Yes.

Q.—And that it was abandoned for fear of undermining the cribs?

30 A.—I don't know. I don't remember that.

Q.—You know that it was started, and that it was proceeded with?

A.—Yes, I know that.

Q.—You suggested that it would have been proper after putting cribs in, and anchoring them, to have excavated along the base thereof, if there was any over-burden over the rock?

A.—As part of the operation of placing the sheeting, if there had been a diver.

40 Q.—Would there not have been danger of undermining those cribs by excavating along the front of them?

A.—It is a customary thing to do.

Q.—To excavate several feet down below the base of this cribs?

A.—I have seen it done.

Q.—Where?

A.—At Masson.

Q.—In that kind of material?

A.—Material similar to that, yes.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—And in a current of that degree?

A.—A swifter current.

Q.—Without endangering the cribs?

A.—The cribs stood up.

10 Q.—Of course, to do that, it would have been necessary to have had a clear way along the base of the cribs down to the bottom?

A.—Yes.

Q.—And if there were logs there they would have had to be removed?

A.—Yes.

Q.—And you do not know to what extent efforts were made to remove such logs as were there?

A.—No.

20 Q.—With respect to your notes of August 3rd, 1929, I believe you read this portion:— “The closing section of the coffer is anchored about a foot behind the line of the coffer and they were trying to lift it, and loosened it today”. You explained that apparently that coffer in coming down had grounded on something, and that they were trying to move it further down?

A.—Yes.

30 Q.—Then, does not the note continue:— “Might have saved time if he had removed four or five courses of cribbing and permitted the crib to float into position loose logs later giving him some trouble”?

A.—Yes.

Q.—The four or five layers of cribbing would be the layers above the surface of the water?

A.—Yes.

Q.—The weight of which, in your opinion, had a tendency to press the crib down?

A.—Yes.

40 Q.—Taking this off might have enabled the crib to float it by itself off the obstruction it had encountered?

A.—Yes.

Q.—Do you remember if you have given us all the dates in July 1929 when you visited the works? We have the 9th, 12th, 16th, 18th, 22nd and 24th?

A.—You have the 25th, have you not, and the 29th?

Q.—Is the 25th of July the date you fixed as being that of the strong language in use by Mr. Lindskog, you answered Mr. Kenny?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

Q.—You have no notes about that in your diary?

A.—No.

Q.—Was it so strong that you did not dare to set it out in writing?

A.—No. I just did not put it down.

10 Q.—It did not appear to you at the time to be of sufficient importance to make a note about it?

A.—No.

Q.—The only other visit in July was the 29th?

A.—Yes.

Q.—Will you read what you have in your diary with respect to the visit of the 29th July?

A.—(Reading)

20 “Drove to Cedars in the afternoon. Excavation in the non-spilling dam has uncovered a crevice between two shoulders of solid rock about twenty-five feet wide. This is a seam of rotten rock about four feet wide running diagonally across the dam section, and the bottom is now at about 100. Due to the location of this pocket and to the height of the ground upstream I do not think it would be unsafe to stop excavation now, and fill whole trench with concrete, but this is up to Dubreuil. Arrange tonight with Dubreuil and Lindskog to clean out all muck. Drill holes but not shoot until Dubreuil examines bottom after it is cleaned. Pouring No. 19 poor. Have about 150 to 200 yards of concrete in sight and then they have to go on the top back cofferdam, looks like hell. Center crib is settling and does not look very promising. Setting up derrick on south shore.”

30

Q.—I presume you still persist in the opinion you formed of the leaks of the cofferdam at that time?

A.—Yes.

40 Q.—And the photographs which have been filed show what your justification was for that statement?

A.—Yes.

Q.—There is a statement that one of the cribs there was settling?

A.—Yes.

Q.—Why was it settling? Can you offer any explanation?

A.—Because it very likely was not resting on a uniform bottom. The bottom of the crib had not been scribed.



*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

By Mr. Geoffrion:—

Q.—What does that mean?

A.—Fitted.

10

By Mr. St. Laurent:—

Q.—Would it not be more apt to be due to the fact that it was resting on something which was itself of insufficient consistency to support it?

A.—I cannot imagine that, no.

Q.—Is it because of what you saw after the unwatering had been completed?

A.—Yes.

20

Q.—If it had not been for what you saw after the unwatering had been completed, it does happen that the crib resting on something soft, might settle, does it not?

A.—I cannot picture anything so soft in the bed of the stream.

Q.—There was a considerable current there, was there not?

A.—Yes.

Q.—Could not the settling be due to the fact that the current was undermining the crib, and washing material away?

30 A.—If the crib had been properly fitted to the bottom there was enough fill in to hold it in place.

Q.—But if that bottom was porous could not the water flow through, and carry some of it away?

A.—Not with a load of rock in it.

By Mr. Forsyth:—

Q.—You mean that the bottom could not scour because there was rock in the crib?

A.—Yes.

40

By Mr. St. Laurent:—

Q.—The fact of there being rock in the crib would prevent the bottom from scouring?

A.—The rock in the crib would hold it down, that is, always assuming your crib fits the bottom. Of course, if the crib does not fit the bottom, you will have scouring.

Q.—And if the bottom is porous and the water is coming through, won't you have scouring no matter what the fit is?

*DANIEL W. O'SHEA (for Defendant) Cross-examination.*

A.—If it were porous, yes.

Q.—The one you referred to in your notes, is the center crib that has on it crib, what No.?

A.—Crib No. 2.

10 Q.—Crib No. 2, and that is shown to have been placed on the 6th of July 1929?

A.—Yes.

Q.—And that is the one which, in your notes of the 29th July, was settling?

A.—Yes.

Q.—That would be just a week after the log jam?

A.—Just about.

Q.—The 29th, and the log jam was the 22nd?

A.—Yes.

20 Q.—Have you a note on the 19th July of a conversation of yourself with Mr. Lindskog as to the amount of concrete he expected to pour monthly? Have you a note there that Mr. Lindskog had stated to you that he would pour six thousand yards of concrete that month?

A.—Yes.

Q.—And that you thought it was impossible?

A.—Yes.

Q.—Why did you think it was impossible?

30 A.—I did not think he would do it with the plant he had.

Q.—You did not think the capacity of the plant was sufficient to do it?

A.—Or the condition of it.

Q.—Do you know that in June 1929 5,900 yards had been poured?

A.—I knew that about that figure had been poured.

Q.—And you did not consider that it could be repeated?

40 A.—No, because there was not enough concrete in sight for one thing.

Q.—Then, it was not because of the insufficiency of the plant?

A.—And there was the condition of the plant also, the break-down of the cable-way.

Q.—What was the condition of the plant different in July from June?

A.—Well, it was breaking oftener probably.

Q.—Well, probably. Now, we do not want probabilities, Mr. O'Shea. You know that you are a witness and you must

*DANIEL W. O'SHEA (for Defendant) Re-examination*

state what is to your personal knowledge. Is it to your personal knowledge that it broke in July?

A.—I would have to go through my notes.

Q.—You have not any recollection of it?

10

A.—No.

Mr. Forsyth:—There is one note in that diary as to its breaking in July.

By Mr. St. Laurent:—

Q.—Have you in your index to your diary anything in respect to the breaking of the plant in July 1929?

A.—No.

20

Q.—Are you able at this time to say why you made that comment that you did not think it was possible?

A.—“Not enough concrete in sight.”

Q.—That is, not enough space prepared to pour concrete, is that it?

A.—Yes.

Q.—When you say in your notes, “Not enough concrete in sight”, not enough of a foundation ready to take concrete?

A.—Yes.

30

Q.—Was that the main reason?

A.—That was the main reason.

Q.—Then, it was a difference of opinion as to how fast the foundation would be got into shape to take the concrete?

A.—Yes.

Re-examined by Mr. Geoffrion, K. C., of Counsel for Defendant:—

40

Q.—I will deal first with the settling of the crib. The current in that river was swift?

A.—Yes.

Q.—It was swift before the works began?

A.—Yes.

Q.—For quite a number of years, I suppose?

A.—Yes.

Q.—How can that fact fit in with the suggestion there might have been soft material there in which a properly shaped crib could have sunk and settled unevenly?

A.—I cannot picture soft material in the bed of the river there.

*DANIEL W. O'SHEA (for Defendant) Re-examination*

Q.—Why?

A.—Because the current would take it away.

10 Q.—It has been suggested to you that if there were logs jammed in the cribs, it would be necessary to remove them, in order to dredge where they were, and you said yes. Well now, assuming there were logs jammed in the crib. I gather that the sheeting was put ahead of those logs higher up than those logs otherwise they could not have been driven?

A.—No.

Q.—Could the dredging have taken place therefore, logs or no logs, at the place where the sheeting was placed?

A.—They could have been carried just a step ahead of the sheeting.

20 Q.—The logs would not be in the way under those conditions — if they were not in the way of the sheeting, they would not have been in the way of the dredging for the sheeting??

A.—No.

Q.—You said there was a ledge of rock on the south side of the river, and you were dealing with exhibit P-103 which has been filed. Where was that ledge of rock?

A.—This rock that was exposed, was bare.

Q.—It was a ledge of rock that was bare?

A.—Yes.

30 Q.—The levels you made you comparison with, in your testimony in chief, the ten levels, were not on that?

A.—They were further into the stream.

Q.—Not in the ledge?

A.—No.

Q.—Mr. St. Laurent suggested they were all on the south side, the place where they appear on the plan?

A.—Yes.

Q.—And we can find out for ourselves?

A.—Yes.

40 P-103, five levels. One of them you said you did not check. You mean, you checked and you do not agree?

A.—I do not agree with their difference.

Q.—You say you did not check. It is not that you did not check; you checked, and you do not agree?

A.—Yes.

Q.—I gather their difference is marked 2.8?

A.—Yes.

Q.—And they got that by choosing...

A.—The Stratton sounding.

*DANIEL W. O'SHEA (for Defendant) Re-examination*

- Q.—And one of their soundings further away from it than another?
- A.—Yes.
- 10 Q.—They did not take the nearest sounding?
- A.—No.
- Q.—If you take the nearest sounding, what would the difference be?
- A.—1.5 feet.
- Q.—But they ignored that one, to make it 2.8 and to take one further away?
- A.—Yes.
- Q.—What is the distance of the nearest sounding?
- A.—Three feet.
- 20 Q.—You say the other four check? You said there was one where the distance was over six feet. Which is it?
- A.—The one where the difference is 8.2.
- Q.—What horizontal distance is there between the two soundings that are being compared?
- A.—Eight feet.
- Q.—Now you have got one of 2.7. What is the distance there? In other words, the difference in level is 2.7?
- A.—The distance is six feet.
- Q.—Then, you have got three there; you have two more. You have one where the difference in level is six feet five?
- 30 A.—Seven feet.
- Q.—And you have got one where the difference in level is 2.9. What is the distance?
- A.—Four feet.
- Q.—Does this, in your opinion, shake very much the inference you draw from you ten comparison?
- A.—No, it does not, because you cannot expect soundings taken from a boat to agree much closer with those final elevations taken when the place had been unwatered.
- 40 Q.—I will ask you to look at exhibit P-101. Mr. St. Laurent has questioned you about confirming with your observation, about a depth of soft material of fourteen feet, and which, in his persuasive manner, he has made you say yes to. I would like you to check it. I think you will find it is not the case if I figure correctly. I gather that each square is two and one half feet?
- A.—Yes.
- Q.—Let us begin by plus 80 east. Take about the middle there. There is hardly 10 feet between the surface of the soil

*DANIEL W. O'SHEA (for Defendant) Re-examination*

and the line marked "Top or hardpan" by the witness who filed that plan?

A.—Yes.

10 By Mr. St. Laurent:—

Q.—What is it?

A.—It is not quite ten feet.

By Mr. Geoffrion:—

Q.—Take 1400 E and take about the middle there. That is a little better?

A.—Twelve feet.

20 Q.—Take 1 plus 20 east?

A.—About ten feet.

Q.—Take 1 plus 40 east?

A.—Ten feet.

Q.—Take 1 plus 60 east?

A.—It runs to the full line.

Mr. St. Laurent:—What we put as the hardpan line is this. Of course, you could find a point where there would be less than a foot.

30

Mr. Geoffrion:—I beg your pardon.

Mr. St. Laurent:—If you take it in the deepest point, what would you get.

By Mr. Geoffrion:—

Q.—Well, we will take them all at the deepest point?

A.—13 feet.

40 Q.—In one you have 13 feet. I have been taking the middle. We will go back to the deepest corner in a minute. Give me the last one and give me the difference?

A.—10½ feet.

Q.—There is none in the 1 plus 80 east?

A.—There is nothing there.

Mr. St. Laurent:—There is nothing claimed, but there is at the maximum depth fourteen feet.

*DANIEL W. O'SHEA (for Defendant) Re-examination*

Mr. Geoffrion:—There is no hardpan claimed.

Mr. St. Laurent:—There is a layer of more than 14 feet which is not claimed to be hardpan. We did not go down deep  
10 enough.

By Mr. Geoffrion:—

Q.—Mr. St. Laurent wants to choose his section. Go back to 0 plus 80 east. Which is the deepest there. Is there any difference there practically? They are about the same? How many feet?

A.—It varies from 9 to 10 feet.

Q.—You took the highest the last time. Measure it any-  
20 way?

A.—Twelve feet.

Q.—The highest point is 12 feet?

A.—Yes.

Q.—Where is the highest spot in 1 plus 20 east?

A.—11 feet.

Q.—And highest spot in 1 plus 40 east?

A.—13 feet.

Q.—And of course, these high spots are not in the same  
cross section. They vary from east to west?

30 A.—Yes.

Q.—And the highest spot, and the last one, 1 plus 60  
east?

A.—11½.

Q.—You observed 14 feet at one spot, did you not?

A.—Yes.

Q.—You don't know at all whether that spot fits in with  
these cross sections?

A.—No, I do not.

40 By Mr. St. Laurent:—

Q.—Did you measure it or estimate it?

A.—I estimated it.

By Mr. Geoffrion:—

Q.—I see in your note of the 12th November, that is, where you stated there was some hard material which you say

*DANIEL W. O'SHEA (for Defendant) Re-examination*

was different from what you find in your test pits, and you thought there was not much of it. "Believe this layer of hard material is shallow". Do you know how deep and how far that layer of hardpan extended, as a matter of fact, from your observations?  
10

A.—No, I do not.

Q.—Did you meet with it elsewhere?

A.—No.

Q.—In the other instance where you saw them excavating you did not see anymore of that material?

A.—Not that kind, no.

Q.—So you do not know whether you are right or wrong in your belief that it was hard material?

A.—I don't know.

20 Q.—And you cannot say how far it extended?

A.—No.

Q.—I want to take you on about the water that you saw in the ground. You say you cannot say from what depth under the surface the water came from under the earth. Could you see it coming from the earth?

A.—You could see it seeping through.

Q.—Could you see it seeping through when you were digging your test pits?

A.—Yes.

30 Q.—Could you see it seeping through when the plaintiff was excavating?

A.—I never examined it enough for that.

Q.—You were questioned by Mr. St. Laurent about your remark that the orange peel did not function well in that ground. Have you that entry in your diary?

A.—Yes, November 10th.

40 Q.—You said, "Orange peel is fairly effective in the dry earth, but about useless in wet earth." Mr. St. Laurent asked you a question which I thought I understood, as suggesting that it removed the wet mud on top, but met hard material under it. What is your answer as to the way it operated on the wet material?

A.—It picked up very little at a time.

Q.—Mr. St. Laurent's suggestion was that it picked up the wet material and left something hard under. Is that what you meant?

A.—No.



*DANIEL W. O'SHEA (for Defendant) Re-examination*

Q.—Will you correctly state what you observed at the time?

A.—Yes.

10 Q.—Could the teeth of the orange peel enter into it where you could not pick it up?

A.—The teeth were worn.

Q.—Did they manage to get into the wet material with any success?

A.—Later on.

Q.—Do you mean when the teeth were replaced?

A.—Yes.

Q.—And when the foreman was replaced?

A.—Yes.

20 Q.—That was in the winter?

A.—Yes.

Mr. St. Laurent:—November 10th.

By Mr. Geoffrion:—

Q.—You say that the orange peel did succeed in excavating the wet material. Was that in winter?

A.—It was in December.

30 Q.—Had the orange peel been repaired then?

A.—Yes.

Q.—Had the foreman replaced?

A.—Yes.

Q.—Was the ground frozen at that time?

A.—It was beginning to freeze

Q.—Were they dynamiting then?

late in December. A.—I have no recollection of seeing dynamite used until

Q.—You said the 17th of December?

40 A.—Yes, but I did not see it done at the time.

Q.—Not for that date?

A.—No.

Q.—Do you know if, previous to the winter, there was any dynamiting for boulders, to break up big boulders?

A.—I did not see any.

Q.—In other words anything about dynamiting boulders, as you mentioned in your examination in chief, would be through reports?

A.—Yes.

*DANIEL W. O'SHEA (for Defendant) Re-examination*

Q.—You said this material was wet?

A.—Yes.

Q.—Once it was frozen, would dynamiting be necessary under any conditions?

10 A.—Yes.

Q.—You were questioned about the effect of the by-pass having been left narrower than contemplated until the next autumn floods. You said that would increase the head in the river?

A.—Yes.

Q.—It would therefore, increase the pressure against the cofferdam?

A.—Yes.

Q.—What would be the effect of the possibility of a log jam in the by-pass?

20 A.—With a narrow channel?

Q.—Yes.

A.—It would increase the possibilities.

Q.—I think you told Mr. St. Laurent and I want to be sure that I understood you. Did I understand you correctly when you said you did not see, yourself, and you only know from records, of the nature of the toe fill on the north side of the river?

A.—Yes.

Q.—You did not see it yourself?

A.—I did not see it being deposited.

30 Q.—You saw the toe fill on the other side of the river and in the middle being deposited?

A.—Yes.

Q.—That was good toe fill?

A.—Yes.

Q.—As regards the pile of broken rock right on the north shore, which was going down to the edge of the river, that was just above the cofferdam?

A.—Yes.

40 Q.—If the water rose would that not operate and fulfil the same function towards the cofferdam as to the toe fill? As regards the cofferdam and the toe fill, would not the water leak into the cofferdam?

A.—It would leak through right to the cofferdam.

Q.—And that was loose rock?

A.—Yes.

By Mr. St. Laurent:—

Q.—But it was material, whether it leaked there or not. It was not there to stop the water, was it?

*DANIEL W. O'SHEA (for Defendant) Re-examination*

A.—It was fulfilling part of the toe fill.

By Mr. Geoffrion:—

10 Q.—If the cofferdam had been perfectly tight — if the sheeting had been perfectly tight and had not needed any toe fill, it would have been material?

A.—Yes.

Q.—But if the sheeting was such that the cofferdam needed toe fill, that was a place where there was no good toe fill?

A.—Yes.

20 Q.—You were questioned as to the danger for a diver going down. Whether the sheeting was placed right against the cribs, or placed as it was, a distance up from the cribs to clear the logs, with braces or supports, would that make any difference to a diver as regards going down in the way you suggested?

A.—It would be just as easy for him to go down in front of those braces as in front of the cribs.

Q.—As long as he followed the sheeting?

A.—As long as he followed the sheeting.

Q.—If the logs were below that sheeting they would not interfere with his going down?

A.—No.

30 Q.—I take it that the first sheeting is in shallow water?

A.—Yes.

Q.—On the shore.

A.—Yes.

Q.—And if you follow that way?

A.—You keep on following until you get into deeper water.

40 Q.—Are you in a position to tell us, or should we apply to men who have been in the log business, whether it would have been easy if it had been wanted, to saw any logs off there that would have been jammed in the cribs. Do you know anything about that?

A.—Sawing them off?

Q.—Or pulling them out?

A.—I don't know very much about it.

Q.—I presume you know as much as the contractors in that respect?

A.—Well, I think so.

Q.—What would you think of it?

A.—I think it could be done.

*DANIEL W. O'SHEA (for Defendant) Re-examination*

Q.—The question would be whether it would be better to pull them out, or to remove the sheeting higher up, is that it ?

10 A.—Yes. I think it would be preferable to remove the logs than to extent the sheeting upstream.

Q.—But as long as the sheeting was made water tight and in the proper place you did not care ?

A.—No.

Q.—You were questioned about broken rock having been seen inside the cofferdam. Do you mean inside the cribs, or between the two cofferdams ?

A.—Between the two cofferdams.

Q.—Where would that come from according to you ?

A.—It would come from the excavation on the island.

20 Q.—Have you had time to look into the figures to find out what you have to say in respect to the question whether there was enough cement at the end of the winter that could have carried the contractor through, if he had not been ordered to make an apron in the by-pass ?

A.—Yes, he would have had enough cement.

By Mr. St. Laurent:—

30 Q.—Will you state what the weight of a barrel of cement is ?  
A.—350 pounds.

By Mr. Geoffrion:—

Q.—I don't know if you have been able to check up the tons of steel that had to be placed in winter on account of the delays in unwatering ?

A.—The four sills beams would have to be placed in winter time. They amount to between one and a half and three tons.

40 Q.—Each ?

A.—All told.

Q.—Is that all ?

A.—That is all.

Q.—Will you look at exhibit P-24, being the contemplated progress schedule of Mr. Bishop had everything gone well, and can you tell me where, according to that plan of his, when he would have made or, in fact, started the concrete in the part of the dam that crosses the by-pass ?

A.—This shows April 15th.

*DANIEL W. O'SHEA (for Defendant) Re-examination*

Q.—Ending in June?

A.—Yes, ending in June.

10 Q.—What have you to say, therefore, as to the necessity of a cofferdam at the lower end of the by-pass in view of that programme?

A.—The cofferdam in the by-pass was needed because at that season the water would have backed into the trench where he was going to place the concrete.

Q.—When was the excavation in the by-pass to finish, according to his plan?

A.—It was to finish on the 1st of January for the downstream, and the upstream was to be done in June.

By the Court:—

20

Q.—And it was in July he finished the cofferdam in the by-pass?

A.—The cofferdam was finished in April.

Mr. Geoffrion:—It was started April 7th.

By the Court:—

30

Q.—They pulled it down?

A.—They pulled it down in June.

Mr. St. Laurent:—We have ascertained there is a mistake there, and they charged to by-pass cofferdam work which was done to complete the excavation of the by-pass above the dam site. It was a mistake in distribution.

By Mr. Geoffrion:—

40

Q.—The cofferdam was started on the 7th of April?

A.—About that time.

Q.—At that time there was no contemplation of excavating that rotten bit of rock. It was now known?

A.—It was not known.

Q.—And the plans of Mr. Bishop contemplated starting his concrete in the second half of April in that by-pass?

A.—Yes.

Q.—You show on this plan D-10 a number of levels in the river. Are they the Stratton levels?

*DANIEL W. O'SHEA (for Defendant) Re-cross-examination.*

A.—The Stratton levels are surrounded by a circle. The other levels, those above the cross, represent elevations of rock as found. Those were taken by M. McIntosh and Mr. Chagnon. Those below the cross represent soundings taken during the  
10 summer of 1929, also by Mr. Chagnon and Mr. McIntosh.

Q.—So these levels are either Mr. Stratton's and the others are Mr. Chagnon's or Mr. McIntosh's?

A.—Yes.

Q.—By whom was the survey of the cribs made?

A.—That was made by Mr. Chagnon.

Q.—And the sheeting?

A.—The sheeting, also by Mr. Chagnon.

Q.—Are there any electrical soundings shown here?

A.—Yes.

20 Q.—Which are they?

A.—They are designated by a cross with a small circle and  
No. 1 etc.

Q.—Was this electrical sounding in that place a success?

A.—No, it was not very very accurate.

Q.—A good deal has been said about core drilling?

A.—Core drilling. Do you mean as to the accuracy?

Q.—As to the accuracy of the information they give, and  
as a means of checking the quantity of rock excavation need-  
ed ?

30 A.—They would have given an indication of the nature of the rock, but they would not have determined the exact amount of excavation required.

Q.—Have you any experience to show that?

A.—We have a case on the National Power Development where we did have core drilling, and we nevertheless had an over-run of two hundred per cent.

Q.—More than in this case?

A.—Yes.

40 Q.—You have been questioned about exhibit D-9 and you referred us to a man by the name of Armstrong?

A.—Mr. Armstrong simply based this from a drawing made by Mr. Chagnon.

Q.—Therefore, that is a Quebec Streams Commission plan?

A.—Yes.

Re-cross-examined by Mr. St. Laurent, K. C., of Counsel for Plaintiff:—

*STANLEY C. STRATTON (for Defendant) Exam. in chief.*

Q.—You have seen this plan, exhibit P-95, which shows the readings of the gauge above the dam site?

A.—Yes.

10 Q.—That shows that the water commenced to rise steadily from the 18th April, and that the high water point was reached on the 9th of May, and that it got back to the 18th of April elevation on the 5th of June?

A.—Yes.

And it now being 12.30 the further testimony of the witness was adjourned until 2.30 P. M.

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20 DEPOSITION OF STANLEY C. STRATTON

A witness examined on behalf of the Defendant.

On this twenty eighth day of February, in the year of Our Lord one thousand nine hundred and thirty three personally came and appeared Stanley C. Stratton, of the City of Minneapolis, in the State of Minnesota, Engineer, aged 42 years, a witness produced and examined on behalf of the Defendant, who, being duly sworn, deposes as follows:

30 Examined by Mr. Ayleu, K. C., of Counsel for Defendant:—

Q.—Are you a graduate of an engineering school?

A.—Yes.

Q.—What school?

A.—Dartmouth College.

Q.—When did you graduate?

A.—In 1914.

40 Q.—Since that time have you been engaged in engineering work?

A.—Yes.

Q.—From whom? have you been working?

A.—Mr. Hardy S. Ferguson.

Q.—Did you enter his employ immediately you graduated?

A.—I went with Mr. Ferguson in 1916, I think.

Q.—Until when?

A.—Until last year.

*STANLEY C. STRATTON (for Defendant) Exam. in chief.*

- Q.—With what organization are you connected now?  
A.—The Minnesota & Ontario Paper Company.  
Q.—Doing engineering work?  
A.—Yes.
- 10 Q.—Will you tell His Lordship if during the time you were in Mr. Ferguson's employ you were engaged on construction work, power and paper plants, and such work?  
A.—Yes, I have been.  
Q.—Will you mention one or two of the construction with which you have been connected?  
A.—Ripogenis Dam, in Maine.  
Q.—What sort of a dam is that?  
A.—A storage dam.
- 20 Q.—What position did you occupy there?  
A.—Assistant to the Resident Engineer.  
Q.—Would you mind mentioning a few others?  
A.—A steampower plant at Lockport, New York. I was Resident Engineer there. Then there was the pulp and paper mills power plant at Kenora, Ontario, for the Backus-Brooks Company.  
Q.—All works carried out under the direction of Mr. Ferguson?  
A.—Yes.
- 30 Q.—I understand that in or about the year 1927 you were sent by Mr. Ferguson to the locality of the Cedar Rapids Dam which was afterwards built?  
A.—Yes.  
Q.—What was the purpose of your visit there?  
A.—To choose a site for the location of the dam.  
Q.—In connection with that work did you take soundings in the bed of the river?  
A.—Yes.
- 40 Q.—Can you tell His Lordship the dates, or the number of days, you devoted to that work?  
A.—I think it was about two and one half days.  
Q.—In what month would that be?  
A.—October.  
Q.—October of what year?  
A.—October, 1927. About the middle of the month.  
Q.—Did you keep records of your investigations in the river bed at that place?  
A.—Yes.



*STANLEY C. STRATTON (for Defendant) Exam. in chief.*

Q.—Have you before you, as you give your evidence, the original notes you made at the time?

A.—Yes.

10 Q.—The plan marked “B-2444” has been produced in this case as part of Plaintiffs’ Exhibit P-2. Will you please look at it, and will you say by whom it was prepared, if you know?

A.—This plan was prepared by me.

Q.—I notice in the lower corner, “Drawn by S. C. S.” Are those your initials?

A.—Yes.

Q.—Was this plan, so prepared by you, drawn in accordance with the soundings and investigations you made at the place?

A.—Yes.

20 Q.—Mr. O’Shea has testified that after this plan was prepared he extended it and added some information to it. If I am correctly instructed, the plan now before you is entirely your own work. I think there was another copy filed later which contains other information beyond the result of your own investigations?

A.—Of course, the red marks on this plan are not mine.

Q.—Limited to the information disclosed as to the bed of the river, does it cover entirely your own investigation?

A.—Yes.

30 Q.—As regards the bed of the river, this plan shows certain places at which elevations are mentioned. Do I understand those are the elevations you found by sounding?

A.—Yes.

Q.—Where the letter “L” follows the elevation, what does it indicate?

A.—Ledge.

Q.—And, what is indicated by the letters “B” and “G”, which I notice in certain places on the plan?

A.—Boulder and Gravel.

40 Q.—I notice some elevations are not followed by any letter. What does that fact signify, if anything?

A.—I do not know. There was no way of knowing what the condition of the bottom was at those points.

Q.—So, when you were unable to ascertain what the bottom was, you simply stated the elevation. Is that correct?

A.—Yes.

Q.—Will you tell His Lordship the elevation of the water on the dates you made your investigations?

A.—94.7.

*STANLEY C. STRATTON (for Defendant) Exam. in chief.*

Mr. Forsyth:—That is the water level?

Mr. Aylen:—Yes.

10 By Mr. Aylen, continuing:—

Q.—What instrument did you use to make those soundings ?

A.—A steel rod.

Q.—Of about what diameter?

A.—If I am not mistaken, three quarters of an inch.

Q.—How did you get it into the river?

A.—In a boat.

20 Q.—Was the boat attached in any way, in order to keep it in a certain position?

A.—On the lines which we determined where the soundings should be taken, we stretched a rope across the river, and on the rope we had markers every ten feet, I think.

Q.—If I remember correctly, the soundings were taken in six lines, shown on the plan?

A.—Seven. There is one away up at the top of the sheet.

Q.—Is there any indication on the top line of the nature of the bottom?

A.—No, sir.

30 Q.—In making soundings in a river such as the Lièvre River at that point, is it possible to be certain that the soundings will be exactly at the place indicated, or have you to allow a certain leeway?

A.—You have to allow a certain leeway.

Q.—Within what limits of deviation do you consider those soundings would be absolutely located on the plan?

A.—With the condition there, I should say a five foot circle.

40 Q.—That is, when you show a sounding of a certain elevation, you consider that point would be within a circle with a diameter of five feet?

A.—Yes.

Q.—Will you tell us how you determined what was ledge, and what was marked as boulders, or gravel, or not marked at all ?

A.—We took a boat and went across the river. As we went opposite each marker on the rope we dropped the rod.

Q.—You said the markers were ten feet apart?

A.—Ten feet apart, yes.

*STANLEY C. STRATTON (for Defendant) Exam. in chief.*

Q.—If I am not mistaken some of the soundings are more than ten feet apart?

A.—Yes. In the position where it was determined the dam would finally be we have taken them at 10 foot centres.

10 Q.—Apart from the line of dam, how far apart are they, roughly speaking?

A.—On the line of dam, about ten feet.

Q.—And, in other places?

A.—Twenty feet.

We dropped the rod, and in most cases this rod, as I distinctly remember, struck on ledge, then there would be a bounce to it and there would be a ring to it; and I think that is a very good indication of ledge.

20

Q.—You had made soundings on rivers before this?

A.—Yes.

Q.—You had had experience in that work?

A.—Yes.

Having taken each sounding, and got the depth of water, we would raise the rod slowly, and there might be some indication of gravel or whatever it was. In order to determine the depth of that, it would be merely an estimate, that is all.

30

Q.—So, in some places, by movement of the rod, you could distinguish some overlying substance?

A.—Yes.

Q.—What depth would this overlying material be before you indicated it as otherwise than ledge?

A.—On this plan I did not indicate that at all, I do not think. I indicated ledge.

Q.—What purpose did you have in view in making the soundings? What had you been told to find?

40 A.—The main thing, I think, was to determine the position of the dam.

Q.—Were you looking for ledge, or for boulders?

A.—I was looking for ledge : for foundation for the dam.

Q.—And, where you were able to push the rod through any material that might be overlying the ledge, you did so, and indicated it as ledge?

*STANLEY C. STRATTON (for Defendant) Exam. in chief.*

Mr. Forsyth:—I do not think that is a proper way to question the witness. The witness may have been there, but I know my learned friend was not. The witness can tell us what he did. I submit the question is objectionable.

10 Mr. Aylen:—I will withdraw the question.

By Mr. Aylen, continuing:—

Q.—I notice, in the lower sections of those soundings particularly, you indicate boulders and gravel at certain places?

A.—Yes.

Q.—At those places were you able to get ledge?

A.—No, sir.

20 Q.—Am I to take it that at the places where you could push the rod through to ledge you did so?

A.—Yes.

Q.—And, indicated ledge?

A.—Yes.

Q.—Where you could not get the rod through, you indicated boulders, or gravel, or nothing at all?

A.—On the lower portion that is not true.

Q.—Then, will you explain it?

A.—Because it was outside the limits of the dam.

30 Q.—You made a difference, then, between the limits of the dam and the remaining part of the river?

A.—Yes.

Q.—You have already stated you prepared this plan. Are you able to testify that the results of your soundings, taken in the manner you have explained, are correctly shown on this plan?

A.—Yes.

40 Q.—Can you tell us the maximum and the minimum depth of any over-burden through which you pushed the rod to find ledge? I understand it does not show on your plan.

A.—No, sir, it does not.

I would not say the maximum would be over 2 feet.

Q.—You would say it would not be over 2 feet?

A.—Yes.

Q.—Were there very many places where this over-burden would reach 2 feet?

A.—No.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Q.—Could you give us an average figure for it?

A.—It would be hard to determine.

Q.—Am I to understand you found this over-burden every-  
where?

10 A.—No, sir.

Q.—Just at certain places?

A.—Yes.

Q.—Have you marked on the plan the elevations you found  
at every point you took soundings?

A.—All my notes are plotted on it.

Q.—There are certain lines extended—contours, up and down  
the river. I would like to have it appear in your evidence whether  
or not you actually took soundings all along those contour lines?

20 A.—The soundings from the top of the sheet to the bottom  
of the sheet.

Q.—You indicated the elevations wherever you dropped  
the rod?

A.—Yes.

Q.—And, those are the only places, I think, you made  
soundings?

Mr. Forsyth:—I submit this is an improper way of ques-  
tioning the witness. He should be able to tell us himself just  
what he did.

30

By Mr. Aylen, continuing:—

Q.—Did you make any soundings in the bed of the river at  
places which are not shown on this plan?

A.—No.

Q.—I mean, which are not shown by figures of elevations  
on the plan?

A.—No, sir.

40 Q.—Did you draw the contour lines which appear on this  
plan?

A.—Yes.

Q.—How were they plotted, or calculated?

A.—From interpellation between the soundings.

Cross-examined by Mr. Forsyth, K. C., of Counsel for  
Plaintiff:—

Q.—You said you had taken soundings in other rivers.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Where did you last do that before you did this one? What was the last river you sounded before you sounded this one?

Witness:—Did I make that statement?

10 Counsel:—My learned friend Mr. Aylen made the statement that you had sounded other rivers, and had had experience in the work, and you agreed with him.

Mr. Aylen:—I asked him if he had.

Mr. Forsyth:—In any event, he took the position that he had.

20 Mr. Geoffrion:—Undoubtedly he said he had experience in sounding. Whether he had or not is for him to say. If he had not, he can say so.

Witness:—I would like to know the question.

By Mr. Forsyth, continuing:—

30 Q.—You said you had taken soundings in other rivers. Where did you last do that before you did this one? What was the last river you sounded before you sounded this one?

A.—The Lièvre River.

Q.—The same river?

A.—Yes.

Q.—And, where was the one before that?

A.—None.

Q.—How long before you took the soundings shown on the plan B-2444 had you taken other soundings in the Lièvre River?

A.—Practically the same time.

40 Q.—So, so far as taking soundings in rivers was concerned you were practically without experience when you arrived on the Lièvre?

A.—Yes.

Q.—Were you accompanied by any other engineer on this work?

A.—No.

Q.—You must have had men working with you, of course?

A.—Yes.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Q.—Local men, whom you got there to help you?

A.—Yes.

Q.—You say the method of sounding was to use a three quarter inch rod?

10 A.—Yes.

Q.—How long was the rod?

A.—I should say it was 16 feet.

By Mr. Geoffrion:—

Q.—What kind of rod was it?

A.—A steel rod.

By Mr. Forsyth, continuing:—

20

Q.—Who handled the rod?

A.—I did.

Q.—Yourself?

A.—Yes.

Q.—It was suggested that on certain occasions you pushed this rod through as much as 2 feet of over-burden, and determined there was ledge underneath. You do not wish us to understand you did that?

A.—I think that can be taken, yes.

30

Q.—But, I am not asking you to tell me what you think. I am asking you to tell me what you did. Did you put that sixteen foot rod, three quarters of an inch in diameter through 2 feet of over-burden and ascertain a ledge bottom underneath the over-burden at any place there?

A.—In my opinion, yes.

Q.—Just show me one place on the plan where you did that.

40

Witness:—Where I did what?

Counsel:—Where you went through 2 feet of over-burden with that rod, and ascertained ledge underneath it.

(The witness indicates a point marked “82.2 L” about three eighths of an inch downstream from the line of dam, almost in the centre of the river bed).

Q.—That was the place where you went through 2 feet of over-burden with your rod?

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

A.—Yes.

Q.—And found there was ledge 2 feet down?

A.—Yes.

10 Q.—At what elevation would the bottom of the river at that point be?

A.—82.2.

Q.—I am speaking of the bottom. The surface of the over-burden would, of course, be the bottom of the river, would it not?

A.—Yes.

84.2.

Q.—When you got through the two feet of gravel how did you know that you had ledge? Because you could not push the rod any further?

20 A.—You could not be sure it was ledge.

Q.—But, you could be sure enough to mark it on the plan as ledge?

A.—Yes.

Q.—You would not get a ring from the rod when you got through the two feet of over-burden?

A.—Yes.

Q.—The rod would ring when it got through two feet of over-burden?

A.—Yes.

30 Q.—Could you hear it ringing?

A.—Yes.

Q.—How did you tell the difference between a large boulder and ledge 2 feet below the over-burden?

A.—It is impossible to tell.

Q.—And, the “L” is just a guess as to what was the hard substance that you got through the over-burden, is it not?

A.—No, sir.

Q.—Then, what is it?

A.—It is ledge.

40 Q.—How do you know it is ledge? You have just told me it is impossible to say?

A.—The surface of it is ledge.

Q.—So, between the surface indications and the fact that you got the rod down as far as you could shove it you decided it was ledge?

A.—Yes.

Q.—But, there was not any real way, surface indication or otherwise, of distinguishing between a boulder and ledge at that point?



*STANLEY C. STRATTON (for Defendant) Cross-examination.*

A.—No, sir.

Q.—Perhaps you will tell me some other place where you went through 2 feet of this over-burden and found ledge beneath it ?

10

(Witness indicates a sounding which is third on the line running from the point station 4 in a diagonal direction to the point "S", on plan B-2444).

Q.—I suppose your method of proceeding at that point was just the same as at the one we have last discussed ?

A.—Yes.

Q.—Namely, that you pushed the rod down as far as you could, and when you could not push it any farther you decided it was ledge ?

20

A.—Yes.

Q.—Did you ever go back to this place after the excavation was done ?

A.—No, sir.

Q.—Mr. O'Shea, speaking of the material in the bed of the stream said :

30

"The material already dredged seems to be a compact mass of clay, sand, pebbles, and small boulders; about a hardpan."

How far do you think that you, standing in a boat, could put a 16 foot rod three quarters of an inch in diameter through such material as Mr. O'Shea describes ?

A.—Under the conditions, probably no impression.

Q.—Is there anything on your plan B-2444 to indicate that you went through any over-burden at all at those places where you have indicated ledge ?

40

A.—No.

Q.—I ask you whether an ordinary engineer, let alone a layman, reading that plan would not take it that the ledge elevations you showed were surface elevations of ledge — that is, that the 84.2 to which you have just referred showed ledge on the top of the river bed ?

A.—No, sir.

Q.—You think not ?

A.—No, sir.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Q.—What would he think in regard to the places where you have marked “G”, or “B”, or “S”?

A.—“B” is boulders.

10 Q.—Where would he think those occurred? Where you have boulders, would he think they occurred under some over-burden, or on the top of the river bed?

A.—They would be on the river bed.

Q.—Just looking at this plan, and without any other information, do you mean to tell me you would read the plan as indicating there was over-burden over the ledge?

A.—No.

Q.—You would not?

A.—No.

20 Q.—Does it not necessarily follow that if you would not read it as over-burden overlying the ledge, then those elevations showed the surface of ledge?

A.—No.

Q.—Then, what would they indicate?

A.—It would indicate a surface of ledge.

Q.—Would it indicate whether there was anything overlying it or not?

A.—No, sir.

Q.—If you came to a place where there was something overlying it, is there any way you could indicate it?

30 A.—In this particular area ...

Q.—(interrupting) By “this particular area” you mean the locus of the dam?

A.—Yes.

I particularly endeavored to find ledge along that line.

Q.—So, you were instigated by a desire to find ledge, when you were working there?

40 A.—To find ledge alongside the site of the dam, yes.

Q.—You wanted to find it?

A.—Yes.

Q.—Did that have anything to do with the fact that as soon as you got the rod down as far as you could get it you marked it “ledge”?

A.—No, sir.

Q.—I suppose you will concede that is not a very accurate way of determining the existence of ledge, will you?

A.—I think it is common.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Q.—You had never done it before?

A.—No.

Q.—Have you ever done it since?

A.—No, sir.

10 Q.—You told my learned friend that these soundings as shown on the plan correctly indicate the result of your investigations?

A.—Yes.

Q.—As a matter of fact, in so far as the ones marked “L”, or “G”, or “B” on your plan they indicate what your inferences were?

A.—They indicate what I found there.

20 Q.—You were up there investigating, and you were making a plan which was supposed to show what the bottom of that river was like?

A.—No. I was supposed to find ledge for the dam site, in order to determine a good location for the dam.

This was not the only site I investigated.

Q.—But, this was one you did investigate?

A.—Yes.

30 Q.—And, you marked those letters “L”, “G”, “B”, and “S” for some reason or another?

A.—Yes.

Q.—What was the reason?

A.—To determine the position of the dam. To get a good foundation for it.

Q.—Do you suggest for a moment that those marks of yours as to ledge are accurate?

A.—Yes.

Q.—You say they are accurate?

A.—Yes.

40 Q.—And that ledge existed at every point you show?

A.—Within reasonable limits.

Q.—What are the reasonable limits?

A.—I think I stated we could not expect that those points I took would be within a circle of, say, 5 feet in diameter.

Q.—Would you think it was within reasonable limits if there were 7 to 9 feet of over-burden over where you said there was ledge?

A.—No, sir.

Q.—What you are saying, if I understand you correctly,

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

is this : that you have reported correctly what you thought you found, within a margin of uncertainty of a circle 5 feet in diameter?

A.—I reported correctly what I found.

10 Q.—After telling me there was no way to tell whether it was ledge or a boulder, you do not mean to tell me that you reported correctly what you found when you put “L” on the plan?

A.—Yes.

Q.—Never having seen the site as excavated, would you mind telling me how you know that what you reported as ledge was ledge, and not a boulder?

20 A.—I think a boulder any size would have shown up in there. In sounding we took a position, and dragged our rod along more or less on the surface, and dropped it here and there. I think a boulder of any size would show up.

Q.—Do you remember telling me, (not as long ago as 1927, but within the last few minutes) that there was not any way you could tell the difference between a boulder and the ledge when you struck it with the rod under 2 feet of over-burden?

A.—Yes.

Q.—Have you thought of any way since then?

A.—No, sir.

30 Q.—You did not have any electrical apparatus up there, did you?

A.—No.

Q.—Have you ever had any experience in using this electrical apparatus?

A.—No, sir.

Q.—You looked at your notes, and established two positions for me as being places where you went through 2 feet of over-burden and got ledge. How can you tell that from these notes?

40 A.—The line running through Station 4 was a base line. My transit was set up at Station 4, and at angles swung to some point across.

Q.—You took the transit over a hub at Station 4, and sighted on Station 5?

A.—Not necessarily.

Q.—But, you did sight on Station 5 at some time?

A.—Yes.

Q.—Then, Station 3 would be at an obtuse angle to the line between Stations 4 and 5?

A.—Yes. We back sighted at Station 3.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Q.—You back sighted to Station 3 from Station 4, and Station 3 would be somewhere on a slightly obtuse angle to the line Station 4 — Station 5?

A.—Yes.

10 Q.—Then you swung on various angles in the lines of soundings?

A.—Yes.

Q.—But, taking your notes how do you establish that at a particular sounding you went through 2 feet of over-burden? I am now asking you to speak from your notes. Let us take the sounding 84.2 : gravel and boulders were at 86.7?

A.—Yes.

20 Q.—And, having got through the gravel and boulders to what you thought was ledge, approximately 2½ feet, you then established ledge at 84.2?

A.—Yes.

Q.—And, that is how you did it all the way along?

A.—Yes.

Q.—Let us take the sounding where you showed gravel and boulders.

A.—Here is one down on the bottom line of soundings : boulder and gravel.

Q.—Also sand, I think?

A.—I think it is “B” and “G”.

30 Q.—What are the figures there?

A.—Elevation 81.

Q.—Did you try to find ledge down there?

A.—No.

Q.—Have you any ledge elevation at all down there?

A.—No.

Q.—Then, let us take the next line up — that is the line from R to P, marked in red — has that any ledge elevations in it ?

A.—Yes.

40 Q.—Has it any gravel and boulder elevations in it?

A.—Yes.

Q.—You were interested in finding ledge on the four soundings which are nearest to the point “P”?

A.—Yes.

Q.—Was it not equally desirable to find them on the four or five elevations nearer the point “R”?

A.—Yes.

Q.—Why did you not find them?

A.—I probably could not.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Q.—Why not? Was it because you could not get any resistance to the bar? Did it go down out of sight?

A.—No, sir.

Q.—Did you try the bar in that particular location?

10

A.—Yes.

Q.—How far did you go with it?

A.—To the bed of the river.

Q.—Did you go into the over-burden, into the boulders and gravel, with the bar or rod?

A.—I cannot say.

Q.—Where the other four elevations are, nearer to the point "P", is there any over-burden? I am speaking now of the three elevations nearer to the point "P". Is there any over-burden there?

20

A.—I cannot say.

Q.—Look at your notes.

(The witness refers to his notes).

Q.—Before you look at the other book, let me ask you this: have you had occasion to read plans which show elevations of surfaces of river beds, before you made this plan — even since 1927?

A.—Yes.

30

Q.—Did you ever see a plan in which there were two elevations shown at a point?

Witness:—Two elevations?

Counsel:—Yes : two elevations shown.

A.—Yes.

40 Q.—It is a rather common practice, is it not, to show the elevation of the bed of a river, and another elevation below to indicate the rock?

A.—Yes.

Q.—That is a very common thing to do?

A.—Yes.

Q.—And, if it had been done in this instance it would have presented a truer picture of what you thought you found, would it not?

A.—Yes.

Q.—Did Mr. Ferguson know, from anything you told him, that there was over-burden overlying the ledge on this plan?

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

A.—I could not say.

Q.—But, you can say whether you told him or not.

A.—I do not remember.

10 Q.—Would it not be of some interest to anybody who was going to build a dam there to know whether there was any overburden over that ledge?

A.—If there had been any appreciable amount, yes.

Q.—What do you consider an appreciable amount?

A.—Anything over 4 or 5 feet.

Q.—Did you prepare the quantities of work to be done on this contract?

A.—No.

Q.—Do you know who did?

A.—No.

20 Q.—I suppose with the information you have as to the existence of the overburden there it would be rather a surprise to you to learn that the quantities in the river section mention nothing but rock, would it not?

A.—No.

Q.—It would not surprise you at all?

A.—No.

Q.—Would you think anybody with the information that there was material other than rock there would conceal it?

A.—No.

30 Q.—So, if you had been preparing those quantities you would have allowed some excavation other than rock, would you not ?

A.—No.

Q.—What would you have done? Give them rock for everything they took out of the river?

A.—Yes.

Q.—Including the gravel, sand, and boulders you found?

A.—The levels as given there, yes, from ledge.

40 Q.—That is, anything they took out of the river you would have allowed them as rock excavation?

A.—Figured from the ledge elevations as given on this plan, yes.

Q.—For instance, where you found gravel, sand and boulders at 86.7 you would give them rock for everything they took out down to 84.2, which was the actual place where the ledge existed. Is that what you mean?

A.—I think that would all be figured from the ledge elevations as given here.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Q.—What would you do about the over-burden that was there? Would somebody just blow it away, or take a broom and sweep it away?

A.—It is small, compared with the total amount.

10 Q.—But if a contractor had 2 feet of it all the way across the river, and for the width of the dam, it would be something, would it not?

A.—No, I do not think it would.

Q.—How many yards would there be, allowing 2½ feet in depth, because that was what you found?

A.—In places...

Q.—(interrupting) I am asking you how many yards there would be. For the whole bed of the river, and the whole width of the dam 2½ feet of over-burden, what would they have to  
20 take out? Let us come to it in this way : how wide is the river?

A.—I have not a scale.

Q.—Just get a scale, and tell me.

Mr. Geoffrion:—You mean, from shore to shore?

Mr. Forsyth:—Yes, from shore to shore.

Witness:—130 feet.

30 By Mr. Forsyth, continuing:—

Q.—How wide was the base of the dam?

A.—I have not any idea. I do not know.

Scaling the plan No. 2571 of Exhibit P-2 it is 30 feet.

Q.—I am instructed it is more than that under the sluice-gates.

40 A.—I have no way of knowing that.  
40 feet.

Q.—Let us take it for the time being as 40 feet, and perhaps we will tell you later how wide it was. Assuming it to be 40 feet, how many yards would there be?

A.—400 yards.

Q.—According to my calculations there would be more than 400 yards. As I figure it there would be approximately 13,000 feet, which would be nearer to 500 yards, would it not?

A.—Yes.



*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Q.—Assuming that condition existed, what would happen to that excavation? Would the contractor do it for nothing, or would you give him rock prices for it, or would you put quantities in for it?

10 Mr. Aylen:—Are you asking the witness to determine the contract?

Mr. Forsyth:—I am asking him, as an experienced man, to tell me what he would have done if he had been making a contract.

Witness:—I do not think I would figure that at all.

20 Q.—You would not figure those 500 or 600 yards at all?

A.—No. I think it would go into the excavation, and being so small it would be taken care of under other items. Your rock excavation might be a great deal larger.

Q.—But, would you as Resident Engineer allow rock for that?

A.—I do not know.

Q.—Have you ever had occasion to supervise a job of that kind?

A.—Yes.

30 Q.—But, you do not know what you would do?

A.—No.

Q.—Will you look over your other book now, and let us see if we can get those soundings located. Going to the point "P", and working towards the south on the plan we have an elevation 83.5 ledge. Will you show me that in your notes? And I notice the notes you have before you just now are somewhat different in their form from the ones you were looking at in the other book?

A.—Yes.

40 Q.—In these I take it you start with a point 94.5 : that is the level of the water?

A.—Yes.

Q.—And you add the depth of your soundings?

A.—Yes.

Q.—In the other ones you did not do that?

A.—Yes, I did. You will see it from the book.

Q.—Going through the book I find the soundings on the line 3-4. The line is at an angle of 85.36 degrees to the line 3-4?

A.—Left to the line 3-4.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

- Q.—This would be the top line of soundings in the region of the dam?
- A.—Yes.
- 10 Q.—That is the upstream line of soundings in the region of the dam?
- A.—Yes.
- Q.—Represented by a line practically at right angles to the line 3-4?
- A.—Yes.
- Q.—I notice some of the figures are changed in this book?
- A.—Yes, sir. Changed at the time I put them in.
- Q.—Where did you put them in? In the boat?
- A.—Yes, sir.
- 20 Q.—You would put the rod down, and strike some over-burden, and then you made a note of that depth?
- A.—Yes.
- Q.—Then you would put the rod down through the over-burden until you got a resistance?
- A.—Yes.
- Q.—And, you took that depth?
- A.—Yes.
- Q.—You changed your original elevation as marked here to a new one?
- 30 A.—“Ledge”.
- Q.—I would like to understand this: the first sounding on the first page of the book shows 93.7?
- A.—Yes.
- Q.—And that is crossed out, and we have 92.7 underneath it?
- A.—Yes.
- Q.—Which is the elevation of the ledge?
- A.—The crossed out figure is not the elevation of ledge.
- Q.—Is the crossed out figure the elevation of boulders?
- A.—I do not know.
- 40 Q.—You have it marked here as boulders, have you not?
- A.—Yes.
- Q.—Did you put the rod in between the boulders to get down to the ledge?
- A.—I do not know. It was deep water.
- Q.—Going down to the fifth sounding, where we have “Rock. 82.7”, which would be located on the plan B-2444 proceeding from Station 4 in a line parallel to the top of the plan as the fifth sounding : there was not any over-burden there?
- A.—Not that I could determine.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Q.—But, you determined it was rock ?

A.—Yes.

Q.—And, you so showed on your plan ?

A.—Yes.

10 Q.—Will you tell me what is the next elevation to the south of the one I have just mentioned ?

A.—83.4.

Q.—I notice there is a fourth sounding in your book, which appears as 82.4, and which has been changed from something else. What have you to say about that ?

A.—It is 82.4.

Q.—And, that is the sounding which is shown on the plan as 83.4 ?

A.—Yes.

20 Q.—I want to know from you frankly that you wrote those figures 82.4 in that book, and when you wrote them ; and I want you to be very frank about it.

A.—From the time I made this survey, and plotted them out of this book, to the present time, I have never seen the book.

Q.—Having told me that, will you now please answer my question. When did you write the “82.4” in the book ?

A.—I cannot say. I know it was some time in 1927.

Q.—Was it before, or after, this plan B-2444 was made ?

30 A.—It was before.

Q.—Then, how do you account for the fact that you show ledge at 83.4 on the plan, and at at 82.4 in you book ?

A.—I cannot tell you.

Mr. Forsyth:—I intend to offer this book as an Exhibit, and I would like your Lordship to look at it carefully.

By Mr. Forsyth, continuing:—

40 Q.—I understand from you all those changes were made in the boat when you were making the notes ?

A.—Yes.

Q.—Did you have two pencils when you were in the boat, or were you using the one pencil all the time ?

A.—One, most of the time.

Q.—Will you concede that the figures which have been put in there after the strokes were made are much heavier than the ones that were made first ?

A.—Yes.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

- Q.—Why was that?  
A.—A hard pencil, and the book, and my hands were wet.  
Q.—Were they wetter when you made the second one than when you made the first ?  
A.—No.  
10 Q.—Will you find for me the line on the plan for the soundings on the second page of the book ?  
A.—They are those on the line running from Station 4 to Station 5.  
Q.—Where do you start? At the south shore?  
A.—Yes.  
Q.—Will you read from the plan the elevations on that line, and what is said about them?  
A.—(reading) 91.7 L;  
20 86.2 L;  
85.7 L;  
84.7 L;  
72.7 L, I think.  
Q.—Please be sure of this last one?  
A.—79.7 L;  
83.7 L;  
Q.—All ledge elevations ?  
A.—Yes.  
30 The next one I am not sure of. It is not plain.  
Q.—Is 83.7 inside the shore line?  
A.—No.  
79.7 L is one;  
83.7 L is the next;  
85 — something : I am not sure about that. I should say it is 85.7.  
Q.—And, that is ledge?  
A.—Yes.  
40 Q.—Let us go back for a moment to the first one : 91.7. Is that ledge ?  
A.—I think so.  
Q.—Will you please verify it?  
A.—I think it is so indicated.  
Q.—It is “Boulders” in the book, is it not?  
A.—Yes.  
Q.—Why?  
A.—There is a question about that.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Q.—Is it the question indicated on the plan ?

A.—No, but there is a question as to what it is.

Q.—And, if we can establish it is “L” on the plan, it does not correctly represent what was in the book, does it?

10 A.—No.

Q.—Then, let us go to the next page.

A.—91.2 L.

Q.—Are you sure it is “L”?

A.—Yes.

88.7 G and B;

82.7 G and B, I think it is.

Q.—Is there one on the plan 84.2 L?

A.—I think that is the one we were questioning about.

20 Q.—It is in the book as 84.2 L, and it is very indistinct on the plan ?

A.—Yes.

Q.—That is on the line from Station 4 to the point marked “S” in red on the plan B-2444?

A.—Yes.

82.7 L.

Q.—Is that the next after the 84.2 L?

A.—Yes.

81.7 L;

82.2 L;

30 83.7 L;

86 something.

Q.—Would it be 86.1?

A.—I would say it is, but I am not sure.

Q.—Is it “L”?

A.—I would say yes.

Q.—Let us now take the fourth page of the book. That is the left of line 4 to 4-A?

A.—Yes.

Q.—And, the shore line at 94.7?

40 A.—94.7, yes.

Q.—That is the line I mark on the plan B-2444 running from X to Q?

A.—Yes.

Q.—94.7 is ledge?

A.—Yes.

92.9.

Q.—I suggest to you it is 92.3.

A.—I cannot tell.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Q.—What is the next one ?

A.—86.7 L;

84.2 L;

82.8 L.

10 Q.—Have you 80.7 ?

A.—That must be away over against the shore.

Q.—How long is it since you worked on this plan B-2444 ?

A.—I have not seen that plan since 1927.

Q.—Did you not see it since you came to Montreal ?

A.—Only this morning. I arrived in Montreal this morning.

Q.—Looking through the book we do not find any other signs of changes for the purpose of accounting for over-burden, after the first four pages ?

20 A.—That is right ; and those soundings up in the area which we have not dealt with.

Q.—You have not yet been able to locate for me the soundings from R to P, and the line of soundings just downstream from it ?

A.—No.

Q.—Have you the line from the point I mark “M” to the point “S” ?

A.—Yes.

30 Q.—Will you look through your notes and find for me the soundings from R to P, and from M to S, and those on the lowest line of soundings across the channel ?

A.—Yes.

Q.—Will you file, as Plaintiffs’ Exhibit P-104, the book containing certain notes of your investigations at Cedar Rapids ?

A.—Yes.

Q.—This is a small black covered book, and one loose sheet ?

A.—Yes.

40 Q.—These contain soundings other than those for which I asked you ?

A.—Yes.

Q.—If you had never sounded a stream before you went there, except practically contemporaneously with this, who instructed you in this method of ascertaining the existence of ledge ?

A.—I think that can be found in construction books.

Q.—Do not tell me what you think. I want to know where you got it ?

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

A.—Partly my own invention.

Q.—What part was your invention?

A.—Well, it is not an invention. It is the most feasible way of doing it, and the most accurate way I should say.

10 Q.—Did you ever hear of a core drill?

A.—Yes, sir.

Q.—It is a useful tool to discover what is below the surface of the ground, is it not?

A.—Yes.

Q.—And, particularly useful when the surface of the ground is covered with water?

A.—Yes, sir.

By the Court:—

20

Q.—All across the river was it so shallow that there was no place more than 16 feet deep?

A.—In the particular place I sounded, yes ; except the upper portion.

By Mr. Forsyth, continuing:—

30 Q.—When you were sounding and got an elevation 72 what did you do with the 16 foot rod? Did you lean over the side of the boat?

A.—Yes.

Q.—You leaned 6 feet under water with the rod?

A.—No. But, there again it is outside the line of the dam.

40 Q.—But, you were up there sounding this river, and you say the surface of the bed of the river was at elevation 72 at a certain place, and you told me the water level was 94.5. I would like to know how you ascertained that with a 16 foot rod. I suggest to you the answer is you did not. Do you agree with me?

A.—No, I did not, with a 16 foot rod.

Q.—Then, why put it on the plan, if you did not ascertain it ?

A.—That is without the dam.

Q.—It was outside the area of the dam?

A.—Yes.

As a matter of fact, I cannot remember exactly what I did, but I know I went down to the bottom.

Up in here in the deep section I know what I did.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

- Q.—What did you do?  
A.—Used a rope.  
Q.—What did you have on the end of it?  
A.—The rod.  
10 Q.—You tied the rod on the end of the rope?  
A.—Yes.  
Q.—If you had the rod on the end of the rope did you still  
get the ring when you struck the ledge?  
A.—I cannot say. I do not remember.  
Q.—But, I want you to remember about this, because there  
is a sounding about which I wish to question you. Please exercise  
your memory, and tell me whether you got a ring or not when you  
sounded with the rod on the end of the rope.  
A.—I do not remember.  
20 Q.—How far away would you say those soundings are out-  
side the dam area?  
A.—I would say up in here (witness indicating).  
Q.—The soundings lying on the line from Station 4 parallel  
to the top of the plan, and the intervening ones, and including  
those on the line R-T are the ones that would be out of the dam  
area?  
A.—I should judge so, yes.  
Q.—That means that those lying between the line Station  
4-K and the line R-P, including the soundings on those two lines,  
30 are the ones within the area of the dam?  
A.—Yes.  
Q.—Looking at the line Station 4-K I see a sounding  
73.7 L.  
A.—Yes.  
Q.—How did you ascertain the ledge on that sounding? It  
would be 21 feet below water level, would it not?  
A.—Yes.  
Q.—Was that where you were using the rope?  
A.—Yes.  
40 Q.—How did you get the ledge with the rope?  
A.—The same sound.  
Q.—With the rod 5 feet below the surface of the water?  
A.—From the same feel.  
Q.—You felt it on the rope, instead of the rod?  
A.—Yes.  
Q.—The rope would not be as rigid as the rod, would it?  
A.—No.



*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Q.—And it would hardly transmit the same sensations as would the rod?

A.—No.

Q.—What was the sensation transmitted by the rope?

10 A.—Down, and it stuck.

Q.—And when it stuck it indicated there was ledge there?

A.—Yes: it so indicated to me.

Q.—Here we are with a 16 foot steel rod, three quarters of an inch in diameter, on the end of a rope, and we put it down until the top of the rod is 5 feet below the surface of the water, and you mean to say the rod sticks?

A.—No, I do not think it would.

Q.—But, you said something about it, and I would like to know what it was.

20 A.—There would be a bounce to it.

Q.—And, do you suggest it could not bounce on anything but ledge?

A.—No, sir.

Q.—It would not?

A.—It could.

Q.—Did it ever occur to you that it might be bouncing on something else?

A.—No.

Q.—I want you to be frank about this, and tell me frankly  
30 that to attempt to ascertain with a 16 foot rod on the end of a line whether the bottom is ledge or not is a hopelessly inaccurate way of going about it?

A.—Yes, sir.

Q.—It is?

A.—Yes.

Q.—What was the speed of the current there?

A.—I cannot tell you.

Q.—There is no doubt of the fact there was a current?

40 A.—There was a current.

Q.—And, a pretty fast current? There was a little fall right there, was there not?

A.—Yes.

Q.—And, you could not manoeuvre your boat across the stream without having a wire or rope across to hold it up?

A.—No, sir.

Q.—So, the current was fairly fast.

A.—Yes.

Q.—And you would say that any elevation that was obtained where the water level was over 16 feet above the surface of the

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

bed of the river cannot be relied upon at all with the method you used?

A.—No, sir.

Q.—It cannot be?

10 A.—No, sir. Where I used 16 feet below.

Q.—That is, where you had more than 16 feet of water to go through, it was an inaccurate and unreliable method?

A.—As accurate as we could make it.

Q.—With that device?

A.—Yes.

Q.—But, of course, with a 20 foot rod you could have done better?

A.—I suppose so.

20 Q.—But, certainly those soundings are not to be relied upon?

A.—Yes, sir.

Q.—I am speaking of the ones more than 16 feet below the surface of the water.

A.—No, sir.

Q.—You would agree with me that they are not to be relied upon?

A.—I do not know.

Q.—Would you not feel better if you just stated what you are thinking, and say you do not think they are to be relied upon?

30 A.—I think that plan can be relied upon.

Q.—Notwithstanding the fact that you have admitted it was a hopelessly inaccurate way of taking the sounding 73.7?

A.—Yes. I think that plan can be relied upon.

Q.—The elevation 73.7 cannot be relied upon, can it?

A.—To the extent it is necessary, yes.

Q.—To what extent is it necessary?

A.—To give the depth of water at that particular point.

Q.—And, that is all it can be relied on for?

40 A.—Yes, sir; but we are not interested in the depth of the water at that particular point on the plan.

Q.—Then why did you take 7, or 8, or 9, or 10 different soundings across there, if you were not interested in knowing the depth of the water?

A.—It is a survey up and down the river. It would naturally go without the limits.

Q.—You did not spend a long vacation up there. You were there only two and a half days.

A.—Two and a half days on the water work.

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

Q.—If this information you are speaking of was of no use to anyone, why in the name of Heaven did you take the time to get it?

A.—It was of some use.

10 Q.—Then, if it was of some use, there was a purpose in it?

A.—Yes.

Q.—And, it should be accurate?

A.—Yes.

Q.—And, should be done in a way that could be relied upon?

A.—Yes.

Q.—As a matter of fact that elevation 73.7, which I pointed out to you a moment ago, is right along where the cofferdam was to be put?

20 A.—I do not know.

Q.—Coming back to the question of over-burden, we are going to be left in darkness as to whether you discovered any over the points on the line R-P, because you cannot find your notes?

A.—That is correct.

Mr. Aylen:—They are not very pertinent. They are at the lower part.

30 By Mr. Forsyth, continuing:—

Q.—You considered them pertinent at the time you made them?

A.—To be sure to take everything in.

Q.—Of course, it would be useful to the contractor who was building the dam to know whether there was or was not over-burden over the ledge?

A.—Yes, sir.

40 Q.—Particularly from the point of view of his coffer-damming operations?

A.—Yes ; but I would not think of that in making the survey.

Q.—Nor would you think of passing out information that was not correct?

A.—No, sir.

Q.—You had no intention to do that?

A.—No.

Q.—In the light of your experience here, if you had to sound another river would you change your method?

*STANLEY C. STRATTON (for Defendant) Cross-examination.*

A.—I would do the same thing.

Q.—Whether you used a rope and a rod, or a rope alone, you would do it in the same way?

A.—Yes.

10 Q.—And, after you had done it that way would you consider the plan to be a fair plan upon which to ask a contractor to bid?

A.—Yes, sir.

Q.—Then, perhaps you do not consider a contractor is entitled to any accurate information as to the whereabouts of the ledge?

A.—Accurate information is given on the plan.

Q.—As to the whereabouts of the ledge?

A.—Yes.

20 Q.—In every instance?

A.—No.

Q.—Just partly? Partly accurate, and partly inaccurate?

A.—No, sir.

Q.—Then, what do you mean?

A.—Accurate to the extent that it is necessary.

Q.—Is it accurate to the extent that it is necessary if you show a ledge elevation at a certain point, and it has 7 feet of overburden which is not shown at all?

A.—No.

30 Q.—When does it cease to be inaccurate, and begin to be accurate? When you get to  $2\frac{1}{2}$  feet of overburden?

A.—Yes.

Q.—And, over  $2\frac{1}{2}$  feet is not accurate?

A.—No, sir. Errors are found to creep into every survey.

Q.—And, some did creep into that one?

A.—We found one in recording 82.7 to 83.7. That was a mistake.

Q.—How were those contours drawn in?

A.—Interpolated from the different given points.

40 Q.—Will you explain it to me from the plan?

A.—Well, for instance, here is 79 (witness indicating).

Q.—That is a point on the contour line which I circle with a yellow pencil. That is elevation 79?

A.—Yes. This contour is 80 (witness indicating).

Q.—80 on the line is at the top of the plan?

A.—Yes. And proportional to 79 and 80 would be the proportional here.

*STANLEY C. STRATTON (for Defendant) Re-examination.*

Q.—80 is a proportional point between the point 79 encircled in pencil and that marked 83.7 encircled in yellow pencil?

A.—Yes.

Q.—What is the next?

10 A.—80 runs down to the point “K”.

Q.—You ascertain certain definite points?

A.—Yes.

Q.—And then you draw a line to represent the contour, taking the proportions between the adjacent ascertained elevations?

A.—Yes.

Q.—And, establish the line by the proportion between those adjacent elevations?

A.—Yes.

20

Re-examined by Mr. Aylen, K.C., of counsel for Defendant.

Q.—Your attention was called in cross-examination to an elevation given on the first page of Exhibit P-104, which apparently does not check absolutely with the elevation on the plan supposed to be at the same place?

A.—Yes.

Q.—What is the extent of the error?

30

A.—One foot.

Q.—After looking at your book you have no explanation to offer for that fact, except that it is an error in transcribing?

A.—Yes.

Q.—I notice at the bottom of the first page the date October 15th appears, and at the side, opposite this particular place, there is a note “October 19th”. What does that indicate to you?

A.—I cannot tell you.

40

This was sent to the office.

Q.—You said in cross-examination that after pushing the rod through one or two feet of over-burden you would not be able to tell whether you were on ledge or on a boulder?

A.—Yes.

Q.—Would it be any easier to tell the difference between ledge and a large boulder, if there were no over-burden? Let me put the question to you in this way: in making soundings in a river is it possible when you come to something firm to be absolutely certain that you are on ledge or on a large boulder?

*STANLEY C. STRATTON (for Defendant) Re-examination.*

A.—No, it is not.

Q.—When you spoke of boulders in your testimony, and in your notes, what size boulders did you have in mind?

A.—Mansize boulders.

10 Q.—About what cubic content?

A.—A cubic foot, and larger.

Q.—A cubic foot and larger you would call a boulder?

A.—Yes: not very much larger.

Q.—If I am not mistaken the two lines for which you are not able to find your original records are the second and third lines from the lowest point on the river shown by those soundings?

A.—Yes.

20 Q.—That is R-P, and the line below, are the two lines for which you have not been able to find your original survey notes?

A.—Yes.

Q.—In whose possession have those notes been since they were made?

A.—Mr. Ferguson's.

Q.—When were they produced to you?

A.—This morning.

Q.—You arrived in Montreal this morning?

A.—Yes.

30 Q.—You did not have them in your possession in the interval.

A.—No.

Q.—I think you said your object in going there was to find the elevation of ledge, and that at any place where you were able to push the rod through whatever over-burden there was and find what you thought was ledge you marked "L"?

A.—Yes.

Q.—Am I to understand that at any place marked "B" or "G", on the plan you made no effort to thrust the rod through?

40 A.—Any places where I thought it was necessary, the effort would be made; otherwise, no.

Q.—Am I to understand you were equally interested in finding ledge where you could, even on the line where about half your elevations are "L", and half "B" and "G"?

A.—Yes.

Q.—Did you make an effort to find ledge at the places marked "B" and "G"?

A.—No, sir, I do not think I did ; for the simple reason that I considered those places were without the line of dam.

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

Q.—You mentioned two feet as being the greatest depth to which you thrust the rod through any over-burden?

A.—Yes.

Q.—Am I to understand that would be the average?

10

A.—I do not think it would be an average, no.

Q.—Would you say it was the maximum?

A.—Yes, I think it would be a maximum.

And further deponent saith not.

And the further hearing of testimony in this case is continued to Monday next, March 6th, 1933, at 10.30 o'clock in the forenoon.

J. H. Kenehan,

20

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DEPOSITION OF JOHN C. McINTOSH

A witness produced on behalf of Defendant.

On this sixth day of March, in the year of Our Lord, one thousand nine hundred and thirty-three, personally came and appeared John C. McIntosh, of Buckingham, Quebec, Civil Engineer, aged 35 years, a witness produced on behalf of the  
30 Defendant, who being duly sworn, doth depose and say as follows:

Examined by Mr. Ayles, K. C., of Counsel for Defendant:—

Q.—Are you a graduate of an Engineering School?

A.—Yes.

Q.—What University?

40

A.—Queen's University, Kingston.

Q.—When did you graduate from there?

A.—In 1925.

Q.—Have you prepared, in the same manner as some of the other witnesses, in order to save time, a list of work in which you have been engaged?

A.—Yes.

Q.—Would you file this list as exhibit D-31?

A.—Yes.

Q.—Being a statement prepared by you showing the prin-

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

cipal work with which you have been engaged in engineering work, and also a list of the professional bodies of which you are a member?

A.—Yes.

10 Q.—This is correct?

A.—Yes.

Q.—You prepared it yourself?

A.—Yes.

Q.—What was your position at Cedar Rapids on this work?

A.—Assistant to the Resident Engineer.

Q.—As a Resident Engineer under Mr. O'Shea, who has already been examined?

A.—Yes.

20 Q.—Will you tell us when you went there to take up your position?

A.—Early in October 1928.

Q.—Can you give us the date exactly on which you arrived on the job?

A.—I was up the river on the Reservoir Survey. I came down on the 6th October. That was before the contractor was on the site.

Q.—Were you there continuously after that?

A.—Yes.

30 Q.—Until when?

A.—Until the completion of the work.

Q.—What date was that?

A.—I was there till June 1930.

Q.—Did you have anything to do with the other job that was progressing simultaneously at High Falls?

A.—No.

Q.—You were at Cedars all the time?

A.—Yes.

40 Q.—Would you tell us briefly what your duties there were?

A.—I made the lay-out. I established the lines and levels and made up the quantities for the estimates.

Q.—When you say you made the lay-out, just what do you mean by that?

A.—I established the various sites for the contracted work in connection with the dam proper, that is, not in connection with any layout for equipment, or anything like that.

Q.—You had nothing to do with the contractor's layout, but you mean the general location of the work?



*JOHN C. McINTOSH (for Defendant) Examination in chief.*

A.—As covered by the contract.

Q.—During the time you were there, and while this work was going on, did you keep any records from time to time?

A.—Yes, I kept a daily diary.

10 Q.—Have you got that with you here?

A.—Yes, it is there.

Q.—I presume the entries in that diary were made by you personally?

A.—Yes.

Q.—From day to day?

A.—Every day.

Q.—Coming first to the claim in respect of hardpan excavation, did you, yourself, have occasion to keep an eye on this excavating work in the by-pass?

20 A.—I saw it daily.

Q.—You saw it daily?

A.—Yes.

Q.—Did you keep any record of the progress of this work? Did you make any notes?

A.—We have our field notes. We made an estimate once a month at the end of the month.

Q.—Were these field notes you speak of, made by you?

A.—Yes.

30 Q.—As part of your duty which you mentioned?

A.—Yes.

Q.—Just what is the nature of these field notes?

A.—The outline of the ground, and the various depths to which the work had proceeded that month.

Q.—Have you them here if needed?

A.—Yes.

Q.—How were these field notes taken? Are they on any particular dates?

40 A.—As near to the end of the month as it was convenient to take them, at the end of one month to the first day of the next month.

Q.—The purpose was to show the progress of the work from month to month. Is that what I understand?

A.—Yes.

Q.—Would you describe to me your opinion of the nature of the material that was met with in this by-pass excavation?

A.—First, gravel and boulders.

Q.—Perhaps you had better start with the material that would be met with at the commencement of the excavation, and

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

then as we get down deeper, let us know if there was any change in any way?

A.—The first material that was handled was in this upper surface, was the sandy loam which the orange peel had no trouble in handling ; then, below, there was this gravel. I might say  
10 there were boulders in both the sandy loam and the gravel.

Q.—When you say boulders, what size do you call the boulders?

A.—Boulders, anything over half a cubic yard I classify as rock, solid rock, and paid for as such. Under half a yard was not.

Q.—Was there, or was there not, any clear line separating the earth from the gravel of which you have spoken?

A.—No, I do not think so. The nature of the cut was quite  
20 wavy. I would not say there was any definite claim of distinction between the two that I could ever see.

Q.—Have you a date that you could give me from memory, or from your records as to when this excavation work was actually started?

A.—I will look at my diary. I have the date, November 2nd 1928.

Q.—You mean that there was not much excavation in the by-pass until then?

A.—No.

Q.—Who was in charge of this work for Mr. Bishop at  
30 the start?

A.—A man named Mr. Crawford.

Q.—How long did he have charge of it? Have you any record there as to the date on which he left?

A.—The actual date of his departure was the 5th of December.

Q.—He was there approximately a month in charge of this work from the start, November 2nd till December 5th?

A.—Yes, and he was there before November 2nd, when he  
40 was in charge all that time of this excavation work.

Q.—How did he handle this work?

A.—He removed this upper material which the orange peel could not handle. He had difficulty with the lower material, and he just passed on.

Q.—He excavated the part that he had no difficulty with?

A.—Yes, the top layer.

Q.—You said he had difficulty when he got down further. Can you tell me, in your opinion, from what you were able to see, what the reason for the difficulty was?

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

A.—He told me himself. He complained that the peel had blunted points, that it had no impression on the stuff.

Q.—Apart from what he told you, did that seem to be the reason of the trouble ?

10 A.—Yes. The sharp points of the orange peel were all work off. It would not make any impression on this harder material below.

Q.—In your opinion, if the points had been sharp, would the excavation have gone on better ?

A.—Yes.

Q.—What did Mr. Crawford do then to handle it? Did he handle any of this harder material ?

A.—Yes. At the lower end of the cut they started with wheel barrows and picks and shovels to take it down to grade.

20 Q.—What success did he have with the picks and shovels in that place ?

A.—Good success, no trouble.

Q.—During the time Mr. Crawford was handling this excavating work, was any dynamite used ?

A.—No.

Q.—Can you tell me, or have you any record or recollection, as to when dynamite was first used ?

A.—The first record of using dynamite was on the 12th December, and that was to shoot boulders.

30 Q.—So, during Mr. Crawford's regime they did not use dynamite ?

A.—No.

Q.—Do you know anything about the circumstances under which Mr. Crawford left ?

A.—No, I know nothing at all about it. He did not tell me he was going or anything else. He did not show up one morning.

Q.—Who took his place on the site of this excavation work ?

40 A.—There was nobody for a time. Subsequently a man named Wallen was sent up from High Falls.

Q.—How long did Mr. Wallen have charge of this excavation work ?

A.—Until Mr. Lindskog came in January.

Q.—Have you the date there of Mr. Lindskog's arrival ?

A.—The 15th January.

Q.—How did Mr. Wallen proceed with his work ?

A.—He brought the orange peel and derrick back to the lower end of the cut, and widened it out, and carried the excavation to grade.

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

Q.—What equipment did he use, or in what manner did he go about the work?

A.—He must used the orange peel, the same equipment.

Q.—Did he do any work with pick or shovel or not?

10 A.—The pick and shovel work was carried on simultaneously.

Q.—You mean at different places?

A.—On the far side of the cut. The machine could not reach the far side of the cut.

Q.—Why could it not reach the far side of the cut?

A.—The machine operating there on top, it could not get down into the cut. The reach of the boom was not long enough to reach on the far side of the cut when it was stationed on this side.

20 Q.—As I understand, Mr. Wallen excavated with the orange peel at places he could reach, and at other places he went on with pick and shovel?

A.—And the carts, yes.

Q.—Would you look at your diary on the 19th December, and read to me the entry I understand there was, with reference to this comment...

Mr. Forsyth:—I object to this method of examining the witness from the diary. In the first place the witness has not  
30 produced the diary for the purpose of making it evidence.

Mr. Aylen:—I will change the form of the question.

By Mr. Aylen:—

Q.—You have told me already that you kept a diary from day to day in connection with the progress of this work?

A.—Yes.

40 Q.—You gave me a moment ago in your testimony, a date on which you said the first dynamite was used?

A.—Yes, the 12th December.

Q.—And did you state the nature of the material that was blown out with that dynamite! I think you did.

A.—Boulders.

Q.—Can you tell me whether this dynamite was used at the place at which the orange peel was excavating, or at the place the pick and shovel work was being carried on?

A.—I cannot say definitely. The boulders were all over.

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

Q.—At the time this excavation work was being carried on, after Mr. Wallen came, was the ground frozen or not?

A.—No, it was not frozen when Mr. Wallen came.

Q.—Can you tell us when the ground became frozen?

10

Witness:—What degree of freezing do you mean?

Counsel:—I will put it this way: at any time, did the frost, in your opinion, have any effect or any bearing on the excavation?

A.—Oh yes, certainly.

Q.—After what time would you say? From what date?

20 A.—I went home for a few days on the 26th December. Prior to that there was none, and when I came back it was all frozen.

Q.—When did you come back?

A.—I came back on the 27th December, a day or two after Christmas.

Q.—After you came back, was the work being made more difficult on account of freezing?

A.—Oh yes.

30 Q.—You say dynamite was used for boulders about the end of December? Can you tell me when dynamite was used generally for the excavation, not only for boulders?

A.—I would say approximately the 20th December.

Q.—Do you mean from then on?

A.—From then on.

Q.—Then, you said Mr. Lindskog came about the middle of January. I think you said the 16th?

A.—Yes.

Q.—Did he make any change in the manner the work was carried on?

40 A.—The orange peel had not been operating but very little from about the 17th December. Mr. Lindskog turned the machine all around and started work, and instead of using charts and horses, he got in cars and rails, which was a much better method of disposing of the spoil.

Q.—You told me a moment ago that in your opinion, the freezing of the ground influenced the excavation. In your opinion, assuming that excavating had been done in summer, how do you think it could have been handled with the orange peel, assuming that it was in proper condition?

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

A.—Well from the evidence of Mr. Wallen since, I think it would have been handled all right.

10 Mr. Forsyth:—I submit, my Lord, that this witness has not, so far as I have noticed his experience, qualified himself as an expert to give an opinion of how people would excavate anything. I will enter a formal objection to this evidence.

The Court reserves the objection.

By Mr. Ayles:—

Q.—Did you keep track of the dates on which the excavation work was carried on, and the dates at which it was at a stand-still ?

A.—Yes, I have a list of the dates, and I have a graf showing the time lost.

Q.—Have you prepared a statement showing the dates on which the orange peel was delayed on account of break-downs ?

A.—Yes.

Q.—You made this up from your personal records ?

A.—Yes.

Q.—Would you file that as exhibit D-32 ?

A.—Yes.

30 Q.—Have you prepared from your personal knowledge and records, a diagram in the form of a graf showing the periods of operation and the periods when this work was closed down ?

A.—Yes, for a certain period.

Q.—Would you file this as exhibit D-33 ?

A.—Yes.

Q.—On what date does this commence ? Would you explain it ?

40 A.—The date is November 2nd, running through to January 31st. These are actual working days, omitting Sundays and everything else.

Q.—So by looking at this, we can see pictorially the days on which the excavating work was proceeded with and the days on which it was not proceeded with ?

A.—Well, the days, portions thereof. The shaded sections are the days that they worked, and the blanks are the time lost, the idle period.

Q.—Have you also indicated by coloured lines on a copy of the plan B-2444 the area of the by-pass excavation that covered at a certain periods ?

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

A.—Yes.

Q.—Would you file as exhibit D-34 another copy of the plan B-2444 with certain marks and lines coloured red and yellow, and explain to me just what those are meant to show ?

10 A.—The yellow lines represent the extent of the work at the end of November. The red is at the end of December ; these yellow elevations are the elevations of the cut at the end of November. The red is the same for December.

Q.—By looking at this exhibit D-34, we can tell the area that had been excavated and the depth to which that excavation had gone at the end of those two months ?

A.—Yes.

Q.—Were you there when Professor Mailhiot came ?

20 A.—Yes.

Q.—On the occasion that he has mentioned. I am not sure of the exact date ?

A.—He was there several times. He was there on the 20th February.

Q.—Were you present when he went with Mr. Bishop ? I think he said he examined the by-pass excavation ?

A.—Yes.

30 Q.—Can you indicate to me on the plan that has just been filed as exhibit D-34 the place where Professor Mailhiot examined the excavation ?

A.—You mean where he pointed out the boulder clay ?

Q.—He has spoken of finding boulder clay at a certain place ?

A.—It was along the south side of the by-pass, below the line of the dam.

Q.—Would you indicate with the capital letter “M” approximately the place where Professor Mailhiot found that boulder clay. Will you indicate it on exhibit D-34 ?

A.—It was along the face of the exposed ledge.

40 Q.—Put a circle around that, and put the letter “M” inside it ?

A.—Yes.

Q.—Did you say it was on the side ?

A.—It was on the south side of the by-pass.

Q.—Was this boulder clay lying at the bottom or the excavation ?

A.—No, it was clinging to the exposed ledge.

Q.—At the side ?

A.—Yes.

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

Q.—Can you state approximately the extent of this boulder clay — the quantity of it? Did you examine it?

A.—I have estimated it is about fifty yards.

Q.—About fifty cubic yards?

10 A.—Yes.

Q.—Within the area that you have indicated on D-34 covered by a circle with red pencil and the letter “M” inside?

A.—Yes.

Q.—Would you describe to us the fifty yards more or less of boulder clay? Was it hard material?

A.—Yes, it was hard material.

Q.—What was the cementing material composed of?

20 A.—It looked like concrete. It was boulders in a sort of sand and clay, but it looked like warts on the ledge, which remained after the rest of the excavation had come away.

Q.—Can you state whether there were any other places in the by-pass excavation where similar material was encountered?

A.—No, I saw no other.

Q.—Were these fifty yards that you have spoken of in line with the dam, or outside the line of the dam?

A.—It was mostly outside the line of the dam.

Q.—Coming to the second claim in connection with the logs: first of all, will you tell me approximately the width of the river at the place where the cofferdam was located?

30 A.—I have scaled it 140 feet.

Q.—Can you tell me when the logs began to come down the river that season?

A.—Early in June is the closest I can say.

Q.—The first crib, No. 1. Have you the date of that?

A.—I have June 15th.

Q.—While this crib was being lowered down in position, was anything done to keep the water away from it?

A.—No.

40 Q.—After it was in position was anything done to keep the water away?

A.—Yes. There was a boom placed around it to protect it from the logs.

Q.—That boom extended from where to where?

A.—Some point on the north shore upstream, around the outside of the crib, to some point below the crib on the north shore of the river.

Q.—Who placed this boom?

A.—The contractor.



*JOHN C. McINTOSH (for Defendant) Examination in chief.*

Q.—Do you know where the logs came from?

A.—They were the logs that were running in the river at the time. The Company's logs. Large pulp logs.

Q.—What, again, was the purpose of this boom?

10 A.—To protect his works from the logs.

Q.—Protect the crib.

A.—Yes, his crib.

Q.—Did it work.

A.—No, it was not effective. It was too light. The logs were able to work their way over it and under it, and around it, and the cables that were anchoring the crib entangled the logs. The cables were running to both shores.

Q.—After the crib had been placed, and at this time you are speaking of, there were cables attached to the crib?

20 A.—Well, they had it anchored with cribs.

Q.—Did these cables remain there?

A.—No. Once the crib was laid the cables were removed.

Q.—Was any request made to you by the contractor to hold back logs at any time in connection with crib No. 1?

A.—No.

Mr. Forsyth:—Who was this witness working for?

By Mr. Ayles:—

30

Q.—Who were you working for?

A.—I was the Company's representative.

Q.—Can you give me the date of the placing of crib No. 2, that is, the center crib referred to by the witnesses of the Plaintiff as crib No. 2?

A.—That is the one the bridge was on.

Q.—The center crib?

A.—The second crib down the river, on July 16th.

40

By Mr. Forsyth:—

Q.—Do you mean they placed it on that date?

A.—Yes.

By Mr. Ayles:—

Q.—When you speak of crib No. 1, Crib No. 2, you are referring to the cribs of the same numbers as shown on exhibit P-37, is that correct?

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

A.—Yes, that is correct.

Q.—When you say, were down the river, you mean the center crib was lowered in place on that date?

A.—Yes.

10 Q.—Was any request made to you by the contractor to hold back the logs while that crib was being placed?

A.—No.

Q.—Was anything done after it was placed by the contractor, to keep the logs away from it?

A.—No.

Q.—Taking up crib No. 3, also as shown on that plan P-37, have you the date that that was placed in position?

A.—July 22nd.

20 Q.—Was any request made to you by the contractor to hold back the logs while this crib was being placed in position?

A.—No.

Q.—Was anything done after the crib was placed by the contractor, to keep the logs away from this crib No. 3?

A.—No, not in placing the boom — no, nothing was done.

Q.—Coming to crib No. 4, will you give me the date of the placing of that crib?

A.—August 2nd.

30 Q.—You stated, with regard to crib No. 1, that cables were holding that in place until it was filled? Is that also true of the other cribs?

A.—Oh yes. They would all have to be supported with cables.

Q.—Can you tell me what position those cables were in with relation to the surface of the water?

A.—They would be in the water and they would be out of it.

Q.—Partly in and partly out?

40 A.—They would anchor the crib to the shore on either side. It would be quite a distance. The weight of the cable would cause it to sink in the water and then it would emerge again towards the shore.

Q.—It would emerge at the upper end and the lower part would be in the water?

A.—And then it would come out again at the crib, if it was anchored above water.

Q.—Was it attached to the top or bottom of the crib?

A.—I don't know exactly what point it was anchored.

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

Q.—While crib No. 4 was being lowered, while it was being lowered in position, was any request made to you to have the logs held back?

A.—Yes.

10 Q.—By whom was that request made?

By Mr. Lindskog.

Q.—Did you have the logs held back?

A.—I spoke to Mr. Coyle.

Q.—Mr. Coyle being already referred to as the foreman or the river superintendent?

A.—Well, he had charge.

Q.—As a matter of fact, were the logs held back?

A.—Yes, they were held back.

Q.—For how long?

20 A.—Till they were put through the by-pass.

Q.—How long would that be after the 2nd August?

A.—Three weeks.

Q.—When the logs were put through the by-pass, did they continue to go through the by-pass after that?

A.—Yes.

Q.—Were there any logs that came down the main channel of the river after August 2nd?

A.—No.

Q.—Past the site of the work?

30 A.—No.

Q.—Were there any logs piled up against this crib No. 4 after it was placed in position?

A.—No.

Q.—I understand it has been stated that there was a jam formed in the by-pass after the logs were put through there. Did you see that?

A.—Yes.

Q.—Have you the date when that logs jam formed there?

A.—August 22nd.

40 Q.—In what manner were the logs diverted through the by-pass previous to that?

A.—There was a boom placed across the river upstream.

Q.—Upstream from what?

A.—It ran from the north side of the by-pass — it started from the south shore of the by-pass upstream, to the south shore upstream.

Q.—It was upstream from the cofferdam?

A.—Yes.

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

- Q.—And the purpose of it was, to deflect the logs into the by-pass?
- A.—Yes.
- 10 Q.—Do you know who placed that boom?
- A.—The contractor.
- Q.—Where did he get the boom?
- A.—The boom was loaned by the company.
- Q.—Who placed it in position?
- A.—The contractor.
- Q.—Did it prove effective?
- A.—Yes.
- Q.—And the logs in consequence were diverted through the by-pass?
- A.—Yes.
- 20 Q.—Coming to the third claim, with respect to unwatering. What was the first step in the building of the cofferdam?
- A.—The building of the south abuttment.
- Q.—That is one on the south shore of the river?
- A.—Yes.
- Q.—Have you the date for that?
- A.—He has March 18th. I have March 11th.
- Q.—Would March 11th be the date it was completed?
- A.—That would be the date commenced it, I should say. It was around the middle of March. I have the note, “Began erection cofferdam, March 11th”.
- 30 Q.—What was it built on?
- A.—It was built on logs.
- Q.—Was it built in position or lowered down?
- A.—It was built in position.
- Q.—What was used to fill it?
- A.—Rock from the excavation.
- Q.—After it was filled with rock, then what was done?
- A.—Sheeting was placed on it.
- 40 Q.—What was the next step?
- A.—They went over across the river to the north abuttment.
- Q.—And they built the north abuttment?
- A.—Yes.
- Q.—And did they build it in the same manner?
- A.—Yes.
- Q.—Have you the date of that? Was it immediately after?
- A.—March 20th.

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

Q.—You say it was built in the same manner ? Was it filled in the same way and sheeted immediately ?

A.—Well, it was filled from excavation from the north shore, what they call the island.

10 Q.—Was it also sheeted at that time, or later ?

A.—As soon as it was filled it was sheeted.

Q.—During the time these abutment cribs were being built, filled and sheeted, was there any dynamiting in the locality during that time and before ?

A.—Yes.

Q.—Whereabouts ?

A.—In the south shore the dynamiting was in the stop log section. On the north shore it was on the top of the island.

20 Q.—What distance on the north shore would it be from the shore of the river where the north abutment crib was ?

A.—Right adjacent.

Q.—Was the rock from the blasts thrown far ?

A.—Yes, it was thrown out into the river all around.

Q.—When these shots were set off, where would the rock go to ?

A.—It would go in all directions. It was an open cut. It would be pretty hard to confine it. There was nothing around needing protection.

Q.—In all directions. Does that include the river ?

30 A.—Yes.

Q.—Was any of this work that had been done up to that time injured or affected by the rock from this excavation ?

A.—Well, there was a suspension bridge at the north end that was destroyed, and considerable of the crib work of the north abutment was damaged by other blasts.

Q.—Over what period was this blasting being carried on in that location ?

A.—From the month of March to the month of July.

40 Q.—Then, what was done with this rock that was blasted out of this island on the north side. What was it used for ?

A.—It was used mostly to fill the cofferdam, and what was not used to fill the cofferdam, was dumped upstream from the island, they made a spoil bank of it.

Q.—Could you identify that spoil bank on some of the photographs that were filed here the other day ? On these photographs that have been filed by the Defendant, would you indicate on one of those, the spoil bank of rock above the cofferdam you have referred to ?

A.—They are above ground.

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

Q.—Look at the photograph D-19. You have indicated a spot at the left hand of the picture, to the left of this bridge, is that the pile you refer to?

A.—Yes.

10 Q.—You say that extends into the river. Does that appear from the photograph?

A.—Yes. Here is a photograph before any rock was dumped in.

Q.—Will you look at the photograph D-13, and state if any loose rock appears at the spot on the river bank where the rock pile is shown, on D-19?

A.—No, there is none.

Q.—It is bare rock?

A.—Yes.

20 Q.—You have already given us the date the first crib was placed, June 14th, I think you said. What have you to say with regard to the position of this crib?

A.—It was not in good alignment with the abutments.

By Mr. Forsyth:—

Q.—Which one are you speaking of?

A.—No. 1 on this drawing.

30 By Mr. Aylen:—

Q.—I forgot to ask you about the two abutments themselves. What have you to say with regard to their position?

A.—The north abutment points upstream. They do not line up very well.

Q.—Then, you say the first crib was not in line with the shore?

A.—With the shore abutments, no.

40 Q.—You have spoken of one of the abutments being damaged by rock from a blast. Which one was that?

A.—The north abutment.

Q.—What position would that be, in relation to crib No. 1?

A.—Right next to crib No. 1.

Q.—And did you, yourself, see any rock from any blasts fall into the river at or about the location of crib No. 1?

A.—No, I cannot say I saw any fall in there, but I have seen rock fall over the river.

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

- Q.—You cannot swear to the exact place?  
A.—No.  
Q.—You have personally seen it?  
A.—Yes, you see the water splash.
- 10 Q.—The second crib you stated was placed on July 16th.  
Where was it built?  
A.—Upstream on the south shore.  
Q.—In what manner was it lowered down?  
A.—With cables.  
Q.—Did anything happen while that crib was being lowered down in position?  
A.—Yes. Something happened and it grounded about 75 feet above the line of the abutments. At least I saw it in the middle of the afternoon and it was stationary there.
- 20 Q.—It was then lowered down later on?  
A.—It was lowered down later on.  
Q.—What have you to say with regard to its final position?  
A.—It is not in line with the abutments. It is upstream quite a bit.  
Q.—Is it in line with No. 1?  
A.—No.  
Q.—It is not in line with the abutments?  
A.—No.
- 30 Q.—Of course, you saw this crib in its final position?  
A.—Yes.  
Q.—In what position was it, in relation to this suspension bridge you have mentioned, shown on the photographs you have recently referred to?  
A.—It was at the location of the suspension bridge. They fouled that suspension bridge when it came down the river.  
Q.—What do you mean by fouled?  
A.—Struck it, got connected with it.
- 40 Q.—When it was being placed?  
A.—Yes.  
Q.—What was the second crib filled with?  
A.—Rock. They were all filled from the same source.  
Q.—After this second crib was built, was it in the middle position?  
A.—It was level when they started to fill it, but it gradually tilted towards the south.  
Q.—That is, shoved towards the crib?  
A.—Towards crib No. 4.

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

Q.—When it tilted, had crib No. 4 been placed?

A.—It had tilted somewhat before crib No. 4 was placed, but the final tilt rested on crib No. 4. Crib No. 4 saved it from going over, I should say, but it had tilted somewhat before crib  
10 No. 4 was lowered into position.

Q.—Crib No. 3, as I understand, was the crib between Crib Nos. 1 and 2. You have given the date of the placing of that as July 22nd. Was it also upstream?

A.—Yes.

Q.—And lowered down the same way?

A.—Yes.

Q.—When did you, yourself, see that crib No. 3 for the first time on this date, July 22nd?

A.—I saw it between five and six o'clock.

20 Q.—And where was it at that time?

A.—It was jammed between cribs 1 and 2.

Q.—Jammed between, in what position?

A.—It was distorted, a sort of diamond shape, with one apex protruding upstream between the line of those two cribs.

Q.—Do I understand that it extended from the line of the other corner between cribs No. 1 and 2?

A.—Yes.

Q.—At the time you saw it between five and six o'clock, were there any logs in the river immediately above it, or against  
30 it?

A.—No.

Q.—Did you see that crib again later on the same day?

A.—Yes.

Q.—About what time?

A.—In the evening between seven and eight o'clock, after supper.

Q.—In what position was it then?

A.—Approximately as shown on this drawing.

40 Q.—That is, as shown on exhibit P-37?

A.—Yes.

Q.—Would you describe it? How does it compare with the position it was in at five or six o'clock?

A.—It had shifted quite a piece downstream.

Q.—And the position that it was in later in the evening, at seven or eight o'clock, you have stated, is approximately as shown on this plan P-37?

A.—Yes, as near as I can say.

Q.—Would that be its final position?



*JOHN C. McINTOSH (for Defendant) Examination in chief.*

A.—This was supposed to be its final position. I don't know this drawing. I take it to be.

Q.—When you saw it later on in the evening from seven to eight o'clock, was it in its final position?

10 A.—Approximately, yes.

Q.—What position was it in between seven and eight o'clock?

A.—About as shown here.

Q.—Was it in the position as shown on this drawing?

A.—As near as I can tell. I did not mark the exact position of the crib. All I had to judge of was by my eye.

Q.—What was the position later in the evening?

A.—They were filling it.

20 Q.—In what way?

A.—From the excavation from the island.

Q.—The excavation from the island would be rock?

A.—Rock.

Q.—Were there any logs against the crib when you saw it later, the second time in the evening?

A.—No.

Q.—At the time you saw this crib in the evening at seven or eight o'clock, were there any cables attached to it then?

A.—I do not recollect. Possibly there were. Very likely there were.

30 Q.—Was it completely filled?

A.—No, it was empty.

Q.—They were just commencing?

A.—They were starting to fill it the next shift.

Q.—Were any cables laid?

A.—There must have been, or they had nothing to anchor it to.

Q.—You saw that crib again the following day?

A.—Yes.

40 Q.—Were there any logs the next day?

A.—There were logs the next day.

Q.—In the lowering of crib No. 4, which I think you stated, was August 2nd, did anything happen while that was being lowered in position?

A.—It grounded before it was got into position between crib No. 2 and the south abuttment.

Q.—How did they get it moved down?

A.—They had a derrick on the south abuttment, and they freed it with the derrick. They landed it with the derrick.

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

Q.—Were any special precautions taken in the lowering of this crib No. 4 to prevent it going entirely too far?

A.—Yes, there was a sort of fin or out-riders attached to the front of the crib, extended out clear of the front of the crib so it could not possibly go on down through. It was anchored between this crib No. 2 and the south abuttment.

Q.—What do you mean by fin?

A.—They were just spars, long logs extending out clear of the crib.

Q.—Was that done with regard to the others?

A.—No. That was the only time it was used.

Q.—What position did they take up with crib No. 4? How did it run with the others?

A.—It was in line with No. 2. It is not exactly as shown on this photograph. That crib was rectangular. This is shown diamond shaped.

Q.—When you speak of crib No. 4 which was square, and then, was there a rectangle?

A.—No, it is shown there as diamond shaped. It was built rectangular. It is not square across the front.

Q.—What were the distances between these cribs as they were placed, the 1, 2, 3 and 4, and the abutments?

A.—I don't know. You will have to scale them here.

Q.—This plan P-37 is drawn to scale?

A.—I don't know. I had nothing to do with making this drawing.

Q.—Can you state from your own knowledge what those distances would be?

A.—They looked to be about three or four feet. They are not shown here.

Q.—Have you any criticism to make as to the distances between them as shown on that plan?

A.—No.

Q.—In the position that the cribs were finally in, was it possible, in your opinion, to sheet them?

A.—Yes. They could have been sheeted, but it would have been a lot of additional work.

Q.—So what was done? What did the contractor do?

A.—He built some false work to make a sort of even front to clear his cribs—false crib, struts and walers.

Q.—Did he put anything in between the cribs and his false front?

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

A.—There was debris in there. I do not remember whether he rock filled it as systematically as he filled the cribs, but there was rock in there.

10 Q.—Coming to the placing of the sheeting on this false front, was there any diver used there to place that sheeting?

A.—No.

Q.—You saw them diving from time to time?

A.—Yes.

Q.—Would you describe the sheeting to us?

A.—It was what they call Wakefield sheeting, with a center board checked back to make a sort of tongue effect.

Q.—What did they use to place them?

A.—They placed it by hand so far as I could see.

20 Q.—Was it possible without a diver to fix this to the bottom?

A.—I would not think so.

Q.—They were just placing it from the bottom.

A.—Yes.

Q.—Where was this sheeting started?

A.—It was started from both shores.

Q.—Where did it meet?

A.—It met in front of crib No. 3.

30 Q.—And as to the place that it met, what have you to say about how it stood?

A.—It was out of shape. It was sort of “V” shaped or slanting. It was not vertical.

Q.—You say it was in a sort of “V” shape. Where was the point of the “V”? At the top or bottom?

A.—At the bottom.

Q.—But it met eventually? It only met at the bottom, is that what you mean?

A.—Well, if it got contact at the bottom, it was open at the top and made a “V”.

40 Q.—What did the contractor do to close up that hole?

A.—He must have put in shorter pieces and worked up the “V”.

Q.—Will you look at the photograph D-28 (and the other photographs if you like) and state if you can show us the place on the cofferdam sheeting where the sheeting is you have spoken of. Will you kindly indicate with the letter “V” the place you wish to indicate?

A.—Yes.

Q.—You have marked with a cross the point on the coffer-

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

dam where you stated the sheeting was on the "V" shape, on D-28, is that correct?

A.—Yes.

10 Q.—In your opinion, what effect, if any, would the sheeting meeting in that way, have on the cofferdam, as regard being water tight?

A.—It would show the sheeting was open at the bottom.

Q.—After the sheeting was completed, what was the next operation in connection with the cofferdam?

A.—Toe filling.

Q.—Where was that toe fill started from?

A.—It started from the north shore.

Q.—They began to dump material in the river on the north shore?

20 A.—Yes.

Q.—Did you see them doing it?

A.—Yes.

Q.—What did they dump in first?

A.—There was a pile of rock, spoil.

Q.—How did they get that out of the river to dump it?

A.—They put down cars and rails, and they had an end dump, and would dump over the end and extend their track down as they went.

30 Q.—How far into the river from the north shore would you say this was rock?

A.—The crest of the dam was about the end of the abutment. The toe would be quite a piece in — this rock fill I speak of.

Q.—What size rock would this be?

A.—It was not any bigger than one man could handle. It was loaded by hand.

Q.—For how long did they continue this dumping of the rock.

40 A.—As far as I can tell you, two days.

Q.—And after that, what did they dump in the toe fill?

A.—Then they brought toe fill from both shores. They brought it from the south shore and from a point on the north shore.

Q.—What have you to say as to the suitability of this broken rock as toe fill?

A.—I do not think it was suitable at all.

Q.—Why?

A.—It was porous.

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

Q.—How far would this spoil bank of rock that was on the north shore be above the cofferdam?

A.—I cannot say exactly because all that spoil bank did not come from the excavation. There was some came from the excavation of the by-pass. As I remember the whole bank extended  
10 over a hundred feet from the original line.

Q.—Where would the lower end of this rock pile be with relation to the upper face of the cofferdam? What distance would there be between the sheeting where it came to the shore, and this rock dump?

A.—That would be right adjacent.

Q.—And then, it extended from there up along the bank, say about a hundred feet?

A.—I guess so, one hundred feet.

Q.—In your opinion, did the presence of this rock pile at that place adjacent to the cofferdam, have any effect on the cofferdam?  
20 dam?

A.—Well, it was not water-tight there.

Q.—It was not water-tight where? At the north end?

A.—This fill permitted the water approaching and getting in the sheeting that way. It allowed the water to get in the sheeting.

Q.—I understand it was about this place that steel sheet piling, that has been referred to, was out in place?  
30

A.—Yes.

Q.—When was this work started? I understand it is shown on P-38?

A.—Yes. It is on here.

Q.—It is also on P-37, location?

A.—Can you give me the approximate date of that?

Q.—I understand it was early in November. I think it was about November 4th?

A.—Yes, November 4th.

Q.—And they started that from which end?  
40

A.—They started from the south end, out in the river.

Q.—They started in the river at the point where it is indicated on P-37?

A.—Yes.

Q.—And where did they carry it to?

A.—The steel sheeting was carried to a point about fifteen feet from the north abutment.

Q.—The steel sheet piling did not extend in to the north shore?

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

A.—No.

Q.—But from the place it stopped to the north shore, did they drive any extra sheeting there?

A.—They filled it up with timber sheeting.

10 Q.—Did they in any way fit this timber sheeting to the bottom?

A.—Well, they made a good ceiling to the ledge.

Q.—How did they do that?

A.—It had been excavated. The ledge was visible right there.

Q.—You heard Mr. Steele give his evidence. There was reference made to a shaft. There was excavation carried on in the shaft. Would that be about that place?

A.—Yes, that is the location.

20 Q.—And so they were able then, by reason of this shaft to fit this wood sheeting to the bottom, is that correct?

A.—Yes.

Q.—The other day Mr. O'Shea produced a plan of this steel sheet piling as exhibit D-9, and in connection with it, he mentioned your name as having something to do with it. Will you please tell us just what you had to do, if anything, with this exhibit D-9?

30 A.—I made this, with the exception that one of the draughtsmen at Buckingham did this lettering. I did not letter it.

Q.—What did you take it from? You did not survey this yourself?

A.—I got this from the Quebec Streams drafting.

Q.—The Quebec Streams Commission whose officers will be examined later made a survey of this steel sheet piling?

A.—Yes.

Q.—And have made a plan?

A.—Yes.

40 Q.—And you have simply traced it on to this exhibit D-9?

A.—Yes, and these points here I got from B-2444.

Q.—The two points where elevations are marked as indicated on this plan, you took from B-2444?

A.—Yes.

Q.—The two points where these elevations are given on D-9, were not at the line of the steel sheet piling as Mr. O'Shea has explained, they were down in the river?

A.—Yes.

Q.—In connection with exhibit D-10, which is a plan show-

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

ing various information as regards the river bed principally, would you tell us what part, if any, you had in the preparation of that exhibit?

10 A.—I did the field work in connection with this sheet piling here, and I took all these notes.

Q.—This plan D-10, shows, among other things, the location of Mr. Stratton's survey. Did you transfer this from B-2444?

A.—Yes.

Q.—It also shows the actual elevations all along, as found in the line of the dam?

A.—Yes.

Q.—Where was that obtained from?

A.—From my own notes.

20 Q.—And I understand you did that work in connection with Mr. Reiffenstein and Mr. Chagnon, the three of you together?

A.—Yes.

Q.—As far as you know, there was not any dispute about that?

A.—No.

Q.—It also shows the figures of the elevations as supposed to have been discovered by electrical investigation?

A.—Yes.

30 Q.—From what is that taken? Did you transfer this to this plan exhibit D-10?

A.—When they made the investigations I located them. I did the locating of those points.

Q.—Then, the position of the cofferdam cribs, where is that taken from?

A.—That is taken from the Quebec Streams commission's drawing.

Q.—And the position of the steel sheet piling also?

A.—Yes. I surveyed that myself.

40 Q.—When the area between the upper and lower cofferdam was unwatered, what was found there?

A.—An over-burden composed of silted material, rock from the excavation; some natural boulders, some gravel and some clay.

Q.—What have you to say as regards the depth of this over-burden?

A.—Do you want the maximum depth?

Q.—The maximum, minimum, or average. It appears in the first place from this exhibit D-10. What you are going

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

to state now, is it from your own observation or from calculating from this plan D-10, as far as the depth of the over-burden is concerned?

A.—From my field notes.

10 Q.—You made a survey you stated with Mr. Reiffenstein and Mr. Chagnon?

A.—Yes.

Q.—What have you to say as regards the depth of this over-burden?

A.—In what respect?

Q.—Was it evenly distributed over the whole bottom or did it vary?

A.—It varied.

Q.—What would it be?

20 A.—It varied from 11 feet to one foot.

Q.—When this toe filling was going on (not the rock you have mentioned, but the earth toe filling above the cofferdam) there was still water, of course; it had not been unwatered; there was still water below the cofferdam. Did you remark anything that would help you to locate the leakage?

A.—You could see the water coming in. It was quite evident.

Q.—When you say “it” what do you mean?

A.—The water coming in.

30 Q.—From an observation of the surface, was it possible to locate these leaks?

A.—Well, when they were toe filling, it was marked, the water would be cloudy from the toe fill.

Q.—Some of this toe filling would come through and you could see it in the water below, is that what you mean?

A.—Yes.

Q.—At what part of the river was this toe fill leaking through like that?

A.—Oh, around the crib, what they call crib No. 3.

40 Q.—When the cofferdam was removed, how did they do it?

A.—They dredged it with the orange peel, and blasted it out.

Q.—You described a moment ago the nature of the over-burden. What have you to say as regards the manner in which it was fastened together. Was it in anyway cemented together, or loose, or what?

A.—Well, it was taken out. It was frozen when I saw it taken out. It was very compact. It was in winter weather.



*JOHN C. McINTOSH (for Defendant) Examination in chief.*

Q.—I understand that after the toe filling had been placed, it was found there must have been leaks somewhere, that a diver was employed by the contractor in an endeavor to locate the leak. Is that to your knowledge?

10

A.—Yes.

Q.—Did you observe this diver there yourself?

A.—Yes.

Q.—Working?

A.—Yes.

Q.—Did you have any conversation with the diver while he was at work?

A.—Yes.

Q.—Did you question him about the leaks he was looking for?

20

A.—Yes.

Q.—What information did you gather from him?

A.—He told me that he had investigated this spoil bank at the north end of the island, and that he had found the whole bank in the south side was exposed in large boulders.

Q.—On the south side?

A.—On the south side of the spoil bank.

Q.—That would be the side near the cofferdam?

A.—Yes, from the cofferdam up.

Q.—And he had found rock there?

30

A.—Yes.

Q.—In the bottom of the river?

A.—Along the face of that bank. I do not say it was the bottom of the river.

Q.—Did they do something in connection with the leak?

A.—Yes, they spread tarpaulins ; they tried to put tarpaulins over this exposed rock and weight them down at the back.

Q.—That is, placed tarpaulins under water at the place where the toe filling began?

40

A.—It was upstream a piece from there.

Q.—Upstream, a piece from the cofferdam?

A.—Yes. He just made the one attempt. He did not have much success ; he abandoned it.

Q.—With regard to the leaks that you have said were visible. That would be on the north shore of the river?

A.—The north shore of the river. The south shore is the spoil bank.

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

Q.—You said you noticed the leaks being visible. Were you able to tell from your observation where this leakage was with relation to the cofferdam?

A.—It was at the north end.

10 Q.—I mean with relation to the level of the cofferdam, the part where it might be coming through, near the top or bottom, or where?

A.—Do you mean from underneath or from the side?

Q.—Yes, tell us.

A.—It came along the side. I could not see it. It was on the top of the water. It rushed in around the crib No. 2. It was quite evident it came in on that spoil bank, because that flooded it, and it collected from the flume ; the flume came in 16 or 18 inches deep, 3 feet 6 inches wide.

20 Q.—Coming now to the fourth claim, of the cofferdam at the lower end of the by-pass. Have you the date when that commenced?

A.—Yes, April 8th.

Q.—And when was it completed ? How many days did it take to complete it?

A.—It began April 8th and was completed April 16th.

Q.—When was it removed?

A.—June 15th.

30 Q.—What is the elevation of the grade, as you call it where the excavation was to go at the lower end of the by-pass?

A.—Elevation 96.

Q.—Do you remember when this seam of rock was discovered where the deep hole was afterwards excavated?

A.—Yes.

Q.—Whereabouts was this, and at what section?

A.—It was in the section of the Stoney Gates, intersected by the by-pass.

Q.—When was it discovered?

A.—On May 17th.

40 Q.—At the time this cofferdam was commenced on April 8th, was the contractor ready to commence his concreting operations in this Stoney Gate section?

A.—No.

Q.—When did he actually start concreting work there?

A.—May 18th.

Q.—There is a small claim in connection with handling and trimming of the excavated rock. Was it you who indicated to the contractor the place where he was to dump this spoil rock?

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

A.—Yes, I marked the contour ; contour 130 above which he was not to place the spoil.

Q.—Just where was it he was to place this ? Was it above the dump ?

10 A.—Yes, north of the non-spilling section. He was to keep a certain clearance from the approach of the water to the Stoney Gates.

Q.—Was there sufficient room on the area available to dump this rock without going above elevation 130, even with the increased quantities of the rock excavation ?

A.—Yes.

Q.—With regard to the Apron that has been mentioned that was put in the by-pass, do you know when that order was given ?

20 A.—The date of the extra order, March 13th.

Q.—What was that extra order for ?

A.—It was to construct the cofferdam.

Q.—Was it for this Apron ?

A.—Yes.

Q.—When was the Apron finished ?

A.—The concrete was finished on March 22nd.

Q.—The extra work was ordered on March 13th and the work finished March 22nd ?

A.—Yes.

30 Q.—Up to what date in the spring of 1930 were the winter roads navigable ?

A.—The 2nd of April.

Q.—How are you able to fix that ? Do you know when the last trip was made over the winter roads ?

A.—I know of the last successful trip without difficulty.

Q.—When was that ?

A.—April 2nd.

Q.—How many cubic yards of concrete were there in this Apron ?

40 A.—145.

Q.—Which would require how many bags of cement. Could you figure that out ?

A.—According to the concrete record, it was 1320 bags. That is what was actually put in.

Q.—In weight how much would that be ? How many tons ?

A.—Seven and one half pounds to a bag—58 tons.

Q.—In your opinion, was there time between the 13th

*JOHN C. McINTOSH (for Defendant) Examination in chief.*

March and the 2nd of April to bring in that quantity of concrete?

A.—Yes.

10 And it now being 12.30 the further testimony of this witness was adjourned until 2.30 P. M.

---

March 6th., 1933. 2 o'clock P. M.

John C. McIntosh reappeared and continued his evidence as follows:

20 By Mr. Ayles:—

Q.—Mr. McIntosh, can you give me the date on which the Plaintiff Company began to ship out to the plant, when the job was nearing its completion?

A.—I have a note January 21st. about loading equipment; I have also a note January 28th., 1930.

Q.—January 21st. would be the first date, would it?

A.—The note of January 21st is “loading pumps and equipment on sleighs, to be sent out.” On January 28th “sent out tractor loaded with equipment for Gracefield.”

30 Q.—You told us the winter roads were good up to April 2nd?

A.—That was the last uneventful trip.

Q.—Did you make a list of the plant and equipment still on hand at the end of March?

A.—Yes.

Q.—Have you got that in your diary some place?

A.—“Contractors' equipment remaining on dam site, April 40 1st., 1930”.

Q.—Without reading all the details, unless my learned friend is interested in that, did you make an estimate of the total number of tons of material that remained to be shipped out after the 1st of April?

A.—Yes.

Q.—How many tons did you estimate?

A.—135 tons.

Q.—Can you tell me what part of that was actually used after the 1st of April?

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

A.—You mean that had remained on the site to complete the work?

Q.—Yes. You say there were 135 tons approximately on the job the 1st of April?

10 A.—Yes.

Q.—Was all of that used after that date?

A.—No, some of it was dispensable.

Q.—What number of tons was not actually used up after that date, in your estimate?

A.—I think about fifteen tons.

Q.—The remainder was actually used after that time?

A.—Yes.

20 Cross-examined by Mr. Forsyth, K. C., of Counsel for Plaintiff:—

Q.—Why did you make that list of the items of equipment?

A.—Because we knew it would not be sent out by the winter roads. It would have to be sent out by Buckingham, a more expensive proposition.

Q.—You were not going to pay for it?

A.—It was part of my work.

30 Q.—Did you make any list of equipment they brought on the job?

A.—No.

Q.—But you made a list of the equipment that went off the job?

A.—Yes.

Q.—Will you tell me why you made that list?

A.—In case there was a claim made about the equipment on the job.

Q.—You were looking for a claim at that time?

A.—Yes.

40 Q.—Is this the book you made the list in?

A.—Yes.

Q.—Were you on this job after this list was made?

A.—Yes.

Q.—What was the date on which the list was made?

A.—April 1st.

Q.—April 1st., 1930? You are sure you made the list on the date April 1st., are you?

A.—I will have to check up on that. The only thing I have is what is written here : “Contractors’ equipment remaining on dam site April 1st.”

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

Q.—When did you make that list?

A.—I cannot tell you now.

Q.—Is there any significance in this, that two pages after the list stated what was left on April 1st, you have an entry of  
10 March 12th, 1930 ; the next paragraph, 5, again, March 13th. These entries occur at the lower side again on the 1st of April?

A.—Yes. When I write up my daily report I generally find it is complete. You will find an elaboration on various pages in the back of the book.

Q.—I will refer back three pages ahead of that and ask you if it is not dated Wednesday June 4th., 1930. It refers to installing electrical equipment?

A.—Yes. I try to write it up daily.

Q.—Yet we find on three pages a list of equipment dated  
20 April 1st., 1930. Am I right in saying three pages after the entry June 10th., you will find a list of entries taken the 1st of April?

A.—It is the plant on the job on the 1st of April. That was made up of equipment I saw piled up.

Mr. Geoffrion, K. C.:—I object to that.

By Mr. Forsyth:—

Q.—If you will listen to me and not to my learned friend  
30 for a moment, will you tell me whether it is not true that three pages after the entries dated June 10th we find in your book a list of equipment, purporting to be taken on the 1st day of April?

A.—Yes.

Q.—And after the entry of the 1st day of April we find entries referring back to the 10th of March?

A.—Yes.

Q.—Did you carefully refuse to answer me when I asked  
40 you when you took that? Did you carefully refuse to say when you took that list?

A.—I cannot answer that. It depends on what you mean by “carefully”. You are getting away from the question.

Q.—I am not getting away from anything. Did you carefully refuse to tell me? You carefully avoided telling me the date on which you took that. I want to know whether you avoided answering that question?

A.—I cannot tell that.

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

- it ?  
Q.—Was there any reason why you should be careful about  
A.—No.  
10 Q.—You said there was no reason why you should care-  
fully avoid telling me?  
A.—Did I say that?  
Q.—You said that alright. You stick to it now.  
A.—Yes, I cannot repeat word for word what I said five  
minutes ago. That was what I intended to imply.  
Q.—You cannot repeat what you said five minutes ago?  
A.—I cannot be sure of it.  
Q.—You have a fair memory, I suppose?  
A.—Yes.  
20 Q.—Now then, can you remember when you took that  
list ?  
A.—No.  
Q.—So it might have been taken any time after the 10th  
of June?  
A.—No.  
Q.—Why not?  
A.—It was taken on or before the 1st of April.  
Q.—What would be the good taking it before the 1st of  
April?  
30 A.—Because they had stuff packed up, crated, to be sent  
out.  
Q.—And you took that list, did you?  
A.—Yes.  
Q.—Your list purports to be on the 1st of April?  
A.—Yes.  
Q.—Where is it said it was crated up to be taken out?  
A.—That is all I have.  
Q.—Where did you put the list you made of the stuff to  
be taken out ? Is this the original ? Is this the original entry of  
40 the list taken on the 1st of April?  
A.—It is the list taken in this book.  
Q.—Do you remember when you wrote that?  
A.—No.  
Q.—Would you turn forward two pages in that book.  
What is the first date you see there?  
A.—March 12th.  
Q.—Would you say that was written before or after the  
reference to the list of equipment?  
A.—I cannot say that.

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

- Q.—Would you turn backward now to the next entries before your list of equipment. What is the first date there?  
A.—June 4th.
- 10 Q.—Were the entries which refer to March written before the entries of June 20th?  
A.—I could not say.
- Q.—Was the entry of April taken before the entry referring to the list of plant as at April?  
A.—I don't know.
- Q.—You don't know what you copied it from?  
A.—No; some memorandum I had.
- Q.—And the different entries of March represent the by-pass and coffer-dam?  
A.—That is the dam built the side of the apron.
- 20 Q.—Is this your diary with reference to these facts?  
A.—No. That is a sort of résumé of the whole thing.
- Q.—Prepared for what purpose?  
A.—To elaborate the points. I elaborate some of these at the back of the book.
- Q.—Why did you elaborate them?  
A.—To refresh my memory.
- Q.—You are refreshing your memory by elaborating the points for the purpose of testifying in a law suit?  
A.—For whatever reason it may be of use.
- 30 Q.—Did you elaborate anything about hardpan?  
A.—No.
- Q.—Did you elaborate anything about the logs?  
A.—Not in that book.
- Q.—But you elaborated about the cofferdam in the lower end of the by-pass?  
A.—Because it refers to entries in the book.
- Q.—Where did you get the entries on which you elaborated? In the front of the book?  
A.—Yes.
- 40 Q.—Is it not a fact that the conclusion in your diary with reference to the work at Cedars Rapids is covered by the entry of Tuesday, June 3rd., 1930?  
A.—June 10th.
- Q.—June 10th?  
A.—Yes.
- Q.—You carried this book as a diary of your day to day observations on the job, taken on June 10th., 1930?  
A.—Yes.



*JOHN C. McINTOSH (for Defendant) Cross-examination.*

Q.—At some time or other you put into your book reference to a list of equipment on the job up to April 1st. You elaborate that with a reference to the cofferdam at the by-pass?

A.—Yes.

10 Q.—Can you tell us how long after June 10th that was?

A.—I did not see the books after the 12th.

Q.—You suggest the entries you put in at the end of the book about the cofferdam and about the list of equipment were made by reference to the books at the Company's office?

A.—Yes.

Q.—Can you tell us why you were elaborating about the cofferdam?

20 A.—Because I knew it was going to enter into this argument. Mr. Bishop objected at the time about it. I knew there was going to be trouble.

Q.—About having the work late in the year?

A.—About having to do it at all.

Q.—About the coffer dam on the lower end of the by-pass?

A.—Yes.

Q.—He made such a terrible time about it you felt you ought to elaborate on it before June. Had you any reason to believe before the 12th day of June 1930 Mr. Bishop was going to make any claim at all in respect of the coffer dam in the lower end of the by-pass?

30 A.—Yes.

Q.—What reason did you have?

A.—I heard him talking ; Mr. Lindskog and myself.

Q.—Who else?

A.—I heard the general conversation. We were all there down in the by-pass.

Q.—What did he say ?

A.—I cannot recall that now.

Q.—You must recall something about it.

40 A.—No, I don't recall the general conversation.

Q.—You prepared a list of plant for some reason?

A.—We heard him complaining about that. I heard the general trend of things.

Q.—Did you hear him complaining about the list of the plant he had on the job and that he could not take out?

A.—I cannot say definitely, but it is the impression I had, I better get a list in case it would be useful later on.

Q.—When did you get that impression?

A.—All the time, as the job had been going on.

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

Q.—You thought, in November, 1928, you better have that list of the plant?

A.—That is not a fair question.

Q.—When did it come up?

10 A.—In the winter of 1930.

Q.—You realize, Mr. McIntosh, that you said you elaborated on this coffer dam in the lower end of the by-pass and you put this list of the plant taken as at April 1st in the back of the diary sometime before you had completed your regular diary entries?

A.—Yes.

Q.—And you realize, looking through your diary from the first page until the entry of June 12th, that there is no reference to Mr. Bishop's complaint, in connection with the entry  
20 about the lower end of the by-pass. Perhaps you say there is?

A.—There might be. I have to look back and see.

Q.—Have you any recollection of making any entry about Mr. Bishop's complaint?

A.—None that I recall at the moment.

Q.—You recall no entry in your Diary, made from day to day, in your reports, with reference to that plant being left there?

A.—I do not recall.

Q.—But you had a very definite impression in the winter  
30 of 1929 and 1930 you better get these things elaborated?

A.—Yes.

Q.—You have made some remarks with reference to the coffer dam and the spoil pile. I want to get from you a frank statement as to what you mean by these remarks. Do I understand you to mean that the existence of the spoil pile was responsible for the leakage through the coffer dam?

A.—It is my opinion.

Q.—Will you take a piece of red pencil and outline for  
40 me on plan 37 where the spoil pile was.

A.—I am doing it from memory.

Q.—Is there any way you can do it more definitely?

A.—Unless I had a plan.

Q.—What plan will give you a start?

A.—No plan will give me a start.

(Witness draws a line which runs from the point B in a general northerly direction and then west almost straight up the river to R). I don't know exactly.

Q.—That is a general idea?

A.—Yes.

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

- Q.—Is that the south bank of the spoil pile or the north bank of it?
- A.—That is the south bank of the spoil pile.
- Q.—The south bank of the spoil pile?
- 10 A.—Yes.
- Q.—As a matter of fact, the spoil pile did not lie in front of crib No. 1, No. 3 or No. 2?
- A.—No.
- Q.—So that if there was any leakage, we will say through the middle of No. 1, you could hardly attribute it to the existence of the spoil pile, could you?
- A.—Yes.
- Q.—Why?
- A.—There is nothing to prevent it coming down along the
- 20 sheeting, to come down there. In fact, it did ; I saw it.
- Q.—I think we can say if I were to draw a line from R direct to the point B, that I would still have to the south of the line R-B, open water, wouldn't I?
- A.—No. He shows it all open.
- Q.—I am speaking of the river channel.
- A.—Yes. There may be some water.
- Q.—But the river channel would be south of line R-B, underneath that?
- A.—Yes.
- 30 Q.—Will you look along the line R and say if it would not be porous material?
- A.—Yes, in front of crib No. 1 it would afford an opportunity of the water getting down in that position.
- Q.—The water could get down in that position anyway?
- A.—I suppose it would. It might go down to the toe fill.
- Q.—If the toe fill ran up to the line R-B and over it, do you dispute the accuracy of the drawing?
- A.—I have not checked it ; I don't know.
- 40 Q.—So far as any question of leakage under the actual sheeting or under the actual cribs, if the cribs were on a ledge and sheeted properly the existence of the spoil pile would not make much difference?
- A.—If it was well sheeted and well sealed, but I don't think it would be at that time.
- Q.—Unless it were situated on a ledge and sheeted in toe fill, even then if you had these cribs on a ledge and could sheet

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

them on a ledge and toe fill them, the existence of the spoil pile would not do much damage, would it?

A.—No.

10 Q.—Referring to your experience, what operations have you had charge of before this one which involved coffer damming and unwatering of streams?

A.—Nothing involving unwatering of streams.

Q.—You had never seen that operation before?

A.—I had seen one coffer dam dried out. I was only a rod man there.

Q.—Where was that?

A.—Temiskaming.

Q.—What was that?

A.—Excavating at the power house.

20 Q.—There is not any doubt there was a considerable amount of over-burden over-lying the river in this point?

A.—When it was unwatered?

Q.—Yes?

A.—We have the actual record of it.

Q.—Is that what you said this morning, that it ran from eleven feet maximum to 1 foot?

A.—Yes, to a foot.

30 Q.—I would like you to look at the photograph which is purported to have been taken by Mr. Dubreuil. He has a picture of the location of the dam. Is that the crib structure which we see in the background of the picture? Is that the north abutment?

A.—Yes.

Q.—Just to the left hand side of the abutment, as it faces us, is there bare rock exposed?

A.—Yes.

Q.—And the spoil pile line lies to the north of the bare rock exposed?

A.—Yes.

40 Q.—I would like you to produce this photograph as Exhibit P-105?

A.—Yes, I elaborated on that photograph. Will I elaborate on that?

Q.—If you feel you ought to, go ahead.

A.—I said it was toe filled from the north shore. This photograph was taken before that time.

Q.—I am not saying anything about that. I am saying that that does show that the south line of the spoil pile is north of solid rock exposed?

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

A.—Yes, at this date.

Q.—Perhaps you would like to say it changed at some later date and the spoil pile came further south. How far south did it go?

10 A.—They brought it down as far as the abutment.

Q.—Is this from the diary or from the elaboration?

A.—It is from the synopsis. I have taken dates.

Q.—You are reading from a book. We want to know when it was made.

A.—At the time it was dated.

Q.—Is this the diary or the elaboration?

A.—No, it is the diary, placing toe fill from island, with abutment in front of cofferdam, August 5th.

20 Q.—Did the south line of the spoil pile go any further south than shown in the photograph P-105?

A.—The spoil pile was moved.

Q.—South?

A.—Yes, along the abutment.

Q.—You refer to some rock dumped in?

A.—I am saying what is bare ledge there evidently was not bare ledge. You can call it spoil pile as well as toe fill.

Q.—Where is the book with the elaborations in it?

A.—The one about the coffer dam?

30 Q.—Yes.

A.—Here it is.

Q.—Will you produce this as Exhibit P-106?

A.—Yes.

Q.—Book No. 5?

A.—Yes.

Q.—Was it from the north abutment that the sheeting was put in in the manner you described this morning as being pretty good? In your evidence this morning, Mr. McIntosh, you indicated at some point or other the sheeting seemed to be well done?

40 A.—Did I?

Q.—Perhaps you did not. I thought you did.

A.—I know I intimated a point where I thought it had been well done.

Q.—Did you intimate any other point where it was well done?

A.—I cannot recollect.

Q.—Do you remember Mr. Aylen referring you to some evidence of Mr. Steel this morning?

A.—In connection with the caisson.

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

Q.—In connection with the sheeting trouble. Do you remember him referring to the evidence of Mr. Steel in connection with the driving of a shaft?

A.—I don't remember. There was something. I am not  
10 going to say now I remember the exact thing.

From the end of the steel sheeting into the abutment there was something in connection with a shaft.

Q.—It was from the north end. Is it not a fact you said that they were able to fit the sheeting to the bottom from the north abutment out for some distance?

A.—Fifteen feet.

Q.—Is that the point where the spoil pile, so called, was  
20 latterly extended?

A.—No, the spoil pile was put before that.

Q.—Do you say you were referring only to the steel sheet piling?

A.—No, I was referring to the timber, from the end of the steel sheet piling to the coffer dam.

Q.—And they were referring to some wooden sheeting that was down there?

A.—Timber sheeting.

Q.—It was done well and fitted to the bottom?

A.—Yes.  
30

Q.—That is at the point where the north abutment meets the ledge?

A.—Yes, it is beside the north abutment.

Q.—The ledge is exposed. That is the point. That is where the photograph P-105 shows the spoil pile slightly north of the exposed ledge?

A.—Yes.

Q.—What is the way in which we should proceed to coffer dam a stream, Mr. Mc.Intosh?  
40

A.—I am no authority on coffer damming.

Q.—What?

A.—I am no authority on coffer damming. I will give you my opinion, what I think.

Q.—Then you don't pretend to have any special experience in coffer dams?

A.—No.

Q.—When you talk about a diver not being used, you never saw a diver used in a coffer dam?

A.—The diver was not there.

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

Q.—You never saw a diver used in making a coffer dam?

A.—At Masson, yes.

Q.—I am talking since?

10 A.—Yes, I saw another coffer dam at Windsor, Ontario, once, and they used a diver there.

Q.—When was that?

A.—That was in 1923.

Q.—What were you doing around there?

A.—I was summer holidaying and making a little money.

Q.—What was going on there?

A.—Building a dock.

Q.—They were not coffer damming a stream?

20 A.—It was sort of box coffer dam out into the river. It was just a dry site.

Q.—There were no logs there?

A.—There were a lot of piles.

Q.—Were they driving logs in the river then?

A.—No.

Q.—They were piles that had been driven in and they were not driving?

A.—Yes.

Q.—There was no particular current problem there, was there?

A.—No, I saw a diver used there.

30 Q.—You never saw anybody use a diver in circumstances such as obtained at Cedar Rapids, in your life?

A.—No.

Q.—Did you ever hear of people taking soundings along the bottom of a river with a view to placing their sheeting correctly and shaping it to the surface of the river bed?

A.—Nothing any more than I have heard in the room here.

Q.—The only time you heard about that was in here?

40 A.—No, I heard lots about the divers the time the coffer-dam was being built. I heard Mr. Lindskog say it and I heard Mr. O'Shea say it, and eventually a diver came there.

Q.—Did he dive?

A.—Yes.

Q.—They did use a diver?

A.—He did not do any good.

Q.—Mr. Lindskog seems to be right about it?

A.—The source of the trouble was not accessible to the diver.

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

- Q.—Then Mr. Lindskog was right, wasn't he?  
A.—No.  
Q.—What should he have done with the diver?  
A.—I am starting to express an opinion.  
10 Q.—If you are going to express an opinion, tell me the experience on which you base it and express it?  
A.—It is not based on any experience at all.  
Q.—Well, don't express it. There was another question that you said when they put — let us get through this — when crib No. 1 was put in, as floated down, it was left anchored with cables before it was filled?  
A.—Yes.  
Q.—Have you any criticism to make about that?  
A.—Yes.  
20 Q.—What?  
A.—They had to hold it there some way.  
Q.—Can you suggest some other way it should have been done?  
A.—No.  
Q.—After it was put in position a boom was put up to keep the logs away from it?  
A.—Yes.  
Q.—When crib No. 2 was placed they anchored that with their cables?  
30 A.—Yes.  
Q.—You would not see anything wrong with them doing that ?  
A.—No.  
Q.—Was the sheer boom then placed further apart?  
A.—No.  
Q.—There were two apertures left, of sufficient width to pass the logs through?  
A.—Yes.  
40 Q.—There were two apertures where cribs Nos. 4 and 5 now show ?  
A.—Yes.  
Q.—Of sufficient width and with sufficient depth of water to pass the logs through?  
A.—Yes.  
Q.—You told us logs were held back when crib No. 4 was placed ?  
A.—Yes.  
Q.—Crib No. 4 was the closing crib?



*JOHN C. McINTOSH (for Defendant) Cross-examination.*

A.—Yes. With No. 4 going into this there was no space left in the river channel through which logs could go.

Q.—You said there were fins placed on crib No. 4 when it was being sent down in that place. I suppose after cribs 1 & 4 had been in position, the speed, the velocity of the current in the place now occupied by crib No. 4 increased considerably?

A.—I presume so.

Q.—It is so.

A.—It is just an opinion. Yes, it increased, sure.

Q.—That would dictate the reasonableness of using some extra holding device to catch crib No. 4, to insure it not going down stream?

A.—Yes.

Q.—It is true, is it not, that on the evening or during the night of the day on which crib No. 3 was placed there was a very large quantity of logs let down the river?

A.—Yes.

Q.—And that this large quantity of logs jammed in front of the cribs of the coffer dam?

A.—Yes.

Q.—I understood you to say this morning that there was no visible plane or supports between the overlying material in the by-pass excavation and the material you described as earth, gravel and boulders. I see here, in my opinion, it was earth, gravel and boulders.

A.—That is the whole material in the excavation.

Q.—What was the composition of the upper, lower or upper stratum? Sandy loam?

A.—Yes.

Q.—Under that you found gravel and boulders?

A.—Yes. There were boulders in the sandy loam too.

Q.—Were those boulders and gravel cemented together?

A.—No, in except one place I saw it cemented.

Q.—Are you stating now it was not cemented anywhere else?

A.—In my opinion, I looked at it.

Q.—Was it stuff you could easily move with a pick or a trowel?

A.—I never saw a trowel at it, but a pick took it down?

Q.—Very easy?

A.—Not as easy as sand, but they took it out with a pick.

Q.—Can you tell me why, if this material was easy picking, why an orange peel bucket would not go into that at all?

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

A.—It would not go into the points where the points were in bad shape, but it went in after the points were replaced.

Q.—After they started to use dynamite?

A.—Not after they started to use dynamite.

10 Q.—When would you say that happened?

A.—I think the 12th of December. That is the day they used the dynamite, for the boulders only.

Q.—On the 12th December what were they doing? Drilling the boulders?

A.—Blasting the boulders.

Q.—They did not do anything else with the dynamite then?

A.—No.

Q.—Are you positive of that?

A.—Very sure.

20 Q.—Outside of the cut were they shooting boulders?

A.—They were, all over the cut.

Q.—What size boulders were they?

A.—I cannot say that. They were all sizes. They ran up to a yard bigger than what a man cannot lift.

Q.—Would they be shooting the ones that were a yard?

A.—Yes.

Q.—And half a yard?

A.—Yes.

30 Q.—One quarter?

A.—I suppose so. I cannot say.

Q.—Did you put this in your estimate as rock in the by-pass?

A.—Over half a yard?

Q.—Yes.

A.—No.

Q.—You are not referring to the dam site?

A.—No, I am referring to the by-pass.

Q.—And they were all over the by-pass?

40 A.—Yes, pretty much.

Q.—Now then, when Mr. Mailhiot was there, the professor, do you say he examined only one spot?

A.—No, I saw a spot where he indicated boulder clay was one spot.

Q.—Did he not examine it generally?

A.—He came to examine the quarry and the dam site and he was only there about two hours.

Q.—How long was he in the by-pass?

A.—Half an hour.

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

Q.—You don't mean to tell me he only went to that one spot when he was in the by-pass half an hour?

A.—He may have gone around.

Q.—Did you go with him?

10 A.—I was right behind him.

Q.—Did you hear him make any specific remark about the material?

A.—Yes.

Q.—What did he say?

A.—Boulder clay.

Q.—Anything else?

A.—Not that I remember. I was interested in the analysis of the material and it stuck in my mind. He called it boulder clay.

20 Q.—Did you hear him make any other remark about this material?

A.—No.

Q.—But you were interested?

A.—Yes.

Q.—You showed us an exhibit which you had prepared, D-33. The purpose of Exhibit D-33 was to show the time lost, due to the break-down of the derrick, the delays, time lost that should have been employed in other useful work.

A.—Digging.

30 Q.—How much digging was there left to be done in the by-pass on the 30th day of January, 1929?

A.—I cannot say now.

Q.—Why did you stop until the 30th day of January?

A.—Because after that they had satisfactory operations with the machine.

Q.—What was left for the derrick to do there after the 30th of January?

A.—Nothing.

Q.—That is when you stopped?

40 A.—After that there was nothing for me to show.

Q.—There was not any digging left for the derrick to do after the 30th of January in the by-pass ?

A.—No.

Q.—We see they did on the 30th or 31st of January finish in a day and a half?

A.—Yes.

Q.—After the 10th of January you show a space of twenty days as lost time of the derrick?

A.—Yes.

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

- Q.—But there was only a day and a half's work left to be done on the by-pass at that time?
- A.—That day and a half was not done on the by-pass.
- Q.—Will you swear that it was not done there?
- 10 A.—It was done on the by-pass section, on the Stoney-Gates.
- Q.—I am asking about the 10th of January. There was only a day and a half's work to do in the by-pass?
- A.—In the Stoney-Gates of the by-pass there was lots of work to do.
- Q.—You told me that this day and a half, the 30th and 31st of January was done on the Stoney-Gates section?
- A.—Yes. They proceeded until they completed it and they moved on up the cut.
- 20 Q.—What was he going with the derrick?
- A.—He was digging and peeling.
- Q.—For how long?
- A.—They continued until they had it complete, what they could do.
- Q.—I suggest to you that at the 10th of January and from the 10th of January to the 30th of January there was not any particularly useful work for that derrick and peel, that the derrick and peel could do right then?
- A.—Yes, there was, right there in the by-pass section,
- 30 Stoney-Gates.
- Q.—What were they doing with that section, Stoney-Gates?
- A.—Waiting for the derrick. It was broken down. The foot-block was broken down.
- Q.—What kind of a block was that?
- A.—Metal ; iron.
- Q.—How many days' work did they have for the derrick after that?
- A.—I cannot say.
- 40 Q.—Don't you think it may have fairer to set up all the work that was done with the derrick and peel to show a comparison of the time lost?
- A.—I could have done that when the derrick performed satisfactorily. I was not interested to show when it worked.
- Q.—What did they do to this foot-block under the mast ? How was it repaired?
- A.—That was in January?
- Q.—Yes?
- A.—Do you want the actual details?

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

Q.—Provided they are not too detailed.

A.—They had another machine at Gracefield. First, they tried to get the new part. They got a piece from the derrick at Gracefield eventually and they fitted it up.

10 Q.—It worked alright?

A.—As far as I remember, yes.

Q.—After the 31st of January the machine worked alright?

A.—Alright.

Q.—It worked better than it had before?

A.—Yes.

Q.—With the part that did not fit it?

A.—There were adjustments made so it would fit.

20 Q.—Have you any idea what caused the fracture of the leaf in the orange peel ?

A.—Yes, banging on that hard stuff.

Q.—From the 20th December on, is it not a fact that dynamite was used continuously in the excavation in the by-pass?

A.—Yes.

Q.—And not for the purpose of shooting boulders only?

A.—No.

Q.—When you left on the 20th December there was not any frost which appreciably affected the excavation?

A.—No.

30 Q.—On what face were the operators working?

A.—With the clam?

Q.—Yes?

A.—The derrick with the last of the operations was on there.

Q.—From the 20th December on?

A.—From the 15th of December until they broke down on the 19th. It did not operate from the 20th of December on. From the 20th of December to the end of December it was idle.

40 Q.—You were not there?

A.—No.

Q.—You are giving me an opinion again?

A.—No, I know it was idle.

Q.—Although you were not there you know it was idle ?

A.—Yes.

Q.—What face were they working on on the 20th December ?

A.—In here (indicating on photograph).

Q.—What would be the height of the face?

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

- A.—You are down in grade from 120. It must have been about 30 feet.
- Q.—While the derrick was idle from the 20th December to the 3rd of January they were excavating by hand?
- 10 A.—Yes.
- Q.—To what extent would you say the frost penetrated in that country?
- A.—I don't know.
- Q.—So you cannot give us any idea about the depth of the penetration of the frost there?
- A.—No.
- Q.—Now, was the graph, D-33, compiled from entries in your diary?
- A.—Yes.
- 20 Q.—Are there any elaborations on that point anywhere in your books?
- A.—Yes, I think there are.
- Q.—Elaborated for the same purpose as the other?
- A.—Ones we made, yes.
- Q.—Let us find out what you were doing there? Who were you working for?
- A.—Well, I took orders from Mr. O'Shea.
- Q.—Who were you employed by?
- A.—I understood I was employed by H. S. Ferguson, but
- 30 I was on the pay roll of James McLaren. What arrangements they had I don't know.
- Q.—You took orders from Mr. O'Shea?
- A.—Yes.
- Q.—Did you take any orders from the James McLaren Company?
- A.—No, I got no orders from the James McLaren Company.
- Q.—Never?
- A.—No.
- 40 Q.—Are you sure about that?
- A.—Yes.
- Q.—Then you had really no authority from the James McLaren Company about this log driving at all?
- A.—Where?
- Q.—Anywhere?
- A.—Yes. Anything that was done in the name of the Company in connection with the derrick went through me but I got orders from Mr. O'Shea.

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

Q.—Tell us which it was? Did the McLaren Company give you instructions about anything or did they not?

A.—Well, if I got orders from the McLaren Company they came through Mr. O'Shea.

10 Q.—Who was Mr. O'Shea employed by?

A.—H. S. Ferguson.

Q.—You did not have anything to do with taking these soundings, I suppose?

A.—Which soundings?

Q.—The soundings in the channel?

A.—We took soundings in the channel.

Q.—Was this your first contact with Mr. Ferguson?

A.—No.

Q.—Where did you work for him before?

20 A.—When I first worked as rod man I worked for him at Temiskaming, Bromptonville, up here. With the exception of the time I spent with the International Company it was with Mr. Ferguson. There was another. I did a year in the Welland Ship Canal, as detailed on that statement there.

Q.—Where they were blasting out the rock on the north side of the river what was the working face of the rock? You spoke about the rock going into the river on the island. What was the working face there?

30 A.—Well, it varied. They excavated down to 112 and 115 from the elevations ; 125 to 130. The face would vary.

Q.—Ten to fifteen feet would be an average?

A.—Perhaps ten feet would be an average.

Q.—Had you ever been around where they were doing that blasting before?

A.—Yes.

Q.—Where?

A.—There was always blasting in connection with the work I was doing.

40 Q.—Would you consider there was a great deal of scattering of rock when it was shot?

A.—Yes. It was a heavy shot, where he wrecked the bridge and broke the abutment.

Q.—Where was the bridge? How far from where the shot was?

A.—Right under it.

Q.—Were you surprised?

A.—No, I knew the wreck occurred when they did shooting there.

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

Q.—It did not require a very heavy shot to wreck it?

A.—No, it was incidental. The mere fact the bridge was wrecked was no indication the shot was heavy. The condition of the crib showed more.

10 Q.—What did it show?

A.—It was all broken.

Q.—What do you mean, broken?

A.—The north abutment. They were waiting until they put off the shot fill the crib, and they broke it badly.

Q.—Did it break it to interfere with its usefulness?

A.—They repaired it.

Q.—What was the nature of the breakage?

A.—It just broke the logs. The idea of the shot was to fill the crib with the shot, I think.

20 Q.—Is that an opinion of yours?

A.—Yes, that is an opinion of mine.

Q.—Are you serious in saying that was the idea of the shot? Are you saying they were trying to fill it with the shot?

A.—No. I am remarking a lot of stone from that went into the crib without further handling.

Q.—How high was the crib?

A.—I cannot say.

Q.—You know how high it was above the water?

A.—I cannot say now.

30 Q.—Were you joking when you made that remark about the shot? When you made that remark about them trying to fill the crib with that?

A.—No.

Q.—When you said the idea was to fill the crib with shot were you joking then?

A.—The idea that they meant to put the rock in the crib, is that the impression I gave you?

Q.—That is the impression you gave some other people?

40 A.—That was foolish. The rock would not jump into the crib.

Q.—Do you mean it was a foolish suggestion or that the inference was foolish?

A.—The inference is foolish and the suggestion is foolish.

Q.—Crib No. 2 normally came down, was filled, and you said it tilted later?

A.—Yes.

Q.—Tilted over against No. 4. Are you in position to define any opinion as to why that happened?

A.—No.



*JOHN C. McINTOSH (for Defendant) Cross-examination.*

Q.—You would be prepared to admit, I suppose, if there were a porous bottom, susceptible of being scoured, that the scouring might do that, might cause it to tilt?

10 A.—I would have to express an opinion. I would not say that. I think personally the crib was on stone.

Q.—What kind of stone?

A.—Some stone from the excavation. It gradually began to settle very slowly.

Q.—What did it settle into?

A.—It tipped.

Q.—If it was on stone the stone would have to settle somewhere, too?

A.—The stone remained stationary and the crib moved.

20 Q.—Off the stone?

A.—Yes.

Q.—Where did it tilt to?

A.—It would have gone right over if it had not No. 4 to rest on.

Q.—How far from the bottom did it rest on the stone?

A.—Four or five feet.

By the Court:—

30 Q.—It was in position when the blast went off?

A.—No.

By Mr. Forsyth:—

Q.—You mean that filled the river with stone first from the blast and put the crib on top of it?

A.—Perhaps the stone of the crib rested or might have come from that big blast.

40 Q.—If it was resting on stone and there was a settlement wouldn't it have to settle under the crib could settle?

A.—I don't think so. If the stone went down it would have to keep its equilibrium.

Q.—Here is the crib. If this is the end of the crib, the end under which the stone settles, obviously the stone has to settle first.

A.—If it settles, yes.

Q.—If the other end settles, it is not necessarily so?

A.—No.

Q.—I suggest if there was nothing under it it would not be a question of settlement at all?

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

A.—A question of tipping and tilting.

Q.—It did not tilt over against No. 4 when it was first placed in position, did it?

A.—No.

10 Q.—So that obviously something underneath it must have moved, or it must have moved into something in order for it to lower?

A.—The operation of filling it might have caused it to tip.

Q.—It was filled a little time before it was tilted?

A.—I cannot say now.

Q.—Con you say that is not so?

A.—No.

Q.—That it was filled for some time before it tilted?

20 A.—No.

Q.—Do you remember the day crib No. 3 was placed in position?

A.—Yes.

Q.—Do you remember Mr. O'Shea being there that day?

A.—Yes.

Q.—What time did he leave?

A.—I cannot say. I remember him being there that day. I would have to look that up.

30 Q.—The date was the 27th July, if I am correctly informed?

A.—O'Shea was there the 22nd of July.

Q.—He has told us he saw that crib. Do you know what time he left. When was the crib put into position first? What time of the day?

A.—I cannot say.

Q.—You said you left at supper time, between five and six?

A.—I saw it between five and six.

40 Q.—Had it been placed very long before that?

A.—I cannot say.

Q.—When you left there between five and six, it was anchored?

A.—It was jammed.

Q.—It had cables on it though?

A.—Yes.

Q.—And it was caught or jammed on two and one?

A.—On two and one.

Q.—And the cables were still on it when you left?

A.—I cannot say; I presume so.

*JOHN C. McINTOSH (for Defendant) Cross-examination.*

Q.—No, it was not filled.

A.—I don't think the cables could have been removed.

Q.—If you had been putting out a boom to keep the logs clear of the coffer dam, what kind of a boom would you use?

10 A.—I don't know.

Q.—You have experience to say the one that was there was inadequate?

A.—When I saw the way the logs got around it.

Q.—It was inadequate to cope with the logs the way they were coming in there?

A.—Yes. The cables anchored in the crib No. 1 did the most of the collection of logs. I also noticed that the cables tangled the logs.

20 Q.—Do you know what that means, “the cables tangled the logs”?

A.—The cables caught the logs.

Q.—I suppose they were deflected along a certain line of the cable?

A.—There were a lot of logs around.

Q.—The boom that Mr. Lindskog placed there was not sufficient to cope with the logs that came down there?

A.—No.

Q.—You have not any suggestion to offer that they might have dispensed with the cables?

30 A.—They were indispensable as long as the crib was not loaded.

Q.—You are not suggesting it was attempted to toe-fill any part with loose rock?

A.—Yes, there was loose rock placed on the abutment.

Q.—Did they use brush?

A.—I don't know.

Q.—There was rock placed in there between the sheeting and the cribs?

40 A.—Behind here (indicating on photograph)?

Q.—Yes?

A.—I guess so.

Q.—That is what they were attempting to work for, to anchor the brush?

A.—Not along the north abutment.

Q.—No brush there?

A.—No.

Q.—Are you sure of that?

A.—There may have been some hay. They used a lot of

*JOHN C. McINTOSH (for Defendant) Re-examination.*

brush and hay, in large quantities. The rock was massed in there. They tied a lot of branches and filled them, with bags.

Q.—They tied them and filled them with brush?

A.—To keep it down?

10 Q.—Yes?

A.—Yes.

Q.—You approve of that?

A.—Yes.

Q.—Crib No. 3, you saw it between five and six. I understand you to say it was empty until some time between seven and eight.

A.—I did not say it was empty.

Q.—Are you sure about that?

A.—I said they were filling at night.

20 Q.—So far as you know, they may have done a good deal of the filling in between six and seven?

A.—They could not have done a great deal.

Q.—You were not there?

A.—No, I was not there.

Q.—The crib was in 15 feet of water?

A.—Yes.

Q.—You could not tell what was in it when you came back?

A.—No.

30 Q.—You do not disapprove of the method which Mr. Lindskog adopted to build his falsework?

A.—I express no opinion on that.

Q.—You have no adverse opinion to express?

A.—I heard the opinion expressed it is not good practice.

Q.—Personally, you have no adverse opinion, in your own experience?

A.—No, adverse or otherwise.

Re-examined by Mr. Aylen, counsel for Defendant:—

40 Q.—You stated when the diver came it was too late?

A.—Yes.

Q.—I am not sure whether you explained what you meant why it was too late for the diver to be of any benefit?

A.—There was a huge amount of toe-fill placed against the sheeting and he could not examine the sheeting.

Q.—There was some mention made of a place where the wood sheeting was actually fixed to the bottom. Was that in connection with the sheeting of the main coffer dam or in connection with the steel sheet piling?

*JOHN C. McINTOSH (for Defendant) Re-examination.*

A.—Steel sheet piling.

Q.—That is where you mentioned it did not extend to the north shore to be a connecting link to the fifteen foot wood piling?

10 A.—Yes.

Q.—It was fitted to the bottom for the reason you have explained, there was a shaft, caisson built?

A.—Yes.

Q.—You said you had only seen one or two jobs where coffer dams were built?

A.—I had seen a diver. I was not connected with the coffer dam at Windsor but I saw a diver there.

Q.—Have you seen a coffer dam built without a diver, except this one of Mr. Bishop's?

20 A.—No.

By Mr. Forsyth:—

Q.—Did you have a diver at Temiskaming on the coffer dam?

A.—I don't recall.

Q.—It is possible you saw two built without a diver and one where there was a diver present?

A.—Previous to this work?

30 Q.—Did you see a diver working in Windsor?

A.—Yes.

Q.—What was he doing?

A.—He was sealing the coffer dam.

And further deponent saith not.

Whereupon an adjournment was taken until March 7th, 1933, at 10.30 o'clock a. m.

In the Privy Council.

**VOL. 3**

No. 72 of 1936.

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**ON APPEAL**  
**FROM THE COURT OF KING'S BENCH FOR THE**  
**PROVINCE OF QUEBEC**

**BETWEEN**

**WILLIAM I. BISHOP LIMITED and**  
**THE BANK OF MONTREAL**

(Plaintiffs and Cross-Appellants before Court of  
King's Bench) ... .. *Appellants*

**AND**

**THE JAMES MACLAREN COMPANY LIMITED**

(Defendant and Cross-Respondent before Court of  
King's Bench) ... .. *Respondent*

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**RECORD OF PROCEEDINGS.**

**VOLUME 3.—PLAINTIFFS' EVIDENCE (CONTINUED) AND**  
**DEFENDANT'S EVIDENCE.**

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17, Victoria Street, S.W.1,  
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