

arranged that a separate dam for this should be made, but with extra precaution required by the movement of the canal bank. The getting in of this connecting wall (which was now required to be a retaining one) absorbed the whole season of 1879—as it was found necessary in order to hold up the Canal bank as well as to get in the wall,—to drive piles both in front and rear of the line of wall and shore between them.

The specification having permitted us to include the space for the line of wall—in our dam for the first section—and having done so, after consultation with the Chief Engineer, we certainly do not expect to be saddled with the consequences of the movement of the canal bank to the possibility of which we find no reference in said specification. We feel that an injustice has been done us in the fact, that no allowance has been made in our progress estimates for the extra work connected with the getting in of this oblique wall as above stated.

The cost of the separate dam has been enhanced, by the fact that it could, in the first place, have been built at the west end on dry land, which was excavated below water-level, when the larger dam was adopted, and here, therefore, a coffer-dam was required; but it is now evident in any case that the extra work required to sustain the canal bank could not have been avoided had a separate dam been built for this oblique wall in the first place.

The canal bank having been secured in October, 1879, we were permitted to unwater the Aqueduct pit, and in November excavation was resumed. The water was kept out until March, but the dams showed the effects of the long flooding on the new bottom as well as of the yielding character generally of their sites, and as it was evident they could not be maintained in the position and on the plan assented to, no further work was permitted. As it was costing us \$25 per day for pumping, this was stopped, and the pit allowed to fill up.

The masonry season of 1879 was entirely lost by the necessary flooding of the Aqueduct pit by order of the Government Engineers—and this in consequence of circumstances for which we were in no way responsible, when it became evident that the coffer-dam, the details of which had been arranged by the Chief Engineer, and which had been constructed without protest under the windows of the office of the Resident Engineer, was not reliable, we were called upon in January last to state the course we intended to pursue, in order to secure the completion of the work within the time specified, notwithstanding the Aqueduct proper had been suspended by order of the Government Engineers, as shown for the whole of the masonry season of 1879.

Having tried a dam with length of pile and width of puddle, approved by the Chief Engineer, which had proved insufficient on a movable bottom, we proposed on the 12th April last, to build another upon any plan the Government Engineer would furnish. This was refused on the 13th May, and we were required to submit plans for approval before the 1st June, or take the consequences, and as we found that we were to be held responsible for the engineering as well as the construction of the coffer-dam, we found it necessary, in view of the alarming developments of the sub-soil, to call in the best engineering assistance we could obtain. The result was the proposal in our letter of the 31st May last which has been accepted, save as to the position of the north line of the dam, close to the canal bank and the old aqueduct, no doubt from motives of economy. As this location has produced the sliding of the canal bank and of our first coffer-dams, and has caused increased expense and loss of time in getting in the oblique wall, we fear a greater increase of cost and loss of time in getting in the deeper foundations of the new Aqueduct, unless the new coffer-dams are placed as far as possible from the borders of the excavation. And it is because we are at issue with your Engineer upon this point, that in view of his magnitude of the interests involved to the Department, to the country which is waiting for the completion of this work—and to ourselves—we appeal from his decision.

We have the honor to be, Sir, your obedient servants,

HUNTER, MURRAY and CLEVELAND.

F. BRAUN, Secretary, Railways and Canals, Ottawa.