

Mr. KORCHINSKI: Mr. McLeod mentioned there are 1268 gauging stations throughout Canada.

Mr. McLEOD: That is our figure at March 31, 1959.

Mr. KORCHINSKI: In your presentation to the Royal Society you also state that you have some 500 part-time employees engaged in reading these gauges?

Mr. McLEOD: Yes.

Mr. KORCHINSKI: The question that comes to my mind is, why do you require 700—I should not say “more employees,” but you require far more than 500 part-time observers? Is it because of the fact these gauges are so complicated, or because of the remoteness?

Mr. McLEOD: First, with regard to the 1200 gauging stations, that includes a number of gauges—quite a number now—which are, as we term them, automatic or self-recording. Many of those, particularly when located in remote areas, are serviced by our personnel when they visit them, sometimes monthly or at two-month intervals. In a good many of our locations, whether we wanted to or not, we could not get part-time employees anyway.

Secondly, the part-time employees are used to read the manual types of gauge, either daily or on some other basis that may be determined, depending on the need for information. Customarily it is daily. That consists usually of perhaps three minutes work for the employee at the location, plus whatever time it takes him to get to the river from his place of residence or place of work. We have about 500 places where we do require and do have these gauge readers employed strictly on a part-time basis. We have something like 250 water stage recorders installed now, and many of them require no paid observer on a part-time basis, because they are serviced by our people.

In addition, in some locations one part-time gauge reader may read two or three gauges along a river, depending on how they are located, and so forth. For example, for many years we took a lot of gauge observations on the west arm of Kootenay lake, investigating problems of out-flows from Kootenay lake. I can recall that one gauge reader read something like 8 or 9 gauges for us, because he made a trip down on his boat and read each one as he went. However we do not need very many additional gauge readers; that is no particular problem. What we need more of, and what we will continue to need more of are the more expensive things—the automatic recording instruments and the appropriate housing of them—for these remote areas where there is not anybody living to provide a part-time gauge reader service.

Another item which is growing very rapidly in our estimates, and which is going to continue to grow rapidly, is charges for chartered aircraft, because we are getting more into remote places now, particularly in territories where this is the only way of getting in and out.

Mr. KORCHINSKI: What determines whether you construct an automatic station or one where you require a gauge reader? I suppose that is governed by cost in a lot of instances?

Mr. McLEOD: Yes, partly cost; but it is also in part the location itself. For example—Mr. Payne may know this—up on the Unuk river—which is part of the Stikine river system which flows in the northwestern section of British Columbia and enters the Pacific down through the Alaska panhandle—we have a gauge station in there which must be self-recording because there is not anybody who lives within 50 miles of the place.

Mr. KORCHINSKI: What variation is there in cost between one of the gauging stations, where you require a gauge reader, and an automatic one?

Mr. McLEOD: The cost of just a manual installation, I think it would be fair to say, can be as low as \$50, depending, again, on the configuration