

out two or three considerable towns, and which developed a waterfall eight times the height of Niagara. Connected with that enterprise, which cost many millions of dollars and has proved one of the most successful of its kind in the world, one attains certain habits of mind in dealing with such a project, having always in view, as you must have, the necessity of keeping down expenditures so that the works may be created at a cost which will ensure the possibility of the project becoming a commercial success. With that habit of mind, acquired during those years and other years, I read the report of the Senate with the utmost dissatisfaction, and it gave me no confidence whatever in the feasibility and practicability of the navigation of the Hudson straits for more than two or two and a half months during each year, nor in the feasibility and practicability of the railway itself and the terminal works which were partly completed there and which are still contemplated.

Mr. MURPHY: Would the hon. member permit a question?

Mr. CAHAN: I would prefer it being put later on if the hon. member has no objection. At the moment my mind is on a particular subject. Mr. McLachlan, in his evidence before the committee gave an account of himself which I should like to put on record. He said:

I am engineer in charge of the work at Port Nelson on Hudson bay. I have been in charge from August 6, 1913. Nelson at that time had been selected as the terminal. The minister went up in 1912, the year before I went up, that was the confirmation of the former selection. I left Halifax on July 4, Sydney on July 8, and arrived at Nelson on August 6. We were stuck in the ice, we were stuck about a week in the Strait about half way through the strait, then we got away from there and I think we got over to 140 miles from Nelson on about the last day of July and we were stuck there until the 4th.

Remember, that is 140 miles from the estuary out in Hudson bay itself.

We got loose from that ice on the evening of the 4th, and we arrived at Nelson on the 5th and went in on the 6th.

So they were stuck by ice one day's steam from the estuary.

It was heavy ice, enough to stop one of those Newfoundland sealers. I was in the Bonaventure, which is just as good an ice-breaker as there is, she was a Newfoundland sealer. There was practically nothing done at the terminal when I got there. I ran it a year and four months the first time, but I have gone back each spring about April 1. I came out sometimes about December 1; sometimes I did not

come out until the middle of February. I always go and come overland by way of Le Pas. I have made only the one trip by water.

In dealing with his own experience as to the navigability of the bay and the estuary of the Nelson river, he says:

Regarding the navigation season from the Atlantic to Port Nelson, my opinion is that in the early part of the season the ice conditions immediately off Nelson will govern—

So that it is not entirely a question as to the navigability of the straits, but the ice conditions immediately off the Nelson estuary govern for a certain time of the year.

—and that at the end of the season the ice conditions at the head of Mansell island will govern. The latest ice at the mouth of the Nelson estuary occurred in the season of 1917. On August 13 of that year the ice appeared to stretch in a continuous belt from the Nelson shoals towards cape Tatnam, and I consider a tramp steamer could not pass through. On August 29 in the same year I found the ice stretching in a great belt just off the outer bar.

That is, the outer bar of the Nelson river.

Beyond this seaward the surface area of the water seemed to be densely packed, though a tramp steamer might be able to worm her way through at considerable danger to herself. Anything in the nature of buoys in the outer bar and for many miles inside it would have been carried away had they been placed. During the next few succeeding days ice was seen floating about in the estuary at within eight miles of the island.

That is the island they were building in the estuary in connection with the particular terminal.

The experiences of this particular season are extreme. In the year 1915 a Newfoundland sealer arrived at Port Nelson on August 1, and the tramp steamer Sheba arrived in 1916 on August 8. They both met considerable ice. I do not think that any ship arriving at Port Nelson earlier than August 20 has done so, since I have been there, without encountering ice at some point or other on its voyage.

Proceeding further, he says:

The latest departure from Port Nelson was on October 22, 1915, when the tramp steamer Sheba and two sealers, Belleventure and Adventure, left. The only ice they encountered was a belt about twelve miles wide near the head of Mansell island. The earliest difficulty with the ice during my stay at Port Nelson was when the tramp steamer Sinbad, which left Nelson on September 30, 1913, encountered ice in the vicinity of Mansell island, got frightened and came back to Nelson, but made a second attempt, leaving Nelson on October 13, and made the journey successfully. During that same season the tramp steamer Alette, which left Port Nelson on October 7, encountered ice near Mansell island and received a hole in her bow and returned to Nelson, wrecking herself on the 16th.

And so on. I do not regard evidence of that character as conclusive either with respect to the navigability of the straits and bay or