

Railway, 800 miles; inland navigation, 600 miles; ocean navigation, 259 miles; total, 1,659 miles.

In view of the above facts it is certainly worth while to look carefully into the practical questions affecting the navigation of the Nelson route, and if the difficulties are such as can be readily overcome, the early adoption of that route for the great bulk of the export and import trade of central North America is assured. It is not considered necessary here to answer the statement, that is always made when the Hudson Bay route is mentioned. "That it is impossible to navigate Hudson's Straits." It should, in the absence of any proof to the contrary, be sufficient that one of the most practical officers of the navy, Captain, now Admiral Markham, after a personal examination, has reported strongly in favour of the contention that the navigation of Hudson's Straits is commercially practicable. In Hudson's Bay, between the straits and the mouth of the Nelson, there are no difficulties as Dr. Bell says, in speaking of the bay, "It is open all the year round."

Lake Winnipeg, at the bottom of a basin which, during the glacial period, had its outlet to the south, now receives the drainage from an area extending from the head waters of the Mississippi and the height of land west of Lake Superior to the summit of the Rocky Mountains, and from the watershed of the Missouri to those of the Athabaska and Churchill Rivers. This immense drainage area of some 480,000 square miles, had its outlet through the Nelson River into Hudson's Bay.

A short distance to the east of the Nelson and close to it is the Hayes River. The Hayes rises about twenty-eight miles from the Nelson at the outlet of Lake Winnipeg, and empties into Hudson's Bay six miles from the mouth of the Nelson. The Hayes

drains a large district to the east and north of Lake Winnipeg.

The mouth of the Red River is, according to the Government maps, 710 feet above sea level. Both the Nelson and the Hayes offer practical routes to the sea from Lake Winnipeg. Enough is known about the Nelson to make it certain that, by the improvement of the channel, construction of ship canals, or ship railways, ocean steamers may be brought into Lake Winnipeg, and possibly into the mouth of the Red River. While there is not sufficient data to enable an estimate of the cost of the necessary work to be made, there appear to be fewer and less serious obstacles in the way than on the St. Lawrence route from Chicago.

The Hayes River offers an alternative route between Lake Winnipeg and Hudson's Bay. This is the old Hudson's Bay Company boat route, which has been used as the chief avenue of the company's European trade from the earliest times to the present day. From what is known of the Hayes, there appears to be no difficulty in the way of canalizing that river for inland boats of nine feet draught. The following summary of a description of the Hayes route is compiled from Dr. Bell's report, Geological Survey of Canada, 1878:

Norway House to Echimamish, 28 miles, by Nelson River, which is about a mile wide and full of islands, shores low but not swampy; Sea River falls, a chute of about 4 feet, occur at 17 miles from Norway House—boats run down. Echimamish to Painted Stone, 25 miles; two dams with a rise of about one foot each are passed in this interval; the Painted Stone forms the watershed of the channel, the water running both ways from it; it is 28 yards in width—boats are hauled over it. Painted Stone to Robinson Portage, 18 miles; the White Water River joins the eastern