

9. Liard River is at present navigated by canoes and yolk boats. Its length from its junction with the Mackenzie to Fort Halkeft on the west branch or Fort Nelson on the east branch, is about 500 miles. It is about 500 yards wide. There are obstructions, especially a rapid about 30 miles from the mouth of the river. In the months of May, June or July, however, there is depth of water for a steamer of light draught to mount. The current is strong, with an average in spring of 4 or 5 miles, mounting at certain places to 8 to 10 miles an hour, and caution with the steamer would be necessary in descending the rapid.

10. Peace River is a finely navigable river for about 800 miles upward from Athabasca Lake, with only one obstruction, which could be easily bridged by a tramway of about 3 miles, and might be removed by blasting. Peace River is nearly half a mile wide and its depth from a fathom and upwards. But in the fall its depth may fall a fathom on obstructions.

11. Of this I have no personal knowledge.

12. This has been anticipated. The Mackenzie is about 1,300 miles long, north of Great Slave Lake, and averages about 1 mile wide, with a depth from 1 to 10 fathoms, or more. The average current is 3 to 4 miles, but increased at certain points to 6 or 8 miles, or even 10. It is suitable for navigation by the steamer now running on it, which draws about 6 feet. The obstructions are chiefly :—1st. Sand at the entrance from Great Slave Lake, which reduces the depth of water in the fall of the year to about 6 feet ; and in certain years, when the water of the lake happens to fall very low, this depth might be further reduced. 2nd. Between Good Hope and Normand, latitude 66, is a rapid, where in fall the depth might be not over 6 feet, and the current 10 miles an hour. 3rd. At Good Hope close to the Arctic circle, is a flat shelf of rocks, where in the fall of the year (September) is said to be only 3 feet of water.

13. Lake Athabasca is about 200 miles long and about 30 miles wide, with varied depth. It needs a lake steamer of light draught for its navigation. The "Graham" a flat river steamboat, crosses only the shallow end of the lake, which it is unable to navigate. Valuable minerals have not yet been discovered, but the timber on the Athabasca River and the Peace River is valuable, and would all naturally be floated down to this lake for shipment. Timber might float to this lake on the Athabasca River and its adjoining lakes and affluents for more than 1,000 miles, and down the Peace River for 1,500 miles at least, and driftwood probably does come from these distances. A vast amount of large and very valuable timber could thus be gathered in Athabasca Lake with little expense beyond that of hewing. The timber of 100,000 square miles of country could probably be floated to Athabasca Lake. The natural outlet for this would be either by a railway to Hudson's Bay, or by improving the navigation thither. There are fish (white-fish) in Athabasca Lake that might suffice to feed those engaged in the timber trade there, but not enough for exporting. Nothing else but timber and fur is yet known that would pay for exporting, unless rock oil or mica.

14. This has been anticipated. Great Slave Lake is about 300 miles long and 50 miles wide, and with a depth of 10 fathoms and upwards. It is of course navigable for lake steamers and other vessels. A large number of rivers run into it, and some of considerable size, as Slave River, Hay River, Yellow Knife River and others. Rock oil or tar springs are found in it, and sulphur abounds at Sulphur Point on its southern shore. It is possible that a manufactory of gunpowder might be advantageously carried on here, but the saltpetre required might have to be imported. Salt is very abundant on Slave River, but saltpetre is not known here. Sulphur and charcoal being accessible, it might be better to import saltpetre than manufactured gunpowder, for the greater need of the country is ammunition. Lead is said to exist in the same neighborhood on Buffalo River, and that may imply the presence of silver, which has long been reported of in the neighborhood of Peace River. White-fish and large trout are numerous in Great Slave Lake, but not enough so for export. They might suffice to support those engaged on its shores in mining or mineral industry. The timber round Great Slave Lake is not large or valuable for exports, but suffices for building on the spot. No other valuable product is known besides fur, unless it be mica.