

main ship channel. Mines are also about to be laid in the harbor of Portland, Maine.

NO. 20, APRIL 29.—CHART OF BAY OF QUINTE, ONT.—A chart of the Eastern portion of the Bay of Quinte, from Kingston to Deseronto, prepared from a survey of the Chief Engineer of this Department, has lately been published by the British Admiralty. Copies of the same may be obtained from the agent for Admiralty charts in Canada, C. Potter, Toronto. The number of the chart is 2961.

Toronto Harbor Notices.

Harbor Master Postlethwaite has issued the following notice to mariners :

LIGHTHOUSE POINT.—Placed buoys off the point of the Island to mark the Bank to the S. & S.W. of the Lighthouse Point. One iron can buoy no. 2, painted red, with black ring on the end, the Point Lighthouse bears from it N.W. by N. Another can buoy (red), no. 6, the Lighthouse bears from it N. $\frac{3}{4}$ W. Another can buoy (red), no. 8, the Lighthouse bears from it N. by E. $\frac{1}{4}$ E. Another can buoy (red, with white ring round it & white ball on end), no. 10, the Lighthouse bears from it N.E. by N. A can buoy painted red, no. 12, stands on the N.W. point of the Bank, & bears from the Lighthouse E.N.E. in 5 fathoms water. The can buoys to the west are in 8 fathoms water, except no. 12, which is in 30 ft. water. It is not safe for vessels to go inside them, as the Bank rises very abruptly. An additional spar buoy (red) is placed on the N.W. point of the Island in 14 ft. water.

WEST CHANNEL.—The red spar buoy on the starboard side of the Channel stands in 14 ft. of water, distant 620 ft. from west end of Queen's Wharf. One black buoy stands on the north side of the Channel in 14 ft. water, distant 620 ft. There are 11 ft. of water in mid-channel. The best water is on the south side of the Channel near the breakwater. On entering Harbor the course is from east end Breakwater to Fisherman's Island, nearly due east.

EASTERN CHANNEL.—The buoys in this Channel are placed thus : Two black spar buoys on the west or port side coming into the Bay, & two red spar buoys on the east or starboard side. One red spar buoy at south end of east pier, to mark the stone protecting the pier. This channel is 105 ft. wide, & has a depth of 15 ft. at this date. Between the piers the water is 16 ft. deep for full width of channel 400 ft. Landmarks for entering are the cupola of St. Lawrence Hall in line with a point midway between the tower of the Metropolitan Church & St. Michael's Cathedral spire. The course by compass, coming in, is N.W. by N. The water to-day, 9 in. above zero. A new lighthouse, with red light occulting every 5 seconds, & 33 ft. from deck of pier to centre of lamp, has been erected on the south end of the eastern pier. The old lighthouse with red light has been moved to the north end of eastern pier.

Via Edmonton to the Yukon.

Isaac Cowie, of Edmonton, writes :—I have pleasure in furnishing you with the following brief account of the Athabasca & Mackenzie Route to the Yukon. Having been for many years the Chief Officer in Charge of the Northern Transportation Service of the Hudson's Bay Co., I have had full opportunity of knowing it in a practical manner.

From Edmonton you cross the watershed, between the waters flowing into Hudson's Bay & those which empty into the Arctic Ocean, by an ordinary waggon road some 90 miles in length. On this a company has been formed to run a weekly stage service, connecting with the train arriving here on Monday even-

ing. "The Edmonton & Athabasca Stage Co." will also contract for freight as well as passengers with their light hand baggage.

Embarking on the broad Athabasca at Athabasca Landing, the traveller is swept down amidst beautiful scenery for 125 miles to the mouth of the Pelican River, where in low stages of water there is a small rapid; the sweeping current of the spring or early summer hurries him on without pausing to examine the Dominion Government's boring plant, which has here tapped the enormous petroleum deposits which he will further on see exuding from the banks of the valley for 200 miles further down stream. Forty miles further on we arrive at Grand Rapids, where easy navigation ends for a time. Here an island which cleaves these mighty rapids in twain, forming a natural bridge, not across, but parallel with the course of the stream, is utilized for carrying overland the cargoes of the boats from the head of dangerous navigation to the foot thereof. The boats thus lightened of their loads safely shoot the rapids, guided by their skilful crews. Stretches of easy & exciting navigation succeed each other in frequent intervals on from Grand Rapids to Fort MacMurray. Of these the Burnt, the Boiler, & the Long, like the Grand, are caused by the river flowing over a bed of immense boulders. Then follow the limestone ledges, cutting through which the river passes over the falls of the Crooked, the Stony, the Cascade, & the Mountain Rapids. One mile above the Hudson's Bay Co.'s post at MacMurray, a small boulder rapid shows in low water. Then after a run of pleasurable excitement, arrested at the Cascade alone to lighten the boats & make a portage of the cargoes should circumstances render it necessary, there is clear sailing down the Athabasca for 170 miles to Lake Athabasca, across which at a distance of 70 miles from the mouth of the river stands the important Hudson's Bay Fort Chippewa, from which waterways radiate to the west up the Peace River, to the east along the Athabasca Lake to the highly mineralized districts of rocks north & east thereof, & to the north by the Riviere du Roche to the Slave River, down which we proceed 95 miles to Smith Landing. Here we have the alternative of proceeding by a waggon road of 16 miles to Fort Smith at the foot of the Slave River rapids, or else of shooting & portaging over them by the old Hudson's Bay boat route. These rapids & portages are the Cassette, the Mountain, & the Pelican, over which both boats & cargoes must go overland a quarter of a mile at each. Then comes the Rapid of the Drowned, where half the load is taken by boat & half by land.

Then comes a clear run of 1,200 miles on which an ocean going vessel could run, down to Peel's River. From Fort Smith to Great Slave Lake, down the Slave River, we pass in a run of 196 miles the mouth of Salt River, on which an immense mine of beautiful crystallized salt, of a capacity to supply the world, exists. Reaching Fort Resolution at the mouth of the Slave River, the Great Slave Lake has to be crossed to its outlet—the magnificent Mackenzie River. At the north & east of this inland sea, with its myriads of rocky islands, galena in enormous quantities is everywhere to be found. Gold-bearing quartz has also been discovered by prospectors, & accessible from these waters on the east lie vast deposits of virgin copper on the Coppermine River.

Leaving this potential sea of treasures behind we lie on down the Mackenzie. Passing Fort Providence, 168 miles from Resolution, the swift current of the mighty river sweeps us on amidst grand scenery to Fort Simpson at the mouth of the Liard. Pausing here at this, the headquarters of the vast Mackenzie River District, to hear of the success of the miners who have proceeded up the gold-bearing Liard to mine thereon, or proceed by it to the Francis River & Lake & the head waters

of the Pelly-Yukon, or to hear of the new finds which have been made on other hitherto untapped rivers flowing east from the Rockies into the Mackenzie, we again push off on the broad bosom of the river for our final run of 778 miles of uninterrupted navigation to the mouth of Peel's River. On this stretch Forts Wrigley, Norman & Good Hope are passed, & intelligence gained. Then up stream for the first time on the entire run, to Fort McPherson, 13 miles.

At this point 3 alternative routes present themselves. Those who like can proceed up the Peel, the gravels of which are known to yield gold & at the head waters of which gold-bearing quartz has been found, & there establish a mining camp. If the wish be to go on to the Klondike there are 2 ways of getting over to the Porcupine. The old summer route to the Porcupine is across the watershed on foot, men carrying pack loads of 40 lbs. each, besides rations, &c., for a trip of 6 days, or else by the water route for small boats, which necessitates only a portage of a quarter of a mile at the height of land. From thence the Porcupine is reached by running down small creeks & rivers, & from then on there is free navigation to Fort Yukon for good sized steamboats (275 miles).

Stikine Transportation Rates.

The transportation companies directly interested in the Stikine River business have taken a positive & apparently firm stand for the maintenance of uniform rates. The adoption of a scale of charges was the chief business of a meeting held in Vancouver at the end of April, & from the fact that 30 river steamers were represented, it is evident that the combination will have the absolute dictation of terms with regard to the river business. The meeting was held under the chairmanship of H. M. Kersey, & those present—representing the entire fleet to be operated this season on the Stikine—were :

A. Cameron, E. J. Coyle & G. L. Courtney, representing the C.P.R.'s 12 boats.

J. S. Harvey, representing F. C. Davidge & Co.

F. Peters, representing The Klondike Mining, Trading & Transport Co.

H. M. Kersey, representing the Canadian Development Co.

G. T. Legg, representing the Union S. S. Co.

F. W. Vincent, representing the C.P.N. & H. B. Co's.

P. Hickey, E. D. Self, & H. H. Cohen, representing the Cassiar Central Ry. Co.

S. G. Yerkes, representing the Tacoma Port Orchard Co.

E. Dewdney & J. T. Bethune, representing the Canadian & Oriental Co.

J. A. Mara and W. F. Bullen (by proxy).

It was decided that rates should be fixed with Wrangell as a starting point, there being so many vessels competing for business between Tacoma, Seattle, Victoria, Vancouver & Wrangell, that rates could not be controlled for the ocean trade. It was decided to adopt an especially low rate on horses & cattle with a view to assisting the transportation of outfits & men beyond Glenora, & the following scale of freight charges was agreed to—the approximation in the second column being, of course, beyond the scope of this meeting, although mentioned so that the public may thoroughly understand the scale :

	Wrangell to Glenora.	Victoria to Glenora.
Cargo of all sorts (except lumber) per ton measurement or weight at ship's option.....	\$40 00	\$50 00
Lumber per 1,000 feet B.M.....	60 00	75 00
Horses, mules & cattle, per head.....	25 00	43 00
Dogs, sheep & goats.....	5 00	12 50

As to the passenger rates, \$20 was agreed upon as the price of first-class transportation