

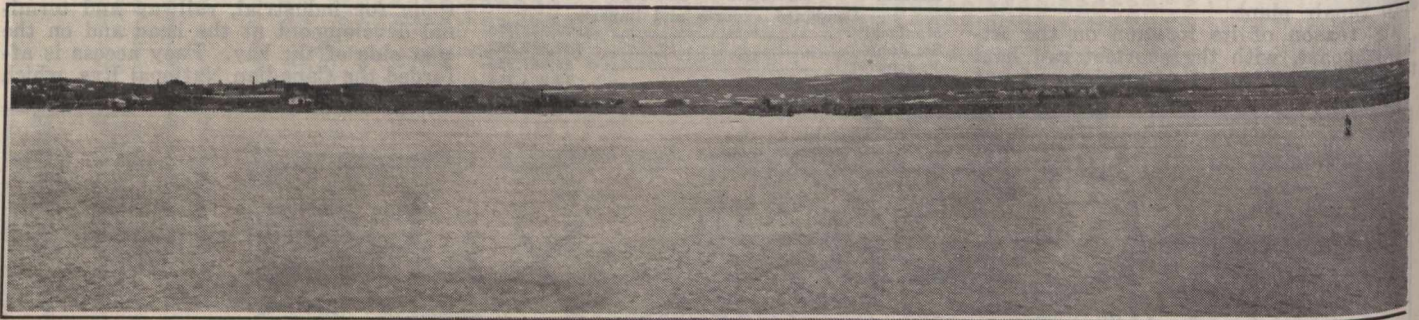
Harbor Works Contract provides for the construction of a breakwater, entrance channel and basin and deep water wharves, the location of which is shown on the accompanying plans. This contract includes the following works: 2,500 lin. ft. of breakwater extension. The dredging of an entrance channel 500 ft. wide, with 22 ft. depth at lowest water (maximum tide 28 feet), involving the removal of about 2,500,000 cu. yd. of sand, gravel and clay. The dredging of a large turning basin to a depth of 32 ft. at lowest water, requiring the removal

stones of from 2 to 25 tons cover the slopes. The last extension of 2,500 ft. has been under construction since Dec., 1918, and is now at its ultimate length and almost completed.

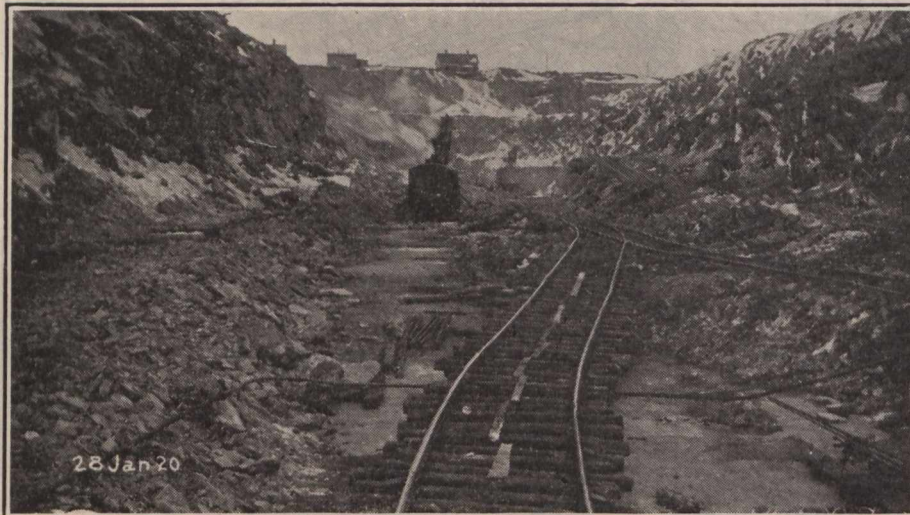
Entrance Channel and Basin.—Navigable access to Courtenay Bay will be afforded by an entrance channel 500 ft. wide, with a depth of 22 ft. at lowest water (maximum tide 28 ft.). With the range of tide that obtains, the depth in this channel at high water will vary from 43 ft. to 50 ft. The entrance channel enlarges into a turning basin, shown

Dock and Shipbuilding Co. has undertaken to build and operate a dry dock of the first class for naval and general purposes. The act specifies a first class dry dock as:

"(a) Dry docks, other than floating dry docks, of dimensions when completed of not less than the principal dimensions next hereinafter mentioned, that is to say, clear length on bottom from caisson groove or hollow quoin to head, 1,150 ft., clear width of entrance, 125 ft., depth of water over sill at high water ordinary spring tides, 38 ft.



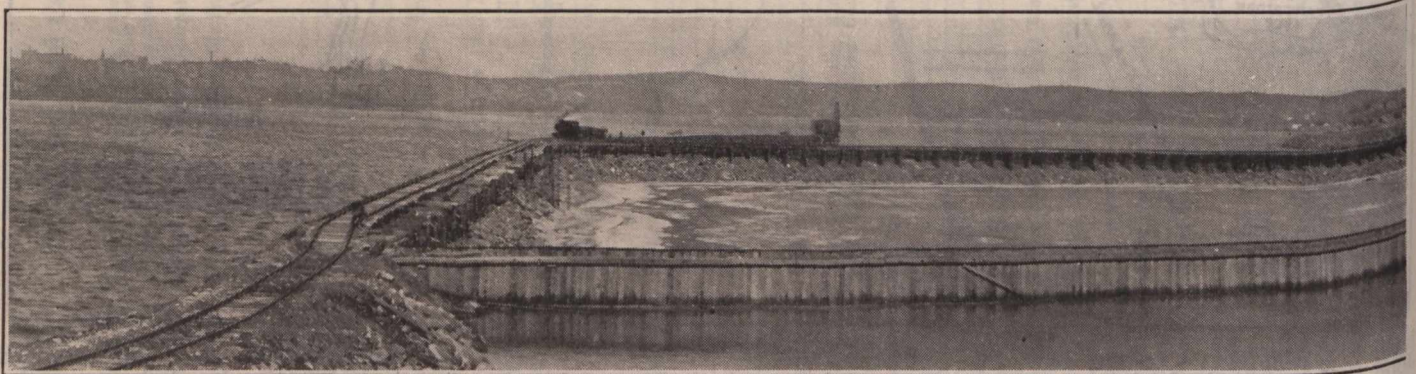
Breakwater, at Courtenay Bay, St. John, N.B., from west side.



Excavation of Drydock, at Courtenay Bay, St. John, N.B.

"Provided, however, that any such dry dock shall not, for the purposes of this act, be deemed to be a dry dock of the first class unless there can be received and repaired therein, with ease and safety, the largest ships or vessels of the British Navy existing at the time at which the contract is entered into."

The dry dock, the location of which is shown on the accompanying map of the harbor and, in detail, on the accompanying plan, will have the following general dimensions: Length, 1,150 ft.; width at coping, 133 ft.; depth on sill at high water, 42 ft. By a recent change, the sill will be lowered 2 ft., thus giving a depth of that much more than is shown on the general plan. The dry dock will be the only one on the Canadian Atlantic coast capable of taking ships over 600 ft. long and will embody in its construction the latest and most efficient features of dry dock construction. Provision is made, by an intermediate sill and caisson, to use separate portions of the dock 650 ft. and 500 ft. long, to suit the size



Coffer Dam, at entrance channel to Drydock, Courtenay Bay, St. John, N.B.

of about 4,500,000 cu. yd. of sand, gravel and clay. The removal of some 140,000 cu. yd. of submarine rock, leading into the entrance to the dry dock. The construction of a series of deep water piers.

The breakwater is of the rubble mound type, 7,070 ft. long, with a top width of 20 ft., outer slope, 1 on 2 horizontal, and inner slope, 1 on 1½ horizontal. The outer end, or head, has both outer and inner slopes of 1 on 3 horizontal. Large

on the accompanying map, which will have a depth of 32 ft. at lowest water.

Deep Water Wharves.—On the west side of Courtenay Bay there will be built a series of deep water wharves, affording some 6,500 ft. of berth space, with a depth of 32 ft. at lowest water.

Dry Dock and Ship Repair Yard.—Under the terms of The Dry Docks Subsidies Act, 1910, and The Dry Docks Amendment Act, 1917, the St. John Dry

of ships to be accommodated. The inner and outer entrances will be closed by floating caissons, two of these being provided. The pumping equipment will consist of three 52 in. vertical centrifugal motor driven pumps, capable of unwatering the dock in 2½ hours. The dock will be equipped with a travelling crane capable of lifting 40 tons at a reach of one-half the width of the dock.

To the north of and immediately ad-