HARBOUR COMMISSIONERS OF MONTREAL.

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Capt. THOS. McKENZIE, Superintendent of Dredging.

A. B. SAVIGNY, Mechanical Engineer.

JOSEPH LEVEILLE, Superintendent of Pilots.

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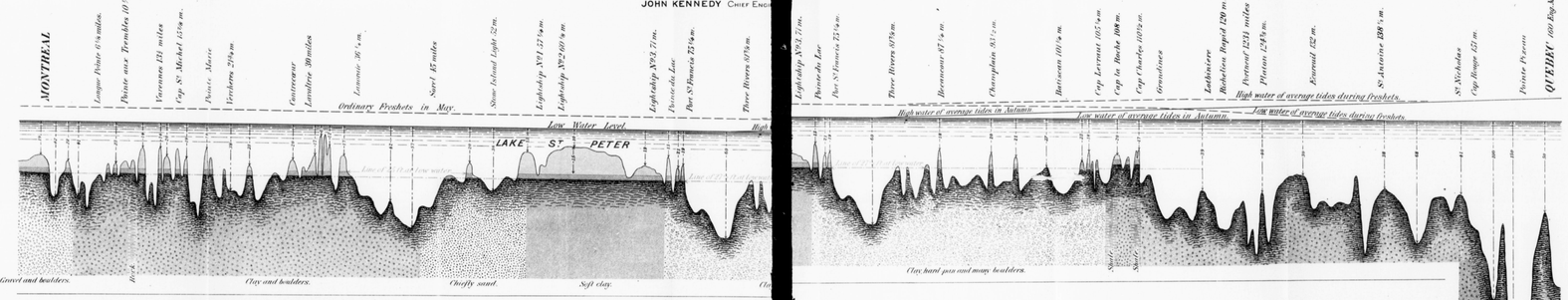
Secretary and Treasurer

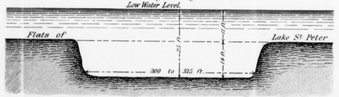
HARBOUR COMMISSIONERS' OFFICES,
MONTREAL, FEBRUARY, 1883.

HARBOUR COMMISSIONERS OF MONTREAL
PROFILE OF THE RIVER ST. LAWRENCE BETWEEN MONTREAL AND QUEBEC
SHOWING THE SHIP CHANNEL AS ALREADY DEEPENED TO 25 FEET AT LOW WATER AND PROPOSED FURTHER DEEPENING TO 27½ FEET

JOHN KENNEDY CHIEF ENGINEER.



LAKE ST. PETER
Cross-Section of Dredged Channel.
Low Water Level.



Length of Dredging in Lake St. Peter, 17¼ Statute miles.
Quantity for 25 feet depth, 8,000,000 cubic yards.

SCALES.

Vertical, 30 feet to an inch.
Horizontal, 6 miles to an inch.

Dredging done to 25 ft. depth at low water shown thus ——
Do. yet to be done to 27½ ft. depth. " " ——

SHIP CHANNEL DREDGING.

Distance from Montreal to Quebec	160 English Statute Miles.
Dredging the Ship Channel began in 1844 and continued to 1847.	
Dredging resumed in 1851 and continued to 1866.	
Dredging to attain 25 feet depth resumed in 1875.	
Depth of Ship Channel at low water before dredging	11 feet
Increase of depth effected up to 1866	9 "
Depth attained in 1866	20 "
Depth attained in 1878	22 "
Depth attained in 1882	25 "
Expenditure for 20 feet depth	$1,200,000
Do. do 25 do. do. additional	$1,700,000

PLACES AT WHICH DREDGING HAS BEEN DONE.

Length of Dredged Channel in Miles.

25 Foot Channel.		
Montreal Harbour	Gravel and Sand	.26
Hochelaga	Stones and Gravel	.22
Pointe aux Trembles Channel	Clay and Boulders	3.15
Fusilier Varennes—opposite Varennes	Clay and Boulders	.15
Varennes to Cap St. Michel	Clay and Boulders	1.20
Curve at Cap St. Michel	Clay and Boulders	1.35
Pointe Marie	Clay and boulders	.47
Verchères	Clay and Boulders	.65
Plum Island	Clay and Boulders	.22
Contrecœur Channel—upper entrance	Clay and a few Boulders	.51
" " main portion	Clay and a few Boulders	1.10
" " Ile St. Ours	Hard Silt and Clay	.85
Ile de Grace	Sand and some Clay	.50
Lake St. Peter, including Nicolet Traverse	Cheffy Soft Clay	17.47
Port St. Francis	Hard Pan and Boulders	.32
Bécancour Traverse and Reef	Hard Pan and Boulders	.72
Champlain Village	Clay and Boulders	.35
Point Cicerolle	Coarse Sand	.25
St. Ann's Shoal and Cap Lermont	Tough Clay and Boulders	1.47
Cap La Roche	Shale Rock and Boulders	.95
Fusilier Bayer	Boulders and Clay	.17
Cap Charles	Shale Rock and Boulders	.40
	Total for 25 feet Channel	24.25
20 Foot Channel.		
Lavaltrie Channel	Clay and Boulders	8.00
	Total length Dredged	32.25

In the straight parts of the Channel, between No. 1 Lighthslp and the White Buoy, Lake St. Peter, the dredging is 225 feet wide; in the straight parts elsewhere it is generally 200 feet, but in bends and all important places it is widened out to 450 feet or more. At all places above Cap la Roche the depth of the Dredging is 25 feet at low water, and at Cap la Roche and Cap Charles it is 20 feet with a good average tide. In the Lavaltrie Channel—which is independent of the 25 feet Channel—the depth is 20 feet at low water.

PLANT EMPLOYED.

Eight Elevator Dredges (single set of buckets, endless chains).
Two Spoon Dredges (employed part of time).
Two Boulder Grappling Barges.
Nine Tug Boats.
Five Coal Tenders.
Nineteen Hopper Scows, 80 to 90 cubic yards capacity.
Four Hopper Scows, 150 cubic yards capacity.
Daily capacity of Dredges varies with the nature of work, from 150 cubic yards Shale to 4,000 cubic yards soft Clay.