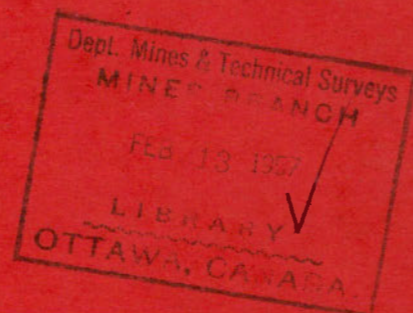




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Extracts Relating to the Navigability of Canadian Inland Waterways

W. A. Black

GEOGRAPHICAL BRANCH
Department of Mines and
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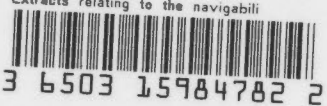
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PREFACE

This paper "Extracts relating to the navigability of Canadian Inland Waterways" is an outgrowth of work resulting from other lines of research. The Geographical Branch is responsible for the Ice Distribution Survey, the purpose of which is to extend knowledge of the formation, extent and movement of ice in the coastal and inland waters of Canada, and to present the accompanying navigational difficulties.

The Branch has met with many requests for a map showing the navigable inland waterways of Canada; hitherto such a map of Canadian origin has been unavailable. As a map of this type was required for the Atlas of Canada, its preparation was undertaken. The major part of this study was the outcome of research done for the new Atlas.

It is hoped that the study will provide useful information to those who are interested in the navigability of our waterways.

N. L. Nicholson,
Director,
Geographical Branch.

INTRODUCTION

This compilation of extracts from published works is designed to make available in convenient form the wealth of source material revealed in the work of preparing a navigable waterways' map for the Atlas of Canada. It includes the records of the early explorers and fur traders, government reports, and information from local authorities with specialized knowledge of individual waterways. Each reference is selected on the basis of completeness; it was not intended, nor was it feasible, to provide a complete reference on the navigability of a single waterway. The study is thus of a preliminary nature and should be regarded as incomplete as it omits the multitude of navigable lakes for which information may only be secured locally.

To facilitate their use the references are arranged alphabetically by place name followed by the author's name and the bibliographic source of the information. The information is arranged under five major drainage regions: (1) Pacific Coast; (2) Interior Plains; (3) Hudson-Laurentian; (4) Great Lakes-St. Lawrence, and (5) Atlantic Coast.

I PACIFIC COAST DRAINAGE

ADAMS LAKE

"... the 37-mile-long Adams Lake, itself navigable, but inaccessible to boats without a long portage on account of rapids in the Adams River". p. 16.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n.d.

CHILCO LAKE

"Chilco Lake, 40 miles long and from 1 to 3 miles wide, which seldom freezes over in winter. The lake is navigable ... (but) the Chilcotin River, which joins the Fraser ... is a swift-flowing unnavigable stream". p. 17.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n.d.

COLUMBIA RIVER

"The navigation of the Columbia from the sea, for more than 300 miles, is interrupted by only two short portages; and above this, with the exception of a few short intervals of impassable rapids, it is navigable nearly to Boat Encampment, at the junction of Canoe River, 250 miles above Fort Colville, and more than 800 miles above Astoria". p. 51.

Selwyn, A.R.C. Journal and report of preliminary explorations in British Columbia. Geological Survey of Canada. Report of Progress for 1871-72. Montreal, 1872.

COLUMBIA RIVER SYSTEM

"... the total distance by water from Revelstoke to Sproat's Landing, is one hundred and forty-five miles and a half, of which eighty-seven miles and a half is lake and the remaining fifty-eight miles river ... During the past summer it was continuously navigated by two small steamers, ...". p. 16B.

Dawson, G.M. Report on a portion of the West Kootanie District, British Columbia, 1889. Geological and Natural History Survey of Canada, Annual Report (New series) Vol. IV, 1888-89. Part B. Montreal, 1890.

COLUMBIA RIVER

"Mouth of Canoe River to Revelstoke, 90 miles ... During part of the summer a steamboat used to ply between Revelstoke and ... Boyd's Ranch just a few miles below Priest Rapids, but above that point ... the river should be considered unnavigable, not to Canoe River only, but as far as Kinbasket Lake. p. 21 ... Revelstoke to U.S. Boundary, 176 miles ... the river to Upper Arrow Lake, a distance by water of about 28 miles ... steamers drawing 3' can navigate the entire stretch ... even at low water. Upper Arrow Lake ... 38 miles long ... northeastern Arm, ...

about 8 miles long ... 18 miles of broad river lead to Lower Arrow Lake ... about 50 miles long ... but sternwheelers have navigated the remaining 30 miles (from W. Robson) to the U.S. boundary".

p. 21-22.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n. d.

COLUMBIA RIVER

"The whole river is navigable from source to border except for a stretch of about 85 miles around the Big Bend, p. 18 ...

Distance from U.S. border to Columbia Lake is 461 miles". p. 18.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n. d.

DOG LAKE

"Steamships ply on ... Trout and Dog Lakes". p. 13
(Estimated distance Trout Lake 12 miles, for Dog Lake 11 miles).

British Columbia, Provincial Bureau of Information. Manual of provincial information, Province of British Columbia 1930. Victoria, 1930.

DRIFTWOOD RIVER

"Driftwood River that flows in (to Takla Lake) near that place (Bulkley House) is so shallow, and has so many bends and log jams, that it has been ascended only rarely". p. 12.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n. d.

FRANCOIS LAKE

"Fraser Lake was the limit of their run, for the Stellaco River that enters its west end from Francois Lake is too swift and shallow even for canoes; ... Francois Lake, however, has ... a motor-driven ferry ... " p. 13-14. (Estimated distance 65 miles).

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n. d.

FRASER RIVER

"The village of Tête Jaune, ... marks the beginning of navigation on the Upper Fraser River ... Tête Jaune to Prince George, 315 miles ... p. 4. ... In 1912 stern-wheel steamers were operating the 155 mile stretch between Prince George and Soda Creek ... Navigation from Soda Creek to Chimney Creek Canyon, about 20 miles is fairly safe ... For two years in the 1880's a stern-wheeler gallantly operated the 26 miles between Lytton and Boston Bar without disaster, but craft of all kind would be well advised to avoid the entire stretch from Soda Creek to Yale ... p. 8. There is no longer any regular service to that place (Yale) such as used to be provided by stern-wheelers ... Yale to Chilliwack, 32 miles ... small ocean-going vessels drawing up to 15 feet still go to Chilliwack

... Chilliwack to New Westminster, 47 miles ...". p. 9-10.
 Jenness, D. and Leighton, J. The Fraser River system. Typed
 M S. in Geographical Branch Library, Mines and Technical
 Surveys Department. Ottawa, n.d.

HARRISON RIVER

"Harrison River is navigable, however, only during its high
 water season, which lasts from May until about the end of July; at
 other times of the year it is very shallow". p. 10.

Jenness, D. and Leighton, J. The Fraser River system. Typed
 M S. in Geographical Branch Library, Mines and Technical
 Surveys Department. Ottawa, n.d.

HARRISON RIVER AND LAKE SYSTEM

"Some steamers ran up the Fraser ..., while others ...
 ascended the Harrison ... The Harrison traffic moved by water
 from the Fraser up Harrison River to Fort Douglas at the head of
 Harrison Lake ... From Fort Douglas a portage trail of 29 miles
 led to Lillooet Lake, which was served by the stern-wheeler
 'Marzelle' ... portage of 22 miles to Anderson Lake, freight and
 passengers were loaded on the 'Lady of the Lake'. The gap of a
 mile and a half between Anderson and Seton Lakes ... The 'Champion'
 navigated Seton Lake ... to Lillooet". p. 151-152. (Estimated
 distance of navigable waters 98 miles).

Hutchison, Bruce. Rivers of America: the Fraser. Clarke,
 Irwin & Co., Toronto, 1950.

KAMLOOPS LAKE

"Kamloops Lake, 25 miles long, offers no difficulties to
 navigation". p. 15.

Jenness, D. and Leighton, J. The Fraser River system. Typed
 M S. in Geographical Branch Library, Mines and Technical
 Surveys Department. Ottawa, n.d.

KOOTENAY RIVER

"Its upper waters are quite unnavigable, but from Canal Flats,
 ... shallow-draft vessels can descend it some 132 miles to Jennings,
 Montana; ... steamers used to operate regularly between Jennings
 and Fort Steele, a distance of about 90 miles ... From Canal Flats
 (to the U.S. Border, distance) approximately 92 miles ... and again,
 for approximately 57 miles from Bonner's Ferry in Idaho to Kootney
 Lake . p. 23 ... Kootenay Lake ... is 66 miles long, ... at the
 entrance to the 20-mile-long west arm. p. 23 ... The best season for
 navigation is between May and September, because the low water of
 autumn creates many shallows, and between December and March
 the river is generally frozen over". p. 24.

Jenness, D, and Leighton, J. The Fraser River system. Typed
 M S. in Geographical Branch Library, Mines and Technical
 Surveys Department. Ottawa, n.d.

LEWES - YUKON RIVERS

"Lewes River, ... rises in Lake Lindeman, ... Lake Lindeman was the head of navigation for many gold - seekers ... 1897-98. Lake Lindeman ... via river ... Lake Bennett, 26 miles in length ... Lakes Nares ... Tagish Lake ... Lewes River ... Marsh Lake, 19 miles in length ... to town of Whitehorse, (Distance computed 284 miles) ... Opposite the settlement of Fort Selkirk, which is about 264 miles below Whitehorse, the Lewes is joined by the Pelly River". p. 107.
North Pacific Planning Project. Canada's new northwest. 1947.

LINDEMAN LAKE - MARSH LAKE

"Lake Lindeman ... It is the extreme head of navigation in this direction ... (p. 172B). The total length of the route by the Lewes River from "the Landing" on Lake Lindeman to the site of Fort Selkirk is 357 miles. From the outlet of Lake Labarge, to the same point, is a distance of 200 miles, ..." (p. 173B).

Dawson, G.M. Report on an exploration in the Yukon District, N.W.T., and adjacent northern portion of British Columbia. 1887. Geological and Natural History Survey of Canada, Annual Report (New Series) Vol. III, Pt. 1. Rept. B. 1888. Montreal, 1889.

MACMILLAN RIVER

"... the Macmillan branch is also navigable for a considerable, though not ascertained distance ..." p. 20B.

Dawson, G.M. Report on an exploration in the Yukon District, N.W.T., and adjacent northern portion of British Columbia. 1887. Geological and Natural History Survey of Canada, Annual Report (New Series) Vol. III, Pt. 1. Rept. B. 1888. Montreal, 1889.

MASSET SOUND AND INLET

"The length of Masset Sound from its seaward entrance to (Masset Inlet) is nineteen miles ... Inside the bar ... 3 fathoms at the entrance ... depth increases to 9 to 11 fathoms ... Masset Inlet ... with an extreme east and west length of seventeen miles has a breadth ... of five and half miles ... on the north side ... a second great expansion ... is nine and half miles in length". p. 35B-36B.

Dawson, George M. Report on the Queen Charlotte Islands 1878. Geological Survey of Canada. Report of Progress for 1878-79. Part B. Montreal, 1880.

NASS RIVER

"The Nass River is navigable by motorboat or stern-wheeler from its mouth at Arrandale to the foot of a canyon 8 miles below Aiyansh, a distance of about 40 miles". p. 28.

Jeness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n.d.

NECHAKO RIVER

"... 50 miles up the Nechako to the mouth of Stuart River ... The Nechako continues navigable for motor craft, though fairly swift and shallow, for another 79 miles ... Fraser Lake lies 56 miles beyond

the Nechako's junction with the Stuart ... The mile-long Nautley River, ... shallow-draft steamers used to ascend it during the high water season ... Fraser Lake was the limit of their run, ... By-passing Fraser Lake, the steamers were able to ascend the Nechako itself for another 20 miles, but a small canyon ... could have been made passable, the Grand Canyon only 28 miles farther on completely barred all further navigation ..." p. 13.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys, Ottawa, n.d.

NORTH THOMPSON AND SOUTH THOMPSON RIVERS

"Both streams are navigable during the high water season from May to the end of September or early October, ... the transition from low to high water comes very suddenly about the beginning of May ... Extreme high water ends in July, but low water does not really set in until the end of September. From then until the end of April it is the low water rather than an ice that prohibits navigation". p. 15.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n.d.

NORTH THOMPSON RIVER

"... the North Thompson is a shallow stream ... which is navigable (105 miles) ... up to the mouth of the Mad River. This was as far as the old stern-wheeler could ascend; it is probably near the limit also for smaller craft". p. 15-16.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n.d.

OKANAGAN LAKE

"Okanagan Lake, ... drain into the Columbia River, is 69 miles long, ... no navigable outlet ...". p. 25.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n.d.

OOTSA - TETACHUCK LAKE SYSTEM

"Great Circle Tour", 203 miles. This is purely a tourist route within the confines of ... Tweedsmuir Park at the headwaters of the Nechako River; ... the series of rapids and falls (the highest about 25') between Tetachuck and Euchu Lakes completely blocks all vessels that cannot be carried over the portage". p. 14.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n.d.

OOTSA - TETACHUCK LAKE SYSTEM

"The Kenney Dam ... 21 miles from the lake (on the Nechako River) ... raises the water some 300 feet at its face and some 17 feet in Tahtsa Lake, the western extremity of the lake-chain system ..." p. 1386. (This provides a navigable waterway of 270 miles suitable for river steamers and 70 miles longer than the former "Great Circle Tour").

Jomini, Harry. The Kenney dam. *Engineering Journal*, Vol.37, No. 11. Nov. 1954.

PELLY RIVER

"From the site of old Fort Selkirk, again, the Pelly might be navigated by small steamers of good power to within about fifty miles of the site of old Fort Pelly Banks, ..." p. 20 B. ... the river would be easily navigable for stern-wheel steamers as far up as the mouth of the Macmillan ... Above the Macmillan, I believe, no serious difficulty would be met in taking a small stern-wheel steamer of good power up to the mouth of Ross River, and possibly as far as the foot of Hoole Canyon. ... The Ross River is a navigable stream at its mouth, but its upper part is quite unknown". p. 133 B.

Dawson, G.M. Report on an exploration in the Yukon District, N.W.T., and adjacent northern portion of British Columbia. 1887. Geological and Natural History Survey of Canada, Annual Report (New Series) Vol. III, Pt. I. Rept. B. 1888. Montreal, 1889.

PELLY RIVER

"Pelly River and its tributary, the Macmillan, have been navigated by small steamers, ... Hoole Canyon, which is the limit of direct navigation". (The distance is computed to be 278 miles) p. 109. ... The Macmillan is navigable for 152 miles.

North Pacific Planning Project. Canada's new northwest. 1947.

PITT RIVER

"A buoyed channel, dredged to a depth of 25 feet, leads from the deep waters in Fraser River to those in Pitt River, ... From its mouth the Pitt River extends about 11 miles northeastward to Grant Narrows, and thence Pitt Lake extends a farther 12 miles northward. ... In the greater part of the lake the depths are too great for anchoring." p. 176-177.

United States, Navy Department, Hydrographic Office, H.O. No. 175. Sailing directions for British Columbia. Vol. I, 4th ed. Washington, 1940.

PORCUPINE RIVER

"Porcupine River is navigable for gas boats from its confluence with the Yukon River (in Alaska) ... to the settlement of Old Crow (Estimated distance 48 miles) ... Bell and Eagle Rivers, tributaries of the Porcupine, are also reported navigable for small power boats". (Estimated distance to junction of Ramparts and Old Crow 200 miles). p. 109.

North Pacific Planning Project. Canada's new northwest. 1947.

QUESNEL RIVER AND LAKE

"The Quesnel River flows into the Fraser from the south-east at Quesnel ... about 21 miles from its junction it passes through a rocky canyon ... This canyon effectively bars all navigation. Quesnel Lake, however, is navigable throughout its entire length". p. 17. (Estimated distance Quesnel Lake 64 miles and North Arm 16 miles).

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n.d.

SHUSWAP LAKE

"Its waters are clear and deep ... In fact it is two lakes, the western 45 and the eastern 37 miles long, lying almost parallel but joined in the middle, p. 280. ... The first steamboat to churn the Shuswap waters was greeted at Seymour ... (1866)". p. 159.

Hutchison, Bruce, Rivers of America: the Fraser. Clarke, Irwin & Co., Toronto, 1950.

SKEENA RIVER

"... stern-wheel steamers navigated the Skeena River as far as Hazelton, some 150 miles from its mouth, and one or two succeeded in reaching 12 or 14 miles beyond that town ... Motor-boats operate on the 100-mile-long Babine Lake from which Babine River issues, but rapids and canyons prevent any descent of that tributary to ... the Skeena". p. 27.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n. d.

SLOCAN LAKE

"Slocan Lake, ... is 25 miles ... the C.P.R. has no difficulty in maintaining an all-year steamer service". p. 25.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n. d.

SOUTH THOMPSON RIVER

"The South Thompson River from Kamloops east to Little Shuswap Lake (35 miles) is a rather sluggish stream ... Little Shuswap Lake, which is only 5 miles long ... slightly over 2 miles of nearly still water separates it from Shuswap Lake, which is roughly ten times the length and navigable without difficulty in its several arms ... pass from Shuswap Lake into the 8-mile-long Mara Lake, and proceed thence 19 miles up the shallow and winding Shuswap River to Enderby, a total distance by water from Kamloops of about 110 miles, ... Enderby is the terminus of effective navigation. p. 16-17 ... the 37-mile-long Adams Lake, itself navigable but inaccessible to boats without a long portage on account of rapids in the Adams River". p. 16. (The estimated navigable distance of the South Thompson including the arms of Shuswap Lake is 162 miles).

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n. d.

STEWART RIVER

"The Stewart River ... is reported to be navigable for two hundred miles above its mouth". p. 143D.

McConnell, R. G. Report on an exploration in the Yukon and Mackenzie basins, N.W.T. Geological and Natural History Survey of Canada, Annual Report (New Series) Vol. IV, 1888-89, Part D. 1891. Montreal, 1890.

STEWART RIVER

"With the exception of Lewes River, Stewart River is the most easily navigated of the tributaries of the Yukon ... As a result of the reopening of silver mines in the Mayo district in 1946, including those of Keno Hill Mining Company, Limited, steamers ... will bring down from Mayo ... silver - lead ore and concentrates". (The distance computed is 168 miles).

North Pacific Planning Project. Canada's new northwest. 1947.

STIKINE RIVER

"The river (Stikine) is navigable as far as Telegraph Creek, a distance of 138 miles, ... From Telegraph Creek to Dease Lake, a distance of 72 miles, a good gravel road is provided ... Dease Lake ... is 24 miles long ... It is navigable for its entire length". p. 114.

North Pacific Planning Project. Canada's new northwest. 1947.

STUART LAKE

"Stuart Lake, 46 miles long ... many islands in the lake, but do not hinder navigation". p. 12.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n.d.

STUART RIVER - TAKLA LAKE

"In 1871 the (sternwheeler) Enterprise ran the Cottonwood and Fort George Canyons - then up the Nechako to Stuart - up the Stuart to Stuart Lake - up Tachie River to Trembleur Lake - up Middle River and Takla Lake". p. 2. See "Steamboating on the Fraser". (Estimated distance 240 miles).

Stewart, N.C. (Surveyor General). Correspondence with Dr. D. Jenness. Nov. 15, 1946. Victoria, B.C.

STUART RIVER - TAKLA LAKE

"Prince George to north end of Takla Lake, 238 miles. For the first 50 miles the course lies up the swift and rather shallow Nechako River, ... Shallow-draft stern-wheelers used to navigate both these rapids (on the Nechako) ... Stuart River, ... 65 miles to Fort St. James ... Stuart Lake, 46 miles long ... Tachie River, navigable without difficulty as is also Middle River that enters it from the north ... The 55-mile-long Takla Lake is itself hardly more than a broadened river ... Navigation really ceases at Bulkley House, at its north end, ..." p. 11-12.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n.d.

TACHIE RIVER

"Tachie River, navigable for motor boats, though not for stern-wheelers, during the season of high water ... In the Grand Rapids the river falls abruptly two or three feet during the season of low water, ... at high water motor-boats towing barges can be

lined through". p. 12.

Jenness, D. and Leighton, J. The Fraser River System. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n.d.

TESLIN RIVER

"The Tes-lin-too is probably navigable for stern-wheel steamers for a hundred and fifty miles or more from its mouth, ..." p. 20B.

Dawson, G.M. Report on an exploration in the Yukon District, N.W.T., and adjacent northern portion of British Columbia. 1887. Geological and Natural History Survey of Canada, Annual Report (New Series) Vol. III, Pt. I. Rept. B. 1888. Montreal, 1889.

TESLIN RIVER

"Teslin River is navigable for the larger steamers ... Its tributary, the Nisutlin, is also navigable, .. to the first rapid. Navigation on Teslin Lake is practical". (Distance computed to be 274 miles) p. 109.

North Pacific Planning Project. Canada's new northwest. 1947.

THOMPSON RIVER

"The Thompson itself, however, is quite unnavigable, for it drops no less than 745 feet in the 70 miles between its exit from Kamloops Lake, at Savona and its junction with the Fraser at Lytton ... Kamloops Lake, 25 miles long, offers no difficulties to navigation". p. 15.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n.d.

TOBA RIVER

"Formerly a small steamship was used on Toba River". p. 12. British Columbia, Provincial Bureau of Information. Manual of provincial information, Province of British Columbia 1930. Victoria, 1930.

TREMBLEUR LAKE

"Trembleur Lake, the source of the Tachie River, is navigable without difficulty, as is also the Middle River that enters it from the north". p. 12.

Jenness, D. and Leighton, J. The Fraser River system. Typed M S. in Geographical Branch Library, Mines and Technical Surveys Department. Ottawa, n.d.

TROUT LAKE

"Steamships ply on ... Trout and Dog Lakes". p. 13. (Estimated distance Trout Lake 12 miles, for Dog Lake 11 miles).

British Columbia, Provincial Bureau of Information. Manual of provincial information, Province of British Columbia 1930. Victoria, 1930.

WHITE RIVER

"White River has been navigated by small stern-wheelers as far as Snag, about 100 miles upstream, and, it is reported, on one occasion a small stern-wheeler made a successful trip from Whitehorse to Kluane Lake in early summer, via White, Donjek, and Kluane Rivers". (Distance computed for the latter 2 rivers to be 200 miles). p. 109.

North Pacific Planning Project. Canada's new northwest. 1947.

YUKON RIVER

"... a remarkable system of waterways, which permits the operation of river steamers over a total distance of more than 1,400 miles in Yukon Territory ... p. 101 ... From Fort Selkirk to White River, a distance of 90 miles, ... About 60 miles below Stewart River, the Klondike (River) ... (Distance from Fort Selkirk to Dawson is 160 miles) ... The International Boundary between Yukon Territory and Alaska is crossed about 88 miles from Dawson". (203 miles). p. 108.

North Pacific Planning Project. Canada's new northwest. 1947.

2. INTERIOR PLAINS DRAINAGE**AKLAVIK CHANNEL**

"... from Point Separation to Aklavik ... via Middle Channel to about latitude 68° 00' N. thence by ... Aklavik Channel to Aklavik". p. 17.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Mackenzie River pilot (preliminary edition) 1946. Ottawa, ca. 1947.

ARCTIC RED RIVER

"... it is said to be navigable for canoes and small Indian Schooners for a considerable distance". p. 16.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Mackenzie River pilot (preliminary edition) 1946. Ottawa, ca. 1947.

ASSINIBOINE RIVER

"During its high stages of water, the Assiniboine has been navigated by steamboats to Fort Ellice at the mouth of the Qu' Appelle". p. 23E. (This distance is computed to be 322 miles).

Upham, Warren. Report of Exploration of the glacial Lake Agassiz in Manitoba. Geological and Natural History Survey of Canada. Annual Report (New Series) Vol. IV, 1888-89. Part E. Montreal, 1890.

ATHABASCA LAKE

"Lake Athabaska ... is about 195 miles long with a greatest width of 35 miles". p. 100.

North Pacific Planning Project. Canada's new northwest. 1947.

ATHABASCA RIVER

"There (Athabasca Landing) they (H.B.C.) have built a steamer this summer (1888) that runs from Athabasca River ... from the head of the Grand Rapids to the 60 miles of rapids ... the worst in the country". p. 76.

Canada, Parliament - Report of the select committee of the Senate appointed to enquire into the resources of the great Mackenzie basin. Session 1888. Queen's Printer, Ottawa, 1888.

ATHABASCA RIVER

"... that between Grand Rapids and Fort McMurray to Clearwater they would continue to use barques. p. 137 ... From Athabasca Landing descend a good navigable river as far as the Grand Rapids. Below that there are plenty of rapids and they can be run except ... the Falls, not far from Fort McMurray - about 20 miles above Fort McMurray ... If the water is high we can pass down without portaging.

Q. You say that a steamboat can go down to the head of the rapids?

A. Yes.

Q. And that another steamer comes up to the foot of the rapids?

A. Yes. ... The portage would be about 70 miles altogether". p. 168.

Canada, Parliament. Report of the select committee of the Senate appointed to enquire into the resources of the great Mackenzie basin. Session 1888. Queen's Printer, Ottawa, 1888.

ATHABASCA RIVER

"... at its confluence with the Pembina River ... or about 110 (miles) above Athabasca Landing The ... steamer runs ... in ordinary stages of water finds no difficulty in doing so ... in the month of October ... many spots too shallow to pass over ... From Athabasca Landing down stream the Athabasca River is free of hindrance to navigation for about 120 miles, when we reach Pelican Rapids ... One hundred and sixty-five miles below the Landing, Grand Rapids are reached ... p. 4. From the head of Grand Rapids to Fort McMurray is upwards 85 miles ... From McMurray to Fort Chipewyan on Lake Athabasca ... nearly 200 miles by the channel, the steam-boat has to pass through in ordinary stages of water, there is neither obstacle nor hindrance ..." p. 6. The Athabasca is navigable to the McLeod River, 96 miles west of the Pembina River .

Ogilvie, Wm. Report on the Peace River and tributaries in 1891. Geological Survey of Canada. Ottawa, 1892.

ATHABASCA RIVER

"The Athabaska River which flows into Lake Athabaska is navigable by boats of three feet draught from its mouth to Fort McMurray, or distance of one hundred and eighty-seven miles ... Navigation is broken south of Fort McMurray by the Grand Rapids but from that point for two hundred and fifty miles to the confluence of Lessen Slave River. There is a depth for vessels of twenty-three inches..." p. 568.

Patton, M.J. Shipping and canals. In Canada and its provinces. Ed. by A. Shortt and A. G. Doughty. Vol. X, Toronto, 1914.

ATHABASCA RIVER

"The distance from Waterways (on the Clearwater River, 2 miles from its mouth with the Athabaska River) to Lake Athabaska is about 175 miles and the only obstructions to steamboat navigation in this distance are sandbars and the shifting of the channel at the outlet. (in the Athabaska delta)". p. 100.

North Pacific Planning Project. Canada's new northwest. 1947.

BLACKWATER RIVER

"A portage route to the downstream end of the navigable portion of the Blackwater River leads northeast ..." p. 10.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Mackenzie River pilot (preliminary edition) 1946. Ottawa, ca. 1947.

CARROT RIVER

"From its mouth to the Red Earth Indian reserve above Sipanok channel, it is deep and slow moving, and may be traversed either way with ease by boat or canoe and even by small launches". p. 28. (Distance estimated 120 miles).

McInness, William. The basins of the Nelson and Churchill Rivers. Geological Survey of Canada. Memoir 30. Ottawa, 1915.

CLEARWATER RIVER

"This same steamer (Grahame) runs from the mouth of the Clearwater up the Clearwater, towards Portage la Loche ... Q. How far? A. Somewhere about eighty miles. p. 82 ... Clearwater River is navigable only a short distance from its mouth. In summer the water is sometimes very low; besides there are five considerable rapids which are insurmountable. Above these rapids the river is quite navigable as far up as Great Portage la Loche. p. 136 ... in seasons of good water is navigable for a distance of about 50 miles from its confluence with the Athabasca or up to where it is obstructed with rapids and waterfalls, about 25 miles from the height of land, commonly known as Portage la Loche". p. 256.

Canada, Parliament. Report of the select committee of the Senate appointed to enquire into the resources of the great Mackenzie basin. Session 1888. Queen's Printer, Ottawa, 1888.

DAWSON 'ROUTE'

"The Dawson route, which, following the navigable waters, curves to the southward until it reaches the International Boundary line, which it follows until the North-west Angle is reached ... are innumerable lakes and streams, some navigable for large boats. From Lake Shebandowan to ... North-west Angle ... total navigable distance 304 miles, total portage distance 8.21 miles" (The navigable passages include 12 lakes and 1 river - River Maligne of 10 miles). p. 5.

Ontario. North Western Ontario: Its boundaries, resources and communications. Toronto, 1879.

DEASE RIVER

"... Dease River flows from Dease Lake to the Liard River, a distance of 180 miles ... navigable for its entire length ...

(Lower part on the Liard)" p. 114.

North Pacific Planning Project. Canada's new northwest. 1947.

EAGLE LAKE

"While on Eagle Lake, a short distance to the west there are three (steamers). The latter is navigable for sixty miles by vessels of seven feet draught". p. 566.

Patton, M.J. Shipping and Canals. In Canada and its provinces, Ed. by A. Shortt and A.G. Doughty. Vol. X, Toronto, 1914.

EAST CHANNEL

"... branches from Middle Channel, about latitude 68° 30' N. and flows ... parallel to Middle Channel ... junction with Oniak Channel ... to Kitigazuit Bay ... (to) Port Brabant". p. 17.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Mackenzie River pilot (preliminary edition) 1946. Ottawa, ca. 1947.

FAIRFORD AND DAUPHIN RIVERS

"The Fairford is navigable by small steamers, ... Navigation for small steamers is possible also on the Dauphin in early summer ..." p. 66.

Denis, L.G. Waterpowers of Manitoba, Saskatchewan and Alberta. Canada, Commission of Conservation, Committee on water and water-powers. Toronto, 1916.

FINLAY RIVER

"Its navigation, for two hundred miles above its mouth, with the exception of the canyon half a mile in length, is easy, ..."

p. 14C.

McConnell, R..G. Report on an exploration of the Finlay and Omenica rivers. Geological Survey of Canada. Annual Report (New Series). Vol. VII, 1894. Ottawa, 1896.

FRANCES RIVER

"The Upper Liard and Frances Rivers, above the mouth of the Dease, are also passable for large boats, with occasional portages, but not so for steamers ... p. 19B. This river, like the Liard, was at a medium stage (June) ... Marks along the banks showed that it had been six feet higher in the spring, and that it had since been falling ... p. 102B. Frances Lake ... is evidently very deep in its upper portions, ..." p. 111B.

Dawson, G.M. Report on an exploration in the Yukon District, N.W.T., and adjacent northern portion of British Columbia 1887. Geological and Natural History Survey of Canada. Annual Report (New Series) Vol. III, Pt. 1. Rept. B. Montreal, 1889.

GREAT BEAR RIVER

"... it has carried all the traffic, other than air freight, resulting from the mining operations at Great Bear Lake. The river, about 90 miles long, is broken by several rapids about half-way between the Mackenzie River and Great Bear Lake". p. 99.

North Pacific Planning Project. Canada's new northwest. 1947.

GREAT SLAVE LAKE

"It is about 290 miles long and at its greatest width is nearly 70 miles. The easterly and northerly extensions of Great Slave Lake are deep ... The distance from Slave River Delta to the head of the Mackenzie River at the western end of the lake is about 110 miles. In bad weather ... steamers and other river craft expect very rough water, ..." p. 100.

North Pacific Planning Project. Canada's new northwest. 1947.

HAY RIVER

"... the falls, which are situated about thirty miles in a direct line from its mouth ... In high water light draught steamers could ascend as far as the foot of the rapids". p. 73D.

McConnell, R.G. Report on an exploration in the Yukon and Mackenzie basins, N.W.T. Geological and Natural History Survey of Canada. Annual Report (New Series). Vol. IV, 1888-89. Part D. 1891. Montreal, 1890.

INGENICA RIVER

"... is reported to be navigable up to the forks, a distance of about thirty miles, ..." p. 16C.

McConnell, R.G. Report on an exploration of the Finlay and Omenica rivers. Geological Survey of Canada. Annual Report (New Series) Vol. VII, 1894. Ottawa, 1896.

KAMINISTIQUIA RIVER

"Navigable ... (to) about fifteen miles above Fort William occurs the ... Kakabeka waterfall. This waterfall can be avoided by a short canal ... and then there will be a continuous navigation between Port Arthur and Lake Shebandowan, which is forty-five miles distance by the Dawson Road. Lake Shebandowan is eighteen miles long, and a portage of three-quarters of a mile connects it with Lake Kashebowie, nine miles long. Another portage of one mile ... to Lac des Milles Lacs, which is eighteen and a half miles long. From this lake to Rainy Lake there is a continuous chain of lakes and rivers ... The total distance between the lakes being about 119 miles, including (6½ miles) portages". p. 292.

Griffin, W. The waterways of Canada. In Canada: An encyclopaedia of the country. Ed. by J.C. Hopkins. Vol. III, Toronto, 1898.

LAKE OF THE WOODS.

"... is navigable by vessels drawing not more than 9 feet of water, from Kenora to the mouth of the Rainy River a distance of eighty miles. There are no fewer than twenty-two steamers upon this lake". p. 566.

Patton, M.J. Shipping and canals. In Canada and its provinces. Ed. by A. Shortt and A.G. Doughty. Vol. X, Toronto, 1914.

LESSER SLAVE LAKE

"It is sixty-one miles long, has an average width of eight miles, a maximum width of twelve miles, ..." p. 17D.

McConnell, R.G. Report on a portion of the District of Athabasca comprising the country between Peace River and Athabasca River north of Lesser Slave Lake. Geological Survey of Canada. Annual Report (New Series) Vol. 5, Part 1. 1890-91. Rept. D. Ottawa, 1893.

LESSER SLAVE LAKE AND RIVER

"Attempts to ascend the Lesser Slave River to Lesser Slave Lake, but so far without success. The lower twenty miles ... almost one continuous rapid, ... After heavy rainfalls this stream rises rapidly, ... she would find no serious difficulty in ascending, ..." p. 4. Distance of Lake and River computed to be 115 miles.

Ogilvie, Wm. Report on the Peace River and tributaries in 1891. Geological Survey of Canada. Ottawa, 1892.

LESSER SLAVE RIVER AND LAKE

"... you ascend that river by steamer, go on to their post at the end of Lesser Slave Lake, (Lesser Slave Lake), is 100 miles long ... Lesser Slave River ... (is) about ninety miles long ... Then you have 190 miles of navigation from the mouth of the river to the head of the lake? A. Yes, Mr. Hardisty puts it at 200 miles". p. 82.

Canada, Parliament. Report of the select committee of the Senate appointed to enquire into the resources of the great Mackenzie basin. Session 1888. Queen's Printer, Ottawa, 1888.

LIARD RIVER

"... from Hell Gate Canyon ... the river has an uninterrupted flow, and presents no obstacles to navigation until near its mouth". p. 50D.

McConnell, R.G. Report on an exploration in the Yukon and Mackenzie basins, N.W.T. Geological and Natural History Survey of Canada. Annual Report (New Series) Vol. IV, 1888-89. Part D. 1891. Montreal, 1890.

LIARD RIVER

"Fort Liard, 182 miles from Simpson ... From Fort Liard to the mouth of the East Branch the distance is about fifty-seven miles ... any steamer that could make her way up to Liard could make her way up to the East Branch ... East Branch River (Nelson) ... stern-wheel flat-bottomed steamers, ... could make their way up to Fort Nelson ... a distance of about 111 miles ... About ninety-one miles above the Fort the forks is situated ... A powerful light draught stern-wheel steamer might in good water ascend as far as the forks, but certainly no further ..." p. 11, 12, 13.

Ogilvie, Wm. Report on the Peace River and tributaries in 1891. Canada. Department of Interior. Ottawa, 1892.

LIARD RIVER

"In its course through the Rocky Mountains and eastern foothills, the Liard is navigable only by canoe, ... Shortly below Hell Gate the Liard breaks through the foothills and enters the Great Central plain and presents no obstacle to navigation until near its mouth ... making the navigable water on this stream 440 miles in length". p. 6.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Mackenzie River pilot (preliminary edition) 1946. Ottawa, ca. 1947.

LIARD RIVER

"The lower (Liard) ... has been used to some extent during spring high water in transporting freight to the Mackenzie River settlements. It also provides a water route between points on the Alaska Highway and the Mackenzie River. p. 99 ... It is, however, not navigable between Lower Post to Fort Nelson River for any craft except canoes ... the canyon below Hell's Gate can only be navigated safely in the low water period of the late summer". p. 114.

North Pacific Planning Project. Canada's new northwest. 1947.

LOON - WABISCAW RIVERS

"With the exception of the lower part of Loon River, none of these rivers (tributaries of the Wabiscaw - Loon River) are navigable by steamers ... p. 7D. The Loon - Wabiscaw River might possibly be navigated, by powerful steamers, as far as the Grand Rapids, during the season of high water ... with the exception of a few miles of still water above its mouth, it can hardly be considered a navigable stream". p. 13D.

McConnell, R.G. Report on a portion of the District of Athabasca comprising the country between Peace River and Athabasca River north of Lesser Slave Lake. Geological Survey of Canada. Annual Report (New Series) Vol. 5, Part 1. 1890-91. Rept. D. Ottawa, 1893.

MACKENZIE RIVER

"The Mackenzie River, with its tributaries, supplies the most extensive and far-flung system of natural water routes in Canada. Together with the Athabaska and Slave Rivers and Great Slave Lake it provides an inland water transport system for 1,660 miles from the rail terminus at Waterways, Alberta, to Aklavik, N.W.T. ... This waterway is continuous except for the unnavigable stretch of 16 miles on the Slave River between Fort Fitzgerald, Alberta, and Fort Smith in the Northwest Territories ... p. 99. The name Mackenzie is applied to that part of the river system from Great Slave Lake to the Arctic Ocean, a distance of about 1,100 miles". p. 100.

North Pacific Planning Project. Canada's new northwest. 1947.

MANITOBA AND WINNIPEGOSIS LAKES

"The length of each of these lakes, measured in a straight line, is about a hundred and twenty miles, ... Both are shallow in proportion to their size, ... The maximum width of Lake Manitoba, about twenty-eight miles ... The width of Winnipegosis varies from five to fifteen

miles. Its northern portion is bent, ... so that its length following this curve, is nearly a hundred and fifty miles". p. 19E.

Upham, Warren. Report of exploration of the glacial Lake Agassiz in Manitoba. Geological and Natural History Survey of Canada. Annual Report (New Series) Vol. IV, 1888-89. Part E. Montreal, 1890.

MANITOU LAKE

"... has only two steamers, although navigable for only forty miles by vessels of six feet draught. It is important as the centre of a rich mining district". P.560.

Patton, M.J. Shipping and canals. In Canada and its provinces. Ed. by A. Shortt and A.G. Doughty. Vol. X, Toronto, 1914.

NAMAKAN CHAIN OF LAKES

"The Namakan reach includes the chain of lakes consisting of Namakan, Kabetogama, Sand Point, Little Vermilion and Crane Lakes ... Navigation ... on the chain of lakes ... is allied in a measure to that of Rainy Lake ... Navigation on these upper lakes ... La Croix, Basswood, Saganaga and Northern Lights Lakes, ... is confined principally to the lumber interests". p. 62.

International Joint Commission. Final report of the International Joint Commission on the Rainy Lake reference Washington - Ottawa 1934. Ottawa, 1934.

ONIAK CHANNEL

"... which is about 8 miles long, ... It is a steamboat route from Middle to East Channels". p. 18.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Mackenzie River pilot (preliminary edition) 1946. Ottawa, ca. 1947.

PARSNIP RIVER

"(For) two thirds of the summer it would (be fit) for steamboat navigation, 74 miles from Fort McLeod to Forks of the Finlay. p. 68 ... For 50 miles in the mountains there is nothing to interfere with (steamboat) navigation ". p. 69 ... (i.e. above the Peace River Canyon to Forks of the Finlay)

Canada, Parliament. Report of the select committee of the Senate appointed to enquire into the resources of the great Mackenzie basin. Session 1888, Queen's Printer, Ottawa, 1888.

PEACE RIVER

"Another boat, built below the portages on Slave River, would give uninterrupted navigation to the Arctic sea, while another on Peace River, above the chutes, could run all the way to Hudson's Hope". p. 171. (Estimated distance 772 miles)

Macoun, Prof. On the botanical features of the country traversed from Vancouver Island to Carleton, on the Saskatchewan. Geological Survey of Canada. Reports of Exploration and Surveys. 1875-76. In Report of Progress for 1874-75. 1876.

PEACE RIVER

"Peace River is navigable above and below the canyon at Hudson Hope. p. 12 ... Portions of the Parsnip, Finlay, Nation, Omineca, and Ingenika Rivers are navigable. Power craft are used on the ... Finlay and Ingenika Rivers". p. 12.

British Columbia, Provincial Bureau of Information. Manual of provincial information, Province of British Columbia 1930. Victoria, B.C., 1930.

PEEL CHANNEL

Peel River ... forms a connecting link 4 miles long between Mackenzie and Peel Rivers ... The portion of Peel River between this crossover and Aklavik is called Peel Channel ... This is the established steamboat route to Aklavik". p. 17.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Mackenzie River pilot (preliminary edition) 1946. Ottawa, ca. 1947.

PEEL RIVER

"At Fort McPherson, 24 miles up Peel River ... is the highest point to which steamers ascend the river, but there seems no reason why stern-wheel steamers cannot ascend the stream as far as the mouth of Wind River". p. 18. (Distance computed to be 96 miles)

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Mackenzie River pilot (preliminary edition) 1946. Ottawa, ca. 1947.

RAINY LAKE

"Rainy Lake, ... can accommodate steamers of seven feet draught for a distance of seventy-five miles". p. 566.

Patton, M.J. Shipping and canals. In Canada and its provinces. Ed. by A. Shortt and A.G. Doughty. Vol. X, Toronto, 1914.

RAINY LAKE - RAINY RIVER

"Rainy Lake is navigable for forty-four miles, from Kettle Falls to Fort Francis, where navigation is interrupted by the Fort Francis Falls ... Rainy River is navigable by steamers of considerable size from Fort Francis to the Lake of the Woods, and ... in the shallowest places is over five feet deep at low water-mark". p. 45.

Lyon, W.D. Report respecting lands of Rainy River. Ontario, Department of Attorney General. In Ontario, Sessional Papers (No. 22, 1880). Toronto, 1880.

RAINY LAKE - LAKE OF THE WOODS

"The length of Rainy Lake is nearly fifty miles ... Lake of the Woods ... its maximum extent in either direction is sixty miles. p. 19E ... The Rainy River, about eighty miles long, connecting Rainy Lake and the Lake of the Woods, is a broad ... deep stream ... It is navigable for large steamboats from Lake of the Woods to the foot of the Long Sault; and thence to Rainy Lake it is navigated by tug or propellor, ..." p. 20E.

Upham, Warren. Report of exploration of the glacial Lake Agassiz in Manitoba. Geological and Natural History Survey of Canada. Annual Report (New Series) Vol. IV, 1888-89. Part E. Montreal, 1890.

RAINY LAKE - LAKE OF THE WOODS

"... there is a considerable field for navigation to take the people from one terminus to the other ... It involves about 185 miles. ... From where? ... From Fort Frances to Kenora ... July and August ..., those are the months with which the navigation companies are chiefly concerned ..." p. 40.

International Joint Commission. Progress report of the International Joint Commission on the reference by the United States and Canada in re levels of the Lake of the Woods and its tributary waters and their future regulation and control including public hearings at International Falls and Warroad, Minn., and Kenora, Ontario. Washington, 1914.

RED RIVER

"All the way below McCauleyville and Fort Abercrombie, fifteen miles north of Breckenridge, it is navigated by steamboats, barges and flat-boats;" p. 21E. (Distance calculated from International Boundary to Lake Winnipeg 144 miles).

Upham, Warren. Report of exploration of the glacial Lake Agassiz in Manitoba. Geological and Natural History Survey of Canada. Annual Report (New Series) Vol. IV, 1888-89. Part E. Montreal, 1890.

ROSS RIVER

"Sheldon Lake (about 96 miles from the mouth) is the limit of boat navigation in low water, but in high stages, Wilson Lake, forty-five miles beyond, might be reached". p. 263.

Denis, L.G. Waterpowers of Manitoba, Saskatchewan and Alberta. Canada, Commission of Conservation, Committee on Waters and Water-Powers. Toronto, 1916.

SASKATCHEWAN RIVER

"The Saskatchewan and both its North and South branches ... during favourable stages of water are navigable by steamboats from Cedar Lake to the Rocky Mountain House on the North Saskatchewan, ... and beyond the confluence of the Bow and Belle Rivers, which form the South Saskatchewan, fifty miles west of Medicine Hat ... The chief hindrances to their navigation in low stages are shifting sand-bars". p. 26E.

Upham, Warren. Report of exploration of the glacial Lake Agassiz in Manitoba. Geological and Natural History Survey of Canada. Annual Report (New Series) Vol. IV, 1888-89. Part E. Montreal, 1890.

SASKATCHEWAN RIVER

"... permits of navigation westward from Lake Winnipeg for a distance of fifteen hundred miles. For the first seven hundred miles from the lake to Prince Albert there are nine steamers, none of which draw more than three feet of water. From Prince Albert to Brazeau, a distance of eight hundred miles, where the river is navigable only for boats drawing twenty-two inches of water, there are three steamboats". p. 567.

Patton, M.J. Shipping and canals. In Canada and its provinces.

Ed. by A. Shortt and A.G. Doughty. Vol. X, Toronto, 1914.

SCHIST LAKE - SASKATCHEWAN RIVER

"To the Mandy mine on Schist Lake ... In Dec. 1916, ... contract for hauling of at least 3,000 tons of ore to the head of navigation ... some 3,300 tons were conveyed by barge to The Pas ... 130 miles by water. In summer the route from The Pas to Sturgeon Landing thence across to Lake Athapapokow was used". p. 102, 103.

Dillabough, J.V. Transportation in Manitoba. Manitoba Economic Survey Board. Winnipeg, 1938.

SEINE RIVER

"From the north-east, navigable by boats for 30 miles from its mouth, and for over 100 miles for the passage of timber, the Seine empties itself into Rainy Lake at Sturgeon Falls, ... the railway has been carried farther north, and now touches the navigable waters at Port Savanne, situated at the northern extremity of Lac des Mille Lacs ... From Port Savanne to the head of Rainy Lake, the distance is about 112 miles, with 6½ miles of portaging". p. 6.

Ontario. North Western Ontario: Its boundaries, resources and communications. Toronto, 1879.

SEUL LAC

"...from the post to the head of the English River, at the western end of the lake, (Lac Seul) the distance is 52 miles". p. 21.

Ontario. North Western Ontario: Its boundaries, resources and communications. Toronto, 1879.

SEUL LAC

"Lac Seul, ... is navigable in an easterly and westerly direction for a distance of 180 miles by steamers of eight feet draught. There is only one steamer on this lake at the present time". p. 566.

Patton, M.J. Shipping and canals. In Canada and its provinces. Ed. by A. Shortt and A.G. Doughty. Vol. X, Toronto, 1914.

SHEBANDOWAN (Dog) LAKE

"The tug led the way at the rate of seven knots, towing first a large barge with immigrants, ..." p. 13.

Dillabough, J.V. Transportation in Manitoba. Manitoba Economic Survey Board. Winnipeg, 1938.

SIPANOK RIVER

"This new watercourse has opened up more each year ... until quite a volume of the Saskatchewan water passes through it. During high water a fair sized tug, drawing 4 feet, has made the trip by this route". p. 123.

Denis, L.G. Waterpowers of Manitoba, Saskatchewan and Alberta. Canada, Commission of Conservation, Committee on Waters and Water-Powers. Toronto, 1916.

SLAVE RIVER

"The Rivière des Rochers and Slave River connect Lake Athabaska with Great Slave Lake, a distance of about 300 miles ... About 30 miles north of Lake Athabaska, the Peace River joins the Rochers to become the Slave River ... From the Peace to the head of the rapids at Fitzgerald, a distance of over 70 miles, navigation is uninterrupted ... 16 miles between Fort Fitzgerald and Fort Smith ... Fort Smith is thus the head of navigation for steamers and river craft operating on the lower Mackenzie River system, which is unobstructed from this point to the Arctic Ocean, a distance of over 1,300 miles". p. 100.

North Pacific Planning Project. Canada's new northwest. 1947.

SMOKEY RIVER

"It is possible that a stern-wheel steamer of considerable power could ascend the Smoky River for some distance, perhaps even as far as the mouth of the Wapiti, but this would be at best for a short time each year, and the river can in no proper sense be accounted a navigable one". p. 57B.

Dawson, G.M. Report of an exploration from Port Simpson on the Pacific coast, to Edmonton on the Saskatchewan, embracing a portion of the northern part of British Columbia and the Peace River country. 1879. Geological and Natural History Survey of Canada. Report of Progress for 1879-80. Part B. Montreal, 1881.

STEWART RIVER

"From Fraser Falls to its mouth, a distance of nearly 200 miles. It is navigable by ordinary shallow-draft steamers to Fraser Falls ... Above the falls the river is interrupted by occasional short riffles for several miles, but, farther up, it is reported to be clear to the main forks, a distance of about 60 miles". p. 259-260.

Denis, L.G. Waterpowers of Manitoba, Saskatchewan and Alberta. Canada, Commission of Conservation, Committee on Waters and Water-Powers. Toronto, 1916.

STURGEON LAKE

"Lake Sturgeon, west of Lake Nipigon is navigable for a distance of forty miles for vessels of 6 feet draught and has four steamers". p. 565.

Patton, M.J. Shipping and canals. In Canada and its provinces. Ed. by A. Shortt and A.G. Doughty. Vol. X, Toronto, 1914.

SWAN RIVER

"In the Swan Valley the Swan River is navigable for boats drawing two and a half feet of water for a distance of about 20 miles up from Swan Lake. The Swan Lake, (length 18 miles) again, is connected by a navigable river (Shoal River, length 10 miles) with the northern end of Lake Winnipegosis". p. 188.

Cunningham, Granville C. Report on Exploratory Survey between Lake Winnipegosis and Livingstone, during the summer and autumn of 1874. Appendix L. 1875. In Report on surveys and preliminary operations on the Canadian Pacific Railway up to January 1877. By Sanford Fleming. Ottawa, 1877.

TALTSON RIVER

"It ... could only be ascended by steamboats for 23 miles, to First Falls". p. 30.

Camsell, C. and Malcolm, W. The Mackenzie River basin. (Revised Edition). Geological Survey. Memoir 108. Ottawa, 1921.

WABIGOON LAKE AND EAGLE LAKE

"... which is navigable from Dryden for a distance of fifty miles for vessels of seven feet draught. It has five steamers, while on Eagle Lake, a short distance to the west, there are three. The latter lake is navigable for sixty miles for vessels of seven feet draught".

p. 566.

Patton, M.J. Shipping and canals. In Canada and its provinces. Ed. by A. Shortt and A.G. Doughty. Vol. X, Toronto, 1914.

WABIGOON RIVER

"Wabigoon Lake, ... about thirty miles long ... from it the Wabigoon river flows north and west, a broad, navigable stream with abundant water-power at intervals. p. 73 ... an average depth of from six to eight feet. Being free from rapids, it affords uninterrupted navigation down to the confluence with Eagle River. p. 75 ... This will place the settlers around Dryden in direct communication by water with the Manitou mining region, the distance to be travelled being about forty miles". p. 76.

Ontario, Agriculture Department. The pioneer farm and the Wabigoon country. Toronto, 1896.

WATERHEN RIVER AND LAKE

"... flows from Lake Winnipegosis into the north-western extremity of Lake Manitoba is thirty miles ... three to seventeen feet in depth. p. 45E. ... Waterhen Lake ... twenty-four miles long ... depth in centre being about six feet". p. 46E.

Tyrrell, J.B. Report on North-Western Manitoba with portions of the adjacent districts of Assinibola and Saskatchewan. Geological Survey of Canada. Annual Report (New Series) Vol. V, Part 1. 1890-91. Rept. E. 1892. Ottawa, 1893.

WEST CHANNEL

"... from the junction of Peel and Aklavik channels at Aklavik. It divides, about 20 miles from Aklavik, into 2 branches which follow roughly parallel courses ... to Mackenzie Bay. The westernmost branch is called Anderton Channel and the other Riddell Channel ... The route from Aklavik to Tununuk through West, Anderton or Riddell, and Urquhart Channels, follows the widest channels ... It is navigable for river steamboats ... An alternative route is via Aklavik Channel for about 6 miles thence by an unnamed ... channel, which joins Middle Channel in latitude 68° 27' N.; then by Middle, Oniak and East Channels to Tununuk". p. 18.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Mackenzie River pilot (preliminary edition) 1946. Ottawa, ca. 1947.

WINNIPEG LAKE

"Lake Winnipeg is two hundred and fifty miles long, ... the maximum width of its southern part is about twenty-five miles, and of its northern part sixty miles ... The shallowness of this comparatively large body of water, ... has proved a disastrous waterway to the freighting boats of by-gone days". p. 18E.

Upham, Warren. Report of exploration of the glacial Lake Agassiz in Manitoba. Geological and Natural History Survey of Canada. Annual Report (New Series) Vol. IV, 1888-89. Part E. Montreal, 1890.

WINNIPEG RIVER

"Lake Winnipeg 160 miles below (Kenora) ... p. 27. From Kenora to this point (Minaki) the river is navigable by steamer. ... About 11 miles below Kenora the river enters a somewhat narrow channel of rather rapid current, known as the Dalles. p. 28 ... from Kenora to Minaki ... 19 miles down the river ... The Winnipeg River is classed as a navigable stream, and hence any power development thereon must conform to the provisions of the Navigable Waters Protection p. 183 ... Comprehensive provision which has been made to meet navigation needs, ... with some necessary dredging and channel improvements, will render the river readily navigable throughout the power reach". p. 184.

Johnston, J.T. Report on the Winnipeg River power and storage investigations. Canada, Department of the Interior, Dominion Water Power Branch. Water Resources Paper No. 3, Vol. 1, Ottawa, 1915.

3. LAURENTIAN - HUDSON DRAINAGE

ABITIBI LAKE

"The total length of Lake Abbitibbe, or rather of the two lakes into which it is divided, is forty-seven miles". p. 38.

Ontario. North Western Ontario: Its boundaries, resources and communications. Toronto, 1879.

ALBANY RIVER

"Except in very low water, the river would appear to be navigable by powerful steamers, with shallow draft of water, all the way from its mouth to Martin's Falls, a distance of about 250 miles". p. 111.

Bell, Robert. Report on the country between Lake Superior and the Albany River. Geological Survey of Canada. Report of Progress for 1871-72. Montreal, 1872.

ALBANY RIVER

"The Albany River is the largest river in the territory ... the Albany River is said to be navigable in like manner from James' Bay to Martin's Falls, a distance of about two hundred and fifty miles. p. 8. ... The Moose River and the Albany River are, in my opinion, navigable for steamers of light draught and considerable power, ...

The Albany River would, I understand probably be navigable to Martin's Falls, some two hundred and fifty miles from James' Bay". p. 42.

Borron, E.B. Report on that part of the basin of Hudson's Bay awarded to the Province of Ontario and included in the District of Nipissing. Ontario, Department of Attorney General. In Ontario, Sessional Papers (No. 22, 1880). Toronto, 1880.

ALBANY RIVER

"Prof Bell. A. The Albany is next in point of navigable water. It is navigable for about 250 miles from the sea by river steamboats at high water". p. 179.

Canada, Parliament. Report of the select committee of the Senate appointed to enquire into the resources of the great Mackenzie basin. Session 1888. Queen's Printer, Ottawa, 1888.

ATTAWAPISKAT RIVER

"Prof. Bell ... A ... the river which would afford the greatest length of continuous uninterrupted navigation from the sea ... It is known as the Attawapishkat. ... it is continuously navigable from the sea at high water as far as it will afford width for steamers - which would be perhaps 250 or 300 miles". p. 179.

Canada, Parliament. Report of the select committee of the Senate appointed to enquire into the resources of the great Mackenzie basin. Session 1888. Queen's Printer, Ottawa, 1888.

BEAVER RIVER

"Below the rapids to Isle à la Crosse Lake it is a deep river, and then there would be 200 miles of unobstructed navigation to the mouth of River la Loche". p. 84.

Canada, Parliament. Report of the select committee of the Senate appointed to enquire into the resources of the great Mackenzie basin. Session 1888. Queen's Printer, Ottawa, 1888.

BIG RIVER

"Big River, which enters James' s Bay at Fort George, ... It is navigable for boats to the first fall, about twenty-seven miles from the mouth". p. 27C.

Bell, Robert. Report on an exploration of the east coast of Hudson's Bay 1877. Geological Survey of Canada. Report of Progress for 1877-78. Part C. Montreal, 1879.

CHESTERFIELD INLET - BAKER LAKE

"Chesterfield Inlet is a long, narrow inlet which extends in a west-north-westerly direction for about 112 miles to Chesterfield Narrows where it joins Baker Lake. p. 299 ... Chesterfield Inlet leads into Baker Lake at Chesterfield Narrows ... about 112 miles from the seaward entrance of the inlet ... The lake is about 50 miles long". p. 301.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Labrador and Hudson Bay pilot comprising the Strait of Belle Isle to Cape Chidley and Hudson Strait and Bay. 1st ed. 1954. Ottawa, 1955.

CHURCHILL RIVER

"The Churchill takes the form of a chain of lake-like expansions many of them of large extent and quite worthy the name of lakes, with short, connecting stretches of rapid water ... except the 60 mile stretch between Reindeer river and Nemei river, which is rough, the river affords a good route for canoes or boats; the portages are short, and lake expansions are almost continuous, ... p. 29. From ... the mouth of Nemei river, to Pukkatawagan, 120 miles below, the Churchill flows for almost the whole distance through lakes, ... Between Pukkatawagan and Southern Indian lake, a distance of about 130 miles, the lake expansions are larger, and including Granville lake, 50 miles or more in length ..." p. 31.

McInnes, Wm. The basins of the Nelson and Churchill Rivers. Geological Survey of Canada. Memoir 30. Ottawa, 1913.

GEORGE RIVER

"The river has not been sounded but its winding channel is navigated by Labrador schooners and smaller craft. The river is nearly 8 miles wide at the mouth ... About 16 miles upstream from Beacon Island ... "The Narrows", is reached ... Above the post (at "The Narrows") the river is said to be navigable for small boats for a distance of about 200 miles". p. 212.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Labrador and Hudson Bay pilot comprising the Strait of Belle Isle to Cape Chidley and Hudson Strait and Bay. 1st ed. 1954. Ottawa, 1955.

HARRICANAW RIVER

"It is 250 miles long, is wide and smooth - flowing, and is navigable for 50 miles from its mouth". p. 115.

Wallace, W.S. (Ed.) The encyclopedia of Canada. Vol. III, University Associates of Canada, Toronto, 1936.

HAYES RIVER

"Hayes River and two of its branches might also apparently be navigated by such craft in the spring, to points about one hundred and forty miles inland, ..." p. 8.

Borron, E.B. Report on part of the basin of Hudson's Bay belonging to the Province of Ontario. Ontario, Department of Attorney General. In Ontario, Sessional Papers (No. 39, 1883). Toronto, 1883.

HAYES RIVER

"Hayes River and two of its branches can be navigated by shallow draft steamers to points about 140 miles inland". p. 43.

Bell, C.N. Our northern waters. Winnipeg Board of Trade. Winnipeg, 1884.

HAYES RIVER

"Prof. Bell. A ... The Hayes, Steel and Hill Rivers which are all parts of one river are navigable for about 140 miles altogether from the sea". p. 179.

Canada, Parliament. Report of the select committee of the Senate appointed to enquire into the resources of the great Mackenzie basin. Session 1888. Queen's Printer, Ottawa, 1888.

KAIPISHCOW AND EKWAN RIVERS

"Prof. Bell. A ... (Kaipishcow and Equan rivers) also on the west coast of James' Bay would be navigable for a considerable distance by steamers". p. 179.

Canada, Parliament. Report of the select committee of the Senate appointed to enquire into the resources of the great Mackenzie basin. Session 1888. Queen's Printer, Ottawa, 1888.

KENOGAMI RIVER

"This stretch of the Kenogami, ... is altogether the finest reach of navigable water ... I have no doubt whatever that steamers of large size could then ply between the eighteenth portage and the junction of the Kenogami with the Albany, a distance of 120 miles. p. 38. ... From South end of Long Lake to first portage on Kenogami River (unbroken steam navigation)..... 58 miles From Eighteenth portage on the Kenogami to Albany Factory James' Bay (unbroken steam navigation for six weeks in the spring).....250 miles". p. 67.

Borron, E.B. Report on that part of the basin of Hudson's Bay belonging to the Province of Ontario. Ontario, Department of Attorney General. In Ontario, Sessional Papers (No. 1, 1885). Toronto, 1884.

KOKSOAK RIVER

"The river is navigable for medium - sized vessels as far as Nascopie Bight, almost 30 miles upstream, and 5 miles beyond the Hudson Bay Company's post at Fort Chimo. Small craft can proceed 70 to 80 miles from the mouth". p. 214.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Labrador and Hudson Bay pilot comprising the Strait of Belle Isle to Cape Chidley and Hudson Strait and Bay. 1st ed. 1954. Ottawa, 1955.

MISSINAIBI RIVER

"Below Round Bay there are no more falls or turbulent rapids, the river (Missinaibi) being navigable for boats carrying five or six tons, from thence to Moose Factory". p. 10

Borron, E.B. Narrative of explorations in the District of Nipissing. Ontario, Department of Attorney General. In Ontario, Sessional Papers (No. 44, 1881). Toronto, 1881.

MISSINAIBI RIVER

"... the point where the C.P.R. crosses Dog Lake to the first portage on the Missinaibi River, a distance of about forty miles, there is very good water navigation, broken only by two short portages. ... navigation might be made continuous ... at a very trifling expense". p. 69.

Borron, E.B. Report on that part of the basin of Hudson's Bay belonging to the Province of Ontario. Ontario, Department of Attorney General. In Ontario, Sessional Papers (No. 1, 1885). Toronto, 1884.

MOOSE RIVER

"Prof. Bell. A. The Moose River and its branch the Missinaibi would be navigable for about 120 miles from the sea also at high water". p. 179.

Canada, Parliament. Report of the select committee of the Senate appointed to enquire into the resources of the great Mackenzie basin. Session 1888. Queen's Printer, Ottawa, 1888.

MOOSE RIVER SYSTEM

"All are navigable for boats capable of carrying five or six tons for a considerable distance from the coast ... The Abittibi is ascended, with some difficulty, about seventy miles; the South Moose or Mattagami, ninety miles; the North Moose or Missinaibi one hundred and twenty-five miles, p. 8 ... from Moose Factory to the Long Portage ... at no point in the whole of the one hundred and twenty-five miles is the current such as to obstruct the navigation altogether. p. 18 ... The Moose River and the Albany River are, in my opinion, navigable for steamers of light draught and considerable power ... The Mattagami or South Moose might be thus navigated, it is probable, for about ninety miles — and the Missinaibi or North Moose about one hundred and ten to one hundred and fifteen miles above Moose Factory". p. 42.

Borron, E.B. Report on that part of the basin of Hudson's Bay awarded to the Province of Ontario, and included in the District of Nipissing. Ontario, Department of Attorney General. In Ontario, Sessional Papers (No. 22, 1880). Toronto, 1880.

NELSON RIVER

"Norway House is situated ... twenty miles from Lake Winnipeg ... The boat route leaves the east channel of the Nelson River twenty-five miles below Norway House, p. 3-4CC ... The Nelson River may, therefore, be said to be navigable for river steamers to a distance of about one hundred miles from the sea (ie. to Limestone Rapids) p. 11CC ... But the Redrocks Rapids, at Seven miles from the Lake (Sipi-wesk) ... could terminate the upward navigation of this section of the river (i. e. from Lake Winnipeg). From these rapids, downward, including Sipi-wesk Lake, there appears to be no insurmountable obstruction to the navigation of the river (Nelson) by steamers till the higher of the two rapids (Grand Rapids) above Split Lake is reached, a distance of upwards of 100 miles". p. 14CC.

Bell Robert. Report on the country between Lake Winnipeg and Hudson Bay, 1878. Geological Survey of Canada. Report of Progress for 1877-78. Part CC. Montreal, 1879.

NELSON RIVER

"This (Grand Rapid) is apparently the only formidable obstruction to the navigation of the Nelson River from the south-west extremity of Sipi-wesk Lake, ... all the way to the foot of Gull Lake, a distance of about 160 miles". p. 12C.

Bell, Robert. Report on explorations on the Churchill and Nelson Rivers and around God's and Island lakes 1879. Geological Survey of Canada. Reports of Progress for 1878-79. Part C. Montreal, 1880.

NELSON RIVER

"The Nelson is navigable from the sea about ninety miles to the First Limestone Rapid, ..." p. 27E.

Upham, Warren. Report of exploration of the glacial Lake Agassiz in Manitoba. Geological and Natural History Survey of Canada. Annual Report (New Series) Vol. IV, 1888-89. Part E. Montreal, 1890.

NOTTAWAY RIVER

"The Nottaway is navigable for shallow draft, flat-bottomed vessels to Cedar Rapids on the Bell River for 250 miles during high water period".

Benoit, Robitaille. Oral report. Ottawa, Feb. 7, 1956.

OGOKI RIVER

"In the ten miles of the Ogoki River which we (Robert Bell) examined ... and was from fifty to sixty feet deep in the middle. The Indians informed us that it maintained the same dead-water character as in this section, for a long distance, both above and below; so that it would appear to be well adapted for steamboat navigation in this part of the course; but it is said to spread out to a great width and to become very shallow after it reaches the flat-lying palaeozoic rocks further down". p. 107.

Bell, Robert. Report on the country between Lake Superior and the Albany River. Geological Survey of Canada. Report of Progress for 1871-72. Montreal, 1872.

PAYNE RIVER

"From the entrance to the Hudson Bay Co. Post, ... about 8 miles up the river, the river widens gradually to a width of about 3½ miles at the post, but considerable areas dry at low water".

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Labrador and Hudson Bay pilot comprising the Strait of Belle Isle to Cape Chidley and Hudson Strait and Bay. 1st ed. 1954. Ottawa, 1955.

REINDEER LAKE

"The lake is in the neighbourhood of 150 miles long and, in the northern part, its width averages about 30 miles". p. 110.

McInnes, Wm. The basins of the Nelson and Churchill Rivers. Geological Survey of Canada. Memoir 30. Ottawa, 1913.

RICHMOND GULF

"Richmond Gulf is roughly triangular in shape ... It is about 28 miles long, north and south, with a greatest width of about 25 miles". p. 282.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Labrador and Hudson Bay pilot comprising the Strait of Belle Isle to Cape Chidley and Hudson Strait and Bay. 1st ed. 1954. Ottawa, 1955.

SOUTHERN INDIAN LAKE

"The extreme length of the lake is 92 miles and at the broadest part, 8 miles from the foot, it is 15 miles wide". p. 115.

McInnes, Wm. The basins of the Nelson and Churchill Rivers. Geological Survey of Canada. Memoir 30. Ottawa, 1913.

ST. JOSEPH LAKE

"Lake St. Joseph is a splendid sheet of water, about 80 miles long ... its outlet is by the Albany River". p. 239.

Ontario, Crown Lands Department. Report of the survey and exploration of Northern Ontario, 1900. Toronto, King's Printer, 1901.

THELON RIVER

"The (Thelon) ... is a fine large river about 300 yards wide, having an even, steady current of from four to five miles an hour. For the entire distance over which we followed the main river, there is not a sign of any rough water which could possibly be called a rapid, and the stream is navigable for a steamer of considerable draught nearly the whole way". p. 11.

Hanbury, D.T. Sport and travel in the northland of Canada. Edward Arnold, London, 1904.

WHALE RIVER

"The river is about a mile wide as far as the abandoned Hudson's Bay Company's post which is 8 miles up river ... The post is situated at the head of navigation". p. 213.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Labrador and Hudson Bay pilot comprising the Strait of Belle Isle to Cape Chidley and Hudson Strait and Bay. 1st ed. 1954. Ottawa, 1955.

WINISK AND SEVERN RIVERS

"Prof. Bell. A ... the Wainisk and Severn Rivers are navigable for a limited distance". p. 179.

Canada, Parliament. Report of the select committee of the Senate appointed to enquire into the resources of the great Mackenzie basin. Session 1888. Queen's Printer, Ottawa, 1888.

WOLLASTON LAKE

"Wollaston lake ... with a greatest length of about 55 miles". p. 112.

McInnes, Wm. The basins of the Nelson and Churchill Rivers. Geological Survey of Canada. Memoir 30. Ottawa, 1913.

4. ST. LAWRENCE - GREAT LAKES DRAINAGE

AUX LIEVRES RIVER

"About 2 miles up the river, ... is a basin nearly circular perfectly accessible by the steam-boat, which plies between Grenville and Hull: for about 4 m. above the basin the rapids impede all navigation, after which, for 30 m., it is navigable for bateaux ... about 90 m. up this R. is Lake des Sables, at the head of which this river is still navigable for a great distance to other lakes". (n.p. See Liev.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

BATISCAN RIVER

"The entrance of the Batiscan is obstructed by a sand bar, but, the water being deep, it is navigable for several miles, when the stream becomes impeded by rapids and falls". (n.p. See Bat.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

BAYONNE RIVER

"This River is deep and navigable for loaded boats for 4 or 5 m. from its mouth; higher up its navigation is prevented by rapids and falls". (n.p. See Bay.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

BELLE RIVER

"Belle River, ... runs into the S.E. side of lake St. John ... - This river is navigable for large balteaux for many leagues". (n.p. See Bel.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

BERSIMIS RIVER

"... Boats could row up this river to the foot of the falls 30 or 40 miles distance by the course of the river and a steamer could ascend it with ease, ..." p. 64.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. St. Lawrence River pilot (Canadian edition) below Quebec comprising sailing directions from Cap des Rosiers (South Shore) and St. John River (North Shore) to Quebec. 6th ed. Ottawa, 1943.

BERSIMIS RIVER

"The river is navigable to the falls a distance of about 40 miles by river". p. 214.

Great Britain, Admiralty, Hydrographic Department. St. Lawrence pilot comprising the Gulf and the River St. Lawrence, the Banks of Newfoundland, the approaches to the Gulf by Cabot Strait, the Strait of Belle Isle, and the Gut of Canso. 10th ed., 1943. London, 1943.

BLACK RIVER

"... 1½ miles from the mouth it is spanned by the Canadian National Railways bridge, as far as which, there is water for steamboats of light draught". p. 28.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. St. Lawrence River pilot (Canadian edition) Montreal harbour to Kingston harbour and including Ottawa River. 4th ed. Ottawa, 1942.

BLANCHE RIVER

"It is about 130 ft. wide and is navigable for bateaux in spring only, for about 5 or 6 m. from its mouth". (n.p. See Bla.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

CHAMOUCHOUAN RIVER

"... or the Ashuapmouchouan that empties into Lake Saint-John at Saint-Felicien ... the river is open to navigation for a distance of about forty-five miles". p. 131.

Coudé and Daneault (ed.) *Le royaume du Saguenay* (road guide), Coudé Frères, Chicoutimi, 1950.

CHATEAUGUAY RIVER

"... the Chateauguay, a fine river, navigable for boats and the usual river-craft". (n.p. See Chat.)

Bouchette, Joseph. *A topographical dictionary of the Province of Lower Canada*. London, 1832.

DES PRAIRIES RIVER

"Divides Isle Jesus from the Island of Montreal, for it is one of the channels of the St. Lawrence, extending from Isle Bizard to the N.E. extremity of the Island of Montreal". (n.p. See Pra.)

Bouchette, Joseph. *A topographical dictionary of the Province of Lower Canada*. London, 1832.

DES QUINZE LAC

"... is in most parts about a mile wide and some twenty-three miles in length ..." p. 38.

Ontario. *North Western Ontario: Its boundaries, resources and communications*. Toronto, 1879.

DETROIT RIVER

"The Detroit River is about 32 miles long ... It is navigable for the largest vessels on the Great Lakes ... At Limekiln Crossing, in this rock section, ... The limitations imposed by the natural formation of the lower river bed have necessitated very extensive rock excavation and dredging to provide channels of suitable width and depth for the large vessels ... The river channel, in the upper section, ... the water is deep ..." p. 151.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. *Great Lakes pilot* (Vol. 1) Lake Ontario, Lake Erie, and Lake St. Clair (Kingston Harbour to Sarnia). 3rd ed. Ottawa, 1953.

DU CHENE RIVER

"... the first is navigable at all times as far as the place called the portage, distance about two miles from the St. Lawrence;" (n.p. See Lat.)

Bouchette, Joseph. *A topographical dictionary of the Province of Lower Canada*. London, 1832.

ERIE LAKE

"Length ... 241 miles ... Breadth ... 57 miles ... Depth Maximum ... 210 feet ... Average ... 60 feet ... Elevations 584.657 (feet) ... Area Water Surface ... Canada 4,950 square miles". p. 121.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. *Great Lakes pilot* (Vol. 1) Lake Ontario, Lake Erie, and Lake St. Clair (Kingston Harbour to Sarnia). 3rd ed. Ottawa, 1953.

FRENCH RIVER

"At present the French river is entirely devoted to lumbering enterprise, and a couple of steam tugs have been hauled up over the Dalles rapids and the Horseshoe falls to work on the two lower stretches of the river. p. 533... Lake Nipissing and the upper end of the French River form the reach ... affords free navigation throughout its entire length of 30 miles unobstructed by artificial channels". p. 141.

Canada, Public Works Department. Georgian Bay ship canal report upon survey, with plans and estimates of cost 1908. Sessional Paper No. 19a. Ottawa, 1909.

GATINEAU RIVER

"The navigable sections on this river are from mouth to Chelsea, Chelsea to Wakefield, Low to Maniwaki and Baskatong Lake ... Kakabonga Lake is also navigable".

Woodside, James. In telephone conversation. Gatineau Power Co. Hull, P.Q., Nov. 2, 1955.

GEORGIAN BAY

"Georgian Bay ... is 125 miles long in a northwest and southeast direction, and about 55 miles in greatest width near its middle ... the northeastern and northern shores of the bay are much broken up by inlets and flanked by many islands and shoals, ... The deepest recorded sounding of 540 feet ... is a short distance off the north shore of the Bruce Peninsula". p. xxx.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Great Lakes pilot Vol. II Lake Huron, Georgian Bay and the Canadian Shores of Lake Superior. 1st ed., 1955. Ottawa, 1956.

GOULAIS RIVER

"It is navigable for small boats for about twenty miles". p. 27. Ontario, Crown Lands Department. The Algoma district, and that part of the Nipissing District north of the Mattawa River, Lake Nipissing and French River, their resources, agricultural and mining capabilities. Toronto, 1884.

GRANDE BLANCHE RIVIÈRE

"It is about 130 ft. wide and is navigable for bateaux in the spring about 15 miles; it then becomes rapid". (n.p. See Gra.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

GRANDE MITIS RIVER

"This river is navigable for boats up to the falls". (n.p. See Gra.) Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

GRAND RIVER

"The town "Brantford" was just above the head of navigation.

p. 97. ... that it was once a waterway for steamships as far up as Brantford". p. 363.

Hatcher, Harlon. Lake Erie: The American lakes series. Ed. by M.M. Quaife. Bobbs-Merrill, New York, 1945.

HURON LAKE

"Lake Huron ... the steamer track from Point Edward to Point Detour, is 220 miles, and to the Straits of Mackinac, 243 miles. The lake is 101 miles in its greatest width, ... 750 feet, (is) the deepest recorded sounding ... The present adopted low water datum for Lake Huron ... is 578.50 feet ..." p. xxx.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Great Lakes pilot Vol. II Lake Huron, Georgian Bay and the Canadian shores of Lake Superior. 1st ed., 1955. Ottawa, 1956.

KAMINISTIQUIA RIVER

"Kaministiquia and Matawin Rivers, both fine and navigable streams, and, along the International Boundary line, are Pigeon River, Lake Sageniga and Basswood Lake, connected with Nequaquon Lake, ... a link in the chain of the Dawson Route". p. 6.

Ontario, North Western Ontario: Its boundaries, resources and communications. Toronto, 1879.

KENOGAMI LAKE

"Its length is variously represented by travellers as from 5 to 9 leagues long and from half a mile to two miles in width ... It is navigable for vessels of 60 or 80 tons ..." (n.p. See Ken.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

LA CHEVROTIERE RIVER

"It is navigable for boats about 5 m. up to the seignorial mill". (n.p. See La Che.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

LAKE OF BAYS AND MUSKOKA LAKES

"The Muskoka Lakes Navigation Company operates a line of steamers on these lakes". p. 565.

Patton, M.J. Shipping and canals. In Canada and its provinces. Ed. by A. Shortt and A.G. Doughty. Vol. X, Toronto, 1914.

LIEVRE RIVER

"The river is navigable for 22 miles above Buckingham to High Falls. Above the Falls it is navigable to the head of Whitefish Lake."

Woodside, James. In telephone conservation. Gatineau Power Co., Hull, P.Q., Nov. 2, 1955.

MAGNETEWAN RIVER

"The Magnetewan is also navigable by steamers, but as a rule the Muskoka rivers are very much broken by rapids or waterfalls, though the connecting links of smooth water are generally navigable. p. 4. ... There is also a steamer running on the Magnetewan River and Se - Sebe Lake as far as Burke's Falls about thirty miles steaming altogether." p. 19.

Hamilton, W.E. Muskoka and Parry Sound district. (cover title: Guide book and atlas of Muskoka and Parry Sound districts). H.R. Page, Toronto, 1879.

MASKINONGE RIVER

"The river rises in the lake (Maskinonge) ... About 8 miles from its mouth it is navigable for boats and canoes as far as the Great Rapids ..." (flows into St. Lawrence) (n.p. See Mas.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

MATTAWA RIVER

"The high stage of the river is generally during the month of May, and the low stage in August, September and October ... There is no navigation on the river ... extensively used by lumber interests for the floating of logs down to the Ottawa River". p. 38.

Canada, Public Works Department. Georgian Bay ship canal report upon survey, with plans and estimates of cost 1908. Sessional Paper No. 19a. Ottawa, 1909.

MEMPHRAMAGOG LAKE

"It is of semicircular shape, 20 miles long and very narrow". (n.p. See Mem.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

METABETCHOUAN RIVER

"... is a fine broad stream, deep at its mouth as far as a large basin, spreading to the foot of the rapids, ... This R. is navigable for many leagues for bateaux ..." (n.p. See Met.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

MISSISSAGA RIVER

"The Mississaga River ... The navigation is, however, impeded four miles from its mouth, where a rock range, crossing the river, forms a fall of five feet." p. 20.

Ontario, Crown Lands Department. The Algoma district, and that part of the Nipissing District north of the Mattawa River, Lake Nipissing and French River, their resources, agricultural and mining capabilities. Toronto, 1884.

MISSISSIPPI RIVER

"Mississippi river rises in the northern part of Frontenac county, Ontario, ... until its junction with the Ottawa below Arnprior. It is 105 miles in length, of which a considerable part is navigable for small steamers". p. 311.

Wallace, W.S. (Ed.) The encyclopedia of Canada, Vol. IV, University Associates of Canada, Toronto, 1936.

MISTASSIA RIVER

"Mistassia River, runs into Lake St. John. It is navigable for large boats for many leagues, ..." (n.p. See Mis.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

MISTASSINI LAKE

"The extent of the lake is but imperfectly known; ... this lake, which is very deep; ... The mode of transport practiced by the Hudson's Bay Company, in conveying their goods to Mistassini, is generally in barges conducted by regularly disciplined men, ..." (n.p. See Mis.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

MOISIE RIVER

"The traders state that flat-bottomed boats can ascend to the first rapids, at the distance, by the stream, of 20 miles from the sea". p. 26.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. St. Lawrence River pilot (Canadian edition) below Quebec comprising sailing directions from Cap des Rosiers (South Shore) and St. John River (North Shore) to Quebec. 6th ed. Ottawa, 1943.

MUSKOKA LAKES AREA

"(From 1869 to 1877 three steamers were added to Muskoka Lakes)... The steamer "Northern" ... 1877 ... plies between that village (Port Sydney), Huntsville, and other ports on Mary, Fairy and Vernon Lakes ... In 1878, the "Dean" was transported ... to Trading Lake, and plies between Bayville and a number of ports on Trading Lake and Lake of Bays ... A small steam launch ... plies on Muskoka, Rosseau and Joseph Lakes for the service of tourists in the season". p. 19.

Hamilton, W.E. Muskoka and Parry Sound districts. (Cover title: Guide book and atlas of Muskoka and Parry Sound districts). H.P. Page, Toronto, 1879.

MUSKOKA RIVER

"An instance of one navigable for the largest class of steamers which can twist in and out through its puzzling sinuousities, can be seen in the Muskoka River, from the lake of the same name, to Bracebridge. There is depth enough for the largest steamer which the necessities of our increasing commerce can ever call for p.3. ... The Muskoka River, when ascended from the lake is found to branch into two separate rivers, one being called the South Branch and the other the North Branch. Each of these is broken by a series of unnavigable rapids. The South Branch forms the connecting

link between Muskoka Lake and the Lake of Bays, Trading Lake, etc ... The North Branch proceeds from the navigable chain of Mary, Fairy, and Vernon Lakes". p.4.

Hamilton, W.E. Muskoka and Parry Sound districts. (Cover title: Guide book and atlas of Muskoka and Parry Sound districts). H.R. Page, Toronto, 1879.

NIAGARA RIVER

"From the mouth of the river up to Niagara Falls, a distance of nearly 11 miles, ... The river is navigable as far up as Queenston, Ont., ... p. 89. The Suspension bridge spans the river just above Queenston ... Above the bridge are rapids and swift water the full length of the gorge. Whirlpool Rapids are $2\frac{1}{2}$ miles above the bridges in a bend of the gorge ... (3-1/4) miles above (the Rapids) are the Niagara Cataracts". p. 91.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Great Lakes pilot (Vol. 1) Lake Ontario, Lake Erie, and Lake St. Clair (Kingston Harbour to Sarnia). 3rd ed. Ottawa, 1953.

NIPIGON LAKE

"Many of these afford fine, navigable stretches of water, ... Lake Nipigon affords a 70 miles stretch and Long Lake a 52 miles stretch of uninterrupted navigation ... Some 30 miles is offered by Lakes Esnogami and Kabinakagami; 25 miles by Wabatongusheen and Oba Lakes, and nearly 35 miles by Dog, Crooked and Missinaibi Lakes ..." p. 47.

Borron, E.B. Report on the basin of Moose River and adjacent country belonging to the Province of Ontario. Ontario, Department of Attorney General. In Ontario, Sessional Papers (No. 87, 1890). Toronto, 1890.

NIPIGON LAKE

"... is navigable for vessels of ten feet draught for a distance of seventy miles from the north end ... On its water are three steamers carrying both passengers and freight". p. 565.

Patton, M.J. Shipping and canals. In Canada and its provinces. Ed. by A. Shortt and A.G. Doughty. Vol. X, Toronto, 1914.

NORTH RIVER OR RIVIERE DU NORD

"In the cos. of Terrebonne and Two Mountains, ... Boats and river craft ascend to the village (St. Andrews) notwithstanding the rapids and rocks that impede its navigation, which might be improved so as to admit of the ascent of steam-boats calculated to draw but little water. Above the bridge there is a rapid ... thence to the chute ... and is in that interval obstructed by 6 or 7 rapids, including the waterfall of La Chûte, ... From this place this beautiful river is navigable for boats and craft almost to Abercomby, a distance of twenty-five or thirty miles, and may be found to admit of being navigated much farther". (n.p. See North)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London 1832.

ONTARIO LAKE

"Length ... 193 miles ... Breadth ... 53 miles ... depth Maximum ... 774 feet ... Elevations ... 252.71 (feet) ... Area Water Surface ... Canada 3,980 square miles". p. XXVII.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Great Lakes pilot (Vol. 1) Lake Ontario, Lake Erie, and Lake St. Clair (Kingston Harbour to Sarnia). 3rd ed. Ottawa, 1953.

OTTAWA RIVER

"Of the 440 miles of projected navigation between Georgian Bay and Montreal (via L. Nipissing) from 410 to 420 miles follow the course of some river or lake ... p. 35. For the whole route the aggregate length of purely artificial waterways is astonishingly small, being estimated at 28 miles. ... About 80 miles of lake and river beds are required to be improved by dredging or excavation, leaving 332 miles of natural waterways wider than 300 feet, and over 22 feet in depth, not requiring any improvement ... p. 35. The Ottawa river is navigated from Ottawa down to the St. Lawrence river, ... though navigation is interrupted by the Chaudiere Falls at Ottawa, but above several stretches are navigable. These are the Deschenes lake, the Chats lake, the Coulonge lake, the Lower Allumette lake, and the stretch between Pembroke and Des Joachims ..." p. 35.

Public Works Department. Georgian Bay ship canal report upon survey, with plans and estimates of cost 1908. Sessional Paper No. 19a. Ottawa, 1909.

OTTAWA RIVER

"This route extends from the Harbour of Montreal, ... thence up the Ottawa River ... to Ottawa; thence by the Rideau Canal, Rideau River ... to Kingston on Lake Ontario, a total distance of 246. 24 miles. p. XXV ... from Ottawa by way of the Rideau River and lakes for 126-1/4 statute miles through the Province of Ontario to Kingston ..." p. 1.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. St. Lawrence River pilot (Canadian edition) Montreal harbour to Kingston harbour and including Ottawa River. 4th ed. Ottawa, 1942.

OUAREAU OR LAC OUAREAU RIVER

"On this R. are 9 falls, 4 of them in Rawdon and the others above 6 miles higher up the stream and not far from each other ... The navigation of this R. between its falls in Kildare is perfectly safe for boats of the largest size". (n.p. See Oua.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

OUELLE RIVER

"... in the cos. of L' Islet and Kamouraska ... and is so far navigable for vessels of 25 tons burden, ..." (n.p. See Oue.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

OUTARDES RIVER

"The river can be ascended by boats to the falls which are over granite rocks and are 7 miles within the point". p. 63.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. St. Lawrence River pilot (Canadian edition) below Quebec comprising sailing directions from Cap des Rosiers (South Shore) and St. John River (North Shore) to Quebec. 6th ed. Ottawa, 1943.

PENTECÔTE RIVER

"Steep cliffs of sand and clay form the banks for 2½ miles, for which distance only, the river is navigable for boats". p. 35.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. St. Lawrence River pilot (Canadian edition) below Quebec comprising sailing directions from Cap des Rosiers (South Shore) and St. John River (North Shore) to Quebec. 6th ed. Ottawa, 1943.

PERCHACA RIVER

"... runs into Lake St. John and is navigable for large bateaux for many leagues ..." (n.p. See Per.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

PERIBONKA

"The big Peribonka River is the largest tributary of Lake St. John. It is three hundred miles long ... It can be navigated for a great part of its length, but there are several falls and portages". p. 125.

Coudé and Daneault (ed.) Le royaume du Saguenay (road guide). Condé Frères, Chicoutimi, 1950.

PETITE NATION RIVER

"... discharges its waters into the Ottawa w. of the neck of land ... and is navigable for bateaux nearly the whole year as far as the mills, 5 miles from its mouth; ..." (n.p. See Pet.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

PETIT RIVIÈRE DU SUD OR LITTLE SOUTH RIVER

"... which falls into the Richelieu a little below Isle aux Nois; ... and is navigable for boats and canoes for about 6 miles, ..." (n.p. See Pet.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

RICHELIEU RIVER

"The Richelieu River, which connects Lake Champlain with the St. Lawrence after a course of about 80 miles, is navigable ... All bridges over the navigation channel through the Richelieu River ... are of a moveable type ..." p. 7.

International Joint Commission. Interim report of the International Joint Commission on the Champlain waterway, Washington - Ottawa 1937. Ottawa, 1938.

RIGAUD RIVER

"The former (Rigaud) is at all times navigable from the Ottawa up to the fall, which greatly contributes to the advantage of the settlers on each side of it". (n.p. See Rig.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

RIMOUSKI RIVER

"Navigable for small craft as far as Mr. Trudel's; and at its mouth, ... it can carry vessels of 80 to 100 tons, and craft of 30 and 40 daily go in and out". (n.p. See Rim.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

SAGUENAY RIVER

"The Saguenay is about 107 statute miles in length and is navigable for about 78 miles or 8 miles above Chicoutimi ..." p. 81.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. St. Lawrence River pilot (Canadian edition) below Quebec comprising sailing directions from Cap des Rosiers (South Shore) and St. John River (North Shore) to Quebec. 6th ed. Ottawa, 1943.

SALMON RIVER

"... which, from its mouth to the province line, a distance of four miles and upwards, is navigable for vessels not drawing more than four feet of water". (near St. Regis). (n.p. See Ind.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

SALMON RIVER

"Salmon River can be navigated by small craft, ... to the International Boundary, which are situated the village of Dundee in Quebec Province and the Village of Fort Covington, New York State". p. 31.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. St. Lawrence River pilot (Canadian edition) Montreal harbour to Kingston harbour and including Ottawa River. 4th ed. Ottawa, 1942.

SAUGEEN RIVER

"... an excursion steamship once ran from Port Elgin to Walkerton, a distance of 30 miles". p. 100.

Chapman, L.J. and Putnam, D.F. The physiography of southern Ontario. Ontario Research Foundation. University of Toronto Press, Toronto, 1951.

SOUTH NATION RIVER

"As settlement proceeded, the river was the highway and lumber was loaded on canoes at the falls (Jessup) and taken up to Casselman; in later years, a tug and scow were in the service". p. 524.

Canada, Public Works Department. Georgian Bay ship canal report upon survey, with plans and estimates of cost 1908. Sessional Paper No. 19a. Ottawa, 1909.

SOUTH NATION RIVER

"It is navigable for 2 miles". p. 10.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. St. Lawrence River pilot (Canadian edition) Montreal harbour to Kingston harbour and including Ottawa River. 4th ed. Ottawa, 1942.

SPANISH RIVER

"Spanish River ... is navigable to five-foot craft for thirty miles from the mouth". p. 22.

Ontario, Crown Lands Department. Northern districts of Ontario, Canada. Nipissing, Algoma, Temiscaming, Wabigoon and Rainy River. 4th ed. Toronto, 1897.

ST. CLAIR LAKE

"Lake St. Clair is an expansive shallow basin, ... with a maximum natural depth of about 21 feet ... The ship channel for large vessels, ... has been provided by the construction of St. Clair Flats Canal and by dredging across the lake and in the Grosse Pointe Channel leading to the head of the Detroit River, affording a through depth of 25 feet. The minimum width is 700 feet at the upper end and a width of 800 feet across the lake ... Length ... 26 miles ... Breadth ... 24 miles". p. 169.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Great Lakes pilot (Vol. 1) Lake Ontario, Lake Erie, and Lake St. Clair (Kingston Harbour to Sarnia). 3rd ed. Ottawa, 1953.

ST. CLAIR RIVER

"The St. Clair River has two characteristic sections, ... The delta section extends from Lake St. Clair to the head of Chenal Ecarte where the several branches ... unite. The most important one, used for through navigation, is called South Channel, ... is about 13 miles. A depth of 25 feet in the downbound and 21 feet in the upbound channel is maintained. The upper channel runs from the head of Chenal Ecarte to Lake Huron, a distance of 27 miles, ..." p. 176.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Great Lakes (Vol. 1) Lake Ontario, Lake Erie, and Lake St. Clair (Kingston Harbour to Sarnia). 3rd ed. Ottawa, 1953.

ST. FRANCIS RIVER

"The River St. Francis is one of communications by which a considerable and increasing traffic is carried on between the S. of St. François and the southern townships, and also the United States ... The navigation from Lake Memphramagog to the St. Lawrence is opposed by many and powerful natural obstructions." (n.p. See St. F.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

ST. JOHN LAKE

"The navigation of Lake St. John is subject to many difficulties .. its depth varies from 6 to 40 fathoms from one to two miles from the shore it is generally only 3 ft. deep, and this extreme shallowness is common to the lake. ... It is 90 miles in circumference, in the widest part ... it is about 30 miles, ... is nearly circular. The lake is navigable all round but not in the centre about the latter end of April, and all over by the 8th or 12th of May". (n.p. See St. J.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

ST. JOHN LAKE

"In former years a navigation company operated boats out of Roberval sailing to all other parishes around the Lake". p. 133.

Coudé and Daneault (ed.). Le royaume du Saguenay (road guide). Coudé Frères, Chicoutimi, 1950.

ST. JOHN RIVER

"It is occasionally frequented by fishing schooners early in the season, and boats have ascended its course for 6 miles, carrying a depth of one to 3 fathoms at low water; the river then becomes too rapid to be navigated, except by canoes or flat-bottomed boats ... At some 16 miles from the sea, following the stream; there are said to be high falls over granite rocks". p. 21.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. St. Lawrence River pilot (Canadian edition) below Quebec comprising sailing directions from Cap des Rosiers (South Shore) and St. John River (North Shore) to Quebec. 6th ed. Ottawa, 1943.

ST. LAWRENCE RIVER

"The distance between Quebec and Montreal by the St. Lawrence River is about 140 miles". p. 490.

Great Britain, Admiralty, Hydrographic Department. St. Lawrence pilot comprising the Gulf and the River St. Lawrence, the Banks of Newfoundland, the approaches to the Gulf by Cabot Strait, the Strait of Belle Isle, and the Gut of Canso. 10th ed., 1943. London, 1943.

ST. LAWRENCE RIVER

"The St. Lawrence River ... From its mouth near longitude $64 \frac{1}{4}^{\circ}$ W. to the head of the system at the west end of Lake Superior, about longitude $92 \frac{1}{4}^{\circ}$ W. this waterway has a total length of about 1635 nautical miles. The St. Lawrence ... from the Strait of Belle Isle to Port Arthur or Fort William on the northwest coast of Lake Superior is 1,933 nautical miles (2,348 statute miles)". p. XVII.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. St. Lawrence River pilot (Canadian edition) Montreal harbour to Kingston harbour and including Ottawa River. 4th ed. Ottawa, 1942.

ST. LAWRENCE SYSTEM

Table 1. Distance between Points on Great Lakes.

Port Arthur to Montreal	- 1212 miles	(statute)
" "	to Kingston	- 1034 miles "
" "	to Toronto	- 903 miles "
" "	to Port Colborne	- 848 miles " p. VIII.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. St. Lawrence River pilot (Canadian edition) Montreal harbour to Kingston harbour and including Ottawa River. 4th ed. Ottawa, 1942.

ST. MARYS RIVER

"From Point Detour lighthouse to the entrance to the canals at Sault Ste. Marie by the ship channel, the distance is 48 (42 nautical) miles. For the southern 23 miles, the natural channel ... is nowhere less than a third of a mile wide, and, generally, much wider. At ... the south extremity of Neebish Island, the broad channel ceases, and, thence to the canals, channels have been dredged ... depth of 24½ feet for downbound traffic, and ... depth of 21 feet for upbound traffic. ... West Neebish Channel, is exclusively for downbound vessels ... All vessels upbound to Sault Ste. Marie pass eastward of Neebish Island; ..." p. 380.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Great Lakes pilot Vol. II Lake Huron, Georgian Bay and the Canadian shores of Lake Superior. 1st ed., 1955. Ottawa, 1956.

ST. MAURICE RIVER

"The navigation of the St. Maurice, ... is practicable for boats as far as La Tuque, with the exception of 7 portages ... about 100 miles from the town of Three Rivers". (n.p. See St. Mau.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

SUPERIOR LAKE

"Lake Superior is the largest of the Great Lakes ... Its chief characteristics are deep water and high, bold, rocky shores along a great part of the coast .. The longest steam track from Duluth Canal to the head of St. Marys River is 383 miles ... The breadth ... is 160 miles. The distance from Gros Cap Reef to Port Arthur is 247 miles and to Fort William 246 miles. Area in square miles: Water surface of lake, 11,110 Canada ... Maximum depth recorded ... 1,302 feet ... The adopted Low Water Datum is 601.6 feet ... The fluctuation of Lake Superior is being regulated by compensation works located in the St. Marys River at the head of the St. Marys Falls, ..." p. xxxiii.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Great Lakes pilot Vol. II Lake Huron, Georgian Bay and the Canadian shores of Lake Superior. 1st ed., 1955. Ottawa, 1956.

SYDENHAM RIVER

"Its lower reaches are navigable, however, making Wallaceburg a lake port ..." p. 104.

Chapman, L.J. and Putnam, D.F. The physiography of southern Ontario. Ontario Research Foundation, University of Toronto Press, Toronto, 1951.

THAMES RIVER

"The Thames is navigable by barges and small steamships as far as Chatham, a distance of 16 miles from Lake St. Clair". p. 106.

Chapman, L.J. and Putnam, D.F. The physiography of southern Ontario. Ontario Research Foundation, University of Toronto Press, Toronto, 1951.

THAMES RIVER

"One-third of the passengers aboard the steamer Victoria died when the ship rolled over during a May 24 holiday cruise up the Thames to Springbank Park". (near London). p. 5.

Globe and Mail. Was survivor of river tragedy. Toronto, June 22, 1955.

TIMISKAMING LAKE

"Lake Temiscaming a magnificent stretch of navigable water, ... extends seventy-five miles without any obstruction to vessels of the largest tonnage ... The river Blanche, ... discharges into Lake Temiscaming ... is navigable for twenty-five miles". p. 12.

Ontario, Crown Lands Department. The Algoma district, and that part of the Nipissing District north of the Mattawa River, Lake Nipissing and French River, their resources, agricultural and mining capabilities. Toronto, 1884.

TIMISKAMING LAKE

"The chief line of steamers on this lake is the Lum sden Line whose boats ply between New Liskeard, Haileybury, Ville Marie and Timiskaming". p. 565.

Patton, M.J. Shipping and canals. In Canada and its provinces. Ed. by A. Shortt and A.G. Doughty. Vol. X, Toronto, 1914.

TRENT CANAL SYSTEM

"The term "Trent Canal" is applied to that series of rivers and lakes which ... provides 8-foot navigation for 89 miles from Lake Ontario to Peterborough and 6-foot navigation for an additional 135 miles to Swift Rapids as well as for 8 miles from Georgian Bay to Big Chute. The intervening 8 miles between Swift Rapids and Big Chute are restricted ... to a draught of 4 feet. ... The most important branch is the 35-mile Scugog branch from Sturgeon lake ... to Port Perry". p. 4.

Canada, Transport Department. Trent canal system 1951: improved natural waterway connecting Lake Ontario and Georgian Bay. King's Printer, Ottawa, 1951.

WELLAND RIVER

"The navigable depth from the Niagara River to a point about 4 miles upstream is 30 feet and from there to Port Robinson, on the Welland Canal, it is about 6 feet. The lower four miles is now utilized by the Ontario Hydro-electric Power Commission ..." p. 113.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Great Lakes pilot (Vol. 1) Lake Ontario, Lake Erie, and Lake St. Clair (Kingston Harbour to Sarnia). 3rd. ed. Ottawa, 1953.

WELLAND SHIP CANAL

"Length of canal ... 27.6 statute miles

Depth of water on lock sills ... 30 feet". p. 92.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Great Lakes pilot (Vol. 1) Lake Ontario, Lake Erie, and Lake St. Clair (Kingston Harbour to Sarnia). 3rd. ed. Ottawa, 1953.

YAMASKA RIVER

"The Yamaska, at the rear of the aug., is also navigable, by both of which this S. possesses the advantages of expeditious water conveyance in an eminent degree". (n.p. See Yam.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

5. ATLANTIC COAST DRAINAGE**ALEXIS RIVER**

"Shallow draft steamers have ascended the Alexis River to Port Hope Simpson and tugs to the first rapids about 20 miles further".

Black, W.A. From local report. Ottawa, Oct., 1952.

ANNAPOLIS RIVER

"This river ... is navigable by vessels of moderate draught with local knowledge, as far as Annapolis Royal ... situated about 5 miles above Goat Island; and by small vessels of light draught, as far as Bridgetown about 12 miles northeastward". p. 213.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Nova Scotia (S.E. coast) and Bay of Fundy pilot (Canadian edition) comprising the great Bank of Newfoundland, Sable Island, the southeast coast of Nova Scotia, and the Bay of Fundy. 2nd ed., 1944. Ottawa, 1945.

AVON RIVER

"Vessels of moderate size are able to reach the wharves at Windsor, which lies at its confluence with the St. Croix River ... about 8 miles from the mouth". p. 224-225.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Nova Scotia (S.E. coast) and Bay of Fundy pilot (Canada edition) comprising the great Bank of Newfoundland, Sable Island, the southeast coast of Nova Scotia, and the Bay of Fundy, 2nd ed., 1944. Ottawa, 1945.

BELLISLE BAY

"... and by Bellisle Bay which connects with the St. John and extends for about 12 miles into (Kings County) ... There is daily communication, during the season of open navigation between St. John and Hampton on the Kennebecasis, and a steamer makes three round trips a week to the Bellisle". p. 80.

Hannay, James. New Brunswick, (Canada). Its resources and advantages. New Brunswick, Crown Land Department. Fredericton, 1902.

BIG BUCTOUCHE RIVER

"The Big Buctouche, ... (is) navigable for rafts and boats, ... for upwards of 30 miles". p. 141.

Hannay, James. New Brunswick, (Canada). Its resources and advantages. New Brunswick, Crown Land Department. Fredericton, 1902.

CANAAN RIVER

"The New Canaan falls rapidly down to Washademoac Lake, ... making the distance from its source to its junction with the St. John, about seventy miles; fifty of which ... are navigable for boats ... " p. 24.

Ward, E. An account of the River St. John, with its tributary rivers and lakes. Fredericton, N.B., 1841.

CASSIMAQUAGAN RIVER

"Cassimaquagan, river, runs from the E. into R. Matapediac, ... It is said to be navigable for many miles ... " (n.p. See Cas.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

CASUPSCULL RIVER

"Casupscull, river, in the co. of Rimouski ... and is the largest stream that empties itself into that river (Matapediac) being navigable for 50 or 60 miles". (n.p. See Cas.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

COCAGNE RIVER

"The Cocagne ... (is) navigable for rafts and boats ... 25 miles". p. 141.

Hannay, James. New Brunswick, (Canada). Its resources and advantages. New Brunswick, Crown Land Department. Fredericton, 1902.

ELIOT RIVER (P.E.I.)

"There are depths of not less than 4 fathoms for a distance of about $2\frac{1}{2}$ miles from the entrance to Eliot river; boats can ascend about $4\frac{1}{2}$ miles higher". p. 390.

Great Britain, Admiralty, Hydrographic Department. St. Lawrence pilot comprising the Gulf and the River St. Lawrence, the Banks of Newfoundland, the approaches to the Gulf by Cabot Strait, the Strait of Belle Isle, and the Gut of Canso. 10th ed., 1943. London, 1943.

EXPLOITS RIVER

"The river is navigable, at high water, for vessels drawing 6 feet, as far as the rapids about 6 miles above the entrance; and for boats to the falls about 2 miles farther". p. 361.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Newfoundland pilot (Canadian edition). First ed., 1952. Ottawa, 1953.

FRENCH - MAQUAPIT LAKES

"Maquapit thoroughfare empties into Grand Lake at Indian point and is the outlet of an extensive chain of lakes with connecting streams as follows, Maquapit lake, French lake thoroughfare, French lake, Indian lake and Portobello river. Maquapit thoroughfare, ... is a deep stream, depths varying from 9 to 19 feet ... Maquapit lake, about 5 miles long, has a greatest width of $2\frac{1}{2}$ miles ... French lake thoroughfare, similar to Maquapit thoroughfare, is 12 to 24 feet deep and 2 miles long ... French lake is about $2\frac{1}{4}$ miles long and $1\frac{1}{4}$ miles wide ... it is very shoal. Depths vary from 7 to 13 feet over the greater part of the lake". p. 58.

Canada, Marine Department, Canadian Hydrographic Service. Sailing directions for the Saint John River from Saint John harbour to Fredericton and Kennebecasis Bay. 1st ed., 1934. Ottawa, 1934.

GAMBO RIVER

"The Gambo is a fine stream ... there is a good channel sufficiently deep to permit boats to pass at all seasons, while for ... driving logs it is well adapted ... The navigation of these two miles (entrance to Freshwater Bay) might be made perfect ... A small outlay at the Straits (would) render the river navigable for craft of moderate size for 20 miles up its course, to the head of the upper pond (Gambo) ... The Triton River ... has been ascended during the spring months by the settlers with their punts, ... for 15 miles above the lake..." p. 445.

Murray, Alexander. Geological Survey of Newfoundland. London, 1881. Chapter XVI. Report for 1876. - retrospective remarks - list of M S. maps - Mr. Howley's survey of the upper Gander, and Gambo waters. p. 423-462.

GANDER LAKE

"Gander Lake ... is thirty-three and one-half miles long". p. 121.

Hatton, J. and Harvey, M. Newfoundland its history, its present condition, and its prospects in the future. Doyle & Whittle, Boston, 1883.

GANDER RIVER

"The coast settlers, who frequently ascend the river to the Gander Lake, ... there being no impediments of any consequence to the navigation all that distance, an incalculable supply of lumber might easily be driven down to the sea. (Estimated distance 30 miles). p. 262...I failed to strike soundings with $57\frac{1}{2}$ fathoms of line (i. e. on Gander Lake)". p. 353.

Murray, Alexander. Geological Survey of Newfoundland. London, 1881. Chapter XIV. Report for 1874. - survey of the Gander River and Lake - ... p. 351-409.

GANDER RIVER

"For a distance of 30 miles above the lake (Gander) the river is wide and shallow with a gently easy flowing current all the way ... There are occasions, however, especially in the early spring and late fall, when the river, swollen by melting snows and long continuance of heavy rains, can hardly be excelled for canoe navigation or the rafting of timber". p. 440.

Murray, Alexander. Geological Survey of Newfoundland. London, 1881. Chapter XVI. Report for 1876. - retrospective remarks - list of M S. maps - Mr. Howley's survey of the upper Gander, and Gambo waters. p. 423-462.

GRAND CODROY RIVER

"Great Codroy River, ... can be entered at low water by vessels drawing 6 feet; and can be ascended for $3\frac{1}{2}$ miles". p. 259.

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Newfoundland pilot (Canadian edition). 1st ed., 1952. Ottawa, 1953.

GRAND LAKE

"The largest lake in the island (Newfoundland) is Grand Lake, fifty-six miles in length, ... at its deepest portion, the bottom is more than three hundred feet below the level of the sea". p. 121.

Hatton, J. and Harvey, M. Newfoundland its history, its present condition, and its prospects in the future. Doyle & Whittle, Boston, 1883.

GRAND LAKE

"The St. John receives also through the Jemseg, a short channel three miles in length, the waters of Grand Lake, which is 30 miles long and 10 miles wide in some places. The principal stream which flows into Grand Lake is Salmon River ... " p. 48.

Hannay, James. New Brunswick, (Canada). Its resources and advantages. New Brunswick, Crown Land Department. Fredericton, 1902.

GREAT BRAS D'OR LAKES

"Bras d'Or Lake, entered from northward through Great Bras d'Or or Little Bras d'Or ... and from southward through a ship canal that leads from St. Peter Bay, affords a good waterway ... for vessels of moderate size; a depth of 17 feet can be carried throughout. p. 262. (Total estimated distance 56 miles) ... Little Bras d'Or ... at about 5 miles within the entrance, it expands into the wide, deep St. Andrew Channel". p. 241. (Great Bras d'Or Arm is estimated to have a length of 15 miles. The estimated combined length of St. Patrick and St. Andrew's Channel 48 miles and of East and West bays 45 miles.)

Great Britain, Admiralty, Hydrographic Department. St. Lawrence pilot comprising the Gulf and the River St. Lawrence, the Banks of Newfoundland, the approaches to the Gulf by Cabot Strait, the Strait of Belle Isle, and the Gut of Canso. 10th ed., 1943. London, 1943.

HAMILTON INLET

"... the Narrows, which are about 5 miles long and one mile wide, thence about 90 miles south - westward through Lake Melville to Goose Bay at the head ... Double Mer, ... extends about 35 miles westward from the northern shore near the eastern end of the Narrows. p. 267 ... Grand Lake, a large body of fresh water extending for about 45 miles west-north-westward". p. 268.

Great Britain, Admiralty, Hydrographic Department. Newfoundland and Labrador pilot Vol. II comprising the eastern coast of Newfoundland from Cape Saint Francis to Cape Bauld; Belle Isle; and the eastern and north-eastern coasts of Labrador from Cape Saint Charles to Cape Chidley. 7th ed., 1939. London, 1940.

HAMILTON RIVER

"Goose Bay Airport, just north of the mouth of the Hamilton River, is 130 miles from the sea and is an ocean port for the short summer season ... Lake Melville a huge lake 125 miles long, and up to 24 miles wide ... p. 219. A possible summer route ... by ocean freighter to Goose Bay; by smaller boat to Muskrat; ... by shallow draft boat to Winokapau; perhaps by deeper draft boat to the foot of the rapids ... (near Grand Falls)". p. 229.

Desbarats, G.H. Surveying on the Hamilton River, Labrador. Canadian Geographical Journal. Vol. 37, 1948.

HILLSBOROUGH RIVER (P.E.I.)

"Above the bridge (at Charlottetown) there is a least depth of 30 feet ... for a distance of 3-3/4 miles, and of 16 feet, for a farther distance of about 1 1/2 miles, ... Small craft can ascend to Mount Stewart bridge, a distance of about 14 miles". p. 389.

Great Britain, Admiralty, Hydrographic Department. St. Lawrence pilot comprising the Gulf and River St. Lawrence, the Banks of Newfoundland, the approaches to the Gulf by Cabot Strait, the Strait of Belle Isle, and the Gut of Canso. 10th ed., 1943. London, 1943.

HUMBER RIVER

"The difficulties presented by the rapids ... could easily be removed ... vessels of considerable size and small steamers could reach Deer Lake. ... which is twelve miles from the mouth of the river ... Deer Lake ... is fifteen miles in length and three in breadth ..." p. 319.

Hatton, J. and Harvey, M. Newfoundland its history, its present condition, and its prospects in the future. Doyle & Whittle, Boston, 1883.

HUMBER RIVER

"The river is navigable by boats, when the current is not too strong". p. 239. (Canal connecting Humber River and Grank Lake is estimated to be 6 miles long.)

Canada, Mines and Technical Surveys Department, Surveys and Mapping Branch, Canadian Hydrographic Service. Newfoundland pilot (Canadian edition). 1st ed., 1952. Ottawa, 1953.

JEMSEG RIVER

"The Jemseg river leading to Grand Lake, trends in a general northerly direction for 4.4. miles from where it enters the Saint John to the southern end of Grand Lake ... A minimum depth of 10 feet is found through to Grand Lake". p. 54.

Canada, Marine Department, Canadian Hydrographic Service.
Sailing directions for the Saint John River from Saint John harbour to Fredericton and Kennebecasis Bay. 1st ed., 1934. Ottawa, 1934.

KENNEBECASIS RIVER

"The River Kennebecasis is navigable twenty miles for vessels of any burden, thirty miles for vessels drawing seven feet of water, and thirty miles more for flat-bottomed boats". p. 116.

Bouchette, Joseph. The British Dominions in North America; ... Vol. II. London, 1832.

KENNEBECASIS RIVER

"... the Kennebecasis River, which is navigable to Hampton a distance of about 22 miles from St. John". p. 80.

Hannay, James. New Brunswick, (Canada). Its resources and advantages. New Brunswick, Crown Land Department. Fredericton, 1902.

KOUCHIBOUGU OCIS & KOUCHIBOUGUAC RIVERS

"There are a number of wharves in both rivers which are available for small craft, ... as far as the head of tidal waters, which extends about 8 miles from the mouth, in the case of Kouchibouguac River". p. 380.

Great Britain, Admiralty, Hydrographic Department. St. Lawrence pilot comprising the Gulf and River St. Lawrence, the Banks of Newfoundland, the approaches to the Gulf by Cabot Strait, the Strait of Belle Isle, and the Gut of Canso. 10th ed., 1943. London, 1943.

LAHAVE RIVER

"Vessels drawing not more than 18 feet can ascend the river at high water as far as Bridgewater, 13 ½ miles above Gaff Point". p. 144.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Nova Scotia (S. E. coast) and Bay of Fundy pilot (Canadian edition) comprising the great Bank of Newfoundland, Sable Island, the southeast coast of Nova Scotia, and the Bay of Fundy. 2nd ed., 1944. Ottawa, 1945.

MADAWASKA RIVER

"Madawaska River, ... rises in Lake Temiscouata ... from its source to its confluence with the R. St. John, 10 leagues, ... This R. is navigable for canoes and flat-bottomed boats, ... Above the Little Falls to Lake Temiscouata the current is gentle and the navigation easy and periodically fit for steam-boats. ... In this R. the waters rise considerably in spring and autumn, and there are shallow places but no rapids ... in many parts is so very shallow during the summer that it is not

navigable for anything larger than a canoe; it is, however, possible that it might be navigated by very flatly constructed boats even during that season ... in the spring, it is said, large rafts of timber descend the river. The Little Falls, which are near its junction with the St. John, render a portage from 50 to 100 yards necessary". (n.p. See Mad.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

MADAWASKA RIVER

"Madawaska river rises in lake Temiscouata, ... and is navigable throughout for small steamers ... The river is about 23 miles long ... " p. 222.

Wallace, W.S. (Ed.) The encyclopedia of Canada. Vol. IV, University Associates of Canada, Toronto, 1936.

MATAPEDIAC LAKE AND RIVER

"Matapediatic Lake lies in the co. of Rimouski, ... - The lake is from 15 to 16 miles long, and not above one league in its greatest breadth; ... is navigable for rafts of all kinds of timber, ... From the mouth of the Matapediatic river ... is frequently interrupted by rapids and strong currents, its navigation is not obstructed. The rapids in some places of the river, although of magnitude (between Casupscull Rapid and Obswantel Lakes) will cause no injury or impediment to rafts going down to the Restigouche ... This R. in spring and autumn is navigable for small vessels, of 10 to 20 tons, with the greatest safety and facility".

(n.p. See Mat.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

MEMRAMCOOK RIVER

"... a few miles to the east, (of Petitcodiac R.) is also tidal, and at one time extensive ship-building yards were located near the head of the tidal waters of both these rivers. During low tide both rivers are practically empty with high mud banks, a feature caused by the great rise and fall of the tides ... " p. 11.

Ells, R.W. The geology and mineral resources of New Brunswick. Canada, Mines Department, Geological Survey Branch. Ottawa, 1907.

MIRA RIVER (N.S.)

"The river is navigable for a distance of about 20 miles". p. 250. Great Britain, Admiralty, Hydrographic Department. St. Lawrence pilot comprising the Gulf and River St. Lawrence, the Banks of Newfoundland, the approaches to the Gulf by Cabot Strait, the Strait of Belle Isle, and the Gut of Canso. 10th ed., 1943. London, 1943.

MIRAMICHI RIVER

"It is a noble stream and navigable for a long distance. Below Newcastle and between there and Chatham it forms a harbour of great commercial importance. ... The Miramichi is next to the St. John the greatest lumber river in the province". p. 48.

Hannay, James. New Brunswick, (Canada). Its resources and

advantages. New Brunswick, Crown Land Department. Fredericton, 1902.

MIRAMICHI RIVER

"The river is navigable as far as Boishebert island, a distance of about 12 miles, ... p. 402. Northwest Miramichi river ... Small craft, of not more than 4½-foot draught can proceed to the Northwest boom, above Cassilis, a farther distance of about 6½ miles ... Southwest Miramichi is only available for small craft, ... for a distance of about 6 miles above the railway bridge (at Derby Jct.) ... p. 410.

Great Britain, Admiralty, Hydrographic Department. St. Lawrence pilot comprising the Gulf and River St. Lawrence, the Banks of Newfoundland, the approaches to the Gulf by Cabot Strait, the Strait of Belle Isle, and the Gut of Canso. 10th ed., 1943. London, 1943.

MIRAMICHI RIVER

"... the Northwest and the Southwest, ... Both rivers are navigable for many miles above the forks, the Northwest for some 12 to 15 miles, The Southwest for some 15 to 20 miles, before the head of tide is reached. On the Northwest, the head of tide is above the junction of the Northwest and its branch, the Little Northwest, ... the influence of the tide extends on the main Southwest as far as the Renous". p. 64.

Wright, E.C. The Miramichi a study of the New Brunswick river and of the people who settled along it. Sackville, N.B., 1944.

MIRAMICHI RIVER

"Newcastle librarian, expressed the thought that a paddle wheeler once navigated the Southwest Miramichi as far as Boiestown".

Prior, Leonard. Reported verbally. October 17, 1955.

NASHWAAK RIVER

"Nashwaak River, which is navigable (from Stanley to its mouth on the St. John) ... for bateaux and light scows during four or five weeks in spring". p. 57.

Ward, E. An account of the River St. John, with its tributary rivers and lakes. Fredericton, N.B., 1841.

OROMOCTO RIVER

"The Oromocto is navigable for sloops and wood-boats a distance of twenty miles. (ie. to Fredericton Junction) p. 38. ... Owing to a peculiar warmth in the stream itself, the Oromocto generally remains open longer in autumn, and the St. John is navigable to that point earlier in the spring than at Fredericton". p. 40.

Ward, E. An account of the River St. John, with its tributary rivers and lakes. Fredericton, N.B., 1841.

PETITCODIAC RIVER

"Petitcodiac River, is navigable, at high water, as far as Moncton, situated about 24 miles above the cape". p. 276.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Nova Scotia (S.E. coast) and Bay of Fundy pilot (Canadian edition) comprising the great Bank of Newfoundland, Sable Island, the southeast coast of Nova Scotia, and the Bay of Fundy. 2nd ed., 1944. Ottawa, 1945.

PUGWASH RIVER, N.S.

"A bridge spans the river from Chapel point ... Only small craft can pass the bridge; these can navigate for a distance of almost $3\frac{1}{2}$ miles beyond it, and boats can ascend about $3\frac{1}{2}$ miles farther". p. 367.

Great Britain, Admiralty, Hydrographic Department. St. Lawrence pilot comprising the Gulf and the River St. Lawrence, the Banks of Newfoundland, the approaches to the Gulf by Cabot Strait, the Strait of Belle Isle, and the Gut of Canso. 10th ed., 1943. London, 1943.

RED INDIAN LAKE

"Red Indian Lake, which itself is thirty-six miles long, with an average width of about two miles, and very deep, whence flows the main stream (Exploits) p. 119.

Hatton, J. and Harvey, M. Newfoundland its history, its present condition, and its prospects in the future. Doyle & Whittle, Boston, 1883.

RESTIGOUCHE RIVER

"... falls into the Bay of Chaleurs, forming at its mouth a considerable expansion called Ristigouche Bay. The Indian village, called New Mission Point, is about 5 leagues up this river, at the head of the ship navigation, to which schooners and even larger vessels can ascend". (n.p. See Ris.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

RESTIGOUCHE RIVER

"The lower portion flowing into Chaleur bay is a tidal estuary, navigable for steamers as far as the town of Campbellton, ..." p. 12.
Ells, R.W. The geology and mineral resources of New Brunswick. Canada, Mines Department, Geological Survey Branch. Ottawa, 1907.

RICHIBUCTO RIVER

"The Richibucto is navigable for river steamers, rafts, and boats for upwards of 40 miles from its mouth". p. 141.

Hannay, James. New Brunswick, (Canada). Its resources and advantages. New Brunswick, Crown Land Department. Fredericton, 1902.

RICHIBUCTO RIVER

"Vessels that can cross the bar, can proceed about 13 miles up the river, and small craft can ascend about 2 miles farther. The river is navigable by boats for a further distance of about 7 miles". p. 379.

Great Britain, Admiralty, Hydrographic Department. St. Lawrence pilot comprising the Gulf and the River St. Lawrence, the Banks of Newfoundland, the approaches to the Gulf by Cabot Strait, the Strait of Belle Isle, and the Gut of Canso. 10th ed., 1943. London, 1943.

SALMON RIVER

"Boats may navigate this river twenty, ... miles up-stream". p. 77.

Ward, E. An account of the River St. John, with its tributary rivers and lakes. Fredericton, N.B., 1841.

SANDWICH BAY RIVERS

"The bay extends about 25 miles south-west and southwards. p. 258 ... East river is shoal but was navigated by H. M. S. Scylla's steamboat for a distance of about 5 miles ... Eagle river is navigable by small boats for about 3 miles ... West river ... is navigable by small boats for about 4 miles ...". p. 262.

Great Britain, Admiralty, Hydrographic Department. Newfoundland and Labrador pilots Vol. II comprising the eastern coast of Newfoundland from Cape Saint Francis to Cape Bauld; Belle Isle; and the eastern and north-eastern coasts of Labrador from Cape Saint Charles to Cape Chidley. 7th ed., 1939. London, 1940.

SHUBENACADIE RIVER

"The Shubenacadie River is navigable by boats, at low water, for about 13 miles, and within about 2 miles of the Town of Shubenacadie". p. 227.

Canada, Mines and Resources Department, Surveys and Engineering Branch, Hydrographic and Map Service. Nova Scotia (S. E. coast) and Bay of Fundy pilot (Canadian edition) comprising the great Bank of Newfoundland, Sable Island, the southeast coast of Nova Scotia, and the Bay of Fundy. 2nd ed., 1944. Ottawa, 1945.

ST. CHARLES RIVER

"About 2 miles above its mouth Saint Charles River becomes narrow and intricate, though it is navigable for $1\frac{1}{2}$ miles farther". p. 212.

Great Britain, Admiralty, Hydrographic Department. Newfoundland and Labrador pilot Vol. II comprising the eastern coast of Newfoundland from Cape Saint Francis to Cape Bauld; Belle Isle; and the eastern and north-eastern coasts of Labrador from Cape Saint Charles to Cape Chidley. 7th ed., 1939. London, 1940.

ST. CROIX RIVER

"... which is only navigable for sixteen miles from its mouth on account of rapids". p. 286.

Griffin, W. The waterways of Canada. In Canada: an encyclopaedia of the country. Ed. by J. C. Hopkins. Vol. III, Toronto, 1898.

ST. LEWIS RIVER

"St. Lewis Inlet is entered between Bay point and Mary Harbour head, ... and extends about 15 miles west-north-westward ... Above Black Fly Island ... vessels ... drawing up to 18 feet can ascend about 5 miles farther to the mouth of Saint Lewis River." p. 218.

Great Britain, Admiralty, Hydrographic Department. Newfoundland and Labrador pilot Vol. II comprising the eastern coast of Newfoundland from Cape Saint Francis to Cape Bauld; Belle Isle, and the eastern and north-eastern coasts of Labrador from Cape Saint Charles to Cape Chidley. 7th ed., 1939. London, 1940.

ST. JOHN RIVER

"This river is said to be navigable nearly from its source to its confluence with the Madawaska, 25 to 30 leagues, ... From, the rapid, a little below the Forks, to the Great Falls the navigation is easy and fit for steamboats; from the Green River, below the falls of St. John, to Presqu' Isle are a few interruptions by rapids, but they are not of much consequence; from Presqu' Isle to Fredericton, long intervals are to be found where steamboats may ply; and at Fredericton, vessels from 50 to 100 tons ascend from the sea. A steamboat navigation might be effected from the source of the river St. John, 50 or 60 miles from Quebec, at least with few interruptions". (Estimated distance 265 miles.) (n.p. See St.)

Bouchette, Joseph. A topographical dictionary of the Province of Lower Canada. London, 1832.

ST. JOHN RIVER

"It has a course of 500 miles for 230 of which it is navigable by steamboats ... In the whole of its course from the point where it touches New Brunswick to Grand Falls it flows in a wide, deep stream, which can be traversed by steamboats when the water is at its normal height ... From that point (Grand Falls) to Fredericton, a distance of 140 miles, it is navigable by steamboats; flowing in a full even stream ... from there (Fredericton) to St. John (85 miles) large steamboats sail every day during the season of open navigation". p. 46.

Hannay, James. New Brunswick, (Canada). Its resources and advantages. New Brunswick, Crown Land Department. Fredericton, 1902.

ST. JOHN RIVER

"The river is navigable for steamboats of good size at all times during the season, as far as Fredericton, a daily line of communication being maintained; while above this as far as Woodstock navigation is possible during part of the summer. In high water, boats can run as far as Grand Falls, which is the first great natural barrier in the river. Above this point boats can run for another forty or fifty miles, ... Along the lower fifty miles of its course several large bays extend to the eastward, including Kennebecasis, Bellisle and Washademoak, and the Grand Lake, a sheet of water about twenty-five miles in length with a breadth of three to six miles, connected with the St. John by the beautiful Jemseg Creek. These are all navigable for small steamers, and regular lines of boats ply on these waters during every season." p. 10.

Ells, R.W. The geology and mineral resources of New Brunswick. Canada, Mines Department, Geological Survey Branch. Ottawa, 1907.

ST. JOHN RIVER

"The river is navigable for passenger and freight-carrying steamers of substantial capacity and draught from its mouth to Fredericton; and above this, for a further distance of about 63 miles, to Woodstock, it is navigable during the periods of spring and autumn freshets for smaller vessels of shallow draught. From Woodstock to the Grand Falls, while capable of useful navigation by small boats, the river, since being paralleled by railways, has been chiefly used as a means of floating logs, loose or in rafts. The

Grand Falls, ... constitutes an insuperable barrier to all navigation, ... From the Grand Falls to its source the river is capable of useful navigation ... and for the passage of shallow boats and scows". p. 10.

International Commission. Uses of the St. John River. Report of the International Commission pertaining to uses and conditions of the St. John River, on the reference by the United States and Canada. Washington, Government Printing Office, 1917. (United States, Congress, Senate, 64th, 2nd session, Document No. 724).

ST. JOHN RIVER

"The Saint John is navigable at its mouth for large ocean-going vessels as far as Reversing Falls ... The river may be navigated as far as Fredericton (84 miles) ... Beyond that, in earlier years, it was ascended by light draught steamers for a further distance of 69 miles to Woodstock and during the rainy or freshet season, boats ascended to Grand Falls a distance of 185 miles from Saint John ... Above them and beyond, for a distance of 35 miles, during the high water season the river was also navigable for smaller vessels to the mouth of the Madawaska River". p. 31.

Canada, Marine Department, Canadian Hydrographic Service. Sailing directions for the Saint John River from Saint John harbour to Fredericton and Kennebecasis Bay. 1st ed., 1934. Ottawa, 1934.

TEMISCOUATA LAKE

"... 22 miles in length ... sufficiently deep for vessels of considerable burden".

Bouchette, Joseph. The British Dominions in North America, ... Vol. II. London, 1832.

TOBIQUE RIVER

"... the River Tobique empties into the St. John from the eastward, and extends in a north-east direction about a hundred miles; for seventy of which it is navigable". p. 76.

Ward, E. An account of the River St. John, with its tributary rivers and lakes. Fredericton, N.B., 1841.

WALLACE RIVER, N.S.

"The southern branch has steep banks ... and is navigable for a distance of about 6 miles above the bridge (highway bridge at the entrance of the river) ... The navigation of the northern branch terminates about 4½ miles above Wallace". p. 366.

Great Britain, Admiralty, Hydrographic Department. St. Lawrence pilot comprising the Gulf and River St. Lawrence, the Banks of Newfoundland, the approaches to the Gulf by Cabot Strait, the Strait of Belle Isle, and the Gut of Canso. 10th ed., 1943. London, 1943.

WASHADEMOAK LAKE

"... is entered through Washademoak Creek with navigable depths of from 14 to 19 feet. The lake is about 20 miles long ...". p. 30.

Canada, Marine Department, Canadian Hydrographic Service. Sailing directions for the Saint John River from Saint John harbour to Fredericton and Kennebecasis Bay. 1st ed., 1934. Ottawa, 1934.

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