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REPORT OF THE COMMISSION

APPOINTED BY THE

GOVERNMENT,

TO INVESTIGATE THE NATURE AND EXTENT OF THE COMMERCIAL

ADVANTAGES TO BE DERIVED FROM THE

CONSTRUCTION

OF THE

BAIE VERTE CANAL

TOGETHER WITH THE

EVIDENCE OBTAINED.



DECEMBER, 1875.

REPORT OF THE COMMISSION

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ADVANTAGES TO BE DERIVED FROM THE

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OF THE

BAIE VERTE CANAL

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DECEMBER, 1873.

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REPORT OF THE COMMISSIONERS.

+ By order in Council dated
the 16 June 1875, the Commission
is composed as follows viz:
Honble John Young, Montreal, Chairman
" W. P. Howland C. O. Toronto -
J. W. Lawrence Esq. St John
Peter Sack Esq. Halifax -

REPORT

OF THE

BAIE VERTE CANAL COMMISSIONERS.

MONTREAL, *2nd December, 1875.*

To the Honorable the Secretary of State,

Ottawa.

SIR,—I have the honor to report to you, for the information of His Excellency the Governor-General in Council, in reference to the performance of the duties imposed on the Commission by your instructions of the 28th June, 1875, viz.:—"To investigate the nature and extent of the commercial advantages to be derived from the construction of the Baie Verte Canal, to connect the waters of the Bay of Fundy, at Cumberland Basin, with the Gulf of St. Lawrence, at Baie Verte; further, that the Commissioners should visit Halifax, N. S., St. John, N. B., Charlottetown, P. E. I., Quebec and Montreal, and such other places as may seem desirable, and take such evidence at each of those places as may enable them to gather carefully the opinions of the commercial community, and especially of captains and sailing masters of vessels, as to the commercial value and advantages of the proposed canal."

The Commissioners held their first meeting at Montreal, on the 1st July, 1875, at which were present—The Hon. JOHN YOUNG, Montreal; the Hon. W. P. HOWLAND, C.B., Toronto; J. W. LAWRENCE, Esq., St. John, N.B.; F. BRAUN, Secretary of the

Department of Public Works of Canada, appointed by the Government as Secretary of the Commission; PETER JACK, Esq., of Halifax, not being able to attend.

After several conferences, it was deemed advisable to begin taking evidence as to the advantages of the proposed canal in Prince Edward Island, and to have prepared two maps, showing the various routes between one part of the Dominion and the other, and to the West Indies, South America and Great Britain, with tables of the distances between the various ports. This duty was ably performed by Fred. W. Hyndman, of Charlottetown, late of the Gulf St. Lawrence and Newfoundland Admiralty Survey, under Capt. Orlebar, R.N., and those maps, with the tables of distances, have since been checked by Capt. Rudolph, Harbour Master of Montreal, an intelligent and experienced seaman.

In pursuance of their instructions, the Commissioners proceeded to, and took evidence, at the following places, viz. :—

Prince Edward Island :

Charlottetown.
Summerside.
Alberton.

New Brunswick :

Dalhousie.
Bathurst.
Newcastle.
Chatham.
Sackville.
St. John.

Nova Scotia :

Pictou.
Amherst.
Baie Verte.
Halifax.

Quebec :

Montreal.
Quebec,

United States :

Gloucester.

Cape Ann.

By circulars and notices in newspapers at each of those places, and others not enumerated, all such persons as are designated in the instructions were invited to appear and give evidence before the Commissioners.

The Commissioners also proceeded to the site of the proposed canal, and made a careful inspection of each terminus.

The project of uniting the waters of the Bay of Fundy with the waters of the Straits of Northumberland at Baie Verte by a canal, has, for the last fifty years, engaged much of the public attention.

Haliburton, as far back as 1829, in his "History of Nova Scotia," refers to the importance of the canal; while Colonel Bouchette, C.M., Surveyor-General of Lower Canada, in his work on "The British Dominions of North America," published in 1832, points to the advantages which it would secure.

In 1870, Messrs. Allan, Gzowski, Calvin, Laidlaw, Garneau, Stairs and Jardine, were named, by the Dominion Government, Commissioners to institute and make a thorough enquiry on a comprehensive improvement of the canal system of the Dominion, and were instructed to report "On the construction of a canal through the Isthmus dividing the Bay of Fundy from the Gulf of St. Lawrence at Baie Verte."

Those gentlemen in their report say :—

"Inseparably connected with the growth of intercolonial trade is the construction of the Baie Verte Canal. The advantages that must accrue, not merely to the Dominion as a whole, but to the commerce of the Maritime Provinces, are so clearly pointed out by the Boards of Trade of all the leading cities of Canada, and by men interested in the development of our commercial cities.—not simply the merchants of St. John and other places in the locality of the proposed canal, but merchants of Hamilton, Toronto, Ottawa, Montreal and Quebec,—that it is superfluous for the

“ Commissioners for more than briefly refer to a few salient features
“ of the scheme.

“ A steamer laden with flour for St. John, N. B., now goes down
“ the Gulf as far as Shediac, where the cargo is transported by rail
“ to its destination. The total distance by water from Shediac
“ through the Gut of Canso and round the coast of Nova Scotia to
“ the Bay of Fundy, as far as the commercial capital of New
“ Brunswick, is about 600 miles, and the consequence is that there
“ is little or no direct communication between the Bay of Fundy
“ ports and those of the River St. Lawrence.

“ By a canal through the Isthmus, from Shediac, the distance to
“ St. John will not be more than 100 miles. This fact will show
“ the insuperable obstacle that now exists to anything like extensive
“ commerce between Montreal and the Bay of Fundy ports of New
“ Brunswick and Nova Scotia, and the great impulse that must
“ necessarily be given to the trade by the opening out of a route
“ which will shorten distance so considerably, furnish an inland
“ navigation from the lakes to Boston, and consequently lessen
“ freights between those points at least twenty-five per cent.

“ The fishing interest of the Gulf St. Lawrence, Prince Edward
“ Island, and the north shore of New Brunswick, will be promoted,
“ while the coal trade of Pictou will have a safe and shorter route
“ to ports in the Bay of Fundy, and to those on the north-eastern
“ coast of the United States; and that the most suitable size for the
“ locks on the proposed Baie Verte Canal will be 270 feet in length
“ of chamber between the gates, 40 feet in width, and have 15 feet
“ draught of water on the mitre sills.”

Such have been the impressions given to the public regarding
the proposed canal; and although it is not any part of the in-
structions of the Commissioners to consider the route of the canal
or its engineering difficulties of construction, yet it may serve a
good purpose to briefly relate the various surveys which have been
made of the canal, and the estimates of its cost, with dimensions.

In 1822, under instructions from the Government of New
Brunswick, R. C. Minnette, C.E., made a survey for a canal
between the Bay of Fundy and Baie Verte, and recommended a
depth of four feet, to be fed by fresh water.

In 1825, Francis Hall, C.E., made a survey of the canal, and estimated the cost at \$298,006, with six locks of 105 feet by 20½ feet, and eight feet of water on the mitre sills.

In 1826, Thomas Telford, C.E., examined Mr. Hall's plans, and advised locks of 150 feet by 40 feet, and 13 feet on the mitre sills, estimating the cost at \$685,952.

Capt. Crawley, of the Royal Engineers, was next employed at the joint expense of Canada, New Brunswick and Prince Edward Island, and he advised locks 150 feet by 40 feet, with nine feet on the mitre sills, but gave it as his opinion that it was impracticable on account of the deficiency of the fresh water supply, as he objected to using the Bay of Fundy tidal waters to supplement the deficiency.

In 1869, John Page, C.E., Chief Engineer of the Department of Public Works of Canada, reported that an abundant supply of fresh water might be obtained by adopting a lower level than that proposed by Hall and Telford, but advised further surveys.

In 1872, G. E. Baillairgé, C.E., Assistant Engineer Department of Public Works, reported to Mr. Page that the best line was from Au Lac to Tidnish, water to be taken from the Bay of Fundy by means of one or more rivers connected in reservoirs; length of canal, shore to shore, 18.84 miles; length of canal, from 16 feet at low water Bay of Fundy to 16 feet at Baie Verte, 21.43 miles; locks, 270 feet by 40 feet; navigable draught, 15 feet.

Canal Commissioners, in 1871, reported in favor of a canal of 270 feet by 40 feet on a different line, and estimated the cost, with 15 feet draught, at \$3,250,000.

In 1873, Messrs. Keefer and Gzowski recommended to Government a half-tide canal, *via* Laplanche, Long Lake and Tidnish, at a cost of \$5,417,000; length of canal between entrance locks being 20½ miles.

In 1873, Mr. Baillairgé furnished an estimate of cost of a half-tide canal on the Au Lac and Tidnish line, capable of extension to a full-tide canal.

One based on Mr. Keefer's project for 12 hours' navigation...	\$5,650,000
" " " his own for 16 hours' navigation.....	8,217,849
Also cost for a full-tide canal.....	8,592,849

In December, 1873, Mr. Page reported on both Mr. Keefer and Mr. Baillaigé's projects, condemning Mr. Keefer's line, and approving Mr. Baillaigé's. He estimates the cost, with certain modifications :—

For a half-tide canal.....	\$7,700,000
“ three-quarter tide canal.....	8,100,000
“ full-tide canal.....	8,500,000

Mr. D. Starke. C.E, who also examined the route of the canal, says, in a letter addressed to one of the Commissioners, that, “in the first place, I think that Mr. Page's Report and last estimate of the cost must be taken as the correct one, and, therefore, be the sum which must be looked at in making a comparison between the prime cost of the work and the revenue which its completion will return. I accept the estimate of Mr. Page, because I regard that of Mr. Keefer's, especially with reference to the Baie Verte end of the canal, as being much too small. Crib exposed, as it would be, to the whole force of the Atlantic in an easterly storm, is not to be thought of, as a massive sea wall is required at that point, which would add an enormous amount to Mr. Keefer's estimate.

From these reports and statements, there can be but little doubt that, if the proposed canal is built, it will be $21\frac{1}{2}$ miles in length, with locks 270 feet by 40 feet, with a navigable depth of 15 feet; that it will cost at least \$8,000,000 for what is called a “half-tide canal.”

The evidence accompanying this Report is almost unanimous in proving that, for the trade with Great Britain, South America and the West Indies, the proposed canal is not required. This will also be apparent from an examination of the maps herewith, and will be further made evident by the following comparison of distances :—

From	To	Via Cape North.	Via Gut of Canso.	Via Baie V'te Canal.	Via Direct Route.
Montreal.....	Montevideo....	6449	6429	6479	....
Halifax.....	"	6100	5990	....	5500
St. John.....	"	5855	5745	....	5590
Montreal.....	St. Thomas.....	2513	2439	2449	....
Halifax.....	"	2321	2186	....	1630
St. John.....	"	2073	1938	....	1680

				Miles.
From Montreal to Liverpool, via South Newfoundland ...				2969
" " " " Straits of Belle Isle....				2682
" St. John " " Direct.....				2683
" " " " Canal.....				2603
" Halifax " " Direct.....				2482
" " " " Canal.....				2851

These figures show beyond all question that the canal is not required either for the trade of West Indies, South America or Great Britain.

From the St. Lawrence, St. John, and the ports on the Baie des Chaleurs, the trade in lumber is at present with Great Britain, and is carried on in vessels of large tonnage, and, in most cases, of a draught of water beyond the capacity of the proposed canal, and by which it could not be used even if distance favored the route. From the St. Lawrence, the Bay of Fundy, the northern ports of New Brunswick, and Halifax, the present natural routes direct to Great Britain, South America, or the West Indies, are the best, and for trade with these countries would not pass through it.

This being, in our opinion, made evident, the Commissioners next turn to the trade of Nova Scotia, to consider what advantages the canal would confer upon it. Taking the last published returns for the year ending 30th June, 1874, the imports into Nova Scotia amounted to \$10,907,856, and the exports to \$7,182,395.

REPORT OF THE

THE IMPORTS WERE:

From Great Britain.....	\$5,851,944
“ United States.....	3,581,722
“ France.....	97,081
“ Newfoundland.....	528,581
“ Holland.....	10,961
“ Belgium.....	9,651
“ Spain.....	26,723
“ Portugal.....	13,368
“ British Guiana.....	3,687
“ British West Indies.....	307,948
“ Spanish “.....	413,607
“ French “.....	27,127
“ Danish “.....	7,488
“ Dutch “.....	6,535
“ St. Pierre.....	5,369
“ Madeira.....	15,482
“ South America.....	152
“ Labrador.....	430
	<hr/>
	\$10,907,856

THE EXPORTS:

To Great Britain.....	\$1,011,265
“ United States.....	2,425,182
“ France.....	657
“ Holland.....	666
“ Spain.....	960
“ Portugal.....	14,613
“ Newfoundland.....	508,048
“ British West Indies.....	1,603,752
“ Spanish “.....	783,994
“ French “.....	369,929
“ Danish “.....	62,809
“ Dutch “.....	8,869
“ British Guiana.....	177,756
“ Dutch “.....	1,238
“ St. Domingo.....	74,428
“ St. Pierre.....	64,556
“ Madeira.....	42,945
“ Azores.....	6,782
“ Brazil.....	5,707
“ South America.....	10,836
“ Italy.....	12,363
“ Greenland.....	50
	<hr/>
	\$7,182,395

Now of these \$18,090,251 of imports and exports, the largest portion of which are with Great Britain, the United States and the West Indies, no part of it would require to use the canal. To Halifax and other ports on the southern coast of Nova Scotia, the canal would be of no utility; neither could it be to the ports of Nova Scotia on the Bay of Fundy, as the distance from these ports to the United States and the West Indies is less without the canal, by the routes at present used.

If the canal was constructed, possibly some coal might pass through from the port of Pictou to the United States. This is doubtful, as will be seen by the evidence of residents there acquainted with the trade, although the saving of distance from Pictou to Boston by canal would be 160 miles and 90 miles to New York. Steamers have taken the place, to a large extent, of sailing vessels; and, as most of those steamers draw from 16 to 20 feet, they could not pass through a canal of 15 feet. The evidence goes to show that, if built, it would not be used to any great extent, and that the route through the Gut of Canso would be preferred.

Next in order is the trade of New Brunswick. For the year ending 30th June, 1874—

THE EXPORTS

To Great Britain	\$4,201,438
“ United States	1,247,364
“ France	26,716
“ British West Indies	63,612
“ Spanish West Indies	459,556
“ French West Indies	2,380
“ South America	77,375
“ Holland	14,239
“ Newfoundland	11,023
“ Italy	8,320
“ Portugal	9,700
“ Hayti	1,840
“ Africa	1,816
“ Canary Islands	15,880
“ Brazil	410
“ St. Pierre	288

\$6,141,957

REPORT OF THE

IMPORTS :

From Great Britain	\$5,876,058
“ United States	3,894,484
“ France	94,879
“ British West Indies	146,090
“ Spanish West Indies	171,386
“ French West Indies	3,040
“ Holland	15,035
“ Germany	17,050
“ British Guiana	640
“ St. Pierre	177
“ Central America	825
“ Belgium	52
“ Norway	60
“ Newfoundland	2,092
“ Portugal	963
“ Spain	837
	\$10,223,668

An examination of the above exports and imports to and from New Brunswick, amounting to \$16,365,625, will shew that, in carrying on this trade, the canal would be of little service, nor be the means of increasing it to any great extent. Take for instance, the trade of the following ports on the Bay of Fundy, with Great Britain, the United States, and the West Indies,—all of which are, independent of the canal.

IMPORTS AND EXPORTS AT

St. John	\$12,331,348
St. Stephens	363,107
St. Andrews	174,863
Woodstock	263,053
Fredericton	441,929
Hillsborough	156,068
St. George	130,535
Campobello	60,155
Sackville	105,258
	\$14,026,416

These nine ports, with other smaller ports on the Bay of Fundy, in New Brunswick, carry over 84 per cent. of the whole trade of New Brunswick to Great Britain and foreign ports; and the canal would be of very little advantage to such trade.

The trade of the northern ports of New Brunswick, in the Gulf, is chiefly with Great Britain. The inward and outward tonnage of these ports is nearly the same; but take the trade outwards, of the following ports :—

	No. of Vessels.	Tons.	TO GREAT BRITAIN.	
			Vessels.	Tons.
Chatham.....	148	69,009	139	63,145
Dalhousie.....	22	13,425	22	13,425
Bathurst.....	31	8,687	13	6,324
Baie Verte.....	4	1,116	4	1,116
Newcastle.....	56	24,352	52	23,911
Richibucto.....	85	25,223	81	24,399
Shediac.....	29	12,682	29	12,682

It will thus be seen that at present, almost the whole trade to and from the northern ports of New Brunswick, is with Great Britain; and as this trade is carried on by vessels, most of which are too large for the contemplated canal, which would be out of the route to great Britain, it is not required for that trade, or for the trade with the West Indies, as the route through the Gut of Canso is deemed to be the best.

Vessels inwards, frequently arrive at these ports in ballast with a light draught of water; and if the canal was built, vessels chartered at St. John, or in the United States, could pass through it, to load at these ports.

THE TRADE OF PRINCE EDWARD ISLAND.

The imports in the year ending June, 1874, were—

From Great Britain.....	\$1,454,200
“ United States.....	894,803
“ France.....	244
“ Germany.....	100
“ British West Indies.....	19,652
“ Spanish West Indies.....	22,693
“ Dutch West Indies.....	139
“ Newfoundland.....	21,423
“ St. Pierre.....	102
“ Guadeloupe.....	340
	<hr/>
	\$1,913,696

While the Exports were—

To Great Britain	\$396,486
“ United States	193,571
“ British West Indies	29,587
“ Newfoundland	84,299
“ St. Pierre	9,063
	\$713,096

These figures show that, so far as the trade with Great Britain and the West Indies is concerned, the Province of Prince Edward Island has no interest in the construction of the Baie Verte Canal. In the trade, however, with the United States the case is different. The distance from the Island to St. John and ports in the United States, by the canal, would be considerably lessened.

	Via Gut of Canso.	Via Canal.	Favor of Canal.
Charlottetown to St. John	498	144	354
“ “ Boston	635	414	221
“ “ New York	780	630	150
“ “ Halifax	245	390	....

The exports to and from the United States in 1874, amounted to \$588,374. The largest items of this amount were the exports of fish, \$106,376; animals and their produce, \$64,182; agricultural products, \$21,939; in all \$193,571.

The principal import was 23,655 barrels of flour, value \$127,275, besides various manufactures; and it is held by various parties on the Island that if the canal was built, the trade with the United States would increase, more especially if Reciprocity existed.

A line of well equipped steamers, of about 1,200 tons, has been established between Boston and the Island, touching at Halifax. These steamers carry freight and passengers from Boston to Halifax and Charlottetown, and carry back mackerel and other products at low rates. The fishing vessels, when full, discharge their catch at Charlottetown for the steamers, and go at once again on to the fishing grounds.

The railway running through Prince Edward Island from east to west, affords great facilities for trade, and as the distance to Shé-

diac is only 40 miles, the business with the Bay of Fundy and the United States is carried on with despatch. The principal agricultural products are oats. Last year over 2,000,000 bushels were exported. Of this 1,500,000 were shipped to England, and the rest to the Provinces and Newfoundland. Under the present duty in the United States, oats cannot be sent there; and even if the duty was taken off, it is questionable whether they would go through the canal.

An examination of the maps herewith will show that the trade of the south coast of Newfoundland with the West Indies, South America, or the United States, is through the Gut of Canso, or round Cape North. That is the direct route, and for the trade of these countries Newfoundland would not use the canal. It is needless to say that the canal is in no way connected with her trade to the St. Lawrence or with Great Britain.

The Commissioners have thus glanced at the trade of Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland, with Great Britain and other countries, as shown in the official trade returns; but there is a large and growing Intercolonial trade between each of the Provinces, of which the published trade returns give no account, and it is this Intercolonial trade which, it is contended, the canal would increase and develope to the great advantages of the Provinces.

It is held by some, that the Upper Lake vessels would proceed down the St. Lawrence and pass through the canal to St. John and the United States ports without breaking bulk, and that freight of flour and other produce would thus be cheapened, while the distance would be greatly lessened.

	Via Gut.	Via Canal.	Difference.
From Montreal to St. John.....	1,179	954	225
“ “ “ Boston.....	1,279	1,044	175
“ “ “ New York.....	1,459	1,314	145

There is no doubt whatever but that the canal would lessen the distance from Montreal, Quebec and the Upper Lake ports for vessels

sailing direct through it to the ports named. It is difficult now to say what will be the effect of the enlargement of the Welland and St. Lawrence Canals when completed on the question of transportation between the Upper Lake ports and the Maritime Provinces.

The largest item of export from Ontario and Quebec is flour. It is estimated (we think correctly) that from 600,000 to 700,000 barrels are annually imported by the Maritime Provinces. Of this quantity, Prince Edward Island imported from the United States, in 1874, 23,655 barrels; New Brunswick, 121,137 barrels; and Nova Scotia, 64,851 barrels; in all, 209,143 barrels. Most of that imported by Prince Edward Island came there by steamer from Boston; that to Nova Scotia by steamers and sailing vessels to Halifax; and that to New Brunswick by vessels to St. John. But little of this import of flour from the United States could, therefore, be affected by the construction of the canal.

Besides this flour imported from the United States, the Maritime Provinces, as near as could be ascertained, import from Ontario and Quebec about 400,000 barrels. Of this quantity, 250,000 barrels are sent over the Grand Trunk Railway to Portland, and thence distributed by steamers and sailing vessels to places in Nova Scotia and New Brunswick; but 40 to 50 per cent. of this quantity is carried over the rail in winter, when the proposed canal would be closed. About 150,000 barrels come down the St. Lawrence to Shédiac and other ports on the north shore of New Brunswick, and to Pictou during the period of navigation. At Shédiac, it is distributed by railway to St. John and other ports on the Bay of Fundy; while from Pictou, it is sent also by railway to Halifax and other places in Nova Scotia. By both of these routes—to Portland by rail from Montreal, and by water to Shédiac and Pictou—the rate of freight is very low. The large export of coal from Pictou to Montreal and Quebec in steam vessels adapted to the trade, makes a return cargo a necessity, and freight is carried back in those vessels at rates almost equivalent to ballast rates, say as low as 15 cents per barrel to Shédiac and Pictou. This, with 15 cents by railway from these ports to St. John, Halifax, and other adjacent ports in Nova Scotia and New Brunswick, makes the through rate 30 cents per barrel from Montreal.

This competition during the summer months, compels the Grand Trunk to take low freights also ; hence they have carried flour at 20 cents to Portland from Montreal, which, with 20 cents to vessels or steamers, makes the through freight to St. John, Halifax, etc., 40 cents ; but, no doubt, those rates are very low.

In winter, freights advance, but the question arises as to whether there can be any saving in freight by the construction of the canal, even considering the distance saved by it in direct shipments.

It has been shown in evidence, that a canal enabling a vessel to pass through direct, would probably have a small balance in her favor with a 30 cent freight, and that, " sailing in open water, distance is comparatively of little importance, and is more than " counterbalanced by the disadvantages of going through 21½ miles " of canal, and the contracted navigation of the Bay of Fundy "

The opinion is expressed among many giving evidence that the canal, in consequence of its cost, tolls and probable delays, could not compete successfully with established routes. That, although there is a short delay at Shédiac, a steamer going to Baie Verte would have an additional distance of 60 miles round Cape Tormentine to travel to reach it—not to speak of the delays that may be experienced at the Bay of Fundy by fogs, tides, contrary winds, etc., and this may be illustrated by a steamer landing her cargo, say 600 barrels of flour at Shédiac : This flour could be landed and put on the cars in four hours ; in eight hours more it could be landed in St. John, even at the rate of thirteen miles an hour, or in all twelve hours. By the Baie Verte canal route, the steamer would take eight hours to go from Shédiac to that place, and seven hours to go through the canal, and probably ten hours would be consumed in going from the outlet of the canal at Au Lac to St. John, making twenty-five hours against twelve, the time now taken from Shédiac to St. John, independent of all tolls on canal or other charges for pilots or wharfage at St. John.

It is a question from the evidence, whether the trade as now carried on by water and railroad, is not more advantageous than it would be by the canal to St. John.

The coal trade in the future is likely to be carried on in steamers chiefly ; for the number of sailing craft in that trade is greatly reduced. The description of steamers now monopolizing the

trade in coal to the St. Lawrence being of large capacity, and drawing when loaded, from 16 to 22 feet and more, would be too large for the proposed canal, and freight by such large vessels will be less than by small ones.

After considering the conflict of evidence, as to the dangers and difficulties of the navigation of the Bay of Fundy, as far up as the proposed entrance to the canal at Au Lac, and having personally examined the same, and having consulted the Admiralty's Sailing Directions, published in 1866, wherein it is stated :—

“Ships navigating the Bay of Fundy have to encounter an atmosphere almost constantly enveloped in dense fogs, the tides setting in with great rapidity over the rocks and shoals with which it abounds, and a difficulty of obtaining anchorage on account of the depth ; so that under these circumstances, the most unremitting attention is requisite to prevent the disastrous consequences which would necessarily attend a want of knowledge and caution.”

The St. Lawrence Pilot, published by order of the Admiralty, states also that :—“ Baie Verte is completely open to easterly winds, as well as very shallow water near its head, where flats of mud and weeds dry out to a distance of three-quarters of a mile from the shore. It was formerly erroneously represented as being free from dangers with mud bottom,—shoaling gradually to its head. The Admiralty Survey has, in great part, deprived it of that character, by the discovery of dangerous rocky shoals being directly in the way of vessels entering the Bay.”

The Commissioners are of opinion that, however safe the navigation may be for small vessels, as it now exists, and for those intimately acquainted with it, yet they cannot avoid the conclusion that for vessels using the canal, the entering and leaving it at Au Lac, and for some distance below, would present serious difficulties.

The entrance to the canal on the Baie Verte side, being at a point exposed to easterly winds, vessels of a draught of water exceeding 14 feet and above 500 tons, would find it sometimes difficult to enter the piers.

The use of the canal would be thus mainly confined to vessels of 500 tons and under, and it would be much better adapted for

steam rather than sailing vessels, on account of the difficulty to be encountered in entering and leaving the canal, and on account of the navigation of the upper part of the Bay of Fundy.

The Commissioners have obtained from an experienced Marine Underwriter at St. John, the rates of insurance by the various routes and for each month of the year, as follows:—

	HULL.	CARGO.
From St. John, N.B., and the ports in the Bay of Fundy to United Kingdom or Continent,—the average from Jan'y to Dec. is.....	\$2.75	\$2.27
From Halifax or Yarmouth to the United Kingdom or Continent,—the average from January to December is.....	2.50	2.07
From ports in the Straits of Northumberland, south of Cape Tormentine to the United Kingdom or Continent,—average from May to 30th November is.....	2.39	2.93
From ports in N. B., north of Cape Tormentine to United Kingdom or Continent,—average from May to 15th November is.....	2.96	2.42
From ports on River St. Lawrence to United Kingdom or Continent,—average from May to 15th November is.....	3.96	3.34

It has been stated that the propellers of the Upper Lakes would come direct from thence with cargo, into the Bay of Fundy, and would take back return cargoes of coal, stone, fish and West India produce.

The interior lake or river propeller, drawing 12 feet of water would not find it profitable to continue her voyage down the St Lawrence, and through the proposed canal into the Bay of Fundy. The inland propeller, as at present constructed, is not adapted for sea, or for carrying coal from Pictou and other coaling ports. Steamers, specially adapted for this trade, load with coal at Pictou with great rapidity, and carry back flour and other freight at very low rates; but it is said such rates would not induce inland propellers to go to the Bay of Fundy, as they are more profitably employed in the trade west of Montreal; their profits largely consisting of the number of trips they make during the season.

When the proposed canal was first suggested in 1822, there were no railways; the Grand Trunk, from Montreal to Portland, was opened for traffic in 1853; the railway from Pictou to Halifax in 1870; the railway from St. John to Shédiac in 1861.

The effect of these railways on the commerce of the Maritime Provinces has been very beneficial. The Intercolonial Railway will be opened for commerce next spring, and will open up a new route from Montreal and Quebec to Halifax and St. John, and will also connect the various ports on the north shore of New Brunswick and Nova Scotia; this road will add largely to the facilities which now exist for trade.

These changes in the means of transport by railway are very important; when the Intercolonial will be opened, it will cross the isthmus between Baie Verte and Cumberland Basin, on the Bay of Fundy, and thus form a junction with the two lines. It is difficult now to estimate the advantages of this direct communication by rail with the St. Lawrence.

The Intercolonial Railway will not only open up a new route from Toronto, Montreal and Quebec to Halifax and St. John, but will also connect the various ports on the north shore of New Brunswick and Nova Scotia.

A new line of railway is projected, and considerably advanced, from St. John to Montreal and Quebec, through Megantic, which will shorten the distance between the ports of St. John, St. Stephens, St. Andrews and Montreal and Quebec, about 140 miles.

Another line of railway is in course of construction, from Fredericton to River du Loup, forming a connection with the railway now running from St. John to Fredericton.

These railways will, no doubt, command a large portion of the traffic between the West and the Lower Provinces; and these facilities will be further increased by the construction of a bridge across the river at St. John, and will thereby produce a very important diversion of trade, which might otherwise have afforded traffic to the canal.

Some doubt having been expressed as to the number of fishing vessels which would pass through the canal from the United States, *en route* to the fishing grounds in the Straits of Northumberland, and north of Prince Edward Island, the Commissioners deemed it their duty to visit Cape Ann, Gloucester, and other large fishing depots in Massachusetts; and through the kindness of the Mayors of Gloucester and Cape Ann, they were introduced to parties largely

engaged in the fishing trade. Their evidence will show that if the canal was built, it would not be used by American fishermen to any great extent; but that the present routes would be preferred, as men are engaged in the Gut of Canso for fishing, while salt and bait are obtained there, and from the run home being more direct through the Gut of Canso from the Magdalen Islands.

The Commissioners while referring in this report to the Trade of the various Provinces as it existed at the close of the year ending 30th June, 1874, would express the opinion that, notwithstanding the depression which has existed in all branches of trade during the season which is about to close, they believe that this is only temporary, and that with increasing population and extension of the industry of the country, there is no reason to doubt that the progress of the future will be equal to what it has been in the past, and that this will be greatly accelerated by the cheapening of transport from all ports of the interior to the consumers in the East, and to the points of shipment to Europe.

The Commissioners have used every means within their power to obtain the fullest information and the most reliable evidence to enable them to comply with the instructions with which they were furnished and to fulfill the duties and responsibilities imposed upon them.

Whilst in some cases, from a want of definite knowledge and understanding of the subject, extravagant views have been put forth, yet the evidence which has been obtained from seamen, merchants and others, as well as from public records, will in the main, it is believed, be found of great interest and value; but, taking the whole circumstances relating to the proposed canal to connect the Bay of Fundy at Au Lac, with the Northumberland Straits at Baie Verte, into consideration, and after having carefully weighed the evidence obtained from various sources as to:—

1st. The distance from the St. Lawrence, *via* the proposed canal, to the great sea ports of South America and the West Indies and the United States coasts, as compared with the route by the Straits of Canso, or round Cape North;

2nd. The extent of the existing trade with these ports, and its probable prospective increase;

3rd. Whether it is probable that any or what portion of the coal trade from the northern coasts of Nova Scotia and Cape Breton, or the southern coasts of Newfoundland will be likely to seek an outlet by the proposed canal ;

4th. The size of the vessels which might fairly be expected to trade through the proposed canal, and whether said vessels or steam vessels will be on the same comparative footing as on the existing routes by the mouth of the Gulf ;

5th. The nature and extent of the local trade affecting only the coasts of the Bay of Fundy and the north coasts of New Brunswick and Prince Edward Island ;

6th. The extent and nature of the difficulties which might be encountered in getting into and out of the canal on account of the extremely high tides in the Bay of Fundy.

And considering the railway facilities for transport which now exist ;

The Commissioners have no hesitation in expressing their opinion that it is not in the interest of the Dominion that the proposed canal should be constructed, — *Mr Thomas dissenting* —

The evidence taken and the observations which the Commissioners have had the opportunity of making, have impressed them deeply with the vast resources of New Brunswick, Nova Scotia and Prince Edward Island, and the large increase which may be reasonably looked for in their trade and commerce.

We append hereto the Minutes of the Commission, with copies of all the evidence taken, and the documents furnishing the data to which we have been referred.

All of which is respectfully submitted.

JOHN YOUNG,

Chairman.

APPENDIX.

EVIDENCE

GIVEN BEFORE THE

BAIE VERTE CANAL COMMISSIONERS.

PRINCE EDWARD ISLAND

CHARLOTTETOWN.

HON. BENJAMIN DAVIES, M. P. P.—I have been a merchant most of my life and am now engaged in the Railway Department; I know something of the trade of this island and the Provinces generally; I have given some attention to the effect that will be produced upon the trade of the island by the opening of the canal, and I have conversed with gentlemen who have, perhaps, more knowledge than I have; the subject was discussed last year in the Local Legislature. By rail to St. John, the distance is, I fancy, less than by the proposed canal, and the question would be the difference between the freight by rail and the new route—whether in fact goods could be sent more cheaply by rail than by the canal; my own opinion is that goods could be sent by rail cheaper and more quickly than if the canal was opened. The goods for Boston, from here, are taken principally by ocean steamers, which are about 200 feet in length, and draw I think about 16 feet when they leave here; these ships would go through the canal in preference to the present route if they could go through without charge, but if toll was charged, I do not think they would go; with the power they have they would be as far ahead by going the other way, for they must have some detention; the rate at which they would go through, would have some effect, as would the amount of detention at each end; I think that ocean steamers would prefer the outside route. There is a very large trade between here and Boston—perhaps one-

fourth or one-third of the exports of the island ; I do not know the amount of the export to Boston ; I have not the exact figures ; there is a large trade in fish between here and Boston. I cannot tell whether American fishing vessels would use the canal or not, it would depend upon the charge ; it is doubtful if they would, for a great deal of the fishing is done to the east of the Gut of Canso ; if fishing vessels got loaded at Magdalen Islands, their shortest route would be by the Gut of Canso. I have conversed with many men on this question of the proposed canal, and have found them agree that it is one of the maddest schemes that was ever proposed. We think that it would be an advantage only to the locality through which it would pass, in employing men there upon the works. I have a knowledge of the Baie Verte navigation ; there is no danger in going into the bay, but I think there would be some difficulty in getting into the canal ; very strong breakwaters would have to be built out a long way. I do not know anything about the Bay of Fundy navigation.

JOHN F. ROBERTSON, Esq., Merchant, a member of the firm of James Duncan & Co.—I am 35 years old ; I do not think that the canal would be any benefit to the trade of this Island ; at present we have no trade to any extent with the United States. There is some trade with the port of Charlottetown, where the Americans land their fish, but that is the principal trade ; the present route from here to Boston is about as short as it would be by the canal ; vessels come to this port because it is a good harbor. The large boats plying to Boston draw 16 feet of water ; their tonnage is, I think, about 900 tons ; these steamers depend largely upon the Gut of Canso ; a large part of their trade is in carrying passengers, and they get a large number from the Gut ; American fishermen, to take advantage of the canal, would have to get their salt in St. John ; they now get their salt in Halifax, or here. Freights are cheaper to Halifax, and they would get their salt cheaper there ; fishermen commence to catch mackerel off Gaspé, and as the season advances they go to Magdalen Islands, and there they are closer to the Gut ; they get number one mackerel at

Magdalen Islands ; the class of vessels that we have coasting here are cheap ; we can charter them at a small price, and it would not pay them to go through the canal ; they can't afford to pay a large toll ; I think the canal would not do us benefit beyond being a market for our produce while the work was going on. A good deal of grain goes to St. John ; none goes to Boston ; vessels carry this grain from Summerside, and make through freight arrangement at six and three-quarter cents per bushel ; the vessels get about 3 cents, and the railway three and three-quarters. I do not see how the canal could pay ; the rates I have given are about the customary rates from Crapaud and Summerside ; they are sometimes even less. The Government make a great mistake if they suppose that they will forward the interests of the Island by the canal ; we do not want the Government to tell us hereafter that they have expended money for our benefit in this canal ; the vessels that might be expected to trade there would be under 100 tons ; from Dalhousie and vicinity there would be no trade with St. John ; the great trade of both places is wood ; Halifax is supplied from Sheet Harbor with wood ; this Island has no West India trade of any consequence ; some cargoes which were brought here this spring found a better market in Montreal ; these vessels going through the canal would lose time. The great bulk of our oats go to England ; several causes have tended to produce this result ; last year we exported nearly 1,500,000 bushels, and year ending June, 1874, 752,000 bushels ; no quantity of oats would go through the canal ; our barley goes to Newfoundland, and some to St. John ; not much to the States ; if the Reciprocity Treaty was in force, oats would go to the States. Considering the general interests of the Dominion, I think it would be unwise to construct a canal at an expense of \$8,000,000 ; it would be impossible to make it self-sustaining, unless something extraordinary took place, which we have no right to expect ; I do not see any trade which is going to do it ; the locks would not admit a paddle steamer of any great width ; there is no trade from the south side of Newfoundland that could take the canal ; their shorter course would be by Scatari, or by the Gut of Canso. The expenditure near us of so much money as it would take to build this canal would do us good, but the canal would not benefit us ; I know nothing

about the Bay of Fundy ; the navigation in the Baie Verte is good, but that of the Bay of Fundy, from what I have heard, is not good ; the Baie Verte is a capital place ; our vessels run into it, and go up as far as Tidnish Head ; I have run into it with vessels of 350 tons ; we have vessels here of 800 tons ; the vessels that run in there, are those that have loaded in the vicinity of Shediac ; vessels run in there in the night drawing fifteen and a half feet of water ; we have run into it in the night with that draught ; no vessels go near Coldspring Head ; we consider the bay a very good place of shelter.

FENTON T. NEWBERY, Esq. : I reside here ; am in the commission business, also Shipping and Insurance Agent ; our trade to St. John is by rail ; fish are shipped by schooner to Shediac and are taken thence by rail to St. John, and steamer to Boston ; I think that the Canal should be a great benefit to this Island and to the northern part of New Brunswick, &c., perhaps Montreal also. They have to export from Gaspé, Paspébiac &c. ; I have not got the statistics ; they ship pretty largely to the West Indies, and on that route ; they would save 150 miles ; I think the Canal would be an advantage to this section, but as regard its paying, the matter would have to be looked into very closely in order to form a correct opinion ; I have no idea of the quantity of exports from these localities, but I think that the aggregate is very considerable ; the vessels could afford to pay a considerable toll ; a day on an average would put them through ; I am not very much acquainted with the navigation of the Bay of Fundy, and I do not know the prevailing winds there ; it strikes me that the winds are, as in this Island, variable ; we have northwest winds pretty frequently in autumn, and that would be the time when the Canal would be an advantage ; sometimes vessels are kept in the Straits of Canso for a week ; I do not know enough of the navigation of Fundy or Baie Verte to give any information ; I have nothing more than a general knowledge of the trade of Newfoundland and Canso ; I know a little about the American fishing trade ; they might avail themselves of that route ; they fish a good deal on the north side of the Island, and they

often go further up the Gulf too ; I do not know anything about the difficulties that would have to be encountered in getting into the Canal at either end ; there is a good deal of stone shipped from Wallace to Boston, Providence and New York ; this is free-stone ; the Canal would help this trade ; I should think that not less than 12 or 20 cargoes are shipped from Wallace every year ; these cargoes would average 200 tons of stone ; sometimes the vessels that load there are as much as 250 tons ; they draw all the way from 8 to 11 and 12 feet ; small sized vessels drawing about 9 feet are those that trade the most there ; they are more handy ; there is quite a business from the Baie des Chaleurs to the West Indies in shingles.

PETER W. HYNDMAN, Esq.:—I am a Merchant and Ship owner ; I have not looked much into the merits of the proposed Canal. From a superficial glance at the matter, I think it would be very advantageous to the Provinces—this Island and New Brunswick. To arrive at a proper estimate, however, the advantages would have to be compared with the outlay ; I think it would benefit Newfoundland and Labrador ; Newfoundland is perhaps nearer to Boston by Canso ; the Canal would benefit Baie des Chaleurs ; I have no knowledge of the navigation of the Bay of Fundy, or as to what winds prevail there ; I do not know that American fishing vessels make a point at Gaspé at the beginning of the season ; they fish there and on the north side of this island and at Magdalen Islands ; if there was any expense and delay in getting through the canal, these vessels, from Magdalen Islands would go through the Gut ; that is, at the close of the season ; in mid-summer, when the vessels are anxious to land their fares and get a second trip, I think they would use the canal ; some come in here and land their fish, so as not to lose time ; this has not been done so much for the last few years ; the vessels in the fishing business are from 60 to 100 tons ; they would draw from 7 to 10 feet ; we have not much trade with the West Indies direct. There is a good deal of shipping from Summerside and the west part of the island to Shédiac since the railway was built ; the west end of the island makes Shédiac their

market ; at the east end of the island they go to Halifax ; we cannot send oats to the United States now under the present duty ; we ship potatoes occasionally, but not oats. If a treaty were made, there would be a market for oats, and a very large trade ; the 10 cents duty on oats prohibit exportation to the United States ; I cannot give information regarding the quantity of exports or the tonnage of vessels ; I do not think that there are any difficulties in the way of entering the canal in the Baie Verte ; have not sufficiently looked into the trade which would arise ; but I believe the canal would be a public benefit ; we cannot see at a moment's notice what trade is going to spring up for the canal ; it would be of advantage to the trade going both ways, and up the gulf ; I would let the canal go by, if we could get the money for our harbour and for our railway extension. But if there is no prospect for that, we might as well have the canal. I admit I look at it in a selfish point of view ; of the two, I would prefer to have the money for our harbour and to extend our railway ; but if the country could afford it, we might have the canal too ; we might not see the direct advantages at first ; it might open up trade more largely.

WILLIAM WELSH, Esq., M.P.P.—I am a member of the firm of Owen & Welsh, ship-owners ; in the first place, the trade of this island with St. John, is very small, and I think the railway from Shédiac performs all the work required ; I have never had a vessel go to St. John but once ; if I had a vessel here to-morrow, for St. John, and the canal was open, I would prefer ordering the master to go by Canso ; the distance by the canal would be shorter ; but, I consider that the difficulties and dangers of the navigation of the Bay of Fundy, would more than counterbalance the saving in the distance ; the dangers are the tides, and the prevalence of west winds, and also the intricacies of the rivers and the head of the bay ; as a director of an insurance company, I would not insure a vessel going by way of the canal at less than double the charge by the sea route, unless she had a steamer to tow her from the canal on the other side ; I think that these objections and the tolls would deter vessels from using the canal ; if the passage was free I would not go

through ; if I was in St. John and had a good pilot, and a fair westerly wind, I might use it, but I would not use it from this way ; there is good navigation in the Baie Verte ; during the Reciprocity Treaty with the United States, there was a large trade, but it has since fallen off ; and there is now only a trade by steamers, which ply between here and Boston by way of Canso and Halifax ; there is very little trade between here and St. John ; if the Reciprocity Treaty with the United States were again in force, there would be a large trade, but I do not think that the canal would be of any service to the island whatever ; I do not believe that the American fishermen would make use of it ; vessels leaving Gloucester, U.S., with a west wind, would be on the fishing grounds as soon by Canso as by the canal ; they want to call at the Gut to obtain men and barrels and stores, and then they are on the ground at once ; this is my opinion, but I am not very positive ; I think they would take the same route back ; they commence fishing on the north side of this island and at Baie des Chaleurs, and finish at Magdalen Islands and East Point ; and then their shorter course homewards is by the Gut ; there would not be the slightest trade from the south side of Newfoundland through the canal ; the coal vessels from Pictou would all go by the sea route ; they would have a narrow navigation up to Baie Verte, and again from the other end of the canal ; by going the other way they would have open sea room ; the average passage now is about seven days in summer, and if they made the passage by the canal in the same time, they would be very fortunate ; the size of the vessels in the coal trade is from 200 to 700 tons ; a 700 ton vessel would require 20 feet of water, and a 200 ton vessel about 15 ; they might not draw that, but they would require that ; fishing vessels have long keels ; they draw from 10 to 12 feet ; their tonnage varies ; some which might register only 60 tons, would measure, by old measurement, 200 ; I would not recommend the canal as a public work ; if I could see that it would benefit the Dominion as a whole, though not this island, I would advocate it ; but I believe it would only be a wasteful expenditure of public money for no practical benefit ; I have travelled from Baie Verte through by Bay of Fundy, and I know the ground ; it might be of some small local benefit in bringing money into the country where it would be built and

increasing the value of property ; the inconvenience at the other end from the tides, could be overcome by tugs, but still there would be great risk ; an examination of the wreck map of England will show that the Bristol Channel, which is very similar to the Bay of Fundy, has more wrecks than any other locality ; it would be impossible for a vessel to go against the tide ; she would have to work by tide work ; fogs are more prevalent there than at Cape Sable, and on the Nova Scotia coast ; we are free from them altogether ; here there would be no trade to the West Indies through the canal ; it would be out of the way.

CAPTAIN JOHN SALMOND :—I have been to sea about 64 years ; I live here ; I do not think the saving of distance by the canal would compensate for the disadvantages ; the navigation of the Bay of Fundy is very difficult, particularly at the head ; it is bad enough at the lower end ; you are surrounded by fogs ; no vessel loaded with coal from Pictou, large or small, would go through the canal to be liable to tolls ; they would have to use tugs to tow them up the Baie Verte and down the Bay of Fundy ; from here very few vessels would go ; very few vessels go from here to St. John ; the only accommodation would be to a few small coasting vessels ; there is very little communication with the United States by sailing vessels ; there was at one time, but not now ; if the trade was to increase the steamboats would increase also, and carry the freight ; they would cut out the sailing vessels ; I think that the canal is a mad attempt ; if you go to sea from here or Pictou with a west wind, and go by Canso, you are perfectly safe as soon as you are at sea ; you get to Boston without delay ; while if you went through the canal, and get a south wind, you would be enveloped in fogs, and not know where you are ; you are not an hour in safety ; I know what it is ; I would not go there for double wages ; the winds are like the winds here, from all round the compass ; if the wind is north-west you have clear weather, but if south and west you have thick fog ; the canal would be an advantage to a few coasting vessels only, and perhaps only two or three of them would go through in a day ; they send no timber from Dalhousie to St. John ; they may

send lumber to the United States, but I do not think that these vessels would take the canal; I have a brother-in-law in Boston who has a good many cargoes of lumber from Shédiac, and I do not think that he would pay canal dues; there would be no trade from the south coast of Newfoundland; they have a direct course up by Canso; Baie Verte is a very good harbour, but it would have to be deepened a long way out; it would take about five miles of piers; the creek that goes up from the loading ground is very crooked; it is a flat right down to Gaspereau; the creek is small, and would have to be deepened and straightened; no large vessels would attempt it; there would need to be tug boats at each side; in the Bay of Fundy there would have to be tugs to take vessels to open water; see what an expense that would be; I am not very well posted upon the rates of freight; even coasting vessels would not go through the canal if they had to pay heavy dues; I would not take that route, and I have been there pretty often; I am thoroughly acquainted with the whole coast on this side; I have often been in the Bay of Fundy in a steamer; it is bad navigation in a sailing vessel, the currents are so various and rapid, and you cannot tell where you are in a fog; you have not sea room, and cannot go by soundings; it is an abominable place.

JAMES PEAKE, Esq.:—I am a member of the firm of Peake Brothers & Co., merchants and ship-owners; there is no doubt that the canal would shorten very materially the distance for vessels going to St. John and Boston; not so much to New York; I cannot say which way the captains would prefer going; I think they would rather go by the Gut; they would save dues; I understand it is very foggy in the Bay of Fundy; none of our vessels would go that way; we keep them here till they have a fair wind and then go by the Gut; there would be great danger of collision in the canal in foggy weather; I think it would not be worth the expenditure of \$3,000,000; it would benefit the shipowners in New Brunswick in shortening the distance to the north shore of New Brunswick, but it would be of no benefit to us; I do not know the freight from here to St. John per ton; the freight from Shédiac to St. John is from \$2

to \$4 ; our principal shipping business is with England ; all our oats are shipped to England ; our fish is sent to the United States and the West Indies ; it is sent to the United States by steamers ; the freight is from 50 to 65 cents per barrel ; these rates would not be decreased by the construction of the canal, notwithstanding the saving of distance ; tolls would have to be paid in the canal and the cost of insurance would be increased ; the trade with the United States was much greater before the abrogation of the Reciprocity Treaty, and would be great now but for the duties ; oats would go to the United States instead of to England—as would also potatoes and general produce ; even with the increased trade I think that the present route would be used in preference to the canal ; in the fall of the year the weather is very thick and stormy, and the making of the entrance would be very dangerous ; the American fishing vessels go to Magdalen Islands and along our coast here, and I think they would continue to use the present route ; they land their fish here and at Canso for the steamers, on their middle trip ; on the last trip they take them home ; sometimes on their last trip they call for the fish that they have left on the middle trip ; if there was a canal and steamers plied through, then they might ship their fish in those steamers ; the great bulk of the vessels that come to fish are from Massachusetts ; they take a good many of their crews from Cape Breton ; they bring their barrels from home ; they get some in Canso ; the salt they get here and at Canso also ; there are many sails of fishing vessels in these waters every year ; they vary in tonnage ; and a vessel measuring 80 tons new, is sometimes 200 tons old measurement ; they draw a good deal of water.

WILLIAM MACGILL, Esq., M. L. C. : I am a commission merchant, of this city ; my opinion is that the Canal would be of no commercial value to this Island ; it would not be used ; no one would attempt to go that way to the West Indies ; it would be of advantage in going to St. John, but I would not consider it so in going to Boston ; I was master of a ship once ; have been engaged in the shipping trade—some years ago ; I would not go by way of the Canal on account of the difficulty of navigation of the Bay of

Fundy ; vessels would be subject to fogs and to detention in going through the Canal ; I have come up the Baie Verte during the winter and have been up the Bay of Fundy ; I would consider that the rate of insurance would be greater there than by the other route ; fish go mostly by steamers—sometimes by the railway ; I would consider that the opening of the Canal would be setting up a rival mode of transport to the railway ; there would be no advantage to the trade of the Island from the Canal ; if the Canal cost only \$2,000,000 I would not think it of advantage to have it ; if I was in the House of Commons I would record my vote against it ; there is no probability of any portion of the trade mentioned in paragraph No. 3, flowing through the Canal, nor is there any more probability of trade from the north shore of Nova Scotia, or from Cape Breton ; as a Master of a ship I would prefer to go by the present natural route, from the places named in question No. 2 ; it is not probable that there will be much increase in the West India trade ; the great difficulty in carrying on that trade is the Excise Laws ; we are by the action of those laws in favor of the manufacturers of Canadian whiskey—Gooderham & Worts—and prevented from importing rum and can bring nothing but sugar and molasses ; this benefits no one but the manufacturers ; it deprives us of our import trade ; there have been three vessels here this year with sugar and molasses, and one from Turks Island with salt ; a very large quantity of whiskey from Canada is imported here ; it is used in adulterating liquors ; they make Dunville whiskey out of it, and it is in almost every article of liquor that you purchase ; if the Excise duty was raised it would help our trade and do good to our people, but this whiskey I speak of is very injurious in its effects.

ISAAC C. HALL, Esq.:—I know the business upon which this Commission is sitting ; I have some knowledge of the question ; I am engaged in the fisheries, and in commerce to a certain extent, but principally in the fisheries ; I ship fish to the United States and the West Indies, principally to the United States ; I should suppose that there would be no question as regards the saving of distance by the canal being a benefit ; the trade that would go through the

canal from here would be the greater part of it with the United States and with the West Indies, to the West of what are called the Windward Islands; there would not be any saving in going to the Windward Islands—as Barbadoes, Martinique and Antigua, but to all points west of Porto Rico, to the Gulf of Mexico, to all United States ports, and to all points in Nova Scotia west of Cape Sable, the saving would be very great, say from 250 to 300 miles. In going by the Gut, Easting has to be made, and then Westing, say 250 miles east, and then 350 miles west, which is equal to a loss of 500 miles; a direct line on the map does not always show the distance that a vessel has to sail; the exports direct to the West Indies are not large from here; our exports of fish are mostly to the United States; our catch of mackerel last year was about 40,000 barrels; the records of our exports will not show this, but I know it is the fact; about seven barrels will make one ton; I am not a seaman myself; I have been up and down the Bay of Fundy frequently; I have no knowledge of navigation; the whole coast of Nova Scotia and New Brunswick is troubled with fogs, and is dangerous from that cause; the strong tides in the Bay of Fundy would necessitate tugs to take vessels to open water; rates of insurance to the United States ports would be lessened; of course I do not think that the canal could be immediately self-sustaining; the value of the canal depends very much upon free trade with the United States, and every intelligent man looks for that, and considers it not far off; when that time comes, the canal will be almost invaluable to the north shore of New Brunswick, and to this island; it will be valuable to the United States and to the Fisheries; but it would not benefit the United States so much; it is near to us, and our business is with them, while their business is all over the world; a large number of fishing vessels come from Gloucester, (U. S.) every year, but not so many as 1000 to these fishing grounds; there is no question but that the canal would benefit the United States, as I have said; the value of the canal depends very much upon free trade with the United States; the great productions of Maine, are hay, lumber and fire-wood; she has built a class of vessels specially adapted for carrying these products—low deck vessels—the decks of which she piles up high with hay and lumber; these vessels having a coast line

to follow can reach any of the ports of the U.S. in perfect safety ; and Maine thus supplies the great States of New England ; we cannot do this trade here now, for our vessels have to go to the Atlantic ; it could only be done as a rare thing in summer ; if we had a canal, we and New Brunswick could go in to it ; this island has shown a capacity for growing hay, which is enormous ; with the use of mussel mud, the production of hay has greatly increased, and when we have a market we can grow greater quantities ; an industry would be created by the canal, which has now no existence ; when we have a canal we can compete with Maine, for we would have a coast line, and could make a harbour every night if necessary ; then the work could be done profitably and safely, which it cannot be now. The present trade with the United States, so far as the products of the land are concerned, would not justify the project ; the present United States Tariff is prohibitory ; this trade that I speak of depends upon free trade with the United States, except in the matter of fish, which is now free ; fish, though valuable, do not comprise a great many tons ; it would be nothing to American tonnage in extent—that is, our fish trade ; the great products of this island are those of agriculture and the fisheries ; agriculture is the first ; when we had the treaty, new blood was infused, and everything was lively in commerce, since the abrogation of the treaty it has gone down ; we have had to give up growing potatoes to any great extent, though this island is the best adapted place in North America for the growth of that vegetable ; our products of potatoes would amount to millions of bushels a year, if we had the markets of the United States ; our local markets are small and soon glutted. Fishermen would go through the canal most parts of the year, except in fall sometimes, when they are near Canso ; in summer most of them would go through, and in the fall, to avoid the Nova Scotia coast ; fishermen usually commence between the island and New Brunswick, after that they drop to Magdalen Islands and Cape Breton ; the distance from Magdalen Islands by Canso and by the canal, would be about the same ; supposing there were tolls upon the canal, and possible detention in going through it, a portion of the vessels would go round, but the navigation there is dangerous, and a great many vessels will go by the way that is

nearest, and by which they can get home safest ; I think that the rates of insurance would induce them to go through the canal in the fall ; in the fall it is very difficult for vessels to make their way westerly, while the west wind would admit of their working up from the Bay of Fundy ; the N.W. wind is what they want, and that is what troubles them in the fall, by way of Canso ; American fishermen make deposits of fish in Canso, and the steamers take them away ; they land fish here and at Canso. Previous to the raid upon us here by Peter Mitchell and his mosquito fleet, we did a large business with American fishermen, but he pretty much extinguished us, and we have not done much business in that way since ; if a vessel gets a good fare of fish, she lands them, and ships by steamer, so that she can go and get more ; many think this the cheapest course ; it has not been done till of late years—within the last fifteen years ; the steamers that carry these fish are from 800 to 900 tons, they can carry cheaper than small vessels can ; I think that the mackerel could be carried from the north part of this Island for about two-thirds of what it now costs, viz., 90 cents ; it would be a good business for vessels to go through the canal to Boston from the north part of the Island for 50 cents ; fishing vessels could land fish here, and small schooners take them to Boston for 50 cents by the canal ; I do not think that small vessels can carry fish so cheaply as large ones, but they can carry them better ; in the large vessels they are put in a large bulk, and they are thereby injured ; fish in barrels require very careful handling ; the same holds good with potatoes. If 10,000 bushels of potatoes are put in one vessel, and sent to New York, they are sure to be destroyed, while if the same quantity is divided between three vessels, they will go all right ; by shipping from the north side of this Island, by schooner direct, the expense of trans-shipment and wharfage would be saved ; the Americans do the largest fishing business in the Gulf ; I should not think that the canal was more an American interest than a Canadian ; in forming an opinion of the value of the canal, so much depends upon free trade with the United States that it is hardly possible to go into a fair valuation without considering the question of free trade ; it does not affect the Americans so much ; they get the advantage of it at once ; the advantage

to the Canadians from the American fishing vessels going through the canal would be in the tolls collected ; I think that the fishermen in the Bay of Fundy would come through the canal and fish in the Gulf ; if the canal was built, the American vessels that follow Hali-but fishing would take their bait in the Bay of Fundy, and go through the canal to their fishing grounds ; they use herring for bait, and they are very plentiful in the Bay of Fundy ; the canal is certain to induce trade, in the same way as railways do ; it will break down barriers, and cheapen rates of insurance ; one can scarcely estimate the change that free trade would make ; I have not the statistics of the number of tons of fishing vessels from the United States in the Gulf ; the number of vessels has been much increased the last four or five years ; the average for the last 10 years would, I think, be under 500 vessels ; it would certainly not be 1,000 ; they still average 75 tons ; the number formerly was much in excess of that now, for of late years they have fished on their own coasts ; since the difficulties with the Canadian Government, they have not come here so much ; I do not think that 25 cents a ton would deter them from going through the canal, nor would the tugging ; there is now not one vessel in ten of those entering the port of Boston but that takes a tug ; there are not less than forty tugs in Boston harbour ; I think that tug boats would be indispensable in the Bay of Fundy ; the expense of moving vessels by tugs is not so great as hauling them ; I think that the rate of insurance would be lessened one third by the canal ; the rate to Boston, to-day, is two per cent by Canso, in the fall it is 3 to 3½ ; I think it would not be more than two-thirds, if over the half, by the canal ; about one-third the distance is saved ; I have been about 18 years in the fishing trade with the United States. By going through Canso you have to make easterly and westerly in order to get to any port to the west of Porto Rico ; St. Thomas is not a port for landing at, it is a port of call for information, and to look for freights with empty vessels ; it is merely a free port where vessels go to find freights ; I have had considerable experience in the West India business ; I do not know that there would be much trade from the south coast of Newfoundland through the canal ; it would be as near by Canso, and Canso would be as near from Cape Breton ; this island, the north shore of

New Brunswick and Canada East, with their fisheries and lumber, would be benefitted; the distance to the West Indies would be shortened, and rendered more safe for everything that comes out of the St. Lawrence; I know that from Montreal to Portland goods go by rail, and thence by steamer to St. John. Up to a short period the cheapest way by far to send goods was by water; but now there are certain articles which go cheaper by rail; goods of large value, and where insurance is high and time is an object, sometimes go cheaper by rail, but cheap goods go best by vessel; flour would, I think, come cheaper by water; we get flour from Montreal here for about 40 cents, that is about the average; it has sometimes run down to 15 cents under competition; there would not be a great saving on flour from Montreal to St. John by the canal, perhaps from 5 to 10 cents per barrel; I do not know what the tolls would be, and cannot, therefore, tell whether that difference would be made up by the tolls; if it was all to depend upon flour, I would say let the canal alone, though flour is a large item, and it is an object to get it at the least possible price; there would not be enough saving on the freight of flour to justify the canal. The lumber interests of North New Brunswick would be benefitted; if the canal was open all their lumber would move through there; I think that flour would go both ways; the gain in time by Portland would be 4 or 5 days, and that is an item as regards interest; insurance would also be saved by that route; the deeper the canal could be made the better; it would require to be at least 14 feet to meet the requirements of the trade; the greater part of the vessels draw from 9 to 12 feet, and some more than that; fishing vessels require from 8 to 12 feet; the most of them draw from 9 to 11 feet; a 15 foot canal would meet the requirements of the business; if the canal were built it would create a certain kind of business, and a certain kind of vessels that we have not now; I agree with the ideas of Dickie and Black, as expressed by them before the Canal Commissioners, so much of the value of the canal depends upon free trade with the United States, that it is hardly possible to separate the two; we are sure to have free trade, it is only a question of time; the American Government has been under adverse circumstances for some years; the Democratic party are as much mixed on that

question of free trade as the other party; Pennsylvania is the hardest foe we have to contend with; the difficulties regarding revenue are most in our way; the idea of a zollverein is a good one; we will have to have free trade or a zollverein; the necessities of the case are so great that it must come; I think that a zollverein would be better than a treaty, and annexation better than either; I am a citizen of the United States.

SUMMERSIDE.

HON. JOHN LEFURGEY, M.E.C. : I am in business here—in shipping principally; I have never been master of a vessel; I have been at sea a little; I am a little delicate in giving an opinion where so large a sum of money is involved; I know the ground very well where the canal is intended to go through; I have been over it this summer; I have thought a little about the advantages that it would be to the Island, but whether they would justify so large an expenditure I do not know; I rather think that the most of the business men of the Lower Provinces are in favor of it; our exports are principally agricultural; we would send oats to the United States perhaps if the canal were built; we have to pay 10 cents duty on them in the United States; there are certain ports that we could even ship to now; we send the principal part of our oats to England; a good deal of our grain goes to St. John, and water communication is cheaper than by rail; it is not my idea that the canal, if built, would be self-sustaining; we have to take into consideration, if we are part of the Dominion, what Public Works we are to get; we want to have some advantages; it has to be considered whether we, as part of the tax payers of the Dominion, should tax the rest of the Dominion for this canal; I do not suppose that the canal dues would be more than those now levied in Canada, though perhaps the canal would not have much to do; a 60 ton vessel would, at 25 cents, pay 15 dollars, and such a vessel would carry 4,000 or 5,000 bushels of oats; we pay 2½ cents on oats to Shediac, and almost 5 cents by rail to St. John, or about 7½ cents in all; I think all our fish would be shipped that way; a good many of our fish go by steamer from Charlottetown—that is American fish; it is their policy I suppose to keep their vessels as long as pos-

sible on the ground ; some of the vessels might find it convenient to ship by steamer as now, but many would go through the canal ; when they are going home they would go through ; I can hardly say whether there is local trade enough to warrant the expenditure of so large a sum of money ; the advantages of the canal could not be very well estimated till it was opened ; we generally find that canals and railways, after they are opened, give more advantages than are anticipated at first ; all improvements are the same ; I think the canal would be a very great advantage to the Lower Provinces and to the Gulf ; it is generally found advantageous to avail ourselves of every means of saving time, for time is money ; large ships could not go through it if it is only 15 feet deep ; fishing vessels from the Magdalen Islands would not go up to the canal to go home ; I know more of this side than of the other.

There would, under a Treaty, be a market opened for our potatoes in the United States ; we can send them and pay duty now, but the distance is considerable by the present route, and the risk of their spoiling is very great.

JOHN R. CALHOUN, Esq. :—I am a merchant here ; I should be strongly in favor of seeing the canal built ; I am well acquainted with the Bay of Fundy ; I was brought up near its head, and lived there most of my life ; no fog comes up there at all ; fogs do not come within 20 miles of that part to interfere with navigation ; they are nearer St. John—about 30 or 40 miles above that city ; I think that the trade of the Island would be benefitted by the canal ; it was one of the inducements that I had to vote for Confederation ; it was held out as almost a certainty that it would be built ; I think it would be of advantage to the whole Dominion, but I speak more of the local advantage, which is all that can be expected of us here ; I am not aware of the number of tons that would pass through it ; here, at Summerside, there is quite a large grain trade with St. John ; if there was a Treaty we would do a very large trade with the United States, both in potatoes and grain ; the business of the canal would be a good deal enhanced by a Treaty ; I am not aware of the distance that would be saved by the canal ; both distance,

time and risk would be saved; even with the delay in the canal a vessel would probably go through to the Bay of Fundy when she could have reached Canso, using the present route, and then she would be much nearer her destination by the canal route; I am not much acquainted with the fishing trade; I would think that, with the canal, these vessels could get two or three cargoes, but a small proportion of the fish taken by American vessels is shipped home by steamers; none are from Summerside; I should think that there would be no chance to do anything with the South coast of Newfoundland, nor with the Magdalen Islands; until we have a Reciprocity Treaty with the United States there is very little chance to do anything large with the United States; if we had a Treaty with the States our oats would go there; it would open a large market; now our oats trade is thrown into the hands of the large dealers; if we had a Treaty with the United States smaller men could go into it, and do the business direct with the United States.

ROBT. T. HOLMAN, Esq.:—I am largely engaged in business; I do not know that I can offer much information upon this matter; I have always thought the building of the canal something that would not take place in my day, and I have never given it much consideration; I cannot see clearly the usefulness of it to us here; I have always looked upon it as one of those political moves which are often got up to strengthen political feeling, and to open up a field for political speculation; like all public undertakings, it will cost more than the estimates—probably \$12,000,000 instead of \$8,000,000; the fact is I have really heard very little upon the matter; I would like to understand what benefit it is to be to the island; our trade with the United States is large and likely to increase; but I would like to know whether a short cut through the Bay of Fundy during the dangerous season of the year when our exports are made, is likely to be worth much. It is certainly more dangerous through the Bay of Fundy than outside, on account of the fogs and not having more sea room; we do very little exporting during fine weather; our trade comes in a heap at the close of navigation; our anxiety is

to get our vessels out and clear of land, where there is least danger ; probably I have made up my mind without sufficient consideration ; but I could not be induced to advocate a thing which I was convinced was not right ; I have heard no arguments in favor of such a canal. A treaty is essential to any large trade with the United States,—in coal, oats, potatoes and everything else ; I speak only as the matter presents itself to me now ; I do not believe that it would benefit this island, because I do not believe it would be generally patronized.

ANGUS McMILLAN, ESQ. :—I do not know what to say upon the matter, for I have hardly given it thought ; I do business in ship-building—mostly with England ; have always thought the canal a short cut ; the passage through the cut is a pretty dangerous one in the fall of the year ; I do not know that it is more dangerous in the Bay of Fundy ; when we send a vessel to England we are more anxious to get her clear of the Gut, than all the rest of the passage ; after a vessel is past the Gut she has plenty of sea room ; I think it would be far shorter from the Magdalen Islands by the canal than by the Gut ; a large number of American vessels go round the north cape of this island when going home in the fall ; I have sometimes seen 400 of them going round ; when there is a north-east storm they go that way ; I would say that the vessels that want to remain here all summer could get their fish sent home by the canal and procure salt for their second trip, instead of going home ; they could send home by steamers ; I suppose there would be small steamers running through the canal ; it would be a small steamer that would only draw 12 feet. Freight is less by large steamers, where there is sufficient trade, than by small ones ; it is pretty hard to say until the canal is opened how much trade there would be ; canals almost always draw trade, so do railways ; I do not see that there would be any great benefit to us in Summerside ; I do not think that it would freeze earlier than elsewhere ; I do not look so much to the expenditure of the money, for it only changes hands in a manner ; it goes from the Government to the people, and the people are the Government ; I look upon the canal as a piece of road, going

through a country ; I have never paid much attention to the matter ; I have always thought it of more benefit to the other Provinces.

DAVID ROGERS, Esq. :—I am in business here—general business ; my knowledge of this matter is very limited ; I have considered it very little ; I believe that it would be a very great benefit to the shipping trade of this island. The fishing vessels leave their cargoes here, and ship by steamer, because the distance is so great ; if they could save so much distance by the canal, it would be a great inducement to go home ; they have some fogs to contend with from the Gut as well as from the Bay of Fundy ; I believe that the canal would bear the same relation to the Gut as the Gut now does to the course round Cape Breton ; we can get very few vessels to go round the north of Cape Breton, if they can get through the Gut ; the saving of 200 miles would be a very great inducement ; the grain trade of the island with St. John, is large at some seasons ; the cost of getting it there by the canal would be very much less than now ; it now costs about $7\frac{1}{2}$ cents ; I would ship by the route that was cheapest ; I cannot tell what the charges in the canal would be ; it is an established fact that water carriage is cheaper than land carriage ; I cannot say how much would be saved by the canal ; there would be no re-shipment as now at Shédiac ; the canal would be of benefit in getting vessels out of the gulf in the fall of the year ; the great objections of underwriters are to the difficulty of getting outside the Gut, when outside they are considered out of danger ; the rates of insurance are less when once clear of the Gut ; the canal would enable a vessel to get out twelve hours sooner ; $2\frac{1}{2}$ cents to Shédiac is a low freight.

ROBERT T. HOLMAN, Esq. :—I ship considerable grain to St. John, and I would prefer the other way, for the matter of insurance is reduced by way of Shédiac ; it is a matter of four or five hours, and you are safe ; when there is more shipping done there, and more danger of wrecks, the same restrictions will be placed upon it that are now placed upon the Gut ; and it is a matter of only two months work through the canal ; the shipping of produce lasts only through October and November, or a very little longer.

DAVID ROGERS, Esq.:—It is my opinion that the canal would benefit this country very much ; the distance saved would be a great advantage to the United States trade ; if we had a treaty the trade would be very large ; even now the lumber and the stone trade would be diverted through it ; we should count on the saving of time and distance ; trade would be diverted into it that we have very little idea of now ; no trade would come from the south coast of Newfoundland ; have had no experience in the navigation of the Bay of Fundy.

RICHARD HUNT, Esq.:—I am in general business here ; am engaged in fishing also ; I have not given the subject of the canal that consideration which would give my opinion a great deal of importance ; I have had a general idea that the canal would be of advantage, without going into figures to show the why and the wherefore ; I think that if the canal were opened, and the tolls were not too high, that a great deal of trade with the United States and St. John would pass through it ; we cannot have much trade with the United States without reciprocity ; our fish will go there, as they do now ; I think that American vessels would go home on their first trip that way ; the last trip they would probably go round ; a good many land their fish, but not a large proportion of the whole ; others make their trips home direct ; the great body of them fish within sight of the island ; there are not so many there this year as last ; we would not build the canal for the Americans, I suppose, but for ourselves ; I think there is very little doubt that the canal would be of advantage to the Americans ; the United States is the best market for our root crops ; we cannot send them there now ; if we had a treaty a large proportion of our root crops would go to the United States ; coal would also go there ; the United States is a good market for oats and barley, if we had no duty to pay we are now forced to send oats to England ; we have some West India trade ; we send fish and hay and grain and butter and pork and some sheep and horses.

JAMES L. HOLMAN, Esq.:—I am not now in business ; have only one vessel afloat ; I have not given this matter much consideration ; I have always been impressed favorably by the *Shédiac*,

route; I have always thought that the canal would be of great benefit to the Island wherever it was put through; the principal benefit would be in shipping to the United States, but not to St. John; I would prefer to send by rail; there is no risk, and it is rapid; we never think of insuring; it always reaches in a day or two; it might be detained in the canal; the great benefit would be in shortening the distance to Boston; it would cost an immense amount of money; people generally take the shortest route in going anywhere, if the risk is no greater; in the Bay of Fundy you have not the sea room that you have after you get through the Gut; I have no doubt that the route by Canso is the safest, though there is a good deal of fog there too.

FINLAY MACNEILL, Esq.:—I cannot go into statistics, but I think that the canal would be of great benefit to the Island; no part of the Dominion would receive so much benefit; the Island is capable of producing ten thousand times more than it does now; our principal grain is oats; we can send oats now only to England in any large quantities; a few go to St. John; if the duty were taken off it would be different; it is very hard to say how soon the duty may be taken off; without reciprocity it does not pay to send oats to the United States; I would not be altogether in favor of building a canal depending entirely upon the prospect of a treaty; we often send potatoes to St. John, but our market for potatoes is pretty much in the United States, and there the duty meets us; eggs can be shipped by railway, and round by steamer; every vessel that would pass through would pay tolls I suppose; take it on the whole it is, as it were, drawing this Island half way to Boston; the duties may be taken off next year; the expense of building the canal would be, of course, immense, but taken on the whole it would be a benefit to the Island; there will always be strong opposition to every public work; our railroad and the railroad from Shediac met with strong opposition; the people in Cape Breton and in the east part of Nova Scotia oppose the canal, because it will draw trade away from them; they want all the shipping to go through Canso; I have no local knowledge of the Bay of Fundy; can give no opinion regarding its navigation; perhaps the waters of the Bay of Fundy mixing with the Baie Verte might keep the harbours open a week longer.

HON. JAMES C. POPE, M. P. P.:—I am a merchant and a ship-owner; I am a great believer in everything in the way of improvements; I introduced the railway here and the general impression was that there would be nothing for it to do, and it now far exceeds the expectation of the most sanguine; I am strongly of opinion that the proposed canal would be of great advantage to the Island; it would shorten the distance to the United States very much, and thereby cheapen the transport of our goods, and enable us—more particularly from the west end of the Island—to send fresh fish, which is our great product in the summer season, almost every day to Boston; it is our best market; if we had a Reciprocity Treaty there would be still more advantages; the saving in distance to Boston is about 200 miles; it would take about 5½ hours to go through the canal, and the delay at each end would only be a possible delay and might not occur at all; fish could be sent in ice daily and a great trade would arise; down at the east end of the island they are as near the States as by the other way; if we had Reciprocity everything that could be raised from the ground or taken from the fisheries would go to the United States by way of the canal; it is our natural market; we can send now by rail, but I would prefer to send by canal, because goods are knocked about so by rail; eggs are a large item, a great many of them get knocked about and broken by rail; we cannot send oats now to the United States; it costs 7 cents to take oats to St. John; by the canal the trouble and expense of transshipment would be saved; I would not advise the Dominion Government to build the canal upon the strength of a Reciprocity Treaty, but I think it is due to the Maritime Provinces that it should be built; there is a large expenditure for canals in Canada where they do not pay; I am not prepared to say that the proposed canal would pay directly; under the Treaty the trade might be sufficient to make it pay, not otherwise; my experience in the fisheries are limited; I do not know the trade from the south coast of Newfoundland; the Americans commence fishing down to the east end of the Island and all along the north shore to the North Cape and West Cape; their present practice is to take the fish home in their vessels; one of the advantages of the canal would be that they could send their

fish come and remain on the ground fishing ; some ship their fish in Charlottetown and Canso ; I would go for giving the shortest and cheapest method of carrying goods to market, it makes trade for itself ; I do not see how any of our people in the Maritime Provinces should object to the only canal that is proposed to be built ; we should have our share of the advantages from the large expenditure for canals and improvements generally, but still I have in view what is best for the general good, what is for the advantage of the Maritime Provinces would be for the advantage of the whole Dominion ; I would like to see it built in the interest of the country ; I do not go for Public Works being simply to get a share of the money. South-west winds are the prevailing winds, and it is a dead beat down from Canso ; you would be further to the windward in the Bay of Fundy and you would save those 200 miles, which is a long beat.

HON. WILLIAM RICHARDS:—I am a general merchant and ship owner ; I do not know that I am in favor of the project of the canal, but if we had it, we would have facilities given to the trade of the country which we have not now ; I know it would not pay—that I do not look at so much, if it would be a benefit to the country ; but whether enough to compensate for the cost is the question ; I am not so much in favor of it considering the cost ; when there are facilities people will use them ; it is difficult navigation on the other side ; I do not think it would be so much used as a great many think ; the difference of distance is a consideration in its favor—but the tolls and the delay and the short time of the year during which it could be used, are against it ; for a great part of the year the canal would be frozen up ; if we had reciprocity the question would be different ; at present we have not very much trade with the United States ; under reciprocity we would have a large trade from all parts of the island ; our exports to St. John go by the railway from Shédiac ; the navigation is not by any means safe from the entrance to the canal on the other side through the Bay of Fundy ; I have been there, and I know the position of the land ; I think some vessels would not take advantage of it, some would ; the Bay of Fundy is not very safe navigation, for it is sub-

ject to fogs and to strong currents; people accustomed to it do not mind it, but to a stranger it is different; in the summer time I have no doubt it would be availed of, but many from the east would not go there unless they were met by contrary winds and had to go there; there would be delay in the basins and locks; Baie Verte is safe, but is a long shoal bay, and a great deal of expense would be necessary to make it suitable for large vessels; there is a long flat covered with water; there would be difficulty on that account; no doubt if we had reciprocity with the United States, the whole aspect of the matter would change. The route by Shédiac is very direct, but it is expensive; if there was a heavy carrying trade in goods, that could not be well transported by rail, the other way by the canal would be cheaper; for light articles the rail is the cheapest way. I am a practical navigator; I understand the management of ships; I know the places I have spoken of very well; at present I think a great many of the American fishing vessels take their fish home themselves; I think they would take the shortest route; those belonging to the island send by steamers. I am in doubt which route the American vessels would take; their only object in taking the canal would be the saving of time and distance; they would save 200 miles; the winds would be the same in both cases, pretty nearly; they are not far apart; they would have the advantage of tugging in Fundy; with a north east wind they would have clear navigation and would save the 200 miles also; but then on the outside route a north east wind would be a fair wind; the canal would be used by a great many, and a great many would not use it; there are a great many advantages which I cannot now explain, but which would come out of it; many people would avail themselves of it when the wind, or other circumstances, favored their going through it; there is no chance of any trade from the south coast of Newfoundland unless vessels are driven by adverse winds; in the fall of the year, probably, many would avail themselves of it, rather than go round outside; in bad weather they would have the advantage of a harbor.

ALBERTON.

HON. HERBERT BELL, President Legislative Council:—I am a general merchant; the question is whether the canal would be of sufficient commercial utility to justify the expenditure of so large a sum of money; I would like to see the canal built; but, at the same time, it is a very large sum of money, and we would have to pay our quota; the question is “will it pay, or anything like it, either in money value or advantages;” the only thing that operates against my going for it, is that we can get no advantage from it in winter; if we had a Reciprocity Treaty with the United States it would put a different feature upon it altogether; I am not in a position to judge accurately whether it would be of advantage or not; it would depend upon the action of the Dominion with the United States; if there was a treaty with the United States, there would be a great deal of trade with the United States, and it would pass through the canal and swell the receipts; at the same time the building of the canal would be a great benefit to the people of the Lower Provinces, it is only a question of time in my mind that is its building, and we want some improvements in our Island too; there are places here where it is not two miles from deep water to deep water; I should like very well to see the work go on if there is any prospect of its paying; the people of the Island are as public-spirited as their neighbors, and would bear their share of the expense, if they see that it will be of advantage; if there is any prospect of reciprocity with the United States, I would say build the canal; if there is no prospect it is a question with me if I would vote for it.

HON. RICHARD B. REID, M.L.C.—If I should not be considered selfish, I would say that the canal would benefit my constituents more than any others, because we are near to it; we have been looking for a steamer to Cascumpec for some time back; the great danger is in going round North Cape; this is why we have not had it; if the canal were built, and a breakwater were erected at Brae Harbour, which I believe has been reported upon favorably, and a small canal were built through to this harbour, which would not be more than one mile long, it would increase our trade to a great extent; a great number of fishermen come here to fish; they come round by Canso, which is a long

route; I believe we would have a great many more if they had a short route; I believe that they would help the canal; the opening of the canal would create a larger trade than now exists; we look forward to a Treaty in the future; under the present duties we cannot send produce to the United States; the facilities afforded to the United States fishermen by the canal, would be a very large offset to anything that the Americans might ask in making a new treaty; it would have the effect of inducing them; I would not construct it for that alone; there are other considerations beside; I have talked with American fishermen about the dangers of the Canso course; it is not always that they can get through there; sometimes they are detained there several days; I have been detained there two days, and quite a number of vessels were there waiting for a change of wind; the canal is a matter that I individually have very little knowledge of; I would not like to give an opinion too decidedly; if there is a prospect of reciprocity, I would go in favor of it.

NEW BRUNSWICK.

DALHOUSIE

HON. WILLIAM HAMILTON, M.L.C., Dalhousie.

I have been in business (general fishing) in this place for many years, am aware of proposed Baie Verte Canal; since the time it was projected, there is considerable business transacted between this and St. John; it goes by Shédiac and from thence to St. John by railroad; there is scarcely any trade to St. John by present water route, but a trade might arise from construction of a canal; the trade with the United States would be benefited, and is the only one that would be benefited by its construction; the principle trade is with England, in deals and square timber; but the trade in timber, shingles, shooks and hoops is with the United States and the West Indies; this trade with the latter is increasing, some six vessels have been cleared this season for the West Indies, and although nothing of importance has as yet been done with South America, there is every prospect of its increasing, but as far as our interest is concerned, no benefit for such trade would be derived from a canal, or to warrant an expenditure of public monies of \$8,000,000, for

the trade from Dalhousie and the Gulf Ports to the United States, a great benefit would be derived by a canal, on account of safety afforded vessels; I think the navigation of Bay of Fundy safer than by the Gut of Canso, and think the insurance would be much less; I do not think the canal would pay from tonnage any amount of tolls equal to amount of interest on outlay.

I do not offer my opinion in regard to dangers of navigation in Bay of Fundy, not having any personal experience on the subject. The trade with the United States is largely dependent on duties being removed from our lumber. If removed, our business would be increased. I think Reciprocity would as soon be brought about with the United States without, as with, the construction of a canal. Only a small portion of our lumber go to the United States, as I have already above stated. The vessels employed in this trade would be from 100 to 120 tons. I have always been under the belief that, with a tide of 48 feet in the Bay of Fundy, and of 6 or 8 feet in the Strait, the building of a canal would present great difficulties. There is no trade now in lumber between the Gulf Ports and the ports on the Bay of Fundy. I do not think our trade here would derive more benefit by using the Intercolonial Railroad instead of the Canal.

GEORGE HADDON, Dalhousie:—Have not given the matter sufficient consideration to warrant giving an opinion; would have to confer with steam ship agents as to amount of freight, &c., with St. John, New Brunswick; from what I can see I believe the building of a canal would benefit our trade, but the building of a branch line railroad, and suitable wharf, would benefit it far more. I am not acquainted with the West India trade; the trade with the United States is not large at present; I have no knowledge of navigation, nor am I acquainted with shipping; if the tolls were put on the canal which would make the cost of freight equal to the cost at present, there would be no advantage derived from its construction; I am in general business, and more particularly in canned fish.

JOHN PHILLIPS, M.P.P.:—Have lived here about 40 years, although not engaged in lumber business, yet I have given considerable attention to the subject of proposed canal. Although the distance from Dalhousie to St. John would be shortened 340 miles and to Boston 155 as shown in map, by way of proposed canal, compared with the present route by Gut of Canso, yet if tolls were charged for passing through, this with the slower time would lessen its advantages. At present there is scarcely any through trade with the

United States, neither is there any to the Ports of Bay of Fundy. It is now carried on to Shédiac by water and from thence by railroad to St. John. I have examined the map shewn me of the different routes to the West Indies, and find the difference to St. Thomas by the route through Canso would be nearly equal to that by the proposed canal.

Should the Government of the United States see fit to pass a Reciprocity Treaty similar to the one that formerly existed, and thus secure a free trade between United States, I have no doubt trade would assume proportions far beyond anything in the past; but until that time comes about, the increase must be small.

I consider that if \$8,000,000 were expended in improving Harbours, building Branch Railroads, and other works of general advantage, it would be of more benefit than a canal. I also believe that such a canal would act as a rival to the railroad. Take for instance this important Port: the railroad station is nearly 7 miles distant, and it is highly important that such Ports as this one should have direct communication with the Intercolonial Railway. I think it also well to say that this Port is open a month later in the fall than any other between this and Quebec. It is well sheltered, and the whole of the British fleet might enter it in safety.

BATHURST.

R. F. BURNS, M.P.P.:—Have done general business here for 13 years, and am well acquainted with the trade; no vessels sail direct from here to St. John, New Brunswick; the present route of exports to that place is by way of Shédiac by railroad; in the exports to the West Indies from this place, we occasionally send by Shédiac, but the greater part is by sea through the Gut of Canso; the imports from the United States are brought by sea through the Gut of Canso; light goods are occasionally brought per railroad to Shédiac.

The greater part of flour and pork used here, which is considerable, is brought principally from Quebec and Montreal by vessels, and occasionally by steamer from the former place; we also import those articles occasionally from the United States, as prices suit.

The freight on flour from Quebec, in vessels, varies from 35 cents to 70 cents per barrel, according to season; in some instances it went up to 90 cents. The rate of insurance from Quebec by sailing vessels varies from 1 per cent. to 5 per cent., and by steamer from $1\frac{1}{4}$ to $1\frac{1}{2}$ per cent. The through rate of freight from St. John to this place varies from 22 to 50 cents per 100 lbs.; the 22 cents is only on sugar and molasses; the rate of freight from here to Shédiac will vary from 30 to 50 cents per barrel.

These figures are for through rates, when steamers and packets may be running in connection with the railroad, but as happens at present there is no such connection; sailing vessels have to be employed at rates from 30 to 50 cents per barrel, as above stated; on freight from St. John to Bathurst, the usual proportion of through freight is 53 per cent. to the vessel, and the remaining 47 per cent. to the railroad. When the Intercolonial Railroad is completed the great bulk of imports will be brought over it from St. John, New Brunswick. There is no trade from here to the West Indies and South America. In reference to the Baie Verte Canal, I am of opinion it would be advantageous to the northern portion of New Brunswick, by the saving of distance compared with the present route. The canal would increase the business of this place even without reciprocity, but if the latter were attained there would be a great increase. The principal exports through such canal to the United States would consist of shingles, lumber of every description and grindstones, also of fish and farm produce. It would also give us an opportunity to trade more with St. John and other places on the Bay of Fundy. I am not a seaman, nor have I any knowledge of navigation, and therefore cannot speak as to the merits of the Gut of Canso as compared with the proposed canal; I am, however, aware that in some years the Gut of Canso is impeded by ice from the north. I think the rate of freight to the United States would be less by the canal than by the present route, owing to the shortening of distance and lessening of risk. In the statement of vessels outwards at this port, in trade returns for 1874, there is altogether 27 vessels, measuring 7,124 tons, of which 17 went to the United States, and these were mostly laden with grindstones, with a little fish.

HON. JOHN FERGUSON, Senator.—I am acquainted with the trade of this place, having been connected extensively with it for several years. I am also acquainted with the general trade of the Maritime Provinces. As to the commercial advantages of the Baie Verte Canal, I have to say that if the construction of it could have been made at a moderate price, say \$1,500,000, or even \$2,000,000, I would have been in favor of it; but, as the last survey and report of Mr. Page, C. E., Department of Public Works, makes it certain that it will at least cost \$8,000,000, I do not think that the advantages to the commerce of these provinces or to the country would warrant the expenditure of such a large amount. There is no doubt that the trade of these provinces would be greatly increased by a free trade with the United States; but even with such free trade, I would still doubt the propriety of undertaking such an extensive work as the one proposed.

JOHN E. O'BRIEN, merchant, Bathurst:—I have been for many years in business here, both as shipbui'der and general merchant. As to my opinion about the proposed Baie Verte Canal, to connect Baie Verte with the Bay of Fundy. I have to say that the construction of a railroad connecting those straits with St. John and the United States has largely met the desires of the people of this province who have since 1825 desired some such improvement.

The present railroad, which will soon be finished, will still further aid the facilities existing to and from Shédiac. I would be in favor of all improvements tending to cheapen the transport from one place to another, whether in the United States or in the Dominion, and I would be also in favor of constructing the canal in question if it could be done at a moderate cost, say from \$1,000,000, but in my opinion it would not be wise to expend on such work so large a sum as \$8,000,000, especially, as I have already stated, we will soon have railroad facilities, either to the Bay of Fundy, the United States, Montreal, Quebec, and Ontario. We have no commerce here with the West Indies nor with South America. No vessels sail direct from here to St. John. Our trade is principally with England, the United States, and the Upper Provinces. Our shipment to the United States consists of grindstones and some fish, but the trade with the United States would be largely increased if the duties were removed from our natural products. I am, as already stated opposed to the building of a canal at a cost of \$8,000,000, for this sum, at 5 per cent., would be an interest of \$400,000 per annum, and, with my experience, I doubt if sufficient tonnage and tolls could be obtained to meet even a moderate part of this amount. The necessity of a canal which formerly existed to communicate between the Bay of Fundy and the Baie Verte, has been largely met by the railroad.

NEWCASTLE.

R. R. COLL, Shipping and General Merchant, also Pilot Commissioner:—New Castle has no trade with the West Indies. All West India produce is purchased at Halifax or St. John. The market is ideals to the Old Country, except a very small trade with the United States in small lumber, fish and stone.

With the Canal and Reciprocity our country along the Gulf would be second to none in the Dominion.

The supply of small lumber that could be furnished is very great with our better and cheaper facilities for getting it out, had we the canal we would be on as good footing in the United States market as in St. John.

The canal would stimulate the Gulf Fisheries, and as fish is free of duty,

we should be able to prosecute them. Captains and owners of vessels have great reluctance to voyage to United States by Canso. We bought, at St. John steamer "Andover"; had to bring her round Cape Sable and through the Gut, and were unable to affect any insurance on her. Had the canal existed, we should have brought her through it, and save at least \$500. I think a canal of less depth than 16 feet would answer for years. If made of the intended depth of the St. Lawrence canals, will be ample for all vessels that would desire to use it.

Vessels at Miramichi, getting offer of freight at St. John, in ballast, could go through it and vice-versá.

I will prepare a table of draught of vessels, in ballast, from papers I have as Pilot Commissioner, from which you will see the tonnage of vessels that could use it. Vessels like ones referred to, would have no trade *via* canal.

Reports made in accordance with Section VIII of the Pilotage Regulations for the Port of Miramichi, in May and June, 1875.

Name of Vessel.	Tonnage.	Nationality.	Where from.	Draught.
Alma	541	Norwegian	Christiana	10½
Arethusa	341	British	Belfast	9
Maris	627	Norwegian	Sovn Norway	12'
Uller.....	542 ⁶⁷ / ₁₀₀	"	Arundel	11'
Nor.....	456	"	Cardiff	10'
Eldorado	224	British	Belfast	9'

ALLAN RITCHIE, Merchant and Shipowner, of Newcastle:—With a canal, a market for small lumber could be found in United States; at present we have only one market, viz.: England, and cannot sell small lumber there. The supply of logs for that description of stuff would be found almost inexhaustible on our rivers and tributaries.

We have a very fine quality of free stone, its best market is the United States, the voyage *via* Canso is a great drawback to the prosecution of it.

The canal would greatly help that business; in looking through our books I find our vessels could all go in ballast through the canal if it was of depth of proposed enlargement of St. Lawrence canals, a vessel from Bay of Fundy

Ports for Gulf Ports, could do with less ballast than in crossing ocean; canal would be frequently used by charterers in Gulf Ports and St. John.

HON. EDWARD WILLISTON, one of the Judges of the County Courts:—Most favourably impressed with the value of the canal to the Northern section of New Brunswick; although never engaged in business, yet having for years been a member of the Local Legislature, I have a general knowledge of the requirements of the country.

F. C. WINSLOW, Banker, Newcastle, says:—The northern coasts abound with fish; in Gloucester there are valuable quarries of free stone. Two are extensively worked on Baie des Chaleurs. With exception of wheat we can produce cereals per acre equal to Ontario, and could compete in any market accessible to us with the rest of the world.

The canal would shorten the distance and consequently decrease the price of freight is certain. With the cheaper freight through the canal we could, even with the United States duties, follow a profitable business in the small lumber that is now wasted in the manufacture of deals. Our forests of cedar and hemlock are boundless, and shingles, boards and small lumber would, in the event of opening the canal, prove valuable exports. During the present season it is only through the low freights that mill owners have been able to prosecute the deal trade. At present the trade of the northern ports is largely with England in large vessels. The completion of the canal would largely employ smaller vessels, for this reason owners of large class tonnage may be either indifferent or opposed to the proposed canal. It will unquestionably open up a new trade in the wood; small vessels difficult to get for Canada route to States.

CHATHAM.

J. B. SNOWBALL, Merchant and Ship Owner, Chatham:—At present not prepared to say what interests would be benefitted from the construction of Baie Verte canal.

Eventually, to some, no doubt it would be a great benefit. A canal of material reduction in size, in depth and breadth, would answer, not only for present, but prospective business. I decidedly recommend that the bottom be narrower in proportion of ten feet in sixty at water level), a few sidings could be built in canal if necessary.

HON. WILLIAM MUIRHEAD, Senator, Merchant, Mill and Ship Owner:—Canal would facilitate increase of trade between Chatham and other

points north with St. John and the United States. It would bring about a new trade in small lumber now wasted for want of a market. The voyage *vid* Canso is too long to be remunerative to us; by canal, expense of insurance would be lessened, freight would be cheapened and time saved. Voyage around a dangerous coast would be avoided and importers from the United States and St. John would be saved disappointments they are now often subjected to.

American vessels coming here, through canal, could be obtained at less freight rates to Great Britain than if they came round United States coast; this would increase our import and export trade with United States one-half; as we have been promised the canal, we are entitled to it, same as West is entitled to similar improvements.

A canal of less dimensions than that proposed might serve the general trade that would offer, say 12 or 13 feet deep, and (60) sixty feet wide.

D. E. SMITH, Editor of Chatham Advocate:—The proposed canal could not fail to be of great local value, so far as the trade of the north shore with the United States and St. John is concerned, as it would develop new industries, and foster and enlarge those already in existence. Our fisheries, especially the business in ice and fresh fish, would be very materially benefited; small lumber, the raw material for which is now burned at some expense to the operators, would be extensively manufactured at the mills already in existence, and portions of our forest, already culled for the larger lumber, would be enhanced in value, as trees, now useless, would be made available. We have sandstone quarries, which produce a first class marketable article for building, which would be made available.

The route to St. John, being shortened by nearly 400 miles, would attract coasting steamers, and these with our coming railway facilities, would tend to increase existing industries, and open new ones which can hardly be foreseen at present.

It seems that a canal somewhat smaller than the one generally contemplated would suit the trade of the Province, besides costing much less, being sooner built and more easily maintained.

HON. WILLIAM KELLY, M.P.P., Commissioner of Public Works:—Am of opinion that a moderate sized canal would be of great advantage in fostering and increasing our trade in small lumber, fish, stone, and other industries, now only partially developed. We are now kept out of some paying markets for the above fact, that we are obliged to go around the United States coast to reach them; this would be available by the canal, and the sooner we get it the better.

M. SARGENT, Mill Owner; Chatham:— With Baie Verte Canal, fallen pine now useless, and unmerchantable forests of cedar, might be made available. Building stone and grindstones, equal to any in the Dominion, might and would be profitably exported. Distance and risk decreased, could not fail to promote trade (if tolls not too high) with the canals. Our hemlock lumber would be made available—increased facilities would operate beneficially in some way in promoting our export of fish. The products of the soil must necessarily be increased and benefited.

GEORGE BENCHILL, Mill Owner, Chatham, Northumberland:— Thinks, by shortening water carriage, trade in small sawed lumber, shingles, pine and spruce to Boston and West Indies would be promoted and benefited. The country is rapidly growing and the canal is one of the necessities of the age; our hemlock lumber, our fish and anything we have to sell, had we cheaper water communication, would be produced in greater quantities and the canal would possibly open up other branches of Commerce. At present our isolated position makes freight by water a material object against the general business of shipping and other heavy freight business.

ST. JOHN.

AMMI ANDERSON, of Sackville:—I am a Ship Builder and owner; I sail my ships to Britain, South America, and the West Indies, or wherever I can get satisfactory freights; I have been at sea, and understand navigation, and am acquainted with the navigation of the Bay of Fundy and with that of the Maritime Provinces:

I do not think there would be any great trade for the proposed canal, and I very much doubt if such a sum as \$8,000,000 should be spent on such a work now; I doubt that, altho' distance would be saved from the northern ports of New Brunswick, Prince Edwards' Island, and the St. Lawrence to St. John, vessels would come through it and whether return freights could be got in the Bay of Fundy. Besides, the railway from Shediac does a large business, and takes freight very low from the St. Lawrence and Prince Edwards' Island.

South and S.W. winds prevail in the summer months in the Bay of Fundy, and these winds, as a general rule, bring fogs; these winds are fair up the Bay of Fundy to the mouth of the proposed canal at Au Lac, and if the canal was made, some vessels might take advantage of it, bound to Britain, but those winds would be foul for vessels going down the Bay. There are few vessels arrying deals to England, from St. John, less than 300 tons; such a vessel loaded, would draw 15 feet, but the great bulk of vessels are not less than from

4 to 500 tons, and these would draw from 15 to 16 feet; there are vessels from 900 to 1400 tons, and such vessels would draw from 20 to 23 feet, loaded with deals. If there is to be only 15 feet on the mitre sill of the lock, and 16 feet at the piers to be carried out at Baie Verte, it would not be safe, in my opinion, for vessels to enter or come near the piers so erected at a greater depth of water than 13 feet; I mean where there is any swell in the Bay which is frequent in such an open entrance; I consider the navigation of the Bay of Fundy safe as far up as Grindstone Island; the anchorage above Grindstone Island to Woody Point is good, but from this to Au Lac, a distance of about four miles, there is no safe anchorage for vessels over 800 tons, and all small vessels would require assistance from steamers to go to the canal, if anchorage became necessary. I may here remark that, at low water, no vessel would attempt to go above Woody Point with over 60 tons, at lowest water—a vessel of 100 tons could not go up to the canal, far less any larger vessel.

As regards ice formed during winter in the piers leading to the canal, I would say that I have known two well-built wharves here, around which the ice had formed, carried completely away; the ice went as usual, but the wharves went with the ice. The wharves were made of wood, but it might be different if they were built of stone.

JAMES GRIFFIN, of St. John:—I am in the fish business; we have vessels in the trade off the Bay of Fundy, but I am not a seaman myself, and have no experience of the navigation of the Bay, nor of the eastern coast of Nova Scotia; I have been a good deal interested in reading as to the proposed canal to connect the Bay of Fundy with the Straits of Northumberland; my view of the proposed canal is derived from my experience as a merchant here and at Eastport. Some six years ago my firm sent three vessels to fish in the Gulf *viâ* the Gut of Canso; they could not get through, in consequence of ice, till the 10th May; fish come on to the fishing grounds early, especially herring; those vessels, in consequence of the ice in the Gut, were too late and got nothing and had to return empty. There were other vessels, perhaps 50 or 100, situated as we were. My opinion is, that if a canal was constructed, all vessels engaged in the fishing business either from the Bay of Fundy or the United States, would go through it in the Spring; these vessels going so early, are intended solely for the herring fishery and not for mackerel. In my opinion, the same cold that creates ice to block the Gut, as I have described, would not block other places. I am not a seaman myself, and have never been in command of a vessel, and the evidence I now give is what I have heard from others. A great many herring are caught round Newfoundland in winter, and the vessels for

this have to go outside during the winter, and if the canal was existing, none of them would go round; they sail about the 25th December; I think the canal, if all salt water, would not freeze before that time; I am not aware that Baie Verte is frozen over during winter, as I have never been there; neither am I aware that the canal would be frozen over at that period or all winter; I am only aware that, if it was open during winter, it would be a great benefit. We do not trade ourselves from St. John with the West Indies, but we have a house in Boston to whom we send our fish, caught in the north, and who ship it to the West Indies; if the canal existed, this trade would be favored. In consequence of the dangerous character of the navigation outside or east of Nova Scotia, this trade would be greatly promoted by the canal. I do not know myself what the rate of insurance is in the Bay of Fundy, nor by the route east of Nova Scotia; I know, however, it is considerably higher by the route outside—it is 1 per cent. by the Bay of Fundy; I am not aware, I am surprised to hear that the rate of insurance should be less from Halifax to Great Britain and to the continent, than it is from the Bay of Fundy; I have no knowledge of the South American or Great Britain trades; am not acquainted with the navigation of the Bay of Fundy, and cannot give any information thereon. I think that, if the canal was built, the American fishermen would go through it. The fish exported from Nova Scotia to the West India Islands is caught about Newfoundland, and I think, if the canal was built, the people of St. John would go into the business; the vessels that we employ are generally American bottomed, but sometimes we charter Canadian. There never has been an attempt made to cure and dry codfish in St. John, but this is made at Gasport, 60 miles distant, and I know of about 20 vessels there engaged in the business successfully and that without the canal. The best baiting ground for American vessels, for codfish, is Grand Manan, St. Andrew's Bay. The difference in the distance between Anticosti and Boston, in favor of the canal, is 95 miles; the difference of the distance between Anticosti and St. John in favor of the canal, is 269 miles; the difference between the distance going from Boston to the baiting grounds at Grand Manan, thence to Anticosti, would be 200 miles in favor of the canal. The rate of insurance from the Bay of Fundy to Britain, is $1\frac{1}{2}$ per cent. in June, July and August. The rates of insurance from ports east of Cape Tormentine, for the same period, is $1\frac{3}{4}$ per cent. I have no personal knowledge of the rates of insurance,—those given by me above are taken from figures furnished by Mr. Marshall, in a paper which is now before me. The rates of insurance from the Bay of Fundy ports in October, is $2\frac{1}{2}$ per cent.; south of Cape Tormentine, it is 3 per cent. From Bay of Fundy in November, is 3 per cent., and south of Cape Tormentine, is 4 per cent. from 1st to 10th; and 5 per cent. from 10th to 20th, and 6 per cent. from 20th to 30th. From

these statements, I presume that the inducement would be for the Americans to use the canal. The rate of insurance for June, July and August, from St. John or Halifax to Great Britain, is the same.

JAMES BARBER, Surveyor of Shipping and Register, Clerk for the Port of St. John, in H. M. Customs :—St. John is the distributing point for a large portion of the Bay, for all kinds of goods. The value of export of fish from Nova Scotia in 1874, to British and Foreign West India Islands, was \$2,202,431. From New Brunswick to the same points, is \$325, as shewn by Trade and Navigation Returns of 1874.

Handed in papers marked "A" and "B."

A

1873.

NUMBER of Arrivals and Departures from and to Sea at all the Bay of Fundy Ports, from Yarmouth, N. S., to St. Croix, N. B., inclusive, for the year 1873:—

No. of vessels	8,254
Amount of their tonnage.....	1,517,251
Number which met with casualties.....	28
Amount of their tonnage.....	9,359
Percentage of casualties on number of vessels.	33 or $\frac{1}{3}$ of 1 p. c.
Percentage of casualties on tonnage,.....	62 or 3.5 of 1 p. c.

Of the 28 vessels that met with casualties, only 16 were total losses; and of the sixteen total losses only 11 were lost at the period of the year when the Baie Verte Canal would be open, say from the 1st of April to the 1st December—8 months. Of the above 11 totally lost during the season of the year when the canal would be open, only four were lost from fog, viz:—

"H. V. Crandall,"	154 tons
"Merriam,"	250 "
"Rolling Wave,"	80 "
"Will o' the Wisp,"	26 "
	510 tons

out of 1,517,251, or about 3-100 of 1 per cent.

It should be added that while the *casualties* refer to all vessels in the Bay, the coasters are not included in the number and tonnage of vessels given above.

I have not full returns as to the number and tonnage of coasters. The arrivals at St. John alone, in 1873 were, from Bay Ports, 739 vessels, with a tonnage of 62,659 tons; consequently, the percentage of casualties would be considerably less than stated, if the coasters were added.

B

1874.

NUMBER of Arrivals and Departures to and from Sea at all the Bay of Fundy

Ports, from Yarmouth, N. S. to St. Croix, N. B., for the year 1874 :—

Number of vessels	7,295
Amount of tonnage.....	1,631,688
Number which met with casualties	25
Amount of their tonnage	6,374
Percentage of casualties on number of vessels..	34 or $\frac{1}{3}$ of 1 p. c.
Percentage of casualties on tonnage ..	39 or 2.5 of 1 p. c.

Of the 25 casualties, the total loss was 11 ; of the 11 total losses, there were lost between the 1st of April and first December only 3; amount of tonnage of these three, 245. Of these three, none were lost through fog. The only casualties from fog were two:—

“Royal Harrie”.....	483 tons
“Cornella”.....	142 “
	—
	625

The arrivals of coasters at the Port of St. John, N. B., for the year 1874, were 730 vessels, with a tonnage of 84,408; they are not included in the above 7,295, whilst the casualties happening to them are included in the 25 above-mentioned.

Between 1st April and 1st December, the total losses were only three vessels of 245 tons; and while the total of disasters in the bay, from all causes, is given the total tonnage is not given, as the coasters are not included.

E. N. SHARP, St. John:—I am Secretary of the Parrsboro' Railway Co., and Mining Broker. The Spring Hill Mining Co. have deferred making any preparation for shipping coal at the head of the Bay of Fundy, in anticipation of the construction of the Baie Verte canal, with a view to making their shipping place at or near the mouth of the canal, expecting to ship through the canal to the St. Lawrence and Prince Edward Island; a vessel coming down the Gulf, through the canal, could get a return cargo of coal from the Joggins; freestone, gypsum, from Windsor, Amherst Point and Hillsborough. In a few years, salt will be produced at Springhill, which would be taken through the canal, in addition to coal from the Springhill mines.

The construction of the canal would increase the trade by vessels to the Bay of Fundy, where they would obtain return cargoes to the Gulf and River St. Lawrence. For the general local distribution of coal, vessels drawing 11 feet are considered by those engaged in the trade as best adapted. Such

vessels, during the winter season, when there is most coal trade, could be employed in carrying coal to the West Indies. For this trade the canal is not directly necessary. The bulk of the trade with the West Indies is in small vessels. I think if the canal were opened, it would induce the people of St. John to engage in the fisheries, but I do not know much about it. The Gloucester people sometimes come up to Grand Manan for bait, and might then go on through the canal; but, at present, they obtain most of their bait at Margants, Bay; salt and other supplies at Halifax, and men and ice, and sometimes sale and other things in the Gut of Canso; St. John fishermen, if they wanted bait, could get it north east of Point Lepreau.

DICKSON OULTON:—I have been engaged in sailing to the head of the Bay. The ice in Cumberland Bay leaves before that of Windsor. I do not consider that the piers proposed by Mr. Page in his plan, at Au Lac, would interfere in the Spring with the navigation, and the ice would leave there as soon as from the river. No pilots would be required in the canal, and even with a strange captain, no pilot would be required between St. John and the mouth of the canal; any vessel could go up from Woody Point to the mouth of the canal, even at lowest water of from 2 to 400 tons; there is fine anchorage above Woody Point to the canal, and no danger whatever, even in a fog.

Although the rise and fall of the tide is 48 feet, there would be no difficulty in a vessel getting in or out of the canal at any stage of the tide; I have charge of a tug boat in the harbor; I am a seaman, and have been at sea ten years; I have never been captain of a ship, but I have been mate; I had charge of a steamer for Mr. Lunt, in the basin of Minas; I ran from St. John to Sackville four seasons.

ALEXANDER WRIGHT, of Moncton:—I am a Ship Builder and General Merchant; I am in favor of the proposed canal, provided it can be constructed at a reasonable cost; I would be in favor of its construction even at \$8,000,000. For the trade with the West Indies, South America, and Great Britain, either from the St. Lawrence or Bay of Fundy, I acknowledge that the canal is not necessary; I think that the importance of the canal depends mainly whether the trade from the Upper Lakes and down the St. Lawrence to St. John can be made by vessels passing through the canal without breaking bulk; I am well acquainted with the navigation of the Bay of Fundy; have had ships sailing on it for 40 years; I never made a claim for insurance; I am acquainted with the navigation from Woody Point to Au Lac, a distance of about 4 miles; at lowest water a vessel could not go up from that Point to the entrance to the canal; to go up at that time would be an impossibility.

The Baie Verte is an open roadstead and occasionally there is a sea in it, especially when the wind is north east; if there was a considerable sea on and only 16 feet at the entrance piers, I think it would not be safe for a vessel to approach drawing more than 14 feet, and some might say 13; such vessels would have to anchor outside, until the sea went down, before attempting to enter.

I agree with the following, taken from Mr. Page's report of 1873, page 9, viz.: "The channel through that part of the Bay of Fundy, known as Cumberland Basin, is described as being about $1\frac{1}{2}$ miles wide, with a depth varying from 30 to 14 feet at low water up to Barne's reef, or to half-a-mile below the upper end of Woody Point, through the reef; Mr. Baillargé, in August last, found a channel 900 feet wide, and of sufficient depth at low water to admit of a vessel drawing 15 feet to pass. From Barnes' Reef to the mouth of the Au Lac river, a distance of about three miles, the channel has a depth of from 30 to 15 feet, and the course is north easterly, thence upwards to the river Laplanche, a course S. E. by $\frac{1}{2}$ E. The distance is nearly $3\frac{1}{2}$ miles, and the depth diminishes almost to nothing at extreme low water, which is about $2\frac{1}{2}$ feet lower than ordinary low water." The depth of water shewn by the map up to the north of the Au Lac, at low water, is 15 feet; the size of vessels that navigate the canal might be 320 tons, which, when loaded, would draw 14 feet. I have built such vessels myself; the cost of transport very much depends upon the size of the vessel; a large ship can carry cheaper than a small one; of late years, the tendency has been that steamers are superceding sailing craft, which, I think, will continue. The canal would be used mainly by steamers and a small class of sailing vessels. For a trade between the Bay of Fundy ports and the Lakes of Canada, it is not necessary to have the Baie Verte canal of a greater depth than the other canals of Canada.

The exports through the canal would consist of the natural products of Nova Scotia and New Brunswick, say: coal and Albertite rock and ground gypsum, grindstones, building stones, scythe stones, flagging, shad, etc. An opportunity would then be given to the Gulf fishermen sending their fish to the St. John market.

In looking at this subject of the canal, I do not think it ought to be looked upon in any narrow point of view, but in the general interests of the Dominion. The construction of the Intercolonial Railway, which will soon be in operation, and the Railway from Shediac, will offer advantages for a much more rapid transit than has ever before existed, and afford greater convenience for distribution of smaller quantities and more frequently, and it is a question with me how far the railway and the canal should enter into competition with each other. If St. John were to engage in the fisheries, it would increase her business with the West Indies.

From Anticosti to St. John by the canal would be a saving of 267 miles over the route by Canso. From St. Georges Bay, Newfoundland, 236 miles, from Fortune Bay 160. These are all important fishing points.

JAMES A. HUGHES, Ship Captain, of Digby:—I have some knowledge of the navigation of the Baie Verte and Bay of Fundy, but wish to confine my remarks in regard to that of our own locality. The imports of flour and meal into Digby, Bear River, Weymouth, Sandy Cove, Long Island, Briar Island and Clare, are: of meal 14,200 brls., and flour 36,000 brls. There are about 500 chaldrons coal brought into Digby and about 500 into the other ports mentioned. The exports from the points above mentioned are of fish and smoked herring 25,000 boxes—of the flour one-third is imported from the United States and the bulk of the meal. Two-thirds of the flour is received from St. John, N. B. I do not consider the navigation of the Bay of Fundy as good as that outside. With vessels in foreign ports asking for freights, objection is always made to the fog, high tides and currents in the Bay of Fundy. I have been up in the upper part of the Bay of Fundy, towards Au Lac, the entrance to the proposed canal; I have knowledge of its navigation, of its shifting sand and mud bars, and think the navigation very intricate, rendered more so by the very high rise of tides, especially at high tides. I have thought a good deal about the proposed canal, and think there would be great difficulty, occasionally, in getting vessels out. The fall of the water is so sudden, about ten feet in the first hour, that it gives you very little time to work in. When 15 or 20 vessels might be in the canal and wanted to get out, it would be difficult to get them down to a place of safety before the tide left them. The same difficulties would arise in regard to vessels going in. In the afternoon, if the flood tide is at that time, there is an indraft of S. W. wind coming in with the tide, that makes an ugly sea which makes it difficult to navigate it, and I have frequently been obliged to run back and come to an anchor, waiting for moderate weather. I have carried a good deal of stone and coal, for oil, to the United States, and found the navigation very difficult. I have been in the Baie Verte and all along that coast. It is an open roadstead, where there is good anchorage, but exposed. In answer to your question, I would say that: if the canal piers are sunk in 16 feet, it would not be safe, with a heaving sea running, to go in with a vessel drawing 16 feet. It is a rule with us, to allow one-third for the hollow of the sea. I have been in a vessel crossing Wilmington Bar from the West Indies with salt, there was at that time 16 feet of water on the bar at high water. We were drawing $11\frac{1}{2}$ feet, wind was strong to the southward and the pilot objected to

taking me in. I remonstrated and the Pilot yielded, but we struck three times going over the bar, thus proving what I say as to the necessity of allowing space for the hollow of the wave. If I were loading in the Gulf ports for the West Indies, I would not use the canal if it were made, because we have the Gut of Canso and also the Gulf to get out, which is much preferable. We find a market for our fish in the West Indies and the United States.

I would prefer going from Cape Tormentine to Britain rather than from the upper part of the Bay of Fundy, and don't know but think Insurance would be lower as the navigation is safer respecting fogs and tides, and the voyage is shorter.

The fall of 10 feet in the first hour I speak of is, from my own observation, in the summer months—it was in full tides when I was there. I differ from the opinion expressed by Mr. Keefer in his report on the Baie Verte Canal, page 14, now shown to me :

“ On the direct course, up the Bay to Cumberland Basin and in the basin itself, there is no bore, the water being too deep, and the course too direct to admit of such a phenomena. Having observed the operation of the tides, both at Laplanche and at Au Lac, I was surprised to see with what regularity it was done. The surface of the great basin rises and falls almost imperceptibly, all the while preserving, in the absence of any wind, the placid appearance of a lake.”

If there were tolls charged on the canal, I do not think American fishing vessels would go through it. All American vessels, and other foreign ones, going up the Bay, generally take pilots. They sometimes come into our port for them, on account of the tides. Have been up the Petitcodiac River a great many times ; to Cumberland Basin twice.

G. A. VEITS, of Digby :—I am interested in fishing vessels ; am not a seaman. Our market for fish is the United States, as it is a better market for us than any other ; and for this trade the canal is not required. I am not acquainted with the navigation of the Bay of Fundy ; have not been at its head, and cannot say anything about it.

EDMUND BURNHAM, General Merchant, Digby :—Our export trade is with the United States and West Indies, and the canal would be of no benefit to this trade. I would anticipate that it would, to some extent, diminish the cost of freight on flour from the Upper Provinces to our ports and to St. John, and to that extent the trade would be benefitted. I concur in the statement of imports and exports of Digby, made by Capt. Hughes. It is my

impression that the Dominion Government would hardly be warranted in spending so much money on this work, as the benefits would be local and limited.

JAMES P. MILLER, Captain, St. John:—I am master of the Brigantine "Alice," of St. John. I was brought up at Windy Point, and am well acquainted with that portion of the Bay of Fundy. I have looked upon the plan of the canal by Mr. Page, and do not agree that the piers are in the proper position, and believe there would be great difficulty from ice flowing over them in the spring, and they should be placed more on the southern bank of the Au Lac. As at present proposed, a vessel would have great difficulty in getting inside the piers in light winds. It would be almost impossible to get in without a steamer. In passing over a channel of 16 feet, where there is a sea of 4 feet running, you could not pass that channel with a ship of over 12 feet draught, not with safety. There is no bore at Au Lac. I agree with the description given by Mr. Keefer in his Report, at page 14, already quoted. A vessel could be taken up by myself, or any good pilot, to Au Lac, drawing 15 feet. In Sackville River, at low water, there is plenty of room to anchor and swing, also at Botsford's Creek. I think it desirable to build the canal. It would shorten the distance for our small-sized vessels to and from Europe; it would give our fishermen, from the ports in the Gulf or Labrador, much easier access to ports in the United States or Bay of Fundy. Our Bay of Fundy people could go through the canal to the fishing grounds.

AMOS B. BARNES, St. John:—I have followed the sea, and am thoroughly acquainted with the navigation of the Bay of Fundy, more particularly from the head of it. I was born at Sackville. Referring to page 9 of Mr. Page's Report of 1874, already quoted—to my knowledge the statement is correct. A vessel can anchor any place between Rockport and Barnes' Reef. Between the Reef and Au Lac, there is one anchorage opposite Botsford's Marsh. A vessel can lay perfectly safe at the mouth of Sackville River. Referring to page 14 of Mr. Keefer's Report, already quoted, I find the statement therein made correct. I do not consider there would be any difficulty in entering or getting out of the canal on account of the tides. A vessel can leave Sackville from between the 20th and the end of March every year. I believe the proposed entrance to the canal to be very much exposed; it should be located at the mouth of No. 1 River; the water is deeper at this point than at the other. The vessels I refer to above, would be of from 100 to 300 tons, drawing up to 15 feet.

JOHN BOYD, Esq., St. John:—For all the information I can give on the Baie Verte canal question, I would refer to the report prepared by me and presented to the Canal Commission at Ottawa, in 1871. I have not since obtained any new information, and cannot present the question better than in that article.

J. G. TOMPKIN, Esq., St. John:—The Bay of Fundy plaster is superior both for land and calcining; about 780,000 (about 130,000 tons) of rock, and 45,000 barrels of calcined are sent from the Bay of Fundy to the United States.

It is manufactured chiefly upon the seaboard of United States and shipped to all parts of the Counties; largely to the West—chiefly from New York and Philadelphia.

If the proposed canal was built, the plaster could be delivered at the Nova Scotia sea ports, of St. Lawrence and Lakes, cheaper than *via* New York, and a trade of 200,000 barrels per year would not be an extravagant estimate, if mills were encouraged, and it could be sent as back freight.

I have shipped about 5,000 barrels to Montreal and Toronto this year; first shipment was made at the opening of the navigation, per Gulf ports Steamship Company.

I cannot say if the canal, when built, would enable us to send plaster to Montreal and other Western cities at lower rates, this would depend upon rate of tolls. It costs about 15 cts. per barrel from Hillsboro' to Shediac, with storage at Moncton extra. I have shipped direct by water to Montreal at 4⁵ cts., but this is a chance freight, and very low; 60 cts. per barrel *via* Moncton and Pointe du Chêne to Montreal.

The distance to Montreal from Hillsboro', *via* Gut of Canso, is 1,250 miles; by the proposed canal 780 miles.

Plaster is an article of unquestioned and economic value, unlimited in supply and not costly in manufacture. Its value is not popularly known and it is retailed at large profit. The industry increased from about 80,000 tons shipped to the United States from the Bay of Fundy, in 1867, to about 148,000 in 1870. The decline the last year, 1874, can readily be traced to the dull times.

One ton of rock is worth one dollar f.o.b. in Windsor; it will make six brls. of calcined plaster, worth \$1.00 per brl., our selling price.

If what is sent in rock was manufactured in Windsor and Hillsboro', it would give employment direct to 1,000 workmen. My estimates in letter to Minister of Finance will stand investigation; I am confident they are largely under.

The Plaster is used for casting, both artistic and otherwise. One house in Philadelphia sold 10,000 brls. last year for dentistry alone. One building in Montreal is using 6,000 brls. (that is what they asked propositions for) for fire proof walls. It is one of the best non-conductors. Common lime walls are good conductors of heat ; its value for the soil, in agriculture, is too well established to be mentioned to intelligent people. Its value for other economic purposes is not so well understood. I truly believe the gypsum deposits of the Lower Provinces to be one of their most valuable possessions, the complement of the grazing grain fields of the West, and the national commodity exchangeable for Western productions.

ROBERT MARSHALL, Marine and Fire Insurance Agent:—Was brought up in the firm of Johnson and Mackie, Miramichi, but have not been engaged in general merchandize on my own account ; I have given a good deal of consideration to the proposed canal, and am of opinion that it would largely benefit the interests of the Maritime Provinces, and tend to increase the trade of the Dominion. It would give to Canada a larger share than she now possesses of the great wealth in the fisheries, which are now monopolized largely by the United States ; to effect this change, the canal is indispensable. Some 20 years ago, capitalists in Miramichi, made an effort to engage in this trade, in competition with the Glouster and Cape Ann fishermen, but found, from the shortness of the season, and the necessity of wintering their vessels unemployed—that they could not compete, and gave it up. My opinion is, that in consequence of not being able to bring their vessels through the canal, to ensure employment in winter, was partly the cause of their non-success. I believe that the greater number of the American fishermen would use the canal if built, both in going to and coming from the fishing grounds. I am aware that fish caught are frequently transported over the railway from Shédiac to Boston, and also by line of steamers from Charlottetown and other places. My belief is, that if the canal was built, a route would be opened up less dangerous than the outside route, and shorter. I think the canal would be used even with a moderate toll, and that it should be built even at a cost of eight million dollars. My conviction is, that the business on the canal would not, for many years, pay the interest on the cost, or be a commercial success, but the indirect advantages would be so great as, in my opinion, to warrant the expenditure. The trade with Great Britain is wholly independent of the canal, and vessels sailing from St. John to Great Britain would not go by the canal ; neither would

they from the ports of northern New Brunswick on the gulf. The trade between St. John and the United States would not require the construction of the canal; neither would the trade with the West Indies or South America require the canal, as far as at present developed.

The opening of the canal would warrant Canadian capitalists to build fishing vessels in large numbers, and those vessels could be profitably employed in winter coasting. The construction of the Railway from St. John to Shédiac has been of the highest importance in developing the trade with northern New Brunswick, and Prince Edward Island, both in imports from and exports to these places. The trade with Canada would be increased by the canal. I am not aware of the rates of freight from Montreal to Shédiac, nor from Montreal to St. John, neither could I say what would be the rate on flour from Baie Verte through the canal to St. John; but in my opinion, if the canal was constructed, lines of steamers would sail from Montreal and Quebec and intermediate ports, *via* the canal to St. John, and I should think 30c. per barrel on flour would be a remunerative rate to them. These steamers would thus make St. John the winter port and trade with the West Indies and Brazil. I am acquainted with the build and character of the ships trading between the upper lakes and Montreal, but they are not strong enough for these trades; I do not mean that those lake vessels could engage in this trade, but that other vessels adapted to the trade would be employed. I represent here, Mr. Brunsbuck and Lloyds Association of Marine, and do a comparatively large business for it and other Companies, since 1866.

I do not consider, from my experience, that the rate of insurance for ships coming in or going out of the Bay of Fundy is any greater than the rates to Halifax and other ports.

The average rate for marine insurance will compare as follows.—

FROM St. John, New Brunswick and the ports in the Bay of Fundy to United Kingdom or Continent:—

	HULL.	CARGO OR FREIGHT.
Leaving in the Month of January.....	4 p. c.	3½ p. c.
“ “ February	3½ “	3 “
“ “ March	3 “	2½ “
“ “ April	2½ “	2 “
“ “ May	2 “	1½ “
“ “ June, July & Aug. 1½ “	1½ “	1¼ “
“ “ September	2 “	1½ “
“ “ October	2½ “	2 “
“ “ November.....	3 “	2½ “
“ “ December	3½ “	3 “
	2.75	2.75

FROM Halifax or Yarmouth to United Kingdom or Continent:—

	HULL.	CARGO OR FREIGHT.
Leaving in the Month of January	3½ p. c.	3 p. c.
“ “ February	3¼ “	3 “
“ “ March	2¾ “	2½ “
“ “ April	2¼ “	1¾ “
“ “ May	1¾ “	1½ “
“ “ June, July & Aug. 1½ “	1½ “	1¼ “
“ “ September	2 “	1½ “
“ “ October	2¼ “	2 “
“ “ November	2¾ “	2½ “
“ “ December	3 “	2¾ “
	<u>2.50</u>	<u>2.17</u>

FROM Ports in the Straits of Northumberland, south of Cape Tormentine to United Kingdom or Continent:—

	HULL.	CARGO OR FREIGHT.
Leaving in the Month of May	2 p. c.	1¾ p. c.
“ “ June, July & Aug. 1¾ “	1¾ “	1½ “
“ “ September	2 “	1¾ “
“ “ October	3 “	2½ “
“ “ Nov. 1st to 10th... 4 “	4 “	3½ “
“ “ Nov. 10th to 20th. 5 “	5 “	4½ “
“ “ Nov. 20th to 30th. 6 “	6 “	5 “
	<u>3.39</u>	<u>2.93</u>

FROM Ports in New Brunswick, north of Cape Tormentine, to United Kingdom or Continent:—

	HULL.	CARGO OR FREIGHT.
Leaving in the Month of May	2 p. c.	1 p. c.
“ “ June, July & Aug. 1¾ “	1¾ “	1½ “
“ “ September	2 “	1¾ “
“ “ October	3 “	2½ “
“ “ Nov. 1st to 5th... 4 “	4 “	3½ “
“ “ Nov. 5th to 15th . 5 “	5 “	4½ “
	<u>2.96</u>	<u>2.46</u>

FROM Ports in the River St. Lawrence to United Kingdom or Continent:—

	HULL.	CARGO OR FREIGHT.
Leaving in the Month of May	2 p. c.	2 p. c.
“ “ June, July or Aug. 1¾ “	1¾ “	1½ “
“ “ September	2 “	1¾ “
“ “ October 1st to 15th 3 “	3 “	2½ “
“ “ Oct. 15th to 31st... 4 “	4 “	3½ “
“ “ Nov. 1st to 6th... 5 “	5 “	4½ “
“ “ Nov. 6th to 10th... 6 “	6 “	5 “
“ “ Nov. 10th to 15th. 7 “	7 “	6 “
	<u>3.84</u>	<u>3.44</u>

THOMAS ALCOCK, Agent Grand Trunk Railway, St. John :—The quantity of flour carried over to Portland by Grand Trunk Railway for St. John and other parts of New Brunswick, and some of the ports on the Bay of Fundy, is 200,000 barrels; this is independent of what is carried from Portland to Halifax; the through rate of freight from Montreal to St. John, *via* Portland, is 40c. per barrel, 20c. for railroad, and 20c. per steamer; the price increases in the fall and winter to 60c. per barrel; I am not certain of the rate by railroad from Montreal to St. John *via* Shédiac, but I understand they have been as low as 30c. per barrel; besides flour, various other articles come over from Montreal *via* Portland, equal to 3,000 tons; a great proportion of our cars go back from Portland empty in winter, they get return freight in West India, and general steamship freight.

It is quite evident to every one from the position of St. John and of the northern ports of New Brunswick, that the trade with Great Britain and the West Indies is nearer going out of the Bay of Fundy than it could by way of the proposed canal; such a canal is not necessary for such trade.

CAPTAIN ALLAN McLEAN :—I am Shipping Master and Superintendent of Mercantile Marine Department of Board of Trade, in England—I am a seaman by profession, and have been at sea from the age of 15 to 60; I am well acquainted with the navigation from this port, in and out of the Bay of Fundy, also with the Gulf of St. Lawrence, but not with that of the Bay from Apple River up the Bay where it is proposed the canal would enter; fogs are the only drawback which we have all along the coast and on that of Nova Scotia; strangers would require pilots above Apple River; we employ them here.

The proposed canal would, of course, be closed all winter, but I think the American fishing vessels would use it; I could not say, having no data, whether the amount to be raised from this source would be sufficient to pay interest on outlay.

It seems to me tolls on the canal would be paid and other charges, including pilots and towage, in preference to transshipment at Shédiac.

The trade with Great Britain, South America, and the West Indies, does not require this canal, and the trade of such a canal would have to depend for its support on the fisheries and the coasting trade between the St. Lawrence, the Gulf, and the Bay of Fundy.

I think it would be of great advantage to all the south and north shore of New Brunswick, and the north shore of Nova Scotia, in the Bay

of Fundy, down as far as Yarmouth, because the distance from any of the Gulf Ports down to Yarmouth is so much shorter than the Gut; but cannot say whether the cost is excessive or not; after a few years, I think the advantages of the canal would warrant the expenditure of \$8,000,000; I am not acquainted with the anchorage above Grindstone Island; for strangers, pilots would be required.

CAPTAIN WILLIAM PORTER:—Have sailed for thirty years; given a general consideration to the subject of the proposed canal.

It is not required for the trade with Great Britain, West Indies, nor South America, nor United States. If constructed, the two shores of the Bay of Fundy would probably benefit by it.

I am aware that the freight, say for flour, both by Grand Trunk Railway to Portland, and thence here by water, and Montreal to Shediac by steamers, and thence by railroad to St. John is very low; by the latter route, flour is a return cargo by steamers which have taken up coal from Pictou to Montreal; I cannot say the rate at which through steamers would carry after paying tolls, pilotage, towage and other charges; but I doubt the wisdom of spending \$8,000,000 on such a work; in fact, I do not doubt, but I am sure, that to expend such a sum would be ill-advised on the part of the Government. The matter would be entirely different if we had reciprocity with the United States.

The south-west wind prevails in the Bay of Fundy in summer, and it would be a foul wind to the entrance of the canal at Baie Verte, while it would carry a vessel through the Canso clear of land; it must also be borne in mind that the south-west wind is a foul wind passing down the Bay of Fundy, and this, too, in dense fogs and strong tides.

The rate of insurance is, I think, higher on the Bay of Fundy, say from Liverpool to St. John, than it is from Liverpool to Halifax.

JOSEPH WHITEHEAD HALL:—Have been a Merchant and Ship Owner in this City for several years; am now retired from business.

Have read the reports of Surveyors and Engineers on the proposed canal. I have been engaged in a good deal of rock excavation in this City, and my opinion is that the highest Engineering estimate for that class of work in the proposed canal is very high and that the work could be done for less. I do it for less; I have never been over the route; I think it would be prudent on the part of the Government to construct the canal even at the estimated cost of \$8,000,000.

Before replying to the question would say—that I am interested locally in this City. I have been 44 or 45 years going through these Provinces ; I know the business of Halifax, and considering the business that would come here from Ontario and Quebec, *via* St. Lawrence, if the canal was built, I am satisfied that it would prove of general advantage to St. John and its surroundings. The fishing trade of St. John is now limited ; if a canal was built, in a few years our fishing trade would be equal to that of United States and of Halifax in particular.

I am of opinion that the fishing trade carried on by New Brunswick and Nova Scotia in the Gulf, is greater than that of the United States in some waters. I have no personal experience in the fishing business and the opinion I have formed is from reading the *Telegraph* newspaper published here. I am of opinion that the navigation of the Bay of Fundy is not very safe, on account of fog. I have been up the Bay but cannot give my opinion regarding its navigation. The canal would not be required for the general trade of St. John with Great Britain, the West Indies, the United States, or South America. Outside of these countries I must confess that the trade through the canal would be very small. I am of opinion that the freight from Montreal to St. John through the canal would be less than the present to Shediac, and from thence by rail here, and that vessels would go back through the canal to Pictou to take a return cargo of coal.

CAPTAIN MICHAEL THOMPSON :—Have been at sea for about 25 years ; am well acquainted with the navigation of the Bay of Fundy and of the Maritime Provinces, also of the West Indies, &c., &c., &c. The size of the proposed canal and its depth of water would not be sufficient to admit of the passage through of our large ships. The trade from St. John to Great Britain, South America, and West Indies would not use the canal.

The prevailing winds in the Bay of Fundy are south and south-west ; these winds while they would be fair to vessels entering the canal at Au Lac, would be adverse to those leaving it. Insurance rates in summer are the same in the Bay of Fundy as on the coast ; I never could see the very great danger of the navigation of the Bay of Fundy. This applies to the navigation from St. John outwards. I have never navigated the Bay of Fundy above St. John ; I believe that all our fishing vessels as also the American would use the canal, inasmuch as it would effect a saving of ten days on the round trip.

CAPTAIN JOSEPH RITCHARD :—Have been at sea for thirty-five years; am now engaged in hardware business; although well acquainted with the navigation, my experience has been in large ships trading from our freight ports, but not with coasting trade. If I was in a ship in the Gulf St. Lawrence, bound for the West Indies or South America, I certainly would not use the canal, however large it might be. The great object of a seaman is safety, and to secure this, ample sea room is always looked for. To go through the canal would be going through a narrow passage. To beat down the Bay with a south-west wind and a fog, would be difficult; a vessel would have to be towed down under these circumstances; I do not know what trade would go through the canal, excepting that from the Gulf ports. Considering the limited time of navigation, each tide, it is doubtful if the interest of such a heavy expenditure as \$8,000,000 could be obtained. The falls of St. John give a very good idea of how the canal could be used between tides.

WILLIAM SIMPSON :—Have been in the coasting business for the last 30 years; am well acquainted with the navigation of the Bay of Fundy, and the Gulf of St. Lawrence; vessels bound for Great Britain from the Bay of Fundy or to the United States, West Indies or South America, would not use the proposed canal. The trade from the north west ports of New Brunswick to Great Britain would not use it neither; the fishing vessels from the United States might use the canal if they were allowed through it *free* of tolls; fishing vessels at the end of the season would pass through the Gut of Canso, this being a shorter and easier route than beating up the straits to make the entrance of canal at Baie Verte.

Insurance is not higher in the Bay of Fundy in summer than outside; pilots are, however, required, and strangers would require pilots he whole distance from Au Lac outwards down the Bay of Fundy.

The tendency of late years has been to increase size and tonnage of vessels; also that steamers are fast superseding sailing vessels. If the canal was built, I think a line of steamers would be established between Prince Edward Island and the United States.

CAPTAIN AUGUSTUS QUICK, formerly Ship Master :—I would not myself take a vessel coming down the Gulf St. Lawrence, for any part of the south, through the proposed canal, on account of the difficulties of navigation of the Bay of Fundy, although there would be a

saving of distance over the present route; I consider that the canal would be useless; I do not think that fishing vessels going to or coming from the fishing grounds would use the canal on account, as I have already said, of the difficulties of the bay; I prefer the present route by the Gut of Canso, or Round Cape North, and believe the American vessels would prefer them also.

The canal would not be used for the trade with Great Britain, the West Indies, or South America, or with Newfoundland; the rate of insurance is higher, up the bay, than what it is here; it is here pretty near what it is outside; with 14 feet depth of canal, a vessel of about 300 tons could pass, but that depends on the build; I think great difficulties would be experienced by vessels of that size coming out of the canal, or being in that part of the Bay of Fundy, and for my part I would not care to be so situated on any terms, even with tug boats, there would be great difficulty; pilots would be a necessity, especially to strangers.

J. S. STEWART, Journalist:—I have always as such, advocated the opening of a canal on general principle, of opening a new route for trade, believing that it would be of great advantage to the Dominion generally, and to St. John in particular; it seems to me that a considerable portion of the Intercolonial trade would take that route, by the increased facilities it would afford; it would largely increase the local trade between the Gulf Ports and those on the Bay of Fundy.

Water route, as a principle, is cheaper than railroad route; the distance between the Gulf Ports and St. John, and other Ports along the coast, would be greatly shortened by such a canal, and I believe its construction, even at a cost of \$8,000,000, would be in the interests of the country, and pay as well as the majority of public works already constructed.

I do not know the amount of trade that would be carried through the canal outside of the trade from the Bay of Fundy to Great Britain, West Indies, South America, and the United States, which trade would not require the canal.

I have no knowledge what the freight would be from Montreal to St. John, through the canal, compared with what it is by water to Shediac, and from thence by railroad to St. John: I am not aware whether any return freights could be obtained from the Bay of Fundy to Montreal, not being acquainted with the details of trade,

There is no doubt that the construction of the railroad between this and Shediac has been of great advantage, and the extension of the Inter-colonial, along the Gulf shores, will increase the advantage; if this railroad was connected by a bridge across the river St. John here, to connect with the American system of railroad, transport would be greatly cheapened thereby, and it would facilitate through traffic.

CHAS. S. TAYLOR, Harbour Master:—Have been engaged as a seaman to foreign and other ports, and have acted as pilot in Bay of Fundy for some 20 years; I do not think the Bay of Fundy navigation as safe as that outside.

As regards the proposed canal from the outlet at Au Lac, vessels coming through it would, on entrance into the Bay, require a pilot, more especially strangers, and would have to be towed down after coming out of the canal to anchorage ground at Grindstone Island, a distance of miles.

I do not think the American ships going into the Gulf to fish would take the route of the canal, if a charge was to be made for tolls; they would rather take the natural route through the Gut of Canso, both in going to and from the fishing grounds around the Magdalen Island.

I do not think that vessels bound for Great Britain, West Indies, South America, or the United States, could use the canal, as the draught of water would in general be greater, and although the distance might be a little less if they could go through the canal, yet it would be safer to go round Cape Sable; with a draught of water of 14 feet in the canal, a vessel of from 300 to 400 tons could pass through loaded, but everything depends on the build; as some vessels loaded, of 300 tons, might draw 15 feet, while a vessel of 500 tons would draw 18 feet; a vessel coming out of the canal at any stage of tide, would require a good powerful steamer, and a pilot to take her down to anchorage at Grindstone Island.

The canal at Au Lac would be dangerous to come out from without the assistance of a steamer, unless the wind was favorable, but this should not be depended on.

The south-west winds prevail in the summer months, and in these months there is consirable fog.

CHARLES H. FAIRWEATHER, Flour Merchant and Ship Owner:—Have been engaged in general business in St. John for the last 20 years.

The subject of the canal to connect Baie Verte, in Northumberland Straits, with the Bay of Fundy, has occasionally engaged my attention. I have considered the matter in reference to the import and the export from the St. Lawrence, and think it would naturally increase these if the canal was constructed, but the subject is so extensive that I have not given the consideration to it that would warrant me in giving an opinion as to whether or not it should be constructed at the estimated cost of \$8,000,000.

The quantity of flour imported into New Brunswick may be estimated at 300,000 brls.—say 200,000 by Grand Trunk to Portland and thence by sea and rail, about 50,000 via Shédiac railway and North Shore Ports, and the remainder from the United States.

The lowest rate I have had flour by rail and water from Montreal, *vid* the Grand Trunk to St. John in the summer months, is 40 cents; but by the Shédiac route from Montreal to St. John, I have known it carried at 30 cents. I prefer paying more by the Grand Trunk Railway in consequence of the transhipment by the Shédiac route involving loss by heads going out.

If the canal was constructed the freight from Montreal would largely depend on the return cargo. For this return cargo we have gypsum, the finest kind of plaster, free stone, granite grey and red, grindstones, and coal. Fish, such as cod, lobster, salmon, herrings smoked and pickled.

The trade from Canada West, in pork, corn, barley, cattle, agricultural implements, coal oil, butter, furniture, engines, machinery, etc., would also be increased by the construction of the canal. I cannot give an opinion as to what would be the saving in rate of freight from Montreal by vessels direct, compared with the routes now existing by water and rail—so much depends on circumstances and developments not now perceivable. As regards the distance from St. John to Montreal, improvements are now going on by the construction of railways which will shorten the distance between these cities from 120 to 150 miles, and this will tend to give advantages to the railway. The Intercolonial Railway can never be a complete line, until a continuous connection is made by a bridge over the St. John at this place. If such a bridge is made, all the expense of transhipment in trade with the United States would be avoided to the advantage of all; am not acquainted with the fishing trade, or how it is conducted; of the quantity of flour imported from Canada West and Montreal, for New Brunswick, about $\frac{1}{4}$ to $\frac{1}{3}$ is brought after navigation closes in November and during winter.

HENRY P. STURDEE, Agent of Lloyds, London, also of the Liverpool Underwriters Association :—Have heard the merits of the proposed canal a good deal discussed, but I do not feel that I am in a position to give much information on the subject.

I do not think the dangers in the Bay of Fundy are greater than elsewhere, if the soundings are attended to, and the Admiralty directions are followed.

I believe that with a canal of 14 feet, only small vessels would be used on it, and among the many ship captains I have spoken with I have only found two in its favor.

It is difficult for me to see the advantage of spending \$8,000,000 on this canal, when other work of general utility is required in this and the Province of Nova Scotia; to give an illustration of this opinion, I would point out the general advantage which would result in the construction of a railway Bridge across the St. John here, a work which in its results would tend to cheapen transport between the United States and Canada West and the Maritime Provinces, and prove beneficial to all.

CAPTAIN JOHN M. LOVETT.—Have been engaged at sea, and am well acquainted with the navigation of the Gulf of the St. Lawrence and the Bay of Fundy.

There is no doubt whatever, that for ships leaving the Port of St. John, or other parts in the Bay of Fundy, either for Great Britain, South America, the West Indies, or the United States, the shortest and best route to these countries is to go to sea by the mouth of the Bay of Fundy, and that the proposed canal from Baie Verte into the bay, is not at all required for the trade with these countries; from my experience, I would consider that if the canal was constructed, there would be great difficulty in bringing a vessel from the canal down to sea; the reason for this is the rapid rise and fall of the tide at that place, adverse currents, and no good anchorage above Grindstone Island; strangers to the bay would find it especially difficult, and no doubt pilots would be required, and tug boats would also have to be employed.

In the summer months the winds blow generally from the southwest, and this wind brings fog, this wind being a foul wind down the bay from the canal; steam would be necessary for an ordinary sized vessel.

I have been through the Gut of Canso frequently, from the Magdalen Islands, Newfoundland, and north side of Prince Edward Island; it is

evident from the map that the shortest way from these places to Boston, or the United States, is through the Gut; as a seaman, I would prefer the open sea, and I do not think the canal would be used by American fishermen or others, especially if tolls were charged, and the unavoidable detention of passing through the canal, and of not meeting the tide in time, would all add to the difficulty; the canal with 14 feet water, would only accommodate a vessel about 350 tons; a ship of 600, fully loaded, would draw 18 feet, and for such vessels the canal would, of course, be useless.

I, perhaps, cannot so well judge as others, but it seems to me strange that the construction of this canal, at a cost of eight millions, should be seriously considered. It would never pay interest on cost, or near it, and although there might be some local trade, yet I cannot see where any large trade is to come from.

The tug boats I refer to would require to be very powerful, and I would not like to take a vessel there, or bring one away from the canal.

JOHN W. WOODWARD, St. John:—Have been for years engaged in business, and negotiating railway contracts. As to the canal, I would first say that when the railway, now in construction to Montreal, *via* Megantic, from St. John and St. Andrews, the route to Montreal will be shortened about 150 miles to St. John over any route to the Atlantic now existing; and this will have a very important effect on transport, and will, in my opinion, transfer to St. John and St. Andrews a large portion of the trade now carried on at Portland. When this is carried into effect, as it will soon be, (possibly this year) the advantages claimed for the canal, as a means of cheapening transport, will be greatly diminished, and if a bridge for railway purposes was made over the St. John, giving continuous railway connection, the interest of New Brunswick would be promoted as well as Nova Scotia.

I am utterly opposed to the expenditure of such a large sum as \$8,000,000 on the proposed canal, as the money could be expended in other ways far more usefully.

The following evidence of Messrs. Lunt and Elder was partly given orally, but they subsequently asked to revise it. They largely added to it without the Commissioners having the opportunity of their explanations.

REUBEN G. LUNT:—I am engaged in the steamboat business, connected with the running and ownership of steamboats. For the trade with South

America, Great Britain, or the West Indies, the canal is not required. In reference to the advantages of the canal, I am convinced there would be a large business from Prince Edward Island to Boston, and other ports in the United States; also to St. John and other Bay of Fundy ports, which would pass the canal. This business would be done, I believe, by propellers. I am certain that the canal would give an impetus to the fishing business from St. John, at which there is none at present. Mr. Jack, one of the Commissioners, states that a fleet of twenty fishing vessels was fitted out at Eastport last year, and profitably employed in the fishing business, on the northern part of this province, and I have no doubt whatever, if the Baie Verte Canal was completed, a much larger number of vessels would be employed in this business, at a much larger profit, as they would save the long and dangerous journey around the coast of Nova Scotia. I believe that if the canal was opened, a large quantity of free stone, from the vicinity of Dorchester, would pass through to Montreal. I have this information upon the statement of a gentleman who is interested in these quarries. I think there would be a small description of lumber, including shooks, not now manufactured, which would be manufactured in the northern parts of New Brunswick and sent through the canal to various ports in the United States, and also to St. John for re-shipment in winter. The lumber referred to for the United States would doubtless go *via* the canal, as the water communication would be cheaper than railway. I am engaged in the steamboating business between St. John and Fredericton, and, notwithstanding we have to compete with a railway running between St. John and Fredericton, having an advantage of twenty-five miles in distance over the steamer, and notwithstanding the freight has to be carted two miles to reach the steamer, the latter gets the freight, being the cheaper mode of transportation. I do not think that the trade from Prince Edward Island would go as cheaply through by Shediac as by the canal. I mean, in saying this, that tolls on the canal, and other charges, would not be as expensive as the breaking of bulk at Shediac, and the railway charges. I think, if a canal could be constructed at \$5,000,000, the expense would be warranted. I think that a canal of less depth than fifteen feet would answer the purposes of the traffic that would be likely to pass through it. Propellers are generally superseding sailing vessels, and I think that the trade between Boston and Charlottetown would go by them through the canal. These vessels, not coasting nor fishing vessels, would require pilots. The saving in the consumption of coal on a diminished distance of 440 miles from Charlottetown to Boston and back, would be very great;—not having to carry coal for this distance, there would be more room for freight, and the rate of freight would be cheaper, the distance being so much less *via* the canal, also a saving in wages and time. In point of safety I would prefer going through

the canal. Within my recollection, I have not known of any total wreck of steamer between St. John and Boston, but only a partial wreck of one. The steamers have been running as far back as I can remember. The steamer "Alhambra," going from Boston to Halifax, Gut of Canso, and Charlottetown, was a total wreck on the western coast of Nova Scotia last year,—a coast that is very dangerous, and where the loss of life has been very great. It is along this coast that vessels bound from Charlottetown to Boston, *via* the Gut of Canso, have to pass. I consider the risk of navigating the Bay of Fundy much less than the coast above named. Insurance companies charge a less rate of insurance in the Bay of Fundy. Fog whistles largely diminish the risk of navigation in the Bay of Fundy. A steamer running between Boston and Charlottetown, *via* Baie Verte Canal, would obtain her coal at the Joggins Mines, which would be a great advantage. Spring Hill coal is considered a good steam coal, and could be delivered either by Parsboro' or by the Inter-colonial Railway, at the junction or mouth of the canal. The ice is free from Windsor about the first week in April. I believe that it would get out of Cumberland Basin earlier than from Windsor. I believe that Cumberland Basins would, in most seasons, be open earlier than the Gut of Canso, as a north-east wind very often in the spring of the year drives the ice down into St. George's Bay and the Gut of Canso, and so blocking it that vessels are very often detained. Last spring our own steamer, bound from St. John to Shediac, did not get through the Gut of Canso until the 11th of May. I believe she could have gone through the Baie Verte Canal, had it been constructed, a month earlier. I feel quite sure that the ebb tide would remove the ice from the basin, inside of the piers, and that no delay would arise from that cause. I have no doubt whatever that there would be no difficulty in a vessel entering or leaving the basin at the mouth of the canal, on account of the high tides in the Bay of Fundy. I have no personal knowledge of the channel leading to the proposed canal, but I believe it could form no exception, so far as the tides are concerned, to other parts of the Bay of Fundy. We have never found the tides any draw-back to the safe navigation of the Bay of Fundy; for sailing vessels the tides are an assistance. In saying that there was a difference of 440 miles between Charlottetown and Boston and return, I meant that the distance by the Gut of Canso was 635 miles, and by the canal 415, or a difference of 220 miles, which, on the return, makes 440. I think that 9 miles per hour is about the average rate of a propeller. In going by the Gut of Canso such a vessel would take $70\frac{1}{2}$ hours to reach Boston. I am not acquainted with the time it would require to pass through the canal, but I take it from Mr. Young, the Chairman, who states that it would occupy $6\frac{1}{2}$ hours. The remaining distance, $393\frac{1}{2}$ miles by the Straits of Northumberland to Baie Verte, and through

Bay of Fundy to Boston, at 9 miles an hour, would be 44 hours, which, added to the $6\frac{1}{2}$ by the canal, would be $50\frac{1}{2}$ hours, or a difference of 20 hours, or 40 hours on the round trip. Suppose a vessel of 500 tons was to be employed on both routes, there would be no tolls through the Gut of Canso to Boston. I am informed by the Chairman that the rate of tolls through the canals is $2\frac{1}{2}$ cents on vessels and 15 cents on cargo, or $17\frac{1}{2}$ cents in all, per ton. I find, upon reference, that the St. Lawrence canals are $42\frac{7}{8}$ miles long, with 24 locks, and that the rate is $1\frac{1}{2}$ cents on vessels and 15 cents on cargo; but the Baie Verte Canal, which would be $21\frac{1}{2}$ miles long, with only 4 locks, would undoubtedly be at a proportionate less rate, so that the rate named by the Chairman would seem to be excessive. I also find, by referring to Mr. Page's report, that 4 miles per hour is the estimated canal speed, which would reduce the time through the canal to $5\frac{1}{4}$ hours, instead of $6\frac{1}{2}$ hours, as named by the Chairman. The following figures will show any unprejudiced mind that the canal must command the trade of Prince Edward Island and other places in Northumberland Straits, with Boston and other western ports.

Distance from Charlottetown to Boston <i>via</i> Cape North.....	780	miles.
Distance " " " " Gut of Canso ...	635	"
Distance " " " " Baie Verte Canal	415	"

Distance in favor of Canal over Canso, 220 miles. Suppose that two Propellers of 500 tons each at a speed of 9 miles per hour were engaged in these two routes, and the season commenced in the middle of April and closed middle of November, being 7 months, this would be say 210 days, allowing 100 hours' for round trips *via* canal and one day in port at each end of the route, she would make in 7 months 35 round trips. In the other case *via* Gut of Canso, allowing 140 hours for the round trip and a day in port at each end of route, in the 7 months or 210 days, she would perform 26 round trips, this would show that *via* Canal she would make 9 round trips more during the season. In making the 35 trips *via* canal, she would not consume as much coal as the steamer making the 26 trips *via* Gut of Canso, as in making the 26 trips she would steam 3,640 hours, and in making 35 trips *via* canal she would steam 3,500, showing a saving of 140 hours steaming. Supposing the wages to be the same in either case during the 7 months she would have to her credit the proceeds of 9 trips which would be about as follows: Estimating a propeller to carry 3,000 brls. say of oats, there would be other products of the Island shipped which I shall refer to hereafter. Boston and New England States are the natural markets, and with Reciprocity the trade from the Island to these markets would be enormous; allowing 3 bushels of oats to the brl., and 56 bushels to the ton, this being the canal standard for

oats, the 3,000 brls. would be about 160 tons, which at a freight of \$4.50 per ton would amount to \$720. Allowing the same amount for the return trip (this calculation would be under as the return cargo being miscellaneous would pay better than cargo in bulk) would make \$1,440 the round trip, and for 9 trips would be \$12,960; add to this the large freight room that would have been occupied by the 40 tons of extra coal which the steamer would consume on the round trip *viâ Canso*, say for 30 tons (as the coal would possibly occupy less space than cargo) at \$4.50 per ton would make \$3,510, making \$16,470. To this should be added the profit on passengers for 9 trips which would be large, as passengers are more profitable than freight. From this amount the toll charges are to be deducted, and taking the rate of the St. Lawrence Canals for a calculation, which canals are $42\frac{1}{2}$ miles long with 24 locks, while the Baie Verte will be only $21\frac{1}{2}$ miles long with 4 locks, the following would be the result on 160 tons of cargo at 15 cents, would be \$24, and $1\frac{1}{2}$ cent per ton on vessels of 500 tons, would be \$7.50 or \$31.50 each way, making \$63 on the round trip, or for 35 trips \$2,205, leaving profit of \$14,265 for the propeller running *viâ canal* on the one running *viâ Canso*. It is quite evident that the vessel running *viâ Canso* could not possibly compete with the one running *viâ the canal*. This is not all: there would be a large saving of insurance on vessels and cargo on the diminished distance of 440 miles. The Island would ship largely of other articles, eggs, butter, potatoes, fish, &c. The amount of tonnage that would be required to carry the Island produce would be large. In one year the Island shipped to England 1,500,000 bushels of oats. The most natural and most profitable market for the Island is Boston and the New England States. To carry the above quantity of oats which would be equal to about 500,000 brls. would require a propeller of 500 tons, carrying 3,000 brls., to make 166 trips each way or 332 trips which would be equal to a tonnage of 166,000 that would pass through the canal for oats alone. The Island grows potatoes largely and Boston is the natural market. Estimating the export at 750,000 bushels or equal to about 300,000 brls., it would require a propeller of the same capacity as named, (3,000 brls) to make 100 trips or 200 passages through the canal, or equal to a tonnage of 100,000 for carrying the quantity of potatoes alone; thus in two articles only, potatoes and oats, a tonnage of equal to 266,000 tons would be required for the transportation through the canal, and this from only one section of the Northumberland Straits. But the above is not the limit of the Island capacity, for with the dispute settled, and the railway to facilitate the transportation of produce to shipping points, a very large increase may be expected, 20 per cent. would perhaps not be an extravagant estimate;

but allowing 10 per cent., this would show a much larger tonnage than named, that would require to use the canal. It may be said that we require Reciprocity to develop the above trade to the extent above named. I think that few men in Canada doubt that a treaty on same basis will soon be agreed upon, it will include product of the field, forest and mine at least.

WILLIAM ELDER, Esq., M.P.P., Editor and Proprietor of the *St. John Daily Telegraph*, examined:—

Mr. Elder said, he proposed to speak mainly as to the commercial effects of the canal, its traffic, etc., assuming that the Commissioners had obtained ample statistics as to the distances to be saved by the canal, safety of the Bay of Fundy, and kindred matters.

Sources of traffic for the canal. These are to be deduced partly from the existing traffic of the Gulf ports with ports in the United States, etc., and partly from the new traffic which the opening of the canal would create between the Gulf and Bay, and the ports with which they respectively communicate.

The tonnage which entered and cleared between the ports in the Gulf of the St. Lawrence and the United States, for the fiscal year ending June, 1874, was as follows:—

	Cleared to U. S. Ports.		Entered to Gulf Ports.
* Gaspé.....	None.	.....	None.
Magdalen Islands....	639	.....	1106
Montreal.....	00	.....	1,516
New Carlisle.....	129	.....	1,056
Percé.....	91	.....	159
Quebec.....	00	.....	5,660
Pimouski.....	00	.....	00
Three Rivers.....	75	.....	1,112
Pictou.....	64,612	.....	57,560
Bathurst.....	2,305	.....	1,913
Baie Verte.....	1,116	.....	309
Caraquette.....	00	.....	00
Chatham.....	450	.....	630
Dalhousie.....	00	.....	00
Newcastle.....	301	.....	1,988
Richibucto.....	00	.....	446
Shédiac.....	00	.....	00
Shippegan.....	00	.....	00
Charlottetown.....	30,506	.....	35,611
	<hr/>		<hr/>
Cleared.....	100,224	Entered.....	109,066
Entered.....	109,066		
	<hr/>		<hr/>
Total.....	209,290		

I assume that this shipping would pass through the canal, owing to the saving in distance and the character of the navigation in the Bay as compared with that in the Gulf. I include the tonnage trading between the Gulf and West Indian ports, some of which, especially steam tonnage receiving traffic from Bay ports *en route* to the West Indies and back, would pass through the canal. I also take no account of the local coasting trade which would be extended from the Gulf to the Bay, and *vice versa*, in the case of populations so considerable.

In the case of steam tonnage, it would clearly be an object to use the canal and thus save coal, time and wages, as well as to get increased stowage room in proportion to the shortness of the voyage. These considerations suggest that the above tonnage might be placed at a higher figure.

But were the canal open, new sources of traffic would arise.

1. Coal would come into the Bay from the Gulf, for use in the Bay and *en route* to the United States. The statistics of the exports to the latter country will no doubt be in evidence. In St. John alone, notwithstanding the expensive circuitous and dangerous route by the Gut of Canso, we consumed of this coal from 3rd July 1874, to 3rd June, 1875, 3,147 tons.

The coal from Sydney, so largely used in St. John and other Bay of Fundy ports, could be sent through the canal at a saving in distance of 150 miles. Cape North would be rounded and the voyage along the coast of Nova Scotia avoided.

2. Coal would go from the Bay into the Gulf by the canal, including the *Springhill*, the *Joggins*, and the *Albertite* coals. The two former coals are valuable for steam. They go into competition with hard coal here and in Ontario and Quebec. If they could be cheaply laid down, would be likely to go into competition with the Anthracite of Pennsylvania, as is to some extent the case with the Pictou and other Nova Scotia coals. *Albertite*, used for gas and oil, ought to find customers in Ontario and Quebec as readily as in the United States or Maritime Provinces.

3. Plaster, in like manner, would be sent through the canal from the Bay into the Gulf. The plaster or gypsum of Albert County is now exported largely to the United States Atlantic ports, but some of this is for the far Western States, and its proper route is by the Gulf. Hants County, on the Bay, is a large exporter to the United States, and the same remarks apply to its exports as can easily be learned by inquiry. A very large amount of tonnage is required for this traffic.

4. Building and other kinds of stone would be sent both from the Bay to the Gulf, and the Gulf to the Bay, the latter *en route* to the United States.

The red granite of St. George, so much admired and needed in Montreal and points west of it.

Free stone from Rockland, in Westmorland County, to compete with that of Ohio, greatly used in Montreal, &c.

Free stone from several quarries in Albert County, for the same purposes. Grindstones from Shefford and elsewhere in the Bay.

All these would be sent by the canal and Gulf.

On the other hand, Wallace and Pictou, N.S., and the north shore counties of New Brunswick, would send their products in stone, through the canal to their present customers, and to many new ones, in the United States; and they would thus be relieved of an enormous tax for freight, insurance, etc.

The Wallace free stone has an established reputation.

Pictou produces the same article in abundance.

So do our North Shore Counties. Grindstones are even now largely shipped from New Bandor, in Gloucester, to the United States.

Lime is abundant in the Bay; is needed in Prince Edward Island, where there is none; is needed elsewhere in the gulf, would go through the canal.

The Lumber Trade.

Lumber, in enormous quantities, would be sent from the Gulf counties into the bay, and into the United States, were the canal open.

The ship-building ports of the Bay require pine spars. Within the last day or two some of these spars were brought into the Bay from New York, at a cost in freight of \$80, besides cost of wood. The northern counties are filled with this kind of lumber, but very few vessels pass between the Gulf and Bay ports.

Various other kinds of ship timber are needed in the Bay ports; also, wharf logs, spiling, sleepers, sapling pine for box-shooks. Some of these articles are needed for local purposes, and some for export. There is an endless supply of sapling pine in the northern counties, and were the canal in existence, those counties would participate in the manufacture of sugar box-shooks, which has been very profitable to St. John, etc., when affairs were in a normal condition in Cuba.

The counties of Gaspé, Bonaventure, Restigouche, Gloucester, Northumberland, and Kent, abound in magnificent pine forests, of which, the other New Brunswick counties have been almost completely stripped. The want of the canal above, prevents this lumber from being sent to the United States, in the shape of boards, which always sell high. The northern counties

lose a great deal of small lumber for the same reason, while the southern counties make a good share of these profits, by the export of this lumber to the United States.

Some time ago, in referring to the sources of traffic for the canal, in the *Daily Telegraph*, I stated that 50,000,000 superficial feet of this lumber might be annually sent through the canal, *en route* to the United States, for an indefinite period. Soon after, I received a letter from Mr. Edward Jack, the most experienced lumber pioneer and explorer in the province, that I might have doubled or trebled my estimate with safety.

This lumber would be sold very low at \$30 a thousand; it is worth \$40 at least, as a rule.

50 millions at \$30, would bring \$1,500,000; at \$40,—\$2,000,000.

These 50 millions, if shipped in schooners of from 60 to 200 tons, would require a tonnage of about 40,000 to carry it; assuming that most of this tonnage would get return cargoes to the gulf, this would give nearly 80,000 tons to the canal, and as I make the estimate of export so low, and give no statistics of the export of sapling pine, span, etc., we should say 80,000 tons.

It is well known that the great pineries of the United States are rapidly vanishing. This lumber trade is now wanted and soon will be more wanted in the United States, and with or without reciprocity (as is the case of the lumber sent from the Ottawa Valley) it must be purchased by those who need it, and at a price that will bring it. It would be a sure and lasting source of traffic to the canal, as well as a great source of wealth to the Gulf counties. They would in consequence need more flour, pork, tea, molasses, coffee, with corresponding advantage to those with whom they dealt, to the canal and the revenue. The splendid Gulf counties, so rich in soil, in lumber, in fisheries, etc., are now in a prostrate condition in consequence of being cut off from access to the Bay and the markets south of it: give them these connexions for their various products and new commercial life and energy will mark their future.

Agricultural Products of the Gulf, and especially of P. E. Island, as sources of Traffic to the Canal.

Prince Edward Island can produce grain and potatoes almost without limit. It has shipped as many as 1,500,000 bushels of oats to England in one year. It could raise many times as many bushels of potatoes. New England is the natural market for the sale of the agricultural products of the Island. Now that a railway traverses nearly every district in the Island, and that the

land question is about settled, the products of the Island may be expected to increase rather than diminish. Under reciprocity these products would go largely into the United States, but even without it this must also be the case.

The price of breadstuffs is determined by the necessities of Europe in relation to the sources of supply. The United States being obliged to import oats to an enormous extent must submit to this law and, as in the case of lumber sent from the Ottawa Valley, of which the price is steadily rising, (though subject to temporary periods of depression, like other commodities) pay the imposed duty in whole or in part as is so often done by the consumer.

In considering the probability of the Islanders being able to send oats and other grains into the United States we also take into account, not merely the price at a particular date, but the value of having a second market with its vicissitudes, often in favor of the vendor. It is by watching said opportunities, and by low freights, that flour is often purchased in the United States Atlantic seaports for the Maritime Provinces.

Besides, in the event of Reciprocity not being granted, any reasonable measure of manufacturing prosperity in the United States, would cause a large demand to arise in that country with corresponding advance in prices for the agricultural products which they would require to import. A considerable portion of the large production of oats, barley, etc. of the Island might be expected to go into the United States through the canal, almost the entire 1,500,000 bushels or whatever the yield might be, will one day certainly be sent into that market. As I make no statistical estimates of the products of this kind to be sent from other agricultural regions in the Gulf, it will not mislead to suppose that 1,500,000 bushels of oats and 100,000 bushels of potatoes might ere long be sent annually to the United States through the canal, were it in existence. Large quantities of potatoes are now sent to the United States from the Island at an enormous cost in freight and with much damage to the article. Let us note the tonnage that would be required for this purpose.

The grain is equal to 500,000 barrels, and would require about 83 propellers of 1,000 tons each to carry it, making in going and returning with assorted cargoes, 160,000 tons of shipping.

It would require propeller tonnage of 133,000 tons going and returning to take this cargo.

The Island recently shipped in one year 409,000 dozen of eggs to the United States. This article requires a short, quick and cheap route; the canal would supply these conditions.

The Island is an extensive producer of cattle and horses ; they would leave it by the canal.

The Island goes largely into the fisheries ; the canal is the direct road to a portion of the markets of North America for canned, dried and pickled fish ; a short cut to these markets would proportionately stimulate the fisheries.

The agricultural capabilities of Pictou, and of those portions of Cumberland, Colchester and Westmoreland, which are on the Gulf, and of Kent, Northumberland, Restigouche and Gloucester, are of the same high character as the Island, and if those regions were quickened by easy communications with the Bay and the ports south of it, the effects would be transforming. It should be borne in mind that the Bay ports, especially those in the Basin of Minas, though nominally open in winter, when those of the Gulf are closed, have little or no trade until the opening of navigation. Hence the causes of the differences must be such as I have stated. If the conditions indicated are realized in the case of the Gulf ports, the Counties of the Gulf will become populous, wealthy, enterprising—having a stimulus to action—large consumers of goods, to the great benefit of those commercial centres with which they now carry on their transactions, such as Quebec, Montreal, Halifax, St. John, &c.

Pork, brought from the west, would be a source of traffic to the canal ; it now comes largely by way of New York, and after the date of the closing of the Erie Canal, which is always early in the season, (unlike, in this respect, what would be true of the Baie Verte canal), this article has to be sent by rail, at proportionately increased cost.

Similar remarks apply to grain *en route* to these Provinces and to the Atlantic sea-board. The period in which the grain trade could be extended, could be greatly prolonged by means of this canal as compared with the Erie.

Flour would be a large source of traffic for the canal ; the Maritime Provinces take 700,000 barrels, of which the Bay of Fundy ports would probably need 500,000. If we had as cheap breadstuffs markets in the Upper Provinces, which it is reasonable to expect we should have, and as low freights from the Upper as from the Atlantic ports, and had open navigation from the Gulf the entire year, it is reasonable to suppose that all this flour would come through the canal.

In point of fact, the flour would not be *all* brought during the period of navigation ; but it must be remembered that supplies for winter operations, whether of flour, pork, biscuit, coffee, etc., are laid in early, and so as to be forced up the rivers before they close. Therefore, the quantity of flour purchased in winter, and brought by water from Atlantic ports, or by rail from any source, would be limited.

For these reasons, and because I do not give statistics of the pork, the cheese, butter, live cattle, etc., which would come down through the canal, nor of some articles of manufacture, which would be sent up through it, it will not mislead, but the reverse, to estimate the flour receipts through the canal, at 500,000 barrels. Add to this, the consideration that the conditions which lead to purchases of flour in the United States for the bay, would also cause portions of the United States imports of flour, to go into the gulf, and consequently go through the canal. These 500,000 barrels would require a corresponding amount of tonnage; say for bringing down the flour, etc., 80,000 tons, and for taking back coal, gypsum, stone, etc., as before stated, a corresponding amount. As the tonnage is not statistically estimated, in regard to the matter of the return cargoes, it must be counted here. This gives us in all, 160,000 tons.

Flour can now be brought from Boston to St. John, for 12½ cents a barrel, and from New York at 15 cents. It costs 30 cents to bring a barrel of flour into the bay from Montreal. It is clear then that so far as the consumers in the Bay of Fundy ports, are concerned, the Ontario millers must either cut down their prices, owing to the high freights, or be at times undersold in the markets of the United States. This I regard as an important matter for Ontario, which great province has more interest in the construction of the canal. Our great North-west is also interested in it for a similar reason, and also owing to a fact connected with the grain trade, already alluded to, than the Maritime Provinces. On the other hand, the people of the Bay of Fundy ports are entitled to the same consideration in regard to cheap food, as the people on the banks of the St. Lawrence. They are also entitled to a share of the carrying trade of Canada, for which such large expenditures in the making of canals, and the deepening of the St. Lawrence, are being made, and very properly so. By the water through rate by the canal, there would be less waste of flour, (as compared with a railroad route) and less cost. It may be said that the flour which is sold in New York, Boston, etc., has generally come from the far west, with corresponding increase in price; but while it is true that the flour has come from the west, it has often to be sold without paying reasonable rates of transit, as proved by the fact that nearly one-third of the Maritime imports of flour come from the United States; the low water freights from New York, helping to produce this result. This strengthens the argument for the canal, as regards its advantages to Ontario, and also as to its sources of traffic, for the canal would invite the transit through it, of the western flour, as well as that of Ontario; and for the same reason, the Ontario millers in this case, having the advantage of a shorter line of transit, and

lower freights. The same remarks would apply to flour coming from our own North-west, as already hinted at in regard to grain.

Fish, through the canal: one of the many and great benefits to be conferred by the canal would be, that it would enable the people of the Bay of Fundy to go into the fisheries, a most profitable branch of industry, which is also the key to the West India trade. The fish are in the Gulf, while most of the bait is in the Bay; the people of the Bay are the great ship-building people of Canada; the population and the wealth are largely in the Bay ports as compared with the New Brunswick, Nova Scotia and Quebec Gulf ports proper; consequently it would be material for the people of the Bay to be enabled to go into the fisheries from which they are now entirely excluded; specially would this be the case when lumber and ships are depressed, for the more varied are the industries of a country, the better will be its chances of weathering financial and commercial troubles. To illustrate the fact, that the people of the Bay are those who build and man Canadian vessels, as compared with those of the Gulf. I invite attention to the tonnage statistics of the last year:—

SHIPS OWNED IN THE GULF PROPER.

	TONS.
Chatham.....	11,260
Pictou.....	28,921
Pugwash.....	1,476
Port Hawkesbury.....	1,960
Gaspé.....	1,922
Magdalen Islands.....	1,211
New Carlisle.....	1,830
Perce.,.....	232
Charlottetown.....	48,388
Total Gulf Tonnage.....	97,200

SHIPPING OWNED IN THE BAY PORTS PROPER.

	TONS.
Dorchester.....	2,511
St. John.....	263,401
St. Andrews.....	16,743
Sackville.....	826
Amherst.....	2,170
Annapolis.....	18,248
Digby.....	19,621
Londonderry.....	3,638
Maitland.....	5,010
Parrsboro'.....	12,517
Windsor.....	75,038
Weymouth.....	819
Yarmouth.....	134,070
Total owned in Bay.....	554,612

The poverty of the Gulf ports in shipping tells its own tale. Could these ports send their first lumber and agricultural produce through to the Bay and ports south of the canal, how long would their shipping remain in this miserable position? Could the ship-building, ship-loving people of the Bay send their tonnage into the Gulf, how long would their fisheries remain in their present neglected and disgraceful condition?

To shew the disadvantage under which New Brunswick labors for want of access to the Gulf fisheries, it may be stated that Nova Scotia, in 1874, exported to the United States \$1,142,570 worth of fish, and to the West Indies \$2,250,000 worth. The same year New Brunswick only sent \$229,000 of fish to the United States, and to the West Indies \$225 worth! It is, however, rather interesting to note that New Brunswick is going more and more into the fisheries, even under great disadvantages. In 1870, the N. B. exports of fish were valued at \$1,131,435; in 1871, at \$1,578,695; in 1872, at \$1,965,459; in 1873, at \$2,285,666; and in 1874, at \$2,685,793, an increase of about 130 per cent. in five years. Let the waters of the Gulf and the Bay be mingled—as they have in other ages—and the yield of the New Brunswick and other Bay port fisheries will be doubled or trebled in a single year.

The British and Spanish West Indies have an import trade of \$250,000,000 a year, and a corresponding export trade. The people of those countries want our fish in particular, and were one in a position to supply them with that article and take their produce proper, we could make many other exchanges to our mutual advantage, and obtain a share of one of the most enriching traffics in the world.

If permitted (and on the supposition that the connection to be made between the waters of the gulf and the bay is to be a canal and not a gut or a tidal river, a supposition which may, however, be negatived) there would also be a large traffic between the Bay and the Gulf by the United States fishermen, in search of bait and for other purposes, that being the most direct course to and from the gulf. The testimony of an ignorant fisherman, who would assert that he would not avail himself of this route, if it were open, would be incredible and unworthy of notice. He might as well contend for closing up the Gut of Canso or the Suez Canal.

In canned, dried and pickled fish there would be a large traffic through the canal, as well as a considerable traffic in fresh fish seeking a through water route to market, without repacking, etc. The canal would also enable the fishing season to be greatly extended.

The imports of merchandize from the Upper Provinces to the Bay of Fundy, which are increasingly large, would come by the cheap route of the

canal, an object of great importance to the Upper Provinces as well as to their Maritime customers. As an illustration of the advantages of a cheap water rate to the Upper Provinces, I may mention that I am now bringing printing paper from Montreal by rail and water or water and rail at \$8 a ton freight, whereas I can bring similar freight from England direct at \$4 a ton and from Boston at less than half that rate.

My view of the general advantages of the canal and its great natural importance are very admirably expressed in a statement made by the Hon. John Young before the Dominion Board of Trade, as printed in their Report issued in January, 1871. Mr. Young said :—

“ But there can be no doubt that the inland propeller can descend the St. Lawrence and go direct to Halifax, in Nova Scotia; and this fact brings up other important considerations. Among projected canals there is the Baie Verte Canal, to connect the Bay of Fundy, on the Atlantic, with the Straits of Northumberland in the Gulf, and the Murray Canal, to connect the Bay of Quinte with Weller's Bay on Lake Ontario. If the Baie Verte Canal is possible of construction, the work will be highly important, and, in its results, of a truly national character in all its aspects. The City of St. John, in New Brunswick, as well as all other places in the Bay of Fundy, would be brought 430 miles nearer Montreal, Quebec or Toronto for the water-borne vessels, than at present; and, if such a canal were constructed, the propeller of 900 tons sailing from Lakes Superior, Michigan, or Ontario, could proceed direct to Halifax or St. John with Western States or Canadian products. If the navigation of the River Richelieu were improved, and a connection made from it into the Caughnawaga Canal, then the 900-ton propeller could load coal, fish, &c., as a return cargo, and, without breaking bulk, sail into Lake Champlain, to meet and facilitate the manufacture of iron from the inexhaustible deposits of ore in the State of New York, on the west side of that Lake.

It would be difficult to point out all the advantages which would result to Prince Edward Island, Nova Scotia and New Brunswick, by the construction of the Baie Verte Canal. If the 900-ton propeller could deliver western or Canadian products at Halifax or St. John, these places would thus become cheap depots for such products. Assorted cargoes of fish, hoops, shooks, lumber, &c., could be made up at these ports for the West India Islands and South America, and could bring back return cargoes from these countries of sugar, coffee, hides, tallow, etc., to be again re-shipped as return cargo to Canada and the Western States by the inland propeller, and thus be delivered at less cost by such means than by any other possible route.”

I find my views on another point or two very admirably represented by W. J. Patterson, Esq., in his report of the commerce of Montreal for 1869.

There is probably a misprint in the extract, as Mr. Patterson makes the distance a vessel would have to traverse in going from St. John to Shediac, by the Gulf, 100 miles, the actual distance being about 160. Mr. Patterson says:—

“ The value of the proposed canal, in more intimately connecting all the Provinces, must be evident to all who have examined the geographical situation. At present there is little or no community of interest between the portions of the Provinces on the Bay of Fundy and those on the Gulf,—although separated by but a narrow strip of land. For want of a few miles of canal navigation, a profitably development of the fisheries by the people of New Brunswick and Nova Scotia is seriously hindered; the fishermen of Cape Ann, in Massachusetts, being nearer the valuable mackerel fisheries of the Gulf of St. Lawrence than the Canadian fishermen who live on the Bay of Fundy. By means of the proposed canal the waters of the Bay and Gulf would be united, and the fisheries brought within the reach of the fishermen of all the Provinces;—passing easily, so to speak, from one sea to another as the fishing season might render necessary.

In brief, let it be borne in mind that the distance from the port of St. John on the Bay of Fundy, to the Gulf at Shédiac is not much less than 600 miles, which the proposed canal would reduce to 100; that the distance from St. John, N. B., to ports in Prince Edward Island and Newfoundland would be greatly shortened, and a new trade opened up on that line; that a short route to Halifax from Montreal and Quebec would be obtained by steamers passing through and landing cargo at Windsor; that ultimately the chain of inland water communication might be completed from Windsor to the seaboard at Halifax; and, viewing the question in the light of the foregoing statements, there can be very little difficulty in concluding that the “ Baie Verte Canal” is necessary and national in all its aspects.

Taking the sources of traffic for the canal that I have so imperfectly indicated, and though I have passed over many, I feel confident that it would be a very moderate estimate of the traffic with which the canal would begin with to set it down at from \$500,000 to \$600,000. Like the Suez, the Welland, and other canals, it would go on increasing with the increase of the population, commerce and wealth, which it would develop. Much more would this be the case if the canal or cut could offer some special advantages as compared with those canals.

I am of opinion also that directly and indirectly the canal would be more than equal in advantages, in proportion to its cost, to the Welland and other canals of Canada, of which the country is so justly proud, though provided for populations which own comparatively little tonnage in comparison

with those on the Bay of Fundy. The Premier, in a recent speech at Sarnia, referred to these canals, as follows :—

“ There is the great canal system. We have derived a revenue from our canals approaching to half-a-million of dollars every year, but the expenses of management have swallowed up half of this. The Welland Canal would pay a small interest on the amount invested ; but the other canals, the St. Lawrence, the Ottawa, and others, would not nearly meet their working expenses. Still, with the enlargement now going on, we hope to carry such a volume of trade, that we may not only benefit the carrying trade and milling trade of our own country, but may be able to transport produce from and to the Western States through our own waters. With this object in view, we have been endeavouring, as fast as possible, to get these great works completed, which will enable you to have a vessel brought from the ocean, 278 feet long, by 44 feet beam, and drawing 14 feet of water. (Cheers). When completed, I have no doubt these works will produce a revenue to some extent, giving a little interest on the investment ; and, in the meantime, they are affording employment to a large number of our people.”

In these remarks, I have, for the most part, assumed that the canal would be one of the character described by some of the chief engineers, and similar in cast ; but the researches of some of the engineers, confirmed by geologists, as to the existence, at a remote period, of a tidal river between the bay and the gulf, suggest the propriety of enquiring into the possibility of opening up the river, and making not a canal, but a gut or tidal river. The Commissioners have, no doubt, received complete information on this interesting subject. In this connection, however, I would submit for the information of the commissioners and the government, a map of 125 years of age, showing that during the French *régime*, water communication was kept up between the gulf and the bay by means of two rivers, between which there was only a short portage. One of these ran into the gulf ; the other into the bay, and the course of the latter is in part coincident with the course of the ancient river, indicated by geological phenomena. This map, for the use of which I am indebted to Mr. Hannay, of the corps editorial of the *Daily Telegraph*, was prepared by the French engineer, the Sieur Franguet, who, in 1749-50, was employed in devising a scheme of defence for those portions of Acadia and the Island of St. John (P.E.I.), not occupied by the English. The map may be seen in the Bureau of Marine, in Paris, and a copy is in the Ottawa Legislative Library, obtained from Paris some years ago. The map shows rivers which are not now in existence, and, taken in connection with the facts above alluded to, is mainly important, as suggesting that, as geology teaches, that a great tidal river once connected the waters of the Gulf and the Bay ;

and as in comparatively modern times, a water-way was available almost from Gulf to Bay, and then utilized for military purposes, so now under the auspicious confederation of these provinces, it ought not to be an insuperable task for our engineers, our statesmen, and our people generally, to open up the ancient river, and consecrate it to the purposes of commerce and of peace; to employ it as Judge Haliburton suggested, in cementing that great union, which he so much desired, but which it was not given to that broad-minded and distinguished Nova Scotian to see actually accomplished. I need hardly request that particular care shall be taken of this map, the more particular history of which could be furnished in detail if desired.

If in face of all the facts suggested to the commission, any one can undertake to affirm that the union of the waters of the Gulf and the Bay, would not be warranted, then he will have done much more than condemn the project under consideration. He will have shown that the construction of railroads connecting the interior provinces with the Atlantic sea-board; connecting these provinces with each other; connecting even the gulf and the bay, is a gigantic folly; and that confederation itself, whatever it may be as a political contrivance, is commercially, a "mockery, a delusion, and a snare," seeing that there is not trade enough between the chief sections of the Eastern Provinces to justify their being connected with each other, by a short water-route of moderate proportions.

AMHERST.

W. H. ROGERS, Amherst, Inspector of Fisheries:—I have been engaged in business in this country for some 15 years, and from having lived in it since boyhood, am well acquainted with the various localities.

The export trade from the Bay of Fundy to the United States, and Great Britain, would not be advantaged by way of the canal, inasmuch as in the one case the route would be longer, and in the other the class of vessels would be too large. Neither would the trade to the West Indies or South America be benefited by the construction of a canal; flour to this place is brought from Montreal by steamer to Shediac, and from thence by railroad here; I consider that a canal is required in the interests of the country even at a cost of \$8,000,000. There are many reasons in its favor—it shortens the distance by way of the St. Lawrence and Gulf ports to St. John and Boston; it would open new branches of trade with the United States, such as in lumber, free stone, also would be largely used by fishermen who would take certain kinds of supplies, such as barrels, farm produce, etc. on the line of it. At present trade with the United States, in minerals, coal, stone, as well as lumber, is very limited

in consequence of the high duties now existing, and its future increase depends largely on reciprocity with that country.

I am not acquainted with the navigation of the Bay of Fundy, nor with that of the Gulf; but I am with that of the Straits of Northumberland.

ARTHUR DAVISON, Esq.—I am engaged in general business; have resided here the last five years; I buy and sell flour; get it from Montreal by the Gulf Port Steamers to Shédiac, and from thence by railroad here; at present I pay 40c. per barrel for flour from Montreal; 15½c. is the railroad proportion, and the 24½ to the steamers; three years ago when competition existed for about a month, the freight was 30c. per barrel; the highest rate I have ever paid was 75c. in the fall of the year, but the ordinary rate is about 40c. per barrel; my opinion is that even if the canal was built, flour would come over the present route (*via* Shédiac) cheaper, than by it with tolls; I have no knowledge of the navigation of the Bay of Fundy; the construction of the canal would benefit certain portions of the Maritime Provinces, but, as a business man, looking at it as a commercial transaction, I do not think it would pay; I know a captain who has navigated the Straits of Newfoundland for several years, who now navigates in the Bay of Fundy; he prefers the latter.

JAMES H. HICKMAN, Esq.:—I am engaged in the lumber business; send deals to England in vessels from 900 to 1000 tons, drawing over 18 feet water. I am of opinion that if the canal was built it would be of great advantage to the country at large, as it would benefit the coal mines, plaster stone quarries, &c., all which could be shipped by such canal. So far as the trade of coals, stone, to the United States is concerned, it would flow through the Bay of Fundy as it is the nearest route; but for the Canadian trade by the St. Lawrence, in these articles the construction of the canal would enable the shipment of these articles to be made there, and besides it would open new sources of trade generally.

SACKVILLE.

CAPTAIN TIMOTHY OUTHOUSE, Master Mariner:—Been here and have been master of vessels since 1848, and am well acquainted with the navigation of the Bay of Fundy and of the American shore, but am

not familiar with the Gulf navigation, with shore of New Brunswick or United States. A master of a ship not acquainted with the Channel from the proposed outlet of canal on Bay of Fundy would require a pilot for at least six miles, after that distance, if the wind was fair, he would get along, but if contrary he would have to come to anchor on the flood tide, that is for 25 miles below the six above stated. Below the 25 miles the width of the Bay enables vessels to proceed by tacking; if the wind was fair the vessel would proceed without interruption from the outlet of the canal. The prevailing winds during the season are from South West—that is a head wind going out of the Bay. Fogs are prevalent in the Bay of Fundy, especially in July and August, but not at the upper end where the canal begins. The principal difficulty to the navigation is between Brise Island and Grand Manan, where there are some rocks; apart from this I do not believe there is any difficulty to the navigation of the remainder of the route.

As I have already stated, I have no personal knowledge of the navigation of the north coast of New Brunswick. The ships carrying deals and lumber to Great Britain from their size, could not go through the canal, vessels trading to the West Indies, and South America, would not go that route either; could not say what advantage it would be to vessels coming down the St. Lawrence.

C. BOTTOMHOUSE, Shipbuilder:—A vessel of 350 tons, according to its construction, would draw loaded from 14 to 16 feet; one of 500 tons about 16 feet; and one of 1,000 tons 21 or 22 feet. No vessel from St. John would go by that route to Great Britain, West Indies, or the United States, the distance being less by the mouth of the Bay of Fundy; I have some experience of the navigation of the Gut of Canso, the North Straits, the south side of the United States, and of the Bay of Fundy. The mouth of the latter is obstructed by the Wolves, Grand Manan, and ledges of rocks between the western part of Nova Scotia and the American shore; the distance between that and the latter is about nine miles; I have lost two ships in these waters, one on Long Island, and the other on Cape Sable; I do not consider there is any danger on those Islands; any stranger coming to or from the canal, would require a pilot. Even now, our own people take pilots after they get within thirty miles of Sackville. The prevalent wind in summer months is southwest, which is fair coming in, but foul going out of the Bay; during the summer months fogs are prevalent, not so much at the head as below the Bay. I have

waited for days at St. John, bound westward, on account of the fog; when you are clear of Cape Sable, no danger is apprehended by vessels bound to England or the West Indies. The vessel I lost on Cape Sable had sailed from St. John for Great Britain, that was in 1872 or 1873; the other was from Great Britain to St. John, and was lost on Long Island, in a thick fog, although the Captain was one of the most experienced in the trade as a master mariner.

CAPTAIN RICHARD LAWRESON, Amherst:— Have been a ship-master for 15 years; now agent for Black & Co., Glasgow; am acquainted with the navigation of the Bay of Fundy and the Ports of the Maritime Provinces as far as Richibucto; also with the West Indies, by the United States; the vessels trading from the Bay of Fundy to Great Britain are generally laden with deals or timber, and while some of them are of a large size, drawing from $16\frac{1}{2}$ to $17\frac{1}{2}$, loaded with deals, which could not go through the proposed canal, there are other vessels of smaller size in the same trade drawing 14 feet and less that could go through.

I have known vessels of 50 tons register sail from the Bay of Fundy to Europe laden with deals; the great bulk of the trade with Europe is carried in large ships; the trade to the West Indies, from the Gulf Ports or the Bay of Fundy, would not use the canal; the prevalent winds in the Bay of Fundy are south-west and west-south-west; these winds would be fair for vessels coming into the Bay, but foul going out of it; the Bay of Fundy is a bold shore, and from the outlet of the proposed canal there would be no necessity for strangers to take a pilot; there are no doubt fogs in the summer months that interfere with navigation of the Bay, but they generally clear up some time in the 24 hours; I think the navigation of the Bay of Fundy safer and superior to that of the Gut of Canso, and the southern side of Nova Scotia; I would sooner go through the canal than by the Gut, on account of fogs, &c., in the latter; as regards the light fishing vessels, I believe they would go through the canal to their fishing grounds, and would return the same way in the Fall, for the following reasons:—In the first instance, as south-west or west wind would be fair wind to take them to their grounds, and in the other, deep laden fishing vessels don't like going round Cape North or Gut of Canso, the harbor being hard to get into on the southern side of Nova Scotia; I have not sailed a vessel since 1866; I am personally aware of the transshipment of fish on steamers at Prince Edward Island or Gut of Canso for Boston and the United States.

R. A. CHAPMAN, Rockland, New Brunswick :—I am engaged in ship building and ship owning; am not a seaman, nor have I had any experience in the navigation of the Maritime Provinces.

I have, from my knowledge of the reports from masters of my vessels, and believe that the Bay of Fundy is a safe navigation; it is true there are fogs in the summer months, but the fog whistles and other facilities lessen any danger of these fogs; if the proposed canal was constructed, a stranger to the bay would require a pilot, but the insurance would not be more by the canal route than by the Gut of Canso route; the great bulk of the trade with Great Britain from the Bay of Fundy, is carried on in larger vessels than could go through the canal, especially from St. John, but for vessels drawing 14 feet from the head of the bay, I think, would use the canal; for the trade of the West Indies or South America from the Bay of Fundy, the canal is not required; I think, however, that if the canal was built, a trade would grow up with Ontario and Quebec; vessels from the West Indies, loaded with the produce of these islands coming to St. John, would proceed to Montreal and Quebec, and bring back cargo from thence in return to St. John, being in vessels adapted to carry out lumber from St. John to the West Indies.

I import flour from Canada, Montreal, and do so *vid* Shédiac; the cost of through freight from Montreal to Dorchester is from 25c. to 55c., the latter rate being in the fall of the year, I have never had any *vid* Portland and the Grand Trunk Railway, except once in winter when the rate was 95c. Of the 25c. to Shédiac, 15c. is given to the ship from Montreal, and 10c. to the railway from Shédiac to Dorchester; if the canal was built I doubt if the rate of freight from Montreal to ports at the head of the Bay of Fundy, on the railway, would be materially lessened by steamers drawing 14 feet, but would be somewhat by small sailing vessels, even with tolls and other charges on the canal.

I am not acquainted with the fishing business, but believe that with the canal a trade in fishing would grow up by the population at the head of the bay; I am aware by reports that the estimated cost of the canal is \$8,000,000; I do not think for a moment that the business at present or for years to come, will pay the interest on the cost, but I think that indirectly it will lead to foster an intercolonial trade which does not now exist.

THOMAS McKELVIE, resident of Rockland, engaged in stone

quarries as manager, have been so engaged for 10 years ; the stone is that called olive free stone ; it is principally taken to New York and Boston ; it pays a duty there of $1\frac{1}{2}$ dollars per ton, and sells there for \$15.00 ; the freight from Rockland to Newport averages \$3 $\frac{1}{2}$; the trade in this stone would be benefited by the alteration of the duty, the number of ships loaded in average years is about 25, or about 5,000 tons, but the proposed canal for this trade is not required. If the canal was built I think my trade could be increased and opened with Canada, but no trade at present exists, I have read over Chapman's evidence, and quite agree with him in the main.

NOVA SCOTIA.

PICTOU.

JAMES PRIMROSE, Merchant, Pictou :—I have been long engaged in the trade of Pictou, say for fifty years.

The chief export from the northern and eastern coast of Nova Scotia, and the Island of Cape Breton, is coal ; since the repeal of the Reciprocity Treaty, this business has greatly fallen off, and unless the Treaty is renewed in a shape to revive the business of export in coal, there would seem to be but small chance of the proposed canal being of much utility to the northern and eastern coast of Nova Scotia and Cape Breton.

Recent experience at Pictou has shown that our coal for the future is likely to be carried in steamers chiefly, and the number of our sailing craft in that trade greatly reduced, the description of steamers now monopolizing the trade in coal to the St. Lawrence being of large capacity, and drawing, when loaded, from 16 to 20 feet and more, would be too large for the proposed canal ; freights by such large vessels will be less than by small ones.

The facility of getting coal for the use of these steamers is so great at Pictou and Cape Breton, that it is fair to suppose steamers will in future have nearly a monopoly of the coal business ; I believe at present that steamers carry nine-tenths in round numbers of the coal now sent from Pictou to the St. Lawrence ; these steamers

bring back from the St. Lawrence flour and general merchandise, and deliver it at Halifax and other places, by rail from Pictou, at much lower rates of freight than it has been heretofore carried by sail.

I question very much whether, even if the proposed canal to connect the Northumberland Straits at Baie Verte, were opened, steamers engaged in carrying coal would adopt that route, even if it were of a capacity to admit of their doing so, as the navigation of the Bay of Fundy, in consequence of its tides, and of its being nearly always enveloped in fogs during the navigable season, would add to the difficulty of navigation; besides, Baie Verte has had the character of being a dangerous roadstead.

I am of opinion that the expenditure of so large a sum of money as the canal is estimated to cost (and it is likely to cost a great deal more) from the difficulty likely to attend its construction, and the dangerous navigation, would be unwarranted under the circumstances. Cheaper transport would be by railway, and I think, would be productive of much more benefit to trade generally than the canal, it being more certain and expeditious. An expenditure of a much smaller amount, the improving and deepening of the various harbours of the Maritime Provinces, would be much more beneficial to the trade generally. We have little or no trade with the West Indies, or South America, direct from Pictou.

It is also proper for me to say, that the tolls of the canals, for vessels using it, would tend to make its use ungeneral, even if reciprocity with the States was renewed. I think steamers would go by the Straits of Canso in preference to going by the canal.

The small coasting vessels of about 100 tons and under might use the canal, but I am apprehensive that such coasters generally, considering the dangers of navigating the Bay of Fundy, coupled with the tolls, would prefer going by the longer, or present route.

The steamer "Miramichi" I consider about an average size; that vessel draws, when loaded, 12 feet.

The trade in coal with the United States during reciprocity, was altogether conducted by sailing vessels. The bulk of the coal trade with the States would, I think, be carried by steamers. Ports requiring small quantities at a time, would probably be supplied by small sailing vessels. The average time of a sail vessel to Boston and New York

with coal, varies from three to five weeks, while the voyage could be performed by steamer in about ten days. If fogs on the Bay of Fundy did not exist, or were less prevalent, the canal would now be used; but, as regards fogs on the Bay of Fundy, I speak from reading, rather than from a personal knowledge.

CLARENCE PRIMROSE.—I have heard the above statements made by my father, and have nothing to add thereto; I concur in them all.

CAPTAIN WM. CRERAR:—I have not given much attention to the subject of the proposed canal. There is very little or no trade between this port and the Bay of Fundy. The trade with Boston and New York prefer going round the southern route, and would continue to do so, even if the canal was built; that is my opinion. The impression in my mind is, that a stranger going into the Bay of Fundy with a ship, could not keep his reckoning, unless he was well posted in regard to tides and currents. There is no trade to speak of between this and the West Indies and South America.

J. W. CARMICHAEL, M.P., Ship Owner.—I have given much consideration to the subject of the proposed Baie Verte Canal, and I am opposed to its construction for the following reasons, viz:—

1st. It is a difficult work, presenting great engineering difficulties; the rise being 48 feet at one side, and 6 feet only at the other.

2nd. Its cost is estimated at \$8,000,000; there being no similar work in existence, it will likely cost more than that. The interest alone on this amount would necessitate very heavy tolls, and with the necessary detention, and the difficulty of navigating the Bay of Fundy, I have no doubt whatever but that the present routes would be preferred; even if the canal was built, no trade from this port would go through it. This port will not be benefitted by the construction in proportion to the outlay, and there are other improvements required in the Province of far greater importance, and which should be undertaken in preference to the canal, such as railroad branches, harbour improvements, &c. A canal with 15 feet of water would be inadequate for our trade; our class of ships draw 17 to 18 feet. Coal is shipped to

Montreal by steamer, at least nine-tenths of it. There is a bar between Pictou and Albion loading grounds, over which there is only 18 feet at high water; vessels sometimes ground on it. This should be removed by dredging. It is difficult for me to see where the traffic is to come from which will render the construction of this canal necessary. I am confident that seamen will declare that open waters south of New York will be much shorter than by the proposed canal. The Intercolonial Railroad from Shédiac has very much increased the traffic with the Upper Provinces, and when it is completed it will add to the facilities much more.

R. S. GRANT, Esq., Chairman Harbour Commissioners:—I have heard the above statements made by Mr. Carmichael, and I entirely concur in them. The point that would test the value and utility of such a canal for Pictou is the coal trade with the United States; and I am satisfied that a very small proportion of the coal going there would pass through the canal in the best season of the year, and in the fall and spring it could not be used, in consequence of ice, which forms in the fall and holds on in the spring; at these seasons the passage would be taken *viâ* Strait of Canso, in preference to going north through the canal. I cannot understand how there can be the slightest advantage of coal vessels going to the United States; owing to side winds and difficulty of navigation in Bay of Fundy, there must of necessity be detention, which ship-masters will avoid.

WM. GORDON, Esq., Merchant:—I concur fully in the statements made both by Messrs. Carmichael and Grant, and do not see that I have anything to add further on the subject.

P. G. SINCLAIR, Esq., Merchant:—I have followed the sea for upwards of 25 years as seaman and master up to the last three months, when I then engaged in business. I am well acquainted with the navigation in the Maritime Provinces, and in the Bay of Fundy. The proposed canal to connect the Gulf of St. Lawrence with the Bay of Fundy, would entail a very heavy expenditure. The phenomena of the great rise on our side and of a lesser on the other does not occur elsewhere. The

contemplated depth of 15 feet, from the gradual increase of size of ships would prove insufficient before long. For instance a 500 tons ship, according to present mode of construction, would draw 18 feet loaded, and it no doubt would be more advantageous to employ a larger ship say of 750 to 1000 tons, which would draw from 20 to 21 feet. I do not think that if the canal was built it would be of any advantage for either the United States, West Indies, or South American trade. Again, if built, I am of opinion as a seaman, that preference would be still given to the present natural routes, inasmuch as it would be shorter to South America, and ports south of New York, besides being clearer. In the Bay of Fundy the prevailing wind in the summer season is from the south, which brings on fogs. Pilots would have to be employed, ships would have to pay tolls, and the Channel in some parts is intricate. I believe tugs would be required to be used both at the Baie Verte and on the Bay of Fundy outlet. I do not think that the small American crafts would pass through the canal as they would have to pay tolls, and from many places on the fishing grounds they would find it shorter to go by the Gut of Canso. On the whole, I consider that there would be no advantage whatever to the trade of the Province by the construction of such a canal.

I have no doubt that transport by sea can be more cheaply done in a large than in a small craft. I am aware that it is the practice for American vessels to keep on the fishing grounds the whole season round. They come to Charlottetown or Gut of Canso to deposit their loads, which are shipped from thence to the United States by large steamers, after which they (schooners) return at once to their fishing grounds for another cargo. Even with the saving of distance by the proposed canal from Pictou to St. John, Boston and New York, I am clearly of opinion that masters of vessels would prefer the natural routes, for the reason that during the summer season the prevailing winds on this side of the coast are westerly, and such wind would be fair to go by the Canso route.

C. DWYER, Ship Broker and General Agent:—Have been at sea ten years of my life; I have a thorough knowledge of the Gulf St. Lawrence, Bay of Fundy, and of the American coast; I have given the matter of the proposed canal some consideration; I do not believe

the return from it would be at all proportionate to the outlay on its construction. There are very few of the vessels trading here of so small a draught as 14 and 15 feet, and therefore could not be benefited by the canal; a vessel of 500 tons will draw 18 feet, and one of 750 or 1,000, from 20 to 21 feet; there are a good many reasons to show why even fishing crafts would not use such a canal. I have been engaged as a fisherman, conducting fishing voyages on the principal grounds in the Gulf of St. Lawrence and the coast of Labrador, for five or six years. The principal reason is that there are no fishing grounds of any importance within 200 miles of Baie Verte, the bulk of fish taken for exportation is procured round Cape Breton Island, Magdalen Island, and the north-east portion of Prince Edward Island; from all those places, the natural and more direct route is through the Gut of Canso; the vessels from these fishing grounds discharge their cargoes as caught here at Charlottetown and Canso, which cargoes are again loaded in large steamers for Boston and United States ports. I have in this way, as agent of the Boston Line of Steamers, to ship to-morrow, a quantity of fish from the Bay du Chaleurs. As regards trade with West Indies or South America to pass through the canal would absolutely increase the distance, as after passing through the Gut of Canso the course is south to either of these destinations; whereas, to go by canal would be making a westerly passage, and then have to bear south when out of the Bay of Fundy; the narrowness of the channel of the bay, on leaving the proposed canal, would render the navigation very dangerous, there being almost constant fogs during the summer. The steamer "Miramichi" draws 12 feet when loaded, but she is a passenger boat; all the other freight steamers draw 18 feet. A good deal has been said and written, as to the great advantages of the canal to the trade of Prince Edward Island and Nova Scotia, but I have never been able to realize the truth of this, for this reason: the parts of Prince Edward Island where the largest shipments are made from, are in the north and east portion, from which points Canso is nearer and more direct than the canal, while Nova Scotia has no interest in the canal, whatever. In answer to the question, whether the western parts of Nova Scotia on the Bay of Fundy, would not be benefitted by the canal, I have to say that to my knowledge, nothing would induce a captain of a ship to use the canal to or from these ports, in consequence of the persisting fogs, and uncertain

currents, for there is no more dangerous navigation in the whole of North America, and this I say from my own experience. I deem it absurd to suppose that anything from Newfoundland would be shipped through the canal, as the distance thereby would be very much greater. In going from Ports of Newfoundland to St. John, N.B., or State of Maine, there would be a saving of time and distance by the present routes; steamers are fast superseding sailing vessels in these waters.

I am agent for chartering ships as well as for effecting insurance; I cannot take freights to St. John or the Bay of Fundy at the same rate as to Boston or New York.

The rate to Boston is \$2.25 per ton, while I cannot get any to St. John at \$2 50 in consequence of the dangers of navigation; the same remark applies to St. Andrews and St. Stephens. Freight from Boston is carried by steamers, there is no return freight by sailing vessels from St. John; steamers could not sustain themselves in the trade without having a part return cargo. I had to pay 60c. per ton for ballast at Boston.

MR. S. H. HOLMES, M.P.P.:—Knows nothing personally on the subject. Has not given it the consideration it merits.

HALIFAX.

CAPTAIN DAVID HUNTER:—Am Port Warden; have been at sea some 36 years; am well acquainted with the coasting trade of Nova Scotia and New Brunswick; in the trade to the West Indies and Newfoundland for 25 years.

From the general coast of Nova Scotia, the route which would be chosen by steamers would be through the Gut of Canso, not by the proposed canal.

The Bay of Fundy with its currents and fogs during the summer season, as well as existing rocks, would in my opinion render the latter route dangerous. There would be no advantage gained to Nova Scotia by the canal in any trade from any of our ports to or from the West Indies. There is one vessel trading between Halifax and St. John of about 120 tons, which sails about every fortnight. A small steamer also runs between this latter port and Bay of Minas,

Digby and Annapolis—but this trade is not effected by, nor does it require the proposed canal for its feeding. There is scarcely any trade whatever between the North shores of New Brunswick, Newfoundland, and the West Indies that would require to go through the canal. Vessels from Pictou going to South America and the West Indies, prefer going through the Gut of Canso as it would be much safer in every respect to go by that route. The tendency of late years have been to increase the tonnage of vessels, there being a greater economy in sailing large than small vessels. The draught of a vessel of 500 tons would be from 18 to 20 feet, and the canal for such craft would be useless. I could not from my experience and knowledge of the trade recommend the construction of the canal at an estimated cost of \$8,000,000, nor do I see that any advantage could be derived from it to an adequate extent. Vessels from the United States that go to the Straits and Gulf to fish, now go through the Gut, and would not use the canal, for the reason that they have to come to the south shore for salt, bait and other supplies, and therefore go through the Gut. A sailing vessel leaving Cape Ann or Gloucester, would get down to the fishing grounds by the Gut quicker than she would through the canal via the Bay of Fundy. The prevalence of the wind in summer would be fair going out from the north shore of Nova Scotia through the Gut of Canso, but to make the Bay of Fundy and canal from Pictou the wind would be contrary during the same period.

GEORGE P. BLACK, Esq., Agent Grand Trunk Railway and New England and Nova Scotia Steamship Company for the last 10 years:—The freight of flour from Montreal *via* Grand Trunk Railway to Portland, and from thence by steamer to Halifax is, in the summer season, 40 cents per barrel; the lowest rate of freights from Montreal to Portland I have ever known was 20 cents a barrel, but generally the rate ranges between 30 cents and 40 cents, that is if its destination is Portland; flour from Canada to the various ports of Nova Scotia on the Bay of Fundy, is carried from Portland in sailing vessels, who take return cargoes of plaster. Including Halifax and the ports of Nova Scotia on the Bay of Fundy, the receipts of flour by the Grand Trunk Railway, *via* Portland, was 150,000 barrels in one year; of this amount only about one-third is received in summer (6 months), while the remainder is brought in the winter

months. The flour trade is about 50 per cent of the trade carried over the Grand Trunk Railway in this Province, the other 50 per cent being pork, butter, grain, and other produce, also all description of manufactures; the above trade could not in any way be affected by the construction of the proposed Baie Verte Canal, for the reason that the freight now paid is less than it could be by vessel from Montreal by steamer or vessel to Baie Verte and thence, through the canal, to any destination on the Bay of Fundy.

Being agent of the New England and Nova Scotia Steamship Co., I am able to say that no benefit whatever would result to the trade between Nova Scotia and the United States by the construction of the canal, in as much as the present route is more convenient and shorter. The steamers carrying fish, and trading between Prince Edward Island and Boston, are of about 1,000 tons, and they always call at Halifax on their way to and from Boston. I have examined the trade returns (official) for 1874, now shewn, and in the total exports of \$7,183,007, the growth and produce of Nova Scotia to various countries shewn as stated, I have to say that no part whatever would be affected by the proposed canal. I have also examined the same returns of imports, amounting to \$10,907,330, from the various countries named, and have to declare that, in my opinion, no part of them could be carried through proposed canal if built.

JOHN DOULL, Esq., Merchant:—Have been in business for the last twenty-five years; am acquainted with the general trade of the country; considering the cost of the proposed canal from Baie Verte and Bay of Fundy, I am from my experience obliged to say, that no equivalent would be received to warrant the outlay; considering that such a canal would be open only six months in the year, and on the upper part of the Bay of Fundy in coming in and going out of canal there would be a delay of twelve hours a day, the result would be, that its available capacities would simply extend three months in the year.

CAPTAIN GEO. MACKENZIE:—Am a Steamboat Agent; have been 29 years at sea as a seaman; if I was in command of a vessel from the St. Lawrence to the Bay of Fundy, considering the time to be taken to go through the proposed canal, as well as the detention that might arise from the half tide canal, and the more dangerous navigation of the Bay of Fundy, I would prefer the route by the Gut of Canso. As to Halifax, and other ports on the south coast of Nova Scotia, no question

whatever arises as to the Gut of Canso being the best that can be used. The distance from the St. Lawrence, to South America, or the West Indies is much shorter by the Gut of Canso, or Cape North, than it would be by the canal.

I am acquainted with the navigation of the Bay of Fundy, and with its strong currents and fogs; I do not think it safe, especially to strangers who would require pilots. In the event of a canal being built, tugs would have to be used at both ends, on Baie Verte and in Bay of Fundy; tolls on the canal would also act unfavorably to its being used.

J. S. McLEAN, Esq., wholesale grocer:—I have been in business some 20 years; I have given much consideration to the subject of the proposed canal; it is only fair to say that I am largely engaged in business with north shore of New Brunswick, and should the canal be built it would probably improve it. Still I have been opposed to such canal on principle, and cannot see how, in any way, its construction can benefit Nova Scotia. \$8,000,000 is a very large sum, and, in my opinion, could be better spent on other works in the Maritime Provinces; various improvements are required; a railway bridge at St. John is one of them, so as to connect our railway system with that of the United States. The cheapening of transport that would follow would be of general benefit.

DANIEL CRONAN:—I have been engaged in shipping and general business with the West Indies and Gulf Ports for the last 43 years; I have no business that would be injured by the construction of the Baie Verte Canal, but from my experience and the knowledge I have of the business of the Maritime Provinces, I consider its construction would be a useless expenditure of public money; it would not benefit trade with the West Indies, from the Gulf or North Shore Ports of Nova Scotia and New Brunswick, for all would prefer using the Gut of Canso or going round Cape North, as circumstances may direct, to using the proposed canal; the same remark would apply with greater force to the trade of South America, as it is advantageous for ships to sail out along way to the east. From my knowledge of the American fishing vessels, I am quite sure they would not take the canal in preference to the present routes. I am a director of a Marine Insurance Company, and if I was asked the rate *via* Canso or the canal, I would say much less by the Canso route than by the canal from Gulf Ports, in consequence of the increased dangers of navigation by strong currents and fogs in the Bay

of Fundy. As far as the St. John trade is concerned, I would say that a railroad from Shédiac to St. John is sufficient for its purposes.

In my opinion there is no prospective increase of trade that would lessen the conditions that at present exist adverse to the canal.

JAMES B. MORROW, Esq.—Have been engaged in general business for some years; I am a partner in the Cunard Co., and agent also for the Allan line of steamers. From a general knowledge of the trade it is difficult for me to see how the construction of the proposed canal could be of any benefit to Nova Scotia, particularly for vessels of only 15 feet draught.

At present, trade is much paralysed—for some years past a large business has been carried on between Montreal and South America. The vessels in this trade are of a large class, and they call at Pictou or Cape Breton mines to take in coal for Montreal, where they load lumber, etc.; such vessels, however, are too large for the depth of water in the contemplated canal. The size of vessels has been on the increase of late years, it being more economical to carry in a large ship than in a small one. I am of opinion, that the navigation of the Bay of Fundy, with its currents and fogs, would not be as safe as that of the gut of Canso, more especially to strangers. I have personal knowledge of the navigation of the Bay of Fundy. In coming through the Gut of Canso from the north, the fog is apparent outside at sea, but it is quite clear in the Gut;—in the Bay of Fundy it would be the reverse. Seamen accustomed to navigate the Bay of Fundy know all its difficulties, and do not regard its navigation as particularly dangerous, but to strangers it presents great difficulties.

The amount of trade which would go through the canal, if built, appears to me to be so small that it would be highly impolitic to construct it at such a cost as at the estimated amount of \$8,000,000.

WILLIAM STAIRS, Esq.—Have been engaged for many years in general business in this city. I have given a good deal of consideration to the prospect of building the Baie Verte Canal. It has been a difficulty with me to see advantages to be obtained corresponding with its great cost. I am not intimately acquainted with the navigation of the Bay of Fundy, and probably its dangers, which many refer to, are over-rated by estimating something they know little about; those that know the least of it are the most frightened.

I do not see from the exports and imports of Nova Scotia, how the

construction of the proposed canal could affect them, but one of smaller dimensions might prove advantageous to local trade, and perhaps in half a century a larger one might become necessary.

CAPTAIN LEWIS ANDERSON, Inspector Marine Insurance Companies :—Have been at sea since 1833, and Master since 1843 to 1870. I am well acquainted with the navigation of the St. Lawrence below Quebec and round Nova Scotia; I am intimate with the West India and South America trade; I have considered the project of a canal to connect the Gulf with the Bay of Fundy; as a seaman, I declare that I would use the Gut of Canso or Cape North in preference to any canal. For the West Indies it is shorter from the St. Lawrence by the Gut of Canso, and for the South American trade by Cape North to get easting; I am not intimately acquainted with the fishing trade with the United States, it is carried on in vessels from 90 to 120 tons; I do not think that these vessels would use the canal going or coming to the fishing grounds, the time would be greater by the canal, and if there were any tolls it would add materially to the disadvantages. Vessels employed in the South American trade are generally of a larger class, drawing from 16 to 18 feet of water, and consequently could not avail themselves of such a canal. I do not see any kind of advantage to accrue to trade by the construction of a canal at a cost of \$8,000,000; it might, I suppose, be of some use to Prince Edward Island and St. John, but not elsewhere; such a canal would not be used by vessels carrying coals from Cape Breton to St. John.

H. A. HIND, M.A.:—In reply to your note requesting me to commit to paper as briefly as possible the views I had the honour to submit verbally to the Commission, on the subject of the Baie Verte Canal, on the 28th instant, I now present a condensed statement of the opinions I have formed on various topics relating to the work.

I beg to state, at the outset, that these opinions are the result of study and observation pursued without reference to the Baie Verte Canal, but, when applied to the proposed plan of construction, they appear to have a bearing upon its fitness, as contemplated for permanent navigation, and consequently upon its commercial success.

Being necessarily limited, and from the exceptional circumstances under which this communication is written, being without access to works of reference, it will not only be condensed but expressed in general terms.

With a view to systematize the statements made, I shall treat them under separate heads, and first notice the physical structure of the Isthmus in relation to the proposed canal.

The Old Bed of the Maccan River across Baie Verte Isthmus.

There is strong evidence to show that this river, with its tributary, the Hebert, now debouching into Cumberland Basin, at a former epoch, ran directly into Baie Verte; it is also very probable that this old Maccan River channel is now in part occupied by the La Planche or Missaguash, and the Tidnish Rivers.

The subject of old river valleys is one of paramount importance in surface geology, and as a rule it may be stated that few rivers now occupy the same valleys continuously, in which they flowed before the drift epoch. They have re-excavated much of their old valleys, but often now flow in more recent depressions, sometimes remote from their original channels.

I think that before the drift period the Maccan pursued a due north-east course to the sea across the present isthmus, and debouched into Baie Verte, which extended more inland than it now does.

At this period the tides of the Bay of Fundy did not reach so far north-east as the now Cumberland Basin.

I think that the old channel of the Maccan has been detected by borings at the summit or divide between the bays; it is in part filled with drift clay and in part by more recent marine alluviums, and possibly also fresh water alluvion.

The "Pass" in the divide, described by Mr. Keefer, is a part of the old valley of the Maccan, but it is not necessarily the lowest depression existing in the divide.

The borings were made from 500 feet to 1,000 feet apart, and in these considerable intervals there may be a lower depression, and one not necessarily underlying the "high mosses" at the divide, but under the drift clays. As known, however, the summit pass in the rock is stated to be about 4 feet lower than the average mean range of high tides, and if the clay and moss were removed from this old channel, the waters of the Bay of Fundy would sweep through to Baie Verte with a depth of four feet at the average mean range of high water, and with a depth of eight feet during maximum spring tides, and with a depth of fourteen feet during a "Saxby storm."

But, as already stated, this is far from being the probable lowest

portion of the old Maccan Valley, cut through the rock on the Baie Verte Isthmus, and it becomes a question of some moment to find the lowest part of this concealed water-course. As it is, there is a gut already existing, but choked up with moss and drift or alluvial deposits. Is it not worth while examining the nature and extent of this old choked up river bed, which if cleaned out forms, as will be shown in the sequel, the very canal of which we are in quest.

Results of cleaning out the old Bed of the Maccan, and establishing an open passage or gut across the Isthmus.

Let us suppose this old Maccan Valley to be cleaned out to a depth of fifteen or eighteen feet below the mean level of the sea at Baie Verte, and twenty feet below the same mean level at Cumberland Basin, or to the depth of the bottom of the rivers now emptying into the Basin, such as the Tintamare, the Missiguash, the LaPlanche, &c. These depths are assumed, first, because they exist in great part already as natural excavations; secondly, because if continued from Bay to Bay they would form a canal satisfying the required conditions of depth, and its width, except for the present at one central point is of no material importance as that can be regulated without difficulty within limits varying from 300 to 500 yards.

Taking the maximum range of high water above the mean level of the sea in Cumberland Basin, we find from the elaborate tables in the Report of M. Baillargé that the rise is as follows :—

	feet.
Average mean range of high water.....	94.08
Mean level of the sea.....	71.12
	22.96
Difference or fall.....	22.96

Or in round numbers 23 feet. That is to say the high tides in Cumberland Basin rise on an average, twenty-three feet above the mean level of the sea in Baie Verte, and if an open cut existed, as on the LaPlanche and Tidnish line, the waters of Cumberland Basin would have a fall of about one foot per mile in their descent to Baie Verte, supposing they had to fall to the mean level of the sea.

This is a considerable less fall than actually occurs every day and every night throughout the year from Cumberland Basin to Chignecto Bay, and in many other parts in the Bay of Fundy.

But in our supposed open cut the fall would not approach one foot

per mile, for the maximum range of high tides in Baie Verte is 4.63 feet above the mean level of the sea. Now if the period of high water were attained in both bays at the same moment of time, the fall from Cumberland Basin to Baie Verte would be 22.96 feet less by 4.63 feet, or 18 feet 4 inches in $20\frac{1}{2}$ miles, which is at the rate of 10.7 inches per mile.

But the tides in Baie Verte attain their maximum elevation 2 hours and 30 minutes sooner than the tides in Cumberland Basin. Hence it is already (excluding the stand) more than two hours ebb at Baie Verte when it is full flood at Cumberland Basin. This difference increases the fall from the basin to the Baie to about 19 feet 4 inches in $20\frac{1}{2}$ miles, or nearly $11\frac{1}{2}$ inches per mile.

During ordinary tides the fall would be considerably less, during a "Saxby Storm" it would, as will now be shown, not exceed the daily fall in many parts of the Bay of Fundy and the tributary rivers.

Fall and speed of current in the Bay of Fundy compared with the fall and speed of current in an open Baie Verte Gut.

The swing of the tides in the Bay of Fundy extends horizontally over the distance of about 30 miles, that is to say, a vessel in a calm, starting from the mouth of Au Lac at the first turn of the ebb, would drift about 30 miles before she would be brought to a stand by the incoming flood $5\frac{1}{2}$ hours after she had left the mouth of the Au Lac. In about the same period of time, neglecting in both cases the stand of 20 minutes at each turn of the tide, she would be brought back to her original starting point by the flood. During this period she drifts in round numbers about 30 miles in say 6 hours (not including the stand), that is at the rate of 5 miles an hour, which is about the average rate of current along the line of route. But what extent of vertical displacement with regard to the level of the sea is passed through by this vessel? In descending from the Au Lac she falls with the tide from a position varying from 24 to 19 feet above the mean level of the sea to nearly the same relative vertical space below it, in other words she falls with the tide over 40 feet in 30 miles during springs and at flood tide she rises through the same vertical space. This is at the rate of one foot four inches per mile. No one can say that this occurrence, which constantly and daily takes place throughout the season of navigation, is attended with danger, and yet the fall is very considerably greater than would occur either way through a Baie Verte Gut.

In fact the Strait joining Cumberland Basin and Chignecto Channel

represents in all particulars such a gut, only with very increased fall; 40 feet in 30 miles in place of 19 feet in 20 miles; one foot four inches fall per mile, instead of barely one foot per mile, and even taking the extreme high tides and the abnormal tides, such as the "Saxby Storm," in no instance would the possible fall or current through a Baie Verte Gut, approach the actual fall and current which occur twice every day in Cumberland Straits, through which vessels sail with ease and security.

*Effect of an open canal, 500 yards broad, on the Marshes of
Cumberland Basin.*

The elevation of the marshes and bogs around Cumberland Basin, for more than seven miles inland, is stated to be about 18 feet 6 inches (18'65) above the mean level of the sea. Nowhere under these marshes and bogs as far as borings enable us to judge, has solid rock been found beneath them at a less depth than from 19 to 24 feet, and, frequently, it is at greater depth. In other words, the bed rock under the marshes is always *below* the mean level of the sea, in the Baie Verte Isthmus. There may be "islands" of rocks which rise above the level, as well as great islands of drift, but, generally, it may be stated as the result of borings, that the rock surface is below the level of the ocean.

But the bogs, marshes and vast tidal mud deposits are the work, directly or indirectly, of the Bay of Fundy tides. In other words, these tides have succeeded in so far carrying on a process of repair that they have been instrumental in protecting and accumulating a stratum of mud, sand, peat, and clay, averaging twenty feet in thickness over very many square miles.

Mr. Baillirgé's sections of the slope of the rock inland from Cumberland Basin, show that the present channel of the basin exposed at low water resembles in every particular that of an excavated river bed, and such would be the ultimate form of a Baie Verte Gut.

But it is a protected river bed, protected from currents and ice by a littoral cordon of Boulders forming a permanent zone at a fixed and unchangeable depth below high water.

Move or disturb that zone of boulders or littoral cordon, and the equilibrium of the whole system will be destroyed, and banks first, then the marshes will be invaded and denuded, if not artificially protected.

The entrance to a river such as the Tintamare can be protected and improved by low training walls, as hereafter described, but these

must be constructed on the same principles as nature has adopted in constructing the protecting littoral cordon.

It is contended that by making use of the old valley of the Maccan into Baie Verte, and adopting the simple means which have been used for 180 years in the Bay of Fundy marshes to limit the tidal action, an open gut or canal without lock, or artificial embankments or piers at the Bay of Fundy entrance, can be constructed with but one check gate, or gates at the summit, as a mere temporary precautionary measure.

The gut will first determine and then maintain its own width in proportion to the size of the check gates, or cut through the rock at the summit, if an old channel should not be found wide and deep enough.

It will be a river at the flood, flowing through tidal marshes toward Baie Verte, just like the Annapolis, the Shubenacadie, the Avon and the Kennetcook. At the ebb it will be a river flowing from Baie Verte to the Bay of Fundy, just like the sea pouring its waters twice a day into the bed of the Saint John, until it forms an even surface over which vessels may pass.

The quantity of water and its effects coming into the Bay of Fundy from Baie Verte, during six hours, will be compensated by the quantity of water going out to the gulf in the next succeeding six hours.

Equilibrium in all cases will ensue, for the acting forces are very nearly equal, and operate under similar conditions.

It may be urged that it will take a long time for the open gut to protect its own banks by a littoral cordon, because the material boulders are not at hand in sufficient quantities.

But if the owners of dyke lands on the Bay of Fundy want to fill a broad open gully running through the marshes, they do not use boulders.

A few fascines, branches of spruce or young spruce trees accomplish the work far better than thousands of tons of stones. They arrest the mud and become consolidated. Placed in a proper position as groynes, they very soon fill up in the rear, and a gully half a mile long, and a hundred yards broad, and thirty feet deep will, by judicious adjustment of spruce branches and small trees, become filled up and blended with the marsh in a very few years by tidal action alone, as shown by experience.

The best engineering constructive skill has been at a loss to devise a more simple, practical and thoroughly adequate method to reclaim the

dyked lands than the *aboideau* of the first French settlers, which is still universally used throughout the dyked land area.

It will not escape notice that an open communication between the Bay of Fundy and Baie Verte has once existed, and the only memorials it has left of its action and potency are the narrow depressions between the drift ridges occupied by the swamps and "High Mosses," from which the La Planche and the Missaguash on the one side, and the Tidnish on the other, take their rise in common; and from mosses scarcely higher than maximum high tides, in the Bay of Fundy. Old channels must exist under these, for there is positive evidence that within comparatively recent times, the whole isthmus, and indeed the whole country has been submerged and slowly risen again. The last channel would probably be that through which the Maccan once flowed, and a search for it, even though it be narrow, could scarcely fail to be attended with success.

Commercial advantages resulting from an open Baie Verte Gut.—Character of the Baie Verte Gut.

From the statement of altitudes already made it will appear without explanation (*) that a gut occupying a channel 15-18 feet below the mean level of the sea at Baie Verte, and 20 feet below the same level at the Bay of Fundy, would at all times present a navigable stream, with a minimum depth at the pivot or oscillating point at the summit of the divide, or wherever it might be placed, of 12-15 feet below the mean level of the sea. The current would never exceed five knots an hour; the flow would be constant and uninterrupted one way or another, like the River St. John at its mouth, but *without any impediment*. It would form a salt water river with never less than 12-15 feet of water from Baie Verte to the Bay of Fundy, all the way down Cumberland Straits, through which steamers might pass at all hours day or night, either up or down.

It would exercise no appreciable effect on the height of the flood tides below Boss' Point, but it would affect the height of the flood tide above that point, and this advantageously. In all its commercial relations it would be a first-class stream, and it may be made to assume a breadth of 300 or 500 yards, according to the sectional area of the check-

*) NOTE.—This depth is wholly dependent upon the depth of the cut through the summit, which determines the depth throughout.

way to be cut (if not found) at the summit. In the article published in the *Canadian Monthly*, on the "Ice Phenomena of the Bay of Fundy," I have already alluded to the probability of a lower depression than those discovered by recent surveys.

It is a noteworthy fact that with such a gut as described, steam navigation would be wholly independent of the tides, for both at low water as well as at high water there would be at least 12-15 feet in the channel throughout Gut and Strait.

There is however, one feature which would be presented, requiring notice. While the tide way, and hence the current in the Cumberland Straits, leading from Chignecto Channel, would remain, as heretofore, nearly up to the period of the tide, acquiring the mean level of the sea at the western entrance of the Gut; yet after that elevation had been attained, the current would be accelerated in the straits, and during the ebb, under similar conditions, it would be accelerated about the mouth of the Gut, in the estuaries of the Maccan and Herbert, but not to a disadvantageous extent. The effect which the Gut would produce on the high tides in Cumberland Basin would doubtless be beneficial, for it could not fail to diminish their height, and this would lessen the current flowing to Baie Verte through the Gut.

I have not had the advantage of perusing Capt. Crawley's Report on the Baie Verte Canal, in which he discusses the probable effect of an open gut on the marshes, but from numerous obstructions on the great tidal estuaries in the Bay of Fundy, I have confidence in the maintenance of the banks intact, throughout the length of the Gut, in the same manner as they are preserved intact in many notable instances in rivers entering the Minas Basin, of equal magnitude as the one supposed.

And in its commercial aspect their can, I venture to say, be no question whatever of the advantages which would accrue to the Dominion if a Gut like that of Canso, but on a smaller scale, shall once again occupy the position it, in earlier ages, had scooped out and maintained until by the slow rising of the land it became so gently obliterated as to leave no more deeply scared record of its former existence than a uniform moss covered surface, which while it suffices to hide it from view, is strong enough to resist the supposed all powerful encroachments of the Bay of Fundy tides.

Probable effect of the closing of the former wide passage on Marine life in the Gulf of Saint Lawrence.

It is well known that remains of vast beds of oysters are to be found all along the gulf coast of New Brunswick, the south side of Prince Edward Island and part of Nova Scotia.

These old beds of dead shells lie tier upon tier, and while in some localities they indicate a raising of the sea bottom, and in other places a subsidence, yet the uniform destruction points to a *climatal* change, or to a deprivation of certain kinds of fish food.

Who in the light of the recent discoveries made by the United States Coast Survey, and by the Officers of the Dominion Department of Marine and Fisheries, is bold enough to say that the almost extinction of the oyster over some hundred miles of our Gulf Coast is not connected with the natural slow closing of the former passage through the present Baie Verte Isthmus, and the change which has in consequence resulted in the marine climate of the waters of that part of the coast.

When it is shown that not only the wide spreading remains of various marine animals, but also living surviving colonies are found near the south shore of the Gulf of Saint Lawrence and near to Baie Verte, and also near the great mouth of the Bay of Fundy, on the coast of Maine, but very rarely, if at all, in the intermediate vast space of Atlantic Coast stretching from the south part of Nova Scotia to the Gulf at North Cape, except perhaps in certain sheltered nooks, it is strong presumptive evidence that these remains and these surviving colonies so situated, are related to the physical changes which resulted from the closing of the Isthmus.

In the reports of the different engineers on the subject of the proposed canal, attention is called to the detrimental effect which might be produced on the Baie Verte Fisheries, by the introduction of Bay of Fundy tidal mud, and of the mosses and 'muck' swept away by the "floating ditch" system so long pursued throughout the Sackville marshes.

Surely it is but fair to look at this question in a comprehensive manner, and point to the amazing benefit which might result to industry and commerce, if even a tithe of the former marine life were reproduced on the coasts of Northumberland channel, which existed when the isthmus was a strait.

And this branch of the subject I venture to notice here, not because I think that a great or speedy good in that direction could result from a channel 500 yards broad, when one has existed five miles or more in breadth, although island studded, but because it tends to show that the result would be in favor rather of unmixed good, as distinguished from a fleeting and at the best a speculative harm.

A single year's income of the oyster trade of the United States would suffice to construct the most expensive artificial canal ever contemplated across the Isthmus, and the resuscitation of a very limited area of old oyster feeding grounds in Northumberland Straits, and the trade arising therefrom, if properly pursued, as is now done in France would, I submit, in a few years pay all the expenses of an open gut across the Isthmus, even though it should not exceed 500 yards in breadth.

These observations apply also to marine life and fish food generally, in the Gulf of St. Lawrence and Bay of Fundy; having a very wide and important bearing, but which I am unable to introduce here.

The gradual subsidence of the Isthmus.

The ultimate formation of such a gut as contemplated in preceding paragraphs, is inevitable, according to conclusions drawn from observations.

But it must be noted that in many localities the change of land in relative position as referred to the mean level of the sea, partakes of an oscillatory character. A portion, for instance, of the Isthmus, may give conclusive evidence of recent subsidence, another portion equally strong evidence of recent elevation; but these relative changes of level may be wholly subordinate to a general elevation of a very wide area. Undoubted evidence exists, however, of the recent elevation through ten feet and upwards above the mean sea level of considerable area in the Maritime Provinces and Newfoundland within the last 150 years. There is also equally strong evidence of contiguous and intermediate areas undergoing a subsidence to an equal extent within the last 150 years, showing when the lines are connected a wave-like or undulatory motion over a vast area.

Again, there is evidence to show, and this applies to the Baie Verte Isthmus, that an area may locally rise, and then after a period of greater or less extent, locally subside.

And yet when taken in connection with a wide area, the general

effect is a subsidence or an elevation as the case may be. The local displacements being oscillations in a more comprehensive movement.

A part of the Baie Verte Isthmus shows conclusively a very recent local subsidence, like some of the islands in Passamaquoddy Bay on the boundary line. Another portion rather tends to confirm the idea of no very recent vertical movement, so that all the phenomena have to be grouped together before a definite conclusion can be stated with reference to any particular point.

But with regard to the whole of the Bay of Fundy, and this most touches the point in question, although local differences occur, yet it is found necessary in nearly all the great dyked districts, even hundreds of miles apart to *raise* the dykes by at least a foot or more to place them in a state of supposed security. The inference from this is that the marshes are settling or the tides rising, or the whole country subsiding. I have glanced at this subject in the article before referred to on the "Ice Phenomena of the Gulf," but I have not there mentioned a most important evidence of general subsidence which is of paramount interest in the case under review.

During the last 115 years, three well-known invasions of the tidal waters of the Bay of Fundy have swept away all the dykes from Cumberland Basin to Cornwallis.

These periods were as follows :

In the year 1759.

In the year 1828.

In the year 1869.

Now the dykes in some districts were several years in rebuilding, and during that period a foot or more of mud was deposited on them.

The law limiting the height of the marshes is this : "The level of the marshes is that of mean high water."

The result of Mr. Bailliarde's surveys shows that now this dyked land and marshes in Cumberland Basin are from one to three feet below the plane of mean high tides. During the successive invasions of the tidal waters in 1759, 1828 and 1869, the accumulation of mud which takes place with astonishing rapidity ought, and in many known instances has, raised the marshes to the theoretical plane, beyond which they cannot rise, I think I have found the record of these former invasions in thin films of vegetable matter, remaining still undecomposed, like the stumps of the "submerged forest" in Cumberland Basin.

The three recorded instances of invasion and overflow, are probably but a few out of many successive overflows to which the marshes have been subject, but before the dyking of the marshes these would occur over salt marsh, which would always preserve its relation to the plane of mean high water, so that records can only be found on dyked marsh where the influx of tidal waters has been prevented, and the evidence afforded by these is, that the subsidence is greater than would be produced by consolidation or a local elevation of the tides, and also that subsidence is a general phenomenon extending over wide costal areas, and is locally subject to oscillation. One of these oscillations is now occurring, as long ago shown by Dr. Gesner, in the great Tantamar Marsh. But this local subsidence in the Tantamar Marsh is a subject which appears to require exhaustive investigation, for the evidence enumerated by Dr. Gesner, in the transactions of the Royal Geological Society, for 1861, is very important and suggestive. In October, 1869, I saw the mud-laden waters of the Bay of Fundy during the "Saxby storm" ripple over a bed of fresh water shell marl, lying at the inner edge of the dyked marshes, and in a position which left no doubt of a subsidence.

In this connection I may be permitted to state that the great discrepancies which exist in all published descriptions, relating to the Baie Verte Isthmus of the "red clay" deposits, the "mud" deposits, "the gravel, sand and clay," the "rock" itself, make it essential that these should be uniformly classified and uniformly described, in order to be understood.

The "red clay of the country" is stated to be found at the summit, between Baie Verte and the Bay of Fundy, although many feet below the highest tides, yet it may be :

First, Glacial Clay.

Second, Boulder Drift Clay.

Third, Alluvial Marine Clay.

Fourth, Alluvial Fresh Water Clay.

One illustration will point out the necessity for this distinction, I have found on an island in the marshes, undoubted glacial drift clay, belonging to the glacial drift period, also glacial drift clay filling protected hollows in the rocks of the country, also glacial drift clay in the marshes overlaid by boulder drift clay, which again is overlaid by recent alluvium, I need not say that these several kinds of clay differ vastly in their toughness and composition, but in a

geological point of view they have a special significance and involve the *physical history* of the area where they occur.

If what I suppose to be the old valley of the Maccan through the Isthmus, is filled with glacial clay or boulder drift clay, the conclusion is, that it was excavated before the glacial drift period, and has not since been opened; if with marine alluvium, in part overlaid by boulder drift, the same conclusion is arrived at, but if it is filled with marine alluvium, posterior to the drift, it shows that since the drift period there has been an open communication between Baie Verte and the Bay of Fundy, and the growing mosses which extend on the summit below the level of high tides, appear not only to prove the latter assumption, but to show that it is of comparatively very recent date, and this may apply to other channels than that which connects the Missaguash and the La Planche with the Tidnish.

It would appear from the foregoing, that I advocate on geological grounds alone, an imitation and reproduction on a small scale of nature's work—an open Gut from Cumberland Basin to Baie Verte—having a depth of say 18 feet 6 inches below the mean level of the sea at Baie Verte, and about the same depth below the same level at the Bay of Fundy. This would admit of an uninterrupted passage for vessels drawing 15 feet of water, at all periods of the tide in both directions, and vastly change the commercial character of the enterprise.

The results of the careful and elaborate surveys which have been conducted during the past six years, enable the question of an open Gut to be intelligently discussed; for it must be borne in mind that, without the careful borings made at the summit level, disclosing one old passage, without the admirable series of tide tables so carefully and ably discussed by Mr. Bailliarage, it would have been impossible to have treated this subject otherwise than as a purely speculative one.

It is now susceptible of practical demonstration, and with results to the future of the Dominion, of far-penetrating and wide-spreading influence for material good.

The experiment of cutting a narrow ditch at the summit five feet broad at the bottom and down to the rock, where the known lowest spot exists, by removing the moss and clay, and leaving the tide to search out the bottom of the old channel, would settle the question of tidal action through an open Gut. It could be accomplished for less cost than the expense of the surveys which have shown it to be practicable, or which have led to the construction of the beautiful and elaborate models of the lock gates of a Baie Verte canal, now lying in the office of the Assistant Engineer, in the Parliamentary buildings at Ottawa.

I conclude with a brief enumeration of the advantages which would arise from an open *Baie Verte Gut*.

1. The procuring of abundance of fresh fish bait, and the speedy discharge of fares, are the foundations of success in the great fisheries, which represent in the aggregate an annual income for the Maritime Provinces and Newfoundland of \$20,000,000, and are susceptible of fast increase, with a corresponding trade.

The Canadian fisheries of the future will bear to the Canadian fisheries of the present day, the same relation as the old stage coach of a generation past bears to the modern first-class railway in regard to locomotion. A *Baie Verte Gut* would afford speedy connection between great sea areas, where the different kinds of bait could be procured at the different seasons when they are required, and the catch cured as soon as taken in sheltered and fog-protected drying grounds.

The modern European bait steamer would become a possibility between the Atlantic coast and a wide range of the Gulf, where it is now debarred from access; and the knowledge, skill and appliances of northern Europe could be introduced with vast advantages over the whole southern plateau of the Gulf, and even far beyond its limits.

The simultaneous appearance of different kinds of good fishes on different parts of our coasts is regulated by the approach of a marine isothermal line, just as the simultaneous budding of the same kind of vegetation through fifty degrees of longitude along a sinuous or curved line, is guided by the same law.

If you can pass with celerity from one position of the coast to another, where the marine isothermal approaches later in the season from the great feeding grounds, for instance, at the mouth of the Bay of Fundy to the vast plateau in the southern part of the Gulf, you increase proportionally the area of the available fishing grounds, and the area where proper bait is procurable upon which the fisheries are dependent.

2. The grand question Canadians have to study in relation to future commercial and maritime pre-eminence is, I apprehend, the extension of the season of navigation in the Lower St. Lawrence and south part of the Gulf for a period of a month or six weeks longer than is possible on the Erie or Richelieu Canals.

So vast is the growing importance of this subject, that on it hinges our future maritime supremacy, and possibly our nationality.

To ensure the carrying trade of the grain of the West by the St. Lawrence route, in a vessel which can load at Chicago and reach the open sea

without breaking bulk, great efforts are now being made. The winter transportation of grain and flour by rail is also yearly augmenting; but it has a limit of cost which it cannot pass. But if a vessel could load at Quebec, and deliver her load in December or early in January at St. John, or carry it across the seas, it would place in the hands of Canadians the control of the grain, the timber and the fish carrying trade on this side of the Atlantic.

When all the great canals of the west are ice-bound, a calm and beautiful "summer sea" often extends from Bic or Gaspé to Baie Verte, and from Baie Verte to St. John. To render navigation as secure during these six weeks as during the late autumnal months, there is required a thoroughly equipped marine signal service, amply provided with coast telegraph lines, and the selection and maintenance of harbours of refuge. The coast navigation during this period, would be in effect conducted from the land, just as modern coast fishing operations in Europe, are directed from telegraph stations on the land. In such a coast navigation as is here contemplated, a Baie Verte Gut becomes an essential element, chiefly on account of the tidal phenomena in Northumberland Straits, which sometimes causes early winter ice to accumulate in the great tidal eddy which exists to the east of Baie Verte.

3. The fiscal regulations of the United States forbid a Canadian steamer, after taking in American wheat at Chicago and carrying it through Canadian canals and rivers to unload it at an American port. But a Canadian steamer can take in American wheat at Chicago, and when all other avenues are closed, unload it at St. John, there convert it into flour with Nova Scotian coal and ship it to the great fish marts, in Canadian bottoms, thus utilizing home industry throughout, and this by means of a Baie Verte Gut.

4. It is admitted on all hands that the growth of the grain trade of the West far exceeds the capacity of the available means of transportation; the descent of the St. Lawrence with the improved canals can be accomplished by steamers direct from Lake Superior and Chicago, which at the close of inland navigation can continue to act as carriers for six weeks between Quebec and St. John *via* Baie Verte; and it is worth while remembering that every mile deducted from the cost of transporting a bushel of wheat to the sea-board, may be said to throw profitable cultivation one mile further back toward Red River and the Saskatchewan, so that, in effect, as we cheapen the cost of transportation of grain to the Dominion seaboard, so in proportion do we promote emigration to the North-west; and the key to the solution of this great problem appears to lie in facilitating the early winter navigation of the St. Lawrence, and thus more intimately connecting the Maritime Provinces with their re-

sources of coal and fish, with the grain storehouses of the west on the one hand, and the markets of the world on the other.

CAPTAIN P. A. SCOTT, R.N., Halifax:—Am chairman of the Board of Examiners, Masters and Mates; have been thirty years about this coast, generally employed on surveys, including the Bay of Fundy; from my experience and personal knowledge of the whole subject in connection with the proposed Baie Verte Canal, I have never yet seen any good reason for supposing that such a canal would be of any great advantage to the trade of these Provinces. The trade from Quebec and down the St. Lawrence, is principally to the eastward, (or say to Europe) consequently it would not use the canal. I am not aware that there is any trade of consequence between Quebec and the West Indies. Having commanded the Canadian cruisers for the protection of the fisheries for the space of four years in the Gulf, and having visited the greater part of the Ports of New Brunswick and Nova Scotia, I cannot suppose that vessels upon those coasts, with the exception of the American vessels, would avail themselves of such a canal, and even the Americans, if high tolls were imposed, would not use it. I wish it to be understood that I am speaking only for the present, as this and other works of equal magnitude may become necessary at a future period. It is a well-known fact that insurance companies ask high rates on vessels navigating the Bay of Fundy on account of the difficulties of navigation, strength of tides and dense fogs, also this would apply more to strangers. This canal would be closed on an average, four months in the year, and only available at half tide, therefore reducing its availability to a great extent.

ADAM BURNS, Esq:—Have been in general business and as ship-owner for eighteen years. I have given some consideration to this subject, and I know of no advantages such a canal would offer at all commensurate with the heavy expenditure it would involve; I am also connected with the lumber trade, and have saw mills on the Humber River, on the North-west Coast of Newfoundland; I have vessels constantly trading with lumber to the States; the canal, if made, would not be used by me, irrespective altogether of tolls, in consequence of the great difficulties to the navigation of the Bay of Fundy, and the uncertainty of the weather prevailing there. I cannot believe that any Government would be justified in undertaking a work involving such an enormous

expense, and presenting so few advantages at the present time to the business commercial community of this Province.

JOHN PUGH, Esq.:—I am a General Merchant: have been ship master for some 20 years, trading all over the world. I am well acquainted with the trade of the Maritime Provinces, and the navigation of the Gulf St. Lawrence generally. Rate of freight by sailing vessels range from 40 to 50c. per barrel; vessels going to Montreal from the West Indies take return cargoes back of flour and other produce. I have received flour from Montreal *via* Pictou, coming thence by steamer and thence by rail to Halifax, as low as 38 and 40 cents per barrel, but this is an unusual rate—rates of freight vary and in accordance with special agreement. There is very little difference between cost of transportation over the Grand Trunk Railway to Portland and steamer to Halifax and that down the St. Lawrence to Pictou by steamer, and thence by rail to Halifax. I have no hesitation in saying that no seaman would use the proposed canal for any large class of vessels in preference to the present usual routes, nor yet would any underwriters take a risk on vessels taking that route without large increase in premium. I am acquainted with the navigation of the Bay of Fundy, and know its currents, fogs and general difficulties; I think it highly dangerous, more especially to strangers. Neither Nova Scotia nor Newfoundland would use the canal if built. For South American trade the same may be said—no vessel from the St. Lawrence would use it going to South America.

Americans in fishing vessels of 60 to 120 tons would not in my opinion, go through the canal if built, either in going to or coming from the fishing grounds in the Gulf—as many of those vessels fish all along the coast of Nova Scotia and Cape Breton before going into the Gulf. They get bait and salt on this coast, and their fish is landed at Prince Edward Island and in the Strait of Canso where it is re-shipped on steamers to Boston, the vessels return to the fishing grounds for another cargo and so on till the end of the season. I do not think it would be in the public interest to expend such a sum as \$8,000,000 on the proposed canal; acquainted as I am with the trade and navigation of the Maritime Provinces, it really seems to me a foolish project. I think the railroad from Shédiac quite sufficient for the local trade from Prince

Edward Island and neighbouring places to St. John; if this railroad was connected with the American railroad by a bridge at St. John, it would be of great public advantage. From Dalhousie and other ports on the Baie des Chaleurs, a large quantity of shingles is shipped to Halifax for the West India market and come through the Gut of Canso.

CAPTAIN PETER COFFIN:—Have been at sea most of my life—from age of 14 to 65. I do not think that the proposed canal is required in the general public interest. I am not prepared to say that if the canal was built some vessels from north of Prince Edward Island, and from Baie des Chaleurs might not use it in going to the United States with oats, potatoes, &c.; but the navigation of the Bay of Fundy is very intricate, there being no harbors, excepting a tide harbor, until St. John is reached on the north or Digby on the south, and few would like to go that way.

If tolls were charged in passing the canal it would further discourage people from using it. The canal would be of no use whatever to vessels trading to the West Indies and South America, and no seaman would attempt to use it.

I think some of the vessels engaged in the fishing trade from the United States would occasionally pass through the canal, if built, in going to or coming from their fishing grounds, but the principal portion would use the present natural route.

CAPTAIN I. B. CARROLL:—I have been about 40 years at sea and master of a vessel about 30 years; I have heard Captain Pugh's statement as above, and agree with him in every word of them, adding merely my opinion that the navigation of the Bay of Fundy is the most intricate and difficult in the world.

C. T. DE WOLF, Esq., general commission merchant:—I am acquainted with the rates of freight on flour from Montreal to this and other ports of Nova Scotia. There are two routes, one *via* the St. Lawrence to Pictou, the other *via* Grand Trunk Railway to Portland, and from thence by steamers or vessels to Halifax and other ports.

The rate of freight by either of these routes varies according to competition, but the difference between the rates on either routes is comparatively small. The proposed canal could not in any way be of advantage to the trade of Nova Scotia, excepting of course some small portion in its vicinity.

Having already two good harbours, one at Shédiac, the other at Pictou, the former connecting by railroad with St. John, and the latter with Halifax, does away with the necessity of the canal. In conversation with a great many sailing masters for some years past, they all agreed that the canal would not likely be used, the distance by the present natural routes being so small, and the dangers of the approach to the canal and tolls to be paid rendering the present routes more acceptable.

Vessels from the United States or from St. John, going through the canal into the Gulf would save no time over the present route, if they had ordinary fair weather for going round.

I have never heard any arguments or sound reason in favour of such a canal.

W. E. SILVER, Esq., Dry Goods Merchant:—I am chairman of the International Trade Committee of Commerce. When the canal was first mooted I thought it would be proper that the subject be brought before the committee, with the view of aiding it if found valuable. After looking over maps, &c., of it, it was found that there would be no prospective advantages which would warrant me in advocating its claims. I found the three Provinces, Nova Scotia, New Brunswick and Prince Edward Island, already enjoying advantages of subsidized steam communication, by boat and railroad, to quite as large an extent as they reasonably could expect: also that the cheap class of schooners, by which this trade is carried on in heavier articles, would not likely pay tolls for the advantage of passing through the proposed canal; the facilities enjoyed by Halifax, St. John and Quebec in the ocean trade are such, that so large an expenditure for so short a distance saved would make the canal a poor speculation in a financial point of view. I consider the canal not a necessity but a convenience, and feel alarmed at the large amount of money proposed to be expended upon it.

JAMES TURNER, Esq.:—I have no personal knowledge on this subject, the proposed canal. I came rather to hear if anyone would be so

silly as to advocate the spending of so much public money without any possible return.

H. H. FULLER, Esq., Hardware Merchant:—I do not consider that the canal in question is required, nor would the expenditure of such a large sum of money as \$8,000,000 be at all justifiable. I have heard Mr. Silver's statements above, and I quite agree with him in all he has said.

CAPTAIN WILLIAM A. DECKER, Master Mariner since 1846:—Am well acquainted with the navigation of the St. Lawrence Gulf and the Bay of Fundy; if the canal was built, I do not believe that vessels would use it, as the present routes by the Gut of Canso and Cape North, into the Gulf of St. Lawrence, are much superior to the canal route; tolls would necessarily have to be charged through the canal, and the navigation of the Bay of Fundy much more difficult; no vessels to the United States would use it; the extra time required in passing through and meeting the tides and fogs, would more than make up for the increased distance by the natural routes, and of course no vessels going to the West Indies or South America would use it, as it would be going out of their course. Very few fishing vessels, in my opinion, would go through it at any season of the year; I have talked this matter over with my fellow masters of vessels, and have not yet met one who did not agree with me that the canal would be almost useless, and of very small benefit to be derived from it.

W. H. NEAL, of Neal, White & Co., Merchants:—Allowing the largest number of days in which the canal could be used, say 200, from 15th April to 15th December, the interest on the cost of \$8,000,000, at 5 per cent, being \$400,000, would involve a daily cost of \$2,000 for interest alone, without mentioning cost of repairs, maintenance, &c.; the repairs every spring would necessarily be very heavy; the class of vessels that would likely use it would be coasting vessels; very many of these are partly, or entirely owned by the masters, and carry freight very cheaply, on account of the cheap way in which they are sailed; the captains of these vessels would look upon the time saved by using the canal as costing too much to compensate for the advantages having to pay tolls; generally speaking the captains or owners of these coasting vessels have

very little means, and I do not think they would be able to pay tolls required. I have heard Mr. Silver's statement, and I agree with him in everything he has said.

CAPTAIN JAMES CURRIE.—I am a resident of Pictou, and have been master of a ship for the last twenty-five years, and am well acquainted with the navigation of the Bay of Fundy and of the Maritime Provinces generally, as well as the West Indies.

If the proposed Baie Verte Canal was constructed to-morrow, I do not believe any vessels would pass through it, as I think the natural routes by Gut of Canso and Cape North, superior; my reasons for saying so are that going into the Bay of Fundy from the canal, we find there heavy fogs, adverse currents and mud flats, which, with the prevailing winds in the summer months from the south-west, would make it difficult to get out without the aid of tug boats and pilots. No stranger could make his way without these, while by the Gut of Canso, the same winds would be favourable, besides having an open sea and a bold shore.

A considerable trade is carried on in free stone to the United States from the Port of Wallace. I have a vessel engaged in that trade, and I would not consider it my interest to go through the canal if built, and pay tolls and go through the Bay of Fundy. I have no hesitation in declaring that sailing from Quebec or Montreal for St. John, I would prefer going through the Gut of Canso to going through the canal, and believe from my practical knowledge of both routes, I would be sooner in St. Johns by the natural route than by the canal. Insurance also would be higher; I have no prejudice over one route more than the other, but I do think that if the Government of Canada have \$8,000,000 money to spend on this canal which I deem useless, it were much better for the people, and for the trade of these Provinces, that it should be spent in deepening our shallow harbors, increasing lights and fog whistles on the coast, for we have more need of these than the canal, and such I believe is the general opinion of those whom I speak to on the subject.

Not a pound of coal from Cape Breton or Pictou would go through the canal.

From Pictou and Cape Breton, the prevailing winds would be in favor of using the natural route, against the canal route and Bay of Fundy. The fishermen from the United States, would certainly not use the canal, either going to or coming from the fishing grounds, the natural route is altogether the best for them, and if they made for the

North Straits, with a strong wind to enter the canal, they could not hold their ground, and would be obliged to run to the straits for shelter. In conclusion I can see no object in making the canal so as to benefit trade. When I take stone to the United States, I sometimes get a little flour and other things back as return cargo, but in most cases I have to come back in ballast, for which I have to pay about 50c a ton. The freight of flour from New York and Boston runs sometimes 20c, at other times a little more, but never much at any time.

BAIE VERTE.

H. DAVIDSON,—According to your request, I write you a few lines in reference to the construction of the Baie Verte Canal:—

1st. The sea would not continue frozen in the canal any material length of time after the opening of navigation in the Baie Verte or Straits of Northumberland. As a general rule the ice thaws in the mill ponds and lakes as soon as the navigation opens in the Gulf. Some springs, high tides accompanied with an easterly storm, may raise the ice off the shores, and a sudden change of westerly wind carry it out, but those springs are only exceptions.

2nd. That the fog prevails on the southern coast of Nova Scotia and Cape Breton much more than it does in that part of the Bay of Fundy that shipping would have to navigate in entering the canal, for the following reasons:—The coast of Nova Scotia is enveloped in fog with east, south-east, south and south-west winds, whereas south and south-west winds bring the fog up the Bay of Fundy.

I have had to lay too for three and four days off the Straits of Canso waiting for the fog to lift, so that I could get a chance to get through.

3rd. That the ice often jams in the Gut of Canso in the spring, occasionally detaining vessels for two weeks in getting through.

In the spring of 1859, 200 sail of us had to stop in Canso and the adjoining harbours for over two weeks, waiting for the ice jam to break in the Gut, and vessels from Arichat that had gone up about the first of April, could not return before the first of May.

4th. That a great saving of time and distance would be secured to all shipping coming down the Gulf of St. Lawrence bound to St. John, the western ports of Nova Scotia, or the United States, as the distance from Cape Tormentine to St. John *via* Cape Sable, is about 540 miles, whereas by the canal it would be about 120 miles.

From Cape Tormentine to Portland *via* Cape Sable, 560 miles; by the canal, from Cape Tormentine, 350 miles.

I have coasted for twelve years, principally on the coast of Nova Scotia, Cape Breton, Bay of Fundy and Newfoundland, and consequently am pretty well acquainted with the difficulties connected with the different coasts. I always considered the dense fogs prevailing on the coast of Nova Scotia the greatest hardship to contend with, and which, doubtless, has been the great cause of the loss of so many steamers and loss of life on the coast.

With reference to the amount of shipping which would be likely to pass through the canal, that would very much depend upon subsequent causes, and a great deal of speculative opinion will probably be given upon it. I notice that the leader of the Government views the canal, if constructed, only calculated for local trade, and it is possible that the information you have hitherto received may sustain that opinion, and if, as I stated at Baie Verte, that the shipping passing through the canal would be exclusively confined to the Dominion, then it might be considered such, but I cannot form so contracted an opinion of its importance as that.

The canal would, without doubt, afford a shorter route of transit between the Gulf Ports and the United States, and taking into consideration the rapidly increasing population and trade of that great nation, the increased right lately acquired by them in our fisheries, though prejudicial to our interests, in securing more favorable terms of commercial relationship, I cannot shut my eyes to the fact that the canal, if constructed, would prove a great highway to the fishing grounds in the Gulf, which would greatly increase the trade of the canal. We cannot always rely upon the European market for the sale of our surplus production. The United States must inevitably be the great market for our coal, plaster, freestone, grindstone, potatoes, and various kinds of our lumber, and to consider the construction of the canal only calculated to benefit local traffic, would not, in my opinion, be giving it the consideration it deserves. For over fifty years the canal has been in contemplation, and the different Boards of Trade have unanimously agreed upon its general usefulness, and we trust that the Government will not allow the hostile position taken by some of the representatives, and a part of the press of Nova Scotia, to set it aside, as their opposition proceeds from jealous, personal and envious motives. I have confidence in the Government, and believe that they never will give up a work which must prove of so much value to the Maritime Provinces and the Dominion at large, and which will, without doubt, bind our Dominion more closely together, and allay the feeling that is beginning to arise, that the Government is going to do all for Ontario and nothing for us.

S. E. CRANE, of Baie Verte:—I have lived here since my boyhood, and am well acquainted with the navigation of the Baie. I am engaged in general business, and have loaded ships of 900 and 1,000 tons. I have never known of any accident in the Baie by ships grounding, and it is often a protection for ships, and I do not know of any reason why it should not be a safe and excellent outlet for the proposed canal. My father was a sea captain, and sailed out of this Baie for nearly 30 years, and I know he never met with an accident in it, and he has often taken vessels to Britain, of large size, built and loaded here.

Our trade here is with St. John principally, but I could not say the amount of it, and that trade would, I think, go by the Baie Verte canal, if built. I mean merchandise, of course; our timber and deals go direct to Britain from this, and such trade would not require the canal. I have not considered what effect the completion of the Intercolonial Railway to the St. Lawrence and Montreal, *via* the north part of New Brunswick, will have. I, however, believe that if this point was connected with the main line, now distant from us 14 miles, freight would be greatly lessened.

ALEXANDER MUNRO, Esq.:—Am well acquainted with the route of the proposed canal. Have lived in this country for over sixty years. See no obstacles that cannot be overcome in the construction. The navigation opens early in May, and the canal would close about last November on Baie Verte side. Have no knowledge of the sea, and am not engaged in business, being a land surveyor.

I would not be in favor of the construction of the proposed canal in the public interest at a cost of \$8,000,000, but a lesser canal would answer, say of 14 feet depth and 80 feet bottom, and by making locks and culverts for a large canal, and using the Tidnish river.

My impression is, that a large lumber business on the Straits of Northumberland ports and the Gulf St. Lawrence would be benefitted and developed by the canal. The coal also from mines in the Bay of Fundy could be made available for the St. Lawrence by the canal. If the American fishermen would not pass through the canal, the favorable opinion I had formed of it would be greatly diminished, as the mere local trade would be insufficient to support it, and if the trade of Montreal in flour would find other more favorable channels, that also would go to lessen my favorable view of the canal. I have always held the opinion that a large portion of the St. Lawrence, west and east, would pass through the canal, and that the American

and Bay of Fundy fishing interests would be increased. I do not know if the facts warranted this opinion.

H. DAVIDSON, Esq., said, in reference to a statement above given :— I mean by material length of time, the canal remaining frozen after the opening of navigation not more than a week ; rather south-west winds are the prevailing winds in the Bay of Fundy.

In stating what I did in my letter, that if the shipping passing through the canal was to be confined to the Dominion alone, or to local trade, that there might be force in the opinions held against the construction of the canal. In saying this, my view was that all the surplus articles we ship to the United States from the Straits of Northumberland and the Gulf St. Lawrence would go to the United States by the canal. I admit that the trade to the United States, West Indies and South America, would not be affected by the canal.

In calculating the relative distances from the St. Lawrence, I assumed that vessels would pass through the Straits of Northumberland, and my measurements were only taken from Cape Tormentine.

I consider that, under the present circumstances, it would be premature for the Government to undertake the construction of a canal at so heavy a cost as \$8,000,000 ; but I believe that one such as Mr. Keefer suggested of \$5,300,000 would answer the purpose, if required.

CAPT. WILSON EASTABROOKE :—I have been a seaman for about 22 years, and have been coasting in the Bay of Fundy and master of a vessel 14 years. On looking at the map, I am of opinion that for the West India trade, the trade of South America and that of Great Britain, the canal to connect Bay of Fundy with the Straits of Northumberland is not required, either from the St. Lawrence, the northern ports of New Brunswick or the Bay of Fundy.

From the ports of Nova Scotia, or the east side, as well as from the ports on Bay of Fundy on the west side of Nova Scotia, the route would be shorter to the United States ports, and for this trade the canal is not required. The case, however, is different, I think, from the St. Lawrence, say—Montreal to St. John, or from Georgetown, in Prince Edward Island, to St. John and the United States, as the saving in distance would be some 200 or 300 miles.

I know there is not much trade at present from the northern ports of New Brunswick or Prince Edward Island ; but I think if the canal was built,

this trade would increase. From my experience, I would prefer the navigation in the Bay of Fundy up to the canal entrance at Au Lac, to that round the coast of Nova Scotia through the Gut of Canso. No doubt there are fogs in the Bay of Fundy, but there are also similar fogs on the outside coast. Strangers, no doubt, would require pilots; but coasters in the Bay, accustomed to its navigation, would not require pilots or tug boats.

The size of the vessels I have usually sailed in is from 100 to 300 tons, drawing from 10 to 14 feet fully loaded. These vessels are coasters.

In coming into the canal at Baie Verte, with piers extended to 16 feet depth, a vessel in a fresh wind, with a sea having waves of 6 feet, would require to allow a little more than 3 feet, or half the height of wave, and could only be secure by not drawing over 13 feet.

I am better acquainted with the navigation of the Bay of Fundy than any other. I have been nearly all my time engaged in that navigation; but I have not been much engaged on the eastern coast of Nova Scotia, or through the Gut of Canso. I have only been two or three times through the Gut of Canso.

I never was master of a vessel navigating the Straits of Northumberland; but, as a seaman, I have been two or three times through them.

I am of opinion that American fishermen would pass through the canal and Bay of Fundy, but have no experience or knowledge of the fishing business.

A vessel properly laden for sea, of 350 tons, would draw about 13 feet of water.

I think the voyage from Baie Verte to St. John, through the canal, could be made in 48 hours; but from Baie Verte, through the Gut of Canso to St. John, the voyage could not be done on the average of nine days. I speak only of a sailing vessel, not of steamers. I do not know what time it would take to carry freight from Shédiac to St. John by railway.

NATHAN LAW, farmer:—Have lived here all my life. Have never been engaged on the sea, nor in trade or shipping, but have been engaged in making dykes and canals to drain the marshes.

I think the ice in the spring time, which would be formed between the piers at the outlet and inlet of the proposed canal, would not remain much longer than the ice outside, and I also think the ice in the canal formed there, would remain longer than in the Bay of Fundy, although not much longer.

There are more larger vessels now than formerly, and the small class of vessels engaged in the coasting trade are greatly diminished in number by the competition of railways.

QUEBEC.

MONTREAL.

CAPTAIN RUDOLPH, Harbor Master, Montreal:—Have an intimate acquaintance with the navigation of the Lower Provinces, more particularly Nova Scotia, of which Province I am a native; also with the trade of the St. Lawrence from Montreal to Quebec, and to these Provinces coals in large quantities are brought by vessels, principally steamers, from 500 to 1000 tons, from Pictou and Sydney, chiefly from the former. Those vessels draw when loaded from 16 to 20 feet. The reight of coal by these vessels varies, in the spring it was high, but at present it is less being governed chiefly by the demand. Those vessels take back flour and other articles of manufactures but chiefly flour.

In the spring and fall of the year they have generally good return cargoes, but in mid-summer it is not so, and the rates of freight are then very low: this is owing very much to competition; indeed, very often during the summer months they have to go back in ballast without any reight; the ballast being created through the construction of the vessel aking in water as ballast, they have tanks for that purpose. I have traded to the West Indies as Master of a ship; should the proposed canal be constructed and adapted for steamers for the West India trade, such steamers would require to be about 1,200 tons, and would draw some 20 feet when fully loaded.

It is evident, therefore, from what I state, that with the present scale of the proposed canal, 15 feet of water, it would be utterly useless for such vessels as I have described, of 1,200 tons, going to the West Indies or elsewhere.

The natural route of such vessels would be through the Gut of Canso. I do not believe that any Master of a vessel would choose the canal, if it was now built, to go to the United States, West Indies, or South America, in preference to the Gut or Cape North routes, because the latter are less difficult of navigation; the route through the canal, although somewhat shorter to the United States, yet the voyage could be made quicker by going through the other routes.

All the trade from the United States and New Brunswick with Great Britain, is principally carried on in ships of a greater draught of water than there would be in the canal, consequently such vessels would not use it, but independently of this, the shorter, better and safer route is by the

ocean. From what I have stated, as to the coals imported from Pictou and Sydney it will, in my opinion, be very difficult, if not impossible, for the canal to compete with the vessels bringing such coals, who are enabled to take back a return cargo at very low prices, as it can be distributed from Shédiac to any part of Nova Scotia or New Brunswick.

From my knowledge of the Maritime Provinces and of their trade, I cannot for the life of me see where the trade is to come from, that will go near paying even a small part of the interest on the cost of the work said to be \$8,000,000.

I do not believe, from my knowledge, that any of the American vessels going to the Gulf of St. Lawrence from Cape Ann, Gloucester, and neighbouring coast to fish, would pass through the canal even if it was in existence. My reason for saying this is, that such vessels fish first all along the coast of Nova Scotia, and go in through the Gut or by Cape North, taking in men and procuring bait, etc. No master would pass through the canal where the navigation is more difficult, delays more frequent, and tolls would have to be paid, nor would they have any chance of getting fish.

CAPTAIN MARK P. McELHEMMY :—Now in business here as a Ship Broker, and was formerly Master of a ship during ten years trading in the Maritime Provinces, West Indies, the United States, South America and Great Britain.

I have frequently thought over and considered the prospect of the proposed canal to connect Baie Verte with the Bay of Fundy, and am prepared to give my opinion in regard thereto.

For the trade between Montreal and the West Indies by steamers, vessels of 1200 tons would be of the proper size—such vessels would draw, fully loaded, about 19 feet water. I learn that the proposed canal is to have a depth of 15 feet, consequently it would be useless for steamers of 19 feet. Trade, however, with the United States is frequently conducted in vessels of smaller tonnage, which would not pass through the canal even if it was constructed, because this route would be longer and more expensive than the present natural routes. I am very well acquainted with the navigation of the Bay of Fundy as far up as Juno, and although there are fogs, there are advantages also in the tides. The prevailing winds in the Bay of Fundy during the summer months are from the south-west. I am not acquainted with the navigation of the Bay of Fundy in the Cumberland Bay, nor up to the entrance of the proposed

canal at Au Lac. Pilots would certainly be required in that part of the Bay of Fundy, and more particularly in strange vessels.

The vessels that trade from ports east of St. John, or the northern ports of New Brunswick, are generally laden with timber or deals; their tonnage would be 700 tons and under; a vessel of 700 tons would draw about 18 feet, and could not pass through the canal; from St. John, the vessels trading with Great Britain are of a large class, drawing from 20 to 22 feet; the canal would be of no benefit for such trade; from the northern ports of New Brunswick, vessels trading with Great Britain would not require the canal; a large coal trade is now done between Montreal, Pictou and Sydney, and the vessels carrying on this trade, take back cargo at very low rates; if the canal was built, considering the low freight which is said to be charged, of 30 cents per barrel from Montreal to St. John, either by Shédiac or by the Grand Trunk Railway, a vessel carrying freight direct to St. John through the canal, could not compete with such low rates during the summer months; this rate, however, is the lowest.

I doubt, under the circumstances, whether the proposed canal, at a cost of \$8,000,000, would be a public benefit, or whether any tolls that could be collected would pay the interest, or near the interest of the principal expended. I am aware that of late years the tendency has been to increase the size of sailing and steam vessels, and that steam vessels are rapidly taking the place of sailing vessels. The proposed canal, with a draught of 15 feet, would be almost useless for the sailing or steam vessels drawing a larger draught of water, and would not meet the requirements of vessels now most in use.

HENRY A. BUDDEN, Merchant:—Have been engaged for many years in business in this city, and am now Managing Director and Vice-President of the Dominion Colliery in Pictou. The Company have shipped from the mines in one year upwards of 40,000 tons to Montreal; the freight has varied from \$2.00 to \$3.50 per ton of 2,240 lbs.; this rate is affected by the return cargo, which consists principally of breadstuffs and of manufactured goods; the rate of freight at present to Pictou or Shédiac is 25c. per barrel of flour, and it has been as low as 15c. I think the consumption of flour alone in Nova Scotia and New Brunswick is about 500,000 brls, over 200,000 of which, I believe, go to New Brunswick. I am not acquainted with the rate of freight by the Grand Trunk Railway Company; the proposed canal could not possibly be of any benefit

to the trade from the St. Lawrence to the West Indies or South America; there is no direct trade at present from Montreal or Quebec, by water, to St. John, New Brunswick; the trade being carried on, as before stated, by water to Shédiac and from thence by railroad to St. John. If the canal is built, it ought not to be of a greater depth than the St. Lawrence canals, say 12 feet. My reasons are :—

1st.—That it would furnish an additional outlet for the inland vessels of the St. Lawrence and Lakes to the ports of Bay of Fundy and to the American coast, as these vessels are best adapted for coasting voyages. I am not prepared to say what the freight would be per barrel, by a vessel sailing direct to St. John from Montreal—but taking into consideration the low freights by the return coal vessels added to the railroad charges from Shédiac to St. John, I fear that it would not be a paying business for a direct shipment through the canal. There would be a return cargo for the vessels sailing direct to Montreal through the canal, if used, of coal, gypsum and stone.

2nd.—The advantage of such a canal to Cape Breton and Pictou County would be chiefly by the facility given for the distribution of coal in small vessels to the United States ports as far down as Cape Cod. In various parts of the United States ports the water is shallow, and only small vessels or vessels of light draught can enter them. I am aware that the tendency of late years has been to increase the size of vessels, and also that steam vessels are fast superseding sailing vessels.

I think that sailing vessels of 1000 tons of carrying capacity can be built for a draught of 12 feet. It is not so much the saving of distance that would be the advantage, as the greater safety of passage through the canal and the Bay of Fundy for the coasting voyage. I am not practically acquainted with the navigation of the Bay of Fundy, but I am aware of the large trade being done by small vessels between the Basin of Mines and Portland and the United States ports.

I am quite aware that fogs exist in the Bay of Fundy during the summer months, which, no doubt, add to the dangers of its navigation.

I do not know if there is good anchorage in the upper part of the Bay or not; do not know what the prevailing winds are, or whether there are any adverse currents; I think a canal of 12 feet would be advantageous and tend to promote trade, which does not now exist, in consequence of the restrictive tariff in the United States, even with tolls charged in the canal.

I am of opinion that the canal would be of no benefit to New Brunswick or Nova Scotia, in the trade with Great Britain, that trade being carried on in vessels of a larger draught of water than the canal could afford.

I believe that a 12 feet canal with proportionate dimensions would cost much less than the proposed one, but if it is determined to build it of 15 feet, according to the estimate of \$8,000,000, I must say that I would be decidedly opposed to it; I do not mean to say that a 12 feet canal would pay the interest on the cost, but such a canal would serve all practical purposes, and therefore, that an extra depth is unnecessary. There is no doubt that since the construction of the railroad between Shédiac and St. John, the facilities of trade have been greatly increased, and these will be further increased when the Intercolonial Railroad is completed. Coal from our mines is carried in vessels of all sizes; we have loaded one of 1,870 tons, for Montreal, but the great bulk of that trade is carried on in vessels drawing 16 to 18 feet when fully loaded.

DAVID R. MacKAY, Esq.:—I have been connected with the coal trade and insurance business for many years; a portion of the trade to Montreal and Quebec, from Pictou and Cape Breton, is carried in vessels of about 150 tons, but by far the largest portion is carried in steamers. Steamers in fact are rapidly supplanting the trade now done by sailing vessels.

The rate of freight by steamer is from \$2.00 to \$2.75, and flour is carried back at from 15 to 25cts. The steamers carrying coal draw about 18 feet when loaded, and such could not use the proposed canal with a depth of 15 feet. I have given considerable attention to the project of the proposed canal, and do not believe that the business done in it could possibly pay even a small portion of the interest of its cost of \$8,000,000. The bulk of the business would be local: it would be of no advantage for the West Indies, South America, or the trade with Great Britain. If there was a free trade with the United States, no doubt that the local business would be greatly increased. The coal trade in Montreal has rapidly increased within the last five years; at that time 25,000 tons were imported—now there is over 100,000 tons, and there is no doubt that it will rapidly still further increase. This trade, however, is independent of the proposed canal. There are several coal mines in the Bay of Fundy, but the trade with them will not offer sufficient inducement for the building of the canal.

F. W. HENSHAW, Esq., Merchant :—I have had a long experience in business in coal from Pictou, and also in shipping from the United States. I have given a good deal of attention to the project of the proposed canal. I understand its cost is estimated at \$8,000,000, and that it will be adapted for vessels drawing 15 feet; I cannot see the public advantage of building such a canal at such a cost and such a depth of water; any advantage, if any there be, would be purely local, for such a depth would not allow of the canal being used by ocean vessels of ordinary size. The canal would be of no use for Canadian trade with West Indies, South America or Great Britain; it would require a large amount of tolls to pay anything like the interest on its cost. I have now a steamer in port of 800 tons register, which carries about 1500 tons freight, drawing, when loaded, about 18 feet 6 inches; the expense of passing this steamer through the Suez Canal lately was £700 sterling.

In my opinion the route through the Gut of Canso could be greatly improved, and increased facilities would thereby be obtained for shipping.

DAVID SHAW, Esq., Merchant :—Agent for Montreal and Acadian Steamship Company. Have been long engaged in shipping, and am now Agent for the London Line of steamers to Liverpool and Glasgow; am also Agent for most of the Yarmouth ships (N. S.), coming to this port.

The proposed canal would be of no use whatever to Canada for the trade to South America, the West Indies, or Great Britain, but the very opposite; I do not think that the interior lake or river propeller, drawing 12 feet of water, would find it profitable to continue her voyage down the St. Lawrence and through the proposed canal into the Bay of Fundy; my reason for this is that the inland propeller is not adapted for carrying coal from Pictou and other coaling ports; at present, steamers specially adapted for this trade, load with the coal at Pictou with great rapidity, and carry back flour and other freight at very low rates; I have known flour carried at 15 cents to Shediac, and 30 cents to St. John; this season these rates are 10 cents higher, say 25 and 40 cents; such rates would not, in my opinion, induce inland propellers to go to the Bay of Fundy through the canal, such vessels not being adapted for the coal trade, nor could they have a return cargo from the Bay of Fundy; moreover, they are more profitably employed in the trade west of Montreal, their profits

largely consisting in the number of trips they make during the season. I do not think that Nova Scotia would in the slightest degree be benefited by the proposed canal; I have had occasion to send steamers to the Bay of Fundy and, from the reports I have received, I think that its navigation, by fogs, currents and tides is dangerous, especially so at the upper end where the canal is to enter at Au Lac; strangers, masters of vessels, would require coasters going up or down; I do not consider that the public advantage would in any way be conserved by the construction of the proposed canal at a cost of \$8,000,000; on the contrary, I think it would be throwing away public monies to do so; if constructed, the trade through it would be purely local, and the revenue would be very small.

The railroad from Shédiac has, in my opinion, done away largely with the necessity for a canal, and the completion of the Intercolonial Railroad will largely add to the facilities already existing.

GEORGE A. DRUMMOND, Esq., Sugar Refiner:—I have a large interest in the Drummond Colliery, Nova Scotia, Pictou County; the bulk of our coal is sent here; the freight per ton of 2,240 lbs., is \$2.50; the steam vessels carrying this coal are of about 4 to 600 tons, drawing about 12 feet to 14 feet, and carrying from 800 to 1,000 tons; these vessels carry all the return freight they can get, but the rate is so low that it is almost better to use the water ballast; the proposed canal would not affect the conveyance of coal to Quebec and Montreal.

Vessels engaged in the West India trade from the St. Lawrence or to South America, would not use the canal—they would, I think, prefer the route round Cape North. I think under certain conditions of the wind, vessels laden with lumber or shooks, outward bound, might use the canal; but for myself, I should think it rather dangerous with a valuable cargo of sugar, etc., to come through that route. Vessels laden with sugar generally carry 50 to 60 per cent. over their registered tonnage in dead weight, and if such vessels grounded with such heavy cargo, they would be more liable to injury than those laden with lumber or shooks. The canal, if built, might prove advantageous to a line of small coasting steamers passing through the St. Lawrence to the Bay of Fundy as far west as St. Andrews, but the difficulty no doubt would be the return freight. The trade through the canal would in my opinion be a small one.

I have no knowledge of the extent of local traffic that would pass through the canal; but my impression is that the amount of it would

not be sufficient to warrant the expenditure of \$8,000,000. My firm has during late years imported from the West Indies to Portland for Montreal 20 to 25 cargoes annually in vessels on an average of about 300 tons. These vessels take return cargoes from Portland of lumber, box and puncheon shooks, as well as hoops, and some of them go to St. John for a similar return cargo.

I have no doubt that the distance from Montreal to St. John by railroad may be greatly shortened; on the present railroad route it is stated that it can be so shortened by 140 miles. If this is correct, then it will be a question, whether such a route from Montreal to St. John in the carrying of flour and other freight will not be preferable to that of the canal,—the cars bringing such freight to St. John, would then be in a position to carry back West India and other produce, and vessels bringing such produce to St. John could no doubt be loaded in return with lumber, shooks, hoops, etc., on better terms than at Portland.

H. McLENNAN, Esq., Merchant:—I have been for many years resident here, and largely engaged in transporting produce from the interior Lake Ports to this city. During last year the Company with whom I am connected carried some 6,000,000 bushels grain. In reply to the question as to whether in the event of the Baie Verte Canal being constructed, inland lake propellers would pass through it to supply flour and other western produce to St. John and other ports of the Bay of Fundy, I would say, I understand that flour is now carried by the western coal vessels from Pictou at 15c. to Shédiac, and thence by railroad at 15c. more, making 30c. in all from Montreal to St. John. A canal enabling a vessel to pass to St. John and earning an additional 15 cents after deducting tolls, allowing for time, would probably have a small balance in favor of the vessel, but this trade being local in its character, must be so limited as to be of very little weight in the construction of a canal estimated at such a large sum as \$8,000,000. As to the shortening of the distance from Montreal through the canal to ports west of St. John, I have to state that sailing in open water, distance is comparatively of little importance, and that it is more than counterbalanced by the disadvantages of going through 21½ miles of canal and the contracted navigation of the Bay of Fundy.

JOSEPH HICKSON, ESQ., General Manager Grand Trunk Railway Company, Montreal:—The traffic carried to St. John, N.B., and to Halifax, N.S., by the Grand Trunk Railway *via* Portland, consists principally of flour; some grain in bulk is taken, but not a very large quantity. The latter principally consists of Indian corn. Some portion of the traffic is brought from the Western States, but the greater part of it goes from points in Canada.

The following is the tonnage of traffic to St. John, from 1872, to 30th June, 1875:—

1872.....	22,265	Tons.
1873.....	28,012	“
1874.....	21,049	“
To June 30th, 1875.....	8,661	“

Some traffic, principally general merchandize, has been shipped by way of Danville Junction and the European and North American Railway. The expense of handling this traffic, which has to be carted between Carleton and the City of St. John, is about thirty cents per ton more than the cost of handling, when shipped from Portland. This constitutes a rather heavy tax upon the traffic by railway.

The tonnage from St. John, was as follows:—

1872.....	1,813	Tons.
1873.....	1,063	“
1874.....	879	“
To June 30th, 1875.....	349	“

The tonnage sent to Halifax, by way of Portland, was:—

1872.....	20,250	Tons.
1873.....	22,655	“
1874.....	19,996	“
To June 30th, 1875.....	10,840	“

The traffic from Halifax, was:—

1872.....	5,113	Tons.
1873.....	3,709	“
1874.....	2,689	“
To June 30th, 1875.....	496	“

Of course, there is a distribution of the traffic from St. John and Halifax, to points in the interior of New Brunswick and Nova Scotia.

In the summer season, the Grand Trunk Company carries to Montreal, a certain quantity of traffic for the Lower Provinces, which is shipped here. The quantity so sent in the year 1874 was 2,560 tons.

In addition to this, of course, there must be a very considerable shipment of traffic brought into Montreal from the Lakes *viâ* the canals. I have no statistics showing what this is.

The construction of the Baie Verte Canal might slightly cheapen the cost of transportation of this traffic by way of the St. Lawrence; but looking at the railway facilities afforded from Shédiac, it does not appear to me that it would do so to any very considerable extent.

The Grand Trunk Company grant through bills of lading for traffic, both to St. John and to Halifax, providing the necessary ocean tonnage from Portland, either by the chartering of sailing vessels or by contract with the regular lines of steamers.

There is competition for the traffic from points west of Toronto by the American Railway Companies running from the Niagara Frontier to Boston and New York.

It seems highly probable that the shipments by railway, to and from St. John, will increase.

The completion of the St. Francis and Megantic Railway, (a part of which is now built) running across from Sherbrooke on the Grand Trunk to a point on the Penabscot on the European and North American Railway, would shorten the distance by railway, and would undoubtedly lead to a large portion of the traffic for the Lower Provinces, being sent by that route.

The following shows the quantity of freight forwarded to and received from New Brunswick *viâ* Danville Junction :—

FORWARDED.	RECEIVED.
In 1874.. 95 Tons.	In 1874...4,255 Tons.
“ 1875.. 344 “	“ 1875...4,586 “

WM. J. PATTERSON, Esq., Secretary Montreal Board of Trade and of Corn Exchange Association; also Secretary Dominion Board of Trade :—I have always taken a deep interest in the Baie Verte Canal project. My opinions regard-

ing it were mainly derived from newspaper and other articles which I have seen in print, and particularly from information obtained from John Boyd, Esq., and Wm. Elder, Esq., of St. John, N.B. Have also considered the statements of Messrs. Hall and Telford, and other information on the subject contained in Haliburton's History of Nova Scotia. Am not competent to form an independent opinion on a question of engineering, nor of navigation either of the Gulf of St. Lawrence or the Bay of Fundy,—but have imagined from the character of the engineers I have named, and the estimate they give for building the proposed Baie Verte Canal, that the work could have been accomplished, as they proposed at the time, for \$780,000, and that a larger canal (to form a connecting link between the Straits of Northumberland and the Bay of Fundy) could be built for a greater sum, say \$2,500,000; have not made any special investigations as to the commercial necessity for a value of the said work, having accumulated information as above stated, and published it in my "Annual Reports of the Trade and Commerce of Montreal," for the years 1866, '67 and 1868, (I specially refer you to the one for 1867) copies of which I now hand you. I have always supposed that the possible construction of the canal was largely a question of engineering; but taking into account the conclusion arrived at in 1870 by the Canal Commissioners, I was certainly not prepared to hear that the Chief Engineer of Public Works (John Page, Esq.) had estimated the cost to be \$8,500,000.

I had formed an opinion that when the St. Lawrence Canals are enlarged to the capacity now contemplated, the Baie Verte Canal would have given rise to a very considerable through trade between St. John, N.B., and ports on Lake Ontario, and that goods sent in that way (notably flour) would be landed in better condition than at present by propeller and railway, thus effecting a very considerable saving to the owners of the property. But I have been informed that the completion of the Intercolonial Railway will quite as well answer the purpose and effect the saving referred to.

On looking at the map, I am inclined to think that trade between Ontario (for instance) and the West Indies and South America, would not seek to pass through the Baie Verte Canal.

Referring to the official estimated outlay necessary for construction, it is impossible for me to say whether the expected benefits arising from that canal would warrant such an outlay; but I think it would not for a considerable time to come.

D. BUTTERS, Esq. (of the firm of D. Butters & Co.)—Our firm

is largely engaged in shipping grain to the United Kingdom; we have shipped largely of oats, and always do so in bulk. I have read over the evidence given by Messrs. Wm. Gunn & Co. as to the best means of shipping oats from Prince Edward Island to the United States, (if that were possible, with the duty there of 10 cents per bushel), and I have no hesitation in declaring that the statements made by them are quite correct, and it is really ridiculous to suppose that any one shipping oats in quantity from the Island to the United States would put them in barrels.

I have not been asked the question before, but I must confess that, as a merchant acquainted with the trade of the Maritime Provinces, I do not see where the trade is to come from that would render the proposed canal advantageous to the trade of the Dominion, as it will be found that the railway, to a large extent, will take the place of the canal.

I would consider it simply absurd to put a large quantity of oats at Prince Edward Island into barrels for shipment to the United States, First: Because the cost of the barrel would be at least 35 cts., which, with 5 cts. cooperage, would be forty cents; and as a barrel would contain $3\frac{1}{2}$ bushels, the cost of carrying oats in barrels would thus be increased about 12 cents per bushel, independent of all other freight. Second: Oats put thus into barrels, would entail at least one-third additional freight per room; for as ten barrels of flour weighing 216 lbs. represents a ton of freight in commerce, the same number of barrels of oats would weigh over half of that. The true and cheapest way, therefore, of shipping, is in bulk, and in the largest quantities, which is the rule in all out-shipping countries, such as Russia, Denmark and Sweeden, as well as in Canada, for I have known as many as three million bushels shipped from Montreal in one season; one-half of which our firm shipped themselves within a period of three months, and which could not possibly have been done had packages been used. If the canal proposed to connect the Bay of Fundy with the Northumberland Straits at Baie Verte is only to have 15 feet in the locks of the canal, of course it is evident that such vessels as I think should be employed drawing from 17 to 21 feet, could not pass through the canal which would therefore be of no advantage to this trade. In consequence

of the duty of 10 cents per bushel in the United States, oats could not be sent there from Prince Edward Island, or other parts of the Dominion. If, however, oats could be sent from the Island to the United States, and if I had 1,500,000 bushels to ship, I could do so in 15 or 20 vessels, and the natural route of such vessels, would be through the Gut of Canso, as they could not go through the proposed canal.

WILLIAM GUNN & CO., Merchants, of Montreal, (late of Messrs. Rimmer, Gunn & Co., of Montreal.)—I am now, and have been largely engaged in the shipment to Europe of all kinds of grain, wheat, oats and corn; a bushel of oats in legal weight is 32 lbs., but sometimes a bushel according to quality will weigh 33 or 34 lbs. If I had a quantity of oats, say one or two million of bushels in Prince Edward Island to be shipped to the United States, it would never occur to me to ship them otherwise than in bulk, and in as large a vessel as I could get. Our shipments to England are in vessels ranging from 25 to 50,000 bushels drawing from 17½ feet of water to 19 feet 6 inches, when loaded. Within a few years a new system has prevailed, whereby steamers of large capacity, using water ballast, may carry 100,000 bushels of oats, drawing when loaded, about 20 to 21 feet water, and of a lesser size carrying 50 to 75,000 bushels from 17 to 18 feet 6 inches.

CHARLOTTETOWN, P.E.I., 23rd Nov., 1875.

HON. JOHN YOUNG, Montreal.

SIR,—I am in receipt of your favor of 8th instant, and note the evidence given before you at St. John, in regard to the shipment of oats from here. We invariably ship in bulk to England; and during the time the Reciprocity Treaty was in operation, all were shipped there in bulk also. It would be the greatest nonsense to entertain the idea of shipping oats in barrels, as the cost of same, say equal to 12 cts. per bushel, allowing three bushels to the barrel, would be about equal to the freight in bulk. The voyage to the States being

a short one, they never heated within my knowledge; hence there would not be the slightest necessity for shipping in barrels for the purpose of preserving the oats. The advocates of the canal must, I think, be hard pushed when they are brought to this argument.

I am, dear Sir,

Yours truly,

JOHN F. ROBERTSON.

CITY OF QUEBEC.

T. H. GRANT, Esq., Merchant, Member of the Council of the Board of Trade, of which I have been secretary:—In reference to the navigation of the proposed Baie Verte Canal, I have no knowledge; the proposed canal is a work, however, which has had my particular attention, and if it can be built at a moderate cost, I think it would be of general advantage to the public interest; by a moderate cost, I mean \$5,000,000, but even at \$8,000,000 I would be in favour of it, provided the dues on it would not give an advantage to the Gut of Canso as a competing route; the Canal Commissioners alluded to this canal as likely to cost \$3,250,000, but Mr. Keefer estimated it at \$5,000,000. The trade of Canada or of New Brunswick, Nova Scotia, or Prince Edward Island, with Great Britain, South America and the West Indies, would not in any way be assisted by such a canal; it is, therefore, the Intercolonial trade of the Dominion that would use and support it; the freight from Quebec or Montreal, to St. John and other ports in the Bay of Fundy, is at present carried on by two routes, one to Shédiac, by return vessels bringing up coal at rates varying from 15 to 30 cents per barrel, and from Shédiac, by railroad to St. John, at 15 cents additional; coal is taken to Quebec and Montreal from Pictou at \$2 to \$2.50 per ton; the other route is *via* Grand Trunk Railway to Portland, and from thence to St. John, Halifax and other ports, by steamers and other vessels, at 20 to 25 cents to Portland, and 10 cents additional from thence to destination.

I do not think that the Intercolonial Railroad will be of any or much use in the transport of the freight, owing to distance and heavy charges in winter, and would be quite useless in summer, owing to the superior advantages of the water route; 40 cents per barrel, in my opinion, would be a fair paying rate for the small vessels now engaged in the trade be-

tween the Provinces, but I do not know what return cargo they would take, excepting in coal and iron, used for shipping purposes, also gypsum and stone.

As regards the present trade, I must say its amount would not justify the proposed expenditure, but my idea is, and the opinion I have expressed as above is, that the future trade will be much greater than it is at present, and that the proposed canal will assist its growth, and that if we had a Reciprocity Treaty with the United States the trade would be further greatly stimulated. I am of opinion that the present mode of construction of vessels now in use in the Upper Lakes, from their build, size, and use of centre boards, would not suit for the Gulf and Ocean navigation. I consider that when those inland vessels meet the ocean vessels, then a transshipment is profitable, and should take place; I believe that large vessels could not use the canal; I also think that if the canal was made 12 feet instead of 15 feet as proposed, it would be of more general advantage.

FRANCIS GOURDEAU, Harbor Master:—Have been a Pilot in my earlier years; I know all the ports in the Gulf St. Lawrence, but have not sailed in the Bay of Fundy. Vessels leaving the St. Lawrence for the West Indies, South America, or Great Britain would not use the proposed canal as the present or natural route is shorter and better. If the canal was built to connect the waters of the Gulf and Bay of Fundy, there is no doubt that it would shorten the distance to St. John and other ports on the Bay of Fundy, but my inexperience of the navigation of the Bay of Fundy does not admit of my giving an opinion whether the advantages such a canal would offer, would compensate for its great cost of \$8,000,000.

The proposed canal being 15 feet, this depth would only suit small vessels; the tendency is to increase the size of the vessels, and to supersede sailing vessels by steamers.

WILLIAM MONRO, Manager of the Quebec and Gulf Port Steamship Company:—I am well acquainted with the navigation of the Gulf; have been in the Bay of Fundy, but not in the place where it is intended to locate the entrance to the canal. Our line of steamers trade with both Montreal and Quebec and the Gulf ports; almost the sole freight from the Lower Provinces is coal, which is loaded at Pictou; sometimes gyp-

sum and fish, but in very small proportion. The present rate of freight from Pictou is \$2.50 per ton of 2240 lbs. of coal, it has been as low as \$2.25.

Our return cargo is principally flour, which is carried at 25 cents per barrel; it has been as low as 15 cents per barrel. We have carried considerable quantities of manufactured articles to ports of call for \$3.00 per ton, and give through bills of lading at \$4.50 to St. John, Halifax and intermediate places. We also give through bills of lading for flour to some places. We have arrangements with railway companies for carrying freight; for instance, we give the railway 15 cents per barrel from Shédiac to St. John, and 17 cts. from Pictou to Halifax, and proportionate rates for assorted articles. These rates are, no doubt, very low for the vessel, but it is because we have the up cargo of coal and passengers traffic, that it can be done so low. Our vessels are of from 500 to 1120 tons, two of them, the smallest, draw about 8 feet when loaded—the others from 18 to 19 feet. The smallest of these vessels could pass through the proposed canal, but the largest could not, if loaded to their full capacity. If the canal was built, our line of steamers no doubt could pass through it to St. John, and other ports on the Bay of Fundy; but the difficulty would be to get a return cargo from thence to Montreal and Quebec; they carry at present considerable quantities of manufactured goods, sugar and molasses from Shédiac to different ports on the northern side of New Brunswick, Dalhousie, and Miramichi, etc. This freight can only be carried by our passenger vessels that carry no coal cargo; but it would not pay to send our freight vessels as they must go to Pictou for coal—and there not being sufficient return cargo from St. John, these vessels trading in coal from Pictou, might take freight at Montreal or Quebec. Economy in management seems to compel any return freight to be landed at Shédiac to be transferred to railway going direct to St. John. For the West Indies, South America, and Great Britain, the proposed canal is not required.

In my opinion, the proposed canal would offer no advantages equal to the outlay. The trade it would serve, would be purely local, and too insufficient in amount to warrant such a heavy expenditure. The trade with the south coast of Newfoundland would not use the canal.

JAMES G. ROSS, Quebec, Merchant:—Have been long engaged in

business here; am not intimately acquainted with the navigation of the Bay of Fundy, excepting from hearsay.

I have given a good deal of consideration to the construction of the proposed canal between Baie Verte and Bay of Fundy, but I have failed to see where the trade is to come from that would warrant its construction; its cost is said to be eight millions of dollars, this would be \$400,000 per annum, besides repairs and attendance; I do not see what trade there would be from the Bay of Fundy by return cargo in vessels coming from the St. Lawrence. The trade would be local in its character and limited in amount.

The trade with South America, the West Indies and Great Britain does not require the canal, the present routes are shorter and in my opinion safer; a glance at the map will prove this.

The down freight that steamers would get to St. John could not be taken so low as it is at present by water, in as much as they would have to come back empty, and the trade as now carried on by water and railroad is much cheaper than it could be by the canal. In my opinion, vessels that carry lumber to South America and West Indies are generally of a size that they would never use the canal, and the approaches to it are not so safe as by following the present natural route.

WILLIAM WITHALL, Merchant:—In my opinion I fail to see what benefit this canal would be in connection with the trade of the Dominion of Canada. My experience for several years back, and from my being connected with the line of steamers trading to the Gulf ports is; that the only trade of any importance carried on between the Maritime Provinces and Montreal and Quebec, is flour and provisions downwards, and coal in return. A vessel leaving Quebec or Montreal with a portion of a cargo for St. John lands it at Shédiac; it is taken from thence at a cost of 15 cts. per barrel by the Intercolonial Railroad to St. John in about 8 hours; this must be a considerable advantage over going by the proposed canal. The first reason is, the amount saved to the steamer by the short delay there is in discharging at Shédiac, or if she went through the canal at Baie Verte she would have an additional distance of 50 or 60 miles to travel to reach it, not to speak of the delays that may be experienced at the Bay of Fundy side by fogs, tides, contrary winds, &c.

I illustrate this by the steamer landing her cargo, say 600 barrels at Shédiac, (which is the usual quantity shipped there by our steamer);

this flour could be landed and put in the cars in 4 hours; in 8 hours more it could be landed in St. John even at the rate of 13 miles an hour; or in all 12 hours from the time of landing at Shédiac. By the Baie Verte canal route, the steamer would take 8 hours to go from Shédiac to that place, and 7 hours to go through the canal; it is not too much to say; that 14 hours more would be consumed in going from the outlet of the canal to St. John, making in all 29 hours against 12, the time now taken from Shédiac to St. John, and this too, independently of whatever tolls might be charged. Pilots too are necessary especially for strangers, besides wharfage at St. John. This is of great importance to the ship owner, considering that the expense of a steamer of 1,000 tons would be at least \$140 a day. I would state another reason against the proposed canal: our provision merchants find it an economy to order flour in small quantities by each steamer during the summer season. As winter draws near, larger stocks are laid in and shipments can be made to Shédiac 15 to 20 days later than they could be by the canal, owing to the latter being frozen earlier. There are now 12 steamers plying constantly between Quebec, Montreal, and the Provinces, these vessels averaging 10 trips each, which would make 120 during the season. I am positive in saying that the whole of the tonnage of goods or articles brought back from St. John or ports in the Bay of Fundy does not exceed 1,000 tons in all for the 120 trips. A vessel leaving Charlottetown for Boston would find it more advantageous to go by the Gut of Canso rather than by the proposed canal, the difference in distance being small, while the risks as already stated would render the canal route most objectionable. Moreover, there is very little trade just now. I am of opinion that vessels leaving the St. Lawrence for the West Indies or South America would never make use of the Baie Verte canal, but would use the present natural routes by the Gut or round Cape North.

In consequence of our climate, fully 50 p. cent of the flour and provisions required in the Maritime Provinces is carried by Grand Trunk Railway to Portland during winter, and from thence to destination by steamer or sailing vessels. From all that I have said, I do not think that the canal is required. In thinking the matter over, I am at a loss to see what benefit would be derived from it. For years to come, I do not think 20,000 tons would pass yearly through it. I see no necessity for such a canal, nor could I advise its construction on any account.

HENRY FRY, of Quebec, Merchant and Ship owner:—Have long

been engaged in business, but have only a slight knowledge of the navigation of the Bay of Fundy; I have, however, been interested in ships trading there and have a general knowledge of it.

I do not think the rate of freight from the St. Lawrence to the Bay of Fundy, if the proposed canal was built, would be higher than through the present route by the Gut of Canso.

The canal is not required for the trade of the West Indies, South America or Great Britain.

As a rule, the lake propellers are not suitable for the navigation of the Gulf, especially in the fall of the year, but I know of no reason why they should not do so in spring and summer, except that boilers suitable for fresh water often suffer in salt water; if flour is now carried from Montreal to St. John *via* Shédiac or *via* Portland at 40 cents per barrel, I do not believe it could be carried cheaper *via* the proposed canal; I do not believe the canal would be of any great practical benefit to the trade between the St. Lawrence, New Brunswick and Nova Scotia, or Prince Edward Island and the West Indies, or South America, nor in fact to any place south of Boston; if it were constructed, I believe ship-masters, as a rule, would prefer the Gut of Canso, or the route *via* St. Paul's, if bound south of Boston; most ship-masters, especially strangers, dread the Bay of Fundy on account of the strong tides and the prevalence of fogs, and I think the navigation would be safer outside the Gut of Canso, when bound south, than in the Bay of Fundy. For such vessels there would be no saving in freight or in insurance, and a toll, or any delay, would I think be fatal to its use. No doubt it would be of great advantage to vessels bound from the St. Lawrence, Labrador, Straits of Belle Isle, and P. E. Island to St. John and the various small ports on both sides of the Bay of Fundy, as well as to Maine, Portland, and possibly to Boston, and especially to fishing schooners. I have no precise knowledge of the extent of this trade, but with my present means of information, I could not recommend the Government to spend \$8,000,000 upon such a work. If the canal was constructed vessels sailing direct from the St. Lawrence to St. John might occasionally get a cargo of Plaster, or of West India produce from Portland, but their main dependence for back cargo must be as now on the coal trade from Pictou.

J. W. DUNSCOMB, Collector of Customs at Quebec:—I was formerly engaged in the West India trade extensively.

The proposed Baie Verte canal would not, in my opinion, afford any facility to the navigation and trade with the West Indies, South America or Great Britain; a reference to the maps accompanying the Report of the Trade Commission to the West Indies and South America, published in 1866, will show that the canal would not shorten the distance, or confer any other advantage to this trade.

The great rise and fall of the Bay of Fundy waters, and consequently the immense engineering difficulties to be overcome in the construction of the proposed canal, deters me from expressing an opinion, whether the work is desirable at a cost of eight millions of dollars.

The Bay of Fundy is boisterous and tempestuous and cannot be compared with the route by the Gut of Canso, which is almost land-locked and comparatively smooth.

If the canal was constructed, steamers and vessels might certainly pass through it to St John, carrying flour, furniture, and other Canadian manufactures, and goods ex English steamers. It is difficult to say what freight would be obtained for return cargoes; a little West India and perhaps some Mediterranean produce might occasionally be obtained, but it is to be borne in mind that the great staples now moved are flour down, and coal up; the former is now carried perhaps cheaper than it could be through the canal, and the latter, (coal) of course would not pass through the canal.

UNITED STATES.

GLOUCESTER (MASS.)

J. S. AYER, Gloucester, Massachusetts, United States:—I have been sailing in the Gulf of the St. Lawrence, in the fishing business, for the last 25 years; am well acquainted with the fishing trade as it is now carried on, and as it has been carried on, and am now engaged on shore in carrying on fishing trade; I do not think American vessels going out to fish in Canadian waters would use the proposed canal; my reason is that the navigation of the Bay of Fundy would be considered dangerous at the head of the Bay, on account of strong tides, currents and fogs, which would also cause delay, and preference would be given to the present route through the Gut, and sometimes round Cape North; we engage a number of the men at the Gut and along the Nova Scotia shore, also procure there our cod fish bait.

For the past 20 years the average number of vessels may have been 200 a year ; this year it has not exceeded 50 sail.

We find the fish better and plentier on the American coast for some years past, hence the vessels remain here, I would say that between 500 and 800 is the number of vessels employed, in both American and Canadian waters ; the average tonnage would be about 80 tons, and the average draught would be about 10 feet.

JOHN PEW, Gloucester :—I am engaged in the fishing business ; have the largest business in this line in the United States ; I have examined the route of the proposed canal, and I think if it was constructed it would be of no practical value to American fishermen, and would not be used by them ; they would go by the usual routes. The average tonnage of our vessels is 80 tons, and draft of water 10 feet. The number of vessels large and small engaged in fishing is about 1100. I do not think, that more than 50 out of 500 American vessels have gone to fish in Canadian waters of late years, the great bulk of our fleet fish in our own waters. I own twenty-five vessels, and but two out of that number went out fishing in Canadian waters this year.

B. H. CORLISS, Ship Chandler :—Have been engaged in Commercial business ; our vessels have a dread of going in the Bay of Fundy, and would have more still of going to the head of it, on account of currents, shallow water, fogs, etc. For my part, I would rather go round through the Gut of Canso than use the proposed canal ; if built, I do not think it would be generally used by our fishing vessels.

SYLVANUS SMITH :—Have been 28 years engaged in the fishing business, and know every nook of the coast of New Brunswick, Nova Scotia and Prince Edward Island. In reference to the proposed canal, all I can say is that if built, it might be used to some extent ; all would depend on the nature of the wind, &c.

I have never been up at the head of the Bay of Fundy, therefore cannot give any opinion in regard to the navigation there.

There are not more than 70 American vessels in Canadian waters engaged in mackerel fishing this year, and a portion have gone in

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within the last fortnight. I have known as many as 250 vessels from this port going out on mackerel fishing in Canadian waters. Vessels engaged in cod fishing would not use the canal as they go outside on the Banks. In my opinion, our fishing vessels would give preference to, and use the present routes by the Gut and Cape North, in preference to the proposed canal.

DISTANCES.

FROM	TO	VIA			In favour of Canal.	Against Canal.	MILES.
		Cape North.	Straits of Canso.	B. Verte Canal.			
		MILES.	MILES.	MILES.	MILES.	MILES.	MILES.
Montreal	Liverpool	Via	Straits	of Belle	Ile		2,780
"	"	Via	South	Coast N	ewfound	land	2,939
New York	"	Via	South	Coast N	ewfound	land	3,018
Montreal	Monterideo	6,445	6,429	6,579			150
"	Rio	5,330	5,320	5,470			150
"	St. Thomas	2,513	2,439	2,449			10
"	Havana	2,598	2,504	2,406		98	
"	New York	1,519	1,459	1,314		145	
"	Boston	1,289	1,211	1,046		166	
"	Portland	1,254	1,229	1,044		185	
"	St. John, N.B.	1,239	1,179	954		225	
Dalhousie	"	805	710	360		340	
"	Boston	915	785	630		155	
"	New York	1,075	975	865		110	
"	Halifax	540	440	565			125
Chatham	St. John, N.B.	780	620	230		390	
"	Boston	840	710	430		230	
"	New York	1,019	905	725		180	
"	Halifax	480	360	470			110
Pictou	St. John, N.B.	625	485	182		303	
"	Boston	745	580	422		158	
"	New York	930	755	673		82	
"	Halifax	400	220	417			197
Charlottetown	St. John, N.B.	689	504	150		354	
"	Boston	789	643	414		229	
"	New York	959	781	643		138	
"	Halifax	424	245	390			145
New London	St. John, N.B.	638	434	240		394	
"	Boston	745	621	404		117	
"	New York	938	811	735		76	
"	Halifax	403	267	479			303
Port Hood	St. John, N.B.	621	442	217		225	
"	Boston	701	525	477		48	
"	New York	891	720	708		12	
Anticosti (east end)	St. John, N.B.	655	605	369		236	
"	Boston	714	633	610		73	
"	New York	945	900	830		70	
Belle Isle (S. entrance)	St. John, N.B.	845	830	600		230	
"	Boston	958	936	890		46	
"	New York	1,145	1,155	1,135		20	
St. George's Bay	St. John, N.B.	620	630	394		236	
"	Boston	712	720	663		48	
"	New York	903	1,119	885		18	
Fortune Bay	St. John, N.B.	670	779	510		159	
"	Boston	780	830	780			50
"	New York	955	1,000	1,010			45
Halifax	St. Thomas						1,585
Portland	"						1,541
Boston	"						1,510
"	Barbadoes						1,860
"	Havana						1,430
"	Jamaica						1,690
New York	St. Thomas						1,420
"	Barbadoes						1,800
"	Havana						1,220
"	Jamaica						1,530
New Orleans	St. Thomas						1,630
"	Barbadoes						2,120
"	Havana						890
"	Jamaica						1,095

The above are in Nautical miles.

Distances.

FROM	TO	VIA			In favour of Canal.	Against Canal.	NO. MILES
		Cape North.	Strait of Canso.	B. Verte Canal.			
		NO. MILES	NO. MILES	NO. MILES	NO. MILES	NO. MILES	NO. MILES
Montreal...	Gaspe Basin .....	.....	.....	.....	.....	.....	505
"	Dalhousie .....	.....	.....	.....	.....	.....	603
"	Chatham .....	.....	.....	.....	.....	.....	610
"	Shediac .....	.....	.....	.....	.....	.....	640
"	Baie Verte .....	.....	.....	.....	.....	.....	685
"	Charlottetown.....	.....	.....	.....	.....	.....	690
"	Pictou .....	.....	.....	.....	.....	.....	725
"	Strait of Canso.....	.....	.....	.....	.....	.....	708
"	Sydney .....	.....	.....	.....	.....	.....	726
"	St. Johns, Nfld.....	.....	.....	.....	.....	.....	1,030
"	Halifax	951	870	1,039	.....	169	.....
"	Liverpool	Via	Strait Belle	Isle	.....	.....	2,780
"	"	Via	South Coast	Newfound	land ..	.....	2,969
New York ..	"	Via	South Coast	Newfound	land ..	.....	3,013
Montreal...	Montevideo.....	6,445	6,429	6,579	.....	150	.....
"	"	5,230	5,320	5,470	.....	150	.....
"	St. Thomas.....	2,513	2,439	2,449	.....	10	.....
"	Barbadoes	2,598	2,504	2,406	98	.....	.....
New York ..	Havana .....	.....	.....	.....	.....	.....	1,420
"	Barbadoes .....	.....	.....	.....	.....	.....	1,800
"	Jamaica .....	.....	.....	.....	.....	.....	1,530
Boston	St. Thomas.....	.....	.....	.....	.....	.....	1,510
Portland ...	" .....	.....	.....	.....	.....	.....	1,541
St. John, N.B	" .....	.....	.....	.....	.....	.....	1,620
Halifax.....	" .....	.....	.....	.....	.....	.....	1,585
New Orleans	" .....	.....	.....	.....	.....	.....	1,630
"	Jamaica .....	.....	.....	.....	.....	.....	1,095
"	Barbadoes.....	.....	.....	.....	.....	.....	2,120
"	Havana.....	.....	.....	.....	.....	.....	590

The above are in Nautical miles

A.

Number and Tonnage of Vessels entered Inwards and Outwards at Bay of Fundy Ports for the years 1873 and 1874.

NAME OF PORT.	1873.		1874.	
	INWARDS.	OUTWARDS.	INWARDS.	OUTWARDS.
Amherst	245	18,640	92	17,819
Annapolis	127	12,778	120	11,290
Bridgetown	10	936	5	423
Campobello	81	5,397	92	4,874
Cornwallis	189	18,308	204	20,645
Digby	146	15,371	126	13,093
Dorchester	36	5,148	47	7,400
Hillsborough	114	13,649	92	11,667
Londonderry	19	1,587	17	1,701
Margaretville	71	5,770	65	4,950
Moncton	16	1,357	10	947
Parishborough	101	12,644	84	10,374
Sackville	42	4,861	26	2,894
St Andrews	589	84,453	577	81,876
St George	110	15,508	96	13,106
St John	1,470	406,442	1,390	480,743
St Stephens	52	12,827	45	8,795
West Isles	9	543	8	435
Weymouth	185	14,703	154	11,251
Windsor	362	50,120	376	55,473
Yarmouth	197	23,359	185	31,968
	<u>4,171</u>	<u>724,401</u>	<u>3,741</u>	<u>791,723</u>
		4,083		792,850
				3,554
				839,965