

**REPORT ON THE PROPOSED
TRUNK LINE OF RAILWAY FROM
AN EASTERN PORT IN NOVA
SCOTIA, THROUGH NEW
BRUNSWICK, TO QUEBEC**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649330799

Report on the proposed trunk line of railway from an eastern port in Nova Scotia, through New Brunswick, to Quebec by William Robinson

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

WILLIAM ROBINSON

**REPORT ON THE PROPOSED
TRUNK LINE OF RAILWAY FROM
AN EASTERN PORT IN NOVA
SCOTIA, THROUGH NEW
BRUNSWICK, TO QUEBEC**

HE 2507
R66

REPORT

ON THE PROPOSED

TRUNK LINE OF RAILWAY

FROM AN EASTERN PORT IN NOVA SCOTIA,
THROUGH NEW BRUNSWICK,
TO QUEBEC.

BY MAJOR WILLIAM ROBINSON,
CAPTAIN, ROYAL ENGINEERS.

Printed by Order of the House of Commons.



Ottawa:
PRINTED BY HUNTER, ROSE & COMPANY.
1868.

H

MESSAGE.

ELGIN AND KINCARDINE.

The Governor General transmits, for the information of the Legislative Assembly, copies of the Despatches from Her Majesty's Secretary of State for the Colonies, enumerated in the annexed Schedule.

GOVERNMENT HOUSE,
30th January, 1849.

SCHEDULE.

FROM	NO.	DATE.	SUBJECT.
		1848.	
Earl Grey to the Earl of Elgin...	166	11th February...	<i>Customs' Act</i> —Assented to by the Queen—with letter from Treasury and the Board of Trade, respecting it.
Do. ..	167	11th February...	<i>Ditto</i> —With Memorial from certain Iron Founders.
Do. ..	175	6th March.....	<i>Ditto</i> —With Memorial from certain Glasgow Merchants.
Do. ..	186	31st March.....	<i>Ditto</i> —Views of Her Majesty's Government.
Do. ..	252	7th July.....	Respecting the Canada Act, to extend <i>Copy-right</i> to persons resident in the United Kingdom.
Do. ..	299	17th November...	<i>Halifax and Quebec Railroad</i> —Transmitting Report of Commissioners, and desiring to be informed of the views of the Provincial Legislature.
Do. ..	Military	{ 15th Sept.... } { 22nd Dec. .. }	Respecting the necessity of exempting from <i>duty, articles</i> imported for the <i>Military Service</i> .
Do. ..	174	24th February...	Respecting the Montreal and Lachine, and the St. Lawrence and Industry Railway Acts.
Do. ..	202	20th April.....	Enclosing Order of the Queen in Council, confirming seven reserved Railway Bills of 1847, and pointing out amendments required.
Do. ..	206	23rd April.....	Reporting the confirmation of certain Acts, and suggesting amendments to the Acts for incorporating the Montreal and Echo Lake Mining Companies.
Do. ..	231	15th June.....	Suggesting amendments to the Act incorporating the Western Telegraph Company.

REPORT

ON THE

PROPOSED TRUNK LINE OF RAILWAY

FROM AN EASTERN PORT IN NOVA SCOTIA, THROUGH NEW
BRUNSWICK, TO QUEBEC.

HALIFAX, NOVA SCOTIA,
August 31, 1848.

Three principal lines or routes for a trunk line of railway present themselves for consideration; and by combining portions of two of these lines together, a fourth and fifth route may be formed.

1st. Commencing at Halifax and crossing the Province of Nova Scotia to a port in the Bay of Fundy, from thence by a steamer to St. John, in New Brunswick, and then by Fredericton along the St. John River, to the Grand Falls.

From the Grand Falls by the best practicable route across to the mouth of the Rivière du Loup, on the St. Lawrence, and by the right bank of the St. Lawrence to Quebec.

The distance by this route would be as follows:—

	Miles.
Halifax to Windsor.....	45
Windsor to Annapolis.....	85
Annapolis to entrance Bay of Fundy.....	11
Across Bay of Fundy to St. John (by sea).....	45
St. John to Fredericton.....	65
Fredericton to Woodstock.....	62
Woodstock to the Grand Falls.....	71
The Grand Falls to the mouth of the Rivière du Loup.....	106
Rivière du Loup to Quebec.....	110

Total distance, Halifax by the St. John River to Quebec..... 600

This line may be termed a mixed route—by railway and steamboat.

2nd. Commencing at Halifax and running to Truro at the head of the Bay of Fundy, thence over the Cumberland Mountains to Amherst, then along the coast from Bay Verte to Shediac, thence by a north-westerly course, crossing the Rivers Richibucto and Miramichi, above the flow of the tide, so as not to interfere with the navigation.

Then by the valley of the North-western Miramichi to Bathurst, on the Bay Chaleurs, along the coast of this bay to the Bestigouche River, and by it and the valley of the River Metapedia to the St. Lawrence, and by the right bank of the St. Lawrence to Quebec.

The distance by this route would be as follows:—

	Miles.
Halifax to Truro.....	55
Truro to Amherst and Bay Verte.....	69
Bay Verte to Shediac.....	26
Shediac to Miramichi River	74
Miramichi River to Bathurst.....	56
Bathurst to the Eel River, near Dalhousie.....	48
Dalhousie to the mouth of the Metapedia River.....	30
Metapedia River to the mouth of the Nagot River, near the St. Lawrence.....	86
Along the St. Lawrence from this point to Quebec	191

Total distance by this route..... 635

This, for the sake of reference, may be called the Halifax and Eastern or Bay Chaleurs Route, through New Brunswick to Quebec.

3rd. Commencing at the harbour of Whitehaven, near Canso, at the north-eastern extremity of Nova Scotia, thence along the Atlantic Coast to Country Harbour and Valley of the River St. Mary, thence by or near to Pictou and along the northern shore to Bay Verte.

From Bay Verte to or near the Bend of Petitcodiac, thence across to Boistown, and northerly to the Restigouche River, crossing it several miles to the east of Grand Falls.

From thence by the most direct and practical course to the Trois Pistoles River, and along the right bank of the St. Lawrence to Quebec.

The distance by this route would be nearly as follows:—

	Miles.
Whitehaven to Country Harbour.....	40
Country Harbour to St. Mary's Valley and Pictou.....	64
Pictou and along the coast to Bay Verte.....	77
Bay Verte to Bend of Petitcodiac.....	40
Petitcodiac to Boistown	80
Boistown to the crossing of the Restigouche River.....	115
Restigouche River to Trois Pistoles, by the Kedgwick and Rimouski Valley.....	105
Along the St. Lawrence to Quebec.....	131

Total distance from Whitehaven by Boistown to Quebec..... 652

This may be termed the Direct Route.

4th. Combining the Halifax route through Nova Scotia, and the direct route through the centre of New Brunswick.

The distances will be probably as under:—

	Miles.	
From Halifax by Truro and Amherst to Bay Verte, as per Route No. 2.....	124	} In Nova Scotia.
Bay Verte to the Bend of Petitcodiac, Boistown, Restigouche River, as per Route No. 3.....	235	
By the Kedgwick and Rimouski, to the mouth of the Torcadi.....	75	} In New Brunswick.
Mouth of the Torcadi to the crossing of the Trois Pistoles River.....	30	
Along the St. Lawrence River to Quebec.....	131	} In Canada.

Total distance from Halifax to Quebec by this route... 595

5th. Combining the Whitehaven Route through Nova Scotia, with the Eastern or Bay Chaleurs Route through New Brunswick to Quebec, the distances will be as under:—

	Miles.	
From Whitehaven by Pictou and the North Coast to Bay Verte, as in Route No. 3.....	181	} In Nova Scotia. } In New Brunswick. } In Canada.
From Bay Verte to the Bay Chaleurs, and mouth of the Metapedia, as in Route No. 2.....	234	
Mouth of the Metapedia River to the mouth of the Naget	86	
Along the St. Lawrence to Quebec.....	191	
Total distance from Whitehaven to Quebec by this route	692	

Thus the distances will be as under:—

	Miles.
1st. By the mixed route, Halifax to Annapolis, by the St. John to Quebec, the distance will be.....	600
2nd. By the Halifax and Eastern, or Bay Chaleurs Route, to Quebec...	635
3rd. By the Direct Route, Whitehaven, Boistown and Quebec.....	652
4th. By the Halifax, Truro, Amherst and Boistown, to Quebec.....	595
5th. By the Whitehaven, Bay Verte and Bay Chaleurs, to Quebec....	692

The first line falls in the most essential object contemplated by the proposed Railway, viz., a free and uninterrupted communication at all times and seasons of the year, from the port of arrival on the Atlantic terminus in Nova Scotia to Quebec.

The intervention of the Bay of Fundy is fatal to this route.

In summer the transhipment of passengers and goods to and fro would be attended with the greatest inconvenience—loss of time and additional expense; whilst in winter it would be even still more inconvenient, and liable to be interrupted by storms and the floating masses of ice which then occur in the bay.

In the case of the conveyance of troops, transport of artillery and munitions of war, the crossing the bay would at any time be most objectionable, and if suddenly required in critical times might be attended with the worst consequences.

Commercially, too, it would destroy the fair prospect of the proposed line from Quebec to Halifax competing successfully with the route by the Gulf of the St. Lawrence, and with rival lines in the neighbouring States.

But there are also other serious objections to be offered against it.

Passing through New Brunswick and on the right bank of the St. John River, as it must necessarily do, to the Grand Falls, it would for a considerable distance, both before and after the reaching of that point, run along and close to the frontier of the United States.

In case of war, therefore, or in times of internal commotion, when border quarrels or border sympathies are excited, this line, when most needed, would be the most sure to fail, for no measures could be taken which would at all times effectually guard it from an open enemy and from treacherous attacks.

The passage across the Bay of Fundy so close to the shores of Maine, would invite aggression, and require a large naval force for its protection.

The engineering difficulties as the line approaches the Grand Falls from Woodstock would not be easily overcome.

The space between the St. John River and the Boundary Line becomes gradually contracted to a width of not more than two or three miles, and the country is broken and rough, whilst the banks of the St. John are rocky and precipitous for many miles below the Falls.

From the Grand Falls to the St. Lawrence, a distance of more than a hundred miles, the country is so far known as to make it certain that there is very difficult and unfavorable ground to be encountered, which would require careful explorations and extensive surveying.

This intervention of the Bay of Fundy, therefore, and the proximity of this line for a considerable distance to the frontier of the United States, was so objectionable and fatal to this route, that the attention of the officers and the exploring parties was, after a slight examination of the country between Halifax and Annapolis, directed in search of other and more favorable lines.

To understand the comparative advantages possessed by the *other* routes as well as to be able to weigh the objections which may be raised against each, and afterwards determine from their relative merits, which is the *best direction for the proposed line to take*, it will be necessary, previously, to give some description of the country through which the lines pass, the present amount and distribution of the population, and the engineering difficulties which were met with along the lines examined.

As it will be seen in the end, that only one of the lines, viz., the second, has been explored and carried out *successfully* from its terminus on the Atlantic quite through to Quebec, it may be perhaps considered superfluous to enter upon the discussion of rival lines, but the object to be gained by so doing, is to show that so much has been done, and is known of the country as to render further explorations for new lines unnecessary, because, if completed, they would not be likely to be recommended in preference to the one which will be proposed for adoption.

The distance from the Atlantic coast of Nova Scotia, to the bank of the St. Lawrence is about 360 miles in a straight line. Intersecting the country which must be traversed by any line of railway and crossing its course at right angles, are *five great obstacles* which have to be either surmounted or avoided:—

1. Is a broad range or belt of high and broken land which runs along the Atlantic shores of Nova Scotia, from Cape Canso to Cape Sable. The breadth varies from about twenty miles in its narrowest part up to fifty or sixty miles in other places. Its average height may be about five hundred feet. The strata of which it is composed consist of granite, slate, and a variety of rocks, hard and difficult to cut through. The characteristic features of the surface are rugged and uneven, and therefore very unfavorable for railway operations. No useful minerals of the metallic kind have been found in it, in quantities sufficient to work to advantage.

Valuable quarries of stone for building purposes are abundant, but these will be found everywhere nearly along the proposed line.

This formation is estimated to cover nearly two-thirds of the surface of Nova Scotia. It is, generally speaking, unfavorable for agriculture; the timber on it is stunted in growth, and it is an object of some importance to pass through it and leave it behind as soon as possible.

If a line be drawn from the head of the estuary of the Avon, near Windsor, to the Great Shubenacadie Lake, and then across the Steniacke River, along the upper parts of the streams in the County of Pictou, to the Gut of Canso, all the portion lying to the south of this line belongs to this formation, and all to the north of it to the more favorable and highly valuable formation of the carboniferous system.

The narrowest and shortest line by which this range or belt can be crossed occurs at Halifax, and at the same time, owing to a favorable break in the chain, at the lowest point in altitude; the summit level through it not exceeding ninety feet.

The Halifax line (Route No. 2) is clear of it in twenty miles. Before the same can be done by the Whitehaven and Direct line (Route No. 3), it must follow the coast for upwards of thirty miles, as far as Country Harbour, and then a further course across it of another thirty miles; involving in this distance *two* if not three tunnels, and must surmount a summit level of 400 feet.

2. The second great obstacle is the Bay of Fundy. This, as is stated, is fatal to the first route. By the other routes it can be turned and avoided.

3. The third obstacle is the range of Cobequid Hills. These extend all along the north shore of the Bay of Minas and very nearly across but not quite to the shore of the Straits of Northumberland. In breadth the range preserves nearly an uniform width of about ten miles. In altitude the hills average from 800 to 1000 feet. The lowest point, after a careful survey, was found to be at the Folly Lake, 600 feet above the sea. This range can be avoided and passed by the Whitehaven and Direct Route, but must be surmounted and crossed over by the Halifax and Eastern line (Route No. 2).

The prevailing rocks are granite, porphyry, and clay slate, in the upper portions; along the shores of the Bay of Minas and on the northern side, the formation is of the red sandstone and the coal measures.

This range abounds with the most valuable minerals, of which a large mass of specular

iron ore, of unequalled richness, occurs close to the line, and only requires facility of carriage for bringing coals to the spot, to be worked with profit.

A large portion of this tract still remains ungranted, and timber of excellent growth, with abundance of the finest stone for building purposes, are to be met with, and still belonging to the Crown, can be had for the expense of labour only.

4. The fourth obstacle is the broad and extensive range of highlands which occupies nearly the whole space in the centre of New Brunswick, from the Miramichi River, north to the Restigouche. Some of these mountains rise to an altitude exceeding 2,000 feet.

The Tobique River runs through them, forming a deep valley or trough, which must be crossed by the direct line, and increases greatly the difficulty of passing by them.

The lowest point of the ridge overlooking the Tobique River, at which any line of railway must pass is 1,216 feet above the sea. Then follows a descent to the river of 796 feet in 18 miles, and the summit level on the opposite ridge or crest between the Tobique and Restigouche waters, is 920 feet above the sea, or a rise of 500 feet above the point of crossing at the Tobique water. These great summit levels, which must be surmounted, form a serious objection to this route.

The Eastern line, by the coast, avoids this chain altogether. The greatest summit level along it will not be above 368 feet, while the distance by each, from the Province line to Bay Verte to the Restigouche River (the northern limit of New Brunswick) will be, as nearly as possible, the same, there being only a difference of one mile in these two routes through this Province.

The rocks composing this chain of mountains are granite, various kinds of slates, grauwacke, limestone, sandstone, &c.

5. The fifth and last obstacle to be overcome, and which cannot be avoided by any of the routes, is the mountain range running along the whole course of the River St. Lawrence in a very irregular line, but at an average distance from it of about twenty miles. It occupies, with its spurs and branches, a large portion of the space between the St. Lawrence and the Restigouche River. The rocks and strata composing the range are of the same character and kind as the Tobique range. The tops of the mountains are as elevated in the one range as in the other.

The exploring parties failed in finding a line through this range, to join on to the direct line through New Brunswick, but succeeded in carrying on the Eastern or Bay Chaleurs Route, owing to the fortunate intervention of the valley of the Metapedia River.

The line which was tried, and failed, was across from the Trois Pistoles River, by the heads of Green River, and down the Pseudy, or some of the streams in that part, running into the Restigouche River.

A favorable line from the Trois Pistoles was ascertained along the Eagle Lake and Torcardi River, as far as the Rimouski; and it is probable that by ascending this river, and descending the Kedgwick River, this line, Route No. 4, could be completed.

But it is most improbable that it could compete in favorable grades with the Metapedia.

It will be allowing it sufficient latitude to suppose it will be equal in engineering merits; and that, if accomplished, it will give the Route No. 4 an apparent advantage of forty miles in distance.

A very striking characteristic in the geological formation of North America, and which has been noticed in the writings of persons who have described the country, is the tendency of the rock strata to run in parallel ridges in courses north-easterly and south-westerly.

On referring to the General Map No. 1, and confining the attention more particularly to that portion of country east and north of the St. John River through which any line must pass—this general tendency cannot fail to be remarked.

The River St. Lawrence—the main Restigouche River and intermediate chain of mountains—the Tobique River and mountains—all the streams in New Brunswick (the main trunk of St. John and a branch of the Miramichi excepted).

The Cobequid Range, the Bay of Fundy, and the high and rocky range along the Atlantic shore, have all this north-easterly and south-westerly tendency.

It will be evident, therefore, that any line from the coast of Nova Scotia to the St.