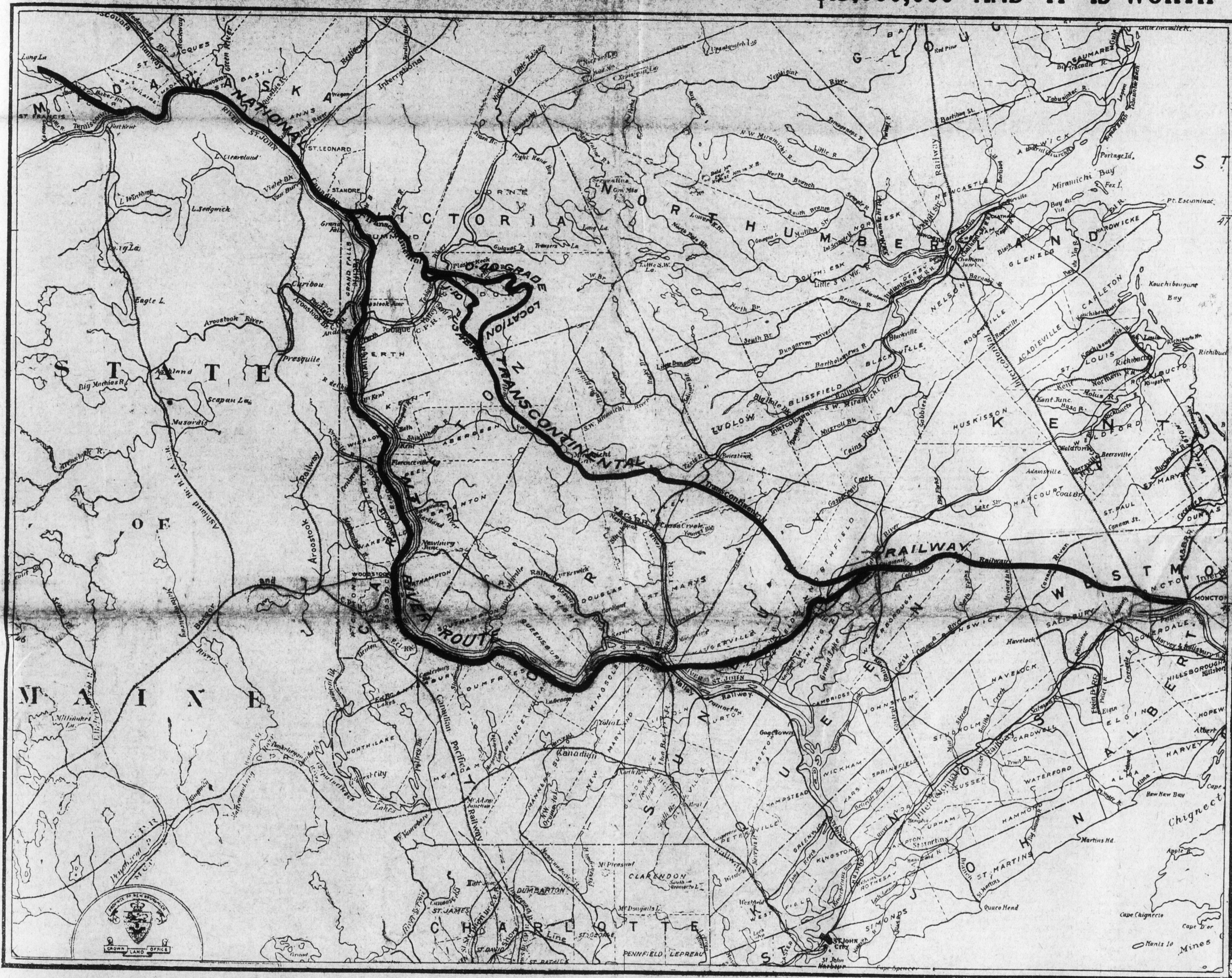


THE NATIONAL TRANSCONTINENTAL AND WHAT IT MEANS FOR NEW BRUNSWICK; 256 MILES OF HIGH CLASS LINE THAT COST \$15,000,000 AND IT IS WORTH IT



The foregoing map shows the route of the Transcontinental from Moncton to the Quebec line, and also (in red) the river route which was surveyed but not adopted because of its greater length and greater cost. To have obtained a four-tenths grade by the river from Grand Falls down through Fredericton and into Chipman would have lengthened the line by more than forty miles and added to the cost by three or four millions of dollars. The red loop just before the Tobique is reached shows where the engineers would have had to carry the road around to secure a four-tenths grade at that point. By adopting the "pusher" grade for twelve miles (the black line) they saved seventeen miles in distance and a cost of almost two millions of dollars. Particulars as to these matters are given in the accompanying article.

The Telegraph in mid-September was able, thanks to the courtesy of Chas. O. Foss, the district engineer in charge of the New Brunswick section of the National Transcontinental Railway, to send a member of its staff over the new line, section by section, from Moncton to Edmundston, and thus to secure at first hand for its readers a plain story regarding this tremendous enterprise which is now nearing completion, and all the essential facts regarding the remarkable engineering features of the railway and the possibilities of the wonderful country it traverses.

Wonderful seems a trite word here, to be sure, but it fits the railway and the grand territory it is to serve. The Telegraph man went over every mile of the road, in beautiful weather, when the hills were blazing with the fires of their autumn foliage, saw every grade, every curve, every bridge and viaduct, every cut and embankment, every difficulty that the engineers have conquered, every triumph they have achieved.

And he wished a hundred times during that journey that all of the people of the province could see for themselves this railroad and the country to which it is to give new life; for at every mile there recurred the conviction that not one man in a hundred has any adequate idea of the magnitude of the enterprise, of the tremendous influence it will exert in developing this province, of the almost un-

limited resources and rare physical beauty of the region through the heart of which the line of steel is laid.

In the party were District Engineer Foss, J. Edward, traffic agent of the Grand Trunk Pacific; L. H. Wheaton, who is in charge of the Moncton-Chipman portion of the railway, and The Telegraph representative. An engine pushing a flat car ahead of it, carried the party, and it is noteworthy that as the travelers sat on chairs or benches on the end of this ordinary flat car and were propelled swiftly over most of the road they felt no more jar or vibration than they would have noticed had they been seated in a first-class passenger car on another line.

That is what it is to have 80-pound rails, a well-made roadbed, low gradients, easy curves and good ballasting. When passenger trains begin to run over the Transcontinental, the traveling public will get some new ideas about these things, beyond question; and the experience will be at once novel and agreeable.

For the first time in railroad history it will be possible to ride for 3,000 miles without encountering any grade heavier than twenty-one feet in the mile, coming east, or thirty-one feet in the mile going west, excepting at two points only—one in the Rockies and the other in this province where for a few miles the grade runs up to fifty-seven feet in the mile.

The passenger will never know it until he is told about it. But of that, more later on.

On several occasions it has been pointed out in this journal that if the Canadian west were about completing 256 miles of railway, the terminal division of one of the greatest systems in the world, traversing a wonderful region hitherto lacking the transforming and magic touch of transportation, the facts would be cried from the housetops and all the world would be asked to come and see, settlers and investors would be invited to examine the new land of promise and, as a matter of course—for the hustling west knows the value of publicity—a very great noise would be made over the matter.

So it has not been with us here in the east. Since 1904 when the engineers began to search the rugged New Brunswick hills and woods for a level road through the centre of the province, there has been a deal of hard and earnest work—but mighty little publicity. The time has come to tell a plain story about the line of steel that stretches from Moncton to Quebec and on north and west, over which steel, presently, there will go thundering the new Transcontinental passenger expresses and the long freight trains of the Greater Canada.

It is proposed to publish a short series of articles dealing with the several sections of the road in New Brunswick, and

to accompany these with a map and a few illustrations of some of the outstanding engineering features of the new line. The map published herewith shows the interior route, which is now followed, and also the river route, which was surveyed, but which was not adopted because of its greater length and its greater cost. The map shows also, and very clearly, why the "pusher" grade in the Tobique region was decided upon instead of building a long loop around the hills in order to secure the four-tenths grade which was found available and duly surveyed there.

What do you know about the Transcontinental in New Brunswick and about the territory for which it will be the principal outlet; about the engineering wonders of the road, its marvellous system of drainage, and the solid resources it is opening up; about the real meaning, in transportation, of its low gradients and its easy curves; about its value to the whole country as a short cut to Atlantic tide water, and about its value to this province as a feeder of the ports—a spur from the western hopper in Van Horne's phrase—and as a tremendous agency for settlement and development?

As bearing upon all these aspects of the Transcontinental, a thoughtful examination of the facts gleaned during a three days trip over the new line should. The Telegraph submits, be of more than passing interest.

In actual mileage from Moncton to Quebec the Transcontinental is 42 miles shorter than the Intercolonial—but for the purpose of hauling heavy trains economically and at high speed it is more nearly 242 miles shorter. That should be supported by a few simple but all-important facts. From the Pacific to Moncton the new line has but two grades heavier than four-tenths of one per cent—or 21 feet in the mile. One of these is in the Yellowhead Pass in the Rockies and the other is in New Brunswick, and while the New Brunswick grade—in the Tobique region—exceeds four-tenths for some twelve miles and is technically described as a "pusher" grade, the ascent is no heavier than is to be found in scores of places on the C. P. R., and the Intercolonial, yet no one thinks of applying the word "pusher" to any portion of these older roads.

A plain word now as to grades. The four-tenths grade—the maximum on the new road coming eastward—means, as has been said, twenty-one feet in the mile. A locomotive can haul on this grade all the load that it can start on the level, and can haul it at a slightly accelerating speed. So that, for the purposes of traffic, a line with no grade exceeding four-tenths is equivalent in practice to a level road. Wherever there is a crossing siding of a tank, or a station the Transcontinental is exactly level, and wherever there is a curve the grade is eased down so that it would be equivalent to four-tenths on the straight line.

This means that a locomotive can haul over the whole line any load that it can start in the level yard where the train is first made-up—a load up to its maximum capacity.

It means also, that on this line there is no grade heavy enough to cause a train to run away. For should a train get beyond control going down a four-tenths grade, it would not pick up speed, but would continue at the same rate at which it was running when it struck the grade, the fact being that on a four-tenths grade the friction is just great enough to counteract the propelling force of gravity.

"Ah, but!"—someone objects—"there is the 'pusher' grade. That is the weak link in the chain." It is not so. As a matter of fact it was found possible to get a four-tenths grade, or better, for every yard of the whole distance from the Rockies to Moncton. Why, then, was the "pusher" adopted? For these reasons, which are undeniably sound, as all unprejudiced engineers will testify:

When the road had been located up to Mile 149, which is the summit of the divide between the Miramichi and the Tobique rivers, the engineers were confronted with this problem: That they must hold their straight line across country and encounter for twelve miles a grade of 1.10, or fifty-seven feet in the mile, or secure an unbroken four-tenths grade by building around on the hills that formed the rim of the basin. To build around

this rim would mean a great deal of heavy work, and would lengthen the railway by seventeen miles—at an additional initial cost of \$100,000 a mile, or a million and three-quarters of dollars, not counting the loss of train time and the cost of maintaining and operating that long and needless loop of steel for generations to come.

The straight way across is about twelve miles in length, while the whole way round would be twenty-nine. The facts given here, together with a glance at the map where the loop and the straight line are shown in contrast, should give the reader a clear idea why the road goes as it does.

The extra cost of maintaining and operating the loop would pay the whole expense of maintaining the "pusher," to say nothing of the extra initial cost of construction. In a word, engineering considerations, transportation considerations and economy, all favored the short cut across and the saving of that seventeen miles—and the short cut was taken.

Straight as the crow flies, the great road goes its way. There will be no interruption to traffic, no delay, no financial loss. Indeed, as compared with the long way round there will be a marked saving in all these respects. The big passenger trains will take the grade without extra engines and yet without perceptible diminution of speed. The heaviest freights will find an extra engine in waiting to

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OBITUARY

David Ogilvie.
Stewarton, Kings Co., Oct. 3.—The death of David Ogilvie, one of the oldest residents of West Scotch Settlement, Kings county, occurred Sunday morning, Sept. 25. Deceased was in the 76th year of his age.

In 1860 he married Annie King, sister of Senator King, of Chipman, who survives him; also one son, John, of Scotch Settlement, and Mrs. Samuel Chisholm, of Stewarton; Mrs. Daniel Apple, of Westfield, and Mrs. Frank Pitt, of Greenfield; and one sister, Mrs. David Porter, of Nauwigewak, all of whom were present on Wednesday when his body was laid to rest in the family lot at Stewarton, Rev. Mr. S. McKay conducting the funeral service.

Miss Mary E. Seely.
Wednesday, Oct. 5.
The death occurred of Miss Mary E. Seely at her home, Middle street, West End yesterday. She was the daughter of Mr. and Mrs. Manly D. Seely. She was 28 years of age and had been ailing for nearly a year with tuberculosis. She is survived besides her parents by two brothers, Manly L., and Sylvius.

Mrs. Maggie A. McCarthy.
Wednesday, Oct. 5.
The death of Mrs. Maggie McCarthy, wife of David McCarthy, of 129 Hawthorne avenue, occurred yesterday after a long illness. She was 36 years old and formerly belonged to New Ireland, Albert county. She was a daughter of the late Patrick Duffy, and leaves beside her husband a mother and sister. Her sister is Mrs. T. H. Martin, of Kings county.

Victor W. Redstone.
Belleisle Creek, N. B., Oct. 4.—Victor W. Redstone, of Belleisle Creek, Kings County, who has been seriously ill for the past month, suffering from a form of paralysis, died at his home at that place on Friday, the 30th ult., aged 36 years.

The deceased had many friends in this vicinity and elsewhere by whom he was much liked because of his genial disposition, kindness of heart, and readiness to lend a helping hand when required. Naturally possessed of great physical strength and hardly knowing what it meant to be laid aside by sickness until about four weeks ago, his death came as a great shock to the community. In religion, Mr. Redstone was a Baptist, with which denomination he had been identified in church membership for about thirteen years.

The funeral service on Sunday afternoon, conducted by Rev. H. S. Young, of Belleisle Creek, was very largely attended, many people being present from a considerable distance. The immediate surviving relatives are a wife and two children, his mother, Mrs. McKay, of St. John, his half-sister, and his brother Fred, who resides at Belleisle Creek.

George Lynch.
Digby, N. S., Oct. 5.—(Special)—George Lynch died at his residence here today, aged 81 years. He had been confined to his house through illness for many years but had only been seriously ill for a week. The deceased was born in Ireland and was the only survivor of a large family, who moved to St. John when Mr. Lynch was fourteen years of age. He resided in that city until forty years ago, when he retired from business and moved to Digby. He had a family of five by his first wife, two of whom survive him—G. H. D. Lynch, of Grant, Montana, and T. E. G. Lynch, of Digby. He leaves a widow, his second wife.

The funeral will be held from his late residence at 2:30 Friday afternoon with interment in Forest Hill cemetery. The services will be conducted by Rev. Wm. Driffield, rector of Holy Trinity church.

LOCAL NEWS

John E. Irvine, who is at the Royal Victoria Hospital, Montreal, underwent a delicate operation a few days ago, and is now progressing favorably.

Sir Charles Hibbert Tupper and Lady Tupper are spending a fortnight in the city and are stopping at the Russell—Ottawa Free Press.

J. N. Harvey, who is going to Vancouver, has sold his house in Princess street to Dr. L. M. Curran, of Fairville, who, it is understood, will move to the city about the first of May.

Refined sugar dropped 16 cents per hundred pounds in the local wholesale market yesterday. This had been looked for for some time and makes the price of standard granulated now \$5.10 per 100 pounds.

The engagement of Miss Mary Kilgour Shives, daughter of the late Kilgour Shives, to W. Frank Napier, manager of the Shives Lumber Co., Ltd., Campbellton, is announced. The marriage takes place in St. John, October 26.

Their Excellencies the Governor-General and the Countess Grey entertained the organizing committee of the Imperial Order Daughters of the Empire, at lunch at the Citadel, Quebec, on Saturday. The committee, composed of Mrs. Douglas Young, of St. Catharines; Miss Nanna Hughes and Mrs. Avilla, of Toronto, were en route to Newfoundland. They will visit St. John on their return.

Robert Connelly, manager of the Pejez-Scott Lumber Co., was in the city Tuesday. He reports that his company are already making preparations for their winter cut. They will themselves get out between 6,000,000 and 7,000,000 feet at Great Salmon River and expect to give out contracts for as much more at St. Martin's, Lynemouth Creek and Black River. The company are making preparations to take out a cut at Martins Head next summer.

Another Moose Shot at Alma.
Alma Oct. 5.—Isaac Cooper, Jr., shot a fine moose today.