

NOTES ON THE COUNTRY TRAVERSED

BY THE

QUEBEC & LAKE HURON

RAILWAY

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These notes are simply the reproduction of the reports of the surveyors and of the members of the Geological Survey of Canada, who have made on the spot a study of the country. The belt described comprises the area which would be directly accommodated by the railway. The figures at the head of each report, refer to those on the accompanying map, showing the position of the section of country described.

(1) TOWNSHIP OF ALTON

In making this survey, I acquainted myself with the quality of the soil and of the wood, so as to give an exact report of what I met along the line. I consider the soil almost everywhere unfit for culture, being too rocky, even so rocky that it was with much trouble that I could place my surveying instruments and posts.

The merchantable timber is white spruce, hemlock, birch, beech and maple, which are fine high trees. The hard wood seems to predominate. There are several sugaries which have been worked for a considerable time by people from St. Alban and St. Casimir.

The spruce has everywhere been cut down and greatly destroyed, as can be seen by the remains of such on the ground where it is very often difficult to pass.

The hemlock is treated in the same manner. In the spring they cut it down, take off the bark and leave the trunks on the ground to rot.

The pine is not in its element there; I do not remember having met any good pine in the part subdivided by me.

(*T. C. de Lachevrotière*, 20th Oct. 1898)

(2) TOWNSHIP OF MONTAUBAN

The soil, in general, seemed very fit for cultivation. The timber has been partly cut down, with the exception of what little the shanties have been cutting this winter.

(*Ignace-P. Déry*, 20th February, 1879)

The land from the 3rd range going towards and as far as Alton is better and less stony and less mountainous than the range nearer the Batiscan river.

Nearly all the merchantable timber has been carried away, and, in a couple of winters more, there will scarcely be any left at all.

There is considerable hard wood all through the surveyed part, as can be seen by my field notes. In some places there are very fine sugar bushes. Quite a number of intending new settlers came to visit lots while I was performing the survey and possibly more have been there since, and will purchase the lots as soon as these lands are offered for sale.

(*J. George Bignell*, 8th March, 1897)

(3) TOWNSHIP OF CHAVIGNY

Besides, by the Batiscan river, this township is crossed by two other fine rivers fit to drive timber: 1st the Propre river, which issues from lake au Sable, passes through the Paran lake, and then discharges into the Batiscan river, in the seigniory of Grondines; 2nd the river Towachiche, which crosses the western corner of the township of Chavigny and discharges also into the Batiscan river. This last river (the Batiscan) forms in different places beautiful falls, especially those at the eighth and ninth portages, which are capable of running the most powerful mills at all times of the year. The timber, in general, is fine and large, birch, maple, spruce

and fir being the most common. I also met with fine pine, but not in very large quantities; I saw more stumps of this wood than standing timber; merchantable spruce, however, is still in great abundance. There are maple groves in rather great quantities, especially at the depths of the first range, to the north east of the centre line. They are all sound, contrary to what we see to the south of the St. Lawrence, opposite this township, where they are all dead and dry.

All the surveyed section of the township is generally fit for cultivation and advantageous for colonization. The finest lots occur on both sides of the Batiscan river, starting from the eighth portage, going to the north-east to lot number ten of the first range, to the point T, as also to the south and south-west sides of the lake au Sable. I had orders to survey the fourth and fifth ranges of Chavigny, to the south-west of the centre line, but I found this section too mountainous and everywhere unfit for cultivation; the wood is, however, of as fine growth as elsewhere. The soil is in general broken in the surveyed section of the township of Chavigny; we also come across in some places stony, granite sections, but not in sufficiently large numbers to be an obstacle to colonization. In general, a layer of yellow loam predominates; the subsoil seems to be of clay: it is a continuation of the soil of the township of Montauban, and I can say that it is fertile; I have seen it this year produce magnificent crops.

(*T. C. de la Chevrotière*, 7th November, 1864)

(4) TOWNSHIP OF BELLEAU

The region in which the three first ranges of the township of Belleau are situated, from the line of lots number seven or eight, is elevated, cut in some places by small hills, with a stony soil; but this will not be an obstacle to the settlement of nearly all these ranges, of which the soil, in general, is similar to that of the township of Decalounes, which is of yellow and brown loam and appeared to me to be fit for agricultural purposes. There are no swamps, marshes or steep mountains. Two settlers, named Narcisse St. Germain and Israël Peltier, are settled in the second range of Belleau, and frequently expressed to me their

satisfaction at having located there, and their crops, which I had occasion to see, presented a vigorous growth, unsurpassed in any other locality, proving that the township of Belleau is favored with a fertile soil.

The surroundings of the Clear Water lake, situated for the greater part in the township of Caxton, are extremely mountainous and stony and mostly everywhere unfit for cultivation.

The chief timber in these three ranges of the township of Belleau consist of birch, maple, cedar, spruce and fir. Everywhere the wood is of fine growth and size. The amount of pine remaining is small here, as everywhere else; it has been recklessly cut down by the lumbermen, who have carried on operations there for many years.

The water-powers in the township of Belleau are, one, on the Red river, and the other, at the discharge of the Clear Water lake, where falls occur, which are powerful enough to run mills.

(*T. C. de la Chevrotière*, 28th November, 1870)

As to the land by me surveyed and subdivided in Belleau, the soil, though fertile, is disadvantageous for cultivation and settlement on account of its rocky and hilly character in places; there are, however, some good tablelands in these two ranges, especially near the line of the Caxton gore. The timber, generally, is fine and tall and consists usually of white birch, maple and birch. I also met several maple groves, which seemed to have been already tapped. White and red pine are common enough. There is a border of red pine to the mountains around the lakes; among others, the one called Red Pine Lake, and the white and red pine, as well as the white spruce, are presently being cut off for the lumber trade, especially around lake à l'Isle, where dams for the purpose of driving the timber have been constructed at the discharges of the principal lakes.

(*T. C. de la Chevrotière*, 8th March, 1882)

I have subdivided the part of the township of Belleau, comprised between the River Shawinigan to the south-west and the seigniory of Cap de la Magdeleine to the north-east.

I divided the part in question of the township of Belleau into five ranges, forming a total of one hundred and sixty-four lots.

I estimate that half of this superficies is very favorable to settlement. This portion of the county of St-Maurice is nevertheless mountainous, but the bare rock is very seldom visible. The mountains are everywhere covered with a coating of soil sufficient to permit of vegetation and generally composed of a yellow loam mixed with sand. The first six lots on range 10 are so good that already some settlers have located there and have done some sowing. The ground is level, the timber almost completely destroyed by fire and the soil a sandy yellow loam. There are no rocks on this tract, while the remainder of the township is more or less rocky.

In some places, there is a good deal of merchantable timber, chiefly spruce.

(*H. B. Tourigny*, 17th July, 1895)

(5) TOWNSHIP OF DESAULNIERS

The land I surveyed and subdivided into farm lots in the first range of this township is well suited to settlement, as the river du Loup cuts a portion of the lots of the range, creating on each side, generally speaking, fine low grounds. The soil of the latter is a black earth, but upon the heights it is of grey sand.

The timber is fine and tall, and consists of birch, white birch, white and red pine and white spruce. There is still a good deal of white pine, but the best has already been cut off for the trade. The three first lots in the first range of the township of Desaulniers form part of the place known as "The Red Pines." These lots are partly closed, having been formerly swept over by fire, and the only growth now upon them, properly speaking, may be said to be of blueberry bushes.

(*T. C. de la Chevrotière*, 8th March, 1832)

(6) GORE OF CAXTON

The soil, generally, is composed of yellow mould, rocky and inferior in quality. The mountains lie in close proximity.

mity to one another: the principal woods are white spruce, fir, hemlock, maple, birch, and beech.

The soil in all the sections of the gore of Caxton is composed of yellow and rocky loam ; the land, although maintainous in some parts, is fit for cultivation ; the growth of timber is of very fine appearance.

(L. A. O. Arcand, 8th February, 1876)

(7) TOWNSHIP OF CHAPLEAU

All the land in this township and in the ranges surrounding the lake *aux Ecorces*, with the exception of a mountain which passes to the south-east of the lake and which bears nearly south-west to where it meets the river *aux Ecorces*, presents the best advantages to colonization and the clearing of lots. The land is generally even and level, or sloping slightly towards the lake. The soil is composed of good yellow earth and in some places of a greyish loam, not stony, the subsoil appearing to be of clay in the lower levels.

There are no settlements yet in the township, nor any squatters living in it, but a number of lots are taken or pre-empted, and on most of the lots bordering the lake *aux Ecorces* on the south-west, north-east and north-west, choppings have been made in order to mark the lots chosen by parties who wish to secure them by purchase as soon as they are open for sale. I have no doubt they will do so, as a number of such parties even offered me payment for the lots so chosen by them in order to induce me to continue my survey further on, because, they say, there are not enough lots laid out to meet the demand. The timber is generally fine and long, birch and spruce being the most common ; the latter is in sufficient quantity for lumbering. Maple is also to be found in the second, third and fourth ranges. There is hardly any pine left, this having been all taken by the lumberers, who have left, so to speak, nothing but the stumps. The lakes are well stocked with fish ; I took some excellent trout in the lake *aux Ecorces*.

(T. C. de La Chevrotière, 12th February, 1880)

Most of the farm lots, surveyed and subdivided in this township, are favorably adapted to settlement, especially

in the north-east section of the township, which comprises the first, second, third and fourth ranges. The land is generally level and the soil composed of a sandy yellow loam on the heights, and in some places, in the low ground, of greyish loam, which seems to be of excellent quality. This section is wooded with fine, tall timber, consisting of maple, birch, white birch, spruce and of fir, with ash, birch and alders in the bottoms.

The part of the township containing the ranges B, C, D, 2nd and 3rd ranges south-west, which border the river aux Ecorces, is not so advantageous for tillage, being mountainous and stony ; but the proximity of this river, which has some beautiful bottoms, offers certain advantages. The 2nd, 3rd and 4th south-west ranges are in great part wooded with white birch. This timber is now in great demand by spool manufacturers, who have already established two factories at Saint Alexis, a parish adjoining the township of Chapleau. It will not be long before they will transfer their machinery here, because the white birch is nearly all used up in their neighborhood.

There are a great many water-powers, notably those of the river aux Ecorces, of the South-West river, and the discharges of the numerous lakes and brooks. On all these rivers, outlets and brooks, I remarked falls or rapids which are used to run mills or factories.

Pine is not abundant, having been already cut in the past ; but some, fit for export, can still be found in this township, especially in the north-east 2nd and 3rd ranges.

(*T. C. de la Chevrotière*, 31st May, 1881)

TOWNSHIP OF HOUDE

Now part of Chapleau

The land is rocky and dotted with lakes, but, nevertheless, susceptible of tillage in many places, principally on both sides of the river aux Ecorces, in the township of Houde, where a double range could be run parallel to the north-east line of Peterborough. To the east of this double range, there is a bare rock, about a mile and a half in superficies, unfitted for cultivation. Around the great lake Saccacomie, the land, as well on the top of its banks as in the flats formed by its bays, seems very favorable for settlement. A visit to the interior satisfied

me that the soil there was of better quality and a great deal less mountainous than in the township of Caxton, running very nearly along the summit of the Laurentides, of which the slopes should slightly decrease towards the valley of the Mattawin, which is not very far from the north line of the projected township.

(*Léon Z. Arcand*, March, 1864)

(8) TOWNSHIP OF DECALONNES

The soil of the arable lands of Decalonnés, and especially those which border the rivers du Loup, Saccacomie and aux Ecorces, and also those which border the south-eastern environs of lake Saccacomie, is mostly a yellow sandy loam. The timber in general throughout this township is everywhere of fine growth and is composed of all kinds of wood, especially birch, maple, white spruce, hemlock and pine.

The land which I traversed in the course of my operations is mountainous, rocky, very much broken, and in consequence interspersed with many lakes; apart from the surveys already made, and those which I recommend to be made, I do not think there remains much land, in Decalonnés, fit for cultivation, suited to colonization and worth surveying.

The pine has been partly cut off in range A, by the Hunterstown Company and, probably, the same may be said of the remainder of the township.

In addition to what I have just said relative to the nature of the soil and the physical features of the township, I may mention that I came across some magnificent water-powers, firstly on the river du Loup, at a fall of that river, in the first range, at the point at which it is cut by the central line. This falls is known by the name of Brulée fall. There is another at the outlet of the Clear Water lake, on lot number two of the second range, a little higher than the place where this outlet discharges into the river du Loup.

(*T. C. de La Chevrotière*, 4th February, 1870)

The surface of the seventh and eight ranges of Decalonnés, with the exception of the section of the seventh range, situated to the north-east side of the river aux

Ecorces, from lot number six to lot number twenty, is composed of large mountains of granite rock; elsewhere, the soil is of a superior quality. All these lots are taken up or pre-empted. The timber which predominates in the interior of the eighth range is maple and birch; near the banks of the river, the basswood, the elm and fir.

The soil of the different sections, which I surveyed and explored in range A of the township of Decalounnes, is of superior quality. The quality and the richness of the timber prove that the soil is of great fertility.

(*T. C. de La Chevrotière*, 28th November, 1870)

The third range of the township of Decalounnes is broken and mountainous; the soil, in general, is rocky, with the exception of the low lands, where there is grey loam, which appears to be fertile. This range is wooded with a fine growth of mixed hard wood; the most common woods are the maple, birch, white birch, spruce and fir. In the low lands, the ash, willow and birch predominate. On the higher mountains, there is some oak. Pine is not in great quantity now, most of it having been cut off some years ago.

The proximity of this third range to the river du Loup and the opening of a road would be a great help to the sale of the lots; a part of these are already taken up or pre-empted, and the other will not be long before it is taken. In this third range, there are also water powers, which can be utilized in the future for mills or other industrial purposes.

(*T. C. de la Chevrotière*, 31st May, 1881)

(9) TOWNSHIP OF PETERBOROUGH

I next ran the line between the first and second ranges which, of course, passes through the settlements of the River Mastigoche. The land may be said to be in general pretty good along the whole of this line. I next ran the north-eastern lateral line of the township, in the course of which I found the land to be susceptible of settlement and much superior quality to what it is in the interior or central part of the township.

The general aspect of the township is hilly and interspersed with lakes; it cannot be said to abound over much

with timber adapted to lumbering purposes ; the best lands are found along the valley of the Mastigoche, and in the neighborhood of the several branches or tributaries of that river.

(*J. Martin*, February, 1854)

(10) TOWNSHIP OF COURCELLES

I subdivided two ranges of 19 lots each, fronting on the Mastigoche river. and a range, also of 19 lots, fronting on the north-east branch of Lake *des Iles*, the whole as shown on the plan accompanying this report. This new subdivision represents the portion of Courcelles, most favourable for settlement and in fact it is well suited for farming. The soil is a yellow loam, rocky, but very fertile, clayey soil on the surface is found only near Lake *à la Vase*.

Moreover, this part of Courcelles is not hilly and broken like most of the land in this section of the Laurentides.

The Mastigoche river has several water-powers which might be used to advantage for lumbering in the splendid surrounding forests. Timber of various kinds is very abundant, such as white and black birch, spruce, fir, cedar, maple and pine. The tracing of the Desautels road is a complete success.

(*Elz. Boivin*, 17th September, 1891)

(11) TOWNSHIP OF MASSON

The land just surveyed by me in this township is generally flat and level ; two thirds of it, at least, are in *brutis* and, in several spots, the fire has made such a clean sweep of everything that the settler will have little labor to bring it into cultivation. The soil, which is composed of a strong yellow loam, though rocky in places, seemed to be of excellent quality for grain growing. The grain which I saw growing on the lots occupied by settlers on the banks of the river Mattawin, in this township, looked splendid, thus attesting the fertility of the soil.

As this township and a large part of the region adjoining the Mattawin have been ravaged by fire, the timber now on it is only a second growth, mostly composed on the

high grounds of small bouleau and poplar, and in the bottoms of small cypress. The original woods, which were commonest, were the cedar, white spruce and tamarac on the flats, and bouleau, birch and pine on the heights, as indicated by the *debris* which encumber the ground. Here and there, however, a few green clumps of the old timber can be seen like islands, which have been spared by the fire.

(*T. C. de la Chevrotière*, 10th April, 1886)

(12) RIVER DU POSTE

The Post river may be considered one of the finest rivers, for the rapids met in ascending it to its head are not bad. Only the Cedars rapid seems dangerous to pass, but, on the other hand, the portage is a short one.

From the Mattawin river to the eighth mile-post, on each side of the Post river, there is a good deal of land easy to clear, because it was swept by fire some years ago, destroying all the large timber that then covered that region. The soil consists of yellow earth of good quality bearing a young growth of poplar and white birch. Alder, ash and elm are about the only trees to be found on all other low alluvial points. From the eleventh mile-post to the portage of Pins Rouges lake, apart from a length of a mile in the vicinity of Guenard creek, all the land bordering on the river and the lakes is covered with evergreen trees, principally balsam, white birch, spruce and pine. Merchantable spruce and pine in particular are found in sufficient quantities to be worth cutting, from lake Dargie to lake Travers and on both sides of the river. Around lake Clair there is a good deal of merchantable spruce, but little pine. Most of the land in the upper portion of the Post river and its tributaries is rocky and unfit for cultivation.

(*J. B. St Cyr*, 30th April 1897)

(13) RIVER DU MILIEU

In the neighborhood of Pine Lake, on the river *du Milieu*, as far as the *des Aulnaies* falls (31 miles from the mouth of the river *du Milieu*) on the Mattawin and on the Post river as far as Hamel creek, there are large areas of

alluvial soil, fairly rich and easy to cultivate as the trees that have grown up here since fire devastated the region consist of young poplars and white birch. In addition to the reports of a large number of persons who have visited these lands since the spring, I myself, while going to and returning from my work, observed that their reports were accurate.

Merchantable pine and spruce are found in fairly large quantities on the river du Milieu from Lake Long to Lake *les Fourches*. The extent of land comprised between the lakes of the north and north-east branches of this river is covered with spruce, fir, white birch, black birch and cedar, all of good growth. The cedar in particular that I saw measured two and three feet in diameter at the stump and seemed sound. Apart from the places I have just mentioned, the land is either very swampy or has been devastated by fire, some years ago.

Pine and spruce are also found in fairly large quantities in the neighborhood of Lake Sasekinagog, of Lake Travers, in the upper part of Lake Long and around Lake Croche.

The region I explored is not very hilly; there are only two or three rather remarkable mountains at the head of the river Du Milieu, near Lake Long and to the south east of Pine Lake.

(*J. B. St-Cyr*, 17th July, 1894)

(14) LAKE MATAWIN AND RIVIÈRE DU MILIEU

There is, however, a very nice parcel of land around the last lake of Two Branch river as well as around the first lake of the Matawin, nicely timbered with maple, birch and some balsam and spruce.

From Matawin lake down to the Rivière du Milieu, the soil is a rough gritty sand near the shore, but I have no doubt that the hardwood hills which were in sight all the way down, were they explored, would show better soil than that along the margin of the stream.

The land on the head streams of the Rouge is chiefly timbered with bouleau, spruce and balsam, all small. And it is nearly the same description of woods that is to be found on the Rivière du Milieu down to the twentieth mile, and there we met with another large branch of the same river. at which place we found ourselves

introduced to a new kind of timber, viz. cypress or pitch pine, which is to be found thickly studded along both banks of the river down to Long lake, where we met with rather a small growth of red and white pine,—I mean, small for merchantable purposes.

From the head of Long lake, at the twenty-sixth mile of the survey, to the thirty-fifth mile, there is a good deal of white pine near the shore, but as the hills rise a little back from the water edge, hardwood begins to predominate, which consists chiefly of birch and poplar.

(Duncan Sinclair, 8th May, 1866)

(15) TOWNSHIP OF BRASSARD

While transmitting to you the documents concerning the survey of the township of Brassard made by your instructions of the 2nd Oct. 1885, I have the honor to report that the surveyed lands are generally fit for cultivation, with the exception of that part which is on the banks of the river des Aulnais, from the side line north-east to lot number twenty-five and which for about twenty chains on each side of the river is too low to be drained.

The part east of the river des Aulnais is generally wooded, but nearly all burnt over; west of the river is also burnt for the greater part, but less wooded.

The south-west part of the township is generally covered with standing timber comprising a few maple groves.

(Jeremie Laporte, 24th April, 1886)

With the exception of a few lots in the tenth range, all the land surveyed is very well fitted for cultivation and about one fourth of the lots are already occupied.

Although I have not inspected the part which remains to be surveyed to the north-east of the Brassard road, the reports which I have received as to the quality of the soil are such that I have no doubt that it could be settled rapidly, if surveys were made and colonisation roads opened.

(Jérémie Laporte, 28th, oct. 1880.)

(16) BRASSARD AND PRÉVOST

(*Outlines*)

Here the soil varies very much ; on the borders of the Mattawin river there is a valley of considerably varying breadth, the soil of which is rich alluvion ; beyond this valley the soil is yellow, more or less sandy, the whole, nevertheless, covered with a pretty thick bed of vegetable detritus. Lastly, there are some lands only middling on account of the sand and rocks.

The land surveyed is slightly broken by valleys, hills and dales ; the other part is more so and by mountains more or less steep.

The large valley or plain which is seen to the south-east of Lake Kaiakama is a tract of land of about three miles, bare of timber and just as level as the lake itself.

(*U. Dorval, March 1883*)

The general features of the region traversed is good, although, for about nine or ten miles along the line, it is of a barren nature as far as the height of land, where the waters fall each way, on the one side into the Mattawin, and on the other into the Mastigouche ; from the Mattawin towards the height of land south-easterly, the land is composed of yellow soil of a rich nature, well fitted for the settler ; there exists also a very strange peculiarity about this section : it is impossible to judge of the nature or quality of the soil from the growth of the timber thereon, it being wooded with spruce, balsam, pine and white birch. However, it is good soil. There are also numerous lakes abounding in very fine trout and other fish, which are an inducement to parties to settle near their banks.

(*Carolus Laurier, 1863*)

(17) TOWNSHIP OF TELLIER

I have the honor to submit the report of my exploration of the territory of a projected township to the north-west of Cartier, in the county of Joliette.

In point of general aspect, this territory is mountainous and broken, presenting in some places rocky cliffs and

elsewhere pretty large tracts of land suitable for tillage and of easy access.

The river l'Assomption is bordered on each side by a strip of pretty level land, forming a valley with a breadth varying from a few acres to about a mile. Beyond that, the ground rises gradually, to form at some distance chains of more or less high mountains running generally from south-east to north-west.

Some summits rise to a height of 700 feet above the river. The most of these mountains, however, hardly exceed half this height and offer splendid plateaux and easy slopes clothed with fine hard and mixed woods.

The best part of this territory is in the centre and especially on the south-west side of the lake and river l'Assomption, where the hard wood forests are remarkable as much by their beauty as by their extent.

Although the surface is higher and generally rougher towards the north-west, north-east and south-west extremities, there are still some plateaux, valleys and even declivities which might be cleared and profitably cultivated. Nevertheless, as already mentioned higher up, the best part, from the agricultural point of view, seems to be towards the centre of the projected township and it is presumable that the first settlers will select their lots there or on the banks of the river. It would be therefore desirable to include the whole of this part in the first subdivision ordered.

The soil is generally composed of a yellow clay, more or less sandy, and though certain parts are rocky and unfitted for cultivation, I estimate that more than one-half of the total superficies may be tilled with greater advantage than most of the lands in the surrounding townships: Cartier, Cathcart and Joliette, in which have sprung up parishes like St-Côme, St-Alphonse and Ste-Émilie de l'Énergie, that are to-day prosperous centres. These last mentioned localities have hardly any more cultivable lands open to location, so that the survey of the projected township at lake l'Assomption has been long demanded and expected.

It is presumable that a large number of settlers will flock in that direction so soon as the lots are offered for sale and a road leading to them has been opened.

The timber most commonly met within the space traversed is spruce, balsam, cedar, pine, birch, beech and maple. Among the hardwoods, the birch generally predominates, attaining considerable diameter, thirty inches and upwards; but on the other hand the maple seldom runs over 10 or 12 inches in diameter.

The merchantable timber, spruce and pine, have been cut over a little everywhere, but especially near the river l'Assomption and the principal lakes, where numerous traces of the passage of the lumberers are still visible. Several buildings (old shanties) are still standing. Nevertheless, there still remain in many places spruce and pine of average diameter.

(*J. A. Martin*, 29th February, 1897)

(18) LINE BETWEEN JOLIET AND MONTCALM

On the plan which I have transmitted to your department and which accompanies this report, two profiles are indicated: the first covers the locality from the starting point of the survey, that is to say, from the northern angle of the township of Nantel running north-east to Lake Masquick or des Baies.

The second comprises the part from Lac des Baies running north west to the exploration line from the river du Lièvre to the St. Maurice, run in 1870 by surveyor Lindsay Russell.

The first of these profiles shows us land generally level and the slopes met with on one side or the other seem easy; the whole presents no serious obstacle to colonization.

I must state, however, that at a short distance, both to the north-west and the south-east, the general aspect of this region is not so favorable. In fact, in the one or the other of those directions, this country is much more broken and further a succession of mountain chains is met, which rise higher and higher towards the north-west and the general trend of whose summits is towards the north east.

The second profile indicates a mountainous country, intersected by narrow valleys, ravines and deep gorges at the bottom of which flow the rivers and brooks of the region.

In the whole of this territory, the only part that seems to me to be colonizable is that extending from the river Rouge towards the south-east.

Along the prolongation of the division line between the townships of Lynch and Nantel, a zone embracing the second and half of the third mile, has been swept by fire.

The area thus swept runs north westward and according to the information which I obtained from certain parties on this subject, this zone they all agree in saying, crosses the river Rouge and extends as far as the Kiamika river. I was enabled to verify this information to a certain extent for, after completing my work, I returned by the river Rouge, when I was enabled to note the same destruction.

From the river Rouge running south-east, the soil is of excellent quality.

The forest trees in the valley and low lands are the balsam fir, the white birch and the spruce. Cedar is so rare that in several places I could find none for the posts. Still, there are a few clumps of this wood near the river Rouge. On most of the summits, the other woods remarked are, in the order of their abundance, maple, birch and ash. Where the fire has passed, the new growth is composed of aspen, cypress and willow and there is no timber of any value to the trade. The merchantable timber, consisting of spruce, a few pines and balsam fir is met to the south-east of the river Rouge, but beyond that stream, it is of small dimensions and does not exist in sufficient quantity to be worked with profit.

(*L. E. Fontaine*, 14th April, 1898)

(19) TOWNSHIP OF LUSSIER

There is no improvement in the part included in the present survey, but the whole is arable, and well adapted for settlement and purposes of colonization, along the first mentioned outline. The third range is level to river Ouareau, timbered with soft wood. The fourth range, north east side of said river, is ascending and mountainous, the fifth undulating, all mostly timbered with hard wood, the sixth descending through a beautiful maple grove, seventh undulating and mixed timber. The line between the fifth and sixth ranges runs descending through a

grove of good maple for about eight lots, both sides; the remainder level and mixed timber. A tier of lakes runs across about the centre of the sixth range, the north-east banks of which are mountainous, the remainder of the sixth range, the north-east banks of which are mountainous, the remainder of the sixth and seventh mixed with some undulating land, the remainder level and mostly timbered with maple, which is sound and well calculated for sugar making, and there is easy access and a level tract for roads to communicate therewith.

(*F. P. Quinn*, 1st May, 1877)

I have the honor to report that I have closed the survey of the section of the township of Lussier, mentioned in my instructions, and that I found a large part of this township level and the soil good and suitable for agriculture, and a considerable number of squatters settled upon the south west part of the section surveyed by F. P. Quinn, P. L. S. The portion of this township situated to the south-east of Mr. Quinn's survey is nearly all level and the soil good. The river Ouareau crosses part of the township, furnishing plenty of water for mills or other purposes. The timber merchants and lumberers have built a dam at the outlet of lake Ouareau, which can be utilized for mills without obstructing the passage of logs or square timber. There are also other water-powers and mill sites in other parts of the township. In the eighth, ninth and tenth ranges there are large plateaux of land, which, though rough in some places, are well watered and timbered.

There is a number of lakes in different parts of said township, several of which required scaling and occupying considerable delay, which caused me to take somewhat longer time with my survey than I would otherwise have had to take. In concluding this my report, I will add that if a road was opened in this township passing through Chilton on the south-east side of lake Ouareau, the said township of Lussier in few years would be more thickly populated than any other part of the county of Montcalm.

(*N. C. Mathieu*. 20th May, 1880)

The fourth and fifth ranges, sixteen lots broad each, are rather undulating, except where the river Michel empties into said lake, along the banks of which it is overflowed as aforesaid for the breadth of about four lots; the high land is rather stony, but good soil and well timbered with heavy maple, birch and spruce; the sixth and seventh ranges, for the same breadth, are almost level and well timbered as aforesaid. There are extensive sugaries on this land; it is also arable and well calculated for the purposes of settlement and colonization, being well watered with rivers, live streams and a portion by lake Archambault.

In the portion of Lussier, on which I have the honor to report, from the rear of Chilton, on both sides of the river and lake Ouareau, to number forty-seven, inclusive, the land is good and level and many of the lots improved and well built upon, and the residence of actual settlers in the second and third ranges and in the fourth range north-west of the outlet of lake Feu.

This part of the fourth range is high and rather mountainous and also north-west of lakes Archambault and Feu, undulating, but well timbered with maple, birch and spruce. Block A in the first range is high and covered with hard wood, mostly maple.

The piece of land between the line of separation between said townships and lake Archambault is also high and mountainous and covered with maple. All the tract of land situated between lakes Ouareau and Archambault is level and of a good quality, well adapted for settlement.

(*F. P. Quinn*, 8th January, 1876)

(20) RIVER DU DIABLE, OR DEVIL'S RIVER

The name of this river appears to have been well chosen, judging from the numerous falls, chutes, rapids, whirlpools, eddies, &c., which were encountered during the performance of the perilous and difficult task of surveying one of the roughest of rivers. From the source the waters go through a succession of turbulent commotions, at places making deafening noises, so that no other earthly sound can be heard, then calm, circuitous running portions followed by waters rushing at race-horse speed, then passing through lakes, thus it continues winding

its way between the bases of Trembling and Blue mountains, thence passing the Tuque, a perfect pinnacle, it continues its course around the shadows of that mysterious Trembling mountain, where, being joined by the Brulé river, it becomes a river of importance. Brulé river is also rough and wild, and the force of these two rivers combined might be reckoned by millions of horse power.

FEATURES—Generally near the source of rivers the country is found level and rolling, so it is with the river du Diable and its tributaries; first level and as you descend hills rise and mountains loom and the country becomes rolling and hilly, but the features of the country are certainly not unfavorable for settlement. Inland lakes are few and insignificant.

SOIL—There is no heavy soil to be seen along this river; it is either of a light clay loam, or of a light yellow and gravelly loam, and although an inspection gives the impression that it is not of a quality to warrant settlement, still there appears to be quite a number of settlers who are anxiously awaiting the day when this country will be surveyed and thrown open for settlement, and I have not the least doubt that, should their desire be fulfilled, in a very short time there would be equally as flourishing settlements as St. Jovite, which I well remember seven years ago was as silent as the forest.

TIMBER—Unlike most of our streams, the river du Diable cannot boast of her pine trees, and, although a well timbered stream, it lacks the pine timber, but almost every other timber such as met with in Canadian forests may be found in plenty, of a fair size and of good quality. Fine hard wood groves are frequently seen, comprising yellow birch and basswood of uncommon size. Near the source the timber is small, but only a short distance from the river a larger growth is found. I noticed that the lumbering operations had extended up the river to the first lake; above that there is no pine of any account.

(*G. E. McMartin*, 19th July, 1870)

(21) ROUGE RIVER

From the rear of Clyde the mountainous aspect of the country on the Rouge disappears as we go northward. I have estimated the rise of the river from the commence-

ment of the survey at Clyde to its close at the mouth of the Stone House creek from a few cursory levels taken, which are as follows

1. Iroquois Chute					
at.....	6	miles	6	chs. long...	30 ft.
2. Pine Rapids...	9½	"	4	" " " ...	4 "
3. Chute of the Two Sisters	12	"	2	" " " ...	14 "
4. Chute Split Rock.....	12½	"	3	" " " ...	10 "
5. Long Rapids the less....	13	"	115	" " " ...	50 "
6. A small rapid.	18	"	8	" " " ...	2 "
7. Slippery Rock	18½	"	5	" " " ...	8 "
8. Lantier's Rap.	30	"	55	" " " ...	30 "
9. Long Rapids the great..	44 chs. 56 lks		1121	" " " ...	840 "
10. Trout Rapid..	60	"	30	" " " ...	30 "
11. Caribou Rapid	68 m. 70 chs.		10	" " " ...	10 "
			1359		1028
12. Distance of smooth but swift water.			4187	} at 8 f. p.m. }	418
			5546		1446

	69 m. 26 chs.	
13. Three miles' work with considerable rapids to Rouge Lake.....		54
		1500
From the Ottawa to Clyde is a distance and rise equal to the past sum		1500
From the Ottawa to Rouge lake		3000

The timber (pine) has been very abundant on the banks of this river from the rear line of Clyde to the foot of Great Rapids, then it diminishes in size and quality until there are but a few trees of white pine to be seen towards the head of the rapids and the plains above them, but, on reaching Rouge lake, there is some quantity of pine to be found. Of course, I can only speak of what I saw ; it

was but small the extent of ground I saw compared with what I did not see.

The Three Branch river, the two Nominings and Pike creek are good white pine streams. There is no other timber, except the white pine, of much value. The spruce above Clyde is generally small.

The soil is generally light alluvial sand along the banks of the river and back about half a mile on each side. The only clay we saw was a small spot about the middle farm, at about the twenty-first mile. The soil on the hills, especially on the west side of the river, is a light, clear, warm loam with a tendency to sandiness. The land on the east side of the river is more broken with rocky ridges and sandy marshes than the west side is. The west side from the place of beginning the survey to the foot of the Great Rapids, a distance of twenty-six miles of northing and a width of five miles, is a good country for settlement; and I feel great pleasure in recommending it to the Government as a fit place for settlement at the earliest moment that roads can be opened into it.

White pine is to be found in the valleys along the creeks, around the lakes and swamps on the west side of the river. The hard wood which largely prevails in the settling part is in general small, being poplar, birch, the boulean of the voyageur, with considerable tracts of hard maple.

The probable area of pine timber lands on the Rouge above the line of Clyde still vacant, I have estimated as follows: forty-five miles of northing already done, and I think there is at least a northing of fifteen miles more, which will make sixty miles, and I have ascertained that there is a width of about ten miles on each side of the Rouge, then sixty miles by twenty will give twelve hundred square miles, thus giving an area sufficient to make twenty-five large limits of fifty square miles each.

(*Duncan Sinclair, 20th, may 1864*)

(22) RIVER ROUGE SECTION

Departure Section begins at the northern angle of the township of Grandison, county of Argenteuil, and extends to the easterly branch of the river Rouge. This

section is the most mountainous of the whole line and especially the first twelve miles, that is, to the west shore of Lake Chaud. The point of commencement lies about six miles north-north-east of the Trembling mountain, which is the highest peak of the range of mountains lying between the North river and river Rouge. The issues or connections of this formation are prolonged (as far as I am informed) towards the north about fifteen to twenty miles and to the westward to the Macaza lake, which belongs to the most easterly branches of rivers crossed by my line. The direction of the mountains is in most instances parallel to the river Rouge, and there are only few exceptions going from east to west when constituting the boundaries of lakes, which intersect this section of country.

From the west side of Lake Chaud towards the river Rouge, the surface of the whole country is gently sloping, and elevations of any amount can only be found in places near some lakes north of Lake Chaud.

The timber in this departure section is mostly mixed hard wood, that is maple, beech, birch and elm on the sides of the mountains and cedar, ash and elm in the lower or moist posts. There are, however, occasionally a few white pines amongst a great deal of balsam.

I entertain only very little hope that, for agricultural purposes, this section will be used, except in the event of a road being made to connect the settlement of the township of Rawdon with the excellent and extensive tract of arable land lying in the next section between the rivers Rouge and Lièvre.

Rouge Section is, as a whole, *level and undulating*, no mountains or hills of any consequence, with the exception of the one constituting the division of the watershed between the tributaries of the Lièvre and Rouge rivers.

Near the west side of river Rouge, two or three deep gullies occur in which creeks are running, but beyond this the surface is almost level, with only a few stones or boulders on the surface, and the land must be warmer since I found more ice when advancing into the next section than here.

The soil varies between heavy and light loam of both colors, yellow and black. The extent of this tract of good land is the best adapted for agricultural purposes, which

I found during my survey of one hundred and six miles, and is equal to the best lands of Upper and Lower Canada; it is also larger than, perhaps, any one not acquainted with this section of the province of Quebec might imagine. It would open a home to a large proportion of those young Canadian farmers, who cannot remain on their father's homesteads, and who at present emigrate to the neighbouring republic, whose institutions are not familiar to them. By opening up this section for settlement, Canada would gain double by it: firstly, by retaining a population brought up to farming and used to our customs and climate, the very nerve and sinew of any country, and, secondly, by raising the revenue of the country.

The distance between Rouge and Lièvre is twenty-eight miles and sixty-six chains; from this deduct about three miles west of Rouge, which leaves about twenty-five miles. Thence downwards about forty miles and upwards twenty miles, that is, above the *Bouveau* farm, and we get an area of one thousand five hundred and fifty miles; add to this an area of ten miles by seventy miles west of the Lièvre or seven hundred square miles, and we have in all an area of two thousand two hundred and fifty square miles or one million and a half of acres of land well adapted for agricultural purposes.

The resident farmers on these places assured me that they had not found any difference in the time of cultivating the lands up on the Lièvre and on the banks of the Ottawa. There are from the High Falls up to the line and outside of my calculated area a good many stretches of fine lands, and although these latter lands had been settled, yet for want of roads the settlers have left their places. This fine tract of land which, I have not the slightest doubt, will some time play a great role in the drama of colonization of the province of Quebec, may be approached from three different points.

The predominating timber here is the maple, having in its company birch (black and yellow), balsam, but no beech, as far as I could see; in the swamps, we found cedar, ash and elm; pine were few and scattered and not in groves as in a regular timber country.

This tract of land appears to me to be of an alluvial formation over limestone or Silurian outcrops of lime-

stone in a primitive state. I found these near the height of land and again on the Lièvre at the Cedar Rapids, below Tapanee. Specimen collected are lost.

(*W. Wagner*, 24th October, 1867)

Section I embraces (townships of Boyer and Turgeon) the country along our projection of the northern outline of the township of Kiamika and along the base line to the intersection of Mr. Leber's transverse line from lac Rond, of the Nomingue waters. It is qualified on the plan as fit for settlements of a scattered nature. Along the lines in this section some lands were passed through of excellent quality for agriculture, soil a rich dark loam, surface even enough to be cultivated with a plough; roads of the most desirable kind; large maples for this northern region, many a couple of feet in diameter; black or yellow birches, three feet through; an occasional basswood of similar dimensions and some hemlock. The two latter woods furnish a valuable indication of the climate with respect to the ripening of wheat. In connection with this, I would mention that I have, in this section, seen a few isolated butternuts of large size and healthy growth. These last are a still more conclusive evidence of fitness of climate for grain culture.

The good land is usually on the hills, whilst the low grounds, besides being very swampy in places, give generally a poor sandy subsoil under the surface moss. In this characteristic of rich soil on the highest hills, the country resembles some parts of the Eastern Townships. I would consider section one as forming a part of the tract of habitable country that extends along the valley of the Nation river, thence northwestward across the Lièvre, and probably out to the Baskatong, and fit to be subdivided into townships and farm lots for the reception of settlers.

(*Lindsay Russell*, 15th January 1870)

(23) TOWNSHIPS OF LYNCH AND NANTEL

After detailing the surveying operations in the two townships, I deem it right to refer to the advantages of these townships from the standpoint of colonization.

In general, the surface is hilly, but nevertheless presents large level and very advantageous spaces. These townships are susceptible of settlement nearly all over. The principal mountainous spots are at the starting point of the centre line on the north side of lake Chaud, to the range line between the fourth and fifth ranges of Nantel, a little to the east of the centre line at the north-east corner of Lynch, near the river Rouge.

Heavy clay land is met with between the fourth range of Lynch and lake Chaud; Sigouin's house is covered with clay. This part is perfectly favorable to settlement. Another favorable spot occurs near lake Ackerson. In general, the valley of the Chaud brook is suited to settlement as is also that of the river Macaza. Between the latter stream and the Cold brook, there is a fine tract of hardwood bush.

Lumbering is being carried on this winter in the north east corner of Lynch; the lumbering roads are numerous throughout all these townships, which shows that circulation is easy in them.

(*J. H. Leclair*, 6th February, 1897)

The soil is good and generally very suitable for farming. These two townships are well timbered and there are splendid sugar bushes to the north-east of the centre line of Nantel in ranges 1, 2, 3 and 4 and in the township of Lynch in ranges 3 and 4. As a rule the soil is undulating and except near the lakes, where it is broken, the portion adjoining the outer line of the township of Lynch, starting from Cold stream in a north-westerly direction as far as range 2 is intersected by deep rains.

(*Louis E. Fontaine*, 18th May, 1897)

(24) TOWNSHIP OF MOUSSEAU

The soil of the township of Mousseau, although rocky in some places, being composed of yellow sandy loam, is as a rule very well suited for cultivation. The timber is everywhere of fine growth. The high plateaux are generally covered with maple, beech, bass-wood, black birch, etc. In the valleys and low-lying places are spruce, black birch, ash, fir and cedar. The latter seemed to me to be very plentiful and of superior quality. This

township contains many sugar bushes; very frequently, in many places, I saw splendid ones from which a considerable quantity of sugar could be made. There are several water-powers which might be utilized for mills.

(*T. C. de Luchevrotière*, 9th January, 1889)

(25) TOWNSHIP OF TURGEON

The surveyor made no *résumé* of his field-notes on this township; but these notes show that the soil and lay of the ground are better than in the township of Boyer, described under No 29. The remarks of the late Mr. Lindsay Russell, on section 1, river Rouge, describe this township.

(26) TOWNSHIP OF MARCHAND

This township is on the whole a very fair agricultural country, the best portion being between the head of the long rapid and the bend of the river. The soil is generally very sandy and though to a stranger it might seem poor, yet the Middle Farm has been worked for a number of years without any manuring and is still good. A good proof is that two practical farmers, W. McGuire and Varin, who had charge of the Middle and Upper farms for a number of years, are about to take up lots in the township. A large extent of country in the north-west part of the township has been so badly burnt over that apparently the soil is even destroyed. The lower part of the township does not appear to be very good, more especially east of the range, which looked so broken up by mountains and swamps that it was not considered worth running the rear line at present. The south-west portion of the township seems mountainous, but some lots have been taken up and are spoken well of. In the unsurveyed parts, there seems to be good lands in the central part of the township both east and west, but more limited in extent in the former. The country is generally well watered and plenty of good timber both hard and soft is to be found, although large districts are thickly covered with a second growth of poplar.

(*William Crawford*, 26th August, 1880)

The portion of this township which I traversed offers a fine field for settlement. The mountains, which are pretty steep, especially in the northern section, nevertheless show fine plateaux of arable land on their summits and splendid valleys between, often of considerable extent, with a very rich yellow soil free from stones.

The section to the south of the Chapleau road, although more broken and rocky in many places, still offers a good number of lots which might be profitably worked.

The timber is of fine growth. The higher plateaux are generally covered with maple, beech, bass-wood and birch, and spruce, cedar, birch, ash and fir are found in the valleys and low grounds. Wherever pine occurred, it has been cut off; only a few trees remain here and there and they are of inferior quality.

(*J. A. Martin*, 1882)

I subdivided into lots this part of the township of Marchand under the name of the north range of the river Macaza and the south bank of that river.

With the exception of some slightly hilly lots, the surface is level enough; soil very sandy; the prevailing timber is soft wood. I found several water-powers on this and other rivers, and among others, a splendid one between lots No. 6, called the great Macaza falls. The lots along the river are nearly all taken up by squatters.

(*N. C. Mathieu*, 20th March, 1884)

(27) TOWNSHIP OF LORANGER

The land, in the first and second ranges of the township of Loranger, is slightly rolling and in general very well adapted to cultivation. The part of the third, fourth and fifth ranges, south of little lake Nomingue, is more broken, without being very mountainous. The remainder is nearly everywhere level or slightly sloping.

The land, along the north outline, except ranges 1, 2 and 3, is mountainous and rocky, showing over extensive tracts nothing but dry trees and windfalls. There is fine land along the west outline from the north-west angle to Big Bay lake. The south side of this lake, however, is mountainous for about two miles. The soil of this township is generally a good yellow loam, usually free

from rocks, except near the large lakes and some places south of little lake Nomingue, which are rocky. The prevailing timber is spruce, fir, cedar, and birch; on the higher grounds, maple and other hardwoods predominate. The pine, which seems to have been pretty common in certain places, has nearly all disappeared under the lumberer's axe, and what remains is of inferior quality.

(*J. A. Martin*, 23rd August, 1881)

I found in this place a splendid valley extending through the fifth, sixth and seventh ranges for a mile and a half to two miles on each side of the centre line and almost without undulations. The remainder of the township, though more uneven and rocky, offers nevertheless a very rich soil, covered with a splendid forest, in which hardwood predominates; I noticed in several places magnificent maple groves, which seem to be profitably worked for sugar.

(*J. A. Martin*, 1882)

(28) TOWNSHIP OF MONTIGNY

This township is situated at an equal distance from the rivers Rouge and Lièvre.

The land in the township of Montigny is in general broken and rocky, without, however, being unfitted for tillage, except a portion to the south of the Chapleau road, towards the centre of the township and the portion north of the Chapleau road on ranges 5 and 6, which are intersected by gorges and precipitous rocks. The parts in which the best land occurs are in ranges 1, 2, 3, and 4 north and south of the Chapleau road and ranges 1, 8 and 9 north of the Chapleau road. All the southern part of the township is arable from the Lesage grand line to about 2 miles to the northward and the best way to settle this part would be by passing through the township of Lesage.

In general, the soil of this township is composed of a good yellow or gray earth.

The prevailing woods are spruce, cedar, and hemlock and on the heights, maple, birch and beech.

There are some very fine sugaries. There is hardly any merchantable timber left, except in the north-western part of the township.

(*P. A. Landry*, 18th June, 1898)

The land through the township is generally rolling and in places rather rough and hilly, but there are no high mountains nor deep valleys and the soil is generally a rich loam, but unfortunately too rocky in most parts to offer much inducement to settlers. It is wooded with different kinds of timber, birch in particular being very large. There are also some very fine sugaries on the sides of the hills. There is very little pine remaining and a great part of the spruce has been carried away also, but there is still a large quantity remaining. There are some fine bass-wood trees to be met with and also elm along the streams, with cedar and fir in the low lands.

I rather think it is a pity to see such fine timber being cut down and burnt to clear up such rocky land. Imagine bush that would yield from forty to eighty cords of wood to the acre, that would sell in most of our towns and cities through the province, for from three to six dollars a cord, being cut down and burnt to clear land that would not sell for as much per acre, after two or three crops had been taken off it, as one cord of the wood would be worth in any of our cities. Could not some way be found of preserving this fine wood and timber until some cheaper means be had of transporting it to market.

One has only to drive along the Chapleau road from Labelle, or lake Nominigue to the Lievre, to see as fine birch as can be had anywhere, that would square from one to two feet.

(John H. Sullivan, 9th June 1898)

Demontiguy is generally rocky and broken throughout. There are no very high mountains, but, part of it is cut up with crags and hog-holes utterly untillable. In other places, although rocky, the soil is good and the boulders seem, only on the surface, large and scattered, leaving good tillable portions between.

There is generally a good growth of timber, chiefly spruce of fair size and quality, with some good birch, maple, birch and basswood, and some scattering pine.

(Henry O'Sullivan, 12th December, 1887)

(29) TOWNSHIP OF BOYER

The soil is of the best quality for farming purposes, but the surface is rather mountainous in certain places. The forest growth chiefly consists of maple, which covers more than one half of the township. There is also a fair growth of spruce.

(*L. P. De Courval*, 29th October, 1897)

(30) KIAMIKA RIVER

The river Kiamika, its larger tributary creeks, and the headwaters of the Nation river afford abundant water power for mills and other factories near almost any point that they may be required. I may particularize the two falls below Big Bark lake, river Kiamika, as excellent mill-sites, any of them being capable of driving half a dozen of the largest mills or factories at any season of the year.

The river Kiamika, though of sufficient size, will never, in any state of settlement of the country, afford a means of transport; its course is too often interrupted by long shallow rapids of steep incline and therefore considerable fall.

No pine fit for timber was seen elsewhere than in places where lumberers had cut most of what was worth taking; even before they came, there must have been but little timber in this section. Where it is not hard wood land, it is generally wooded with spruce, balsam, tamarac and ash; the tamarac was not seen anywhere large enough for exportation, though of sufficient dimensions to be useful for local building purposes.

(*Lindsay Russell*, 15th January, 1870)

(31) RIVER KIAMIKA

(*Townships of Moreau and Campbell.*)

The field of those mathematical operations was the river Kiamika, in the county of Ottawa. No stream could have been better chosen as a site for the base of agricultural establishments. Everything there seems to be of a character to invite the hardy settler. On each side of

this river, whose capricious sinuosities are followed at a distance of a quarter or half a mile by the enclosing hills, there extends a zone of rich level land. Elm, ash and other trees of fine appearance which shade the ground, are the indications of its fertility. The soil is composed of very rich yellow and black earth. Upon the mountains, which would be better styled knolls, they are so low, so gentle in slope and so easy of access, are magnificent plateaus covered by a virgin forest of vigorous growth. Birch, maple, spruce, cedar and balsam are the prevailing species; there are also hemlock, ash, bass-wood, beech and iron-wood. The pine has been cut; there is, however, at a few isolated spots, which I have indicated in my notes, some second growth pine which will soon make excellent timber.

The water of the Kiamika is warm, to use the expression of the local explorer, and the country drained by it is temperate. This river, of considerable depth and an average width of one hundred and thirty feet, is navigable for small craft from the lake *aux Ecorces* (Bark lake) to its source, where there is a fine fall composed of two cascades. The few rapids met with here and there, along its course, are of little importance and may all be easily overcome. Three considerable water-powers, two in the lower part and near the lake *aux Ecorces*, and the other already mentioned, at the outlet of the little Kiamika lake, offer attractive sites for mills or manufactories.

The lake *aux Ecorces*, lake Gauvin, little Kiamika lake and lake Brochet are marvellous sheets of water with gay and attractive shores, requiring only the cabin of the settler, the cheerful songs of the *canadienne*, and the joyous shouts of children to complete the charm.

Now, Sir, permit me to deplore with you the absence of means of rapid communication with this charming locality and so many others which ornament the northern portion of our dear province. Colonization roads so called are certainly useful, but should be, as the streams are to the rivers, only the tributaries of the grand colonization road, the railway, the artery of a country.

Nature, in her monstrous upheavings, seems to have foreseen this luminous idea of human genius, the railway. There is really no chain of mountains without one or more broken links. The forest-ranger is always surprised to discover these cuttings opened by the hand of the

Creator through these high natural walls of stone and earth, which at first sight seem impassable.

The maxim of our industrious neighbors—" Let the country make the railroad and the railroad will make the country"—the application of which has contributed so powerfully to their wealth, should be ours also. In the district from which I have just come, the settlers wait with feverish longing for what they correctly style *Curé Labelle's* railroad; elsewhere other settlers also wait for other railways, so that they may soon derive benefit from their courageous labors and open up new lands. And new lands mean new blood, new population.

(*A. T. Genest*, 22nd April, 1889)

(32) TOWNSHIPS OF DUDLEY AND KIAMIKA

The soil of Dudley and Kiamkia is pretty much of the same quality, a sandy loam capable of bearing good crops and well adapted for cultivation. Along the river du Lièvre and as far back as the fifth range in Kiamika and along the river du Cerf in Dudley, there is considerable clay land. Grass known as blue joint is abundant along the banks of the river du Lièvre in both townships, and is now a source of profit to the settlers who are engaged in the manufacture of saw-logs in that vicinity. As an indication of the fertility of the soil in the region of my survey, I may mention that, on a farm in the township of Wabassée, opposite Kiamika, of which the soil resembles that generally prevailing in the two townships, owned by Messrs. McLaren & Co., were raised in the year 1864:

106 tons of hay @	\$20.00.....	\$2120.00
900 bushels of oats @	0.60.....	540.00
900 " potatoes @	0.50.....	450.00
90 " pease @	1.00.....	90.00
20 " beans @	1.50.....	30.00
Besides turnips and other vegetables worth	50 00.....	50.00
And pasturage for fifty horses and cattle.	\$	250 00
		<u><u>\$3530.00</u></u>

This large crop was sown, cultivated and harvested by thirteen men in five and half months at an average cost per man for board and wages of \$20 per month: \$1,430.00, and I may add that the land in Kiamika and Dudley is on the whole not inferior to that in the vicinity of this farm. In short, hay, oats, potatoes, pease, beans and turnips can be as profitably raised in either of these townships as in the older townships lower down.

With regard to timber, the two townships are alike. The best white pine has been taken away. There remains, however, yet abundant white pine scattered through the hard wood, from which saw-logs which are now considered second quality could be manufactured. Maple and birch, and in some places basswood, and on the flats ash, elm, cedar and tamarac are abundant. The rivers and lakes abound with excellent fish, trout, pike, perch, bass, pickerel and chub, a soft watery fish averaging from four to six pounds in weight, trout predominating in the lakes, in fact, monopolizing the most of them, and chub predominating in the rivers.

As far as I went in Kiamika to the fifth range, and all except the south-western portion of Duddley as far as surveyed, the surface of the land is generally free from large or abrupt hills. In the south-western portion, the township of Duddley is hilly, but not so much so as to render any considerable portion of the land unfit for cultivation.

(*Samuel Allen, 1864*)

(33) TOWNSHIP OF KIAMIKA

From the centre line to the northern boundary of this township, the lots on each side of this line are in general very rough and rocky, but very rich in mixed timber, such as hemlock, elm, spruce, ash, cedar, bass-wood, pine, birch, fir and maple. The soil is good. The lots starting from the centre line and running direct south are very rough and rocky. On each side of said line, the prevailing timber is soft wood: soil good.

The lots situated on both sides of the river Kiamika are first class as regards the quality of the soil and timber. The prevailing wood is ash, elm and maple, and the lots are nearly all level. Mr. Dufort, of Montreal, has lately

built a saw and grist mill on the fine water-power on lots numbers 13 and 14. This mill will, doubtless, be a great help to settlement.

(*N. C. Mathieu*, 1888)

(34) TOWNSHIP OF CAMPBELL

Having completed the survey in the township of Robertson, I ran de centre line of Campbell through the first and second ranges; also these ranges as shown on the accompanying plan and the upper and the lower outlines from these range lines west to the river du Lièvre.

The character of the country, soil and timber is very similar to that of Robertson, the part along the upper township line being exceptionally fine; the soil varies from a rich clay to a mellow sandy loam with a generally mixed bush.

The only hills met with are on the centre line near the river and another near the lake at the rear of second range line. The country along the point of range two, of the long narrow lake intersected by it, is low and somewhat swampy, and along the other lines generally undulating. This township is a very fine one, and is rapidly filling up with settlers.

(*E. J. Rainboth*, 26th January, 1886)

Almost the whole of the land which I surveyed, with the exception of some mountainous parts on the borders of lake No 3, is of good quality and very suitable for cultivation, the portion of ranges 3 and 4 from lot 33 northwards, especially, is first class, the land slightly undulating, covered with a forest of hardwood composed of birch, maple and bass-wood; cedar and balsam are found in the low grounds, but not enough to be unfit for cultivation.

The south part of ranges 2 and 3 is generally good land, but there are low places on lots 22, 21 and 20, where the timber is balsam and black and red spruce; apart from these the rest may be considered of first and second quality. This land is not very rocky; on the borders of lake No. 3, there is also some good land; and certainly when civilization shall have reached these parts, the

portions now considered of no value will be looked upon as fit for cultivation, for the mountains are not so steep that they cannot be tilled, and few rocks are to be seen. North of this lake, there are some low lands timbered with ash, cedar, bass-wood and birch; these plains are certainly of first quality.

The merchantable timber in this portion comprises hemlock, cedar, bass-wood and birch; there is but little spruce or pine.

(*F. S. A. Pelletier*, 1889)

This survey consisted of the running of the centre line and the front of ranges three and four north-west river Kiamika, also the completion of the northern outline, the latter forming the southern outline of the township of Wurtele.

There are a number of settlers in this township, but they are confined to the older subdivision along the rivers du Lièvre and Kiamika.

The portion included in my subdivision is fairly good, the soil being a sandy loam, and the timber principally spruce, balsam, tamarac, beech and birch.

The country is generally level and good for farming purposes.

(*E. J. Rainboth*, 15th March, 1900)

(35) TOWNSHIP OF WURTELE

This is a very fine township, level country, first-class sandy loam soil, covered with a growth of good mixed timber and every way suitable for settlement.

There is no pine timber of any merchantable value in this township and the only water-power is at the Turtle Rapid, on the river front, near the south-east corner.

The country above this township still continues good and well adapted for settlement.

(*E. J. Rainboth*, 25th April, 1887)

(36) TOWNSHIP OF MOREAU

The land in this township is generally level, though higher than in the township of Gravel, the banks of the river being higher on this side than on the other. The

quality of the soil is the same as in the township of Gravel—sandy grey and yellow loam—but the clay sub-soil is deeper.

Some places, however, are slightly rocky. The timber may be classified as in the township of Gravel. There is however more black birch and it is much more remarkable as regards size and quality : while running the lines I was obliged to have some cut down that were over thirty inches in diameter and perfectly sound.

There are also large areas of arable land in the neighbourhood of these two townships, especially on the north west side of Gravel, where the good land stretches as far as the waters of the Gatineau river, where I passed while returning from my survey.

(*Paul T. C. Dumais*, 3rd July 1889)

(37) UPPER LIEVRE

From "Cheval Blanc" to the Forks the land in the neighbourhood of the river is level and the soil good, several farms are met with where grain and fodder are raised for the lumbering establishments. The banks of the river are low and the current pretty strong, broken by an occasional rapid. The growth of timber is spruce, fir, birch, pine, elm, cedar and ash.

From the Forks, I ran a line due south-east to intersect the exploratory line between rivers du Lièvre and St. Maurice. This line passes over a rough, broken and mountainous country, where are found many small lakes and streams; the land is poor and in many places rocky; the growth is fir, spruce, birch, bouleau, cedar, maple, tamarac and pine, the last being abundant in the neighbourhood of the Forks for the first two and three miles, but diminishes in quantity to the twelfth mile, beyond which no more is seen. About the middle of the eighth mile, the line intersects a winter road which had just been opened between Tapanee Farm and the lumbering camps situated from 14 to 22 miles above the Forks on the east branch.

Having completed this line, we returned to the Forks and scaled the east branch on the ice to the outlet of lake Nemicachingue, thence we continued the scaling by a small river and chain of lakes across to the west branch,

which we also scaled from the Forks to its source together also with the north-west secondary branch which flows into the east branch 25 miles above the Forks. All these branches are rapid and pass through many lakes, some of them of considerable extent. The aspect of the country is the same throughout, viz. hilly, and in many places mountainous and rocky, the soil is poor and the growth is fir, spruce, cypress, bouleau, aspen, tamarac and pine. The last is abundant at the Forks and for 25 miles above, along the east branch; beyond that it diminishes in quantity very rapidly and the quality is very inferior. Along the west branch it is also plentiful in some places and is found in gradually diminishing quantities as far as the head of lake Mejomangeos, beyond which no more is seen.

(John Bignell, 22nd August, 1874)

(38) TOWNSHIP OF WABASSEE

I beg to make a few remarks concerning the topographical features of this township as far as they have come to my cognizance. Besides the river du Lièvre, there are four water courses which traverse the township in a southern and southeastern direction; the most southern of them is Gatineau creek, which takes its rise on the height of land between the rivers Gatineau and du Lièvre, near the centre line of the said township of Wabasse west, averaging about sixty links in breadth. It traverses in its lower course an almost level country of sandy and loamy soil. It has a good mill-site at the confluence with lake des Sables. The second water course is that of Bobish creek, which empties into the river du Lièvre, half a mile above Bobish creek rapids. The upper course of said creek is very rapid, forming cascades and sets of rapids in close succession. It rises on the height of land between the waters of the Gatineau and du Lièvre, where it forms two lakes of considerable extent; it averages in breadth fifty links. Near the mouth, it forms a valley with marshy bottom. The third water course is that of Carp creek which takes its rise in the township of Bouthillier, near the south outline. It drains a considerable extent of country, which is comparatively level and contains good clay soil; it averages about fifty

links in breadth, and has a good mill site near its confluence with the river du Lièvre. The largest and most northern water course is that of Pearce's creek which takes its rise near the north outline of the township of Bouthillier, about twenty-two miles from its confluence with the said river du Lièvre. About a mile from its mouth it forms a basin of considerable extent, commonly called lake des Camps, which is nearly five hundred acres large. The average breadth of said creek, above lake des Camps, is about one chain and below it two chains. It traverses nearly the whole length of its course a level country well adapted for agricultural purposes. Around the western portion of said lake des Camps and on both banks of the creek below the lake, the country is all taken up by settlers, who grow a considerable quantity of grain and hay. Concerning the river du Lièvre, I beg to state that its course is throughout very rapid and often interrupted by sets of rapids of which the Bobish, Devil's, Long, Lambert's and Grenier rapids are the most prominent ones. The country on both banks of the river is undulating, almost level, now and then intersected by narrow ridges, while the mountain chains from the interior shoal towards the river.

The land along its western and northern shores from lake des Sales to the upper Lagoon consists of good farming land and is capable of accommodating a number of settlers with good farm sites. The country intersected by the line between the second and third ranges of the western portion of the township as far as surveyed is level and consists of sand and clay. The line between the first and second ranges of said western portion passes through a country which is much cut up by mountain chains, running in a north-western direction; and about two thirds of the land is unfit for the rising of grain, but would afford good pasturage.

The northern portion of the township is more adapted to farming purposes, on account of its less mountainous nature. The soil consists of clay and loam and is more accessible from the river du Lièvre,

Of valuable timber, such as pine and tamarac, none is left near the banks of the river, but west of lake des Camps, in the western and northern portion of the township, some of it is to be met with, not to say of the

best quality, yet such as would realize a fair price when brought to market.....

(*R. Rauscher*, 25th February, 1867)

(39) TOWNSHIP OF BOUTHILLIER

The land in the township of Bouthillier, fronting on the river du Lièvre, is well suited for agricultural purposes; more than one third of said lots are already occupied by the lumbering establishments of Messrs. James McLaren & Co. and Thompson & Co., who have large farms in an excellent state of cultivation thereon; said establishments afford a convenient and profitable market for the sale of the surplus produce of the settlers who reside in the vicinity of the lumbering operations.

The banks of the river are for the most part level and the soil is fertile, being composed of clay and sandy loam which are easily cultivated; the timber is chiefly hard wood, consisting of ash, birch, beech, maple. Pine timber does not appear to be in abundance, neither is it of good quality, although saw-logs chantiers belonging to Messrs. Thompson & Co. are in active operation within the township this winter. There are numerous beaver meadows which produce a large quantity of wild hay. There are also numerous creeks and lakes which abound in excellent fish that are taken in large numbers by the Indians and settlers.

(*James McArthur*, February, 1866)

(40) TOWNSHIP OF ROBERTSON

The physical features of the country are similar up as far as the upper Lacos or Lagues Supérieures, where the northern limit of the Laurentides appear to have been reached, as they gradually slope away and flatten out to a comparatively level country about the Wabasseé rapid. From this point up, the further one ascends, the more level the country becomes, the soil also improving in quality, the river banks varying from a clay loam to a sandy loam, and as indicating the fertility and richness of the soil, is covered by a dense growth of soft maple, elm, ash, butternut, &c.

Messrs. Ross Bros. have an extensive farm at the Wabassee and Messrs McLaren & Co., a very extensive one, on the west side of the river, opposite the junction of the Chapleau road with the river, called the "Ferme Rouge," on which, the foreman informed me, they raised this year over 3000 bushels of oats, several hundred tons of hay and also a quantity of Indian corn, which ripens without any difficulty and which they cultivate every year, proving that there are no summer frosts to injure grain growing.

Having arrived at the lower outline of Robertson, running it and then working northwards, running the fronts of ranges 2, 3 and 4. The country along this outline is gently undulating, with a fine growth of birch, elm, ash, maple, basswood, spruce, balsam and a few pines, the soil being a good sandy loam with a mixture of clay loam along the streams. Lake des Iles is intersected in this boundary in the 3rd range. The country surrounding this lake appears to be very fine, being level, with a good soil, and will undoubtedly be settled in a very short period. Proceeding northwards the country is uniformly very good, mostly level, with a fine quantity of soil and bush principally hardwood.

After completing the front of the 4th range, across the township, I proceeded to survey the northern outline, from the corners of the townships of Sicotte and Anmond, along which the country is generally undulating, with a growth of spruce, balsam and mixed hardwood, the soil being a sandy loam, with a few flats of swamp lands up to two miles from the said corner. Thence the country has a marked descent to the creek of lake au Sable, a tributary of the river Baskatong, one of the principal ones of the Gatineau river, and is timbered with a very fine growth of hardwood, mostly maple and birch, with a good sandy loam soil and well fitted for agriculture. Thence to the river du Lièvre, the topography of the country is very similar, being undulating, without any marked descent, until within a short distance of the Lièvre. The only mountain visible in this part of the country is the Devil's mountain, lying to the north about ten miles.

The pine timber appear to be almost completely exhausted.

A good road could be built across through this township for a trifling cost, to connect with the waggon roads leading to the Desert village and the Priests' Mills on the Joseph creek.

There are a few settlers in this township. They are also settling further up along the river than my survey extended and their report of that part of the country is most favorable.

There is a fine mill site at l'Original chute, also another at the Turtle rapid.

The tract of country in this vicinity, comprising this and the adjoining township, is one of the finest in the country and is destined to become at no distant date, a large thriving settlement.

(*E. T. Rainboth*, 25th January, 1886)

(41) TOWNSHIP OF POPE

This is a very fine township, level country, first class sandy loam, soil covered with a growth of good mixed timber and very suitable for settlement. The finest farm on the river is situated in the north-east corner of this township, being Messrs. Jas. McLaren & Co's mountain farm, on which they have about four hundred acres under cultivation. The Devil's mountains commence in the northern part of this township about five miles back from the river and run in a northerly direction as far as the eye can see. The fine tract of country of which this township forms part will not be settled properly or rapidly until there is a colonization road built either up the river du Lièvre or from the the Gatineau roads.

There is no pine timber of any merchantable value in this township, and the only water-power is at the Turtle rapids, on the river front near the south-east corner. The country above this township still continues good and well adapted for settlements.

(*P. Griffin*, 11th February, 1881)

This survey consisted of running the centre line through ranges 3 and 4, and the lines forming the front of the ranges 4 and 5 throughout the full width of the township, also the outline across the north end of ranges 3 and 4.

The country is rather hilly and stony in places, but the soil is a very rich loam, the southern half being better than the northern and continues so westwards towards the rear, and is similar in character and quality to the adjoining township of Robertson.

An excellent growth of maple, birch and spruce extends throughout, and the front of the township is all settled and well cleared; a good road is being constructed up along the river to the township of Gravel.

There are grist and saw-mills at the chute Orignal, in the river du Lièvre, about two and a half miles below the south-east corner of this township.

(*E. J. Rainboth*, -2nd March, 1900)

(42) TOWNSHIP OF GRAVEL

The land is slightly undulating, consisting of sandy grey and yellow soil with a subsoil of clay, being first class for farming purposes. Hard wood trees, such as black birch, maple, ash, elm, beech and poplar, predominate. White spruce, cedar, fir and tamarac are also found in large quantities and of good dimensions.

(*Paul T. C. Dumais*, 3rd July, 1889)

This survey consisted of the running of said range lines, (of front ranges 3 and 4), the centre line through ranges two and three and the western outline across the end of range three from the northern outline of the township of Pope, and the rechainning of the county line, which forms the northern outline of this township, across ranges two and three.

This township is, I think, superior to any on the river du Lièvre, for farming purposes, the country being level, with a light mixed bush, easily cleared and a rich mellow loam, varying from sandy to clay in the bottom. A number of settlers are established from the river back, even beyond the part now subdivided.

(*E. J. Rainboth*, 22nd March, 1900)

(43) TOWNSHIP OF BASKATONG

The land embraced in this survey is generally level; some flats cover as much as four hundred acres. The soil

is a light loam, occasionally sandy, and stony on the ridges. The western part of this township is hilly, but contains the best land, as far as can be judged from the growth of the timber. Balsam and white birch are to be met all over the township; there are some spruce and tamarac, but too small for lumbering purposes. Cedar grows to a great size on some of the flats; a few groves of small pine remain along the river.

About three hundred acres of land are cultivated on the river lots of range seventh. The lands give excellent crops of hay, oats and especially roots; some good wheat has been raised, but is not much cultivated owing to the nearest grist mill being twenty-five miles distant.

(*J. E. Woods, 18th March, 1887*)

(44) TOWNSHIP OF SICOTTE

The general character of the soil and the physical features of the country are very different from what we would naturally expect to meet with in so high a northern latitude in Canada. There are no mountains, and but very few fixed rocks on the surface, except at or near the banks of the Gatineau river, where some highly inclined stratified rocks of the hypozoic or primary formations are visible. But there are a considerable number of boulders scattered over the surface of the land, varying very much in size and shape. The soil is principally of that quality usually denominated drift by geologists, and the township is divided into a succession of hard wood ridges sloping very gradually to their summits, with narrow tamarack, balsam or cedar swamps intervening.

No timber limits lines have as yet been run and there is very little marketable timber now standing on the land, except on a small belt on each side of Philomen's Creek, which empties into Lake Baskatong and through which saw-logs are floated to the Gatineau river.

The navigation of the river Gatineau in front of the township of Sicotte is interrupted by not less than seven different chutes or water-falls. The chutes or water-falls alluded to would make excellent mill-sites, as they afford an unlimited supply of water-power.

The land on the banks of the river is not very well suited for agricultural purposes, for the soil is in general

light and sandy, the prevailing timber white birch, red and white pine, cedar, balsam and tamarack. All that portion of the township of Sicotte lying west of the base line contains land of an inferior quality, although it is tolerably level and even, strictly speaking may be denominated arable land.

All that portion of the township lying east of the base line is remarkably well suited for settlement; the soil is of a rich alluvial kind and the timber is principally hard wood, viz. birch, ash, ironwood, &c., intermixed occasionally with balsam, cedar, tamarack, &c., white and red pine. There is an abundant supply of excellent water throughout the township.

Yet, notwithstanding the advantages pointed out, there is not one single settler in the township of Sicotte. The great drawbacks to settlement in this the most fertile portion of land in the valley of the Gatineau are the want of roads and the consequent high prices of provisions and other necessaries of life.

The townships of Maniwaki, Kensington, Egan, Aumond and Sicotte afford a better field for settlement and colonization than is to be found in any other portion of the vacant surveyed lands north of the Ottawa river; but in order to render these lands available, it is highly necessary that the new road along the west bank of the Gatineau should be completed.

I would also beg leave to observe that potatoes, garden vegetables, oats, peas, spring and fall wheat, have been cultivated in the above mentioned townships with success and the flour made from the latter is of a superior quality. The soil is also apparently well adapted for the successful cultivation of flax, and limestone can be found in sufficient quantities for all required purposes.

(*James McArthur*, 10th July, 1859)

(45) TOWNSHIP OF AUMOND

The land in the sixth and seventh ranges is without exception fit for settlement, being level and composed of sandy loam, covered with hard wood, beech, maple, birch and pine. Only part of the eighth range is fit for settlement, say, the six tenths, the remaining four tenths being bold, rocky hills covered with thin, shallow soil,

and hard wood growing thereon of smaller size than on the sixth and seventh ranges. Trout or Quinn's lake and the Castor lake abound in excellent fish,

(*E. Magrath*, 21st April, 1874)

(4.) TOWNSHIP OF KEN-INGTON

I further beg leave to report that the soil of this township is generally of a very good quality and well adapted for the purposes of agriculture, and in certain parts the soil is, in fact, of a very superior quality, more especially towards the southern extremity of the township and in the immediate vicinity of Graves lake. The Messrs. Gilmour & Co. occupy a very large farm in the fifth range, comprising a portion of six lots as represented on my plan of the survey. The improvements which they have made on it consist of about one hundred and fifty acres in a good state of cultivation, a large barn and stables, and a good house in course of erection.

The township is accessible by several tolerably good roads: besides, there are several chantier roads through the portion which I have surveyed, which could very easily be rendered passable; this will no doubt be a slight inducement for settlers to establish themselves there. It is also generally of a level nature and, as my accompanying plan will indicate, well watered by several beautiful lakes and their small tributary streams.

In conclusion, I beg leave to state that the front or part of the township which has been surveyed for some time past is well settled, and I have no doubt that as soon as some other portion of the township has been surveyed, a new settlement will rapidly spring up for I believe that its heretofore unsurveyed state has been the only obstacle to its settlement.

(*James Roney*, 26th January, 1865)

(47) TOWNSHIP OF MANIWAKI

I commenced to run the line of separation between the townships of Maniwaki and Bouchette and continued the same till I intersected the Eagle river, making a distance of 15 miles and 20 chains. For the first four miles, the land is of a very good quality, with pine and

hardwood timber, and the soil is fit for cultivation. The fifth mile is a cedar swamp, descending to Cedar lake, and is unfavorable to settlement. Beyond this lake, there lies a fine tract of hardwood land, ascending about half a mile to the summit, thence level good land till it comes to the border of Cedar lake, where it descends to the water's edge. The margin of these lakes chiefly abounds with cedar timber, from which they take that name. The country beyond the above lake is rather ascending and broken, abounding with pine timber on each side of the line, to the banks of the Eagle river. Along the valley of this river there appears to be good land and well timbered down to the line between the townships of Maniwaki and Egan, as also down to its junction with the Desert, thence down the river Desert to its mouth the soil is of the finest quality.

I thence proceeded to the line between the townships of Maniwaki and Egan. I intersected the river Desert on the 4th mile, crossed the Picanock lake in the 5th mile. The land is pretty good and level from this place to the intersection of the Eagle river; on the west side of this river, the land is of very inferior quality, part of which is a sandy plain with red and white pine timber and some spruce. The remainder, to the distance of fourteen miles from the Gatineau river, is mountainous and rocky and covered with all sorts of timber.

(John Newman, 6th April 1850)

(48) TOWNSHIP OF EGAN

This township is naturally divided into two sections, which may be designated the eastern and western, by the river Desert, which intersects it from north to south. The eastern, the largest section, comprises the peninsula formed by the rivers Desert and Gatineau; it is likewise the most fertile portion of the township; the land, with few exceptions is well adapted for agricultural purposes, and embraces very few lots unfit for settlement. It is clothed with a thick growth of wood, varying in species and quality, according to the quality of the soil and situation, hard wood and pine predominating where the soil consists of gravel or mixed clay, sand and gravel, and soft wood predominating where the soil is exclusi-

vely clay and the country champaign. Here are to be found flourishing nearly all varieties of Canadian timber, which may be classified in the order of their preponderance as follows: balsam, spruce birch, maple, basswood, elm, ash, oak, tamarac, white birch, poplar, pine and cedar; hemlock is rarely found and only in barren situations, dwarfish and stunted. There is very little pine except adjacent to the river Gatineau, and that of an inferior order, all the good quality being already manufactured. The surface is for the most part level or slightly undulating, without any ranges of mountains, and, with the exception of one instance, east of Balsam lake, the hillocks to be met with are mere undulations.

The soil on both sides of the river Desert is chiefly clay in many places covered with loam. In the interior, between the Gatineau and Desert rivers, it is a mixture of clay and gravel, and therefore the most available for the indigent settler. Along the Gatineau, there are considerable tracts of rich alluvial deposits. Limestone is frequently met with along the rivers Gatineau and Desert, I think it is not the crystalline, but rather belongs to the class called primozoic.

The western section comprises that portion west of the river Desert. Along the river Desert, varying from one half to two miles, the land partakes of the character of the east side and is equally well fit for settlement; westward, the surface is more broken and the land inferior, culminating in barrenness towards the county line and south of the base line along the Eagle river ranges. This portion has but a few limited patches of good land. The good land on the north of the base line is more frequent and of greater extent, and though, in many places, rugged and rocky, it contains a considerable portion of good land. The soil in this portion consists chiefly of gravel and sand, the surface is broken and rocky, irregular hillocks alternating with marshes and lakes. Taken as a whole, the township is well adapted for settlement at least as far back as the eighth range.

From the continued and almost unvarying sterility of the rear of the township, I was constrained to desist from its further subdivision.

(*J. P. P. O'Hunly, 26th May, 1863*)

(49) TOWNSHIP OF LYTTON

With respect to the physical characteristics of Lytton, I beg leave to state that the land is of very good quality and extremely level; there are very few elevations of any considerable extent; at least ninety five per cent of the whole is arable and fit for cultivation. There is a continual succession of hard wood ridges, with balsam, cedar and tamarac swamps intervening; the soil on the hard wood ridges is excellent, but in the swamps it is light and sandy. There is not much white and red pine in the township; occasionally, small groves are to be met with of large growth and of apparently good quality, but not in sufficient quantity to induce extensive lumbering operations. There are no settlers in Lytton, nor is there any probability of its being settled soon, as it is so difficult of access at all seasons of the year.

In no other part of the Ottawa country is there so large a tract of really good and fertile land as in the townships of Maniwaki, Egan, Aumond, Sicotte, and Lytton, but in order to render said land available, it is absolutely necessary that roads should be immediately constructed or laid out throughout said townships.

(*James McArthur*, 21st June, 1862)

(50) UPPER GATINEAU

FROM RIVER DESERT TO HEIGHT OF LAND

The estimated height above the sea-level of the Gatineau at river Desert, about one hundred miles due north from Ottawa city, is 369 feet. At this point and for six miles further up the Gatineau, the soil is a sandy loam, the general level of the country being from twelve to thirty feet above the river, although rocky hills of a hundred feet are seen occasionally. Along the distance a considerable quantity of land was under cultivation with oats, barley, peas, and spring and fall-wheat. Several fields of the last looked healthy, and covered the ground well on the 26th of September. I was informed that the yield is from twenty-five to thirty bushels to the acre. Potatoes appear to yield well and were found to be of excellent quality. Above this there are no settlements, and

the only cultivation is on the farms of lumbering establishments. One of these is Island Farm, belonging to Messrs. Gilmour & Co.; the next and highest up belongs to Messrs. Hamilton Bros. Here I was furnished with the following facts by Mr. Grant, the superintendent: The clearing is about 400 acres in extent, producing 140 tons of hay, 3,500 bushels of oats, 200 bushels of peas, 50 bushels of buckwheat, 1,300 bushels of potatoes, with barley, turnips and mangold-wurtzel, the quantities of which I did not ascertain. There are three other farms in the neighborhood, collectively of 350 acres, producing 180 tons of hay, 3,000 bushels of oats, 100 bushels of pease, and 1,400 bushels of potatoes. I am not aware whether wheat has been grown. These farms are chiefly for providing food for the horses and oxen used for drawing the lumber in winter.

It appears to me that the above facts indicate that the country is well adapted for settlement. The soil is very similar to that of the river Desert, a sandy loam, and, as far as observed, it is very much the same for a distance of over fifty miles along the Gatineau from the mouth of the Desert. The banks of the former river are from twenty to fifty feet high. Rocky hills from 100 to 150 feet high sometimes rise from them, but are oftener at some distance back. Besides the great quantities of pine, which this district is known to produce, it also contains spruce, balsam-fir, some black birch, as well as considerable areas of white birch, with occasionally white and brown ash. Curiously enough, where maple is met with, it is in groves on the most elevated points.

The river, excepting at the portages, is generally lake-like, and from 100 yards to not less than half a mile wide. There are in all ten portages, varying in length from fifty yards to about one mile. The total rise from the Desert to Hamilton's farm is 142 feet, making the latter about 512 feet above the sea. From Hamilton's farm to the junction of the north-east and south-east branches, a distance of about forty miles, the aspect of the country remains the same, except that pine timber gradually becomes smaller and more rare. There is reason to believe that, for a great portion of these forty miles, the forest was burnt seventy or eighty years ago, and its place is now occupied by a second growth of white birch. Pines are seen overtopping them; in many places these are

numerous, and judging from their appearance, they are of comparatively recent growth, very few of them being more than a foot in diameter. It would be for the interest of the country to have these young forest protected from the lumbermen for many years to come.

The character of the river for about ten miles above Hamilton's farm is the same as below; in this distance, four portages are passed, with a total rise of 114 feet. Above this the river becomes rapid, without portages, and narrower, the additional rise to the forks being 185 feet, making the latter 815 feet above the sea. For about twelve miles up the south-east branch, the river is rapid and rises nearly 300 feet, reaching 1,015 above the sea. The river is from half a chain to two chains wide, with rocky banks rising into broken rocky hills from seventy to one hundred feet high, covered with a scanty sandy soil, supporting principally white birch, with here and there pines similar to those below the forks. I may here remark that no hardwood trees, such as maple, black birch, elm and ash were observed above this. One small ash tree was, however, seen at the end of the distance.

For the next twenty-five miles, the river is less rapid, the rise being only sixty-five feet. The country is low, with few elevations over fifty feet. The soil is sandy, but supports a large growth of spruce, balsam-fir, white birch, tamarac and poplar, and a few pine trees of small size. Here, about 230 miles northward of Ottawa city, and 1,080 feet above the sea, appears to be the northern limit of pine on this branch of the Gatineau. The succeeding twelve miles is hilly, but well wooded with spruce, balsam-fir, tamarac, and white birch. The hills are from 150 to 450 feet high, shewing occasionally bare rocky summits and escarpment. This is succeeded for about ten miles by bare rocky hills, 100 to 500 feet high, with terraces of boulder sand from twenty to thirty feet high. Near the river, on both sides, small thinly scattered poplar, cypress and white birch are seen. To Marten river, three miles farther, the country is lower, rising above the river from 20 to 150 feet. The timber is of good size, the spruce and tamarac being from twelve to eighteen inches in diameter, and from seventy to eighty feet high. The country and the timber retain the same character to White Bear lake, about nine miles

farther. The river up to this point is full o rapids, shewing a height above the sea of 1,450 feet. Beyond this to the height of land the stream rises to 1,500 above the sea. The aspect of the country is the same, except three or four miles to the south-east, where rocky hills are seen 300 or 400 feet in height, having a blackened appearance from recent fires.

(*James Richardson*, of the Geological Survey,
20th April, 1870)

(51) COUNTRY BETWEEN THE GATINEAU AND THE
COULONGE.

From the said ferry (McGee's ferry on the River Desert, about $\frac{1}{2}$ mile above Chute Rouge, in the 6th range of the township of Lytton), to the mouth of the Quinn's Creek, the River Desert winds for the greater part through rich alluvial flats, well timbered with soft maple, ash, birch, pine, spruce, etc., but from Quinn's Creek to Round Lake there are numerous rapids and the country is rougher and more elevated and a greater quantity of pine is visible on both sides of the river.

The distance between Round Lake and Lake Desert by the river is four miles, but it might all be called one lake, for there is no difference of level, and the discharge expands in some places to nearly a quarter of a mile in width.

Lake Desert is an irregular expanse of water measuring over seven and a half miles in length and from half a mile to three miles in width. In the middle of this lake, opposite the mouth of the Ignace River, there is a large island about 200 acres in area on which a man named Griffin has a very fine farm of about 50 acres cleared, on which he raises hay in abundance and all kinds of cereals. A splending view of the lake and its surroundings is had from this island. It is generally a rolling country with fine hardwood slopes that appear inviting to settlers—unless perhaps they might be found rather stonely.

The first mile of the Tomasine River flows smoothly through comparatively level land with steep banks studded here and there with red pine and, then, a succession of small lakes, rapids and expanses for a distance of about three miles bringing us to the foot of Lake Tomasine.

The difference of level between Round Lake and Lake Tomasine is about 20 feet.

Lake Tomasine is a long narrow stretch of water over six miles in length and from ten chains to half a mile in width.

Along the lower end the land is gently rolling; about two and a half miles above the discharge there is a very steep mountain on the east side and at the north end the country is very mountainous. Following up the river which falls into Lake Tomasine about $\frac{3}{4}$ of a mile from its upper end, the discharge of Catfish lake comes in from the south-west at about three miles from the former lake.

Catfish Lake is a splendid sheet of water about two and a half miles in length and from half a mile to three quarters of a mile in width with beautiful sloping hardwood hills all round.

Windfall Lake is a large irregularly shaped body of water, measuring about seven miles on the canoe route. The land around this lake is gently rolling and fairly well timbered with pine, spruce, etc.

Big Wolf Lake is an immense body of water measuring about 14 miles in length by from one to four in width, with several large bays on either side and numerous beautiful islands.

There is not so much pine around Wolf Lake as around Antostagan, but the country seems far more inviting.

The land is gently undulating in easy slopes all around and judging by the rich growth of mixed timber on every side I should say that the soil is well worthy of cultivation.

A squatter named Descoursi has a clearance of several acres at the lower end of the lake with a snug cabin and root house, etc. He has been living there several years and he says that all kinds of grain and root crops succeed well there.

Having completed my arrangements for winter supplies and engaged additional portagers, etc., we returned by the Ignace and completed the survey of lakes Bras Coupé, Kagema, and other small lakes in that direction.

The country along that route is generally undulating and the soil is apparently of good quality, if not too strong. The hills are covered with a good growth of hardwood,

while good groves of pine, spruce and hemlock, are found throughout the valleys and ridges.

Pike Lake is an irregularly shaped body of water, measuring about seven miles in length by from a quarter of a mile to two miles in width, counting the bays and nooks on either side.

It is fairly well timbered all around and along the road from there to Island Lake there are splendid groves of tamarac most suitable for railway ties.

Island Lake is an immense body of water measuring nearly twelve miles in length by from half a mile to over two miles in width, and containing numerous large and picturesque islands.

There are some beautiful hardwood slopes around this lake, and the highest hills to be seen around are covered with birch, maple, beech, etc.

There is also a fair showing of pine in many places around the lake.

From the large bay on the south-west side I crossed the height of land and surveyed Crow Lake and another small lake tributaries of Crow river.

The head of Crow river here is about 90 feet above the level of Island Lake. There is a fair lot of pine all through here.

Returning to Island Lake and completing the survey of it to its most northern end moved up the inlet to a beautiful lake nearly round and encased between beautiful hardwood hills.

(*Henry O'Sullivan*, 9th February, 1874)

(52) BETWEEN GATINEAU AND DU MOINE RIVERS

From the head waters of the Dumoine until you approach the Gatineau, the country is very level and might be compared to the table lands of Mexico.

(*H. C. Symes*, 25th August 1867)

There is, though with great unevenness, a general uniformity of altitude in the country going from the height of land of the Coulonge, Du Moine, and Keepewa rivers, northward, to the slope to Hudson Bay. The depression in crossing the Ottawa being inconsiderable, it may be considered a rough plateau and but slightly

inclined to the westward, however much it may rise in the opposite direction towards the sources of the St. Maurice and Saguenay rivers.

(*Lindsay Russell*, 28th March, 1868)

(53) BETWEEN THE COULONGE AND BLACK RIVERS

The area traversed by the Black and Coulonge rivers is largely occupied by reddish granite and gneiss. Bands of limestone are well exposed on the lower 40 miles of the Black river and similar bands occur along the Coulonge as far as the 10th mile post from its mouth. The upper part of these streams flow through a comparatively level country, largely covered with sandy drift which is, in places, underlain by clay. Isolated masses of reddish granite rise here and there, but this area is much less rugged than that nearer to the Ottawa.

The Black river has a very tortuous course, flowing for a great part of the way through banks of sand. Rapids occur at frequent intervals, necessitating a number of portages, some of which are very heavy. The worst of these is past the Long Rapids, sixty miles from the mouth, where a carry of three miles is necessary, over the spur of a mountain.

The country between the Black and Coulonge rivers, south of Foran's Creek and its chain of lakes, is generally rough and hilly. The character of the country to the north is similar to that seen on the upper portions of the Gatineau and Rouge rivers, further to the east.

(*Dr Ellis, Report of Geological Survey, 1896, pp. 54 and 55 A.*)

(54) TOWNSHIP OF BOISCLAIR

The area surveyed amounts to 8,702 acres. The north bank of the Ottawa river which bounds this township to the south is bordered by a mountain whose height varies between 50 and 200 feet, and whose surface is stony and uncultivable, except in the Ottawa river range, in which the ground is flat and good and may be advantageously tilled.

From the centre line to the eastern extremity of the township, the soil, though rolling, is first class and very

favorable to cultivation. This part of the township is well wooded. The principal merchantable timber consists of yellow pine, hemlock and oak; maple prevails in some spots; bass-wood, elm, birch, white pine and cedar are also met with. A considerable amount of pine was cut this winter.

From the centre line to the western limit of the township, the surface is very mountainous and unfavorable to settlement, but going north, the land is more level and the soil better. In this part of the township and more to the north and west, fire, some years ago, destroyed all the timber; the new growth is composed of aspen, white birch, oak and pine from 2 to 6 inches in diameter.

(*J. L. Michaud*, 14th April, 1888)