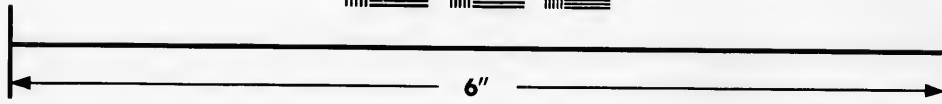
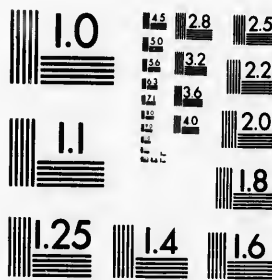


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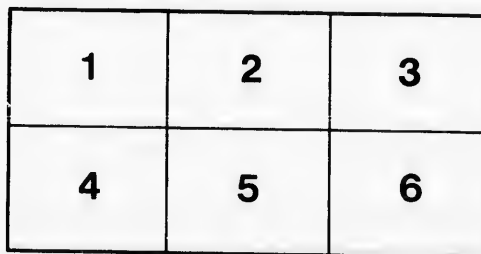
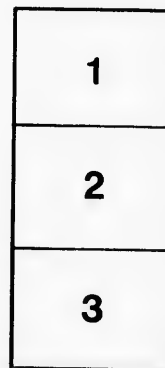
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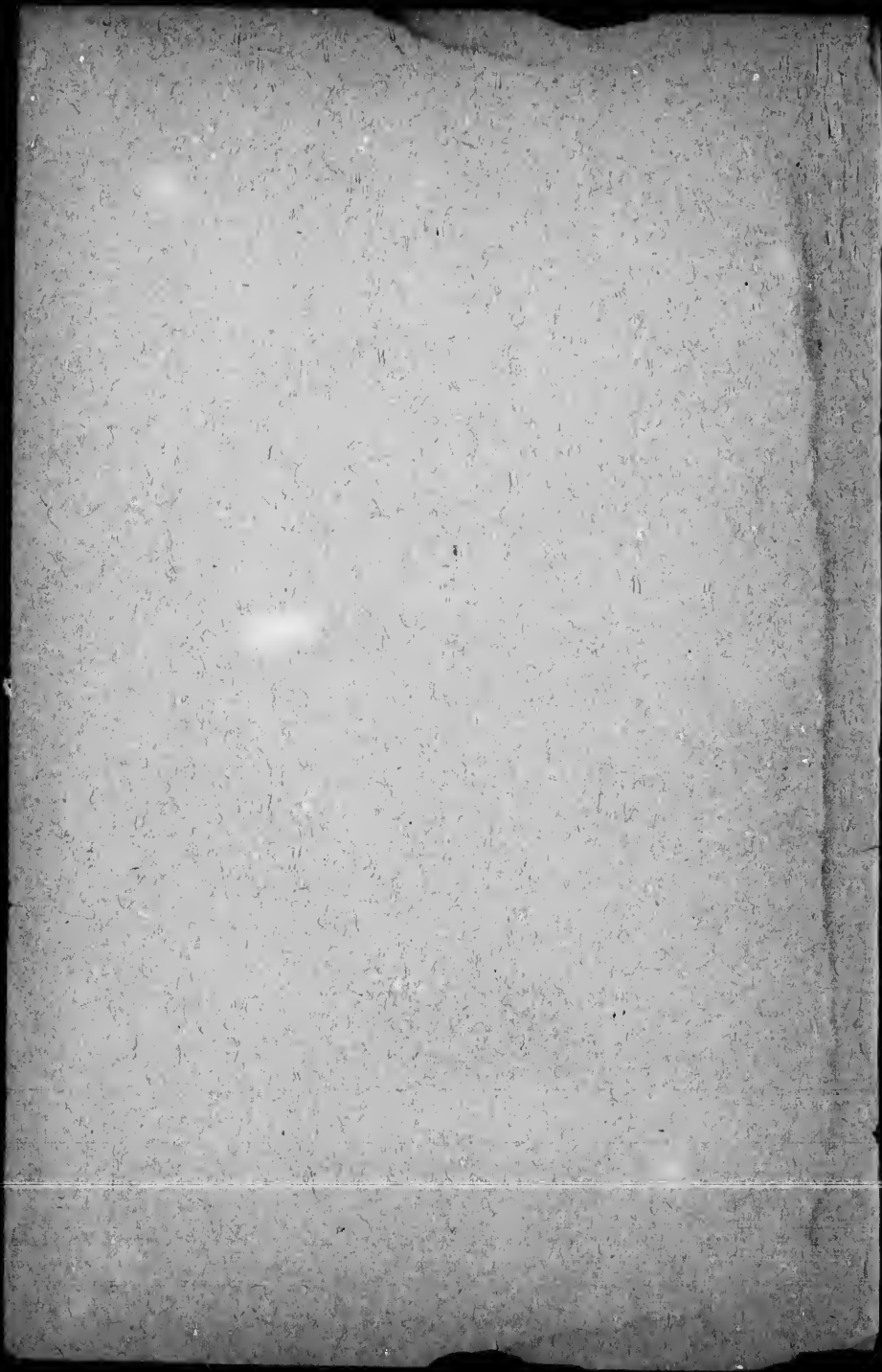
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THE COUNTRY NORTH OF THE MATTAWA RIVER AND LAKE NIPISSING.

Lakes, Rivers and Agricultural Capabilities.

On the north bank of the Mattawa a range of hills, of no great elevation, runs nearly the whole way from Trout Lake to the mouth, and between their base and the margin of the water there are good mixed wood flats, with elm, ash, maple, and a few oaks; but the slopes produce soft woods chiefly, the prevailing species being red pine.

To the north of Upper Trout Lake there is an extensive spread of flat hardwood country running in an east and west direction, possessing a good soil, consisting of loam in some places and clay in others, and the timber, in a great measure, composed of black birch, maple and basswood.

Associated with this tract is another, at the distance of five miles on the west side of Seven League Lake, on the Ottawa, between the Mattawa River and Lake Temiscaming, running in a south-westerly course to the vicinity of the Mattawa, and reaching as high as the Galere on Lake Temiscaming, though it is not there much nearer the lake than it approaches the river lower down.

Lake Temiscaming, a magnificent stretch of navigable water, the largest and deepest on the whole course of the Ottawa, extends seventy-five miles without any obstruction to vessels of the largest tonnage. It consists of three lakes, the lower, middle and upper, connected by narrow straits.

The Upper Lake extends from Fort Temiscaming to the "Head." This beautiful sheet of water has all the characteristics of a true lake. It is from six to eight miles wide, indented with deep bays, bold promontories, steep cliffs and low banks, and is studded with picturesque islands, two of which are of considerable size.

The Montreal River, its largest tributary, as regards both extent and volume, takes its source at the northern height of land, flows for about sixty miles in an easterly direction, and sixty miles more south-easterly, and discharges into Middle Lake by several mouths.

The River Blanche, which derives its name from the white or turbid colour of its water, discharges into Lake Temiscaming at its "Head," and is navigable for twenty-five miles. The area of the clay land drained by this river has been estimated to be between 500 and 600 square miles, equivalent to twelve townships of fifty square miles, or 32,000 acres each. This is the largest area of land fit for settlement, in one unbroken clay block, in the unsettled portion of Ontario.

The limit southward of this tract of good level country is associated with a change occurring in the quality of the rock formations of the district in the vicinity of the mouth of the Montreal River on the right side of the lake, and a few miles higher up on the left. The unbroken monotony of the hard syenitic gneiss, constituting so much of the banks of the lake and main river further down, here ceases; a more distinctly stratified set of rocks, of a less crystalline and more easily disintegrating character, presents itself. The ranges of the hills become more determinate, the valleys wider, and many of them are occupied by clay lands. At its very extremity both sides of the lake present a favourable aspect; good stratified limestone there makes its appearance, constituting the large islands already mentioned, and the promontory separating the east and west bays. Its escarpment does not exceed 100 feet, and it runs northward into the interior with an even continuity of height, which can be followed by the eye for miles.

The marshes, arising from the sediment deposited by the Blanche and other rivers at their mouths, are extensive, and produce an abundant supply of good meadow hay.

The general character of the country south and east of Lake Tamagamingue is undulating but not very broken. This lake is a fine sheet of very clear water, abounding with bass, pickerel, pike, and salmon trout, and filled with islands. The scenery is beautiful, resembling that of the Thousand Islands of the St. Lawrence. This lake has two outlets, one flowing south into the Sturgeon River, which empties into Lake Nipissing, and the other flowing north into the Montreal River, which discharges into Lake Temiscaming. Numerous lakes, of various sizes, are dotted at intervals over this country. Otter Tail Creek is the principal stream falling into the Ottawa.

Throughout the whole of this region there is good clay soil along the flats of the rivers and creeks; generally, however, a sandy loam prevails.

After traversing the Township of Widdifield, on the north-east shore of Lake Nipissing, the land descends gradually to the north, showing a level country of hardwood timber, with here and there some rock, and generally a good loamy soil.

Turning east, between townships 17 and 18,* on the nineteenth mile from the boundary of Springer, the country is flat in some places, but generally undulating, with fair soil. From the twenty-first to the forty-fourth mile on this line, there is a good tract of country with rolling land and good soil, fit for farming purposes, the timber being chiefly maple and black birch, of large growth and good quality, with some good scattering pine.

The Township of Widdifield (No. 17) is nearly all good hardwood land, and is by far the best township in this section of the country. Finer hardwood bush is rarely seen. There are a few bass-wood trees, iron-wood in some places, and a grove of beech on the east boundary, a few miles north of Trout Lake.

Townships 22, 23, 27 and 28, contain a large percentage of good land, with considerable pine.

Townships 1, 5, 9, 13 and 18 also contain a fair percentage of good land, with very little pine. The timber is chiefly balsam, spruce, birch, with occasional patches of hardwood.

The Jocko River runs eastward through a fine tract of country to the River Ottawa.

Sturgeon River, emptying into Lake Nipissing, is a fine deep stream, having an average breadth of six chains to the first fall, about six miles from its mouth.

The Veuve, or Widow River, empties into Lake Nipissing, about four miles west of Sturgeon River.

Lake Nipissing lies immediately above the 46th parallel of latitude, and across the 80th of longitude. In form it is very irregular, but has an extreme length, east and west, of about forty miles, and a maximum breadth, north and south, of about twenty miles. Its area in round numbers is about 300 square miles.

*These numbers have reference to an exploration made by the Department of Crown Lands in 1882, and are applied to townships lying east of the Township of Springer and the Indian Reserve, which, with the exception of Widdifield, have been outlined, but not surveyed or named.

The northerly shores of the lake are low, generally of flat rock and sand, and the water shoal upon a sandy bottom. Its waters pass out into French River by three distinct outlets through myriads of islands.

The French River, though sometimes merging into one vast lake, is throughout the greater part of its length, divided into two main channels. From its entrance on Georgian Bay to its outlet on Lake Nipissing the distance is about forty miles, and the navigation is obstructed by falls and rapids. The scenery of the Thousand Isles of the St. Lawrence is tame and uninteresting as compared with the endless variety of island and bay, granite cliff, and deep sombre defile, which mark the character of the beautiful, solitary French River.

HEIGHTS ABOVE THE SEA.

The height of the surface of Lake Temiscaming at its head above the waters of the St. Lawrence at Three Rivers, which is about the highest point affected by the action of the tides, is 612 feet. The level of the Mattawa, at its junction with the Ottawa, is 519 feet 5 inches.

The height of the surface of Upper Trout Lake, the source of the Mattawa, is 690 feet, and of the height of land between it and the Vase River on the canoe portage, is 714 feet 5 inches.

The fall from the height of land to the River Vase at the end of the portage is 22 feet 11 inches, and from this point to Lake Nipissing the fall is 26 feet 6 inches, which makes the height of Lake Nipissing above the waters of the St. Lawrence at Three Rivers, 665 feet.

The ascertained height of the surface of Lake Huron above the sea, according to the Michigan surveyors, is 578 feet.

NORTH SHORE OF LAKE HURON.

Rivers, Agricultural Capabilities, Timber, etc.

Six principal rivers, besides several of inferior note, flow through this country. The principal are the Thessalon, the Mississaga, the Serpent, the Spanish, the White Fish, and the Wahnapiatae, of which the mouths are from fifteen to thirty miles apart. The Mississaga and the Spanish are the largest two, the reported length of the former being 120 and of the latter 200 miles.

In the valleys of all the principal streams there are extensive flats of rich and deep soil, producing maple, oak, elm, birch and basswood, besides occasional groves of both red and white pine of large size.

From Sault Ste. Marie to Root River, the surface is generally level, with a slight inclination to the eastward, or towards Garden River; the soil is here a fine sandy loam, and the subsoil a reddish blue clay.

Root River, flowing south-easterly, is a small stream, emptying into the St. Mary River on the westerly side of Little Lake George; it is shallow, with clear water, rapid current, and gravel bottom. The soil on both sides of the river is good. Northward of the river for six miles, the surface is gently undulating, broken here and there by the rock ridges previously described, the soil and timber being the same as on the south side.

In rear of this, a valley of seven or eight miles in width extends eastward to the high land surrounding Echo Lake, and westward to the Gros Cap Range at the Foot of Lake Superior, its regularity broken here and there by similar ranges of rock.

Garden River, flowing southerly and south-westerly, empties into the St. Mary River a short distance eastward of Little Lake George. It is a fine stream, having a general width of about three chains. Here, wheat, oats, maize, potatoes, and grass, grow luxuriantly. The soil on the banks of this river, and for a considerable distance inland on either side is of the best quality, being a fine rich sandy loam, and the timber is large and thrifty.

The valley, entered northward from Root River, is again seen presenting the same appearance, and stretching eastward to the high land surrounding Echo Lake. Through each of these valleys there usually flows a pretty brook of clear water, taking its rise from one or other of the picturesque little lakes which lie on each side of the watershed.

To the east of Echo Lake, and northward of the limestone point on the east side, there is a tract of fine land, heavily timbered with maple, elm and birch, interspersed at intervals with groves of hemlock and a few pines, with cedars in the hollows and swamps.

The Thessalon River, with its chain of lakes and mill-sites, flowing from the north-west, empties into Lake Huron about twelve miles eastward of the Bruce Mines.

The land on the margin of the river is of good quality and heavily

timbered. The surface rises gently from the water's edge, and at the top of the bank the rock is exposed; this continues, however but a short distance, when it descends gradually, and for several miles to the eastward the soil is of good quality and deep, the surface rolling, and the timber fine and thrifty, maple, birch, cedar, elm and ash prevailing. Much good pine is also scattered through this section.

Westward of the river, or in rear of the Bruce Mines, the country is more broken and rugged. North and west from Desert Lake, the second of the chain, the coast is low and swampy for the distance of three-quarters of a mile, but in rear the surface rises gradually, and, though broken here and there by the rock ranges which form a marked feature in the topography of this country, affords a considerable extent of land fit for settlement, the soil being deep and rich, and the timber principally hardwood.

North and east from Lake Deception, the third of the series, there are extensive tracts of excellent land, timbered chiefly with hardwood; these tracts extend eastward to the Mississauga, and southward to within two miles of the coast of Lake Huron.

The Mississauga River, entering Lake Huron about thirty miles eastward of Point Thessalon is, at its entrance into the lake, a fine broad stream, with a considerable depth of water, and its mouth being protected eastward by several islands affords a safe and commodious harbour. The navigation is, however, impeded four miles from its mouth, where a rock range, crossing the river, forms a fall of five feet.

At the mouth of the river the land is low and swampy, but the surface rises gradually, and at the distance of one and a half miles from the lake the banks on both sides are high, and the soil and timber of good quality, the former being a rich red sand with a subsoil of blue clay, and the latter consisting of birch, hard and soft maple, cedar, poplar, spruce, balsam, black and white ash, and elm.

Between the northerly limit of the Indian Reserve and Little White River, a south-west flowing tributary of the Mississauga, there is a tract of country of considerable extent fit for settlement. Northward of Little White River there is a fine block of land extending nearly to the Grand Portage, and stretching to the eastward for a considerable distance.

The Blind River, forming the eastern limit of the Indian Reserve, enters Lake Huron about four miles east of the Mississauga.

Serpent River empties into a deep bay or inlet of Lake Huron about twenty-five miles east of the Mississaga. The bay into which it empties is unsurpassed as a harbour. At the mouth of the river, on the west-erly side, the land is of good quality, but low and level. Ascending the river the scene is rugged and rough, the rock ranges running close to the margin of the stream and parallel to it. In rear, however, on both sides some valleys of good hardwood land are met with, more particularly on the west, being a continuation of the valleys from the east bank of the Mississaga.

Spanish River, which is navigable for thirty miles to craft not drawing over five feet, falls into an extensive and beautiful bay, land-locked by islands and projecting points from the main land, the communication to the eastward being through a narrow but deep channel, called the Petit Detroit, between the southern extremity of the peninsula and the eastern end of Aird Island. From the Petit Detroit to La Cloche the outline of the coast is irregular, being indented by deep bays and coves, which in some parts are perfectly land-locked by groups of long, low and narrow islands running parallel with the main shore, and affording excellent places of shelter for all classes of vessels under almost any circumstances.

The hills bordering on Spanish River seldom attain a height over 300 feet, but the banks of the river itself are frequently bold, precipitous and rocky. At the great fall a picturesque and imposing ruggedness prevails. A ridge of smoothly polished bare rock rises in rounded knolls, so steep in places, as to be inaccessible, obstructing the south-eastern flow of the river and splitting it into two parts, of which one turns a little to the northward of east, while the other is deflected to a precisely opposite course. The latter, after running above a quarter of a mile, is thrown in a beautiful cascade over a precipice thirty feet high, and then turning abruptly to the eastward rushes violently for thirty chains in that direction, falling in a vertical sheet over three successive steps of five feet each, when it is again united to the other division of the stream in a wide pool of nearly still water.

Much of the country for some distance back from the north side of the river is flat or rolling land, and is almost everywhere covered with a luxuriant growth of red and white pine.

The extent and value of the pine forest in this region, the facility offered by the river for navigation, the water-power to be found on the

main stream and all its tributaries, and the capabilities of the soil for raising most of the necessaries of life, all tend to indicate a probability that it is destined to become of commercial importance to the Province.

The White-fish River in its whole length, until within a mile or less of Lake Huron, consists of a long chain of lakes lying at short distances from one another, connected by short, small and sometimes rapid streams.

The valley of the Wahnapiæ River contains many considerable tracts of flat land, much of which is of good quality, bearing hardwood and large white pine in abundance, but a great proportion of the flats are low, wet and swampy.

The Vermillion River is a fine broad stream with deep water and a rapid current, which, flowing generally south-westerly, empties into Vermillion Lake, and thence running southerly, joins the east branch of the Spanish River about five miles east of White-fish Lake. The banks of the Vermillion River present a very inviting appearance both as regards soil and timber, the former being a rich alluvial deposit with a subsoil of reddish blue clay, and the latter principally fire and thrifty Hardwood. Inland for a considerable distance from its banks the same appearance prevails, white oak, elm, and white ash being abundant.

This river takes its rise near the height of land, and unlike most of the streams in this country, is unbroken save by the one lake above spoken of.

Vermillion Lake is a long, narrow sheet of water timbered to the water's edge with birch, poplar, maple and oak, and takes its name from the peculiarly beautiful colour of the foliage in the autumn.

Grain, root crops and Indian corn flourish here to perfection.

On the south side of the height of land, and coming down in some places to within a few miles of Lake Huron, the country, as before remarked, like that for a considerable distance north, is full of lakes. These are not generally very deep, one result of which is that the water heated by the sun's rays becomes much warmer throughout than the water of Lakes Huron and Superior. The climate of a wide belt of territory is so tempered and modified by the warm waters of the numerous small and shallow lakes, which cover probably one-third of the country, as to admit of the cultivation of many of the most valuable kinds of fruit.

East of the Bruce Mines, in the valleys of the Thessalon and Mississaga

Rivers, all kinds of crops flourish well. Spring wheat grows from four to five feet high and thick on the ground, yielding from twenty-five to thirty bushels to the acre. The oat crop is remarkably good, and yields from fifty to seventy bushels per acre. In this section of the country there is a good opening for stock raising, and stock farms with large clearances can be had at reasonable rates.

LAKE SUPERIOR REGION.

Rivers, Soil, Timber, Agricultural Capabilities.

Between Salter's Lake Huron base line and the Goulais River, a distance of ten miles, there is a large proportion of good rolling land, occasionally broken by hills of trap rock, heavily timbered with maple, birch, balsam, spruce and some pine. The soil is a sandy loam, changing to rich clay loam in the valleys.

The Goulais River flows in a south-westerly direction through a valley varying from one and a-half to three miles in width, and empties itself into the bay of the same name. It is navigable for small boats for about twenty miles. For the first twelve or fifteen miles from its mouth the banks vary from five to twelve feet in height, and are in general of clay or gravel. The soil in the valley of the river is of excellent quality, giving growth to large maple, birch, elm, ash, and softwood trees.

Leaving the Goulais River and proceeding north, the country for some miles resembles that just described. Hills are seen in some places from 300 to 600 feet in height, with greenstone, trap and gneiss appearing on their summits in ragged cliffs; while their flanks and the intervening valleys shew good loamy well timbered soil.

On approaching Lake Superior, the country, generally, is mountainous and barren.

Between Point Corbeau, on the north shore of Batchawaung Bay and Mamainse, there is a fine tract of richly-wooded land of some miles in width, and of a rich productive loam, giving growth to large maple, birch, oak, etc.

Batchawaung Bay affords a constant supply of the finest trout and white fish.

The surface of the country between Batchawaung Bay and Montreal River, though a good deal broken, contains in some places low hills and

valleys of good soil. The timber consists of spruce, balsam, maple, an birch, with some pine and tamarac. Iron is largely distributed over this district.

The Montreal, a clear rapid river, flows through several small lakes, and between high hills of granite and trap rocks, in a direction a little south of west. In the first ten miles from its mouth there is a succession of wild rapids and falls, varying from 10 to 150 feet in height, flowing through narrow gorges and openings in the rock.

The tract between the Montreal and Agawa Rivers is for the most part hilly, though valleys of good soil are sometimes met with. Maple begins to grow scarce in this latitude, the prevailing timber being spruce, birch and balsam.

The Agawa, a clear gravelly river, abounding in speckled trout, flows between high perpendicular cliffs of granite and greenstone in a direction a little west of south into Lake Superior, about six miles to the north of Montreal River. The smaller streams of the country through which it flows, pour their contents, in many cases, directly over cliffs 150 feet in height into this river.

From the Agawa to the Michipicoten River there is little change in the appearance of the country, or in the quality of the soil. Here, as well as in every other part of the Lake Superior District, the country is well watered by streams and lakes which contain many varieties of excellent fish.

The second river in point of size, on the north shore of Lake Superior, is the Michipicoten. It is a large, clear, rapid river, and takes its rise far in the interior. It has been for many years the route taken by the Hudson's Bay Company's canoes in travelling to and from Hudson's Bay, and the principal trading establishment of the Company is at its mouth.

The Hudson's Bay Company's winter mail route to Sault Ste. Marie connects in a nearly direct line the mouths of the Michipicoten and Agawa Rivers, and passes through a fine rolling country, well timbered with maple, birch, balsam and spruce, and watered by numerous streams and lakes.

The Pic River flows in a southerly direction for many miles, with a gentle current through a valley from one to three miles in width. The banks, which are generally of clay, and low, rise in some places to 70 or

80 feet. There are many points on this river of rich clay soil, giving growth to elm, birch, poplar, and black ash of large size. All along the river blue clay, of the finest description, well adapted for the manufacture of bricks or fine pottery, may be got in abundance.

The Neepigon River, the largest on the north shore of Lake Superior, takes its rise in Lake Neepigon, flows through several smaller lakes, and empties itself through a wide deep channel into Neepigon Bay. At the eastern side of its entrance, bold precipitous greenstone cliffs, several hundred feet in height, overlie a red soft rock of a soapy structure, which is used in the manufacture of pipes. In the valleys between these cliffs and on the west side of the river, there is excellent soil heavily timbered. The water of this river is beautifully clear, and swarms with speckled trout, weighing from one to twelve pounds. About 30 miles up, Lake Neepigon is reached. This lake is 120 miles in length and 60 miles in breadth. Its surface is dotted with numerous islands, its waters are deep, and contain in abundance fish of every variety taken in Lake Superior.

In the Neepigon country the largest tract of good land appears to be on the south-western side of the lake. From the Nonwaten River, northward to the Pagitchigama, a distance of fifty miles, the country is comparatively level, and the soil generally fertile. This tract is represented as continuing nearly to the River Winnipeg, and becoming more generally level in receding from Lake Neepigon. The rivers entering in this part of Lake Neepigon, as far as examined, were found to flow with tortuous courses between muddy banks of clay, overspread with fine sand.

There is a considerable area of good land around the bottom of South and McIntyre's Bays, and on the peninsulas east of the latter Bay, and Gull Bay. From the mouth to the first rapid on the Poshkokagan, the loamy banks of the river are from twenty to thirty feet high. The River Kabitotiquia is so crooked that by following its windings from the mouth to the portage leading to Chief's Bays, the distance is estimated to be fully thirty miles, although it is only nine miles in a straight course. On both sides the country is level, and the soil sandy, supporting a growth of grass and bushes, the timber having been burnt off by repeated fires. The land is free from stones, and very little labour would be necessary to make it ready for the plough.

The Kaministiquia, the only river on the Canadian side of Lake Superior navigable for large vessels for any distance from its mouth, flows

into Thunder Bay at Fort William. For the last fifteen miles of its course, it winds through a rich valley of alluvial soil, in the centre of the Townships of Neebing and Paipoonge, between banks varying from five to forty feet in height, crowned with large elm, ash, poplar, birch, spruce and pine, with a thick underbrush of flowering shrubs.

Between its mouth and the Kakabeka Falls, which are scarcely inferior in grandeur to the Falls of Niagara, there is nothing in the flora to lead one to doubt the feasibility of raising all the cereals.

In a general way it may be said that the whole country which has been examined, north of the hilly region around Lake Superior, between the Pic River and Lake Neepigon, is comparatively level, with a sandy soil, generally dry, but in places interrupted by shallow swamps and low rocky ridges. The sand is underlaid by a light coloured clay which occasionally comes to the surface.

The drift, which has come from the north eastward, is rich in pebbles and boulders of the paleozoic limestones, which occur *in situ* in that direction. These are washed out and exposed in the banks of lakes, and along rivers and brooks, especially at rapids, and will prove valuable for burning into lime. The fossils which they contain are mostly silicified and indicate the Niagara formation.

In going from Lake Superior, through this country, to the valley of the Albany River, no difference is observed in the character of the vegetation, which may be accounted for by the greater elevation of the southern part, together with the cooling influence which Lake Superior exerts upon it. Oats and barley are successfully cultivated at Long Lake House; while hay, potatoes, and all the ordinary vegetables thrive remarkably well. The potato-tops, as a rule, are not touched by frost up to the time of harvesting, which is during the first week in October.

RAINY RIVER, AND RAINY LAKE, LAKE OF THE WOODS, AND RAT PORTAGE.

This most important section of the Province lies between the height of land west of Lake Superior and the Winnipeg River. In its general aspect it is a hilly and broken country, intersected by rapid rivers and widespread lakes. The hills, however, do not rise to any great elevation,

and there are several fine alluvial valleys, the most extensive of which is that of Rainy River.

The lakes and rivers present long reaches of navigable water, the principal of which, extending from Fort Frances to the western extremity of Lac Plat, is 158 miles in length. Dense forests cover the whole of this region, and the most valuable kinds of wood are seen in various places, and in considerable quantities. Elm is found on Rainy River, and white pine is abundant on the waters which flow towards Rainy Lake. On the Sageinaga River, and on the Seine and Maligne, there are extensive forests of red and white pine. Occasional white pine appears in the beautiful valley of Rainy River, and on the islands in the Lake of the Woods.

The approach to Fort Frances is very beautiful. As we near the outlet of Rainy Lake, and enter Rainy River, the right bank appears very much like a park, the trees standing far apart, and having the rounded tops of those seen in open grounds. Blue oak and balsam poplar, with a few aspen, are the principal forest trees. These line the bank, and for two miles after leaving the lake, we glide down between walls of living green, until we reach the Fort, which is beautifully situated on the right bank of Rainy River, immediately below the Falls. All sorts of grain can be raised here, as well as all kinds of garden vegetables. Barley, three feet high, and oats over that, show there is nothing in the climate or soil to prevent a luxuriant growth. The length of the river is about eighty miles. The right, or Canadian bank, for the whole distance, is covered with a heavy growth of forest trees, shrubs, climbing vines, and beautiful flowers. The forest trees consist of oak, elm, ash, birch, basswood, balsam, spruce, aspen, balsam poplar, and white and red pine near the Lake of the Woods. The whole flora of this region indicates a climate very like that of the old settled parts of Ontario, and the luxuriance of the vegetation shews that the soil is of the very best quality.

The name of Alberton has been given to the settlement at Fort Frances.

Of the lakes in this section, the Lake of the Woods is the most extensive. From Lac Plat, which may be regarded as its western extremity, to White Fish Lake, which is a somewhat similar extension in an opposite direction, the distance is not far short of 100 miles, and from the mouth of Rainy

River, at the entrance of the lake, to its outlet at Rat Portage, in lat. 49° 47' north, and long. 94° 44' west, the distance is about seventy miles, so that altogether it occupies an area of about sixteen hundred square miles. This extensive sheet of water, like all the other lakes on the line of route, is interspersed with islands, on some of which the Indians have grown maize from time immemorial, and have never known it fail. It would be difficult to conceive anything more beautiful of its kind, than the scenery of this lake. Islands rise in continuous clusters, and in every variety of form. Sometimes, in passing through them the prospect seems entirely shut in; soon again it opens out, and through long vistas a glance is obtained of an ocean-like expanse, where the waters meet the horizon.

CLIMATE, AGRICULTURAL RESOURCES, STOCK-RAISING, ETC.

Throughout the whole of the region from Lake Nipissing to the Lake of the Woods, the depth of snow is generally less on an average than it is at the City of Ottawa. Only in one locality between these two points is the snow found generally so deep as at this city, namely, in the immediate neighbourhood of Lake Superior, where the lake appears to have a local influence on the humidity of the atmosphere, and, in consequence, on the amount of snow-fall.

The climate of the territory north of the height of land is one of extremes. The winters are cold—the temperature falling sometimes as low as forty degrees below zero of Fahrenheit's thermometer, and occasionally rising in summer to ninety degrees in the shade on the coast of James' Bay. The mean temperature of the summer at Moose Factory is about sixty degrees.

In going northward, from the height of land to James' Bay, the climate does not appear to get worse, but rather better. This may be due to the constant diminution in the elevation more than counterbalancing for the increased latitude, since in these northern regions a change in altitude affects the climate much more than the same amount of change would affect it in places further south. The water of James' Bay may also exert a favourable influence, the bulk of it being made up in the summer time

of warm river water, which accumulates in the head of the bay, and pushes the cold sea water further north. The greater proportion of day to night during the summer months may be another cause of the comparative warmth of this region.

The rainfall at Moose Factory forms no criterion as to what it is on the southern highlands, where, without being too wet, there is sufficient rain and dew to support the most luxuriant vegetation. The snow fall at Moose Factory is not nearly as heavy as it is south of Lake Nipissing and French River.

The following tables of temperature and rainfall at Port Arthur and Moose Factory are taken from the report of the Meteorological service of Canada, for the year ending 31st December, 1881.

PORT ARTHUR.

1881.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Mean temperature of the several months.	0·5	10·7	25·8	34·2	50·4	56·5	67·1	64·4	53·7	40·6	22·9	21·2
Highest temperature in each month.	29·8	38·4	45·5	71·8	70·8	80·7	88·6	85·6	72·3	69·8	49·8	42·8
Lowest temperature in each month.	—	—	—	—	—	—	—	—	—	—	—	—
Rainfall in inches in each month.	0·00	0·00	0·00	0·76	3·23	1·74	2·71	2·97	7·38	2·66	1·00	0·00
Number of days on which rain fell in each month.	0	0	0	3	10	8	8	6	15	5	2	0

MOOSE FACTORY.

1881.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Mean temperature of the several months.	10·6	6·9	16·1	22·6	48·2	47·4	64·0	60·8	51·5	32·6	12·3	8·0
Highest temperature in each month.	20·1	36·1	44·2	56·8	79·0	83·0	90·5	88·5	76·8	71·2	52·0	37·1
Lowest temperature in each month.	39·6	34·5	11·3	—	—	—	—	—	—	—	—	—
Rainfall in inches in each month.	0·00	0·20	0·10	0·16	0·52	3·53	2·35	2·82	4·80	1·52	0·90	0·00
Number of days on which rain fell in each month.	0	1	2	5	11	14	16	13	17	5	1	0

Agricultural operations have been very limited north of the height of land. It is only at the fur-trading posts of the Hudson's Bay Company that any attempt has been made to cultivate the soil.

Farming and gardening have been successfully carried on by the officers of the Company at their posts on Lakes Mattagami and Missinibi. At the latter, spring wheat has been found to ripen well. At Moose Factory, although the soil is a cold, wet clay, with a level, undrained surface, farm and garden produce, in considerable variety, are raised every year. Oats, barley, beans, peas, turnips, beets, carrots, cabbage, onions, tomatoes, etc., are grown without any more care than is required in other parts of Canada.

Wheat may be successfully grown where the soil is suitable in all that part of this territory lying to the south of the fiftieth parallel of latitude. The mean temperature of the summer south of that parallel is sufficient to ripen this cereal. Indeed wheat has been grown at Abbitibbe House, Flying Post, and New Brunswick, on or about the forty-ninth parallel, and at Lac Seul, between the fiftieth and fifty-first parallel. Indian corn, a

more delicate plant than wheat, has come to maturity at Osnaburgh House, on Lake St. Joseph, north of the fifty-first parallel.

Barley, oats, rye, peas and beans succeed well. The invariable excellence of the crops of the Windsor bean and the kidney-bean at Moose Factory is surprising.

The vetch grows wild everywhere, but nowhere is it so abundant as on the coast of James' Bay.

There is probably no food plant that is likely to be of more importance to the inhabitants of this territory than the potato. There is none the cultivation of which has been so successful in every part. The fitness both of soil and climate for its growth has been established beyond dispute. Whether viewed in reference to size, quantity or quality, the crops at Moose Factory and Matawagamingue (260 miles further south), will compare favourably with those in the best potato-growing districts in Ontario. Peaty soil is particularly well suited to the growth of potatoes. There are millions of acres of peat mosses in this territory, very extensive areas of which can be easily reclaimed, and when the country is settled and means of transport provided, hundreds of thousands of tons of potatoes may be grown and sent away to supply the wants of other countries.

The fitness of the soil and climate for the growth of root crops will make the breeding of cattle and dairy husbandry important resources of this territory. Among these crops the turnip is entitled to a place in the front rank. The carrot, beet, and parsnip can also be grown.

Cabbages, spinach, lettuce, mustard, cress, and radishes, are grown without any difficulty. Rhubarb also grows well. The cauliflower appears to be one of the surest crops at Moose Factory, and is sometimes ready for the table as early as the first of August.

Whatever doubts exist as to the agricultural value of the country north of the height of land in respect to its grain-growing capabilities, there can be none in regard to its fitness to produce the more important roots and grasses. From the height of land northward to the coast of James' Bay, nothing on the north shores of Lake Huron or Superior can exceed the luxuriance of the native grasses. Cows and oxen are kept at all the principal posts, and they are invariably found to be healthy and in fine con-

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ditto : a good evidence of the salubrity of the climate, and excellence of the pasture. At Moose Factory, where some sixty head are constantly kept, a certain number are slaughtered every fall, and are quite fat, although then taken straight from the grass.

The only fruits that appear to be cultivated in the garden are the red and black currant and raspberry. The red currant is remarkably prolific. The strawberry and gooseberry might be raised with little trouble, for they are found growing wild in many places, and nowhere more plentifully or of finer quality than on the coast. The huckleberry, or blueberry is found in great profusion from the long portages to the height of land. Indeed it may be said to abound from the coast of Hudson's Bay to the shores of Lakes Huron and Superior. It is nowhere in greater profusion or of finer quality than on the height of land itself.

There is another wild fruit which may be noticed. This is a bush or tree not unlike the wild cherry in appearance.* North of the height of land, it attains a height in some places of ten or twelve feet, but is generally about six feet. The fruit grows singly, not in bunches or clusters on the tree. It is an oblong or pear shape, larger than the blueberry, but smaller than the grape. When ripe it is of a purple or blue color. It is sweeter and has more flavor than the huckleberry, and is preferred by the natives to it. It is to be found all the way from James' Bay to Lake Huron, but nowhere in greater perfection than on the Mattagami River. The fruit is not only pleasant and wholesome, but the juice would make an excellent wine, and the tree is worthy of cultivation and a place in our orchards and gardens.

*This is probably *Amelanchier Sanguinea*, a variety of the Canadian *Medlar*.

