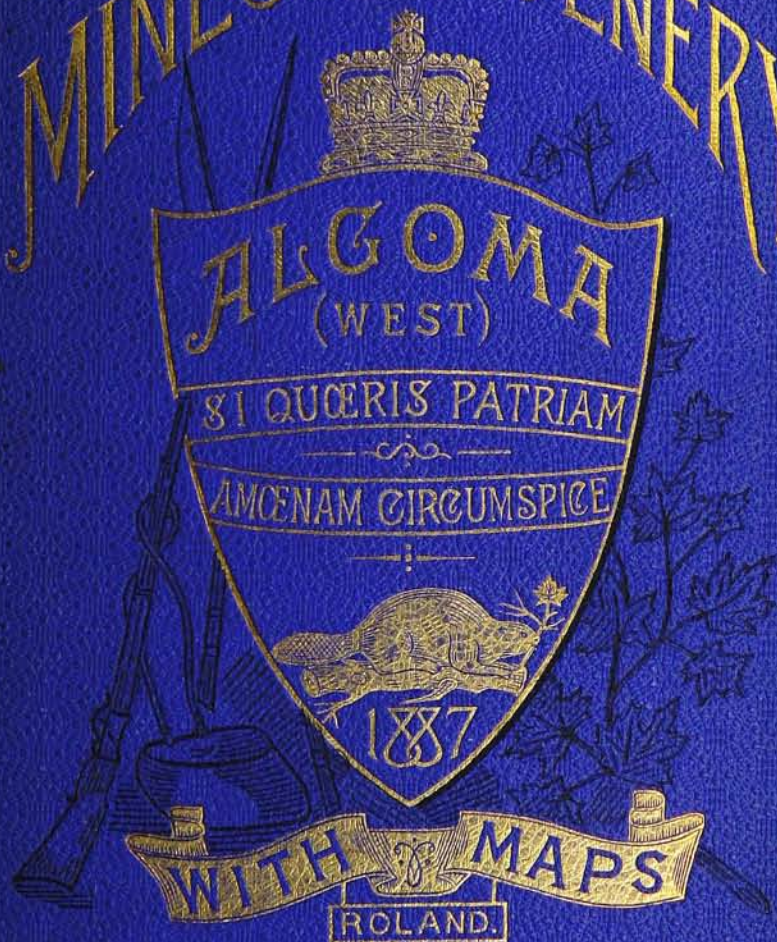


MINES AND SCENERY

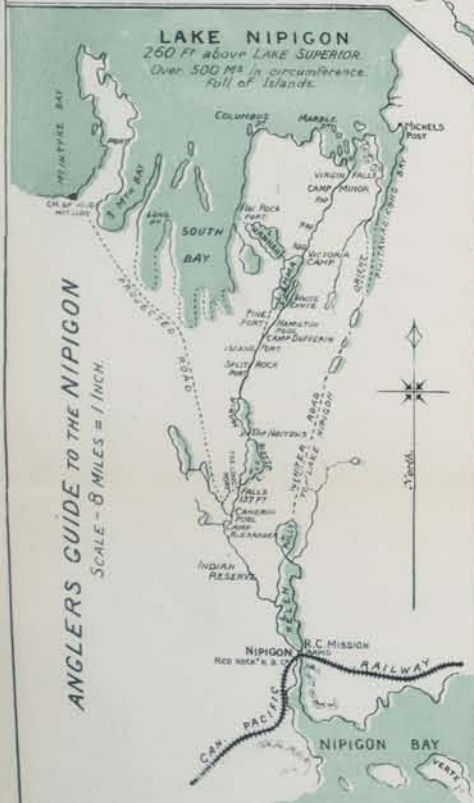
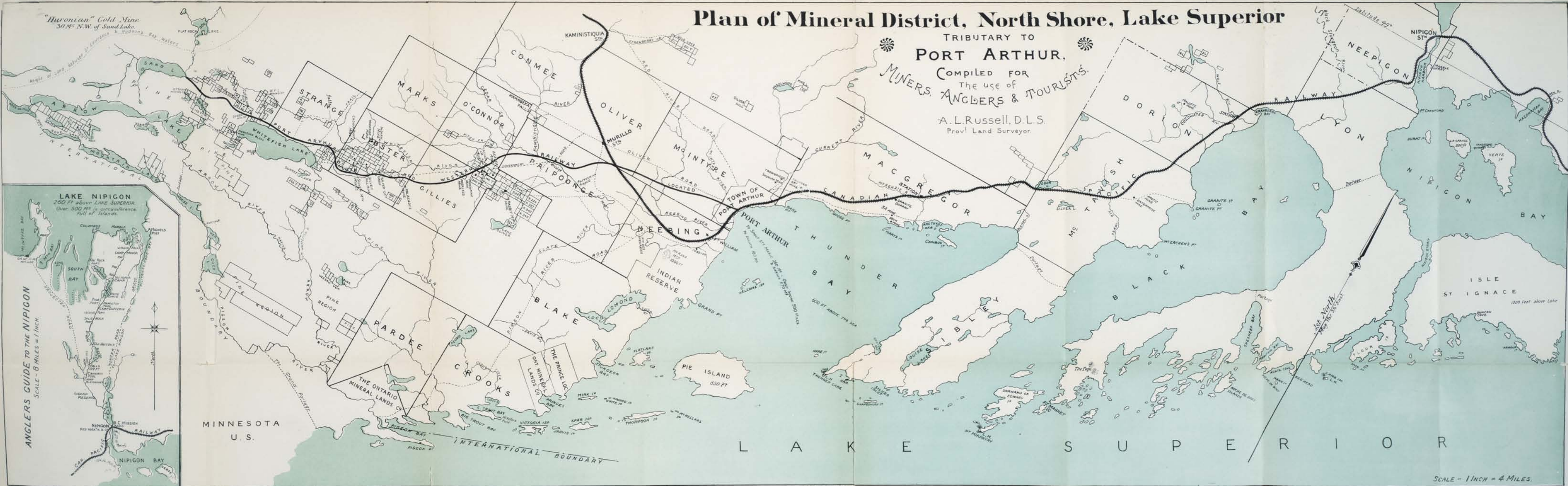


Plan of Mineral District, North Shore, Lake Superior

TRIBUTARY TO
PORT ARTHUR,

MINERS, ANGLERS & TOURISTS.

A. L. Russell, D. L. S.
Prov. Land Surveyor.



SCALE - 1 INCH = 4 MILES.

ALGOMA WEST

ITS

MINES, SCENERY

AND

INDUSTRIAL RESOURCES.

~~~~~  
ILLUSTRATED.  
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BY

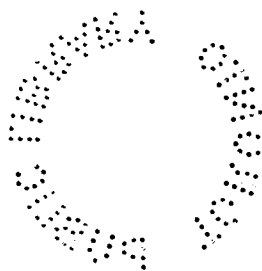
WALPOLE ROLAND, C. E.

TORONTO:

PRINTED BY WARWICK & SONS, FRONT STREET, WEST.

1887.

Entered according to the Act of Parliament of Canada, in the year one thousand eight hundred
and eighty-seven, by WALPOLE ROLAND, C.E., in the office of the Minister of Agriculture.



ERRATUM.

Page 14.—Illustration wrongly named, should be Thunder Cape. See page 17.

P R E F A C E.

The idea of presenting the following brief record of the marvellous resources of Western Algoma in general, and of the development of the mines and other important commercial industries tributary to Thunder Bay in particular, has again and again been suggested to the writer by a long series of letters from various quarters of the United States and England, quoting certain issues of mining and other papers, as for example: the New York, Chicago and London *Mining Reviews* and journals, the Thunder Bay *Sentinel* and *Miner*, etc., in which they had seen articles of special interest, with a polite request for additional information touching the relative merits of particular sections, etc. But laudable as this desire for knowledge may appear, it was not always either convenient or possible without involving a heavy tax upon my time, to fully satisfy many enquirers, and deeming partial answers most unsatisfactory, I adopt the following course.

* * * * *

Within, gentlemen, you will please find answer—supported not only by the testimony of our local press, but also by the experience and personal research of many of the most eminent scientists on this continent.

Your demand for a map “showing the relative position of the various surveys made for the Government or private individuals up to date,” has also been complied with. This latter work was prepared specially by one of our best known and most experienced Provincial and Dominion Government Land Surveyors, Mr. A. L. Russell, of Port Arthur.

In conclusion, the writer has much pleasure in reminding his readers of the fact that, the figures and statements given herein, are from personal observation and investigation, as are also the general historical and other descriptive references touching the district so far described. Over twelve years of continuous exploratory engineering, mineralogical and topographical examinations therein, rendering the subject perfectly familiar from every aspect and under different conditions, both in summer and winter.

Owing principally to a press of other work at this season, it is, of course, barely possible to more than refer to the existence of many industries of considerable merit and promise. The agricultural interests from similar causes have not received the amount of attention they so richly deserve. To this latter remark, the west-bound traveller *via* the Canadian Pacific Railway around Lake Superior, may be disposed to mildly object. Visitors and intending settlers going through to the Northwest Territories, would, however, materially alter their opinion and improve their chances of success, or fund of information, by remaining over at Port Arthur, and observing for themselves its great natural advantages and what has been accomplished there since the construction of the Canadian Pacific Railway. They will find men of all nationalities investing money there; they will find it a splendid business centre, and a delightful summer resort.

Your obedient servant,

W. R.

PART I.

TOPOGRAPHICAL AND HISTORICAL NOTES.

NIPIGON LAKE AND RIVER

—TO—

THUNDER BAY.

UNRIVALLED SCENERY AND CHARMING CLIMATE

—AS OTHERS SEE US—

A VIVID DESCRIPTION OF A FAMOUS TROUT STREAM, BY EDITOR
OF *FOREST AND STREAM*.

A GLIMPSE OF RED ROCK AND THE NIPIGON RIVER FROM THE CANADIAN PACIFIC
RAILWAY. THE MANITOU OR SACRED ROCK. THE TERRIBLE FATE OF A
C. P. R. SURVEYING PARTY. INDIAN MISSIONS, AGENTS AND
MISSIONARIES. GUIDES, OUTFITS AND MAPS.

PORT ARTHUR

1800 TO 1887.

THE ADVENT OF THE C. P. R. PROGRESS OF PORT ARTHUR. ITS INDUSTRIES, PUBLIC
BUILDINGS, HOTELS, SCHOOLS AND CHURCHES, MILLS, BREAKWATER,
DOCKS, RAILWAYS, WATER-WORKS, FALLS AND POWERS.

PROSPERITY OF FORT WILLIAM ^{AND} ITS SURROUNDINGS.

SPLENDID AGRICULTURAL LANDS ON THE SLATE AND
WHITE FISH RIVERS.

MISCELLANEOUS.

OUR MINES, MINERALS AND PIONEERS.

OPINIONS OF THE PRESS. ENGINEERS' AND SURVEYORS' REPORTS
ON RAILWAYS AND TOWNSHIPS.

OFFICIAL REPORTS ON DEVELOPMENT

BY A. L. RUSSELL, DOMINION AND PROVINCIAL LAND SURVEYOR.

PART I.

ALGOMA WEST.

NIPIGON TO THUNDER BAY.

NIPIGON HARBOR AS THE LAKE SUPERIOR TERMINUS OF THE
CANADIAN PACIFIC RAILWAY—FERTILE LANDS, MAGNIFICENT
SCENERY AND VAST WEALTH OF MINERALS AND TIMBER.

Lake Nipigon, situated between the parallels of the 49th and 51st degrees of latitude and the 88th and 89th degrees of longitude, measures nearly 70 miles in length by about 39 miles in width, and in consequence of its numerous and deeply indented bays, has a coast line of nearly 600 miles. This magnificent sheet of clear, deep water, with its innumerable islands, great and small, was, until the commencement of exploratory surveys in connection with the Canadian Pacific railway, comparatively unknown to the outer world. During the years 1872 and 1873 extensive explorations were being carried out upon all sides of this inland sea by the Government engineers, under the direction of Mr. W. Murdoch, then chief engineer of the Lake Superior divisions of the Canadian Pacific railway. It was one of those parties, accompanied by Chief Murdoch, that in the winter of 1871 and 1872, made a bee line from Fort Garry to Nipigon House, a distance of about 410 miles, making a topographical survey of this hitherto unbroken wilderness, on their journey.

At this period in the undeveloped scheme of our great national transcontinental railway, the Government had seriously entertained the idea of making Red Rock, near the mouth of the

Nipigon River, the Lake Superior terminus of the road. This scheme had many warm advocates among the engineers, who were of course thoroughly conversant with the great natural advantages of the harbor. A change of Government, however, occurred about this period, when the advocates of the amphibious route came into power, and of course abandoned the north shore for all time, as they supposed. Anyhow, another selection was made.

About this time many important improvements were made in the appearance of the Red Rock post by the officer in charge, Mr. Robert Crawford, now of Indian Head. Docks, houses, stores and commodious officers' quarters were rapidly constructed, and in an amazingly short time the once desolate and weird looking shanties were transformed into an orderly and prosperous station. All this was done in anticipation of the promised terminus. The terminus, however, did not come. The great company of merchant adventurers were disappointed and disgusted with the expenditure, and then and there resolved that as soon as they could discover a post belonging to their ancient corporation where wood or building material did not exist, to that place they should send the offending agent, though said place be the north pole itself. The opportunity soon occurred. A vacancy was made in far away Ungava, and to that place, the nearest post to the north pole, Mr. Crawford was exiled. "Lumber," writes Mr. Crawford, "is entirely out of the question here. I used to think \$55 and \$60 a thousand dear at Red Rock, but here everything is constructed of ice," and unfortunately for Mr. Crawford, ice palaces had not then become fashionable.

The land upon the north-west and west side of Lake Nipigon is good, and the soils and grasses of the south shore will compare favorably with any other section of Ontario. This soil, like that of the company's land at *Red Rock*, now called Nipigon, is a rich clay loam, with sandy clay subsoil, and capable of a high degree of cultivation. The soil of the east side is not quite so fertile or extensive, but has in places much better timber, and but for the ravages of forest fires could boast of extensive tracts of fair pine land.

The country along the shores of South and East Bay and

along the route of the proposed colonization road is, however, fringed with very fine belts of pine of sound quality, and away to the north-eastwards are also to be seen unknown quantities of white and some red pine. This, too, is the most interesting section from a geological point of view. The rock formation here is principally Huronian, with granite prevailing southward. Many important discoveries have been made of the precious metals here, and several well defined contact and other veins rich in pyrites, both iron and copper, grey and yellow, have been recently located in this immediate section. Bands of chloritic slate have also been found, carrying \$5 to \$20 in gold. Provisions and supplies of every kind, however, cost heavily, flour frequently selling at the rate of \$20 per barrel, and other things in the same ratio. This, it is alleged, is owing to the great expense of transport over the numerous portages on the Nipigon river.

The Hudson Bay Company have now but one regular post on this lake, that of Nipigon House, and, although situated north of the 51st parallel of latitude, they manage to grow all kinds of grain, vegetables, fruit and flowers. Everything requisite in the way of crops flourishes abundantly. I am assured, by the courteous officer in charge, Mr. Henrie De La Ronde, a titled representative of a distinguished French family, of the ancient regime. This post is situated on the west side.

The scenery of the east and north-west side of Lake Nipigon is very fine, and the views in the immediate vicinity of Nipigon House stand unrivalled. Conspicuous among these are the Inner and Outer Barn, and the Roche qui Frappe, famous for its peculiar echoes.

The barns are walls of grayish-black trap, rising from the bottom of the deep blue lake to a perpendicular height of 750 feet above its surface, with tons of overhanging masses of loose rock, apparently ready to topple over, upon the least provocation.

NIPIGON RIVER

Is famous for its speckled trout and charming scenery, and is the only outlet from Lake Nipigon. It is also distinguished as being the largest and clearest body of water flowing into Lake Superior. At Red Rock, some two miles from the mouth of the river, stands

the Hudson Bay Company's post, beautifully situated on the western slope of a well cultivated clearance of about 100 acres. Within view from the company's dock here, and about one-eighth of a mile up stream, occurs one of the swiftest currents on the river, where the water sweeps downwards from Lake Helen with a velocity of over six knots per hour. This is the first rapid on the Nipigon and is crossed by the Canadian Pacific railway, over an iron bridge, at an elevation of 97 feet above the water level. This bridge, with its trestle approaches, measures 1,000 feet in length, and is decidedly graceful in its proportion and general appearance. Although the post office and company's stores here are called *Red Rock*, the railroad station located just west of the bridge is named Nipigon. This causes frequent mistakes and one or other name should be applied to both post office and station.

The principal water stretches into which the river expands, are as follows :—Lakes Helen, Jessie, Emma, Hannah, Maria and Mirror, the principal rapids, falls and portages being Alexander, Long Portage, Narrows, Island Portage, Split Rock, Pine and Little Flat Rock, from whence the Hudson Bay Company's canoe route branches west, reaching South Bay on Lake Nipigon by a shorter and easier route than that of the river, where the rapids increase in number and velocity to the Grand Falls, or head waters of the Nipigon. The Grand Falls have an elevation of 855 feet above sea level. This magnificent fall is one of the greatest attractions to tourists, and although less majestic than Niagara, owing to the romantic wildness of the surrounding scenery and peculiar fore and back ground, most travellers give it preference to any other in this land of picturesque falls.

The total length of Nipigon river is 43 miles. It has an average width of 285 feet, but in places opens out to two and a half miles. The number of falls and chutes in this distance is fifteen. The fish of this stream is the true brook trout, "but runs," says the Editor of *Forest and Stream*, "to a size without a parallel anywhere." Lake Nipigon is also teeming with fish of every variety, including monster speckled trout, sometimes exceeding fourteen pounds, and in one or two well known cases weighing over twenty pounds.

THE HARBOR.

Nipigon harbor is one of the safest on Lake Superior. It is formed by two long peninsulas that stretch out on either side and converge towards the entrance, where three large islands of great altitude effectually check the force of wind and sea from the south, while on the east and west side it is securely sheltered by high spurs of trap mountains. This harbor is perfectly landlocked and in many essential points resembles the basin of Bedford, N. S. The large islands referred to in the bay are the Verte and La Grange, both of the old red or brown sandstone formation. The Verte Isle stone is now extensively known to American builders, and large quantities are constantly being quarried here. Nearly every kind of building stone is found in this section, including a fine class of marble or serpentine.

THE SACRED MANITOU ROCK.

At the mouth of the river also occurs the famous red rock, sacred to the Manitou, and carved with hieroglyphics, the marks of early Indian visits. Of this rock from time immemorial the Indian Calumet has been made, and far away upon the Saskatchewan and Mississippi rivers, and in Mexico, in the mounds or tumuli of extinct races, may be found samples of this peculiar stone.

A BEAUTIFUL VIEW.

Leaving Nipigon harbor, with its bold headlands and walls of rock rising to a perpendicular height of 560 feet from the water, the tourist can revisit one of the islands formerly referred to as affording protection to the naval anchorage. The first of these is called La Grange, or the Barn. It is of considerable altitude, the aneroid barometer indicating an elevation of some 1,420 feet.

The prospect from the summit is fine indeed, commanding as it does a bird's eye view of the surrounding bay and islands. From this point the spectator also overlooks many miles of the mainland; and as every feature of the landscape east to the distant horizon rushes fresh on the memory, a brief description of it, combining the useful with the beautiful, may prove of interest.

La Grange and its sister Isle Verte are of the oldest geological formation—the old red sandstone—and were evidently intended in the economy of nature to serve as a lookout point or break-water. This, at least, was the opinion of Duncan McEachren who, by the way, was among the first to turn the attention of practical men to the excellence of its building stone. Already large shipments of this stone has been made to Chicago from the Verte quarries. The sandstone is unsurpassed, and its success as a marketable material is long acknowledged.

TERRIBLE FATE OF AN EXPLORING PARTY.

Glancing past the Twin Sisters and frowning heights of Isle Verte, a view is obtained of the Mazoukamaw and Don river section. This district is rich in mineral deposits, and many fine veins were located there in 1873. The country, however, is much burned and barren looking. It was in this valley that Mr. Johnston's survey party perished by fire in 1872 while on exploratory work. Seven of the party were returning from a *cache* near the mouth of the Don, and neglected to extinguish a fire at which they had cooked breakfast. A wind sprang up, and they were overtaken by the flames before reaching shelter and perished in the fire. That night was an anxious one in camp. Wails and wail sounds were distinctly heard from the burning bush. Morning dawned gloomy and wet. The forest fires were nearly extinguished, and while the deep gorges were reverberating with peals of thunder, and vivid lightning flashes illuminated the desolate scene, diligent search was made for the missing men, whose remains were subsequently found.

The Don has its source among the elevated trap and granite hills to the east, called Scarboro'. These hills, or rather mountains, are bare, rugged and precipitous. The scenery is, however, admirably diversified, and to the geologist and lover of nature is especially attractive.

A PROMISING MINING PROPERTY.

Before taking a final leave of Nipigon Bay and its superb panorama, we will describe one of the many promising mining

properties in this district. It is a patented location surveyed in 1881 and numbered 30T. This property consists of a series of deposits of lenticular shaped masses of zinc blende, of great purity and unknown depth. These deposits, in places measuring eighty feet long by twenty feet wide, occur in a bluff of horn blende trap directly above a watercourse of great power. The water power referred to is the White Sand River, which like River Pays Plat, has its source in Wintering Lake, on the water-shed, 25 miles north of the zinc deposit. Passing through the narrow channel of Pays Plat the Huronian series appear to terminate, and, as we approach the shores for closer examination, the Laurentian is seen to stand out in bold relief.

THE TOWNSHIP OF NIPIGON.

This township is situated on the north-eastern extremity of Nipigon Bay, and enjoys from its many natural advantages an extensive and growing popularity. This prominence is due in a great measure to the discovery of rich lodes of copper, iron and galena made a few years ago. It is remarkable for its numerous fertile slopes and plateaus, especially those near the mouth of the river, and also for its heavy timber, fisheries, delightful climate and scenery. The township is traversed obliquely from south-west to north-east by the line of the Canadian Pacific Railway.

THE NECESSITY OF A COLONIZATION ROAD.

By far the best lands in this district are situated between the north boundary of the township and the southern extremity of Lake Nipigon, as already described, and the hardy pioneers of this settlement assert that the early construction of a good wagon road connecting Lakes Helen and Nipigon is of vital importance to their personal welfare, and the development of this interesting district generally.

This township was surveyed in 1873, and, during this period only one small grant has been made for local improvements. This sum, it is claimed, was squandered upon the wandering Indians, who no sooner had a road built to their new Mission than they immediately availed themselves of the opportunity of

clearing off, bag and baggage, including log houses, for pastures new, some seven miles northward. The length of the proposed Colonization road would not exceed twenty-five miles of easy gradient, with few crossings and light work throughout its entire length.

THE INDIANS AND AGRICULTURE.

The aboriginal inhabitants of the district so far described, number about six hundred. Of these some 350 perambulate the shores of Lake Nipigon and the other interior lakes during summer with all the freedom and easy grace of the Bedouin. They are not all Pagans, but many of them, although not strictly adhering to ancient usage, may be said to be decidedly free-thinkers.

Farming, or the art of cultivating their fertile valleys and plateaus, upon Lake Nipigon is absolutely unknown excepting at Nipigon House, where the Hudson Bay Company have had lands under cultivation for upwards of one hundred years, and at South Bay where the Rev. Mr. Rennison has also a large tract carefully cultivated by Indian labor. Agricultural pursuits should receive more Government encouragement in this quarter, as the time is not far distant when the Indians of this district must dig or die.

GREAT CHANGE EFFECTED BY MISSIONARIES.

It is now many years ago since the venerable Jesuit, Pere Du Ranquette, preached his first sermon to the natives of the then unbroken wilderness. This kind and zealous missionary, after years of unceasing and arduous toil, effected a wonderful reformation in the lives and habits of a people by whom he was esteemed more than feared. Too often this gentle Father was, I suspect, imposed upon. His successor, however, the Rev. Father Hebert, S. J., was not quite so indulgent, a fact of which the flock soon became unpleasantly aware. About 500 of these Indians claimed to belong to the Roman Catholic faith, and one of the first steps taken by their new missionary, after his arrival in 1876, was to assemble his scattered band and commence the erection of a mission station. Previous to this assembly Father

Hebert had, of course, paid them a flying visit, but it was not until the work of building had commenced that they fully realized the changed state of affairs. They had to work! Their church, school and small village is situated in a pretty bay, on east shore of Lake Helen, where a few families reside permanently, while many others have signified their intention of settling there also, providing they can obtain a deed of their lots.

The English church mission, in charge of Rev. Mr. Rennison, is upon the big lake, as already stated. A church, school and several substantial log houses have been erected. This establishment is a branch of the Shingwauk Institute near the Sault, and many of the practical lessons imparted to Indians at that school are carried out here. Supplies for this station are packed over the numerous portages on the river, and this, I am assured, is the greatest drawback to its progress.

INDIAN AGENTS.

The Indian agent for the North Shore and Nipigon district is Mr. J. P. Donnelly, one of Algoma's pioneers; his district extends north-eastwards from the Kaministiquia River to Michipicoten, a distance of nearly 300 miles, and northwards or "inland" from Pic River to Long Lake, and westward to the northern extremity of Lake Nipigon; thence south and westward along the Gull River valley to Dog Lake, near the sources of the Kaministiquia River or place of beginning our description. Many important changes have been made in the condition of the Indians of this agency of late, and owing to the united efforts of agents, Messrs. McIntyre and Donnelly, a taste for agricultural pursuits is being fostered among their respective scattered bands. Mr. McIntyre's agency extends westward from the "Kam" to the international boundary beyond the height of land, and includes the numerous bands over which, as a chief officer of the Hudson Bay Company, he so long exercised a powerful influence.

THE RAILWAY HISTORY.

Although many interesting mining and other properties in this section are located immediately on the line of the Canadian Pacific Railway, it is almost impossible, without extending this

report to an inconvenient length, to refer to them however briefly in touching upon the early exploration, location and construction of the Nipigon and Port Arthur railway, as it was once named. This particular branch of the main line was first explored in the winter of 1879 and 1880, when the idea of testing the feasibility of a shore line was advocated by our worthy member, Mr. S. J. Dawson. Its general course is as follows :—

The line crosses the Nipigon at the first rapids, where the river is narrowest, and the banks, composed of boulder drift, are over 70 feet high. From this crossing the line sweeps along the western shores of the river and harbor to Camp Roland, when it curves around a cliff of red rock, capped with columnar trap, rising hundreds of feet above the road bed; thence it runs westward through a fertile and well timbered valley, and crosses the Black Sturgeon River in the township of Dawson, which is now re-baptised "Lyon." From this crossing the line inclines slightly towards Black Bay, enters the township of Dorion and runs on through MacTavish, attaining the summit near Loon Lake at an elevation of 1,080 feet. From this point it follows the valley of the north-east branch of the McKenzie River to a point near the Forks, and thence converging upon the shores of Thunder Bay, it reaches Port Arthur by an easy grade. The work of exploration and survey of this branch occupied seventy-five days, and some 67 or 68 miles were measured and levelled up for grade.

Many apparently insurmountable obstacles, thanks to the careful reconnaissances and abundant resources of the engineer in charge, were passed over in detail and without delay, and what was long considered to be the worst section of the road was demonstrated to be by far the most practicable of the many lines approaching Nipigon from any direction. The winter of 1879 and 1880 was an exceptionally severe one and among the many delays and difficulties which the engineer in charge, Mr. R. McLennan, experienced, was that of having his entire party and outfit solidly frozen in while attempting to navigate Black Bay in the venerable tug *Neff*, with the thermometer at 40° below zero. It is strange how memory lingers!

In conclusion, I must not omit to mention that Nipigon, (I refer to that particular section of it in the immediate vicinity of

the Hudson's Bay Post and the Canadian Pacific Railway crossing on the Nipigon River), is no longer the deserted village it appeared to be before the advent of the railway. The Hudson's Bay Company's stores and business has been much enlarged, and the courteous and zealous agent in charge, Mr. Flannigan, is prepared to furnish the tourist and prospector with every essential article of outfit. Settlement has already followed the construction of this line, and some eight or ten new families are located there permanently.

APPROACHES BY LAND AND WATER.

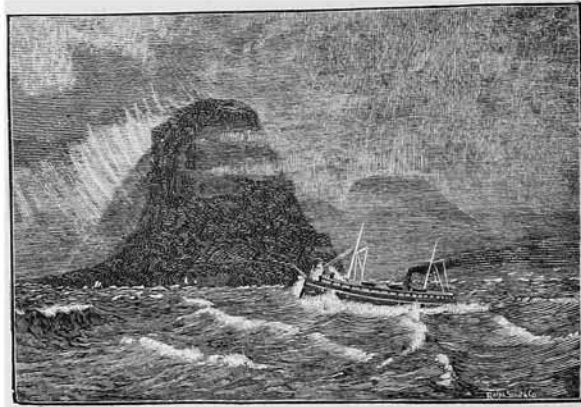
The Canadian Pacific railway touches the margin of Nipigon Bay at Ross Port, opposite the charming archipelago of Pays Plat, and going westward, follows closely upon the margin of the bay for some 40 miles, where it inclines inland for about $2\frac{1}{2}$ miles for the purpose of obtaining a suitable crossing on the Nipigon River. Up to this point, a most varied and extensive view of the bay is obtained from the car windows, there being but just sufficient intervals of green trees to complete the foreground of the ever-changing scene, and running as it were through the entire gamut of sea and landscape.

NIPIGON CROSSING.

The view from the elevated structure is simply enchanting. Over 100 feet below, the deep, dark waters are rushing madly towards the quiet bay to the south, while in full view, up stream, among the richly foliaged hills, lies Lake Helen, which in reality is but an opening of the river. Between this crossing and the bay, and sloping gently to the latter, is a magnificent spot. Glancing through an opening in the trees, we catch sight of an ancient post of the Hudson's Bay Company called "Red Rock," with its quaint white store and outbuildings nestling serenely in one of the loveliest of dales. It is evening as our express train passes this historic spot, and as the last rays of the setting sun are illuminating the attic windows of the "Fort," ere it sinks to rest behind the pine-clad hills, many pleasant reminiscences of Swiss scenes are vividly recalled to mind.

BY SAIL OR STEAMBOAT.

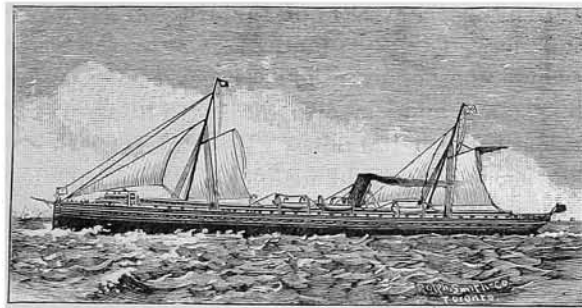
But of all the picturesque routes approaching Nipigon and Thunder Bays, *via* the north shore of Lake Superior, none surpass that taken by the "Marks North Shore Line," calling at every point of interest between Pic, Nipigon, Kaministiquia, (and if



NIPIGON RIVER.

specially chartered), Pigeon River and Isle Royale. The boats of this line, owing to their lighter draught, usually follow the inner channels and thereby afford the rare treat of travelling amid scenes like those of which Mr. Halleck has so vividly depicted in *Forest and Stream*, after "doing" the Nipigon, St. Ignace and Silver Islet Channels:—"Islands succeed islands in an unbroken continuity hour after hour as we glide; islands of every conceivable size and shape, more numerous than the Thousand Islands of the St. Lawrence many times multiplied; islands barren, wooded, sandy, rocky, columnar, gracefully rounded, precipitous and gently sloping, wind-swept and storm-polished, large, diminutive, and infinitesimal; reefs widely spreading and submarine monoliths whose peaks barely project above the surface. There is a breadth and sweep and never-ending change in the panorama, which is all-absorbing to a mind intent upon the picture. For 150 miles we steam through this island scenery! In the calm repose of summer's morning, when the waves are stilled and the

face of the lake gleams like polished glass, the shadows fall heavily from the indented shores, and every rock and tree is sharply outlined and reproduced inverted in the mirror. Then we seem to float on airy nothing, looking upwards into cloudland and downwards into cloudland, into depths above and below that seem illimitable." Before the construction of the Canadian Pacific Railway along the margin of this great fresh water sea, more than one line of large steamers made irregular trips through the main channels above enumerated, landing freight, mails and tourists at the various isolated trading posts. Since the construction of the railway a marvellous change has been effected in the aspect of the north shore generally, and what was formerly but the lonely home of some hardy fisherman, trader or trapper, is to-day a prosperous village or a growing city. Again there is the direct route, traversed only by first-class boats, like the magnificent Clyde-built steel steamers of the Canadian Pacific Railway. This line, like those of the well-known Sarnia and Collingwood upper cabin liners, fearlessly plough their course direct from the St. Mary's ship canal for Port Arthur, and as they frequently run for upwards of 140 miles without sighting land, none but the most prominent headlands become at all conspicuous.



CANADIAN PACIFIC RAILWAY STEAMSHIP.

MAIL STEAMERS.

Foremost on the long list of strictly first-class mail and passenger boats on this route comes the *Athabasca* and *Alberta*, of the Canadian Pacific Railway Company, fitted up with the

modern improvements peculiar to the best class of ocean-going mail boats, including electric lights, and commanded by the veteran upper lake sailors, Captains Anderson and Foote. Next in order stands the two superb models, *Cumpana* and *United Empire*, both well equipped, and officered by sailors of tried experience; while in the same class may be enumerated the staunch propellers *Ontario* and *Owen Sound*, all active rivals for passenger and general transport business with the above mentioned fleet. Besides the steamers referred to, there are numerous other fine vessels making regular trips to Port Arthur and Duluth, at the head of Lake Superior.

RIVERS.

Among the principal streams flowing into Lake Superior, the Kaministiquia, as a navigable river, ranks first, and the Nipigon next. Besides these noted streams there are also the Black Sturgeon, flowing into Black Bay; the Current, McKenzie and Carp flowing into Thunder Bay,—all of which are teeming with fish, and noted in addition for their scenery, including numerous chutes and falls, as the "*Shuniah*," "Current," (both on Current River) "McKenzie" and "Carp," only a few miles from Port Arthur.

These streams have their origin in the Height of Land or watershed dividing the waters of the Hudson's Bay from those of Lake Superior. This, the grand reservoir of the St. Lawrence, with a circumference of over 500 leagues, comprises an area of about 32,000 square miles, its greatest length being over 350 miles, and its greatest breadth 160 miles. Its greatest depth is supposed to be 1,200 feet, which would make its bottom 603 feet below, while its surface is 597, or practically 600 feet, above the level of the sea.

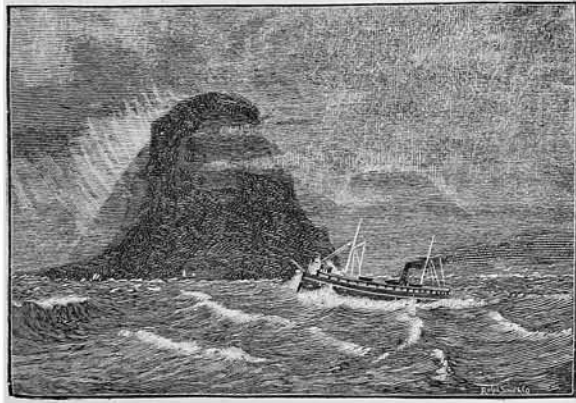
TEMPERATURE.

The frosts of winter, apparently, are not sufficiently long to cool, nor the heats of summer potent enough to warm this great body of water (4,000 cubic miles) to the temperature of the surrounding surface. In the middle of the lake, in the month of July, the temperature of the water at the surface is about 39° Fahr., and that above the lake averages 51°, while in the interior

of the country the thermometer often ranges from 70° to 85° , and sometimes 90° . The climate of the north shore is most favourable, and careful observations taken at Port Arthur, "Red Rock" (Nipigon) and Pic River, give the following average results, from standard, self-registering instruments: "Mean temp., July, $62^{\circ} 88'$; August, $63^{\circ} 54'$; September, $56^{\circ} 02'$." "Thus," reports a reliable authority (Mr. E. B. Borron, then M.P.P. for Algoma), "although about five degrees of latitude north of Toronto, the temperature of the north shore of Lake Superior is nearly the same as at Toronto during July and August, and a few degrees warmer during September and October, taking the average of 29 years."

THUNDER BAY.

After traversing this vast expanse of inland sea, or Kitchi-
gome ("Big-Sea-Water,"—the Otchipway name for Lake Superior), we at length come to the great point of interest on this lake of magnificent distances, viz.:—Thunder Bay, the most westerly of the great inlets. At its entrance, Thunder Cape, the extremity



VIEW OF THUNDER CAPE.

of a long, rocky peninsula, rising abruptly to a height of 1,350 feet, is the eastern janitor of what the Marquis of Lorne has named the "Silver Gate of Lake Ontario." To the west, some nineteen miles across the water, the dark mass of Mount McKay looms up, while Pie Island lies in the mouth of the bay like a huge

monitor at anchor. These three gigantic upheavals dominate the scene. They sit in massive dignity, superior to all surrounding objects, like "the three Emperors," each with a cloudy crown about his brow. "As we entered this famous bay," wrote a distinguished American artist, "upon a gloomy and tempestuous morning, Thunder Cape stood out against a fierce red sky. Ragged clouds out of the west trailed across his lofty forehead. A fit abode it seemed for the storm-spirit, this cloud canopied bay, with its three grim sentinels wrapped in creeping mists." Thunder Cape, from the south-west, has the outlines of a *couchant* lion, the highest elevation forming the head and breast, while a spur of lesser height forms the flank. But viewed in profile from the north or south, the entire ridge has the appearance of a sleeping giant. About this colossal figure hangs many a fascinating Indian legend, a correct translation of which it is almost impossible to procure from the Indians. It is agreed, however, that the giant who lies there, with his face to the sky, like a marble knight upon his tomb, is one *Nanna-Bijou*, a sort of Ojibway Hercules, who performed, before his lamented demise, many wonderful feats of prowess. As to how he came to make this cape his last resting place, the authorities differ, as well as how the bay and cape obtained their significant name. (See translation of legend at end of book). However that may be, the giant who there sleeps the sleep which the sun rising over him each morning will never disturb, will ever remain to the citizens of the city which is growing up on the western shore of Thunder Bay, a memorial of the race who once held undisputed sway over "Algoma," or the country of the Algonkins.



PORT ARTHUR.

1800 TO 1887.

The early history of Port Arthur, like that of most of our western settlements, is enveloped in the twilight of fable, wherein it is not always possible to separate fact from fiction. That the romantic element for the compilation of a most enthralling chapter,—teeming with fascinating aboriginal legends, could be obtained in this picturesque spot—no person possessing even a limited experience upon the north shore of Lake Superior, will deny. For here, above all frontier places, is a veritable mine of legendary Indian lore. Believing, however, that my matter-of-fact reader's taste lies not that way, I leave to some literary excavator possessing more power of vivid description to turn it to account, when the lode shall have been thoroughly explored, and in the meantime confine this work, as near as possible, to a veracious exposition of dry facts and details.

As far back as 1800, what is now the site of Port Arthur, held a place in authentic records as a terminal point from which the Hudson's Bay Company imported their stores from the east, and usually shipped their valuable furs from the west. It was not, however, until 65 years had elapsed that any degree of attention appears to have been bestowed upon it. This was during the eventful years of 1865 and 1866. During these years the claims of the Hudson's Bay Company to the entire territory north and west of the great lakes, was brought forward, discussed, and finally settled by their giving up, for a consideration, certain claims to the north-west, which they held for upwards of two centuries as their exclusive hunting and trading field.

Confederation occurred in 1867, when one of the first undertakings of the government of the New Dominion was the con-

struction of the highway from the shores of Lake Superior to Manitoba, utilising the Rainy and Winnipeg Rivers, and Lake of the Woods. Mr. S. J. Dawson, C.E., who had previously explored this region westward to the Saskatchewan, was entrusted with this undertaking, and the route surveyed by him has become historic, as the "Dawson Road." After a period of some eight years, we again find Mr. Dawson's headquarters at this place, when the work of construction was practically commenced. At this period Port Arthur was known as the "Station," and boasted of one store or "Fur-trading Post," established by Messrs. Marks Bros., of Bruce Mines. This pioneer enterprise was managed by Mr. James Dickson, our present Inspector of Fisheries.

THE RED RIVER EXPEDITION.

1870.

This year proved a most eventful one in the history of Algoma and the North-west in general, and Port Arthur in particular. The first Riel rebellion occurred in the early part of the year, when an expeditionary force consisting of two battalions of Imperial and Canadian troops, with strong detachments of hardy *voyageurs*, were despatched to the scene of the disturbance, over the recently surveyed Dawson Route. This force, under Colonel Garnet Wolseley, landed here in June, and after traversing over 600 miles of what was then an unbroken wilderness of forest and water, where no supplies were obtainable, reached their destination without accident. Arrived at Fort Garry, now the populous and wealthy city of Winnipeg, perfect tranquility was restored and their Commander-in-Chief was in a position to address the expedition in flattering terms. The return of this force by the same route was attended with the same good fortune that had rendered their advance so successful.

Early in 1872, the Ontario Government appears to have commenced the survey of the Town of "Prince Arthur's Landing," as the original station was called, by the officer in command of the Red River Expedition, in honour of the popular young soldier, Prince Arthur, then serving in Canada.

Upon the completion of this survey the lots were sold openly, many of them falling into the hands of non-residents. Fortunately the bulk of them became the property of men who have ever since closely identified themselves with the town, and laboured with unflagging energy for its welfare and prosperity. The construction of the first dock occurred in this year, as also the important event of forming the little settlement into a municipality, while the surrounding country, chiefly composed of prospectors and miners, was placed under a regular system of government. During the following ten years, a long series of exploratory and location surveys in connection with the proposed Canadian Pacific Railway were being carried on to the north and west of us, and, owing to the uncertainty of the final location of the lake terminus, a strong spirit of rivalry sprang up between the various claimants for the envied distinction of the magic name "Golden Gateway" of the North-west. Location and construction under the government direction, always extremely tedious, became positively slothful about this period, and for a time in our experience, *dormant* was the only word to clearly express the aspect of affairs here.

SKETCH OF PORT ARTHUR.

1883 TO 1887—ITS VIGOROUS AWAKENING—THE ADVENT OF THE C. P. SYNDICATE—PUBLIC BUILDINGS, ENTERPRISING MERCHANTS — PRESENT INSTITUTIONS, FUTURE PROSPECTS — BOUNDLESS MINERAL, TIMBER AND AGRICULTURAL WEALTH OF THE SURROUNDING DISTRICT—UNRIVALLED CLIMATE AND SCENERY—OUR COLONIZATION ROADS, RAILWAYS AND TOWNSHIPS — SUMMER HOTEL ACCOMMODATION — POPULATION, GRAIN, FREIGHT AND OTHER EXPORTS AND IMPORTS.

The long sleep of years appears to have at last ended, and those who saw Port Arthur before the completion of our grand transcontinental railway, and who re-visit it to-day, cannot fail being struck, with the vigorous nature of its first awakening. The substantial and practical causes underlying the rapid growth of this port, are to be seen in the spirit and enterprising character of its citizens,—the ruling traits of its merchants and business men

being thrift and prudence, and a disposition to extend business enterprises by regular and legitimate methods, thus establishing it on a firm basis, to advance equally with the development of the country, and not ahead of it, as is the case with some western towns. Unlike the latter, Port Arthur is advancing hand in hand with the vast section of country of which it is—and must ever remain—the capital, and the future of both involves, at no distant day, a commercial and political supremacy, whose influence must be felt throughout the entire Dominion.

Such being the case, we offer to the capitalists of the world a rare opportunity for safely investing their wealth in a variety of ways that cannot fail to be remunerative; while to the miner, mechanic, and a limited number of unskilled workmen, we can offer work and good wages all the year round.

The trade interests here are large; the official report of 1883 giving 858 vessels inwards of 503,000 tons, carrying 293,000 tons of freight, and crews numbering 20,000. The exports of the same year is \$47,000, and the imports \$176,000. Imports of coal handled in the two following seasons—1884 and 1885—being 364,000 tons, while in 1884 the value of goods imported amounted to \$1,300,000. The grain exported this season amounted to 1,500,000 bushels, and in 1885 about 2,500,000 bushels. The grain shipped from last season's crop, 1886, is 3,000,000 bushels. The duties for the past two seasons amounted to \$369,502.99.

POPULATION, BANKS, FIRE AND VOLUNTEER COMPANIES, BOARD OF TRADE, NEWSPAPERS, ETC.

At present we have a resident population of over 4,500, with first-class public, separate and private schools, numerous well stocked stores, substantial government offices, court house, town hall and law courts, customs, board of trade, registry, Post and Inland Revenue offices; two old established banks, three newspapers and mining journals, including the *Daily* and *Weekly Sentinel* and the *Weekly Herald*. This is the headquarters for two divisions of the Canadian Pacific Railway, with its main line passing through the town, and connecting by spur lines with the steamboat and grain elevator piers. This is also

the headquarters of the grain inspector, Mr. Gibbs. The town also boasts of a first-class foundry, an efficient fire brigade and police force, a volunteer company of infantry, and last but not least, a complete brass band.

MILITARY ORGANIZATION.

The Port Arthur Rifle Company was organized in March, 1885, about the time of the beginning of the North West Rebellion. S. W. Ray was appointed Captain (provisionally); Thomas H. Elliott, 1st Lieutenant, M. S.; and W. F. Davidson, 2nd Lieutenant (provisionally).

The non-commissioned officers were appointed shortly after, passing a written examination, the successful ones (taking rank according to merit) were J. G. Davidson, color sergeant; R. Ritchie, sergeant; John Woodside, sergeant; George Hodder, corporal; J. E. Williams, corporal; W. J. Awty, corporal, and W. H. Arnald, lance-corporal.

The company has been inspected twice—once by Lieut.-Col. Denison, D. A. G., and again by Lieut.-Col. Otter, D. A. G., both times being well spoken of by the inspecting officer.

There has been several changes lately, Capt. S. W. Ray being promoted to Major, and 1st Lieutenant Thomas H. Elliott to Captain.

There has also been several changes on the non-commissioned officers' roll, being caused by parties leaving town.

By the efforts of Major Ray, instead of having a single company in this large district, we have a battallion called "The 96th Battalion Algoma Rifles," having five companies at present: No. 1, Port Arthur, one at Fort William, one at Rat Portage, one at Gore Bay, and one at Bruce Mines, having headquarters at Port Arthur; all of which are in a flourishing condition.

OUR HARBOUR AND BREAKWATER.

Situated on the west side of Thunder Bay at the head of Canadian navigation on Lake Superior, is being made the finest harbour both for refuge and shipping on the inland seas of this continent. Already the Government of Canada have constructed

two thousand feet of the central portion of the breakwater at a cost of \$150,000, and when completed will cost some \$400,000. This work of extension will measure over a mile in length, forming a most secure harbour, the construction being such as to successfully resist ice shoves and seas of extraordinary violence. While inside this substantial barrier, we have over a mile of harbour front and 2,500 yards of docks, where the largest vessels are quite snug during the greatest gales. At the southern extremity of the breakwater stands the old lighthouse, which formerly decorated the eastern end of the Government dock.

OTHER PUBLIC WORKS, SCHOOLS, HOSPITAL, CONVENT AND
NUMEROUS CHURCHES.

Conspicuous among the ever increasing enterprises of a public and private character recently developed within the corporation's limits proper, may be mentioned the completion of the handsome and commodious public school in Waverly Park; the completion of St. Paul's and St. John's Protestant churches, and St. Andrew's Roman Catholic church, convent and General Hospital. Also a Baptist chapel, which latter, with the old Methodist church, makes five places of worship. Commodious and comfortable hotels as the Northern, Commercial, Continental, Pacific, Windsor, Belmont, Western and Tracy, have also been opened up, while arrangements are now being perfected for rebuilding the three favorite hotels, so recently destroyed by fire on Cumberland street, viz.: "The Bodega," "Brunswick," and "Ottawa." In addition to the above-mentioned well known establishments a complete block of general stores, law chambers, architects' and surveyors' offices, including a number of private buildings, were destroyed by the same blaze (February last); while but a short month previous the new and splendidly furnished Hotel Windsor shared the same fate. Besides the complete restoration of the above ruined block, in substantial stone and brickwork, in accordance with the new fire limit by-laws, our "Silver King," the veteran explorer and capitalist, Mr. Daunais, is preparing to build an embryo town of his own right in our midst. The Daunais Block will occupy the beautifully situated site and grounds on the

west side of Cumberland street, and immediately opposite the scene of February's great fire. Mr. Daunais has paid the owner, Mr. S. J. Dawson, M.P., the sum of \$10,000 for the entire estate. This block is to be constructed of the best local building material, including granite, red and brown sandstone, marble and brick, will consist of law chambers, first-class stores, public and private offices, opera and music hall, and possibly our long looked-for new post office. A novel feature in the arrangement of this structure will be the substitution of steam and electric light for heating and illuminating purposes, while in other respects the entire block will be rendered practically fire-proof. Messrs. Edwards and Webster are the architects. Mr. Daunais invests about \$75,000 in this enterprise. This, with the Bazaar Block across the street, completes this great business quarter of the town.

WATER POWER AND WATERWORKS.

The attention of enterprising capitalists has also been directed to the immense advantages of the water power of the falls of Current River, on the line of the Canadian Pacific railway east, and only two miles from town, near where it is supposed the Canadian Pacific railway shops are to be erected. The estimated horse-power to be readily obtained near lower falls is about three thousand, while higher up, and with a little extra expenditure, four thousand horse-power can be safely depended upon. Here truly is a field for new industries and good investments, as flouring, stamping, crushing, smelting, sawing and other mills, and with the native element and raw material right at our doors, manufactories must follow that will not only furnish our own vast agricultural country of the North-west and its future teeming millions of food producers with all the hardware and various agricultural implements of labor they require, but also send them westward *via* the Pacific railway to Vancouver City, and thence to India (our great agricultural rival), to Australia, China and Japan; as a natural sequence the manufacture of a more pretentious kind, such as reapers, mowers, self-binders, separators and fanning machines, besides all the appurtenances that go to make the home of a settler on the prairie.

PAPER MILLS.

Meantime this locality offers splendid advantages for manufacturing wood pulp, for paper-making, and for all the new uses in moulding articles, such as barrels, boxes, etc. This is a rapidly growing industry, and like that of canning fruit, fish, and beef, is peculiarly adapted to the above location. The poplar timber so abundant on the upper tracts of the Thunder Bay Colonization Railway, is the wood, preferred above all others, for the pulp mills; and with a water-power so ample and the wood so convenient, this particular industry, together with that of a flour mill—for the latter of which certain inducements are offered—this may be counted upon as being among the first and most profitable industries to be developed.

TAR AND TANNERIES.

The attention of manufacturers should also be directed to the subject of tar, for in this district, observes a practical Finlander, with our inexhaustible forests of pitch and other varieties of pine, no better opening exists for such an enterprise; while excellent bark, suitable for tanning, is also plentiful.

ELECTRIC LIGHTS AND WATERWORKS.

Besides the eligible mill, and other manufacturing sites above referred to, dams of course could be readily constructed between the lower and upper falls, viz., at an elevation of from 40 to 340 feet, or intermediate points, whereon a system of electric lights, or water works, or both, might be constructed. Properly lighted streets are an important feature in every well regulated town or city, for upon this depends in a great measure the comfort and convenience of its citizens, while the question of water supply, both for home consumption and fire purposes, is one that cannot longer be trifled with.

BUILDING MATERIALS.

There are also within a comparatively short distance of this now almost dormant natural powers, extensive quarries of

silicious, magnesian, and other marbles and limestones, suitable for building material; hydraulic cements and lime, also brown and red sandstone, slate and granite, both white and red, of excellent quality and inexhaustible quantities. We have also in the immediate vicinity, the requisite material for the successful manufacture of common and fire-brick, besides Kaolin, for finer work.

OUR UNCULTIVATED LANDS.

But perhaps what we want most and above all is an influx of some good practical farmers and dairymen, the land in this district being particularly adapted to mixed farming and grazing. At present, however, there is but one of our townships fully settled—that of Oliver. It contains some of the best farms imaginable, and although we have other townships now opened for settlement, composed of as good soil, it is a fact that the old settler of Oliver would not exchange his present property for an improved homestead on the free, open, and stoneless prairies of the North-West.

RICH ALLUVIAL SOILS—THICKLY WOODED AND PARTIALLY BURNT TRACTS.

But beyond the Township of Oliver, in the Township of Paipoonge South, and along the rich reaches and valleys of the Slate and Kaministiquia Rivers, most excellent tracts of open farming and grazing land exists, while to the north-westward across the Kaministiquia Bridge, and thence by the valley of the White Fish River, and onwards between rail and colonization wagon roads to the Beaver, Porcupine, Palisade and Silver Mountain, the land of the above-named valley is, for the most part, first-class. This is chiefly green timber of mixed growth.

THE MARKETS.

Here, too, are the markets for every available article of produce, including live stock, eggs, butter, cheese, roots, grain and vegetables, that are now being so extensively imported from eastern markets and the North-west. Here also, in the old and newly surveyed townships, are situated the principal mines of the

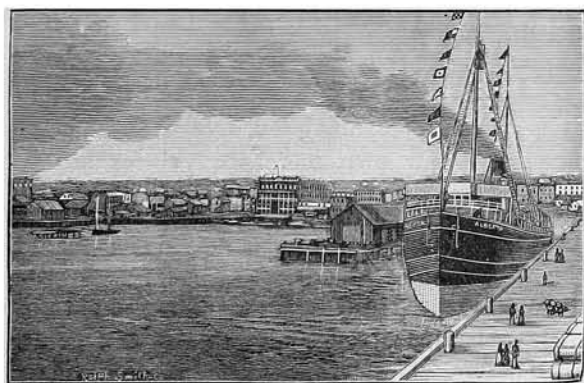
silver region, and where it seems highly probable that before many seasons elapse, a town of some importance will be found. Until a few short years ago this interesting tract was a perfect wilderness, and but for the recent discovery of silver and the consequent irresistible advent of the capitalist, miner, railroader and lumberman, its value would long have remained in oblivion, and its splendid forests of timber be left a prey to the destructive bush fires, the effects of which in many sections have of late become painfully manifested.

PORT ARTHUR'S EXHIBIT IN TORONTO—THE VEGETABLES PRO-
NOUNCED VERY GOOD.

The *Globe* says concerning the Port Arthur exhibit:—This is one of the finest displays exhibited. It does away with the impression, which so largely prevails, that the land immediately north of Lake Superior is only fit for the abode of beavers and beaver hunters. The spring wheat is remarkably fine, especially the Scotch wheat, which is shown in bag and sheaf. There are three samples of barley shown, viz.:—Black, Russian, and ordinary Canadian. The last named is a bright, plump, first-class grain. The Black or Russian barley is a very plump sample, and by the appearance of the grain in sheaf is exceedingly productive. The oats are good, but not up to the standard of our eastern grain in quantity. The display in vegetables in some instances surpasses eastern products. The field carrots are particularly fine. The garden carrots are fair. The three varieties of turnips are very fine, the white being exceedingly large but apparently unripe, which is accounted for from the fact that it is two weeks since they were raised. The parsnips are a fair sample. The cauliflower is a magnificent sample, and can hardly be excelled. The cabbages are immense, both in size and quality, and the pumpkins are also an enormous size. Mr. Wm. Margach, of Port Arthur, who is in charge of the exhibit, states that all the products are from the free grant townships in the vicinity of Port Arthur and Fort William, and are taken from the ordinary crops of the farmers, which are very abundant this season. The exhibit is sent by the Board of Trade of Port Arthur, and it speaks volumes for the fertility of soil and fine climate of that region.

The mineral exhibit is a fine and rich collection, and proves beyond all doubt the richness of the mineral resources of the Thunder Bay district. The specimens in the centre of the case are from Beaver Mountain mines and are exceedingly rich. This mine has not been worked to its fullest capacity, as the steam drills were not put in until June, and the stamping mills are hardly completed (1886). The company employ about 100 men. Rabbit Mountain specimens are equally rich. This mine has all the latest improvements in machinery and is now in full operation, crushing and smelting, as may be seen by a model of the first block of silver, which weighed 45 pounds. There are about 50 men employed at this mine. The Silver Mountain specimens are the handsomest and most attractive in the collection, and beyond doubt are the richest. This mine is not fully developed on account of the litigation arising from a misunderstanding among the owners. The specimens from Porcupine mine are rich and attractive, and compare very favorably with the others.

NAVIGATION AND LAND TRANSPORT.



“ALBERTA.”

The fleet of steamers, steam barges and sailing vessels has also increased very considerably of late, and with the addition of the powerful, first-class Canadian Pacific Railway Company's magnificent screw steamers constantly plying between this place and eastern ports, it will be seen that Port Arthur possesses

natural advantages that should secure for it the great claim of being second to no city on this continent as a commercial centre.

SHIPPING POINT.

Besides possessing a harbor that is one of the best and safest to be found on the great inland waters that form so prominent a feature in the geography of America, it must rise to a first position as a shipping port for the transfer of all classes of merchandise, from the producer of foods in the west to the consumer in the east, and bringing in return the luxuries of civilized life to the settlers in the far west. Already our great railroad is taxed to its fullest capacity in carrying freight and passengers from Europe and eastern provinces, for the North-west, China and Japan, and *vice versa*; and upon the enlargement of the Welland and Lachine canals, ocean going vessels can leave Port Arthur and deliver their cargoes in the Old World without transshipment.

DRY DOCK.

The necessity of a dry or floating dock is very urgent. Accidents will happen, and when it is remembered that there is not a dry-dock upon the upper lakes, it is not strange that our Board of Trade are busy deliberating upon this most important question. Here truly is a rare opportunity for investment, and the marvel is that some one of our own merchant princes has not, so far, grappled with the enterprise.

SHUNIAH.

The town of Port Arthur is situated in the old municipality of "Shuniah" (meaning silver), and obtained its suggestive Indian title from the fact of so many outcrops and veins of silver occurring in the above area, a small vein of which was exposed in the main street about twelve years ago, immediately opposite the general stores and offices of Messrs. Thos. Marks & Co. "Shuniah," however, as will be shewn in the sequel, is by no means the only metal found in this much favoured district. On the contrary, we have nearly every known ore of economic value but one,—that of platinum,—and when treating of the mines,

in another page, the writer will array such a record of facts in connection with the discovery, and development of prospects and mines, that should, one might reasonably suppose, go a long way to convince the most incredulous that here certainly is a great field for investigation and investment.

MINES, MINERALS AND PIONEERS.

Although it is not the writer's intention to enumerate the various enterprises and discoveries just here, yet it may not be out of place to make reference to the hardy and determined explorers, Messrs. Daunais and McPhee, for it is beyond the possibilities of the most imaginative to exaggerate the good which is coming, and will continue to come, out of their discoveries and development in this immediate vicinity. A few short years only, it is true, have elapsed since the above events transpired, and when we look back to this momentous time, when they were pushing far into the depths of the untrodden lands which surround us, and remember the flattering tales of hope they told, and the confidence with which they were known to prophecy results, at which all others laughed; when we call to mind the energy with which the first owners of these claims brought them into a state by which capitalists could better judge their value, and look around at the activity manifested on every side to-day, we need have no fear of the future. For without taking into account the wild stories some men are led to indulge in through excess of good fortune, I present to the readers of this volume a few *facts* in connection with our mines, the verification of which is within easy access to-day to the doubtful or curious visitor.

THE MINING REVIEW.

"The assays of ore from the Silver Mountain vein," says this journal, "go from a trace up to the full value of solid silver, as the silver makes solid nuggets in places. In this respect it resembles the Rabbit Mountain mine, which has produced some of the finest nuggets of solid silver ever seen from any mine. The mode of access to Silver Mountain is *via* Rabbit Mountain, "Porcupine" and Beaver Mountain mines, some 25 miles from Port Arthur by the new Government road, just finished to the last great find. It

has created a very marked interest among mining men who have visited it, and every man capable of judging a prospect, pronounces Silver Mountain to be one of the greatest finds in the territory—one that will develop into great, if not enormous value. It is estimated that there are thousands upon thousands worth of ore in sight. It is a fact that one piece is so heavily charged with silver, and so matted together with the precious metal, that it cannot be removed from the test-pit with the present tackle at the mine."

VISITORS.

Visitors to this district should, however, not fail to see for themselves; there is not one "prospect" or working mine in Algoma West, whose management will refuse full permission,—when properly applied for. Mining here is legitimate, and there should be no prejudice against the district, because it is convenient to the great markets and homes of capitalists on the continent. Numerous good prospects throughout this section await development; were they further away they might be more sought after.

THE NEW RAILWAY FROM PORT ARTHUR.

The construction of the railway will in all probability become an accomplished fact within this eventful year. Already some 45 miles of location surveys have been carefully made by Mr. H. K. Wickstead, C.E., (late of C. P. R. construction) through the rich mineral and agricultural district, known as the White Fish Valley, and connecting with the American system of railways, at a point on the Pigeon River—the International Boundary—near Arrow Lake. The line with which it will connect is known as the Duluth and Iron-Range Road, passing through a section of country as rich in certain mineral and other resources as that of our own, the Vermillion Lake region, having long been distinguished for its rich deposits of iron, the ore of which resembles that of Scandania and Russia, and the geological age being the same in general terms. These deposits are situated in the midst of hardwood timber, sufficient for producing the necessary charcoal, while the surrounding country is fit for farming purposes.

GOLD.

The gold found in this tract occurs with pyrites, some of which appears to be cupriferous. The pyrites is found in milky quartz, which accompanies the joints of the rock itself. The rock of this region is of the Huronian age, and follows immediately below the ferriferous formation referred to.

The country south of the Misabi Range is generally flat, the streams slow and broad, and the soil a dark loam with a clay sub-soil very similar to that upon our side of the boundary.

MAIN LINE AND PROPOSED BRANCHES.

From Port Arthur, running south-westerly to a point near Arrow Lake, it will extend some 55 miles, with branches to the Beaver Rabbit Mountain and surrounding mines; also branches to Pigeon Bay and the lumbering camps and mills of that section; while from a point near Silver Mountain, or "Huronian Junction," as this station may be named, a spur line of some 25 or 30 miles is projected to the Huronian, Highland and Partridge Lake gold region.

WHITE FISH LAKE AND RIVER.

The vegetation of the district is rich and varied and differs but slightly from that of the Slate River. Here too, wild fruits, such as black currants, gooseberries, raspberries, being especially abundant. The wild pea and hop also abound, and the growth of grass is rich and nutritious. This lake measures about eight and three-fourth miles long, by about one and a-half in width. Four islands, all covered with a growth of evergreen timber, add much to the great natural charm of this lake. Both lake and river are teeming with white and other fish. Game and fur-bearing animals are also plentiful. White Fish River has its source to the north of the lake. It is a remarkably crooked stream of swift current and numerous falls, and owing to its great and uniform volume of water, many fine water-powers have been located along its tortuous course of nearly 80 miles. One of the finest of these falls occur nearly opposite "Silver Hill," where a vein

carrying silver, was found to traverse the rocky ledges over which its bright waters fall some 14 feet 6 inches. This location is numbered "135 R" or the Woodside Lode.

TIMBER ALONG THE ROAD.

The region immediately along this road is fairly well timbered with occasional belts of white and red pine, interspersed with other descriptions of forest trees, chiefly tamarack, spruce, birch, cedar, and jack pine, all of a size suitable for railroad structures and telegraph poles, while poplar of fine growth is invariably found on the sunny slopes and elevated places.

The entire tract, however, both right and left of the line, so far located (north of White Fish Lake), and as a matter of fact, from Lake Superior, *via* Hunter's Island to the Lake of the Woods, is estimated by the late Surveyor General Lyndsay Russell, and our M.P. for Algoma, Mr. S. J. Dawson, to contain some *twenty-six thousand millions* of feet of lumber, board measure. Our local representative, Mr. James Connée, M.P.P., furnishes in another page some interesting testimony touching this region, with which it may be observed he has long been familiar as an explorer, lumberman and railroad contractor.

VISIT OF THE DEPUTY MINISTER OF AGRICULTURE TO THE SILVER MOUNTAIN, BEAVER AND RABBIT MOUNTAIN DISTRICT, AUGUST, 1886.

"We went to the Silver Mountain district, then up the White Fish valley, and to the head waters of that river; then around by Sandy Lake on the west, by Frog Lake and through the pine timber belt. We saw a very fine lot of Norway pine, and it would be a great pity if a fire should get into it and destroy it. We then struck Arrow Lake, and got in this morning at a little past 12 o'clock."

"Do you think that the mining interests of the district have progressed since you were through last year?"

"Yes, I think they have made very gratifying progress, especially at the Beaver and the Rabbit Mountain mines. Nearly the whole of the other work being done is prospecting, and men

are prospecting all over the country. We found a mine being operated just at the head waters of the White Fish river, and we found that mining locations had been surveyed all through that part of the country. There are magnificent views to be obtained from the bluffs at the sources of the White Fish. I have never seen finer in any part of the country. The bluffs form the last of the series of mountain-ranges before you reach the Huronian. From the western side we had magnificent views of Lonely Lake and Sandy Lake. The ridge forms the dividing range between the waters that flow into Lake Superior and those which find their exit into Hudson's Bay."

"Do the mining interests now appear to be on a solid basis?"

"That is the appearance, and they are certainly working to that end."

"How about the trip back?"

"We got in here about 12 o'clock last night after 18 hours continuous march. From Silver Mountain till you get to the Colonization road, it is the worst road I have met with in Canada. The Colonization road is a good piece of work, and will compare very favourably with the generality of the country roads in Ontario. Of course it is not level, but that cannot be expected in that part of the country."

Mr. Blue goes down by rail to-day, it being his purpose to inspect the mine now working near Sudbury.

Mr. Blue was accompanied through the above district by H. K. Wicksteed, C. E.

THE SUDBURY COPPER BONANZA, ON LINE OF C. P. R.

Considerable uneasiness and anxiety has disturbed the minds of many of our American cousins, particularly those interested in copper mines, since the discovery of the great copper deposit at Sudbury. Many, and varied, have been the speculations upon the result that this great discovery would be liable to have upon the other copper mines of America. Mr. Mackay, the great bonanza king, after receiving a description of it, stated, that if it proved, upon development, what external appearances would justify one in believing, it would have the effect of closing every

other copper mine in the world. We are not surprised, therefore, that this discovery has created considerable alarm in the mining world, neither are we astonished to see many interested parties endeavouring to belittle the character of the ore, and making statements that it is too refractory to be treated, excepting at great expense, thus practically rendering the mine useless and valueless. It is impossible so early to pronounce an authoritative opinion upon the question; and it is doubtful whether any other person is yet in possession of sufficient information to qualify him to do the same. That there is a remarkably large deposit of ore there is beyond doubt, and that the ore carries a large percentage of copper is also unquestionable; but there is certainly yet some doubt whether the sulphuret ores, which require concentrating, smelting, desulphurizing, and numerous other processes to produce the copper, possess a sufficiently high percentage of copper to justify so complicated and expensive a system of treatment. An expert, over a year ago, took specimens to New York and made assays of them, and his report at that time seems to have been unfavourable. He claimed that it would never pay to work the mine, unless copper were a great deal higher than it is at present. It must not be forgotten, however, that an assay of mineral, taken from a vein at or near the surface is a very uncertain criterion upon which to pronounce judgment on the general character of a mineral deposit; and the probability is that this vein may open up much richer than it shows at the surface, and may contain rich streaks, and even in this case it will furnish an almost inexhaustible supply of copper. Assays give seven per cent. copper and two ounces silver per ton.

CANADIANS, AWAKE!

It is a matter of surprise to all Americans who visit our mining region to find so little Canadian capital invested in developing our resources. People from other countries, necessarily unfamiliar with our customs and laws, and consequently with a natural timidity against embarking moneys in a strange country, overcome all this so strong to them are the inducements; but Canadians sit idly by and let the cream be skimmed off by

those from beyond our borders. We do not object to Americans investing in our mines by any means; on the contrary, we welcome them gladly, for we find them pushing and full of energy in carrying to a successful completion whatever they undertake. Our country is so large, however, and the opportunities for investment and the making of handsome returns so great that we can give full scope to our own capitalists, while leaving ample room for our enterprising neighbours. The apathy of our own people may be laid to the fact, perhaps, of the want of familiarity with mining as a business, and to the impression that it all partakes of the nature of gambling. I think this idea is being dissipated slowly and that the people are beginning to learn that it is not all a matter of inflation and depression of stocks as the scheming manipulators may decide. They are tardily, it is true, but surely, getting to know that in our own land we have a large mineral region that is open to exploration by any one, and that it being easy of access, properties can be personally examined before investments are made. It is not a matter of sending away thousands of miles an expert upon whom altogether one has to depend, nor, as intimated, need any very large sum be expended before the value of any property can be determined. The most of the land already laid out is held by parties who do not ask investors to purchase until an opportunity has been given to determine the value of the property.

WANT OF GOVERNMENT AID TO MINING INDUSTRIES—AMERICAN
ENTERPRISE RECLAIMING OUR WILD LANDS.

We frequently hear, says *The Miner*, of bonuses being granted to manufacturing establishments by municipalities, in order to encourage immigration, and create and foster a spirit of enterprise in a city or town; we often have examples of government aid being granted to railroad companies, to assist them in opening up new and undeveloped districts; and many other enterprises which can show that their existence is, in the smallest degree, beneficial to the public good, have often received bountiful aid from the government. We do not wish to condemn the principle of bonuses in the slightest degree, but on the other hand we wish

to solemnly and emphatically proclaim our faith in the doctrine, that whatever contributes to the general public interest some recognition should be given, some compensation should be made, somewhat commensurate with the advantages conferred. The acceptance and application of such a doctrine, has very often been the strongest incentive, and the most potent agent in the building up of large cities that probably would otherwise have remained villages forever. We claim, however, that in some instances, unworthy objects are the recipients of these favours. Corporations, and even individuals, may sustain such relationship to a government or a municipality, and their influence may be so great that appeals from them are almost irresistible ; and a government may then sacrifice their independence and their better judgment, in order to retain such in its favour. This is, unhappily, too much the case in every country, and consequently many institutions must necessarily suffer through these sinister and selfish motives. We know of nothing more worthy of support from any government than a general mining industry. Nothing requires such large capital ; nothing is attended with such great risk ; and nothing is surrounded with so many discouragements as mining. Neither is there anything that will more enrich a country than extensive and valuable mineral deposits, providing that these are developed.

Our American friends are doing invaluable service to this country in reclaiming our lands from the original state imposed upon them by nature ; for it is they who are developing the resources of the country, showing up its true mineral character, placing a proper value upon our lands by their operations ; and by these means are advertising the country in the markets of the world. They are inviting immigration, and attracting capital, more by their influence and labors than all the other agencies combined. We are assured, that when we have such an agency in our midst, it should receive every encouragement in the prosecution of its labours. We claim that it is the duty of the government to assist the honest and legitimate speculator in building roads as rapidly as possible, and in granting aid to railways ; and we do not think it would be inconsistent with the general principle of "government aid," if a bonus were granted to every well devel-

oped mine in the district. We have no doubt, the time is ripe for our Ontario Government to take hold of this matter of "building roads in this district." The rich and extensive agricultural and timber limits to the west of us, commencing within the vicinity of the mineral belt, and extending for over a hundred miles, would in themselves warrant the Government in giving this district a munificent grant from their large and constantly accumulating surplus, and in so doing they would greatly accelerate settlement, and give an impetus to mining that nothing else could do. We would like to see our Ontario Government supplement the grant that is already offered by the Dominion Government for a railroad through this district; and we have no doubt that in a very short time we would have one of the best developed agricultural and mineral districts in Canada and probably in America."

ROOM FOR MORE.

By way of illustrating what a few of our American friends are doing towards reclaiming the primitive forests of western Algoma, I may take the Rabbit and Beaver Mountain Silver Mining Companies as fair examples.

THE BEAVER MINE,

when acquired by Mr. Kirkland for his Michigan friends some twenty months ago, bore not the faintest traces of civilization. It was almost midwinter when Mr. Kirkland assumed charge there, and with the ground frozen, and the general aspect of affairs *decidedly* forbidding, the work of mining and surface improvements were vigorously commenced. From this period, to the present time, the work of development has been steadily prosecuted. Over 2,500 feet of shafts, adits and cross-cuts have been carried into the heart of the mountain; while upon the surface all necessary buildings have been erected and land cleared to the area of at least 200 acres. Shaft and ore houses, tramways, mills and mill-dams have also been erected, while crushing, stamping, air-compressing, centrifugal, rolling and other machinery, has been hauled in from the Canadian Pacific Railway, a distance of nearly twelve miles, over what the inexperienced in American resource and

perseverance would pronounce "impassible roads." All this, and much more, has been carried out here in a brief season, the average monthly force employed numbering 85 to 100 men, with numerous teams. Thousands of dollars (\$86,000) were expended up to August, 1886, in this way, and many of our cautious Canadian and English capitalists shook their heads ominously at the "new departure" of Messrs. Kirkland & Co. Fortunately about this date (10th August, 1886) a discovery of momentous importance to this district was made in the mine. The cross vein was struck at 600 feet on the lower level (and in upper level also), when work was commenced upon it, to the east and west, with the following results:—At four o'clock this morning the blast revealed ore of great richness throughout the entire breadth of the vein. It is similar to the pink fluor spar, peculiar to Silver Islet in its best days, and assays from 4,244 to 18,000 ounces to the ton. This incident, it appears, imparted some degree of confidence to many of our "cautious" local men, who are now beginning to realize the fact that mines are not so much a matter of finding, buying, and selling, *as making*. Work has been systematically carried on at the "Beaver" ever since, and doubtless, from the appearance of its surroundings, a very considerable sum has been expended thereon. The principal owner of the Beaver mine is Mr. R. G. Peters, of Michigan, who appears to possess the magic power of attaining perfect success in all his operations. Mr. Peters is, in consequence, a wealthy and very desirable acquisition to our new mineral region. Among the various successful enterprises in which Mr. Peters is engaged, we may enumerate extensive lumbering and railroading in Michigan; we say *railroading*, from the fact of his having constructed a railroad of some 60 odd miles of his own. He is also largely interested in salt works, and has recently developed this work to the capacity of 2,000 barrels per day, which should give him a fair claim to be considered one of, if not the largest manufacturer of this useful article in the world. Again we find him a successful owner of oil wells. His visits to Canada, where he owns a large proportion of his mineral and other limits, are few and far between. This company is, however, ably represented here by their energetic and courteous manager, Mr. Kirkland, to whose indefatigable zeal the con-

tinuous success of the Beaver Mountain silver mine is largely due. Again, as we go to press, the news continues good, or rather unusually so, for, according to the professional testimony of M. Ferdinand Sustersic, chemist and assayer to the mine, they have, at this date, April 15th, 1887, "upwards of \$850,000 worth of silver in sight; and should the large vein of silver retain anything like a uniform width (4ft. 8in.) to the next level, where it is also visible, some three or four millions of dollars will doubtless be removed from that space." Among the many curious ones who visited this bonanza recently, was the writer of this work, who could only re-echo the general expression of—"marvellous!" Now, it is hard for men, who have so long regarded mining on the north shores of Lake Superior with suspicion, to realize the above facts; while it is almost impossible at the same time to over estimate the result of this success on the silver mining industries of this immediate district, as there is scarcely a person in Port Arthur—certainly not a merchant—who will be unaffected by it, directly or indirectly.



NORTHERN HOTEL, PORT ARTHUR.

"THE NORTHERN," THE FINEST HOTEL IN CANADA WEST OF
TORONTO—APPRECIATED ENTERPRISE.

This location was well chosen, being on the corner of South Water and Park streets, with an abrupt fall to the water, thereby securing one of the most essential points—good drainage. Facing a large open space of water, it commands a magnificent view of

Thunder Bay, with the Cape and Welcome Islands in front, and Isle Royale in the distance. To the right is Pie Island, and further south the majestic McKay Mountains, guarding as it were the mouth of the beautiful Kaministiquia. Where can be found a site to equal this panorama of scenery?

The architecture of the new building is modern *renaissance* of Queen Ann style, built with red brick. The front has large and elegantly finished verandahs to each floor, with communication with each other by means of iron steps in cases of urgent need. The lowest verandah is continued the entire length of the building on Park street, affording a splendid promenade. The space between the walls and woodwork has been ingeniously filled in with cross pieces, and in places necessary with brick and plaster, to prevent draught in case of fire. The main entrance is off Water street, a dozen wide steps leading into a large and finely constructed vestibule; thence into the main lobby where one is at once struck with the beauty of both the general finish and work in detail of the interior. To the left is the writing-room; on the opposite side the reading-room, facing which is the office, and in rear of that is the wash-room, finished with fine white marble, and a stairway leading to the basement into the water closets. To the front of the basement, and immediately under the reading-room is fitted up and used as a barber shop. Under the writing room and on the corner is situated the cigar and tobacco store, behind which are three large and airy sample rooms for the use of commercial men. The cellar commences here and runs almost the entire length of the building. In the office a large electric bell indicator has been placed in position, connecting with every room in the house. Opposite the office is the grand stairway, wide, and built with low rises, the balustrade under the hand railing being composed of beautifully carved hard wood uprights. On reaching the first landing an immense stained glass window, facing on Park street, gives the surroundings a rich and elegant appearance. On gaining the first floor you turn to the right into the main drawing-room and parlor, 45 x 25, with entrances to the verandah. A fine marble mantle with open English fire place, gives it an air of comfort. A lobby leads to the hallway of the south wing; further to the north along the

lobby the hallway of the wing commences, the rooms of which are all *en suite* in two and three; this is carried on throughout the whole of the first floor. On the second floor in front the rooms are also arranged *en suite*; are large and with fine transoms with patent attachments. There are 100 bed-rooms in all. A ladies' entrance with private stairway leads to every hall, and ladies' conservatories and bath-rooms are on each floor. Great attention has been given by the architect in following closely in his fine design, privacy for lady guests, which is very requisite for a summer hotel. A delightful view is obtained from the windows in front on the top floor facing the bay. A large water tank with a capacity of 5,000 gallons is on the top floor supplying water to the house, and connections are made with every floor, where a large amount of hose will be constantly on hand in case of fire. A back stairway in the south wing leads down to the culinary and kitchen department, the one in the north wing leading to the laundry; also two fire escapes on the outside reach from the top to the bottom of the building. The dining-room is on the ground floor, 25 feet wide, and extends from the office corridor 76 feet through the south wing. The billiard room and bar occupy the same space in the north wing, with ample room for six large billiard tables, at the back end of which is the bar, with more commercial rooms in the rear.

The Northern is under the direct management of Mr. F. S. Wiley, and the gentlemen in connection with this enterprise are deserving of the highest commendation, in supplying not only a long felt want, but a stern necessity, so far as first-class accommodation is concerned. Mr. R. J. Edwards was the architect.

PORT ARTHUR, AS SEEN BY OTHERS—THE CAPITAL OF THE THUNDER
BAY REGION.

(*From the Emigrant.*)

Port Arthur is the capital of the Thunder Bay region of Algoma, Ontario, Canada, has a population of between four and five thousand, the various churches, good schools, many and well stocked stores, the different Government offices, law courts, Customs, Inland Revenue, a strong Board of Trade, banks, three

newspapers, one of them, the *Sentinel*, a credit to any city. A costly breakwater is built and being extended that ensures a secure ample harbor. It is the headquarters of two divisions of the Canadian Pacific Railway, whose main line runs through the town, has a resident grain inspector, grain elevator, and is preparing for a great advance in the next few years. It is easily reached from any point by water or rail, and is rapidly growing in favor with pleasure-seekers and sportsmen, while capitalists are awakening to the openings it offers legitimate investment properly conducted.

GAME AND SPORT.

This was once headquarters for the North-west Fur Company and a very important post of the Hudson Bay Company, and is still a valuable fur field. Of large game, cariboo and black bear are yet to be had, and other smaller animals, while in the feathered line are grouse, ducks, geese, snipe, etc., in their season. In fishing, near by is the Nipigon, which Charles Hallock, late editor of *Forest and Stream*, says is the finest trout stream in the world, and it is yet almost untouched by the angler. Also the McKenzie, Carp, Blend and others nearer but smaller, and in the fall the lake offers good trolling.

THE SCENERY

is extremely beautiful and grand-growing by knowledge, and from Halifax to the Rockies not a more enchanting prospect appears than that, rising from the summit of the hill, upon whose slope Port Arthur lies. Before you lies Thunder Bay, that magnificent water, 16 by 30 miles, guarded by Thunder Cape, upon whose top, 1,300 feet above, lies the Sleeping Giant, where the Indians say thunder dwelt in the form of a great bird. In the near front are the Welcome Isles, where in long past years, opposing Indian tribes fought bloody battles, whose traces yet remain, and further out is Isle Royal, where centuries since some mysterious people mined extensively for copper, and the galleries are traceable for hundreds of yards, hardening the precious metal by a lost process and trading it in lost Atlantis for articles of the commerce of that sunken continent. On the observer's right lies the valley of the

beautiful Kaministiquia River, whose falls of the Kakabeka are a water poem, over which Mount McKay lifts its thousand feet of ancient grandeur in protection of the quaint old Jesuit mission on the bank below, where the Fathers are puzzling over the problem of the red man's salvation and elevation.

On the river are the towns of Neebing and Fort William, the latter the old trading post of the great companies named, now passing its second century of life, but wakening from a quiet monotone to an important place in the advance of the young giant of a nation whose wakening breath ripples the waters of two oceans and the bosom of a vast continent.

PLEASURE.

The bright sunny days and the cool welcome nights pass swiftly by in boating on the bay, canoeing on the rivers, bathing in the streams, visiting the romantic spots about or at the social dance. Canoes, guides and outfits, all can be had at reasonable rates. The hotels are many and good, the Northern being one of the finest in Canada. Expenses are reasonable, and the tourist, while in Nature's arms, commands easy reach of his business, if desired, by rail, steamship, telegraph or mail."

A FAVORITE SUMMER RESORT.—PLEASANT DRIVES, GRAND SCENERY
AND GOOD SPORTING.—WONDERFUL COOLNESS OF THE CLIMATE
THROUGHOUT THE SUMMER.

Hon. Alex. Morris, M.P.P. for East Toronto, and ex-Lieut. Governor of Manitoba, who with his daughter, Miss C. Morris, and his brother, Mr. J. L. Morris, barrister, of Montreal, have been stopping at the Northern for several days, left Thursday, 15th on the *Alberta* for Toronto. A *Sentinel* representative met Mr. Morris, and on making inquiries regarding his opinion of the district was informed that he had found the visit here a very pleasant one. "Your climate is delightful," said the visitor, "and I am fully impressed with the belief that when Port Arthur becomes more generally known it will be a favorite watering place. As a popular summer resort it has many attractions. Your hotel accom-

modation is all that can be desired. The pleasant drives and boating excursions for those who do not desire to enter into the sport of fishing and shooting are a great advantage. Then the points of interest here are many and varied. The scenery is grand, and a trip to the mines, the Kakabeka Falls or up the beautiful Kaministiquia, is something for the tourist to look back upon with great pleasure."

"This is your first visit to Port Arthur, is it not?"

"I passed by here last fall on my way to Duluth, and again a few days ago I went through to Winnipeg on business. I was so delighted with the cool and comfortable appearance of your town that I decided to stop over on my way back. The heat in Winnipeg was most intense. But here the wonderful coolness of the climate is really quite refreshing and invigorating. There has only been one warm day during my visit, and the nights seem always cool.

"What do you think of the prospects of the town?"

"Port Arthur is most advantageously situated, and must become an important point. I read with a great deal of interest the article in the *Sentinel* of Saturday about the extensive tract of agricultural land to the west of the town. This will prove most valuable to the district and materially aid in the upbuilding of Port Arthur. Attention should be more effectively drawn to the resources of this section.

The reporter then asked Mr. J. L. Morris, who had just returned from a two days' fishing excursion at Nipigon, what luck he had.

"Splendid," replied that gentleman. "Never want better. I was up at the first portage, which is about twelve miles from Nipigon. There I caught 108 fine trout, regular beauties, some of them weighing about four pounds, and the lot averaging two and a-half pounds each. We threw away all trout of one pound weight or under as being too small.

"That would be large enough in some places," remarked the scribe.

"Yes, I have often fished for trout considerably smaller, but this is the largest and best catch I have ever made."

Mr. Morris is a fisherman of considerable experience, having

fished all along the Lower St. Lawrence and through various streams in Quebec and Ontario.

Both gentlemen seemed so well pleased with their visit they may be expected to fulfil the desire expressed of visiting us again ere long.

LAND EXAMINATIONS IN THE TOWNSHIP OF PAIPOONGE—RICH SOILS OF THE SLATE RIVER VALLEY, WEST OF PORT ARTHUR—ALMOST OPEN PRAIRIE—EXCELLENT MARKETS IN THE MINING DISTRICT—UNRIVALLED AS A FARMING AND GRAZING COUNTRY.

(*July 16th, 1886.*)

Meeting Mr. Roland, C.E., this morning, on his return from an exploratory trip westward, through the valley of the Slate river, a *Sentinel* representative elicited the following information touching that comparatively unknown section:—

“The Slate river has its source among the elevated ridges of the unsurveyed district south of the Rabbit and Palisade mountains, and after flowing eastward for a distance of fifteen miles, enters the township of Paipoonge, in lot fourteen, in the sixth concession.

PAIPOONGE.

Paipoonge is a township some nineteen miles west of this place, on the Kaministiquia river. It was surveyed by the late Thomas Wallis Herrick, P.L.S., in the winter of 1860. The word “paipoonge” is Indian, and means winter. The township adjoining our own on the west is named Neebing, an Indian word, meaning summer. Neebing is also on the Kaministiquia river and contains some excellent land, particularly in the valley between Fort William and Point de Meuron. This latter point has become historic. It was there the old North-west Co. first established their fortified trading post, soon to be anticipated by their powerful rivals, the Hudson Bay Co.

THE MODEL FARM.

The “model farm,” as that of Point de Meuron is frequently called, is located upon lot nineteen. This claim was first located

and squatted upon by one Thomas Bissett, an employee of the late Mr. Herrick, but better known to old settlers as "Tommy Dodds." The farm is composed of a sandy clay soil, upon a sandy clay sub-soil, and under the present management produces excellent crops. I called there on my way down stream, where I observed Mr. A. McDonald, late of Invernesshire, Scotland, busily engaged irrigating some acres of vegetables. Nearly eighty acres have been cleared, of which about fifty acres is at present under cultivation, including wheat, oats, barley, linseed, turnips, carrots, onions, beets, lettuce, tomatoes and potatoes, the latter being almost ready for the table. Mr. McDonald is ably assisted by "Johnny" McLeod, a hardy old Orkney man, who to use his own expression, "wasted about thirty years of his young life in the employ of the Company." Johnny has been some twenty-five years associated with Point de Meuron, and relates numerous anecdotes respecting pioneer life on the Kaministiquia. The soil upon this farm, where under cultivation, although rather sandy, produces excellent crops. This clearance is upon the highest portion of the peninsula, and has a fine southern slope and aspect. The soil of the western half is composed of deep, dark alluvial clay. This is low in the ground where no regular clearances has been effected. The growth of grass, however, is very luxuriant. Here, too, the timber is fine, and, including as it does, every variety of shade trees peculiar to this latitude, black and white ash, black and white birch, stately elms, maples, and balm of Gilead, cannot fail to continue the same attractive place to the excursionist.

GOOD DOCK WANTED AT POINT DE MEURON.

A good dock would be a decided improvement to this place, as in the absence of a dock or small boat, visitors by steamers cannot conveniently effect a landing. The river is decidedly crooked from this point downward to Fort William. The curves are, however, never monotonous, and every sweeping bend in your course presents the picturesque surroundings in a new light. The distance from the mouth of the Kaministiquia to Point de Meuron, as measured upon the frozen stream, is twelve miles.

THE SLATE RIVER COUNTRY.

"And of the Slate river,—what is the character of the country along its banks?"

"The land in most places along its somewhat tortuous course between the sixth and second concessions is strictly first-class, and in every respect equal to our standard No. 1 soil of Portage la Prairie. It is chiefly composed of a rich clay loam, upon a deep clay sub-soil. The timber, generally speaking, is tamarac, but spruce, pine and other varieties prevail. Bush fires in this, like most other sections of Algoma, have overrun a great extent of wonderfully fertile belt."

NO BETTER SECTION FOR WHEAT.

"Do you suppose wheat can be successfully grown there?"

"Certainly; I know of no better section, and I am strongly of the belief that fall wheat would flourish here, and that as a matter of fact this alluvial soil would year after year raise wheat, and without manure."

"How far is the fertile belt from Lake Superior, and what effect would the cold wave from off its broad expanse have upon your wheat fields?"

"No influence whatever. You will perceive by this map that the particular district to which I refer is completely cut off from the big lake by a crescent-shaped range of trap hills averaging in elevation from 500 to 1,000 feet. This high ridge extends throughout the entire valley, terminating abruptly at Mount McKay, while toward the north and westward it is completely protected by the more elevated divide towards the Kaministiquia, and by the Rabbit Mountain range some five and a-half miles to the westwards. Here, secluded from all extraneous influences, nestling in the warmly reflected suns of a fairly lengthy season, harvests cannot fail to succeed and settlement to expand."

"And your markets, where are they?"

"Already we have our rich silver mines in Rabbit and Beaver mountains, with some ten other working mines within a few miles only. These mines are only beginning, their mills are going up

rapidly ; they are in earnest, and with the advent of said works another process of amalgamation must follow—that of interests. The prosperity of this mining industry is now being fully acknowledged, and soon the landowner, the miner and the enterprising farmer will be mutually engaged in one common undertaking—that of development.”

“What are the prospects for mineral on Slate River?”

The rock formation there is, as the name indicates, slate, and at a point some $2\frac{3}{4}$ miles up stream this formation terminates. At a point about $1\frac{1}{4}$ miles up stream a remarkable trap dyke cuts across the bed of the stream.

The stream is here 40 feet wide, with almost perpendicular banks of slaty outcrop. The height of the banks are 55 feet above the bottom of the stream, and the dyke or dam, as it is sometimes called, crosses the stream obliquely, and presents the appearance from above of a grand triumph of engineering skill in the shape of a solid wall of masonry, through which the irresistible forces of nature had effected a narrow channel.

RICH NATIVE SILVER.

At a point somewhat lower down, one or more veins carrying magnificent specimens of white silver has long since been discovered, but up to the present very little interest has been displayed by the owners of this interesting property.

During this excursion I was accompanied by two of the pioneer explorers of this district (Algoma), and although not specially interested in mineral resources, we were ever on the alert for indications, and while “polling” our boat over a sand bar in the Kaminstiquia, near the mouth of Slate River, were rewarded by the discovery of a huge boulder carrying a large percentage of specular iron.

UNRIVALLED AS A FARMING AND GRAZING COUNTRY.

“How does the slate compare with the valley of the White Fish River?”

“From a topographical or agricultural point of view there is no comparison, and the valley of the slate, owing to its great regu-

larity of surface, surprising fertility of soil and vegetation, may be said to stand unrivalled as a farming and grazing country."

Besides this much favoured district is comparatively open country and so easy of access that a mounted or buckboard excursion can be made throughout its length and breadth. A line drawn due south, three-quarters of a mile from the crossing of the Kaministiquia river in lot 13, in the first concession of Paipoonge, takes you over a partially burnt district into the Slate River proper. The ferry house and crossing on the old road to Rabbit Mountain silver mine is located on lot 13, while at a little way northwestward along the Kaministiquia the new line of colonization railway sweeps inwards into it, crossing six miles upwards in graceful curves.

Mr. Roland appears quite enthusiastic about the great future of this country, both from an agricultural and mineralogical point of view, and being a close observer of the topographical and physical characteristics of the lands which he undertakes to describe, we invariably accept his information with pleasure and confidence.

THUNDER BAY SILVER MINES.

*Written for the New York Engineering and Mining Journal by Robert Bell, B.A.Sc.,
M.D., LL.D., Assistant Director of the Geological Survey of Canada.*

1885.

Silver mining in the Thunder Bay District now promises to become a permanent industry, and several mines in that region have been undergoing steady development for some time. The following general description of the district and of the present condition of the various mines may, therefore, be of interest to your readers. The notes on the actual mining were made in the course of a visit I paid to the district toward the end of October. From having been on the ground during the previous period of silver mining on the Canadian side of Lake Superior, I am enabled to refer to its history and also to the geological relations of the veins from personal knowledge.

The mines that are worked at present are situated in the valley of the White Fish River, a branch of the Kaministiquia, to the

south-west of Port Arthur, a town of about 4,000 inhabitants, on the shores of Thunder Bay, where the Canadian Pacific Railway leaves it on its long stretch westward across the continent. They are situated in two principal groups, one at 25 and the other between 35 and 40 miles from Port Arthur.

The developments now going on in this region form a second epoch in the history of silver mining on Lake Superior. During the active days of mining around this lake by the Montreal, Quebec and British American companies, between 1840 and 1850, silver was found while searching for copper, at Namainse (erroneously spelt Mamainse), on Michipicoten Island, on Nipigon Strait, and at Prince's Location (between Fort William and Pigeon River); but it was not till the discovery of the Thunder Bay and Shuniah mines in 1866-67, and the Silver Islet mine in 1868, that regular silver mining began. In addition to the mines just named, the principal operations of that period were carried on at Mary's Harbour on the Beck mine, 3A Location, Sturgeon Bay, Pic, Thompson's, Jarvis' and McKellar's Islands, and near the Little Pic, a considerable distance to the eastward.

The first discoveries in the White Fish River region were made in 1883, by an Indian. His first discovery, the Rabbit Mountain vein, led to the search for more in the same region, and the prospectors were rewarded by finding a number of silver-bearing lodes within an area of a few square miles around the initial discovery, as well as the Silver Mountain group of veins, between ten and fifteen miles further to the southwestward.

The White Fish region and the whole country thence to Lake Superior consists of flat-topped hills, with wide valleys between them. These hills are capped by horizontal beds of greenstone, underlain by a great thickness of nearly black, flaggy shale or "slate," which forms the slopes of the valleys. A similar geological arrangement is found on Pic Island, at Thunder Cape, and at most of the silver mines on the north-west side of Thunder Bay. The site of the richest ore in most of the veins appears to have something to do with the juxtaposition of the black slate and the greenstone, whether this be in the form of a dyke or bed. At Silver Islet and McKellar's Island the ore was found to be connected with dykes cutting the slates, whereas at the Silver

Harbour, the Thunder Bay, the Shuniah, and also at all the mines of the White Fish region, it is found where the veins intersect the slates just under sheds or overflows of greenstone. The vein at the 3A mine cuts the green crystalline schists of the Huronian series, and the silver is here associated with nickel.

It may be remarked in passing that the horizontal black slates and their associated greenstones belong to the Animike series of Dr. Sterry Hunt, which is believed to be of Cambrian age. These slates rest unconformably upon the denuded edges of the highly inclined and crystalline schists of the Huronian period. Mr. Peter McKellar, the well known geologist of Fort William, who has devoted much attention to the study of the silver-bearing veins of this region, is of the opinion that the metal has been brought up from these underlying schists and deposited in its present situation during the formation of the veins in the upper rocks.

The veins, both around Thunder Bay itself and in the White Fish region, belong to two principal sets, one running north-east and the other north-west. Those in the White Fish region belong to the north-east set, with the exception of that at the Beaver mine, which runs north-west.

None of the mines of the Silver Mountain groups was actively worked at the time of my visit, and I will, therefore, confine the remainder of my present letter to those in operation in the other groups in the White Fish region, as being of more immediate interest to readers at a distance.

Mr. Ingall, of the Dominion Geological staff, has completed the work which he commenced last year, of taking the altitude of the different mines and the country between the Beaver and Silver Mountain mines. It is his intention to finish next the geological survey of the country around Silver Mountain and White Fish Lake, and then move camp to some place in the Rabbit Mountain portion of the district and work around the mines in that vicinity and towards Port Arthur.

THE THUNDER BAY COLONIZATION RAILWAY

survey line has been run so far through a fine tract of agricultural country, and if this line is adhered to it will also be about as convenient a line for the working mines as could be expected.

It crosses the Kaministiquia River a short distance above the bridge on the Government road over that stream, then proceeds along the valley of the White Fish River, which it crosses twice, to a point near the Beaver mine at the foot of the range of hills which separates that mine from the Government road, thence in its course south-west it will, in order to maintain a convenient grade, pass close to the Silver Creek, Little Pig and Porcupine mines, probably through the locations on which the two last named mines are situated.

MINERS TAKING UP HOMESTEADS.

The miners engaged at the Porcupine mines have been induced to become permanent settlers in the district, and they intend to take up homesteads in the valley of the White Fish, where there is good land and room for farms and homes for thousands. Anyone visiting the mining region should be prepared to answer the question which will be put to him by nearly every man he meets out there: "When will work on the new railway be commenced?" They don't ask what railway. They apparently think some company intends to build a railway, and all they want to know is when a railway will be built."

OUR COLONIZATION RAILWAY—MR. MURDOCH'S REPORT TO THE GOVERNMENT—ROUTE PRESENTS NO UNUSUAL ENGINEERING DIFFICULTIES—SIMILAR TO THE CANADIAN PACIFIC RAILWAY TRACK FROM HERE TO SAVANNE.

The following is a copy of Mr. Murdoch's report, which he has accompanied with a large and complete map to illustrate the route and nature of the country:—

PORT ARTHUR, July 6th, 1885.

S. J. DAWSON, Esq., M.P., Ottawa:

SIR,—In compliance with your request I made an exploration of the Thunder Bay Colonization railway as far as the Twin City mines in the Rabbit Mountain district. Up to this point, on the accompanying plan of the proposed railway, I marked the elevations for your guidance.

Beyond this point to the boundary line the Iron Range railway from Duluth would join it. Mr. Roland, C.E., who has just returned from an exploration, and who also was on the original survey of this proposed railway, furnished me with the information relative to that portion of the location as shown on the plan, and whose report I enclose with the plan.

This railway would connect Port Arthur and north shore stations with the American system of railways at Duluth, and thus supply an urgent need without doing injury, but on the contrary, assisting the traffic of the Canadian Pacific Railway.

The proposed route would open up an entirely new country, and would pass through the finest forests of the district, the richest silver country on the continent, and the Iron Range railway has the largest deposits of the finest iron in America, which would be all tributary to this line of railway, and on either side of the proposed line the soil is suitable for cultivation, and the greater part of it would produce crops equal to any grown in Manitoba.

It would supply the struggling mining industry which must have railway facilities to foster and establish it.

The line as laid down by me is the correct one, inasmuch as it would give railway facilities to all the working mines without favouring any particular one. The mining industry of the district will bring millions of dollars of foreign capital to the country, if assisted by railway facilities in time.

The route throughout presents no engineering difficulties, and would simply be ordinary railway work similar to the Canadian Pacific between Port Arthur and Savanne, and the same in distance.

The specimen of silver ore which I forwarded to you by mail is from the Silver Mountain mine.

I have the honour to be,

Yours obediently,

WM. MURDOCH, C. E.

* * * * *

On or about the date of the above report the Dominion Government granted the "regulated" bonus of \$3,200 per mile,

but up to the present, from "various causes," nothing definite has been decided.

MINNESOTA IRON COMPANY—ONE THOUSAND MEN EMPLOYED AT THE MINES—SHIPPING 14,000 TONS OF GOOD ORE PER WEEK—PROSPEROUS AND REMUNERATIVE TRADE FROM THE MINES OF THE DISTRICT BETWEEN PORT ARTHUR AND DULUTH.

(Duluth Herald, July 10th.)

George C. Stone, of St. Paul, general manager of the Minnesota Iron company, returned yesterday from a trip to Tower and the mines of the company. Mr. Stone had not visited the region before for ten months, and found great developments had been made in that time. In fact he says they have in sight fully four times the ore they had last year at this time. The company is employing at the mines 1,000 men, and the railroad company has at work in the operation of the road and in its maintenance fully 300 more, to say nothing of the men employed in building the 27 miles of the Iron Range now under construction.

The Minnesota Iron company has just put in operation at the mines a Brush electric light plant for 30 lights which will illuminate the pits, ore docks and yards so that night work can be carried on as successfully as day work. They are also putting in an additional compressor plant and a number of power drills, which will be in operation very soon. This plant is a duplicate of one put in this spring and which has proved very successful, and without the aid of which nothing near the progress could have been accomplished. The company is also putting in additional and more extensive hoisting machinery.

They had shipped from the mines by vessel from Two Harbours up to the night of the 8th, 88,627 tons, and are shipping now at the rate of 14,000 per week. Up to the present time no vessel has been delayed in loading ore at the docks a moment of time in consequence of the weather. On the first day of July there was loaded on vessels from the company's dock 5,064 tons of ore, and on Thursday the boats Alcona and Alta went into Two Harbours at nine o'clock in the morning and were loaded

and steaming down the lake before eight o'clock in the evening of the same day with 2,636 tons of ore on board. The quality of the ore produced has already an established reputation, and is among the best iron ore produced in the Lake Superior country.

The benefit derived by Duluth from the mines in that district is immense, and the large number of men employed help to keep the business men of the Zenith city in a prosperous and remunerative trade."

ONE RAILWAY WANTED.

There are now four railways proposed to run through the mineral district and open up the valuable agricultural, mineral and timber wealth of the country between this point (Port Arthur), the Lake of the Woods and the adjacent States.

Four railways are not required, but there is no denying the fact that one scheme should be pushed through and the country supplied with railway facilities. There is only one thing that can keep back this part of the Dominion and that is lack of necessary railway facilities.

The benefit derived and to be gained for all time from the construction of the Canadian Pacific Railway can hardly be overestimated, but there is a large and important section of the country tributary to Thunder Bay which the present line of railway does not touch. That country contains a vast amount of natural wealth in the shape of timber, minerals and thousands of acres of as rich and fertile agricultural land as the sun ever shone on. There can be found plenty of land for thousands of farmers, and the location offers every inducement to settlers. The climate is the finest in the western world and the markets open for produce cannot be equalled by any section in Canada. The benefit to Port Arthur of opening up this country for settlement is apparent to every one. The only wonder is that some united and determined effort has not been made before this to construct a railway through the country.

The question of granting some measure of assistance towards opening up Western Algoma came up in the Local House recently. Mr. Meredith strongly advocated the affording of some aid to a railway which will develop the country west of Port Arthur.

A number of the members on both sides of the House are in favour of the proposal, and it is probable that definite action will be taken by the Government in this direction during the present session.

THE KAKABEKA.

The Kakabeka falls are on the Kaministiquia river. A mile above the falls are a series of little falls or rapids, very picturesque. The water shoots over and falls perpendicularly to the bed of the streams below, a distance of 120 feet. To the south is a high mountain range, the said range forming the right bank of the river.



THE KAKABEKA FALLS.

At the foot of the falls the banks are high and rocky, and the channel narrow. Further down the river opens out to grand proportions, while still further downwards a series of chutes and rapids extends for twelve miles on its course. Approaching the falls from the north side, the ground descends gradually to the banks of the river immediately above the cataract, and rising abruptly below the deep, rocky, walled channel, reminds one forcibly of the appearance of Niagara below the Horse Shoe falls. * * * About every second a heavy cloud of spray rises high above the falls, and apparently is going to settle down, and afford one a chance to peer into the seething, foaming chasm; but before it settles another cloud puffs up, and with deafening roar the spray is carried below

to the falls. The Kakabeka falls are small when compared with Niagara, but they are fully equal in size and volume, and more picturesque than the Chaudiere and Rideau falls at Ottawa, or the Montmorenci, below Quebec. Here little or nothing of civilized existence recalls the wandering thoughts to the dull realities of life. * * * The long predicted mills and other suggestive evidences of commerce are yet in the fertile and active brain of the capitalist, and man has done little to mar the picture, although but a few miles from the busy haunts of mining, milling and general trade. It is, however, impossible to say how long this state of things may exist. Already elaborate schemes have been prepared for utilizing this immense water-power in various economical and highly practical and scientific ways. The word "Kakabeka" is pronounced by good authority to be a corruption of Kakapikank, the *a*'s having the sound of *aw* (as in Chippewa), the name signifying "high fall." "The fall itself," writes a distinguished Canadian artist (O'Brien), "is as beautiful as anything on the continent." * * * "The river suddenly meets a vast barrier of slate, over which it tumbles into a chasm cut out of the rock by the unceasing flow of ages. * * * At the top of the cliff the water, illumined by the sun, comes to the edge in a band of purple and gold. Thence it descends a height of more than a hundred feet, a mass of creamy, fleecy foam, not to be described by pen or brush—

Along the cliff to fall, and pause and fall did seem.

* * * * *

One may sit by the hour, spell-bound, and study the motion and colour of this wonderful creation. The foam is softer in appearance than the finest wool, more translucent than alabaster, and behind it the more solid mass of water is seen, by gleams and flashes, in colour and transparency like the purest amber. The spray from the foot of the fall does not rise, as at Niagara, in a slumberous cloud. It shoots into the air at a sharp angle, with immense velocity and repeated shocks of thunder, giving the impression of a series of tremendous explosions. This peculiarity is due to the fact that the water falls upon a hard stratum of rock, from which it is dashed upward in smoke as from a floor

of marble. * * * As our lingering gaze rests upon the fall at some distance, the soft white thing looks a different order of being from the surly rocks to which it is chained. Doomed to dwell in a rocky prison, which it decks in verdant beauty with myriad cool fingers, it is sister to the rainbow which, ever and anon, comes out of the unseen world to visit us."

WHERE ARE THE MINES ?

All visitors coming to our town of late seem to be affected with a common curiosity, namely, "where are the mines?" And no one seems satisfied until he examines for himself to ascertain whether the mineral deposits, and especially silver, are as rich as reported. One and all seem more than pleased after thorough investigation that the mineral reputation that this district has gained of late does not belie the true character of the country, but that this reputation is more than justified by the searching tests that have been made during the last year in the silver districts. The various mines that are now in operation in this district are all giving entire satisfaction to the capitalists and managers interested in them, which is amply proved by the constantly increasing number of men working in each of them, and the great quantity of machinery finding its way to the mines together with the large mills that are in course of construction. Men of extensive capital are now investing in the mines, and those owning mines are so confident of success that they have abandoned the extremely cautious way of working that has hitherto characterized their operations, and are now operating as if they felt perfectly satisfied that the genuineness of their property is fully established and removed entirely beyond the region of doubt or speculation. One great point is thus gained, namely, confidence in the district as a rich mineral country; and this being established, we are not surprised that capital is so extensively interesting itself in the Thunder Bay district. American as well as English capital is seeking investment here, and we have no doubt that in a short time this district will be one of the most productive mineral districts in America. All interested in the progress and prosperity of the country should be ready

and willing to furnish all information in reference to our mines that they can possibly give, and in laying before the world the value and importance of this great district. The splendid mineral exhibit sent from Port Arthur to the Colonial Exhibition, now being held in London, we are assured, has done much towards awakening an interest in this country in the minds of English capitalists, and no doubt in a very short time we shall have more tangible proofs of this interest by the advent of both men and money from the Old Country into our district.

WHITE FISH VALLEY COMPANY.

The first notice for the incorporation of this company, which is to have its head office at Port Arthur, appeared in last Saturday's *Gazette*. It is composed of English, American and Canadian shareholders, who propose to develop the agricultural resources of a small portion of the fertile valley of the White Fish river, with a capital of \$100,000, a great part of which is already subscribed, and the balance will soon be taken up.

On the lots applied for by some of the company's shareholders considerable improvements have already been made. They have cut out roads to their various lots on which land has been cleared. Several houses have been built and others are in course of erection. Two houses are already occupied by families and the others will soon be ready for their tenants, who will be a desirable class of settlers to have in the district. The company propose to clear up large farms and to cultivate and stock them so as to assist in supplying the wants of the district. It is an effort in the right direction and the company's labors will doubtless lead to many settlers going into that part of the country to clear it up and make the soil productive of the crops for which it is so admirably suited.

THE COUNCIL PREPARED TO ASSIST CAPITALISTS.

At the council meeting Monday night there were present—Mayor Macdonell, Councillors Marks, Dobie, Meek, McLaren, Margach, Blackwood and Brown. Mayor Macdonell occupied the

chair. A letter was read by the clerk from Messrs. Ware & Gorham, stating that a party desirous of establishing a flouring mill at this place wished to ascertain what inducements the corporation would give for the promotion of such an industry. A number of the leading men of Oliver township had been seen and promised that the township council would act liberally in the matter of such a desirable acquisition to the district. The communication asked if the council of Port Arthur would agree to exempt the business and property from taxation for a period of ten years, if a flouring mill was erected and run here.

On motion by Councillors Marks and Dobie, the clerk was instructed to notify Messrs. Ware & Gorham that the council was prepared to take such action as they legally could to exempt from taxation for a period of ten years a flouring mill, said mill to be constructed on the roller process principle, with a capacity of 200 barrels of flour per day, and to be employed in the grinding of wheat at least six months in the year.

Councillor Meek thought 100 barrels a day would be a fair capacity.

Councillor Marks said the motion was made principally to give an expression of opinion as to what the council would do in such cases. If Messrs. Ware & Gorham had a man who would undertake the enterprise, well and good; but if their man failed to come to time some other man might hear of the opening. It would be necessary for the council to offer some inducement. In the Northwest they give \$5,000 to \$10,000 of a bonus for the establishment of flour mills and probably exempting them from taxation besides. The reason he had placed the capacity at 200 barrels was that a small mill could not live here and compete with the large west establishments. The work of running such a business would necessarily be a little up hill for some time, as the western men would likely drop prices and endeavor to close out the industry. To make it successful an agreement should be made that all local dealers buy their supply of flour from the mill. A mill with a capacity of only 100 barrels could be employed here in the local trade alone, in supplying Port Arthur, Fort William, Oliver, Canadian Pacific Railway east and other adjoining districts. But as mills did not run all the year round, it would be

found advantageous from every point of view, and to supply the demand, to have a capacity of 200 barrels per day. Flour could be exported from here to Montreal as cheaply as it could be sent 100 or 200 miles outside of Toronto, and we would be in a position to do a large general trade in competition with other dealers.

Councillor Dobie agreed with the representative from No. 1 Ward. At first he had thought that a specification of 200 barrels per day might handicap the promoters of the industry, but the explanation given clearly showed that this capacity would be required. This, he thought, was one of the ways in which to build up the town. We must offer inducements to capitalists to come here. We have the mines, which are fast becoming a very important and beneficial factor in the prosperity of the place. We have also a large stretch of agricultural lands in the district; but it is necessary to have some manufacturing industries, in order to secure the proper development of the place. He would heartily support the proposition.

A vote was then taken on the motion and every councillor voted in the affirmative, Mayor Macdonell casting his vote in order to carry the resolution by two-thirds of the members of the council, necessary in passing such motions.

OFFICIAL REPORTS ON DEVELOPMENT.

PORT ARTHUR, ONTARIO,
December 30th, 1885.

SIR,—I beg to submit the following brief description of the various mines in operation in the Rabbit Mountain Mining Region, a portion of which is incorporated in the Township of O'Connor, which I had the honour of surveying, last summer under instructions from your Department.

All of these mines are situated from 25 to 28 miles from Port Arthur, or about 12 miles from Murillo Station, on the line of the Canadian Pacific Railway.

"The new Colonization Road, built by direction of your Department, affords constant and convenient access to the majority of these mines at all seasons.

“In alphabetical order the mines are as follows:—

First.—Beaver Mine.—97 T.

“This mine at present employs some 43 miners and is operated by wealthy American capitalists, who are so satisfied with the large amount of splendid silver ore in sight, that they have contracted for the erection of an extensive mill for the treatment of ore on the spot, thereby saving the almost ruinous expense of teaming the same to Port Arthur and shipping from thence to New York.

“This is undoubtedly a most valuable and promising mine, with a good strong vein, which has been developed, both horizontally and vertically, by tunnels and shafts to such an extent as to insure a steady industry. The new road passes within less than one-half mile of this mine.

Second.—Rabbit Mountain Mine.

“The Rabbit Mountain Mining Company are operating on Mining Locations 39T and 40T. A great deal of work has been done here, about 35 men being constantly employed.

“This was the first discovery in the region and has yielded a large quantity of rich ore, which heretofore has been shipped to New York at enormous expense.

“Some of the nuggets of silver found near the surface were several pounds in weight, rivalling the ore obtained from the famous Silver Islet. There is a large quantity of low grade ore in the various dumps, and the Company have stipulated to erect a stamp mill before the snow disappears.

“A very comfortable and commodious hotel and store, besides numerous other buildings, make this place quite a village. It has also a Post Office, which is supplied with a weekly mail.

“This mine can be reached by either the Colonization Road and a branch road of four miles, or *via* the ferry over the Kamistiqua River and the nine miles of road which the original miners made at great personal expense.

Third.—Rabbit Mountain, Junior.

"Mining Section 57T, or Rabbit Mountain, Junior, as it is called, is immediately adjacent to the west of the Rabbit Mountain mine. Silver has been taken from the veins, and the owners are sinking a shaft with the view of intercepting the Main Rabbit Mountain lode, which, they affirm dips under this property.

Fourth.—Twin City Mine.—96T ("Porcupine").

"Considerable work has been done at this mine and many very rich specimens were obtained, as well as a large quantity of low grade ore extracted.

"Five miners are at work on this property, the rock from which will probably be treated at the mill to be erected near the Beaver Mine. The new road passes through this property.

Fifth.—Silver Creek.—140T.

"Little work has been done on this property as yet, although very rich specimens of silver have been obtained from the surface.

"About five men are now employed at this promising mine, which will also have the advantage of the mill to be erected in the vicinity of Silver Creek. The new road passes through this property likewise.

"There are other developments in 95T and R48, but not sufficient for extended notice.

"All of which is respectfully submitted by

"Your obedient servant,

(Signed)

A. L. RUSSELL,

Provincial Land Surveyor."

"Honourable T. B. PARDEE,

Commissioner of Crown Lands,

Toronto."

Since the date of the above report, stamp and crushing mills have been erected at the Beaver and Rabbit Mountain mines.

Conspicuous among the many substantial improvements carried out by the Local Government in the way of opening communication with the mines during the above season, may be mentioned the construction of the

KAMINISTIQUEA BRIDGE.

This spans the river of the same name on lot 33, concession 1 of the township of Paipoonge, and is a substantial and useful work. Its total length is 714 feet, comprised of two main spans of 60 feet, and the remainder 20 feet spans or openings, the substructure being piles, with framed end abutments filled with stone, and every precaution taken to make the bridge as secure as possible against spring or other freshets. It is upon the line of Rabbit Mountain or White Fish Lake Road, and is the best selection of site to be found for such a bridge between Fort William and Kakabeka Falls. Owing to the great width of water and quantity of ice which beats against this bridge, it became necessary to increase the waterway of the principal channel by introducing an additional opening of 60 feet, as also to strengthen other parts of the structure, so as to insure it against injury and meet the heavy traffic in machinery now constantly being conveyed over this bridge to the various silver mines.

The total cost of the bridge, including the expenditure of last year, is \$6,911.93, and for a bridge 714 feet long is by no means excessive.

In 1873 a bridge was partially built at Point de Meuron, on the site of the present structure, but before completion the piers and abutments became damaged or displaced by ice and freshet, and so remained till this year. Cost \$5,840.

The amount collected is in excess of the collections of 1885 and of the estimated receipts for the year, and may fairly be taken as indicating that transactions in sawn lumber in 1886 have been of increased volume, that sales have been more readily effected, and on improved terms as compared with the previous year.

TIMBER REVENUE.

The revenue accruing from the Western Timber Limit (including Thunder Bay) is as follows:—Interest, trespass, etc., \$9,322.73; timber dues, \$210,167.24; ground rent, \$24,707.50; bonus, \$149,013.00; making a total of \$393,210.47.

For the year 1887 the forecast is an increase in the cut of saw-logs and a diminution in the manufacture of square and waney pine.

NEW TOWNSHIPS.

A number of new townships will likely be surveyed during the present year along the line of the new railway, and the completion of the road to Silver Mountain may be looked for.

AN IMMENSE INCREASE IN LAKE SUPERIOR FISH TRADE.

Ottawa Journal.—In conversation with Mr. Clarke, Ottawa, agent for the Dominion Express Company, a reporter learned that the quantity of fresh fish handled by the Ottawa dealers has increased over double since last year. The cause of this increase is that in ten years past, all the fresh fish used in Ottawa were caught in Lake Huron and shipped to Toronto dealers, from whom the Ottawa dealers had to buy. Consequently the fish, by the time they reached Ottawa, after being kept in Toronto a week or so were, if not tainted, at least were not very fresh. But since the inauguration of traffic over the new line of the C. P. R., by way of Lake Superior, arrangements were made with the large fish-catching firms in Port Arthur, by which the Ottawa and Montreal dealers were enabled to get fish direct from Port Arthur. Not only were they perfectly fresh, but they were also of a much better quality than the fish caught in Lake Huron.

“Is the fish trade on Lake Superior a very extensive one?” enquired the reporter.

“Well, I will just try to give you an idea of its extent. We receive here in Ottawa shipments of fish from Port Arthur two days in the week, Tuesdays and Thursdays,—” (pulling a shipping bill from among a pile of others) “this is a sample of what amount we receive in one shipment.” The bill showed that in one week 2,650 pounds of fish arrived in Ottawa from Port Arthur.

Now when you consider that the shipments to Ottawa are only a mere nothing compared with the total amount shipped from that place you can imagine the extent of the trade. Why, there are thousands of pounds of fish shipped from Port Arthur

to Chicago and Duluth every year. In Chicago Lake Superior fish is worth one cent per pound more than any other fresh water fish offered for sale. The fish trade in Lake Superior has more than doubled itself within the last year, and now not only are the Chicago, St. Paul and Duluth markets supplied with fresh fish from Canada's fresh water sea, but an immense trade is being built up with eastern Ontario and Quebec even as far east as Montreal. All this fish is, of course, shipped to encourage the trade."

PORT ARTHUR'S WATERWORKS—REPORT ON FOUR PROJECTS—THE CHEAPEST AND BEST SCHEME FOR SUPPLYING WATER.

A special meeting of council was held last night. There were present Councillors McLaren, Mackay, Dixon, O'Connor, Smith, Dobie and Marks, with Mayor Macdonnell in the chair.

The only question which came up was the informal report of Mr. Elwyss, an expert waterworks engineer, from London, England, who has been some days investigating the feasibility of four projects for supplying waterworks for Port Arthur.

Mr. Elwyss thought the town was in the happy position of few places in having many sources of supply. There were four different schemes proposed for obtaining water. He would refer first to the one he was least disposed to recommend, and continue in that order to the most favourable one. The water of the lake was very pure, and the first impulse was naturally to look there. The chief drawback was the necessity of raising the water either by steam or water power. It was a useless extravagance to use steam where such a good water-power as there was here could be obtained.

With reference to the scheme of taking the supply from a point opposite the town and outside the breakwater, the objections were the great expense to bring the water power from Current River, and the likelihood of contamination by sewage. To avoid such objections it would be necessary to go to a point at some distance, and the most favourable spot was at the other side of Bear Point, just north of Current River, where the water was 20 feet deep a short distance from shore. The trend of the shore

line would tend to divert any sewage carried that way out into the open lake. This was the nearest available point to Current River where plenty of water power could be obtained at moderate cost.

The only way to get the water at high pressure up to the ridge on High Street, west of the town, and 200 feet above the lake, at reasonable cost, would be by the Holly principle—pumping direct into a pipe. The pipe would have to be made big enough to supply both domestic and fire purposes.

On a basis of a population of a 1,000 people, 60 cubic feet of water would be required per minute for house purposes. To provide a fire supply of 10 hose streams, 200 cubic feet a minute additional would be required.

The expense of such a scheme would be about \$250,000. It would be unwise not to take advantage of the ridge on High Street for a low level reservoir in any case. In the event of a break in the pipes the reservoir would supply water until repairs were made, and it would be valuable in case of fires in the lower town. The higher portions of the town could not be supplied from there, and to give them service the town would have to pump for a supply or look for a higher spot on which to construct a reservoir.

This project does not give the advantage of a high service reservoir. The whole service would be entirely dependent on the machinery being in order, and there would always be the risk of pipes bursting.

CURRENT RIVER PROJECT.

Water could be supplied from Current River at a point 150 feet above the lake. By constructing a reservoir at 350 feet, just beyond Shuniah mine, one mile from the river, a pressure of 250 feet at High Street could be secured. The water would be pumped into the reservoir by Current River water power. The cost of the scheme with a high service reservoir only would be \$240,000, and with a low service reservoir, \$250,000. The reservoir would hold four and a-half days' supply for domestic and fire purposes. The only drawback to Current River water is that, like McIntyre River, it is somewhat discoloured by peat. The

water is good, there being only six grains of solid matter to a gallon. The discoloration can easily be got out. It is a mere matter of sentiment. There have never been any injurious effects from water so discoloured by peat.

It would be bad economy to dispense with the low reservoir and depend only on one some miles off.

McVICAR'S CREEK.

McVicars's Creek is too small, and could not be made available unless Current River was diverted. This is not necessary when there are other sources.

McINTYRE RIVER.

The next scheme was to take the water from this river about three miles above the cemetery, where it was some 250 feet above the lake, and pump it up to a reservoir on the Red River Road about 350 feet above lake level. If there was no reservoir constructed at High Street ridge the project would cost \$180,000. A high and low service would cost \$221,000. A low service reservoir would give a house supply of 24 hours and a fire supply of about half a day or so. This scheme has an advantage over the lake and Current River of effecting a saving of \$30,000.

THE BEST SCHEME.

The last scheme, which is the cheapest and best, was to cut the McIntyre River at a point some 420 feet above the lake level, and six miles from town. The water could be diverted into a wooden flume and follow the contour of the country to the same spot on Red River Road mentioned in the former scheme, 350 feet above the lake.

This scheme would cost \$154,000 and deliver water at a pressure of 220 feet, but if a high pressure is wanted the pipe could be laid from the 350 foot level at an additional cost of \$13,000, making a total for high and low service of \$167,000. All other schemes depend on pumping, which is expensive, demanding men and machinery. By this scheme one man only is required. There

are one or two doubts to settle, which can only be done by a detailed survey. There is rather a tight fit about levels. But if the contour is not favourable from this point the water might be taken at a higher level, even if a small dam was constructed. The next doubt is the sufficiency of water supply. The general opinion is that there is plenty of water. If there is as much water as will pass through a 12-inch pipe, that is enough.

In the estimates of cost \$5,000 is allowed for rock excavation on five miles of pipe. The last plan is the simplest, cheapest and best.

From the reservoir in High Street ridge a 12-inch pipe would be brought down Waverly and Park Streets to Cumberland and branch off into two eight inch-pipes.

Five and a-half miles of pipe would take in four-fifths of the population, and bring the other fifth within 500 or 1000 feet of a hydrant.

The average cost of pipes is \$8,500 per mile, and \$15,000 is included in the estimates for laying services to houses.

Algoma Street would be about the dividing line between the high and low service. The low service covers all houses below that line and the high service all above.

A number of questions were asked Mr. Elwyss by the councillors regarding the cost of pipes, etc., and the meeting adjourned.



FORT WILLIAM.

THE ECHO.

As showing that Fort William has made solid, if not rapid, advancement since our first visit to it, a comparison between then and now will prove interesting reading, inasmuch as it will afford positive proof that the early settlers had good grounds for reposing faith in its ultimate prosperity as a shipping port and railway point.

In the year 1880, the now prosperous village of Fort William was only a hamlet, with a population of scarcely 200 white people, while the first month in 1886 finds the municipality containing upwards of 2,000 souls, and such evident signs of still greater prosperity in the future as should convince the most sceptical that naught can stay its development in the near future into a large and thriving shipping port.

Returning to the period when we first saw Thunder Bay and the famous Kaministiquia river, Fort William could then only boast of owning four stores, one church, three hotels, three carpenters, a blacksmith shop, telegraph and post offices, C. P. R. engineer's and contractors' (construction) headquarters, together with the round-house and "Neebing hotel," which was then used as government offices. Now, besides the buildings enumerated, we have one drug store run by Dr. Hamilton; one hardware store owned by W. S. Piper; stationery, fancy goods and news depot, W. A. McCallum; the dry goods establishments of Messrs. John King, Arch. McLaren and the Rutledge Bros.; the general stores of Messrs. John McLaurin, Ed. Deacon, — Pelletier and F. de Hertel; A. D. Sutherland does an extensive trade in groceries, liquors, vegetables and canned fruits; Messrs. A. T. McDonald and

P. Robin also deal in groceries and notions, while H. J. Grant does a fair business in supplying the citizens with the "staff of life," and as we are treating of those who supply the wants of the "inner man," we must not omit to mention the first-class meat and vegetable marts of Messrs. H. Harkness, and Donnelly & Hancock, which would be a credit to many towns affecting more city airs than does our steady-going village. Three dress and mantle-makers look after the apparel of the ladies. J. T. Campbell and M. Blue see that horses are properly shod and also do a general blacksmithing trade. S. Stevens is here to see that you have a chance to "secure the shadow ere the substance fades," and turns out really good photographs.

Where three hotels used to suffice for the entertainment of the hungry, footsore and weary traveller, nine good hostelries occasionally find it almost impossible to provide lodgings for would-be guests. Foremost in this branch is the "Queen's."

The churches, also, have made substantial progress in the way of pointing out the "straight and narrow path," and where the Presbyterians were first in the field, the Methodists have followed, both denominations having resident parsons to see that the members of their respective flocks walk as nearly upright as 'tis possible for frail humanity to do. Besides these two, the Episcopalians, Roman Catholics and Baptists hold divine service every Sunday, the two first named having in contemplation the erection of commodious places of worship early in the summer.

In the schools three teachers are now employed, while in 1880 one dominie had an easy time.

The learned professions are represented by Dr. Hamilton and C. N. Black, D. L. S. ; the legal fraternity finding it an unprofitable field for litigation, are unrepresented.

One public hall affords quarters for holding entertainments, and, while "star" troupes of the minstrel variety give the district a wide berth during cold weather, local talent keeps its doors open to the amusement-loving public.

But it is more particularly within the past eighteen months that the town has made substantial progress in the way of improvement, including the grading of streets, building of sidewalks, dwelling houses, stores, hotels, railway buildings, coal docks,

court house and jail, and the most complete elevator on the continent.

In the west end there has been erected upwards of 100 dwelling-houses, nine stores, and five hotels, the court house and jail of dimensions 40 x 60 feet, two stories high, stone foundation and cellar, brick cells and timber walls, *a la* elevator style. Then we have the large coal and grain sheds of the C. P. R., together with their monster water-tank, their pump house and several lesser buildings.

In the eastern end of the town many improvements have been made since the summer of 1884. Over two miles of streets have been ditched and graded, and a fine sidewalk built on Victoria street; and in the same vicinity where 18 months ago it was a "howling wilderness," there have been erected 20 buildings, fine two-storey residences, stores and hotels, and new buildings are continually going up. One of the hotels—the Avenue hotel—changed hands the other day at something over \$3,000; another unfinished hotel (Simpson's), a three-storey building, also changed hands, and the purchaser is bound by the terms of agreement to increase its capacity, finish it off in good style and have it ready for business by the opening of navigation.

The Canadian Pacific Railway Company, in addition to erecting the buildings already mentioned, have built over 1,000 feet of first-class dockage, having a frontage depth of water of 18 feet. The new coal docks with the fine improved patent derricks, are 150 x 500 feet, and for completeness of machinery, etc., are unsurpassed by any.

The elevator, too, in all its arrangements, is allowed by good judges of such buildings to be one of the most complete in all its arrangements of any in the world. It is also one of the largest, being 424 feet long by 85 feet in width and something over 130 feet in height, with a capacity of 1,250,000 bushels.

These works showed to great advantage on the occasion of the reception of the Governor-General, when the majestic Kaministiquia river—over 300 feet wide—was spanned across from the top of the elevator to the top of Carpenter's mills, by an immense banner upon which were in large letters that could

be read at a mile's distance from the approaching fleet of steamers that bore His Excellency and party, the words "Welcome to Fort William."

Within the past year, too, the population has largely increased—more than doubled—yet the harbour was in a very unsatisfactory condition. It was only near the close of the shipping season that the dredging was sufficiently advanced to permit the larger lake craft entering with full cargoes. But with the improvements which were made the deepest draught craft that navigates Lake Superior found it an easy matter to enter in daytime on a draught of 16 feet. 'Tis true some parts of the channel require more dredging to make it complete, but, taking all things into consideration, the Fort William shipping makes a good exhibit and shows that we may expect greater things from it in the future. The tonnage of the American steam and sailing craft that visited this port last season amounted to 33,066 tons, and they delivered here some 23,000 tons of American coal. The revenue in duties that should be credited Fort William for this coal alone would be about \$14,000. The number of Canadian craft that did business on the Kaministiquia during the same period was 95; total tonnage 90,096, and total cargoes 30,324 tons.

It may also be mentioned that, after the dredging had advanced so as to allow boats of deep draught and heavy tonnage to enter this harbour in the autumn, the following craft entered with full cargoes of coal :—

NAME.	Draught. feet.	Cargo. tons.
Str. Iron Duke.	14	1,402
Schr. Iron Cliffe.	15.2	1,624
Schr. H. D. Alveson	15	1,504
Str. Australasia	15.4	2,202

The latter is the largest craft that floats on fresh waters.

* * * * *

THE INDUSTRIES OF FORT WILLIAM

lie principally in the lumber trade, of which she is probably the chief depot on the upper lakes. First, we have the establish-

ment of Messrs. Graham, Horne & Co., who, if not the pioneer lumber dealers of this section, are at least the oldest existing establishment of the kind. Their large planing mill has a capacity of 24,000 feet per diem, and their average sales of dressed lumber have amounted to better than 12,000,000 feet per annum. In addition to dealing in rough and dressed lumber, these gentleman do quite a trade in coal, lime and salt. They also do a considerable shipping or forwarding business, being owners of the palace steamer Ocean, the tug Salty Jack and the large schooner Sligo. The members of this firm, being shrewd business men, give prompt attention to all orders entrusted to their care, and generally try to make things pleasant for customers.

W. H. Carpenter comes next with a saw-mill capable of cutting 25,000 feet daily; the planer run in connection has a capacity of 12,000 feet per diem. Mr. Carpenter has 35 men in the woods this season and will get out over a million feet of logs.

The Neebing Lumbering Co., Charles Garner, Manager, also has a considerable force of men and teams engaged in the woods getting out logs and shingle bolts, and a portable saw and shingle mill will shortly arrive for them to manufacture lumber and shingles.

The Algoma Lumbering Co.'s large planing mill, erected on one of the prettiest mill sites in Canada, is complete in all its appointments. The machinery is of the most approved modern style; the mill itself is a handsome structure, with a switch connecting it with the main line of the Canadian Pacific railway. The boarding house and other buildings in connection are worthy of the mill, and altogether cost the company \$90,000. At present this valuable property, in consequence of dissensions among the proprietors, is lying idle, but strong hopes are entertained that new life will be infused into the concern shortly and the tuneful buz and hum of its machinery heard in Fort William again.

Messrs. Hammond & McDougall give employment to a large number of men in the woods, their forte being ties and piles. They have large contracts with the Canadian Pacific Railway and do a good business in the lines mentioned.

The Fort William Brick Works, Messrs. Armstrong, proprietors, come next in order. These gentlemen manufacture a

really excellent quality of red and white re-pressed brick, which are fully equal to the St. Louis article—for proof of which see the “Northern” Hotel and the school-house, Port Arthur. While not at liberty to state the amount of business done last year, we are assured that the Messrs. Armstrong realized their most sanguine expectations, and are now confident that the coming season will find them doing a much larger trade. They are quite capable of supplying the demand. The clay used contains neither lime nor alkali, and is found in almost unlimited quantities. As yet their trade is confined to supplying the home market, but we are assured that the manufacturers purpose making a “big push” during the coming summer to place their brick in the Winnipeg market, where we have no doubt it will give the best of satisfaction and command a ready sale.

Other industries are spoken of in the near future, such as a pulp mill for the manufacture of paper from poplar wood, of which there is any quantity in the vicinity of Fort William.

Capitalists of undoubted means have also in contemplation the erection of large flouring mills, to grind the famous Manitoba No. 1 hard; and, in short, we offer the very best inducements to capitalists to come and invest their means in building up the future city (Fort William and Port Arthur), between the rock-bound coast of the Atlantic and the sunny slopes of the Pacific.

Our mineral, agricultural and timber lands speak for themselves. Fort William is centrally located, and hard is he to please who cannot be satisfied with the inducements offered by the Thunder Bay district.”

CROWN LANDS.

A persusal of the following extracts from the report of the Commissioner of Crown Lands, referring to lands in the Thunder Bay district, will convince the most sceptical that Fort William is located in a section of the country that for fertility of soil and adaptability to agricultural, mineral and lumbering pursuits, cannot be excelled :—

MINING LANDS.

Over \$12,000 have been received for about 7,700 acres taken up as mining locations about Rabbit and Silver Mountains. About \$8,000 of this amount have been paid in the mining lands at the rate of \$2 per acre.

FREE GRANT LANDS.

Forty-four persons have been located on 6,550 acres in the Townships of Oliver and Paipoonge, and 365 acres have been sold. There have been 24 cancellations for non-fulfillment of settlement duties, and fifteen people have obtained patents for their lots.

The Government have not yet decided on making Gillies, O'Connor, Lybster, Marks and Strange, free grant townships.

TOWNSHIP GRANTS.

During the past year three new townships have been surveyed, comprising over 23,000 acres, in the White Fish Valley, viz.: Marks, Strange and Conmee, and an exploration made of the Rainy River district.

MARKS TOWNSHIP.

Surveyed by Mr. M. J. Butler, C.E. and P.L.S.

The south-easterly one-third of the township, comprising about 8,000 acres, is a comparatively level section of country, the land being gently rolling, the soil a rich black clay loam, well adapted for farming purposes. The underlying rock is chert. The northerly and westerly two thirds is rougher with high hills of granite and trap rock, overlaid with a light covering of sandy soil and boulders, and is not adapted for farming purposes.

The township is well watered by numerous small rapid running creeks, and several large ponds, the water in every case being clear, cold and wholesome, the source of supply being mostly from springs.

Brook or speckled trout were the only fish seen, but of these there was a great abundance. Of fur-bearing animals the only representatives seen were the beaver and fisher.

No signs of the common red deer were seen, plenty of cariboo tracks were run across, showing them to be quite numerous.

Bears were also plentiful ; of the smaller game partridge were the only variety seen.

This whole section of the Province was over-run with fire some years ago, and is now grown up with almost tropical luxuriance, birch, white and yellow spruce, poplar, jack-pine, tamarac, balsam, with an occasional white pine, forming the larger growth. Many of the spruce and tamarac are fine large trees, suitable for lumbermen's purposes.

The poplar from its whiteness and long, clear growth, is particularly well suited for the manufacture of paper. The undergrowth is composed of hazel, dog-wood, small balsam and soft maple. In the vicinity of this township there are at present four mines at work, employing quite a number of men, and constantly increasing. The Canadian Pacific Railway station at Murillo is only fifteen miles distant from Fort William. A Government colonization road passes within five miles of the south-east angle of the township. The new projected Thunder Bay Colonization Railway passes about four miles to the south. By the construction of about four and one-half miles of road, easy access can be had to the whole of the good land, and as there are also large sections in the adjoining township suitable for settlement, there is little doubt that in a few years the whole section will be taken.

CONMEE TOWNSHIP.

The part surveyed is well watered, and except in the north-west is well timbered, and the lay of the land is favorable, being southerly and easterly.

The soil on at least seventy-five per cent. of the township is suitable for farming purposes, and the township as a whole may be considered as above the average of the agricultural lands in this district. The eastern half of the township is more adapted for settlement, being heavy clay overlaid with vegetable mould.

In the north-west portion sandy soil predominates. Numerous small streams traverse the township, Brulé Creek on the north and Cedar Creek on the south-west being always amply supplied with water.

The settlers from the township of Oliver, who were employed on the survey party, considered that the eastern part of Conmee township was superior to the average class of land in their township. The vegetables to be seen at the several clearings were sufficient evidence of the excellence of the soil.

SLATE RIVER LANDS.

EXAMINATIONS ALONG THE RIVER IN BLAKE AND PAIPOONGE TOWNSHIPS—DESIRABLE SETTLERS FLOCKING TO THE ALMOST OPEN PRAIRIE RICH SOIL—(MAY, 1887.)

Meeting Mr. Roland on his return from an extended examination of the above district, a *Sentinel* representative gleaned the following interesting information touching the settlement of that favored tract :—

“It is now about ten months ago since I made a particular topographical examination and valuation of a considerable tract of patented mineral, timber and agricultural lands along the valley of the Slate River, belonging to Toronto people, as well as a general report upon the great natural advantages of that district generally as a field for agriculturists, a brief report of which appeared in the *Sentinel* of July last.

At that date I placed an estimate upon the value of lands in this particular section that caused quite a ripple of excitement among practical men both within and without our own community, not only as a field for agriculture, but also as a sheep and cattle ranche. Foremost among the few practical men who tested the accuracy of those highly favorable reports upon its great capabilities may be mentioned Mr. D. F. Burk, who examined the country in South Paipoonge for himself and immediately afterwards secured the lease of a large area of this extensive park-like grazing range, whereon he placed a large stock of young cattle with splendid results, notwithstanding the fact of

its being an exceptionally dry summer. Up to this date, or for a period of twenty-six years, (date of survey 1859-60) comparatively little was known of this rich and practically inexhaustable soil as a field for settlement. True applications were made as long ago as 1878 for free grant sections in this direction by well known old residents of Port Arthur, and the traveller throughout the township of Blake to-day, who happens to run against a certain south-east quarter post in the 7th concession, may read the following legend:—"This lot claimed by Charles Augustus Everitt;" while upon another may be observed: "Claim of Mr. Geo. Hill Kennedy, 5th March," and upon the north-east quarter of lot 10 in the 8th concession, 160 acres, "Geo. F. Duggan, July, '78." What becomes of claims like the above? If ever placed upon record I presume they have long ago been cancelled, but whether the rich lands in the concessions 6, 7 and 8 are yet open for homesteading we shall probably never know definitely until some practical man like Mr. Burk goes out there, and after demonstrating what the soil is, makes application for a tract for a "model farm."

"Yes, I will explain: At the time Mr. B. examined the lands in the valley of the Slate, there was not one solitary settler or applicant for a free grant, where to-day there are upwards of twenty-three entries and many actual settlers there, while some six or seven others are out there at the present moment, making arrangements for putting in some crop and otherwise fulfilling their homestead duties.

"Many of these are old countrymen, Scotch and English, while others are practical Canadians who have lived and hunted in vain throughout the storm swept prairies of far west Dakota and Minnesota for such a place as this favored portion of Algoma alone can offer. Four at least of the old countrymen have very emphatically expressed their opinions regarding their claims in the 3rd, 4th and 5th concessions, (lots 12, 13, 14, 15 and 16) in the following characteristic manner:—First the hardy Scot observed that 'Right here in one line are my own and my two brothers' lots, or 300 acres altogether; you valued the private lands out here, I believe, at one pound (\$5) an acre last year?' 'Yes.' 'Well, I have seen our free grants now—there they are,'

Nos. 14, 15 and 16 in the 4th concession, and, believe me, I think they are good value at \$1,000 each. Ech, mon! I only wish we had the auld mon here; how he would appreciate the scene. Here are real grand mountain ranges surrounding our well watered table land—there is nothing like it between here and John O’Groat’s.’ ‘Not even in Midlothian?’ I suggest. ‘Ah, weel, the Lothians are fine certainly, but ye ken there are nae free grants there.’” This was Mr. Alexander McDonald, of Point de Meuron farm, who, with his two brothers, George and Angus, appear to be more than pleased with their homesteads.

Another settler, Mr. Newton, (central counties, England) secured some time ago a homestead and pre-emption upon lots 12 and 13 in the 4th concession, immediately east of Alexander McDonald and adjoining the lands of ex-Governor Morris, of Manitoba. Mr. Newton has lived for some time on farms in the vicinity of Brandon and Oak Lake in Manitoba, and marvels much that nothing has ever been done by our citizens to divert a portion of the practical class of old country emigrants or capitalists into this district. Mr. Newton estimates his two sections or lots worth a thousand dollars each. Immediately south of Newton on the 5th concession are the lots of John and Angus McClure, father and son. Mr. McClure, senior, is a practical Scotchman, who fully appreciates the value of his really fine lots, and who with his energetic and resolute-looking son Angus, intend to begin seeding “right away.”

“How is this desirable tract of good land reached?”

“At present you have your choice of two or more routes, including the old ferry road, along the north bank of the picturesque Kaministiquia River to the Rabbit Mountain crossing, thence south over a comparatively open and rather sandy ridge in concessions A and I; or you can take the Pigeon River road through the Point de Meuron farm and crossing by the new and substantial Government bridge across the Kam, follow the Pigeon River road for about 1,320 feet to a point where a new road is being constructed in a general westerly course throughout the second concession of Paipoonge. Beyond or even up to the crossing of Slate River little effective work has so far been carried out, and at the present time is hardly available for horse or foot. The

bridge crossing the Slate, quite a piece of work in itself, is, however, without cribs, piers or approaches, and not of any striking advantage. Rome, however, was not built in a day, and doubtless before the advent of spring floods a great improvement will be effected here. The settlers going in there appear to favor this road being located upon the line of concessions 2 and 3, and westward to Rabbit Mountain road. This route is also advocated by their reeve, Mr. Sidney Smyth. Projected westward across the Rabbit Mountain (ferry) road, this would tap some three or four promising mines, including the Big Bear, and intersects the Government colonization road at the Elgin mine, a little north of Beaver Mountain." "Is all the lands in that quarter (Slate River) taken up?" "Almost. Certainly all the open or burnt tract. A few sections of partly wooded land remains unsettled, settlers as a rule preferring the cleared ground, timber and thick underbrush being regarded by many homesteaders as a most unfavorable aspect of affairs. I have, however, seen some good land in the burnt portion of Blake, and quite a number of intending settlers are here in Port Arthur to-day for the purpose of consulting the Government Agent for Crown Lands, Mr. Margach, with regard to this township. The settlers with whom I conversed respecting this section of country, express great satisfaction with the Local Government and its officers here, for their uniform courtesy and strict impartiality in the manner of dealing with applications from all classes. Returning by way of the ferry, I noticed a nice frame dwelling house on lot 13 in the 1st concession south of the Kaministiquia. This building belongs to a young homesteader, Mr. Hunt, whose long experience in the North-west convinced him that he had at length found what he had so long pined for—a good homestead possessing the great natural advantages of fuel and water combined with the charms of a most delightful climate and scenery. Near to Hunt's claim is a large area of improved land upon which a log house has been erected by Mr. D.F. Burk, the pioneer of the Slate River country. Another settler, Mr. Bennet, at present residing upon lot 13, (the ferry) has entered for lot 9 in the first and intends beginning his improvements forthwith. The distance from the Rabbit Mountain

ferry to Fort William west is under ten miles over a good road; this road is continued westward from the ferry, touching Murillo station on the Canadian Pacific railway, and thence to the numerous falls above and below the Kakabeka or Grand Falls."

A RACE FOR LIFE.

"Bear hunts and other exciting sport I presume are quite common out there?"

"Bears, although known to exist there at all seasons, have a peculiar way of keeping out of sight when wanted. Prairie chicken, however, are more numerous than upon ordinary seasons. Nothing, however, occurred out there upon this occasion to relieve the monotony of the long days until the pretty village of Fort William was reached after a walk of fourteen miles from camp. The train from the west was rapidly approaching the switch to the west, about 400 yards distant from the station. At this point the main line sweeps sharply to the north-east, so that an east bound train is barely visible through a fringe of bush and scattered shanties from the platform or office windows of the station. There, also, a number of sidings are curved off at various angles, one going direct east to the roundhouse from the switch referred to, and toward which all eyes were directed as the overdue train came thundering along, while right in the centre of the curved track and on the main line stood a child of about two and a half years, apparently utterly unconscious of the untimely end that appeared so inevitable. * * At this crisis in our moments of suspense, a man was seen bounding to the rescue of the unfortunate urchin, and although the chances appeared as about 100 to 1, that he must arrive too late! or worse still, perish in the attempt, we had the intense satisfaction and relief of seeing him snatch the child from the jaws of death, in less time than it takes to relate this decidedly meritorious deed. After boarding the train for Port Arthur, I learned that this clever rescue was made by the master mechanic or mechanical superintendent of the Canadian Pacific Railway Company's shops at Fort William, Mr. Priest."

THE SILVER DISCOVERY ON THE MILWAUKEE COMPANY'S LOCATIONS
—R200 AND R201—CAPT. BUCHANAN IN CHARGE.

As soon as the prospecting party, now working on the Eschweiler location near the Porcupine mine, had penetrated the trap overflow of the country and reached the silver slates below, they struck silver in the vein both in its native state as wire silver and in ore as black silver or argentite. Mr. Buchanan, who is at present in charge of the work, sent Mr. Eschweiler a box containing samples of the silver and ore which was exposed to sight since Mr. Eschweiler's departure a few days ago to organize his company for more extensive operations.



PART II.

HISTORY, LOCATION AND DEVELOPMENT OF OUR NEW MINES: GOLD AND SILVER,

Compared with other Mines of LAKE SUPERIOR.

OUR WESTERN SILVER DISTRICT: ARROW AND WHITE FISH LAKES, —SILVER MOUNTAIN—

THE PRINCIPAL MINES AND PROSPECTS IN THE VICINITY OF
THE RABBIT ^{AND} BEAVER MOUNTAIN SILVER MINES.
ALSO, A SHORT SKETCH OF THE
HURONIAN, OR OLD "JACKFISH LAKE" GOLD MINE.

ASSAYS OF ORES AND CONCENTRATES, ETC., ETC., FROM VARIOUS PARTIALLY DEVELOPED
LODES SITUATED BETWEEN "SILVER CREEK," "PALISADES," AND "CROWN POINT"
IN THE WEST, TO THE "ARCTIC" AND HERON BAY LODES IN THE EAST.

OFFICIAL REPORT OF ASSAYS OF SYLVANITE AND OTHER ORES OF THIS IMMEDIATE
SECTION BY THE DIRECTORS OF THE DOMINION GEOLOGICAL SURVEY: DR. ALFRED
SELWYN, DR. ROBERT BELL, DR. LEHNEN, PROF. KREISSMANN, OF PORT ARTHUR,
AND M. FERDINAND SUSTERSIC, ASSAYER TO THE BEAVER MOUNTAIN MINING CO.

REPORTS OF PROF. C. F. ESCHWEILER.

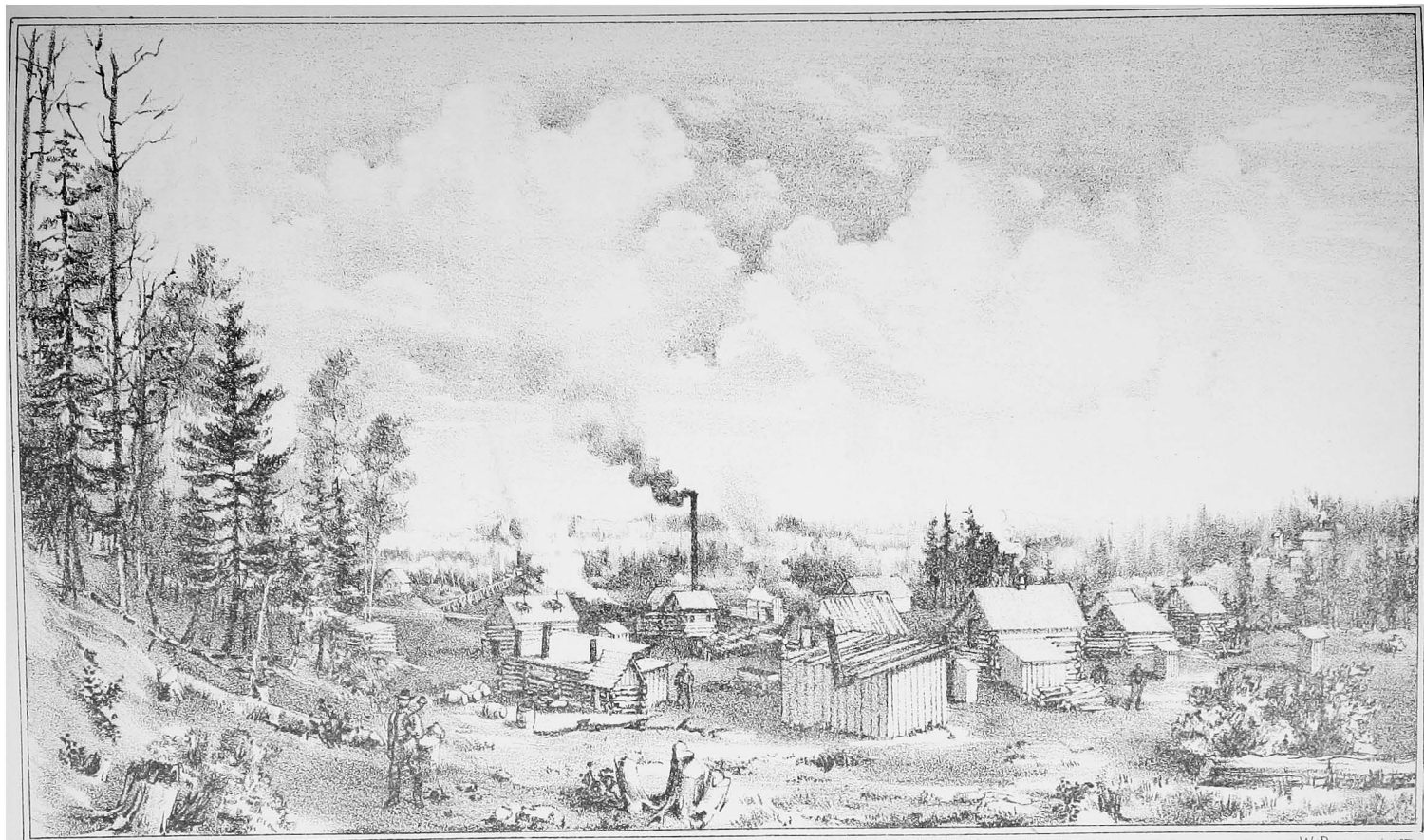
LATEST FROM THE WORKING MINES.
THE "MEDICINE BLUFF," R119, AND OTHER MINES IN VICINITY.

DESCRIPTION OF THE RAINY RIVER DISTRICT, RAT PORTAGE,
WATER POWERS, MILLS AND MINERALS, RAIL-
WAYS AND MARKETS, ETC.

MISCELLANEOUS.
"GLOBE" INTERVIEW WITH MR. CONMEE, M.P.P. FOR ALGOMA WEST,
Re RAINY RIVER.

THIRTEEN YEARS' EXPERIENCE OF A CIVIL ENGINEER AND B.A.S.
IN WESTERN ALGOMA.

MINING.
LATEST FROM LAKE OF WOODS.



Rough S. & Co. C. & Co.

— SKETCH OF BEAVER MOUNTAIN SILVER MINING LOCATION —
— NEAR PORT ARTHUR. —
— LOOKING WEST FROM MAGAZINE AT FOOT OF HILL —

W.R. March 87

PART II.

OUR MINES ON NORTH SHORE

AND

WESTERN GOLD AND SILVER DISTRICT.

1887.

Mining on the north shore of Lake Superior has this year received a great impetus, and it has never before been carried on in a more legitimate, practical and profitable manner than it is to-day. The recent discoveries and the important work performed this year by practical mine owners have established the mining industry on the north shore for all time to come. Although we have seen, in days gone by, greater excitement over mining in this district, we have never before experienced such good results as the past year has produced.

The time was when Silver Islet, with its wonderful yield, astonished the world, and we owe much to that mine for having brought our district so prominently before the world. This, however, was the only mine which was successfully worked in the district until the present.

Silver Islet has produced over four millions of dollars and it has done its duty as a silver mine, and given us a history, even if work again is never resumed there. The mine being entirely under Lake Superior rendered it always a difficult one to work, and as depth was reached, it became evident that more capital

was required to work it than the company had at their disposal. In its palmy days the mine paid enormous dividends to its original owners, and it has produced some of the most marvellous specimens of native silver which came from any quarter of the globe. It is stated by reliable men, who were in a position to know, (Captain John Tretherwey, then in charge), that more silver has been taken out of the same amount of vein-stone broken in Silver Islet than any other mine in the world. This fact and the tendency of the various minerals found in the district to form in either extensive or massive deposits, should have encouraged mining operations among us to a greater degree than it has.

ON THE SOUTH SHORE.

On the south shore of Lake Superior, just opposite us, is the Calumet and Hecla mine, which is admitted to be the greatest copper mine in the world. At this mine they have ore enough in sight to work for a number of years, with no prospect of its giving out, and they are down over 3,000 feet in the earth. The mine has paid regular quarterly dividends for the past fourteen or fifteen years at the rate of two million dollars per year, the total dividends paid to date (April 11th) amounting to \$28,850,000.

MARQUETTE.

The iron mines of Marquette, across the lake, are other instances of the massiveness of the mineral deposits of this region.

ON THE NORTH SHORE.

We have the same geological conditions for copper and iron, and we have in addition the gold and silver veins in abundance, which they have not. Native copper and copper ore have been found on the north shore, and another recent discovery of a fine quality of hematite iron of a grade and purity fit for Bessemer steel, are evidences of the existence of these minerals in the district. Not much notice apparently has been paid to these so far, as the attention of American and English capitalists has been drawn to our veins of the more precious metals, gold and silver.

GOLD AND SILVER—THE FIRST DISCOVERY BY AMERICANS.

The earliest recorded discovery of silver in this section was that of the "White Rose," on Arrow Lake. This discovery was brought about by Mr. W. A. Kindred, of Minnesota, U.S., while exploring for pine timber in the Pigeon River country. It was indicated by his Indian guide, who stated that there was a tradition in connection with it, and that years ago his tribe were accustomed to cross over from the country of the "Long Knives" (Americans) and obtain silver from this vein, which they used extensively for bullets and ornaments. This vein is about one mile south of the centre of Arrow Lake, and about one and a-half miles north of the American boundary line. Mr. Kindred saw silver in the vein at first examination, and in connection with other Minnesota men, surveyed three locations thereon and traced the vein throughout the entire property, or three-quarters of a mile. The vein is from six to eight feet wide, and rich in native and black silver. During the following season some little work was done upon it with excellent results, and a large area of adjacent land was surveyed and patented. The want of roads, however, and its distance from any inhabited place, was the immediate cause of all work being suspended, and it is a matter of astonishment to those who are acquainted with the vein, that work has never been resumed. This is now nearly 12 years ago. The vein occurs in the black argentiferous slates of the district, and contains galena and zinc-blende, native and argentite silver, associated with quartz, calc and fluor spar.

This refers to the first authentic discovery of native silver by white men, in what we may call "Our Western Silver Fields," or at any point west of the "McFarlane Band," supposed to terminate at Prince's Bay, west of Jarvis Island, where silver was found as long ago as 1845.

RABBIT MOUNTAIN.

The next and most important discovery was that of the now famous Rabbit Mountain in the fall of 1882.

This event occurred through the influence of Mr. Oliver Daunais, with a now well-known Indian named Wei-saw

Bouquachinnini (or the "Wild Man of the Forest," from whom he obtained a description of the vein, for although well disposed as the Indian was to his "Wee-maytegouche" friend, yet his superstitious belief in the evil supposed to follow the act of *directly* pointing out to white men the treasures of the "Nannabijou," would not permit him to go in person. Mr. Daunais, however, politely excused him, and being not only a perfect master of the Indian language, but also possessing a natural aptitude for exploratory work, started alone, the result of this solitary trip being the survey of the present patented mining locations so well and favourably known as Nos. "39T" and "40T."

This, the Rabbit Mountain Silver Mine, is situated in latitude $48^{\circ}, 16', 00''$ north; and longitude 90° west (from Greenwich). I may here explain to the uninitiated that the letter found before or after the number of a mining location refers to a certain surveyor who *alone* uses that particular character. For example, Mr. W. H. Furlonge, P.L.S., is here understood to have surveyed the above numbered locations, *his* letter being "T"; while Mr. A. L. Russell's professional "R" denotes that he surveyed the Silver Mountain and other mines, and their respective letters may be found scattered promiscuously throughout the entire district. Mr. Daunais' discovery proved to be exceedingly rich, but was not, however, systematically worked until some time had elapsed. The first test of this vein was made by picking off the surface two and three-quarter tons of the loose earth and decomposed vein-stone which were sent to the smelters, and yielded \$852.50 per ton.

The next test was the shipment of a carload of ore taken from the first ten feet of a shaft, which gave a return of \$645.41 per ton of 2,000 pounds.

At this period were associated with Mr. Daunais, General Edward Wilde, an ex-U. S. cavalryman of distinction, and Capt. Dan. McPhee, a well-known north shore pioneer. This mine produces both native and black silver (argentite), and nuggets of solid silver, weighing from a pound up to 45 pounds, have been taken from the shaft. It was at this juncture that the originators of the present St. Paul Company purchased the mine, which consists of a total area of 319.66 acres of land, which they hold "in

fee simple, free from all incumbrance," there being no royalties or other crown dues on minerals in this portion of Canada. Capt. John Tethervey, late of Silver Islet mine, had charge of the development of the Rabbit Mountain at this period. The past and present history of this wonderfully rich mine is, however, so universally known that further comment is unnecessary; suffice it just here to observe further that their ore assays from \$40 up to \$15,000 per ton, and that never has it looked to such good advantage as since it came under the management of Dr. Lehnen, Ph. D.

Meantime we will, with the reader's permission, follow the trail of the intrepid Oliver, who, as it transpires, had not been idle during the early developments of his first discoveries. On the contrary, we find that although he built himself a substantial log house at the Rabbit Mountain, he was by no means content with the sudden acquisition of so much wealth, and, instead of sitting down to gloat over it, or enjoy it, we find him up, and actively "looking for more." And although his friend Weissaw had long since retired to the interior (upon a well deserved pension), Mr. Daunais appears to have thoroughly acquired the peculiar art of tracing through this then gloomy wilderness a series of veins that would doubtless long have remained hidden beneath their mossy covering but for his good judgement and keen observation. The news of the discovery of Rabbit Mountain, and of its marvellous wealth of the queen metal, soon spread, and although the deep snows of an unusually severe winter ('82) were yet upon the ground, quite a number of local explorers went there, but in consequence of the positively forbidding and wierd-like aspect of the surroundings, they soon retreated, leaving the realms of the "Nannabijou" and the deep and gloomy valley of the Rabbit Mountain range with ill-disguised disgust. Roads, or even the most primitive of "Indian trails," were unknown there; and so unpromising did the outlet appear to many experienced explorers, that such observations as the following were quite familiar to old residents:—"Rich! I should say so; but of what value is such masses of silver in such a country?" "It is not possible to get it out, and I should not live out there for the wealth of five such mines."

During the following spring, the writer of this work had occasion to visit the Rabbit Mountain, and in order to gratify the curiosity of distant friends, obtained a series of dry-plate photographic views of the immediate surroundings, which then comprised the small, but comfortable log-houses of Messrs. Daunais and McPhee, with the addition of one or two smaller out-buildings. Many important changes have occurred there since that time, and it may with truth be said that those who knew Rabbit Mountain mine in that year would fail to recognise it after an absence of four years. Mills, engine houses, substantial boarding and dwelling houses, assaying offices, shaft, ore houses, have also been erected, and the once miniature log structure of the genial "Capt. Dan." has assumed most stately and commodious proportions, and is known throughout this extensive western silver district as the Windsor Hotel. This, the pioneer establishment of its kind, is also the Post Office and general supply depot of the district. It is, however, as a first-class hotel that it will be best remembered by the weary tourist or sojourner. The roads from this point to the Beaver Mountain, Porcupine, Palisade and Silver Mountain Mines, are in a tolerably fair state of repair, while the main road from Murillo, on the C. P. R. *via* Beaver Mine and thence to Silver Mountain, is a fairly good one.

A SERIES OF SUCCESSES.

To follow the fortunes of the "everlastingly lucky Frenchman," as Mr. Daunais is sometimes called, is by no means an easy matter. It appears, however, that during the winter and spring of 1883, his discoveries in the immediate vicinity of "39 and 40T" became particularly interesting, and before the autumn had set in some five or six other locations had been surveyed under his direction. But so quietly and systematically did this exploration go on that comparatively little notice was attracted by the discovery of such well defined veins as that of 97T, (now the Beaver mine) 96T, 57T or 140T, etc., all of which properties, after a little work had been carried on upon them, proved exceedingly good.

57T MINE.

This property adjoins the Rabbit Mountain mine and the vein on it belongs to the same series of veins, as its course is parallel to the Rabbit Mountain vein and distant from it only a few hundred feet. The 57T vein is a strong one about five feet wide and dips at an angle which in a few hundred feet will intersect the Rabbit Mountain vein, which is dipping under this property. It has, therefore, a value beyond that attached to its own vein. The richest portion yet discovered of the Rabbit Mountain vein is but a short distance from the 57T shaft and the two veins, if they continue on the lines of their present dips, would intersect each other on the 57T property. Its vein outcrops in the trap overlying the silver slates at a considerable elevation above the chief workings of the Rabbit Mountain mine.

The vein on 57T is well defined and strong, its gangue being similar to those in its neighborhood. In this country silver is rarely found in the veins in the trap overflow of the country, and miners do not look for silver in quantity until the underlying slates have been reached. As these slates had not been reached when work was suspended on the 57T vein, its characteristics in these slates and its mineral features are yet undetermined. The property is also on a line with a vein outcropping on the Rabbit Mountain property, the ore of which greatly resembles the Beaver mine vein. Rich silver ore in the outcrop of this vein has been found. The junction of this with the 57T vein would take place on the 57T property, a little to the north-east of its present shaft. Here is where it might be expected to make very rich in silver. It was the intention of the owners to sink a shaft a short distance deeper when the silver slates would be reached and then to drift on the vein until the point of junction was reached. Owing to the alluvial deposits the vein is not exposed at surface where this junction takes place, but it could well be reached by driving on the vein underground and thus developing it at the same time. The situation of this mine and the many points in its favor, make it a very desirable property on which to prosecute extensive mining operations. Its history will no doubt run parallel

with that of the Rabbit Mountain mine, and it is to be hoped that work on both will be resumed at an early date. They are properties that should be worked together. There is no doubt work will be commenced again if the Government road is made as convenient to them as it might be. The 57T mine is owned by Oliver Daunais, Thos. A. Keefer, W. H. Furlonge and Capt. Dan McPhee, who has had charge of the work done upon it.

LITTLE PIG MINE.

There is a very strong and well defined vein here, which shows rich in sulphide of silver. There are two cross cuts driven into the vein. It shows well defined walls in both places. Signs of civilization are beginning to appear here. Settlers are coming in, building houses and taking up land for agricultural purposes. The soil appears to be very fertile.

THE SILVER CREEK MINE.

Between the Beaver and Twin City mines on the adjoining location to the latter is the Silver Creek mine now under process of development. The mine was discovered by Oliver Dounais in 1883, and work was commenced on it by its present owners this summer in anticipation of the new Government road passing that way on the line of road originally mapped out for it by the petitioners for the road who advocated it. The mine is in the same geological formation as all the mines in our new silver region. It is a vein about three feet wide and produces both native and black silver, the ore greatly resembling that which the Twin City mine produced. It is either on the same vein as the Twin City or one parallel to it about 400 feet distant from a line produced on the course of that vein as located on the Twin City mine property. The Silver Creek mine is steadily producing a fair grade of good stamp rock, which can only be handled and treated successfully when machinery can be taken in for that purpose. The whole veinstone is pay ore, and some of it is so rich that it is being selected and laid aside for shipment to the smelters when it can be more cheaply and conveniently hauled.

Fine specimens showing the native and black silver (argentite) have at different times during the progress of the work been brought to town, and at the mine a very fair grade of ore can be seen. The vein outcrops on a side hill where the development work is being done. Like other mines in the vicinity it can be cheaply worked by drifting on the vein into the hillside. Large quantities of ore can thus be extracted without hoisting or pumping. The mine has been examined by several experts and mining men who have reported very favorably on it. It is a convenient sized vein to work and when the new road is finished it will be easy of access. There is a fine stream of water running through the location. The soil is good for agricultural purposes and the property is thickly covered with the usual timber of the district suitable for fuel and mining purposes. If the development work continues as satisfactorily as it has done to the present time, there will be a considerable quantity of packing ore for shipment this fall. The property is being developed with a view to sale or getting it in the hands of a company to work it.

140T MINE.

This property adjoins the Silver Creek mine on the north and lies about a mile west of the Beaver mine. The vein shows in strong outcrops on a side hill, and its course is apparently more east and west than the Rabbit Mountain and Silver Creek veins. It is situated in the same geological formation as these and other veins in the new silver region. Assays from the surface rock show it to be a mine of low grade ore in silver, carrying some gold. Work was commenced on it by its owners last summer by driving a tunnel or cross-cut to intersect the vein at a convenient place for working, but it was stopped before the vein was reached, owing to the uncertainty of the location of the new Government road, and it will not be resumed until that question is finally settled, as the property is one of those which cannot be worked to advantage with the present cost of freighting materials and supplies. It is a very promising mine, but there has not been sufficient work done upon it to form an opinion about its characteristics and mineral features.

THE PORCUPINE OR "TWIN CITY MINE."

The above mine, three miles from the Rabbit Mountain mine, was discovered in 1883 and development work was commenced on it under an option of purchase, which certain gentlemen residing in St. Paul and Minneapolis had on the mine. They built their own road from the Rabbit Mountain mine and erected several log houses on the location. The mine was worked by a small force for over a year and it is estimated that upwards of ten thousand dollars has been expended on it.

During the development work the mine produced a considerable quantity of native and black silver, (argentite) as well as a high grade of argentiferous zinc blende. A shipment of this high grade ore was made to the smelters. The whole veinstone of this mine is good stamp rock, as the dump of the mine and tests made of it abundantly prove.

Still without a mill and concentration machinery or reduction works the mine could not be worked successfully. There have been no roads over which such machinery could be taken to the mine, and failing in the construction of a Government road within the time of the option, the Americans, who were spending their money in developing the mine, and who from time to time got extensions on it in the hope of a road being built, allowed the property to revert to the original owners. The cost of freight-ing materials and supplies was great and had there been proper road facilities there is no doubt whatever we should have had another American company established in our midst with a mill and reduction works of their own.

The superintendent who had charge of the work from the beginning was well satisfied with the mine's capabilities and has written and said the mine could be made a good paying one with proper machinery on the ground. An examination of the dump of this mine and all miners who worked in it corroborate the superintendent's statements. It is a mine that could be worked for years without either pumping or hoisting, if it had a proper mill. The ore produced is similar in all its leading characteristics to most of the veins in the same neighborhood and formation.

with the exception that it produces more native silver than those in its immediate neighborhood, except perhaps the Silver Creek mine, which is on the adjoining property and which is either on the same vein or one parallel to it at a few hundred feet distance. As already stated, Mr. Daunais has associated with him in numerous properties in this neighborhood, Capt. Dan McPhee, T. A. Keefer and W. H. Furlong, of Port Arthur.

SILVER MOUNTAIN—DISCOVERY SALE—DEVELOPMENT.

After thorough prospecting and partially developing a number of lodes in the vicinity of Beaver and Porcupine Mountains during 1882 and 1883, we again find Mr. Daunais seeking pastures new and in partnership with his old friend Wiesaw, braving successfully the wrath of the mystic spirit "Nannibijou." The scene of their success upon this occasion is among the "caves of Shuniah" and Medicine Bluffs of White Fish Lake, where in the fall of 1884 Mr. Daunais had surveyed and patented in his own name the following locations, viz. :—R53 and R54, or

SILVER MOUNTAIN, EAST AND WEST,

The history and development of which is as follows :—Mr. Daunais, the patentee, took Captains Richard and John Trethewey as partners and gave them an interest, on condition that they would procure capitalists to work the mine. Capt. R. Trethewey induced E. T. Williams, of Troy, N. Y., to negotiate a contract with a number of Cleveland capitalists. Amongst these was a Mr. Samuel Mather, who agreed to buy five-sixths of the property for \$250,000, on condition that it proved satisfactory after a thorough examination had been made. They paid \$10,000 cash for their contract and immediately went to work. They continued working for several months, having spent between \$12,000 and \$15,000 in exploratory work. They then abandoned the property, claiming it was of no value. Mr. Daunais shortly afterwards continued the work from where they left off; and, after drifting about four feet further, discovered the vein, which carried silver in large quantities, much of which assayed over \$1,000 to the ton. Mr. Trethewey, after this discovery, deter-

mined to see what could be done in England, and last spring proceeded thither, taking a large quantity of the ore from the vein to London, where he entered into a contract with Mr. McEwen for the sale of the property. This gentleman tried to form a company for the working of the property. For some reason, however, this scheme was a failure. Mr. Trethewey and Mr. McEwen then went to Liverpool, where they made the acquaintance of Horsfall Bros., Brokers, who at first entertained the scheme of buying the property, but here also difficulties arose. Finally, however, a Mr. Frank Tobin became so much interested in the matter that he made a contract for the purchase of it direct from the owners. Mr. Tobin, together with Mr. Nancarrow, came to this country some time ago and made as thorough an examination of the property as possible in one week, and became so well satisfied with it that they cabled to their principals in Liverpool that it was much better than it had been represented by Mr. Trethewey, upon the receipt of which instructions were at once cabled back to close the sale and pay over the money. £10,000 cash was paid down, the balance of the purchase money to be paid shortly. The company incorporated to work the property is purely English, and is named the Silver Mountain Mines Company, (limited.) The head office of the company is Liverpool, England. The company have secured a water supply right on the mountain, having purchased the adjoining locations, R60, R151, and 178T, besides about 2,000 acres of lands, lying to the south-east of Silver Mountain.

Mr. Tobin has returned to England to report fully and make all necessary arrangements, and forward the capital necessary to work the mine. We are informed on good authority that a working capital of £30,000 sterling is already provided. The shares of the company were put in the market at £1 each. They are now standing at £1 5s. each, and it is expected that they will shortly go up to £3. Capt. John Trethewey is in charge at this, the East End.

MAY 20th, 1887.

Over 60 men are actively employed at the mine. The machinery is being rapidly put in position. A large force of

miners are at work and already several shipments of wonderfully rich ore has been made to England. The price paid by the English company for this portion of Silver Mountain was \$175,500.

SILVER MOUNTAIN, WEST END.

This is on the same lode as the East End. It also shows very rich in native and sulphate of silver. The shaft is down about 30 feet. It has well defined walls and carries silver very regular. The vein here can be traced without any difficulty whatever from the East End Silver Mountain. This claim was purchased about a year ago, conditionally, by Col. George Shaw, of Toronto, in conjunction with two other gentlemen. The contract price was \$250,000; but these gentlemen failing to perform all the conditions mentioned in the agreement, Mr. Oliver Daunais, the owner, negotiated with a Mrs. Thompson, of Boston, for the sale of the property. This lady paid over \$10,000 and agreed to pay the balance of the purchase money upon the completion of the deeds. A difficulty, however, arose; Col. Shaw claimed the property and protested that he had fulfilled all the main conditions of his contract, and had only neglected a few minor ones; and that therefore the property belonged to him. The consequence is there are two claimants for it, and it is now practically locked up in litigation. The different parties seem unwilling to effect a compromise, and seem determined to fight it out to the bitter end. We regret exceedingly that so valuable a property must lie idle and undeveloped, and our district suffer accordingly for the gratification of a few speculators, who take no interest in our prosperity, but whose operations are directly opposed to our interests and our progress.

The locating party, under Mr. H. K. Wicksteed, C.E., have made their final survey along this line, and station grounds are being selected opposite and within a short distance of both East and West End mines of Silver Mountain. * * * Met the superintendent of the East End mine this morning, who reports an unusually bright prospect for this immediate section. Silver Mountain never looked better, and rich ore is continually being shipped notwithstanding the present state of the roads.

THE BEAVER MOUNTAIN SILVER MINE AS SEEN BY A REPRESENTATIVE OF "THE THUNDER BAY MINER."
APRIL 17TH, 1887.

When Capt. Harry James, of the Beaver mine, was in town last, he told a wonderful story of the richness of the find of silver ore at the Beaver mine that many were inclined to doubt if the narrative was strictly in accordance with the facts. The fact is there is a popular impression that Silver Islet was the acme of richness in a silver mine, and as the tales told concerning the Beaver somewhat cast into the shade the greatness of Silver Islet the presumption of the Beaver people was regarded as almost sacrilege. So that *The Miner's* special commissioner was sent out to the Beaver to investigate and see for himself.

He has been; he has seen. The Beaver has conquered.

He said when he got back that the half has not been told concerning the mine. It is true that the richness of the ore was about duly set forth, but nothing has been said about the marvellous nature of it. It will perhaps be better to let *The Miner* tell the story in his own words.

"I found," says *The Miner*, "in the office of the Beaver Company about half-a dozen specimens, ranging from 20 to 350½ pounds. That is the first time I ever saw such specimens as to size. Then there was another peculiarity about them. They looked as if they were artificial and that a botch had been made in their manufacture for they were a conglomerate of sulphide of silver,—mainly that—little pieces of spar, portions of quartz, silver blende, argentiferous galena, pyrites, a greenish tint in places indicates the presence of copper which once in a while is found in very small nuggets. All these substances are held together by fluor silicate of magnesia, which occurs in a form like soapstone and which the miners have called "grease." In the vein this mass of mixture was reported to me to be soft, though the immense lumps by exposure to the air had become hard. I was taken to the dump and there shown a large heap of the same material, and being outside it was still wet and soft, the sulphide of silver giving a blue tint, and it now looked like blue clay.

Pick a piece up at random and you found plain indications of silver without the aid of a glass, while to get really good specimens was as easy as any man could desire. In the ore house there was 40 tons, the output of the drift for last week, and this was said to be by Mr. Sustersic, the assayer, to be worth over \$50,000. The rich ore is everywhere in barrels in the ore houses, and even on the dump, but only that esteemed milling ore is placed there. The fact of the matter is, the mill is stopped, the patent pulverisers being taken out, and a ten stamp mill being substituted. With a crusher the mill will reduce 30 tons of ore a day, and there is room left for ten more stamps.

The mill has been described in this journal before, and I need not go over it further than to state that everything is completed and a re-start will be made the minute the belts arrive here. Mr. Kirkland was awaiting their arrival with no remarkable degree of patience as he desires to show by mill results the richness of the ore.

A hurried glance around reveals the fact that remarkable changes have taken place in the grounds and appurtenances since I was last there. A steam saw-mill makes "its voice heard in the land," the track to the mill is of course in place, and I may remark that all the woodwork about the location, from the log houses, through the trestles and frame buildings to the mill, is of superior character. The Beaver works and village are enough to convince any man that mining here has assumed a definite shape.

Mr. White, the engineer, was good enough to lend me overalls and jacket, and Mr. Kirkland assigned me to the care of Charley Jondre and I was ready for the start as soon as Captain James had assigned the men to their places underground. It will not be edifying to your readers if I tell you how I got into No. 2 drift, but I may remark and leave the rest to the imagination that the top drift is full of ore all but two feet square, the stoppage of the mill house forced them to avail themselves of any storing place. The obstacles were got over and then down the shaft we proceeded to No. 2 drift which goes west from the shaft. The strike was first made about 100 feet from the shaft and a plug was inserted in the footwall. I examined the roof and floor of the drift and found the ore rich in both places, and of the

character I have described, and all along the "grease" was plainly visible. From the plug to the face of the drift where I found the men working was 55 feet, and arriving there I broke a piece with my fingers off the face of the drift. It is of the general conglomerate character spoken of before and is a second edition of the 350½ pound lump seen in the office.

Arriving at the face of the drift a remarkable sight met my gaze. The vein is there about six feet wide, and everything in it carries silver in some proportion from wall to wall. Lying on the foot wall was a layer of the soapstone, then one of blue slate, as soft as putty, and so these alternated for about a foot. Then more of the fluor silicate of magnesia, to give the distinguished stranger his proper name—for he comes freighted with such a precious burden in such quantities that no name can be too grand for him. Stringers of quartz full of leaf silver then came along and continued to the hanging wall. The whole formed a scene such as the eye of the "oldest" miner had never lighted on before. I asked a number, but the answer was in every case the same, they had never found silver in a substance similar to that. I got several specimens from the vein myself and can attest the genuineness of these and vouch for the fact that I saw the hole where all the others came from, if anybody wants the latter kind of proof.

The men are now drifting from the lower level to the vein, 90 feet below where the strike was made, and if the vein maintains its character downwards a body of ore as unexampled in extent and richness as it is in character will have been developed. The vein in No. 2 drift where I saw the men working is richest at the bottom, and a very perceptible increase in quality is noticeable from top to bottom of slope. This seems a reasonable basis for the expectation that it will continue to increase in richness the lower the vein is struck.

I forgot to mention Mr. Sustersie's estimate of the value of the 350½ pound specimen. It is \$2,500.

Oh! I forgot also to mention that I found out that the specimen was not artificial and a botch at that. It is the Simon Pure article and they will get lots more like it when they come to drift. I don't say that from the vein where I saw it they could

get as big a lump of the "grease" conglomerate of silver, etc., but they could get them—and there were scores of them lying around—of say 60 to 100 pounds weight.

The Beaver has struck it rich and the reputation of the Thunder Bay district will be enhanced.

I have told of nothing but what I have seen, and while I have had, of course, to accept Mr. Sustersic's statements as to the probable assay value of the ores, yet he said nothing but what any reasonable man would believe when he saw the ore.

In the future we have another "shibboleth," and when we want a standard to illustrate our ideas of richness in ore it will be "as rich as Beaver," instead of "as rich as Silver Islet."

An electric light plant, of 160 incandescent, and 6 arc lights, has been ordered and will soon be in place there."

MINES OF SILVER MOUNTAIN DISTRICT—CROWN POINT.

This interesting property deserves more than a passing notice. It is composed of the south half of mining location R95 and the whole of location R118. It is adjacent to the north-east end of Silver Mountain and is a part of that now famous location. The distance by road from Silver Mountain mine (East End) is but a quarter mile. It is owned by two energetic Americans, Messrs. A. D. Cummings and W. N. Montgomery. Although very little has been said about this mine, nevertheless much skilful labour has evidently been bestowed upon it, and it can now safely be classed among the silver producing veins of this district, while but a few months ago it was simply regarded as "a fair prospect."

R70, OR SILVER HILL.

At Silver Hill or R70, I found a large vein running east and west, exposed in three places; in two of these the rock was only slightly disturbed, but at the most distant exposure towards the east, a shaft 8 x 8 feet has been commenced and carried vertically to a depth of about 20 feet. The composition of the vein differs slightly from the general character of deposits in the locality, in bearing a larger proportion of quartz. Sulphurets of iron occur freely in the latter, with traces of specular oxide of iron and cop-

per pyrites. In many parts of the vein so far as exposed, quartz, fluor and heavy spar are about exactly commingled, and in two of such places argentite is visible in fair quantities, with small spires of particles of black sulphide of silver. Near the gangue of the foot wall there is a showing of what appears to be argentiferous galena, associated with zinc blend in small but frequent patches. The matter near the wall is much stained by oxide of iron, and the quartz containing sulphuret,—partially decomposed, has every indication of being auriferous. Owing, however, to water in the bottom, it was impossible to make a close examination of the last few feet, but I am of the opinion that the regularity of the vein continues downwards. Crossing the hill about 150 yards to the north, some work has also been done on a smaller vein and similar in character to that referred to, and containing a much greater percentage of argentite.

This last takes a course and a dip inclining obliquely towards the main vein, when a junction will probably occur at or near to the shaft and workings above described. This property is located immediately upon the line of proposed colonization railway, and as far as appearances go the prospects for silver are decidedly good.

This, with two or three other interesting properties in the immediate vicinity, await but the magic touch of capital to develop into good mines.

SILVER FALLS.

R110, known as Silver Falls, situated two miles north-east of Silver Mountain, was discovered in the spring of 1875, surveyed and taken up by Mr. J. C. Hasking. Considerable exploring was done, one shaft was sunk near the creek which had to be abandoned on account of water. Another shaft was started further up the bluff which is down 60 feet. The vein is very wide and the shaft, 7 x 10 feet, was sunk by the hanging wall. During the sinking three veins came together and cross-cutting was commenced and continued from the hanging wall towards the foot wall. Fourteen feet had been penetrated, but the other wall had not been reached when water came in too great quantities to be hoisted by hand and work was then stopped. At the time of the

cessation of work there was a good show of leaf silver. The Silver Creek runs through the location and has a fall of 60 feet. There is ample water-power and it is admirably located for working the mine. There is plenty of timber on the location for both lumber and the requirements of the mine, and altogether it is an exceptionally situated prospect. Mr. J. C. Hasking owns three-quarters' interest, and it will be started up by him during this summer.

PALISADES R97 AND R98.

A very important mining transaction has just been entered into in reference to the above-named claim.

Mr. Beaupré, of St. Paul, has just completed an agreement with Messrs. McIntosh & Johnson and Mr. Dounais, for the development of R98. He has agreed to develop the claim, with the privilege of working it for eighteen months; and, if at the end of that time, or any time before it, he is satisfied with the property, he will then erect a mill suitable for the necessities of the mine. Mr. Beaupré is to get one-half interest in the claim for his work, the original owners to retain the other half.

Mr. Malloy, a mining expert from St. Paul, has examined the vein and finds it very satisfactory, sufficient to justify work of an extensive character commencing at once.

Mr. Joseph Beaudro has taken a contract to sink a shaft 100 feet; and when this is completed, they expect to go another 50 feet.

Mr. Beaupré, I understand, is a man of extensive capital and a first-class practical mining man, and one who goes in for testing a mine thoroughly, and pushing work as rapidly as possible; and it is certain that his advent amongst us is a great acquisition to our mining district.

The Palisade lode was pointed out to the writer of this work in the winter of 1883 and 1884 while out with a party of Fort William Indians and their chief, Peter Crow. The object of this expedition was to discover a mountain of "shuniah," (silver) which, according to the chief's belief or knowledge, existed somewhere between this point and White Fish Lake. This expedition was outfitted by the late stipendiary magistrate of Port Arthur,

Mr. Robert Laird, who placed implicit faith in Chief Crow. Mr. Crow, unfortunately for the success of the enterprise, became suddenly ill at this point (or at least simulated it) and said that he had a "dream touching this mountain of shuniah," to the effect that "he would not live long if he showed this treasure until several moons had passed." Thinking the chief might have better dreams, the writer decided to remain in camp another night and take occasion to examine what is now the Palisade mine. But with morning came a most unwelcome visitor in the person of Mr. Daunais' argus-eyed Indian Weisaw, who appears to have taken in our dilemma at a glance. After a most animated address from Weisaw, our friend Crow almost collapsed and decided to endeavour to reach home and friends at Fort William before further evil had overtaken him. Weisaw next addressed himself to the writer in the following words, literally translated:—"Is it possible your friends can believe this weak old man? Ever since boyhood I have lived and hunted in this region and around White Fish Lake, and surely if such immense veins or "caves of silver" existed I should know of it. Besides old man Crow has not been this way for nearly 60 years. See! he grows worse, etc." The result was that he would not or could not proceed. That day Crow and two of his sons returned home, while the writer made a close examination of the Palisade lode, which by the way was within a few chains of our camp. Appearances even on the surface looked exceedingly good; a preliminary survey was also made, and a report and detailed description forwarded to Mr. Laird, who it appears made application for two locations, corresponding closely with the present locations, 97 and 98R. From certain causes, however, this application was not followed with the necessary surveys by a Provincial Land Surveyor, and after a period of twelve months had elapsed, it was finally surveyed and patented to Mr. Daunais. It is needless to observe that Silver Mountain was located soon after the interview with Weisaw near the Palisade. There was no road of any kind in this direction at that period. The Palisade lode R98 traverses R150 diagonally. Assays recently made from this vein go as high as \$1,000 per ton of 2,000 lbs. Already considerable work has been done upon this lode with satisfactory results.

Houses and stables have also been erected. Mr. J. L. Meikle, of Port Arthur, owns R150.

DISPUTED CLAIMS.

Notwithstanding the sudden influx of prospectors and speculators that followed the final discovery of Silver Mountain by Messrs. Daunais and Weisaw, comparatively little was heard in the way of disputed claims. This was owing in a great measure to the fact of most of the men seriously desiring the acquisition of claims, having said locations surveyed at once, and sending to the Commissioner of Crown Lands the proper plans, etc., as required by his department, together with the necessary funds for payment of said claims in full. Applications, accompanied by small deposits, may or may not hold good for a short time. Delays, however, in this, as in other important matters of business, are always dangerous, and to this practice chiefly we are indebted for the only alleged cases of dispute within the writer's long experience.

GOLD AND SILVER.—GOOD MEDICINE.—THE NEW MINES DEVELOPING RICHLY.—LOCATIONS R119, R264 TO 266-7R.—A PARTY OF AMERICANS EXPLORING FOR IRON ON THE RAILWAY LINE.—MEDICINE BLUFF MINES.

From the quiet manner with which Mr. Daunais accepts his continuous good luck, no one would imagine that another of his newly developed properties had turned out a possible bonanza, such as his Rabbit, Beaver, Silver Mountain and similar investments, but such is the fact. It is learned from reliable authority that his "Medicine Bluff" mine at the west end of White Fish Lake has lately produced specimens showing large nuggets of black silver as well as the more showy native silver in such quantities as to rank this mine among the most prominent in the district. There is also a good show of gold. The assays in both gold and silver are "away up."

A tunnel has been run into the hillside and a shaft sunk 30 feet, which showed increasing stiffness according to depth. The vein is from five to six feet wide and continues uniform throughout.

It is Mr. Daupais' intention to put on a large force as soon as the roads are in a fair condition.

This mine will be readily accessible by the Port Arthur, Duluth & Western Railway, from which it is distant only two miles.

A party of Americans are out exploring for iron not far from the railway line.

CROWN POINT MINE.

Information has been received to the effect that work will be commenced at this mine as soon as the roads are in fair condition. It is the intention of the company to work a large force from the start and make the location one of the leading mines of the district.

Reduction works will be put in with a capacity of not less than 50 tons daily and ample power to increase the capacity to 100 tons.

COLONIAL MEDALS AND DIPLOMAS.

A number of the exhibitors from this town and section, who contributed to the Indian and Colonial exhibition held in London last year have received bronze medals about two and a-quarter inches in circumference and an eighth of an inch in thickness. One side of the medal shows the good natured face of Albert Edward, Prince of Wales, and President of the exhibition committee, and the reverse contains the words "Indian and Colonial Exposition" with the date.

Mr. Adolphe Perras sold the large beaver which he exhibited at the Indian and Colonial exhibition last year for the sum of \$100, the purchaser being a furrier in London, England. In acknowledgement of the exhibit he has received a handsome chromatic engraving, 24 x 30 inches, in which Britannia is represented seated on a throne receiving deputations from her colonies and possessions all over the world. The Canadian, American Indian, Australian, African, East Indian and many tribes and races are represented by some 30 graceful male or female figures in classical costume. This central scene is surmounted by the royal arms and enwreathed by medallions bearing the names of

the various colonies and possessions. Underneath is the inscription "Colonial and Indian Exhibition, London, 1886," and the signature of the Prince of Wales, President of the Executive Committee, with that of Secretary Cunliffe-Owen.

THE HURONIAN GOLD MINING COMPANY'S CAPITAL.

The capital stock of the new company is £260,000 sterling or \$1,300,000, with an additional working capital of £100,000 sterling, or \$500,000. The directors of the new company are Horace John Neville, George Augustus Thompson and Alexander McEwen, of London, Eng.; Andrew Rutherford Gray, of Edinburgh, Scotland; James McLaren, of Buckingham, Quebec; Thomas Alexander Keefer, Port Arthur; and Nicol Kingmill and Alexander John Cattanaach, of Toronto, Ontario.

MICA.

Of marketable size and quality has been discovered upon an arm of Dog Lake, distant some nine and a-half miles in a north-westerly course from the north-west corner of McGregor Township, a survey of which is about being made by Mr. S. J. McLaren, of Port Arthur.

OTHER MINES AND PROSPECTS EAST AND WEST OF PORT ARTHUR—RECENT DISCOVERIES—OPINIONS OF DISTINGUISHED AND OTHER VISITORS.

CHICAGO AND VERT ISLAND STONE QUARRY.—AN IMPORTANT INDUSTRY.

While our silver mines are absorbing the most of the attention, not only of our own people, but also of foreigners, everything else that is not connected, directly or indirectly with them, seems unworthy of attention. We have a very valuable stone quarry east of Port Arthur about 75 miles, on Nepigon Bay, near the mouth of the river. This quarry is owned and worked by a Chicago company, and has been working for over two years. General McArthur is the manager for the company. He informs

us that they have shipped about 40,000 cubic feet of the stone this year, principally to Chicago. He says that the shipment would have been much larger had it not been for the numerous strikes that have taken place in Chicago during this year. They have had about 30 men employed at the quarry through the season. They are now closing down for the winter, according to their usual custom, and the general says they intend pushing the work extensively next spring.

FURTHER DISCOVERIES IN THE NIPIGON DISTRICT.

(From The Miner).

A short time ago Mr. W. Roland, C.E., in company with Mr. S. J. McLaren, returned from the above district, bringing with them two samples of ore (gold bearing quartz) from the green slates. One of these carries a small percentage of both gold and silver, and the other assays \$13.63 in gold by Prof. C. Kreissman, of this town. Both of these veins are, to all appearance, well defined, and situated immediately on the route of the proposed Colonization road, but until the completion of the said road it will be difficult and expensive to do any great amount of work on them. This makes the tenth claim applied for in this section, including gold, silver, marble and other valuable deposits.

115R.

Mr. Daunais has lately made three other important discoveries of silver, one situated about three and one-third miles east of Silver Mountain. The vein is about six feet in width, and shows mineral all through. A shaft has been sunk 30 feet. This is known by the name of the Indian Mine. Another one is about 12 miles west of Silver Mountain. An assay has just been made, which resulted in 65 ounces of silver to the ton. This assay was made from ore taken from the surface. The other is one and a-half miles from White Fish Lake. An assay has just been made of the ore received from the vein, by Dr. Lenhen, of St. Paul, with a result of $48\frac{1}{4}$ ounces of silver to the ton, and one-eighth ounce of gold. This vein is from six to seven feet in width.

LOT 7, CON. C, TOWNSHIP PAIPOONGE.

Mr. Crawford, of Fort William, and Captain Corbitt have discovered a valuable silver vein, about two and a-half miles from the Kaministiquia, and close to the road leading to the Beaver mine. It has a green flint spar covered with trap, and then comes the slate. This is the formation always found in this country, and is a sure indication of silver. It is four miles from Beaver Mountain silver mine.

SILVER HILL, PORT ARTHUR.

This property was surveyed and patented in 1874; is situated on the Dawson Road, seven miles from town; consists of two locations on well defined veins. No. 1 vein is composed of slaty quartz; contains black sulphide of silver and free gold. Here a shaft has been sunk seven feet deep on the side hill. On No. 2 vein on the same location is a three-foot vein of the same character of quartz and slate mixed, carrying black leaf silver and free gold. The latter occurs in coarse and fine particles and one sample which was examined by a representative of *The Miner* showed nuggets the size of a pin head in transparent quartz. Judging from the specimen brought to town and the character of the quartz, there is every reason to believe that a good deposit exists in the vicinity. The property is only seven miles from town in a straight line, and can be visited with little trouble.

SUDBURY.

A Montreal despatch says: "Sir. Geo. Stephen and Mr. Van Horne have gone to visit the newly discovered copper mine at Sudbury. Nine thousand tons have already been taken out. The ore is described as yielding four times the quantity of pure copper given by the best Michigan ore. Mr. John Mackay, the bonanza millionaire, states that if the mine is of the dimensions stated it will close up all the copper mines in the world."

PIC RIVER.

Messrs. Wilson and Scripture have been prospecting down the lake about 250 miles east of here for the past four weeks. They have, it is said, one good vein, not yet tested, but prospects generally good. They have also discovered what may prove to be alluvial washing in grey and black sand. Some specks are said to be as large as a No. 5 shot with finer gold in packets. The wash is on the side of a mountain, and is being thoroughly prospected.—*Miner*.

ELGIN MINE, LOT 1, CON. F, PAIPOONGE.

This mine is situated about half a-mile east of the Beaver, and is on the same range. It had been working only a few days when they struck rich leaf silver. An expert of the Beaver has examined it, and pronounces it "a very promising prospect indeed." It is owned by Mr. J. Margach, of this town, and Mr. Crawford, of Fort William.

FIRST-CLASS IRON WEST OF SAVANNE, ON C. P. R. ROAD.

Iron has recently been discovered in enormous quantities on the Atic Okan River, near the Seine. The ore forms a great belt from 100 to 150 feet in thickness, which runs along a ridge for a mile and a-half. The quantity is said to be very high—70 per cent. metallic iron, no titanitic acid, a very small amount of sulphur, and of phosphorous practically none; and, as at Sudbury, the deposit has the advantage of being above the surface, and therefore easily worked. This rich lode has just been brought to light, and is in the meantime undeveloped.

HERON BAY GOLD MINE.—WORK TO BE COMMENCED AT AN EARLY DAY.

Arrangements are now being perfected for testing this promising gold lode, and work will be commenced at an early date and continued until the property, which is already partially developed, has had a practical test. The work will proceed under the direction of Mr. Thos. A. Keefer.

WHAT CONSTITUTES BESSEMER ORES.

Chicago Journal of Commerce.

Many people, even among those interested in iron properties, have no clear conception of what Bessemer ore is. To come within what is known as the Bessemer limit, the ore must contain not more than a unit in thousandths of phosphorus for every unit of iron. That is to say, if the ore is 65 per cent. iron, the phosphorus must not exceed .065. In the history of iron mining in Wisconsin and Michigan the ores that have always attained the highest position in the market have been the ones that had the least percentage of phosphorus, combined, of course, with the higher percentage of iron. It is a remarkable fact that hardly any ore has yet been shipped from the Gogebic range that is not strictly Bessemer and of the greatest value to the steel producer. In steel rail making in particular, a low percentage of phosphorus is demanded.

In the desirable quality of freedom from phosphorus the ores of the Gogebic range are not surpassed by any ores in the world, the average analysis showing about .033, or full ten points lower than is necessary to come within the Bessemer limit. In respect of richness there are few ores in the world that can show an average of 63 or 64 per cent. of metallic iron, and yet many of the Gogebic ores are richer than this, while none of the ores from the range shows less than 60 per cent. in iron. The celebrated Tafna or Spanish ores do not average more than 7 per cent. of iron, while some of the Gogebic ores run as high as 66 per cent. or within 6 per cent. of the limit that can be reached by iron ore.

Analysis by chemical experts of the ore from the fifteen or twenty mines now in operation on the Gogebic range show a remarkable uniformity of quality.

A DETROITER ON A NEW LAKE SUPERIOR MINING DISTRICT.

C. J. Johnson, an old Detroitier, returned from the north shore of Lake Superior to day. During the past five months he has discovered and obtained patents to large tracts of land 35 miles

east of Port Arthur, on which he reports some exceedingly rich deposits of silver lead. He has one tract of nearly 400 acres, across which there is a vein 12 to 20 feet wide. On another tract he has a vein which shows outcroppings for four miles. He has closed negotiations with English capitalists who own Silver Mountain, for a portion of his claim. The Englishmen, Mr. Johnson says, intend building smelters near Port Arthur. Mr. Johnson also says that 65 miles west of Port Arthur and 31 miles south of the Canadian Pacific Railroad the McKellar brothers have discovered a veritable mountain of hard hematite ore, which they are in a fair way of selling to Chicago parties. The country is opened very little as yet, but Mr. Johnson says that the rich mineral finds made there since June last will attract capital. He expects to make a fortune out of silver lead veins.—*Evening News*.

The above interesting property is situated some 33 miles east of Port Arthur on the main line of the Canadian Pacific Railway. It is well known by local miners and experts to be an exceedingly rich deposit of fine and large grain galena, carrying some silver.

R111 SOLD.

It is reported that R111 has been sold for quite a large sum. This vein shews silver both in the sulphide and native forms, and has well defined foot and hanging walls.

R64.

Some prospecting has been done upon this property, resulting in the discovery of one strong vein, and two or more smaller veins converging on the large one. These veins carrying traces of silver, and from their peculiar situation with regard to the rich veins of the adjoining property of Silver Mountain—of which they may prove to be a continuation—they are regarded as good prospects. But little has been done hitherto towards development. This property is owned by Messrs. Dawson & Russell, of Port Arthur.

TO THE EAST OF PORT ARTHUR—A DISCRIPTION OF THE COUNTRY
WITH MINES AND GOOD LAND.

In countries first settled for mining purposes usually very little attention is paid to farming, noticeably on the south shore of this lake. For years the entire supplies for the mines were brought from below, but for sometime back more attention has been paid to the production of the soil, and the result is that the mining districts in the matter of hay, oats and vegetables, are nearly, if not quite, self sustaining, adding vastly to the cheaper working of its magnificent and varied mineral deposits.

THUNDER BAY

has been no exception to this general rule, but I am pleased to see that she too is awakening to the importance of her farming interests. The really fine show of farm and mining products sent to the Industrial Exhibition at Toronto is opening the eyes of our people to the possibilities of this district, both in farm and mine productions.

On a recent trip to Black Bay to inspect some mining locations, the writer paid some attention to the agricultural as well as mining prospects of that much neglected locality. We were permitted to land from the Canadian Pacific Railway east bound passenger train at the point desired, namely, Coldwater Bridge. From this point we passed up the valley of this beautiful little stream, literally named, for its water is as cold as ice, even in mid-summer, and is stocked with the most delicious speckled trout found in this lake. The banks of this river are high and gradually rise to the high trap bluffs that flank it on the south-west and north-west. On the north are high gravelly palisades covered by a sparse growth of small poplar, not unlike a vast park, free from under bush and carrying a considerable growth of red-top grass. These high lands could be utilized as a sheep ranche. The valley is about two and a-half to three miles wide and about six miles long, and is the home of the grouse. These high gravelly palisades extend around the large spring, the source

of the north branch of this river, and narrow between the fertile marly clay bed of the river and the bluffs to the west. This part has a considerable rock exposure, some large boulders of granite protrude through the soil, but for about a mile each side of the river is a gently rolling belt of strong marly clay, free from rock or gravel. All along the banks are covered with the largest and most delicious wild strawberries I ever saw, when we passed across there the latter part of July, the air was heavy with their delicious fragrance.

The valley and surroundings are noticeable as fruit producers, strawberries near the river, cranberries in the easily drained muskegs, raspberries in the foot hills, and blueberries on the bluffs, all in immense abundance. A man could make a good living to handle these fruits alone in their several seasons. The only drawback is a lack of timber which has all been burned off, but this great loss is partially compensated by the ease with which the land can be cleared. Large tracts are almost ready for the plough. There are several sections of fair timber, to the south of the stream, just west of the railway, and a narrow belt to the north from the east end of the third concession to about the fifth concession, suitable for building purposes and fuel. About three and a half miles to the west of the Canadian Pacific Railway lies the large lead vein owned by Johnson and Mallott. This location will be the great bread-and-butter mine of this district. Looked over this location, lot 10, in 6th concession of Dorion. It carries an immense show of rich micaceous lead, or argentiferous galena. It is from 12 to 20 feet wide, carrying parallel streaks of solid ore from 2 to 4 inches, and at one place over a foot in thickness. The vein shows on the surface for about half a mile, carrying ore along, nearly the entire length; assaying in silver from \$2.50 to \$125 per ton and from 30 to 74 per cent. of lead. Now with pig lead at \$94 per ton, it looks like the ground work of a good paying mine, to be worked for lead alone. Men have offered to smelt it at \$1 per ton. Just to the south of the vein is a small stream running along its entire length, and but a few feet distant, which will furnish all needed power for air-compressing, pumping, hoisting, etc., and can be used whenever needed along the entire vein. A few miles to the north other veins occur, that have

immense shows of ore at the surface, of the same pure quality as the one above described.

VISITS FROM PROMINENT SCIENTISTS.

Mr. Arnold G. Dana, of New Haven, Conn., a son of the eminent American geologist and mineralogist, Professor Dana, is in the district studying the geology of the country and the mineral products of our mines, which have brought to us this season a splendid class of men. Dr. Selwyn, the director of the Dominion Geological Survey, was in the district on a visit to the Zenith zinc mines. Mr. Charles F. Eschweiler was also in the district temporarily engaged at the Huronian mine. Mr. Ingalls, an associate of the Royal School of Mines of London, is in charge of a survey party in connection with the Dominion Geological Survey. Besides an excellent class of mining men who have been here last summer, several other able experts have quietly slipped in and out of the country and reported so favourably on it that we are beginning to see the result of their labours in renewed activity at the mines.

THE PEERLESS MINE.

This is only a short distance south-west of the Porcupine, and seems to be a continuation of the same vein. It shows a good body of ore in the trial shaft. Mr. Kirchen, the manager, has just gone to Michigan, to consult with the members of the company, as to the advisability of continuing work this fall, or waiting till next spring.

HERON BAY.

The now famous Heron Bay lode, on the line of the Canadian Pacific Railway east of Nipigon, was discovered by an Indian named Moses Pee Kongay in 1869, and shown to the noted explorer, Ambrose Cyrette, in 1872. It is immediately opposite

the present railway station at Heron Bay; it is a strong vein in the Huronian slates, measuring from 6 to 10 feet wide. A little development has only so far been done here during 1873 and 1874, by the late Silver Islet Company. Assays from this vein give the following results: Gold, \$65 to \$75; silver, \$60 to the ton of 2,000 lbs. Work will, it is understood, be resumed here early in June next. Mr. Roland, C.E., who is conversant with the value of the above location, reports it to be similar in many particular points to the Huronian or Jack Fish mine to the west of Port Arthur.—*Miner*.

NEW PROSPECTS.

Among other developments in our Western Silver District it is highly probable that certain St. Paul capitalists, interested in the immediate vicinity of Locations Nos. 171T, 174T and 175T, will do some work thereon soon.

R213, 218 AND 220.

These sections are among the latest and most promising yet located in their immediate sections, viz., thirteen miles west of Silver Mountain. Rich silver has been found in outcrops of a large vein upon lot 213R, and the vein has been traced for some distance on its course. The Colonization Railway is located over this property. Extensive surveys are now being made on the continuation of this vein (April 14th, 1887) by Port Arthur and Toronto men. Deposits of iron have also been located in this neighbourhood. Messrs. Daunais, W. Harvey, Adolphe Perras, W. G. Johnston, and F. Mills, of Port Arthur, are among the latest investors here.

HURONIAN GOLD MINE—THE MINE AND MILL TO BE IN GOOD SHAPE TO RESUME WORK ON 1ST OF MAY, 1887.

Captain Crow arrived in town yesterday from the mine and reports the work of getting in supplies and materials in a very satisfactory state of progress. All the supplies ordered from Port Arthur have gone forward to Savanne, and by the time the teams

have these landed at the mines it is expected the balance of the stuff on the way from Chicago and the east will arrive. Unless an unusually early opening of spring occurs there will be no difficulty in the way of having the mine and mill in good shape to resume work by the 1st of May, so energetically and satisfactorily has Captain Crow made all his arrangements. An active summer's work in our gold country will be the result. There is work enough for a few more good teams if parties in town have them and are wanting work.

TO THE WEST—SHEBANDOWAN—HURONIAN MINE SECTION.

Ten years ago Mr. McLaughlin, Sr., accompanied by William Young, discovered a very promising looking vein on Loch Erne, a small lake lying two miles south of Lake Shebandowan. Surface indications were satisfactory but little was done at the time in the way of prospecting. Upon the revival, however, of the mining industry in the district some years ago, Mr. McLaughlin and his son Dan, have frequently visited the location, and from time to time made sundry improvements, and as soon as the weather allowed them to get out this spring they commenced to thoroughly prospect the property. The principal vein on the location is some 15 feet in width, in a formation of red granite, of a beautiful description of quartz variegated by the colours caused by the presence of sulphurets of iron and copper and other minerals. Assays made of this quartz ten years since gave fair results in gold, and during the developments of this year the presence of sylvanite is clearly discernible. The Messrs. McLaughlin have so far traced the vein across the lake a distance of $2\frac{1}{2}$ miles, passing through two other locations. They have cut a drain through surface soil 4 feet in depth a distance of 200 feet, besides doing considerable work in the rock. The vein is doubtless a true fissure, the walls, as far as exposed well defined and the general course of the lode being north-east by south-west.

On a location east of this is a vein of baryta, which cuts the lead and samples taken from the junction assay gold. The proprietors are making arrangements for the disposal of their property to individuals who, if the transfer is made, will take

immediate steps to open up the vein. We must congratulate the proprietors on their pluck in steadily carrying on the work of improvement in a wild and, in some parts of the year, almost inaccessible region.

PAIPOONGE TOWNSHIP—LOT 34, CON. 2—THE BIG BEAR.

A new discovery called the Big Bear has been located by Messrs. McPhee and Keefer, near Rabbit Mountain. The vein is from two to six feet wide, can be traced three miles, outcropping in several places. It appears to be a strong fissure containing more quartz than spar. This location is immediately north of Rabbit and Beaver mines, and although no amount of work has been done there, the vein shews fine silver through its entire exposure. Preparations are in progress for development, miners' dwellings are being erected, and a road opened from Rabbit Mountain mines.

R 135—THE WOODSIDE LODGE—WHITE FISH RIVER.

John Woodside, James Conmee and others purpose commencing work in a few weeks. A civil engineer, who lately visited this locality, says the appearance of the quartz was exceedingly good, and the mineral shows regular for one quarter of a mile. It is situated three miles north-east of Silver Mountain. This promises to be one of the champion lodes of the country. There is also an abundant supply of water all the year round, probably the best in the district, as it is situated on the banks of the White Fish River. The quartz is a pink flint spar, exactly similar to that which characterized the quartz of Silver Islet.

A DULUTH VISITOR'S OPINION OF THE SILVER DISTRICT.

(*Duluth Herald.*)

A traveller who reached here last evening from the silver mines on the North Shore states that there is work being done and incipient bonanza developing in that section that are merely the advance waves in the tide of prosperity that is soon to

flood the Lake Superior country with its welcome, and spread throughout the land its fame as a mineral producing district. He says he is a pilgrim in these parts and is not very well acquainted with the resources yet, but he has seen sufficient evidences of present valuable mines, and indications of their improvement and the development of future bonanzas that he feels warranted in predicting a brilliant future for the whole district. He states that the Rabbit Mountain mine, owned and operated by St. Paul parties, is a valuable property, and will undoubtedly yield big returns to the owners. They have a fine stamp mill in operation, and are working that to advantage. Other places have recently been purchased from the Government, and parties are being formed for the purpose of mining and crushing the ore. There is no doubt but that minerals of all kinds exist on the entire north shore of Lake Superior.

GOLD : 163T.

This location is situated about three miles from Kaministiquia station, and the patent was granted for it about two years ago. I regard this as one of the most valuable discoveries in gold in this district. It was discovered by Mr. William Gammond, a noted explorer. Several assays have been made of the ore ; all of which have been highly satisfactory. One assay was made in Manchester, England, and resulted in \$183 in gold to the ton and \$25 in silver. Mr. Kreissman, of this place, has made an assay of quartz picked up off the surface and this showed \$81 in gold and \$23 in silver. Other assays have also been made with equally satisfactory results. The vein is well defined, and is about nine inches wide at the surface, and increases in descending, it being about twenty-two inches, three feet below the surface. There are two other veins on this location, in one of which is found free gold. These veins seem to form a junction with the wider vein. Negotiations have been going on for over a year with parties in England for the purchase of this claim ; and numerous letters can be shown in this office where \$30,000 was offered by a gentleman in England. Through some mishap, however, he has failed to turn up, as yet, and the location is now in the market.

25E, NEAR PORT ARTHUR.

During the past two months vigorous mining operations have been quietly prosecuted, almost within sight and sound of our town, without, apparently, having attracted but the briefest reference. I refer to the present developments carried out on mining location 25E, in the township of McIntyre, under the superintendence of Mr. Mitchell, of Ontonagon, one of the oldest capitalists and explorers, on the north or south shores of Lake Superior. This property contains many hundred acres of valuable mineral, agricultural and timber land; is located westward and adjacent to the Dog Lake mining location on the Dawson road, and is traversed by two sparkling spring creeks, one of which is famous for its speckled trout, and well known in piscatorial circles, as Trout or "Six Mile" creek. This property was acquired from the Ontario Government by Mr. Mitchell and his friends in 1866, and surveyed by Mr. White, P.L.S., in the same year. The present developments consist of the opening of test pit, and the sinking of two shafts, one of which has been driven vertically to a depth of forty feet, on a strongly defined vein of rich and floury looking quartz, carrying both silver and gold in nearly equal proportions.

LADY MACDONALD'S TRIP THROUGH PORT ARTHUR.

The following reference is made to Port Arthur and district, in Lady Macdonald's account of the trip made last summer with Sir John to the Pacific ocean :—

"Time fails me to say much of Port Arthur, a pretty little town on Thunder Bay, at the head of Canadian lake navigation. It is a central point, and bids fair to be large and important. A remarkable variety and quantity of minerals are found in the vicinity, and several silver mines are now opened within a distance of eighty miles. We saw fine specimens of gold, silver, copper, lead and iron, as well as of marble and sandstone, and were told that the lands where more of these treasures are supposed to lie, have been offered by the Ontario Government at eight shillings an acre!—so I suddenly interrupt the chief, who is in grave and earnest talk with a large circle of welcome friends,

and propose that we should all stay at Port Arthur and turn miners immediately!

"The view is striking and beautiful as we steam away from Port Arthur and look back on stretching water and sweeping bay. Three bold headlands rise high into the clear air, Thunder Cape, 1,400 feet high, being especially fine; and out on the horizon lies Silver Islet, said to be one of the richest deposits of silver in the world, but, I understand, most difficult to work, from the fact that the veins of ore lie beneath the water level, and so Lake Superior walks into the shaft with the miners, which complicate proceedings considerably."

The mining fraternity are enthusiastic over a mine which is owned by a Winnipeg gentleman, which is situated at Parasseaux Rapids on the Kaministiquia River, eleven miles from Fort William. There is a vein on this property twenty-two feet wide. A special reference was made to this mine in Prof. Selwyn's geological report, published in 1869. Several prospectors were over this claim, and on making an examination discovered several stringers apparently concentrating on the leading vein. Some English capitalists sent experts to examine the mine, and the report received from them was so favourable that they at once opened negotiations for the purchase of the property. The negotiations are still in progress, but the owner believes he can make a greater fortune by the mine than he can by selling it.

THE GOLD REGION.

THE HURONIAN OR JACK FISH LAKE LODE.

As regards the working mines of the gold region the Huronian, having the greatest development and being the largest at work with a ten-stamp mill now in operation, is by far the most prominent. This company made some shipments of concentrates besides several shipments of bullion from their amalgamated plates.

The ore of this mine is partly free milling and what is not caught on the plates is concentrated over Frue's vanning machine. The main shaft is down over 100 feet with nearly 90 feet of drifts on the vein, which is from 6 to 10 feet wide.

GOLD AND SILVER.

The lode produces both gold and silver, each in paying quantities, and it has been thoroughly examined and tested for over 2,000 feet on the property. It is a true vein in the Huronian series, the rocks on the location consisting of semi-crystalline greenish slates, talcose and chloritic, with massive diorite and silicious magnetite, dipping at a high angle towards the north-west. About a mile to the north-east these strata are displaced by an intrusive synite—an allied rock to granite, in which the bed of Jack Fish Lake is cut out. The mine was formerly known as the Jack Fish Lake mine and a particular history of its discovery will be found in another page and part of this book.

The present owners of the mine commenced operations on this property two seasons ago, and have from time to time put in various substantial surface and other improvements, including a ten-stamp and chlorination machinery, with free milling and concentrating attachments. They also have separate hoisting engines at the main shafts, with a tramroad along the course of the vein from the shaft to the mill; also a saw-mill attachment for cutting necessary lumber.

ASSAYS—SYLVANITE ORES.

An average ton of the ore from the surface of the Huronian vein, at intervals of 10 feet, and tested at New York by different metallurgical houses, show a yield of gold, \$36.30; silver, \$12.98; total, \$49.28, of which \$26 per ton was free milling. An assay of the high grade ores yielded \$5,971.60 per ton, of which \$4,652.03 was gold and \$1,219.57 was silver.

A RARE COMBINATION.

This vein produces the rare sylvanite, a compound of gold, silver and tellurium, and is the only mine in the Dominion which is known to contain that mineral. The company it appears do not look so much to the high grade ore, which makes in bunches, for remuneration as to the entire vein-stone, "every pound of which," says one of our best known geologists, "pays to work."

Adjoining this property is the "Highland" mine, upon which some development has been carried out recently under the direction of Mr. Thos. A. Keefer, of this town, who is also vice-President of the company, and to whom I am indebted for the privilege of making the following interesting extracts from the very best authorities upon the subject matter :—

SATISFACTORY ASSAYS.

"DEPARTMENT OF THE INTERIOR, GEOLOGICAL AND NATURAL HISTORY BRANCH DEPARTMENT, (No. 95.)

"FEBRUARY 22ND.

"THOS. A. KEEFER, ESQ. :

"MY DEAR SIR,—I have much pleasure in transmitting you herewith Mr. Hoffmann's analysis of the samples of quartz which I collected from the openings made in the extension of the Jack Fish (Huronian) vein. The average result—6,497 ounces of gold and 26,129 ounces of silver to the ton of 2,000. This must be regarded as an exceedingly satisfactory showing and fully justifies further judicious expenditure in opening up the vein, and having a practical test made of larger parcels of the quartz.

"I am, my dear sir, faithfully yours,

(Signed) "ALFRED R. C. SELWYN."

THE HIGHLAND MINE—FURTHER ANALYSIS OF ORES.

{No. 286.)

"OTTAWA, April 29th.

"MY DEAR SIR,—I am in receipt of your letter of 19th inst. I am sorry I have no time to write you a report of the Highland mining location, which I visited and examined last summer. I can, however, state that it is, I consider, the continuation of the vein which traverses the adjoining Huronian, or old Jack Fish property, already proved to be exceedingly rich in sylvanite and gold.

"Both these properties are exceedingly favorably situated for working. From the five small openings made in the vein, I

took samples which appeared to represent the average character of the vein through a length of 300 yards. These were carefully assayed in the Geological Survey Laboratory with the very promising result given in my letter of 22nd of February last. There can be no doubt that this is as rich a gold-bearing vein, indeed the richest gold-bearing vein, I have yet seen in the Huronian rocks, and the country rock, a rather soft chloritic schist, will greatly diminish the cost of extracting the ore from the vein.

"The greatest difficulty I should apprehend is in the separation and the saving of the whole of the gold, and very great care will have to be exercised in this respect.

"I am, my dear sir, yours faithfully,

"ALFRED R. C. SELWYN."

"Thos. A. Keefer, Esq.

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THE TESTIMONY OF THE ROCKS.—AN EMINENT MINER INTERVIEWED.—WHAT HE SAYS ABOUT THE MINERAL WEALTH OF THIS DISTRICT—"THE MOST PROMISING MINING FIELD ON THE FACE OF THE EARTH."

Mr. Charles F. Eschweiler, the eminent mining engineer of Milwaukee, is a guest at the Northern.

Mr. Eschweiler is a gentleman who has had 40 years experience in various mining fields abroad and on this continent, having during the course of his long professional career reported on many mines, and started and superintended some of the best paying ones in America. On learning that he had visited portions of our district and several of our most promising mines, a *Sentinel* reporter waited on him to know what he thought of our mineral resources. On being introduced and the object of the interview being made known to Mr. Eschweiler, he said:—

"I do not as a rule like to express my opinions of a country to newspaper reporters, but I have seen during the few weeks I have been in this district such evidences of wonderful mineral

resources that to keep silent on such a matter I cannot, and if you will allow me to express in my own way what I think of your country, you may make such use of it as you think proper.

"Many of the economic minerals are to be found here, and in such quantities and richness that if the truth were known abroad you would have many capitalists among you from a distance. The richness of the mineral veins of this country are not sufficiently known among the mining men of America and Europe, or they would soon be worked on a larger scale. You have in the portions of the district I had time to examine, almost every prominent and essential feature to make it a great mining country, and what surprises me most is that your own people do not pay more attention to the mineral wealth that surrounds you on every side, and which is to be found almost at your very doors. I tell you, sir, your business men will live to see the day which is near at hand, when they will regret the loss of the opportunities now offering. The mineral wealth and really wonderful resources of the country cannot long be kept hidden from practical men of means. You have here the proper geological formations in which to look for the minerals. You have evidences on every side of you of the disturbances of the rocks which make a mineral country. You have the veins, and in many of them, I have no doubt, you have the minerals in paying quantities; I did not myself believe the stories of your district before I landed here. I did not expect to see what I have seen. I was a sceptic of your mineral resources when I put foot in Port Arthur. I am now a strong believer in the country, strong in the faith that you are surrounded by one of the most promising mining fields on the face of the earth. This is saying much more than I have ever said of any country before, and much more than is necessary. The fact is, the minerals are too common here, and discoveries too frequent and too rich to be thought of the importance which should be attached to them. Your people have been spoiled by the marvellous richness of the ores of such mines as Silver Islet to pay attention to the more lasting, and in the long run, more profitable low grade ores. It is a common thing in this town to hear men say such a mine is no good, as it only goes ten, twenty, or thirty dollars to the ton. Why, sir, mines such as you have

here would be thought splendid investments in other countries, if they went five, six or seven dollars per ton in quantity. Let any man figure out the cost of production and treatment under skilful management and he will soon realize it.

"You ask me what I have seen that leaves these favourable impressions on my mind. Well, sir, I will tell you that I have seen enough to convince the most stubborn unbeliever that you have veins in this country that will pay handsome dividends to investors if they will but work them in a proper way. I have been into your new silver region known as the Rabbit Mountain District. I saw enough there to convince any man of the value of your silver veins. I do not like to particularize where there are so many assurances of the value of the veins. On seeing the Beaver mine I determined to go no further without examining the country around it. I camped near it and secured a discovery in less than a week. I was satisfied with the richness of your silver country. Some people say the rich silver deposits are only to be found at surface. This is true only in local instances, the result of local causes. I could soon explode that theory in a way that you would understand. Then I desired to see something of your gold district. I accompanied your townsman, Mr. Thomas A. Keefer, on a tour of inspection of several gold-bearing veins. I saw them and am convinced of the great value of your gold country. "See Naples and die" is an old expression. I say let any man see the Huronian mine vein and he will be convinced of the value of your gold country. Good as it is it is not the only promising vein I saw in the gold country. I examined several that in history will leave their own great record. Believe me, sir, I am not a sanguine man, I have seen too many disappointments in mining adventures to admit of any indiscretion in expressing my views now. But I can tell you this, that during an active life of forty years among many mines, I never saw a young country with such a promise as this district has. That, sir, I hope will suffice to let you know what I think of your district. I am only sorry I am not forty years younger. If I were I would settle here; as it is I go away, but I will come again. Such a field for study and investment I do not believe exists in any mining field in America."—*From Weekly Sentinel.*

THE MINERAL WEALTH OF LAKE SUPERIOR—IMPORTANT LETTER
FROM AN ABLE MINING ENGINEER—GREAT FUTURE FORSEEN
FOR THE DISTRICT—AN EXPLORING COMPANY HEARTILY
RECOMMENDED.

The public must have read with interest the report published in Saturday's issue of the *Daily Sentinel* of an interview had with Charles F. Eschweiler, the able and practical mining engineer now visiting this district. Mr. Eschweiler has had a large experience in different mining fields, and especially among the celebrated mines on the south shore of Lake Superior, just across the lake from Port Arthur. He is a stock holder in the great Calumet and Hecla mine, and has been interested and taken part in the wonderful developments which have been made in the United States since the mining industry there was in its infancy.

He is a man eminently qualified to form opinions of this country and to make comparisons. He is one of the few mining men who have visited the district who thoroughly understands his profession, and who is able to speak with knowledge and judgment of the importance of our mineral wealth. He has said already enough to open the eyes of our citizens to the importance of the value of our mineral deposits. The following letter, which by permission is allowed to be published, foreshadows for the north shore of Lake Superior a great future. Our citizens will do well to read it, and, if possible, act on the advice of such a capable man :—

THOMAS A. KEEFER, Esq.

DEAR SIR,—Before leaving this part of the country I must thank you for the many kind attentions you have shewn me. With your help I have been able to see what vast wealth there is in store for the people. But in order to make the most of the immense wealth of the country the people should form an exploring company, whose object would be a systematic way of finding the precious metals and minerals and then securing the land on which deposits of real value was discovered. Such a company, properly managed, could explore better and cheaper than indi-

viduals, as is obvious to everyone. Such a company could secure all the land necessary for a mine. A 20-acre lot is hardly enough to make a first-class mine.

An exploring company could have the work on a discovery carried on to such an extent that the real value of the deposit would be made evident to the eyes of the expert sent by the capitalists intending to purchase. Individuals have not always the means, if they have the knowledge, to show their properties up.

But it would be superfluous to say more in favour of such a measure. I am quite sure that you think with me that an exploring company is the proper thing in the proper time. It is also needless to say that your mining district deserves more than any other on this continent the fullest and closest attention. There is not the least doubt in my mind that the north shore of Lake Superior will equal, if not surpass, the great success of the copper and iron mines of the south shore.

Yours respectfully,

CHAS. F. ESCHWEILER.



RAINY RIVER DISTRICT.

MISCELLANEOUS.

The Rainy River District comprises all that part of Western Algoma lying west of the 91st meridian of west longitude. It is bounded on the south by the State of Minnesota, and on the west and north by the Province of Manitoba. The southern boundary between the Rainy District and the State of Minnesota is naturally defined by the Rainy River, from the 91st meridian to the mouth of the said river, whence it follows the United States boundary to the north-west angle of the Lake of the Woods; thence the boundary adjoining Manitoba is due north to the English River, and follows that river to Lac Seul or Lac St. Joseph to a point when it again strikes the 91st meridian of west longitude, containing an area of about 22,500 square miles.

SURFACE OF THE COUNTRY.

The entire district is intersected by innumerable lakes and rivers, amongst which may be named Lake of the Woods, Shoal Lake, Lac Seul, or Lonely Lake, Eagle, Vermillion and Wabigoon Lakes, the Winnipeg River (which forms the outlet of the Lake of the Woods), and the English and Eagle Rivers. These waters supply a large variety of fish, principally white fish, sturgeon, lake salmon or trout, pike, pickerel and bass. The white fish taken in the Lake of the Woods and Winnipeg River are considered equal in quality to those of the larger lakes, and the fishing industry is being carried on to a very considerable extent. In recompense for the scarcity of agricultural land in the northern and south-western parts of the district, nature has provided an almost inexhaustible growth of timber; Norway and white pine,

and spruce, being the principal varieties, while the labyrinth of waterways already mentioned, affords the lumberman the means of carrying his timber to points where he can command the use of steam tugs to tow logs to the mill. The geological formation of this country is Laurentian and Huronian. The original shapes of the numerous islands in the lakes are singularly distributed, and the lake shows everywhere a rugged and picturesque appearance. This section is interspersed with numerous valleys of rich alluvial soil, the most extensive of which lie along the Rainy River, White Fish and Ptarmigan Bays. The vast mineral wealth, so long hidden in this district, is now claiming the attention of the world, and offers magnificent inducements to both miners and cultivators.

RAINY RIVER.

This river flows out of Rainy Lake, and forms the international boundary between Ontario on the north and Minnesota on the south, for a distance of eighty-five miles; and the valleys of this river for natural beauty may be equalled, but not surpassed, on this continent. The agricultural lands of Rainy River are among the most extensive and valuable in the district, covering an area of at least 2,000 square miles, while its advantages as a timber and general lumbering field are too well known to require further references than the mere mention of the fact of there being some six lumbering firms in operation on the Lake of the Woods and vicinity, four of which have steam power, while the other two saw-mills are driven by water.

STEAM COMMUNICATION.

Two steamboats ply weekly between Rat Portage and Fort Francis and the eastern end of Rainy River in the summer, and carry the produce of the valley to Rat Portage, where it finds a ready market. Notice is given that a lighthouse, erected by the Dominion Government on the east side of the mouth of the Rainy River, Algoma, was put in operation on the opening of navigation this year—1887—(latitude, north, $48^{\circ} 50' 45''$; longitude, west, $94^{\circ} 40' 20''$). The light is fixed red, elevated thirty-five feet above the level of the water, and should be visible eight miles from all

points of approach. It is intended to guide vessels navigating the Lake of the Woods to the mouth of the river. The illuminating apparatus is a dioptric of small size. The tower is a square wooden building, painted white, surmounted by a metal lantern, and is thirty-three feet high from the ground to the vane on the lantern.

CLIMATE.

Notwithstanding the ridiculous reports which have been so industriously put into circulation regarding the severity of the winters in Western Algoma, it is a notable fact that emigrants from more southerly portions of the Dominion experience less inconvenience from cold here than in Eastern Canada. Severe weather, doubtless, is occasionally experienced here during the early part of January, when the thermometer sometimes registers as low as 40° , but the absence of moisture in the atmosphere renders this low temperature more endurable here than milder weather elsewhere.

THE MINING REGION.

About the years 1879-80, during the construction of the Canadian Pacific Railroad, gold was first discovered on Hay Island, about ten miles south-east of Rat Portage. This announcement quickly attracted a number of prospectors, and by the summer of the following year numerous veins of gold-bearing quartz had been found and mining claims surveyed. The long delayed settlement of the boundary question, however, preventing any extensive development of these claims, it was not until the fall of 1882 that any definite steps were taken to make a practical test of mineral on the lake. It was in this year that the Winnipeg Consolidated Gold Mining Company (limited) was organized, and operations immediately commenced on their property in Big Stone Bay. Satisfactory operations appear to have been carried on here during the following winter, when a five-stamp mill was erected on the property. The working of this mill was, however, found to be defective, and after several *gold bricks* had been produced, it was decided to suspend further operations until a larger crusher could be procured, besides other machinery adapted to the treatment of refractory ores.

At the present time there are several hundred tons of ore on the dump here, the produce of some 300 feet of shafts and drifts. Much of this appears of high grade, assaying from \$62 to \$309 per ton of 2,000 lbs. The surface improvements at this mine are of a very substantial character, and taken altogether the property is an interesting one. The property known as "Pine Portage" mine was discovered in 1880 by John G. McDonald and is situated on the north-eastern shore of the lake, about eight miles from Rat Portage. The vein, which varies in width from four to twelve feet, is of bluish and extremely vitreous nature. The ore is highly refractory, carrying specular iron, oxides, and sulphurets. Free gold is here visible in large and small particles and reliable assays of averaged rock resulted \$45 to \$50 to the ton, and picked rock from the same lode went up in the thousands. This property was transferred to a Mr. Dobie about eighteen months since. The country rock of this location is green Huronian trap, or "whin," with the hanging and foot-walls of the same formation. The land is nearly vertical, having a slight dip to the south-east. Concentrates from the Frue Vanners used at the Pine Portage mine, assayed \$1,200 per ton. Next in order of discovery comes the Minerva, and is also a strong vein. Work was commenced here in 1885 by Messrs. Daly and Huggins, and prospecting on the vein displayed no less than six different lodes, all shewing free gold. Afterwards two of these gold-bearing lodes developed into one. Assays of average samples from this mine gave a result varying from \$52 to \$94.1. A small stamp mill has been erected here.

Among the numerous other claims of more or less interest in this immediate section may be mentioned the "Keewatin" and George Heenan mines, "Ada G.," Nyzam, Twins, Sultana, Maiden, Ptarmigan Bay, Woodchuck and Gold Mountain. The rock formation on the northern and north-eastern shores of Lake of the Woods is of a coarse grey syenitic granite, intersected with fine grained calcareous hornblendic schists. On the western portion of the lake, and continuing south to near the north-west angle of the lake, the prevailing rock is Huronian trap and slaty diorites. These rocks are followed immediately to the west by dark-grain silicious and chloritic schists. The general bearing of the

mineral, or rather gold-bearing belt, is about north-easterly. This belt is about eight or ten miles in width, although heavily mineralized quartz showing free gold has been taken from a few points far south from this supposed line. Besides the discovery of gold in paying quantities in this district the following minerals are to be found in considerable quantities:—Magnetic iron, 80 per cent. of metal; mica, 8 to 15 inches square of the wine-colored or marketable sample; rose copper, auriferous and argenti-ferous galena, lead, copper, asbestos and plumbago. Like the country immediately west of Port Arthur and Silver Mountain this district has never been thoroughly explored, and now that the long disputed title to this rich territory has been finally settled, we may anticipate many other important discoveries.

RAT PORTAGE.

The principal town of the district is situated on the northern extremity of the Lake of the Woods on the line of the Canadian Pacific railway and approached from the water, or seen from the railway bridge spanning the foaming rapids of the Winnipeg River, presents a decidedly charming appearance. It was during the construction of the Canadian Pacific railway that Rat Portage first obtained prominence as a grand distributing depot. Since that time the great lumbering interest and the Canadian Pacific railway works combined have built up a permanent and prosperous town, with good substantial public buildings and a well organized corporation. The average population of Rat Portage is about 2,500, but during summer months, owing to its attractive scenery, its numbers are largely increased.

WATER POWERS.

The waters of the Winnipeg River flow out of the Lake of the Woods, opposite Rat Portage, (in latitude 49° 47' north, and longitude 49° 44' west) by two channels through a narrow wall of rocks, with a fall of 17 feet and 6-10th inches, and form a bay below where they unite. Besides the two channels that form the Winnipeg River there are a number of openings in the rock which have been the bed of rivers at a period when the waters of the lake were higher than they are at present. These channels

cross the lines of the Canadian Pacific railway and extend for a distance of upwards of three miles westward from Rat Portage, and are capable of being opened out and converted into mill races at comparatively little expense. No dams are required and no flood can ever break through the embankment to do injury. The power that can be obtained here is unlimited and the supply of water endless. The value of these water privileges is enhanced by the railway crossing at the very point where mills can be erected adjoining the track. There is no other point on the continent of America possessing water power of such magnitude or situated so advantageously as those of the picturesque falls on the Winnipeg River at "Portage du Rat."

(By Henry K. Wicksteed, C.E., B.A.S.)

A good deal has been written about Algoma, a good deal of rubbish pro and con, by enthusiasts and croakers. It has been described in high flown poetry as "the land of mountain and of flood, whose crystal streams, etc., etc., etc.," and on the other hand as a barren wilderness of rocks, swamps and lakes, one-third rock, one-third muskeg, one-third water. My own observation has been confined pretty much to the western portion, that is known as the Thunder Bay district, but during a thirteen years' almost constant residence, in which time I have travelled almost every canoe route between Lake Nipigon and Lake of the Woods, and have systematically pumped nearly every intelligent explorer and half-breed in the district, I may say without vanity that my knowledge of this district in a general way is pretty exhaustive and thorough, and that there is scarce one hundred square miles of it about which I have not some little knowledge either at first or second hand. My own verdict is that it is neither a desert nor a paradise, neither a Sahara nor a land flowing with milk and honey, but a territory having its drawbacks no doubt, (what country has not) but capable of supporting a large population of men and women of almost every grade and calling in life.

"What can you raise in such ground as that?" asked a tourist of a sweaty New Hampshire farmer, toiling in a stony field.

"We raise men was the proud reply," New Hampshire raises men and sends them out to develop other states—brawny, sinewy men.

Algoma can not only raise such men, but is capable of supporting them and of giving them a measure of health, happiness, longevity and comfort far in excess of that enjoyed by the average human being. I wish to mention the mines as one of Algoma's resources and to say that the mines are there, that silver, gold, copper and iron are coming out of them, and that hundreds of men are now employed about them, and further that it is my firm conviction that there are much better fish in the sea than have yet come out of it, and I invite outside capitalists to come and catch these fish before it is too late.

I know that there is good land, large quantities of it in Algoma, not in vast unbroken areas as you have it in the west, but in long sheltered valleys, with timber for building purposes and for fuel in abundance, and water and water-power handy to every settler. In my own opinion and in that of every one to whom I have spoken, and who is qualified to judge, Oliver township, good as some of it is, is not to be compared with the newly surveyed townships to the south-west of it—O'Connor, Gillies, Lybster, Marks and Strange, watered by the White Fish River and its tributary streams. We have on the banks of the White Fish nearly all the essential natural vegetation that is seen on the banks of the Red River in equal or greater luxuriance, with nearly every species of coniferous trees which grows in Canada; besides years of residence have failed to convince me that any difference in climate is not in favor of Thunder Bay, and as an offset against an assumed (not proved) inferiority in the soil, we have the abundance of water and water-power before mentioned. Why cannot a farmer be happy here?

Market—We are much closer to market than the Manitobans are. The initiated Thunder Bay Colonization or Port Arthur, Duluth and Western railway runs through the heart of this district, and the very hills which shut the valley in and protect it from the chilly Lake Superior winds, are seamed and cracked in every direction by mineral-bearing veins, requiring men and horses with good appetites to work them. Market! What better market can a farmer have than a mine within two or three miles

of his front door? I am speaking particularly of this White Fish Valley, because it is the one most easily accessible and most attractive at the present time, not because it is the only agricultural tract in the district; and I do not wish to be understood as under-rating Manitoba, but let her give us our due and not appropriate all the immigration to herself and advertise herself as the only habitable corner of the Canadian North-west, or as you have so aptly put it, of "Central Canada."

There is pine timber in Algoma not comparable in quantity, perhaps, with the magnificent growths of the Upper Ottawa and Mississippi, but good clear pine of a rising market value—rising because of its increasing scarcity in the older localities. Large quantities of this timber will be soon rendered accessible by rail.

There are fish in Algoma, in Lakes Superior, Huron and Nipigon; white fish and lake trout of the finest quality, and in the small lakes—pike, pickerel, suckers, bass, etc., in almost fabulous quantities. We have in illimitable quantities all that is necessary for the manufacture of ordinary wood pulp: water, water-power and poplar timber, with streams to drive the timber and a railway to carry the pulp.

Algoma has other resources, animal, mineral and vegetable. There are vast tracks in Algoma which will never be settled up, which will always remain a primitive wilderness; but even these have their use, and will be to the tired Winnipegger what the highlands of Scotland are to the Londoner, the Adirondacs to the New Yorker, the Muskoka Lakes to the Torontonians and the Saguenay to the Montrealer. A breathing ground and park, surpassing the Scotch highlands in climate, the Adirondacs in variety and sport, the Saguenay in accessibility and Muskoka in picturesque beauty and grandeur, and all four in extent, and the consequent complete seclusion and isolation possible, without fatiguing travel or the necessity for leaving behind the little comforts and luxuries in food for mind and body, raiment and furniture, which long custom elevates into comforts. An hour's drift in a birch-bark canoe or a sailing boat will convey a whole family with their household goods, from that perfect achievement of modern civilization—a pullman palace car—into an untouched and wonderfully beautiful wilderness, through which they can.

travel, if so inclined, for days and weeks with ever-shifting scenery, or pitch their cosy house-tent on the shore of some sandy bay, with all the comforts of the seaside hotel, without the noise and publicity and at a fraction of the cost. Then as a yachting ground (if blue water can be called ground) can anything compare with Thunder Bay, Black and Nipigon Bays and the adjacent north shore of Lake Superior or of the Georgian Bay? No necessity for carrying ice or fresh water; no hot weather and sweltering suns; no insidious tides and currents, and with a harbor always under our lea and good fishing to amuse us when windbound or becalmed.

CAPABILITIES OF THE NEW FREE GRANT COUNTRY—RICH AGRICULTURAL, MINING AND TIMBER LANDS—PROSPECTS FOR SETTLERS—HOW TO REACH IT—INTERVIEW WITH MR. JAMES CONMEE, M.P.P. FOR ALGOMA.

Considerable public attention having been called to the Rainy River District by the speech of Hon. T. B. Pardee, and the addresses of Mr. James Conmee, M.P.P., a member of the *Globe* staff waited on the latter with a request for information.

"Will you state the position," was the first question, "of the large block of good farming land in the West Algoma district?"

"It lies along the southern boundary of the Province, commencing about thirty miles west of Lake Superior at White Fish Lake, and extends some 300 miles along the northern boundary to Lake of the Woods. This tract is almost unbroken, except at one or two points—Kettle Falls being the most noted."

"What is its area?"

"This belt of country comprises about 24,000 square miles, half of which we can safely estimate to be good agricultural lands. This would give over 7,000,000 acres of farming land. The largest block of this land, and, undoubtedly, the best portion of it, lies along the Rainy River, the boundary line between Canada and the United States. This belt is not confined to the Rainy River only, but extends around the shores of Rainy Lake and Lake of the Woods, the good land running as far north as within thirty miles of the town of Rat Portage."

"Has it not been stated by some that the belt of good land on the Rainy River is only a few miles wide?"

"This is a wrong impression, as, from personal observations and the information I have been able to collect, I believe the average is not less than forty miles in depth; at some points it extends back much further. In 1872 I passed through this belt of country from Waubegon Lake, which is now touched by the Canadian Pacific Railroad to the Rainy River, a distance of nearly a hundred miles, and at that point the land is good the whole of the distance. There are also large tracts of fine agricultural land in the vicinity of White Fish and Arrow Lakes, about thirty-five miles south-west from Port Arthur. It is true that from the shores of Lake Superior, and as viewed from car windows of the Canadian Pacific Railway, the country has a broken appearance."

"How do you account for the erroneous impression which has generally prevailed as to the character of the country?"

"As I have just stated, it is a broken country near the lake, and at various points along this belt of territory the rocky or broken lands run through the ridges, and as you go north these rocky portions become more general, so that at a distance of 75 to 100 miles north of the boundary the country is entirely rocky. It is through this section that the Canadian Pacific Railway now runs."

"In your address you spoke of some considerable settlement in this fertile country. Can you give any particulars?"

"There is considerable settlement along Rainy River, pioneers having gone into the vicinity some fifteen years ago, and some of them have made large improvements."

"What do you suppose to be the extent of their improvements?"

"The farmers have from 20 to 100 acres under cultivation."

"Does the land produce good crops?"

"It produces excellent crops. Fall wheat grows well; spring wheat, barley, oats, peas and vegetables also. The growth is very rapid. The soil in this vicinity is very rich, as is usual in 'intervale' lands about rivers and lakes, which are so common to this section of the country."

"Is there any danger from late or early frosts?"

"Frosts never trouble farmers in Rainy River district. I have inquired into that particularly. While I cannot give any particular reason for it, it is nevertheless a fact. The climate is much more favourable than in the prairie country, or on the shores of the great lakes."

"Have the settlers any schools?"

"Yes. Schools have been established this year, though the settlers have laboured under great difficulty with respect to titles to their land, owing to the boundary dispute."

"An impression prevails that there is no settlement near Port Arthur; is this correct?"

"No, there is quite a settlement near Port Arthur, the township of Oliver is pretty well settled and the township of Paipoonge. There were some new townships surveyed last summer of very good land, and there is room and good land for any number of settlers. This country will, no doubt, be settled up in time, but just now the great attraction for the settler seems to be in the North-West. This, I believe, is an error on the part of many intending settlers, as a man with small capital can succeed much better in West Algoma than in the prairie country. It is true he has more difficulty in getting his land ready, but he is close to a good market and does not require the same amount of capital to succeed that he does in the prairie country. An intending settler with less than one thousand dollars will do very much better in West Algoma than in the prairie country. I have every hope that this country will in due time settle up; and I am confident it will do so as soon as sufficient railway facilities are afforded. I can remember, although not very old, when St. Paul and Minneapolis had no railways, and no settlement near them, the country being broken for some distance from the banks of the Mississippi. Settlers at that time were attracted by the more level prairies lying farther west, but St. Paul and Minneapolis have now become great railway centres, and all the lands surrounding them are under cultivation. I believe what took place there will take place at Port Arthur and the Rainy River. The construction of the Ontario, Minnesota & Manitoba Railway will be the means of opening up the country lying along the southern boundary of the Province, and will conduce to its

development and settlement in the same manner as the railway enterprises brought about settlement, and consequent development of St. Paul."

"What about the natural resources of the country?"

"As I have already stated, it has a vast extent of agricultural lands; it is well watered, having numerous beautiful lakes and rivers. It possesses rich deposits of minerals. There is abundance of iron ore of the best quality, silver, gold, copper, mica and phosphates. There are at the present time several mines working near Port Arthur, with good results. There have been several thousands of acres of mining lands taken up within the past few months, all of which show rich indications of silver, and a large amount of capital is being invested. Large quantities of silver are now being taken out and reducing works are being erected. The prospects of this mining region and the vast quantity of silver in sight in the various shafts now being sunk are sufficient to convince the most sceptical of its great wealth in this metal."

"What branch of mining, do you think, will predominate?"

"Silver in the vicinity of Port Arthur, and gold in the neighbourhood of Rat Portage. The exhibit now being collected at Port Arthur for the Colonial Exhibition is probably the finest and best display of mineral of this class which has ever been got together on this continent, and will no doubt go far to convince the mining world of the richness of the mineral deposits in West Algoma."

"Why is there not more actual mining going on at Rat Portage if the mines are so rich as you state?"

"It is all owing to the action of the Dominion Government in raising the dispute with regard to the boundary. That the mineral is there, there can be no doubt. A large amount of capital and numbers of mining men were attracted there some six years ago. A number of mines were started, but as no titles could be got for the lands, no issue of mining stock or bonds could be made, and those who embarked in these enterprises found it impossible to induce large capitalists to invest their money under such circumstances. This difficulty will continue until the Dominion Government cease their pretensions or the Council decides the matter."

“What about the timber resources of the country?”

“There is about 15,000,000 acres of land in this particular belt and there is more or less pine scattered through it, but we can safely estimate one-half the area as being pine lands and placing the average quantity per acre at the very low estimate of 5,000 feet, it will yield about 40,000,000,000 feet. There is an abundance of the finest quality of white poplar and spruce, both most desirable for the manufacture of pulp, and the magnificent water powers will give facilities for the manufacture of this and numberless other articles.”

“What are the prospects of the railway you have referred to?”

“It will be easily seen that a railway passing through such a country as I have just described, which would no doubt become rapidly developed upon the construction of the road, and if we take into consideration the quantity of timber alone that would be produced, will be furnished with ample traffic. Add to this the traffic incidental to a large and productive population engaged in agricultural, mining and manufacturing pursuits, which would no doubt find their way into this country if opened by the railway. The railway is projected from Port Arthur to Winnipeg, and must consequently get a share of the through traffic.”

“What are the present means for settlers reaching the country?”

“By the Canadian Pacific Railway to Port Arthur, or if the intending settler is going to the Rainy River district, to Rat Portage by the Canadian Pacific Railway, from which place they can reach Rainy River by Lake of the Woods. The means of access to this section at present is very limited, but the proposed railway will remedy all that. There can be no extensive settlement until the railway is built.”

THE LAKE OF THE WOODS AND VICINITY — PRESENT OPERATIONS AND PROSPECTS FOR THE FUTURE.

(By George Mitchell, March 30th, 1887.)

PINE PORTAGE MINE.

The proprietors of this well-known property, Messrs. Dobie & Co., last fall engaged the services of Mr. Bouchire, an English mining expert and practical mineralogist, to make a thorough

examination of the ore which is highly refractory, and to decide upon the most economical mode of treatment. Mr. Bouchire at once erected a large furnace and necessary apparatus, but after five weeks' work obtained no satisfactory results from the experiments. He then recommended the trial of a steel furnace, which will shortly arrive, and the work will be resumed in the spring. The ore from this mine, though refractory, is immensely rich. The owners have money at their command and are determined to work the property as soon as they see their way clear with respect to the proper machinery.

GOLD HILL MINING CO.

In September last the Keewatin Lumbering and Manufacturing Co., on whose limits a portion of the above company's claims are located, served an injunction on the miners to stop further operations.

Since then little work has been done, excepting some surface prospecting. Recently, however, arrangements have been made and are now nearly completed, which will permit the resumption of work at an early date. The principal veins on this property are the following:

The "Combination," a six-inch lead blue trap. Very rich specimens have been taken from here. A prospect shaft, forty-two feet deep, has been sunk.

"Ada G." A number of test pits have been sunk on this vein, but as yet the width and extent are indefinite.

CEDAR LAKE.

This vein shows a total width of vein matter of twenty feet. A shaft of twenty feet has been put down on the foot wall, and a twelve-foot drift on the vein. The character of the ore is similar in many respects to that of Pine Portage. There is quite a network of gold bearing leads intersecting this property, all of which will be thoroughly prospected during the coming summer. Substantial buildings have been erected and a good waggon road built to the dock, which is about a mile distant from the camp.

THE SULTANA.

Last summer's prospecting work has showed up this vein in great shape. It is now evident that besides the main lead there are others branching off from it, all carrying coarse and fine gold in paying quantities. Some of the specimens taken from portions of the vein opened last fall are exceptionally rich, but the whole of the gangue pans out very satisfactorily. The width of the vein varies from four to eight feet as far as it is exposed at present. A transfer of a part interest in the property is on the tapis, and the probabilities are that the sound of stamps will be heard in the neighbourhood before long. The Sultana is situated on Indian Reserve No. 38B, which fact has hitherto been detrimental to placing the property on the market. Now, however, this difficulty has been overcome, the Indians having surrendered to the Dominion Government that portion of their reserve. It is, therefore, likely that a title will issue for this location and others contiguous to it, within a reasonably short time.

(Later, April 30th, 1887.)

Daley and Huggins have shut down work on the "Minerva" until navigation opens. They are making an effort to get five head of stamps on the ground.

A number of mica discoveries were last fall added to those already located. One of these owned by Messrs. Bulmer, Parsons & Chaloner shows up big. The vein occurs in the Laurentian formation south of the North-west angle, and in American territory, and can be traced two miles. The samples shown from here are of a better class than any other mica on the lake.

Down below White Dog, on the Winnipeg River, Dr. Scoville and Mr. Matheson, of the Hudson Bay Company, have surveyed a claim on which there is a big deposit of fair mica. The vein will be prospected in the coming spring.

Nothing further has been done in the famous Falcon Island mica mine, owned by Messrs. Matheson and Macpherson. This is a very extensive bed of mica and yields sheets eight inches square.

Some preliminary work was done two years ago, but to all appearance ground was broken in the wrong spot. Some likely looking specimens of the wine coloured mica were brought in last week from the vicinity of English River, and all through that country and the valley of the Winnipeg River numerous croppings of this mineral are found.

There appears to be an early prospect of titles being issued for mining properties on certain Indian Reserves. Last October the Indians of Reserve 38B, near this place, were induced by the Government to relinquish their claim to that part of the reserve where several mining claims have been surveyed, and it is probable that the Government will place a price per acre on the land and give patents for same without delay. Their action, if carried out, in other portions of the section, will materially enhance the value of our mining district, as quite a number of valuable deposits are known to exist on several of the reserves which, heretofore, have not been prospected on account of the Indian title preventing their location.

The Winnipeg *Free Press* says:—Those who have mines on the Lake of the Woods are only awaiting a settlement of the titles question to commence work. Among the specimens on view in Mr. Proudfoot's office are several magnificent ones from the Heenan mine, on Hay Island, ten miles from Rat Portage. The quartz is heavily pregnated with the precious metal, and would yield at the rate of over \$1,000 per ton. The proprietors of this property have had an assay of rock, chosen indiscriminately from the mine, made by Prof. Chapman, of Toronto, and the result shows \$506 per ton. The professor makes special reference to the quality of the ore, which is calcareous in its nature, and easily mined and separated. A considerable amount of money has been spent on this property in the erection of buildings and testing shops. The vein is eighteen inches wide and is most promising, and the owners intend tunnelling with a view to reaching it. There are besides the vein referred to, a number of other veins distributed over the location, showing indications of both gold and silver.

SURVEYS IN NIPIGON DISTRICT—ON SNOW-SHOES—A PERILOUS
EXPERIENCE WHILE CROSSING LAKE NIPIGON, MARCH 15TH,
1887.

Mr. A. L. Russell, P.L.S. and D.L.S., returned from a month's surveying expedition by yesterday's train from the east apparently in good health. Meeting Mr. Roland, who was employed on this party, a *Sentinel* representative elicited the following brief items respecting their general experience :—

“The route to the scene of Mr. Russell's surveys of Indian reservations was along the (for the most part) frozen rapids and chutes of the Nipigon River, and from the Little Flat Rock rapids across the magnificent inland sea known as Nipigon Lake. This immense water stretch possesses a deeply indented coast line of nearly 600 miles. Voyaging along this route in summer was of course familiar to the entire party, but the experience of traveling on snow-shoes over the frozen chain of lake-like expansions composing the swift flowing Nipigon River, was to some of us quite a novel one.

“This river measures some 33 miles from its source at Victoria Falls to its inlet into Nipigon Bay, Lake Superior. No less than fifteen falls of more or less magnitude occur in its impetuous course. Many of these falls are of unrivalled grandeur, and even in their present partially frozen-over state, present new charms and impressions from every point of view.

“The topography of this country is perhaps more diversified with islands, lakes and streams, with rocky mountain ranges and fertile belts interlarded therein, than any other portion of Ontario.

“To the south and westward of the big lake with the euphonious Franco-Indian name of Nipigon, much fertile land and good timber abounds, and the country in the neighborhood of the English church mission, where the Indians cultivate a great variety of root and other crop, is no exception.

“This mission was established some ten years ago by the late Bishop of Algoma (Fauquier), who endeared himself to the small but devoted band now permanently settled in McIntyre Bay on the south side of Lake Nipigon. Here some five or six frame and log houses, including a good school, have been erected, under

the superintendence of Rev. Mr. Rennison, a graduate of Trinity College, Dublin.

"This well chosen site has not yet been secured to the Indians. I am, however, informed upon good authority that both the Dominion and Ontario Governments are about taking steps to construct a good wagon road from Red Rock on the Canadian Pacific railway to this mission. This is rather a better route for the road promised to the Nipigon people by Mr. Conmee, M.P.P., during the closing days of last session, and for which the sum of \$1,000 has been voted in this year's estimates. Mineral lands have been applied for in this vicinity. "Possibly," observed the intelligent chief of the band, "the Government think we have moved away. And as white men have already applied for mineral lands right at our doors, we should like to see this question of ownership settled in a friendly way, as we don't want to keep out miners or settlers."

"During our trip we experienced some unusually severe weather, notwithstanding which work was vigorously carried on every day. Over 11,000 acres of land were instrumentally surveyed, and repeated observations were taken upon clear nights throughout the progress of the work.

"In addition to the above survey, consisting of some twenty miles of line cutting and traversing, Mr. Russell also made a track survey across Lake Nipigon by pacing and prismatic compass bearings, thereby fixing the position of many islands and essential points in this lake of magnificent distances. This latter proved a most fortunate undertaking, as on the return trip, and during a piercingly cold north-east wind and blinding snow storm of sleet, our Nipigon Indians, who might reasonably be supposed to know the route thoroughly, became hopelessly lost, and it was only owing to the fact of Mr. Russell's observations on the up trip and his early detection of their aimless and irregular course that saved us being placed in a very unenviable position to say the least.

"Indians like others are often slow to admit their errors, but in this case they frankly admitted that "Indian was positively lost." Many of the traverses from point to point in this section are extremely long and consequently travelling in stormy weather

is perilous work indeed. It was on one of these long stretches that the party under Mr. Peter Warren Bell, Inspecting Chief Factor of Hudson Bay Company, only a few days before became so entangled among the north-western archipelago during a similar storm, that they lost much valuable time and a few of their dogs before reaching their destination. Beyond a few frost bites none of our party sustained any injury. Not so with our snow-shoes however, for notwithstanding the most indefatigable efforts at their repair, owing to the deep and uneven and yielding surface of the snow everywhere, little else than the frames remain for future use.

"The fur trade near the lake is said to be fairly good this season, but owing to a decided paucity of supplies at the Hudson Bay Company's interior post of Nipigon House, the Indians complain that they would be compelled to seek other sources of supplies. Our party were, however, fortunate in obtaining just sufficient food for time actually employed. This, under the peculiar circumstances of the case, may be looked upon as a very great concession on the part of the Hudson Bay Company. Mr. Russell proves to have been an old acquaintance of the agent at this post (Nipigon House) and this doubtless accounts for his successful negotiations respecting the commissariat department.

"Arriving at Red Rock we were unpleasantly surprised at the blank left in the lovely foreground of the pleasing panorama as seen from the Nipigon bridge. I refer to the total demolition of the "Nipigon Hotel," so successfully conducted by the genial explorer of Lake Superior, Mr. Duncan McEachren, who unlike Marius of Carthage, is up and active as ever.

"In addition to the above reserves on the Big Lake, another reserve was last season surveyed by Mr. A. L. Russell, for the band of Chippeways belonging to Red Rock and Lake Helen. This reserve is on the west bank of the Nipigon River near its inlet to Lake Helen, where the Chief Pierre Deschamps and other civilized Indians have made comfortable homes and well cultivated gardens. Here also reside the most experienced and trusty voyageurs and guides to the numerous fishing places of note. Among the best known of the guides I may mention Pierre Bonnetcarie, Jose Bouchard, John Watt, Alexe La Ronde and Dennie Deschamps."

GUIDE TO SPORTSMEN GENERALLY.

THE NIPIGON RIVER

Is worthy of more than a passing notice, as it has been pronounced by sportsmen, for the past 15 years, the king of trout streams. Until quite recently the trouble, expense and time necessarily involved in reaching the north shore of Lake Superior deterred all but the most enthusiastic from making the trip; however, since the opening of the North Shore Division of the Canadian Pacific Railway on November 2nd, 1885, the journey is a pleasure, and accordingly a fresh page will this year have been turned in the history of the Nipigon. Sportsmen may now take passage from any of the American cities, and after connecting with the Canadian Pacific Railway never leave their car until they reach the Hudsons' Bay Post of Red Rock, at the mouth of the river, where guides, Indians, canoes and tents can be engaged, and all the necessary provisions for the trip may be purchased either at Port Arthur or Nipigon; the general system followed is to make Port Arthur the visitor's headquarters, and base of operations. Nothing need be brought excepting fishing tackle, which can be purchased better in the east than here. Provisions and all necessary camping supplies are nearly as low in price at either Port Arthnr and Nipigon as in the east, and buying them on the spot prevents the traveller being hampered with much that is useless, and totally unfit for a journey up the river. The usual rates for the rent of canoes are 50 cents to \$1.00 per day, men from \$1.00 to \$2.00 and their board. The trout season extends from May 15th to September 15th, the best fishing season being from the first of July until the close of the season, the water usually being too high in June. A nominal license fee is charged by the Government, but it is expected that this will soon be done away with, and that the river will be perfectly free to the sportsmen of all nations. It is not necessary to say anything in favour of the fishing which is so justly celebrated all over America; the chief complaint from those who are in the habit of going there is that they get too many fish, more in fact than they can possibly

use. A six pound trout is no uncommon occurrence, although, of course, the average is not so large, from one and a-half to three pounds being the weight of those usually caught.

The Nipigon is not the only trout stream on the north shore of Lake Superior; there are very many others which of themselves would make any country celebrated, but their importance is to a certain extent overshadowed by the Nipigon, about which so much has been said and written; of course this latter river being navigable for canoes makes it more easily fished than many of the others. In Thunder Bay itself are many fine streams in which trout may be caught: the Mackenzie River, fourteen miles east of Port Arthur; Carp River, 14 miles south; and Blend River, 25 miles east, have all local reputations for the size and quantity of their trout, while within a radius of six miles there are as many streams in which large quantities of small trout may be caught any afternoon in summer. The principal of these are Current River, McVicar's Creek, Six Mile Creek and McIntyre River, while on the north shore, east of Nipigon, nearly all the streams are well stocked, besides possessing the advantage of very rarely having been visited by any one.

PLAN OF RIVER FOR ANGLERS.

Upon margin of large plan of Mining region accompanying this work will be found a small sketch of the Nipigon River from actual instrumental surveys, shewing principal portgages, rapids, and fishing pools, between the Virgin or Grand Falls, and the crossing of the C.P.R.R. at Red Rock or Nipigon.

The above maps were specially prepared by Mr. A. L. Russell, D.L.S., and Provincial Land Surveyor, of Port Arthur, to whom the writer is also indebted for valuable information relating to the "mineral region," now attracting so much attention from foreign and native capitalists.

PORT ARTHUR

Is beautifully situated on natural terraces sloping down to the shores of Lake Superior at the head of Canadian Lake Naviga-

tion, and at the terminus of the Canadian Pacific Railway on Lake Superior.

The following are the distances from it to the undermentioned places, viz.:

Nipigon, <i>via</i> the C.P.R.	67 miles east.
Ottawa " "	874 "
Montreal, " "	994 "
Quebec, " "	1,140 "
Winnipeg, " "	430 miles west.
Regina, " "	786 "
Calgary, " "	1,269 "
Canmore, " "	1,336 "
Vancouver, " "	1,900 "
Toronto, <i>via</i> C.P.R. Steamer and Owen Sound	650 miles east.
Toronto, <i>via</i> N.W.T. Co.'s Steamer and Sarnia	700 miles.
Sault Ste. Marie, by steamer	265 "
Duluth, Minn., by steamer	180 miles s. w.
St. Paul, Minn., by steamer and rail, <i>via</i> Duluth	335 "

It may be reached during the entire year by the following routes, viz.:

By the Canadian Pacific Railway (Eastern Division), which connects with all the railway systems of Ontario, Quebec, the Maritime Provinces, the New England and Eastern States, for all points south and east of Chicago. By the Canadian Pacific Railway (Western Division), which connects at Winnipeg with the St. Paul, Minneapolis and Manitoba systems from St. Paul, Minneapolis, St. Louis, and all points south and west, and after July 1st, 1886, solid trains will be run from Port Arthur to and from Vancouver, British Columbia, making direct connection with steamers for Victoria, Portland, Oregon, and all points on the Pacific coast as far south as San Francisco.

PIGEON FALLS

Are situated near the Mouth of the Pigeon River, which is distant by water 40 miles from Port Arthur; the Falls are still in a natural condition, the surroundings never having been

destroyed by the ruthless hand of man. The river here tumbles perpendicularly over a ledge of rock 90 feet high, into a solid stone basin below. Pigeon River forms the International boundary line between Canada and the United States; the State of Minnesota being the American bank, while the District of Algoma forms the Canadian one. Ten miles further along the coast the Grand Portage is located. It is over this celebrated portage that, in the days before railways were known in the North-West, the supplies of the North-Western fur traders were taken to the interior posts, and it is the only place or route in the United States where British goods can be taken through without any bonding or Customs regulations, the river and the portage being common to the people of both nations.

THE QUESTION OF TITLES.

RAINY RIVER AND LAKE OF THE WOODS.

Brief reference was made in foregoing pages of this work to the above question, since which writing, however, important developments have taken place. It is unnecessary to refer at length to the dispute which arose between the Federal and Provincial Governments in regard to the boundaries of Ontario and Manitoba (familiarily known as the Boundary Question), as the subject was an important issue in Canadian politics during several campaigns, and the points in dispute were discussed through the press and on the platform in every part of the Dominion. Suffice it to say, however, for the benefit of those who are not conversant with the question, that owing to this dispute no titles could be obtained for lands within the boundaries of this disputed territory. For years this matter has retarded the settlement of the country and the development of the timber, mineral, and agricultural lands. The important question of the ownership of the land has at last been set at rest by the decision of the Judicial Committee of the Privy Council of England, to which tribunal the case was referred for final hearing. The verdict of that body gave the Province of Ontario control of the lands within the disputed boundaries. Although

this final decision was given nearly three years ago patents were not issued, owing to a subsequent contention being raised in regard to the extinguishing of the Indian title. This case had also several hearings in the courts, and a verdict in every instance being favorable to the Province, the Government finally decided to issue patents for all claims in the Rainy River district. The following announcement by the Commissioner of Crown Lands, restores confidence in the future of the district, and has already given an impetus to the purchase and development of the mineral lands.

The following letter has been received by Mr. James Conmee, M.P.P., for Algoma :—

“ PORT ARTHUR, May 14th, 1887.

“ MR. JAMES CONMEE, M.P.P.,

“ Port Arthur.

“ DEAR SIR,—I have not forgotten or overlooked your repeated and urgent requests that the Government of Ontario would at once take such action as it might deem advisable and necessary to put an end to the uncertainty which prevails regarding titles to lands in the district of Rainy River, which, as you state, is causing great dissatisfaction to settlers and others, and also is seriously retarding the natural progress of the country.

“ In connection with this important question which for a long time has been a subject of serious and anxious consideration, I desire to say that the Government of Ontario, having had, and having now the utmost confidence in the justice of its claim or title to the lands in the territory, has hitherto delayed action, hoping wiser counsels would prevail at Ottawa, and that the Government of Canada would consider the interests of the people to be paramount to all other considerations and would abandon its unwarrantable pretensions, which have so seriously delayed the settlement and development of the district. But as there appears now little reason for hope that they will do this, and as the interest of the country have seriously suffered in the past and will continue to suffer for some time yet if the case is carried to the Privy Council, as threatened by the Dominion Government, the Government of Ontario has decided that it would be justified

in taking immediate action, and thus, as far as possible, relieve the settlers and others having claims in the district from further suspense and anxiety."

"I have therefore to say that the Government has determined to take immediate steps to investigate all the disputed and other claims to the lands in that region, and to issue patents without further delay.

"Yours truly.

"T. B. PARDEE,

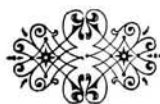
"Commissioner."

THE FIRST PATENT.

June 1st. 1887.

Since the above proclamation was issued the first Patent has been granted Mr. Geo. Grahame of Fort William, namely for a mineral claim on the Atic-Okan Seebee in Rainy River district, and doubtless, before this, is in the hands of our readers, the hearts of a number of old pioneers will be gladdened by the possession of a "Title from the Crown," for which they have patiently waited for a long time.

Owing to the unsettled state of the country in the Lake of the Woods, and Rainy River region, when the first discoveries of gold were made, claims were surveyed and taken up in a somewhat reckless manner—in some instances there being three and four applicants for the same location; consequently a great many disputes have arisen. In order to overcome this difficulty the Government has decided to appoint a commission to take evidence in all cases in dispute, and grant patents to the original discoverers, and first Claimants.



PART III.

GEOLOGY OF ALGOMA WEST

EARLY EXPLORATIONS AND DEVELOPMENTS

— ON THE —

NORTH SHORE.

DESCRIPTION OF MINES, ETC., ETC.

THE LAURENTIAN SERIES, THE HURONIAN SERIES, ETC., ETC.

PLAN AND WORKINGS OF THE BEAVER MINE,

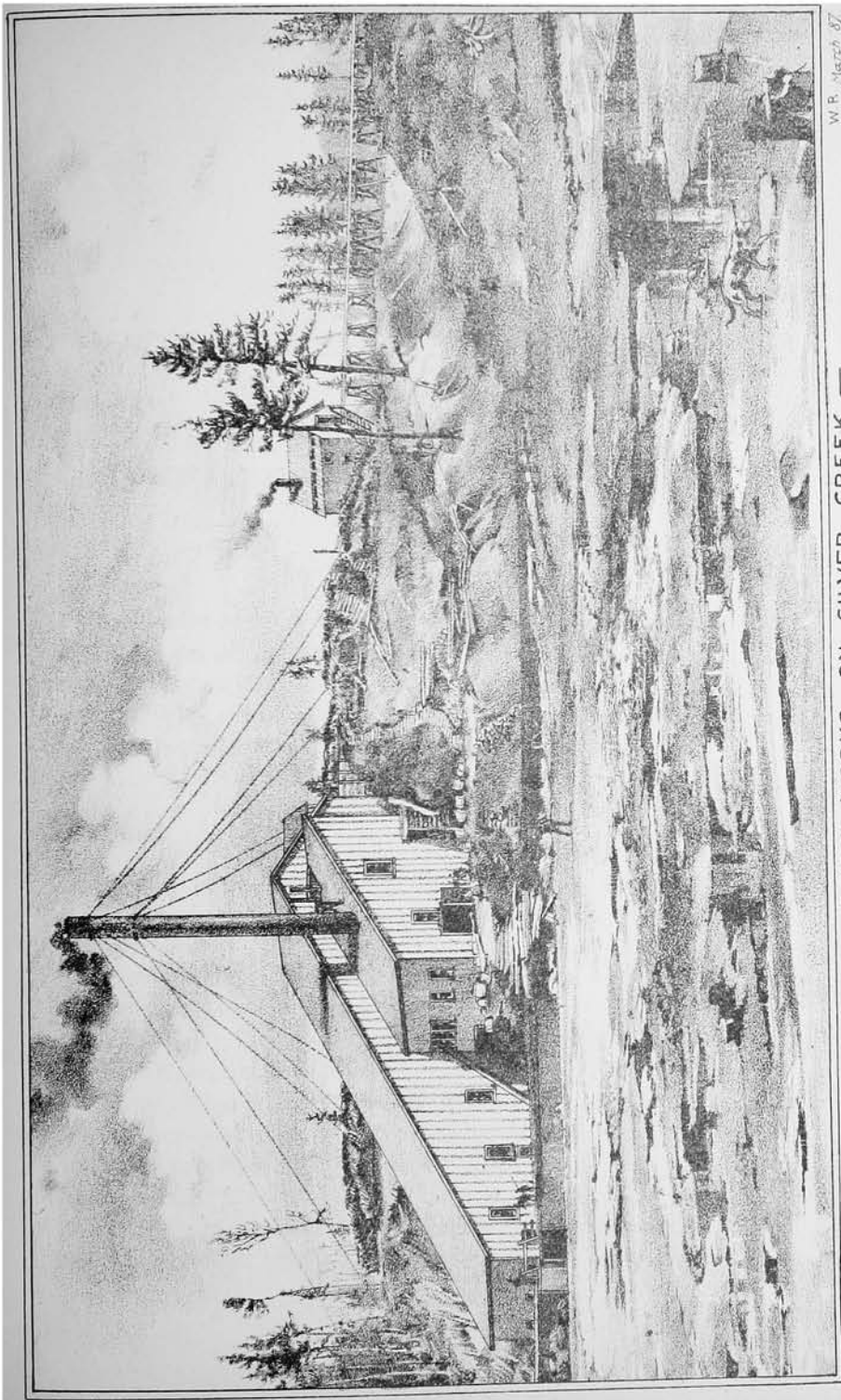
WITH ENGRAVING.

SKETCH OF SLEEPING GIANT

ON THUNDER CAPE.

THE LEGEND OF THUNDER.

HOW THUNDER BAY OBTAINED ITS NAME.



Reph Smith & Co

— REDUCTION WORKS ON SILVER CREEK. —
— BEAVER MINE. —
— LOOKING NORTH —

W. B. March 87

PART III.

GEOLOGY OF ALGOMA WEST.

EARLY EXPLORATIONS AND DEVELOPMENTS ON THE NORTH SHORE.

THE LAURENTIAN SERIES.

This series is chiefly confined to the height of land and touching the shores of the lake in but few places in this district. It consists of granite, gneiss, synite and micaceous schists, almost entirely. Its veins of quartz and spar carry copper and iron pyrites, also galena and zinc blende occasionally.

THE HURONIAN SERIES

Lies generally between the Silurian and Laurentian, striking occasionally in a north-easterly direction in a broad belt towards the height of land merging into the Laurentian. The principal area occupied by these belts stretches westward from Thunder Bay through Lake Shebandowan, and thence to the American boundary. It consists of greenish grey strata, with a dip nearly vertical. The principal portions have a slaty structure, consisting of chloritic, argillaceous, talcose, siliceous, dioritic and fine grain micaceous slates, with interstratified beds of massive diorite. It is from these slates we are expecting great results. It is only a few years ago that the first silver mine ("3A") or any other mine—except that of Little Pic—was discovered within the Huronian belt in this district. This discovery was followed immediately after by that of the Jack Fish Lake gold in the

same series, but some 100 miles to the westward. Again, in 1872 the Heron Bay gold and silver mine was discovered in the same formation, and about 150 miles eastward of the "3A" lode. Since this date many other discoveries of promising silver-bearing lodes have been located in the Huronian area, which includes the coast line opposite the Slate Islands.

THE LOWER BEDS OF THE UPPER COPPER-BEARING ROCKS.

These come next in ascending order. They occupy the coast and islands, with the exception of a few spots near Silver Harbor, where the older rocks come in from the east end of Thunder Bay westwards on to American territory, showing also at a few points further east, underlying the upper beds. They consist of layers of chert, dolomite and iron ore, the latter being near the base, with thick beds of clay, slate and grey argillaceous sandstone shales, interstratified with beds of columnar trap. The intersecting veins carry silver, galena, zinc blende, copper and iron pyrites and other metals in small quantities, and until the discovery of the silver and gold lodes above referred to in the Huronian series, these slates were considered the silver-bearing formation of the country. The Silver Islet, Thunder Bay, "Duncan" or "Shuniah," Prince's Bay, Jarvis Island, McKellar's Island, Spar Island, Lambert's and Thompson's Islands, with many other silver-bearing veins, all intersect these slates, which extend over the principal part of the coast and almost all the islands from Thunder Bay to the east end of Nipigon Bay. They consist of sandstones, conglomerates, indurated marls and some interstratified soap-stone, crowned by an immense thickness of trappean beds, most of which are amygdaloidal in character. The quartz and spar veins, which traverse the sedimentary or lower portion, hold galena, copper ores and zinc blende in very considerable quantities; also gold and silver, as shown by Prof. Chapman in his report of the Enterprise lode in Black Bay. The Silver Lake, "Caribou" and the above are the principal lodes known in this strata. The above trappean beds are the famous copper-bearing rocks of the south shore and Isle Royale. At the former place the workable loads conform with the strata, dip at a high angle and are wonderfully rich. On our side these rocks dip at low angles. Native

copper, with associated nuggets of silver, is the principal metal found in these rocks, but occasionally the sulphurets and other ores are met with in small quantities. The veins, in passing through them into the sandstone, seem to drop the native copper, it being replaced by the sulphurets. Many years ago the Montreal and other companies spent considerable sums of money in mining these rocks without success, but this is of little importance, as there was ten times more spent upon the south shore before their mines proved at all productive.

Among the theoretical views advanced on the metaliferous characteristics of these rocks by geologists is the opinion that the silver in the fissures of the Thunder Bay slates was derived from the same source by an aqueous solution, and the way the discoveries of silver are distributed over that section would appear to substantiate this conclusion, for we find them distributed along parallel belts which seems to agree in strike with that of the highly inclined Huronian strata, which occupy the section, and must underlie these horizontal slates at no great depth. In other parts the veins of similar character have been searched in vain for silver, none being found except the usual quantity peculiar to galena. For example, a belt along Thunder Bay from Lambert Island to the Shuniah mine, a distance of about eighteen miles, shows silver in different places, which would require two argentiiferous parallel strata on this principal to account for it. At the "3A" mine the Huronian are not overlaid by the Silurian, all these veins appearing to conform with the strike of the Huronian and this belt of silver. Again, taking the other belt of silver discoveries—that is Silver Islet, Jarvis, McKellar's and Thompson's Islands, "3B" and McKellar's Point, in all of which silver shows; this is about 30 miles long, running parallel to and lying about 20 miles to the south-east of the above-mentioned silver belt. Here we find all the principal fissure-veins bearing north north-west and south south-east, crossing the strike of the Huronian and the Thunder Bay silver veins; but, strange to say, the general run of the silver conforms with the latter instead of with the veins in which it is found—each of these discoveries being upon a different vein, and on the whole, lying on a line bearing about west south-west and east south-east, which, as above mentioned,

conforming with the Huronian strata, which appears to underlie these slates all through this locality. There would also appear to be another run of silver to the north of this, and nearly parallel with it on the same north north-west veins, as silver has been discovered on the Mackenzie locations to the north of "3B," and upon Prince's Bay and other locations lying northward of Spar Island, on Pie Island and on one of Wood's locations to the north of McKellar's Point, the distance between the two extremes being about 20 miles. Here we find two belts, as it were, of silver, the same as at Thunder Bay, which, if this theory be correct, would show the presence of two or more argentiferous strata in the Huronian, which seems not at all unreasonable, as auriferous and other metalliferous strata are known to exist in other parts of the world. For instance, the late discoveries on the south shore of Lake Superior (and more recently at Michipicoten Island on the north shore) show that the silver, both native and sulphuret, exist in large quantities in a sedimentary, sandstone and clay slate, associated with the ores of copper. The silver is found finely disseminated through the upper layer of a thick bed of slightly metamorphosed sandstone, also in the lower layers of the black clay slate, which immediately overlie it. The change in the character of the sedimentary deposits at this point shows that a great geological change of some kind had taken place there at the time of its deposition, to which, no doubt, the presence of the silver is due. Here the general dip seems to be at a low angle to the north-east into Lake Superior, but the whole has been pressed laterally into undulations nearly at right angles to the direction of the dip, so that the outcrop of the lode has a zig-zag course resembling somewhat a rail fence.

The foregoing theory is, however, but the expression of an opinion which further discoveries may shew in a different light. The far famed Silver Islet vein, though so rich on the islet, shows comparatively little silver on the island near the shore, or on the mainland, when several tests were made, though it is large and well defined, carrying galena, zinc blende and iron pyrites. There is a peculiar metaliferous dyke of diorite (Macfarlane's band), about 10 chains wide, passing along the above-mentioned line by Silver Islet, McKellar's Island, Jarvis Island, etc., which differs

in appearance from any of the dykes seen in the country. This contains several ores, and in places appears rich enough to work for its copper pyrites. Mr. Thomas Macfarlane, who located the Jarvis and Silver Islet silver lodes, was the first to bring it to notice, and accounted for the metaliferous character of these veins on the same principle as that of the Koingsberg silver veins that intersect the metaliferous Fahl-bands, comparing the diorite to the Fahl-bands, so rich in a number of metals, silver included. Although it would doubtless prove of great interest to many of our readers to give more complete extracts from the history of early explorations on the north shore, such a course might extend this work to a most inconvenient length; consequently but a few touching the discovery and location of the most interesting lodes only can be here referred to. One of the very earliest discoveries of silver in this district was that of Spar Island and Prince's Bay, by Colonel Prince, some 45 years ago. The vein on the island is large, well defined, and composed principally of spar. It intersects the above-mentioned dyke of diorite, bearing about north and north-west, with a dip nearly vertical. One of the ribs is charged with the sulphurite of copper, native, and sulphurite of silver. According to Sir William Logan, this appears an interesting lode from which he anticipated satisfactory results, both in silver and copper. It was about this period, also, that the Jarvis Island (1846) and Silver Islet were located for the Montreal Mining Co. by Prof. Forest Shephard, who, with a large party of prospectors, located in addition to the above-mentioned islands some 16 blocks of land along the coasts of Huron and Superior, each block measuring two miles by five. This included the Bruce mines, where their operations in the way of mining was exclusively confined until about the year 1868. During this season the company (after the discovery of silver in Thunder Bay) employed Mr. Macfarlane to explore and report on their lands, for which they were rewarded by the discovery of two silver lodes, the Jarvis and Silver Islet, the latter being the discovery of Mr. Morgan. From this rich lode they had extracted several thousand dollars worth of silver up to the first of September, 1870, the day upon which the sale of their lands was effected to the American Company for the sum of \$25,000. Between the date

of the suspension of work upon the Prince's Bay and Spar Island locations (1847) until 1863, very little appears to have transpired that would prove of interest in this immediate vicinity until the discovery of

THE ENTERPRISE MINE.

It was in the summer of 1865 that Messrs. Peter and Donald McKellar discovered, among other interesting lodes, that of the Enterprise mine, of Black Bay. This vein is described as six feet to eight feet wide, the gangue being quartz and calc, and heavy spars, with a lode of three to four feet wide of solid ore, consisting of a mixture of galena and copper pyrites, with a small quantity of the gangue, of which Prof. Chapman reports as follows: Lead, 47 per cent.; copper, 8 to 11; and some copper ore ribs at 21 per cent.; besides an average of the precious metals of about \$17.00 in gold and \$4.00 of silver. Two years afterwards it appears that the Messrs. McKellars effected a sale of 400 acres in this vein to an American company for \$20,000, who afterwards made considerable surface and other developments upon it.

THUNDER BAY SILVER MINE.

Passing over a number of discoveries more or less remote from this point, we take the next discovery of local importance, viz., that of Thunder Bay, by Mr. Peter McKellar. This event occurred on the 20th of September, 1866, at a point some two and a-quarter miles north-east of the mouth of Current River, and about five miles from Port Arthur, or "The Landing," as this place was then called. At the point of exposure the vein was about 20 feet wide, of quartz, enclosing large masses or belts of the country rock, which were also cut by numerous stringers of vein-stone. "It was," observes the lucky discoverer, "a wonderful show of silver, consisting of native and glance, with some galena, zinc blend, and iron pyrites." This ore occurs in bunches, 3 to 18 inches thick, by 6 to 40 feet in length, the silver being in strings, leaves and grains, and irregularly distributed through the vein-stone which constituted the hanging wall, and one in the greater part of the bunch. At the first opening there were two of the streaks, one next the north or hanging wall, and one in

the middle. It is not well defined, being chiefly in ribs, with considerable slate between. In the fall of 1867, Messrs. J. McKellar and John McIntyre, of Fort William, brought two half barrels of this ore to Montreal, where a company was formed with Governor Hopkins, of the H. B. Co. as president. It was divided into 80,000 shares, the par value of each being \$5.00. Twenty thousand shares were sold for working capital, 60,000 being unaccessible. A manager for the mine, Mr. Macdonald, was sent for to Europe; even the stamp and other mill machinery was imported from Europe. The mill was erected at the mouth of Current River on a magnificent water-power. A good waggon road was cut to the mine. Docks, crib-work, and other buildings were also erected near the mill, all of which have been swept away by the fierce forest fires of 1873 and '81, when the last trace of the once substantial mill and dwelling houses were completely blotted out. Comparatively little actual mining expenditure has been made upon this property. Shafts were, however, driven by the first manager in two places to a depth of 68 feet, some 300 feet apart, in both of which they obtained silver. These two shafts were also connected, and the surface between was also partly stoped when the manager was dismissed. The vein from the surface down, for 25 to 30 feet, passes through dolomite and chert principally, and was strong, carrying the silver. A shaft was also driven to a depth of 25 feet between Nos. 1 and 2, while the ground between the extreme shafts, or a distance of 600 feet, was stoped, in which silver was found in bunches as already described, and Mr. McKellar concludes by observing that "there seems to be no doubt that the vein, if followed down into more solid strata, would resume its original size and character, with every chance of being richer as it approached or entered the Huronian, which I believe, lie within 100 feet of the surface." Work was entirely suspended here during the spring or summer of 1869. The value of the ore raised—which, according to the report of Mr. Chas. Robb, of the geological survey, amounted to 3,294 pounds—was \$2,592, or an average of \$1,513 per ton. "There is, however," continues the same authority, "no knowing how much ore had been carried away by the miners and others, but we have sufficient reason for believing that there had been a great deal." This property contains about 1,700 acres.

THE SHUNIAH OR DUNCAN MINE.

The next important discovery of silver in this immediate vicinity was made by Mr. George A. McVicar, in May, 1867. This was the well-known "Shuniah" mine, on the Current River, some three and a-half miles from Port Arthur. This vein is 20 to 24 feet wide, running nearly east and west with an almost vertical dip. It is composed of coarse crystalline calc-spar, with a little quartz. There are also huge vugs found in it, in which are developed immense crystals of dog-tooth spar. Some galena and zinc blende, with considerable iron pyrites, are distributed throughout the lode, the silver, both native and sulphurite, being found usually associated with the blende. At the first opening the silver was found in small bunches in the form of leaves and fine strings, penetrating the quartz, spar, blende and galena, in a streak of these minerals which run along within a couple of feet of the south wall; but in sinking the shaft it was lost about 18 feet down, and again found in the middle of the vein when cross-cutting the lode at foot of the shaft in the 10 fathom level. Here the ore was found in streaks and bunches around enclosed angular masses of black clay slates. The surface show of this mine was small compared with that of Thunder Bay. Several barrels of ore were taken out under the first attempts at development, the average yield of which did not, it is said, exceed \$200 to \$300 per ton, and \$20,000 and upwards were extravagantly expended in surface and other equally unsatisfactory efforts, until the company finally suspended operations for want of capital. The history of this mine is a long one. In 1870 it was again sold to an American company, who appear to have been better rewarded for their outlay, and found silver in various places in the different workings at a depth of nearly 200 feet. "A good many thousand dollars," remarks Mr. McKellar, "had been spent by this company after the manner of the Thunder Bay Co. —proving and re-proving the surface, instead of sinking as they had been repeatedly advised to do." Although the average sample of ore from this mine did not exceed \$250 or \$300, it is a matter of common notoriety that good samples went as high as \$5,000 to the ton.

JARVIS ISLAND.

In the winter of 1867-8 the Ontario Government placed an annual tax of two cents per acre on all the patented lands on the north shore, which resulted in much good, as parties holding large areas of land were stimulated to explore and ascertain their real value. In the spring of 1868 Mr. McFarlane commenced exploring for his company, the result being the discovery of silver on the Jarvis Island and on the far famed Silver Islet. Jarvis Island was the scene of his first operations. This island is about twenty chains wide where the vein crosses, a considerable portion being deeply covered with earth. The vein is a well defined one, eight to ten feet wide, with a dip of about fifty degrees to the north-east. The silver shows in leaves generally, but is also found in strings and small nuggets, throughout the spar, zinc-blende, and black carbonaceous matter. Mr. McFarlane sunk a shaft here in 1869-70, from which fine silver ore was taken. About this date the property passed into the hands of the Ontario Mineral Lands Company, along with the Silver Islet and all other lands of the Montreal Company, who, after doing some developments, sold it to the Messrs. McEwen, of London, for the sum of \$150,000. "The true fissure character of the lode is quite evident from its appearance. Again it intersects the immense diorite dyke of Silver Islet, so that there should be no danger of its losing its character by sinking." This belongs to the same class of vein as Silver Islet, which has proved to be unusually rich. Between 200 and 700 feet down, these veins bear in the same direction and carry the same minerals and metals, and intersect the same formation, with the comparison of size being in favour of the former. Again in August, 1886, work was resumed upon this property, under the management of Mr. Arthur McEwen, M.E., who, after restoring the dilapidated offices and outbuildings upon the Island, besides erecting a new shaft and engine-house and assay offices, has commenced vigorous mining operations in the principal shafts so long abandoned; and as this work goes to press some really fine samples of black silver rewards his efforts:—

(*Mining Review*, 1887.)

After a long period of idleness work has been recommenced on this well-known property. At a recent meeting of the company in England a report of the condition of the mine was unanimously adopted. It was then resolved to organize a new company and resume operations at the mine. This property has all along had a good name. The miners who were employed at the time of suspending work say that the mine never looked better than when they fired the last shots, and the reason for stopping the work has long been a matter of surmise. However, Capt. John Trethewey has been appointed superintendent, and is now hard at work with a force of twenty men. Mr. Arthur McEwen represents the company here. Drifting has been pushed in the second level to the south-east, and in the first level to the north-west. On this location there are three shafts—one of 146 feet and two others about 100 feet depth. From No. 1 shaft to No. 2 there are two drifts, and in the second level the vein shows up ten feet wide. The course of the Jarvis Island vein is nearly north and south, dipping to the south-east. They are now getting good silver in sulphide mixed with fine galena and blende, and occasionally native silver coated with nickel. A recent assay gave ninety ounce to the ton. One peculiar feature of this vein is a trace of silver in the pure baryta. This is a very rare association, but the spar showed eighty cents to the ton.

SILVER ISLET.

About a month or so after the discovery of the Jarvis veins, the McFarlane party discovered the above lode; the silver being first observed by Mr. Morgan. The islet was then some seventy-five feet long only, and rising from six to eight feet above the surface of the lake, at a distance of fifty chains from the main shore. The vein crosses the Islet in two branches about twenty feet apart, each four to six feet wide, bearing north north-west and south south-east with a dip nearly vertical. The vein stone consists of calcerous or bitter spar, of a reddish white color, with some quartz, etc. The rich streak of ore consists of spar, fine

grain galena, and occasionally zinc blende. Through the whole, especially the galena, the native silver is more or less thickly disseminated in fine strings—the sulphurets of silver being occasionally present, also small quantities of nickel and cobalt. This is two or three inches wide generally, but in places it spreads out to a foot or more. It becomes poor and disappears in places, and again comes in; and in sinking, in some of the layers between two floors, it is found to be rich and in others poor. These “floors” dip at a low angle to the north, and are generally two or three feet apart.

In the spring of 1869, Mr. McFarlane resumed his exploratory work, and did some mining upon Jarvis Island, as above mentioned, and some on Silver Islet. From the latter lode he succeeded in taking out several tons, although the work had to be carried on in from one to three feet of water. Mr. Robb, of the Geological Survey, gives the amount of ore, in his report of 1869, at 10,791 lbs., or over $5\frac{1}{4}$ tons, valued at \$6,976, giving an average of \$1,292 per ton. They built a house or two on the mainland and one on the Islet, and left a party of seven or eight men to mine and prepare timber for crib-work during the winter. This party commenced to sink a shaft on the dry portion of the Islet, in the country rock, with the intention of intersecting the lode at a depth of thirty feet, where the water would not trouble them; but by the time they had got down eighteen feet, a heavy storm came and filled it up, piling the ice high above it, and demolishing the boarding-house, left the miners in great danger. This caused delay, and early in March, when the shallow water had frozen solid to the rock, the hardy pioneers cut through it, and succeeded in taking out according to a fair estimate, about \$25,000 worth of ore in a week, when another violent storm arrested this progress again. Mr. McFarlane was in Montreal during the winter, and making an estimate of the amount necessary to place the mine on a safe-footing for carrying on the works, asked the company for an appropriation of \$40,000, which they refused, notwithstanding the strong evidence of the richness of the lode.

Towards the spring of 1870 this property was placed upon the market, and, according to the testimony of Mr. McKellar, the race between English and American capitalists was a keen one. The

Americans, however, with their characteristic enterprise, were the first to come to time, paying \$50,000 in gold on the 1st of September, 1870, and the balance in three instalments, making in all \$125,000, the amount of the purchase. Immediately after this transaction Mr. Sibley, acting for the American company, telegraphed from Montreal to Houghton, Michigan, for Benjamin Frue, a mining captain of tried experience, who soon after arrived with a strong force of men, and the necessary supplies for the construction of a breakwater to the Islet. Once more their works were interrupted by storms, and early in November their new coffer-dam was partially carried away. But after this and other serious difficulties had been surmounted, the party had turned their attention to mining exclusively, and had shipped ore yielding \$108,000 before the close of navigation of their first season. This company owned and employed three powerful tugs in the construction of this work, and for carrying the men backwards and forwards from the shore to their work, towing rafts of timber across Lake Superior, and cribs and rock from the shore. This mine had to be worked entirely from *one* surface opening or shaft, which was a great disadvantage, as but few miners could be employed for a long time. The shaft was built of timber, and made water-tight to the height of twenty feet above the lake, so that the water should not get into the mine, even if it should get over the crib-work. From this opening the mine was continually enlarged by sinking and driving, each way on the lode, taking care to leave a strong backing to prevent the lake from breaking in. By the time they had got down some 80 or 100 feet, they had gained distance enough, on each side, to sink winds, which would be connected at certain distances, or at each level, by galleries on the main shaft, which was then closed all the way up. This would purify the air, and allow them to employ more miners. On this principle the works had been expanding lengthways on the lode, and in depth.

In Mr. McKellar's interesting paper are also shown very elaborate diagrams of the above mine, illustrating in section what has been actually done up to date, together with still more elaborate extracts from the balance sheets and public accounts of this Mining Company, in proof of the satisfactory state of

their affairs up to date (1874):—"I have been more particular," concludes the writer, "in showing what the mine really has done, as I meet so many who think it of little importance after all, and that it returns but a small interest to the investors. The stock is put down at \$6,000,000, and any person buying at that rate would only receive three per cent. per annum up to the present. But such would be the result were the mine ten times richer than it is, providing that the value of the stock was increased proportionally. It is the original investors who make this money out of it, as they only paid \$1 for what a person would pay \$80 now were he buying at par. Had this mine been on the main land and worked under ordinary circumstances, what a wonderfully rich mine it would have been! Even where it is, with all its disadvantages, it has produced largely and has been a very profitable affair for the stockholders, and no doubt further developments will show many equally rich mines in this extensive metalliferous section."

SILVER HARBOR AND BECK MINE.

Next in order of discovery of silver was the above mine in the summer of 1870, by Mr. Ambrose Cyrette, of Fort William. It is situated on the coast of Thunder Bay, about 14 miles north-east of Port Arthur. This vein at surface measures eight feet wide, enclosing a considerable amount of country rock. It bears about east north-east and west south-west, dipping at a high angle to the north-west, or nearly vertical. The gangue consists principally of quartz, holding a good deal of iron pyrites, zinc-blende and galena, and in places a quantity of silver, some of which occurs native, but chiefly sulphuret. Some fine specimens of glance were also taken out, and altogether the prospect of getting more appears good—if they would only follow it up. This property was last worked by Capt. Beck, who arrived here in 1872, when several tons of ore were selected and sent east. At the close of Beck's operations, in a shaft some 40 feet deep, they took out some very fine silver ore, specimens of which are scattered far and wide. This vein showed a considerable quantity of silver in the upper siliceous and dolomitic bed, but toward the bottom of the shaft in the argillaceous beds, it was irregular and

poor. So the shaft working was discontinued, and their attention turned towards working the surface beds—the same course that the Thunder Bay Company, and I may add the Shuniah Company, followed. In the fall of 1872 work was suspended here, but they will be resumed again beyond a doubt. I do not think that they would require to sink deep in this lode to reach the Huronian rock, as the junction of both formations lay but 40 chains to the eastward of the vein.

“3A” SILVER MINE.

This interesting discovery of silver was made in the fall of 1870 by two miners from Silver Harbor mine. The “3A” adjoins the latter mentioned mine on the north. This lode is from eighteen inches to two and a half feet thick, consisting of quartz and spar, through which are irregularly distributed the ores of copper, iron, lead, nickel and silver, with some cobalt and gold, as shown by assays. The silver is found native, and combined with sulphur and nickel, thickly penetrating the vein-stone in small and large patches, in some of which it is quite heavy, and quite as rich as Silver Islet ore. A mass of this ore 18 inches thick was for a long time to be seen on exhibition in the window of Messrs. Hime & Baines, Toronto. The vein strikes nearly east and west, and nearly parallel with and about a mile to the north of Silver Harbor. It occurs in the Huronian series, which in the vicinity consists of thick beds of diorite and fine grain greenish grey slates, some of which are chloritic, talcose, calcereous and ferruginous, with some serpentine alongside and in the vein. This formation, with which the vein appears to conform, dips here at an angle approaching the perpendicular. It is much more ancient than that in which the other mines above described occur. The discovery of the precious ore in these older rocks, which are known to underlie unconformably the horizontal silver-bearing slates of Thunder Bay, should be sufficient evidence to show that the silver does carry down, and is not confined to the surface bed. During the winter of 1871-2, two miners worked on this lode, carrying the ore taken out in the day to their boarding house at Silver Harbor every night. They sunk a pit some 18 feet deep from which they had taken 22

barrels of ore, which was, according to the testimony of Mr. McKellar, (then on the spot) as rich as the Silver Islet ore. This ore was bought by Mr. J. S. Lyon, of Buffalo, where he had it reduced by Kayser, James & Co. A few of the bars of silver were for a time left on exhibition and then sent to the United States assay office in New York, where, according to the official report of the chief clerk, Mr. J. M. Floyd, yielded \$17.80 of gold to \$301.45 of silver; the amount of silver or nickel either to the ton or to the whole bulk was not given. Soon after this event Captain Slawson took over the management of "3A." He commenced to sink three shafts on the lode 310 feet apart, and by the opening of navigation No. 1 shaft was down 77 feet and No. 2 shaft to a depth of 99 feet, when both workings were discontinued for the want of pumps to keep the water out. A box of the ore taken from these shafts looked very fine, and the superintendent, Mr. Courtis, and the assayer, Mr. J. B. Cleveland certify that the assays show a yield of 2,465 7-10th ounces fine silver to the ton of 2,000 lbs., the coin value of which is \$3,205.41. The assays also showed 1.4-100ths per cent. of cobalt and 25 per cent. of nickel, a valuable metal.

And, assuming the "3A" to be a good paying mine when thoroughly opened out, it could not be expected to pay dividends, if systematically worked, until two or three shafts were down to 300 feet, with the connecting galleries driven at each level of 60 feet. Then a large force could be employed in stoping out the bunches of ore, which appear to be numerous, also large, judging by the quantity taken out of the first, while the barren ground would be left standing. Again, the same amount of vein can be removed by stoping for about one-quarter of the money it would take to do it by sinking. The stockholders and the public at large appear to have been much disappointed at the result of this winter's operations, as they were expecting a large shipment in the spring, by reason of its being too highly represented in the first place—their calculations having been based, no doubt, on the lode being equally as rich throughout its length and depth as it was in the first pit or bunch. * * * In closing this brief sketch, the writer expresses the greatest confidence in the lode, and after giving the total value of product from 100 fathoms of

mining as about \$9,500.00, concludes by asserting that owing to its peculiar formation that the chances of its becoming a good paying mine, when further worked, appears tolerably certain.

Passing over the records of a number of other discoveries of silver, copper, and argentiferous galena in this district, including "Thompsons" and MacKellar's Islands, the Silver Lake, and Cornish mines, and the well-known galena veins of Black Bay, all of which have been only partially tested, I will briefly refer to the subject of

GOLD MINING ON LAKE SUPERIOR.

Previous to the summer of 1871, free gold was not known to exist on the north shore in Canadian territory; yet the pyrites of copper and iron were shewn to be auriferous in several places, as in the Prince's Bay locations, Black Bay (Enterprise) mine, "3A," and a few other places.

The general characteristics of the Huronian States of Lake Superior resemble those of the most gold-bearing formations of the world, but it was not until the summer of the above date that a careful search for the precious metal was rewarded with success.

JACK FISH LAKE—GOLD MINES.

The excitement caused by the silver mines of Thunder Bay spread everywhere amongst the Indians, who also began to hunt for metalliferous veins, by bringing specimens in from every white rock they met with. Two of these, Jean Baptiste and Michel Pouchette, who were in the employ of Mr. Neil Whyte, of the Hudson Bay Company's post at Beau-Blanc, found this vein on a return trip from Fort William, in the winter of 1870-71. Mr. Whyte forwarded specimens from this vein to Mr. P. McKellar. These specimens, it appears, consisted of pieces of talcose slate, and although not showing free gold or other mineral visible to the eye, Mr. McKellar felt confident that the vein did carry gold. "We started for the examination of this property," writes Mr. McKellar, "in July, 1872, following the Dawson route, a distance of 45 miles to Shebandawan Lake, where we procured a canoe and provisions for the rest of the journey, which was 30 miles by

water, to bring us to the west end of the lake; thence, according to the Indian's estimate, it was 25 miles to the vein by portages, small lakes, and streams; which subsequently proved—upon a road being cut out—to be only $12\frac{1}{2}$ miles by actual measurement. On reaching the place I commenced my examination, and was soon rewarded by finding the free gold in the form of thin leaves, coating the bitter spar. At the point of exposure the lode is running along in the face of a steep hill, and large blocks of the vein rock had fallen down, making it appear to the Indians to be running at right angles to its true course; therefore, they were unable to trace it further, or find its outcrop in any other place. * * * Before leaving for Thunder Bay I had traced the vein by its outcrops for about 60 chains, finding it of similar character throughout."

The result of the above examination was the final location of the lands now comprised in the Township of Moss, better known as the "Huronian Gold Region." This survey was made by Thomas Wallis Herrick, P.L. Surveyor, who, with Messrs. Whyte, McKellar and McIntyre, became interested in this property. The surrounding country is covered with the usual timber found on the high lands, including spruce, tamarac, small pine, poplar and birch, which in general are small, though occasional patches of large timber is met with. The flat mossy tamarac swamps that prevail in this section, are surrounded by low rocky and sandy ridges, which seldom rise above an elevation of 200 feet. The rock formation consists of the usually fine textured greenish slates of the Huronian series,—such as dioritic, chlorotic, talcose, silicious, and fine grain micaceous slates, interstratified with beds of massive diorite, and an occasional bed of ferruginous quartz and magnetic iron ore. These magnetic beds are from 20 to 150 feet in width, and show a ribbon-like structure, being interlaminated with layers of quartz, and can be traced for miles along their strike.

The rock, on either side of the lode for some distance, is composed of the greenish slates; while, resting on these to the northwest of the lode, about a mile, is a great thickness of the above mentioned micaceous slates, which are dark in color, and in places pass into clay slate, shewing a transverse cleavage. These are cut in every direction by masses or irregular veins of quartz,

which appear to belong to the gash vein system. Again, to the south-east some two miles beyond the vein, are developed great thicknesses of greenish-white, silicious slate conglomerates. The whole of these slates appear to lie conformably on one another, dipping to the north-west, at an angle of 50 to 80 degrees. About three-fourths of a mile to the north-east of the vein lies the Jack Fish Lake, which is over a mile and a half in length. Its bed is worn out of massive reddish granite, which must have been forced up through the above-mentioned slaty strata, as they are found in altered and displaced appearance next it. In coming from the south-west the slates within a half mile of the lake are found to change in their strike east north-east, around to the north and to the north north-west, the angle of dip, increasing with the change of strike from 50 degrees until it has reached the vertical, then after passing the broadest part of the granite west of the lake they again change and gradually regain their original strike and dip. To the south-east side of the granite and lake the change in the strike of the slate is but slight, but their dip becomes nearly vertical; besides the ore changed into a sort of gneiss for some distance from the granite.

The general width of this igneous belt of rock is one-half to three-fourths of a mile. It extends north-eastward for many miles, intersecting the strike of the slates at a small angle. On Jack Fish Lake, where it terminates abruptly in its westward course, with the exception of the small branches it sends forth, it spreads out in width to one mile and a-half. These branches cut the slate in all directions near the lake; but the most of them at no great distance seem to fall in, and follow the cleavage plains of the slates, and they are seen to continue for several miles from their nucleus, as it were.

The vein may be said to consist of two ribs or bands of quartz, each averaging from 1 to 3 feet in thickness, with a parting of talcose slate of 2 to 4 feet in thickness, making in all a width of 7 to 8 feet. The slaty parting is filled with crystals of iron pyrites and some gold, the quartz and associated bitter spar, making an aggregate thickness of $2\frac{1}{2}$ to 4 feet; all of which is charged with galena and copper, and iron pyrites, with some zinc-blende, gold, sulphide of silver and tellurium. The two latter

occur through the quartz in bunches, consisting of an arborescent and nucleus of the malleable ore, around which, from one to several inches, the quartz is rendered dark from the presence of thin leaves, and minute particles of the silver ore. Nuggets and leaves of gold are almost invariably found in these branches, and the tellurium contains about \$80 to the ton. The gold is also found in leaves coating the bitter spar, and in small nuggets penetrating the quartz, galena, zinc-blende, copper and iron pyrites. It is present in greater or less quantities throughout the entire lode, as shewn by a series of tests embracing every available process.

In January, 1872, the first house was erected at this mine, when a few miners were sent out by Capt. Frue, of Silver Islet; these men worked until March, taking out about 100 tons of ore. About 126 pounds of this rock was sent to Wyandotte, the returns shewing an average of \$500 to the ton—about \$40 being in silver and the balance in gold.

Rich specimens of fine gold were taken out after this work. A road was also grubbed out between Lake Shebandowan and the mine. It appears, however, that the Indians had not at this period relinquished their claim to this section of country, and it is recorded that the notorious Indian chief, "Blackstone, with his warriors, arrived at the mine towards the end of March, and requested the entire party to leave until satisfactory arrangements had been made between his band and the government." Explorations appear to have entirely ceased towards the "Height of Land" about this date, but not before one or two other interesting locations were made, including:

THE PARTRIDGE LAKE GOLD MINE.

This property was located in 1872, through an Indian named Namabin bringing specimens of quartz which he had found in his travels to Mr. John McIntyre, of Fort William. Mr. Archie McKellar accompanied this Indian on his return trip, following the Dawson route as far as Lac de Mille Lac, thence westward by small lakes and portgages some 25 miles to Partridge Lake, where the Indian shewed him the vein. Mr. McKellar, it appears, was not long upon the ground before discovering "nuggets of fine gold in the quartz." Then he traced the vein by the out-

crops for a mile along its strike without any apparent diminution of size, until it disappeared in a lake at one end, and in lowland near the other. The vein proved to be a large one, averaging from 6 to 14 feet, composed of vitreous quartz, with an occasional thin parting of soft talcose slate. The quartz is partly stained red by the oxide of iron, and blue and green by the carbonate of copper, and appears to be sprinkled all through with copper, iron pyrites and small particles of gold, the latter being so evenly distributed through the veinstone that little room is left for choice in selecting samples. Fragments from two places on this vein, weighing some 80 to 90 pounds each, and from places widely apart (three-quarters of a mile), were sent to Montreal, and the assays by Dr. Griswold, of that city, yielded from \$27 to \$30 per ton. The gold, writes Mr. Peter McKellar, is very easily extracted, as it is free through the quartz. "I have tried many samples of the rock where the gold could not be seen by the eye, by simply crushing in a mortar, roasting over a fire, and washing, and it never failed to yield a considerable quantity of gold dust. The fact of the gold being so evenly distributed through the quartz, and the quartz being in such large quantities, are, I believe, sufficient evidence, although only some \$27 to \$30 per ton, to show that this is a valuable mine." The above description of the lode, etc., are given as received from the discoverer of the gold, who had taken specimens and geological notes upon the ground, and can be depended upon. I may state that this vein is distinctly different in character from the Jack Fish Lake lode. Being on Indian territory, however, no work has been done upon it since.

Since the discovery of gold at Jack Fish Lake many other important discoveries have been made in that section, including the Kashabowie and the Shebandowan Lake lodes, which are said to yield from a few dollars up to \$100 per ton. Also the "Loch Erne lodes," (McLachlins,) the latter looking very fine. These discoveries were made chiefly between the years 1872 and 1875, or before the construction of the Canadian Pacific Railway, and the extinguishment of the Indian's title to the surrounding country.

THE HERON BAY GOLD AND SILVER MINE.

The year 1872 appears to have been an eventful one in the history of mineral discoveries on the North Shore. During the

summer of this year the well-known explorer, Ambrose Cyrette, and W. Pritchard, while prospecting near the Pic River, which lies some 180 miles along the coast eastward from Port Arthur, were shewn two veins by an Indian named Moses Pe-kong-gay.

The exact location of these veins appears to be within about one and a-half miles from Heron Bay Landing, and within about 100 feet south from the present station of that name on the line of the Canadian Pacific Railway. These proved to be quartz veins carrying considerable galena, zinc blende, iron and copper pyrites, also gold and silver, as proven by reliable assays made at Silver Islet and elsewhere. The width of the veins vary at surface from four to eight feet, composed of vitreous quartz, with some bitter spar. One of these veins seem to conform in dip and strike with the chloritic slates of the Huronian series in which it is found, which strike about east and north-east, with a dip nearly vertical. The other bears nearly north and south, intersecting the slates. Upon this vein a shaft was sunk in the following year, to a depth of 40 feet, when the vein was proved to widen considerably, and the quality of the ore was richer. Assays of this ore at this date averaged about \$70 in gold, and the same in silver. The general characteristics of these two veins, with regard to the veinstone and its ore and also of its enclosing formation, are precisely the same as those of Jack Fish Lake gold lode and formation.

THE WALBRIDGE MINE.

The above was one of the very earliest locations made in this immediate vicinity, and according to the authority of Mr. Duncan McEachern, was the very first mining property sold in Thunder Bay.

After the suspension of mining operations in Prince's Bay in 1847 the upper part of the lake was almost entirely neglected until 1863, when Walbridge & Co., of Detroit, bought this lode, which is located some seven miles from Fort William in what is now the Township of Paipoonge, for \$1,400, from Mr. John McIntyre, of Fort William East, and D. McEachern, and J. R. McVicar. Very little work appears to have been done upon this property. The vein is a strong one, 24 feet wide, composed princi-

pally of calc-spar and quartz, which hold galena, zinc-blende, copper and iron pyrites, in bunches, stringers, and disseminated in grains. It dips at a high angle to the south, bearing nearly east and west, and can be traced for a mile or two along its strike. It intersects the silicious and argilacious beds of the lower beds of the copper-bearing rocks. A little development was done with a view to sell the mine. The vein carries galena principally.

ACTIVE OPERATIONS RESUMED AT THE HURONIAN MINE.

Arrangements are now progressing to resume vigorous mining work on this property. A grant of \$8,000 has been obtained through Mr. Conmee, M.P.P., from the Local Government for the construction of a new and more direct road to this property, and already Mr. M. Dwyer, road commissioner, has a strong force of men and teams engaged in grading and bridging.

The new route to the Huronian mine is *via* the Canadian Pacific Railway to Savanne, a station seventy-five miles west of Port Arthur, where connection is made with the mining company's steamer plying between the Savanne River and Baril Portage at the head of navigation on Lac des Mille Lac—thirty-six miles south-westward. From this point the road is being constructed nearly south to the mine, a distance of nearly twenty miles. The Mining Company also contribute liberally towards building this road.

OUR ABANDONED MINES.

In dealing with this subject the Chicago *Mining Review* writes as follows:—"Instead of proving the uncertainty of mining operations such instances are strong evidence to prove inexperience and lack of practical knowledge concerning mineral formations. These cases also show in the strongest light the absurdity of judging the value and security of the mining industry by the success or failure of different operations. Many abandoned mines have been proven most valuable upon further prosecution of well directed work.

"In various parts of the mining country there are great enterprises which started up with considerable show of activity and

stir of excitement that are now apparently deserted and abandoned, and all the extensive workings, expensive machinery and great investment of capital are lost and wasted—another example of the uncertainty of mining ; but a little understanding of the case often reveals the fact that there is a well laid plan in this apparent death and desolation, and it forms no criterion of the real value of the mines or the future of proper development.

“Enough is shown to prove that these ‘surface indications’ afford no standard by which to estimate the character of mining as a business.”

MINING—PAST AND PRESENT.

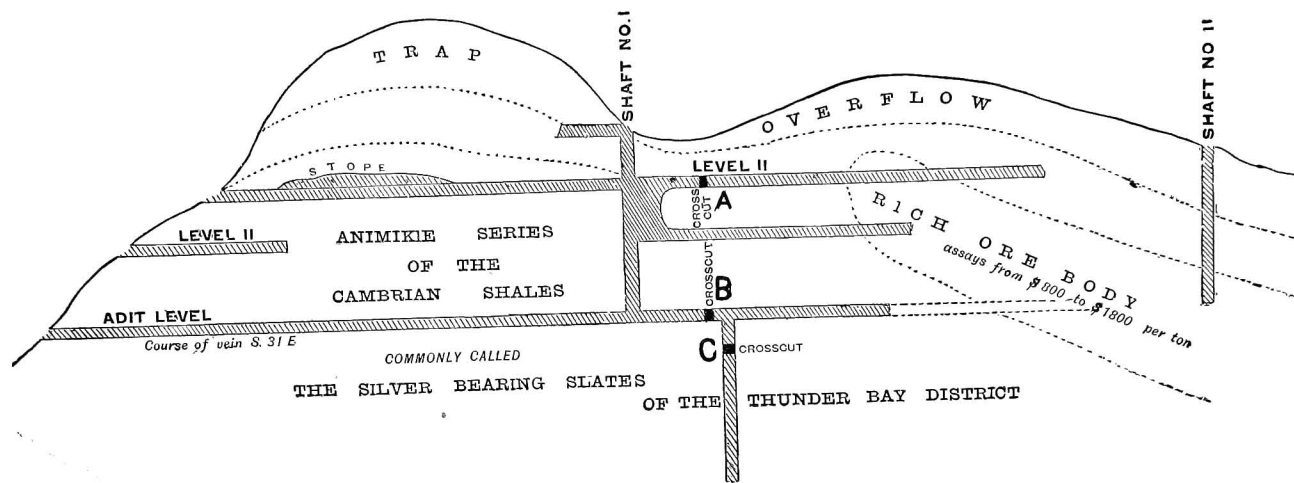
There is scarcely a field of thought or speculation at the present time that has not been completely revolutionized, during the last few years, by the advanced teachings of science ; morals and politics, trade and commerce, and every productive industry have, to a greater or less extent, felt the influence of this all powerful agent. And when we compare the history of the mining industry of the past with that of the present, we are brought face to face with the facts that forcibly demonstrate the essentially practical character of the present age. A few years ago mining was conducted on an entirely different principle from what it is at the present time. Then, the wildest and most reckless speculations characterized all mining operations ; now mining is conducted upon the most cautious and most scientific methods of development. The past, in a great many instances, was one complete system of robbery and deception ; the present is an honest expenditure of labor and capital, as in every other productive industry. In the past, physical energy and capital were mis-applied and mis-directed ; in the present these are most carefully and most cautiously directed by the skilful hand of science.

Such, we find, in examining and comparing the past with the present is a fair illustration of the character of the mining operations in Thunder Bay district. Men in the past became crazed by mirage of approaching riches and rushed into the most unwarrantable speculations, deaf to the voice of reason and heedless of the warnings of experience. They were tempted further and

further by their own intemperate desires ; regardless of conscience or honor they converted all their operations into a complete system of gambling, and only did they recover their judgment after finding themselves hopeless wrecks on the very brink of bankruptcy. There was scarcely a merchant in Port Arthur, or in any other part of this district, who did not suffer from the illegitimate speculation that was carried on at that time. Capital was driven from the country, and legitimate mining speculators abandoned it in disgust ; and one of the consequences that followed—an inevitable consequence that follows every illegitimate mining speculation—was the ruin and condemnation of the country. We are now, however, recovering our reputation in the mining world ; and it is doubtful, whether any other field in America is attracting more attention at the present time than this district. The character of the mining operations is of such a nature as would force the most hypercritical in coming to the conclusion that the mining industry in this place is conducted upon the strictest principles of business integrity. The steady and systematic development that has been going on here during the last three years ; the success that has attended every successive step in that work of development ; thorough and satisfactory tests that have been made, have redeemed the mineral reputation that this country possessed a few years ago ; and we sincerely hope that in the future every attempt to practice the fraud and deception that characterized the operations of the past may be discountenanced and condemned in the most emphatic manner by every citizen who has the welfare of the district at heart and who is desirous of preserving the high character that we have lately gained.

THE BEAVER MINE.

LONGITUDINAL SECTION SHEWING WORKINGS.



REFERENCE.

A } Drifts on Cross Vein.
B }
C }

SCALE—75 FEET TO THE INCH.

THE BEAVER MINE,

At present the richest and most promising mine in Canada, is located in the Township of O'Connor, about 25 miles south-west of Port Arthur and 11 miles from Murillo, the nearest station on the line of Canadian Pacific Railway, and is easily accessible by a good wagon road from Murillo, from whence a regular stage line connects with the mines adjacent, *via* the Beaver and Silver Mountain roads. The location comprises about 1,100 acres of mineral and timbered land, with a splendid supply of water. The geological formation consists of Cambrian shales capped by trap. The general strike of the Beaver vein is south 30° east, with a slight dip to west. Its average width is about 4 feet 4 inches. The vein matter consists of calcspar, fluorspar, quartz and syenite, with silver-glance, brittle silver, native silver, argentite, galena, zinc blende and pyrites. The vein is of a strong and kindly character with well defined walls.

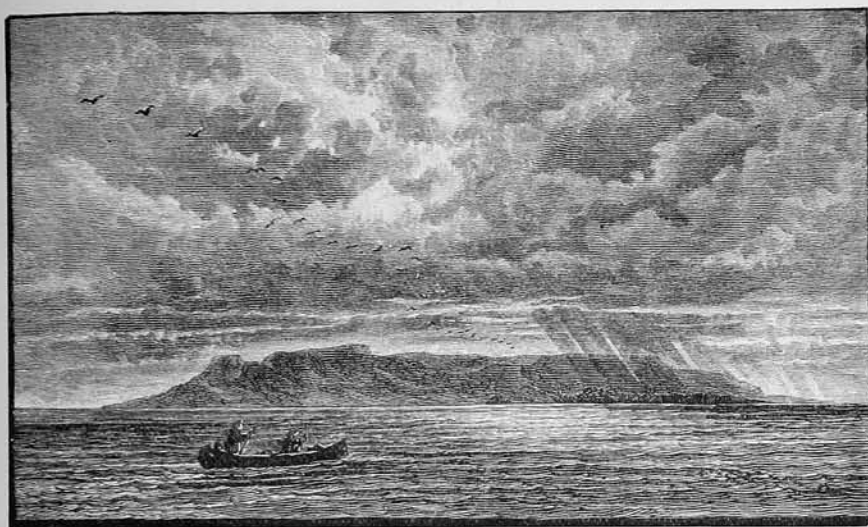
The workings up to date amount to 2,800 feet, and there has been exposed a body of very rich ore about 150 feet south of shaft No 1, in levels Nos. 1 and 2. The overshoot has an average width of 3 feet, and the present developments show it to extend over 50 feet in depth and 250 feet in length. Samples averaged on three to five feet of vein showed \$800 to \$1,800 to the ton of 2,000 lbs., and the average value of the ore is not less than \$1,000 to the ton. The lowest estimates show about \$2,500,000 worth of ore in sight. There is besides a large quantity of lower grade ore all along the No. 1 level that averages about \$50 per ton.

The ore is at present treated in a ten stamp-mill, but its capacity has been found to be entirely insufficient to dispose of the large quantity of high grade ore. It has, therefore, been decided to double the capacity of the mill.

The mill at present (24th May, 1887) is giving great satisfaction and the ore concentrates are running 4,000 to 5,000 ounces to the ton, and turning out upwards of a ton of them per day.

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THE SLEEPING GIANT ON THUNDER CAPE.



A SKETCH FROM PORT ARTHUR, DISTANT 18 MILES.

W. R., 1st June, '87.

THE LEGEND OF THUNDER — HOW THUNDER BAY OBTAINED ITS NAME.

NOTE.—Among the most popular traditions touching the origin of this suggestive title is the following, as related in the *Otchipway* by “Weisaw,” and very freely translated by a friend of the writer’s:—“Long years ago, while my great-great-grandfather, then a young brave, was returning with a war party from a bloody encounter with our foes (the Sioux) near Dog Mountain, a place twenty-five miles north-west of the Kaministiquia River, their attention was suddenly arrested by loud and prolonged reverberations, accompanied by vivid flashes of lightning. Ascending the heights overlooking the Kitchie Gamee, an appalling sight met their gaze—far out in the bay towards the east, where the ‘Sleeping Giant’ Nanibijou usually reclined on his fleecy couch, all appeared in flames, while at intervals great pinnacles or shafts of flame and black clouds were driven upwards with terrible fury. * * * Arriving at the mouth of the Kaministiquia River they were told of the fate of two hunters from a distant tribe, who, regardless of repeated warnings, provoked the fiery spirit of the great ‘Thunder Eagle’ by assailing its home in the cloud-capped cliff, and perished in the vain attempt to bring down a great medicine. Previous to the advent of the white man our storms were grander and more frequent, and only upon rare occasions indeed, could a view from a distance be obtained of the Cape or Nanibijou.”

Who hath seen the gentle water, breathe round the slumbering form,
 And soft caressing kiss the robes of yon dread God of Storm?
 In this dark land of the Otchipways, he guards the Western Gate
 Towards the far lone golden plains, where parted spirits wait:
 To that far land of spirits where the glorious sun burns low,
 And rose and gold and amethyst about the Sun God glow!
 We fathers, and our fathers saw, before the white man came,
 Yon mighty giant heave in sleep and breathe the sulphurous flame;
 Have seen him roused in anger lash these seas in furious wrath,
 And all the torrents of his ire in lightning pouring forth;
 Have seen him ever robed in clouds, and his extended form,
 Forever clouded in his robes, his right robes of the storm;
 But never saw through lifted clouds his rugged sides before
 The white man came to drive away those lurid clouds of yore.
 E'en now sometimes the clouds sweep down to pay their ancient court,
 And from the distant spirit plains their pageantries are brought
 To robe the giant as of old and rouse him from his sleep
 Where he lies dreaming of the past and slumb'ring on the deep;
 But his mighty Thunder Eagle has fled beyond the plains,
 And little of his ancient state in these last days remain.

* * * * *

Once from the nations of the east, two wandering hunters strayed,
 Their birch canoe, all patched and old, their dress of deerskin made;
 I saw them in our chieftain's lodge, beside the stormy bay,
 Ere they towards the setting sun should still pursue their way.
 They came towards the setting sun to seek his resting place,
 Where all the spirits of our dead, and all the human race,
 Dwell where the sky is ever bathed in floods of sunset light,
 The everlasting eventide that knows not death or night,
 Or fire, or flood, or drought, or war, where winter never reigns,
 To the far happy hunting grounds upon the golden plains,
 And when we told them of the God, and his dread shroud of gloom,
 And when they saw across the bay the clouded mountain loom,
 And heard of the dread Thunder Bird whose nest was in the height,
 To guard the unassailed cliffs all hid in endless night;
 And heard their fate who dared to seek the nest and bring us down
 The wond'rous medicine secrets hid there on the mountain crown.
 They laughed our fears to scorn and said: "Should brave men danger fear?
 "And what is danger if it bring the life hereafter near?
 "Now will we learn the secrets hid in Thunder's eyrie nest,
 "To bless the race we leave before we pass into the west.
 "We pass through sleep to Life, where throned among the hills this sun
 "Sinks wearily into his rest—his great day journey done."

Nor warning nor entreaty stayed their swift impetuous feet,
 And soon they rode upon the bay with all our dainty fleet,

And journey'd on the darkened sea with measured movement slow
 A solemn cortege, as the sun's last lurid glare burned low.
 We journey'd on the glassy bay, the shadowed, slumbering deep,
 We journey'd with them towards the brink of their last earthly sleep.
 So when the east was cold with dawn, and the lowering clouds were grey,
 The shadow of the mountain loomed against the wakening day.
 In earnest conclave then we prayed that Manitou should save
 The chiefs who sought among the clouds for wisdom or a grave.
 The agates rattled as their boat touched light the sombre main,
 The solemn thunders echoing warned, but warned the braves in vain.
 With red plumes waving as they strode, they passed along the shore
 To where a clouded canyon loomed through broken rocks and hoar,
 And vertical the cliffs soared upon every side around,
 And at the base their fragments lay, and brushwood strewed the ground ;
 They clambering o'er the boulders, leapt from rock to rock and climbed
 Right up amid the canyon's gloom, 'til troubled sight and mind
 Had lost the tiny spots that moved along the shadows vast,
 And every vestige of their forms passed into gloom at last.

Then morning instant sank to gloom, and gloom was steeped in night,
 The waters all so late at rest had crests of foaming white.
 While mountain waves assailed the heaven and cyclones round us blew,
 Great Manitou stooped down to guide and save each frail canoe.
 The hurricanes swept by—a lull, a blast, a loud wild cry
 From the rent altitudes, the towers and battlements on high,
 With ancient crags crashed down the heights, and lo, each breaking wave
 Screamed in his triumph round a crag and bounded o'er its grave !
 The giant shook with wrath—the trees uprooted, hurled in space,
 Like hails of monster spears were shot adown the mountain's face—
 Against the precipice on high the wildest breakers hurl'd,
 And round the whirlpool's circling deeps the broken waters swirl'd ;
 And who can tell the lightning's glare, recount the thunder's roar,
 Or the wild shrieks that through the gloom the vengful cylcones bore?

How long the tempests swept the bay, how long we fought for life,
 How long among the lodges mourn'd the aged, child, and wife,
 How long before we saw the smoke of camp fires far away,
 Just where the Kaministiquia is emptied in the bay,
 How long we slept and wearied lay, restored to home at last,
 We could not tell ; but heard the squaws relate four days were past
 Since they had seen the tempests rage about the giants bed,
 And seen the seas contend with heaven and mourned their braves for dead.

Full many suns were set between the darksome western height,
 And still the thunder roared by day and lightning glared by night,
 And still the dark cliffs towering round re-echoed loud the roar
 That shook the region of the cloud, and weighed our hearts with awe.

We prayed that Manitou should aid the venturous braves' escape :
 'Twas then we named this "Thunder Bay;" the mountain, "ThunderCape."

At last when evening shadows came across the mighty lake
 Fast spreading up the channel with the night time in their wake,
 The night wind swept across the bay a shadowy lone canoe
 That drifted slowly into sight, the wind was all her crew
 And his chill breaths dying shook the tents and all the clust'ring reeds
 And left the little skiff to rest among the drifted weeds,
 The chieftain sent two braves to take the stranger in their care,
 And when they reached the frail canoe they found a warrior there,
 A warrior resting from the storms and wounded sore and cold,
 With whitened hair all scathed with fire, and naked, starved and old,
 They laid him down beside the tents, and death shades like the night
 Upon his face were chased away by the red sunset light.
 His dim eyes opened as he spoke, but in the voice was told,
 The fever spirit dwelt within; in each proud feature's mould
 We saw that youth had changed to age since on the mountain side,
 He dared the Thunder with his friend and every death defied.

"I see the clouds are low'ring down—I see the gathering gloom,
 These are the agonies of death—This mountain is our tomb—
 The rocks are shaken—and the walls of this impending chasm
 Are closing on us!—Haste—Advance—Fly from this mountain's spasm!
 This is the plateau—to the trees, as hail are hurled in space—
 Behold the huge rocks glow with fire along the mountain's face!
 The mountain is in flames! The smoke in densest volume soars
 And round the crests a rain of fire from all red cloudland pours!
 Lo, in this storm unaided man a thousand deaths had died—
Break Giant all the world in ruin—Avenge—Thou art defied!
 —He comes! Dark Thunder though thy nest were thrice inviolate
 Thou and all thine shall perish—Haste dread vulture to *thy* fate!
 —He strikes!—and Death is near—is come—Erect thy pride my friend,
 Lay down the life but not the man, for death is not the end!
 —He dies!—and I die not—I go—to tell to all mankind
 That man may live a thousand deaths—and deathless reigns the Mind!
 By fire, by fever, or in fight, by lightning, ice, or wave,
 There never sank a braver man than to this hero's grave!"

A mightier hero still than he who on the mountain died
 Lay by the Kaministiquia!

Now broadly flushed and wide
 The mighty gates of evening, as the golden sun was gone,
 And gorgeous across the heavens the arch of glory shone
 So all the air was filled with light, and all the earth with rest,
 As the brave spirit took the trail that leads towards the west.

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—OF—

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THE NORTHERN

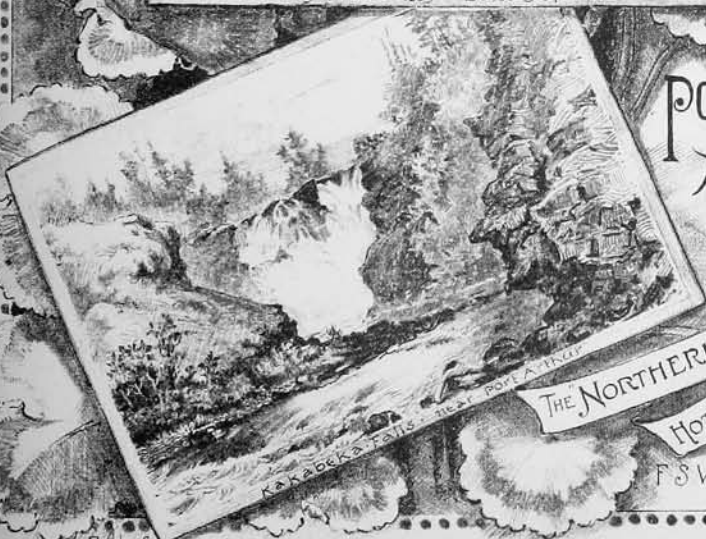


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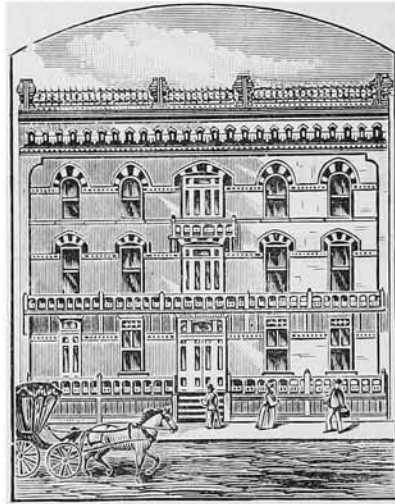
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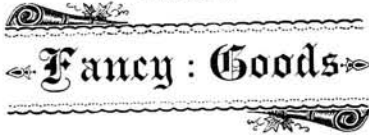
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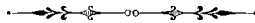
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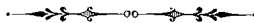
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