RP 141(A)

ADVANCE REPORT, NOMININGUE - MONT LAURIER AREA, LABELLE COUNTY

Documents complémentaires

Additional Files

Licence

License

Énergie et Ressources naturelles
Québec

P.R. 141

ADVANCE REPORT

NOMININGUE-MONT LAURIER AREA

LABELLE COUNTY

Province of Quebec, Canada

DEPARTMENT OF MINES

Honourable Edgar Rochette, Minister L.A. Richard, Deputy-Minister

---

BUREAU OF MINES

A.O. Dufresne, Director

DIVISION OF GEOLOGICAL SURVEYS

I.W. Jones, Chief

ADVANCE REPORT

NOMININGUE-MONT LAURIER AREA

LABELLE COUNTY

by

E. Aubert de la Rüe

QUEBEC

1940

P.R. No.141

NOMININGUE-MONT LAURIER AREA (*)

LABELLE COUNTY

by

E. Aubert de la Rüe

GENERAL STATEMENT

The region here described was investigated during the summer of 1939. It is in the Laurentian Highlands, 150 miles northwest of Montreal, and comprises about 350 square miles, including parts of the townships of Loranger, Montigny, Kiamika, Campbell, Turgeon and Rochon. It is readily reached by the Montreal-Mont Laurier line of the Canadian Pacific railway and by highways that lead to Mont Laurier from Montreal, Buckingham, and Hull.

For part of its length, the eastern boundary of the area adjoins the Labelle-L'Annonciation map-area investigated by Osborne in 1934 (1).

In general, it is a region of rugged topography, with elevation ranging from 700 to 1,200 feet above sea-level. Occasional summits, which are not particularly outstanding, rise to about 1,400 feet. Lakes are numerous, but for the most part they are small. The Lièvre river and its tributary, the Kiamika, flow through the western part of the area.

A large part of the area is covered by forest, and the lumber industry provides occupation for a large percentage of the population, which numbers about 10,000. Others are engaged in farming and cattle raising, particularly in the valleys and on alluvial plains.

GENERAL GEOLOGY

The rocks underlying the area are all of Precambrian age. They include both metamorphic and intrusive types, but the age sequence of the series into which these rocks may be divided is difficult to establish. Glacial and recent superficial deposits are of wide extent, forming, in the less rugged parts of the region, a relatively thick covering where bedrock is only rarely exposed. In the more hilly country, such deposits are more irregularly distributed and outcrops of the Precambrian rocks are

---

(1) Osborne, F. Fitz. Labelle-L'Annonciation Map-Area; Que. Bur. Mines, Ann. Rept., Part E, 1934.

(*) Translated from the French

relatively abundant. Striae, which are to be seen on rock surfaces in several localities, indicate that the ice of the Glacial period advanced toward the south-southeast.

Table of Formations

Recent and Pleistocene		Fluvial deposits (gravel, sand, silt, clay) Glacial and fluvio-glacial deposits (moraines, boulder clay, pebbles, sand)
Great unconformity		
Precambrian	Intrusive Series	Diabase and andesite (rare dykes) Alkaline syenite Gabbro Aplitic granite (Guénette type) Quartzose porphyritic syenite (often accompanied by pink gneissic granite, pegmatite, and, more rarely, diorite) Grey, fine-grained, banded orthogneiss
	Grenville Series	Paragneiss, amphibolite, quartzite, limestone, dolomitic limestone, pyroxenite

Grenville Series

The oldest formations of the area, those of the Grenville series, have a wide distribution. Areally, they constitute about two-thirds of the outcropping rock. The several formations of diverse type that compose the series are, in general, so intimately associated and unevenly distributed that it was not possible to indicate them separately on the map (1 inch = ½ mile) used in this investigation.

Paragneisses, usually more or less granitized, predominate. In general, they are more strongly granitized in the eastern than in the western part of the area. In some places, as for example immediately east of Lac Saguay and at Loranger, they are granitized to such a degree that they could almost be considered as intrusive

rocks. In certain other localities - as in the region between Nomi-ningue and Lac Gaumont, and in many parts of Montigny township - where the paragneisses are much injected by veins of granite, aplite, and pegmatite, and the whole assemblage is very much crumpled, the rock consists of intrusive and sedimentary material in about equal proportions.

Amphibolite is often associated with the paragneisses, but only at Nomininguc are there any important exposures of this type of rock. Quartzite bands are common in the gneisses, and the rock also occurs in relatively large bodies, notably in the neighbourhood of Lac Saguay. Limestone, usually coarsely crystalline and often dolomitic is fairly abundant in the western section of the area, but almost completely absent in the eastern part. Thus, going west-ward, apart from a few outcrops near the western shore of Lac Monti-gny, limestone first make its appearance as Guénette is approached and, beyond that, exposures of the rock are frequent in the uplands bordering the valleys of Kiamika and Lièvre rivers. The town of Mont-Laurier and the villages of Lac-des-Ecorces, Val-Barrette, and Kiamika are, in part, underlain by beds of this limestone. Pyro-xenite, composed chiefly of diopside is found in close relation with the limestone, but on the whole it does not have an extensive distribution. The most abundant outcrops of this rock are to be found immediately south of Mont-Laurier.

Intrusive Series

The oldest intrusive rocks in the region are grey ortho-gneisses, banded, fine-grained, and presenting very uniform charac-teristics wherever found. Such rocks occur in a number of localities but outcrops in general are relatively small. They are to be found especially on the west shore of Lac Nomininguc, in the region bet-ween Nomininguc and Loranger, and in a few outcrops north of Guénette.

Next in age is a series of gneissic granites of somewhat diverse types. These include aplitic granites, most often grey in colour, that are especially well exposed in the vicinity of Guénette grey or pink, medium-grained granites, such as are to be found at Lac Iberville and Lac Zouave, in Montigny township; and types with large, white feldspar crystals, poor in mica, often of pegmatitic appearance (such as those at Boyd lake), and some of them contain-ing tourmaline (as in the occurrences in the valley of the Kiamika river, downstream from Val Barrette). Several exposures of horn-blende granite between Nomininguc and Loranger may also most conve-niently be considered as belonging to this series. In general, the injections of pegmatite that accompany these granites are poor in mica, just as are the pegmatites that so frequently intrude the various phases of the Grenville series.

It would seem that these gneissic granites may be correla-ted with the oldest granites of the Morin Series as defined by Osborne in the region southeast of the present map-area.

Gneissic granite intrusions are very abundant in the rocks of the Grenville series, but many of them are too small to be indicated on a map to the scale of that employed during this investigation, especially so when it is a question of swarms of branching veinlets accompanying lit-par-lit injections. Zones in which the paragneisses have been strongly granitized are not always easy to delimit, particularly as the transition from true paragneiss to orthogneiss is often gradational. Remnants of metamorphic rock (paragneiss, quartzite, limestone, etc.) that was engulfed in the magma but not assimilated by it, are common within the appreciably large granitic bodies. The number of these inclusions of Grenville rocks in the intrusive granites is considerable in some places. The most important masses of gneissic granite encountered are situated between Lac Trinquier and Lac à la Vase (Campbell township); around Lac Iberville (Montigny township); and south of Lac des Iles.

Another very important intrusive series, corresponding to the younger members of the Morin series, is represented in this area mainly by a quartzose porphyritic syenite, which also is quite gneissic. This rock, coarsely crystalline, with large phenocrysts of grey or pink feldspar, forms two bodies of considerable extent. One of these, in Montigny township, is exposed around the shores of Lac Veuillot, Lac des Iles, and Lac Pie IX; the other underlies most of the region between Lac Vert (Lac Gauvin) and the Lièvre river at Mont Laurier. This quartzose syenite is frequently accompanied by pink gneissic granite, a rock well represented near the west shore of Lac des Ecorces. The diorite occurring at the north limit of the town of Mont Laurier is also considered as being a part of this intrusive series.

The Guénette granite, well known because it has been, and still is, quarried at several localities, outcrops a little north of the village of the same name and forms a relatively important intrusion in the midst of the Grenville paragneisses. In certain places, this granite strongly resembles the pink granite mentioned above as accompanying the quartzose syenite. In some outcrops it presents aplitic and gneissic facies, but the most characteristic feature of the rock is the presence of small crystals of allanite, a radioactive mineral.

A large intrusive body of gabbro, rich in black mica and with a structure much less gneissic than in any of the intrusive rocks so far described, occupies the centre of the map-area. This basic mass extends for a length of nearly eight miles in an east-west direction and it has a width varying from two to five miles. It is best exposed in the country surrounding Lac Lacordaire. In addition to this large mass, there are numerous bodies of similar gabbro in other places within the area.

A body of alkaline syenite, often coarsely crystalline and containing an abundance of biotite, has been traced in scattered exposures over a distance of at least five miles in Turgeon township.

Outcrops at the southern end of this massif first make their appearance a little west of Sainte-Véronique. Toward the north, this body of alkaline syenite must extend well beyond the northern limit of the present map-area, as outcrops of similar rock have been observed on the shore of Grand Lac Kiamika. A second mass of alkaline syenite, in part concealed by sandy overburden, occurs in Kiamika township, between Ferme-Rouge and Lac Rouge.

Dykes of andesite and diabase, trending in a northerly direction, are to be seen in some places, but they are of rare occurrence. They appear to be the youngest intrusive rocks of the region. Dykes of this type were noted on the shore of Adams Lake; to the north of Lac Lacordaire; and to the north of Lac Saguay.

MINERAL DEPOSITS

The Nomininguе-Mont-Laurier area does not appear to offer much of interest from the viewpoint of prospecting.

Residents of the area have from time to time done some exploration in the search for gold, notably in the country adjacent to the Gouin road (Manceau mine), around Lac Saguay, and in the vicinity of Mont-Laurier. A number of quartz veins have been found and examined, but none have shown gold values of interest.

During the present investigation, an occurrence of magnetite in paragneiss, was observed on lot 16, range II, Montigny township.

Slight indications of copper are to be seen in the paragneiss near the church at Nomininguе, and in the granitized gneiss one mile west of Lac Saguay; and veinlets containing chalcopyrite occur in amphibolite inclusions that are found in the Guénette granite at Brodie's quarry.

Molybdenite occurs in numerous localities, both in rocks of the Grenville series and in certain of the granites. The mineral is usually present in these rocks only as isolated flakes. Typical occurrences may be seen in the rocks exposed at Nomininguе and in those immediately south of Mont-Laurier, particularly on lots 19 to 21, range I, Campbell township.

Graphite is widespread, occurring as small, disseminated flakes in the paragneisses, quartzites, and limestones of the Grenville series. For some years, until it was closed down in 1930, a graphite mine was active near Guénette. Other localities in which graphite is known to occur in appreciable amount are along the Canadian Pacific Railway cutting near Boyd lake, Campbell township; on lots 21 to 23, range IV, Bouthillier township; and on lot 16, range North of Chapleau Road, Kiamika township.

Feldspar has been produced intermittently at the

Arbic quarry, on lot 19, range I, Campbell township. It is a white, or slightly pinkish, microcline, occurring in a pegmatite dyke.

Garnet is common in much of the gneiss and amphibolite. Up to the present, however, it has not been found in concentrations of sufficient importance to be of commercial value.

Chrysotile asbestos, of very short fibre and in small veins occurs in some serpentinized parts of the Grenville limestones, as, for example, near the south shore of Lac des Ecorces. The known occurrences are of mineralogical interest only. In the same limestone series, there is some muscovite, occurring usually as broken flakes not exceeding three or four inches in diameter. As a general rule, mica is not abundant in the pegmatites of the area and, when present under such conditions, it is as small flakes of no economic interest.

Crystals of violet-coloured fluorite were observed in a pegmatite vein on lot 18, range I, Campbell township, and on the adjoining lot 19 some translucent, green crystals of apatite were seen in metamorphic limestone.

Some twenty years ago, local clay deposits were utilized for making brick in a plant on the bank of Lièvre river, just downstream from Mont-Laurier.

Limestone has been quarried at several points within the map-area for use in the manufacture of lime for local requirements. Lime-kilns have been operated on lot 8, range South of Chapleau Road, Montigny township; near Val Barrette; and in the valley of Lièvre river (east side), three miles south of Mont-Laurier.

Granite quarries have been opened in several localities. Four of these are in the Guénette granite body, in Campbell township; they are the Brodie quarry (lot 4, range A), the Beauregard quarry (lot 1, range A), and two quarries, now inactive, on lot 2, range A, and lot 5, range B. The Provencher quarry, near Guénette, on lot 1, range C, is in banded grey orthogneiss. The stone used in the construction of the Mont-Laurier Cathedral, a porphyritic syenite, was obtained from a quarry opposite the railway station at Mont-Laurier, on lot 25, range I of Campbell township.