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BUREAU OF GEOLOGY AND TOPOGRAPHY

GEOLOGICAL SURVEY

PRELIMINARY REPORT

MISTAWAK MAP-AREA, WEST HALF
QUEBEC

BY

J. T. Wilson

Paper 38-19

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ACCESS AND PHYSICAL FEATURES

The southern boundary of the area is 23 miles north of Taschereau on the Canadian National Railways. A canoe route from La Sarre leads to Lake Turgeon and Partridge River. Portages connect with the other navigable streams, which are all tributaries of Harricanaw River. Aeroplanes can land on the four largest lakes.

The area is of low relief, with few bedrock outcrops. It is thickly wooded with spruce, jack pine, and alders. The northern part is flat with much muskeg, but around the borders of the southern part there are several groups of hills. On the east side lies Plamondon Hill (1,880 feet by aneroid), the highest hill for many miles in any direction.

GLACIAL GEOLOGY

During the melting of the last ice-sheet, glacial lake waters covered the area to a depth of over 1 hundred feet. Streams from the melting ice produced deltas in the glacial lake, which, because the ice edge was rapidly melting and retreating northward, gave rise to long ridges of sand. Elsewhere clay and silt were deposited, so that only the higher knobs of bedrock crop out.

Upon the sides of the higher hills boulder beaches at different elevations up to 1,450 feet (by aneroid) give evidence of the changing levels of the lake. The beaches formed as spits or in sheltered gullies on the hillsides, whereas the more exposed parts of the slopes were washed clean by the waves and are largely areas of bare rock. Above the level of the highest beach, Plamondon Hill is covered with undisturbed boulder clay, indicating that this hill was never completely submerged but formed an island. The tops of the lower hills and knobs, which were at one time covered, were later washed bare of clay by wave action.

GENERAL GEOLOGY

The solid rocks are all of Precambrian age. The oldest are altered lavas and associated intrusives such as are called Keewatin in areas to the south. Dark green andesitic types predominate, but in various areas light-coloured rhyolites are present and in a few

small areas thinly banded tuffaceous sediments. The andesitic rocks are now greenstones and chlorite schists, the tuffs are sericite and chlorite schists, and the rhyolites have not been greatly altered.

The volcanic rocks were intruded by granite which now underlies the greater part of the area. Along the western boundary the granite is pink, fine grained, and has only a small content of dark minerals. Elsewhere the granite is a coarse, grey or pink, biotite granite.

In many places along the contact of the granite with the volcanic rocks there is a zone of hybrid rocks, including injection gneisses, contact breccias, diorites, and basic granites. The planes of schistosity in this zone and in the volcanic rocks parallel the granite contact.

Diabase or gabbro dykes are the youngest consolidated rocks in the area. Near the southeastern corner of the area a large number of narrow diabase dykes or sills cut the granite. Some of them strike northwest and dip about 45 degrees northeast.

PROSPECTING NOTES

The northern two-thirds of the area does not appear to be favourable for prospecting. Outcrops are few and the bedrock is mostly granite.

The volcanic rocks in the southern part of the area provide the most favourable prospecting areas. Pits and trenches have been dug on quartz veins carrying sulphides at several outcrops from Kodiga portage and the shore of Turgeon Lake to the hills at the centre of the southern boundary of the area. Quartz veins occurring near Flamondon Hill in volcanic rocks close to the edge of the granite body are reported to carry gold in some cases and molybdenum in others.