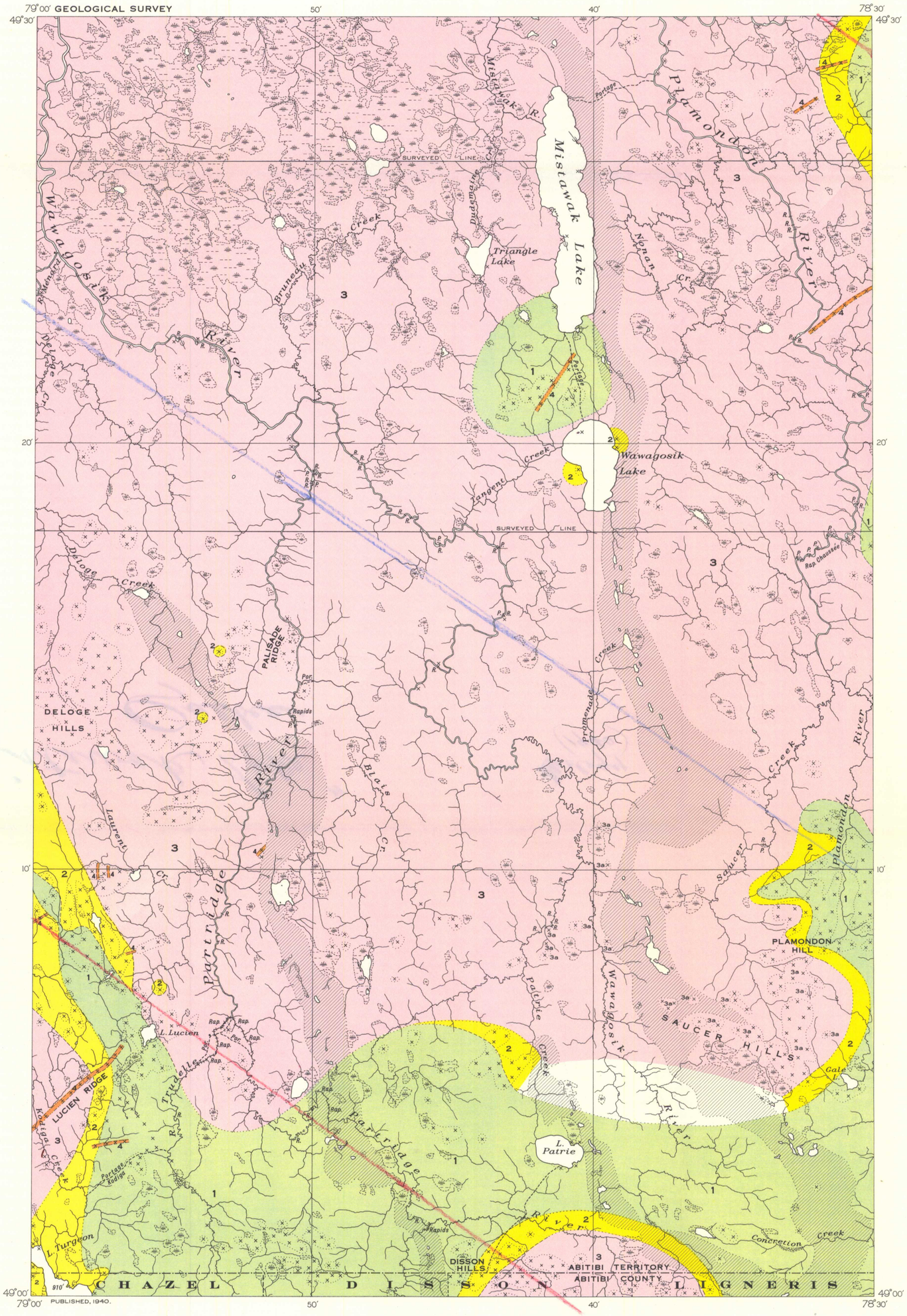
CANADA

DEPARTMENT OF MINES AND RESOURCES

MINES AND GEOLOGY BRANCH

BUREAU OF GEOLOGY AND TOPOGRAPHY

GEOLOGICAL SURVEY



PUBLISHED, 1940.

LEGEND

NOTE:–Coloured areas are in part drift-covered, the locations of known areas of outcrop are indicated by crosses ×××; small outcrop ×.

PROTEROZOIC (?) (LATE PRECAMBRIAN)

4 — *Diabase, gabbro*

ARCHEAN (EARLY PRECAMBRIAN)

3 — *Granite;* **3a**, *granite cut by many diabase dykes*

2 — *Diorite, injection gneiss, contact breccia*

1 — **KEEWATIN** *Greenstone, chlorite schist, altered andesite, associated intrusives; minor amounts of rhyolite, tuff, and breccia*

Sand

Geological boundary (approximate, assumed)

Glacial striæ

Building

Trail or portage — P

Territory and County boundary

Township boundary

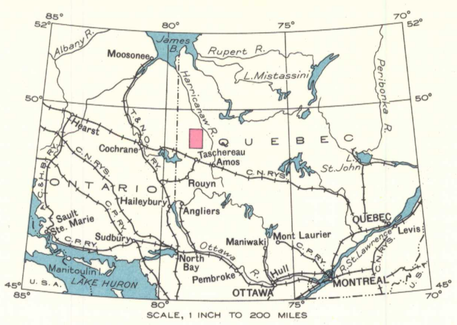
Fall and rapid — F. R.

Marsh

Height in feet above Mean sea-level — 910′

Geology by J.T. Wilson, 1937.

Base-map compiled by the Topographical Survey, 1938, from aerial photographs and from information supplied by the Quebec Department of Lands and Forests. Cartography by the Drafting and Reproducing Division, 1939.



SCALE, 1 INCH TO 200 MILES

ACCESS AND PHYSICAL FEATURES

The southern boundary of the area is 23 miles north of Taschereau and 17 miles northeast of La Sarre on the Canadian National Railways. From La Sarre a truck road leads to the canoe route to L. Turgeon, Partridge and Wawagosik rivers. With difficulty Tangent creek may be ascended to Wawagosik lake, whence good portages lead to Mistawak lake and Plamondon river. All these streams are tributaries of Harricanaw river. Planes can land on the lakes mentioned and on L. Patrie, to which there is also a trail from Macamic-Nord.

Most of 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

The last ice-sheet once lay thousands of feet thick upon this area and deposited over it an uneven layer of boulder clay. When this ice-sheet was melting a large lake formed between its receding front and the height of land to the south. Streams from this melting ice flowed southwards into the lake and deposited deltas at the edge of the ice-sheet. As the edge receded northwards, the deltas did also so that they formed long ridges of sand. Elsewhere in the lake bedded clays were deposited over the boulder clay.

At the time of its maximum depth this lake did not cover the top of Plamondon hill for the boulder clay is undisturbed there. From about 1,500 feet to 1,100 feet the sides of the hills were washed clean by the waves except where boulder beaches formed as spits or in sheltered gullies. These bare hillsides are easy to prospect. A fine series of beaches on the northwestern slope of Plamondon hill records the changing lake levels.

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. Massive, 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, whereas 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 and 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 between L. Turgeon and L. Patrie and on Portage Kodiga. Near Plamondon hill quartz veins occurring in volcanic rocks close to the edge of the granite body are reported to carry gold in some cases and molybdenum in others.

MAP 533A

MISTAWAK LAKE

ABITIBI TERRITORY AND ABITIBI COUNTY

QUEBEC

Scale, $\frac{1}{126,720}$ or 1 Inch to 2 Miles

Miles 2 0 2 4 6

Approximate magnetic declination, 14°30′ West.

533A