



DESCRIPTIVE NOTES

The undifferentiated PRECAMBRIAN rocks (1) outcrop in the southwest corner of the map-area and in a few isolated localities where knobs, mostly of quartzite, protrude through a thin Palæozoic cover. Elsewhere the irregularly eroded Precambrian surface forms the floor of the later Palæozoic formations.

The NEPEAN (2) is the oldest of the Palæozoic formations. It outcrops in isolated depressions within the main area of Precambrian exposures and is not present around the higher, isolated, Precambrian quartzite knobs. It consists of thin and thick beds of coarse-grained cream-coloured, very pure quartz sandstone, weathering grey with irregular brown stains. In places it is a conglomerate containing pebbles of pure quartzite varying from less than an inch to three inches in diameter. Silica is the usual cement but this gives place, near the top of the formation, to more calcareous material or to iron oxide. The maximum thickness in the area is not known. The Nepean has been correlated with the Potsdam of New York which is considered to be of late Cambrian age. There is however, no discernible break between the formation and the overlying March beds, and the Nepean may be of Ordovician age.

The MARCH formation (3) rests conformably upon the Nepean sandstone, or, in a few places, against Precambrian knobs that rise above the sandstone. Its contact with the Nepean is placed at the lowest dolomite layer. It grades upward into the overlying Oxford formation. The March consists of thick beds of grey sandstone, with a calcareous cement, alternating with thick beds of sandy blue-grey dolomite, both weathering rusty brown. Its thickness is not known. The formation is water-bearing and is transitional between the Nepean and the Oxford. The few fossils in it indicate an early Beekmantown age.

The OXFORD formation (4) lies conformably upon the March, or in a few places rests against knobs of Precambrian quartzite. It consists of thick rusty-weathering beds of dove-grey limestone, magnesian limestone, and blue-grey dense dolomite. In places at the top it is dark and somewhat argillaceous. Where it lies against the Precambrian, the basal beds contain irregular quartzite pebbles, one to ten inches long. Its maximum thickness is not known. The few fossils found in the Oxford are indicative of an early Beekmantown age.

The ROCKCLIFFE formation (5) is exposed only in one small group of outcrops where it is a fine grey sandstone. In the area to the north the Rockcliffe rests disconformably upon the Oxford and consists of grey-green shales containing sandstone lenses. The thickness of the Rockcliffe is not known. To the northwest of the map-area the formation thins out and is overlapped by the succeeding beds. Fossils found in the area to the north indicate a late Chazy age. The Lower and Middle Chazy beds of the Lake Champlain area were probably laid down during the erosional interval represented by the disconformity at the base of the Rockcliffe.

The ST. MARTIN formation (6) also has but one exposure, but its presence to the north of the map-area indicates that it probably extends in a broad arc to the northeast of the Rockcliffe formation upon which it rests conformably. The small outcrop consists of siliceous grey limestone. The thickness of the formation is unknown, but is probably not great, because, like the Rockcliffe, the St. Martin is overlapped to the north and west by the next younger formation. Fragments of *Camerozocchia plena* indicate a late Chazy age.

The OTTAWA formation (7) succeeds the St. Martin with a slight disconformity indicative of a short erosional interval. The exposed beds are of impure shaly limestone and dolomite near the base, and thick pure limestone at the top. There are no exposures of the shales and thin limestone beds that elsewhere occur between these two horizons but it is assumed that they are present. Judging from measurements in the adjacent area to the north the formation has a maximum thickness of 125 to 150 feet. The fauna and lithology show that in the map-area only the lower part of the Ottawa formation is represented, namely, the Pamela, Lowville, and Leray zones, of Black River age.

A mantle of drift consisting of glacial till, marine clays and sands, and recent alluvium, conceals much of the Palæozoic rocks. It is thick in the eastern part of the map-area but thins toward the west.

Within the map-area the Palæozoic formations are mainly flat-lying or gently undulating. Minor faulting has occurred. In the south two tongue-like areas of Precambrian rocks appear to be continued as ridges beneath the Palæozoic strata, as indicated by the two small isolated areas of Precambrian rocks that, in the northeast, project through the area of Palæozoic beds.

MAP 710A
PRESCOTT
ONTARIO

Scale, 1:25,000 or 1 Inch to 2 Miles
Miles

Approximate magnetic declination, 10°45' West.

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