



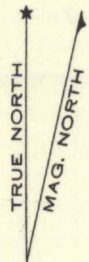
LEGEND

- ARCHEAN (EARLY PRECAMBRIAN)
- 2 Granite
 - 4 Granite, granodiorite, quartz diorite
 - 1 Granodiorite, quartz diorite
 - 3 Granite, granodiorite and quartz diorite with subordinate hornblende-biotite gneiss, biotite gneiss and biotite-chlorite schist

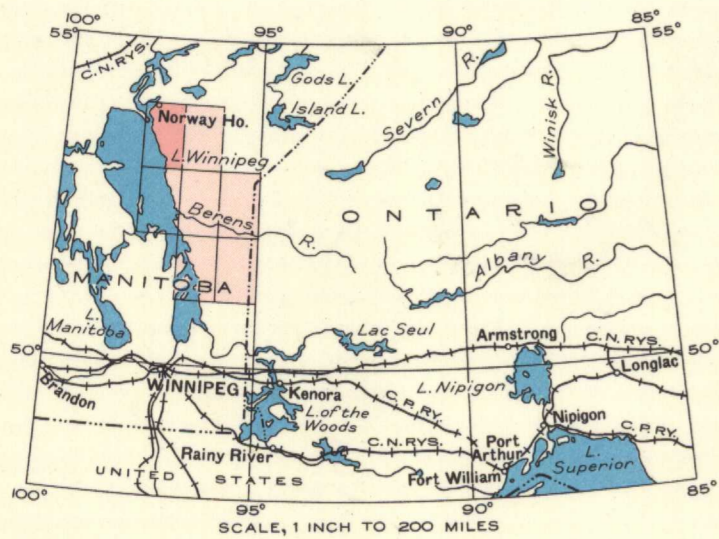
Drift covered, outcrops few or lacking

- Geological boundary (approximate, assumed) - - - - -
- Glacial striae - - - - -
- Outcrops where observed - - - - -
- Church - - - - -
- Post office - - - - -
- Lighthouse - - - - -
- Township boundary (surveyed, unsurveyed) - - - - -
- Indian Reserve boundary - - - - -
- Fall or rapid - - - - -
- Height in feet - - - - -

Compiled and reproduced by the Bureau of Geology and Topography from information supplied by Federal Government Departments. Geology by A. W. Johnston, 1936.



Approximate magnetic declination, 12° East.



ACCESS

Boat services are maintained between Winnipeg and Norway House during the summer months. The interior may be reached from Lake Winnipeg by canoe by ascending the Gunisao, McLaughlin, Belanger, Mukutawa and Nanawan rivers. These streams are well travelled and portage trails are cut around the numerous rapids and falls.

PHYSICAL FEATURES

Lake Winnipeg has a low, rocky or sandy shoreline. The lake is shallow for a considerable distance from the shore and where the shoreline is rocky there are numerous small islands and reefs. Inland from the lake the land surface is an uneven plain rising gradually to the east. The bedrock outcrops as knolls and ridges rising 80 to 100 feet above swampy clay flats. The country is well wooded with jackpine, spruce and poplar but the trees are small and good stands of timber are rare. The area was glaciated in Pleistocene time by ice moving southwestward. The glacial drift left by the retreating ice is not thick but thin deposits of boulder clay, gravel and sand are common. In its later stages glacial lake Agassiz covered most of the area and extended an unknown distance eastward. The clays and silts deposited in the lake form low-lying, plain-like areas in which bedrock outcrops are rare or lacking.

GENERAL GEOLOGY

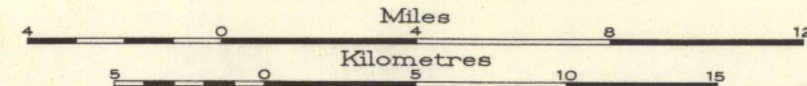
Intrusive granitic rocks ranging in composition from granite to quartz diorite underlie the whole area. They may be divided into two groups. The older group (1) varies in composition from granodiorite to quartz diorite. The rocks of this group are grey, medium to coarse grained and are composed of grey to white oligoclase, 10 to 20% quartz and a relatively large proportion of dark minerals such as biotite, hornblende or chlorite. Foliation is generally present but not invariably so. The younger group of intrusives (2) is mainly granite. They are pink, medium to coarse grained rocks, composed of pink orthoclase or microcline, 20 to 30% quartz and a relatively small proportion of biotite, hornblende or chlorite. Porphyritic phases are common. The pink granites are locally but not generally foliated. Aplite and pegmatite dykes cut both groups of intrusives. They are composed of quartz and feldspar, some mica and in places contain tourmaline or molybdenite.

Contacts between the group of grey granodiorites and quartz diorites, and the younger group of pink granites are generally irregular and poorly defined. Pink granite as dykes and irregular shaped masses intrudes the older group of granodiorites and diorites. Intrusives of both groups are intermingled throughout wide areas (4), rocks of both groups making up a considerable proportion of the bedrock.

The intrusives of both groups contain numerous inclusions of older rocks which they have invaded. The inclusions range from small, rounded or angular blocks to large masses many feet in diameter. They are commonly schistose or gneissic and include hornblende-biotite gneisses, quartz-biotite-feldspar gneisses and mica-chlorite schists; inclusions of greywacke, feldspathic quartzite and greenstone are not uncommon. Areas where the inclusions are abundant occur as zones (3) within the intrusives. Within these zones intrusive material forms the greater proportion of the bedrock but the inclusions make up an appreciable amount of the whole.

MAP 424A
NORWAY HOUSE SHEET
 (WEST HALF)
 MANITOBA

Scale, 253,470 or 1 Inch to 4 Miles



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