



LEGEND

PRELIMINARY SERIES



- 11 Diabase, diorite, and gabbro dykes
- 10 Leucogranite, leucogranodiorite, aplite, pegmatite
- 9 Injection breccia (agmatite); 10 and possibly 8 enclosing 1, 7b, and 8e
- 8 Granodiorite-tonalite-gneiss complex; 8a, biotite granodiorite-gneiss; 8b, biotite granodiorite; 8c, porphyritic biotite granodiorite; 8d, 8a with inclusions and relic fragments; 8e, hornblende tonalite-gneiss; 8f, 8e with inclusions and relic fragments; 8g, augen gneiss
- 7 Basic and ultrabasic rocks; 7a, anorthosite and labradorite porphyry; 7b, gabbro and diorite, in places porphyritic, in places serpentinized; 7c, peridotite and serpentinite
- 6 CROSS LAKE GROUP (4-6)
Injection breccia (agmatite) and paragneiss; 6a, 30% to 75% of 10 in 4, 5 and 6b; 6b, quartz-feldspar-mica paragneiss and biotite-rich schist
- 5 Quartzite, arkose, greywacke, argillite; minor pebble-conglomerate
- 4 Conglomerate, pebble-conglomerate; minor grit, quartzite, arkose and greywacke
- 3 HAYES RIVER GROUP (1-3)
Transition rock: 1 and 2 containing more than 25% injected or secreted granite, pegmatite, or quartz; includes relic volcanic rocks within 8
- 2 Sedimentary rocks: 2a, iron-formation; 2b, quartzite, greywacke, argillite, slate, and phyllite; 2c, conglomerate
- 1 Volcanic rocks: 1a, crystal tuff, welded tuff, agglomerate, volcanic breccia; minor tuff; 1c, 'quartz eye' schist and gneiss; 1d, dacite and related acid extrusions; 1e, andesite, hornblende-biotite-chlorite schist, amphibolite; in part contains up to 25% granitic material

- Drift-covered area
- Area of sand
- Geological boundary (defined, approximate, gradational)
- Limit of ground traverse
- Bedding, tops known (inclined, vertical, overturned)
- Bedding, tops unknown (inclined, vertical)
- Schistosity, layering in volcanic rocks (inclined, vertical, overturned, p indicates top determination by pillow structure)
- Stratiform gneissosity; parallel alternating layers of different composition (inclined, vertical)
- Gneissosity; parallel fabric caused by planar disposition of rock-forming minerals; to be distinguished from schistosity and stratiform gneissosity (inclined, vertical, dip unknown)
- Lineation, plunge known; may be combined with other symbols
- Drag-fold (arrow indicates plunge, relative movement suggested) combined with other symbols
- Fault (approximate, assumed from lineaments)
- Glacial striae (direction of ice-movement known)
- Crevasse-filling kames
- Drumlinoid ridges
- Esker
- Locality where age has been determined
- Mineral occurrence
- Pit, diamond drilling or other workings

MINERAL SYMBOLS

Antimony Sb	Molybdenum Mo
Asbestos asb	Silver Ag
Copper (chalcopyrite) Cu	Spodumene spd
Gold Au	Sulphides s
Lead Pb	Vanadium V
Magnetite mag	Zinc (sphalerite) Zn

Geology by H. C. Horwood, 1931, 1932; T. L. Tanton, 1936; C. K. Bell, 1960

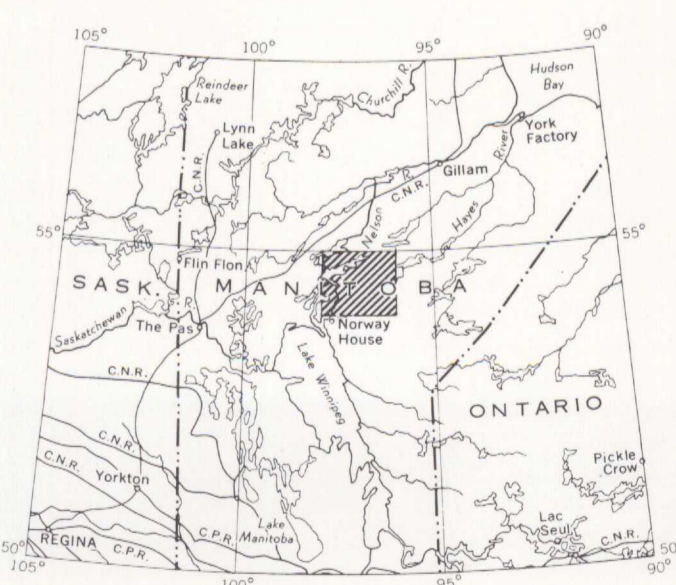
Geological compilation by C. K. Bell, 1961

- Building
- Winter road
- Trail or portage
- Surveyed line
- Indian Reserve boundary
- Marsh
- Fall and rapid
- Height in feet above mean sea-level

Cartography by the Geological Survey of Canada, 1961

Approximate magnetic declination, 9° 50' East

Air photographs covering this area may be obtained through the National Air Photographic Library, Topographical Survey, Ottawa

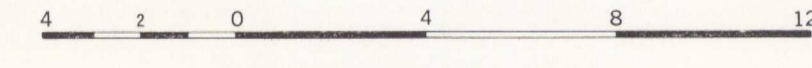


INDEX MAP

PUBLISHED, 1962
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DIRECTOR, GEOLOGICAL SURVEY OF CANADA, OTTAWA

MAP 32-1961
TO ACCOMPANY PAPER 61-22
GEOLOGY
CROSS LAKE
MANITOBA

Scale: One Inch to Four Miles = $\frac{1}{253,440}$
Miles



Geographical names subject to revision

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MAP 32-1961
CROSS LAKE
MANITOBA
SHEET 631

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UNIT
APR 13 1962
C. S. C.