Manitoba Industry, Trade and Mines
Geological Survey
B.G.C.M. Series
Nejanilini Lake, NTS 64P, 1:250 000

MARGINAL NOTES

Regional setting

Lithological units

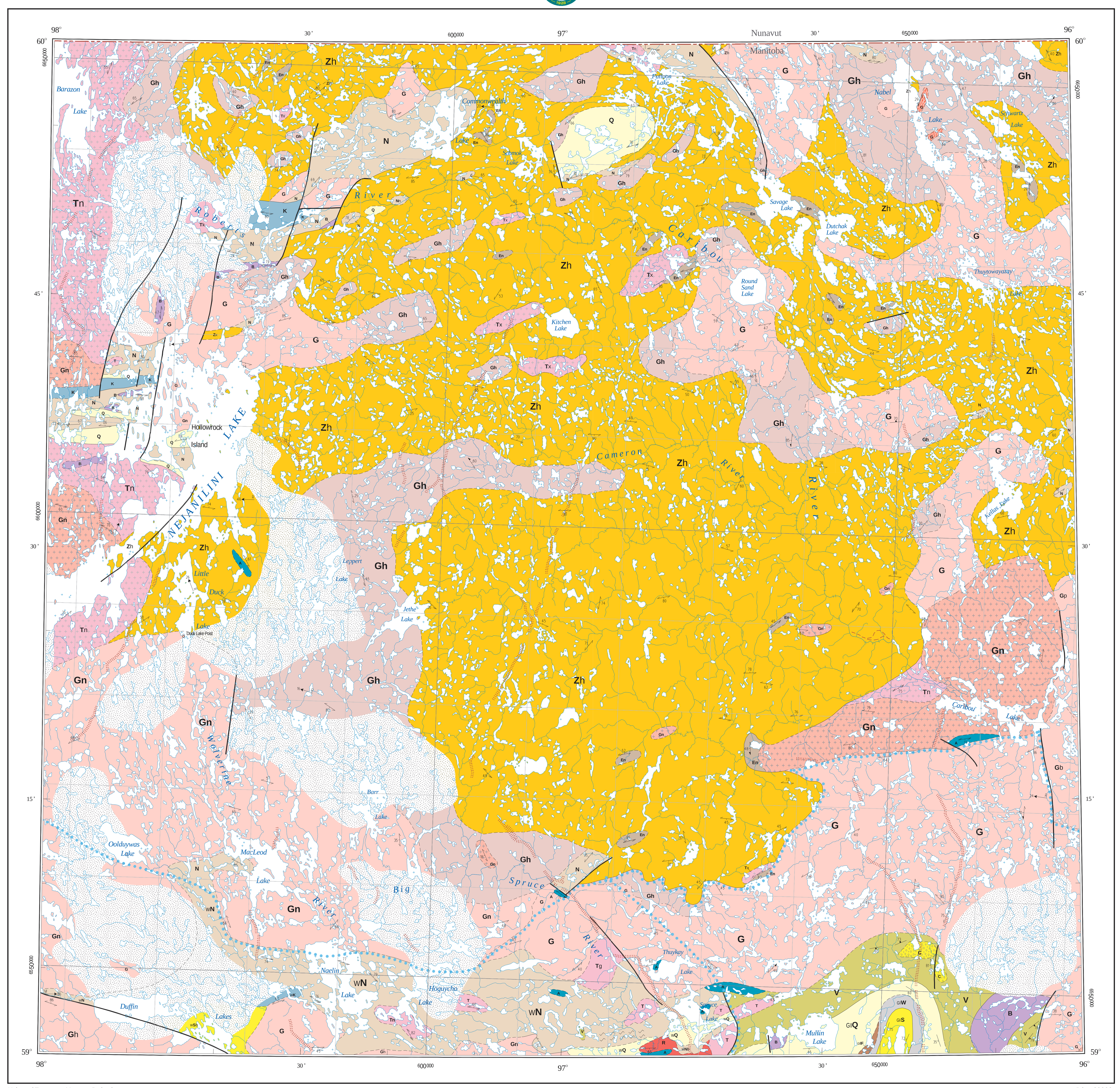
Relationships between the Hurwitz Group, Great Island Group, Wollaston Group and Seal River metavolcanic rocks

Economic geology

Regional tectonic synthesis

Radiometric dating of pre-Hudsonian rocks

Hudsonian collisional tectonics



Universal Transverse Mercator Projection
Zone 14 North American Datum 1983

Printed 2002

Scale 1:250 000

Kilometres 5 0 5 10 15 20 25 Kilometres

True North
3° 9' E
Magnetic North
Approximate mean declination (2002) for centre of map
Decreasing 8.2' annually

LEGEND

GREAT ISLAND DOMAIN

Proterozoic

Hudsonian

Unit	Description
G	Granite, massive to foliated, ± aplite ± pegmatite
Gh	Hybrid granite
T	Tonalite, cordierite bearing, ± tourmaline

Great Island Group

Unit	Description
GIS	Metasiltstone and meta- argillite
GIW	Metagreywacke
GIIF	Iron formation (garnet- magnetite- amphibolite schist)
GIQ	Quartzite and interlayered pale green phyllite

Seal River Intrusive Rocks

Unit	Description
B	Gabbro
G	Granodiorite to porphyritic quartz diorite

Proterozoic and/or Archean

Seal River Volcanic Rocks

Unit	Description
C	Conglomerate, volcanic derived (probably Archean)
V	Interlayered tuff and pillowed andesite (probably Archean)

Archean

Unit	Description
A	Amphibolite

SEAL RIVER DOMAIN

Proterozoic

Hudsonian

Unit	Description
G	Granite, massive to foliated, ± aplite ± pegmatite; **Gn** - with grey tonalitic to granodioritic gneiss and foliated to lineated biotite granodiorite to tonalite; **G**h - pink aplite, ± hornblende
Gh	Hybrid granite
T	Tonalite, cordierite bearing, ± tourmaline; **T**g - with granite, massive to foliated, ± aplite ± pegmatite zones; **Tn** - tonalite with semipelitic paragneiss to metatexite

Wollaston Group

Unit	Description
wSb	Biotite psammite gneiss, ± calc- silicate lenses
wK	Calc- silicate rocks
R	Quartz porphyry
wN	Semipelitic paragneiss to metatexite, ± muscovite ± cordierite ± garnet ± sillimanite ± andalusite ± hypersthene; wNb - biotite feldspar gneiss with granodiorite *lits*
wQ	Impure quartzite to quartzite

Proterozoic and/or Archean

Seal River Volcanic Rocks

Unit	Description
V	Interlayered tuff and pillowed andesite (probably Archean)

Archean

Unit	Description
A	Amphibolite

NEJANILINI DOMAIN

Proterozoic

Hudsonian

Unit	Description
G	Granite, massive to foliated, ± aplite ± pegmatite; **Gn** - with grey tonalitic to granodioritic gneiss and foliated to lineated biotite granodiorite to tonalite; **G**p - porphyritic granite
Gh	Hybrid granite
Gb	Granite gneiss, + biotite + magnetite
T	Tonalite, cordierite bearing, ± tourmaline; **T**k - with calc- silicate rocks
K	Calc- silicate rocks
B	Metagabbro, in part noritic; metabasic rocks
N	Semipelitic paragneiss to metatexite, + garnet; **N**n - with tonalite, cordierite bearing
Q	Impure quartzite to quartzite

Archean

Unit	Description
G	Granodiorite diatexite to biotite metatexite, ± garnet
Gn	Foliated to lineated biotite granodiorite to tonalite
Tn	Grey tonalitic to granodioritic gneiss; **T**x - hypersthene tonalite
En	Hypersthene gneiss
Zx	Hypersthene granite (monzocharno- ckite); **Z**h - with hybrid granite; **Z**m - with hypersthene gneiss
A	Amphibolite

SYMBOLS

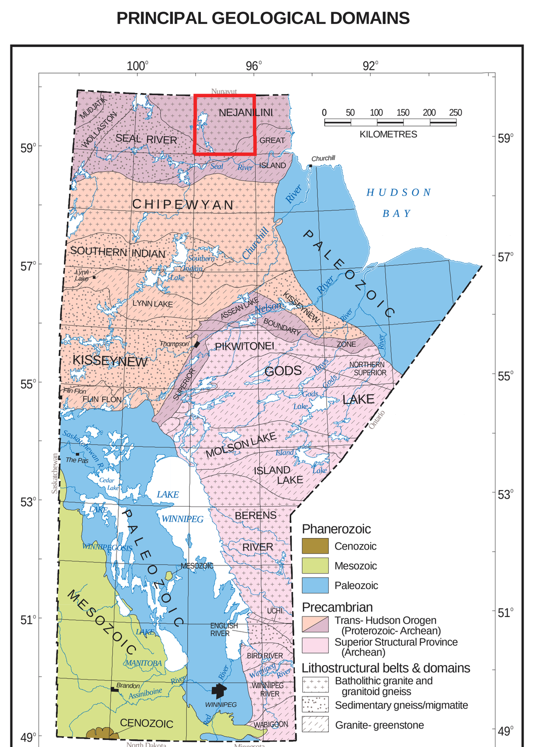
- Geological boundary (defined or approximate, interpreted)
- Geological boundary (gradational, underwater)
- Fault (defined, interpreted)
- Shear zone boundary
- Axial trace of major fold (antiform, synform)
- Bedding, tops known (inclined, vertical, overturned)
- Bedding, tops unknown (inclined, vertical, amount of dip unknown)
- Layering and foliation (inclined, vertical, amount of dip unknown)
- Pillows, tops known (inclined), tops unknown (inclined)
- Schistosity (inclined, vertical, amount of dip unknown)
- Cataclastic foliation (inclined)
- Mineral lineation (inclined - plunge indicated)
- Rodding, mullion structure (inclined - plunge indicated)
- Minor fold axis (inclined - plunge indicated)
- Minor fold axial plane (inclined - dip indicated)
- Minor fold symmetry (Z- shaped, S- shaped, symmetrical)
- Domain boundary
- Areas of little or no Precambrian outcrop
- Esker

Synoptic geology by D.C.P. Schledewitz
Compilation by D.C.P. Schledewitz and D. Lindal
Digital CAD drafting B. Lenton and M. McFarlane
GIS Cartography by L. Chackowsky

Suggested reference:
Manitoba Industry, Trade and Mines
2002: Nejanilini Lake; Manitoba Industry, Trade and Mines, Manitoba Geological Survey, Bedrock Geology Compilation Map, NTS 64P, scale 1:250 000.

Published by:
Manitoba Industry, Trade and Mines
Manitoba Geological Survey

PRINCIPAL GEOLOGICAL DOMAINS



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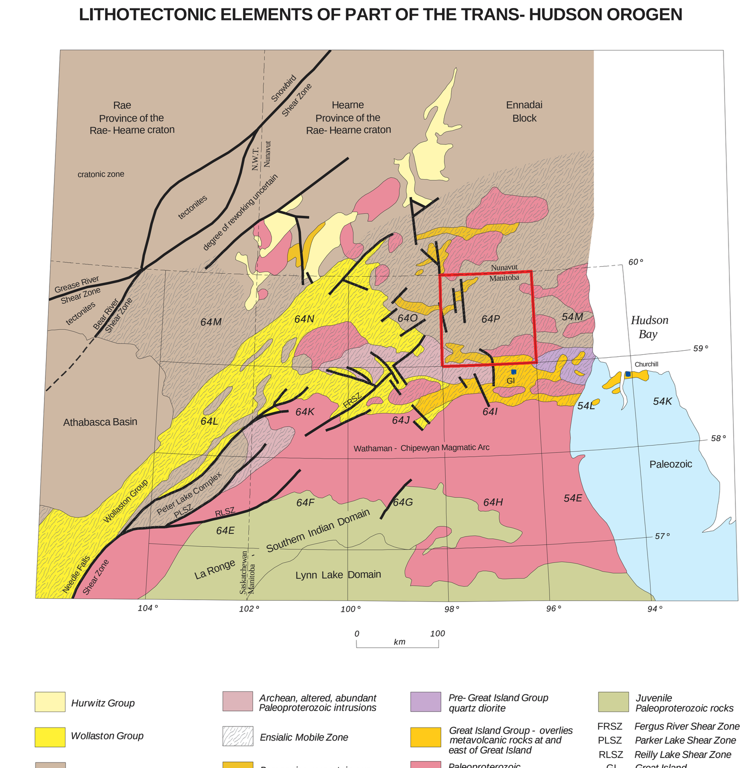
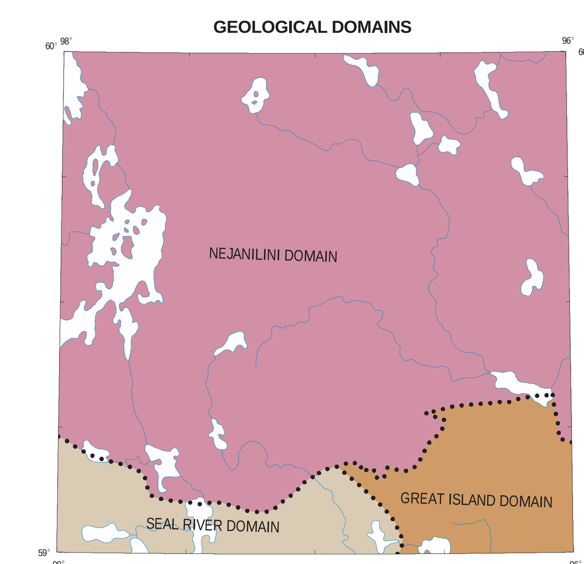
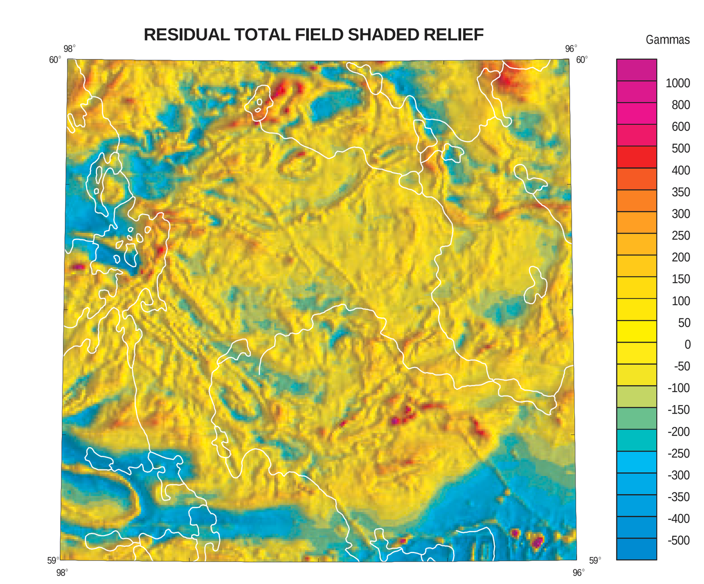
LITHOTECTONIC ELEMENTS OF PART OF THE TRANS- HUDSON OROGEN



GEOLOGICAL DOMAINS



RESIDUAL TOTAL FIELD SHADED RELIEF

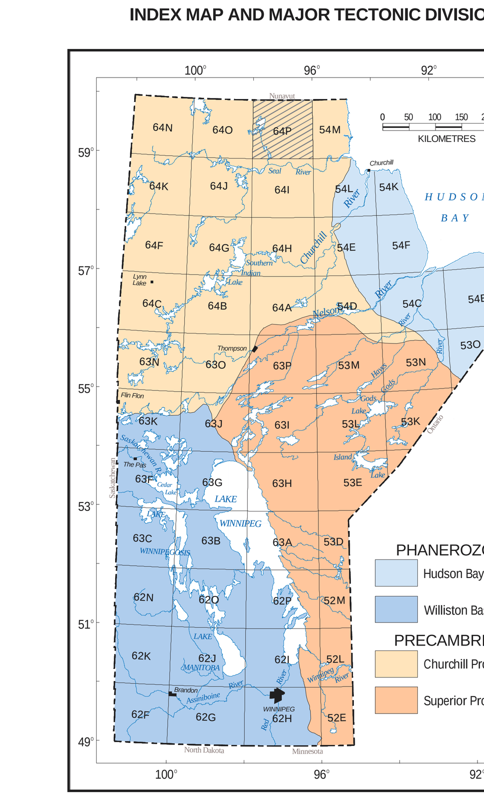


BEDROCK GEOLOGY COMPILATION MAP SERIES

NEJANILINI LAKE

NTS 64P

INDEX MAP AND MAJOR TECTONIC DIVISIONS



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