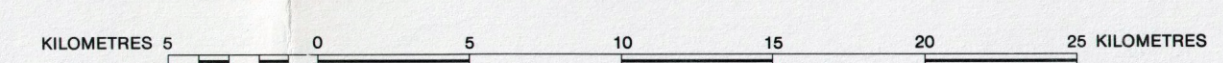


Printed 1989

Scale 1:250 000



LEGEND

PRECAMBRIAN

Late Proterozoic

Diabase dykes (Mackenzie swarm)

SUPERIOR PROVINCE

CHURCHILL - SUPERIOR BOUNDARY ZONE

Metadiabase and/or metagabbro (Molson swarm)

CHURCHILL PROVINCE

KISSEYNEW DOMAIN

Early Proterozoic

G Granite to monzonite (undivided); Gg - garnet-muscovite-sillimanite granite (anatectic granodiorite and granite); Gm - foliated granite with magnetite + hornblende ± diopside ± hypersthene; Gp - porphyroblastic granite with magnetite + hornblende; Gb - gneissic biotite granite to granodiorite + hornblende; Gq - gneissic quartz-rich granite with pegmatitic and nebular patches; Gx - pegmatitic granite; Gl - leucogranite with isolated garnet clots; Gk - garnetiferous magmatic granite to granodiorite

G Biotite granodiorite; Gl - leucogranodiorite, locally containing red garnets; Gp - porphyritic granodiorite; G - granodiorite, tonalite, granite (Livingston granodiorite)

T Tonalite; Th - hornblende-biotite tonalite to granodiorite; Tn - gneissic tonalite to granodiorite; Tng - gneissic garnetiferous tonalite to granodiorite

Touchbourne Intrusive Suite (enderbitics)

Gneissic ferrohypsthene diorite to tonalite (enderbitic); ID - gneissic biotite-hornblende quartz diorite to granite; IDn - biotite quartz diorite to granodiorite, strongly foliated

DP Porphyritic quartz diorite

Missis Metamorphic Suite

MMs Protolith

MMa Meta-arkose and meta-sub-greywacke (paragneiss)

MMV Metabasalt, pillowed and massive flows

MMa Amphibolite

MMSh Hornblende-bearing meta-tectonic and diatexitic arkosic gneisses

Sickle Metamorphic Suite

smS - magnetiferous quartzolite/diopsidic gneiss ± cordierite ± sillimanite ± garnet, derived from sandstone; smB - biotite meta-arkose; smC - sillimanite meta-arkose; smC - polymictic conglomerate; smSh - hornblende-dioptase gneiss

smW Metagreywacke, garnet- and magnetite-rich

smS - migmatite, with < 75% mobilizate (metatexite), derived from sandstone; smSs - with sillimanite + cordierite; smSh - hornblende - diopside gneiss

smS - migmatite, with > 75% mobilizate (diatexite); smSh - with hornblende ± diopside

Metamorphic Rocks of Uncertain Age

A Amphibolite ± garnet

NI Layered hornblende-dioptase gneiss ± hypersthene

Burnwood River Metamorphic Suite

bw Garnet and garnet-biotite gneiss ± cordierite ± sillimanite, derived from greywacke and mudstone; aW - biotite gneiss ± garnet

bw Migmatite, with < 75% mobilizate (metatexite), derived from greywacke

bw Migmatite, with > 75% mobilizate (diatexite)

Amisk Group

AV Felsic metavolcanic rocks

Thompson Belt

G Granite, granodiorite, pegmatite, leucotonalite

Ospwagan Group

oV Metabasalt, pillowed and/or massive flows; derived schist

oW Metapelite, pillowed and/or massive flows; derived schist

oV Metarhyolite

oS Metasedimentary rocks: quartzite, quartz arenite, conglomerate, siltstone, chert, aluminous and ferruginous graphitic shales, silicate, oxide, carbonate and sulphide facies banded iron formation; calcareous rocks and derived schists

Proterozoic and Archean

10 N Migmatites; (1:3038 ± 6 Ma; 1729 ± 12 Ma)

U Ultramafic rocks (in the Thompson belt, additional ultramafic intersections have been reported in drill data.) Ultramafic rocks associated with the Ospwagan Group are Proterozoic; others may be Proterozoic or Archean. (Open symbol - drill intersection)

Archean

Older Plutonic Rocks

On Retrogressed felsic granulite/magnetite-garnet-quartz-feldspar gneiss

E Enderbitic gneiss

On Retrogressed mafic granulite (hornblende-phyric, biotite-hornblende-quartz-feldspar gneiss), pegmatite

I Metagabbro, meta-anorthosite; layered amphibolite

Supracrustal Rocks

V Metabasalt, massive or pillowed flows; breccia

PIKWITONEI DOMAIN

On Felsic to intermediate granulites; enderbitic gneiss, undifferentiated granulites

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Suggested reference to this publication: Manitoba Energy and Mines, 1989, Bedrock Geology Compilation Map Series, Preliminary Edition, Nelson House, NTS 63-O, 1:250 000

SYMBOLS

- Geological boundary (approximate, interpreted ¹)
- Fault (defined, approximate, assumed)
- Iron formation
- Domain boundary
- Sample locality for U - Pb zircon age determination
- Metalliferous - past producer, important mineral property
- Industrial minerals - past producer
- Area of little or no outcrop

MINERAL OCCURRENCES

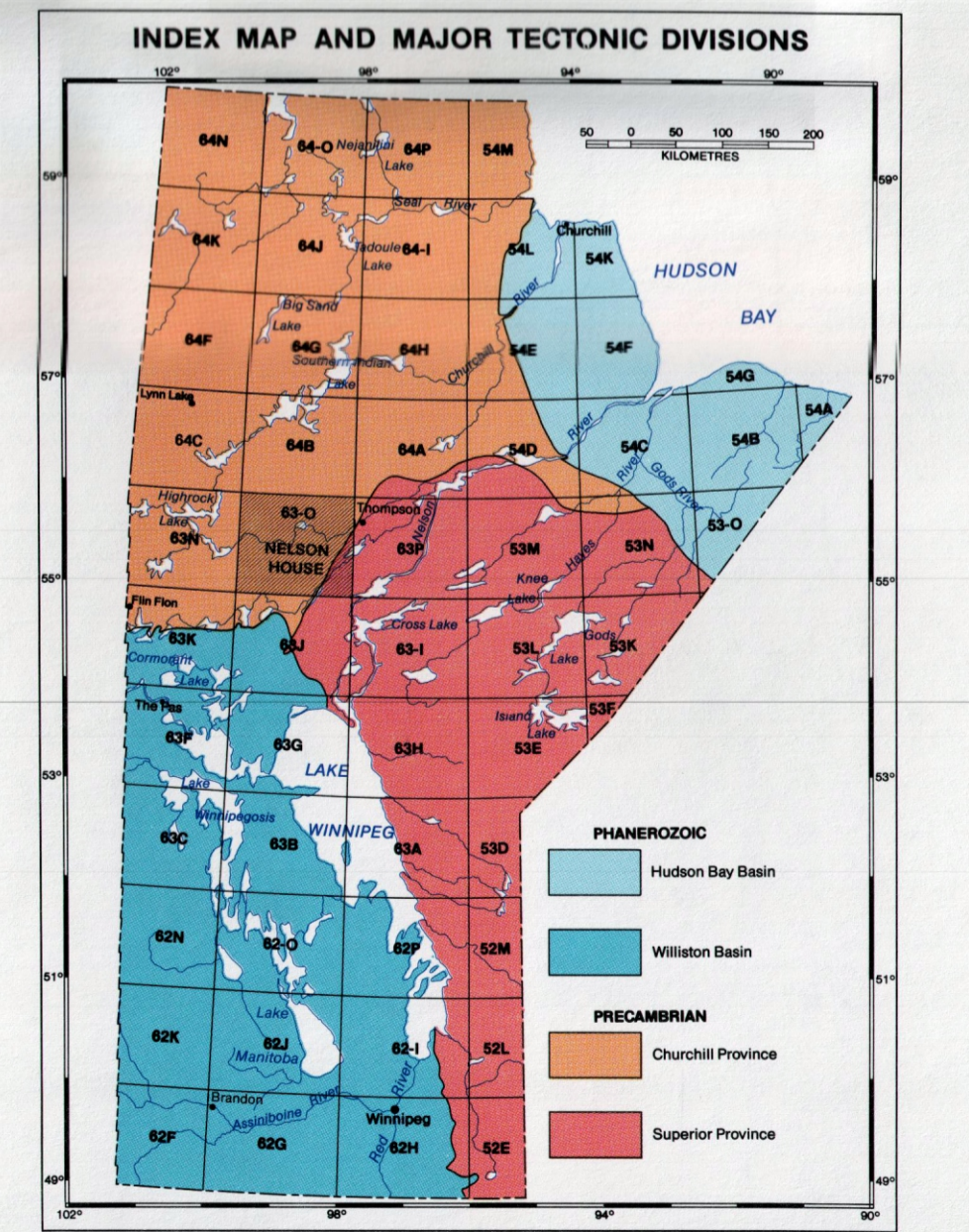
- 10 Setting Lake South
- 20 Setting Lake North
- 3A Soab South
- 4A Soab North
- 5A Hornbone-Miralgo
- 6A Pipe No. 1
- 7A Pipe No. 2 and Open Pit

COMMODITIES

Nickel	Ni	Granite	gr
Cobalt	Co	Crushedstone	cs
Copper	Cu	Serpentine	sp

Contributing geologists: Macek, J.J., McRitchie, W.D., Bailes, A.H., Baldwin, D.A. and Lenton, P.G.
 Cartography by T. Francoschet and D.L. McShane
 This map is a provisional compilation based, in part, on preliminary geological maps. It is not to be regarded as a final interpretation of the geology of the area.
 A contribution by Manitoba Energy and Mines, Geological Services, to programming under the Canada-Manitoba Mineral Development Agreement (MDA), a subsidiary agreement of the Economic and Regional Development Agreement (ERDA).

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STRATIGRAPHIC NOTES:

- The map units are in approximate chronological order.
- No stratigraphic correlation is implied between supracrustal rocks of the Kisseynew Domain and those of the Churchill - Superior Boundary Zone.

Reference for U-Pb zircon ages:
 10 Machado and Weber, 1989

Approximate mean declination (1989) for centre of map
 Decreasing 10.6' annually