Geology of the Halfway Lake area (630/1)

Metadiabase or metagabbro dykes. In O or A, usually belong to Molson dyke swarm

INTRUSIVE ROCKS, ORTHOGNEISS

Hornblende - biotite granite

Biotite - hornblende quartz monzonite

BURNTWOOD AND GRASS RIVER GROUPS, undivided

s2 Pebble metaconglomerate, felsic

Felsic orthogneiss, metatuff (?)

h Meta-arenite, undivided, usually hornblende-enriched

b2 Metavolcanic gneiss, felsic

Migmatite derived from Bw or Bp

OSPWAGAN GROUP SUPRACRUSTAL ROCKS, undivided

GRASS RIVER GROUP, undivided; mainly magnetite-bearing paragneiss

places sillimanite-bearing; locally migmatitized

s1 Metasandstone, crossbedded, locally pebbly

b1 Metasandstone, layered to laminated, pebbly

h2 Meta-arenite, interbedded with a metaconglomerate cp

BURNTWOOD GROUP, undivided; greywacke-mudstone metaturbidite, garnet- and graphite-enriched, locally cordierite- and sillimanite-bearing; includes migmatitized derivatives

Metagreywacke - mudstone paragneiss, garnet- and biotite-rich

Bp Metapelite, cordierite- and garnet-enriched, local magnetite

chert, iron formation, volcanogenic sediment.

a Amphibolite (rafts in granitoid)

Lake assemblage)

aa Bah Lake amphibolite

dolomite marble, calc-silicate.

silicate and chert

Metaconglomerate, polymictic, rich in mafic fragments, interbedded with meta-arenite

Bah Lake assemblage, undivided; metabasalt flows, pillowed or massive, local breccia; derived amphibolite; metagabbro - diabase subvolcanic sills; picrite sills; minor interflow

pp Metapicrite or porphyroblastic metapicrite sill (not limited to the Bah

gb Metagabbro, subvolcanic sill (not limited to the Bah Lake assemblage)

conglomerate grading upwards to sandstone - siltstone - shale

ox Iron formation, oxide facies, found only in P3

determined by its host P1 or P3

se Iron formations of several facies occuring close together

Sequence of iron formations and associated chert layers

T3 Olivine - phlogopite - diopside marble, coarse grained

T1 Marlstone, laminated to thinly layered; dolomite marble

segregations in high grade metamorphic derivatives

diorite in composition, host to distinct bodies of orthogneiss (1 to 6), ages uncertain

Basal metaconglomerate, sandstone, shale; graded beds, fining upwards

ARCHEAN BASEMENT MIGMATITE - GNEISS, undivided, retrogressed, leucogranite to

Semipelite, very thin layer between T1 and T3

Manasan Formation, undivided; basal clastic rocks

AO ARCHEAN BASEMENT AND OSPWAGAN GROUP, undivided

5 Leucotonalite gneiss, garnet- and magnetite-bearing

Structural trend derived from the vertical gradient of a magnetic anomaly

4 Migmatite, stromatic, magnetite-enriched

1 Metagabbro, layered, garnetiferous

3 Alkali-feldspar syenite gneiss, porpyroblastic

6 Biotite granite orthogneiss

2 Enderbite gneiss

Cummingtonite - cordierite schist, layered, a single occurrence at

Pipe Formation, undivided; iron formation, chert, metapelite schist; minor semipelite,

Setting Formation, undivided; feldspathic quartzite and metapelite interlayered in varying proportions in a metaturbidite sequence containing calc-silicate "concretions"; quartzoze greywacke; rare occurrences of multiple layers of quartz-rich, oligomictic

Sequence of silicate and oxide facies iron formations, sulphidic; chert; minor dolomite marble, calc-silicate; near the top sandstone - pelite metaturbidite

dm Dolomite marble intercalation enclosed in silicate facies iron formation

si Iron formation, silicate facies, stratigraphic position unknown unless

P2 Metapelite schist with sulphide facies iron formation near its top; minor calc-

Iron formation, sulphide facies, stratigraphic position unknown unless determined by its host P1 or P2

si Iron formation, silicate facies, stratigraphic position unknown unless determined by its host P1 or P3

Iron formation, sulphide facies, stratigraphic position unknown unless determined by its host P1 or P2

M2 Semipelite schist, rhythmically layered, calc-silicate layer near the top; pegmatite

Thompson Formation, undivided; marlstone or marble, layered, varied in composition

Iron formation, facies unspecified, stratigraphic position unknown

h1 Meta-arenite, usually hornblende- and garnet-enriched

gb Metagabbro, usually associated with um or occuring as subvolcanic sills

s Meta-arenite, undivided, layered to laminated, locally pebbly; magnetite-enriched, in

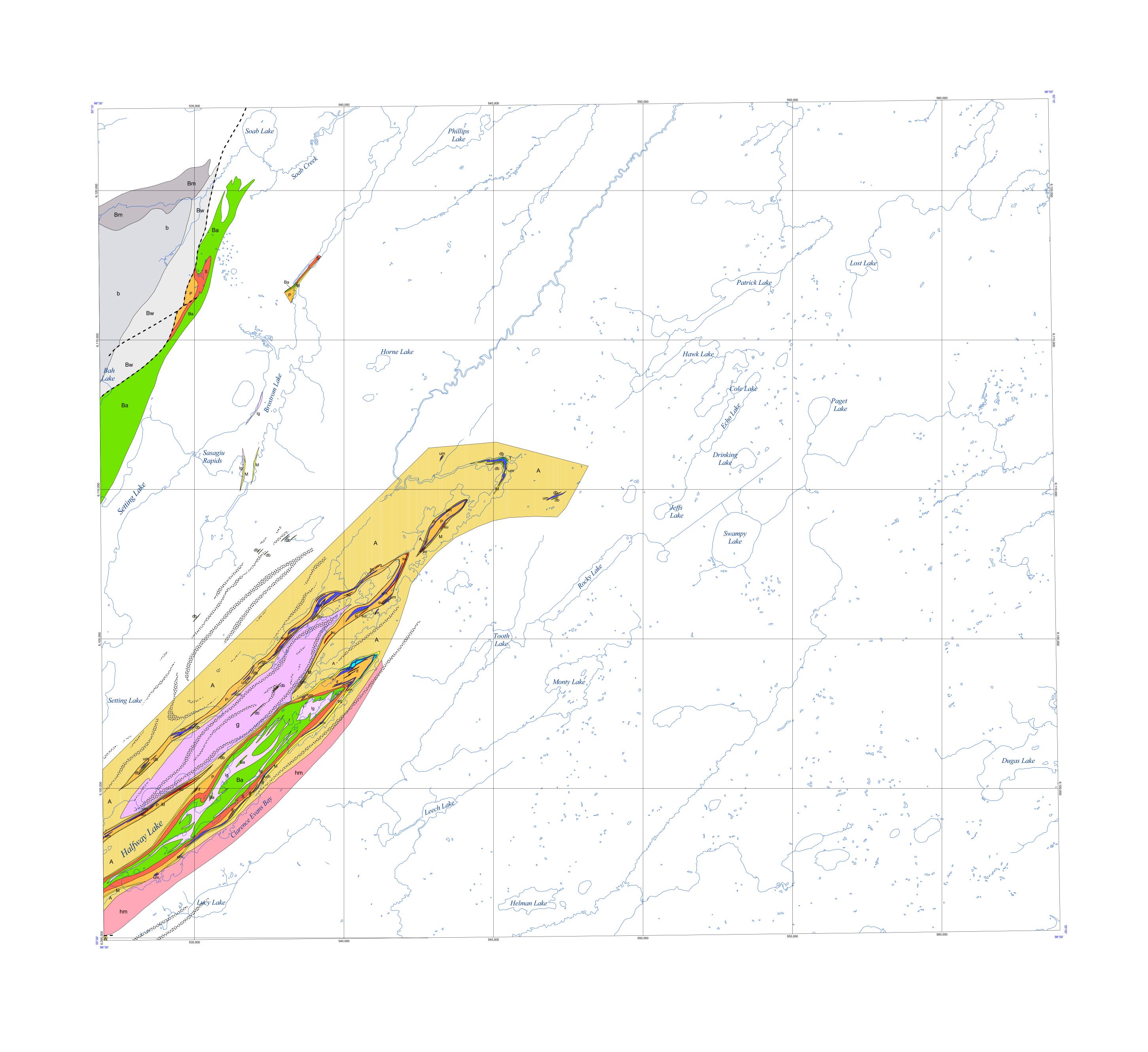
b Meta-arenite, undivided, layered to laminated, biotite-rich, magnetite-enriched, locally

schist; usually as sills in Ospwagan Group sequence

Dunite (serpentinized), metaperidotite, metapyroxenite, serpentinite, derived ultramafic

Gabbro of MacKenzie dyke swarm







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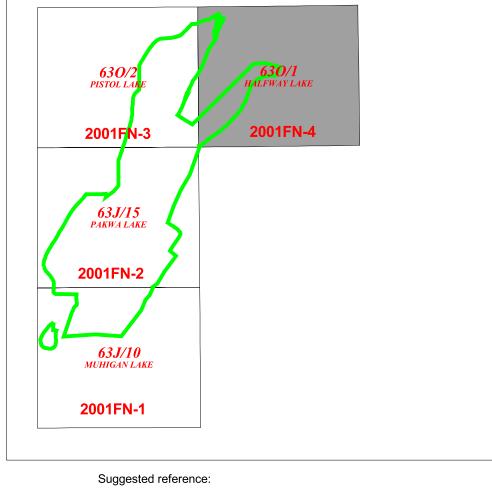
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Relation between Archean basement and Ospwagan Group. Younging away from Thompson Formation thinned out on the right and represented by a single line between M and P. Manasan and Thompson Formations thinned out on the right and represented by a single line between



TNB Geology Working Group 2001: THOMPSON NICKEL BELT GEOLOGY; Manitoba Geological Survey, Preliminary Map 2001FN-4, Geology of the Halfway Lake area (63O/1), scale 1 : 50 000. Map projection: Universal Transverse Mercator, Zone 14, North American Datum 1983.

This map is a preliminary representation of the results of a mapping and compilation program. It is not to be regarded as a final interpretation of the geology of the area. The data used in producing this map was transferred from un-rectified airphotos and thus is subject to distortion. No attempt was made to remove this distortion for this

preliminary release.

Schematic illustrations of the relationships of Archean gneisses, Manasan, Thompson,

Pipe and Setting Formations.

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