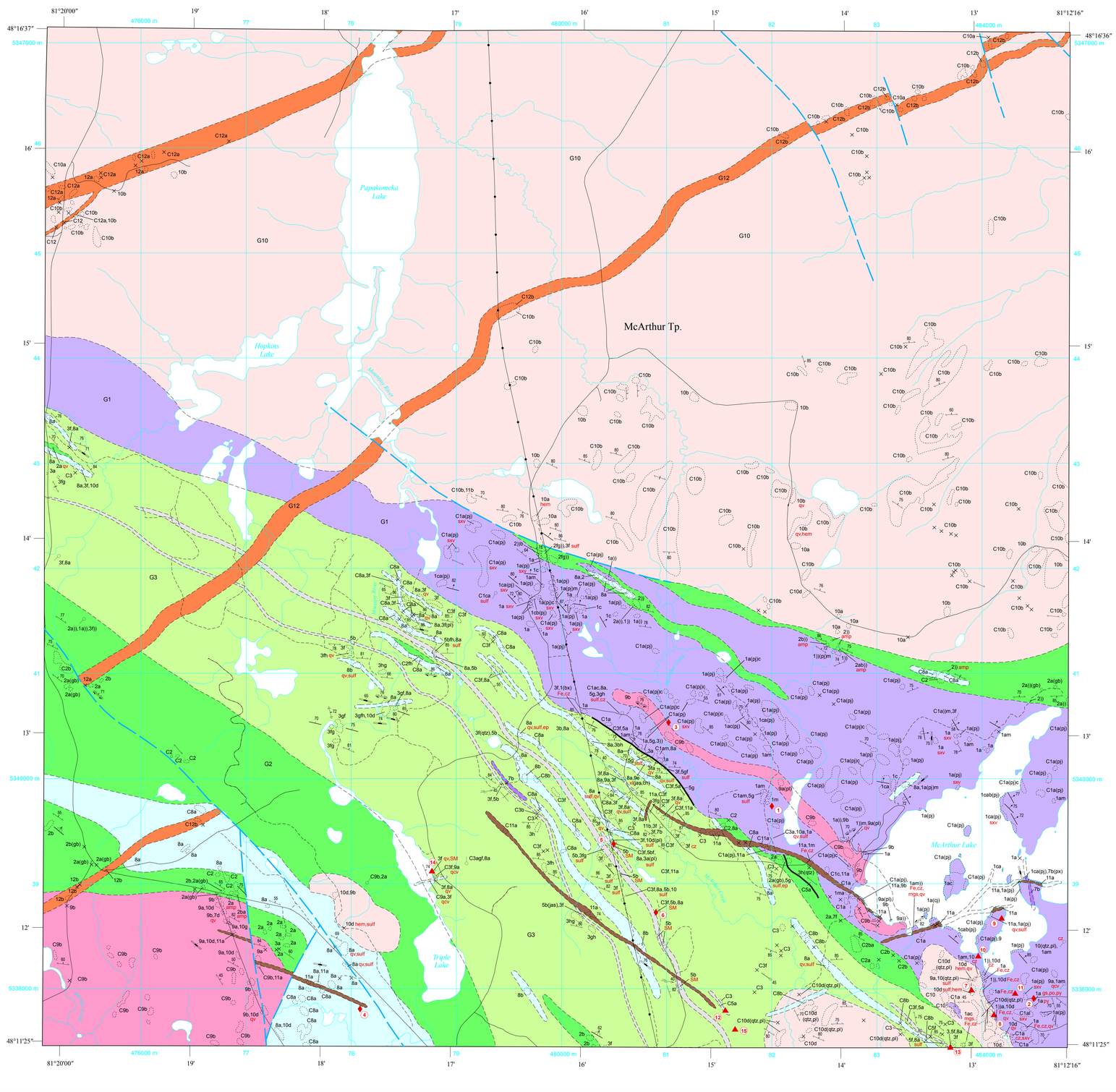


LEGEND[ab]

PHANEROZOIC

CENOZOIC

QUATERNARY

PLEISTOCENE AND RECENT
Unconsolidated sandy till, glaciofluvial sand and gravel

UNCONFORMABLE CONTACT

PRECAMBRIAN

PROTEROZOIC

MESOPROTEROZOIC

12 **Mafic Intrusive Rocks (Abitibi Dike Swarm)**
12a Olivine diabase
12b Quartz diabase

INTRUSIVE CONTACT

PALEOPROTEROZOIC

11 **Mafic Intrusive Rocks**
11a Diabase dikes (Sudbury dike swarm)
11b Diabase dikes (Matachewan dike swarm)

INTRUSIVE CONTACT

ARCHEAN

NEOARCHEAN

10 **Felsic Intrusive Rocks**
10a Granodiorite
10b Porphyritic granodiorite
10d Tonalite
10g Aplite

9 **Intermediate Intrusive Rocks**
9a Diorite
9b Quartz-bearing diorite
9e Syenite

INTRUSIVE CONTACT

8 **Mafic Intrusive Rocks**
8a Gabbro
8b Quartz-bearing gabbro

7 **Ultramafic Intrusive Rocks**
7b Peridotite
7d Amphibolite
7f Pyroxenite

INTRUSIVE CONTACT

5 **Chemical Metasedimentary Rocks**
5a Iron formation
5b Oxides facies
5f Chert
5g Graphitic argillite
5h Chert breccia

3 **Intermediate to Felsic Metavolcanic Rocks**
3a Massive flows
3b Pillowed flows
3f Tuff, lapilli tuff
3g Lapillistone
3h Tuff breccia

2 **Mafic Metavolcanic Rocks**
2a Massive flows
2b Pillowed flows
2f Tuff, lapilli tuff
2g Lapillistone
2h Tuff breccia

1 **Ultramafic Metavolcanic Rocks (Komatiites)**
1a Massive flows
1b Pillowed flows
1c Organized flows
1l Synvolcanic dikes and sills
1m Spinifex textured

[a] *The prefix "G" denotes rock types interpreted from geophysical data.*
[b] *The prefix "C" denotes rock types from compilation: these may have been reinterpreted.*

SYMBOLS

- Area of bedrock exposure
- Small bedrock exposure
- Geological boundary, interpreted from geology or geophysics
- Fault, interpreted, unknown generation
- Brittle-ductile fault/shear zone, sense of movement unknown, inclined
- Volcanic bedding, komatiite-profile, grading in spinifex texture, flow tops, and polyhedral joints, with facing (trend only, inclined, overturned)
- Volcanic bedding, komatiite-profile, grading in spinifex texture, flow tops, and polyhedral joints, no facing, inclined
- Sedimentary bedding, with facing (vertical, inclined)
- Volcanic bedding, pillows, with facing (trend only, inclined)
- Volcanic bedding, pillows, no facing, trend only
- Sedimentary bedding, no facing, inclined
- Volcanic bedding, other, with facing (inclined, overturned)
- Volcanic bedding, other, no facing (inclined, vertical)
- Cleavage, spaced, unknown generation, inclined
- Foliation, unknown generation (trend only, inclined, vertical)
- Dikes (inclined, vertical)
- Stretching lineation
- Fold axis, unknown generation, unknown symmetry
- Fold axis, unknown generation, z-asymmetry
- Veins, inclined
- Diamond-drill hole
- Road, trail
- Powerline

ABBREVIATIONS

amp.....amphibolite
Au.....gold
Cu.....copper
cz.....carbonatized
ep.....epidote
Fe.....iron
gs.....gossan
hem.....hematite
mgs.....magnesite
Ni.....nickel
Pb.....lead
po.....pyrrhotite
py.....pyrite
qv.....quartz vein
qcv.....quartz carbonate vein
SM.....sulphide mineralization
suif.....trace of sulphide minerals
sxv.....spinifex-texture vein (sills) or patches
xl.....xenoliths
Zn.....zinc

MODIFIERS

(bx).....brecciated
(ch).....chert
(cj).....columnar jointing
(gb).....gabbroic texture
(jas).....jasper
(pj).....polysutured jointing
(pl).....plagioclase phyric/phenocryst
(px).....pyroxene phenocryst
(qtz).....quartz phenocryst
)).....highly foliated and/or sheared

MAIN COMMODITY

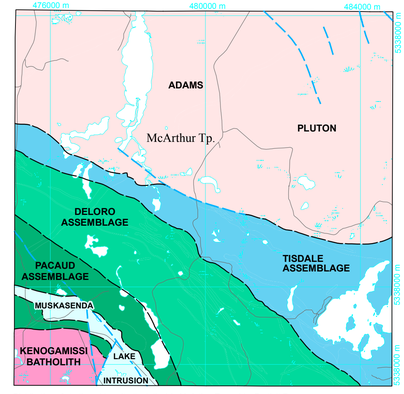
- ▲ Precious metals
- ♦ Base metals

PROPERTIES

Occurrences

1. Noranda 77-1: Ni, Cu* (MDI42A03NW00035)
2. Gossan: Ni?, Cu?
3. Paymaster 1957-2: Ni* (MDI42A03NW00027)
4. Conigo: Cu, Au* (MDI42A03NW00022)
5. Triple Lake Iron: Fe, Au (MDI42A03NW00026)
6. Marceau 92-MDD-03: Fe, Zn, Cu, Ni, Pb (MDI42A03NW00019)
7. Theriault/Ogilvie vein: Au, Cu (MDI42A03NE00023)
8. Chouinard vein: Au
9. Steel vein: Au*
10. Portage vein: Au*
11. Andover porphyry showing: Au*
12. Westport Porcupine occurrences #1: Au*
13. Westport Porcupine occurrences #2: Au
14. Triple Lake showing: Au
15. Hewitt shaft: Au*

** Not located during this survey.*



Distribution of stratigraphic units (tentative) in McArthur Township, Bartlett Dome.

Ontario

Ontario Geological Survey

MAP P.3583

PRECAMBRIAN GEOLOGY

McARTHUR TOWNSHIP

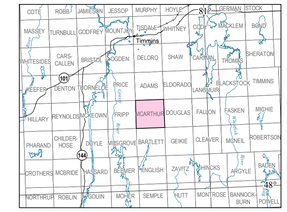
Scale 1:20 000

500 m 0 0.5 1 km

NTS Reference: 42 A/3, 6

This map was produced as part of the TGI-3 Abitibi Project of Natural Resources Canada and is a contribution to the Targeted Geoscience Initiative (TGI-3) Program of the Earth Sciences Sector.

Cette carte a été produite dans le cadre du projet IGC-3 Abitibi de Ressources naturelles Canada et contribue au programme de l'Initiative géoscientifique ciblée (IGC-3) du Secteur des sciences de la Terre.



Location Map 1 cm equals 10 km

SOURCES OF INFORMATION

Base map information is derived from the Ontario Land Information Warehouse, Land Information Ontario, Ontario Ministry of Natural Resources, scale 1:20 000, with modifications by staff of the Ministry of Northern Development and Mines.

Map Datum: NAD 83

Mapping conducted using UTM coordinates in Zone 17.

Magnetic declination approximately 10°43'W in 2007.

Compiled geology derived from:

Assessment files, Resident Geologist's office, Timmins.

Property information modified after the Mineral Deposit Inventory (MDI2) and Clark (1989).

Aeroquest Limited 2004. Report on a helicopter-borne magnetic and electromagnetic surveys on McArthur property, McArthur Township, Timmins area, Ontario, Mustang Minerals Corporation, assessment file no. 42A03NE2010, 41p.

Barber, R.A., Lauder, P. and Diorio, P.A. 1992. Report on the geology and geochemistry of the McArthur Project, McArthur and Douglas townships, Ontario, NTS 42A3,6; BHP Minerals Canada, assessment file no. 42A03NE2001, 76tp.

Clark, R. 1989. Geological and geophysical surveys, Norwin project, Ontario, McArthur and Bartlett Twps, Inco Gold Management Inc., assessment file no. 42A03NE0027; 71p.

Ontario Geological Survey 2003. Magnetic supergrids, Ontario airborne geophysical surveys: magnetic data, grid data; Ontario Geological Survey, Geophysical Data Set 1037.

Ontario Geological Survey 2003. Timmins area, Ontario airborne magnetic and electromagnetic surveys, processed data and derived products, Archean and Proterozoic "greenstone" belts; Geophysical Data Set 1004.

Pyke, D.R. 1978. Geology of the Redstone River area, Districts of Timiskaming; Ontario Division of Mines, Geological Report 161, 75p. Accompanied by Map 2363 and Map 2364.

Pyke, D.R. 1978. Geology of the Peterlong Lake area, Districts of Timiskaming and Sudbury; Ontario Division of Mines, Geological Report 171, 52p. Accompanied by Map 2345.

CREDITS

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Cartographic production by A. Evers.

To enable the rapid dissemination of information, this map has not received a technical edit. Discrepancies may occur for which the Ontario Ministry of Northern Development and Mines does not assume liability. Users should verify critical information.

Information from this publication may be quoted if credit is given. It is recommended that reference to this map be made in the following form:

Houlé, M.G. 2007. Precambrian geology of McArthur Township; Ontario Geological Survey, Preliminary Map P.3583, scale 1:20 000.