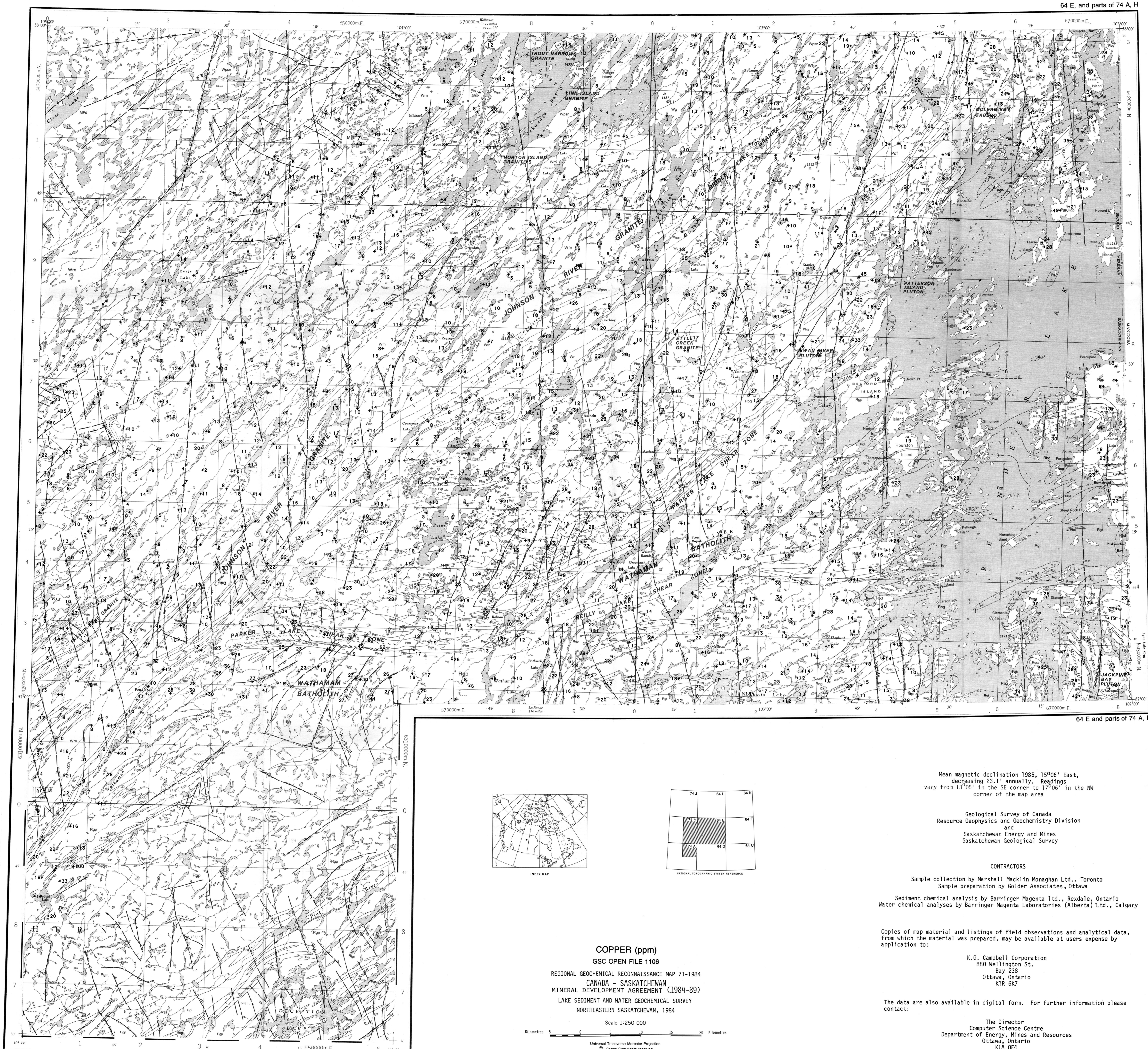


Complexes: where two or more classes of terrain are interspersed in a mosaic or repeating pattern the proportion of each component in the combination is given in a three-position designation set off by slashes denoting arbitrary percentage limits. For example, "Mv/O/R" means that at least 60% of the area is underlain by thin till, with up to 40% boggy areas, and less than 15% scattered rock outcrops. "Rc/R" indicates more than 60% bedrock concealed by vegetation and less than 15% outcrop.



LEGEND

Note: This legend is common for Regional Geochronological Reconnaissance Map 71-1984, Open File 1106

NEOHELMIAN/HADRYANIAN

- dd: Diabase gabbro: fine to coarse grained, massive to weakly foliated, ± clinopyroxene ± biotite ± hypersthene.

PALEOHELMIAN

ATHABASCA GROUP

- MF: Middle Falls Formation: sandstone and conglomerate. MF: fluvial sandstone member, locally poorly sorted, conglomerate member.

LATE APHEBIAN (HUDSONIAN)

- X: Diabase: mylonite and sheared rocks of the Woods Falls Shear Zone, derived from rocks of the Wathaman and Peter Lake Domains.

WOLLASTON DOMAIN

LATE APHEBIAN (HUDSONIAN)

- Wpgr: Biotite granitoid: variable grain size, generally massive to biotite + muscovite ± garnet, contacts with migmatitic supracrustal gneisses commonly gradational.
- Wg: Granite and mafic dikes: coarse grained, massive to weakly foliated; ± biotite + hornblende + muscovite ± amphibole; granitic gneisses commonly gradational.
- Wpgr: Biotite granitoid: medium to coarse grained, massive to biotite + muscovite ± garnet, contacts with migmatitic supracrustal gneisses commonly gradational.

ROTTEKISTE DOMAIN

APHEBIAN (HUDSONIAN) WITH POSSIBLE ARCHEAN ELEMENTS

- Rpp: Megacrystic granitoid: medium to coarse grained, massive to biotite + hornblende ± quartz; locally abundant megacrysts; mafic and mafic gneisses; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Rgr: Megacrystic granitoid: containing abundant xenoliths and inclusions of amphibole and amphibole gneisses derived from late Paleoproterozoic rocks.
- Rhd: Quartz monzonitic dike and gabbro: fine to coarse grained, massive to foliated; quartz monzonitic; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Rpg: Granite granitoid: massive to foliated; ± biotite + muscovite ± hornblende ± garnet.
- Rgi: Granite granitoid and metadiabase: compositionally variable, generally potassium feldspar poor; fine to coarse grained, locally granitic, massive to foliated; ± biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende.
- Rgr: Megacrystic granitoid: containing abundant xenoliths and inclusions of amphibole and amphibole gneisses derived from late Paleoproterozoic rocks.
- Rgr: Amphibole and diorite gneiss: potassic fine to medium grained, locally granitic; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Rgr: Granite granitoid: medium to coarse grained, massive to biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.

LA SONGE DOMAIN

PROBABLY HUDSONIAN (c. 1740 Ma)

- Lp: Granite and quartz monzonite: medium grained, well foliated to gneissic; biotite + hornblende; abundant xenoliths of gneiss and/or gabbro.
- Lgm: Quartz monzonite: fine to coarse grained, foliated to gneissic; ± hornblende ± biotite; abundant xenoliths of gneiss and/or amphibole; remnants of granitoid to quartz monzonite; massive to anastomosing contact zone.

WATHAMAN BATHOLITH (c. 1860 Ma)

ROTTEKISTE MONAZITE COMPLEX

FABER LAKE GNEISSES

PETER LAKE COMPLEX

EARLY TO MIDDLE APHEBIAN

Wathaman Group

- Wah: Quartz monzonitic gabbro: compositionally variable, generally potassium feldspar poor; fine to medium grained, locally granitic; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Win: Calcic diorite gneiss, quartz and amphibole: medium grained to gneissic; ± biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Win: Metadiabase gneiss: fine to medium grained, massive to foliated; ± biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Win: Biotite granitoid: medium to coarse grained, massive to biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Wp: Pelite to paragneiss: gneiss: fine to medium grained, foliated to gneissic; ± biotite + quartz ± hornblende ± garnet ± zircon; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Wp: Metasedimentary: variable and both along and across strike; generally fine grained and foliated; interbedded metasedimentary and metavolcanic; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Wp: Metasedimentary: variable and both along and across strike; generally fine grained and foliated; interbedded metasedimentary and metavolcanic; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
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PROBABLY EARLY APHEBIAN (LATE ARCHEAN?)

- Wp: Metadiabase gneiss: fine to medium grained, massive to foliated; ± biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Wp: Amphibole: fine grained, massive to poorly foliated; locally gneissic; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.

UNCONFORMITY

ARCHEAN DEFORMED AND METAMORPHOSED WITH APHEBIAN SUPRACRUSTAL ROCKS DURING THE HUDSONIAN OROGENY

- Wp: Metadiabase gneiss: fine to medium grained, massive to foliated; ± biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Wp: Metadiabase gneiss: fine to medium grained, massive to foliated; ± biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Wp: Metadiabase gneiss: fine to medium grained, massive to foliated; ± biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.

PROBABLY EARLY APHEBIAN (LATE ARCHEAN?)

- Wp: Metadiabase gneiss: fine to medium grained, massive to foliated; ± biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Wp: Metadiabase gneiss: fine to medium grained, massive to foliated; ± biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.

LAKE BELT

HUDSONIAN WITH POSSIBLE ARCHEAN ELEMENTS

- Rg: Metadiabase gneiss: fine to medium grained, massive to foliated; ± biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Rg: Metadiabase gneiss: fine to medium grained, massive to foliated; ± biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.

PROBABLY EARLY APHEBIAN

- Rg: Metadiabase gneiss: fine to medium grained, massive to foliated; ± biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.
- Rg: Metadiabase gneiss: fine to medium grained, massive to foliated; ± biotite + hornblende ± quartz; locally abundant amphibole and/or hornblende; locally abundant quartz; locally abundant biotite; locally abundant hornblende; locally abundant quartz; locally abundant amphibole and/or hornblende.

SYMBOLS

- Single bedrock exposure: approximate area of abundant bedrock exposure.
- Geological contact: defined to approximate inferred.
- Structural basement: possible to probable fault, as determined from geological, geophysical and/or aerophot evidence.
- Major fold axial trace: antiform, synform.
- Trend and approximate dip of dominant foliation surface: dip (strike) 20°/10°; trend (dip) 10°/10°; trend (dip) 10°/10°.
- Mineral prospect: 1. Gypsum Lake, Dr. P. K. Kamp-Miller and Brunner, 1970; Columbia, 1977.
- Sample location (geochronology): 1. 155-30 Ma, K-Ar, muscovite (Whitlock et al., 1975); 2. 155-30 Ma, K-Ar, whole rock (Whitlock and Macdonald, 1982); map location to approximate center of outcrop area.

CONTRACTORS

Sample collection by Marshall Macklin Monaghan Ltd., Toronto
Sample preparation by Golder Associates, Ottawa
Sediment chemical analysis by Barringer Magenta Ltd., Rexdale, Ontario
Water chemical analyses by Barringer Magenta Laboratories (Alberta) Ltd., Calgary

Copies of map material and listings of field observations and analytical data, from which the material was prepared, are available at users expense by application to:

K.G. Campbell Corporation
880 Wellington St.
Bay 238
Ottawa, Ontario
K1R 6K7

The data are also available in digital form. For further information please contact:

The Director
Computer Science Centre
Department of Energy, Mines and Resources
Ottawa, Ontario
K1A 0E4

COPPER (ppm)
GSC OPEN FILE 1106
REGIONAL GEOCHEMICAL RECONNAISSANCE MAP 71-1984
CANADA - SASKATCHEWAN
MINERAL DEVELOPMENT AGREEMENT (1984-89)
LAKE SEDIMENT AND WATER GEOCHEMICAL SURVEY
NORTHEASTERN SASKATCHEWAN, 1984
Scale 1:250 000

Mean magnetic declination 1985, 15°06' East, decreasing 23.1' annually. Reading vary from 13°05' in the SE corner to 17°06' in the NW corner of the map area.

Geological Survey of Canada
Resource Geophysics and Geochemistry Division
and
Saskatchewan Energy and Mines
Saskatchewan Geological Survey

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* A mnemonic name recorded as rock types as part of field observations

This legend was modified and the geology derived for these geochronological maps from Compilation Bedrock Geology Series 228A, 229A and 232A, Saskatchewan Energy and Mines, Saskatchewan Geological Survey

This map forms one of a series of maps released by the Geological Survey of Canada, Open File 1106. The Open File consists of maps of various geochronological variables: 16 for lake sediment, 3 for lake water and 1 sample site location

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