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PRELIMINARY MAP P.1197
GEOLOGICAL SERIES
**MATTAWA - DEEP RIVER AREA
(EASTERN HALF)**

DISTRICT OF NIPISSING AND
COUNTY OF RENFREW

Scale: 1:63,360 or 1 inch to 1 mile

NTS Reference: 31 K/3W, 4, 31 L/1E, 8E
ODM-GSC Aeromagnetic Maps: 1437G, 1447G,
1457G, 1458G

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SOURCES OF INFORMATION

Geological compilation by S.B. Lumbers, 1976, 1976.
Geology by S.B. Lumbers and assistants, 1972, 1973,
1974, 1975.

Published maps and reports of the Ontario Division of
Mines and the Geological Survey of Canada.
GSC Aeromagnetic Maps: 1468G, Mattawa; 1467G,
Kiosk; 1458G, Magarassi River; 1457G, Brent;
1447G, Des Joachims; 1437G, Chalk River.

Lumbers, S.B.
1974: Mattawa-Deep River Area, District of
Nipissing and County of Renfrew, p.
146-149 in Summary of Field Work,
1974, by the Geological Branch, edited
by V.G. Miller, D.F. Hewitt and K.D.
Gard, Ontario Div. Mines, MP59, 206p.

Earth Physics Branch, Dept. Energy, Mines and Re-
sources, Geological Survey of Canada, Gravity
Map Series No.134, Upper Ottawa River, Scale:
1:500,000.

Base map derived from maps of Forest Resources
Inventory, Ontario Division of Forests, and air
photographs. Additional information by S.B.
Lumbers.

Magnetic declination in the area varied from 10°00'W
in the southwestern part to 11°20'W in the eastern
part in 1974.

Issued 1976

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

Lumbers, S.B.
1976: Mattawa-Deep River Area (Eastern
Half), District of Nipissing and
County of Renfrew, Ontario Div.
Mines, Prelim. Map P.1197, Geol.
Ser., scale 1:63,360 or 1 inch to 1
mile. Geology 1972 to 1975. Com-
pilation 1972 to 1976.

A.E.C. - Atomic Energy Commission
C.F.B. - Canada Forces Base

GEOLOGICAL AND MINING SYMBOLS

- Glacial striae.
- Terrace.
- Esker.
- Geological boundary, position interpreted.
- Geological boundary, in areas of overburden or underwater.
- Fault.
- Bedding (horizontal, inclined).
- Schistosity (inclined, vertical).
- Grossosity (horizontal, inclined, vertical).
- Lamination (strata known, unknown).
- Mineral occurrence.
- Past producing mine or quarry.

LEGEND

- QUATERNARY**
- PLEISTOCENE AND RECENT**
- 19a Swamp, bog, and peat accumulations
 - 19b Fluvial and lacustrine silt, sand, gravel
 - 19c Lacustrine clay, silt, and sand deposited in proglacial lakes
 - 19d Glaciofluvial deposits of sand, gravel, and boulders occurring as ridges, kames, and outwash
 - 19e Sandy, bouldery glacial till and minor glaciofluvial deposits
- UNCONFORMITY**
- PRE-CAMBRIAN TO PALEOZOIC (POST MIDDLE ORDOVICIAN)**
- 18 Fault gouge, cataclastic and mylonitic rocks²
- PALEOZOIC**
- ORDOVICIAN**
- MIDDLE ORDOVICIAN**
- 17 Limestone; minor shale, sandstone, and conglomerate
- UNCONFORMITY**
- CAMBRIAN**
- INTRUSIVE ROCKS**
- 16a Lamprophyre dikes
 - 16b Cataclastic lamprophyre dikes
 - 16c Trachytic dikes
 - 16d Ferrite and partly fenitized calc-clastic rocks
- INTRUSIVE CONTACT**
- PRECAMBRIAN**
- LATE PRECAMBRIAN MAFIC TO ULTRAMAFIC INTRUSIVE ROCKS³**
- 15a Dabase dikes
 - 15b Cataclastic dabase dikes
 - 15c Peridotite
- INTRUSIVE CONTACT**

- LATE PEGMATITE⁴**
- 14 Massive granitic pegmatite dikes
- HIGH RANK REGIONAL METAMORPHISM**
- LATE MAFIC INTRUSIVE ROCKS⁵**
- 13a Cataclastic mafic/dabase
 - 13b Metamorphosed mafic to ultra-mafic rocks
- INTRUSIVE CONTACT**
- GRANITIC INTRUSIVE ROCKS**
- 12 Gneissic to massive quartz monzonite
- ANORTHOSITE SUITE INTRUSIVE ROCKS⁶**
- Monzonitic to Granitic Rocks**
- 11a Pink and grey, gneissic to massive, garnet-ferrobasaltic monzonitic rocks; minor gneissic tonalite and quartz syenite
 - 11b Green, gneissic to massive, pyroxene-bearing, garnet-ferrobasaltic monzonitic rocks; minor gneissic tonalite and quartz syenite
 - 11c Grey to pink, gneissic to rarely massive, ferrobasaltic-bearing quartz syenite
 - 11d Gneissic, leucocratic, quartz monzonite and minor quartz syenite
 - 11e Rusty weathering granitic schist derived from gneissic syenitic rocks
- Alkalic Rocks**
- 10a Gneissic oligoclase-nepheline syenite
 - 10b Gneissic albite nepheline syenite
 - 10c Gneissic albite syenite or diorite

- CLASTIC SILICEOUS METASEDIMENTS⁷**
- Muscovitic and Quartzose Gneiss**
- 4a Intercalated, metamorphosed sub-arkose and quartz-rich arkose (grey to pink, muscovite-plagioclase-K-feldspar-quartz gneiss); minor intercalated arkose (unit 3a), aluminous argillite (grey garnetiferous, feldspar biotite-muscovite quartz gneiss and schist) and biotite-rich argillite (dark grey, fine-grained, garnetiferous, biotite-feldspar-quartz gneiss and schist), metamorphosed orthoquartzite, calc-silicate gneiss (unit 5a) and impure sandstone (unit 2a)
 - 4b Kyanite-rich, aluminous argillite (grey to dark grey, garnetiferous, kyanite-feldspar-biotite-muscovite-quartz gneiss and schist)
- Feldspathic Gneiss**
- 3a Pink, medium-grained, arkose (plagioclase-K-feldspar-quartz gneiss and minor pink to grey, garnetiferous, plagioclase-quartz-K-feldspar gneiss); minor intercalated calc-silicate gneiss and rocks of units 4a and 2a; locally migmatitic
 - 3b Inter-layered, grey to pink, coarse-grained arkose (plagioclase-K-feldspar-quartz gneiss), calcareous argillite (unit 5b), biotite-rich argillite (dark grey, fine-grained, garnetiferous, biotite-feldspar-quartz gneiss and schist) and minor intercalated arkose (unit 2a)
- Biotite Gneiss**
- 2a Fine to medium-grained impure sandstone (biotite-K-feldspar-quartz plagioclase gneiss) containing abundant intercalated biotite-rich argillite (dark grey, fine-grained, garnetiferous, biotite-feldspar-quartz gneiss and schist) and minor intercalated arkose (unit 3a) and rocks of unit 5b
 - 2b Unit 2a with intercalated, thickly bedded, coarse-grained impure sandstone and intrastromatolite conglomerate containing arkose fragments in an impure sandstone matrix

- Migmatitic Biotite Gneiss**
- 1a Medium-grained, impure sandstone (biotite-K-feldspar-quartz-plagioclase gneiss) veined by ten percent or more of quartzofeldspathic material; minor to locally abundant intercalated arkose (unit 3a), biotite-rich argillite (dark grey, fine-grained, garnetiferous, biotite-feldspar-quartz gneiss and schist); minor rocks of units 5a and 5b
 - 1b Thickly bedded, coarse-grained, impure sandstone (biotite-K-feldspar-quartz-plagioclase gneiss and biotite-quartz-plagioclase gneiss) commonly veined by ten percent or more quartzofeldspathic material; minor intercalated rocks of units 1a and 3a
- a. Only the thickest and most extensive Cenozoic deposits, in which bedrock outcrops are absent or scarce, are shown.
- b. The history of fault zones containing these rocks is complex and largely unknown, but the zones were initiated during Precambrian time and underwent reactivation during Late Precambrian to Post Middle Ordovician time; seismic activity is presently recorded near some of these faults. Although not shown, these rocks are also present along most of the narrow fault zones indicated by thick broken lines.
- c. Some of these rocks may be Paleozoic in age.
- d. Only the largest dikes areas of dike concentrations are shown, common throughout the high rank regionally metamorphosed Precambrian rocks.
- e. Contain strict primary microtextures and mineralogy.
- f. Multiple ages represented.
- g. Rocks of these groups are subdivided lithologically and the order does not imply age relationships either within or between groups.
- h. This is basically a Field Legend and may be changed as a result of subsequent laboratory investigations.

METAL AND MINERAL REFERENCES

- Be Beryllium
- Fe Iron
- fo Feldspar
- gt Garnet
- Mg Magnesium
- mi Mica
- q Quartz
- v Vanadium
- sgt Sand and gravel pit
- S Sulfide minerals

PAST PRODUCERS

- 1. North Bay Mica Company Mica
- 2. O'Brien and Fowler Feldspar Mine Feldspar
- 3. Purely Mica Mine Limited Mica

