Energy, Mines and Resources Canada
Geological Survey of Canada

Énergie, Mines et Ressources Canada
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OTTER CREEK SILLIMANITE OCCURRENCE

GEOLOGY BY STEPHEN J. BLACK

SHARBOT LAKE ONTARIO

N

0 100 200 300 400 500
Metres

LEGEND

1 Sillimanite bearing pelitic gneiss

High grade, ie. greater than 15 - 20% sillimanite clots, resembles a sillimanite clot pavement on the surface

Low to medium grade, ie. 5 - 15% sillimanite clots

2 Rusty, pyritic quartzofeldspathic gneiss (feldspathic metaarenite) / Mafic paragneiss occassionally containing reworked? metavolcanics (possibly unit 4)

3 Medium to coarse grained calcitic marble

4 Fine grained biotite - quartz - feldspar gneiss, biotite schist and fine - to medium grained amphibolite, biotite amphibolite (calcareous mudstone)[1]

5 Mafic to Intermediate metavolcanic rocks, Medium grey-green, massive to foliated amphibole poor metavolcanics, probably intermediate flows[1]

6 Intermediate to Felsic metavolcanic rocks, Fine to medium grained, interlayered leucocratic muscovite bearing quartzo-feldspathic gneiss and muscovite schist and gneiss. Possibly a precursor to unit 1 ?

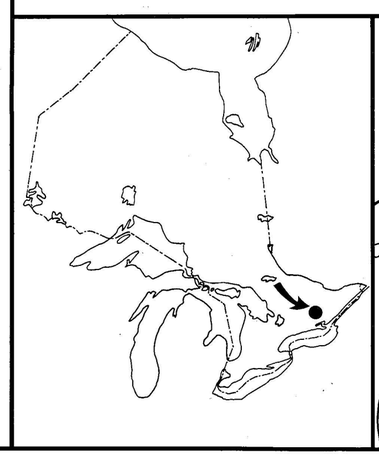
1m	Muscovite sillimanite gneiss	sillimanite clots up to 2cm diameter in fine-medium grained muscovite 0 - 20% sillimanite clots
1b	Biotite sillimanite gneiss	sillimanite clots up to 2cm diameter in fine biotite, often with minor muscovite (often up to 20%). Sillimanite 10-30 % as clots
g	garnet	occurs as crystals 3mm to 10mm disseminated throughout biotite sillimanite gneiss and occassionally in low sillimanite muscovite gneisses
mg	magnetite	occurs as small, ie. 1-2mm up to 1cm crystals often within sillimanite clots, rarely more than 2% by volume

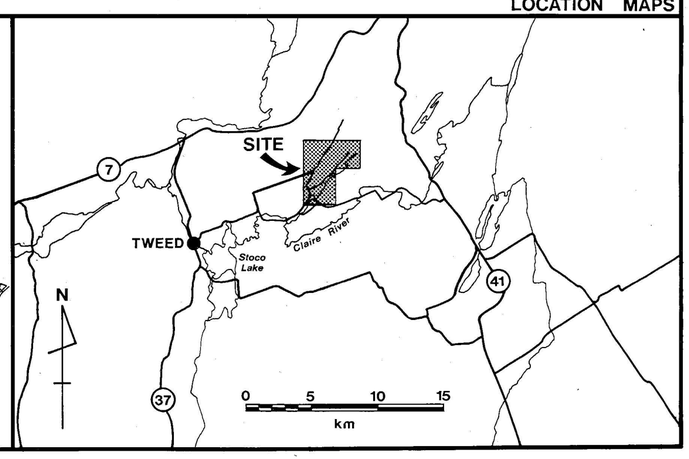
interpreted geological contact
interpreted geological subunit boundary
% percentage sillimanite clots (approximate)
foliation
roads, trails
swamp

Additional Geology by Alistair MacKinnon, Ministry of Northern Development and Mines, Tweed, Ont.

[1]ref: Bright, E. G. 1985: Precambrian Geology of the Mellon Lake Area, Hastings, Lennox and Addington, and Frontenac Counties; Ontario Geological Survey, Geological Series Preliminary Map P.2648, scale 1:15 840 or 1inch or 1/4 mile. Geology 1984

LOCATION MAPS





ONTARIO

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