

Electron Microprobe Analyses of Minerals from Fertile Peraluminous Granites and Related Rare-element Pegmatites, Superior Province, Northwest Ontario: Operation Treasure Hunt

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This release contains electron microprobe data for sample localities described in Open File Report (OFR 6099). The minerals analyzed are from McCombe pegmatite, Consolidated Morrison pegmatite, Tebishogeshik pegmatite, Chappais pegmatite, Falcon Lake pegmatite, Dryden pegmatite field, MNW pegmatite and Buda Feldspar Dike. All of the UTM co-ordinates and zones for sample localities are provided in Table 2.

The database consists of 5172 mineral compositions (from pegmatites and fertile granites) analyzed by an electron microprobe (Tables 3 to 16). This release also contains a table (Table 1) consisting of an overall summary of minerals that were analyzed by an electron microprobe for each sample and for each locality. All tables are in Microsoft[®] Excel (.xls) format. All of the microprobe analyses were performed by A.G. Tindle at The Open University, except for selected tourmaline and garnet samples which were analyzed by the Geoscience Laboratories, Ministry of Northern Development and Mines, Sudbury, Ontario.

List of Tables

Summary of all minerals analyzed by electron microprobe for each sample locality.

UTM coordinates for each sample analyzed.

Electron microprobe compositions of beryl (wt% and apfu).

Electron microprobe compositions of cassiterite (wt% and apfu).

Electron microprobe compositions of columbite-tantalite (wt% and apfu).

Electron microprobe compositions of ferrotapiolite (wt% and apfu).

Electron microprobe compositions of fluorapatite (wt% and apfu).

Electron microprobe compositions of garnet (wt% and apfu) analyzed by Open University and Ontario Geoscience Laboratories.

Electron microprobe compositions of potassium feldspar (wt% and apfu).

Electron microprobe compositions of microlite (wt% and apfu).

a) Electron microprobe compositions of muscovite (wt% and apfu). b) Electron microprobe compositions of lepidolite (wt% and apfu). c) Electron microprobe compositions of phlogopite-siderophyllite (wt% and apfu).

Electron microprobe compositions of spodumene (wt% and apfu).

Electron microprobe compositions of Ta-rutile and strüverite (wt% and apfu).

Electron microprobe compositions of tourmaline (wt% and apfu) analyzed by Open University and Ontario Geoscience Laboratories.

Electron microprobe compositions of wodginite (wt% and apfu).

Electron microprobe compositions of yttröbetafite (wt% and apfu).

Reference for Li calculation in micas:

Tindle, A.G. and Webb, P.C. 1990. Estimation of lithium contents in trioctahedral micas using microprobe data: application to micas from granitic rocks; *European Journal of Mineralogy*, v.2, p.595-610.

Reference for MRD 127

Tindle, A.G., Selway, J.B. and Breaks, F.W. 2003. Electron microprobe analyses of minerals from fertile peraluminous granites and related rare-element pegmatites, Superior Province, northwest Ontario: Operation Treasure Hunt; Ontario Geological Survey, Miscellaneous Release—Data 127.

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