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Identification:

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

Acronym: MRD 127

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Abstract:

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.

Purpose or Objective:

The purpose of the study is to add to the database of mineralogy of Ontario rare-element pegmatites. Within individual pegmatites, the composition of indicator minerals (i.e., niobium-tantalum oxide minerals, tourmaline, garnet, apatite and beryl) is used in OFR 6099 to interpret the degree of fractionation for an individual pegmatite zones. Pegmatites with highly fractionated mineral compositions have elevated potential for economic rare-element mineralization. Pegmatites with tantalum-oxide minerals with elevated tantalum contents have economic potential to become tantalum deposits, depending on the overall tantalum content of the pegmatite.

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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, MRD 127.

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Time Period Information:

Time Period Coverage:

Microprobe data was collected in 2001.

Status of Data Set:

Complete

Data Maintenance Cycle:

None Planned

Keywords:

Chosen Keywords: analyses, electron microprobe, granite, minerals, pegmatites

Business Theme(s): electron microprobe, minerals

Geographic Extent:**Rectangular Bounding Coordinates:****Dryden pegmatite field**

North Latitude: 50° 00'N

East Longitude: 93° 25'E

South Latitude: 49° 45' S

West Longitude: 93° 21'W

Tebishogeshik/Chappais/Falcon Lake pegmatites

North Latitude: 50° 29'N

East Longitude: 88° 03'E

South Latitude: 50° 26' S

West Longitude: 88° 23'W

Buda feldspar dike

North Latitude: 48° 40'N

East Longitude: 90° 48'E

South Latitude: 48° 39' S

West Longitude: 90° 50'W

MNW pegmatite

North Latitude: 49° 15'N

East Longitude: 87° 59'E

South Latitude: 49° 14' S

West Longitude: 88° 01'W

McCombe pegmatite, NAD 83, Zone 15

North UTM: 5674000N

East UTM: 602000E

South UTM: 5636000N

West UTM: 587000E

Named Regions: (townships, regions or municipalities)

Dryden pegmatite field: Drope, Temple, Zealand, Vanhorne, Brownridge, Webb townships

Tebishogeshik/Chappais/Falcon Lake pegmatites: Crescent Lake area, Falcon Lake area

Buda feldspar dike: Goldie township

MNW pegmatite: Miller Lake area

McCombe pegmatite: Root Lake area

User-defined region(s):

Point:

Line:

Polygon:

Geographic Completeness:

100% Complete

Mapping Information:

Grid Coordinate System Used: Universal Transverse Mercator

Map Projection: Transverse Mercator

Horizontal Geodetic Datum: NAD83

Vertical Datum:

Not Applicable

Horizontal Position Accuracy of Features: precise +/-10 m

Vertical Position Accuracy of Features:

Not Applicable

Data Source Information:

Data Source Type: direct field collection followed by electron microprobe analysis

Source Contribution: samples were collected in the field and later were picked for key indicator minerals. The minerals were mounted into grain mounts and analyzed by an Electron Microprobe. 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.

Time Period: sample were collected in the field during the 1980's. Microprobe data was collected in 2001.

Name of Source Data Set: probe data

Acronym of Source Data Set:

Source Data Set Description: minerals were analyzed by an electron microprobe.

Organization that created Source Data Set:

All of the microprobe analyses were performed by A.G. Tindle at The Open University, United Kingdom except for selected tourmaline and garnet samples which were analyzed by the Geoscience Laboratories, Ministry of Northern Development and Mines, Sudbury, Ontario.

Distribution:

General Distribution Information:

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CD-ROM

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