

README: GSC OPEN FILE 4602

The files associated with this Open File represent a data repository only; no interpretation of the data accompanies this Open File, other than those supplied by IOS Services Géoscientifiques Inc for 2002 esker samples. The data found herein represents all available KIM-related data available for the Committee Bay Project.

Due to different data compilation methods used in 2001 and 2002 sample processing, the files are divided into respective folders: 2001 Data, and 2002 Data. Within each of these folders all of the KIM data associated with the corresponding year are presented for both esker and till heavy mineral concentrate (HMC). General information regarding the files found within this Open File:

- All data files are presented in MS EXCEL format.
- Text documents are presented in PDF or ASCII text formats.
- Unless otherwise noted for specific sample sites, all NTS co-ordinates were obtained through the use of hand-held GPS units; the estimated accuracy is ± 10 m.
- **All KIM Sample Locations.xls:** This file lists the locations of all samples submitted for KIM analysis (*i.e.*, includes 2001 and 2002 samples suites). Samples which are listed in this location file, but not in the 2002 till or esker sample files (see below), yielded no minerals grains suitable for visual or probing analyses. All NTS locations referenced to the NAD 83.

Till HMC

With respect to till heavy mineral concentrate, sampling, method of separation, grain size and specific gravity used for separation are outlined in McMartin *et al.* (2003a).

Esker HMC

The following list outlines the procedures used in sampling and separation of the esker heavy mineral fraction:

Esker Sampling:

At each esker sample location, 20 kg of material were collected from the uppermost crest of the esker. All samples were collected from below 10 cm, but typically samples were collected below 20 cm; when there was evidence of soil processes, the sample may have been collected below 25–30 cm depth.

Esker HMC Separation: Each sample was subjected to the following:

- Original sample weight recorded at initial weight-in.
- Gentle milling to remove any clay or vegetation.
- Screened to +2.0 mm, -2.0 to +0.3 mm, and -0.3 mm.
- The -2.0 to +0.3 fraction is fed into a Mini DMS where minerals with a specific gravity greater than 2.90 g/cm³ are collected as a sink fraction (concentrate). Each concentrate aliquot is weighed; light fraction is discarded.
- Mini DMS concentrate was processed through a Micro DMS where minerals with a specific gravity greater than 3.15 g/cm³ were collected as a sink fraction. Each heavies and lights from the Micro DMS are retained for analyses.
- Micro sink aliquots are dried.
- Dried sink fractions are sieved into the following grain size fractions: -2.0 to +1.0 mm, -1.0 to +0.5 mm, and -0.5 to +0.3 mm for sorting and probing where appropriate.

Specific Notes Regarding 2001 Data

Three files represent the KIM data for the 2001 sample suite:

1. ***2001 Visual Data Key.pdf***: Defines the column headers for each of the visual data categories.
2. ***Esker01 KIM data vis+prob.xls***: Organized by Excel worksheet within this single file; all visually identified minerals obtained from esker samples in 2001 are presented along with associated geochemical data from probe analyses.
3. ***Till01 KIM data vis+prob.xls***: Organized by Excel worksheet within this single file; all visually identified minerals obtained from till HMC samples in 2001 are presented along with associated geochemical data from probe analyses.

Specific Notes Regarding 2002 Data

Four files represent the KIM data for the 2002 sample suite:

1. ***Esker02 Picking Data.xls***: Organized by Excel worksheet within this single file; all visually identified minerals obtained from esker samples in 2002 are presented in detail. Tables presented herein include location data and hence, are the “usable” versions of tables illustrated in ***IOS Esker02 Complete Report.pdf***

2. *Esker02 Probe Data.xls*: Organized by Excel worksheet within this single file; all available probe data from selected visually identified minerals obtained from esker samples in 2002. Tables presented herein include location data and hence, are the “usable” versions of tables illustrated in *IOS Esker02 Complete Report.pdf*
3. *Till02 KIM data vis+Prob.xls*: Organized by Excel worksheet within this single file; all visually identified minerals obtained from till HMC samples in 2002 are presented along with associated geochemical data from probe analyses.
4. *IOS Esker02 Complete Report.pdf*: Complete scanned copy of the IOS Géoscientifiques Inc. esker (2002) sample report to Donald Boucher (De Beers Exploration Canada). Copy provided herein is done so with the written permission of D. Boucher (in agreement with the GSC-De Beers Collaborative Research Agreement), and with verbal permission from Réjean Girard (IOS Géoscientifiques Inc.).
5. *IOS Till02 No-table Report.pdf*: Scanned copy of the IOS Géoscientifiques Inc. till (2002) report to Donald Boucher (De Beers Exploration Canada) and Isabelle McMartin (GSC-Ottawa). Copy provided herein is done so with the written permission of D. Boucher (in agreement with the GSC-De Beers Collaborative Research Agreement), and with verbal permission from Réjean Girard (IOS Géoscientifiques Inc.).

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Canada-Nunavut Geoscience Office Project No. 000005

Relevant References:

Background information, ice movement chronology summaries, surficial coverage for NTS 56K, and other related reference materials can be obtained from the following references:

- Giangioppi, M., Little, E.C., Ferbey, T. Ozyer, C.A. and Utting, D.J., 2003. Glaciomarine environments west of Committee Bay, central mainland Nunavut; in Current Research 2003-C5; Geological Survey of Canada.
- Little, E., 2001: Relative ice-movement chronology of the Laughland Lake (NTS 56K) map area: preliminary results; in Current Research 2001-C14; Geological Survey of Canada, p. 12.
- Little, E.C. and Ferbey, T. (2003). Surficial Geology of Laughland Lake (South: 56K/1-8); Geological Survey of Canada, Open File 4278, 1:100,000 scale.
- Little, E.C., Sherlock, R.L. and Sandeman, H.A. (2003). Evaluation of Till Prospecting as an Exploration Tool for Precious and Base Metal Mineralization in Prince Albert Supracrustal Rocks, Central Mainland Nunavut. In: Mining in the Arctic, J.E. Udd and G. Bekkers (eds.). Proceeds of the 7th International Symposium on Mining in the Arctic, Iqaluit, Nunavut March 30-April 1 2003, pp 35-49.
- Little, E.C., Ferbey, T., McMartin, I., Ozyer, C.A., and Utting, D.J., 2002: An Overview of Quaternary Research for the Committee Bay Project, central Nunavut; in Current Research 2002-C13; Geological Survey of Canada, p.12.
- Ferbey, T. and Little, E.C. (2003). Surficial Geology of Laughland Lake (North: 56K/9-16); Geological Survey of Canada, Open File 4279, 1:100,000 scale.
- McMartin, I., Utting, D.J., Little, E.C., Ozyer, C.A., Ferbey, T. 2003a. Complete results from the Committee Bay Drift Prospecting Survey, central Nunavut (NTS 56 K, 56 J-North, 56 O-South and 56 P), Geological Survey of Canada, Open File 4493.
- McMartin, I., Little, E.C., Ferbey, T. Ozyer, C.A. and Utting, D.J., 2003b. Ice-flow history and drift prospecting in the Committee Bay belt, central Nunavut: results from the Targeted Geoscience Initiative; in Current Research 2003-C4; Geological Survey of Canada.
- Ozyer, C.A. (in prep.). Surficial Geology of Arrowsmith River (South: 56O/1-8); Geological Survey of Canada, Open File 4281, 1:100,000 scale.
- Ozyer, C.A. and Hicock, S.R., (2002). Glacial landforms and preliminary chronology of ice-movement in the Arrowsmith River map area, Nunavut. *In*: Current Research 2002-C10, Geological Survey of Canada.
- Utting, D.J. (in prep.). Surficial Geology of Walker Lake (North: 56K/9-16); Geological Survey of Canada Open File 4280, 1:100,000 scale.
- Utting, D.J, Ward, B.C. and Little, E.C., 2002: Quaternary glaciofluvial landforms in the northern sector of Walker Lake map area, Nunavut; in Current Research 2002-C16; Geological Survey of Canada, p. 8.