



Canada-Nunavut Geoscience Office

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SOUTHAMPTON ISLAND INTEGRATED GEOSCIENCE (SIIG) PROJECT PLAN/DESCRIPTION

Donald James and Joyia Chakungal, Project co-leaders

Between June 25th and August 25th, 2007 the Canada – Nunavut Geoscience Office (CNGO) and the Geological Survey of Canada (GSC) propose to conduct an integrated geoscience project on eastern and central Southampton Island, Nunavut (Figure 1). The primary objective of the Southampton Island Integrated Geoscience project (SIIG) is to increase the level of mineral exploration and reduce investment risk by exploration companies in this relatively under-explored region of Nunavut. The hamlet of Coral Harbour would benefit directly from mineral and energy exploration activity and related sustainable development opportunities on Southampton Island. To meet these objectives, the project will make publicly accessible all geoscience knowledge that is gathered from the integrated bedrock and surficial mapping that is to be carried out this summer.

This joint CNGO – GSC mapping initiative will be co-lead by Joyia Chakungal from the CNGO and a research scientist from the GSC. The field work will cover parts of NTS map sheets 45N-P, 46A-C, 46F and G. Ground-based activities will commence following completion of a detailed aeromagnetic survey that will be flown over eastern and central Southampton Island in the spring of this year.

The current level of basic geoscience available for the Southampton region is inadequate to meet current exploration demands. Regional-scale mapping of the bedrock geology of Southampton Island has not occurred since 1969. Only the most general of rock distinctions are made on the existing geological map, and only a very rudimentary understanding of the surficial geology exists. Currently there is no publicly available, regional-scale surficial (till) geochemical data which is essential for understanding exploration potential for metals and diamonds. Therefore, developing a modern understanding of the timing of ice-flow, till and rock geochemistry and geochronology is fundamental in promoting the exploration potential of Southampton Island.

Field work in 2007 will be guided by Remote Predictive Maps, produced in advance of ground-based studies by integration of remotely sensed (satellite) data, air photographs, geophysical data, and archival geoscience data. The helicopter supported field work will be based out of one field camp, located approximately 70 km north of Coral Harbour (Lat - 64°46'59.25"N Long 82°55'43.27"W; Figure 1).

