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## **CANADA-NUNAVUT GEOSCIENCE OFFICE**

by  
**David J. Scott (24/09/2012)**

### **1. Rationale for establishment of the C-NGO**

The Nunavut Act S.C. 1993 provided for the creation of Nunavut as a distinct territory with its own government by April 1, 1999. It was anticipated that this initiative would lead to federal incremental costs. Consequently, on March 18, 1996, Cabinet approved \$149.9M incremental capital and transition costs over a four-year period commencing in 1996-1997 and concluding in 1999-2000. This allocation was only for what was incremental and critical to establish the new government. Cabinet also authorized an amount of \$31.225M from the above total for use by six federal government departments, including NRCan, for incremental capital (salary, O&M, office facilities and staff housing) and transition costs. On May 12, 1998, Cabinet made available a funding allocation of \$15M per year ongoing to fourteen departments/agencies that presented funding pressures related to the creation of Nunavut. Among those departments and agencies was Natural Resources Canada which delivers a longstanding program relating to scientific, policy, regulatory, and logistics responsibilities in the North. Incremental and new funding was necessary for the Surveyor General of Canada and the Geological Survey of Canada to meet the needs and expectations of the new Government of Nunavut. (Ref. Indian and Northern Affairs Treasury Board Submission dated Aug. 10, 1998; assigned T.B. No. 826539). Annex A to the reference document lists specifics of programs and services and funding requests for a number of Departments and Agencies concerned with Nunavut but does not include Natural Resources Canada.

Within NRCan on 14 Aug. 1998 the Deputy Minister prepared a Memorandum to the Minister, NRCan on the subject of "Managing federal legal and financial responsibilities with respect to Nunavut" including background information, a description of NRCan's programs and services provided to Nunavut and a funding request to be derived from the INAC-sponsored submission to Treasury Board. Attached to the memorandum was a letter, for the Minister's signature, addressed to the President of the Treasury Board indicating NRCan support for the INAC-sponsored TB submission as well as support for increases in the reference levels of funding to be provided to NRCan in support of the Department's activities in Nunavut. The letter, dated 17 August 1998, was duly signed by the Hon. Ralph Goodale, then Minister, NRCan.

### **2. Establishment of the Canada-Nunavut Geoscience Office**

As a part of the commitment of the federal government to provide geoscience information and services to the Territory of Nunavut, a Memorandum of Agreement on Government Geoscience Program Coordination in Nunavut, dated 29 Sept. 1999, was established between the Geological Survey of Canada, Natural Resources Canada (NRCan), the Department of Sustainable Development, Nunavut (DSD), and Indian Affairs and Northern Development, Canada (IAND). Signatories to the Agreement were Hon. Ralph Goodale, Minister, NRCan, Hon. Peter Kilabuk, Minister, DSD, and Nancy Karetak-Lindell, M.P., Nunavut on behalf of Hon. Robert Nault, Minister, IAND. This Memorandum was based on the principles expressed in the Intergovernmental

Geoscience Accord (IGA), signed in 1996 by the Minister, NRCan and by most of the provincial and territorial Ministers responsible for their respective governments' geoscience programs across Canada. The IGA defines the different and complimentary roles of the GSC and the provincial and territorial geological surveys and establishes a general framework for cooperation and collaboration in geoscience between the different levels of government. The development of the Memorandum was led by Willard Holtz, a senior policy analyst in ESS's Strategic Policy Division (M. Carpentier, Director).

Accordingly, the objective of the MOA was to facilitate effective cooperation and collaboration among GSC, DSD and IAND in meeting the geoscience needs of Nunavut, the national responsibilities of the GSC, and the client needs of all three participants. A total of nine initiatives pertaining to, *inter alia*, cooperation, collaboration, information sharing and a range of joint geoscience activities. Included in the MOA was provision for establishment of the Canada-Nunavut Geoscience Office (C-NGO). Commitment for support of the C-NGO, however, was to be formalized under a separate document.

The MOA also included two committee structures to assist in program coordination. These structures were The Nunavut Geoscience Cooperation Committee consisting of nine members with three to be appointed from each of GSC, DSD and DIAND and the Nunavut Geoscience Joint Advisory Committee consisting of six members to be drawn from client groups of GSC, DSD and DIAND. The terms of reference, meeting schedules, funding and reporting requirements for the committees were detailed in the MOA.

The MOA, *per se*, did not specifically establish the position of C-NGO Chief Geologist. This position, however, was clearly identified in an attachment to the MOA dealing with Reporting Structures whereby C-NGO Staff reported to the C-NGO Chief Geologist who, in turn, reported jointly to the Director General, Minerals and Regional Geoscience Branch, GSC (line management) and to the C-NGO Management Board (Program direction). In addition, the C-NGO Scientific Review Committee reported directly to the C-NGO Management Board. Under the Terms of the Agreement it came into force upon the signing of the document by the respective minister of each party and was to expire on August 31, 2004.

In December, 1999 a further Agreement between the GSC, DSD and IAND concerning the Canada-Nunavut Geoscience Office was established which dealt specifically with the Canada-Nunavut Geoscience Office. This Agreement came into effect on the date that it was signed by the authorized representatives from each of the parties as follows: Marc Denis Everell, Assistant Deputy Minister, Earth Sciences Sector, Natural Resources Canada, 7 Dec. 1999; Katherine Trumper, Deputy Minister, Department of Sustainable Development, 1 Dec. 1999; Wilf Attwood, Regional Director General, Nunavut, Department of Indian Affairs and Northern Development, 20 Dec. 1999. According to Section 3 of the Agreement its term shall terminate on March 31, 2003.

Section 4 of the Agreement dealt with Management and Administration that were covered in Attachments 2, 3 and 4 that were not available for this review. Section 4.2 of the Agreement, however, specifically noted that the Chief Geologist will manage the affairs of the C-NGO as per Section 8 of the Agreement which covered in detail the accountability of the C-NGO Chief Geologist and that the management of operations of the C-NGO are to be carried out to the satisfaction of the Director General, Minerals and

Regional Geoscience Branch, GSC. Approval of the annual program of the office, and corresponding allocation of the overall budget, is a function of the C-NGO Management Board.

Section 6 of the Agreement covered the financial aspects of operating the C-NGO whereby each of the parties to the Agreement would contribute its share of the combined funding for operation of the C-NGO. For 1999/2000 the total amount allocated was \$875.7K and for the subsequent three fiscal years the total annual allocation was \$1.295M.

### **3. Appointment of the first Chief Geologist and development of operational plans.**

Following the provisions of the tri-partite agreement that established the C-NGO partnership, NRCan was to administer the operation of the office on behalf of the partnership, for the 5-year duration of the initial office agreement. In consultation with the signatories, the Geological Survey of Canada assigned Dr. David J. Scott, a Research Scientist with ongoing applied research interests in Nunavut, to the position of Chief Geologist in February 1999. Among his initial tasks were the development of a multi-year program for the office, and a detailed work plan for fiscal year 1999-2000. These tasks were begun in earnest in Ottawa, prior to Scott's relocation to Iqaluit in April 1999. The initial multi-year program was based on the recommendations of the Nunavut Geoscience Needs Assessment process that was conducted by the signatories in Ottawa in February 1999, whereas the detailed work plan focused on creating and staffing positions, planning for the scientific program that included two major multidisciplinary bedrock mapping projects, and various logistical arrangements to establish the office and enable the geoscience program.

### **4. Acquisition of the C-NGO office space and furnishings**

The initial location of the C-NGO was in a refurbished 1950's era "Butler" utility building that had been leased by PWGSC from a local enterprise. The prime tenant was the Iqaluit office of HRDC, a small separate space at the west end of the building was shared by the C-NGO with Mr. Ash Randev, the PWGSC architect in charge of oversight of the construction of the new Government of Canada Building (GOCB). The building was located immediately north of the GOCB construction site, and adjacent to the main Government of Nunavut office building that was also under construction at that time.

The office was initially occupied in late April 1999, and furnished with a folding table and chair, laptop computer, printer and fax machine. Modular work-stations were ordered from CorCan, for delivery to Iqaluit on the 1999 sealift. These temporary accommodations were occupied for the initial year of operations, while a more permanent home for the office was sought. Through a competitive bidding process, an appropriate location was secured in the recently completed Tummit Plaza (Building 626); the C-NGO remains at this location to the present day.

### **5. Staffing the C-NGO - priorities and process**

The February 1999 Nunavut Geoscience Needs Assessment conducted by partners illustrated a broad range of priority areas for new geoscience research that would assist the socio-economic development of the new territory in a sustainable manner, i.e. such that the needs of the current population could be met without compromising the

ability of future generations to meet their needs. Non-renewable resources had long been seen as the cornerstone of long-term local economic development, and the signatories to the Nunavut Land Claims Agreement (1993) recognized that this development must not unduly compromise the delicate environmental systems in Nunavut, while providing opportunities for local people (Nunavummiut, over 85% of whom are Inuit) to gain new skills and opportunities. As the least-well mapped jurisdiction in Canada, the initial focus of the C-NGO was to provide new regional-scale geoscience knowledge that would be required to stimulate new exploration by the private sector, and further, to begin to build local geoscience expertise in Nunavut.

With this perspective in mind, and recognizing that the partners were seeking to build a leading-edge organization, the initial priorities were to staff a bedrock mapping geologist, a surficial mapping geologist, a mineral deposits specialist, an expert in the application of Geographic Information Systems (GIS) as well as local administrative support to supplement that received from the Continental Geoscience Division of the GSC in Ottawa.

A competitive staffing process, open to the public resident in Nunavut, was run to identify candidates for the Administrative Assistant (AS-01) position. Ms. Kitty Marwell, from the Frobisher Bay area, was selected and began work in the fall of 1999. A second competitive staffing process, open to the public across Canada, was run to identify candidates for the GIS (PC-02) position. Two successful candidates were hired, Ms. Celine Gilbert (southern Ontario) and Ms. Kathryn Parlee (Nova Scotia). Ms. Gilbert started in December 1999, Ms. Parlee joined in the spring of 2000. A national competition was launched early in 2000 for the mapping and mineral deposits positions (SE-RES). Dr. Hamish Sandeman, then a Postdoctoral Fellow at the GSC in Ottawa was hired as the Bedrock Mapping Geologist; Dr. Ross Sherlock, then with SRK Consulting in Vancouver, was hired as the Mineral Deposits specialist, and Mr. Edward C. Little, a Ph.D. candidate at the University of Alberta, was hired as the Surficial Mapping Geologist. (Dr. Little completed his dissertation and was awarded his Ph.D. in 2001). These three geologists joined the C-NGO in the fall of 2000. Dr. Elizabeth C. Turner, a Postdoctoral Fellow at the University of Chicago in carbonate stratigraphy and sedimentology, joined in 2001 to undertake regional mapping and thematic studies related to carbonate-hosted mineralization.

## **6. Operations and outputs by year for the first years**

The first of two new regional bedrock projects was launched by the C-NGO in the summer of 2000, in partnership with the GSC. The Central Baffin Project, co-led by Dr. Scott and Dr. Marc R. St-Onge of the GSC, was a three-year multidisciplinary project that covered 4 NTS 1:250k map sheets. Complete 1:100k bedrock and surficial geological maps were produced, and numerous thematic doctoral, masters and bachelor theses were completed.

The second project, that would cover three NTS 1:250k map sheets covering the poorly known but highly prospective Committee Bay Project, was led in its first season by Dr. Sandeman, with support from Drs. Sherlock and Little. In 2001, the GSC joined to co-lead the project, with the additions of Drs. Tom Skulski and Mary Sanborn-Barrie. A series of new 1:250k and more detailed maps, of bedrock and surficial geology, have

been published, and numerous thematic doctoral, masters and bachelor theses were completed.

In addition to his work on the Committee Bay project, Dr. Sherlock completed a number of thematic studies on gold and base metal mineralization across the territory.

Dr. Turner completed numerous thematic studies in the Borden Basin of northernmost Baffin Island that have clarified the setting of the world-class Nanisivik zinc-lead deposit, and identified new prospective areas.

Following his work on the Committee Bay project, Dr. Little led a multidisciplinary surficial and bedrock mapping project covering parts of four NTS 1:250k map sheets in northern Baffin Island.

Kathryn Parlee and Celine Gilbert undertook the development and production of the critically-acclaimed 'Climate Change in Nunavut' poster, part of national series of posters exploring the effects climatic change intended for the general public that was funded by the Climate Change Action Fund.

## **7. Turn over of Chief Geologist - and other staff**

Ms. Kitty Markwell left in 2001 to work for GN Department of Justice. She was succeeded by Mr. Alan Kunuk of Iqaluit, who served until 2002 when he joined the GN Intergovernmental Affairs Secretariat. Ahme Eegeesiak, an employee of the Surveyor General at the Iqaluit-based Nunavut Client Liaison Unit (NCLU), provided administrative services to both the C-NGO and the NCLU beginning in 2003.

Dr. David Scott returned to the GSC in Ottawa in April 2003 to lead the new four-year Northern Resources Development Program that was initiated as part of the reformation of ESS program delivery into 14(?) national programs. He was capably succeeded in Iqaluit, on an interim basis, by Dr. Edward C. Little, prior to the appointment of Dr. Donald T. James in 2004. Dr. James served until August, 2010, and was replaced in that year by David Mate, formerly of the GSC's Northern Canada Division in Ottawa, who, at the time of preparation of this account, continues to capably serve as Chief Geologist.

With the exploration industry up-turn in 2004, Dr. Sherlock accepted a senior position with the Hope Bay gold project. Dr. Turner was hired as a Professor at Laurentian University, Dr. Sandeman returned to Newfoundland to join the provincial geological survey, and Dr. Little accepted a Research Scientist position at GSC-Calgary.

## **8. Future prognosis**

NRCan, IAND (since 2011 known as Aboriginal Affairs and Northern Development Canada, AANDC) and the GN continue to recognize the value of C-NGO in providing authoritative public geoscience knowledge in Nunavut. The C-NGO is currently at a critical juncture: the current tri-lateral agreement is due to expire 31 March 2013, the range of technical expertise that is required is evolving, and both the governments of Canada and Nunavut are looking forward to the discussions and negotiations that will lead to devolution of resource-related federal responsibilities to the territorial government. The GSC, as with all federal departments and agencies, is facing significant changes following the implementation of measures announced under Budget 2012. Further, the five-year, \$100M Geo-mapping for Energy and Minerals initiative that has done much to improve the regional geoscience knowledge base of Nunavut and

other parts of the North is scheduled to sunset in March 2013. Unless renewed, its termination will have a significant negative impact on the GSC's ability to undertake new major initiatives in the territory, in partnership with C-NGO or independently.

The range of expertise required by the C-NGO has evolved to include knowledge of permafrost and terrain conditions, the importance of which is increasing as major new infrastructure projects, both private and public, have been proposed or are being considered in the face of significant climate-related changes to the physical environment. An enhanced need for the ability to undertake meaningful community consultations has also been recognized.

In light of future devolution, the Management Board has considered the possibility of seeking to co-locate the C-NGO with other government geoscience capacity in Iqaluit, based on opportunistic availability of office space that could be co-occupied. AANDC has been considering ways to streamline the delivery of geoscience-related services to the territory, and appears willing to explore the possibility of co-locating its regulatory geoscience functions with the C-NGO's public geoscience knowledge program.

*As a matter of speculation: Should GN office space become available, housing the territorial geoscience capacity with that of C-NGO and AANDC would create the nucleus of a de facto "Geological Survey of Nunavut" under one roof, prior to any formal devolution of resource-related responsibilities to the territory.*

Acknowledgement: Sections 1 and 2 of this account were compiled by John S. Scott (Geological Survey of Canada – retired) on the basis of documentation and commentary provided by the author.