6/21/2004

DISTRIBUTION

Please find enclosed a copy of an application for a *Science Research License* from **Hamish Sandeman, Canada-Nunavut Geoscience Office, .**

Hamish Sandeman's research is titled ***"Boothia Mainland Project: Economic Potential Through New Bedrock Mapping and Surficial Geosciece Upgrading."*** and is proposed to take place from July 1, 2004 to Aug 25, 2004.

As per the **Scientists' Act** of Nunavut, community consultation is required before a Science Research Licence can be issued. The documentation is provided for your information and review. A ***Reviewer Recommendation Form*** is enclosed for your response by August 5 **, 2004.**

Thank you for your continued assistance. Please contact our office if you have any questions or concerns regarding the above.

Renée Malcom

per Mary Ellen Thomas
Manager, Research Liaison

encl.

cc: Environmental Assesment Screener NIRB
Lands Manager KIA
Executive Director NWB
Director Of Wildlife Management NWMB
Mayor SAO Kugarruk
Chairperson HTO Kugaaruk
Mayor SAO Gjoa Haven
Chariperson HTO Gjoa Haven
Executive Director NPC

P.O. Box 1720, Iqaluit, NU X0A 0H0, Tel: (867) 979-6734, Fax: (867) 979-4681, Internet: iqrcnri@nunanet.com
ᑎᑎᖅᑲᓇᐃᔨᑦ ᑐᑌ 1720, ᐃᖅᓗᐃᑦ, ᓄᓇ X0A 0H0, ᑲᖅᓕᑲᑦ: (867) 979-6734, ᓴᓐᔪᑦ: (867) 979-4681, ᖃᓄᐃᑦᑑᑎᒃ: iqrcnri@nunanet.com
ᖃᓄᐃᑦᑑᑎᒃ ᕿᓐᓱᕐᓂᑦ / Web site: www.nunanet.com/~research
ᓄᓇᕗᑦ ᐱᒋᐊᕐᓂᖅ
Nunavut Arctic College

Instructions:
This is the electronic version of the Land, Freshwater and Marine Based Research application form. Fi fields below as completely as possible, and click the Submit button at the bottom of this document to em information to the Nunavut Research Institute (NRI) office. Make note of the reference number you are after submitting your form. Some questions may require you to mail or fax additional information to NI quote your reference number when sending any material to NRI.

Nunavut Research Institute

SCIENTIFIC RESEARCH LICENSE APPLICATION

Land, Freshwater and Marine Based Research
This application fulfills the requirements for NIRB environmental screening

SECTION 1: APPLICANT INFORMATION

1. Applicant's full name and mailing address:

Applicant Hamish A. I. Sandeman

Address SAME as 2000

Fax: SAME

Phone: SAME

E-mail: SAME

2. Field Supervisor (address, if different from above):

SAME as 2000

Phone (radio or otherwise): 1-600-700-6088

3. Other Personnel list (name and position):

67°33.08'N 92°40.40'W

				sheet #	
Boothia Mainland	Kitikmeot			56N	IOL

*For additional sites, attach a separate page.

NON-TECHNICAL PROJECT PROPOSAL SUMMARY

8. On a separate page, please include a non-technical description of the project proposal, no more than 3 words, in English and Inuktitut (Inuinnaqtun, if in the West Kitikmeot). The project description should i the project activities (research methods, camps, etc.) and their necessity, method of transportation, any s that will be erected, expected duration of activity and alternatives considered. If the proposed activity fi any long-term developments, please describe the projected outcome of the development for the area and timeline.

(Please **fax or mail** this page to the NRI. Make sure that you include your reference number in your documentation.)

SECTION 4: MATERIAL USE

9. List equipment (including drills, pumps, aircrafts, etc.):

Equipment type and number	Size-dimensions	Proposed use
Bell 206L		setouts + pick-ups
Twin Otter		camp mob + demob
honda generator		electricity generation

10. Detail fuel and hazardous materials use:

Fuels	Number of Containers	Capacity of Containers (gal and litres)
Diesel		
Gasoline	5	10 L

2100

SECTION 6: RESTORATION AND ABANDONMENT PLANS

13. Describe the proposed procedure for site restoration upon abandonment of any area associated with project:

see attached

SECTION 7: ENVIRONMENTAL IMPACT

14. Indicate and describe the components of the environment that are near the project area, as applicable **mail** any relevant maps or information:

Type of species (common name, associated herd, etc.)		Important Habitat Area (calving, staging, denning, migratory pathways, spawning, nesting, etc.)	Critical time periods (calving, post-calving, spawning, nesting, breeding, etc.)
Example: Narwhal		*Ice floe edge in Pond Inlet*	*June-July, around break-up*
Fish:			
Caribou:			
Muskox:			
Raptor:		see Appendix	
Migratory Birds:			
Waterfowl:			
Seals:			
Whales:			
Narwhals:			
Canid family (wolves, wolverines, foxes, etc.):			
Bears (grizzly, polar, black):			
Other:			
Eskers:			

18. List the community representatives that you have contacted about this proposed project:

Community	Name	Organization	Date Contacted	Means	Tel.	

19. Describe the level of involvement that the residents of Nunavut have had with respect to the propose project. Elaborate on local employment opportunity, training programs, contracts, Inuit Impact Benefit Agreements (if applicable):

20. Describe, and **fax or mail** documentation regarding community concerns or support for the propose

21. Is there a Traditional Knowledge (TK) component to this research project? If yes, see Appendix C.

- ☐ Yes
- ☒ No
- ☐ Don't know

Submit Reset

BOOTHIA MAINLAND PROJECT: ECONOMIC POTENTIAL THROUGH NEW BEDROCK MAPPING AND SURFICIAL GEOSCIENCE UPGRADING

H.A.I. SANDEMAN, *2004 – PROJECT PROPOSAL*

Project Description:

This project is designed to evaluate the economic potential of the Boothia Mainland area immediately south of Taloyoak through framework bedrock geological mapping and upgrading of the surficial geoscience information.

Archean volcanic and sedimentary rocks of the Prince Albert group exposed in the region are thought to have a high potential for Au, Ni, Zn, platinum group elements (PGEs). Similarly, the potential for discovery of diamond-bearing kimberlites in the area is also significant. Because the bedrock geology of the area is complex and poorly understood, development of the regional bedrock geoscience knowledge base is a prerequisite to efficient mineral exploration in the region.

Presently, little is known about the distribution of economic minerals within the study area, and only rare mineral showings have been identified in supracrustal rocks of the region. A flurry of recent diamond exploration activity and the acquisition of extensive prospecting permits in the region indicates that the area also has the potential to host diamond-bearing kimberlites. The proposed regional bedrock mapping, along with a drift prospecting survey and accompanying surficial geoscience activities, have the capability to identify new sources of Au, Ni, Zn and PGEs associated with supracrustal rocks, as well as kimberlite indicator-mineral trails. This information will be obtained through characterization of regional geology and collection of drift samples and determination of background metal values and evaluation of regional-scale ice dynamics. Therefore, geochemical (till and whole-rock) and heavy mineral surveys undertaken as part of this project will add significantly to the general geoscience knowledge of this area.

Project outputs will: 1) contribute to digital northern geoscience data resources; 2) incorporate remotely sensed data and contribute to new multi-thematic models (partnership with the GSC's Remote Predictive Mapping Project); 3) help to assess mineral potential within the study area and 4) through outreach activities, promote increased community participation in exploration activities and geoscience resource development.

Objectives

The project will contribute to strategic framework mapping and data acquisition in Nunavut through the following digital, web-based and paper outputs: 1) 1:100k-scale bedrock geology maps; 2) on-line geochemistry databases (till and bedrock); 3) regional geochronological acquisition; 4) regional lithogeochemical acquisition; 5) progress reports/presentations will be given at annual industry-oriented meetings; 6) training of young Canadian geoscientists and; 7) interaction with communities to facilitate their understanding and appreciation of this information. Objectives 1 and 2 are directly related to the immediate need for the mineral exploration in Nunavut. Objectives 1-4 will achieve advanced understanding of the geological evolution of the region and will assist in the reduction of risk for geoscience clients. Objective 6 will promote and further Canadian geoscience through training of new geoscientists. The timely release of these products (objectives 5 and 6) to stakeholders and northern communities will refine/enhance future geoscience endeavors accordingly.

Methods

Mapping:

- Local application of remotely sensed predictive mapping to target alteration sites for geochemical sampling.
- standard air photo interpretation, ground truthing, digitization and map production.

Geochemistry:

- bedrock geochemical and geochronological samples will enhance the web-based databases.
- collection of till samples will be facilitated by industrial collaborators; analysis of standard physical and chemical (INAA, ICP, FA) properties.

BOOTHIA MAINLAND INTEGRATED GEOSCIENCE PROJECT: ECONOMIC POTENTIAL THROUGH NEW BEDROCK MAPPING AND SURFICIAL GEOSCIENCE UPGRADING

This is a 3-year geological mapping project on the Boothia Mainland area immediately south of Taloyoak that is designed to evaluate the economic potential of the region through framework bedrock geological mapping and upgrading of the surficial geoscience information in the following NTS 1:250,000-scale map areas.

56N (Darby Lake): 56O north (Arrowsmith River): and parts of 57A, B, C, D.

2004 study area: 56N and 56O north

Field Work: July 1 to August 25, 2004. Move-in: July1-4. Field work: July 4-August 20. Restoration and Clean-up: August 21-25. Move-out: August 25.

Staging area: Gjoa Haven

Base Camp: 13 sleeping tents, two kitchen tents, a storage tent and an office tent would be established on a gravel terrace on an unnamed lake 180 km southeast of Gjoa Haven (see attached map). Machinery is limited to: a helicopter (stationed well away from the lake); and Honda generators to power computers. The camp would be completely assembled and disassembled at the start and end of the field season. Refuse (fuel drums, propane cylinders, solid garbage) will be removed to the Gjoa Haven municipal garbage disposal facility.

Daily activities: Foot traverses with helicopter drop-offs and pick-ups; bedrock sampling (fist-sized pieces); compilation of data with computers; no chemicals required.

Helicopter usage: Drop-offs and pick-ups of traverse teams; sample collection; equipment and supplies movement; personnel moves to/from main camp.

Fuel: 140 sealed 205 litre drums of helicopter fuel would be moved by Twin Otter from the airstrip at Gjoa Haven (sealift drop-off point 2003) to the main camp before the start of the season. Fuel drums would be stored away from any surface drainage on a gravel pad. All drums (empty and full) will be removed by Twin otter at the end of the field season and transported to Gjoa Haven for re-use or disposal.

ᐳᑎᐊ ᓄᓇᕕᖓᓂ ᑲᑐᔾᔨᓪᓗᑎᒃ ᓄᓇᒥ ᖃᐅᔨᓴᖅᑐᑦ: ᑮᓇᐅᔭᓕᐅᕆᑎᓄᒃ ᐱᑦᖃᐅᖕᒪᖏᑦ ᐊᑐᖅᑐᒍ ᓄᓇᒥ ᐅᔭᕋᖓᓂᓗ ᓇᓗᓇᐃᖅᑐᐃᓂᖅ ᓄᓇᙳᐊᖅᑎᒍᑦ ᐊᒻᒪᓗ ᓄᓇᐅᑉ ᖂᖓᓂ ᑭᓱᖃᐅᖕᓂᖓ ᐋᖅᑭᒋᐊᖅᑕᐅᑎᓪᓗᒍ

ᐊᕐᕌᒍᓄᑦ ᐱᖓᓱᓄᑦ ᖃᐅᔨᓴᕐᓂᐅᓂᐊᖅᑐᖅ ᓄᓇᒥ ᓄᓇᙳᐊᖅᑐᒍᑦ ᓇᓗᓇᐃᖅᑐᐃᓂᐅᓗᓂ ᑕᐅᕚᓂ ᐴᑎᐊ ᓄᓇᖓᓂ ᑕᓗᕐᔪᐊᑉ ᓂᒋᑦᑎᐊᖓᓂ ᑕᒪᓐᓇᓗ ᐋᖅᑭᒃᑕᐅᓯᒪᔪᖅ ᖃᐅᔨᓴᐅᑕᐅᕐᑯᓪᓗᒍ ᓯᕗᓂᒃᓴᑦᑎᓂ ᑮᓇᐅᔭᓕᐅᕆᑎᒃᓴᓄᑦ ᐱᑕᐅᖃᐅᕈᓐᓇᕋᔭᕐᒪᖏᑦ ᐊᕙᑎᓕᐅᕐᓗᒋᑦ ᓄᓇᙳᐊᖅᑎᒍᑦ ᓄᓇᐅᑉ ᖃᓄᐃᓕᐅᖅᓯᒪᐅᕐᓂᖓ ᐊᒻᒪᓗ ᑕᒪᒃᑯᐊ ᐋᖅᑭᒋᐊᕐᓗᒋᑦ ᓄᓇᐅᑉ ᖂᖓᓂ ᖃᐅᔨᒪᔭᐅᒥᐊᕈᑕᐅᔪᑦ ᑐᓴᐅᒪᔭᐅᔪᓪᓗ ᐅᕙᓂ ᓄᓇᙳᐊᖅᑎᒍᑦ NTS 1:250,000-ᐊᖏᑎᒋᔪᒥ.

56N (ᑖᐱ ᑕᓯᖓ): 560 ᐅᐊᖕᓇᖓᓂ (ᐃᐅᖀᓯᒥᔅ ᑰᖓ): ᐊᒻᒪᓗ ᐃᓚᖏᑦ ᓄᓇᙳᐊᕐᒥ 57A, B, C, D.

2004ᒥ ᖃᐅᔨᓴᕐᕕᐅᓂᐊᖅᑐᑦ: 56N ᐊᒻᒪ 56O ᐅᐊᖕᓇᕐᒥ

ᓄᓇᒥ ᐱᓕᕆᐊᖑᓂᐊᖅᑐᖅ: ᔪᓚᐃ 1ᒥ ᐊᒡᒌᓯ 25, 2004ᒧᑦ. ᓅᒻᒥᓗᑎᒃ ᑕᐃᑯᖓ: ᔪᓚᐃ 1-4. ᓄᓇᒥ ᖃᐅᔨᓴᓕᕐᒥᓗᑎᒃ: ᔪᓚᐃ 4ᒥᑦ ᐊᒡᒌᓯ 20ᒧᑦ. ᐅᑎᖅᑎᑦᓯᕙᓪᓕᐊᓗᑎᒃ ᐊᒻᒪᓗ ᓴᓐᓂᕐᓗᑎᒃ ᓄᓇᒥ: ᐊᒡᒌᓯ 21-25. ᐸᐅᓪᓛᓕᕐᒥᓗᑎᒃ: ᐊᒡᒌᓯ 25.

ᐃᓂᒋᓂᐊᖅᑕᖓ: ᐅᖅᓱᖅᑑᖅ

ᑕᖕᒫᕐᕕᖓ: 13ᓂᒃ ᓯᓂᒻᕕᐅᖃᑦᑕᕐᓂᐊᖅᑐᓂᒃ ᑐᐱᖅᑕᖃᕐᓗᓂ, ᒪᕐᕿᒃ ᓂᖅᑎᐅᕕᐅᓗᑎᒃ, ᑭᓯᕿᓘᔾᔪᒃᑯᕕᒃ ᐊᒻᒪᓗ ᑎᑎᕋᕐᕕᐅᓂᐊᖅᑐᒥᒃ ᑐᐱᖅᑲᕐᒥᓗᑎᒃ ᑐᐊᐸᔾᔫᖑᓂᕐᒥᒃ ᑕᓯᖕᒥ ᐊᑦᑎᖅᑕᐅᓯᒪᖏᑦᑐᒥᒃ 180 ᑭᓗᒦᑕᕐᒥᒃ ᐅᖓᓯᖕᓂᖃᖅᑐᖅ ᐅᖅᓱᖅᑑᑉ ᓂᒋᐊᓂ (ᑕᑯᒋᐊᕐᓗᒍ ᓄᓇᙳᐊᖅ ᐃᓚᓕᐅᑎᓯᒪᔪᖅ ᑕᐸᕙᓂ). ᐊᐅᓚᐅᑎᒨᖅᑐᑦ ᐅᑯᐊᖑᓂᐅᓴᓪᓗᑎᒃ: ᖁᓕᒥᒎᖅ (ᑕᓯᐅᑉ ᐅᖓᓯᒋᔭᒃᓪᓚᖓᓂ ᐃᓂᖃᕐᓂᐊᖅᑐᖅ); Hᐊᓐᑕᐅᓪᓗᑎᒃ ᐊᐅᓚᐅᑎᑦ ᔭᓄᓚᐅᑕᐅᓂᖅᑕᑦ ᖃᖁᐅᔭᓄᑦ ᑲᑉᐳᑎᕐᕕᐅᖃᑦᑕᕐᓂᐊᖅᑐᑦ. ᐃᓂᓪᓚᒃᓴᐃᑦᑎᐊᕋᔭᖅᑐᑦ ᐊᒻᒪᓗ ᐅᓯᓕᖅᓱᐃᑦᑎᐊᕐᓗᑎᒃ ᐱᒋᐊᓕᕋᑖᖅᑎᓪᓗᒍ ᖃᐅᔨᓴᕐᓂᖅ ᐊᒻᒪᓗ ᐃᓱᓕᑎᓪᓗᒍ. ᐊᒥᐊᒃᑯᐃᑦ (ᐅᖅᓱᐊᓗᖃᐅᑎᕕᓃᑦ, ᐳᓪᓚᒨᖅᑐᑦ, ᓴᓃᓪᓗ) ᐅᖅᓱᖅᑑᑉ ᐊᒃᑕᕐᕕᖓᓅᕿᔾᔭᐅᒐᔭᖅᑐᑦ.

ᖃᐅᑕᒫᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᓂᐊᖅᑐᑦ: ᐱᓱᓪᓗᑎᒃ ᖁᓕᒥᒎᓕᒃᑯᑦ ᓂᐅᔭᐅᔭᕐᖕᒪᒥᒃ ᐊᒻᒪᓗ ᐊᐃᔭᐅᖃᑦᑕᕐᓗᑎᒃ; ᐅᔭᕋᐃᑦ ᐅᑭᑦᑎᕕᐅᖂᕐᔪᖅᑲᑦᑕᕐᓗᑎᒃ ᖃᐅᔨᓴᐅᑕᒃᓴᒥᒃ (ᐊᒻᒪᒃ ᑎᒍᒻᒥᔪᑐᒃ ᐊᖏᑎᒋᓗᑎᒃ); ᖃᕐᓴᐅᔭᒃᑯᑦ ᖃᐅᔨᓴᐅᕙᓪᓕᐊᔪᑦ ᑲᑎᖅᓱᖅᑕᐅᓗᑎᒃ; ᐃᒥᕿᔪᖕᓂᑦ ᐃᓚᐅᖅᑐᕿᑎᓂᒃ ᐊᑐᔾᔫᖏᑦᑐᑦ.

ᖁᓕᒥᒎᖅ ᐊᑐᖅᑕᐅᓂᖓ: ᓂᐅᔭᐅᖃᑦᑕᕐᓗᑎᒃ ᐊᐅᔭᐅᖃᑦᑲᕐᓗᑎᓪᓗ ᖃᐅᔨᓴᖅᑎᐅᓂᐊᖅᑐᑦ; ᖃᐅᔨᓴᒐᒃᓴᓂᒃ ᓄᐊᑦᑎᓗᑎᒃ; ᐱᖁᑎ ᓱᓇᒃᑯᑖᓗ ᐊᕙᓪᒧᒐᖅᑕᐅᓗᑎᒃ; ᐃᖅᑲᓇᐃᔭᖅᑐᑦ ᑐᐱᖅᑲᕐᕕᖓᓂᒃ ᓄᒃᑕᕿᓘᔭᕐᓂᐊᖅᑐᑦ.

ᐅᖅᓱᐊᓗᒃ: 140 ᓯᒥᒃᓯᒪᔪᑦ 205ᓂ ᖃᓪᓗᑎᕐᒫᓂᒃ ᐃᒪᖅᓲᑦ ᖃᑦᑕᐅᔭᑦ ᖁᓕᒥᒎᓕᒃᓯᐅᑎ ᒪᕐᕿᓕᕐᓛᒃᑯᑦ ᑕᐃᑯᙵᐅᔾᔭᐅᒐᔭᖅᑐᑦ ᐅᖅᓱᖅᑑᒥ (2003ᒥ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᓂᐅᔭᐅᓂᑯᑦ) ᑕᐃᑯᖓ ᑕᖕᒫᕐᕕᒋᓂᐊᖅᑕᑦᑎᓐᓄᖅ. ᐅᖅᓱᐊᓗᖃᐅᑎᐅᔪᑦ ᑕᒪᒃᑯᓄᖕ ᖃᐅᓯᕿᔪᖕᓄᑦ ᐊᒻᒪᓗ ᑰᕿᒐᓚᖕᓂᑦ ᐅᖓᓯᒃᓯᖅᑎᑕᐅᓂᐊᖅᑐᑦ ᐊᒻᒪᓗ ᓄᓇᒧᑦ ᑯᑐᔾᔭᐃᒃᑯᓯᖅᑕᐅᓯᒪᓗᑎᒃ. ᒪᕐᕿᓕᕐᓛᒃᑯᑦ ᖃᖓᑕᔫᒃᑯᑦ ᐊᐅᔭᐅᒐᔭᕐᒥᔪᑦ ᐅᖅᓱᖅᑑᒧᑦ ᐊᑐᖅᑕᐅᖏᑦᑐᑦ ᐱᔭᐅᕐᑯᓪᓗᒋᑦ ᐅᐸᕙᓗ ᐊᒃᑕᕐᕕᖓᓄᖅᑕᐅᕐᑯᓪᓗᒋᑦ.

List of IOL Land Parcels in the Study area:

NTS 56O (north)

PB-24/56O
PB-26/56O
PB-27/56O
PB-28/56O

NTS 56N

PB-14/56N
PB-15/56N
PB-16/56N
PB-17/56N
PB-18/56N
PB-19/56N
PB-20/56N,O
PB-21/56N,O

NTS 56A

PB-29/57A
PB-30/57A
PB-48/57A
PB-49/57A
PB-50/57A
PB-51/57A
PB-52/57A
PB-53/57A
PB-54/57A
PB-55/57A,B
PB-56/57A,B
PB-57/57A,B

NTS 57B

SB-01/57B
SB-02/57B
SB-03/57B
SB-04/57B
SB-05/57B
SB-06/57B
SB-07/57B,C
PB-55/57A,B
PB-56/57A,B

NTS 57C

SB-09/57C
SB-10/57C
SB-11/57C
SB-12/57C
SB-17/57C
SB-15/57C,D

NTS 57D

SB-27/57D
SB-28/57D
SB-29/57D
SB-30/57D
PB-57/57A,D
PB-59/57D
PB-60/57D
PB-62/57D

APPENDIX A: BOOTHIA MAINLAND PROJECT 2004

Applicants Name: **Dr. Hamish A. I. Sandeman**

Canada–Nunavut Geoscience Office
P.O. Box 2319 Iqaluit, NU, X0A 0H0
Fax: 867-979-0708; Tel: 867-979-3539

1) Project activities:

This is the first year of a proposed 3-year project in the Boothia Mainland region south of Taloyoak. The project will focus on documenting the bedrock geology and will upgrade the knowledge base for surficial materials and will provide baseline geological maps for the region. These investigations represent the first modern studies of their kind and the data obtained will be instrumental in helping to reduce the risk for mineral exploration. We are optimistic that this research will stimulate the mineral exploration industry and improve the job potential and socio-economic conditions in nearby communities.

2) Schedule of activities:

- Start field work July 1st, 2004
- Mobilization of Camp gear into campsite via Twin Otter; only one base-camp site will be utilized for the entire 8-week operation.
- Fieldwork comprising helicopter set-outs and returns; Field personnel (8/day) will check field sites along ground traverses (walking) between from helicopter drop off site and helicopter pickup site (~8-10 km).
- Demobilization Aug 25th, 2004 via Twin Otter; camp will be removed.

3) Plan of proposed Lands to be used:

The study area encompasses NTS 56N and 56O north, parts of 57A, B, C and D. During the 2004 field season, work will focus on the following map areas: NTS 56N and 56O north.

The work will be accomplished by ground traverses (on foot) from helicopter drop-off zones. Approximately 8 field researchers will set out in a helicopter from the base camp to their drop-off zones each morning; they will be picked up and returned to the base camp by helicopter in the evenings.

The base camp is proposed to be located in NTS 56N, on a gravelly esker exposed on the southern shore of Lake 899 (see atched maps). The base camp will consist only of canvas tents and light equipment (stove, refrigerator, generator etc.). There will be a total of 13-15 people stationed at the camp throughout the 2004 field season.

The oven/stove, refrigerator and freezer will be powered by propane. The generator will be powered by gasoline and will serve only as a backup to the solar panels recharging batteries that will run the office equipment. Heaters and the helicopter will utilize Jet B fuel. Portable stoves and lanterns will use white gas.

Sewage and grey water will be buried. Flammable garbage (organics) will be burned. Any non-flammable garbage such as metal cans and glass will be crushed and shipped at the cost of the project, to appropriate community-based, waste-storage facilities.

4) Structures:

The camp will consist of 13 small canvas sleeping tents; 2 large canvas kitchen tents; 1 large canvas office tent and 1 large canvas storage tent.

5) Equipment:

The following list of equipment will be used in the camp: propane stove/oven, refrigerator, freezer, heaters (burning unused jet-B fuel), gasoline generator, solar panels, helicopter (206L), computers and printer.

6) Fuels:

The following list of fuels will be used in the camp: propane, 4 x 100lbs canisters; gasoline, 6 x 19L jerry cans; jet-B Fuel, 150 x 205L drums; car batteries (2); recharged by solar panels; and white gas, 10 x 10L cans.

Fuel will be transferred to other fuel tanks or vehicles via CSA approved manual or electric (for helicopter) fuel pumps.

7) Containment fuel spill contingency plan:

The Permittee shall report all spills immediately with instructions contained in "Spill Report" form NWT 1752 (05/93), the NWT Water Board's "Guidelines for Contingency Planning" (1987) and contact the Twenty-four (24) hour spill report line (867) 920-8130.

8) Proposed Disposal Methods:

a) Garbage

Combustible garbage (organics) will be burned and the chilled ashes will be buried; non-conbustible garbage will be packed and shipped out of the camp to a municipal waste disposal facility.

b) Sewage (Sanitary and Grey Water)

Sewage and grey water will be buried.

9). Methods of transportation:

Camp mobilization and demobilization will be accomplished through Twin Otter support. Movement of people to and from their ground traverses will be accomplished through the use of a Bell 206L helicopter.

10) Environmental concerns:

No known environmental concerns for the 2004 field season. In 2005 and 2006 the geological mapping program will approach the boundaries of the Rasmussen Lowlands, a known migratory bird habitat. Discussion with Mark Mallory of the Canadian Wildlife Service has clarified both of our concerns and we have agreed that there should be minimal impact on the wildlife habitat, particularly if we eliminate helicopter use in the area of concern.

11) Summary of potential environmental and resource impacts:

No long-term environmental impacts are expected. With the permission of the Kitikmeot Inuit Association, we will establish a base-camp at the south end of east of Lake 899 immediately South of Darby Lake, NTS 56N. The camp will be set-up on a large gravelly esker and will comprise canvas tents. A 206L helicopter will be the only vehicle stationed at the camp. The camp will be mobilized (early July) and demobilized (mid August) by Twin Otter from Gjoa Haven.

12) N/A

13) Proposed restoration plans:

The camp site will be thoroughly cleaned during demobilization. All combustible garbage will be burnt; the chilled ashes will be buried, and non-combustible garbage will be shipped (at the cost of the project) back to a proper municipal landfill site.

14) Socio-economic aspects:

i) The government of Nunavut in conjunction with NRCAN and INAC will allocate approximately $500,000/year to this project.

ii) Approximately $50,000 or 10% will be directly spent on supplies and logistical assistance in the local communities.

iii) The only jobs are seasonal for 2 months of the summer and require employees with specialized post secondary education.

iv) We will endeavour to use local Inuit companies to assist in expediting and fuel handling. A bear monitor will probably be hired in 2005 and 2006.

v) Training possibilities may include basic and advance mineral prospecting through the Government of Nunavut.

Please contact me if any further information is required.

Sincerely,

Dr. Hamish Sandeman

List of Personnel:

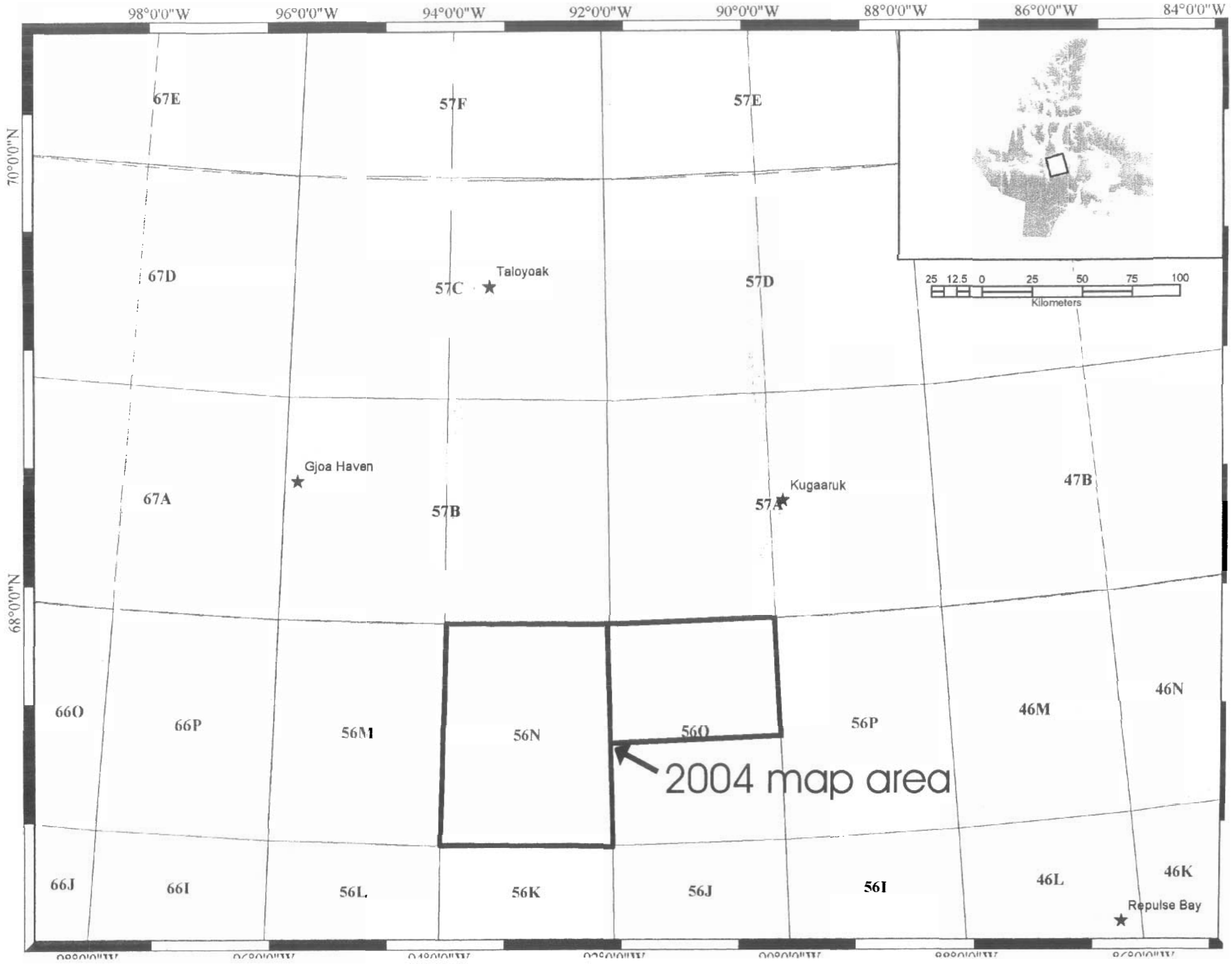
Hamish Sandeman	(Research Scientist: CNGO)
Michael Schultz	((Senior assistant: MSc)
Carl Oyzer	(Senior assistant: Quaternary mapping)
Kate Rubingh	(Senior assistant: Economic Geology)
Roger Fitzgerald	(Senior Assistant)
Nesha Trenholm	(Assistant)
Jenrené Martel	(Assistant)
Ayaka Shiroki	(Assistant)
Jeanette Walsh	(Assistant)
James Boles	Pilot (Custom Helicopters Ltd)
Simon Bew	(Cook: camp manager)

Transient

Celine Gilbert	(GIS specialist: C-NGO)
Jeremy Ford	(Government of Nunavut)
Simon Hanmer	(Research Scientist: GSC)
Tom Chacko	(Professor: University of Alberta)

Organizations we have contacted:

Kitikmeot Inuit Association	Active Permit KTL204N022
Nunavut Water Board	Permit NWB2DAR under review
DIAND Land Use	Permit not required as camp is wholly on IOL
Community of Taloyoak	Notification by letter
HTO of Taloyoak	Notification by letter
Community of Kugaaruk	Notification by letter
HTO of Kugaaruk	Notification by letter
Community of Gjoa Haven	Notification by letter
HTO of Gjoa Haven	Notification by letter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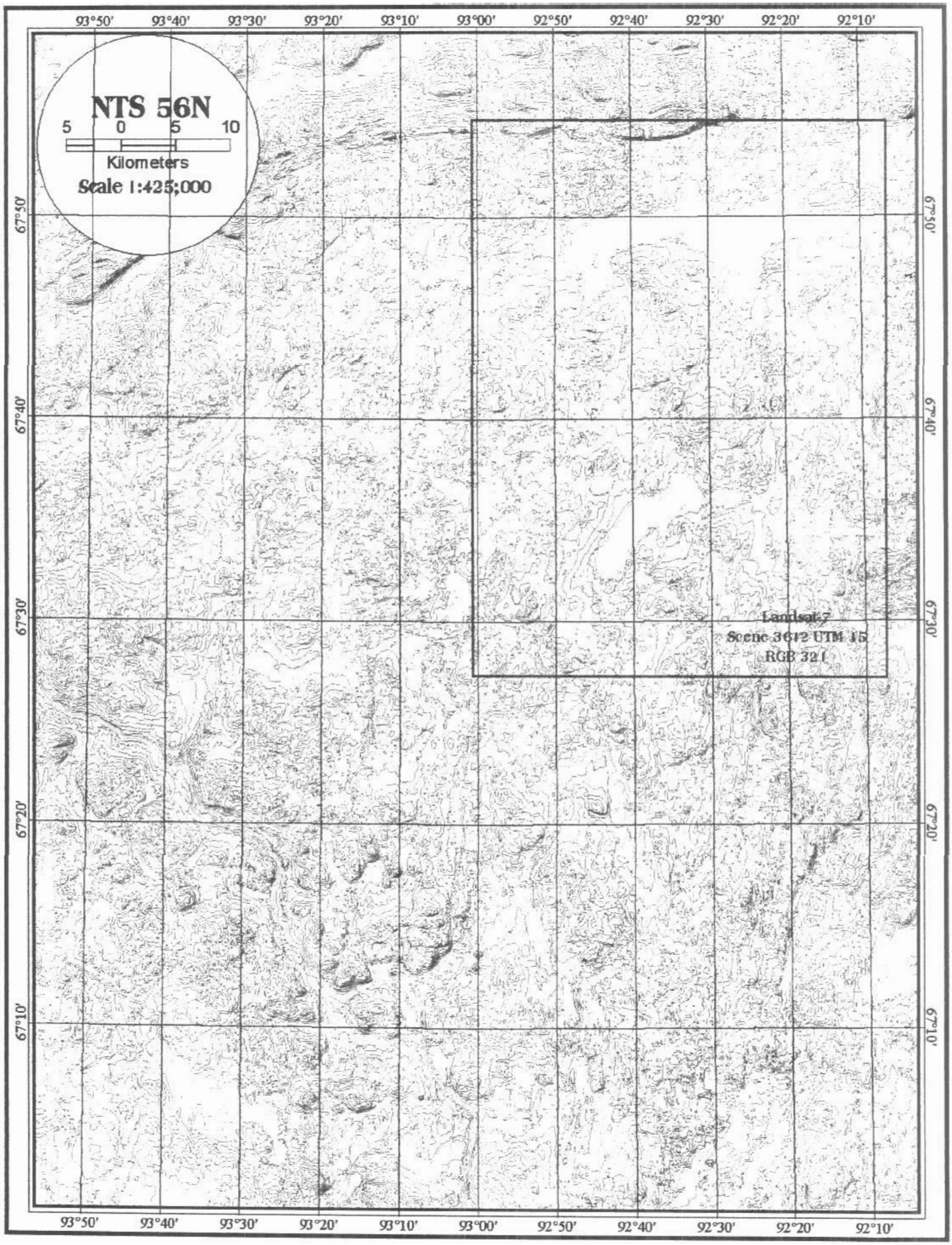
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