Nunavut Research Institute
Nunavummi Qaujisaqtulirijikkut

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SCIENTIFIC RESEARCH LICENCE APPLICATION

(Land, Freshwater & Marine Based Research)

This application fulfills the requirements for NIRB environmental screening

SECTION 1: APPLICANT INFORMATION **1. Applicant's full name and mailing address:** Joyia Chakungal Canada - Nunavut Geoscience Office P.O. Box 2319 Iqaluit, NU X0A 0H0	**Phone:** 867 979 3539 x28 **Fax:** 867 979 0708 **E-mail:** jchakung@nrcan.gc.ca
2. Field Supervisor (address, if different from above):	**Phone:** **Sat. phone:**

3. Other Personnel list (name and position):
The personnel list will be submitted to the office once it has been finalized.

Total # of personnel: **Total # of person days:**

SECTION 2: AUTHORIZATION NEEDED

4. List the organisations you will contact for necessary authorizations associated with the project.
To date, the Nunavut Water Board (water use permit), Indian and Northern Affairs (Landuse Permit), Kivalliq Inuit Association (Landuse Permit), Canadian Wildlife Services and Hamlet of Coral Harbour have been contacted.

5. List the active permits, licences, or rights related to the project and their expiry date:
N/A

SECTION 3: PROJECT PROPOSAL DESCRIPTION

6. Proposed project title: The Southampton Island Integrated Geoscience Project (SIIG)

7. Project duration:
Period of operation: June 25th, 2007 to August 25th, 2007

8. Location(s) of data collection:
- Land Status Types: Crown, Commissioners', Inuit Owned Surface Lands, Inuit Owned Sub-Surface Lands, & Other
- Please ensure that maps of the project area are attached (1:50 000, 1:250 000)

Location Name	Region	Latitude (north)	Longitude (west)	NTS Map sheet #	Land Status
Data collection will occur at field sites over the whole project area (NTS 45 N,O,P and 46 A,B,C,F,G), see Figure 1 on attached project proposal					
For additional sites, attach a separate page					

NON-TECHNICAL PROJECT PROPOSAL SUMMARY

9. On a separate page, please include a non-technical description of the project proposal, no more than 300 words, in English & Inuktituk (Inuinaktun, if in the Kitikmeot). The project description should outline the project activities (research methods, camps, etc.) and their necessity, method of transportation, any structures that will be erected, expected duration of activity and alternatives considered. If the proposed activity fits into any long-term developments, please describe the projected outcome of the development for the area and its timeline.

SECTION 4: MATERIAL USE

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

Equipment type and number	Size-dimensions	Proposed use
Two generators	2000 W each	Recharging and powering computers.

11. Detail fuel and hazardous materials use:

Fuels	Number of Containers	Capacity of Containers (gal & litres)
• **Diesel**		
• **Gasoline**	6	19 L
• **Aviation fuel**	300	205 L
• **Propane**	6	100 lbs
• **Other**		
Hazardous Materials	**Number of Containers/Concentration**	**Capacity of Containers (gal & litres)**
•		
•		
•		

12. Describe method of fuel transfer:

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

13. Describe any procedures and materials in place to handle accidental spills. Please attach the spill contingency plan and other appropriate information about the hazardous materials associated with the proposed project.

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 hour spill report line (867) 920-8130.

SECTION 5: WASTE DISPOSAL AND TREATMENT FACILITIES

14. Describe amount and methods of disposal:

Type of Waste	Projected Amount Generated	Method of Disposal	Additional Treatment Procedures
Sewage		Burial	
Grey water		Burial	
Garbage		Burned or shipped to landfill	
Overburden (organic soil, waste material,tailings)		N/A	
Hazardous waste:		N/A	
Other:			

SECTION 6: RESTORATION AND ABANDONMENT PLANS

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

The 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 municipal landfill site.

SECTION 7: ENVIRONMENTAL IMPACT

16. Indicate and describe the components of the environment that are near the project area, as applicable. Attach 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:		
Migratory Birds:		
Waterfowl:		
Seals:		
Whales:		
Narwhals:		
Canid family (wolves, wolverines, foxes, etc.)		
Bears (grizzly, polar, black):		
Other:		
Eskers:		
Communities:	The area in which we would like to camp will be away from major hunting routes and the East Bay Migratory Bird sanctuary.	
Historical/Archaeological sites:		

17. Indicate and describe other known uses of the area such as local development, traditional use (hunting/fishing/spiritual), outfitting, tourism, mineral development, research, etc.:

To date, diamond and gold exploration has been on going on the mainland, northwest of Wager Bay, and on south west Baffin Island. Since Southampton Island falls between the two areas currently being explored, we hope that our mapping will identify and highlight potential prospects which might encourage economic investments by companies into the island as a whole and to the hamlet of Coral Harbour.

18. Describe the impacts of the proposed project activity on the environmental components and uses, in the area listed above:

No long-term environmental impacts are expected. With the permission of the KIA, we will set up base camp in the north east of the island, along Mathiassen River, for the duration of the mapping project (June 25th – August 25th). The camp set-up will be comprised of canvas tents. Two helicopters (206L4 and Astar BA+) will be the only vehicles stationed at the camp. A temporary airstrip will be set up for a Twin Otter.

19. What are some suggested mitigation measures for these impacts?

The 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 municipal landfill site.

SECTION 7: COMMUNITY INVOLVEMENT & REGIONAL BENEFITS

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

Community	Name	Organisation	Date Contacted	Means	Telephone #	Fax #
Coral Harbour		Hamlet Office	March 16th, 2007	letter	867 925 8867	
Coral Harbour	Ronald (SAO)	Hamlet Office	April 12th, 2007	phone	867 925 8867	
Coral Harbour	Heather	Hamlet Office	April 12th, 2007	phone	867 925 8867	
Coral Harbour	Fred	Sakku School	April 15th, 2007	phone	867 925 8822	

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

The project will be lead by and include several employees from the Canada-Nunavut Geoscience Office who are all Nunavut residents. We also hope to meet one or two individuals through the Hunters and Trappers Organization who we might hire to work on the team as bear monitors. One or two high school level students from either Coral Harbour or the Nunavut Arctic College Co-Op program will also be considered for field assistant positions.

22. Describe and attach documentation regarding community concerns or support for the proposed project:

The Coral Harbour Municipal Council met on April 12th, 2007 to discuss the implications of our presence in the community during the up-coming summer. Results and minutes of the meeting have not been received as of yet.

23. Is there a Traditional Knowledge (TK) component to this research project?

Currently there is no TK component to the research project.

24. Check YES ☑ or NO ☐ if you give NRI permission to release the applicants contact information in the Annual Compendium of Research Undertaken in Nunavut, published by the Nunavut Research Institute.

Applicant:

_____, Research Scientist, April 23, 2007

Signature Title Date

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”N; Figure 1).

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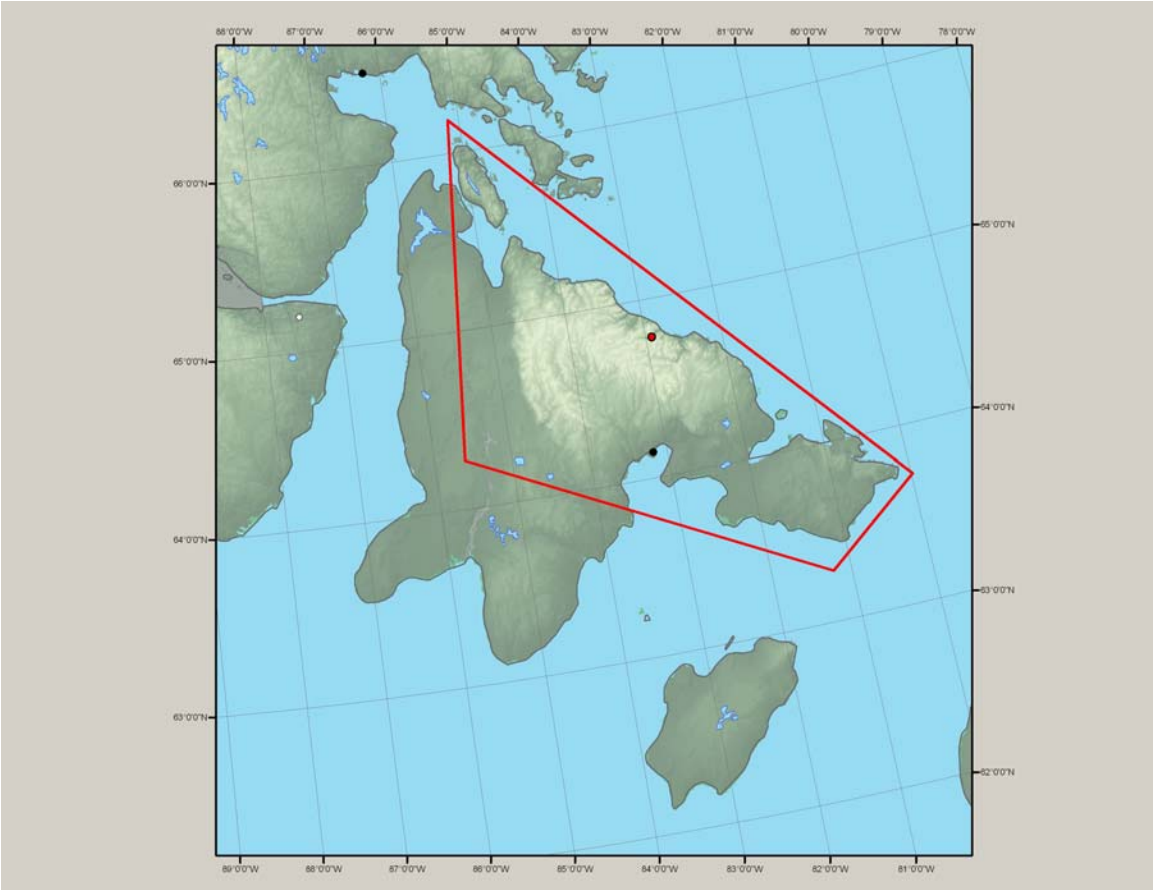

Figure 1: A map of Southampton Island on which the study area is outlined in red. The black point in the south-central part of the island indicates the location of the hamlet of Coral Harbour. The red point ~ 70 km north of Coral Harbour is the proposed camp site location for the SIIG '007 project. The black point on mainland, to the north - northwest of Southampton Island, highlights the location of the hamlet of Repulse Bay.

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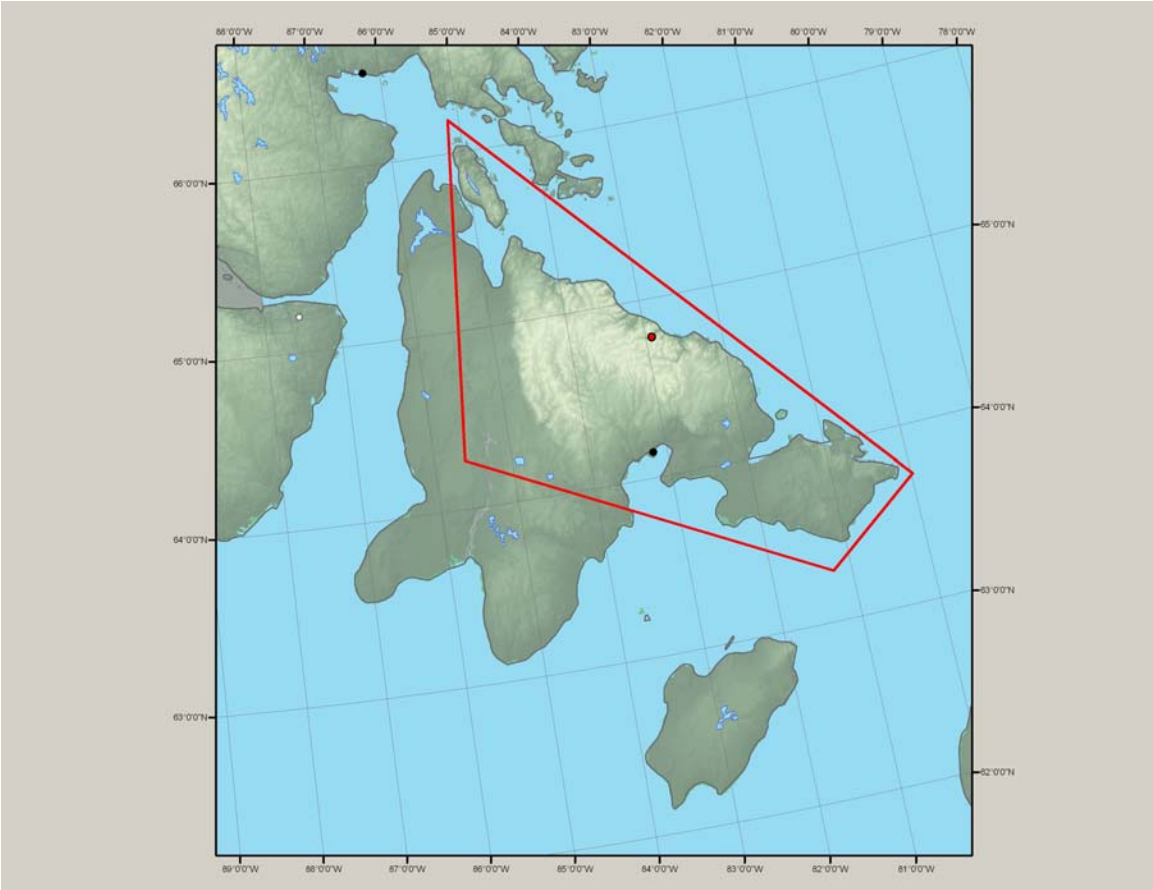
ᐅᓂ 25 ᐊᒡᒪᓗ ᐊᐅᑎᔪᓯ 25, 2007 ᑲᓇᑕᐅᔨ-ᓄᓇᕗᑦ ᓄᓇᓕᓐᓴᐅᒍᑦ (Canada – Nunavut Geoscience) ᐋᒡᓕᕐᓇᖅᓴᖅ ᐊᒡᒪᓗ ᓄᓇᓕᓐᓄᑎᒃ ᖃᐅᔨᓴᖅᑎᖅᓯᔨᐊᑦ ᑲᓇᑕᐅᑦ (Geological Survey of Canada) ᑐᓴᕿᐅᑎᓕᐅᖅᓯᒪᓕᒪᓕᒡ ᑲᒪᔨᒪᓕᓗᑎᒃ ᑲᑎᑕᐅᓯᒪᓕᓗᑎᒃ ᓄᓇᐅᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᖅ ᖃᐅᔨᓴᖅᑎᖅᓯᔨᐊᓂᑦ ᐱᓕᓐᓄᐊᒃᑲᑦ ᑲᓇᑕᐅᖅ ᖁᑎᐊᓂ ᓴᓂᑦ ᖁᕕᖅᑕᖅᓱᓂ, ᓄᓇᕗᑦ (ᑕᑯᓴᐅᔨᖅ 1). ᐱᓕᓐᓄᐊᖅᓇᓯᐊᑎᓪᓗᐊᑕᖅᓱᒃ ᓴᓂᑦ ᖁᕕᖅᕿᓂ ᑲᑎᑕᐅᓯᒪᓕᖅᖅ ᖃᐅᔨᓴᖅᑕᐅᔪᒪᔨᔪᐊᑎᖅ ᖃᐅᔨᓴᖅᑎᖅᓯᔨᐊᑎᒍᑦ ᐱᓕᓐᓄᐊᖅᓱᓗᓂ ᐅᔾᔨᖅᓂᐊᓂᖅᓯᒪᑦ ᖃᐅᔨᓴᖅᓂᐅᖅᑕᖅᑕᖅᑐᖅ ᐱᓕᖅᓂᕐᕕᒃᓴᓕᒪᓗᑦ ᒪᓕᒪᓐᓇᖅᑐᒥᓂᖅ ᓴᓇᓕᖅᓂᖅᑐᑦ ᐅᓗᓕᓐᓄᐊᖅᓯᒪᓂᖅ ᐅᔾᔨᖅᓂᐊᓂᖅᓯᒪᓕᖅᑐᖅᓱᒃ ᐊᖅᓴᖅᑕᐅᓯᒪᓕᓕᒫᑦ ᓄᓇᕗᒻᒥ. ᓴᓂᑦ ᐄᐊᓪᓚᑦᓯᖏᑦ ᐃᑲᔪᓐᓇᐅᖅᑕᕐᕕᖅᑐᑦ ᑐᓴᖅᑎᑎᑕᐅᓪᓚᕆᔨᑦ ᓄᓇᕗᒻᒥ ᐊᐅᓚᔪᓐᓇᐅᑎᓪᓗᑎᑦ ᖃᐅᔨᓴᖅᑕᐅᓪᓚᕆᔨᑦ ᐊᐅᓚᓂᖅᓴᐅᓕᖅᑐᖅ ᐱᓕᓐᓄᐊᖅᓯᒪᓂᖅ ᓴᓇᓕᖅᓂᖅᑐᑦ ᐅᓗᓕᓐᓄᐊᖅᓯᒪᓂᖅ ᐊᐅᓚᓂᖅᓴᐅᓕᖅᑐᖅ ᐱᓕᓐᓄᐊᖅᓯᒪᓂᖅ ᓴᓇᓕᖅᓂᖅᑐᑦ ᐅᓗᓕᓐᓄᐊᖅᓯᒪᓂᖅ ᐊᐅᓚᓂᖅᓴᐅᓕᖅᑐᖅ ᐱ



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