



3/25/2003

DISTRIBUTION

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

Edward Little's research is titled "*North Baffin Project: Economic potential through drift prospecting and surficial materials mapping*" and is proposed to take place from July 1, 2003 to August 30, 2005.

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 **May 9, 2003**

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

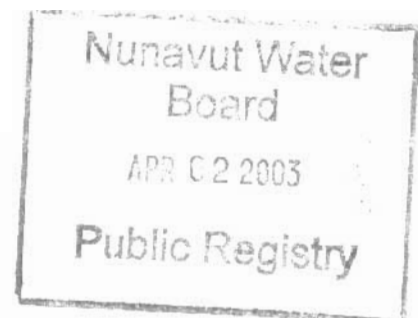
Mary Pickett

Mary Ellen Thomas
Manager, Research Liaison

encl.

cc: Environmental Assessment Screener, NIRB
Lands Administrator, QIA
Executive Director, NWB
Mayor/SAO, Iqaluit
Mayor/SAO, Pond Inlet
Mayor/SAO, Clyde river
Mayor/SAO, Igloolik
Mayor/SAO, Arctic Bay
Mayor/SAO, Hall Beach
Chairperson, HTO, Iqaluit
Area Manager, DFO
Chairperson, HTO, Pond Inlet
Chairperson, HTO, Clyde River
Chairperson, HTO, Igloolik
Chairperson, HTO, Arctic Bay
Chairperson, HTO, Hall Beach

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SCIENTIFIC RESEARCH LICENCE APPLICATION (Land, Freshwater & Marine Based Research)

SECTION 1: APPLICANT INFORMATION

1. Applicant Information	
Applicant's full name, title, and mailing address:	Edward Little Research Scientist / Chercheur Scientifique Canada-Nunavut Geoscience Office / Bureau géoscientifique Canada-Nunavut P.O. Box 2319 / B.P. 2319 Iqaluit, NU X0A 0H0
Fax:	867-979-0708
Phone:	867-979-3539
Email:	elittle@NRCan.gc.ca
2. Supervisor Information	
Field Supervisor (address, if different from above)	-
Phone: (radio or otherwise)	867-979-5561
3. Other Personnel	
List name and position:	Art Dyke (GSC): Co-leader Phil Holme (Vic Univ. of Wellington): Senior Geologist Dan Utting (SFU): Senior field Assistant PhD Student (TBA-Dal. Univ.): Senior Assistant Andrew Hilchey (Dal. Univ.): Junior Assisant Mike Young (Queens Univ.): Junior Assistant Mike March: Cook Jamie Boles: Helicopter Pilot

	TBA: Helicopter Engineer
Total # of personnel:	10
Total # of person days:	420

SECTION 2: AUTHORIZATION NEEDED

4. Authorization Contacts	
List the organizations you will contact for necessary authorizations associated with the project:	QIA: Salomonie Shoo 979-5391 NWB: Rita Becker 867-360-6338 NRI: Mary Ellen Thomas 979-6734 DIAND: Lands Admin. 975-4288 NRCan EA report: Yanick Matteau 613-992-8791
5. Authorization	
List the active permits, licences, or rights related to the project and their expiry date:	QIA: pending NWB: pending DIAND: pending NRCan EA report: accepted, exp.: 2005

SECTION 3: PROJECT PROPOSAL DESCRIPTION

6. Project Duration:					
Period of operation:	July 2003 - August 2005 .				
Proposed term of permit:	July 2, 2003 - August 13, 2003				
Project Title:	NORTH BAFFIN PROJECT: ECONOMIC POTENTIAL THROUGH DRIFT PROSPECTING AND SURFICIAL MATERIALS MAPPING				
7. Location(s) of data collection:					
Location Name	Region	Latitude	Longitude	NTS Map	Land Status
Field Camp	Ice Bound Lakes	71deg08'	78deg12'	37G	none
Ice Bound Lakes	North Baffin	na	na	37G	Inuit Owned Surface and Subsurface
Steensby	North Baffin	na	na	37F	Inuit Owned Surface and

					Subsurface
Buchan-Scott	North Baffin	na	na	37H	Inuit Owned Surface and Subsurface
Conn	North Baffin	na	na	37E	Inuit Owned Surface only

NON-TECHNICAL PROJECT PROPOSAL SUMMARY

8. Non-Technical Project Proposal Summary

SECTION 4: MATERIAL USE

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

Equipment Type and Number	Size-dimensions	Proposed Use
tents x 20	various	kitchen, office, storage, personal
Helicopter x 1	206L	field operations
generator x 1	1100 Watt	occasional, use for electricity
Solar Panels x 2	4'x3'	main power supply (to charge batteries)
Stoves/oven x 1	standard	cooking
Fridges x 2, Freezer x 1	standard	food storage (propane)

10. Detail fuel and hazardous materials use

Fuels	Number of Containers	Capacity (gal/litres)
Diesel	-	na

Gasoline	5	19 L
Aviation Fuel	135	205 L
Propane	4 (start)	100 lbs
Other	10	10 L
Hazardous Materials	Number of Containers	Capacity (gal/litres)
none	na	na
-	-	-
-	-	-
Describe method of fuel transfer	Electric or manual pumps	

11. Spill Contingency Plan

Describe any procedures and materials in place to handle accidental spills. Please fax or mail your 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 (24) hour spill report line (867) 920-8130.

SECTION 5: WASTE DISPOSAL AND TREATMENT FACILITIES

12. Describe amount and methods of disposal:

Type of Waste	Projected Amount Generated	Method of Disposal	Additional Treatment Procedures
Sewage	10 people x 42 days	buried	none
Grey Water	10 people x 42 days	buried	none
Garbage	10 people x	Burned or transported to	none

	42 days	municipal dump site	
Overburden	none	na	na
Hazardous Waste	none	na	na
Other	none	na	na

SECTION 6: RESTORATION AND ABANDONMENT PLANS

13. Site

Restoration

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

Camp will be left as we find it. All garbage will be picked up and grey-water/sewage pits will be adequately buried.

SECTION 7. ENVIRONMENTAL IMPACT

14.

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

Type of Species	Important Habitat Area	Critical Time Periods
Fish:	--	-
Caribou:	--	-
Muskox:	--	-
Raptor:	--	-
Migratory Birds:	--	-
Waterfowl:	--	-
Seals:	--	-
Whales:	--	-
Narwhals:	--	-
Canid Family:	--	-
Bears:	--	-
Eskers:	--	-
Communities:	--	-
Sites:	--	-

15.

Indicate and describe other known uses of the area such as local development, traditional use (hunting/fishing/spiritual), outfitting, tourism, mineral development, research, etc.	None known.
16.	
Describe the impact of the proposed project activity on the environmental components and uses, in the area listed above.	Minimal impact is anticipated, if any at all. We will only occupy areas non critical to wildlife. Any archaeology sites encountered will not be disturbed; Co-ordinates will be recorded and reported to Inuit Heritage Trust and the Department of CLEY. The chosen site has been used previously by other government researchers.
17.	
What are some suggested mitigation measures for these impacts?	No impacts.

SECTION 8: COMMUNITY INVOLVEMENT AND REGIONAL BENEFITS

18.						
Community Representatives						
List the community representatives that you have contacted about this proposed project.						
Community	Name	Organization	Date contacted	Means	Telephone	Fax
Arctic Bay	Joanasie Akumalik	Mayor	in progress	Letter	439-9917	439-8767
Clyde River	Sany Kautuq	Mayor	in progress	Letter	924-6220	924-6293
Hall Beach	Levi Kaunak	Mayor	in progress	Letter	928-8829	928-8871
Igloolik	Elijah Evaluarjuk	Mayor	in progress	Letter	934-8940	934-8757
Pond Inlet	Peter Adla	Mayor	in progress	Letter	899-8934	899-8940
-	-	-	-	-	-	-
19. Local Involvement						
Describe the						

level of involvement that the residents of Nunant have had with respect to the proposed project. Elaborate on local employment opportunity, local benefits, training programs (if applicable)	
11. Community Support	
Describe, and fax or mail documentation regarding community concerns or support for 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 (24) hour spill report line (867) 920-8130.
12. Traditional Knowledge	
Is there a Traditional Knowledge (TK) component to this research project?	

NORTH BAFFIN PROJECT: ECONOMIC POTENTIAL THROUGH DRIFT PROSPECTING AND SURFICIAL MATERIALS MAPPING

E.C. Little, 2003 – Project Proposal

Project Description:

This project is designed to evaluate the economic potential of northeastern Baffin Island through an improved understanding of the glacial history in this extensively drift-covered area.

Archean volcanic rocks of the Mary River group are thought to have a high potential for Au, Ni, Zn, platinum group elements (PGEs); the potential for kimberlites to be found in the area is significant. As the glacial history of the area is complex and poorly understood, development of the regional surficial geoscience knowledge base is a prerequisite to efficient mining exploration in the region.

Presently, little is known about the gold, base-metals and PGEs within the study area. However, mineral showings have been identified in the Mary River group. Further, recent interest by De Beers Canada Exploration Inc. indicates that the area has the potential to host diamond-bearing kimberlites. The proposed drift prospecting survey, surficial materials mapping and ice-movement-chronology evaluations, 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 studies of ongoing regional ice dynamics, and the characterization of regional background values and source-rock petrology. 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 surficial geology maps; 2) on-line geochemistry databases (till and bedrock) which includes gamma-ray studies; 3) numerical modeling of ice-sheet parameters; 4) syntheses of ice-movement, regional deglaciation and regional sea-level changes; 5) glacial mass-balance of the Barnes Ice Cap; 6) progress reports/presentations will be given at annual industry-oriented meetings 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 1-5 will achieve advanced understanding of ice-sheet dynamics and basal processes which are needed to better constrain and understand distributions of till geochemical anomalies. The timely release of these products (objectives 6 and 7) to stakeholders and northern communities will refine/enhance future geoscience endeavours accordingly.

Methods

Mapping:

- remotely sensed predictive mapping to target alteration sites for geochemical sampling, large-scale ice-flow indicators and identification of maximum marine limits (if applicable).
- standard air photo interpretation, ground truthing and digitization.

Geochemistry:

- collection of till samples will be facilitated by industrial collaborators; analysis of standard physical and chemical (INAA, ICP, FA) properties.
- bedrock geochemical samples will enhance the web-based geochemical database.
- gamma-ray survey and mobile element analysis.

Numerical Modeling of Glacial processes:

- using proxy data from the geochemical survey, geochronological constraints (^{14}C , cosmogenic and OSL) on moraines and sea-level change, glaciologists (UBC) will produce regional numerical models of ice sheet dynamics and provide insight into glacial dispersion processes and basal thermal regimes thereby enhancing mineral exploration.

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