SCIENTIFIC RESEARCH LICENCE APPLICATION
LAND, FRESHWATER & MARINE BASED RESEARCH

NRI strongly recommends that applicants review the following documents prior to submitting an application: *Scientific Research Licencing Guidelines* and *Negotiating Research Relationships in Inuit Communities: A Guide for Researchers.*

IMPORTANT
This application fulfills the requirements for the NIRB environmental screening. Please be advised that your application will not be processed until the application form, project summary, and maps are received. All documents should be uploaded in the following formats: MS Word, Adobe PDF or jpeg.

SECTION 1: APPLICANT INFORMATION

1a. Project Title An Analogue Mission to Discover the Genesis of Methane on Mars

1b. Project Number

Please indicate if applicant has submitted any previous application(s) to NRI related to this project proposal? Yes ( ) No (o)

If yes, please indicate the previous NRI licence number:

Please indicate if applicant has submitted any previous application(s) to NIRB related to this project proposal? Yes ( ) No (o)

If yes, please indicate the previous NIRB licence number(s):

2. Applicant's full name and mailing address:

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London, ON, N6A 5B7

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Email: gosinski@uwo.ca

3. Field Supervisor's name and mailing address:

Marc Beauchamp, Dept. of Earth Sciences,
University of Western Ontario, 1151 Richmond Street,
London, ON, N6A 5B7

Phone: (519) 661-2111 ext.88104
Fax: (519) 661-3198
Email: mbeauch6@uwo.ca

4. Other Personnel list (name, position, affiliation)

Dr. Michael Daly, Project Lead, York University (with 2 students)
Dr. Tim Barfoot, Rover Engineer, University of Toronto (with 2 students)
Melissa Battler, student, University of Western Ontario
Dr. Timothy Haltigin, Science Authority, Canadian Space Agency (with 2 students)

SECTION 2: AUTHORIZATION NEEDED

1. Indicate all authorizations associated with the project proposal:

[ ]	Regional Inuit Association (RIA)	[ ]	Canadian Launch Safety (CLS)
[x]	Nunavut Water Board (NWB)	[ ]	Environment Canada (EC)
[ ]	Nunavut Planning Commission (NPC)	[ ]	Department of Environment (GN)
[x]	Department of Indian And Northern Development (DIAND)	[ ]	Department of National Defense (DND)
[ ]	Department of Fisheries and Oceans (DFO)	[ ]	Hamlet
[ ]	Community Government & Services (CG&S)	[ ]	Parks Canada (PC)

[x]	Nunavut Research Institute (NRI/GN)	[ ]	Canadian Wildlife Service (CWS)
[ ]	Department of Culture, Language, Elders, and Youth (CLEY/GN)	[ ]	Other (please specify):

2. List the active permits, licences, or other rights related to the project proposal and their expiry date:

Permit: Expiry Date

3. Have you applied for all authorizations required to conduct the project proposal activities?

(o) Yes ( ) No

SECTION 3: PROJECT PROPOSAL DESCRIPTION

1. Indicate the activities related to the project proposal:

[x]	Temporary camp (to be removed at end of field season)	[ ]	Soil disposal/ soil storage
[ ]	Permanent camp (to remain for life of authorization)	[x]	Incineration of combustible wastes and removal of non-combustible wastes
[ ]	Construction of recreational or safety cabin	[ ]	River/ stream/ lake crossing or work/ bridge
[x]	Temporary fuel storage (to be removed at end of field season)	[ ]	Drainage alteration
[ ]	Permanent fuel storage (to remain for life of authorization)	[ ]	Geoscientific sampling by diamond drilling
[ ]	Placement of structures for life of permit (other than camp or cabin â€“ i.e. scientific instruments)	[ ]	Geoscientific sampling by soil sampling
[ ]	Placement of permanent structures (other than camp or cabin â€“ i.e. scientific instruments)	[ ]	Geoscientific sampling by trenching
[ ]	Air surveys (i.e. geophysical, wildlife)	[ ]	Geoscientific sampling by borehole core
[ ]	Use of aircraft/watercraft/land vehicle for personnel drop-off and pick-up to project location	[ ]	Blasting
[ ]	Use of on-site mechanized vehicles (i.e. atv, snowmobile, truck, zodiac)	[ ]	Channeling
[x]	Sewage or grey water disposal via sump	[ ]	Excavation
[ ]	Hazardous waste storage or disposal	[ ]	Hydrological testing
[x]	Solid waste disposal	[ ]	Abandonment and restoration
[ ]	Chemical storage	[ ]	Site restoration (fertilization/ grubbing/ scarification/ spraying/ recontouring)
[ ]	Explosives storage	[x]	Research
[ ]	Soil testing	[ ]	Ecological survey
[ ]	Harvesting	[ ]	Removal of vegetation for scientific purposes
[ ]	Other:		

2. Personnel

Total No. of personnel on site = (A) 12	Total No. of days on-site = (B) 12	**Total No. of Person days (A) Ã— (B) =** 144

3. Timing

Period of operation:	July 4, 2012	to	July 18, 2012
Proposed term of authorization:	June 15, 2012	to	August 15, 2012

Please outline the phases of the proposed project (construction/ operation/ decommissioning) including the timing and scheduling of each phase.

Travel to the site will be by Twin Otter to a landing strip at Strand Fiord (July 4). A helicopter will then transport all equipment and personnel to the Lost Hammer spring site where a temporary camp will be erected (July 5).

Scientific research will be conducted from July 6 until July 15. The camp will be dismantled on July 16. A helicopter will return all equipment and personnel to the landing strip at Strand Fiord on July 17 for extraction by Twin Otter on the July 18.

4. Location(s) of data collection:

Location Name	**Region** North Baffin, South Baffin, Kivalliq, Kitikmeot	**Co-ordinates** Lat (degree / minute), Long (degree / minute)	**NTS Map Sheet Nr.**	**Land Status** Crown, Commissionersâ€™, Inuit Owned
Lost Hammer spring	North Baffin	(79/4), (90/12)	059H03	Crown Commissioners'

If the project proposal includes a **camp**, please provide the coordinates of the camp location

Lat (degree/minute) (79/4) Long (degree/minute) (90/12)

NTS Map Sheet Nr. (if different from above)

Please attach maps (preferably 1:250,000 scale) which clearly indicate camp sites and research sites. PDF, jpeg or tiff versions are requested.

The Nunavut Impact Review Board may require additional location information in a subsequent Project Specific Information Requirement (PSIR) submission. This may take the form of a digital Geographic Information Systems (GIS) file.

SECTION 4: NON-TECHNICAL PROJECT PROPOSAL DESCRIPTION

Please attach a non-technical description of the project proposal, no more than 500 words, in English and Inuktitut (+Inuinnaqtun, if in the Kitikmeot). The project description should outline the following:

- Project Title
- Researcher's Name and Affiliation
- Project Location
- Timeframe
- Project Description
  - purpose
  - goals & objectives
  - method of transportation
  - any structures that will be erected (permanent / temporary)
  - restoration / abandonment plans
- Methodology
  - collection protocol
  - collection mechanisms
  - indicate why specific communities or individuals were selected for your research
- Data
  - short term & long term use of data
  - other uses of data
- Reporting
  - How will the research results be communicated to the individual participants, communities, regional and Nunavut organizations?
  - Will the research result in a publication?

SECTION 5: MATERIAL USE

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

Equipment type and number	Size â€“ dimensions	Proposed use
Husky A200 Rover	99x67x39 cm, 50 kg	mobility platform for scientific instruments
Honda Generators (4)	50x30x40 cm, 22 kg	powering electronic equipment
Primus stoves (2)	59x12x32 cm, 5.5 kg	cooking
Logan tent	2x2x4 m	toilet tent
Longhouse tent (2)	5x4x3 m	shelter electronic equipment, kitchen

2. Detail fuel and hazardous material use:

Fuel	Number of Containers and Capacity of Containers	Total Amount of Fuel (in Litres)	Proposed Storage Methods
Diesel			
Gasoline	1 x 55 gallon drum	208	
Aviation fuel	4 x 55 gallon drum	832	
Propane	3 x 20lb. tanks	54	
Other			
Hazardous Materials and Chemicals		**Total Amount of Hazardous Materials and Chemicals (in Litres)**	

3. Detail daily water consumption rates

Daily amount (in Litres)	Proposed water retrieval methods	Proposed water retrieval location
50	Collect water in jugs at river.	Small creek which flows to the N of camp location or at the larger river to the W of camp location.

4. Have you applied for a Class A Licence with the Nunavut Water Board?

(o)	**YES**	**( )**	**NO**

SECTION 6: WASTE DISPOSAL AND TREATMENT METHODS

1. List the types of waste:

Type of waste	Projected amount generated	Method of Disposal	Additional treatment procedures
Sewage (human waste)	12 kg/day	Combustible material will be incinerated in a can; all remaining waste will be transported to PCSP for disposal.	
Greywater	10 L/day	Greywater will be disposed of in a sump.	
Combustible wastes	3 kg/day	Incinerated in a can.	
Non-Combustible wastes	1 kg/day	Collected and transported to PCSP for disposal.	
Overburden (organic soil, waste material, tailings)			
Hazardous waste			
Other:			

2. Will you be incinerating combustible waste, removing all solid waste, and removing the ash generated from incineration?

(o) YES ( ) NO

SECTION 7: COMMUNITY INVOLVEMENT & REGIONAL BENEFITS

1. List the community representatives that have been contacted and provide the minutes of the meetings if available:

Minute			
Community	Name	Organization	Date Contacted

2. How will the proposed project benefit Nunavut? Will your project provide local employment or training opportunities? Please specify.

Axel Heiberg Island is uninhabited, therefore there will be no opportunities for local employment or training.

3. Please describe the nature of local services and/or logistic support that will be required from local communities, eg. Equipment, accommodations, outfitting, translations...

There are no local services on Axel Heiberg Island and all logistical support will be provided by the Polar Continental Shelf Program.

4. Describe and attach documentation regarding community support or concerns for the proposed project?

5. Is there a traditional knowledge component to this research project? If yes, please explain:

no

SECTION 8: GENERAL QUESTIONS

1. Do you give NRI permission to publish project information in the Nunavut Research Institute Annual Compendium of Research Undertaken in Nunavut?

(o)YES ( )NO

2. Is the proposed research associated with International Polar Year (IPY)?

( )YES (o)NO

Applicant:

Signature **Title** **Date**

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