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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

EXPLORATION/ REMOTE CAMP SUPPLEMENTARY QUESTIONNAIRE

Applicant: Marc Beauchamp **Licence No:** 3BC - ADM
(For NWB Use Only)

ADMINISTRATIVE INFORMATION

1. Environment Manager: Marc Beauchamp Tel: (519) 661-2111 ext. 88104 Fax: (519) 661-3148 E-mail: mbeauch6@uwo.ca

2. Project Manager: Gordon Osinski Tel: (519) 661-4208 Fax: (519) 661-3198 E-mail: gosinski@uwo.ca

3. Does the applicant hold the necessary property rights? A Land Use Permit is expected in May 2012

4. Is the applicant an 'operator' for another company (i.e., the holder of the property rights)? If so, please provide letter of authorization. no

5. Duration of the Project

   ☒ One year or less Start and completion dates: July 4 - July 18, 2012
   ☐ Multi Year:

   If Multi-Year indicate proposed schedule of on site activities
   Start: _____ Completion: _____

CAMP CLASSIFICATION

6. Type of Camp

   ☐ Mobile (self-propelled)
   ☒ Temporary
   ☐ Seasonally Occupied: _____
   ☐ Permanent
   ☐ Other: _____

7. What is the design, maximum and expected average population of the camp?
   The camp will consist of 2 Longhouse tents and several small personal tents. The population of the camp will be maximum 12 people

8. Provide history of the site if it has been used in the past.
   The Lost Hammer Spring site has never hosted a camp.

CAMP LOCATION

9. Please describe proposed camp location in relation to biogeographical and geomorphological features, and water bodies.

The camp location is near the Lost Hammer spring site. This is located on a large unnamed river flowing north into Strand Fiord, fed by glaciers emanating from the north of the Stacie ice cap. There is also a small creek nearby which flows into the river.

10. How was the location of the camp selected? Was the site previously used? Was assistance from the Regional Inuit Association Land Manager sought? Include maps and/or aerial photographs.

Short visits to the site by scientists in the past have characterized the salt deposits around the spring and the gases emanating from it. This location is the only documented methane seep in a cryo-environment on Earth and, as such, represents a good analogue for methane sources on Mars.

11. Is the camp or any aspect of the project located on: (See map + photos)

- [x] Crown Lands — Permit Number (s)/Expiry Date: Land Use Permit expected May 2012
- [ ] Commissioners Lands — Permit Number (s)/Expiry Date: _____
- [ ] Inuit Owned Lands — Permit Number (s)/Expiry Date: _____

12. Closest Communities (direction and distance in km):

Grise Fiord is located approximately 340 km to the SE of the site

13. Has the proponent notified and consulted the nearby communities and potentially interested parties about the proposed work?

14. Will the project have impacts on traditional water use areas used by the nearby communities? Will the project have impacts on local fish and wildlife habitats?

The project will have no impacts on either traditional water use areas nor local fish and wildlife habitats.

PURPOSE OF THE CAMP

15.
- [ ] Mining (includes exploration drilling)
- [ ] Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.) (Omit questions # 16 to 21)
- [x] Other Scientific and Technical research

16. Activities (check all applicable)

- [ ] Preliminary site visit
- [ ] Prospecting
- [x] Geological mapping
- [x] Geophysical survey
- [ ] Diamond drilling

- ☐ Reverse circulation drilling
- ☐ Evaluation Drilling/Bulk Sampling (also complete separate questionnaire)
- ☒ Other: Robotics and Scientific Instrument testing

17. Type of deposit (exploration focus):

- ☐ Lead Zinc
- ☐ Diamond
- ☐ Gold
- ☐ Uranium
- ☒ Other: methane

DRILLING INFORMATION

18. Drilling Activities No drilling involved in project.

- ☐ Land Based drilling
- ☐ Drilling on ice

19. Describe what will be done with drill cuttings?

N/A

20. Describe what will be done with drill water?

N/A

21. List the brand names and constituents of the drill additives to be used? Includes MSDS sheets and provide confirmation that the additives are non-toxic and biodegradable.

N/A

22. Will any core testing be done on site? Describe.

N/A

SPILL CONTINGENCY PLANNING

23. The proponent is required to have a site specific Spill Contingency Plan prepared and submitted with the application This Plan should be prepared in accordance with the *NWT Environmental Protection Act, Spill Contingency Planning and Reporting Regulations, July 22, 1998* and *A Guide to the Spill Contingency Planning and Reporting Regulations, June 2002*. Please include for review.

See- An Analogue Mission to Discover the Genesis of Methane on Mars - Spill Contingency Plan

24. How many spill kits will be on site and where will they be located?

1-2 Spill kits will be located on site, at the fuel storage area.

25. Please describe the types, quantities, and method of storage of fuel and chemicals on site, and provide MSDS sheets.

1 55 gallon drum of gasoline as well as 4 20 L gerry cans of gasoline, 4 55 gallon drums of Jet A Fuel and 3 20 lb. propane tanks will all be stored on flat ground (preferably soil) on an impermeable liner, far from water courses. (see attached MSDS sheets)

WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

Water will be collected from the small creek which runs just north of our camp location. Should this creek be dry, water will be collected from the large river just west of our camp location.

27. Estimated water use (in cubic metres/day):

- [x] Domestic Use: 0.05 m^3/day Water Source: creek or river
- [ ] Drilling: _____ Water Source: _____
- [ ] Other: _____ Water Source: _____

28. Describe water intake for camp operations? Is the water intake equipped with a mesh screen to prevent entrapment of fish? (see *DFO 1995, Freshwater Intake End-of-Pipe Fish Screen Guideline*) Describe:

Water intake will be done by hand using water jugs.

29. Will drinking water quality be monitored? What parameters will be analyzed and at what frequency?

No

30. Will drinking water be treated? How?

Drinking water will either be filtered with a small hand pump or treated with iodine tablets.

31. Will water be stored on site?

Small amounts (~20 L) of water will be stored on site for domestic purposes.

WASTE TREATMENT AND DISPOSAL

32. Describe the characteristics, quantities, treatment and disposal methods for:

☒ Camp Sewage (blackwater) 12 kg/day (human waste)

Combustible material will be incinerated in a can. All remaining waste will be transported to PCSP for disposal.

☒ Camp Greywater 10 L/day (dishwater, cooking)

Greywater will be disposed of in a sump

☒ Solid Waste 4 kg/day (Garbage, food waste)

Incineration of all combustibles in a can. All non-combustible waste will be transported to PCSP for disposal

☐ Bulky Items/Scrap Metal

☐ Waste Oil/Hazardous Waste

☒ Empty Barrels/Fuel Drums

All empty barrels will be transported back to PCSP for reuse.

☐ Other:

33. Please describe incineration system if used on site. What types of wastes will be incinerated?

34. Where and how will non-combustible waste be disposed of? If in a municipality in Nunavut, has authorization been granted?

Non-combustible waste will be returned to PCSP for disposal.

35. Describe location (relative to water bodies and camp facilities) dimensions and volume, and freeboard for all sumps (if applicable).

One sump will be located approximately 300 m from both the creek and the river, within 20 m of the camp location. Dimensions of the sump: 0.5 m diameter, 1 m deep, ~0.4 m^2 volume.

36. Will leachate monitoring be done? What parameters will be sampled and analyzed, and at what frequency?

no.

OPERATION AND MAINTENANCE

37. Have the water supply and waste treatment and disposal methods been used and proven in cold climate? What known O&M problems may occur? What contingency plans are in place?

These treatment and disposal methods have been used at scientific camps on Devon Island and Axel Heiberg Island for several years. No O & M problems are foreseen.

ABANDONMENT AND RESTORATION

38. Provide a detailed description of progressive and final abandonment and restoration activities at the site.

After the 2 weeks of operations all temporary camp materials will be packed up and returned to PCSP. Nothing will remain on site and any disrupted terrain will be restored to it's initial state.

BASELINE DATA

39. Has or will any baseline information be collected as part of this project? Provide bibliography.

No

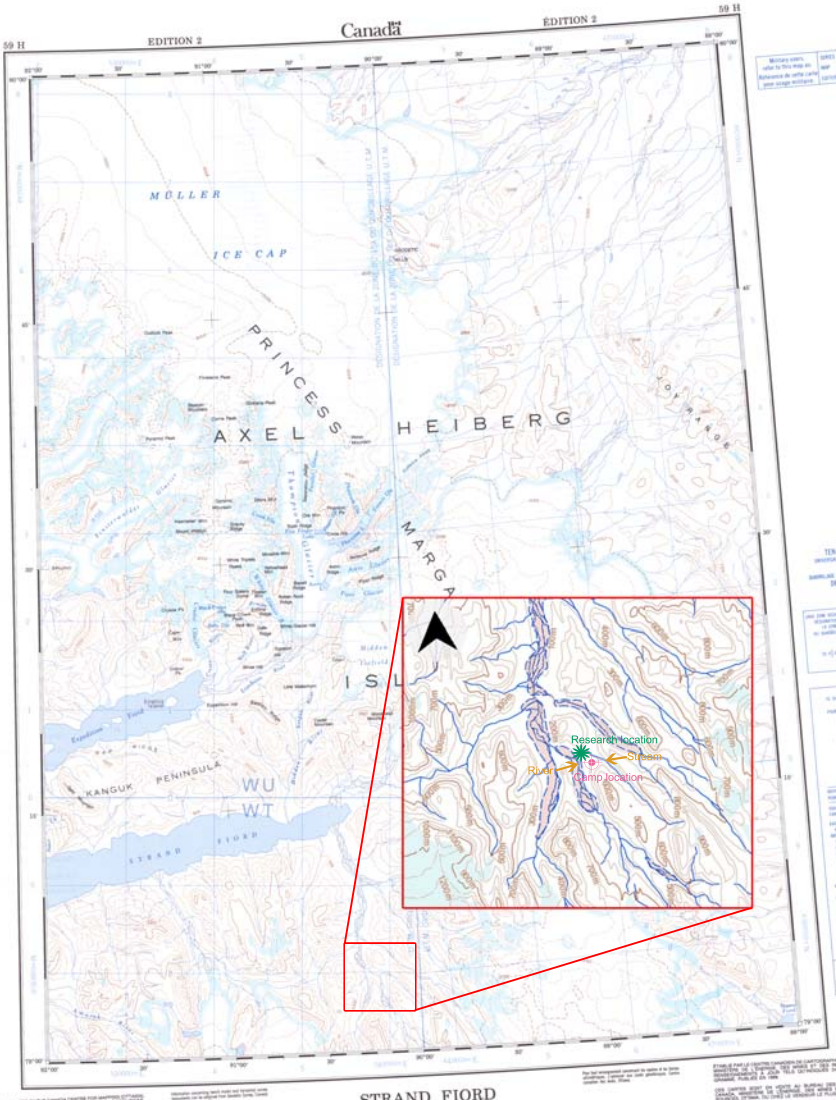
- ☐ Physical Environment (Landscape and Terrain, Air, Water, etc.)
- ☐ Biological Environment (Vegetation, Wildlife, Birds, Fish and Other Aquatic Organisms, etc.)
- ☐ Socio-Economic Environment (Archaeology, Land and Resources Use,
- ☐ Demographics, Social and Culture Patterns, etc.)
- ☐ Other: _____

REGULATORY INFORMATION

40. At a minimum, you should ensure you have a copy of and consult the documents below for compliance with existing regulatory requirements:

- ✓ ARTICLE 13 – *NCLA -Nunavut Land Claims Agreement*
- ✓ NWNSRTA – *The Nunavut Waters and Nunavut Surface Rights Tribunal Act, 2002*
- ✓ *Northwest Territories Waters Regulations, 1993*
- ✓ NWB - Water Licensing in Nunavut - Interim Procedures and Information Guide for Applicants
- ✓ NWB - Interim Rules of Practice and Procedure for Public Hearings
- ✓ RWED – *Environmental Protection Act, R-068-93- Spill Contingency Planning and Reporting Regulations, 1993*
- ✓ RWED A Guide to the Spill Contingency Planning and Reporting Regulations, 2002
- ✓ NWTWB - Guidelines for Contingency Planning
- ✓ *Canadian Environmental Protection Act, 1999 (CEPA)*
- ✓ *Fisheries Act, RS 1985* - s.34, 35, 36 and 37
- ✓ DFO - Freshwater Intake End of Pipe Fish Screen Guideline

- ✓ NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the NWT
- ✓ Canadian Council for Ministers of the Environment (CCME); Canadian Drinking Water Quality Guidelines, 1987
- ✓ Public Health Act - Camp Sanitation Regulations
- ✓ Public Health Act - Water Supply Regulations
- ✓ *Territorial Lands Act* and *Territorial Land Use Regulations*; Updated 2000



STRAND FIORD

DISTRICT OF FRANKLIN DISTRICT DE FRANKLIN

NORTHWEST TERRITORIES TERRITOIRES DU NORD-OUEST

Scale 1:250 000 Échelle

Miles 1 0 5 10 15 20 25 Miles

Kilometres 0 5 10 15 20 25 30 Kilometres

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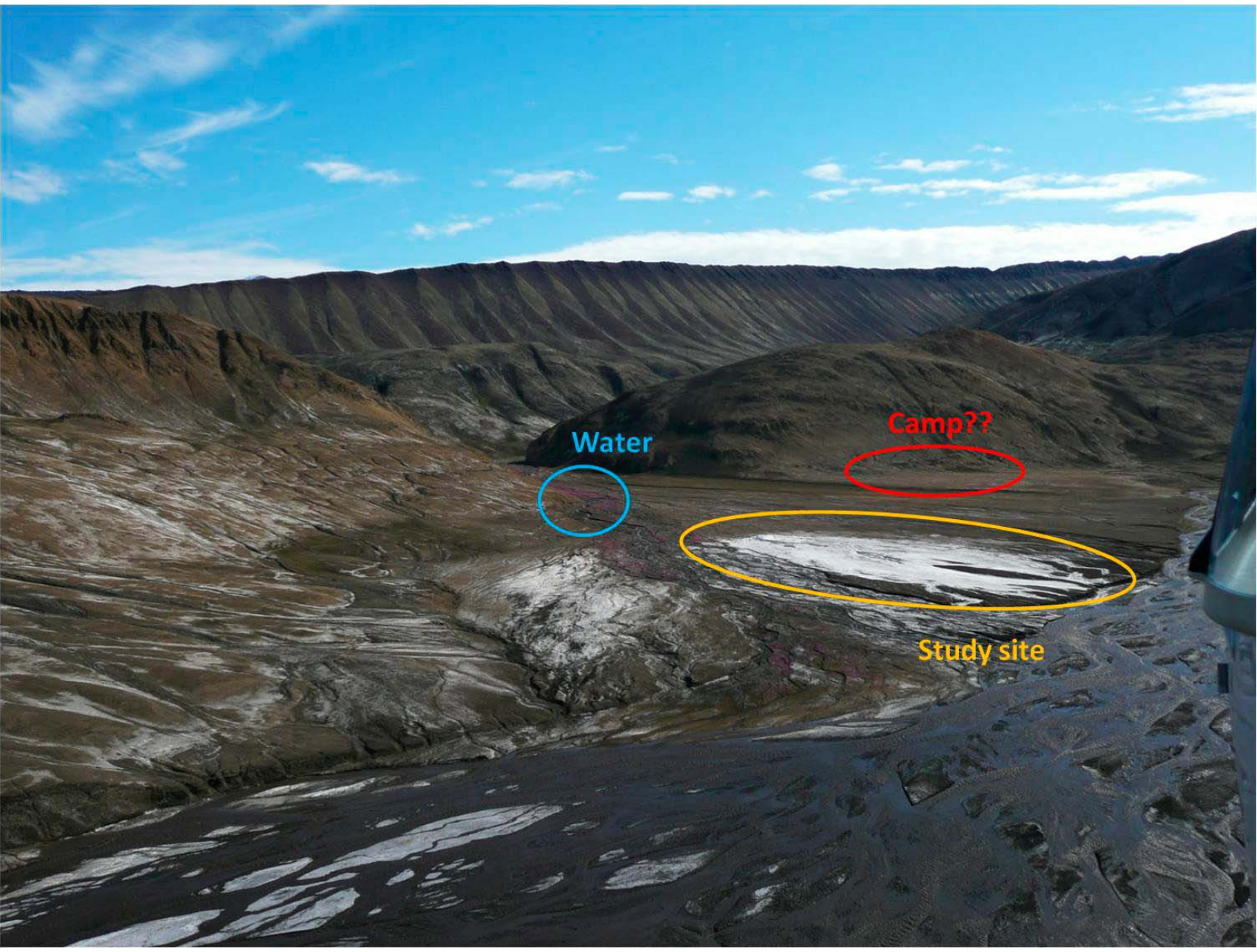
STRAND FIORD
59 H
EDITION 2 EDITION

Energy, Mines and Resources Canada | Énergie, Mines et Ressources Canada


Water
Camp??
Study site