GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA

Ottawa, October 27, 2015

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Subject: 8WLC-TWG1516 – Tehery-Wager Geoscience Project – Report for Approval for the Use of Waters or Deposit of Waste Without A Licence

Dear Mr. Kabloona,

The Geological Survey of Canada (GSC) in collaboration with the Canada-Nunavut Geoscience Office (C-NGO), partners from Canadian universities, and the Nunavut Arctic College, completed all field activities pertaining to the NWB file 8WLC-TWG1516 in the Tehery-Wager area between Wager Bay and Chesterfield Inlet, Nunavut, on August 29, 2015. Please find below our report containing a summary description and supporting photographs of the restoration of our camp site.

As planned, geological mapping and research was carried out of a temporary, low-impact, tent camp situated on a sandy terrace of the Lorillard River (latitude: 64° 36' 28"N and longitude: 90° 05' 16"W). The temporary field camp (**Photos 1 & 2**) was set up by transporting camp gear and construction/research personnel on Turbo Otter flights (using tundra tires) from Chesterfield Inlet. The fuel necessary for camp and helicopter operations (59 barrels) was staged from Chesterfield Inlet by Turbo Otter (using tundra tires) to a fuel cache using regulatory berms (**Photo 3**). Two small remote refueling caches comprising 18 barrels of fuel each were established ~70 km east of Lorillard River camp (latitude: 64° 33' 21"N and longitude: 88° 41' 4"W) and near Peregrine Diamonds Ltd.'s Nanuq camp (latitude: 65° 13' 38"N and longitude: 91° 05' 15"W) to minimize the number of helicopter flights from camp to the eastern and northern reaches of the project area. Camp and both fuel caches were located 50-80 metres from high water line.

As planned, the work was undertaken by a crew of 12-16 participants supported by 1 Bell 206L3 helicopter based out of the Lorillard River field camp between June 30th and August 3rd. The crew involved 6 geologists, 2 GIS specialists, 2 university field assistants, 1 Nunavut Arctic College field assistant, 1 cook, 1 assistant cook (local hire), 1 helicopter pilot/engineer, and 2 bear monitors (local hires).

Field work out of Lorillard River camp involved 6-10 km foot traverses by teams of two to three. Each team made field observations, and took measurements, photographs, and fist-size rock samples as required. Other teams conducted helicopter-assisted traverses to take till or stream sediment/water samples. All work had minimal disturbance on the land or water bodies.

Nunavut Arctic College student Katrina Hatogina participated in all aspects of the camp and research work during the course of the summer and consequently acquired invaluable practical experience, such as geological mapping skills including rock/mineral identification, measuring strike & dip with compass, recording observations in hand-held (Arc GIS) computer, navigating with airphoto; safe precautionary use of shotgun in bear country; awareness and safe behavior when working with helicopters.

Photo 1. Location of Lorillard River camp site, Turbo Otter landing strip, and fuel storage during use. Lorillard River in background.

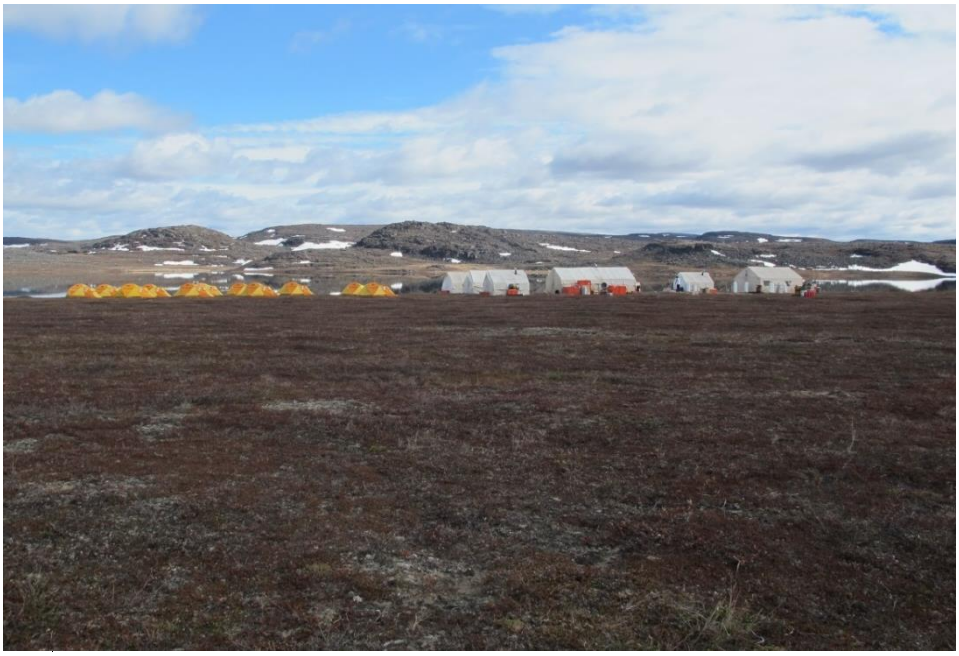

Photo 2. Overview of Lorillard River camp and sleeping tents with Turbo Otter landing strip in foreground.

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Discovery Mining Services was contracted for the small footprint tent camp construction and take-down. Two locals were hired to assist with camp construction.

No drilling or other industrial-type work was undertaken and no roads or tracks constructed. All operations were carried out in a manner to minimize surface disturbance. Other than aircraft, there was no heavy equipment, nor motorized vehicles on site. The project footprint was kept as small as possible and all disturbed areas were properly restored (**Photos 4 & 5**).

Photo 3. Main Lorillard River fuel cache during use.

Water was used exclusively for cooking, drinking, and personal cleanliness. Two 45 gallon plastic tanks were used as clean water reservoir. Water was pumped from the Lorillard River using a small portable gasoline pump with a water intake hose equipped with a screen of appropriate mesh size to ensure that there was no entrapment of fish. The camp bulk daily water consumption ranged between 50 and 70 gallons.

During the duration of the field work no alteration to the bed or banks of the Lorillard River occurred.

All waste was sorted into 3 categories:

- Compostable (e.g. sewage)
- Burnable (e.g. cardboard, wood, paper, kitchen waste)
- Unburnable (e.g. metal, glass)

Compostable residues were buried beneath 1 metre of sandy soil >80 metres from high water line. Burnable waste was processed in an enclosed incinerator meeting the Canadian Wide Standards for Dioxins and Furans, with ashes sealed in 5-gallon metal pails and flown to Chesterfield Inlet for final disposal at the municipal facility.

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Unburnable waste was flattened/crushed and removed from the site in 5-gallon metal pails and flown to Chesterfield Inlet for final disposal at the municipal facility.

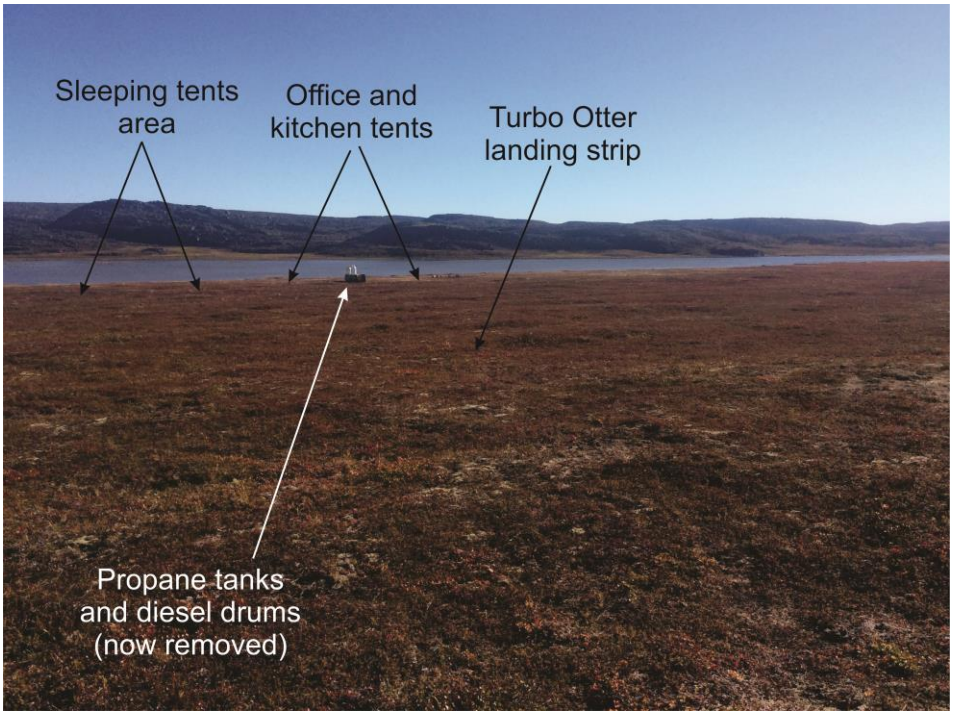

Photo 4. Lorillard River camp site following demobilization (linked to Photo 1).

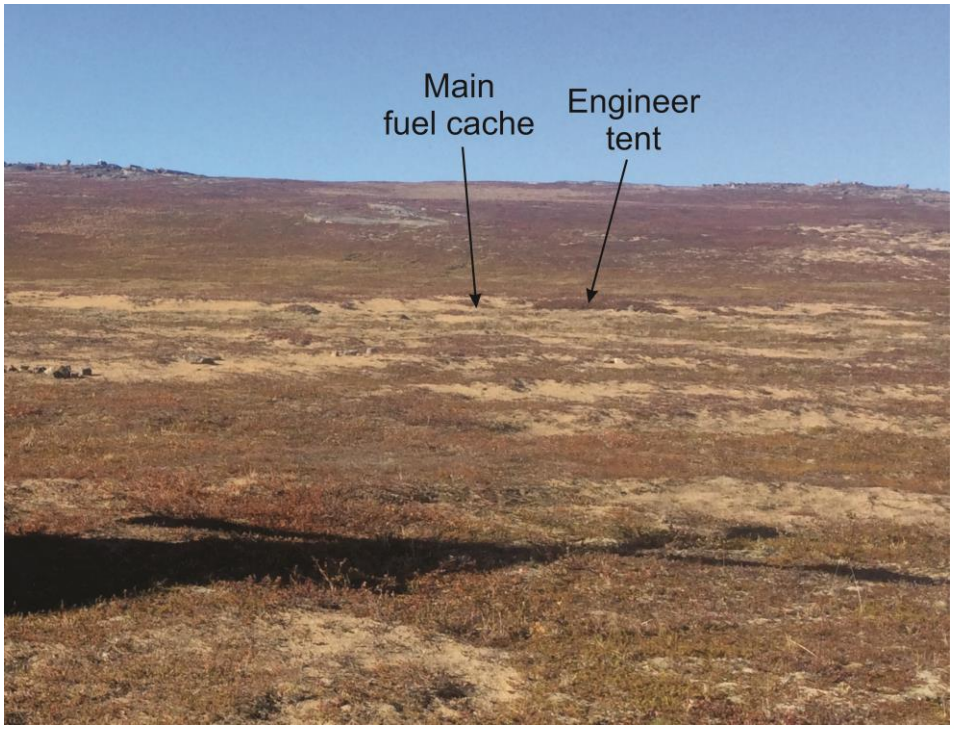

Photo 5. Lorillard River camp site following demobilization (linked to photo 3).

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No petroleum spills occurred in camp or at the satellite fuel caches during field operations.

Camp demobilization took place in two stages owing to bad weather: on August 3-7 and August 28-29. All camp gear and garbage were removed from the camp site (**Photos 4 & 5**), and any small debris systematically picked up/removed. The site was restored, to the extent practicable, to the state in which it was before its use. All sumps were backfilled and restored. Any remaining evidence of camp site use (Turbo Otter tracks) is anticipated to be erased/overgrown by next spring. All fuel caches were cleared with the exception of 11 drums remaining at the Nanuq camp fuel cache. These drums will be used for field work next summer and will be removed in August 2016.

Wildlife sighted over the whole project area included 1000's caribous, 9 polar bears, 4 wolves, and several sandhill cranes. No incidents resulting in harm to wildlife occurred. Archaeological sites encountered included inuksuk, cairns, and tent rings.

All previous documents related to this report are attached to the e-mail. They include:

- GSC-CNGO Tehery-Wager signed application for approval to use water or deposit of waste without a licence
- GSC-CNGO Tehery-Wager Executive summary in Inuktitut
- GSC-CNGO Tehery-Wager Executive summary in English
- GSC-CNGO Tehery-Wager Appendix A
- Nunavut Water Board Approval without a licence

Do not hesitate to contact me if you require any further information.

Sincerely,

Natasha Wodicka

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