

December 18, 2018

Nunavut Water Board
Licensing Department
P.O. Box 119
Gjoa Haven, NU X0B 1J0
867-360-6338

Re: Year-end report and cancellation of Licence no. 8WLC-FHG1819 – Fury and Hecla Geoscience Project

Dear Nunavut Water Board,

The Canada-Nunavut Geoscience Office has completed the first year of field-based geoscience mapping in the area on Baffin Island immediately north of Fury and Hecla Strait. After reviewing the information about the Fury and Hecla Geoscience Project provided below, please recognize this letter as our official year-end report and notice of cancellation for Licence no. 8WLC-FHG1819.

Planning and coordination for the second year of field-based geoscience mapping is on-track to take place in 2019, and a new Application for Approval for the Use of Water and Deposit of Waste Without a Licence will be submitted to the Nunavut Water Board early next spring detailing the aspects of that work.

Should you have any questions regarding the information provided in this report, please contact Linda Ham, Chief Geologist, at the Canada-Nunavut Geoscience Office by e-mail (Linda.Ham@Canada.ca) or phone (867-975-4412).

Regards,

Holly Stumpf

Holly Steenkamp, M.Sc.
Regional Mapping Geoscientist
Canada-Nunavut Geoscience Office
867-222-9223

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camp at the Gifford River Camp location, with the assistance of 3 labourers hired from Igloolik. The camp-build contract included installation of all camp infrastructure including tent structures, plumbing, electricity lines, and satellite communications.

On July 9th, Holly Steenkamp (Field Party Leader) and Alessandro Ielpi (field party member) arrived at Gifford River Camp to assist Discovery Mining Services Ltd. with set up of specific camp equipment in preparation of the arrival of the remaining field party, who stayed in Igloolik to assist with mobilizing Twin Otter loads, welcoming incoming personnel, and completing local contracting. On July 13th, the complete group of field personnel in Igloolik were brought out to Gifford River Camp, and the final steps of camp set up were completed. The first helicopter and pilot (Hudson Bay Helicopters Ltd.) also arrived in camp that day. Discovery Mining Services Ltd. continued to work on the camp until its completion on July 14th. The Twin Otter continued to mobilize fuel to the Gifford River Camp and fuel caches until July 16th.

July 14th was the first day of field work. All field crew members were set out in two helicopter loads to the same location and conducted a group traverse to ensure that all field electronic and communication gear was operating properly, and that all geological observations were being appropriately and uniformly recorded by each crew member. From July 15th to August 13th, individual teams of 2, 3, or 4 people conducted daily traverses, created detailed maps at specific sites, and made targeted helicopter stops at isolated outcrops for map infilling of the Precambrian (rocks 540 million years old or older) geology in the study area.

The helicopter contract with Hudson Bay Helicopters Ltd. ended on July 18th, and this machine returned to Igloolik on July 19th and on to other projects. A new contract with Summit Helicopters began on July 19th, so this machine arrived at Gifford River Camp on July 18th to prepare for work. Summit Helicopters conducted the remainder of the work with the Precambrian geology crews through the end of the field season, returning to Igloolik on August 15th.

A third helicopter contract with Universal Helicopters Newfoundland and Labrador LP. began on July 21st and was solely dedicated to working with the Paleozoic and surficial geologists. This contract ended on August 5th and the helicopter returned to Igloolik to begin work on a different project.

On August 15th, Discovery Mining Services Ltd. (including the same local labourers that had been hired for the camp build) and Kenn Borek's Twin Otter returned to Igloolik to begin demobilization. Field crews at Gifford River Camp prepared field equipment for demobilization prior to their return to Igloolik later that day. All field gear, fuel drums, and waste was demobilized back to Igloolik over the course of a few days, and Gifford River Camp and Neergaard Lake Cache were completely cleaned up by August 19th. Due to poor weather conditions, the Twin Otter could not access the Ivisarak Lake Cache during this planned demobilization schedule. However, the Polar Continental Shelf Program organized a separate flight on August 29th to pick up the remaining drums and fuel berms from the Ivisarak Lake Cache, and at that point all the Fury and Hecla Geoscience Project activities in the study area were reclaimed.

Gifford River Camp

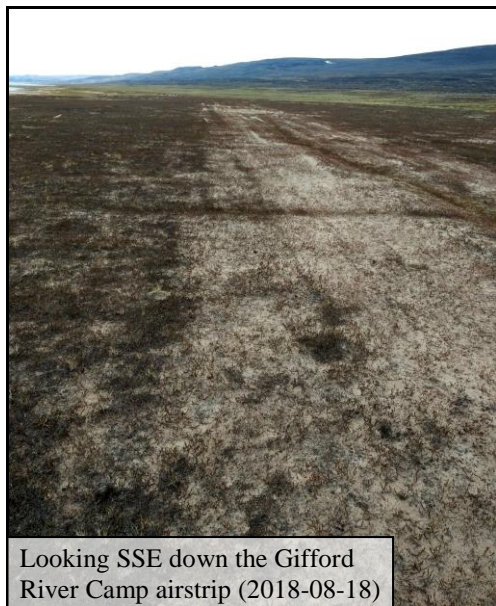
Infrastructure

Gifford River Camp was designed as a single-season camp, with the intention that all gear, supplies, and infrastructure would be removed at the end of the 2018 field work. Discovery Mining Services Ltd. was contracted to provide turn-key camp-build and take-down services, and they provided the expertise and much of the equipment and supplies to build the camp's infrastructure. The Gifford River Camp consisted of a Kitchen tent, a Dry/shower tent, Office tent, four VIP sleeper tents, several Eureka K-2 sleeper tents for field crews, a wooden outhouse, and a Helicopter/Sample tent adjacent to the large fuel berm. All structures and waste pits were set up to be >120 ft (~40 m) from the high-water line of the Gifford River.

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at the Gifford River Camp, they provided the Canada-Nunavut Geoscience Office with photos showing the cleared camp site, and airstrip and helipad areas. All gear, equipment, garbage, and fuel drums were removed from the Gifford River Camp and the Neergaard Lake Cache by August 18th, and from the Ivisarak Lake Cache on August 29th.



Looking SSE down the Gifford
River Camp airstrip (2018-08-18)

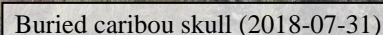
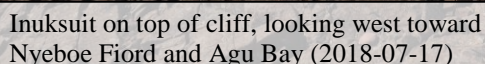
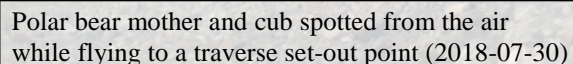


Looking SSE at Gifford River Camp; only outlines in sand remain of VIP, Office, Kitchen, and Dry/Shower tents (2018-08-18)

Wildlife sightings

Field crews were instructed to note any wildlife sightings or encounters they had for reporting purposes. The table below documents these occurrences. The northern coastline of the Fury and Hecla Strait hosted great numbers of snow geese through their molting season. Several falcons were observed in areas where cliffs were sufficiently high (deeply incised river cuts just inland from the strait, for example).

		Wildlife		Location (NAD 83)	
Date	Time	Type	Count	Latitude (DMS)	Longitude (DMS)
2018-07-16	18:10	Caribou	4	UTM 47E07 West (while in flight)	
2018-07-17	18:12	Caribou	2	UTM 47F06 Central (while in flight)	
2018-07-19	11:30	Polar Bear	1	Near Ivisarak Lake Cache	
2018-07-20	10:00	Fox	1	70°04'25.9" N	85°07'04.0" W
2018-07-21	12:30	Caribou	1	70°14'01.9" N	84°40'24.0" W
2018-07-25	12:20	Hare	1	70°26'09.8" N	83°32'09.2" W
2018-07-29	10:00	Polar Bear	1	Swimming in ocean at the south end of Gifford Fiord	
2018-07-30	10:01	Polar Bear	2	70°07'10.0" N	83°03'26.5" W
2018-08-03	09:30	Fox	6–7	Near Neergaard Lake Cache	
2018-08-12	14:30	Polar Bear	1	~15 km north of Ivisarak Lake Cache	

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Socio-economic Impacts

The Fury and Hecla Geoscience Project relied heavily on the cooperation and involvement of businesses and service providers based in Igloolik during the 2018 field season. Grocery contracts were set up with the Igloolik Coop and Northern stores for \$25,000 each, although total purchases did not reach this limit. LRT Construction provided a front-end loader rental for mobilizing camp equipment and fuel, as well as a truck rental and staff housing during both mobilization and demobilization of camp. The Coop Hotel was also used to accommodate pilots and field crew who were swapped in and out of camp throughout the field season. Jet fuel was purchased from the Igloolik supply by the Twin Otters during camp mobilization and demobilization, as well as by the helicopters that moved in and out of town during and after the project. Upon camp demobilization, a Seacan was rented from the Igloolik Coop to store all the field equipment that would eventually be shipped back to Ottawa. The Igloolik Hamlet Office provided heavy equipment to move this Seacan to the Airport area for easy offloading of gear from each Twin Otter load, and then moved the Seacan to the beach for later movement to the NEAS barge.

Discovery Mining Services Ltd. is a northern-based business, located in Yellowknife, and was contracted with the stipulation that any camp-building crews, aside from the crew leader who was to be a Discovery Mining Services employee, were to be hired locally from Igloolik. Discovery Mining Services hired three local labourers from Igloolik to assist with the camp set-up and tear-down. Two men were stationed at the Gifford River Camp during camp mobilization and demobilization, while the third man assisted with loading and unloading the Twin Otter by operating the front-end loader in Igloolik.

A wildlife monitor was sought from Igloolik with the understanding that they must pass a health fitness exam and provide their own firearm and ammunition for the job. One man expressed interest, passed the health exam, and was brought to Gifford River Camp despite not having his own firearm. After three days in camp without being able to get his family members to bring his firearm from their summer camp to the airport for mobilization into Gifford River Camp, he returned to Igloolik on the last Twin Otter flight. The wildlife monitor position was announced again on the Igloolik radio and one person expressed interest but did not complete the health fitness exam, so the position was not refilled.

At the end of the field season a donation of approximately 20 boxes of fresh and non-perishable food, cleaning supplies and toiletries were dropped off at the Igloolik Community Centre during a community event where many children, adults, and elders were playing games and enjoying live music. A fishing pole and tackle that were purchased by one of the field crew were given to the event organizers as a prize to be awarded during one of that afternoon's games. The people at the event were very appreciative.

Finally, several of the field crew members purchased carvings and crafts directly from local artists as souvenirs of their time spent in Igloolik.