



CANADA-NUNAVUT
GEOSCIENCE OFFICE

BUREAU GÉOSCIENTIFIQUE
CANADA-NUNAVUT
KANATAMI-NUNAVUMI
GEOSCIENCE TITIGAKVIUT



November 24, 2017

Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU
X0B 1J0

Re: Year-end reporting for Approval Without-A-Licence No. 8WLC-TWG1718, Tehery-Wager Geoscience Project

To: Thomas Kabloona, Chair, Nunavut Water Board

The 2017 field work component of the Tehery-Wager Geoscience Project was coordinated by the Canada-Nunavut Geoscience Office (CNGO), and included participants from the University of British Columbia-Okanagan (UBCO) and Université Laval (ULaval). Following the successful extension of permits and licenses from the Nunavut Research Institute, Nunavut Water Board, Indigenous and Northern Affairs Canada, and the Kivalliq Inuit Association in the spring of 2017, the five field party participants completed required safety training courses, including Canadian Firearm Safety Training, hands-on shooting practice and Wilderness First Aid. Also, in preparation for the field work, logistic support contracts were finalized through the Polar Continental Shelf Program (Project 063-17).

On June 19th, Celine Gilbert and I traveled to Chesterfield Inlet to deliver 75 printed Inuititut Place Names maps covering the area around the Hamlet of Chesterfield Inlet, which Celine made in collaboration with Inuit Heritage Trust. The maps were delivered on a first-come-first-served basis, with a few batches of maps held for specific groups in town, including the search and rescue teams, Hunters and Trappers Organization, and some of the elders. Before the end of the day, all 75 copies were distributed.

On June 20th, the five field party members travelled to Baker Lake where our mobilization to our field camp was being staged. We stayed at the Baker Lake Lodge, rented a pick-up truck from Baker Lake Contracting and Supply, and organized our field equipment, purchased groceries from the Co-op and Northern stores, purchased fuel and camp supplies, and then waited for the scheduled routine maintenance on our chartered Turbo Otter from Ookpik Aviation to be completed. We mobilized to camp on June 23rd, after meeting our pilot from Prairie Helicopters.

After setting up our tents and equipment at FPB Camp (located adjacent to Peregrine Diamond Ltd.'s Nanuq Camp on the Lorillard River), we began field work on June 24th. For the first week of field work, the two field participants from the UBCO were set out to do 6–10 km-long traverses, while myself and a professor from ULaval used the helicopter to visit specific sites around the study area. On June 29th, one participant from the UBCO and the professor from ULaval were picked up from camp on a scheduled Twin Otter supply flight, leaving three field party participants and the helicopter pilot in camp until the end of the field work on July 5th. Until this time, the remaining participant from UBCO and Celine Gilbert traversed together, while I conducted targeted site visits with the helicopter. All of the field work went smoothly, we had no major interruptions for weather or mechanical issues, and successfully visited all of the areas that were planned. Following our demobilization from camp on July 5th, all of our field gear and samples were removed from FPB Camp by Ookpik Aviation the next day.





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During the field work, we saw 1 muskox, 4 wolves (of which 3 were in a pack), approximately 2000 caribou in 3 or 4 herds, many siksik, and a wolverine. There were countless finches, sparrows, snow buntings, plovers, loons, geese and a few sandhill cranes, gyre falcons, and rough-legged hawks. We did not see any polar bears, despite spending some time near Wager Bay (where we did see paw prints in a snowbank), or grizzly bears.

At the FPB camp, up to 0.075 m³ of water was collected daily for drinking and cooking from the Lorillard River in plastic water bags. A pit was dug for disposal of grey water produced from washing dishes (up to 0.050 m³ per day was deposited), which was located approximately 40 m from the high-water line of the river. A separate pit was dug for human waste (up to 0.025 m³ per day was deposited), located approximately 45 m from the high-water line. Upon demobilization at the end of the field season, these pits were re-covered and returned to their natural state, all loose debris was picked up, and all garbage waste was packed for transportation and disposal in Baker Lake.

Christine Wilson, a Lands Inspector from Indigenous and Northern Affairs Canada based in Rankin Inlet, visited FPB Camp on July 8th while en route to the Sila Lodge. While at FPB Camp, she performed a quick inspection of the camp site. Ms. Wilson noted that the camp site was very clean, with most of the disturbed ground replaced to a natural state. At the time, the site contained only empty and full fuel drums, and she noted that some were missing identification labels. After discussions with Ms. Wilson, we received a generally positive review, and she has since closed our inspection file. All fuel drums (empty and full) were removed by Ookpik Aviation from FPB Camp, Fehet Lake Cache, and Lorillard Cache by September 9th.

The data collected in the field in 2017 was focused on the Wager shear zone, a 450 km-long structure that can be traced from Southampton Island, along the southern coast of Wager Bay, and inland toward Amer Lake, and on targets that will increase the density of data for mapping purposes or that needed to be sampled or resampled. The data and samples will be integrated with the information collected during the 2015 and 2016 mapping work in the Tehery Lake–Wager Bay area. These new maps are currently being drafted by Natasha Wodicka at the Geological Survey of Canada (GSC) in Ottawa. Thematic research that will help develop a geological history of the area is also ongoing, with scientists and students from the GSC, ULaval, and UBCO working on independent, but complementary, studies. The results of these studies are being documented in reports, journal articles, conference posters and presentations, and media releases. All products will be made publically available through the CNGO's website, or through Natural Resources Canada's GEOSCAN website.

At this time, the field components of the Tehery-Wager Geoscience Project are completed. Therefore, all of the standing licenses and permits for access to this study area can be closed. The CNGO and GSC appreciate the continued support of your organization. Should you require further information or have questions, please do not hesitate to contact us.

Sincerely,

Holly Steenkamp

Holly Steenkamp, M.Sc.
Regional Mapping Geoscientist
Canada-Nunavut Geoscience Office
867-975-4533
Holly.Steenkamp@Canada.ca

Natasha Wodecka

Natasha Wodicka, Ph.D.
Research Scientist
Geological Survey of Canada
613-947-4795
Natasha.Wodicka@canada.ca





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The 2017 field party, from left to right: Dr. Carl Guilmette, Université Laval; Isabelle Therriault and Dr. Kyle Larson, University of British Columbia-Okanagan; Celine Gilbert, Canada-Nunavut Geoscience Office; Jason Lamodiere, Prairie Helicopters; Holly Steenkamp, Canada-Nunavut Geoscience Office.



June 24th, 2017: first day in the field, south of Wager Bay, looking west along the Wager shear zone.



A rare sighting of a wolverine at the base of a bouldery outcrop.



FPB Camp before (left) and after (right) demobilization.

