NWB LICENCE No. 2BE-PBP1520

2016 REPORT OF ACTIVITIES

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March 23, 2017

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Water Licence 2BE-PBP1520 – Northquest Ltd

Executive Summary of Report on 2016 Activities

The Pistol Bay camp was opened up June 22nd by a construction crew of three from Eskimo Point Lumber Supply based in Arviat, Nunavut. During the period of June 22nd to July 2nd the kitchen was extended, additional showers were installed in one tent, a wood frame structure was added to house the water storage, hot water tank and a washer and dryer and two plywood tent floors were built.

The camp is comprised of turn-key style Weatherhaven tents and a plywood kitchen. As a result, only a few hours of work were required to make the camp fully operational. The camp was in operation from July 7th to October 6th.

The number of personnel in camp reached a maximum of 33 during the busiest portion of the program. Personnel consisted, from time to time, of seven geologists, one camp foreman, one pilot, one helicopter engineer, eight diamond drillers, one diamond driller foreman, four glacial till samplers, six camp/field assistances that also monitored for bears, two core cutters, and two kitchen staff that were also medics. Due to personnel rotations, and duration requirements for some activities not all of the personnel listed herein were present all of the time.

The camp/field assistants, core cutters and one kitchen staff member were hired from Whale Cove. A total of twenty Whale Cove residents were used to fill these four positions.

An A-Star B2 helicopter chartered from Custom Helicopters was used to transport all drills and personnel during the program.

Diamond drilling by Top Rank Diamond Drilling occurred between July 9th and September 23rd. Two Discovery 2 drill rigs were used to complete all drilling at the Vickers and Howitzer targets. Howitzer is in the same geographic area as Bazooka. Double-walled fuel tanks were used on all drills. At the Vickers target, 16 holes were completed for a total of 4,003.75 metres. At the Howitzer target, 32 holes were completed for a total of 6,863.09 metres.

Upon completion of the 2016 program, the two Discovery 2 drills were mothballed for storage at the Howitzer prospect.

During the 2016 program, the F250 pick-up truck that has been on-site since 2013 was utilized to make trips to Whale Cove to deliver garbage and pick up groceries and fuel. As well, it was utilized to transport all locally hired employees during crew shift changes.

The camp drew drinking and wash water from a nearby pond. A total of 162.84 cubic metres of water were utilized during the 98 days of operation. Camp water consumption averaged 1.66 cubic metres per day.

The drilling operation drew water from 6 small lakes on the Vickers prospect and 7 small lakes on the Howitzer prospect and utilized an estimated total of 7,804 cubic metres of water. The drills were operational for a total of 77 days and consumed an estimated average of 101.34 cubic metres per day.

All non-hazardous waste including paper and cardboard was transported to the Whale Cove municipal dump by truck every few days during the program. The 2017 transportation of non-

hazardous waste to the Whale Cove municipal dump remains subject to approval of certain conditions precedent pursuant to Part D, Item 5 of Northquest's water permit issued as NWB Licence No. 2BE-PBP1520 being satisfied.

Fifty four bags of CaCl are stored inside one of the Weatherhaven tents on the Vickers Prospect. This tent is used for storage of other equipment, and is an emergency shelter for personnel working on the Vickers Prospect.

A total of 15 drums of Jet A fuel and 15 drums of diesel fuel, two drums of gasoline and 14 drums of fuel suitable for use in drill water heaters are currently stored at the base camp in a tarpaulin covered fuel berm.

Ninety six full and fifty partially full 100 lb cylinders of propane are currently stored at the base camp. In addition, two hundred 100 lb cylinders of propane are stored in Whale Cove.

An additional 199 drums of Jet A fuel and two hundred 100 lb cylinders of propane are stored at the old barge landing site in Whale Cove. All of the Jet A is stored in tarpaulin covered berms.

Ten drums of waste oil and contaminated fuel were delivered to the Whale Cove airport. They are currently stored there to await transportation to Arviat for final disposal in the municipality's waste oil-fired furnace, subject to approval of certain conditions precedent pursuant to Part D, Item 5 of Northquest's water permit issued as NWB Licence No. 2BE-PBP1520 being satisfied. No used oil is currently stored at the base camp.

Thirty six empty propane cylinders and 694 fully drained fuel drums are temporarily stored at the Whale Cove airport. The propane tanks will be returned to Churchill and the empty drums will be crushed prior to disposal at the Whale Cove municipal dump. Permission to store the empty fuel drums at the Whale Cove airport was obtained from the Hamlet of Whale Cove on March 16, 2016; written authorization is presented herein on page v. Northquest intends to have these drums crushed and disposed in the dump of the Hamlet of Whale Cove subject to approval of certain conditions precedent pursuant to Part D, Item 5 of Northquest's water permit issued as NWB Licence No. 2BE-PBP1520 being satisfied.

All grey-water generated in camp was dumped into a sumps containing five perforated drums and rocks within a pit dug in sand.

Sewage was contained in pits dug beneath the three outhouses.

No unauthorized discharges occurred in 2016. All drill sites were cleared of foreign debris.

No artesian flow occurrences were noted during the drilling.

ΔΓᕐᒧᑦ ᓚΔᓴᓐ 2BE-PBP1520 – ᓄᐊᑯᓪᑯᐃᑦ ᓕᒥᑎᑦ (Northquest Ltd)

ᓇΔᓕᒋᐊᖅᓯᒪᔪᖅ ᐱᓕᕆᐊᖑᓚᐅᖅᑐᓂᒃ ᐅᖃᐅᓯᓕᒃ 2016 ᐊᕌᒎᕐᖓᓂ

ᐱᔅᑐ ᑕᕆᐅᙵᓐᓂ (Pistol Bay) ᐱᓕᕆᐸᒃᐳᔪᖅ ᐅᑯΔᖅᑕᐅᓚᐅᖅᐳᖅ ᔪᓐ 22nd ᓴᓇᔾᓂᑦ ᐱᙳᓱᐸᓗᑎᒃ ᐊᕐᑲᐊᒻᒥ ᕿᔪᓕᕆᐸᒃᐳᐸ ᐱᓕᕆᐸᒃᑲᙵᓐᓂᑦ ᐊᕐᑲᐊᒻᒥ. ᐊᑯᓐᓂᙵᓂ ᔪᓐ 22nd ᑎᑭᓪᓗᒍ ᔪᓚΔ 2nd ΔᒐᙵΔᓚᐅᓕᒋᐊᖅᑕᐅᓚᐅᖅᐳᖅ, Δᕐᒥᒃᑲᕐᒋᓪᓗ Δᓕᔭᐅᐸᓗᑎᒃ ᐊᑕᐅᓯᕐᒥ ᑐᐱᕐᒥ, ᕿᔪᙱᒃ ᑐᐱᐅᐸ ᐊᕙᓗᐊᓂᒃ ᓴᓇᔪᖅᑲᓚᐅᖅᐳᖅ ΔΓᕐᒧᑦ Δᓂᒃᓴᐅᓂᐊᖅᑐᒃ, ᐅᓇᖅᑐᒥᒃᓗ ΔΓᖅᑲᕐᑲᙱᒃ ᐊᒻᒪ Δᕐᒥᙳᑲᙱᒃ ᐸᓂᖅᓯᔾᒻᒥᒃᓗ, ᒪᕈᙱᒃ ᓇᑎᓕᐅᖅᑐᖅᑲᓚᐅᖅᐳᖅ ᑐᐱᕐᒧᑦ.

ᐱᓕᕆᐸᒃᐳᔪᖅ ΔᓗᓕᖅᑲᖅᐳᖅΔᑎᖅᓯᓇᕆᐊᓕᙱᒃ Weatherhaven ᑐᐱᕐᓂᒃ ᐊᑐᖅᓗᑎᒃ ᐊᒻᒪ ᓴᑐᕋᕐᒥᒃ ᓴᓇᓯᒪᔾᒻᒥᒃ Δᒐᖅᑲᖅᓗᓐᓂ. ᑕΔᒻᒪ, Δᑲᕋᓂᒃᐊᒥᓱᐊᙱᑐᓂᒃ ᓴᓇᔭᐅᓚᐅᖅᐳᖅ ᐊᑐᕈᓐᓇᖅᓯᕐᐸᓗᓂᓗ. ᐱᓕᕆᐸᒃᐳᔪᖅ Δᙱᕋᓚᐅᖅᐳᖅ ᔪᓚΔ 7th ᑎᑭᓪᓗᒍ ᐊᒃᑐᐸ 6th.

Δᖃᓇ∆ᔭᖅᑎᑦ ᐊᒥᓱᓂᙱᑦ ᐱᓕᕆᓗᐊᕐᓂᕐᒧᑦ 33ᙳᓕᓚᐅᖅᐳᑦ ᐅᔭᕋᒃᑕᕆᐊᕐᑲᙱᒥ. ᐅᑯᐊᙳᐸᓗᑎᒃ ∆ᖃᓇ∆ᔭᖅᑐᑦ, 7 ᐅᔭᕋᓕᕆᔨᑦ, 1 ∆ᖃᓇ∆ᔭᕐᑲᙱᒥ ∆ᓱᒪᑕᖅ, 1 ᑎᙱᓱᖅᑎ, 1 ᑎᙱᓱᐸ ∆ᑯᒪᓕᕆᔨᙳ, 8 ∆ᑯᑕᖅᑎᑦ, 1 ∆ᑯᑕᖅᑎᑦ ∆ᓱᒪᑕᙱᑦ, 5 ᐅᔭᕋᙱᒃ ᖃᐅᔨᓴᖅᑎᑦ, 6 ᐱᓕᕆᐸᙱᒥ ∆ᑲᔪᖅᑎᑦ ᐊᒻᒪ ᓇᓐᓄᓂᒃ ᖃᐅᔨᓴᖅᑎᐅᐸᓗᑎᒃ, 2 ᐅᔭᕋᙱᒃ ᓯᕐᑯᐸᑎᓕᔩᒃ, 2 ∆ᒐᒻᒥ ᐱᓕᕆᔩᒃ ∆ᓪᓗᐊᖅᓴ∆ᔨᐅᐸᓗᑎᒡᓗ. ∆ᖃᓇ∆ᔭᖅᑎᑦ ᐊᓯᐊᙳᖅᑕᕐᓂᙱᓐᓄᑦ, ∆ᓚᙱᑦ ᐱᓕᕆᐊᙳᔪᑦ ᐱᐊᓂᒃᑕᐅᔪᓇᓚᐅᙱᓚᑦ ∆ᓚᓐᓂᑯᑦ.

ᐱᓕᕆᐸᙱᒥ ∆ᑲᔪᖅᑎᑦ, ᐅᔭᕋᙱᒃ ᐅᓗᐊᖅᑎᑦ ᐊᒻᒪ ∆ᒐᒻᒥ ∆ᖃᓇ∆ᔭᖅᑎᑦ ᑕᒪᕐᒥᒃ ᑎᑭᕋᕐᔪᐊᕐᒥᑦ ᐱᓕᕆᑎᑕᐅᓚᐅᖅᐳᑦ. ᑲᑎᑦᑐᒋᑦ ᑎᑭᕋᕐᔪᐊᕐᒥᑦ ∆ᖃᓇ∆ᔭᖅᑐᑦ 20 ᐊᒥᓱᑎᒋᓚᐅᖅᐳᑦ, ᓯᑕᒪᓄᑦ ∆ᖃᓇ∆ᔭᒃᓴᓄᑦ.

A-Star B2 ᐊᑎᖃᖅᑐᖅ Hᐊᓕᑲᐸᑕ ᐊᑐᖅᑐᐊᒐᐅᐸᓗᓐᓂ Custom Helicopters Hᐊᓕᑲᐸᑕᓕᕆᔨᙱᓐᓂᑦ ∆ᑯᑕᖅᑎᓂᒃ ∆ᖃᓇ∆ᔭᖅᑎᓂᒡᓗ ᐊᒃᔭᖅᑐᖅᑎᐅᐸᓗᓐᓂ.

ᐅᔭᕋᙱᒃ ᓯᑎᔪᓂᒃ ∆ᑯᑕᕐᓂᖅ ᐊᐅᓚᑕᐅᓚᐅᖅᐳᖅ Top Rank Diamond Drilling ᐊᑯᓐᓂᙵᓂ ᔪᓚΔ 9th ᐊᒻᒪ ᓯᐸᑕᐸ 23rd. ᒪ ∆ᑯᑕᕐᑲᐅᐸ Bazooka. ᒪᕈᙱᒃ ∆ᓗᐱᕈᐊᖅᑲᖅᑐᑦ ᐅᖅᓱᓯᑲᑦ ᐊᑐᒐᐅᓚᐅᖅᐳᑦ ∆ᑯᑕᕐᓄᑦ. ᐅᔭᕋᙱᓂᐊᕐᑲᙵᓂ Vickers ᐅᔭᕋᙱᓂᐊᕐᑲᙱᒥ, 16 ∆ᑯᑕᓚᐅᖅᐳᑦ ᑲᑎᑦᑐᒋᑦ ᓄᓇᒧᑦ 4,003.75 ᒥᑐᓯ. ᐅᔭᕋᙱᓂᐊᕐᑲᙵᓂ Howitzer ᐅᔭᕋᙱᓂᐊᕐᑲᙱᒥ, 32 ∆ᑯᑕᓚᐅᖅᐳᑦ ᐱᐊᓂᒃᑐᑎᒡᓗ 6,863.09 ᒥᑐᓯ.

ᐱᐊᓂᒃᑕᐅᓯᒪᓕᖅᐸᑦ ∆ᑯᑕᕐᓂᖅ ᐊᕌᒍᒻᒥ 2016 ᐱᓕᕆᐊᙱᓐᓂ, ᒪᕈᒃ Discovery 2 ∆ᑯᑕᐅᔪᒃ ᑐᕐᑯᖅᑕᐅᓂᐊᖅᐳᒃ ᐅᔭᕋᙱᓂᐊᕐᑲᙱᒥ Howitzer ᐅᔭᕋᙱᓂᐊᕐᑲᙱᒥ.

∆ᓗᐊᓐᓂ ᐅᔭᕋᙱᓂᐊᕐᓂᐅᐸ 2016 ᐱᓕᕆᐊᙵᓂ, ᐊᒃᓴᓗᐊᓕᒃ F250 ᐅᔭᕋᒃᑕᕆᐊᓂᓯᐅᖅᑐᖅ ᐱᒋᐊᕐᓂᙵᓐᓂ 2013 ᐊᑐᒐᐅᓚᐅᖅᐳᖅ ᓄᓇᓕᙳᓕᐊᖅᑕᖅᓗᓐᓂ ᑎᑭᕋᕐᔪᐊᕐᒧᑦ ᐊᑕᑯᓂᒃ ᐊᒃᔭᖅᓯᐸᓗᓐᓂ ᐊᒻᒪ ᓂᕿᓂᒃ ᓂᐅᕕᐊᕐᓂᒃ ᐊ∆ᒃᕻᖅᓗᓐᓂ, ᐅᖅᓱᓂᒡᓗ. ᐊᒻᒪ ᐊᑐᒐᐅᒪᐅᕐᒥᔪᖅ ᓄᓇᓕᙱᒥᐅᓄᑦ ᐊᓯᐊᓂᒃ ∆ᖃᓇ∆ᔭᓐᓂᒃ ᐱᔭᕆᐊᖃᓕᕋᙳᑕ.

ᐱᓕᕆᐸᒃᐳᐸ ∆ᒪᖃᕐᑲᙳ ∆ᕐᒥᒍᑎᖃᕐᑲᙳᓗ ᑕᓱᕐᒥᑦ ᖃᓂᑐᒥᑦ ᐱᔭᐅᑕᖅᐳᖅ. ᑲᑎᑦᑐᒋᑦ 162.84 ᑭᐅᐱᒃ ᒥᑐᓯ ∆ᒥᖅ ᐊᑐᒐᐅᓚᐅᖅᐳᖅ ᐅᐸᓗᓂᒃ 98 ᐱᓕᕆᓂᙱᓐᓂ. ᐱᓕᕆᐸᒃᐳᐸ ∆ᒪᙳ ᐊᑐᒐᐅᓚᐅᖅᐳᖅ 1.66 ᑭᐅᐱᒃ ᒥᑐᓯ ᐅᐸᓗᑕᒪᕐ.

ᐃᑯᑦᕐᓂᖅ ᐃᒪᕐᑲᖅᑎᑕᐅᓚᐅᖅᐳᖅ 6 ᒥᑭᔪᓂᑦ ᑕᓯᕐᓂᒃ ᐅᔭᕋᖕᓂᐊᕐᕕᖕᒥ Howitzer prospect ᐅᔭᕋᖕᓂᐊᕐᕕᖕᒐᓂ ᐊᒻᒪ ᐊᑐᓚᐅᖅᓱᑎᒃ 7,804 ᑭᐅᐱᒃ ᒥᑐᔅ ᐃᒪᕐᒥᒃ. ᐃᑯᑕᐃᑦ ᐊᑐᒐᐅᓚᐅᖅᐳᑦ ᐅᑉᓗᓂᒃ 77 ᐊᒻᒪ ᐃᒥᕐᒥᒃ ᐊᑐᓚᐅᕐᓱᑎᒃ 101.34 ᑭᐅᐱᒃ ᒥᑐᔅ ᐅᑉᓗᑕᒫᑦ.

ᑕᒪᐃᑕ ᐅᑐᕆᐊᓇᖏᑐᑦ ᐊᑕᒃᑦ ᐊᓂᓚᔫᑦᑐ ᐊᒃᔭᒐᐅᓚᐅᖅᐳᑦ ᑎᑭᕋᕐᔪᐊᕐᒧᑦ ᐊᒃᓴᓗᐊᓂᒃᑯᑦ ᐅᑉᓗᑦ ᐊᒥᓱᓗᐊᖏᑐᑦ ᐅᔭᕋᖕᓂᐊᕐᓂᐅᑉ ᐃᓗᐊᓐᓂ. ᐊᕋᒍᒥ 2017 ᐊᒃᔭᖅᑐᒐᐅᓂᖏ ᐅᑐᕆᐊᓇᓗᐊᖏᑐᑦ ᐊᑕᒃᑦ ᑎᑭᕋᕐᔪᐊᑉ ᐊᑕᒃᑲᖕᒐᓄᑦ ᑭᓯᐊᓂ ᐊᖏᖅᑕᐅᓯᒪᓂᖅᐸᑦ ᐃᓚᖕᒐᓐᓂ D, ᓇᓗᓇᐃᑯᑖᖕᒐᓂ 5 ᓄᐊᑯᕕᔅᑦ ᐃᒪᕐᒧᑦ ᓚᐃᓴᖕᒐᓐᓂ ᑐᓂᔭᐅᓯᒪᔪᖅ ᓄᓇᕗᒥ ᐃᒪᓕᕆᔨᑦ ᑲᒪᔨᖏᓐᓂᑦ ᓇᓴᐅᑎᓕᒃ 2BE-PBP1520 ᓇᒻᒪᒋᔭᐅᓕᖅᐸᑦ.

45 ᐳᕐᑲᑦᑕᑦ CaCl ᓴᓂᕗᒐᐅᓯᒪᕗᑦ ᐃᓗᐊᓐᓂ ᑐᐱᑦ Weatherhaven ᐅᔭᕋᖕᓂᐊᕐᕕᖕᒐᓐᓂ Vickers Prospect ᐅᔭᕋᖕᓂᐊᕐᕕᖕᒐᓂ. ᑕᒻᓇ ᑐᐱᖅ ᐊᑐᒐᐅᔪᖅ ᓴᓂᕗᖅᓯᒪᑉᕕᐅᑉᓗᓐᓂ ᐱᕐᑯᑎᓂᒃ, ᐊᒻᒪ ᑐᐊᕕᕐᓇᖅᑐᓄᑦ ᐊᑐᒐᐅᔫᖅᓴᕐᓗᓂ ᐃᕐᑲᓇᐃᔭᖅᑎᖏᓐᓄᑦ Vickers Prospect ᐅᔭᕋᖕᓂᐊᕐᕕᖕᒐᓂ.

ᑲᑎᑦᓱᒋᑦ 15 ᕐᑲᑦᑕᐅᔾᑦ ᕐᑲᖕᒐᑕᓱᑉ ᐅᖅᓱᖕᒋ Jet A ᐊᒻᒪ 15 ᕐᑲᑦᑕᐃᔾᑦ ᐅᖅᓱᐊᓗᐃᑦ, 2 ᕐᑲᑦᑕᐅᔾᒃ ᐅᖅᓱᑦ ᐊᒻᒪ 14 ᕐᑲᑦᑕᐅᔾᑦ ᐃᑯᑦᖅᑎᓄᑦ ᐊᑐᒐᐅᔪᒪᖅᑐᑦ ᐅᓇᖅᑐᕐᑲᐅᑎᖏᓐᓄᑦ ᒪᓐᓇ ᓴᓂᕗᒐᐅᓯᒪᕗᑦ ᐅᔭᕋᒃᑕᕆᐊᕐᕕᖕᒥ ᐃᖕᒍᕆᕐᒥᒃ ᑕᓱᓯᒪᑉᓗᑎᒃ ᐊᕙᑎᖕᒋᑦ ᑯᕕᒋᒃᑯᓯᖅᓯᒪᑉᓗᑎᒃ.

96 ᐃᒪᕐᑲᖅᑐᑦ ᐊᒻᒪ 50 ᐃᓚᖕᒐᓂᒃ ᑭᓯᐊᓂ ᐃᒪᕐᑲᖅᑐᑦ ᐅᕐᑯᒪᐃᓐᓂᕐᑲᖅᑐᑦ 100 ᐸᐅᓐᔅ ᐳᑉᓚᐃᑦ ᓴᓂᕗᖅᑕᐅᓯᒪᕗᑦ ᐅᔭᕋᒃᑕᕆᐊᕐᕕᖕᒥ. ᐊᒻᒪ ᓱᓕ, 200 ᐅᕐᑯᒪᐃᓐᓂᕐᑲᖅᑐᑦ 100 ᐸᐅᓐᔅ ᐳᑉᓚᐃᑦ ᓴᓂᕗᖅᑕᐅᓯᒪᕗᑦ ᑎᑭᕋᕐᔪᐊᕐᒥ.

ᐃᓚᑲᓂᕐᓗᒍ 199 ᕐᑲᑦᑕᐅᔾᕐᔪᐃᑦ ᕐᑲᖕᒐᑕᓱᑉ ᐅᖅᓱᖕᒋᑦ Jet A fuel ᐊᒻᒪ 200 ᐅᕐᑯᒪᐃᓂᕐᑲᖅᑐᑦ 100 ᐸᐅᓐᔅ ᐳᑉᓚᐃᑦ ᓴᓂᕗᖅᑕᐅᓯᒪᕗᑦ ᐅᒥᐊᕐᔪᐊᑉ ᐅᓱᖕᒋᔾᕐᕕᖕᒐᓐᓂ ᑎᑭᕋᕐᔪᐊᕐᒥ. ᑕᒪᕐᒥᒃ ᕐᑲᖕᒐᑕᓱᑉ ᐅᖅᓱᖕᒋ Jet A ᓴᓂᕗᖅᑕᐅᓯᒪᕗᑦ ᐃᖕᒍᕆᕐᒥᒃ ᑕᓱᓯᒪᑉᓗᑎᒃ ᐊᕙᑎᖕᒋ ᑯᕕᒋᒃᑯᓯᖅᓯᒪᑉᓗᑎᒃ.

10 ᕐᑲᑦᑕᐅᔾᕐᔪᐃᑦ ᐊᑐᐊᓂᒃᓯᒪᔪᑦ ᐅᖅᓯᖅᑎᕈᑎᑦ ᐊᒻᒪ ᓴᓗᒪᐃᓕᓯᒪᔪᑦ ᐅᖅᓱᑦ ᐊᒃᔭᒐᐅᓚᐅᖅᐳᑦ ᑎᑭᕋᕐᔪᐊᕐ ᒥᑦᑕᕐᕕᖕᒐᓄᑦ. ᒪᓐᓇᐅᔪᖅ ᐅᑕᕐᑭᔪᑦ ᐊᕐᕕᐊᓄᑦ ᐊᐅᓚᖅᑎᑕᐅᓂᐊᕐᓱᑎᒃ ᐅᖅᓯᖅᑎᕈᑕᐅᓯᕖᖕᒧᑦ ᐃᓕᔭᐅᓂᐊᕐᒪᑕ, ᐊᖏᖅᑕᐅᓯᒪᓕᖅᐸᑕ ᒪᓕᒐᕐᓂᒃ ᑎᑎᕋᖅᓯᒪᔪᓐᓂᒃ ᐃᓚᖕᒐᓂ D, ᑎᑎᕋᖅᓯᒪᓂᖕᒐ 5 ᓄᐊᔅᑯᕕᔅᑦ ᐃᒥᕐᒧᑦ ᓚᐃᓴᖕᒐᓂ ᑐᓂᔭᐅᓯᒪᔪᒻᒥᑦ ᓄᓇᕗᒻᒥ ᐃᒪᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᓐᓂᑦ ᓇᓗᓇᐃᑯᑦᖕᒐ 2BE-PBP1520 ᓇᒻᒪᒃᑐᒥᒃ ᑲᔪᓯᑎᑕᐅᓂᐊᕐᒪᑦ. ᒪᓐᓇᐅᔪᖅ ᐊᑐᕈᖕᓇᐃᖅᓯᒪᔪᒥᒃ ᐅᖅᓯᖅᑎᕈᑎᓂᑦ ᓴᓂᕗᒐᐅᔪᕐᑲᒡᓯᒪᖏᑐᖅ ᐅᔭᕋᖕᓂᐊᕐᕕᖕᒥ.

36 ᐃᒪᑲᖏᑐᑦ ᐳᑉᓚᐃᑦ ᐊᒻᒪ 694 ᐃᒪᕐᑲᖏᑐᑦ ᕐᑲᑦᑕᐅᔾᕐᔪᐃᑦ ᒪᓐᓇᐅᔪᖅ ᑎᑭᕋᕐᔪᐊᕐ ᒥᑕᕐᕕᖕᒐᓐᓂ ᓴᓂᕗᖅᑕᐅᓯᒪᔪᑦ. ᐳᑉᓚᐃᑦ ᐅᑎᖅᑎᑕᐅᓂᐊᖅᑐᑦ ᑯᖃᔪᐊᕐᒧᑦ ᐊᒻᒪ ᐃᒪᕐᑲᖏᑐᑦ ᕐᑲᑦᑕᐅᔾᕐᔪᐃᑦ ᓯᕐᑲᓂᑕᐅᓱᑎᒃ ᐊᑕᒃᑯᐅᓂᐊᖅᑐᑦ ᑎᑭᕋᕐᔪᐊᕐ ᐊᑕᒃᑲᕐᕕᐊᓄᑦ. ᐊᖏᖅᑕᐅᓯᒪᔪᑦ ᓴᓂᕗᒐᐅᓯᒪᓂᐊᖅᐳᑦ ᑎᑭᕋᕐᔪᐊᕐ ᒥᑕᕐᕕᖕᒐᓐᓂ Hᐊᒻᓚᑯᖏᓐᓂᑦ ᒪᔅ 16, 2016 ᐱᓂᕆᐸᕕᖕᒥᑦ ᐊᑕᒃᖅᑕᐅᓚᐅᖅᑐᖅ; ᑎᑎᕋᖅᑕᐅᓯᒪᑉᓗᑎᒃ ᐊᖏᖅᑕᐅᓯᒪᕗᑦ ᐃᓗᐊᓂᓯᐅᕐᓗᓐᓂ ᒪᒃᐱᖕᒐᓐᓂ v. ᓄᐊᔅᑯᕕᔅᑦ (Northquest) ᐃᓱᒪᓂᐅᖅᓯᒪᕗᖅ ᕐᑲᑦᑕᐅᔾᕐᔪᐃᑦ ᓯᕐᑲᓂᑕᐅᕐᑯᑉᓗᒋᑦ ᐊᒻᒪ ᐊᑕᑯᒐᐅᓗᑎᒃ ᑎᑭᕋᕐᔪ ᐊᑕᒃᑲᕐᕕᖕᒐᓐᓂ ᐊᖏᖅᑕᐅᒃᐸᑦ ᐃᓚᖕᒐᓐᓂ D, ᑎᑎᕋᖅᓯᒪᓂᖕᒐᓂ 5 ᓄᐊᑯᕕᔅᑦ ᐃᒥᕐᒧᑦ ᓚᐃᓴᖕᒐᓂ ᑐᓂᔭᐅᓚᐅᖅᑐᖅ ᓄᓇᕗᒥ ᐃᒪᓕᕆᔨᑦ ᑲᑎᒪᔨᖏᓐᓂᑦ 2BE-PBP1520 ᓇᒻᒪᒋᔭᐅᒃᐸᑦ.

ᐃᕐᒥᖕᓂᑯ ᐱᓕᕆᐸᕕᖕᒥᑦ ᐊᑕᒃᖅᑕᐅᓚᐅᖅᑐᖅ ᕐᑲᑕᐅᔾᓄᑦ ᑖᓕᒪᓄᑦ ᓄᓇᒥ ᓴᒐᖅᓯᒪᐸᓗᑎᒃ.

ᖃᐞᐃᓐᓂᐞᑦ ᓄᓇᒧᑦ ᓴᖅᑭᓯᒪᔨᒧᑦ ᐱᓐᓴᓯᓄᑦ ᓴᐅᕆᐅᓕᐅᖅᓴᑦ.

ᐊᓐᑎᖅᑕᐅᓯᒪᓐᑐᑐᓂᒃ ᐞᕕᔪᖅᑲᓕᐅᖅᓐᓂᓕᖅ ᐊᕐᔪᒪᒥ 2016. ᐃᐞᑕᖅᓂᐞᑦ ᑕᒪᖅᒥᓂ ᓴᓗᒪᓕᖅᓴᖅᑕᐅᓕᐅᖅᓴᑦ ᐊᑕᐞᖅᑕᐅᕐᓗᑎᒃᓗ ᐊᑐᐓᑎᑐᑦ.

ᐊᓯᐊᓄᑦ ᓄᓇᒧᑦ ᐃᐞᑕᖅᓂᐞᓂᒃ ᐞᕕᔪᖅᑲᓕᐅᐓᑎᓕᑦ ᐃᐞᑕᖅᓇᐅᑎᖅᓗᒍ.

HAMLET OF WHALE COVE

PO BOX 120
WHALE COVE, NUNAVUT, X0C 0J0
Telephone: (867) 896-9961 ~ Fax: (867) 896-9109

16 March 2016

Northquest Ltd.
50 Richmond Street East, Suite 101
Toronto ON
M5C 1N7

Attention: Dwayne Car

Re: Storage of Containers

In response to your request it is agreed and understood that the Hamlet approves Northquest Ltd. to store empty fuel drums, (45 gallon) at the staging area of the Municipal Airport. The staging area is under the full control of Northquest.

It is understood that the drums have no residual fuel and are restricted to the staging area for storage pending ultimate removal.

It is further agreed that the staging area is approved to accept used oil stored in appropriate containers, prior to ultimate removal to Arviat. Any spillage or remedial work respecting spillage will be completed by Northquest after reporting said spills to the Government of Nunavut.

Yours truly

Mike Richards
SAO

Select

NWB Annual Report

Year being reported: 2016

License No:	2BE-PBP1520	**Issued Date:**	July 23, 2011
		Expiry Date:	July 22, 2020

Project Name: Pistol Bay

Licensee: Northquest Ltd

Mailing Address:
Suite 101 - 50 Richmond Street East
Toronto
Ontario
M5C 1N7

Name of Company filing Annual Report (if different from Name of Licensee please clarify relationship between the two entities, if applicable):

General Background Information on the Project (*optional):

Licence Requirements: the licensee must provide the following information in accodance with

Part B Item 2

A summary report of water use and waste disposal activities, including, but not limited to: methods of obtaining water; sewage and greywater management; drill waste management; solid and hazardous waste management.

Water Source(s):

Water Quantity:

1.0/day	Quantity Allowable Domestic (cu.m)
1.66/day	Actual Quantity Used Domestic (cu.m)
120/day	Quantity Allowable Drilling (cu.m)
101.34/day	Total Quantity Used Drilling (cu.m)

Waste Management and/or Disposal

- [x] Solid Waste Disposa
- [x] Sewage
- [x] Drill Waste
- [x] Greywater
- [x] Hazardous
- [ ] Other:

Additional Details:

A list of unauthorized discharges and a summary of follow-up actions taken.

Spill No.: (as reported to the Spill Hot-line)
Date of Spill:
Date of Notification to an Inspector:
Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

Revisions to the Spill Contingency Plan

Select

Revisions to the Abandonment and Restoration Plan

Additional Details:

Progressive Reclamation Work Undertaken

Additional Details (i.e., work completed and future works proposed)

Results of the Monitoring Program including:

The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where sources of water are utilized;

Additional Details:

The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where wastes associated with the licence are deposited;

Additional Details:

Results of any additional sampling and/or analysis that was requested by an Inspector

Select

Additional Details: (date of request, analysis of results, data attached, etc)

Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.

Select

Additional Details: (Attached or provided below)

Any responses or follow-up actions on inspection/compliance reports

Select

Additional Details: (Dates of Report, Follow-up by the Licensee)

Any additional comments or information for the Board to consider

Date Submitted:	March 23, 2017	
Submitted/Prepared by:	Stanley Robinson	
Contact Information:	**Tel:**	416-306-0954
	Fax:	
	email:	stan.robinson@ca.inter.net

GPS Coordinates for water sources utilized

Source Description	Latitude			Longitude		
	Deg °	Min ′	Sec ″	Deg °	Min ′	Sec ″
Camp Water	62	20	58.0	92	44	47.0
For DDH's PB-16-01, 3 to 5	62	19	25.6	92	50	39.9
For DDH's PB-16-02, 6, 8	62	19	28.7	92	50	34.1
For DDH's PB-16-07, 16	62	19	20.7	92	50	23.3
For DDH's PB-16-09, 11, 13	62	19	22.2	92	50	16.2
For DDH's PB-16-20, 22	62	19	23.0	92	51	33.6
For DDH's PB-16-24	62	19	31.4	92	51	47.7
For DDH's PB-16-26	62	19	21.4	92	50	53.1
For DDH's PB-16-10, 12,	62	22	16.8	93	5	43.0
For DDH's PB-16-14-15	62	22	16.8	93	5	43.0
For DDH's PB-16-17 to 19	62	22	19.4	93	5	44.8
For DDH's PB-16-21, 23, 33	62	22	16.3	93	5	42.5
For DDH's PB-16-35, 46, 48	62	22	16.3	93	5	42.5
For DDH's PB-16-25, 27 to 31	62	22	18.0	93	5	13.5
For DDH's PB-16-32, 43, 45	62	22	20.1	93	5	25.9
For DDH PB-16-47	62	22	20.1	93	5	25.9
For DDH's PB-16-34, 36 to 41	62	22	15.6	93	6	17.0
For DDH's PB-16-42, 44	62	22	23.1	93	5	10.5

GPS Locations of areas of waste disposal

Location Description (type)	Latitude			Longitude		
	Deg °	Min ′	Sec ″	Deg °	Min ′	Sec ″
Kitchen and Shower Sump	62	21	0.0	92	44	58.0
Outhouse Pit	62	21	0.8	92	45	0.6
Outhouse Pit	62	21	0.6	92	44	59.9
Outhouse Pit	62	21	0.5	92	44	59.8
DDH PB-16-01 Sump	62	19	25.3	92	50	23.0
DDH PB-16-02 Sump	62	19	33.3	92	50	22.8
DDH PB-16-03 Sump	62	19	24.2	92	50	40.8
DDH PB-16-04, 5 Sump	62	19	25.2	92	50	19.5
DDH PB-16-06 Sump	62	19	33.4	92	50	30.0
DDH PB-16-07 Sump	62	19	19.7	92	50	29.4
DDH PB-16-08 Sump	62	19	32.4	92	50	19.6
DDH PB-16-09 Sump	62	19	23.4	92	50	16.3
DDH PB-16-10 Sump	62	22	13.6	93	5	50.5
DDH PB-16-11 Sump	62	19	22.8	92	50	12.6
DDH PB-16-12 Sump	62	22	11.2	93	5	45.8

DDH PB-16-13 Sump	62	19	21.0	92	50	8.6
DDH PB-16-14 Sump	62	22	8.9	93	5	41.2
DDH PB-16-15 Sump	62	22	6.5	93	5	36.3
DDH PB-16-16 Sump	62	19	20.4	92	50	26.3
DDH PB-16-17,18 Sump	62	22	17.2	93	5	56.9
DDH PB-16-19 Sump	62	22	18.4	93	5	59.2
DDH PB-16-20 Sump	62	19	19.8	92	51	35.6
DDH PB-16-21 Sump	62	22	14.6	93	5	47.7
DDH PB-16-22 Sump	62	19	19.6	92	51	42.7
DDH PB-16-23 Sump	62	22	14.8	93	5	42.7
DDH PB-16-24 Sump	62	19	28.6	92	51	53.7
DDH PB-16-25 Sump	62	22	16.3	93	5	25.1
DDH PB-16-26 Sump	62	19	22.6	92	50	49.8
DDH PB-16-27 Sump	62	22	16.6	93	5	20.2
DDH PB-16-28 Sump	62	22	14.0	93	5	20.2
DDH PB-16-29 Sump	62	22	15.0	93	5	15.4
DDH PB-16-30 Sump	62	22	11.0	93	5	12.6
DDH PB-16-31 Sump	62	22	18.6	93	5	29.5
DDH PB-16-32 Sump	62	22	23.9	93	5	25.5
DDH PB-16-33 Sump	62	22	5.6	93	5	27.1
DDH PB-16-34 Sump	62	22	11.1	93	5	54.1
DDH PB-16-35 Sump	62	22	3.0	93	5	22.2
DDH PB-16-36 Sump	62	22	8.5	93	5	57.4
DDH PB-16-37 Sump	62	22	12.9	93	5	57.5
DDH PB-16-38 Sump	62	22	7.3	93	6	6.8
DDH PB-16-39 Sump	62	22	9.8	93	6	11.3
DDH PB-16-40 Sump	62	22	11.2	93	6	3.6
DDH PB-16-41 Sump	62	22	7.7	93	6	17.5
DDH PB-16-42 Sump	62	22	24.8	93	5	17.8
DDH PB-16-43 Sump	62	22	25.2	93	5	27.8
DDH PB-16-44 Sump	62	22	25.0	93	5	8.7
DDH PB-16-45 Sump	62	22	21.1	93	5	34.2
DDH PB-16-46 Sump	62	22	15.3	93	6	44.1
DDH PB-16-47 Sump	62	22	21.4	93	5	30.2
DDH PB-16-48 Sump	62	22	16.1	93	5	35.9

Detailed Summary of Activities as per item 2 of PART B

Northquest Ltd's Pistol Bay camp was in operation from July 6th to October 6th. The diamond drilling program occurred between July 9th and September 23rd.

2.a. The camp obtained drinking and washing water from a nearby pond and utilized 162.84 cubic metres during the 98 days of operation, averaging 1.66 cubic metres per day. A table of the log recording daily use are provided in Appendix 1.

The drilling operation drew water from 13 separate small lakes and utilized an estimated 7,804 cubic metres of water. During the 77 days of drilling, the daily water consumption averaged 101.34 cubic metres per day. A table of the log recording of the daily water use for the drills is provided in Appendix 1.

All non-hazardous waste, including paper and cardboard was transported to the Whale Cove municipal dump by truck every few days during the program. A table of the log recording quantities of trash and dates of transport is provided in Appendix 1.

Fifty four bags of CaCl are stored inside one of the Weatherhaven tents on the Vickers Prospect. This tent is used for storage of other equipment, and is an emergency shelter for personnel working on the Vickers Prospect.

A total of 15 drums of Jet A fuel and 15 drums of diesel fuel, two drums of gasoline and 14 drums of fuel suitable for use in drill water heaters are currently stored at the base camp in a tarpaulin covered fuel berm.

Ninety six full and fifty partially full 100 lb cylinders of propane are currently stored at the base camp. In addition, two hundred 100 lb cylinders of propane are stored in Whale Cove.

An additional 199 drums of Jet A fuel and two hundred 100 lb cylinders of propane are stored at the old barge landing site in Whale Cove. All of the Jet A is stored in tarpaulin covered berms.

Ten drums of waste oil and contaminated fuel were delivered to the Whale Cove airport. They are currently stored there to await transportation to Arviat for final disposal in the municipality's waste oil-fired furnace, subject to approval of certain conditions precedent pursuant to Part D, Item 5 of Northquest's water permit issued as NWB Licence No. 2BE-PBP1520 being satisfied. No used oil is currently stored at the base camp.

Thirty six empty propane cylinders and 694 fully drained fuel drums are temporarily stored at the Whale Cove airport. The propane tanks will be returned to Churchill and the empty drums will be crushed prior to disposal at the Whale Cove municipal dump. Permission to store the empty fuel drums at the Whale Cove airport was obtained from the Hamlet of Whale Cove on March 16, 2016; written authorization is presented herein on page v. Northquest intends to have these drums crushed and disposed in the dump of the Hamlet of Whale Cove subject to approval of certain conditions precedent pursuant to Part D, Item 5 of Northquest's water permit issued as NWB Licence No. 2BE-PBP1520 being satisfied.

All grey-water was dumped into a sump containing five perforated drums and rocks within a pit dug in sand.

Sewage was contained in pits dug beneath the outhouses.

2.b. No unauthorized discharges occurred in 2016. However

2.c. Revisions were made to the Spill Contingency Plan and Abandonment and Restoration Plan in 2015. For the purpose of completeness the plans are provided herein in Appendix 3.

2.d. All drill sites were cleared of foreign debris. Photographs of the sites are provided in Appendix 4.

2.e. No artesian flow occurrences were noted during the drilling.

2.f. Significant perma-frost was encountered in holes PB-16-01 to 48. This required the use of heated water for all drilling operations. The water was heated by two oil heaters that burn diesel fuel. Approximately 100 kg of CaCl were utilized during the drill program to produce brine for downhole tests. Photographs of the water pump sites are provided in Appendix 3.

2.g. Monitoring was not requested. Therefore, no monitoring results are provided.

Map of Property

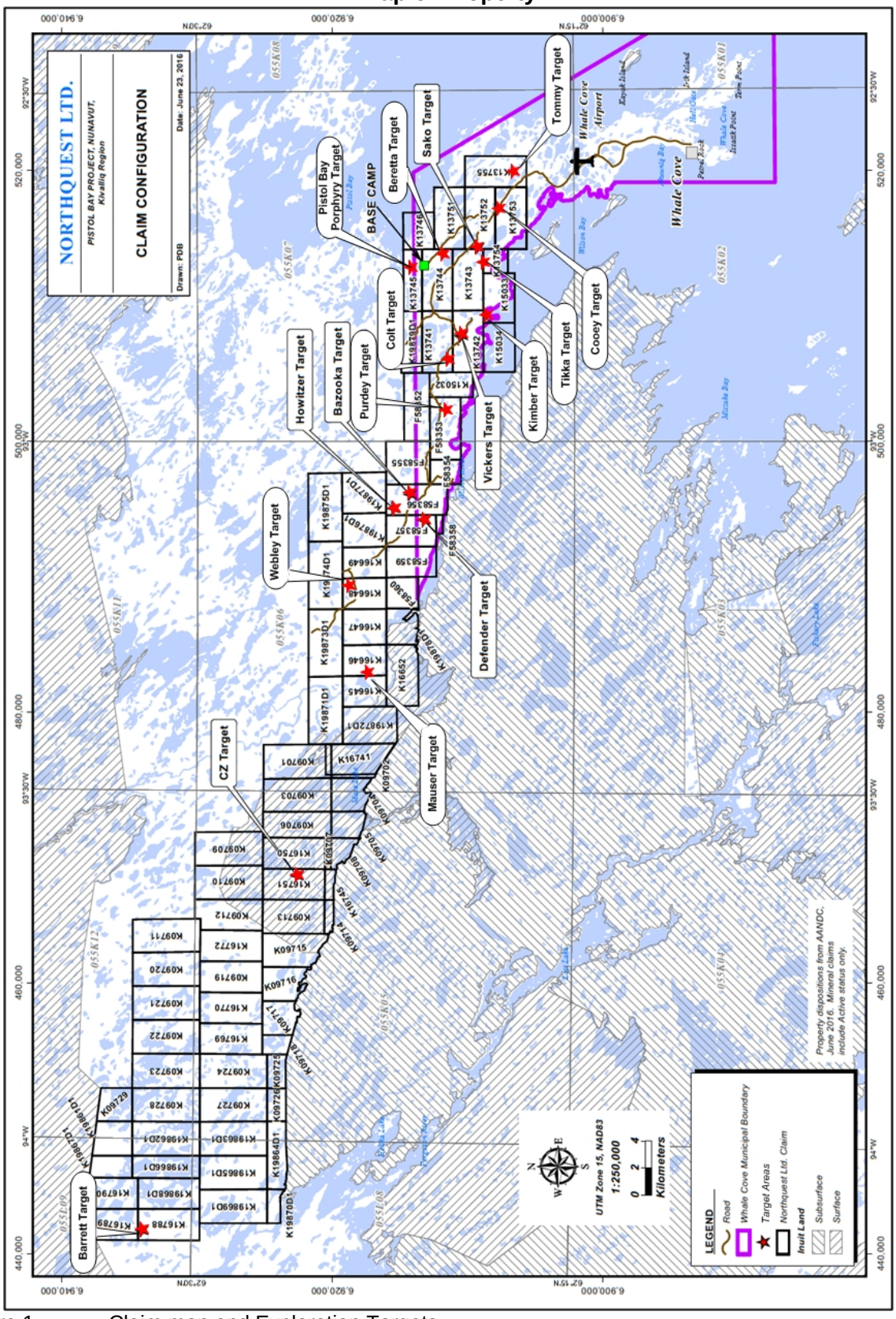

Figure 1. Claim map and Exploration Targets

Sketch Map of Camp Layout

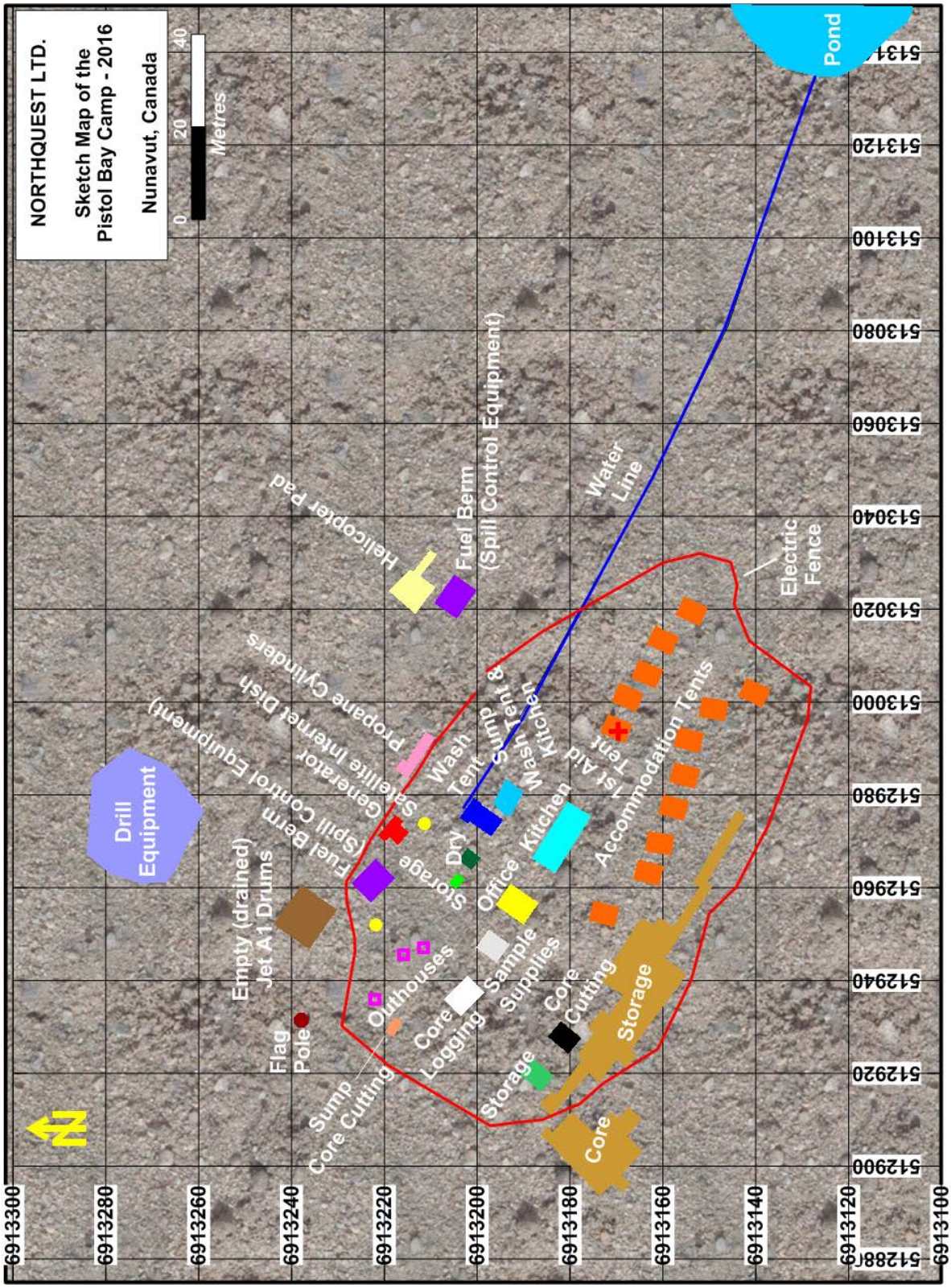

Figure 2. Sketch Map of Camp.

APPENDIX 1

TABLES RECORDING

- **DAILY WATER USE RECORDS**
- **GARBAGE DISPOSAL, and**
- **NWB Comments Regarding 2015 Annual Report**

Water Use in Camp - 2016

Month	Day	Amount of Tank
July	1	Full
July	2	1/4
July	3	1/4
July	4	1/4
July	5	1/4
July	6	Full
July	7	Full
July	8	Full
July	9	Full
July	10	Full
July	11	Full
July	12	Full
July	13	Full
July	14	Full
July	15	Full
July	16	Full
July	17	Full
July	18	Full
July	19	Full
July	20	Full
July	21	Full
July	22	Full
July	23	Full
July	24	Full
July	25	Full
July	26	Full
July	27	Full
July	28	Full
July	29	Full
July	30	Full
July	31	Full
August	1	Full
August	2	Full
August	3	Full
August	4	full
August	5	Full
August	6	Full

Month	Day	Amount of Tank
August	7	Full
August	8	Full
August	9	Full
August	10	Full
August	11	Full
August	12	Full
August	13	Full
August	14	Full
August	15	Full
August	16	Full
August	17	Full
August	18	Full
August	19	Full
August	20	Full
August	21	Full
August	22	Full
August	23	Full
August	24	Full
August	25	Full
August	26	Full
August	27	Full
August	28	Full x 2
August	29	Full x 2
August	30	Full x 2
August	31	Full x 2
September	1	Full x 2
September	2	Full x 2
September	3	Full x 2
September	4	Full x 2
September	5	Full x 2
September	6	Full x 2
September	7	Full x 2
September	8	Full x 2
September	9	Full x 2
September	10	Full x 2
September	11	Full x 2
September	12	Full x 2

Month	Day	Amount of Tank
September	13	Full x 2
September	14	Full x 2
September	15	Full x 2
September	16	Full x 2
September	17	Full x 2
September	18	Full x 2
September	19	Full
September	20	Full
September	21	3/4
September	22	3/4
September	23	3/4
September	24	3/4
September	25	3/4
September	26	1/2
September	27	1/2
September	28	1/2
September	29	1/2
September	30	1/2
October	1	1/2
October	2	1/2
October	3	1/2
October	4	1/2
October	5	1/2
October	6	1/2

Summary	
Tanks	110.25
Cubic Metres of Tank	1.48
Cubic metres	162.84
Days	98.00
Cubic Metres per Day	**1.66**

Water Use at Drills - 2016

During the 2016 drilling campaign the drilling contractor experienced extensive delays in obtaining flow metres for the water supply pumps. Moreover when the flow metres arrived most of them only lasted a day, several lasted a few days. In the following tables the measured water pumped from the lakes is shown in bold. These quantities coupled with the drilling activities of drilling, moving, and inactive shift were extrapolated and those numbers not in bold font have been generated as being as close as possible to actual measured quantities of water. Reliable flow metres are planned to be acquired for the 2017 drilling program.

Month	Day	Drill	Day Shift	Night Shift		Drill	Day Shift	Night Shift
July	9	Rig 1	3325	7455				
July	10	Rig 1	8130	7690				
July	11	Rig 1	7835	8235				
July	12	Rig 1	7790	7980				
July	13	Rig 1	6565	8345				
July	14	Rig 1	2845	6875				
July	15	Rig 1	6990	6910		Rig 2	0	3275
July	16	Rig 1	7245	7115		Rig 2	6985	7345
July	17	Rig 1	2845	6920		Rig 2	7125	8120
July	18	Rig 1	4950	7125		Rig 2	8235	6675
July	19	Rig 1	6835	6945		Rig 2	7565	8245
July	20	Rig 1	1955	5985		Rig 2	7985	8125
July	21	Rig 1	6675	7125		Rig 2	8345	7965
July	22	Rig 1	2890	5545		Rig 2	7885	6690
July	23	Rig 1	0	7125		Rig 2	2250	0
July	24	Rig 1	5990	6850		Rig 2	2760	5975
July	25	Rig 1	7640	7985		Rig 2	6450	7125
July	26	Rig 1	8245	8125		Rig 2	6895	6675
July	27	Rig 1	8150	7610		Rig 2	2945	6850
July	28	Rig 1	7940	8340		Rig 2	7315	7125
July	29	Rig 1	3510	7230		Rig 2	6890	6950
July	30	Rig 1	6990	8140		Rig 2	7245	7120
July	31	Rig 1	7535	7760		Rig 2	2765	3255
August	1	Rig 1	0	0		Rig 2	6950	7245
August	2	Rig 1	4890	0		Rig 2	7210	6895
August	3	Rig 1	8120	6985		Rig 2	5985	5695
August	4	Rig 1	7985	0		Rig 2	2420	0
August	5	Rig 1	2890	8350		Rig 2	2920	6870
August	6	Rig 1	7850	6645		Rig 2	7325	7450
August	7	Rig 1	2445	7240		Rig 2	7120	6990
August	8	Rig 1	7920	8110		Rig 2	2910	6850
August	9	Rig 1	3125	**6417**		Rig 2	**8315**	**5239**
August	10	Rig 1	7750	7890		Rig 2	**8859**	**8477**
August	11	Rig 1	8235	8115		Rig 2	**8779**	**8779**

Month	Day	Drill	Day Shift	Night Shift		Drill	Day Shift	Night Shift
August	12	Rig 1	2865	8225		Rig 2	**8250**	**8215**
August	13	Rig 1	6635	7985		Rig 2	**10610**	**7113**
August	14	Rig 1	6845	7545		Rig 2	**7114**	**7112**
August	15	Rig 1	6990	8250		Rig 2	**2892**	**3891**
August	16	Rig 1	3125	7350		Rig 2	**6504**	**7129**
August	17	Rig 1	7780	7350		Rig 2	**7308**	**7114**
August	18	Rig 1	7540	6980		Rig 2	**6555**	**2583**
August	19	Rig 1	6545	0		Rig 2	**3924**	**7112**
August	20	Rig 1	1945	5990		Rig 2	**6374**	**7244**
August	21	Rig 1	6845	7110		Rig 2	**3271**	**3267**
August	22	Rig 1	6685	1750		Rig 2	**7328**	**6112**
August	23	Rig 1	2440	5995		Rig 2	**5060**	**5586**
August	24	Rig 1	7155	7125		Rig 2	5785	2315
August	25	Rig 1	6635	6845		Rig 2	2465	7110
August	26	Rig 1	3125	7210		Rig 2	6645	6850
August	27	Rig 1	7020	6985		Rig 2	1075	2145
August	28	Rig 1	1995	7135		Rig 2	6845	7120
August	29	Rig 1	6455	5990		Rig 2	2985	6625
August	30	Rig 1	2915	6935		Rig 2	7120	6940
August	31	Rig 1	6345	5765		Rig 2	3310	7235
September	1	Rig 1	2870	7195		Rig 2	5645	6750
September	2	Rig 1	5990	6660		Rig 2	1895	7130
September	3	Rig 1	6310	6245		Rig 2	7210	6635
September	4	Rig 1	3040	5840		Rig 2	3455	6895
September	5	Rig 1	7140	6990		Rig 2	4990	7135
September	6	Rig 1	2645	7235		Rig 2	3825	4995
September	7	Rig 1	6990	2245		Rig 2	5895	6540
September	8	Rig 1	2885	7225		Rig 2	7215	7155
September	9	Rig 1	6575	7145		Rig 2	4560	6875
September	10	Rig 1	5870	5945		Rig 2	2365	6990
September	11	Rig 1	3165	6880		Rig 2	6910	7210

Month	Day	Drill	Day Shift	Night Shift		Drill	Day Shift	Night Shift
September	12	Rig 1	7140	1875		Rig 2	1985	6785
September	13	Rig 1	0	3375		Rig 2	5975	7125
September	14	Rig 1	6975	7115		Rig 2	4210	4535
September	15	Rig 1	2345	4985		Rig 2	7450	7215
September	16	Rig 1	6585	6125		Rig 2	6845	6935
September	17	Rig 1	2485	0		Rig 2	5950	7110
September	18	Rig 1	3570	5885		Rig 2	2835	5990
September	19	Rig 1	1250	0		Rig 2	**5864**	**2561**
September	20	Rig 1	4995	7130		Rig 2	**5672**	2235
September	21	Rig 1	4990	6825		Rig 2	5770	4995
September	22	Rig 1	5425	**4952**		Rig 2	7145	6850
September	23	Rig 1	5475	5335		Rig 2	1965	0
Totals - Imperial Gallons			**406,685**	**480,894**			**395,485**	**433,469**

SUMMARY	
Total Gallons	1,716,533
Total Cubic Metres	7,804
Days	77
Cubic Metres per Day	101.34

Garbage Taken to Whale Cove Dump – 2016

Month	Day	Bags
July	4	15
July	6	12
July	8	12
July	10	14
July	12	15
July	14	10
July	16	10
July	17	12
July	19	12
July	20	10
July	23	11
July	26	6
July	28	12
July	29	9
July	30	15
July	31	10
August	1	12
August	3	15
August	5	14
August	9	10
August	11	15
August	13	10
August	15	12
August	17	13
August	19	9
August	21	15
August	24	9
August	26	14
August	28	15
August	30	14

Month	Day	Bags
September	1	19
September	2	16
September	4	16
September	6	18
September	8	19
September	10	15
September	12	15
September	14	16
September	16	17
September	18	15
September	20	12
September	22	16
September	24	14
September	26	11
September	28	13
September	30	16
October	1	6
October	2	12
October	3	8
October	4	10
October	6	4

In regards to the following sentence, extracted from the NWB review of the 2015 Annual Report (the complete review letter, dated March 9, 2016, appears on the following two pages).

> The Licensee is reminded that in accordance with Part D, Item 5 of the Licence, documented authorizations from communities in Nunavut receiving waste from the Project must be submitted to the Board for review prior to backhauling waste to such communities.

In June 2016 management of Northquest Ltd., changed and there was no overlap with previous personnel and incoming personnel to carry out the field program. The author of this report only became aware of the above noted requirement and moreover was not aware that the requirement had not been fulfilled prior to the June change in personnel. This issue will be addressed prior to commencement of the 2017 field season.

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No.: 2BE-PBP1520/TR/B2

March 9, 2016

Dwayne Car, VP of Exploration
Northquest Ltd.
Suite 101 – 50 Richmond Street East
Toronto, Ontario M5C 1N7

Email: dwayne.car777@gmail.com

Subject: Licence No. 2BE-PBP1520 – Submission of 2015 Annual Report for the Pistol Bay Project

Dear Mr. Car:

The Nunavut Water Board (NWB or Board) has completed its review of the 2015 Annual Report (Report) submitted on February 15, 2016 by Northquest Ltd. to fulfill relevant requirements contained in the water licence issued to the Pistol Bay Project (Project), an exploration project located approximately 20 kilometres from the Hamlet of Whale Cove in the Kivalliq Region of Nunavut.

The review determined that the Report is generally complete and consistent with the reporting requirements under Part B, Item 2 of Licence No. 2BE-PBP1520. The Board notes that details contained in the Report indicate that some of the waste generated by the project have been or will be backhauled to the Hamlet of Whale Cove and/or the Hamlet of Arviat for disposal/use. The Licensee is reminded that in accordance with Part D, Item 5 of the Licence, documented authorizations from communities in Nunavut receiving waste from the Project must be submitted to the Board for review prior to backhauling waste to such communities.

Apart from the above, the Licensee is advised that it is required to submit to the Board for review and acceptance revised copies of the Spill Contingency Plan and Abandonment and Restoration Plan for the project in accordance with conditions included under Part H, Item 2 and Part I, Item 2 of the licence, respectively.

Copies of the above-mentioned report, which was distributed on March 2, 2016, as well as all other documents submitted in support of the Licence, can be accessed through the NWB's Public Registry and ftp site using the following link:

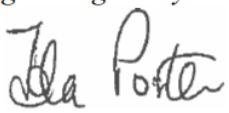
P.O. Box 119, Gjoa Haven, NU X0B 1J0, Tel: (867) 360-6338, Fax: (867) 360-6369

ftp://ftp.nwb-oen.ca/1%20PRUC%20PUBLIC%20REGISTRY/2%20MINING%20MILLING/2B/2BE%20-%20Exploration/2BE-PBP1520%20Norquest/3%20TECH/1%20GENERAL%20(B)/2%20ANNUAL%20RPT/

If you have any questions related to the above, please contact the NWB's Licensing Department at (867) 360-6368 or by email to licensing@nwb-oen.ca.

Regards,

Original signed by:



(for) Sean Joseph
Technical Advisor

Cc: Kivalliq Distribution List

APPENDIX 2

PHOTOGRAPHS OF JET A1 FUEL IN BERMS FOR WINTER STORAGE

Jet A1 Fuel for 2017 being stored in berms

Final winter storaqe of Jet 1 Fuel in covered berms.

APPENDIX 3

SPILL CONTINGENCY AND ABANDONMENT and RESTORATION PLANS

NORDGOLD (Northquest Ltd)

SPILL CONTINGENCY PLAN

FOR EXPLORATION CAMP AND DRILL SITES

PISTOL BAY AREA, KIVALLIQ REGION

NUNAVUT

Prepared by: Dwayne Car May 2015

Revision 1: Stanley Robinson March 2017

NORDGOLD (Northquest Ltd.)
Suite 101 - 50 Richmond Street East,
Toronto, Ontario
Canada M5C 1N7
www.nordgold.com

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Table of Contents

PREAMBLE

This Spill Contingency Plan is effective from the date of issuance of all water licences and land use permits currently being applied for by Nordgold (Northquest Ltd) on its Pistol Bay property located 15 km north of Whale Cove, Nunavut, until the expiry of said licences and permits.

The Spill Contingency Plan was prepared in May 2015 for internal company use and distributed to regulators for approval as part of Nordgold (Northquest Ltd)'s Land Use and Water Licence permits.

This version dated March 2017 reflects project updates since March 2016.

1.0 INTRODUCTION

The purpose of Nordgold (Northquest Ltd.)'s Spill Contingency Plan is to provide a plan of action for any spill event during the Company's exploration program in the Pistol Bay area of Nunavut. This Plan provides the protocol for responding to spills (or potential spills) that will minimize health and safety hazards, environmental damage and clean-up costs as well as defining responsibilities of response personnel. This Spill Contingency Plan details the sites that operations will be conducted upon, describes the response organizations, action plans, reporting procedures and training exercises in place.

The Spill Contingency Plan will;

- *Promote the safe and careful use of potentially hazardous materials;*
- *Promote the safe and effective recovery of spilled potentially hazardous materials;*
- *Minimize the environmental impacts of spills to water or land;*
- *Identify roles, responsibilities and reporting procedures for spill events;*
- *Provide readily accessible emergency information to clean-up crews, management and government agencies, and;*
- *Comply with federal and territorial regulations and guidelines pertaining to the preparation of contingency plans and notification requirements in the event of an emergency or spill.*

2.0 SITE INFORMATION

2.1. Campsite

The Pistol Bay camp has been in place since 2011 and partially owned by Henik Lake Adventures Ltd. of Arviat. The campsite is located at 62° 21' 05.2"N, 92° 45' 19.7"W

Capacity: **13 – 35** people

Facilities:
Eleven x 14' x 16' Weatherhaven sleep tents heated with propane
One 14 x 32' plywood kitchen heated with propane
One 14' x 16' plywood coreshack heated with propane; *re-allocated to sampling supplies*
One 14' x 16' Weatherhaven dry heated with propane
One 14' x 16' Weatherhaven core cutting tent
One 14' x 16' Weatherhaven storage tent
One 14' x 20' Weatherhaven office tent heated with propane
One 8' x 8' plywood *back-up* generator shack
Two plywood outhouses
One heli-pad
One fuel cache stored in four "Insta berms" equipped with water drains
Spill response equipment located beside fuel berms and heli-pad

The following structures were added by Nordgold (Northquest Ltd.) during the 2016 field season:

Two 14' x 16' Weatherhaven sleep tents heated with propane
The kitchen was enlarged to 14' x 48'
A new generator shack 8' x 16' was added to house a new generator
A plywood shack 8' x 14' was added to the Weatherhaven dry to house water storage tank, hot water tank as well as a clothes washer and dryer
A plywood core logging shack 16' x 24' was built
A plywood outhouse

Equipment
One Ford F250 pick up
Four 500 cc Honda ATV's
Two 650 cc Ski Doo snowmobiles
One 7.5 kW diesel generator
One 15 kW gasoline generator
One 50 cc Honda water pump
One A Star B2 helicopter
One D1 Discovery hydraulic diamond drill
Two D2 Discovery diamond drills
Two diesel water pumps for diamond drills

The following equipment was added/replaced during the 2016 field season:

One 500 cc Honda ATV became un-operational; it is currently on-site
One 500 cc Honda ATV was acquired
One 29 kW generator was acquired

2.2. Campsite and Drill Sites

2016 Drilling was carried out on the Vickers and Howitzer targets. 2017 drilling is planned to be carried out on some or all of these targets; Vickers, Pistol Bay Porphyry, Howitzer, Defender, Cooey, Sako, Bazooka, Webley, Mauser, Beretta and CZ targets, shown on the attached map titled "Property Configuration" on page 9 herein.

Campsite: Jet A, diesel fuel, and gasoline to be stored in 45 gal (205 litre) drums stored in portable "Insta Berms" that are outfitted with filtered water drains. Currently, 15 drums of Jet A, 15 drums of diesel fuel, 2 drums of gasoline and 14 drums of fuel suitable for use in oil heaters are stored. It is estimated that an additional 700 drums of Jet A, 450 drums of diesel fuel and 40 drums of gasoline will be purchased for use during 2017.

These will be located a minimum of 31 metres from the normal high water mark and in such a manner that no fuel can enter any such water body.

Drill Sites: Up to 3 drums of diesel fuel and 10 gallons of drill additives to be stored on each drill pad. These will be continuously renewed during the drilling program.

2.3. Effective Date of Plan

June 25, 2015 was the date of the original plan for the project. The Plan is effective concurrent with all licences and permits for the Project.

2.4. Background Information on the Campsite

The campsite is located on a wave-modified, flat-topped esker that was once used as part of an ATV trail network. The Hamlet of Whale Cove recently completed a new gravel-topped road system that allows two-wheel drive vehicles to travel from Whale Cove to the mouth of the Wilson River. The Hamlet also refurbished the existing road which extends to the Pistol Bay campsite. This allows Nordgold (Northquest Ltd.) personnel to travel by pick-up to Whale Cove, the Whale Cove airport and to the Vickers drill target. However, a helicopter is still the primary mode of transport for the project.

3.0 *PETROLEUM AND CHEMICAL STORAGE*

Fuels required for use in the exploration program and at the campsite are stored in the Hamlet of Whale Cove located well above sea level at the old barge landing. They are all clearly labelled as the property of Northquest, are stored in a safe and secure manner with instaberms and are secured for the Winter.

Fuel type	*Purpose*	*Size*	*Total*
Jet A	*Helicopter use*	*205 litre*	*199*
propane		*100 lb tank*	*200*

All fuels for exploration purposes i.e., Jet A, gasoline and diesel are stored in 205 litre (45 gal) metal drums. Propane is stored in standard 100lb propane tanks. Material Safety Data Sheets (MSDS) for these and other petroleum based products used during the drilling programs are located in Appendix B.

Temporary remote fuel caches will be located at each drill site, and will be in accordance with CSA approved methods of storage of drummed product. Spill kits will be located at each temporary remote fuel cache and fuel will be stored in Instaberms.

After drilling at each site, empty drums will be backhauled to the Whale Cove airport and crushed. Upon receipt of appropriate authorization crushed fuel drums will be disposed of in the Whale Cove landfill site. Fuel cache inspections will occur on a regular basis for leaks, damaged or punctured drums.

3.1 Petroleum Transfer Method

Manual, electric engine powered pumps, along with the appropriate filtration devices, may be used for the transfer of petroleum products from their storage drums to their end use fuel tanks. Spill kits will be at all petroleum transfer stations.

4.0 RISK ASSESSMENT AND MITIGATION OF RISKS

The following is a list of sources:

- *Drummed Products: Leaks or ruptures may occur, bung caps may be loose. This includes Jet fuel, diesel, waste fuel and waste oil.*
- *Fuel cylinders: Propane leaks may occur at the valves.*
- *Vehicles and Equipment: Helicopter and fixed wing aircraft, snowmobiles, generators, pumps, diamond drill, ATV's.*

Incidents involving leaking or dripping fuels and oils may occur due to malfunctions, impact damage, and lack of regular maintenance, improper storage or faulty operation. Regular inspection and maintenance in accordance with recognized and accepted standard practices at all fuel caches, reduces the risks associated with the categories listed above. Spill kits will be located at all drill sites.

4.1 RESPONSIBILITIES

Camp Manager – responsible for checking fuel drum conditions and evidence of leakage daily, assuring drip trays are in place and not overflowing; keeping spill kits and absorbent mats in good repair and accessible. If spill or likelihood of a spill occurs the Technician will immediately report to the **Project Supervisor**.

Pilots and Drill Shift Boss to report spills or potential spills to the **Project Supervisor.**

Project Supervisor will report any spill to the NWT 24-Hour Spill Report Line and initiate clean-up. Project Supervisor will request additional aid from external sources if deemed necessary.

If one or more of these key personnel are absent from the site an alternative person will be named as either Camp Manager or Project Supervisor for the interim.

David Smith, Exploration Manager.

5.0 RESPONDING TO FAILURES AND SPILLS

In the case of any spill or environmental emergency, it is necessary to react in the most immediate, safe and environmentally responsible manner. No spill or incident is so minor that it can be ignored and every spill must be reported.

5.1 BASIC STEPS

The basic steps of the response plan are as follows:

1. *Ensure the safety of all persons at all times.*
2. *Identify and find the spill substance and its source, and, if possible, stop the process or shut off the source.*
3. *Inform the immediate supervisor or his or her designate at once, so that he/she may take appropriate action. Appropriate action includes the notification of a government official, if required; Spill Report forms are included at the back of this plan.*
4. *Contain the spill or environmental hazard, as per its nature, and as per the advice of INAC Water Resources Inspector as required.*
5. *Implement any necessary cleanup or remedial action.*

5.2 REPORTING PROCEDURE

Communication in the way of two-way radios will be set-up in the event that if a spill occurs outside of camp at either the drill rig or external fuel cache it can be immediately reported to the Project Supervisor.

All spill kits located at all sources of fuel will have contact information for the NWT Spill Report Line prominently displayed.

A listing of the NWT 24 Hour Spill Report Line as well as other government contacts and company officials will be displayed adjacent to the satellite phone in camp. (See Reporting Procedure and Contacts below).

1. *Immediately notify the Nordgold (Northquest Ltd.) head offi*ce T: (416) 306-0954 *and report to the 24 Hour Spill Line at (867) 920-8130 (Fax: 867-873-6924), INAC Land Use Resource Management Officer (867) 645-2840 and KIA Land Use Inspector (867) 645-5735.*
2. *A Spill Report Form (Appendix 1) is filled out as completely as possible before or after contacting the 24 Hour Spill Line.*
3. *Notify Dave Smith, Exploration Manager, Cell: (647) 549-0954*

5.3 EMERGENCY CONTACT LIST

Emergency Contact List – Spill Reporting and Response

CONTACT	CONTACT NUMBER (Tel / Cell)
David Smith, Exploration Manager, Nordgold	C: (647) 549-0954
Nordgold Headquarters, Toronto	T: (416) 306-0954
24 Hour Emergency Spill Line phone / fax	(867) 920-8130, (867) 873-6924
Government of the NWT Pollution Control Division, Yellowknife	(867) 873-7654
INAC, Yellowknife	(867) 920-8240
Environment Canada, Yellowknife	(867) 975 4644
24 hour Pager, Yellowknife	(867) 920 5131 (867) 873-8185
Environment Canada – Iqaluit Emergency Pager	(867) 975-4639 (867) 920-5131
Environment Canada Enforcement Officer	(867) 975-4644
Nunavut Water Board	(867) 360-6338 Fax (867) 360-6369
GN – DoE Environmental Protection (Rob Eno)	(867) 987-7729 FAX (867) 975-5981
INAC Land Use Resource Management Officer (Rankin Inlet)	(867) 645-2840
KIA Land Use Inspector (Rankin Inlet)	(867) 645-5735
INAC NU Water Resources Manager INAC NU Lands Administration Manager	(867) 975 4550 FAX (867) 975-4585 (867) 975-4280 FAX (867) 975-4286
DFO NU Region Manager, Pollution Control and Air Quality	(867) 979-8000 FAX (867) 979-8039 (867) 975-5907
Rankin Inlet Hospital; Office Hours / After 5pm	(867) 645-8300 / (867) 645-6700
Rankin Inlet RCMP; Office Hours / Emergency	(867) 645-0123 / (867) 645-1111
Whale Cove RCMP Detachment	(867) 896-0123 or (867) 896-1111
Keewatin Air Ambulance	(867) 645-4455
Local Contractor- Panika and Sons (Whale Cove)	(867) 896-9038
M&T Ent. (Rankin Inlet)	(867) 645-2778

A detailed report on each occurrence must also be filled out with the INAC Water Resources Inspector no later than 30 days after initially reporting the event. The Spill Report Form is attached as Appendix I.

6.0 ACTION PLANS

The following responses are recommended for fuel spills in differing environments. Depending on the location and size of the exploration program some of the equipment mentioned in the responses listed below will obviously not be located on site but could be transported to the spill if deemed necessary. The most likely scenario for fuel spills in this type of exploration program would include: leaking drums, hydraulic line malfunction and re-fueling operations. It is not anticipated that a spill of more than 45 gallons will occur as no fuel container on-site will exceed this capacity.

6.1 Spills on Land (gravel, rock, soil and vegetation)

Trench or ditch to intercept or contain flow of fuel or petroleum products on land where feasible (loose sand, gravel and surface layers of organic materials are amenable to trenching/ditching-trenching in rocky substrates is typically impractical and impossible).

Construct a soil berm downslope of the spill. Use of synthetic, impervious sheeting can also be used to act as a barrier.

Where available, recover spills through manual or mechanical means including shovels, heavy equipment and pumps.

Absorb petroleum residue with synthetic sorbent pad materials.

Recover spilled and contaminated material, including soil and vegetation.

Transport contaminated material to approved disposal or recovery site. Equipment used will depend on the magnitude and location of the spill.

Land based disposal is only authorized with the approval of government authorities.

6.2 Spills on Snow

Trench or ditch to intercept or contain flow of fuel or petroleum products on snow, where feasible (ice, snow, loose sand, gravel and surface layers of organic materials as amenable to trench/ditching; trenching in solid, frozen ground or rocky substrates is typically impractical and impossible).

Compact snow around the outside perimeter of the spill area.

Construct a dike or dam out of snow, either manually with shovels or with heavy equipment such as graders or dozers where available.

If feasible, use synthetic lines to provide an impervious barrier at the spill site.

Locate the low point of the spill area and clear channels in the snow, directed away from waterways, to allow non-absorbed material to flow into the low point.

Once collected in the low area, option include shoveling spilled material into containers, picking up with mobile heavy equipment, pumping liquid into tanker trucks or using vacuum truck to pick up material.

Where safe, disposal can be done through in-situ combustion with approval from government and safety consultants.

Transport contaminated material to approved disposal site. Equipment used will depend on the magnitude and location of the spill.

6.3 Spills on Ice

Contain material spill using methods described above for snow, if feasible and/or mechanical recovery with heavy equipment.

Prevent fuel/petroleum products from penetrating ice and entering watercourses.

Remove contaminated material, including snow/ice as soon as possible.

Containment of fuel/petroleum products under ice surface is difficult given the ice thickness and winter conditions. However, if the materials get under ice, determine area where the fuel/petroleum product is located.

Drill holes through ice using ice auger to locate fuel/petroleum product.

Once detected, cut slits in the ice using chain saws and remove ice blocks.

Fuel/petroleum products collected in ice slots or holes can be picked up via suction hoses connected to portable pump, vacuum truck or standby tanker. Care should be taken to prevent the end of the suction hose clogging up by snow, ice or debris.

Fuel/petroleum products that have collected in ice slots may be disposed of by in-situ burning if sufficient holes are drilled in ice. Once all the holes are drilled, the oil which collects in the holes may be ignited. Consult with fire/safety consultants and government authorities to obtain approval.

6.4 Spills on Water

Contain spills on open water immediately to restrict the size and extent of the spill

Fuel/petroleum products which float on water may be contained through the use of booms, absorbent materials, skimming and the erection of culverts.

Deploy containment booms to minimize spill area, although effectiveness of booms may be limited by wind, waves and other factors.

Use sorbent booms to slowly encircle and absorb spilled material. These absorbent are hydrophobic (absorb and repel water).

Once booms are secured, use skimmers to draw in hydrocarbons and minimal amounts of water. Skimmed material can be pumped through hoses to empty fuel tanks/drums.

Culverts permit water flow while capturing and collecting fuel along the surface with absorbent materials.

Chemical methods including dispersants, emulsion – treating agents and shoreline cleaning will be considered.

6.5 Spills Due to Accidental Load Release

The loss of external loads of fuel, oil or chemicals from the helicopter requires an immediate response.

1) Obtain GPS co-ordinates of the location and contact base camp. Include quantity and type of load loss.

2) Base camp will contact the 24-Hour Spill Line and receive instructions on follow up procedures.

3) Administer the appropriate procedure for spills on Land, Water, Snow or Ice

NOTE:

1. **Material Safety Data Sheets** for all hazardous materials involved in this project are presented in Appendix II. These MSDS sheets are for all drilling mud, polymers and greases as well as for calcium chloride, diesel, Jet B, propane and gasoline.

2. In-situ combustion is a disposal method available for fuels and petroleum products. In-situ burning can be initiated by using a large size portable propane torch (tiger torch) to ignite the fuel/petroleum products. Highly flammable products such as gasoline or alcohol, or combustible material such as wood, may be used to promote ignition of the spilled product. The objective is to raise the temperature for sustained combustion of the spilled product.

   Precautions need to be taken to ensure safety of personnel. Also, spilled product should be confined to control burning. These include areas where the spilled material has pooled naturally or been contained via dikes, trenches, depressions or ice slots. Prior to any attempts at in-situ burning, consultation with experts and approval by government authorities are required.

3. Chemical response methods are also available and may include the use of dispersants, emulsions-treating agents, visco-elastic agents, herding agents, solidifiers, and shoreline cleaning agents.

4. Biological response methods include nutrient enrichment and natural microbe seeding.

5. Site remediation will be completed as per the advice of government authorities.

7.0 RESOURCE INVENTORY

Resources available on site:

Trenching/digging equipment in the form of picks and shovels.
Pumps
Impervious sheeting (tarps)
Plastic bags, buckets, empty drums for collection of contaminated material.
2 Spill Kits containing:
- 4 – oil sorbent booms (5" x 10')
- 100 – oil sorbent sheets (16.5" x 20" x 3/8")
- 1 – drain cover (36" x 36" x 1/16")
- 1 – 1lb plugging compound
- 2 – pair Nitrile gloves
- 2 – pair Safety goggles
- 10 – disposable bags

8.0 TRAINING/EXERCISE

Northquest (Nordgold) is aware that without practice no Contingency Plan has value.

At least one practice drill will be held per season to give all employees and contractors a chance to practice emergency response skills. Each practice will be evaluated and a report prepared with the objective of learning where gaps and deficiencies exist, and in what areas more practice is required. Response criteria, communication and reporting requirements will be discussed to ensure everyone fully understands them.

APPENDIX I

SPILL REPORT FORM

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

Government of Northwest Territories · Nunavut · Canada · Inuvialuit Land Administration

NT-NU 24-HOUR SPILL REPORT LINE
Tel: (867) 920-8130 • Fax: (867) 873-6924 • Email: spills@gov.nt.ca

REPORT LINE USE ONLY

A	Report Date: MM DD YY	Report Time:	☐ Original Spill Report **OR** ☐ Update # _____ to the Original Spill Report	**Report Number:**
B	Occurrence Date: MM DD YY	Occurrence Time:		
C	Land Use Permit Number (if applicable):		Water Licence Number (if applicable):	
D	Geographic Place Name or Distance and Direction from the Named Location:		Region: ☐ NT ☐ Nunavut ☐ Adjacent Jurisdiction or Ocean	
E	Latitude: _____ Degrees _____ Minutes _____ Seconds		Longitude: _____ Degrees _____ Minutes _____ Seconds	
F	Responsible Party or Vessel Name:		Responsible Party Address or Office Location:	
G	Any Contractor Involved:		Contractor Address or Office Location:	
H	Product Spilled: ☐ Potential Spill	Quantity in Litres, Kilograms or Cubic Metres:	U.N. Number:	
I	Spill Source:	Spill Cause:	Area of Contamination in Square Metres:	
J	Factors Affecting Spill or Recovery:	Describe Any Assistance Required:	Hazards to Persons, Property or Environment:	
K	Additional Information, Comments, Actions Proposed or Taken to Contain, Recover or Dispose of Spilled Product and Contaminated Materials:			

L	Reported to Spill Line by:	Position:	Employer:	Location Calling From:	Telephone:
M	Any Alternate Contact:	Position:	Employer:	Alternate Contact Location:	Alternate Telephone:

REPORT LINE USE ONLY

N	Received at Spill Line by:	Position:	Employer:	Location Called:	Report Line Number:

Lead Agency: ☐ EC ☐ CCG/TCMSS ☐ GNWT ☐ GN ☐ ILA ☐ AANDC ☐ NEB ☐ Other: _____

Significance: ☐ Minor ☐ Major ☐ Unknown

File Status: ☐ Open ☐ Closed

Agency:	Contact Name:	Contact Time:	Remarks:
Lead Agency:			
First Support Agency:			
Second Support Agency:			
Third Support Agency:			

APPENDIX II

MATERIAL SAFETY DATA SHEETS (MSDS)

MATERIAL SAFETY DATA SHEET

Gasoline, All Grades **MSDS No. 9950**

EMERGENCY OVERVIEW
DANGER!
EXTREMELY FLAMMABLE - EYE AND MUCOUS MEMBRANE IRRITANT - EFFECTS CENTRAL NERVOUS SYSTEM - HARMFUL OR FATAL IF SWALLOWED - ASPIRATION HAZARD

NFPA 704 (Section 16)

High fire hazard. Keep away from heat, spark, open flame, and other ignition sources.

If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs). Contact may cause eye, skin and mucous membrane irritation. Harmful if absorbed through the skin. Avoid prolonged breathing of vapors or mists. Inhalation may cause irritation, anesthetic effects (dizziness, nausea, headache, intoxication), and respiratory system effects.

Long-term exposure may cause effects to specific organs, such as to the liver, kidneys, blood, nervous system, and skin. Contains benzene, which can cause blood disease, including anemia and leukemia.

1. CHEMICAL PRODUCT and COMPANY INFORMATION

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

EMERGENCY TELEPHONE NUMBER (24 hrs): **CHEMTREC (800)424-9300**
COMPANY CONTACT (business hours): Corporate Safety (732)750-6000
MSDS (Environment, Health, Safety) Internet Website www.hess.com

SYNONYMS: Hess Conventional (Oxygenated and Non-oxygenated) Gasoline; Reformulated Gasoline (RFG); Reformulated Gasoline Blendstock for Oxygenate Blending (RBOB); Unleaded Motor or Automotive Gasoline

See Section 16 for abbreviations and acronyms.

2. COMPOSITION and INFORMATION ON INGREDIENTS *

INGREDIENT NAME (CAS No.)	CONCENTRATION PERCENT BY WEIGHT
Gasoline (86290-81-5)	100
Benzene (71-43-2)	0.1 - 4.9 (0.1 - 1.3 reformulated gasoline)
n-Butane (106-97-8)	< 10
Ethyl Alcohol (Ethanol) (64-17-5)	0 - 10
Ethyl benzene (100-41-4)	< 3
n-Hexane (110-54-3)	0.5 to 4
Methyl-tertiary butyl ether (MTBE) (1634-04-4)	0 to 15.0
Tertiary-amyl methyl ether (TAME) (994-05-8)	0 to 17.2
Toluene (108-88-3)	1 - 25
1,2,4- Trimethylbenzene (95-63-6)	< 6
Xylene, mixed isomers (1330-20-7)	1 - 15

A complex blend of petroleum-derived normal and branched-chain alkane, cycloalkane, alkene, and aromatic hydrocarbons. May contain antioxidant and multifunctional additives. Non-oxygenated Conventional Gasoline and RBOB do not have oxygenates (Ethanol or MTBE and/or TAME).

MATERIAL SAFETY DATA SHEET

Gasoline, All Grades **MSDS No. 9950**

Oxygenated Conventional and Reformulated Gasoline will have oxygenates for octane enhancement or as legally required.

3. HAZARDS IDENTIFICATION

EYES
Moderate irritant. Contact with liquid or vapor may cause irritation.

SKIN
Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly.

INGESTION
The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

INHALATION
Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

CHRONIC EFFECTS and CARCINOGENICITY
Contains benzene, a regulated human carcinogen. Benzene has the potential to cause anemia and other blood diseases, including leukemia, after repeated and prolonged exposure. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with systemic toxicity. See also Section 11 - Toxicological Information.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash). Chronic respiratory disease, liver or kidney dysfunction, or pre-existing central nervous system disorders may be aggravated by exposure.

4. FIRST AID MEASURES

EYES
In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

SKIN
Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.

INGESTION

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

INHALATION
Remove person to fresh air. If person is not breathing, ensure an open airway and provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT:	-45 °F (-43°C)
AUTOIGNITION TEMPERATURE:	highly variable; > 530 °F (>280 °C)
OSHA/NFPA FLAMMABILITY CLASS:	1A (flammable liquid)
LOWER EXPLOSIVE LIMIT (%):	1.4%
UPPER EXPLOSIVE LIMIT (%):	7.6%

FIRE AND EXPLOSION HAZARDS
Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

EXTINGUISHING MEDIA
SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

During certain times of the year and/or in certain geographical locations, gasoline may contain MTBE and/or TAME. Firefighting foam suitable for polar solvents is recommended for fuel with greater than 10% oxygenate concentration - refer to NFPA 11 “Low Expansion Foam - 1994 Edition.”

FIRE FIGHTING INSTRUCTIONS
Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

MATERIAL SAFETY DATA SHEET

Gasoline, All Grades **MSDS No. 9950**

6. ACCIDENTAL RELEASE MEASURES

ACTIVATE FACILITY SPILL CONTINGENCY or EMERGENCY PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

7. HANDLING and STORAGE

HANDLING PRECAUTIONS

******USE ONLY AS A MOTOR FUEL******
******DO NOT SIPHON BY MOUTH******

Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents.

STORAGE PRECAUTIONS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

WORK/HYGIENIC PRACTICES

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

MATERIAL SAFETY DATA SHEET

Gasoline, All Grades **MSDS No. 9950**

8. EXPOSURE CONTROLS and PERSONAL PROTECTION

EXPOSURE LIMITS

Component (CAS No.)	Source	Exposure Limits TWA (ppm)	STEL (ppm)	Note
Gasoline (86290-81-5)	ACGIH	300	500	A3
Benzene (71-43-2)	OSHA	1	5	Carcinogen
	ACGIH	0.5	2.5	A1, skin
	USCG	1	5	
n-Butane (106-97-8)	ACGIH	1000	--	Aliphatic Hydrocarbon Gases Alkane (C1-C4)
Ethyl Alcohol (ethanol) (64-17-5)	OSHA	1000	--	
	ACGIH	1000	--	A4
Ethyl benzene (100-41-4)	OSHA	100	--	
	ACGIH	100	125	A3
n-Hexane (110-54-3)	OSHA	500	--	
	ACGIH	50	--	Skin
Methyl-tertiary butyl ether [MTBE] (1634-04-4)	ACGIH	50		A3
Tertiary-amyl methyl ether [TAME] (994-05-8)				None established
Toluene (108-88-3)	OSHA	200		Ceiling: 300 ppm; Peak: 500 ppm (10 min.)
	ACGIH	20	--	A4
1,2,4- Trimethylbenzene (95-63-6)	ACGIH	25	--	
Xylene, mixed isomers (1330-20-7)	OSHA	100	--	
	ACGIH	100	150	A4

ENGINEERING CONTROLS

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

EYE/FACE PROTECTION

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

SKIN PROTECTION

Gloves constructed of nitrile or neoprene are recommended. Chemical protective clothing such as that made of of E.I. DuPont Tychem ®, products or equivalent is recommended based on degree of exposure.

Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

RESPIRATORY PROTECTION

A NIOSH-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection and limitations.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE

A translucent, straw-colored or light yellow liquid

MATERIAL SAFETY DATA SHEET

Gasoline, All Grades **MSDS No. 9950**

ODOR

A strong, characteristic aromatic hydrocarbon odor. Oxygenated gasoline with MTBE and/or TAME may have a sweet, ether-like odor and is detectable at a lower concentration than non-oxygenated gasoline.

ODOR THRESHOLD

	Odor Detection	Odor Recognition
Non-oxygenated gasoline:	0.5 - 0.6 ppm	0.8 - 1.1 ppm
Gasoline with 15% MTBE:	0.2 - 0.3 ppm	0.4 - 0.7 ppm
Gasoline with 15% TAME:	0.1 ppm	0.2 ppm

BASIC PHYSICAL PROPERTIES

BOILING RANGE:	85 to 437 °F (39 to 200 °C)
VAPOR PRESSURE:	6.4 - 15 RVP @ 100 °F (38 °C) (275-475 mm Hg @ 68 °F (20 °C)
VAPOR DENSITY (air = 1):	AP 3 to 4
SPECIFIC GRAVITY (H_2O = 1):	0.70 – 0.78
EVAPORATION RATE:	10-11 (n-butyl acetate = 1)
PERCENT VOLATILES:	100 %
SOLUBILITY (H_2O):	Non-oxygenated gasoline - negligible (< 0.1% @ 77 °F). Gasoline with 15% MTBE - slight (0.1 - 3% @ 77 °F); ethanol is readily soluble in water

10. STABILITY and REACTIVITY)

STABILITY: Stable. Hazardous polymerization will not occur.

CONDITIONS TO AVOID

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources

INCOMPATIBLE MATERIALS

Keep away from strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

11. TOXICOLOGICAL PROPERTIES

ACUTE TOXICITY

Acute Dermal LD50 (rabbits): > 5 ml/kg
Acute Oral LD50 (rat): 18.75 ml/kg
Primary dermal irritation (rabbits): slightly irritating
Draize eye irritation (rabbits): non-irritating
Guinea pig sensitization: negative

CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenicity: OSHA: NO IARC: YES - 2B NTP: NO ACGIH: YES (A3)

IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

MATERIAL SAFETY DATA SHEET

Gasoline, All Grades **MSDS No. 9950**

This product may contain methyl tertiary butyl ether (MTBE): animal and human health effects studies indicate that MTBE may cause eye, skin, and respiratory tract irritation, central nervous system depression and neurotoxicity. MTBE is classified as an animal carcinogen (A3) by the ACGIH.

12. ECOLOGICAL INFORMATION

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations. If released, oxygenates such as ethers and alcohols will be expected to exhibit fairly high mobility in soil, and therefore may leach into groundwater. The API (www.api.org) provides a number of useful references addressing petroleum and oxygenate contamination of groundwater.

13. DISPOSAL CONSIDERATIONS

Consult federal, state and local waste regulations to determine appropriate disposal options.

14. TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME:	Gasoline
DOT HAZARD CLASS and PACKING GROUP:	3, PG II
DOT IDENTIFICATION NUMBER:	UN 1203
DOT SHIPPING LABEL:	FLAMMABLE LIQUID

PLACARD:

15. REGULATORY INFORMATION

U.S. FEDERAL, STATE, and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other federal, state, or local regulations; consult those regulations applicable to your facility/operation.

CLEAN WATER ACT (OIL SPILLS)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a “petroleum exclusion” clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

SARA SECTION 311/312 - HAZARD CLASSES

ACUTE HEALTH	CHRONIC HEALTH	FIRE	SUDDEN RELEASE OF PRESSURE	REACTIVE
X	X	X	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

INGREDIENT NAME (CAS NUMBER)	CONCENTRATION WT. PERCENT
Benzene (71-43-2)	0.1 to 4.9 (0.1 to 1.3 for reformulated gasoline)
Ethyl benzene (100-41-4)	< 3

MATERIAL SAFETY DATA SHEET

Gasoline, All Grades **MSDS No. 9950**

n-Hexane (110-54-3)	0.5 to 4
Methyl-tertiary butyl ether (MTBE) (1634-04-4)	0 to 15.0
Toluene (108-88-3)	1 to 15
1,2,4- Trimethylbenzene (95-63-6)	< 6
Xylene, mixed isomers (1330-20-7)	1 to 15

US EPA guidance documents (www.epa.gov/tri) for reporting Persistent Bioaccumulating Toxics (PBTs) indicate this product may contain the following deminimis levels of toxic chemicals subject to Section 313 reporting:

INGREDIENT NAME (CAS NUMBER)	CONCENTRATION - Parts per million (ppm) by weight
Polycyclic aromatic compounds (PACs)	17
Benzo (g,h,i) perylene (191-24-2)	2.55
Lead (7439-92-1)	0.079

CALIFORNIA PROPOSITION 65 LIST OF CHEMICALS

This product contains the following chemicals that are included on the Proposition 65 "List of Chemicals" required by the California Safe Drinking Water and Toxic Enforcement Act of 1986:

INGREDIENT NAME (CAS NUMBER)	Date Listed
Benzene	2/27/1987
Ethyl benzene	6/11/2004
Toluene	1/1/1991

CANADIAN REGULATORY INFORMATION (WHMIS)

Class B, Division 2 (Flammable Liquid)
Class D, Division 2A (Very toxic by other means) and Class D, Division 2B (Toxic by other means)

16. OTHER INFORMATION

NFPA® HAZARD RATING	HEALTH:	1	Slight
	FIRE:	3	Serious
	REACTIVITY:	0	Minimal
HMIS® HAZARD RATING	HEALTH:	1 *	Slight
	FIRE:	3	Serious
	PHYSICAL:	0	Minimal
			* CHRONIC

SUPERSEDES MSDS DATED: 07/01/06

ABBREVIATIONS:

AP = Approximately	< = Less than	> = Greater than
N/A = Not Applicable	N/D = Not Determined	ppm = parts per million

ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists	CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
AIHA	American Industrial Hygiene Association	DOT	U.S. Department of Transportation [General Info: (800)467-4922]
ANSI	American National Standards Institute (212)642-4900	EPA	U.S. Environmental Protection Agency
API	American Petroleum Institute (202)682-8000	HMIS	Hazardous Materials Information System

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MATERIAL SAFETY DATA SHEET

Gasoline, All Grades **MSDS No. 9950**

IARC	International Agency For Research On Cancer	REL	Recommended Exposure Limit (NIOSH)
MSHA	Mine Safety and Health Administration	SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
NFPA	National Fire Protection Association (617)770-3000	SCBA	Self-Contained Breathing Apparatus
NIOSH	National Institute of Occupational Safety and Health	SPCC	Spill Prevention, Control, and Countermeasures
NOIC	Notice of Intended Change (proposed change to ACGIH TLV)	STEL	Short-Term Exposure Limit (generally 15 minutes)
NTP	National Toxicology Program	TLV	Threshold Limit Value (ACGIH)
OPA	Oil Pollution Act of 1990	TSCA	Toxic Substances Control Act
OSHA	U.S. Occupational Safety & Health Administration	TWA	Time Weighted Average (8 hr.)
PEL	Permissible Exposure Limit (OSHA)	WEEL	Workplace Environmental Exposure Level (AIHA)
RCRA	Resource Conservation and Recovery Act	WHMIS	Workplace Hazardous Materials Information System (Canada)

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

MATERIAL SAFETY DATA SHEET

Diesel Fuel (All Types) **MSDS No. 9909**

EMERGENCY OVERVIEW
CAUTION!
OSHA/NFPA COMBUSTIBLE LIQUID - SLIGHT TO MODERATE IRRITANT
EFFECTS CENTRAL NERVOUS SYSTEM
HARMFUL OR FATAL IF SWALLOWED

Moderate fire hazard. Avoid breathing vapors or mists. May cause dizziness and drowsiness. May cause moderate eye irritation and skin irritation (rash). Long-term, repeated exposure may cause skin cancer.
If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).

NFPA 704 (Section 16)

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

EMERGENCY TELEPHONE NUMBER (24 hrs): **CHEMTREC (800) 424-9300**
COMPANY CONTACT (business hours): Corporate Safety (732) 750-6000
MSDS INTERNET WEBSITE: www.hess.com (See Environment, Health, Safety & Social Responsibility)

SYNONYMS: Ultra Low Sulfur Diesel (ULSD); Low Sulfur Diesel; Motor Vehicle Diesel Fuel; Diesel Fuel #2; Dyed Diesel Fuel; Non-Road, Locomotive and Marine Diesel Fuel; Tax-exempt Diesel Fuel

See Section 16 for abbreviations and acronyms.

2. COMPOSITION and CHEMICAL INFORMATION ON INGREDIENTS

INGREDIENT NAME (CAS No.)	CONCENTRATION PERCENT BY WEIGHT
Diesel Fuel (68476-34-6)	100
Naphthalene (91-20-3)	Typically < 0.01

A complex mixture of hydrocarbons with carbon numbers in the range C9 and higher. Diesel fuel may be dyed (red) for tax purposes. May contain a multifunctional additive.

3. HAZARDS IDENTIFICATION

EYES
Contact with liquid or vapor may cause mild irritation.

SKIN
May cause skin irritation with prolonged or repeated contact. Practically non-toxic if absorbed following acute (single) exposure. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

INGESTION
The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

MATERIAL SAFETY DATA SHEET

Diesel Fuel (All Types) **MSDS No. 9909**

INHALATION
Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

CHRONIC EFFECTS and CARCINOGENICITY
Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. The significance of these results to human exposures has not been determined - see Section 11 Toxicological Information.

IARC classifies whole diesel fuel exhaust particulates as probably carcinogenic to humans (Group 2A). NIOSH regards whole diesel fuel exhaust particulates as a potential cause of occupational lung cancer based on animal studies and limited evidence in humans.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash).

4. FIRST AID MEASURES

EYES
In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

SKIN
Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.

INGESTION
DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

INHALATION
Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT:	> 125 °F (> 52 °C) minimum PMCC
AUTOIGNITION POINT:	494 °F (257 °C)
OSHA/NFPA FLAMMABILITY CLASS:	2 (COMBUSTIBLE)
LOWER EXPLOSIVE LIMIT (%):	0.6
UPPER EXPLOSIVE LIMIT (%):	7.5

FIRE AND EXPLOSION HAZARDS
Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

EXTINGUISHING MEDIA
SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

FIRE FIGHTING INSTRUCTIONS

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

6. ACCIDENTAL RELEASE MEASURES

ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

7. HANDLING and STORAGE

HANDLING PRECAUTIONS

Handle as a combustible liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Diesel fuel, and in particular low and ultra low sulfur diesel fuel, has the capability of accumulating a static electrical charge of sufficient energy to cause a fire/explosion in the presence of lower flashpoint products such as gasoline. The accumulation of such a static charge occurs as the diesel flows through pipelines, filters, nozzles and various work tasks such as tank/container filling, splash loading, tank cleaning; product sampling; tank gauging; cleaning, mixing, vacuum truck operations, switch loading, and product agitation. There is a greater potential for static charge accumulation in cold temperature, low humidity conditions.

Documents such as 29 CFR OSHA 1910.106 "Flammable and Combustible Liquids, NFPA 77 Recommended Practice on Static Electricity, API 2003 "Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents and ASTM D4865 "Standard Guide for Generation and Dissipation of Static

Electricity in Petroleum Fuel Systems" address special precautions and design requirements involving loading rates, grounding, bonding, filter installation, conductivity additives and especially the hazards associated with "switch loading." ["Switch Loading" is when a higher flash point product (such as diesel) is loaded into tanks previously containing a low flash point product (such as gasoline) and the electrical charge generated during loading of the diesel results in a static ignition of the vapor from the previous cargo (gasoline).]

Note: When conductivity additives are used or are necessary the product should achieve 25 picosiemens/meter or greater at the handling temperature.

STORAGE PRECAUTIONS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

WORK/HYGIENIC PRACTICES

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION

EXPOSURE LIMITS

Components (CAS No.)	Source	Exposure Limits TWA/STEL	Note
Diesel Fuel: (68476-34-6)	OSHA	5 mg/m, as mineral oil mist	
	ACGIH	100 mg/m^3 (as totally hydrocarbon vapor) TWA	A3, skin
Naphthalene (91-20-3)	OSHA	10 ppm TWA	
	ACGIH	10 ppm TWA / 15 ppm STEL	A4, Skin

ENGINEERING CONTROLS

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

EYE/FACE PROTECTION

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

SKIN PROTECTION

Gloves constructed of nitrile, neoprene, or PVC are recommended. Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

MATERIAL SAFETY DATA SHEET

Diesel Fuel (All Types) **MSDS No. 9909**

RESPIRATORY PROTECTION

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE

Clear, straw-yellow liquid. Dyed fuel oil will be red or reddish-colored.

ODOR

Mild, petroleum distillate odor

BASIC PHYSICAL PROPERTIES

BOILING RANGE:	320 to 690 oF (160 to 366 °C)
VAPOR PRESSURE:	0.009 psia @ 70 °F (21 °C)
VAPOR DENSITY (air = 1):	> 1.0
SPECIFIC GRAVITY (H_2O = 1):	0.83 to 0.88 @ 60 °F (16 °C)
PERCENT VOLATILES:	100 %
EVAPORATION RATE:	Slow; varies with conditions
SOLUBILITY (H_2O):	Negligible

10. STABILITY and REACTIVITY

STABILITY: Stable. Hazardous polymerization will not occur.

CONDITIONS TO AVOID and INCOMPATIBLE MATERIALS

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers; Viton ®; Fluorel ®

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

11. TOXICOLOGICAL PROPERTIES

ACUTE TOXICITY

Acute dermal LD50 (rabbits): > 5 ml/kg
Acute oral LD50 (rats): 9 ml/kg
Primary dermal irritation: extremely irritating (rabbits)
Draize eye irritation: non-irritating (rabbits)
Guinea pig sensitization: negative

CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenic: OSHA: NO IARC: NO NTP: NO ACGIH: A3

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

MUTAGENICITY (genetic effects)

This material has been positive in a mutagenicity study.

MATERIAL SAFETY DATA SHEET

Diesel Fuel (All Types) **MSDS No. 9909**

12. ECOLOGICAL INFORMATION

Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

13. DISPOSAL CONSIDERATIONS

Consult federal, state and local waste regulations to determine appropriate disposal options.

14. TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:	Diesel Fuel	Placard (International Only):
HAZARD CLASS and PACKING GROUP:	3, PG III	
DOT IDENTIFICATION NUMBER:	NA 1993 (Domestic) UN 1202 (International)	
DOT SHIPPING LABEL:	None	

Use Combustible Placard if shipping in bulk domestically

15. REGULATORY INFORMATION

U.S. FEDERAL, STATE, and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

CLEAN WATER ACT (OIL SPILLS)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a “petroleum exclusion” clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

SARA SECTION 311/312 - HAZARD CLASSES

ACUTE HEALTH	CHRONIC HEALTH	FIRE	SUDDEN RELEASE OF PRESSURE	REACTIVE
X	X	X	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product may contain listed chemicals below the *de minimis* levels which therefore are not subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372. If you may be required to report releases of chemicals listed in 40 CFR 372.28, you may contact Hess Corporate Safety if you require additional information regarding this product.

CALIFORNIA PROPOSITON 65 LIST OF CHEMICALS

This product contains the following chemicals that are included on the Proposition 65 "List of Chemicals" required by the California Safe Drinking Water and Toxic Enforcement Act of 1986:

INGREDIENT NAME (CAS NUMBER)	Date Listed
Diesel Engine Exhaust (no CAS Number listed)	10/01/1990

CANADIAN REGULATORY INFORMATION (WHMIS)

Class B, Division 3 (Combustible Liquid) and Class D, Division 2, Subdivision B (Toxic by other means)

MATERIAL SAFETY DATA SHEET

Diesel Fuel (All Types) **MSDS No. 9909**

16. OTHER INFORMATION

NFPA® HAZARD RATING

HEALTH:	0
FIRE:	2
REACTIVITY:	0

Refer to NFPA 704 "Identification of the Fire Hazards of Materials" for further information

HMIS® HAZARD RATING

HEALTH:	1 *	* Chronic
FIRE:	2	
PHYSICAL:	0	

SUPERSEDES MSDS DATED: 02/28/2001

ABBREVIATIONS:

AP = Approximately < = Less than > = Greater than
N/A = Not Applicable N/D = Not Determined ppm = parts per million

ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute (212) 642-4900
API	American Petroleum Institute (202) 682-8000
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation [General info: (800) 467-4922]
EPA	U.S. Environmental Protection Agency
HMIS	Hazardous Materials Information System
IARC	International Agency For Research On Cancer
MSHA	Mine Safety and Health Administration
NFPA	National Fire Protection Association (617)770-3000
NIOSH	National Institute of Occupational Safety and Health
NOIC	Notice of Intended Change (proposed change to ACGIH TLV)
NTP	National Toxicology Program
OPA	Oil Pollution Act of 1990
OSHA	U.S. Occupational Safety & Health Administration
PEL	Permissible Exposure Limit (OSHA)
RCRA	Resource Conservation and Recovery Act
REL	Recommended Exposure Limit (NIOSH)
SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	Self-Contained Breathing Apparatus
SPCC	Spill Prevention, Control, and Countermeasures
STEL	Short-Term Exposure Limit (generally 15 minutes)
TLV	Threshold Limit Value (ACGIH)
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average (8 hr.)
WEEL	Workplace Environmental Exposure Level (AIHA)
WHMIS	Canadian Workplace Hazardous Materials Information System

Material Safety Data Sheet

JET B AVIATION TURBINE FUEL

1 . Product and company identification

Product name : JET B AVIATION TURBINE FUEL

Synonym : Jet B; Jet B DI; JP-4; Jet F-40; NATO F-40; Turbine Fuel, Aviation, Wide Cut Type (Can/CGSB-3.22).

Code : W219, SAP: 150, 151, 152

Material uses : Used as aviation turbine fuel. May contain a fuel system icing inhibitor.

Manufacturer : PETRO-CANADA
P.O. Box 2844
150 – 6th Avenue South-West
Calgary, Alberta
T2P 3E3

In case of emergency : Petro-Canada: 403-296-3000
Canutec Transportation: 613-996-6666
Poison Control Centre: Consult local telephone directory for emergency number(s).

2 . Hazards identification

Physical state : Clear liquid.

Odour : Gasoline like.

WHMIS (Canada) :

Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : DANGER!

EXTREMELY FLAMMABLE LIQUID AND VAPOUR. FLAMMABLE. VAPOUR MAY CAUSE FLASH FIRE. CAUSES SKIN IRRITATION. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER. POSSIBLE BIRTH DEFECT HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE BIRTH DEFECTS, BASED ON ANIMAL DATA.

Extremely flammable liquid. Irritating to skin. Keep away from heat, sparks and flame. Avoid exposure - obtain special instructions before use. Do not breathe vapour or mist. Avoid contact with eyes, skin and clothing. Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure. Contains material which may cause birth defects, based on animal data. Avoid exposure during pregnancy. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : Inhalation of this product may cause respiratory tract irritation and Central Nervous System (CNS) Depression, symptoms of which may include; weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death.

Ingestion : Ingestion of this product may cause gastro-intestinal irritation. Aspiration of this product may result in severe irritation or burns to the respiratory tract.

Skin : Irritating to skin.

Eyes : May cause eye irritation.

Potential chronic health effects

Chronic effects : No known significant effects or critical hazards.

Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

2 . Hazards identification

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Contains material which may cause birth defects, based on animal data.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Medical conditions aggravated by over-exposure : Repeated skin exposure can produce local skin destruction or dermatitis.

See toxicological information (section 11)

3 . Composition/information on ingredients

Name	CAS number	%
Complex mixture of petroleum hydrocarbons (C6-C14)	64741-41-9	60 - 100
Benzene	71-43-2	0.1 - 0.5
Fuel System Icing Inhibitor (FSII) (if added**): (Diethylene Glycol Monomethyl Ether)	111-77-3	0.1 - 0.15
Anti-static, antioxidant, corrosion inhibitor and metal deactivator additives.	Not applicable	< 0.1

** Please note that Jet B DI, JP-4, Jet F-40 and NATO F-40 all contain Fuel System Icing Inhibitor (FSII). corrosion inhibitor

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First-aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : Flammable liquid (NFPA).

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Products of combustion : Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), aldehydes, ketones, smoke and irritating vapours as products of incomplete combustion.

5 . Fire-fighting measures

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards : Flammable in presence of open flames, sparks, and heat. Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. This product can accumulate static charge and ignite. May accumulate in confined spaces.

Special remarks on explosion hazards : Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Ensure the storage containers are grounded/bonded.

8 . Exposure controls/personal protection

Ingredient	Exposure limits
Benzene	**ACGIH TLV (United States). Absorbed through skin.** TWA: 0.5 ppm 8 hour(s). STEL: 2.5 ppm 15 minute(s).

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: A NIOSH-approved air-purifying respirator with an organic vapour cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a positive-pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Recommended: polyvinyl alcohol (PVA), Viton. Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness, will get permeated by chemicals. Therefore, protective gloves should be regularly checked for wear and tear. At the first signs of hardening and cracks, they should be changed.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state	:	Clear liquid.
Flash point	:	Closed cup: -31°C (-23.8°F) [NFPA]
Auto-ignition temperature	:	240°C (464°F) [NFPA]
Flammable limits	:	Lower: 1.3% [NFPA] Upper: 8% [NFPA]
Colour	:	Clear and colourless.
Odour	:	Gasoline like.
Odour threshold	:	Not available.
pH	:	Not available.
Boiling/condensation point	:	50 to 270°C (122 to 518°F)
Melting/freezing point	:	Not available.
Relative density	:	0.75 to 0.8 kg/L @ 15°C (59°F)
Vapour pressure	:	21.1 kPa (158 mm Hg) @ 37.8°C (100°F)
Vapour density	:	3.5 [Air = 1]
Volatility	:	Not available.
Evaporation rate	:	Not available.
Viscosity	:	Not available.
Pour point	:	Freezing point: <-51ºC (<-60ºF) for all types of Jet B including F40
Solubility	:	Insoluble in water. Partially miscible in some alcohols. Miscible with other petroleum solvents.

10 . Stability and reactivity

Chemical stability	:	The product is stable.
Hazardous polymerisation	:	Under normal conditions of storage and use, hazardous polymerisation will not occur.
Materials to avoid	:	Reactive with oxidising agents, diborane and halogen compounds.
Hazardous decomposition products	:	May release COx, NOx, SOx, aldehydes, ketones, smoke and irritating vapours when heated to decomposition.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Complex mixture of petroleum hydrocarbons (C6-C14)	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Diethylene Glycol Monomethyl Ether	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	4000 mg/kg	-
	LC50 Inhalation Vapour	Rat	>50000 mg/m³	4 hours
Benzene	LD50 Dermal	Rabbit	>9400 mg/kg	-
	LD50 Oral	Rat	930 mg/kg	-
	LC50 Inhalation Vapour	Rat	13200 ppm	4 hours

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitiser

Conclusion/Summary : Not available.

Carcinogenicity

11 . Toxicological information

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Complex mixture of petroleum hydrocarbons (C6-C14)	-	2A	-	-	-	-
Benzene	A1	1	A	+	Proven.	+

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Conclusion/Summary : Not available.

Biodegradability

Conclusion/Summary : Not available.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
TDG Classification	UN1863	FUEL, AVIATION, TURBINE ENGINE	3	II		-
DOT Classification	Not available.	Not available.	Not available.	-		-

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Flammable liquid
Irritating material
Carcinogen

Canada

WHMIS (Canada) : Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

15 . Regulatory information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

Canada inventory : All components are listed or exempted.

United States inventory (TSCA 8b) : All components are listed or exempted.

Europe inventory : All components are listed or exempted.

16 . Other information

Label requirements : EXTREMELY FLAMMABLE LIQUID AND VAPOUR. FLAMMABLE. VAPOUR MAY CAUSE FLASH FIRE. CAUSES SKIN IRRITATION. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER. POSSIBLE BIRTH DEFECT HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE BIRTH DEFECTS, BASED ON ANIMAL DATA.

Hazardous Material Information System (U.S.A.) :

Health	*	2
Flammability		3
Physical hazards		0
Personal protection		H

National Fire Protection Association (U.S.A.) :

References : Available upon request.
TM/MC Marque de commerce de Petro-Canada - Trademark

Date of printing : **12/7/2009.**

Date of issue : 7 December 2009

Date of previous issue : No previous validation.

Responsible name : **Product Safety - DSR**

Indicates information that has changed from previously issued version.

For Copy of (M)SDS : Internet: www.petro-canada.ca/msds

Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-1228

For Product Safety Information: (905) 804-4752

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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SECTION I: IDENTIFICATION OF PRODUCT

PRODUCT NAME:	**BIG BEAR DIAMOND DRILL ROD GREASE**
CHEMICAL FAMILY:	Hydrocarbon
WHMIS CLASSIFICATION:	Not regulated
WORK PLACE HAZARD:	Not applicable

TRANSPORTATION OF DANGEROUS GOODS (TDGR)

CLASSIFICATION: Not regulated
PACKAGE GROUP: Not applicable
PRODUCT IDENTIFICATION NUMBER (PIN): Not applicable

SECTION II: HAZARDOUS INGREDIENTS

INGREDIENT	PERCENTAGE	CAS NUMBER	LD50	LC50
Severely hydrotreated naphthenic oils	< 75.00%	64742-52-5	>3 g/kg (Dermal Rabbit) >5 g/kg (Oral Rat)	N/D
Barium soap	< 35.00%	68201-19-4	Not determined	

SECTION III: TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY:
[XXX] Skin, [ ] Eye Contact, [ ] Inhalation, [ ] Ingestion

SKIN CONTACT:	Acute exposure is believed to be minimally irritating
EYE CONTACT:	Acute exposure is believed to be minimally irritating.
INHALATION:	Believed to by minimally irritating if not in excess of permissible concentrations; see Section VIII.
INGESTION:	Not available
CHRONIC OVEREXPOSURE:	Not determined
IRRITATION INDEX:	SKIN: Believed to be 1.0 - 2.0/8.0 (Rabbit); slightly irritating EYES: Believed to be <15/110 (Rabbit); no appreciable effect
SYMPTOMS OF EXPOSURE:	None expected other than possible minor irritation. Considered practically non-toxic.

SECTION IV: FIRST AID MEASURES

SKIN CONTACT: None considered necessary.
EYE CONTACT: As with most foreign materials, should eye contact occur, flush eyes with plenty of water.
INHALATION: None considered necessary.
INGESTION: None considered necessary. Do not induce vomiting.
OTHER INSTRUCTIONS: In some cases of ingestion and/or inhalation, medical attention should be obtained.

SECTION V: PHYSICAL DATA

APPEARANCE AND ODOR:	Brownish yellow, fibrous grease
DENSITY (SPECIFIC GRAVITY):	>1.0
BOILING POINT:	700° F
MELTING POINT:	400° F
WATER SOLUBILITY:	Negligible
% VOLATILE BY VOLUME:	Not determined

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BIG BEAR DIAMOND DRILL ROD GREASE

EVAPORATION RATE:	Not determined
VAPOR PRESSURE (mm Hg):	Not determined (low)
VAPOR DENSITY (Air =1):	>1.0
pH:	Not applicable
VISCOSITY:	NLGI No. 3-4 grease

SECTION VI: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	>350° F (COC Method)
FLAMMABLE LIMIT:	Not determined
EXTINGUISHING MEDIA:	According to the National Fire Protection Association Guide, use water spray. Dry chemical. Foam, Carbon Dioxide CO_2. Water or foam may cause frothing.
SPECIAL FIRE FIGHTING PROCEDURES:	Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protec tion for persons attempting to stop the leak. See Hazardous Decom position Products, Section VII.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None

SECTION VII: REACTIVITY DATA

STABLE [XXX] INSTABLE [ ] Info not available

INCOMPATIBILITY (CONDITIONS TO AVOID):	Strong oxidizers
HAZARDOUS DECOMPOSITION PRODUCTS:	This material decomposes at a high temperature to form carbon monoxide, carbon dioxide, aldehydes and ketones, combustion products of nitrogen and sulphur.
HAZARDOUS POLYMERIZATION:	Will not occur [XXX] May occur [ ]

SECTION VIII: PREVENTATIVE MEASURES

RESPIRATORY PROTECTION:	None required if exposures are within the permissible concentrations. See below
VENTILATION:	Natural dilution
PROTECTIVE GLOVES:	Neoprene
EYE PROTECTION:	Chemical type goggle or face shield optional
OTHER PROTECTIVE EQUIPMENT:	Standard work clothing and work shoes.
PERMISSIBLE CONCENTRATIONS: AIR:	5mg/cubic metre of air for mineral oil mist averaged over an 8 hour daily exposure (ACGIH 1986 - 87)

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Exposed persons should exercise reasonable personal cleanliness; this includes cleansing exposed skin areas several times daily with soap and water and laundering or dry cleaning soiled work clothing at least weekly. Minimum feasible handling temperatures should be maintained. Periods of exposure to high temperatures should be minimized. Water contamination should be avoided.

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BIG BEAR DIAMOND DRILL ROD GREASE

STEPS TO BE TAKEN IN CASE OF SPILL OR LEAK:

Contain spill if possible. Wipe up or absorb on suitable material and shovel up.

WASTE DISPOSAL METHOD:

Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures and processes may influence waste classification. Disposal should be in accordance with applicable federal, provincial and local regulations.

SECTION IX: PREPARATION

The information contained herein is given in good faith, but no warranty, expressed or implied is made.

DATE ISSUED: September 17, 1993 **DATE REVISED:** April 1, 2000

BY: Product Safety Committee

Material Safety Data Sheet / Fiche signalétique

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1 OF 4

SECTION I: IDENTIFICATION OF PRODUCT

PRODUCT NAME:	**550X POLYMER** (MUD)
CHEMICAL FAMILY:	Copolymer of Acrylamide and Sodium Acrylate
PRODUCT USE:	Drilling Mud Additive
WHMIS CLASSIFICATION:	Not a Controlled Product under WHMIS
WORK PLACE HAZARD:	Not applicable

TRANSPORTATION OF DANGEROUS GOODS (TDGR)

CLASSIFICATION:	Not applicable
PACKAGE GROUP:	Not applicable
PRODUCT IDENTIFICATION NUMBER (PIN):	Not applicable

SECTION II: HAZARDOUS INGREDIENTS

INGREDIENT	PERCENTAGE	CAS NUMBER	LD50	LC50
No Hazardous Ingredients				

SECTION III: TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY:
[ ] Skin, [ ] Eye Contact, [XXX] Inhalation, [ ] Ingestion

SKIN CONTACT:	Prolonged contact may cause skin irritation or dermatitis in some individuals.
EYE CONTACT:	May cause irritation.
INHALATION:	May cause sneezing, slight irritation of nose and throat.
INGESTION:	Not available
EFFECTS OF ACUTE EXPOSURE:	Not available
EFFECTS OF CHRONIC EXPOSURE:	Not available

SECTION IV: FIRST AID MEASURES

SKIN CONTACT: Wash exposed area with soap and water. If irritation or abnormalities persist, call a physician.
EYE CONTACT: Immediately flush eyes with water for fifteen (15) minutes and call a physician.
INHALATION: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.
INGESTION: Do not induce vomiting. If conscious, dilute by giving two glasses of water. Call a physician immediately.

SECTION V: PHYSICAL DATA

APPEARANCE AND ODOR:	White granular solid; faint odor
DENSITY (SPECIFIC GRAVITY):	0.80
BOILING POINT:	Decomposes
MELTING POINT:	Not applicable
WATER SOLUBILITY:	Soluble
% VOLATILE BY VOLUME:	Not applicable
EVAPORATION RATE:	Not applicable
VAPOR PRESSURE (mm Hg):	Very low
VAPOR DENSITY (Air = 1):	Not applicable

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550X® POLYMER

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SECTION V: PHYSICAL DATA

APPEARANCE	White granular solid
ODOR	None
SPECIFIC GRAVITY	0.8 at 25° C (77 F)
BOILING POINT (°C)	Not applicable
MELTING POINT (°C)	Not determined
SOLUBILITY IN WATER	Forms a gel
PERCENT VOLATILE BY VOLUME	Not determined
EVAPORATION RATE	Not determined
VAPOR PRESSURE (mm Hg)	Not determined
VAPOR DENSITY (Air=1)	Not determined
pH	4 – 9 @ 5g/L

SECTION VI: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	93° C (200 F)
FLAMMABLE LIMITS	Not determined
EXTINGUISHING MEDIA	Dry Chemical, Carbon Dioxide
SPECIAL FIRE FIGHTING PROCEDURES	Aqueous solutions or powders that become wet render surfaces extremely slippery.
UNUSUAL FIRE AND EXPLOSION HAZARDS	No special equipment required.

SECTION VII: REACTIVITY DATA

STABILITY	[XXX] Stable [ ] Unstable
INCOMPATIBILITY (Conditions to avoid)	Oxidizing agents
CONDITIONS OF REACTIVITY	Not known
HAZARDOUS DECOMPOSTION PRODUCTS	NO_X, CO_X
HAZARDOUS POLYMERIZATION	[XXX] Will not occur [ ] May occur

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SECTION VIII: PREVENTIVE MEASURES

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION	Dust masks are recommended where concentration of total dust is more than 10 mg/m^3
VENTILATION	General mechanical
PROTECTIVE GLOVES	Chemically resistant
EYE PROTECTION	Safety glasses with side shields
OTHER PROTECTIVE EQUIPMENT (Specify)	Not known

ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE THE MATERIAL IS SPILLED OR RELEASED

Do not flush with water. Clean up promptly by sweeping or vacuum
Keep in suitable and closed containers for disposal.
After cleaning, flush away trace with water.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid contact with skin and eyes Avoid dust formation. Do not breathe dust. Wash hands before breaks and at the end of the day. Keep in a cool dry place (0 – 30 °C)

WASTE DISPOSAL METHOD

Can be land filled or incinerated, when in compliance with local, provincial and federal regulations.

SECTION IX: TOXICOLOGICAL INFORMATION

CARCINOGENICITY	Not determined
REPRODUCTIVE TOXICITY	Not determined
TERATOGENICITY	Not determined
MUTAGENICITY	Not determined
DEVELOPMENTAL TOXICITY	Not determined
CHRONIC EFFECTS:	This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

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550X POLYMER

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SECTION X: PREPARATION

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DATE ISSUED: August, 2001 DATE REVISED: August, 1998

BY: Product Safety Committees

AMENDMENT
HAZARDOUS INGREDIENTS (550X)

Material or component	WT% Hazard data
COPOLYACRYLAMIDE/SODIUM ACRYLATE	Not considered hazardous

ENVIRONMENTAL

DEGRADABILITY/AQUATIC TOXICITY:	Not determined
OCTANOL/WATER PARTITION COEFFICIENT	Not determined
WASTE DISPOSAL METHODS:	Incineration and/or disposal in Chemical Landfill. Disposer must comply with federal, provincial and local disposal or discharge laws.
RCRA STATUS OF UNUSED MATERIAL IF DISCARDED:	Not a "Hazardous Waste"
HAZARDOUS WASTE NUMBER:	Not available

REPORTABLE QUANTITY:	EPA 40 CFR (CERCLA 102):	Not applicable
THRESHOLD PLANNING QUANTITY:	EPA 40 CRF 355 (SERA 301-304):	Not applicable
TOXIC CHEMICAL RELEASE REPORTING:	EPA 40 CFR 372 (SERA 311-313):	Not applicable

EPA HAZARD CLASSIFICATION CODE:	ACUTE - Yes	CHRONIC - No
	FIRE - No	PRESSURE - No
		REACTIVE - No

HMIS AND NFPA RATINGS:	HMIS	NFPA
HEALTH	1	1
FLAMMABILITY	0	0
REACTIVITY	1	1
SPECIAL	Not applicable	Not applicable

SECTION IX: PREPARATION

The information contained herein is given in good faith, but no warranty, expres
DATE ISSUED: January 1, 1991
BY: Product Safety Committees

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SECTION I: IDENTIFICATION OF PRODUCT

PRODUCT NAME:	**G-STOP**
CHEMICAL FAMILY:	Copolymer of Acrylamide and Sodium Acrylate
WHMIS CLASSIFICATION:	not controlled
WORK PLACE HAZARD:	not applicable

TRANSPORTATION OF DANGEROUS GOODS (TDGR)

CLASSIFICATION:	not dangerous goods
PACKAGE GROUP:	not applicable
PRODUCT IDENTIFICATION NUMBER (PIN):	not applicable

SECTION II: HAZARDOUS INGREDIENTS

WARNING STATEMENTS: Based on currently available data, this product does not meet the regulatory definition of a hazardous substance. However, good industrial hygiene practices should be used in handling it.

INGREDIENTS	PERCENT %	CAS NUMBER	LD50	LC50
Copolymer of acrylamide and sodium acrylate		25085-02-3		
Acrylamide		79-06-1		

SECTION III: TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY: [XXX] Skin [XXX] Eye Contact [XXX] Inhalation [XXX] Ingestion

SKIN CONTACT	: Low acute dermal toxicity. May cause slight transient irritation.
EYE CONTACT	: Dusts may cause irritation.
INHALATION	: Mists and dusts may cause upper respiratory tract irritation.
INGESTION	: Low acute oral toxicity. May cause nausea, vomiting.
THRESHOLD LIMIT VALUE	: none
EFFECTS OF OVEREXPOSURE	: not determined
EFFECTS OF ACUTE EXPOSURE	: not available
EFFECTS OF CHRONIC EXPOSURE	: This product does not contain any ingredient designated by IARC,NTP,ACGIH or OSHA as probable or suspected human carcinogens.

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G-STOP

SECTION IV: FIRST AID MEASURES

SKIN CONTACT	: In case of contact, immediately wash with plenty of soap and water for at least 5 minutes. Seek medical attention. Remove contaminated clothing and shoes. Clean contaminated clothing and shoes before re-use.
EYE CONTACT	: Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention.
INHALATION	: Inhalation is not an expected route of exposure. If respiratory irritation or distress occurs remove victim to fresh air. Seek medical attention if respiratory irritation or distress continues.
INGESTION	: If victim is conscious and alert, give 1 – 2 glasses of water to drink. Do not give anything by mouth to an unconscious person. Seek medical attention. Do not leave victim unattended.

NOTES TO PHYSICIAN: All treatments should be based on observed signs and symptom of distress in the patient.
Consideration should be given to the possibility of overexposure to materials other than this product may have occurred.
Treat symptomatically. No specific antidote available.

SECTION V: PHYSICAL DATA

APPEARANCE AND ODOR	: solid white granules, slight odor
SPECIFIC GRAVITY	: 0.8 @ 25 C (77 F)
WATER SOLUBILITY	: > 40%
MELTING POINT	: not available
BOILING POINT	: not applicable
VAPOR PRESSURE	: not applicable
VAPOR DENSITY	: not applicable
pH	: 6 – 7

Material Safety Data / Fiche signalétique

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G-STOP

SECTION VI: FIRE AND EXPLOSIVE HAZARD DATA

FLASH POINT	: > 93 C (200 F)
FLAMMABILITY CLASS	: will burn
FLAMMABILITY LIMITS	: not determined
EXTINGUISHING MEDIA	: dry chemical, carbon dioxide, alcohol foam, universal foam, water jet not recommended.
SPECIAL FIRE FIGHTING PROCEDURES	: wear NIOSH/MSHA approved self contained breathing apparatus and full protective clothing.
UNUSAL FIRE AND EXPLOSION HAZARD	: product will burn under fire conditions. like all organic and most dry chemicals, as a powder or dust, this product (when mixed with air in critical proportions and in the presence of an ignition source) may present an explosion hazard.

SECTION VII: REACTIVITY DATA

STABLE [XXX] UNSTABLE [ ]

INCOMPATIBILITY (Conditions to avoid)	: Strong oxidizing agents. Strong reducing agents.
HAZARDOUS DECMPOSITION PRODUCTS (under fire conditions)	: oxides of nitrogen : oxides of carbon
HAZARDOUS POLYMERIZATION	: will not occur

SECTION VIII: PREVENTIVE MEASURES

RESPIRATORY PROTECTION	: When respirators are required, select NIOSH/MSHA approved equipment.
EYE/FACE PROTECTION	: Dependent upon work environment conditions and material handling practices. Appropriate ANSI 287 approved equipment should be selected. :Chemical safety glasses with side shields or splash proof goggles are recommended. :An emergency eye wash must be near by.
SKIN PROTECTION	: Should be minimized through the use of gloves and suitable long sleeve clothing.

Material Safety Data / Fiche signalétique

WESTCOAST DRILLING SUPPLIES LTD.
8069 River Way, Delta, British Columbia,
Canada V4G 1L3
Ph. (604) 940-6050 Fax (604) 940-6080

EMERGENCY 1-800-665-6645

G-STOP

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Do not store near foods, beverages, tobacco products or cosmetics.
Avoid breathing dusts or vapors.
Avoid prolonged contact with skin and eyes.
Avoid creating dusts as this product is pyrophoric in power form.
Store in tightly closed containers.
Store in an area that is dry, well ventilated away from ignition sources and away from incompatible materials.

STEPS TO BE TAKEN IN CASE OF SPILL OR LEAK

Small spills sweep up. Large spills, collect and return to plant to be recovered. Material is non-hazardous.
Materials maybe disposed by incineration or other methods approved by local ordinances for disposal of non-hazardous material.
Do not flush down drains.

WASTE DISPOSAL METHOD:

Material may be disposed by incineration or other methods approved by local ordinances for disposal of non-hazardous material.

SECTION IX: PREPARATION

THE INFORMATION CONTAINED HEREIN IS GIVEN IN GOOD FAITH, BUT NO WARRANTY, EXPRESSED OR IMPLIED IS MADE.

DATE ISSUED: December 16, 1998

DATE REVISED: April 1, 2000
DATE REVISED: February 1, 2002

BY: Product Safety Committee

Review date: June 31/03

Authorized by: Alan Clarke

MATERIAL SAFETY DATA SHEET

1 of 1

N/AP = Not Applicable
N/AV = Not Available

SECTION 1—PRODUCT IDENTIFICATION AND USE			MSDS 485
PRODUCT IDENTIFIER: Chevron Polyurea EP Grease 2 TUBE GREASE			PRODUCT IDENTIFICATION NUMBER (PIN): N/AP
PRODUCT USE: Machinery lubricant			
SUPPLIER'S NAME: Chevron Canada Limited		MANUFACTURER'S NAME: Chevron U.S.A.–Lubricants	
STREET ADDRESS: 1500 - 1050 West Pender Street		STREET ADDRESS: 575 Market Street	
CITY: Vancouver	PROVINCE: B.C.	CITY: San Francisco	PROVINCE: California
POSTAL CODE: V6E 3T4	EMERGENCY TELEPHONE NO.: 1-800-457-2022	POSTAL CODE: 94105	EMERGENCY TELEPHONE NO.: 1-800-457-2022

SECTION 2—HAZARDOUS INGREDIENTS				
HAZARDOUS INGREDIENTS	%	CAS NUMBER	LD_{50} OF INGREDIENT (SPECIFY SPECIES AND ROUTE)	LC_{50} OF INGREDIENT (SPECIFY SPECIES)
2, 4 Diaminotoluene	0 - 0.1	95807	N/AV	N/AV
Lubricating base oil	75 - 85	Mixture of any of the following	N/AV	N/AV
		64741884 64741895 64741964		
		64741975 64742014 64742525		
		64742536 64742547 64742627		
		64742650 72623837		

SECTION 3—PHYSICAL DATA				
PHYSICAL STATE: Grease	ODOUR AND APPEARANCE: Dark green grease with typical petroleum odour			ODOUR THRESHOLD (ppm): N/AV
VAPOUR PRESSURE (mm Hg): <1 mm Hg @ 40°C	VAPOUR DENSITY (AIR=1): N/AV	EVAPORATION RATE: N/AV	BOILING POINT (°C): N/AP	FREEZING POINT (°C): N/AP
pH: N/AV	SPECIFIC GRAVITY: 0.93 @ 15.6/15.6C	ODER/P. WATER/OIL DIST.: N/AV		

mk6/46.1

Material Safety Data Sheet
Calcium chloride, Anhydrous MSDS

Section 1: Chemical Product and Company Identification

Product Name: Calcium chloride, Anhydrous

Catalog Codes: SLC5011, SLC2221, SLC4012, SLC4798, SLC1006

CAS#: 10043-52-4

RTECS: EV9800000

TSCA: TSCA 8(b) inventory: Calcium chloride, Anhydrous

CI#: Not available.

Synonym:

Chemical Name: Calcium Chloride, Anhydrous

Chemical Formula: CaCl2

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Calcium chloride, Anhydrous	10043-52-4	100

Toxicological Data on Ingredients: Calcium chloride, Anhydrous: ORAL (LD50): Acute: 1000 mg/kg [Rat]. 1940 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to heart, cardiovascular system. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Furan-2-peroxycarboxylic acid + calcium chloride causes explosion at room temperature.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as moisture.

Storage:
Hygroscopic. Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 30°C (86°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Synthetic apron. Gloves (impervious).

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Crystalline solid.)

Odor: Odorless.

Taste: Saline.

Molecular Weight: 110.99 g/mole

Color: Colorless. White. Off-white.

pH (1% soln/water): 9 [Basic.]

Boiling Point: 1670°C (3038°F)

Melting Point: 772°C (1421.6°F)

Critical Temperature: Not available.

Specific Gravity: 2.15 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, acetone.

Solubility:
Easily soluble in cold water, hot water, acetone. Freely soluble in alcohol. Soluble in Acetic Acid.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials, moisture.

Incompatibility with various substances: Reactive with moisture.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Hygroscopic. Reacts violently (violent boiling) with water, generating heat. Forms flammable gases and evolves hydrogen when reacted with zinc. Solutions attack some metals. Generates heat and violent polymerization occurs when mixed with methyl vinyl ether. Bromine trifluoride reacts violently with and attacks calcium chloride.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 1000 mg/kg [Rat].

Chronic Effects on Humans:
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause damage to the following organs: heart, cardiovascular system.

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals:
Lowest Published Lethal Dose: LDL [Rabbit] - Route: Oral; Dose: 1384 mg/kg

Special Remarks on Chronic Effects on Humans:
May affect genetic material based on animal data. May cause cancer (tumorigenic) based on animal data.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: May cause severe irritation and possible burns, especially if skin is wet. Contact with dry skin causes mild irritation. Contact of solid with moist/wet skin or skin contact with strong solutions may cause marked irritation or possible burns. Eyes: May cause severe irritation, possible transient corneal injury, and possible eye burns. Inhalation: May cause severe irritation of the upper respiratory tract with pain, inflammation and possible burns. Ingestion: May cause severe gastrointestinal (digestive) tract irritation with nausea, vomiting and possible burns. May affect cardiovascular system (cardiac disturbances, slow heart beat), behavior (seizures), metabolism, blood, and brain, respiration (rapid respiration). Chronic Potential Health Effects: effects may be delayed.

Section 12: Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): 100 mg/l 96 hours [Fish].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: Calcium chloride, Anhydrous

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R36- Irritating to eyes. S2- Keep out of the reach of children. S22- Do not breathe dust. S24- Avoid contact with skin.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 0

Reactivity: 1

Personal Protection: C

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 2

Specific hazard:

Protective Equipment:
Gloves (impervious). Synthetic apron. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/09/2005 04:31 PM

Last Updated: 11/01/2010 12:00 PM

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NORTHQUEST LTD

ABANDONMENT AND RESTORATION PLAN

PISTOL BAY PROJECT, NUNAVUT

Prepared by: Dwayne Car May 2015
Stanley Robinson March 2017

NORDGOLD (Northquest Ltd.)
Suite 101 - 50 Richmond Street East,
Toronto, Ontario
Canada M5C 1N7
www.nordgold.com

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NORDGOLD (Northquest Ltd.)

Pistol Bay Project, Nunavut

Abandonment and Restoration Plan

1. Preamble

This Abandonment and Restoration Plan (A&R Plan) is in effect until the expiry of Nordgold (Northquest Ltd.)'s water licence and land use permits, and applies to the work areas planned for the Pistol Bay property. These work areas lie within the municipal boundary of Whale Cove, on Crown Land and on Kivalliq Inuit Association (KIA) Inuit Owned (IOL) surface land.

Nordgold (Northquest Ltd) has received licences and permits from Indigenous Affairs and Northern Development Canada (INAC) for exploration activities on Crown Land, the Kivalliq Inuit Association for activities on Inuit Owned surface land (IOL), a water licence from the Nunavut Water Board (NWB) for water use and waste disposal related to the project, as well as permission from the Hamlet of Whale Cove and authorization from the Government of Nunavut Department of Community and Government Services (GN CGS) for activities on Commissioners Land.

Questions or concerns regarding this Plan can be directed to

David Smith
Exploration Manager, Canada
NORDGOLD (Northquest Ltd.)
Suite 101 - 50 Richmond Street East,
Toronto, Ontario
Canada M5C 1N7

T: (416) 306-0954
C: (647) 549-0954
EMAIL: david.smith@nordgold.com
www.nordgold.com

2. Introduction

This Plan has been prepared for one temporary campsite and several proposed diamond drilling locations on Nordgold (Northquest Ltd.)'s Pistol Bay project. The campsite is located at 62° 21' 05.2"N, 92° 45' 19.7"W. The site is located on an existing road that is capable of permitting standard vehicular travel. This road is part of a road system that the Whale Cove Hamlet has constructed to allow for easy access to the mouth of the Wilson River for its residents to pursue traditional activities.

The Pistol Bay camp has been in place since 2011 and is owned by Henik Lake Adventures Ltd. of Arviat. The camp consists of several aluminum framed 14' by 16' tents on plywood floors, a plywood kitchen, a plywood core logging tent, and can accommodate up to 35 people. Some structures were added by Nordgold (Northquest Ltd.) in 2016.

Exploration based out of the camp generally consists of prospecting, till sampling, geophysical surveys, mapping and diamond drilling.

3. Background Information on the Campsite

The site is located on a wave-modified, flat-topped esker and is situated on an existing road that is capable of permitting standard vehicular travel. This road is connected to a road system that the Hamlet of Whale Cove constructed to allow for easy access to the mouth of the Wilson River for its residents to pursue traditional activities

4. Schedule

The effective date of the plan is June 25, 2015. The restoration of the camp will occur when the program has been completed and will be finished prior to expiration of the renewed water licence, unless another renewal is applied for. Each drill site will be restored as soon as the drill is moved to a new location (progressive reclamation).

5. Infrastructure

Structures:
- Eleven x 14' x 16' Weatherhaven sleep tents heated with propane
- One 14 x 32' plywood kitchen heated with propane
- One 14' x 16' plywood coreshack heated with propane
- One 14' x 16' Weatherhaven dry heated with propane
- One 14' x 16' Weatherhaven core cutting tent
- One 14' x 16' Weatherhaven storage tent
- One 14' x 20' Weatherhaven office tent heated with propane
- One 8' x 8' plywood generator shack
- Two plywood outhouses
- One heli-pad
- One fuel cache stored in four "Insta berms" equipped with water drains
- Spill response equipment located beside fuel berms and heli-pad

The following structures were added during the 2016 field season:
- *Two 14' x 16' Weatherhaven sleep tents heated with propane*
- *The kitchen was enlarged to 14' x 48'*
- *A new generator shack 8' x 16' was added to house a new generator*
- *A plywood shack 8' x 14' was added to the Weatherhaven dry to house water storage tank, hot water tank as well as a clothes washer and dryer*
- *A plywood core logging shack 16' x 24' was built*
- *A plywood outhouse*

Machinery
One Ford F250 pick up
Four 500 cc Honda ATV's
Two 650 cc Ski Doo snowmobiles
One 7.5 kW diesel generator
One 15 kW gasoline generator
One 50 cc Honda water pump
One A Star B2 helicopter
One D1 Discovery hydraulic diamond drill
Two D2 Discovery diamond drills
Two diesel water pumps for diamond drills

The following machinery was added/replaced during the 2016 field season:
One 500 cc Honda ATV became un-operational; it is currently on-site
One 500 cc Honda ATV was acquired
One 29 kW generator was acquired

A map showing the location of the campsite and drill sites is **attached**, along with photographs of the camp and fuel berms.

6. Seasonal Shutdowns

Buildings and Contents

All doors on the Weatherhaven tents will be screwed shut before the camp is closed for the winter. All windows and doors on the plywood kitchen and core logging tent will be covered with plywood.

Vehicles

The ATV's snowmobiles will be stored inside one tent. The pick-up will be stored in Whale Cove.

Water System

The pump and hoses will be drained. All will be stored in the winterized kitchen tent for the winter.

Fuel and Chemical Storage

An inventory of fuel will be made at the end of each season and all drums will be inspected for possible leaks. The fuel will remain stored in the portable "Insta Berm" fuel berms. All empty drums will be temporarily stored at the Whale Cove airport before being crushed and buried in the Whale Cove landfill. All empty propane cylinders will be returned to Churchill, Manitoba.

Drill additives and unused salt will be stored in the storage tent.

Waste

Combustible Waste

All combustible waste will be burned on site in an incinerator. Ash will be sealed in 45 gallon drums for transport to the Hamlet of Whale Cove's landfill.

Non-Combustible Waste

All non-combustible waste will be transferred to the Whale Cove dump for disposal. This waste will only consist of metallic materials such as cans and steel strapping and wire.

Used batteries will be transported to Ontario for disposal.

Used Motor Oil

Used motor oil will be flown in 45 gallon drums to Arviat, for final disposal in the Hamlet's waste oil furnace.

Grey Water Sump

On-site septic system.

Sewage

The outhouse sumps will be buried at the end of the season.

Drills and Drill Sites

Prior to shutting down for the season, the D1 drill and all ancillary equipment will be moved back to the main campsite. The two D2 drills will be mothballed and stored at the Vickers drill site.

All drill sites will be inspected upon completion of each hole. All combustible and metallic waste will be collected and sent to the Whale Cove dump site. All sumps will be filled in and casing will be cut off to ground level. Photographs of each drill sites before and after drilling will also be taken for inclusion the annual report that is sent to the NWB.

Contamination Clean Up

Any soil at camp or the drill sites that has been contaminated will be treated according to procedures outlined in the Fuel Spill Contingency Plan. The soil will be transferred to the Whale Cove dump site for incineration.

Inspection and Documentation

A complete inspection of all disturbed areas at the camp and drill sites will be conducted prior to seasonal closure of the project. A full inventory of equipment will be made. Photographs will be taken of the campsite after it has been winterized.

7. Final Abandonment and Restoration

Tents and Contents

All tents and structures will be dismantled and removed, using a local contractor. Removal will be carried out with a tandem truck. All material will be taken to the Whale Cove airport for final distribution to Manitoba and Arviat.

Equipment

All equipment including the diamond drill, pumps and generators will be removed from the project site by truck and helicopter. All material will be taken to the Whale Cove airport for final distribution to Manitoba and Arviat.

Fuel Cache and Chemicals

All fuel drums and chemical containers will be removed from the site. All sites that contained fuel will be inspected and any contamination will be dealt with according to the Spill Contingency Plan. Final photos of the fuel cache site will be taken.

Sumps

All sumps will be inspected and backfilled. Final photos will be taken and forwarded to the NWB.

Camp Site

A final inspection will be made. Photos will be taken and forwarded to the NWB.

Core Storage

All drill core will be removed from the site unless specified otherwise by the Nunavut government.

Drill Sites

All drill sites will be inspected upon completion of each hole. All waste will be collected and transferred to the Whale Cove municipal dump site. All sumps will be backfilled. Each drill collar will be cut off to ground level. Photographs of each site will be taken and forwarded to the NWB.

Contamination Clean Up

Any contamination will be treated according to procedures laid down in the Fuel Spill Contingency Plan. Any contamination and subsequent clean-up will be documented with photographs. All waste will be transferred to the Whale Cove municipal dump for incineration.

Inspection and Documentation

A complete inspection of all areas will be conducted prior to closure. Photographs will be taken for use in the final report. All appropriate agencies will be contacted upon final clean up.

8.0 Contact Numbers for Relevant Organizations

Whale Cove Hamlet Office – (867) 896-9961

Nordgold (Northquest Ltd) – (416) 306-0954

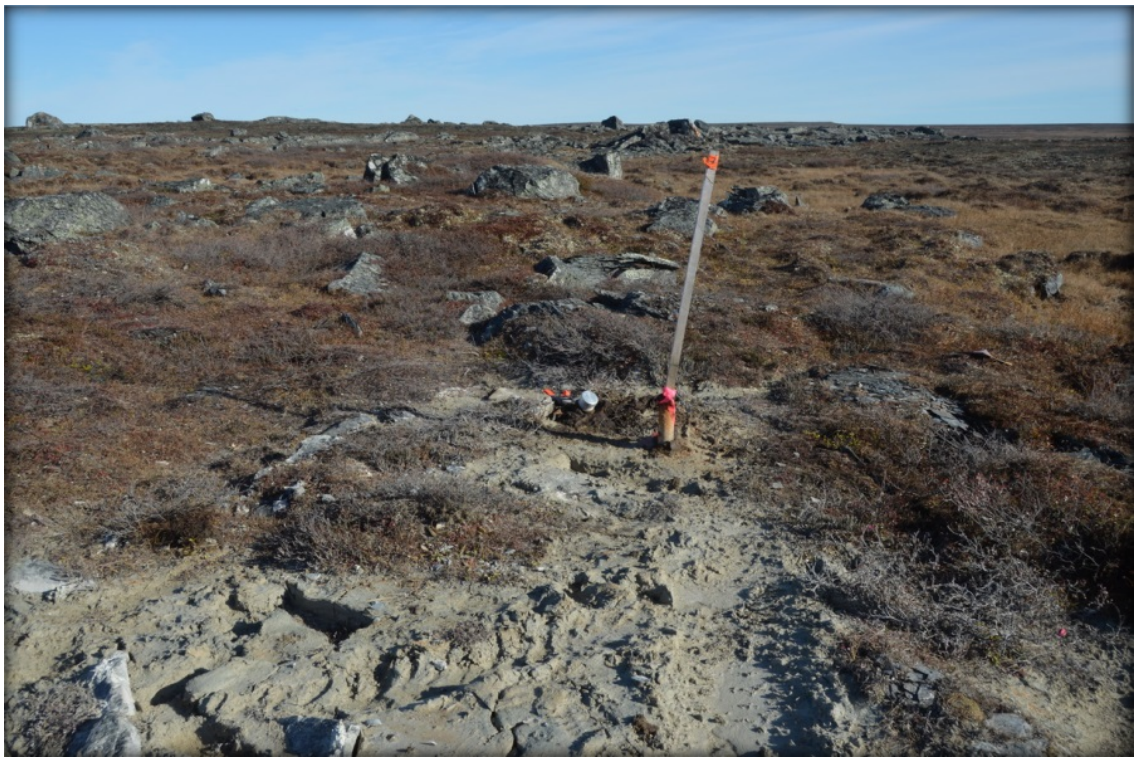
NT – NU Spill Hot Line – (867) 920-8130

Henik Lake Adventures Ltd (owner of camp equipment) (867) 857-2978

APPENDIX 4

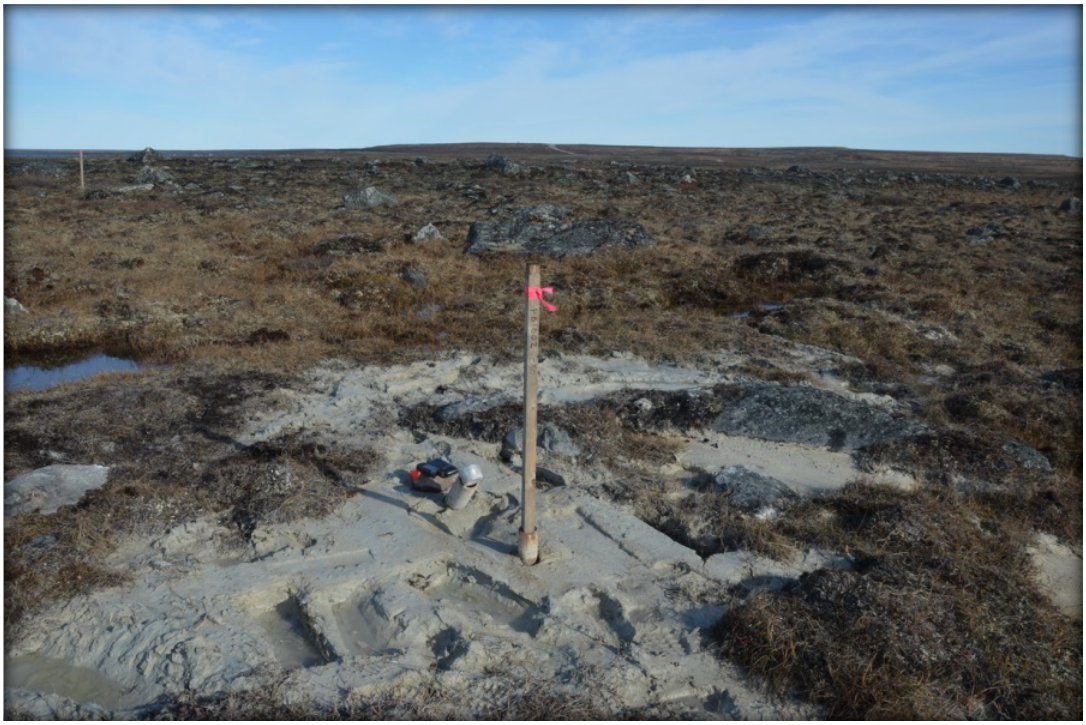
PHOTOGRAPHS OF DRILL COLLARS AND WATER PUMP LOCATIONS

DDH PB-16-01 Collar Prior to Drilling



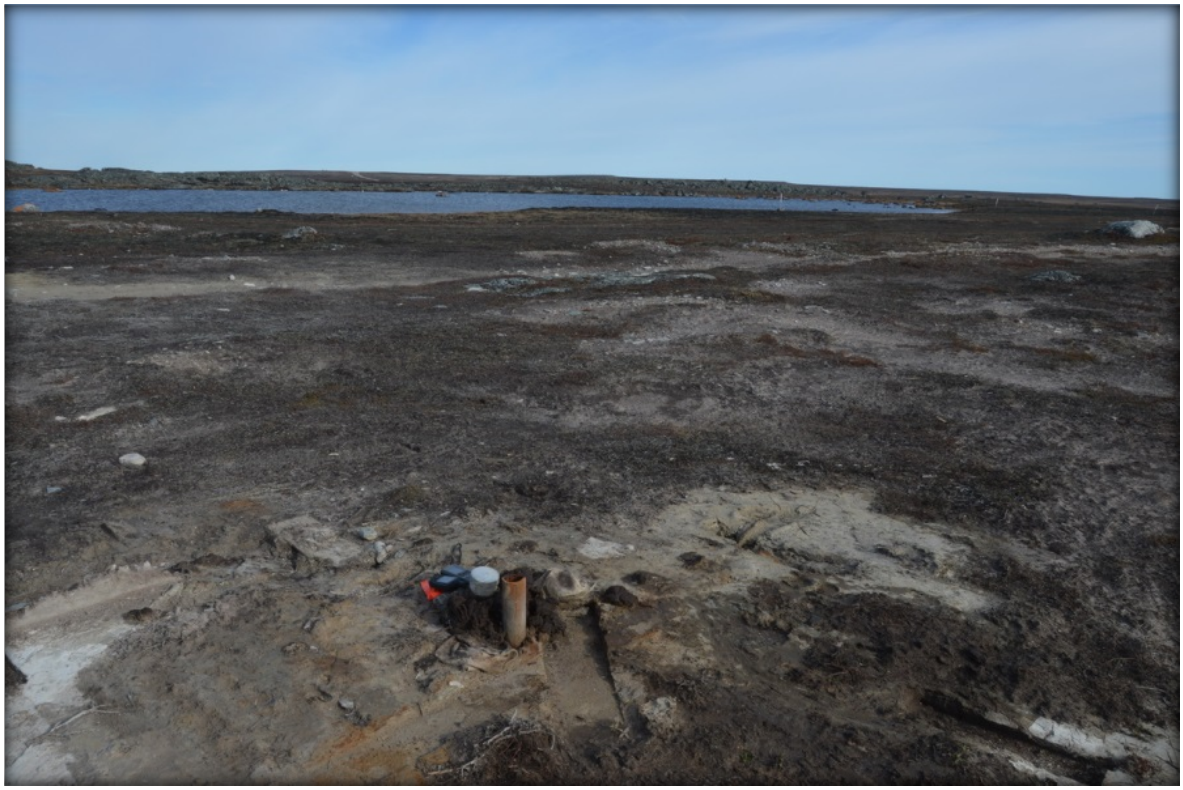
DDH PB-16-01 Collar After Drilling

DDH PB-16-02 Collar Prior to Drilling



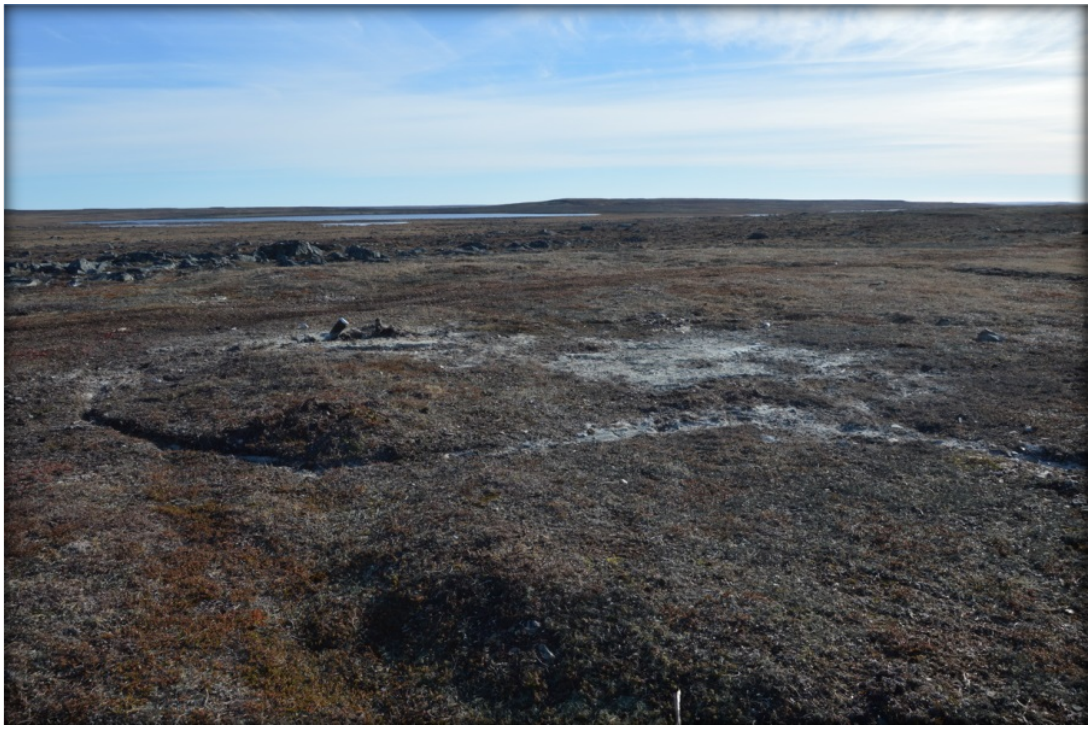
DDH PB-16-02 Collar After Drilling

DDH PB-16-03 Collar Prior to Drilling

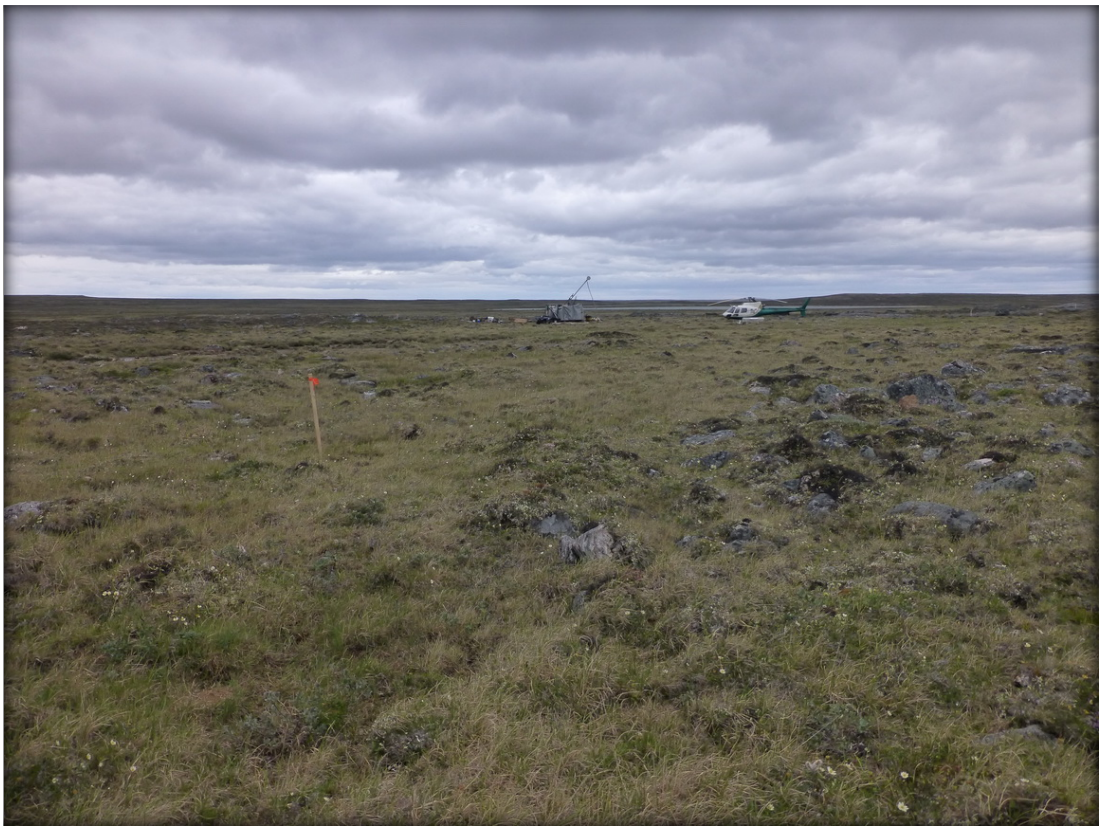


DDH PB-16-03 Collar After Drilling

DDH PB-16-04, 05 Collar Prior to Drilling



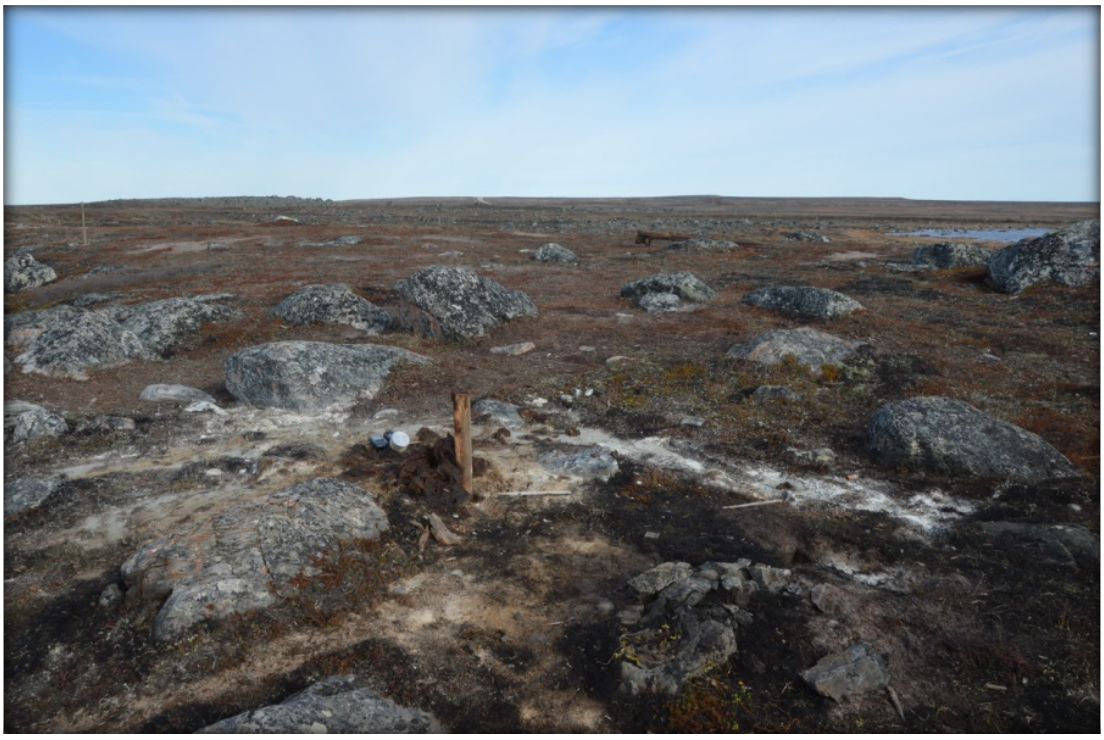
DDH PB-16-04, 05 Collar After Drilling



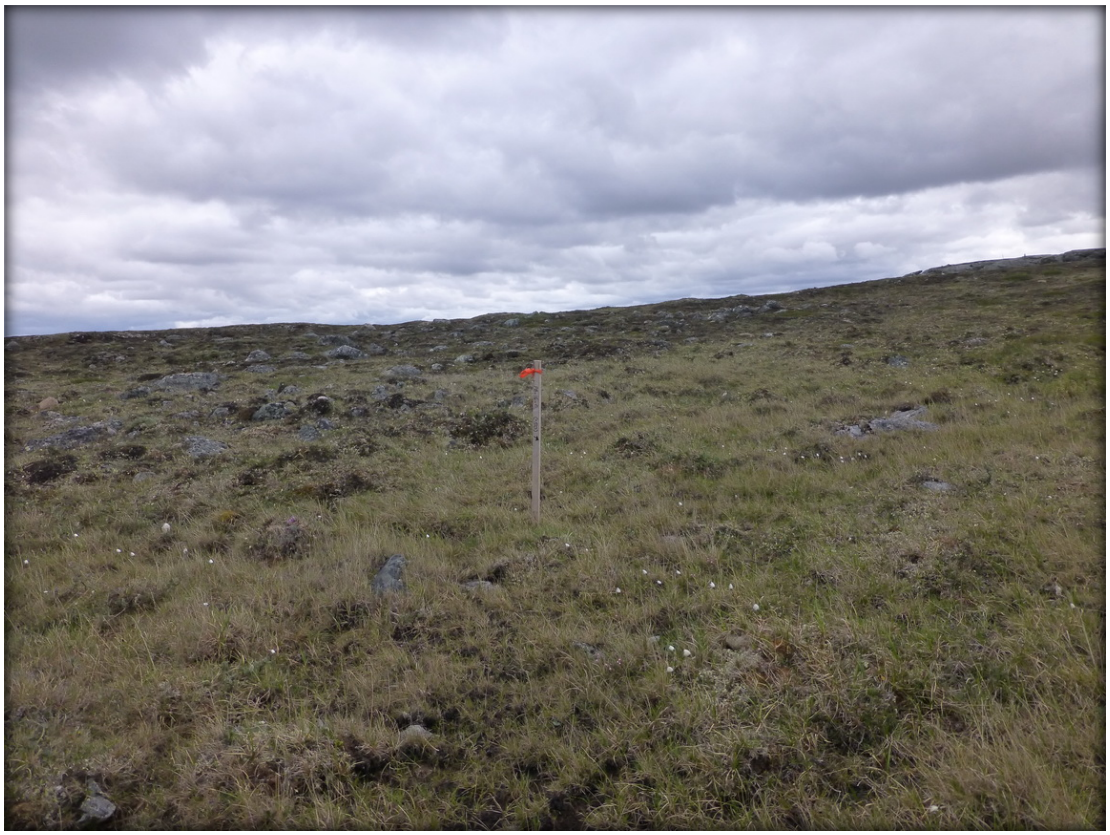
DDH PB-16-06 Collar Prior to Drilling

DDH PB-16-06 Collar After Drilling

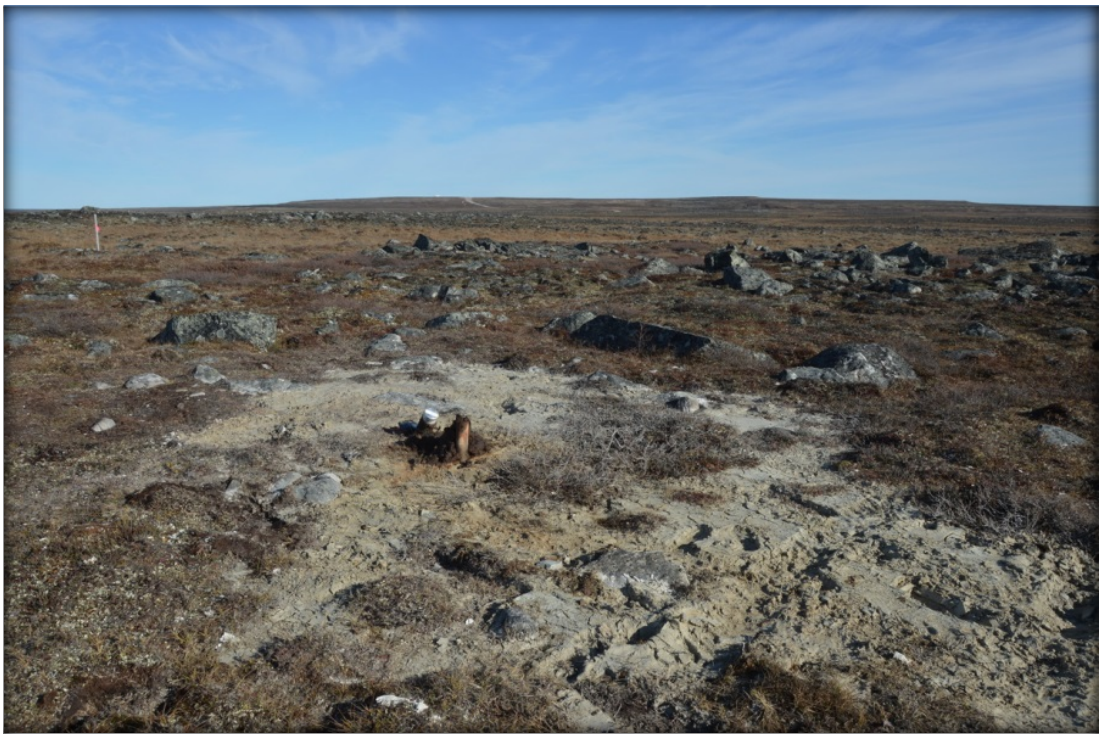
DDH PB-16-07 Collar Prior to Drilling



DDH PB-16-07 Collar After Drilling

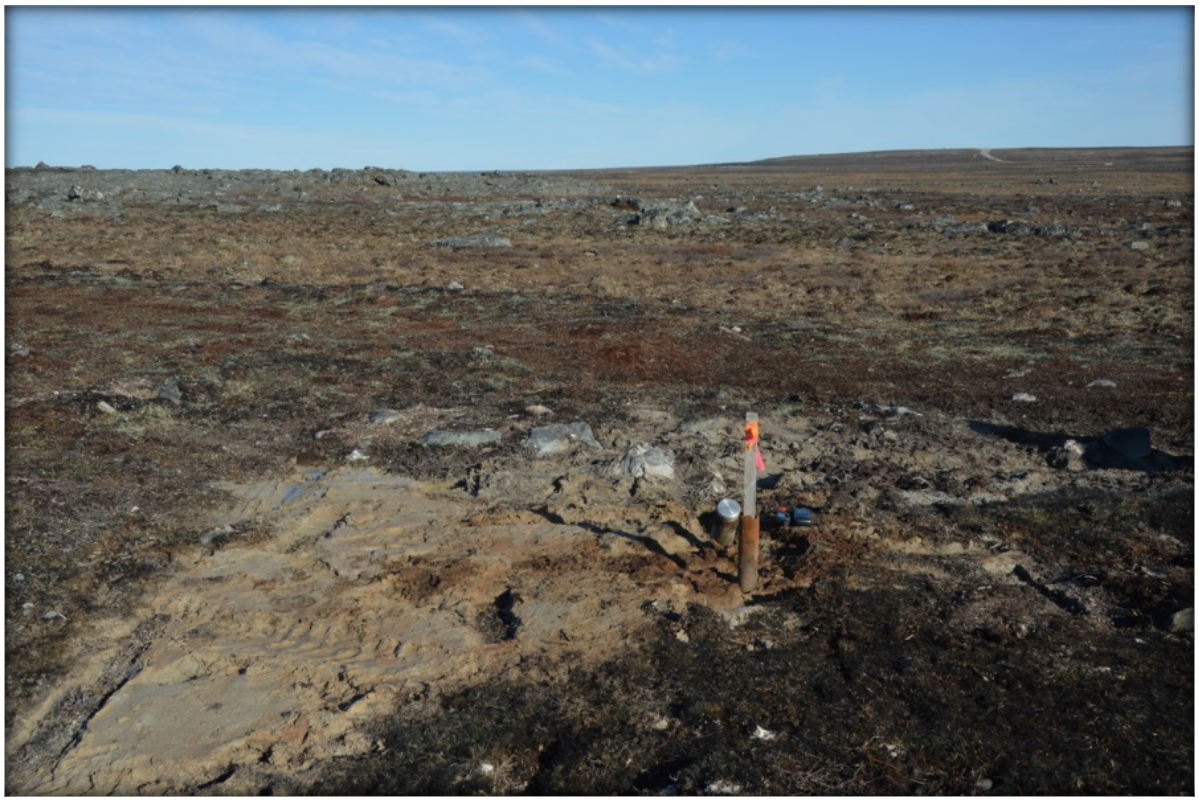


DDH PB-16-08 Collar Prior to Drilling



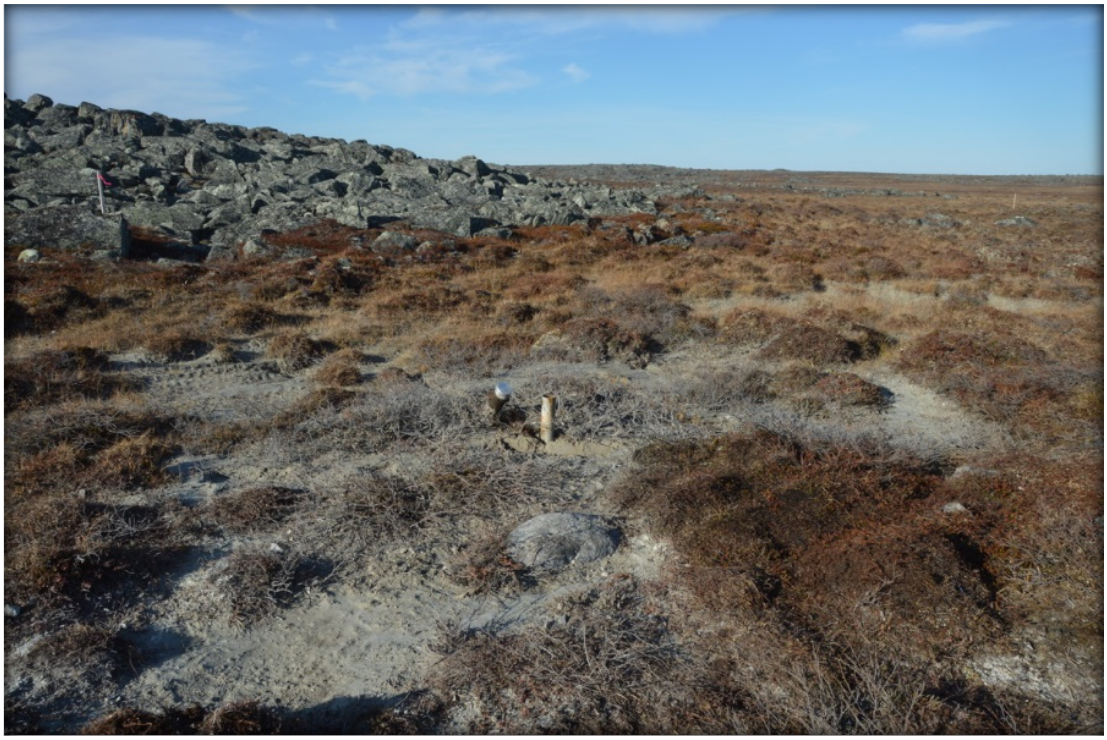
DDH PB-16-08 Collar After Drilling

DDH PB-16-09 Collar Prior to Drilling

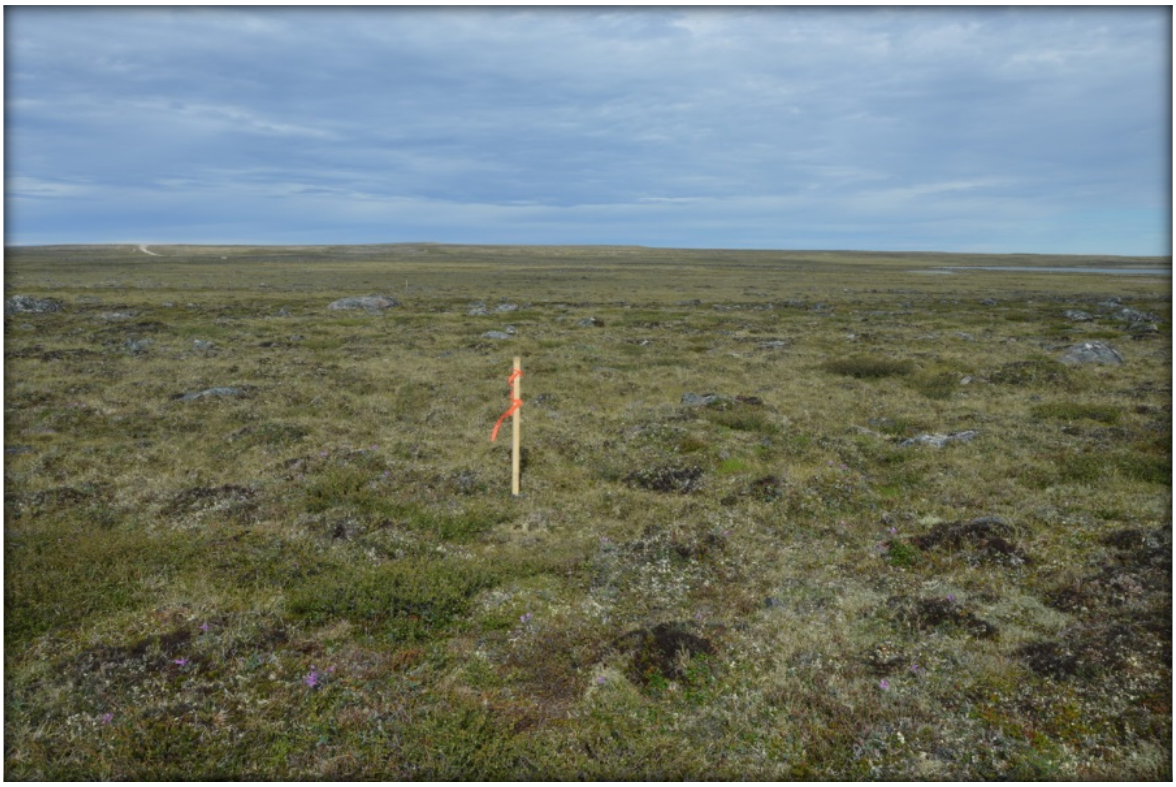


DDH PB-16-09 Collar After Drilling

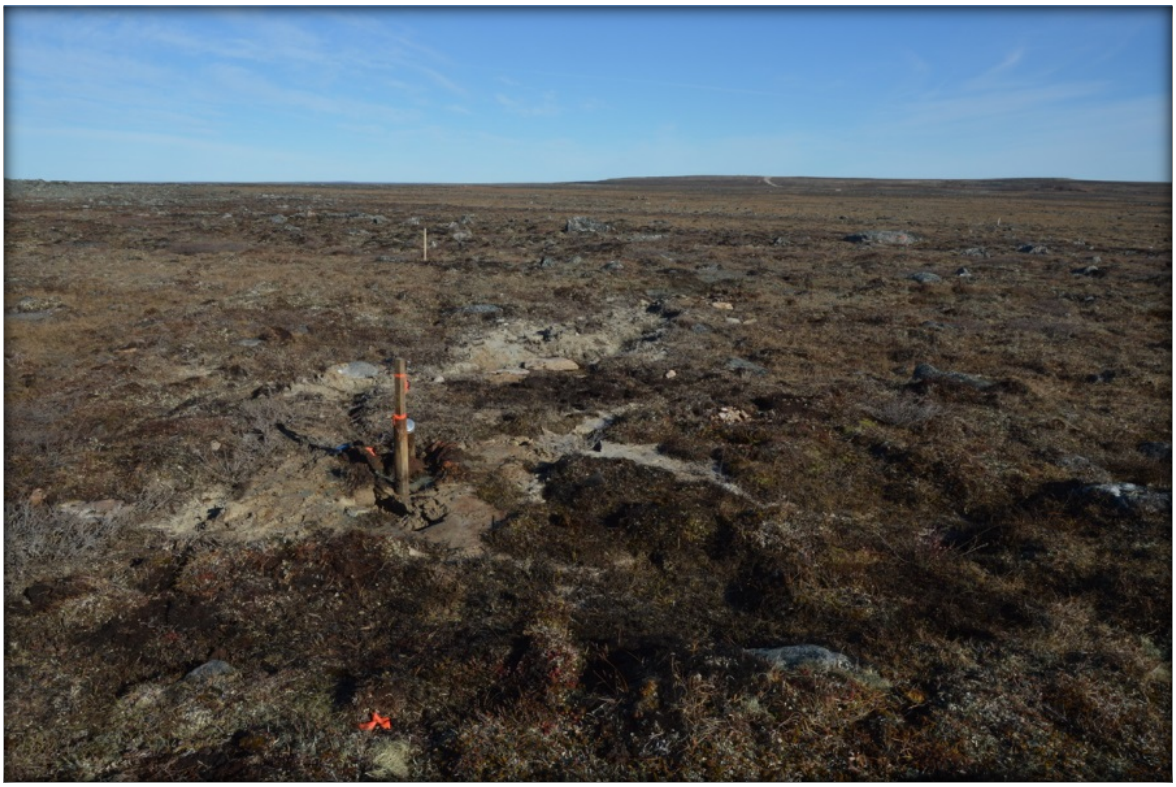
DDH PB-16-10 Collar Prior to Drilling



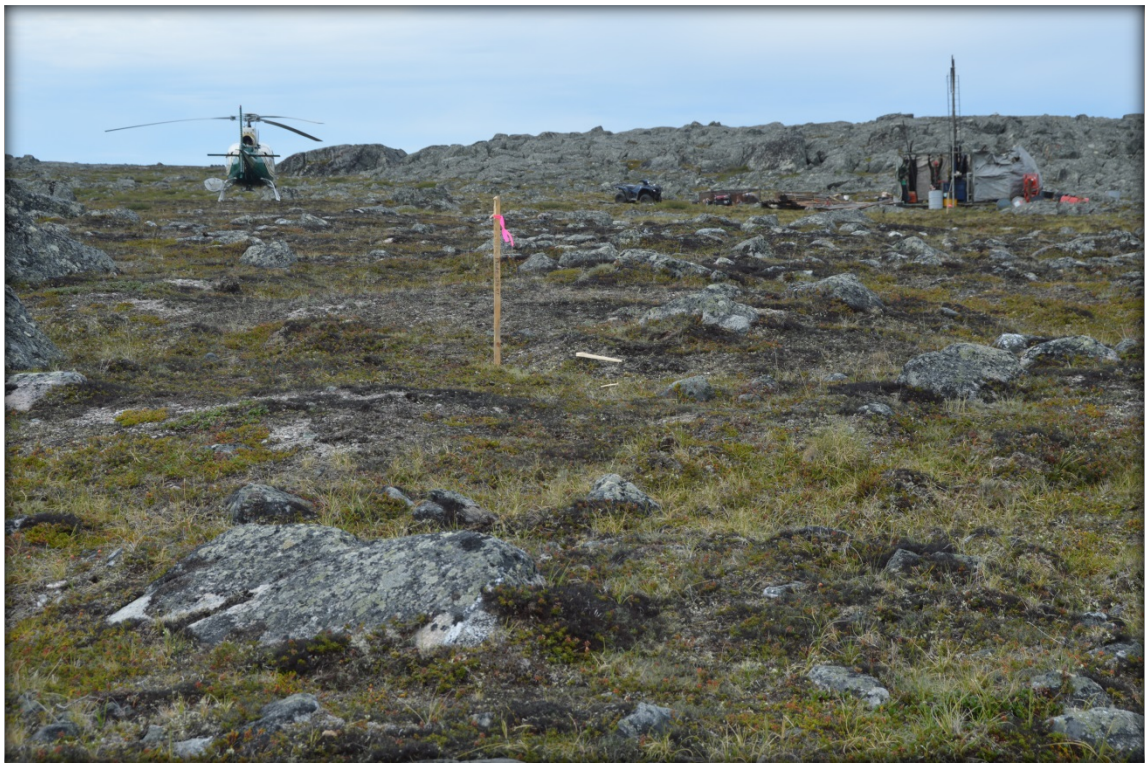
DDH PB-16-10 Collar After Drilling



DDH PB-16-11 Collar Prior to Drilling

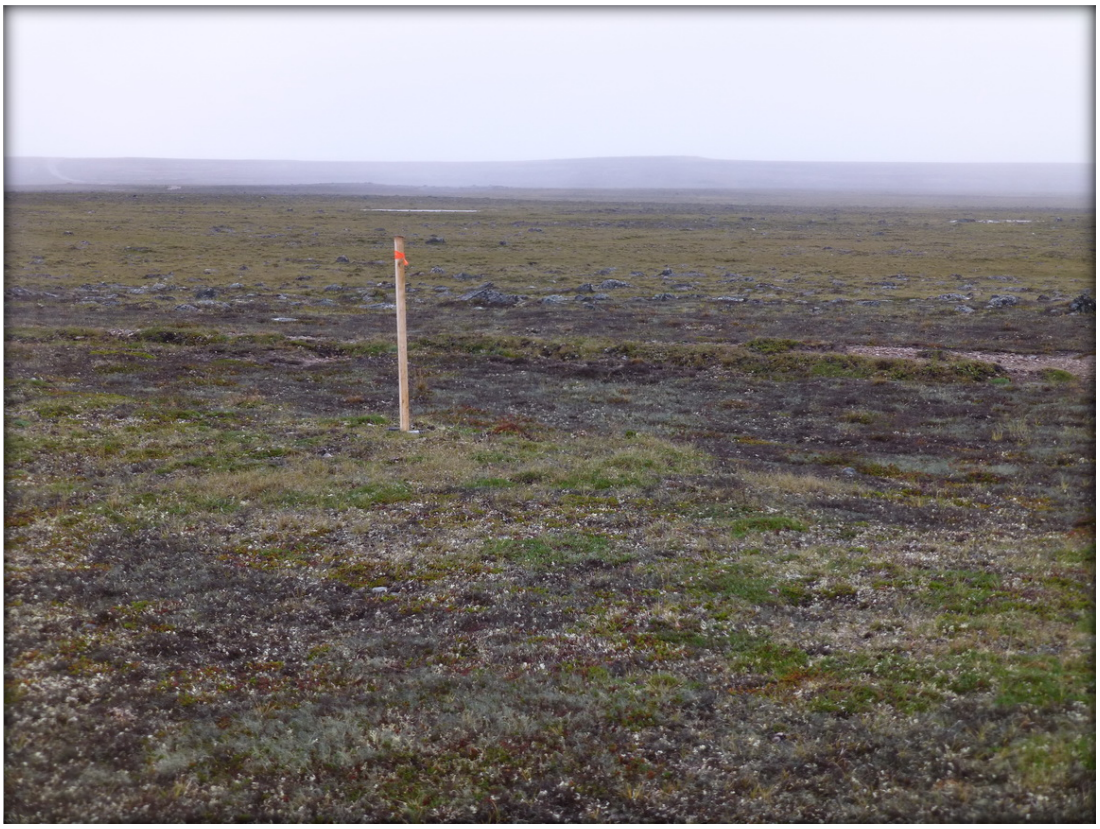


DDH PB-16-11 Collar After Drilling

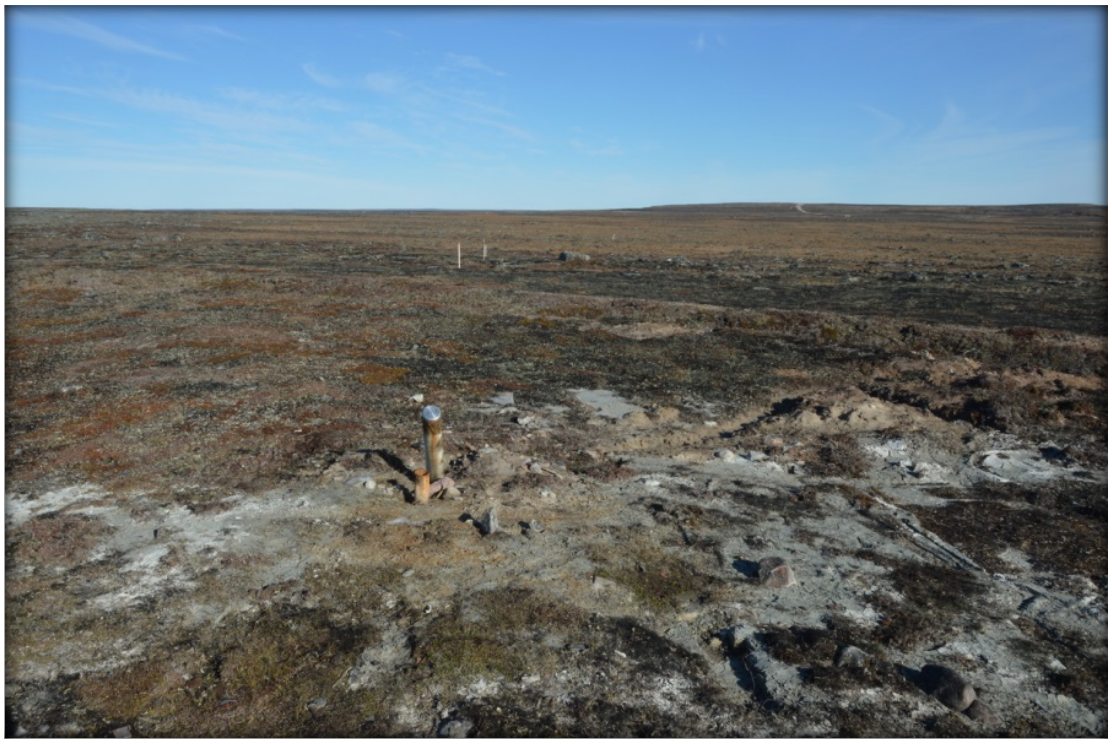


DDH PB-16-12 Collar Prior to Drilling

DDH PB-16-12 Collar After Drilling

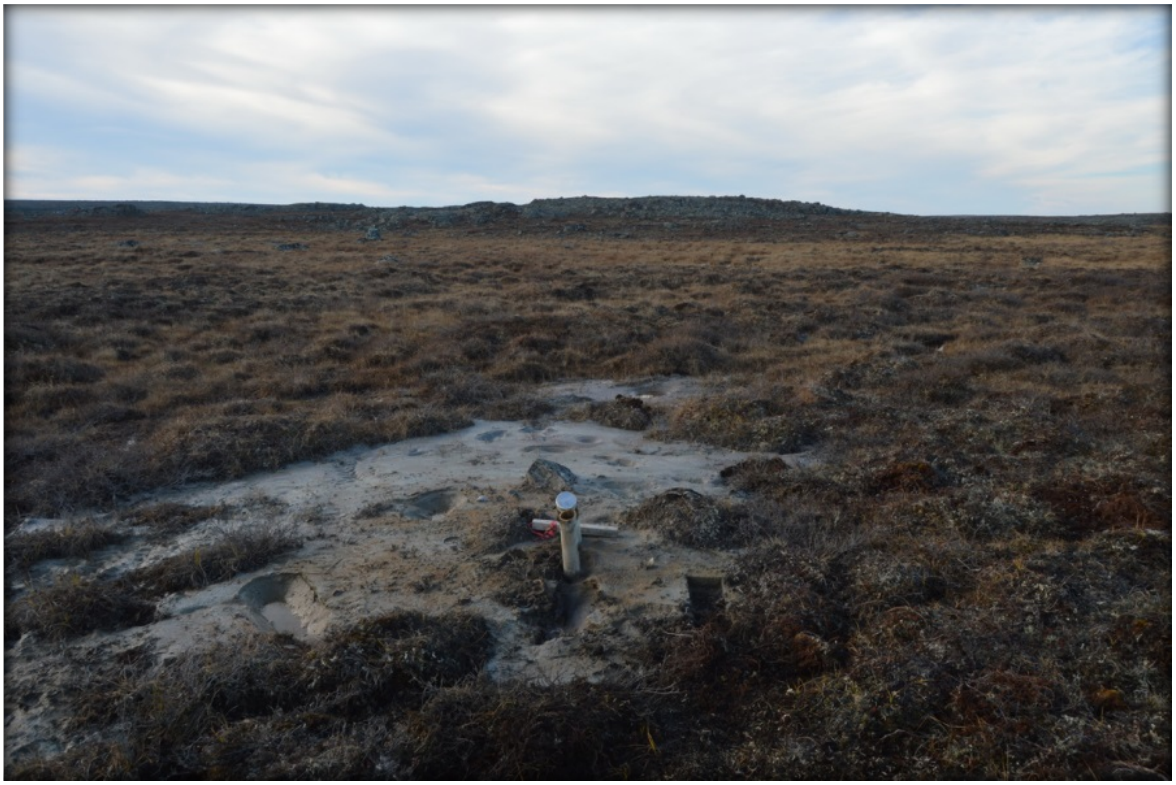


DDH PB-16-13 Collar Prior to Drilling

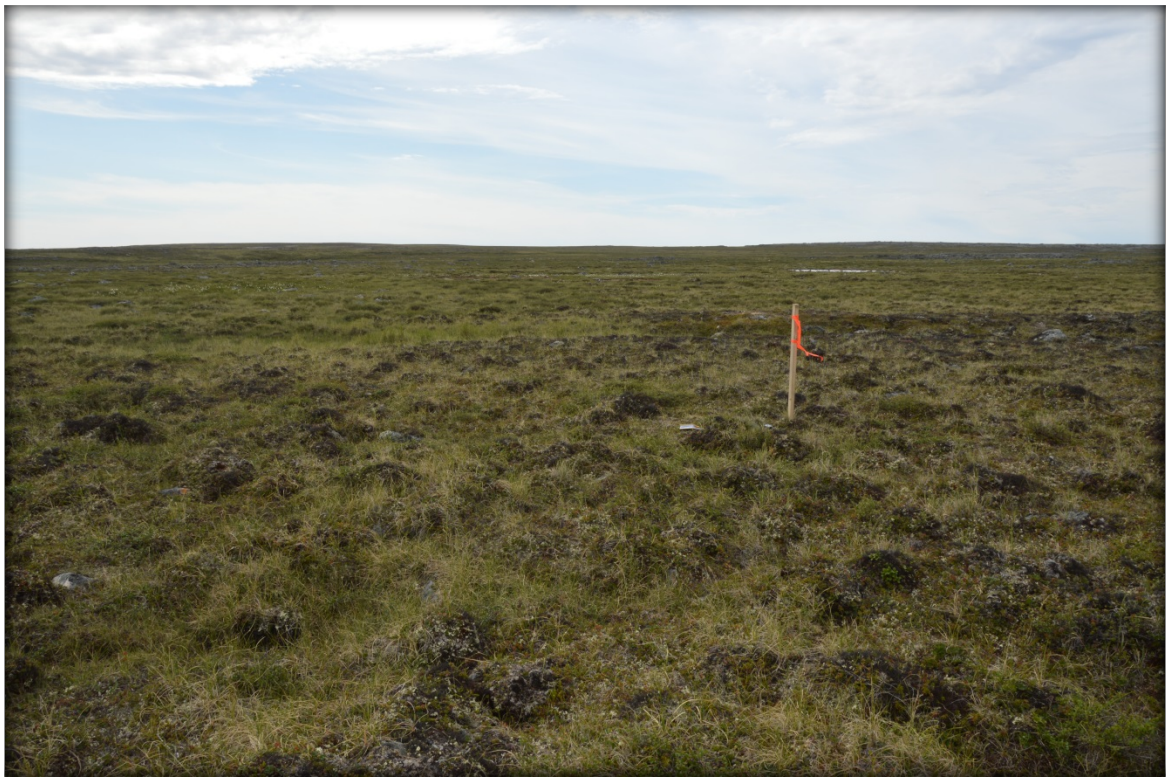


DDH PB-16-13 Collar After Drilling

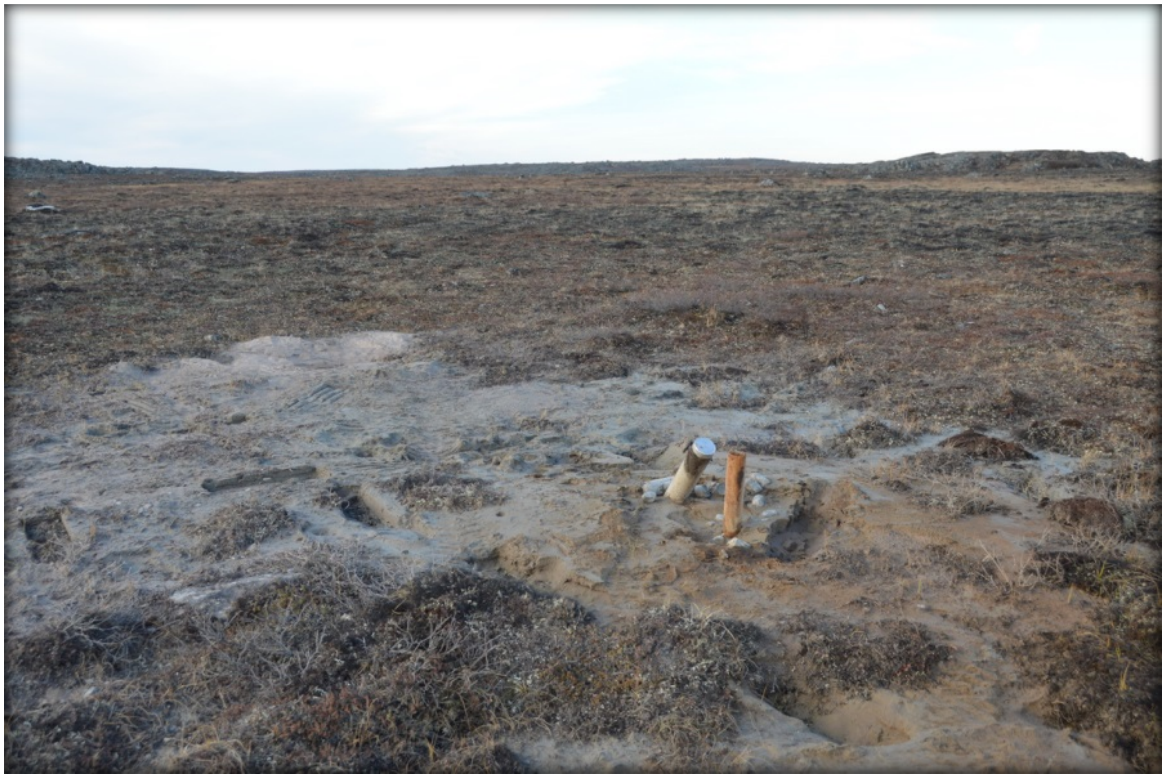
DDH PB-16-14 Collar Prior to Drilling



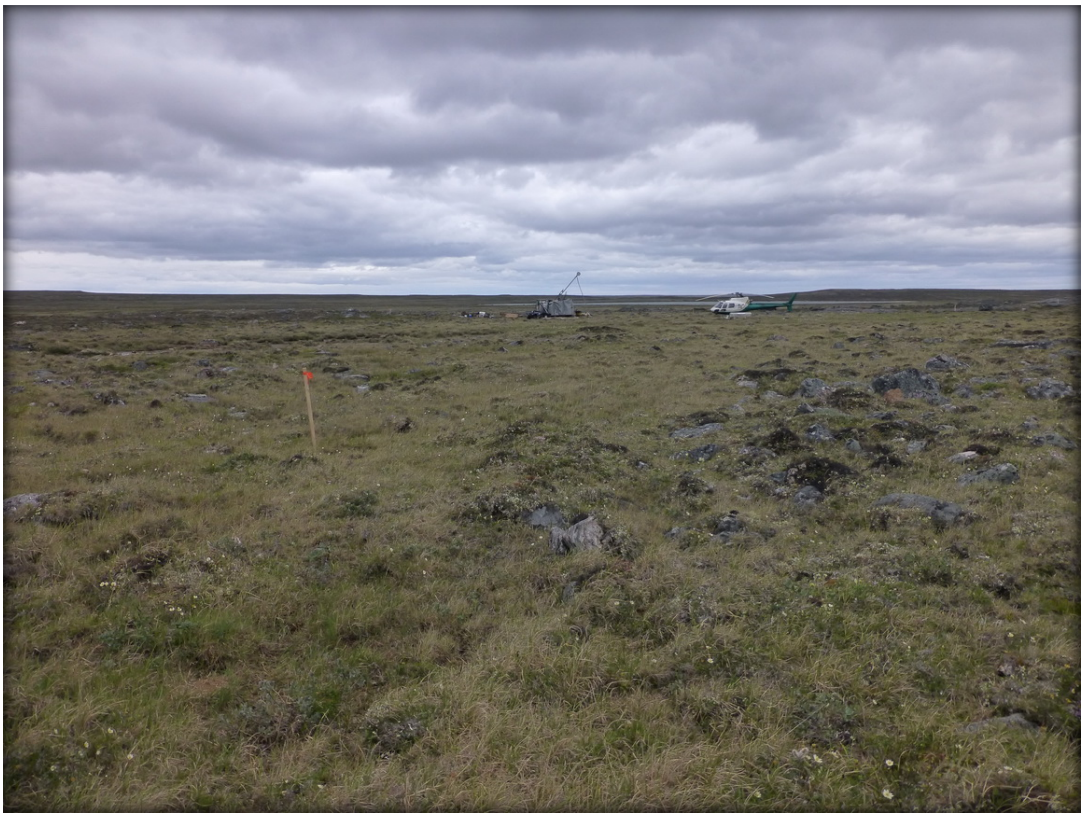
DDH PB-16-14 Collar After Drilling



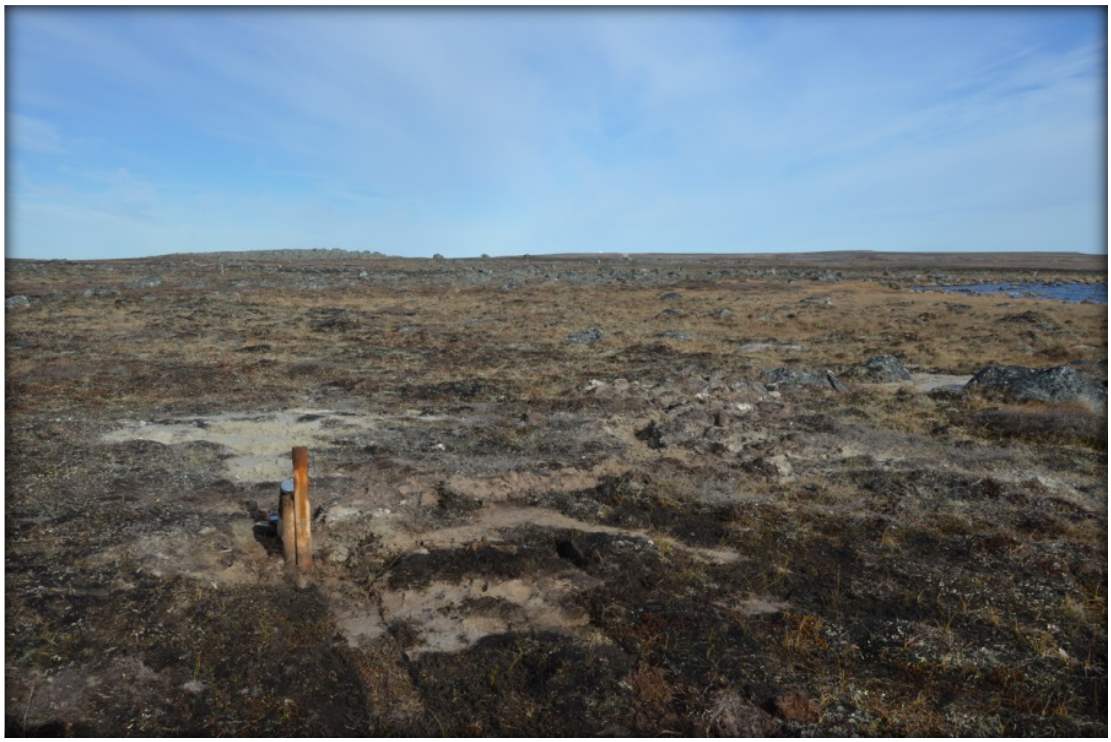
DDH PB-16-15 Collar Prior to Drilling



DDH PB-16-15 Collar After Drilling



DDH PB-16-16 Collar Prior to Drilling



DDH PB-16-16 Collar After Drilling

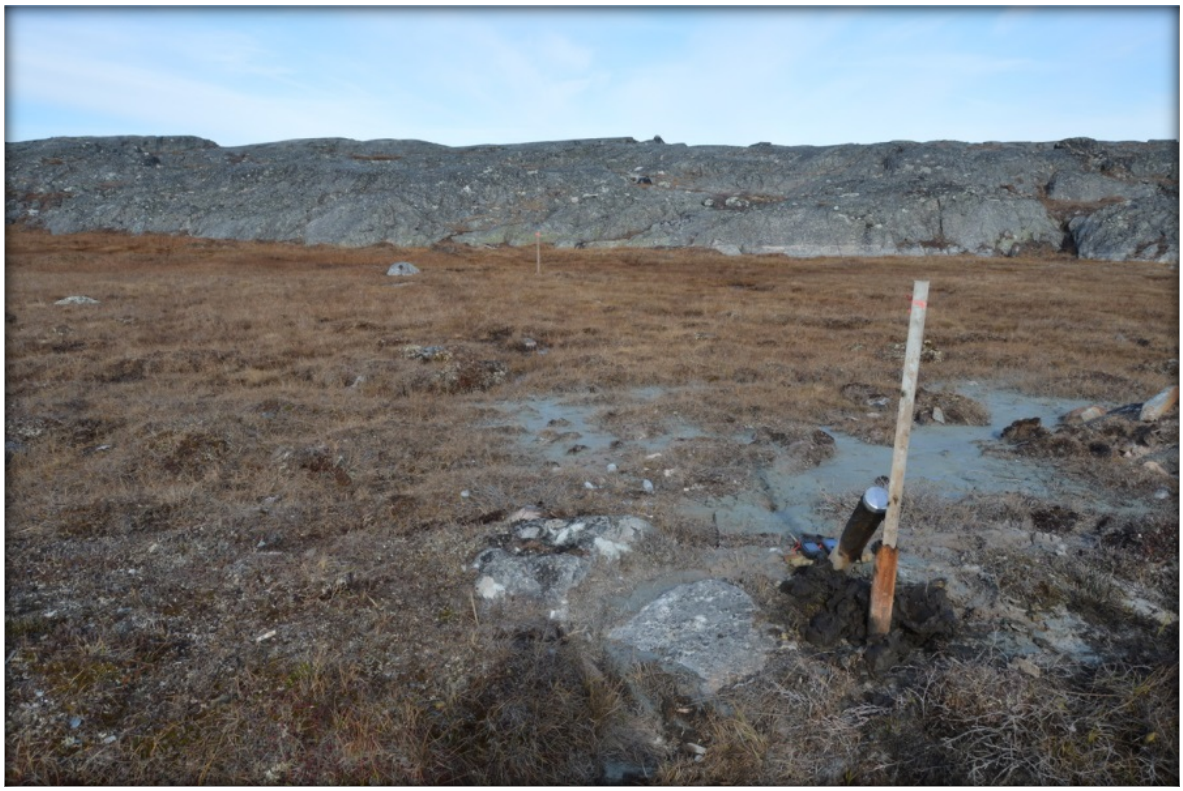
DDH PB-16-17 Collar Prior to Drilling

DDH PB-16-17 Collar After Drilling

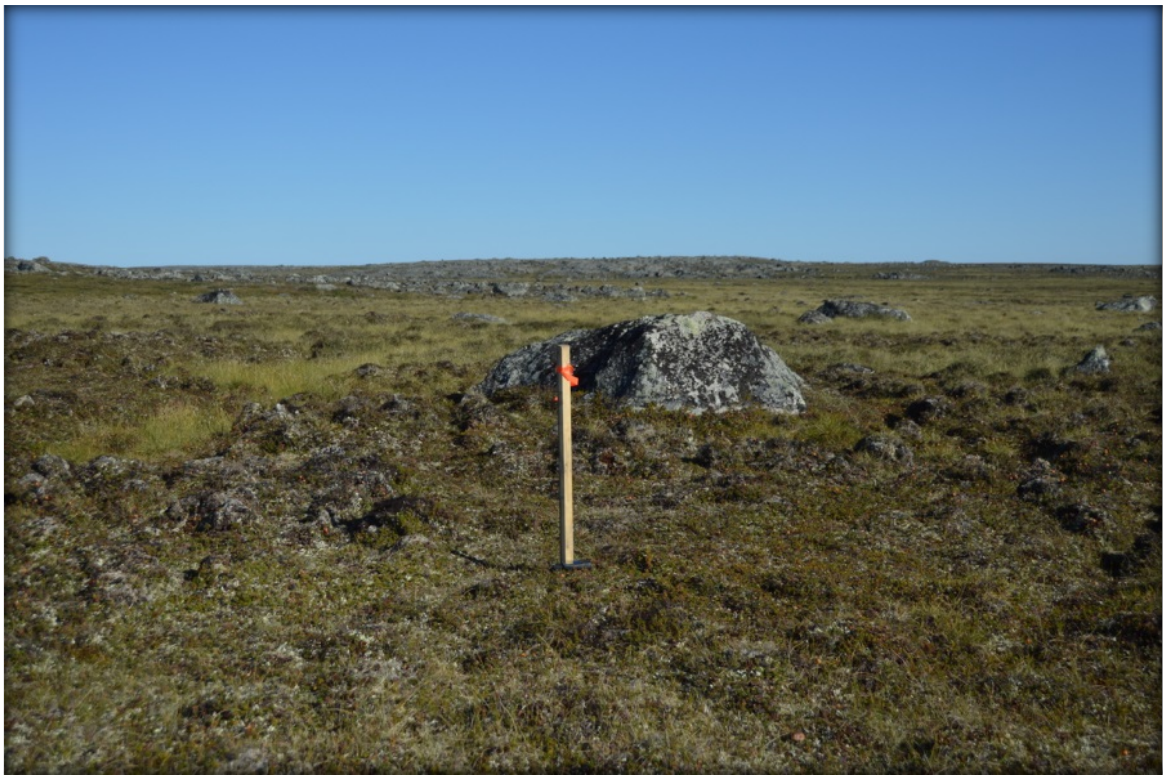
DDH PB-16-18 & 19 Collar Prior to Drilling

DDH PB-16-18 & 19 Collar After Drilling

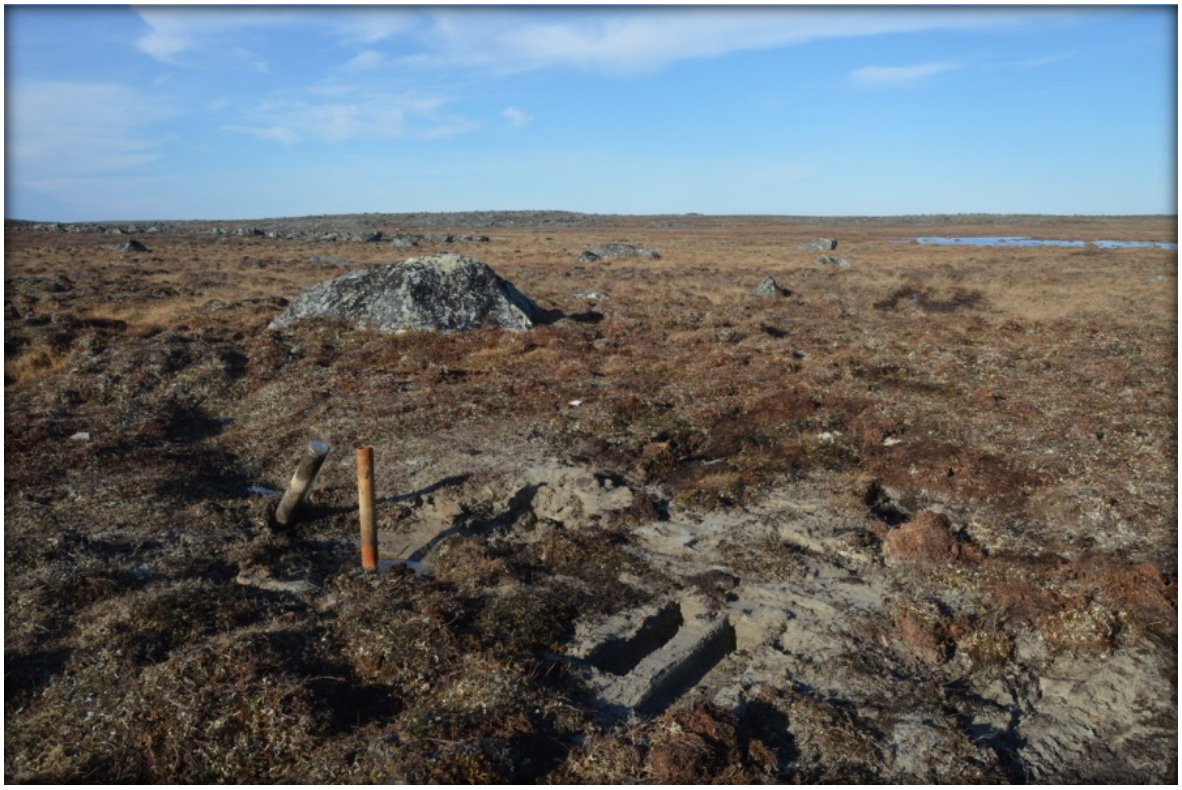
DDH PB-16-20 Collar Prior to Drilling



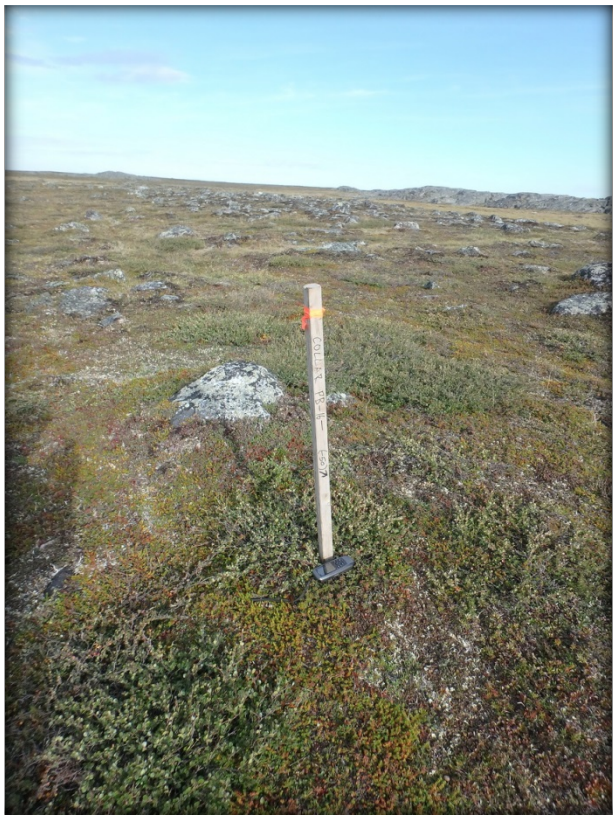
DDH PB-16-20 Collar After Drilling



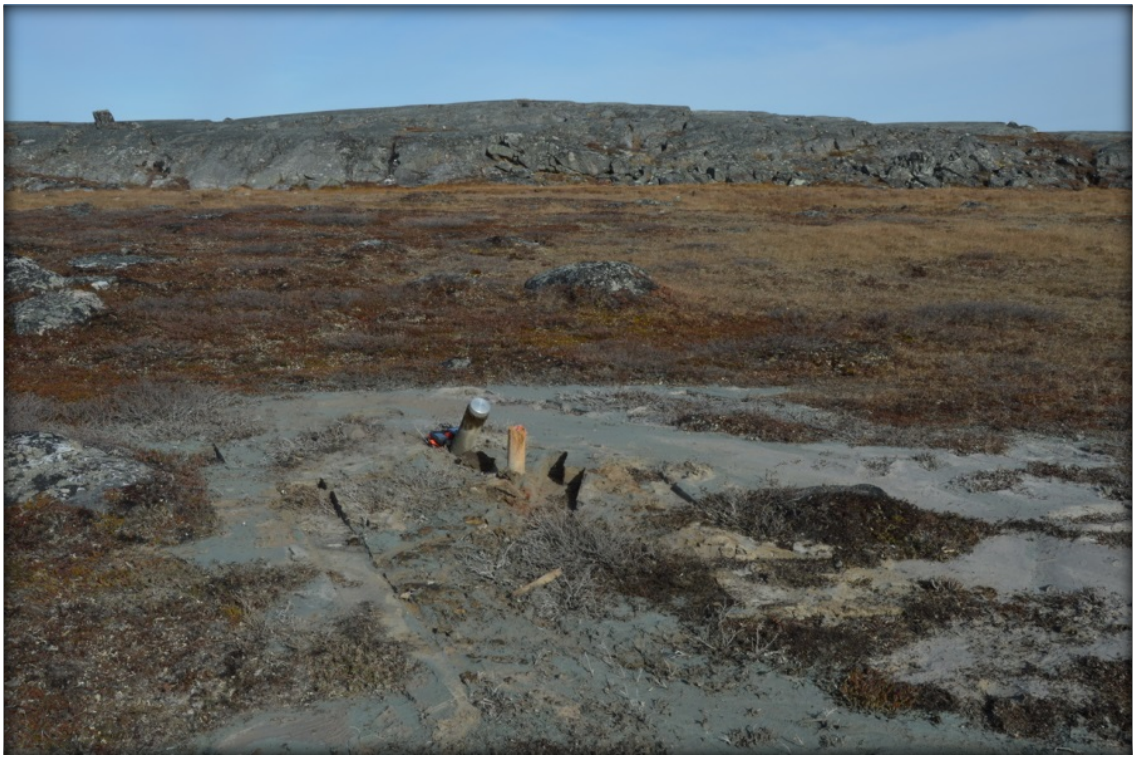
DDH PB-16-21 Collar Prior to Drilling



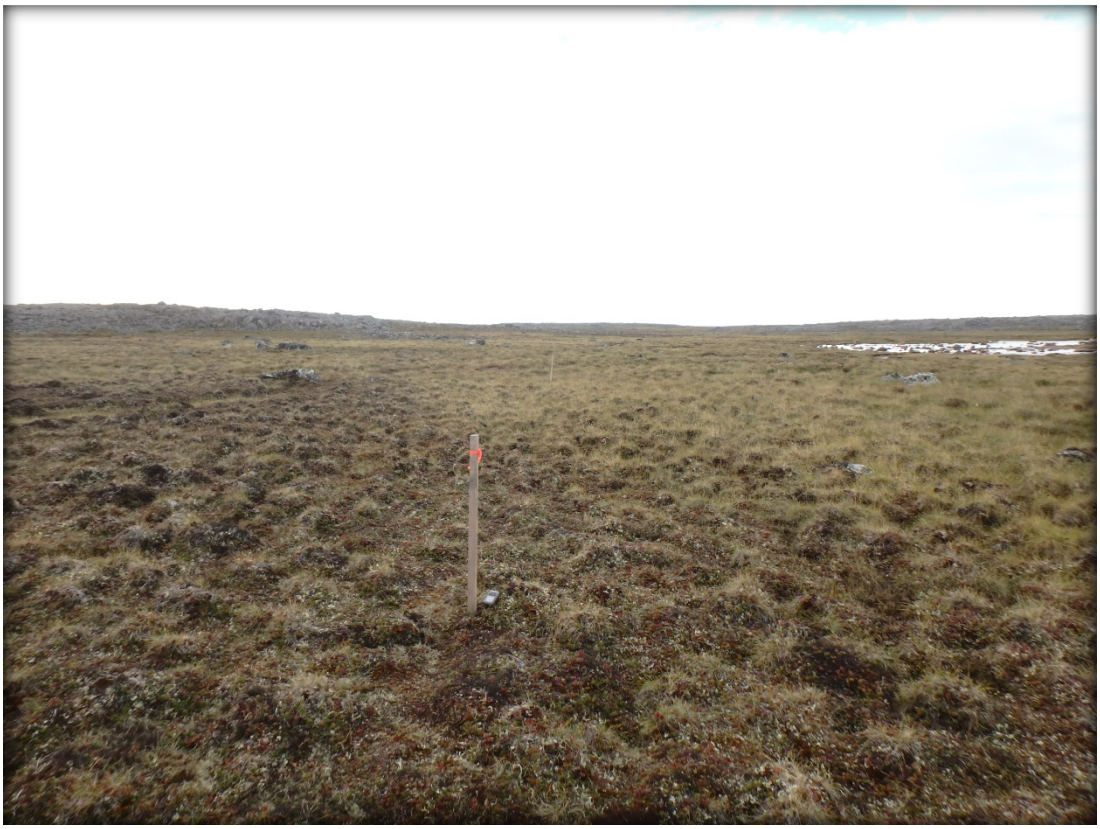
DDH PB-16-21 Collar After Drilling



DDH PB-16-22 Collar Prior to Drilling

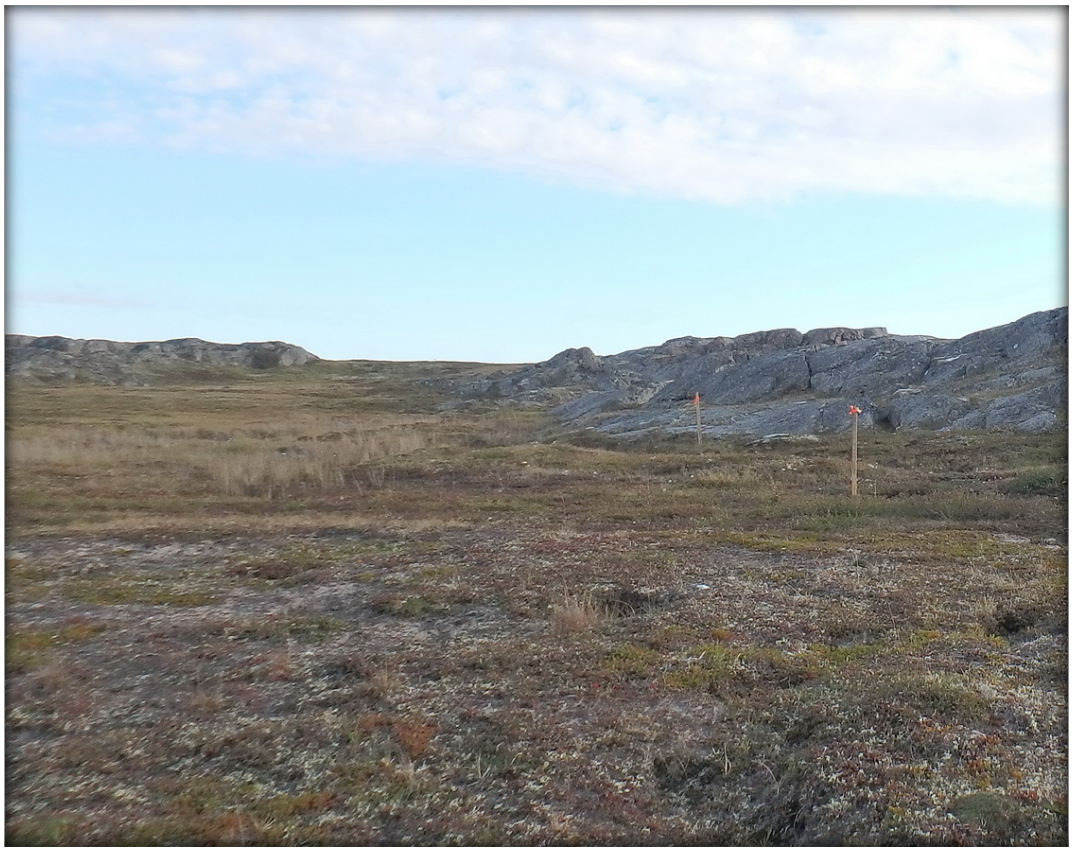


DDH PB-16-22 Collar After Drilling



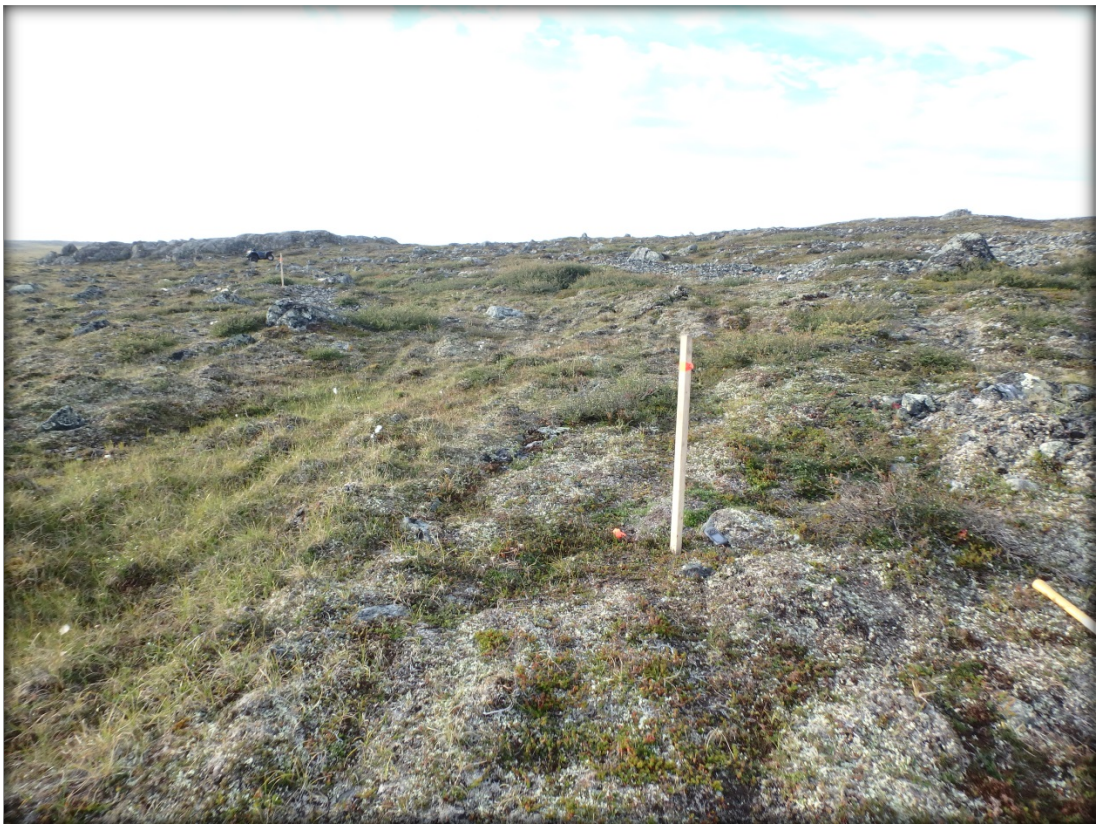
DDH PB-16-23 Collar Prior to Drilling

DDH PB-16-23 Collar After Drilling

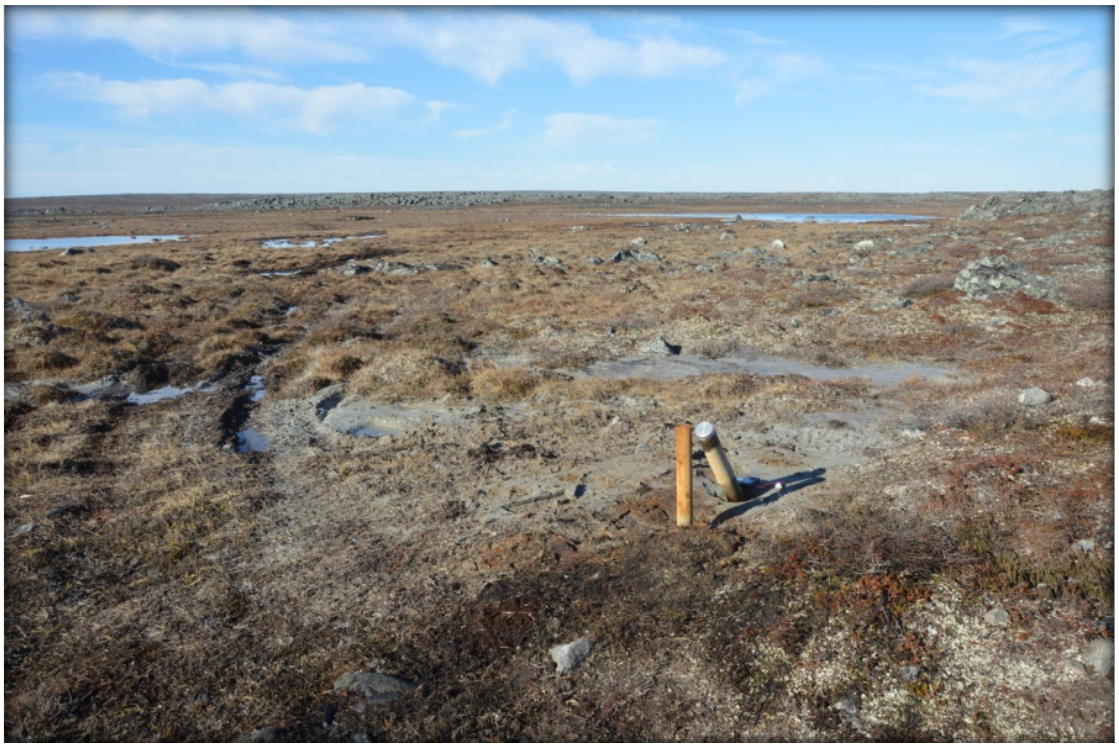


DDH PB-16-24 Collar Prior to Drilling

DDH PB-16-24 Collar After Drilling



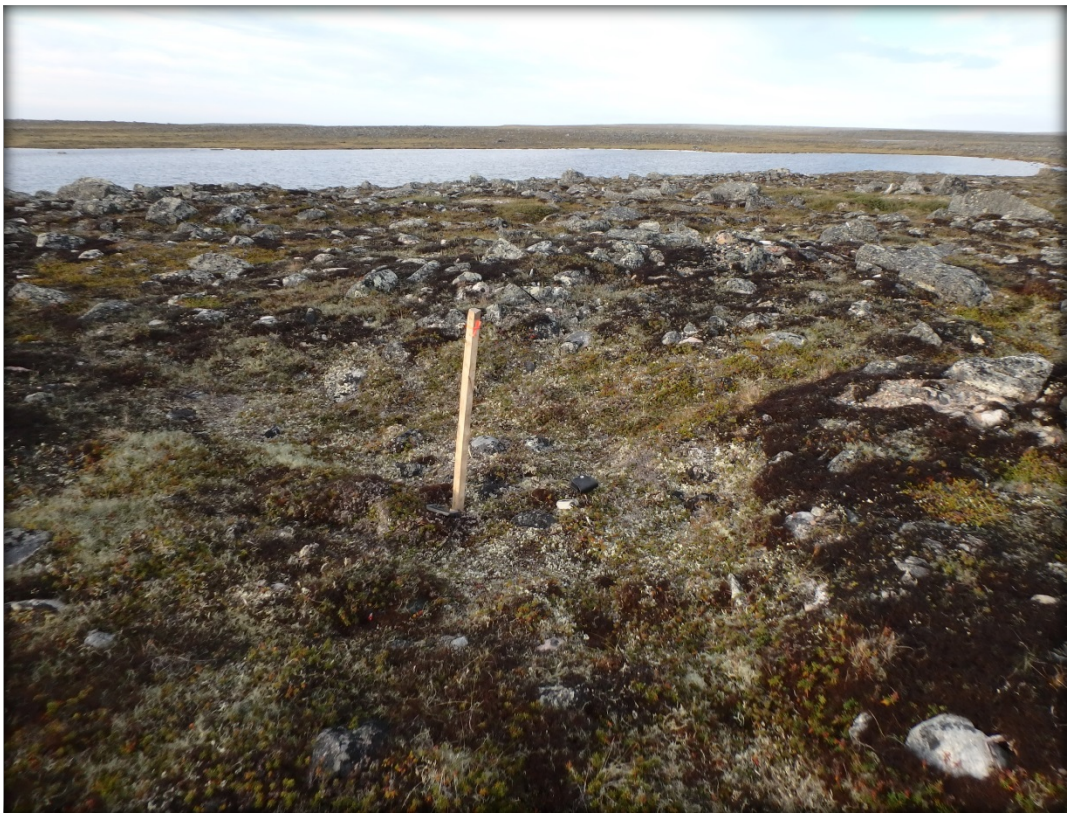
DDH PB-16-25 Collar Prior to Drilling



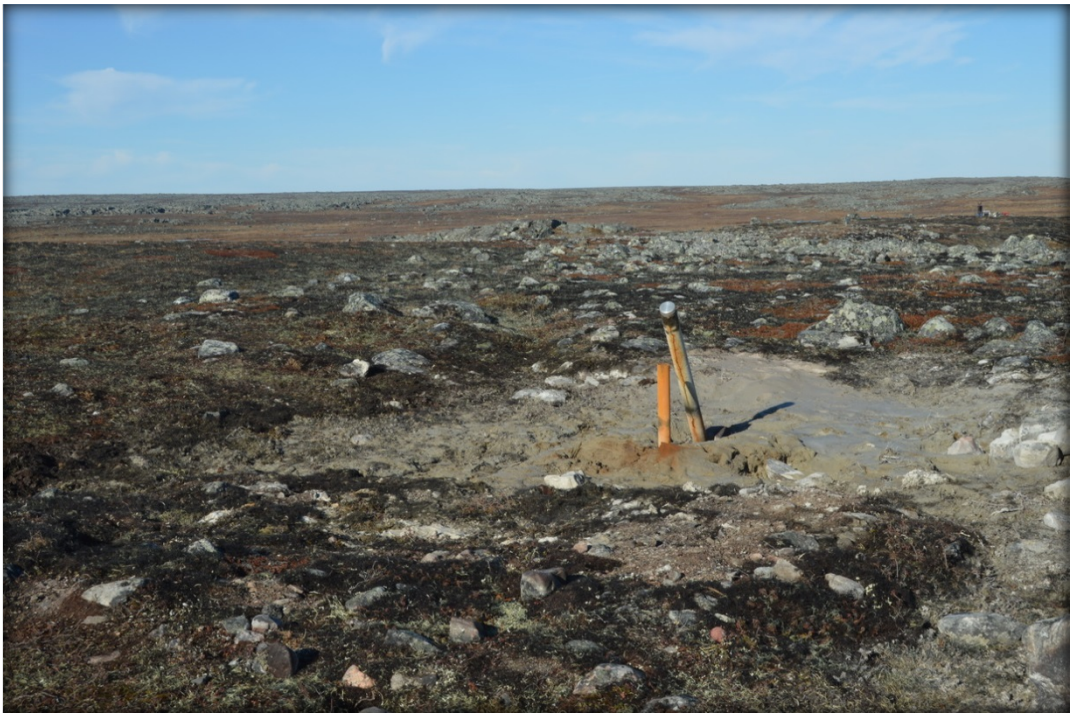
DDH PB-16-25 Collar After Drilling

DDH PB-16-26 Collar Prior to Drilling

DDH PB-16-26 Collar After Drilling



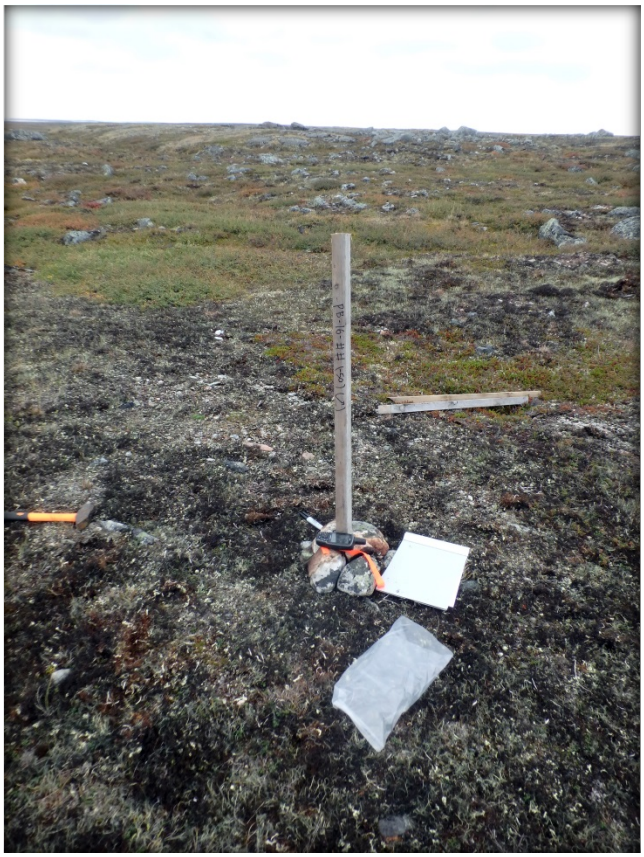
DDH PB-16-27 Collar Prior to Drilling



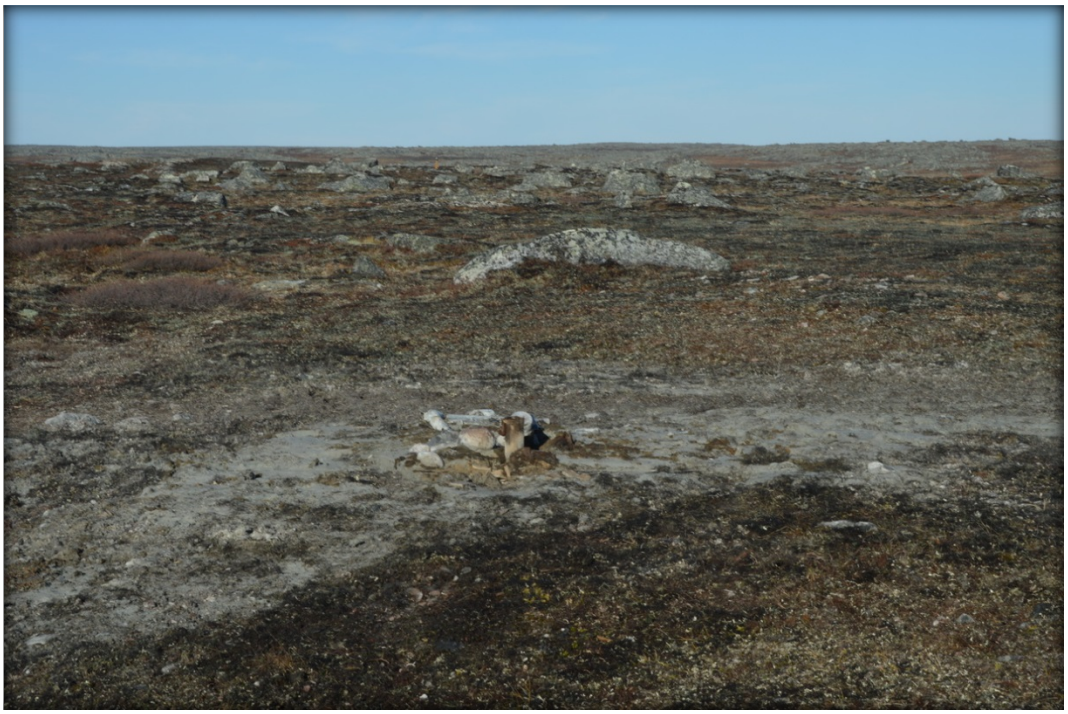
DDH PB-16-27 Collar After Drilling

DDH PB-16-28 Collar Prior to Drilling

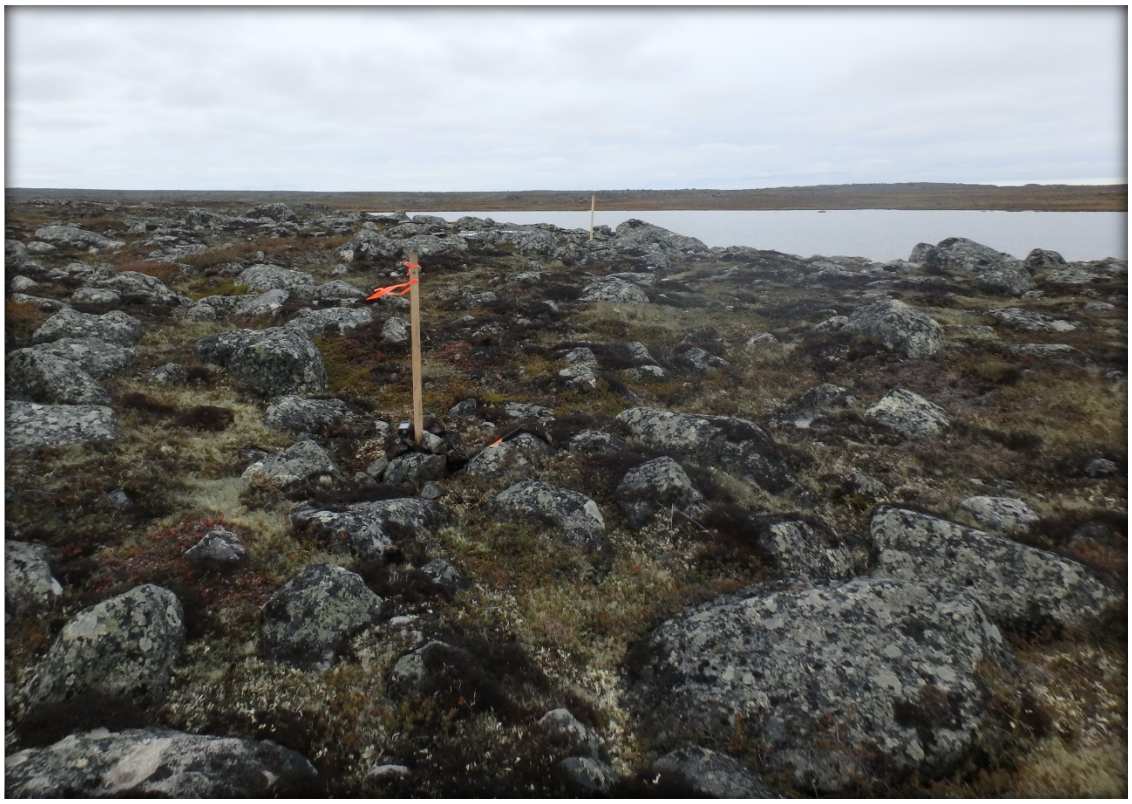
DDH PB-16-28 Collar After Drilling



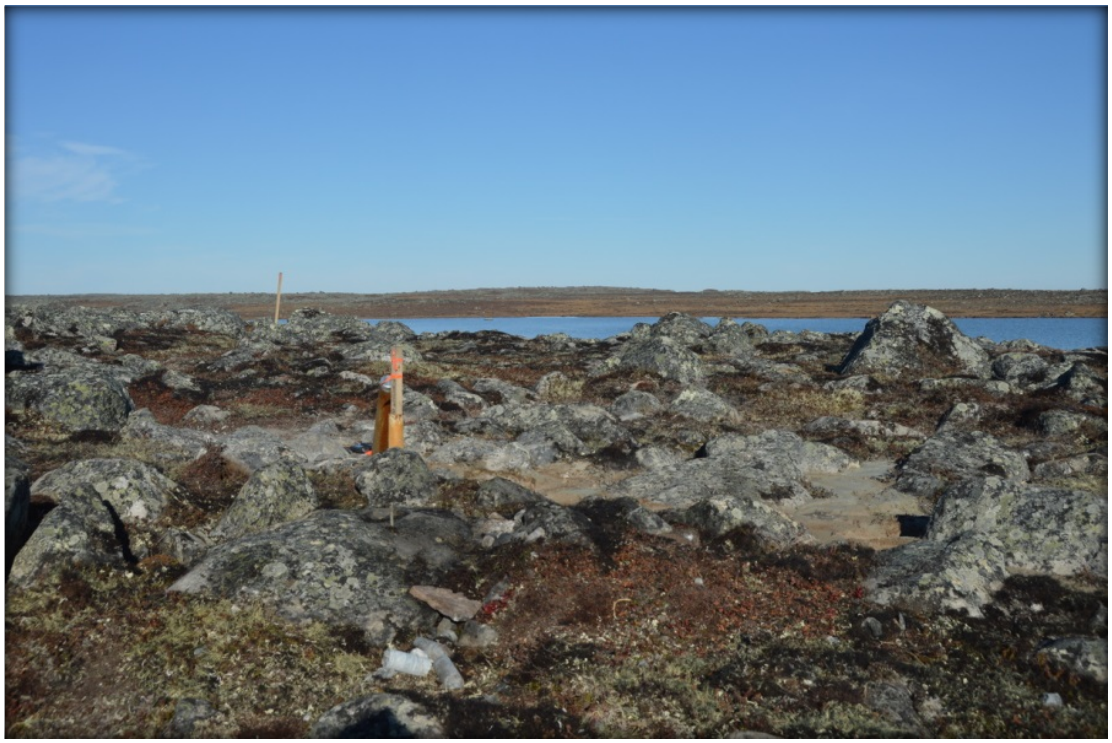
DDH PB-16-29 Collar Prior to Drilling



DDH PB-16-29 Collar After Drilling

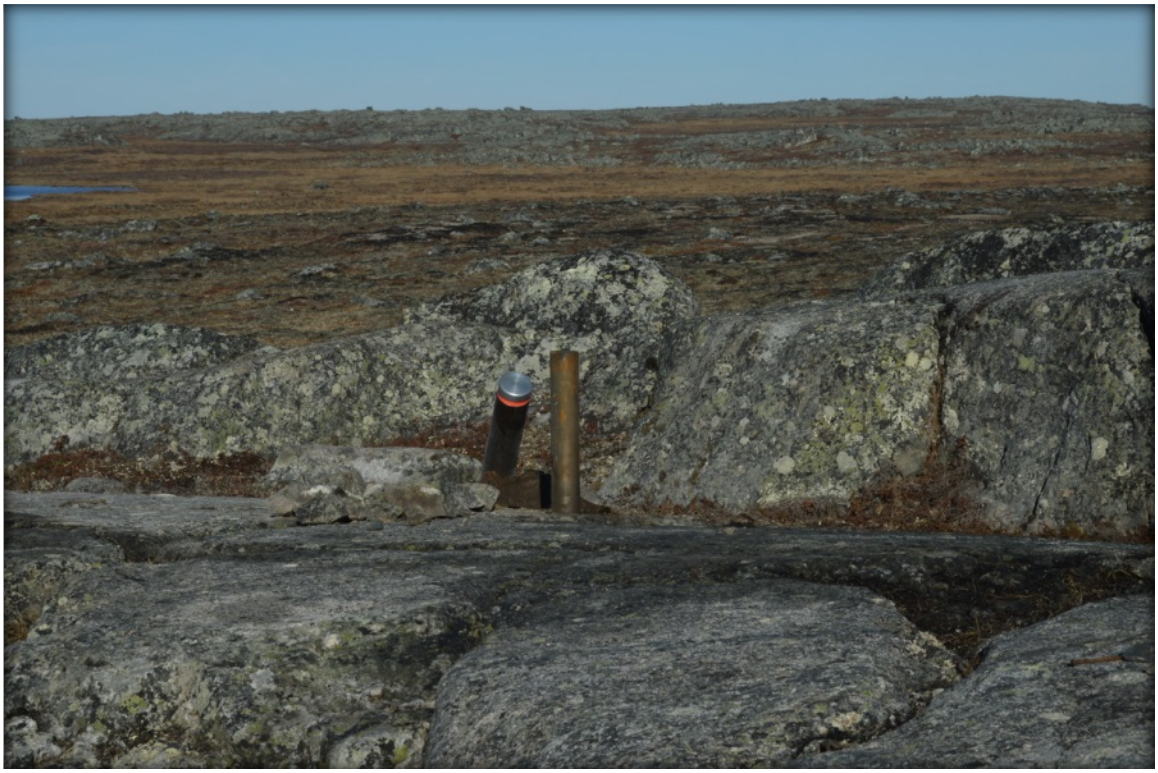


DDH PB-16-30 Collar Prior to Drilling

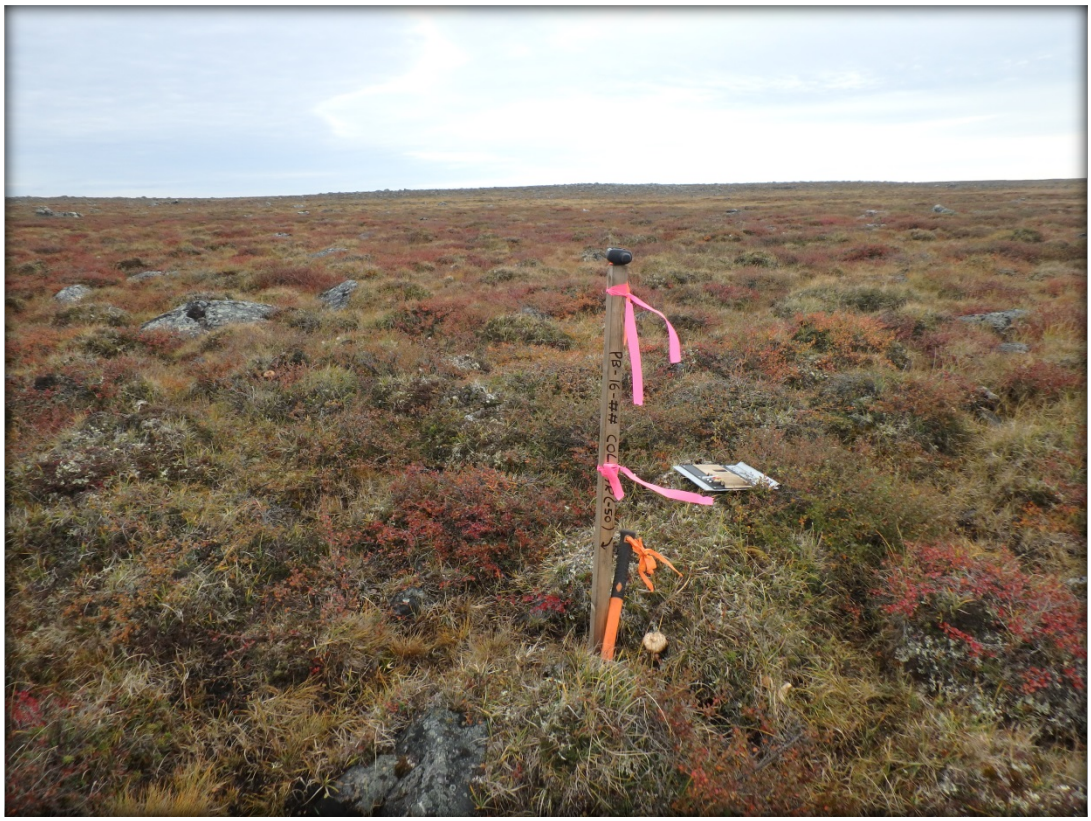


DDH PB-16-30 Collar After Drilling

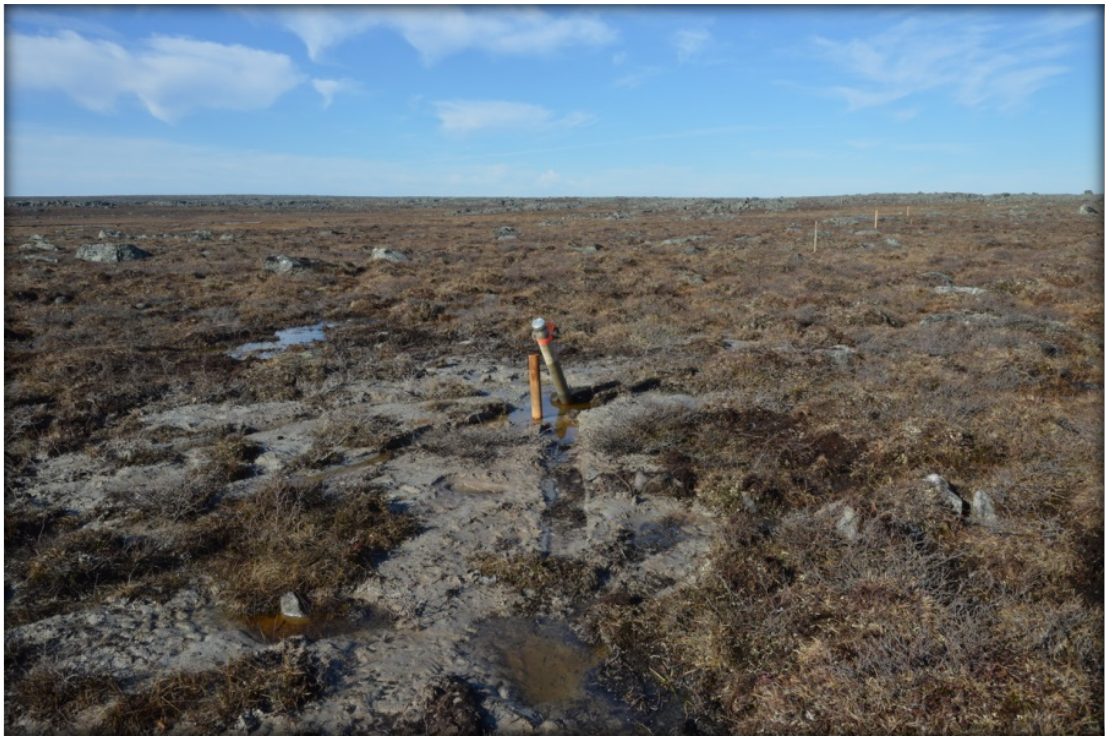
DDH PB-16-31 Collar Prior to Drilling



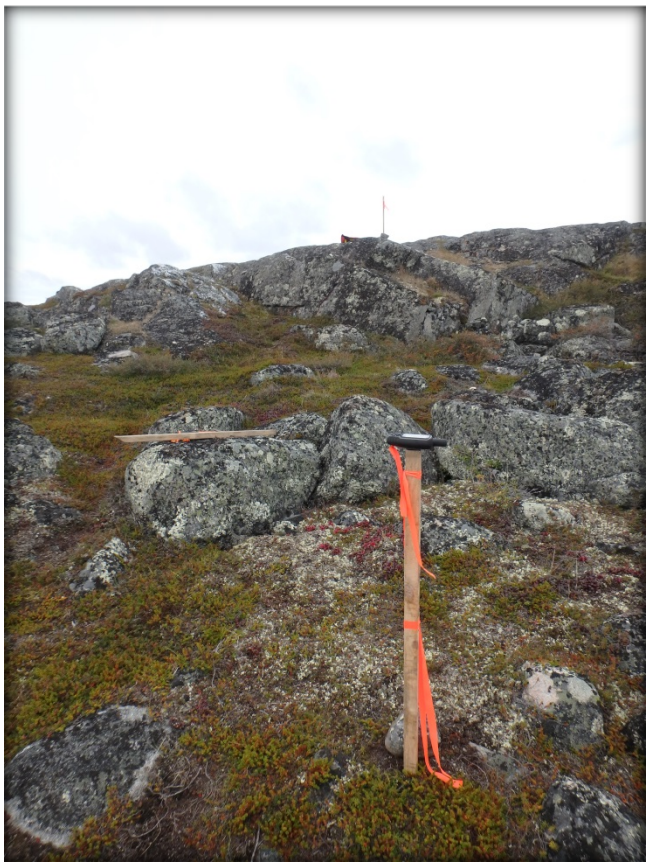
DDH PB-16-31 Collar After Drilling



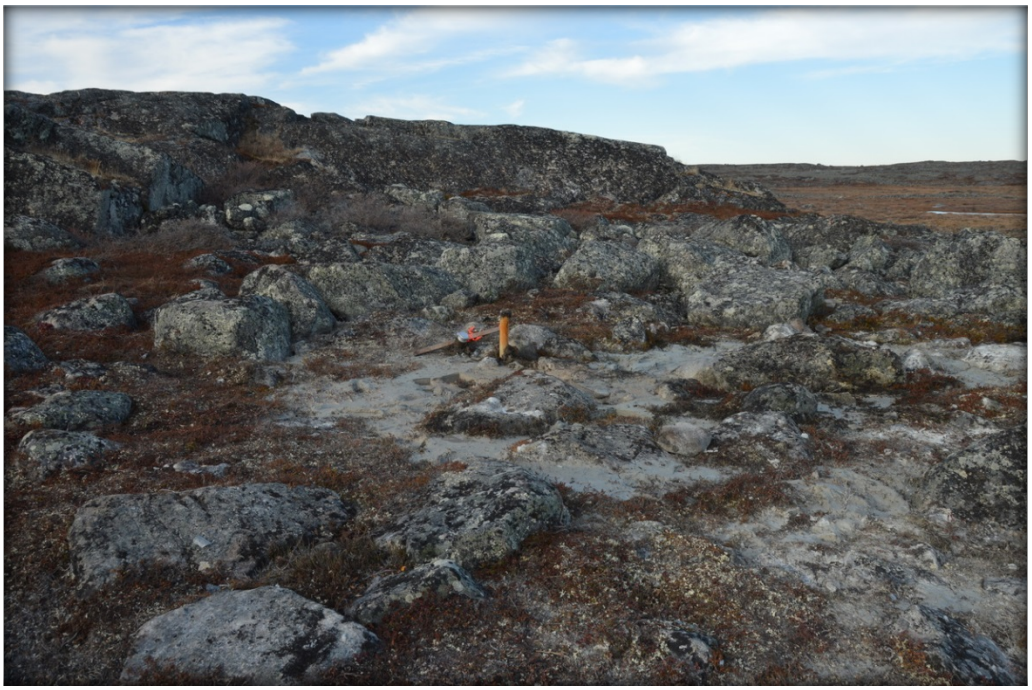
DDH PB-16-32 Collar Prior to Drilling



DDH PB-16-32 Collar After Drilling

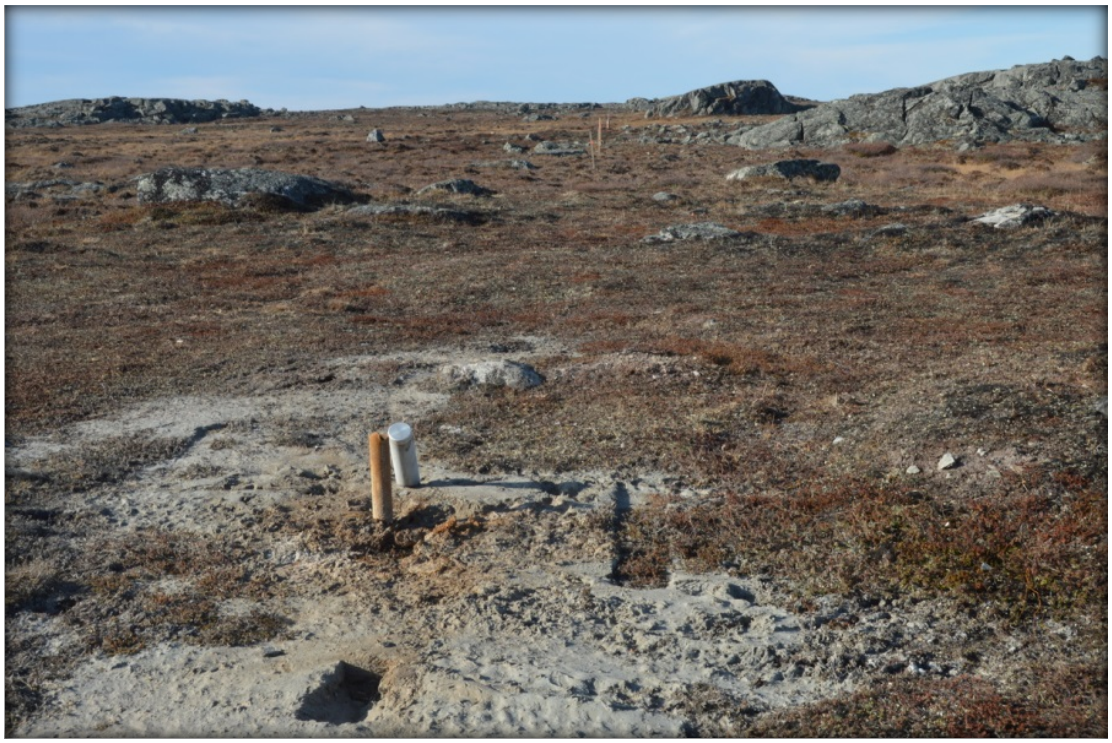


DDH PB-16-33 Collar Prior to Drilling



DDH PB-16-33 Collar After Drilling

DDH PB-16-34 Collar Prior to Drilling



DDH PB-16-34 Collar After Drilling

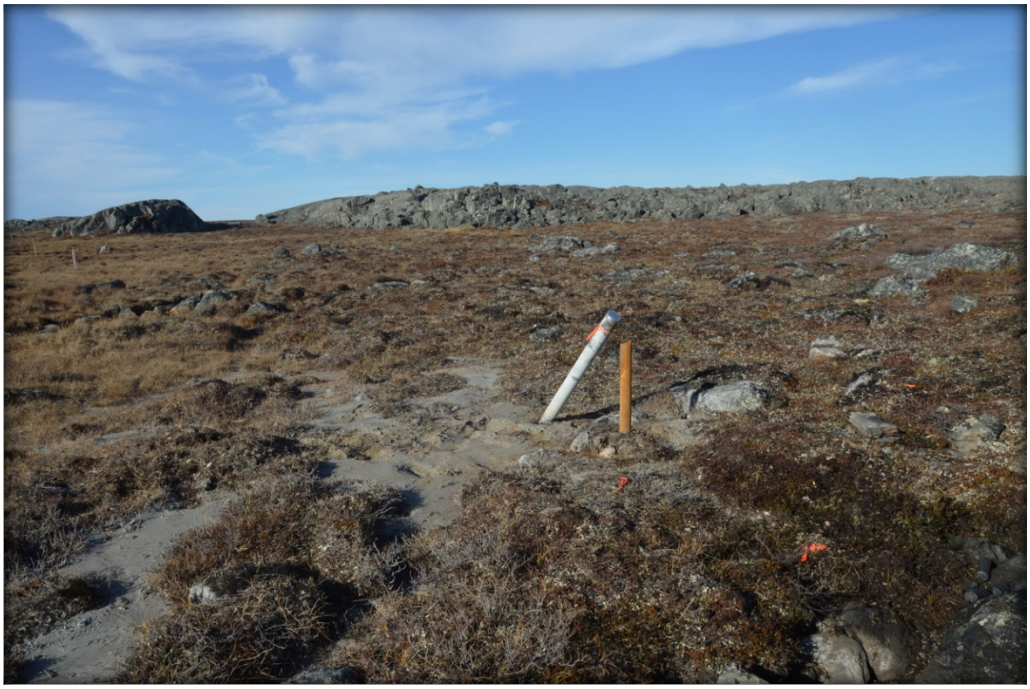
DDH PB-16-35 Collar Prior to Drilling

DDH PB-16-35 Collar After Drilling

DDH PB-16-36 Collar Prior to Drilling

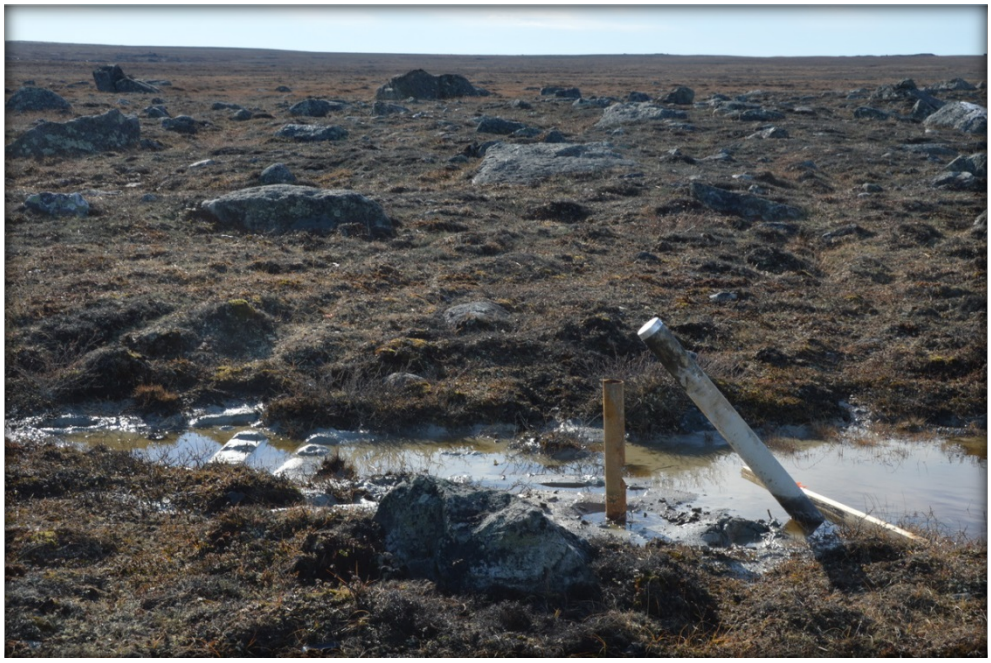
DDH PB-16-36 Collar After Drilling

DDH PB-16-37 Collar Prior to Drilling



DDH PB-16-37 Collar After Drilling

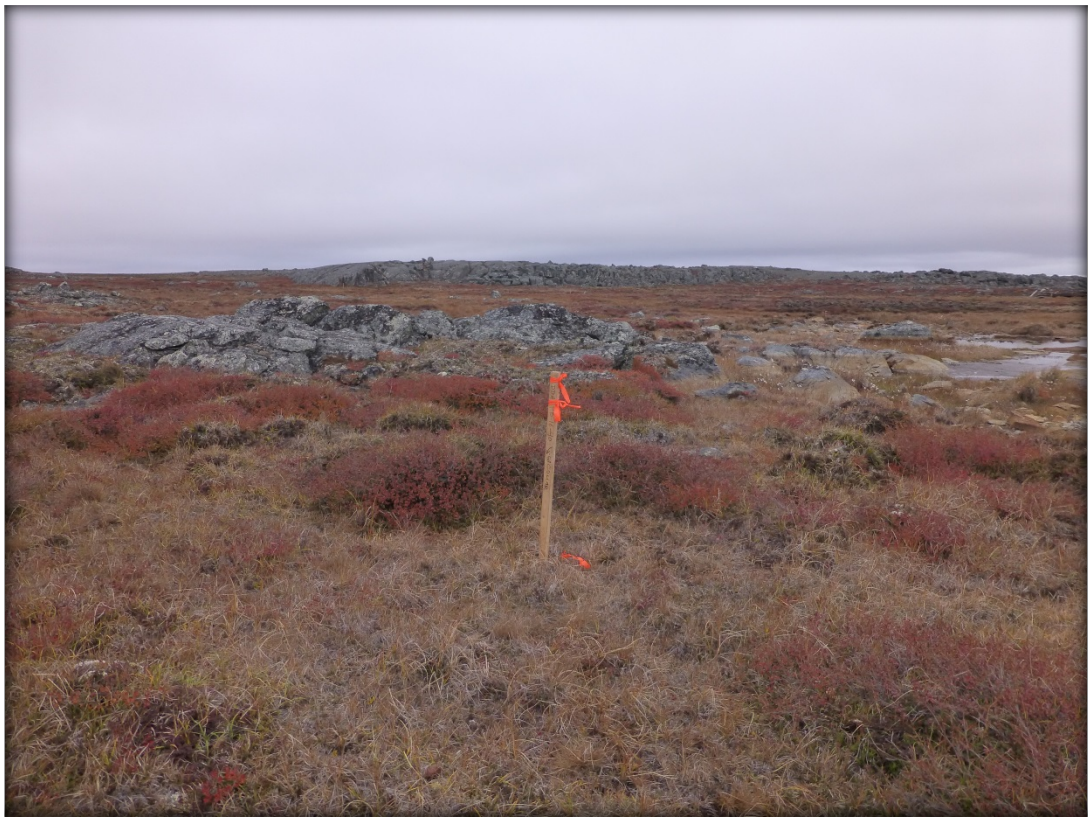
DDH PB-16-38 Collar Prior to Drilling



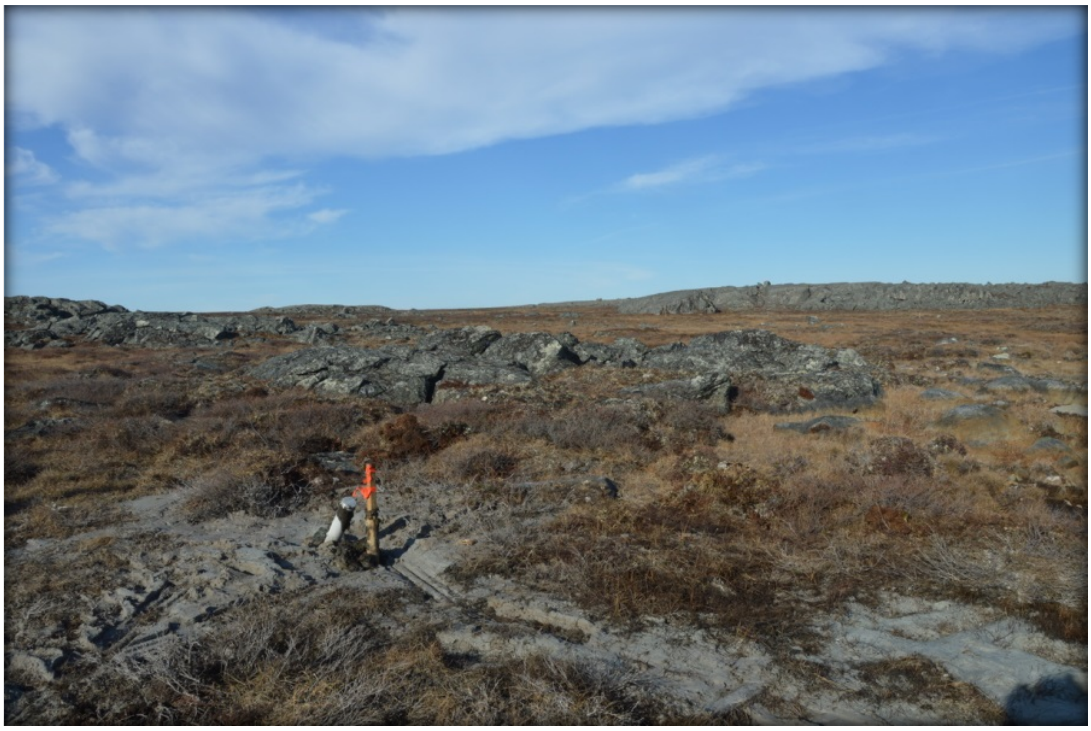
DDH PB-16-38 Collar After Drilling

DDH PB-16-39 Collar Prior to Drilling

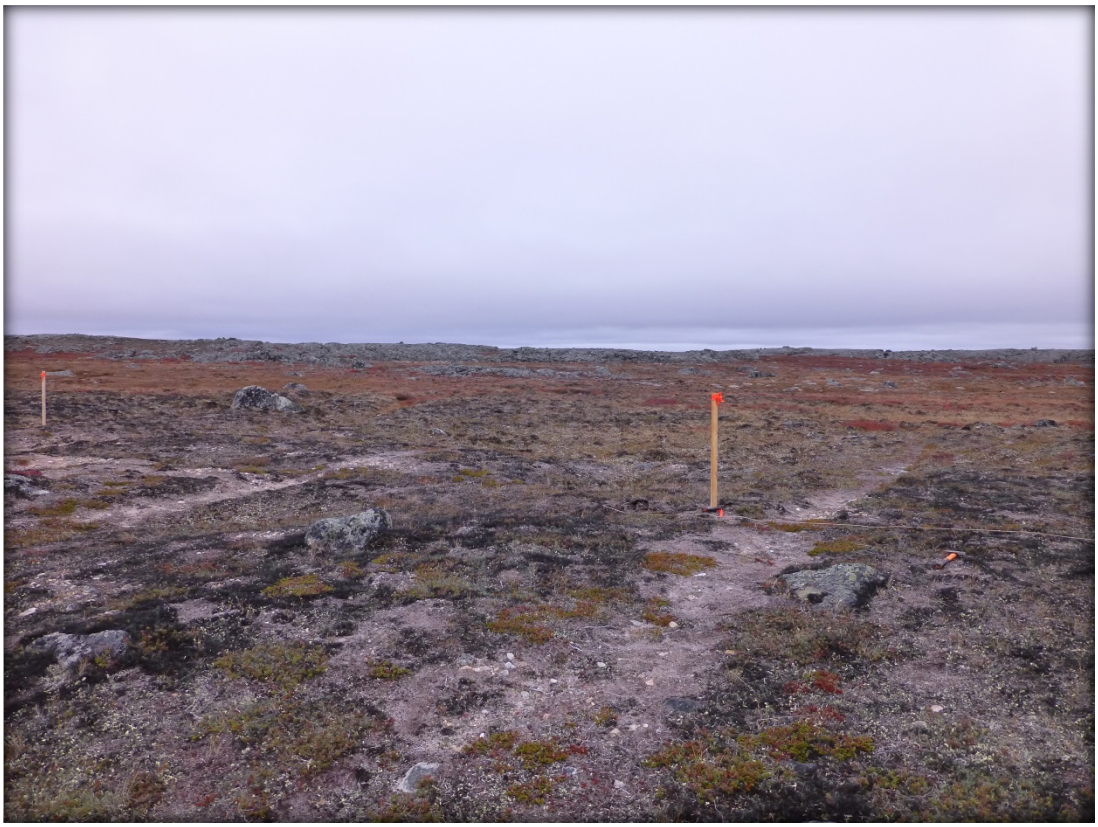
DDH PB-16-39 Collar After Drilling



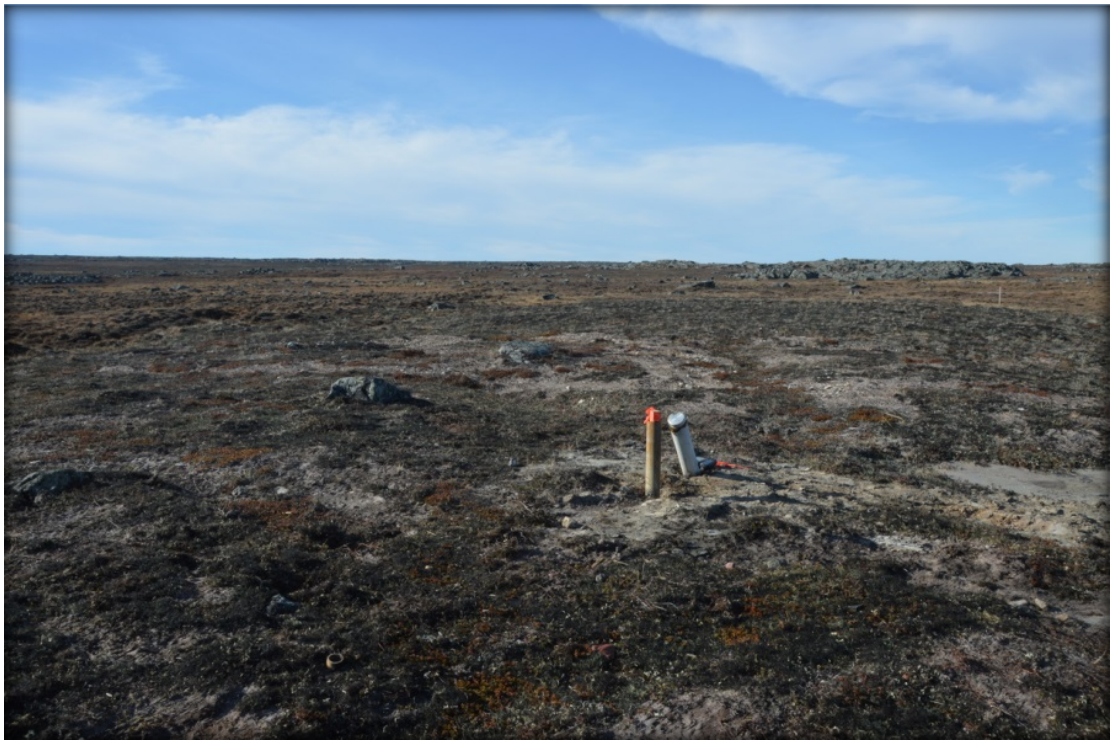
DDH PB-16-40 Collar Prior to Drilling



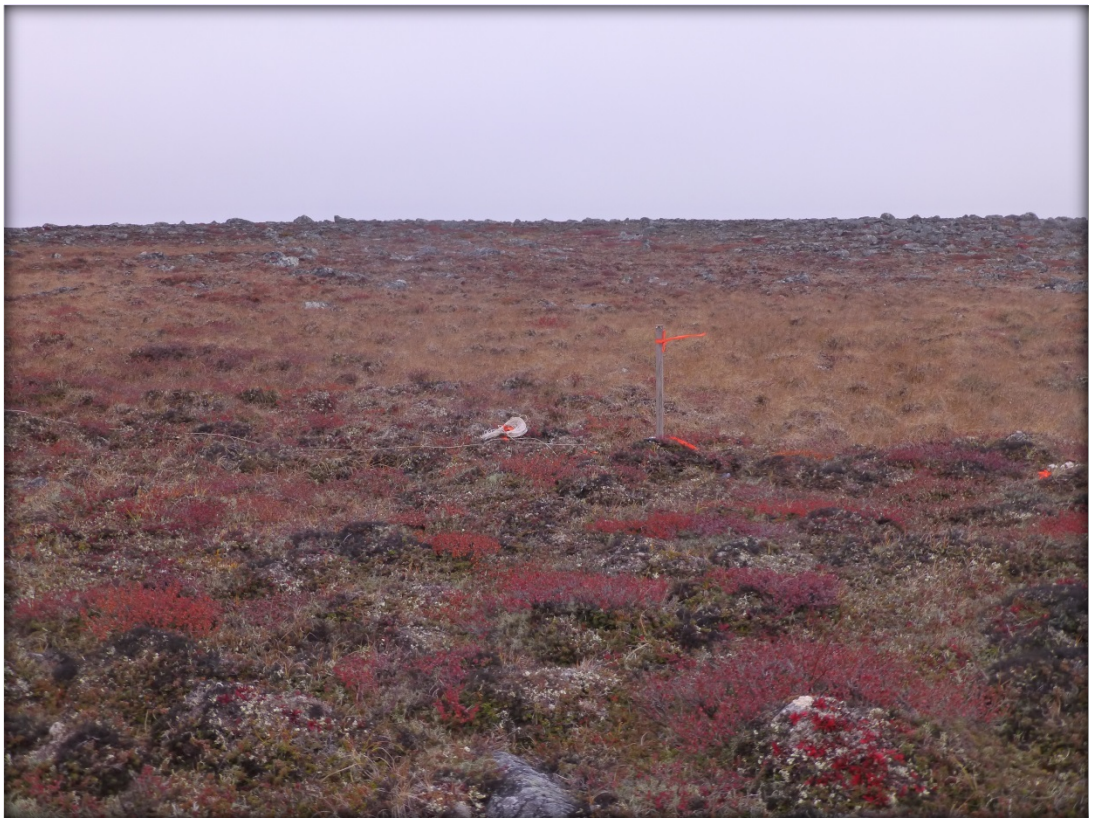
DDH PB-16-40 Collar After Drilling



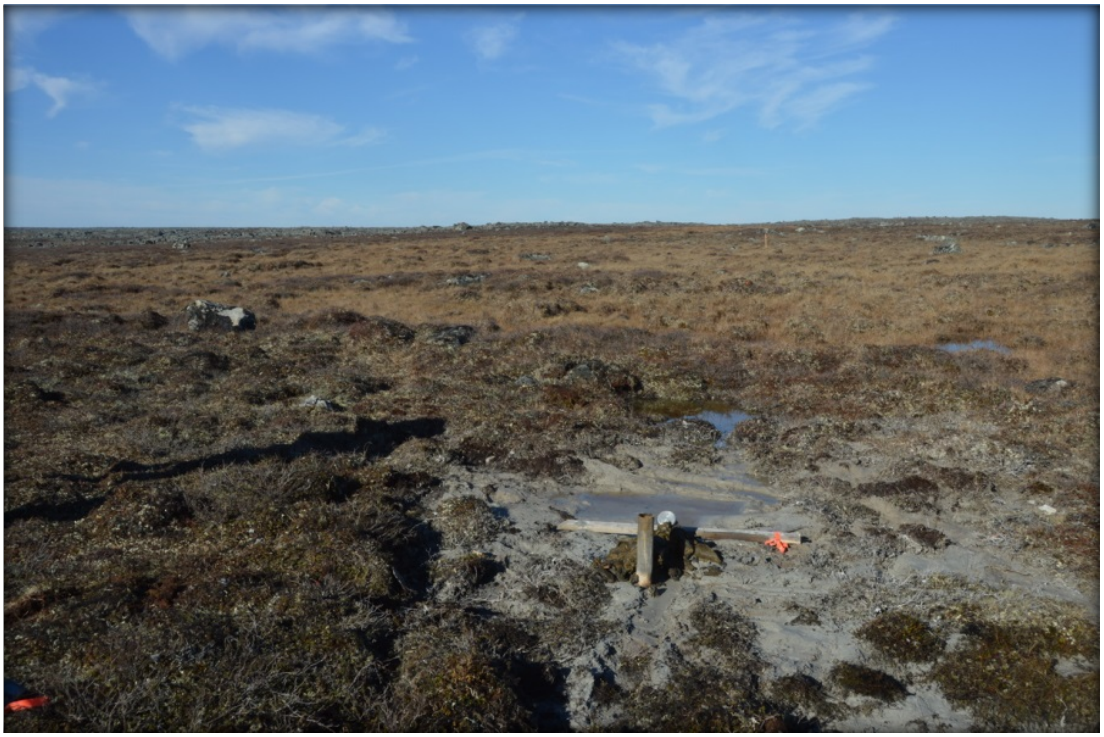
DDH PB-16-41 Collar Prior to Drilling



DDH PB-16-41 Collar After Drilling



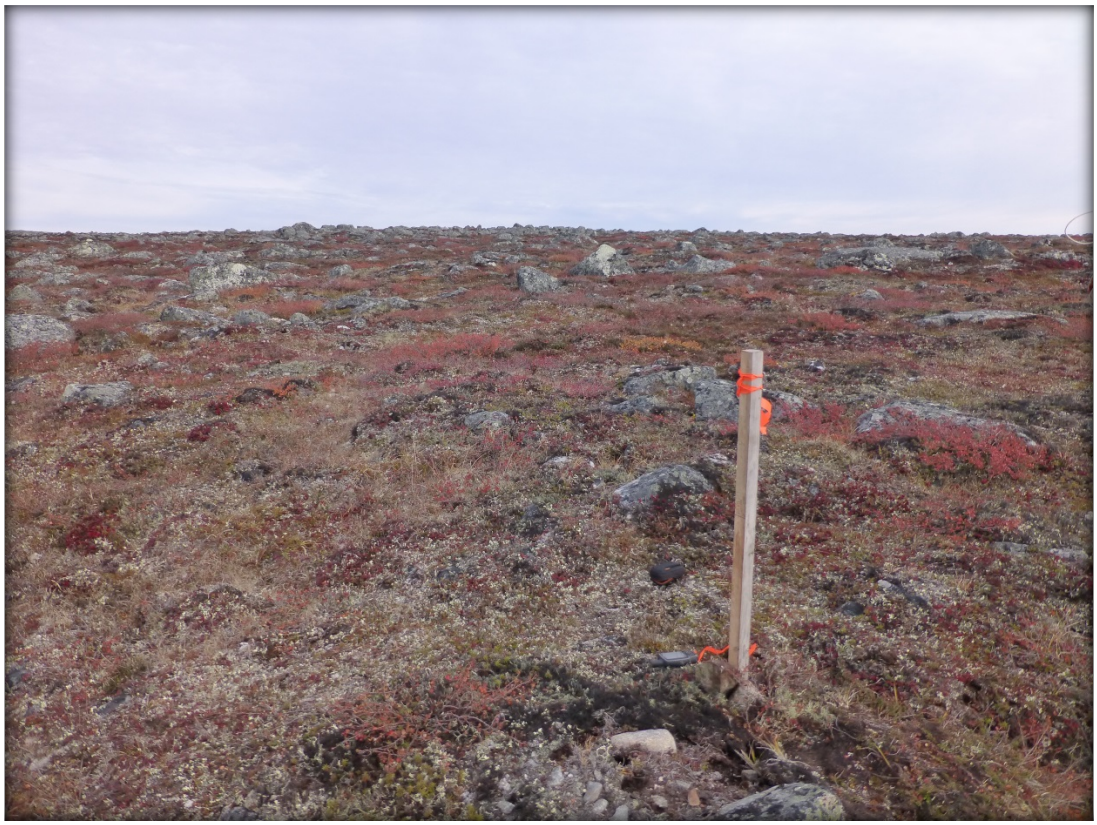
DDH PB-16-42 Collar Prior to Drilling



DDH PB-16-42 Collar After Drilling

DDH PB-16-43 Collar Prior to Drilling

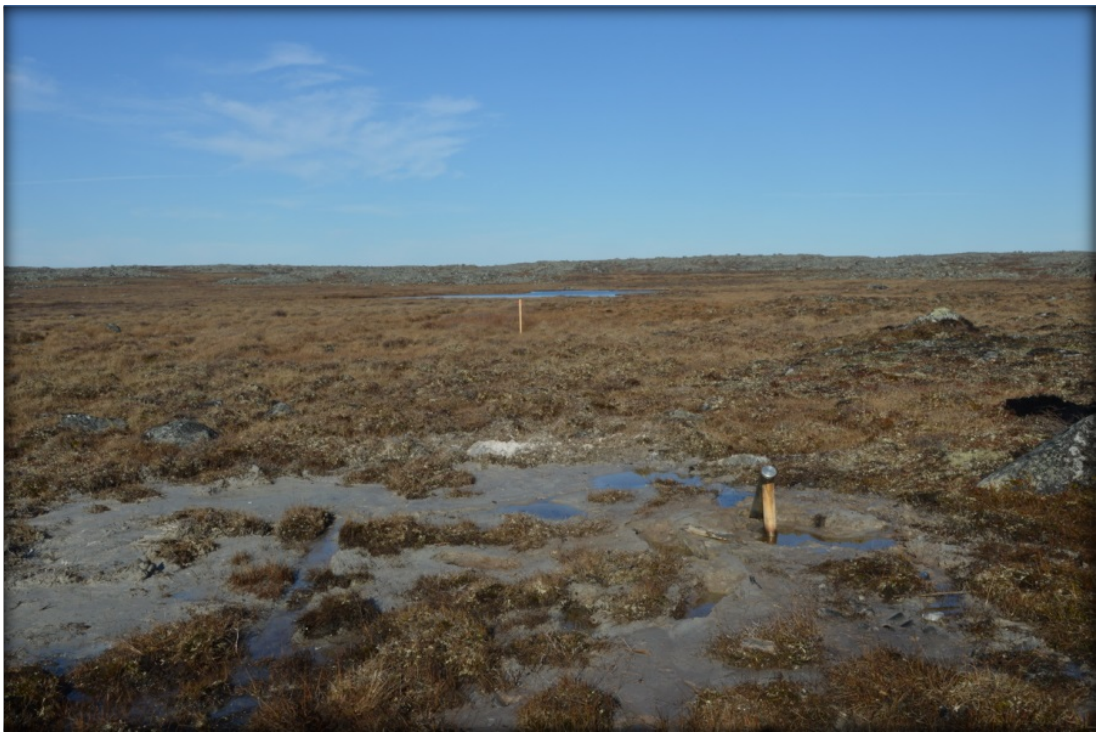
DDH PB-16-43 Collar After Drilling



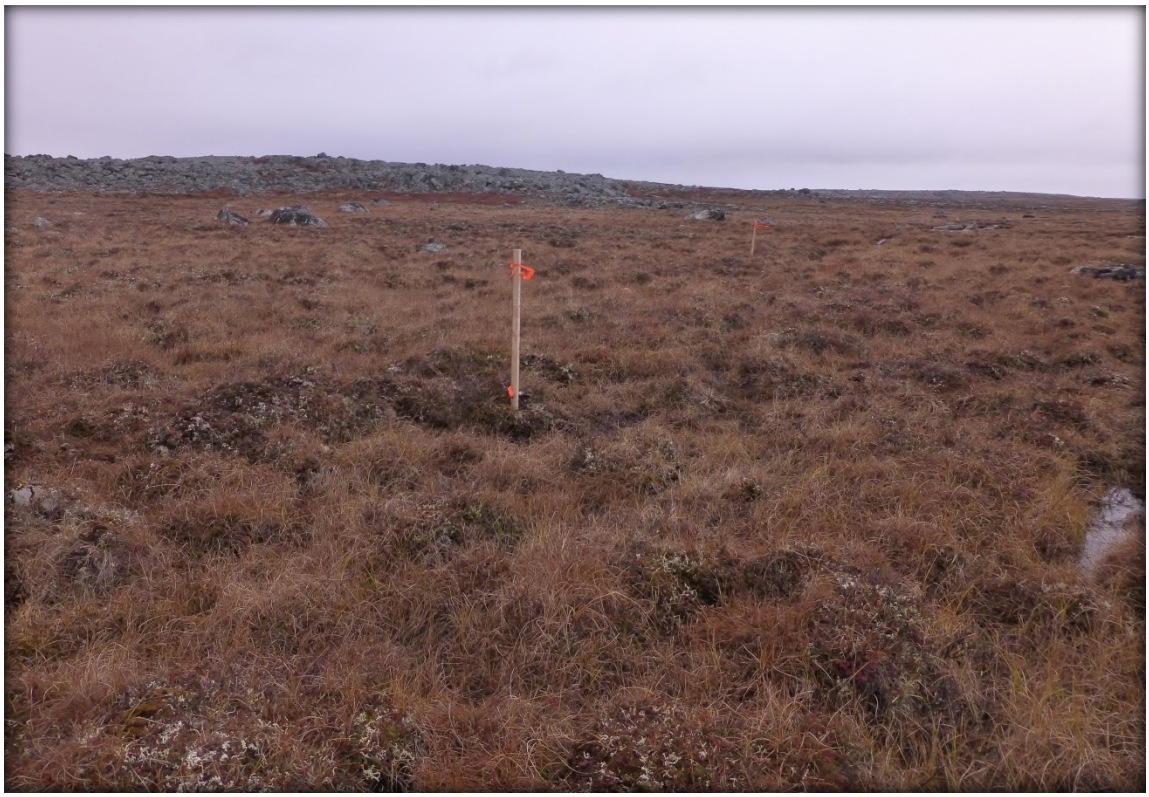
DDH PB-16-44 Collar Prior to Drilling

DDH PB-16-44 Collar After Drilling

DDH PB-16-45 Collar Prior to Drilling



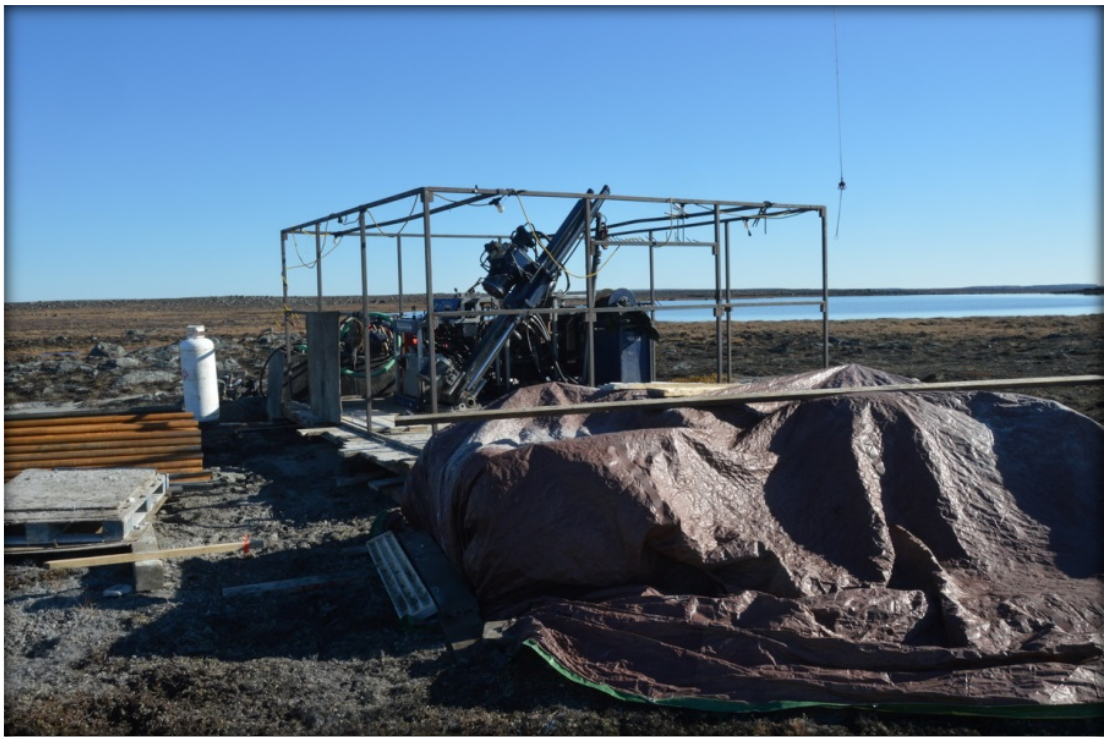
DDH PB-16-45 Collar After Drilling



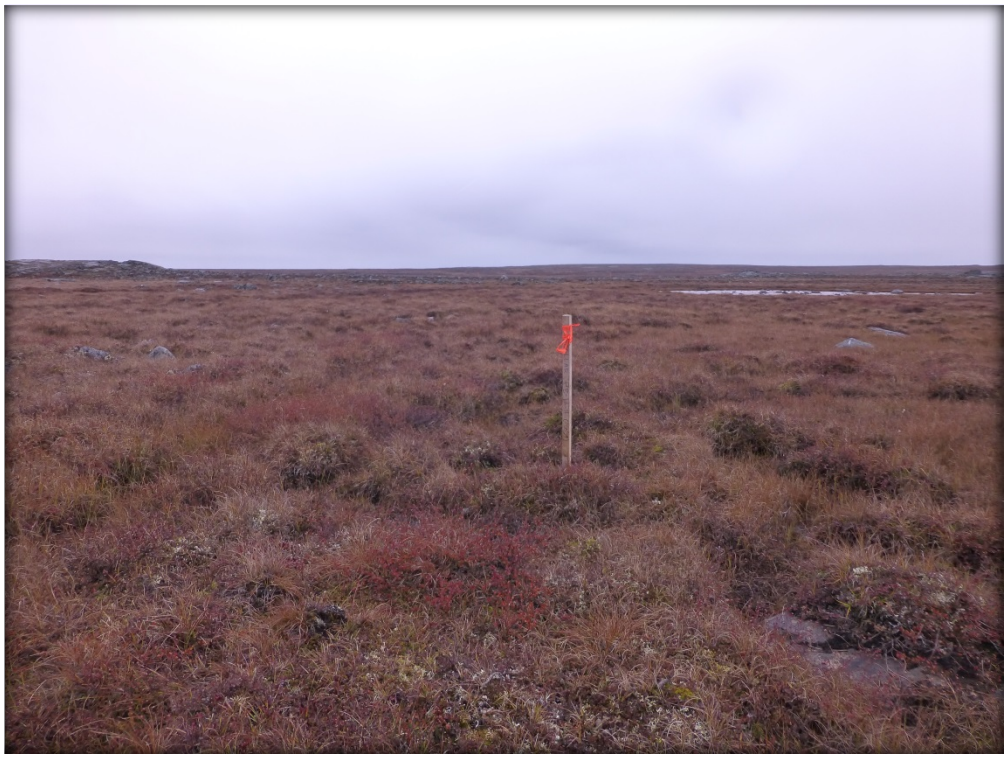
DDH PB-16-46 Collar Prior to Drilling

DDH PB-16-46 Collar After Drilling

DDH PB-16-47 Collar Prior to Drilling



DDH PB-16-47 Collar After Drilling (*Drill remaining on this pad until next drill program*)



DDH PB-16-48 Collar Prior to Drilling

DDH PB-16-48 Collar After Drilling

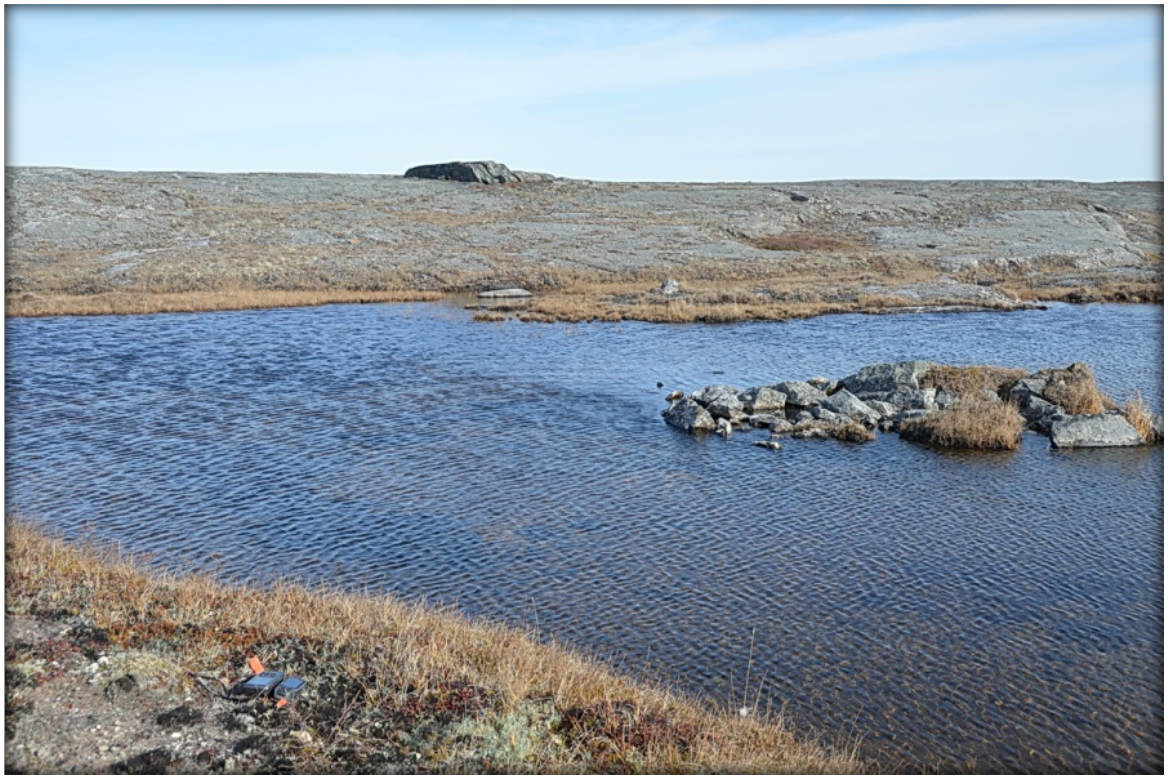
Water Pump Location for DDH's PB-16-01, 03, 04, 05

Water Pump Location for DDH's PB-16-02, 06, 08

Water Pump Location for DDH's PB-16-07, 16

Water Pump Location for DDH's PB-16-09, 11, 13

Water Pump Location for DDH's PB-16-20, 22



Water Pump Location for DDH's PB-16-24

Water Pump Location for DDH's PB-16-10, 12, 14, 15

Water Pump Location for DDH's PB-16-17, 18, 19

Water Pump Location for DDH's PB-16-21, 23, 33, 35, 46, 48

Water Pump Location for DDH's PB-16-25, 27, 28, 29, 30, 31

Water Pump Location for DDH's PB-16-32, 43, 45, 47

Water Pump Location for DDH's PB-16-34, 36, 37, 38, 39, 40, 41

Water Pump Location for DDH's PB-16-42, 44

APPENDIX 5

PHOTOGRAPHS OF CAMP

Aerial View of the Pistol Bay Camp and Water Source

Aerial View of the Pistol Bay Camp