BOREHOLE LOG

PROJET: Iqaluit Aiport
SITE: Taxiway A
BOREHOLE NO.: IQA_AERO_DDH_13_02
COORDINATES: X:521901.1093 Y:7070216.8521
ELEVATION: 28 m
START DATE: 27-04-2013
END DATE: 28-04-2013

Instrumentation
- Temperature sensor (Decagon ECT)
- Temperature sensor (YSI 44033)
- Volumetric water content, temperature and bulk electrical conductivity (Decagon 5ET)
- Volumetric water content (Decagon EC-5)
- Pressure sensor

Instrumentation
- PVC casing

Sampling method
- Excavation
- Diamond core
- Slit spoon
- Destructive

Recovery
- Recovered
- No recovery

Sample state
- *Ud-F* Undisturbed and frozen
- *Ud-Uf* Undisturbed and unfrozen
- *D-F* Disturbed and frozen
- *D-Uf* Disturbed and unfrozen

C/H/N
- *w* Water content (%)
- *p* Bulk density (g/cm-3)
- C Carbon (%)
- H Hydrogen (%)
- N Nitrogen (%)

Depth (m)	Instrumentation	Stratigraphy	Image	CT (HU) 3071 / -1024	TI profile (HU) -1024 / 1024 / 3071	Soil description	Sampling method	Recovery	Sample state	Sample name	Volume (%) Soil / Ice / Air (0 – 100)	Water content (%)	Salinity (ppm)	Grain size G	Grain size S	Grain size M-C	Consistency wl	Consistency wp	Consistency Ip	Consistency IL	USCS	Consol. kPa 25	Consol. kPa 50	Consol. kPa 100	C/H/N w	C/H/N p	C/H/N C	C/H/N H	C/H/N N	Radiocarbon dates 14C (BP)	±	Material
0.00						Asphalt (0,14 m).																										
						Brown angular to sub-angular gravel and sand (embankment). Pore ice.			D-Uf	13_02_14-50				48.6	42.0	9.5					GW-GM											
-1.00																																
						Boulders.			D-Uf																							
-2.00						Grey clayey silt.				13_02_196-201				18.2	32.5	49.4					SM											
									D-Uf	13_02_244-270																						

Version 1.4 E. L'Hérault and A-S. Carbonneau (2015-06)

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- w Water content (%)
- ρ Bulk density (g/cm-3)
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- N Nitrogen (%)

Stratigraphic information: Stratigraphy, Image, CT (HU) 3071 / -1024, TI profile (HU) -1024 / 1024 / 3071, Soil description
Sampling characteristic: Sampling method, Recovery, Sample state, Sample name
Laboratory analysis: Volume (%) Soil / Ice / Air (0–100), Water content (%), Salinity (ppm), Grain size (G, S, M-C), Consistency (wl, wp, Ip, IL), USCS, Consol. kPa (25, 50, 100), C/H/N (w, ρ, C, H, N), Radiocarbon dates (14C (BP), ±, Material)

Depth (m): -3.00, -4.00, -5.00

Soil description:
- Ice rich grey clayey silt with occasional layer of organic matter. Ataxitic ice.
- Grey laminated clayey silt with occasional small sub rounded pebbles. Occasional layer of organic matter. Horizontal to sub horizontal ice lenses to a few cm thickness.
- Oxyded laminated fine sand. Subhorizontal bedding. Occasional layer of heavy mineral. Erosion surface at 4, 85 and 4, 89 m. Pore ice.
- Oxyded laminated grey clayey silt. Subhorizontal bedding. Occasional layer of organic matter. Very thin ice lenses.

Sample name	Sampling method	Sample state	Water content (%)	Salinity (ppm)	G	S	M-C	wl	wp	Ip	IL	USCS
13_02_272-282		Ud-F	46.4									
13_02_282-292		Ud-F	75.5		0.5	16.8	82.7	22.8	15.9	6.9	8.7	CL-ML
13_02_292-295		Ud-F	59.9									
13_02_295-302		Ud-F	44.1		0.7	18.0	81.3	24.2	17.2	7.0	3.9	CL-ML
13_02_302-330		Ud-F	25.2		10.5	37.4	52.2	23.4	15.7	7.6	1.2	CL
13_02_330-350		Ud-F	22.8		18.4	16.1	65.5	21.0	15.0	6.0	1.3	CL-ML
13_02_350-355		Ud-F	61.3									
13_02_355-365		Ud-F	20.1		1.9	12.8	85.3	23.4	15.8	7.6	0.6	CL
13_02_387-395		Ud-F	21.8	13.7								
13_02_407-424		Ud-F	27.8									
13_02_424-435		Ud-F	18.8									
13_02_460-463		Ud-F	19.2									
13_02_463-479		Ud-F	21.9									
13_02_479-489		Ud-F	15.7		0.0	97.5	2.5					SP
13_02_489-503		Ud-F	21.4									

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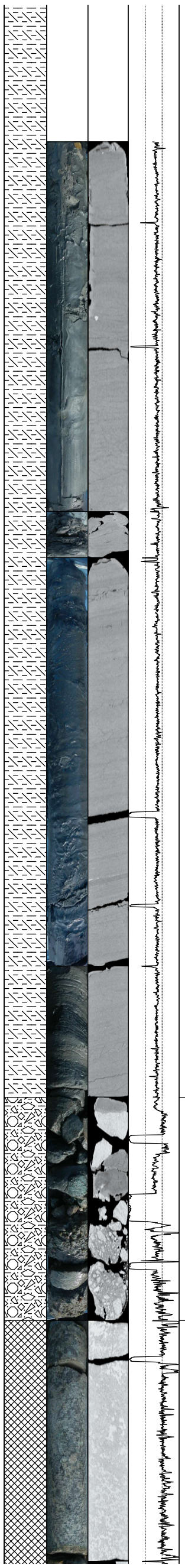

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					Ud-F	13_02_545-557		23.0																				
-6.00					Ud-F	13_02_593-603		21.5		0.0	11.8	88.2	21.2	14.4	6.8	1.0	CL-ML											
					Ud-F	13_02_603-606		20.5																				
					Ud-F	13_02_606-614		20.9		1.2	13.5	85.3	20.6	14.1	6.5	1.1	CL-ML											
					Ud-F	13_02_614-658																						
					Ud-F	13_02_658-672		20.0	14.6																			
					Ud-F	13_02_672-683		20.3		0.0	31.7	68.3	18.9	13.6	5.4	1.3	CL-ML											
					Ud-F	13_02_683-691		20.2																				
						13_02_691_694																				17940	110	Organic Mater
-7.00					Ud-F	13_02_694-705		23.9		0.0	29.7	70.3	19.3	13.1	6.2	1.7	CL-ML											
		Grey and angular diamict (till). Pore ice.			Ud-F	13_02_705-725		7.8																				
					Ud-F	13_02_725-742		8.8		44.0	44.6	11.4	16.2				SP-SM											
		Bedrock			Ud-F	13_02_740-780																						

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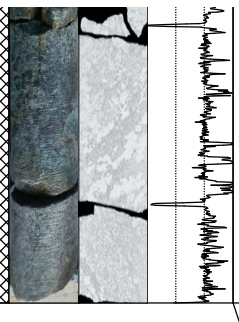
-8.00									Ud-F	13_02_780-810																						

End of borehole at 8,12 m.

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