BOREHOLE LOG

PROJET: Iqaluit Airport
SITE: Apron I - New Terminal
BOREHOLE NO.: IQA_AERO_DDH_13_12
COORDINATES: X:522527.6675 Y:7069986.0224
ELEVATION: 24
START DATE: 15-05-2013
END DATE: 15-05-2013

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 (%)
- ρ Bulk density (g/cm-3)
- C Carbon (%)
- H Hydrogen (%)
- N Nitrogen (%)

Stratigraphic information / **Sampling characteristic** / **Laboratory analysis**

Depth (m)	Stratigraphy	Soil description	Sampling method	Recovery	Sample state	Sample name	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 C1	Consol. kPa C2	Consol. kPa C3	C/H/N w	C/H/N ρ	C/H/N C	C/H/N H	C/H/N N	Radiocarbon dates 14C (BP)	±	Material
0.00		Coarse angular gravel and very coarse brown sand. Pore ice. Air bubbles between 1,80 and 2,14 m.			D-Uf	13_12_0-90																					
-1.00					D-Uf	13_12_90-130	14.5		18.2	63.2	18.7	29.6				SM											
					D-Uf	13_12_130-178	16.2		17.2	68.3	14.5	20.1	15.8	4.3	0.1	SM-SC											
					Ud-F	13_12_180-195	14.0																				
-2.00					Ud-F	13_12_196-208	15.1		12.6	67.9	19.5	23.5	20.3	3.2	-1.6	SM											
					Ud-F	13_12_208-218	12.3																				
		Coarse angular brown gravel and very coarse sand. Dark brown ice rich peat from 2,14 to 2,22 m and 2,40 to 2,43 m. Correspond to the natural terrain surface before construction.			Ud-F	13_12_218-231	18.5		34.2	52.5	13.3	40.0				SM											
					Ud-F	13_12_231-238	7.7																				
		Coarse subangular to subrounded brown cryoturbated gravel and very coarse brown sand. Small boulder between 2,76 and 2,82 m. Pore ice.			Ud-F	13_12_238-254	14.3		31.1	66.4	2.5					SP											
					Ud-F	13_12_256-268	18.0																				
					Ud-F	13_12_268-278	16.2		20.2	78.5	1.3					SP											

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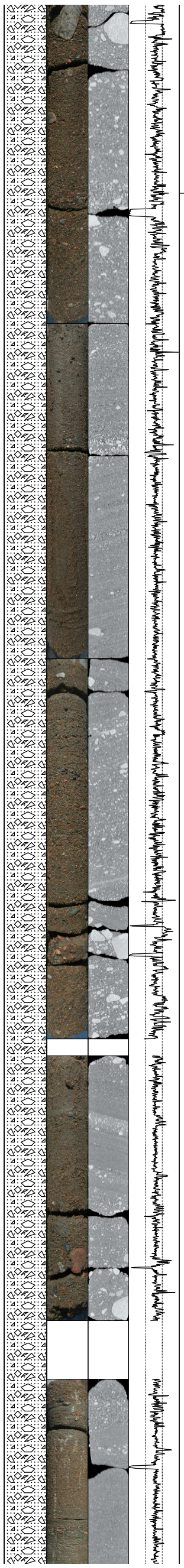

Depth (m)	Stratigraphy	Soil description	Sampling method	Recovery	Sample state	Sample name	Water content (%)	Salinity (ppm)	Grain size G	Grain size S	Grain size M-C	Consistency wl	Consistency wp	Consistency Ip	Consistency IL	USCS	Consol. kPa C1	Consol. kPa C2	Consol. kPa C3	C/H/N w	C/H/N p	C/H/N C	C/H/N H	C/H/N N	Radiocarbon dates 14C (BP)	±	Material
		Coarse angular to subangular gravel and very coarse sand embedded with coarse to medium sand. Horizontal to subhorizontal bedding. Pore ice.			Ud-F	13_12_278-287	13.4																				
-3.00					Ud-F	13_12_287-296	19.0																				
						13_12_296-304	19.1																				
						13_12_304-313	17.2																				
						13_12_313-321	16.7																				
						13_12_321-331	19.0																				
					Ud-F	13_12_330-335	22.3																				
						13_12_335-345	24.2		0.8	98.3	0.9					SP											
						13_12_345-354	19.9																				
					Ud-F	13_12_354-390																					
-4.00					Ud-F	13_12_391-397	21.1																				
					Ud-F	13_12_432-436	19.7																				
						13_12_436-441	6.6																				
						13_12_441-456	17.5		19.0	80.7	0.3					SP											
					Ud-F	13_12_460-470	23.5																				
						13_12_470-479	22.7																				
						13_12_479-486	18.9																				
-5.00					Ud-F	13_12_486-496	17.9																				
						13_12_496-504	15.0																				
					Ud-F	13_12_517-560																					

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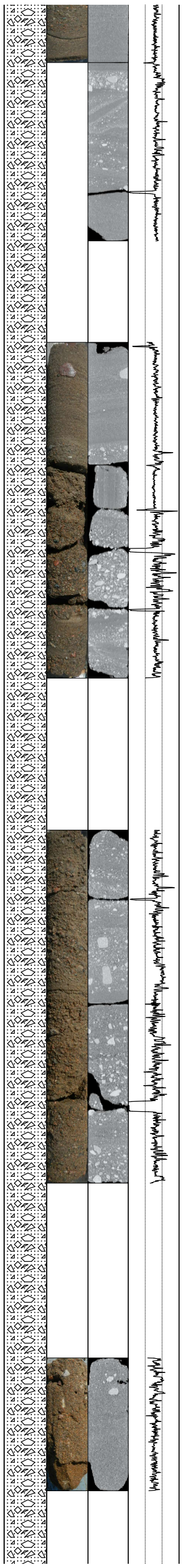

Depth (m)	Sampling method	Recovery	Sample state	Sample name	Volume (%) Soil / Ice / Air	Water content (%)	Salinity (ppm)	Grain size G	Grain size S	Grain size M-C	Consistency wl	Consistency wp	Consistency Ip	Consistency IL	USCS	Consol. kPa C1	Consol. kPa C2	Consol. kPa C3	C/H/N w	C/H/N p	C/H/N C	C/H/N H	C/H/N N	Radiocarbon dates 14C (BP)	±	Material
			Ud-F	13_12_560-569		18.7		7.4	85.9	6.7	24.5				SP-SM											
			Ud-F	13_12_569-581		20.6																				
			Ud-F	13_12_581-590		22.3																				
-6.00																										
			Ud-F	13_12_609-620		22.3																				
			Ud-F	13_12_620-630		22.4																				
			Ud-F	13_12_630-636		25.2																				
			Ud-F	13_12_636-642		18.6																				
			Ud-F	13_12_642-652		14.1																				
			Ud-F	13_12_652-668		19.2																				
-7.00			Ud-F	13_12_695-705		20.5		4.3	94.9	0.9	23.5				SP											
			Ud-F	13_12_705-714		17.6																				
			Ud-F	13_12_714-722		16.0																				
			Ud-F	13_12_722-740		17.9																				
			Ud-F	13_12_740-755		16.1																				
-8.00			Ud-F	13_12_788-797		20.6																				
			Ud-F	13_12_797-810		23.1		0.0	99.5	0.5					SP											

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Depth (m)	Instrumentation	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	Volume (%) Soil / Ice / Air 0 / 100	Water content (%)	Salinity (ppm)	Grain size: G	S	M-C	Consistency: wl	wp	Ip	IL	USCS	Consol. kPa: C1	C2	C3	C/H/N: *w*	*p*	C	H	N	Radiocarbon dates: 14C (BP)	±	Material

End of borehole at 8,64 m.

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