



# Sub-Surface Log

Test Hole TH19-05

1 of 3

**Client:** Blumetric Environmental **Project Number:**                       
**Project Name:** Former Wellgreen Mill and Tailings Area **Location:** UTM 7V, 6820475 m N, 589502 m E (Former Mill Site)  
**Contractor:** Midnight Sun Drilling Inc. **Ground Elevation:** 795.98 m  
**Method:** 100 mm sonic core in 152 mm casing hole, Rig 9 Terrasonic track mounted **Date Drilled:** 9 October 2019 - 10 October 2019

**Sample Type:**  Grab (G)  Shelby Tube (T)  Split Spoon (SS)  Split Barrel (SB)  Core (C)  
**Particle Size Legend:**  Fines  Clay  Silt  Sand  Gravel  Cobbles  Boulders  
**Backfill Legend:**  Bentonite  Cement  Drill Cuttings  Filter Pack Sand  Grout  Slough

Elevation (m)	Depth (m)	Soil Symbol	TR-02	MATERIAL DESCRIPTION	Sample Type	Sample Number	SPT (N)	Temperature (°C)	Bulk Unit Wt (kN/m <sup>3</sup> )		Undrained Shear Strength (kPa)			
									16	17		18	19	20
									Particle Size (%)					
									0	20	40	60	80	100
									PL	MC	LL			
									0	20	40	60	80	100
									0	50	100	150	200	250
									Test Type					
									<input type="checkbox"/> Torvane <input type="checkbox"/> Pocket Pen. <input type="checkbox"/> Qu <input type="checkbox"/> Field Vane <input type="checkbox"/>					
	0.0			SAND AND GRAVEL (FILL) - trace clay, trace silt - brown, grey below 0.1 m - frozen to 25 mm depth, moist when thawed, compact - poorly-graded, fine sand to coarse gravel - sub-rounded, maximum diameter <75 mm	▲	G162		●						
	0.5				▲	G163		●						
	1.0			ORGANICS - black, moist										
	1.5			SAND - some gravel (<25 mm diam.), trace silt, light brown, grey below 1.8 m, moist, loose, poorly-graded, fine to coarse sand - trace organics below 1.8 m	⊗	SS165A	8	●						
	2.0			- organics seam (150 mm thick) at 2.0 m	⊗	SS165B		●						
	2.5			CLAY (TILL) - silty, sandy, trace gravel (<30 mm diam.) - grey - moist, hard - low plasticity	▲	G166		●						
	3.0				⊗	SS167	40	●						
	3.5													
	4.0													
	4.5													
	5.0				⊗	SS168	53	●						
	5.5													

SUB-SURFACE LOG LOGS 2019-11-08 WELLGREEN WORKPLAN SITE (TEST HOLES)\_FINAL\_BT 0154-015-00.GPJ\_TREK GEOTECHNICAL\_GDT 28/11/19

**Logged By:**                      **Reviewed By:**                      **Project Engineer:**



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Elevation (m)	Depth (m)	Soil Symbol	TR-02	MATERIAL DESCRIPTION	Sample Type	Sample Number	SPT (N)	Temperature (°C)	Bulk Unit Wt (kN/m <sup>3</sup> )		Undrained Shear Strength (kPa)						
									16	17							
									Particle Size (%)		Test Type △ Torvane △ ⊕ Pocket Pen. ⊕ ⊠ Qu ⊠ ○ Field Vane ○						
									0	20							
									PL	MC	LL	0	50	100	150	200	250
6.5				CLAY (TILL) - silty, sandy, trace gravel (<30 mm diam.) - grey - moist, hard - low plasticity	⊠	SS169	49	4.3									
7.0								3.6									
7.5								3									
8.0					⊠	SS170	41										
8.5																	
9.0																	
9.5					⊠	SS171	41	2.9									
10.0																	
10.5								2.8									
11.0					⊠	SS172	50 / 244mm										
11.5																	
12.0					▲	G173		2.8									
12.5				- trace cobbles (<100 mm diam.) below 12.2 m													
13.0								2.7									

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Elevation (m)	Depth (m)	Soil Symbol	TR-02	MATERIAL DESCRIPTION	Sample Type	Sample Number	SPT (N)	Temperature (°C)	Bulk Unit Wt (kN/m <sup>3</sup> )		Undrained Shear Strength (kPa)	
									16	17	18	19
780.6	13.5											
	14.0				X	SS174	52	2.6				
	14.5											
	15.0				X	SS175	50 / 149mm	2.5				

END OF TEST HOLE AT 15.4 m IN CLAY (TILL)

Notes:

1. No seepage observed.
2. Sloughing could not be observed due to drilling method.
3. 25 mm diameter PVC pipe (TR-02) installed to a depth of 15.4 m (at the bottom of test hole) to facilitate thermistor string.
4. Test hole backfilled with sand from the bottom of test hole to 0.9 m depth and bentonite chips from 0.9 m depth to surface.

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Logged By: \_\_\_\_\_ Reviewed By: \_\_\_\_\_ Project Engineer: \_\_\_\_\_