

CLIENT CITY OF WINNIPEG
PROJECT MONTCALM FORCE MAIN REPLACEMENT
SITE MONTCALM FORCE MAIN
LOCATION RUE ARCHIBALD
DRILLING METHOD 150 mm ø Solid Stem Auger, Nodwell and HQ Coring

JOB NO. 03-107-17
GROUND ELEV.
TOP OF PVC ELEV.
WATER ELEV.
DATE DRILLED 6-Jan-04 and 8-Jan-04

ELEVATION m (ft)	DEPTH (m) (ft)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	PIEZ. LOG	DEPTH (m)	SAMPLE TYPE NUMBER	RECOVERY %	SPT (N) blows/0.30 m▲ CONE blows/0.15 m△	Cu from Uncon. Comp. Test (kPa) ◇	
									PL	MC
			LIMESTONE - Crushed. FILL - Frozen.							
			CLAY FILL - Brown, moist, high plasticity, trace fine grained sand.							
			CLAY (NATIVE) - Brown, moist, soft to firm, silty.							
			- Silt layer from 3.35 to 3.66 m. - Increased silt content, trace 2-3 mm ø silt nodules, trace oxidation below 3.35 m.							
			- Increased moisture content, soft, high plasticity between 7.32 to 7.62 m.							
			- Increased moisture content, decreased silt nodules between 8.84 to 9.14 m.							
			SILTY CLAY - Grey, very moist, soft, intermediate to high plasticity, trace 2-3 mm ø silt nodules.							

SAMPLE TYPE  Auger Grab  Core Barrel

CONTRACTOR **Paddock Drilling Ltd.** INSPECTOR **J. CHING / G.E. HARRISON**

APPROVED _____ DATE 12/01/04

ELEVATION m (ft)	DEPTH (m) (ft)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	PIEZ. LOG	DEPTH (m)	SAMPLE TYPE NUMBER	RECOVERY %	SPT (N) blows/0.30 m▲ CONE blows/0.15 m△	Cu from Uncon. Comp. Test (kPa) ◇ Cu TORVANE (kPa) ◆			
									PL	MC	LL	
								20 40 60	20 40 60 80			
11	35				8							
12	40		- Increased moisture content, softer between 11.89 and 12.19 m.		9							
14	45				10							
15	50		- High plasticity, trace 1-2 mm ø silt nodules, trace fine grained angular gravel, between 14.94 and 15.24 m.		11							
17	55		SILT (TILL) - Brown, soft, low to intermediate plasticity, with fine to coarse grained angular gravel.		12							
18	60		- Begin HQ Coring from 18.35 m. - Limestone cobble at 18.35 m. - Tan, damp, very dense, low plasticity, numerous pebbles to 0.03 mm ø (10% granitic) at 18.48 m.		13							
20	65		- Limestone cobble at 19.51 m.		1							
21	70		- Granitic cobble at 20.57 m. - Limestone cobble at 20.65 m.		2							
			- Granitic cobble at 21.34 m. - Limestone cobble at 21.54 m.									

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								20 40 60	20 40 60	20 40 60 80	PL MC LL %
22			- Limestone boulder at 22.40 m.		22.0						
	75		- Coarse grained, numerous granitic (10%) and limestone pebbles to 0.08 mm ø, minimal recovery, fine grained sand recirculating at 22.71 m.		23.0	3					
					23.3						
24			- Loss of circulation.								
	80		LIMESTONE (BEDROCK) - Solid buff limestone core with machine break.			4					
25			- Distinct sedimentation planes with vug holes at 25.15 m.			5					
						6					
26	85										
27			- White, massive at 27.0 m.			7					
	90				27.6						
			END OF HOLE AT 27.56 m								
28			Notes: 1. Installed Casagrande standpipe at 23.32 m depth. Pipe consists of 25 mm diameter PVC with 0.3 m long screen zone. 2. Groundwater depth at 7.92 m below ground surface on January 9, 2004.								
	95										
29											
	100										
30											
	105										
31											
	110										

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