

CLIENT CITY OF WINNIPEG
PROJECT MONTCALM FORCE MAIN REPLACEMENT
SITE MONTCALM FORCE MAIN
LOCATION RUE ARCHIBALD, EAST BANK NEAR RIVER, 5529380.6 N 635873.1 E
DRILLING METHOD 150 mm ø Solid Stem Auger, Nodwell and HQ Coring

JOB NO. 03-107-17
GROUND ELEV. 226.40 m
WATER ELEV. 222.30 m (8-Jan-04)
DATE DRILLED 6-7-Jan-04

ELEVATION m (ft)	DEPTH		GRAPHICS	DESCRIPTION AND CLASSIFICATION	PIEZ. LOG	DEPTH (m)	SAMPLE TYPE NUMBER	RECOVERY %	SPT (N) blows/0.30 m ▲	Cu TORVANE (kPa) ◆				
	(m)	(ft)								20	40	60	80	PL
226.2				TOPSOIL - Organics, frozen to 0.3 m.										
226				CLAY (LACUSTRINE) (CH) Mottled grey-brown, moist, firm, high plasticity, silt striations, trace fine grained sand.										
225	1	5					1							
224	2			- With some fine grained sand at 2.13 m.										
223	3	10					2							
222	4													
221	5	15		- Sandy (fine grained) with trace free water at 4.88 m.			3							
220	6	20					4							
219	7			- Grey at 7.01 m.										
218	8	25					5							
217	9	30		- Light brown, 0.2 m silty lens with fine grained sand at 8.53 m.			6							
216	10			- Brown, till inclusions at 9.75 m.										
215	11	35					7							
214	12	40					8							
213	13			- Occasional pebble to 19 mm ø at 13.11 m.										
212.4	14	45		SILT (TILL) (ML) - Tan, damp, low plasticity, dense, trace gravel.			9							
212	15													
211	16	50		- End of solid stem auger at 15.24 m. - Set casing to 15.2 m. - Begin HQ coring at 15.7 m.		15.8	10							
210				- Cobbly, bouldery, very dense at 16.5 m.			11							

SAMPLE TYPE  Auger Grab  Split Spoon  Select Core Barrel

CONTRACTOR Paddock Drilling Ltd. **INSPECTOR** G.E. HARRISON

APPROVED _____ **DATE** 19/01/04

ELEVATION m (ft)	DEPTH (m) (ft)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	PIEZ. LOG	DEPTH (m)	SAMPLE TYPE NUMBER	RECOVERY %	SPT (N) blows/0.30 m ▲	Cu TORVANE (kPa) ◆			
									PL	MC	LL	
								20 40 60	20 40 60 80			
209	17		- 360 mm ø boulder at 16.8 m, begin HQ Coring at 17.1 m. - Poor recovery, good circulation.		17.5							
208	18		- Recovered very dense granite cobble (150 mm ø), numerous granitic and limestone gravel sizes (<75 mm ø) at 17.98 m. Fines may have been washed out during coring. Sand visible in return cuttings.		17.8							
207	19					12						
206.4	20		LIMESTONE (BEDROCK) - Core (0.13 m length) of buff limestone, very vuggy, very strong. - Buff to white, massive at 20.12 m.									
206	21					13						
205	22					14						
204	23		- 0.31 m of insitu vertical fracture planes at 22.56 m.									
203.2	23		END OF HOLE AT 23.16 m		23.2	15						
203	24		Notes: 1. Installed Casagrande standpipe at 17.83 m depth. Pipe consists of 25 mm diameter PVC with response zone from 15.85 to 23.16 m depth. 2. Lockable protective steel casing installed at ground surface. 3. Groundwater depth at 4.1 m below ground surface on January 8, 2004.									
202	25											
201	26											
200	27											
199	28											
198	29											
197	30											
196	31											
195	32											
194	33											
193	34											
192	35											
191	36											
190	120											

SPT & TORVANE P:\PROJECTS\2003\03-0107-17\GEOLOGS\03-107-17.GPJ

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