

## **Appendix A – Test Hole Logs**

**CLIENT** CITY OF WINNIPEG - WATER AND WASTE DEPARTMENT  
**PROJECT** 2016 OUTFALL RENEWAL  
**SITE** PRITCHARD POINT PARK OUTFALL  
**LOCATION** EAST EDGE OF PATH IN WWD ROW  
**DRILLING METHOD** 125 mm ø Hollow Stem Auger, ACKER

**JOB NO.** 16-0107-021  
**GROUND ELEV.**  
**TOP OF CASING ELEV.**  
**WATER ELEV.**  
**DATE DRILLED** 10/13/2016  
**UTM (m)** N 5,530,615  
 E 634,392

ELEVATION (m)	DEPTH		GRAPHICS	DESCRIPTION AND CLASSIFICATION	SAMPLE TYPE NUMBER	RECOVERY %	SPT (N) blows/0.15 m ▲ DYNAMIC CONE (N) blows/ft △	Cu POCKET PEN (kPa) ★ Cu TORVANE (kPa) ◆		
	(m)	(ft)						PL	MC	LL
				<b>TOPSOIL</b> - Black, damp, some coarse grained gravel, trace organics.						
				<b>CLAY</b> - Mottled brown and light brown, damp, firm, high plasticity, trace fine to coarse grained sand, trace fine to coarse grained gravel.						
1					S1					
5				<b>SANDY CLAY</b> - Brown, moist, soft, high plasticity, trace fine grained gravel.						
2					S2					
				<b>ORGANICS</b> - Black, moist, soft, high plasticity, some fine grained sand, some clay.						
				<b>SILTY CLAY</b> - Light grey, moist, very soft, high plasticity, some fine grained sand.						
3					S3					
					S4					
				- Trace fine grained sand below 3.66 m.						
4										
				<b>CLAY</b> - Black, moist, soft, high plasticity, trace fine to coarse grained sand, trace fine grained gravel, some organics.						
5					S5					
				<b>CLAY</b> - Light brown, moist, firm, high plasticity, trace silt pockets.						
6					S6					
				- Grey and soft below 15.33 m.						
					S7					
					S8					
					S9					
				- Trace fine grained gravel below 7.62 m.						
					S10					

SAMPLE TYPE  Auger Grab

CONTRACTOR **Paddock Drilling Ltd.**

INSPECTOR **L. CHALMERS**

APPROVED **DRAFT**

DATE **10/24/16**

ELEVATION (m)	DEPTH (m) (ft)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	SAMPLE TYPE NUMBER	RECOVERY %	SPT (N) blows/0.15 m ▲	Cu POCKET PEN (kPa) ★		
						DYNAMIC CONE (N) blows/ft △	PL	MC	LL
						20 40 60	20 40 60 80		
11	35		- Silty, very soft at 11.28m, some silt pockets, some fine to coarse gravel.	S11					
12	40		- Soft below 12.50 m.	S12					
13	45		<b>SILT TILL</b> - Light brown, moist, compact to dense, some medium to coarse grained sand, trace fine to coarse grained gravel.	S13					
14	45			S14					
15	50		<b>AUGER REFUSAL at 14.63 m</b>						
16	55		Notes: 1. Hole open to 13.72 m after drilling. 2. Hole backfilled with cuttings to grade.						
17	60								
18	65								
19	70								

SAMPLE TYPE Auger Grab

CONTRACTOR **Paddock Drilling Ltd.**

INSPECTOR **L. CHALMERS**

APPROVED **DRAFT**

DATE **10/24/16**

**CLIENT** CITY OF WINNIPEG  
**PROJECT** FLOOD PUMPING STATIONS - CONDITION ASSESSMENT STUDY  
**SITE** Marion Flood Pumping Station  
**LOCATION** Upper Bank, 4 m from Crest at Slope, 12 m West of Pumphouse  
**DRILLING METHOD** 200 mm  $\varnothing$  Hollow Stem Auger, ACKER SS Drill Rig

**JOB NO.** 04-107-12.400  
**GROUND ELEV.** 230.20 m  
**TOP OF PVC ELEV.**  
**WATER ELEV.**  
**DATE DRILLED** 15-Oct-04

ELEVATION (m)	DEPTH		GRAPHICS	DESCRIPTION AND CLASSIFICATION	INSTALLATION LOG	DEPTH (m)	SAMPLE NUMBER	RECOVERY %	SPT blows/0.15 m $\Delta$	CONE blows/0.15 m $\Delta$	Cu from Uncon. Comp. Test (kPa)			
	(m)	(ft)									20	40	60	80
230.1				<b>TOPSOIL</b>										
230				<b>CLAY FILL</b> - Brown, mottled black-brown, moist, very stiff, intermediate plasticity, crumbly, trace gravel, sand, brick, and silt, trace organics and rootlets, trace oxidation. - Near plastic limit, trace wood below 0.51 m.										
229	1			- Mottled brown-light brown below 1.02 m.										
228	2			- Gravel, wood and oxidation decrease below 2.03 m.										
227.7	3			<b>SILTY CLAY (CI)</b> - Brown, mottled grey-brown, moist, very stiff, intermediate plasticity, trace silt, trace organics, trace oxidation. - Trace clam shells from 2.54 to 3.05 m.										
227	4													
228	5			- Trace organics, trace oxidation below 4.57 m.										
225	6													
224	7			- Stiff below 6.60 m. Grain Size Distribution: Gravel (0.0%), Sand (0.0%), Silt (50.6%) and Clay (49.4%) at 6.60 m.										
223	8			- Alluvial below 8.13 m. - Fine grained sand layer from 8.46 to 8.51 m. - Trace fine grained sand below 8.64 m.										
222	9			- Organic odour below 9.14 m.										
221				- Grey, mottled black-grey, firm below 9.65 m										

SPT\_FT\_M\_CALC.P:PROJ 200404-01:07-12:GEOILOGS\04-107-12.400 LOGS.GPJ

**SAMPLE TYPE** Split Barrel  
**CONTRACTOR** Paddock Drilling Ltd.

**INSPECTOR** D. ANDERSON

**APPROVED** **DATE** 20-09-05

ELEVATION (m)	DEPTH		GRAPHICS	DESCRIPTION AND CLASSIFICATION	INSTALLATION LOG	DEPTH (m)	SAMPLE NUMBER	RECOVERY %	SPT blows/0.15 m ▲	Cu from Uncon. Comp. Test (kPa) ◇			
	(m)	(ft)							CONE blows/0.15 m ▲	PL	MC	LL	
220		35											
219.2	11			<b>SAND</b> - Black, wet, loose, poorly graded, coarse grained, trace cobbles, trace silt, trace clay, trace clam shells. - Black, coarse grained below 11.18 m. - Light brown, fine grained, decreased cobbles below 11.25 m.  <b>CLAY TILL</b> - Light grey to pink, moist, soft, trace gravel, sand and silt.									
218.4													
218.0	12	40											
217.8				<b>AUGER REFUSAL AT 12.19 m</b>		12.2							
				Notes: 1. Slope Inclinerometer SI-07 grouted to ground level and installed with an above ground casing.									
217	13												
		45											
216	14												
		50											
215	15												
		55											
214	16												
		60											
213	17												
		65											
212	18												
		70											
211	19												
210	20												
209	21												

J200404-0107-12GEOLOGS04-107-12.400 LOGS GPJ

SPT FT. M. CALC P-PRC

SAMPLE TYPE Split Barrel

CONTRACTOR **Paddock Drilling Ltd.**

INSPECTOR **D. ANDERSON**

APPROVED

DATE **20-09-05**

**CLIENT** CITY OF WINNIPEG  
**PROJECT** FLOOD PUMPING STATIONS - CONDITION ASSESSMENT STUDY  
**SITE** Marion Flood Pumping Station  
**LOCATION** Lower Bank, 3 m West of Path  
**DRILLING METHOD** 125 mm ø Solid Stem Auger, ACKER SS Drill Rig

**JOB NO.** 04-107-12.400  
**GROUND ELEV.** 226.20 m  
**TOP OF PVC ELEV.**  
**WATER ELEV.**  
**DATE DRILLED** 14-Oct-04

ELEVATION (m)	DEPTH (m) (ft)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	INSTALLATION LOG	DEPTH (m)	SAMPLE TYPE NUMBER	RECOVERY %	SPT blows/0.15 m Δ	CONE blows/0.15 m Δ	Cu from Uncon. Comp. Test (kPa) ◇		
										PL	MC	LL
225.5			<b>SILTY CLAY</b> - Dark brown, moist, soft, intermediate plasticity, alluvial.									
	1		<b>RIPRAP</b>									
224.7	5		<b>ALLUVIAL SILTY CLAY (CI)</b> - Dark brown, moist, firm, intermediate plasticity, lean clay, alluvial, trace oxidation, trace wood and organics.									
224	2		- Water infiltration at 2.44 m.									
223	3		Grain Size Distribution: Gravel (0.0%), Sand (9.3%), Silt (46.5%) and Clay (44.2%) at 2.74 m.									
222	4		- Mottled grey-brown, clay content increasing at 3.66 m.									
221	5		- Grey, mottled black-grey at 4.88 m.									
220	6		Grain Size Distribution: Gravel (0.0%), Sand (0.8%), Silt (45.1%) and Clay (54.1%) at 5.79 m.									
219.8			<b>SILT TILL</b> - Light grey to pink, moist, stiff, dense, trace gravel, coarse grained sand and clay.									
219	7											
218	8											
217.7			<b>AUGER REFUSAL AT 8.53 m</b>		8.5							
217	9		Notes: 1. Slope Inclinometer SI-08 grouted to ground level and installed with an above ground casing. 2. Water infiltration at 2.44 m.									

SPT FT. M. CALC P. IPROJECTS\2004\04-0107-12\GEOLOGS\04-107-12.400 LOGS.GPJ

SAMPLE TYPE Auger Grab

CONTRACTOR **Paddock Drilling Ltd.**

INSPECTOR **D. ANDERSON**

APPROVED DATE **20-09-05**