


**APPENDIX A**  
**TEST HOLE LOGS**

**CLIENT** CITY OF WINNIPEG - WATER AND WASTE DEPARTMENT  
**PROJECT** City of Winnipeg 2010 Outfall Gate Chamber Upgrades  
**SITE** Salme Drive  
**LOCATION** Northeast Corner of intersection - just beyond road near curb  
**DRILLING METHOD** 125 mm ø Solid Stem Auger, Acker MP8-T

**JOB NO.** 10-107-17  
**GROUND ELEV.**  
**TOP OF PVC ELEV.**  
**WATER ELEV.**  
**DATE DRILLED** 11/29/2010  
**UTM (m)** N 5,522,507  
 E 634,362

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
				<p><b>TOPSOIL</b> - Dark brown to black, firm, with tan silt, some clay, trace rootlets, soil was frozen.</p> <p><b>SILTY CLAY (CI-CH)</b> - Brown, damp, stiff, intermediate to high plasticity, trace sand.</p>	S1					
1				- Moist below 1.52 m.	S2					
2				- Intermediate plasticity, increased silt content from 2.74 m to 4.57 m.	S3					
3				- Soft below 3.05 m.	S4					
4				- High plasticity below 4.57 m.	S5					
5				- Grey below 5.79 m.	S6					
6				- Water came up with the augers upon pulling up from 6.10 m.	S7					
7										
8										
9										

SAMPLE TYPE  Auger Grab

CONTRACTOR **Paddock Drilling Ltd.**

INSPECTOR **R. DOBSON**

APPROVED

DATE 1/24/11

ELEVATION (m)	DEPTH		GRAPHICS	DESCRIPTION AND CLASSIFICATION	SAMPLE TYPE NUMBER	RECOVERY %	SPT (N) blows/0.15 m ▲	Cu POCKET PEN (kPa) ★		
	(m)	(ft)					DYNAMIC CONE (N) blows/ft △	20	40	60
11	35				S8					
12	40				S9					
13				<b>SILT TILL (ML)</b> - beige, moist, low plasticity, some sand, some gravel, trace clay.	S10					
14	45									
15	50				S11					
16										
17	55			<b>AUGER REFUSAL AT 16.76 m.</b>						
18	60			Notes: 1. Cassagrande standpipe installed to a depth of 13.22 m below grade followed by 2 bags of silica sand and one bag of bentonite and then cuttings to grade. Flush mount cover installed. 3. Water table was measured on Dec. 15th, 2010 and water table was 3.18 m below grade.						
19										
20	65									
21	70									

SAMPLE TYPE Auger Grab

CONTRACTOR  
**Paddock Drilling Ltd.**

INSPECTOR  
**R. DOBSON**


APPROVED

DATE  
1/24/11

**CLIENT** CITY OF WINNIPEG - WATER AND WASTE DEPARTMENT  
**PROJECT** City of Winnipeg 2010 Outfall Gate Chamber Upgrades  
**SITE** Avenue De L'Eglise  
**LOCATION** Northeast of bridge near light pole  
**DRILLING METHOD** 125 mm ø Solid Stem Auger, Acker MP8-T

**JOB NO.** 10-107-17  
**GROUND ELEV.**  
**TOP OF PVC ELEV.**  
**WATER ELEV.**  
**DATE DRILLED** 11/29/2010  
**UTM (m)** N  
 E

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
				<b>TOPSOIL</b> - Dark brown to black, trace rootlets, soil was frozen.					
				<b>SILTY CLAY FILL (CH)</b> - Brown, moist, stiff, high plasticity, trace to some sand, trace to some gravel.					
1				- Dark brown, intermediate to low plasticity from 1.37 to 3.96 m,	S1				
5									
2									
3					S2				
10									
4				- High plasticity below 3.96 m.	S3				
15									
5				<b>SILTY CLAY (CH)</b> - Native clay soil, brown, damp to moist, stiff, high plasticity, trace sand.	S4				
6									
20									
7					S5				
25				- Firm, no sand and silt inclusions present below 7.32 m.					
8									
9				- Softer with depth. - Grey below 9.14 m.	S6				
30									

SAMPLE TYPE  Auger Grab

CONTRACTOR **Paddock Drilling Ltd.**

INSPECTOR **R. DOBSON**

APPROVED

DATE 1/24/11

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			S7						
12	40			S8						
13				S9						
14	45			S10						
15	50		<b>SILT TILL (ML)</b> - beige, moist, low plasticity, some sand, some gravel, trace clay.	S11						
16			<b>AUGER REFUSAL AT 16.46 m.</b>							
17	55		Notes: 1. Cassagrande standpipe installed to a depth of 16.24 m below grade followed by 2 bags of silica sand and one bag of bentonite and then cuttings to grade. Flush mount cover installed. 2. Water table was measured on Dec. 15th, 2010 at 6.06m below grade.							
18	60									
19										
20	65									
21	70									

SAMPLE TYPE Auger Grab

CONTRACTOR  
**Paddock Drilling Ltd.**

INSPECTOR  
**R. DOBSON**

APPROVED


DATE  
1/24/11

**CLIENT** CITY OF WINNIPEG - WATER AND WASTE DEPARTMENT  
**PROJECT** City of Winnipeg 2010 Outfall Gate Chamber Upgrades  
**SITE** Douglas Park Road  
**LOCATION** Northeast edge of island at the roundabout  
**DRILLING METHOD** 125 mm ø Solid Stem Auger, Acker MP8-T

**JOB NO.** 10-107-17  
**GROUND ELEV.**  
**TOP OF PVC ELEV.**  
**WATER ELEV.**  
**DATE DRILLED** 11/30/2010  
**UTM (m)** N 5,526,220  
 E 627,629

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)							20	40	60	80
				<b>ASPHALT</b>								
				<b>GRAVEL FILL</b> - Clean limestone gravel.								
				<b>SILTY CLAY (CL-CI)</b> - Brown, damp, stiff, low to intermediate plasticity, trace sand, trace organics.								
				- Intermediate to high plasticity below 1.35 m.								
				- Becoming softer with depth.								
				- Grey below 4.88 m.								
				<b>SANDY CLAY</b> - Grey, moist, soft, low plasticity, approximately 25-35% sand, mostly fine grained sand.								
				<b>SAND (SP)</b> Grey, wet, poorly graded, mostly fine grained sand.								
				<b>SILT TILL (ML)</b> - beige, moist, low plasticity, some sand, some gravel, trace clay.								

GEO-TECHNICAL-SOIL LOG P:\PROJECTS\2010\10-01-07-17\DESIGN\GEO\LOGS\CITY OF WINNIPEG.GPJ

SAMPLE TYPE  Auger Grab

CONTRACTOR **Paddock Drilling Ltd.**

INSPECTOR **R. DOBSON**

APPROVED

DATE **1/24/11**

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		AUGER REFUSAL AT 11.28 m.	S8					
12	40		Notes: 1. Cassagrande standpipe installed to a depth of 10.75 m below grade followed by 2 bags of silica sand and one bag of bentonite and then cuttings to grade. Flush mount cover installed. 2. Water table was measured on Dec. 15th, 2010 at 3.69 m below grade.						
13									
14	45								
15	50								
16									
17	55								
18	60								
19									
20	65								
21	70								

SAMPLE TYPE  Auger Grab

CONTRACTOR  
**Paddock Drilling Ltd.**

INSPECTOR  
**R. DOBSON**


APPROVED

DATE  
1/24/11

**CLIENT** CITY OF WINNIPEG - WATER AND WASTE DEPARTMENT  
**PROJECT** City of Winnipeg 2010 Outfall Gate Chamber Upgrades  
**SITE** Deer Lodge Place  
**LOCATION** See Drawing  
**DRILLING METHOD** 125 mm ø Solid Stem Auger, Acker MP8-T

**JOB NO.** 10-107-17  
**GROUND ELEV.**  
**TOP OF PVC ELEV.**  
**WATER ELEV.**  
**DATE DRILLED** 11/30/2010  
**UTM (m)** N 5,526,322  
 E 627,356

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> - Dark brown to black, firm, with tan silt, some clay, trace rootlets, soil was frozen.						
				<b>GRAVELLY CLAY FILL (CL)</b> - Brown, damp, low plasticity, trace to some sand, approximately 25% sand.						
1					S1					
5				<b>SILTY CLAY (CH)</b> - Brown, damp to moist, stiff, high plasticity, trace to some sand.						
2										
3				- Becoming softer with depth.						
10					S2					
4										
15					S3					
5										
20					S4					
6										
7				- Grey below 7.01 m.						
25				<b>SILT TILL (ML)</b> - Beige, wet, low plasticity, some sand, some gravel, trace clay.						
8					S5					
9										
30					S6					

SAMPLE TYPE  Auger Grab

CONTRACTOR **Paddock Drilling Ltd.**

INSPECTOR **R. DOBSON**

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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 △	20	40	60	80
	35			S7						
	40		<b>AUGER REFUSAL AT 12.19 m.</b>	S8						
	45		<p>Notes:</p> <p>1. Cassagrande standpipe installed to a depth of 12.03 m below grade followed by 2 bags of silica sand and one bag of bentonite and then cuttings to grade. Flush mount cover installed.</p> <p>2. Water table was measured on Dec. 15th, 2010 at 5.53 m below grade.</p>							
	50									
	55									
	60									
	65									
	70									

SAMPLE TYPE  Auger Grab

CONTRACTOR  
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