APPENDIX B

Borehole Logs

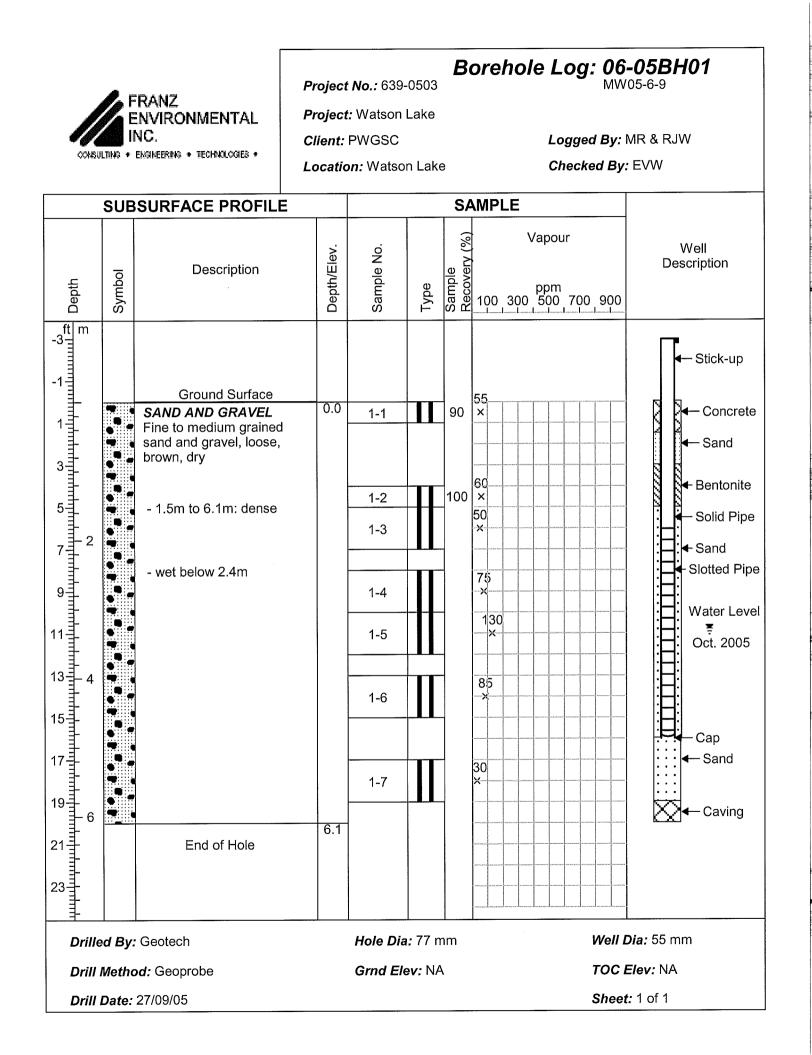
FRANZ ENVIRONMENTAL INC. • CONSULTING • ENGINEERING • TECHNOLOGIES •	LOG Borehole No: <u>BH01-6-1</u> Page <u>1</u> of <u>1</u> Reference Level :											
	Site Plan											
Project: <u>Watson Lake – Phase III Site Assessment</u>												
Location: <u>Watson Lake</u> Project No.: <u>639</u>												
	Drilling Date: <u>Sept. 12, 2001</u> Depth of Borehole: <u>5.18 m</u> Diameter: <u>25 cm</u> <i>refer to APEC</i> Surface Elevation: <u>684.90 masl TOC: <u>684.76 masl</u> Water Level: <u>681.34 masl</u> <u>#6 figure</u></u>											
Surface Elevation: 684.90 masl TOC: 684.76 masl Water Level: 681.34 masl #6 figure Screen Diameter: 5 cm Length: 2.74 m Slot size: #10 slot												
Screen Diameter: <u>5 cm</u> Length: <u>2.74 m</u> Slot size: <u># 10 slot</u> Riser Diameter: <u>5 cm</u> Length: <u>0.5 m</u> Type: <u>Sch 40 PVC</u>												
Drilling Company: <u>Geotech Drilling Services</u> Drilling Meth												
Logged by: <u>Clayton Truax</u>	Notes * Indicates sample sent to lab.											
SOIL SOIL CLASSIFICATION (colour, texture, structure)	Sample No. No. No. No. N" N" N" N" N" N" N" N" N" Sample Type Sample Type Sample Type Sample											
ooo.oo ⊨ 0 – Issuesanavaa	flushmount protective casing											
	concrete											
brown coarse to fine sand with cobbles, moist, no odour												
or staining.	1 SS – – 50 ppm											
cobble	2 SS 45.8% 10,12,26,25 -											
brown coarse to fine sand with cobbles, dry, no odour	3 SS 41.7% 6,8,5,9 55 ppm											
3 0 0 or staining, large cobbles at 3.35 m and wet.												
	4 SS 50% 11,42,15,12 -											
	5 SS 50% 3.4.5.3 50 ppm											
wet sand (10%) and gravel (90%)—coarse, no odour or staining.												
5-	6 SS – 2,3,5,7 50 ppm											
	end of hole											
6												
8-												
- 9-												
-10-												
Note: This borehole log was prepared for hydrogeological and/or environmental assessment purposes and does not necessarily contain information suitable for a geotechnical assessment of subsurface conditions. Borehole data require interpretation by Franz Environmental Inc. personnel before use by others.	Franz Environmental Inc. 39 Robertson Rd. Suite 220 Nepean, ON. K2H 8R2 Ph: (613) 721 0555 Fax: (613) 721 0029											

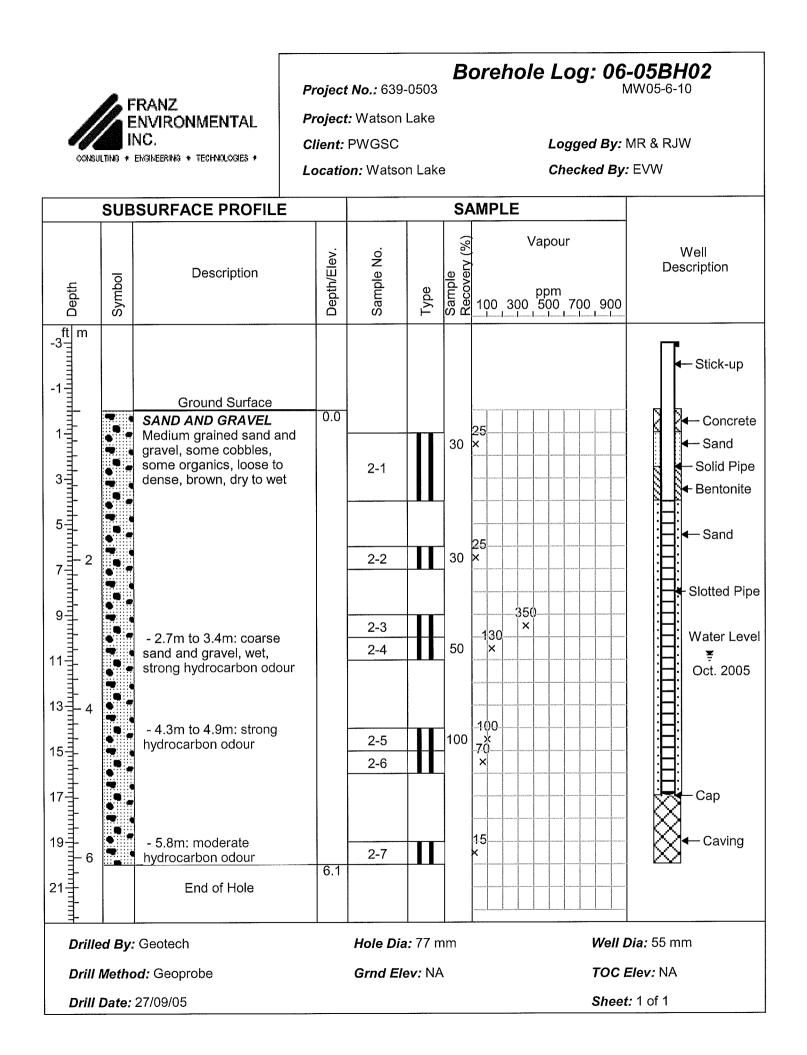
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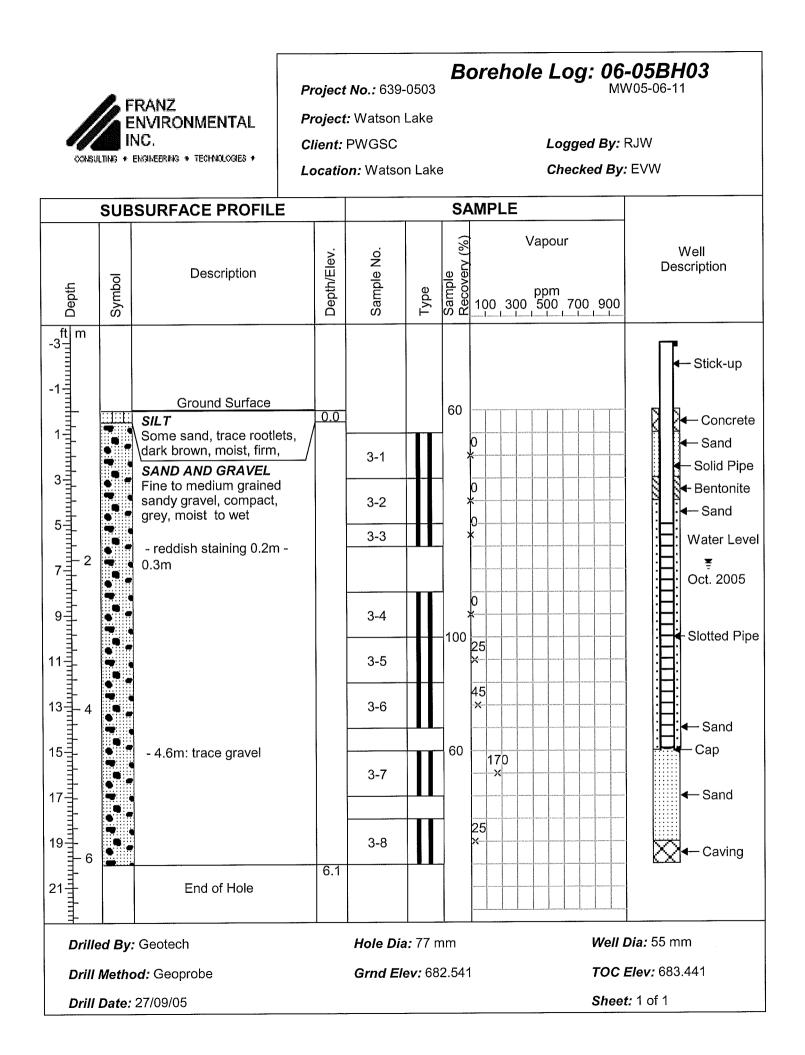
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FRANZ ENVIRONMENTAL INC. • CONSULTING • ENGINEERING • TECHNOLOGIES •	LOG	ì			nce L		<u>1-6-2</u> Page <u>1</u> of <u>1</u>
Project: Watson Lake Project No.: _639-0 Location: Watson Lake Project No.: _639-0 Drilling Date: Sept. 12, 2001 Depth of Borehole: _4.59 m Surface Elevation: 685.05 masl TOC: _684.91 masl W Screen Diameter: 5 cm Length: _2.74 m Elevation: _0.5 m	0101 Dia aterL Sla	evel: _ ot size	r: <u>25</u> 681.6 e: <u>#</u> 1	<u>; cm</u> 52 mc 0 slo	 		" er to APEC 6 figure
Drilling Company: <u>Geotech Drilling Services Ltd.</u> Drilling Me Logged by: <u>Clayton Truax</u>		Hollow				<i>lotes</i> * Indico	ates sample sent to la b
Elevation (mass)) Depth (m) (m) (m) (m) (m) (m) (m) (m) (m) (m)	Sample No.	ample Type (split spoon)	Recovery (%)	"N"	V.O.C. (110 ppm)	Well Data	REMARKS
mm 0 ∕asphalt							
medium coarse sand with cobbles, no odour or staining							no well installed
	1	ss	-	-	65 ppm		
wet coarse rounded gravel with trace coarse sand, wet, no odour or staining.	2	SS	-	-	65 ppm		
	3	SS	-	-	65 ppm		
8							
- 9- - 9- - 10-							
Note: This borehole log was prepared for hydrogeological and/or environmental assessment purposes and does not necessarily contain information suitable for a geotechnical assessment of subsurface conditions. Borehole data require interpretation by Franz Environmental Inc. personnel before use by others.							Franz Environmental Inc. 39 Robertson Rd. Suite 220 Nepean, ON. K2H 8R2 Ph: (613) 721 0555 Fox: (613) 721 0029

FRANZ ENVIRONMENTAL INC.	BOREHOLE LC	DG					<u>-6-3</u> Page <u>1</u> of <u>1</u>				
Project: <u>Watson Lake — Phase III Site As</u>	ssessment (Client:	PWGSC		_ 51	te Plan	n				
Location: <u>Watson Lake</u>					_						
Drilling Date: Sept. 12, 2001 Depth of Borehole: 5.18 m Diameter: 10" $refer$ te											
Surface Elevation: NA TOC: NA Water Level: NA Screen Diameter: 2" Length: 7' Slot size: #10 slot #6 figure											
Screen Diameter: <u>2</u> Length: Riser Diameter: <u>NA</u> Length:											
Drilling Company: Geotech Drilling Service					r l						
Logged by: <u>Clayton Truax</u>					— <i>I</i> V	'otes * Indico	ates sample sent to la b.				
Elevation (mass)) (mass) (mass)) (mass) (mass)) (mass)) (mass)) (TION Estructure)	Sample Type	s (split spoon) Recovery (%)	"N"	V.O.C. (110 ppm)	Well Data	REMARKS				
000.00 F 0 -∃I							-flushmount protective casing				
brown medium coarse sand and staining, moist, cohesive.	d cobbles, no odour or	1	- -	-	60 ppm		concrete				
		2		_			silica sand				
	_	-			70 ppm		bentonite				
		3 5	SS 21%	6,6,4,3	-						
		4 5	SS 21%	3,4,3,5	-						
	=										
		5 5	SS 33%	5,7,8,8	70 ppm						
4 - coarse sand and rounded grave weathered petroleum.	el, wet, staining, slightly	6 5	SS 42%	5,9,8,4	-		silica sand				
coarse sand and rounded grave	el, no odour, spotty sheen	7 9	SS 25%	6,6,5,9	70 ppm						
						··	end of hole				
-10-											
L E ∃ Note: This borehole log was prepared for hydrogeological and/or							Franz Environmental Inc.				
environmental assessment purposes and does not necessarily contain information suitable for a geotechnical assessment of subsurface conditions. Borehole data require interpretation by Franz Environmental Inc. personnel before use by others.							39 Robertson Rd. Suite 220 Nepean, ON. K2H 8R2 Ph: (613) 721 0555 Fax: (613) 721 0029				







Project No: 639-0904

Client: PWGSC/TC

Location: Watson Lake, Yukon

Borehole Log: BH09-6-12

Project: Watson Lake Supplemental Drilling

Site ID: AEC 6 Logged By: Ivy Liu Checked By: Ivy Liu Date: Aug. 17, 2009

S	SUB	SURFACE PROFILE		SA	MPL	.E				
Depth (m)	Symbol	Description	Elev.	Number	Type	Recovery	Organic Vapour Rdg. PPM 0 200 400 600 8001000	Well Completion Details		
ft m		Ground Surface	0.0							
ft m 0 1 1 1 2 1 3 1 4 1 5 1 6 7 11 1 6 1 7 1 10 1 12 1 13 1 14 1 15 1 16 1 17 1 16 1 17 1 18 1 19 1 20 1	S	Ground Surface Sand medium, trace silt, some gravel, brown, loose, moist, no odour Sand medium, trace silt, some gravel, compact, brown, moist, no odour Silty Sand medium, some gravel, reddish brown, moist, slighht odour Sand coarse, some gravel, brown, loose, some odour *13ft greying Sand coarse, trace gravel, grey/brown, loose, moist, no odour End of Borehole		 <i>Z</i> 12-1 12-2 12-3 12-4 12-5 12-5 12-6 12-7 12-8 			0 200 400 500 500 1000 0 1 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 15 1 1 1 15 1 1 1 15 1 1 1 130 1 1 1 130 1 1 1			
21 22 23 23 24 24 25 26 26		End of Borehole								
Drill M	Drilled By: GeoTech Drilling Services Drill Method: Direct Push Hole Diameter: 4.5"									

Well Diameter:

Project No: 639-0904

Borehole Log: BH09-6-13

Project: Watson Lake Supplemental Drilling

Site ID: AEC 6 Logged By: Anna Raynham Checked By: Ivy Liu Date: Aug. 17, 2009

Client: PWGSC/TC Location: Watson Lake, Yukon

SUBSURFACE PROFILE SAMPLE Well Completion Depth (m) Recovery Number Symbol Organic Vapour Rdg. Details Description PPM Type Ele∕. 0 200 400 600 8001000 ft m 0 **Ground Surface** 0.0 0 1 1 2 Silt fine, some sand, light 25 G 13-1 brown, loose, moist ٠ -0.9 3 -10 1 Sand G 13-2 4 medium, some gravel, trace silt, brown, loose, no 5 odour -1.8 6 5 Sand G 2 13-3 7 coarse, some gravel, -2.4 brown, loose, moist, no 8 odour 70 G 13-4 • 9 Sand -3.1 medium, trace silt, trace 3 10 55 gravel, brown, wet G 13-5 -٠ 11 Sand medium to coarse, trace 12 gravel, dark brown, wet, no 13 - 4 odour 14 15 -4.9 16-17-55 - 5 Sand G 13-6 • 17 medium, trace gravel, Ξ brownish grey, wet, no 18 odour 19 -6.1 6 20 End of Borehole 21 22 23 - 7 24 = 25 26 -Drilled By: GeoTech Drilling Services Comments: sample analysis BTEX/VPH, EPH, and PAHs. Drill Method: Direct Push Hole Diameter: 4.5" Sheet: 1 of 1 Well Diameter:

Project No: 639-0904

Location: Watson Lake, Yukon

Borehole Log: MW/BH09-6-14

Project: Watson Lake Supplemental Drilling

Client: PWGSC/TC

Site ID: AEC 6 Logged By: Ivy Liu Checked By: Ivy Liu Date: Aug. 17, 2009

	SUB	SURFACE PROFILE		SA	MPL	<u>.E</u>	
Depth (m)	Symbol	Description	Elev.	Number	Type	Recovery	Organic Vapour Rdg. PPM 0 200 400 600 8001000
$\begin{array}{c c} ft m \\ 0 \frac{1}{2} 0 \end{array}$		Ground Surface	0.0				Stick Up
		<i>Silty Sand</i> medium, trace gravel, brown, loose, moist, no odour		14-1	G		0 Bentonite +
4			-1.5	14-2	G		
1 1 1 2 3 1 1 1 2 3 1 1 1 1 1 1 1 1 1 1		Sand coarse, trace gravel, trace silt, brown, moist to wet, no odour Sand coarse to medium, trace gravel, trace silt, brown, wet, no odour Sand fine to medium, trace gravel, dark brown, loose, wet, no odour End of Borehole	-1.5 -3.1 -3.7 -4.6	14-3 14-4 14-5 14-6			Screen
Drille	ed By:	GeoTech Drilling Services			Cor	nmei	nts: Sample analysis BTEX/VPH, EPH, PAHs.
		d: Direct Push			-		
		eter: 4.5"					Sheet: 1 of 1
Well	Diam	eter: 2"					Sheet. 1 01 1

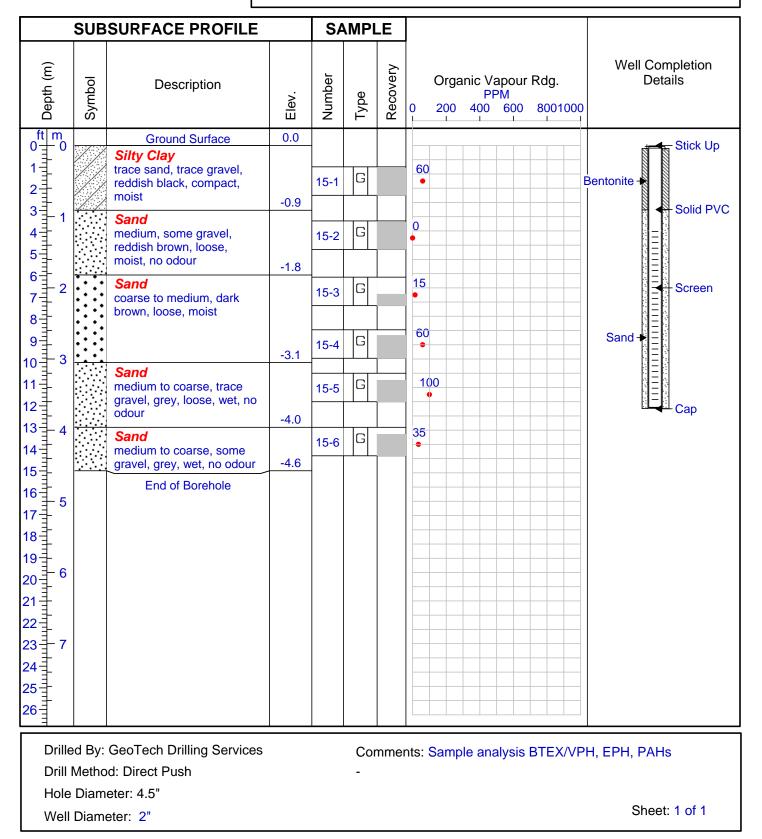
Project No: 639-0904

Borehole Log: MW/BH09-6-15

Project: Watson Lake Supplemental Drilling

Site ID: AEC 6 Logged By: Anna Raynham Checked By: Ivy Liu Date: Aug. 17, 2009

Client: PWGSC/TC



Project No: 639-0904

Location: Watson Lake, Yukon

Borehole Log: MW/BH09-6-16

Project: Watson Lake Supplemental Drilling

Client: PWGSC/TC

Site ID: AEC 6 Logged By: Ivy Liu Checked By: Ivy Liu Date: Aug. 18, 2009

SUBSURFACE PROFILE SAMPLE Well Completion Depth (m) Recovery Symbol Number Organic Vapour Rdg. Details Description PPM Type Elev. 0 200 400 600 8001000 ft m **Ground Surface** 0.0 0 Stick Up ٠ ٠ Sand coarse to medium, some Bentonite gravel, trace silt, brown, 2 loose, moist, no odour 70 G 16-1 3 • **PVC Pipe** 1 4 5 80 G • 16-2 6 2 Screen 7 -2.4 8 -Sand ÷ 40 Sand and Gravel G Ð, 16-3 ß coarse, greyish brown, 9 ġ, ୍ର نجو -3.1 loose, wet, no odour 3 • 13 10 o c 10 Sand and Gravel G 16-4 11 5 trace silt, brown, loose, ъ **О** نجى νß wet, no odour 12 Cap 3 -4.0 13 14 15 4 30 7 Sand G 16-5 ٠ medium to coarse, trace -4.6 gravel, loose, wet, no odour End of Borehole 16 17 - 5 18 19 6 20 21 22 23 - 7 24 25 26 -Drilled By: GeoTech Drilling Services Comments: Sample analysis BTEX/VPH, EPH, PAHs Drill Method: Direct Push Hole Diameter: 4.5" Sheet: 1 of 1 Well Diameter: 2"

Project No: 639-0904

Client: PWGSC/TC

Location: Watson Lake, Yukon

Borehole Log: MW/BH09-6-17

Project: Watson Lake Supplemental Drilling

Site ID: AEC 6 Logged By: Anna Raynham Checked By: Ivy Liu Date: Aug. 18, 2009

SUBSURFACE PROFILE SAMPLE Well Completion Depth (m) Recovery Symbol Number Organic Vapour Rdg. Details Description PPM Type Ele∕. 0 200 400 600 8001000 ft m **Ground Surface** 0.0 Stick Up 0 Sand medium, some gravel, 95 G 17-1 trace silt, dark brown, **Bentonite** ÷Ŕ 2 loose, moist, no odour 3 25 H Solid PVC 1 G 17-2 • 4 5 -1.8 25 6 Sand and Gravel G 2 Ö. 17-3 Screen ß 7 3 brown, loose, moist 50 i 🚓 -2.4 8 110 Sand G 17-4 9 coarse, some gravel, trace -3.1 silt, brown, loose, moist, Sand 3 10 slight odour 160 G 17-5 . 11 Sand medium, trace gravel, grey, 12 Cap loose, moist -4.0 13 = 4 60 Sand G 14 15 17-6 ٠ medium, some gravel, -4.6 grey, loose, wet *strong odour 16-] End of Borehole - 5 17 18 19 6 20 21 22 23 - 7 24 25 26 -Drilled By: GeoTech Drilling Services Comments: Sample analysis BTEX/VPH, EPH, PAHs Drill Method: Direct Push Hole Diameter: 4.5" Sheet: 1 of 1 Well Diameter: 2"

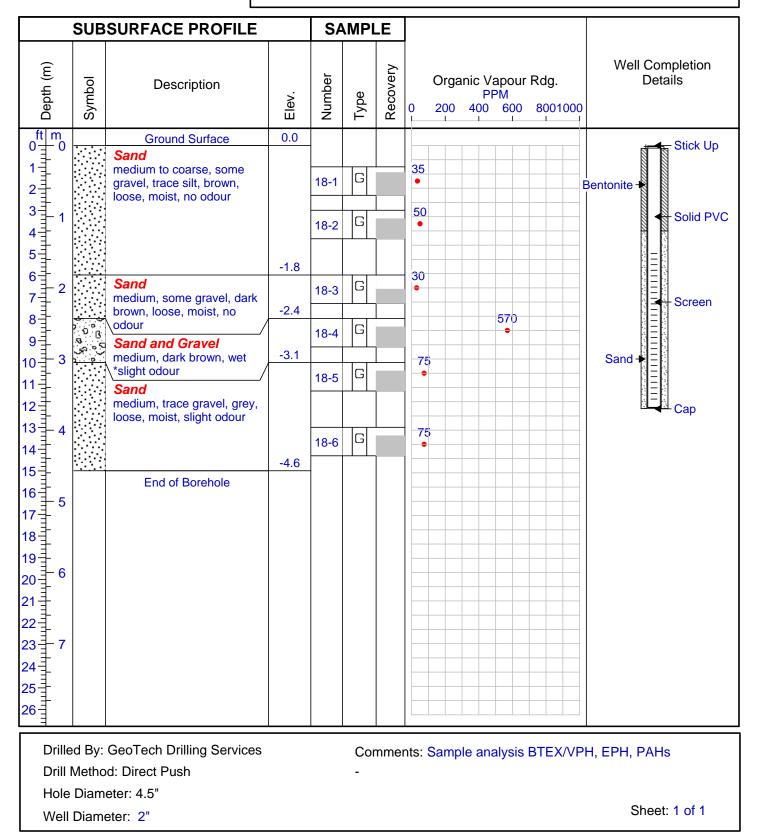
Project No: 639-0904

Borehole Log: MW/BH09-6-18

Project: Watson Lake Supplemental Drilling

Site ID: AEC 6 Logged By: Anna Raynham Checked By: Ivy Liu Date: Aug. 18, 2009

Client: PWGSC/TC



Project No: 639-0904

Client: PWGSC/TC

Location: Watson Lake, Yukon

Borehole Log: MW/BH09-6-19

Project: Watson Lake Supplemental Drilling

Site ID: AEC 6 Logged By: Anna Raynham Checked By: Ivy Liu Date: Aug. 19, 2009

11		SUB	SURFACE PROFILE		SA	MPL	E	
1 Image: constraint state site, trace gravel, brown, loose, dry, no odour 19-1 Image: constraint state site, trace gravel,		Symbol	Description	Elev.	Number	Type	Recovery	Organic Vapour Rdg. Details
1 Image: constraint state site, trace gravel, brown, loose, dry, no odour 19-1 Image: constraint state site, trace gravel,	ft m		Ground Surface	0.0				Stick Up
25	1 1 2 3 4 5 6 7 8 9 10 1 12 13 14 14 15 6 7 8 9 10 11 12 13 14 14 15 16 17 18 19 14 14 14 14 14 14 14 14 14 14 14 14 14		Sand medium, trace silt, trace gravel, brown, loose, dry, no odour Sand medium to coarse, trace gravel, greyish brown, loose, moist, no odour Sand and Gravel coarse, grey, loose, wet, no odour Sand medium to coarse, grey, loose, wet, no odour	0.0 -1.5 -3.1 -4.0	19-2 19-3 19-4 19-5	G		25 • Solid PVC 10 • Solid PVC Sand • Screen 80 • Screen Cap
	25 26 Drille Drill I	Metho	d: Direct Push					

Well Diameter: 2"

Sheet: 1 of 1

Project No: 639-0904

Borehole Log: BH09-6-20

Project: Watson Lake Supplemental Drilling

Site ID: 6 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct.22, 2009

Client: PWGSC/TC

	SUB	SURFACE PROFILE		SA	MPL	E		
Depth (m)	Symbol	Description	Elev.	Number	Type	Recovery	Organic Vapour Rdg. PPM 0 200 400 600 8001000	Well Completion Details
$\begin{array}{c c} ft m \\ 0 \frac{1}{2} \end{array} $		Ground Surface Sand	0.0					
1 2 3 4 4 5		medium to coarse, trace gravel, brown, dry to moist, loose *clay layer 0.2m thick just below surface		20-1	G			
6 7 7 8 10 10 10	•		-3.1	20-2	G		95	
		Sand coarse, trace gravel, grey, wet, loose						
12 <u>1</u> 13 <u>4</u> 14 <u>1</u>		*PHC odour at 9-15ft Refusal at 15ft due to heave		20-3	G		65 •	
15		End of Borehole	-4.7	-				
17 <u>5</u> 17 <u>5</u> 18 <u>5</u>								
19 20 6								
21 22								
23 7 24 7								
25 26								
	-	GeoTech Drilling Services			Cor	nmei	nts: Sample analysis PAHs, EP	Hs
		od: Direct Push eter: 4.5"			-			
		eter: N/A						Sheet: 1 of 1

Project No: 639-0904

Client: PWGSC/TC

Location: Watson Lake, Yukon

Borehole Log: BH09-6-21

Project: Watson Lake Supplemental Drilling

Site ID: 6 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 22, 2009

r				-			1			
	SUB	SURFACE PROFILE		SA		_E				
Depth (m)	Symbol	Description	Elev.	Number	Type	Recovery		ic Vapour PPM 400 600	_	Well Completion Details
ft m		Ground Surface	0.0							
ft m 0 0 0 1 1 2 1		Sandy Clay trace gravel, compact, brown, dry to moist	-0.6	21-1	G	1	15 •			
3 4 4 5		Sand and Gravel fine to medium, brown, loose, dry to moist								
0 6 7 7	•••	*slight odour at 6-8ft *HC odour and grey in color at 10-12ft		21-2	G		100			level
8 9 10 10 10	••••									uk Water Level
		Sand	-3.7	21-3	G			510		=
13 4 14 4		medium to coarse, trace gravel, grey, loose, wet, hydrocarbon odour	-4.6	21-4	G		0			
15 16 17 17		End of Borehole								
18 19 19 										
20 - 0 21 - 0 22 - 0										
23 7 24										
25 26										
Drille	ed By:	GeoTech Drilling Services			Cor	nme	nts: Sample	e analysis F	PAHs and	EPHs
	-	d: Direct Push			-		campio			
Hole	Diam	eter: 4.5"								
Well	Diame	eter: N/A								Sheet: 1 of 1

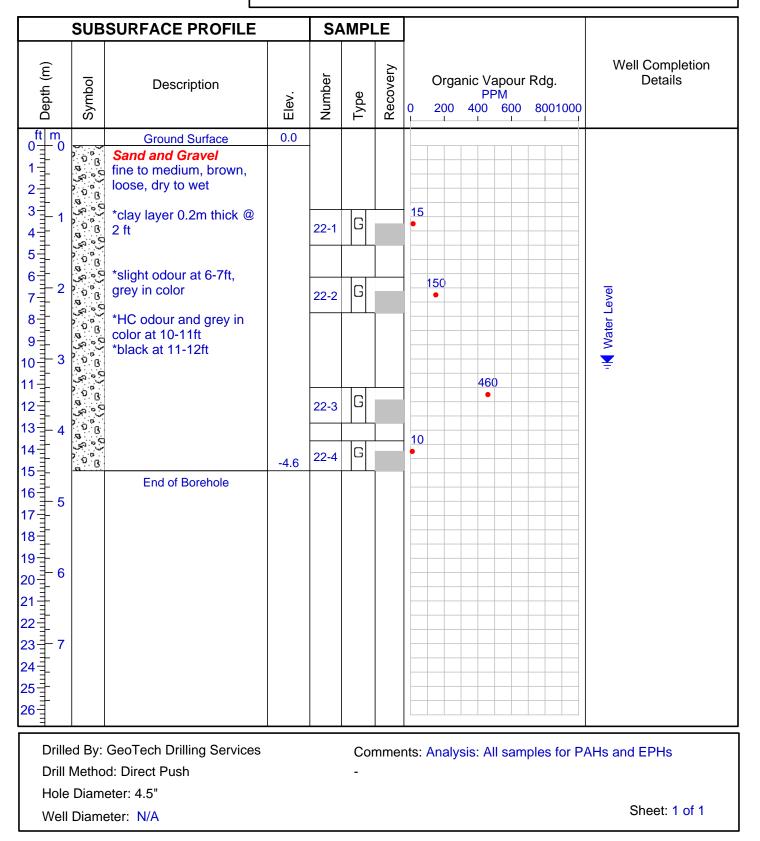
Project No: 639-0904

Borehole Log: BH09-6-22

Project: Watson Lake Supplemental Drilling

Site ID: 6 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 22, 2009

Client: PWGSC/TC



Project No: 639-0904

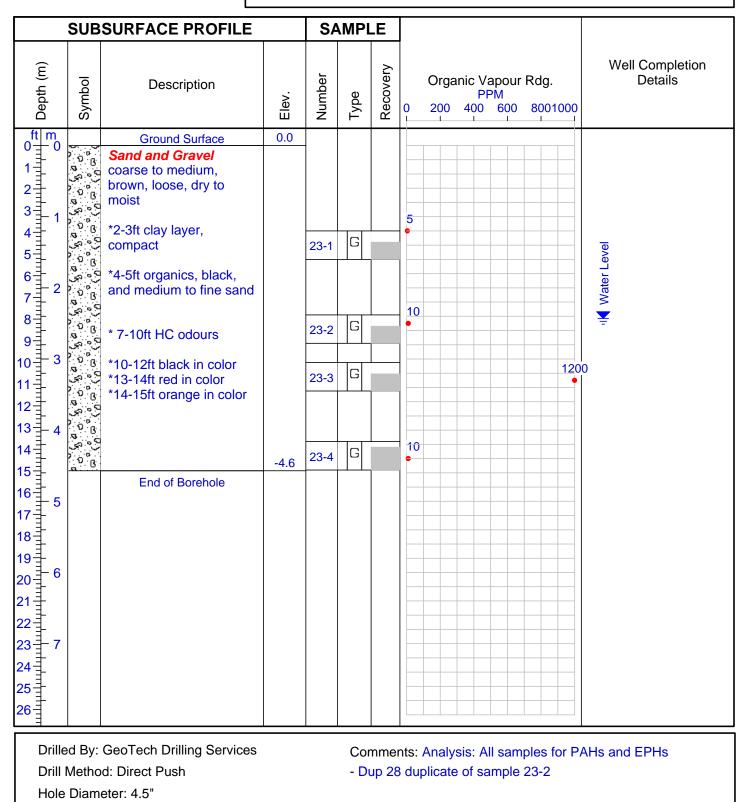
Client: PWGSC/TC

Location: Watson Lake, Yukon

Borehole Log: BH09-6-23

Project: Watson Lake Supplemental Drilling

Site ID: 6 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 23, 2009



Well Diameter: N/A

Sheet: 1 of 1

Well Diameter: N/A

Project No: 639-0904

Borehole Log: BH09-6-24

Project: Watson Lake Supplemental Drilling

Site ID: 6 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 23, 2009

Client: PWGSC/TC

	SUB	SURFACE PROFILE		SA	MPL	.E						
Depth (m)	Symbol	Description	Elev.	Number	Type	Recovery			PF	PM	Rdg. 8001000	Well Completion Details
ft m		Ground Surface	0.0									
		Sand and Gravel fine to medium, brown, loose, dry to moist					10					
3		*3-4ft red clay, semi compact		24-1	G	[
5 6 7 7 8	ی° ۵ ۵،۶۰ ۵،۶۰											r Level
	ې د دی ی د ر											u Mater Level
9 10 3	3°°,		-3.1	24-2	G		40 •					Ŧ
10 0 11	•	Sand fine to coarse, grey, loose, wet										
13 – 4 14 –	•••	*9-15ft HC odour, significantly less at 15ft			G		5					
15	· · · ·	E 1 (D 1 1	-4.6	24-3								
16 5 17		End of Borehole										
17 - 18 -												
10 <u>+</u> 19 +												
20 = 6												
21 22												
22 - 7												
24												
25												
26												
Drille	d By:	GeoTech Drilling Services			Cor	nmei	nts: A	nalys	sis: Al	l sam	ples for P	AHs and EPHs
		d: Direct Push			- Re	efusa	l due	to he	eave			
		eter: 4.5"										Sheet: 1 of 1

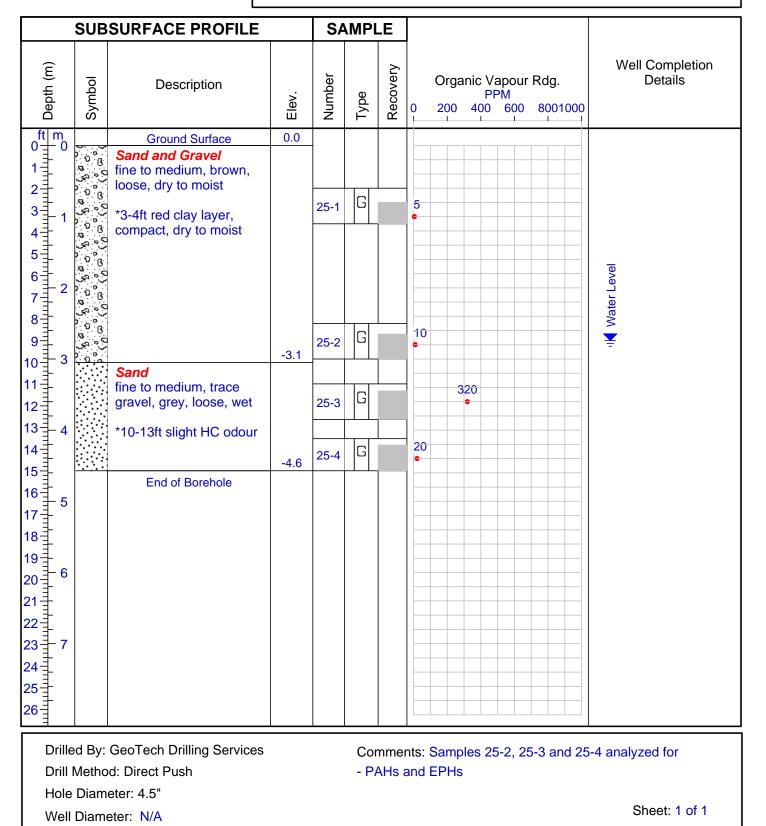
Project No: 639-0904

Borehole Log: BH09-6-25

Project: Watson Lake Supplemental Drilling

Site ID: 6 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 23, 2009

Client: PWGSC/TC



Project No: 639-0904

Borehole Log: BH09-6-26

Project: Watson Lake Supplemental Drilling

Site ID: 6 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 23, 2009

Client: P	WGSC/TC	

Location: Watson Lake, Yukon

	SUB	SURFACE PROFILE		SA	MPL	E	
Depth (m)	Symbol	Description	Elev.	Number	Type	Recovery	Organic Vapour Rdg. PPM 0 200 400 600 8001000
ft m		Ground Surface	0.0	1			
ft m 0 0 0 1 1 1 2 1 1 3 1 1	ی ^ر دی د دی	loose, dry to moist		26-1	G		
4 5 5 6 7 7 4 1 1 1 2		*9-12ft grey color and					Mater Level
8 9 10 10	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Sand	-3.1	26-2	G		under the second secon
11 12 13 13 4		Sand medium to coarse, trace gravel, grey, loose, wet					
14		*Refusal due to heave	-4.6	26-3	G		210
15-1		End of Borehole					
Drill I	Metho	GeoTech Drilling Services d: Direct Push					ts: Analysis: All samples for PAHs and EPHs duplicate of sample 26-2
Hole	Diam	eter: 4.5"					

Well Diameter: N/A

Project No: 639-0904

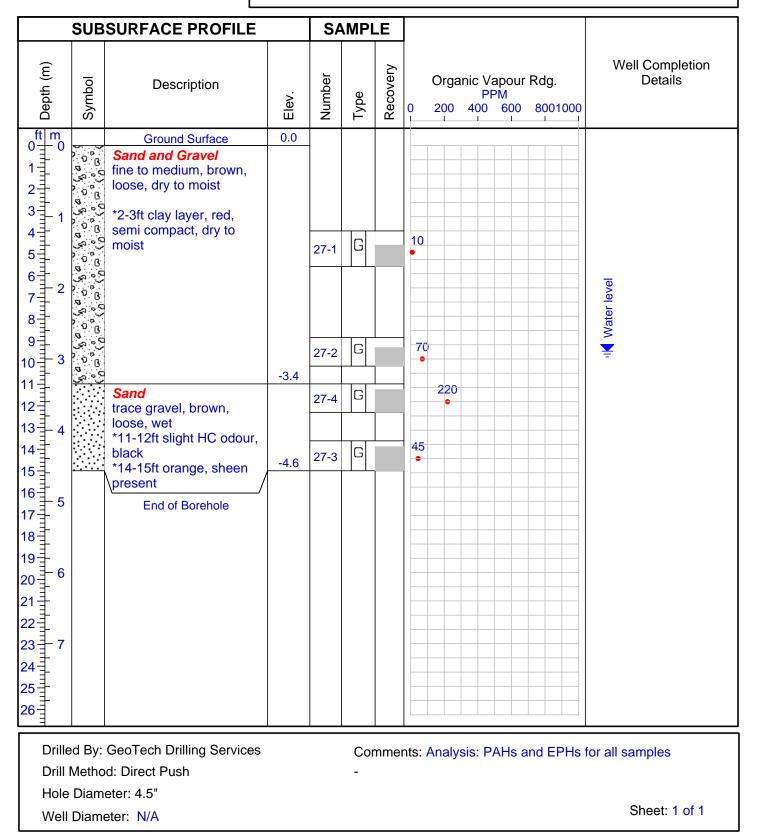
Client: PWGSC/TC

Borehole Log: BH09-6-27

Project: Watson Lake Supplemental Drilling

Site ID: 6 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 23, 2009

Lastian	Watson Lake,	Vukan
Location:	watson Lake,	тикоп



		TTNT	Public Works		Client Gov't S	ervices	Cana	da		Borehole No. : 6-BH15-28				
>)	SNC · LAVA	LIIN	Watson Lak		ocation port, W		ake, `	п		PAGE 1 OF 1				
Drilling Boreh	g Contractor Blue Max Environmental g Method Vibratory Sonic ble Dia. (m) 0.15 slotted Pipe Dia. (m) none/none		Date Monitored Ground Surface Ele Top of Casing Elev Northing: 6663989.	. (m)	n/a n/a Eas	ting: 509	969.00	00		Project Number: Borehole Logged Date Drilled: Log Typed By:	631841 By: MLC 2015 12 04 NDS	4		
Depth in Metres	Drilling Legend Sample Interval Vibrasonic Soil Des	Water/NAI Water Le Water Le NAPL NAPL Cription	vel 1	Stratigraphy Plot	Sample Interval Core Run	Sample Number	Blow Count	% Recovery		Reading within indicated scale Reading outside indicated scale Soil Vapour (ppm) 10 ² 10 ³ 10 ⁴				
0 1 2 3 4 6	Soil Des SILT and SAND, fine to medium red/brown, loose, frozen. Below 0.3 m - damp to moist. SAND, medium grained, trace s damp. SAND, medium to coarse graine coarse, occasional cobbles, bro SILT and SAND, fine grained, re SAND, coarse grained, grey, loc odour. Below 4.1 m - no odour. Bottom of hole at 4.6 m.	grained, som ilt, trace grave ed, some grave wn, loose, dar	I, brown, loose, el, fine to np.			28-1 28-2 28-3 28-4 28-5 28-6 28-7* 28-8 28-9		•	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			- SAND - BENTONITE - SAND		
MLC 2016 01 19 Print Date: 2016-03-08				NO T Bolo is a	TES Jed sa blind f	mple de ield dup	note	s san e of 2	nple 28-6	e analyzed. *der	notes blind field o	duplicate. 28-7		

	SNIC AT ANIA	TTNT	Public Works		Client Gov't S	ervices	Cana	ıda	Borehole No. : 6-BH15-29				
	SNC · LAVA		Watson Lak		ocation bort, W		ake, `	ΥT		PAGE 1 OF 1			
Drilling Boreh	g Contractor Blue Max Environmental g Method Vibratory Sonic ole Dia. (m) 0.15 lotted Pipe Dia. (m) none/none		Date Monitored Ground Surface Elev Top of Casing Elev Northing: 6663997.	. (m)	n/a n/a Eas	ting: 509	957.00	00	Project Number: Borehole Logged Date Drilled: Log Typed By:	631841 By: MLC 2015 12 05 NDS			
Depth in Metres	Drilling Legend Sample Interval Vibrasonic Soil Des	Water/NA	vel 1	Stratigraphy Plot	Sample Interval Core Run	Sample Number	Blow Count	% Recovery	 Reading within indicated scale Reading outside indicated scale Soil Vapour (ppm) 10¹ 10² 10³ 10ⁱ 				
0-1-1-3-3-4-4-5-5-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6	SAND, some gravel. SILT and SAND, fine grained, tr firm, no plasticity, damp to mois SAND, medium to coarse grain loose, damp. Below 2.6 m - hydrocarbon-like	ace gravel, co st. ed, some grav odour. avel, grey/brov to rounded, gre	el, fine, brown, vn, loose, moist y, loose, wet,			29-1 29-2 29-3 29-4 29-5 29-6 29-7 29-8		100	10 ¹ 10 ² 10 ³ 10 ⁴ 0 0 0 5 5 0 0 0 0 0 0 0 0 0 0 0 0 0		- SAND - BENTONITE - SAND		
MLC 2016 01 19 Print Date: 2016 03-08				NOT Bold	TES led sa	mple de	enotes	s sar	nple analyzed.				

	CRIC. T ATA	TTNT	Public Work		Client Gov't S	ervices	Cana	ada	Borel	Borehole No. : 6-BH15-30			
>	SNC · LAVA		Watson La		ocation port, W		ake, '	YΤ		PAGE 1 OF 1			
Drilling Boreho	Contractor Blue Max Environmental Method Vibratory Sonic ole Dia. (m) 0.15 lotted Pipe Dia. (m) none/none		Date Monitored Ground Surface E Top of Casing Ele Northing: 6664026	v. (m) ́	n/a n/a Eas	ting: 509	935.0	00	Project Number: Borehole Logged Date Drilled: Log Typed By:	631841 I By: MLC 2015 12 05 NDS			
Depth in Metres	Drilling Legend Sample Interval Vibrasonic Soil Des	Water/NA Water Le Water Le NAPL NAPL Cription	vel 1	Stratigraphy Plot	Sample Interval Core Run	Sample Number	Blow Count	% Recovery	 Reading within indicated scale Reading outside indicated scale Soil Vapour (ppm) 10² 10³ 10 				
- 0-	SILT and SAND, fine to medium brown, loose, frozen.		e gravel, fine,			30-1			.0				
	 Below 0.2 m - not frozen. SAND and GRAVEL, medium to gravel, occasional cobbles, brow 	o coarse grain wn, loose, dan	ed sand, fine ıp.			30-2 30-3 30-4		100	0 ;;20 ;015				
	SAND, fine to coarse grained, s brown, loose, damp.	-				30-5 30-6			0 	BENTONITE			
	SAND and GRAVEL, coarse gra grey/brown, loose, moist to wet. SAND, coarse grained, some gra					30-7			_o 180				
4-	\wet. SAND, coarse grained, grey, loo	ose, wet.		/		30-8			₀ 35	SAND			
MLC 2016 01 19 Print Date: 2016.03-08	Bottom of hole at 4.6 m.												
MLC 2016 01 19				NOT Bold	TES ded sa	mple de	note	s sar	nple analyzed.				

		TTNT	Public Works		Client Gov't S	ervices	Cana	Borel	Borehole No. : 6-BH15-31			
>	SNC · LAVA	LIIN	Watson Lak		ocation oort, W		ake, `	ΥT		PAGE 1 OF 1		
Drilling Boreh	Gontractor Blue Max Environmental Method Vibratory Sonic Die Dia. (m) 0.15 Iotted Pipe Dia. (m) none/none		Date Monitored Ground Surface Ele Top of Casing Elev Northing: 6664010.	r. (m) ́	n/a n/a Eas	ting: 509	968.0	00	Project Number: Borehole Logged Date Drilled: Log Typed By:	631841 1 By: MLC 2015 12 04 NDS		
Depth in Metres	Drilling Legend Sample Interval Vibrasonic	Water/NA	vel 1	Stratigraphy Plot	Sample Interval Core Run	Sample Number	Blow Count	% Recovery	 Reading within indicated scale Reading outside indicated scale Soil Vapour (ppm) 			
	Soil Des	scription		0	ပ်လ	Ś		%	10 ¹ 10 ² 10 ³ 10	4		
- 0-	SAND and GRAVEL, medium to coarse gravel, brown, loose, da	mp.	ed sand, fine to			31-1 31-2			0 5	SAND		
	Below 0.9 m and 1.0 m - dense Below 1.0 m - red/brown.					31-3			,0 ,0			
2	SAND and GRAVEL, some cob SAND, some silt, some gravel, SAND and GRAVEL, medium to coarse gravel, olive brown, loos	loose. o coarse graine	ed sand, fine to			31-4 31-5			5	BENTONIT		
3	Below 2.7 m - hydrocarbon-like		лот.			31-6						
4-	SAND, fine to medium grained, loose, wet, hydrocarbon-like od SAND, coarse grained, grey, loo	our.	coarse, grey,			31-7		100	₀ 120			
	Bottom of hole at 4.6 m.					31-8			,0	SAND		
5	Boltoni oi noie al 4.0 m.											
6												
8												
9-08												
Date:2016-03												
101 10 Print [NOT Bolo	r es led sa	mple de	note	s sar	nple analyzed.			
MLC 2016												

	SNC · LAVA	TINI	Public Works		Client Gov't S	ervices	Cana	ıda	Bore	Borehole No. : 6-BH15-32			
			Watson Lal		ocation oort, W		ake, `	YΤ		PAGE 1 OF 1			
Drilling Boreho	Contractor Blue Max Environmental Method Vibratory Sonic ole Dia. (m) 0.15 lotted Pipe Dia. (m) none/none		Date Monitored Ground Surface Elev Top of Casing Elev Northing: 6664032	ر. (m)	n/a n/a Eas	ting: 509	994.00	00	Project Number: Borehole Logged Date Drilled: Log Typed By:				
Depth in Metres	Drilling Legend Sample Interval Vibrasonic Soil Des	Water/NA	vel 1	Stratigraphy Plot	Sample Interval Core Run	Sample Number	Blow Count	% Recovery	 Reading within indicated scale Reading outside indicated scale Soil Vapour (ppm) 10¹ 10² 10³ 10³ 	4			
	SAND, fine to medium grained, trace cobbles, brown, loose, dar Below 0.3 m - no frost. SAND, fine to medium grained, trace silt, trace cobbles, light bro Below 1.7 m - dry.	mp, frost.	ine to coarse,			32-1 32-2 32-3 32-4			0 0 5 .0	SAND			
	SILT, some sand, fine grained, r damp. Below 2.6 m - light brown, dry. SAND, coarse grained, some gr loose, moist to wet.					32-5 32-6			•5 0	BENTONITE			
4	Between 3.7 m and 4.0 m - blac Below 4.0 m - damp. SAND and GRAVEL.	k/brown.				32-7 32-8			0	SAND			
att::2016-03-08	Bottom of hole at 4.6 m.												
MLC 2016 01 19 Print Date: 2016-03-08 01 11 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				NOT Bold	r ES ded sa	mple de	enote	s sar	nple analyzed.				

	SNC . I AVA	TTNT	Public Works		Client Gov't S	ervices	Cana	ada	Boreh	Borehole No. : 6-BH15-33			
>))	SNC · LAVA		Watson Lak		ocation oort, W		ake, `	ΥT		PAGE 1 OF 1			
Drilling Boreho	g Contractor Blue Max Environmental g Method Vibratory Sonic ole Dia. (m) 0.15 lotted Pipe Dia. (m) none/none		Date Monitored Ground Surface Elev Top of Casing Elev Northing: 6664037.	. (m)	n/a n/a Eas	ting: 509	985.0	00	Project Number: Borehole Logged Date Drilled: Log Typed By:	631841 By: MLC 2015 12 04 NDS			
Depth in Metres	Drilling Legend Sample Interval Vibrasonic Soil Des	Water/NA Water Le Water Le NAPL NAPL Scription	vel 1	Stratigraphy Plot	Sample Interval Core Run	Sample Number	Blow Count	% Recovery	 Reading within indicated scale Reading outside indicated scale Soil Vapour (ppm) 10¹ 10² 10³ 10⁴ 				
0-	SAND, fine to medium grained, trace cobbles, brown, loose, dry Below 0.3 m - no frost.	some gravel.	fine, trace silt, t.			33-1 33-2 33-3			0 0 0 0 0 130		SAND		
2	Below 1.5 m - some silt. Below 2.0 m - red/brown.			••••		33-4 33-5		100	o ¹⁸⁰		BENTONITE		
3	SILT and SAND, fine grained, tr firm/loose, dry to damp. SAND, fine to medium grained,					33-6		100	•5				
4	SAND and GRAVEL, coarse gra subrounded to rounded, dark br SAND, medium to coarse grain brown, loose, moist.	ained sand, co own, loose, we	arse gravel, et.			33-7 33-8			₀ 15 ₀ 30		SAND		
MLC 2016 01 19 Print Date:2016.03-08	Bottom of hole at 4.6 m.												
MLC 2016 01 15				NOT Bold	r ES led sa	mple de	note	s sar	nple analyzed.				

	SNIC AT ANIA	TTNT	Public Works		Client Gov't S	ervices	Cana	ıda	Boreh	Borehole No. : 6-BH15-34			
	SNC · LAVA		Watson La		ocation port, W		ake, `	ΥT		PAGE 1 OF 1			
Drilling Boreho	Contractor Blue Max Environmental Method Vibratory Sonic Die Dia. (m) 0.15 Iotted Pipe Dia. (m) none/none		Date Monitored Ground Surface Elev Top of Casing Elev Northing: 6664042	ر. (m)	n/a n/a Eas	ting: 509	964.00	00	Project Number: Borehole Logged Date Drilled: Log Typed By:	631841 By: MLC 2015 12 04 NDS			
Depth in Metres	Drilling Legend Sample Interval Vibrasonic Soil Des	Water/NA Water Le Water Le NAPL NAPL Scription	vel 1	Stratigraphy Plot	Sample Interval Core Run	Sample Number	Blow Count	% Recovery	 Reading within indicated scale Reading outside indicated scale Soil Vapour (ppm) 10¹ 10² 10³ 10⁴ 				
0	SAND, fine to medium grained, trace cobbles, light brown, loose Below 0.3 m - no frost. Below 0.6 m - moist to wet.	some gravel, t e, dry to damp	fine, trace silt, , frost.			34-1 34-2 34-3 34-4		95	0 •5 •20	SAND			
2	SAND, medium to coarse grain coarse, subangular to subround Below 2.7 m - damp to moist.	ed, some grav led, red/brown	el, fine to , loose, damp.			34-5 34-6 34-7		91	o ¹⁵ o ²⁰ o ⁶⁵	BENTONITE			
80°6091 80°6091	WOOD DEBRIS. SAND and GRAVEL, coarse gra gravel, subrounded to rounded, Bottom of hole at 4.6 m.	ained sand, fin grey, wet.	e to coarse			34-8 34-9			o ¹⁰ o ²⁰	SAND			
MLC 2016 01 19 Print Date: 2016-03-08				NO1 Bolc	T ES led sa	mple de	note	s sar	nple analyzed.				

	CRIC. T ATZA	TTNT	Public Works		Client Gov't S	ervices	Cana	ada	Borel	Borehole No. : 6-BH15-35			
 	SNC · LAVA		Watson La		ocation port, W		ake, `	ΥT		PAGE 1 OF 1			
Drilling Boreho	g Contractor Blue Max Environmental g Method Vibratory Sonic ole Dia. (m) 0.15 lotted Pipe Dia. (m) none/none		Date Monitored Ground Surface El Top of Casing Elev Northing: 6664043	/. (m) ́	n/a n/a Eas	ting: 509	952.0	00	Project Number: Borehole Logged Date Drilled: Log Typed By:	631841 I By: MLC 2015 12 04 NDS			
Depth in Metres	Drilling Legend Sample Interval Vibrasonic	Water/NA	vel 1	Stratigraphy Plot	Sample Interval Core Run	Sample Number	Blow Count	% Recovery	 Reading within indicated scale Reading outside indicated scale Soil Vapour (ppm) 				
- 0-	Soil Des	•		 		0			10 ¹ 10 ² 10 ³ 10	4]] 0 0 0 0 0 0 0 0]			
	SAND, some gravel, fine, trace damp, frost. Below 0.3 m - no frost. Below 0.6 m - coarse grained s	and, black/brov				35-1 35-2 35-3		41	0 015 510	SAND			
2	SAND, medium to coarse grain coarse, trace silt, brown, dense SILT and SAND, fine to coarse	ed, some grav , dry.				35-4 35-5			° ²⁵ ° ⁵⁵	BENTONITE			
3	light olive brown, dry. SAND, medium to coarse grain coarse, loose, damp.	ed, some grav	el, fine to			35-6 35-7		100	o ²⁰				
4	Below 4.1 m - coarse grained s	and, gravelly.				35-8			5	SAND			
MLC 2016 01 19 Print Date: 2016 03-08	Bottom of hole at 4.6 m.			ΝΟ	TES								
MLC 2016 01 1				Bold	led sa	mple de	note	s sar	nple analyzed.				

Project No: 639-0904

Borehole Log: MW/BH09-7-14

Project: Watson Lake Supplemental Drilling

Site ID: AEC 7 Logged By: Ivy Liu Checked By: Ivy Liu Date: Aug. 16, 2009

Client: PWGSC/TC

SL	JB	SURFACE PROFILE		SA	MPL	.E						
Depth (m)	oyiiiddi	Description	Elev.	Number	Type	Recovery	0	Orga	PF	apour ⁹ M 600	Rdg. 8001000	Well Completion Details
ft m		Ground Surface	0.0									Ctick Up
ft m 0 0 1 0 1 1 1 2 1 1 3 1 1 6 7 8 9 10 1 13 14 14 14 14 14 15 17 14 16 17 18 19 20 14 23 14 14 16 17 14 17 18 14 18 14 14 19 10 14 10 14 14 14 14 14 14 14 14 14 14 14 16 21 21 23 14 14 24 14 14 14 14 14 14 14 14 15 16 21 23 14 14 1		Ground Surface Sand medium, some gravel, trace silt, brown, loose, moist, no odour Sand medium, some gravel, trace silt, brown, loose, moist, slight odour Sand coarse, trace gravel, trace silt, brown, loose, wet, slight odour End of Borehole	-1.8 -2.7 -3.1	14-1	G							Sand - Screen Cap
Drill Met	tho	GeoTech Drilling Services d: Direct Push eter: 4.5" eter: 2"			Cor -	nmer	nts: S	Samp	le ana	alysis	BTEX/VF	PH, EPH, PAHs and metals Sheet: 1 of 1

Project No: 639-0904

Client: PWGSC/TC

Location: Watson Lake, Yukon

Borehole Log: MW/BH09-7-15

Project: Watson Lake Supplemental Drilling

Site ID: AEC 7 Logged By: Ivy Liu Checked By: Ivy Liu Date: Aug. 16, 2009

	SUB	SURFACE PROFILE		SA	MPL	E		
Depth (m)	Symbol	Description	Elev.	Number	Type	Recovery	Organic Vapour Rdg. PPM 0 200 400 600 8001000	Well Completion Details
ft m		Ground Surface	0.0					Stick Up
ft m 0 1 1 1 1 2 1 1 1 2 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Silty Sand fine, trace gravel, brown, loose, moist, no odour Sand coarse, some gravel, brown, loose, moist Sand coarse, some gravel, brown, loose, wet, no odour End of Borehole	-1.5 -2.1 -3.1 -4.0	15-2	G		5 -	Sentonite Sand Sand Sand Sand
Drille	d Bv	GeoTech Drilling Services			Cor	nme	nts: Sample analysis BTEX/VPI	Η ΕΡΗ ΡΔΗς
	-	d: Direct Push			-	me		I, EFII, FAIIO
		eter: 4.5"						
		eter: 2"						Sheet: 1 of 1

Well Diameter: 2"

Project No: 639-0904

Client: PWGSC/TC

Location: Watson Lake, Yukon

Borehole Log: MW/BH09-7-16

Project: Watson Lake Supplemental Drilling

Site ID: AEC 7 Logged By: Anna Raynham Checked By: Ivy Liu Date: Aug. 16, 2009

SUBSURFACE PROFILE SAMPLE Well Completion Depth (m) Recovery Number Details Organic Vapour Rdg. Symbol Description PPM Type Elev. 0 200 400 600 8001000 ft m) <u>+</u> 0 **Ground Surface** 0.0 Flush mount Silty Sand medium, trace gravel, 30 **Bentonite** G 16-1 brown, no odour • Solid PVC 20 1 G 16-2 Screen ⊵ -1.5 = Silty Sand 100 medium, some gravel, G 2 16-3 brown, wet *strong HC odour - Sand G n/a 16-4 3 10 -3.4 _ 11 Ξ 440 Sand G 16-5 12 medium to coarse, some gravel, some silt, grevish 13 - 4 brown, wet 400 G 16-6 14 * strong HC odour -4.6 Cap 15 End of Borehole 16∃ 5 17 18-19 6 20 21 22 23 7 24 = 25 26 -Drilled By: GeoTech Drilling Services Comments: Samples analyzed for PAHs Drill Method: Direct Push - Dup-15 duplicate of sample 16-6 Hole Diameter: 4.5" Sheet: 1 of 1

Project No: 639-0904

Client: PWGSC/TC

Location: Watson Lake, Yukon

Borehole Log: BH09-7-17

Project: Watson Lake Supplemental Drilling

Site ID: AEC 7 Logged By: Ivy Liu Checked By: Ivy Liu Date: Aug. 16, 2009

SUBSURFACE PROFILE SAMPLE Well Completion Depth (m) Recovery Number Details Organic Vapour Rdg. Symbol Description PPM Type Elev. 0 200 400 600 8001000 ft m) <u>+</u> 0 **Ground Surface** 0.0 0 Sand 0 medium, trace gravel, trace G 17-1 silt, brown, loose, moist, no odour 3 35 Ξ 1 G 17-2 4 -1.5 5 Sand G 30 17-3 6 coarse, trace gravel, 2 -2.1 brown, loose, moist, no 7 odour 8 _ Sand 180 G 17-4 coarse, trace gravel, grey, 9 loose, wet -3.1 3 10 *strong odour Sand 11 coarse, trace gravel, 12 greyish brown, loose, wet *strong odour 13 4 380 G 17-5 14 = 15 160 16 Ξ 5 G 17-6 17 18 110 G 17-7 19 -6.1 6 20 End of Borehole 21 22 **23**∃ 7 24 -25 26 -Drilled By: GeoTech Drilling Services Comments: Sample analysis: Sample analysis BTEX/VPH, EPH, - PAHs, and total metals.

Drill Method: Direct Push

Hole Diameter: 4.5"

Well Diameter:

Sheet: 1 of 1

Project No: 639-0904

Client: PWGSC/TC

Borehole Log: BH09-7-18

Project: Watson Lake Supplemental Drilling

Site ID: AEC 7 Logged By: Anna Raynham Checked By: Ivy Liu Date: Aug. 16, 2009

			Locatio	n: Wa	atson	Lake		e: Aug. 16, 2009
	SUB	SURFACE PROFILE		SA	MPI	E		
Depth (m)	Symbol	Description	Elev.	Number	Type	Recovery	Organic Vapour Rdg. PPM 0 200 400 600 800100	Well Completion Details
ft m 0 <u>+</u> 0		Ground Surface	0.0					_
ft m 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Sand medium, some gravel, trace silt, brown, moist, no odour		18-1	G		40 •	
3 ⁺⁺ 4 ⁺⁺			-1.5	18-2	G]	50	-
5 6 7 7		Silty Clay trace gravel, trace sand, dark brown, compacted,	-1.5	18-3	G		280	
7 7 8 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		moist, faint odour Sandy Silt trace gravel, grey, loose,	-2.4	18-4	G		130	
10 1 3 11 1 1 12 1 13 1 4		wet, slight odour						
14 15 16 16 17 17		Silty Sand medium, trace gravel, brownish grey, wet, no odour	-4.3	18-5	G		120	
18 19 20 21 21 22		End of Borehole		-				
23 7 24 7 25 7 26 7								
∃ Drille	-	GeoTech Drilling Service	es				nts: Dup-25 duplicate of sam	

Drill Method: Direct Push

- water level @ 3 ft, Sample analysis BTEX/VPH, EPH, PAHs,

Hole Diameter: 4.5"

Well Diameter:

Sheet: 1 of 1

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Project No: 639-0904

Client: PWGSC/TC

Borehole Log: BH09-7-19

Project: Watson Lake Supplemental Drilling

Site ID: AEC 7 Logged By: Anna Raynham Checked By: Ivy Liu Date: Aug. 16, 2009

	SUB	SURFACE PROFILE		SA	MPL	.E		
Depth (m)	Symbol	Description	Elev.	Number	Type	Recovery	Organic Vapour Rdg. PPM 0 200 400 600 8001000	Well Completior Details
t m - 0		Ground Surface	0.0					
		Sand trace silt, some gravel, brown, loose, moist		19-1	G		40 •	
+ - - -			-1.5	19-2	G		40	
- 2		Silty Sand trace gravel, some organics, dark brown, wet	-1.5	19-3	G		210	
		*HC odour		19-4	G		40	
- 3 - - - - 4			-4.3					
- 5		Sand and Gravel coarse, some cobbles, some organics, greyish brown, wet *HC odour	-5.5	19-5	G			
- 6	<u>20.242</u>	End of Borehole						
- 7								

Drill Method: Direct Push

Hole Diameter: 4.5"

Well Diameter:

Project No: 639-0904

Client: PWGSC/TC

Location: Watson Lake, Yukon

Borehole Log: BH09-7-20

Project: Watson Lake Supplemental Drilling

Site ID: AEC 7 Logged By: Ivy Liu Checked By: Ivy Liu Date: Aug. 17, 2009

SUBSURFACE PROFILE SAMPLE Well Completion Depth (m) Recovery Number Details Organic Vapour Rdg. Symbol Description PPM Type Ele∕. 0 200 400 600 8001000 ft m) <u>+</u> 0 **Ground Surface** 0.0 0 1 2 Sand 80 medium, trace gravel, light G 20-1 brown, moist, no odour -0.9 3 1 1650 Silty Sand G 20-2 4 medium, trace gravel, olive grey, some organics, 5 compact, moist *strong odour 350 6 G 20-3 2 -2.1 7 Sand 130 8 medium, some gravel, G 20-4 trace silt, brown, moist, 9 *slight odour -3.1 3 10∃ Sand 11 medium, some silt, trace gravel, reddish brown, wet, 12 no odour 13 - 4 G 20-5 120 14 -4.6 **15**≟ Silty Sand 16 trace gravel, reddish/grey 45 G - 5 20-6 brown, wet 17 • *slight odour 18-19 -6.1 6 20 End of Borehole 21 22 23 7 24 = 25 26 Drilled By: GeoTech Drilling Services Comments: Water level @ 10 ft **Drill Method: Direct Push** - Sample analysis BTEX/VPH, EPH, PAHs and total metals

Hole Diameter: 4.5"

Well Diameter:

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Project No: 639-0904

Client: PWGSC/TC

Location: Watson Lake, Yukon

Borehole Log: BH09-7-21

Project: Watson Lake Supplemental Drilling

Site ID: AEC 7 Logged By: Anna Raynham Checked By: Ivy Liu Date: Aug. 17, 2009

SUBSURFACE PROFILE SAMPLE Well Completion Depth (m) Recovery Symbol Number Organic Vapour Rdg. Details Description PPM Type Ele∕. 0 200 400 600 8001000 ft m) <u>+</u> 0 **Ground Surface** 0.0 0 1 2 Sand 30 medium, some gravel, G 21-1 brown, loose, moist -0.9 3 0 Ξ 1 Sand G 21-2 4 medium, some gravel, trace silt, greyish brown, 5 35 moist G 21-3 *slight odour 6 2 7 -2.4 85 8 111 Sand G 21-4 9 coarse, some gravel, some organics, greyish brown, 3 10 loose, wet, no odour 11111 11 12 13 4 -4.3 14 글 50 Sand G 15 21-5 • medium, some gravel, some organics, dark 16 = greyish brown, loose, wet - 5 *slight odour 17 -5.5 18 νß Sand and Gravel G 80 21-6 s . . . 3 19 coarse, some organics, ⊽ີິເ' brownish grey, loose, wet -6.1 6 20 *slight odour 21 End of Borehole 22 **23**∃ 7 24 25 26 -Drilled By: GeoTech Drilling Services Comments: Water level @ 8 ft

Drill Method: Direct Push

- Sample analysis BTEX/VPH, EPH, PAHs, and total metals

Hole Diameter: 4.5"

Well Diameter:

Project No: 639-0904

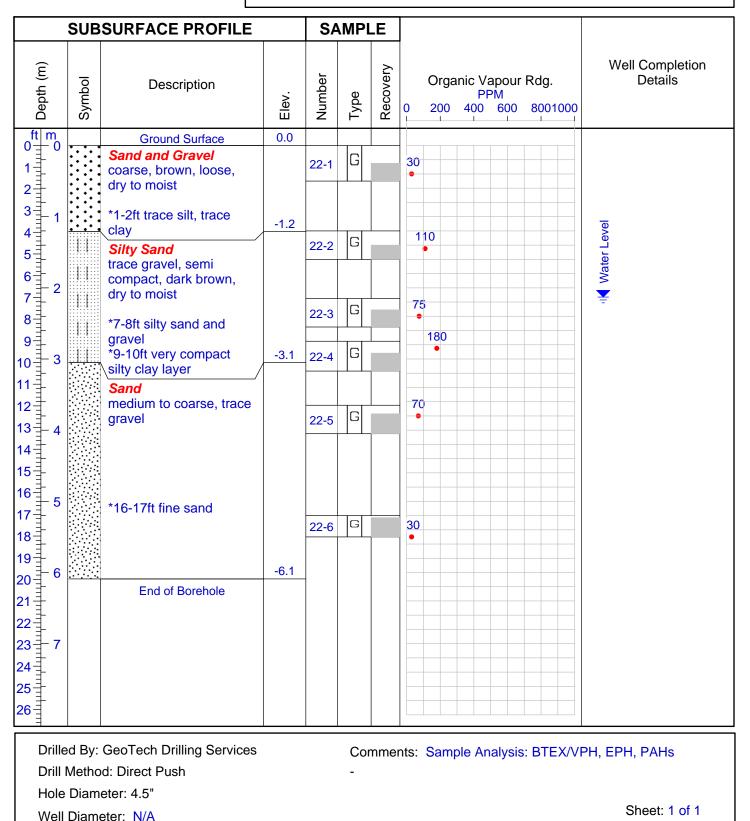
Client: PWGSC/TC

Borehole Log: BH09-7-22

Project: Watson Lake Supplemental Drilling

Site ID: 7 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 20, 2009

Location: Watson Lake, Yukon



Project No: 639-0904

Client: PWGSC/TC

Location: Watson Lake, Yukon

Borehole Log: BH09-7-23

Project: Watson Lake Supplemental Drilling

Site ID: 7 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 21, 2009

	SUBSURFACE PROFILE					E			
Depth (m)	Symbol	Description	Elev.	Number	Type	Recovery	Organic Vapour Rdg. PPM 0 200 400 600 8001000		
ft m		Ground Surface	0.0						
$ \begin{array}{c} ft \\ 0 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$		Ground Surface Sand and Gravel medium to coarse, brown, loose, dry to moist Silty Clay dark brown, loose, moist *5-6ft grey in color Sand and Gravel coarse, trace clay, red/brown, loose, wet *8-11ft HC odour Sand medium to coarse, trace gravel, grey, loose, wet End of Borehole	-0.9 -2.1 -3.1 -4.6	23-1 23-2 23-3 23-4	G				
Drill I	Drilled By: GeoTech Drilling Services Comments: Samples analyzed for PAHs and EPHs Drill Method: Direct Push - Hole Diameter: 4.5"								
Well	Diame	eter: N/A					Sheet: 1 of 1		

Project No: 639-0904

Borehole Log: BH09-7-24

Project: Watson Lake Supplemental Drilling

Site ID: 7 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 21, 2009

Client: PWGSC/TC	
1	

Location: Watson Lake, Yukon

	SUB	SURFACE PROFILE		SA	MPL	.E				
Depth (m)	Symbol	Description	Elev.	Number	Type	Recovery	Organic Vapour Rdg. PPM 0 200 400 600 8001000	Well Completion Details		
ft m		Ground Surface	0.0							
4 5 6 7 8 9 10 11 12 14 14 15 16 17 14 14 15 16 17 18 19 10 11 14 14 14 14 14 14 14 14 14		Ground Surface Sand and Gravel medium to coarse, brown, loose, dry to moist *3-4ft fine sand and pebbles, grey, loose, dry *7ft HC odour continues down, grey in color Refusal due to heave End of Borehole	-3.1	24-1 24-2 24-3	G			Mater Level		
24 25 26										
Drill Hole	Drilled By: GeoTech Drilling Services Drill Method: Direct Push Hole Diameter: 4.5" Well Diameter: N/A Comments: Sample Analysis: BTEX/VPH, EPH, PAHs - Sheet: 1 of 1									

Project No: 639-0904

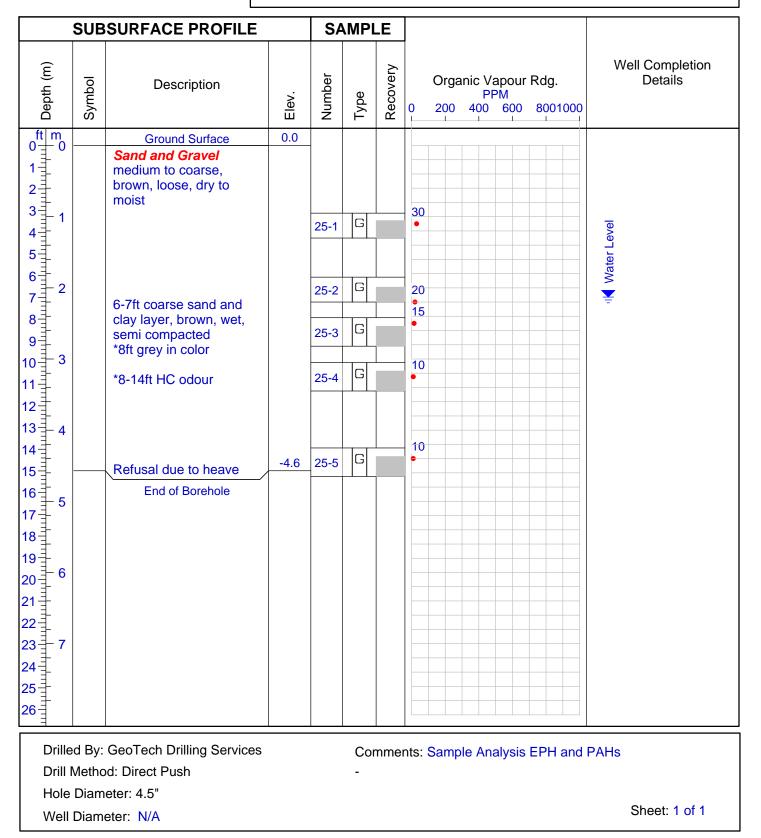
Client: PWGSC/TC

Borehole Log: BH09-7-25

Project: Watson Lake Supplemental Drilling

Site ID: 7 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 21, 2009

Location:	Watson	Lake.	Yukon



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Project No: 639-0904

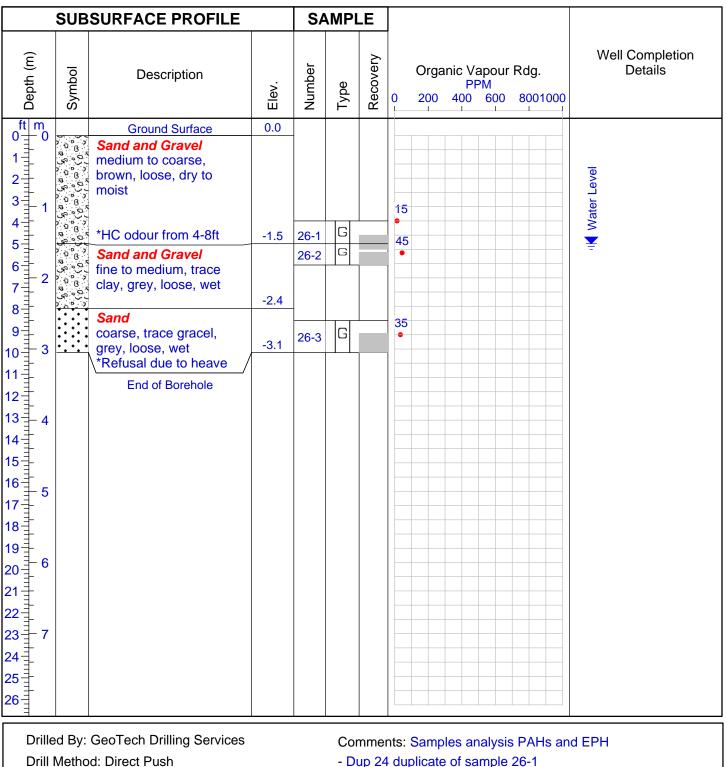
Client: PWGSC/TC

Borehole Log: BH09-7-26

Project: Watson Lake Supplemental Drilling

Site ID: 7 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 21, 2009

Location: Watson Lake, Yukon



Drill Method: Direct Push

Hole Diameter: 4.5"

Well Diameter: N/A

Project No: 639-0904

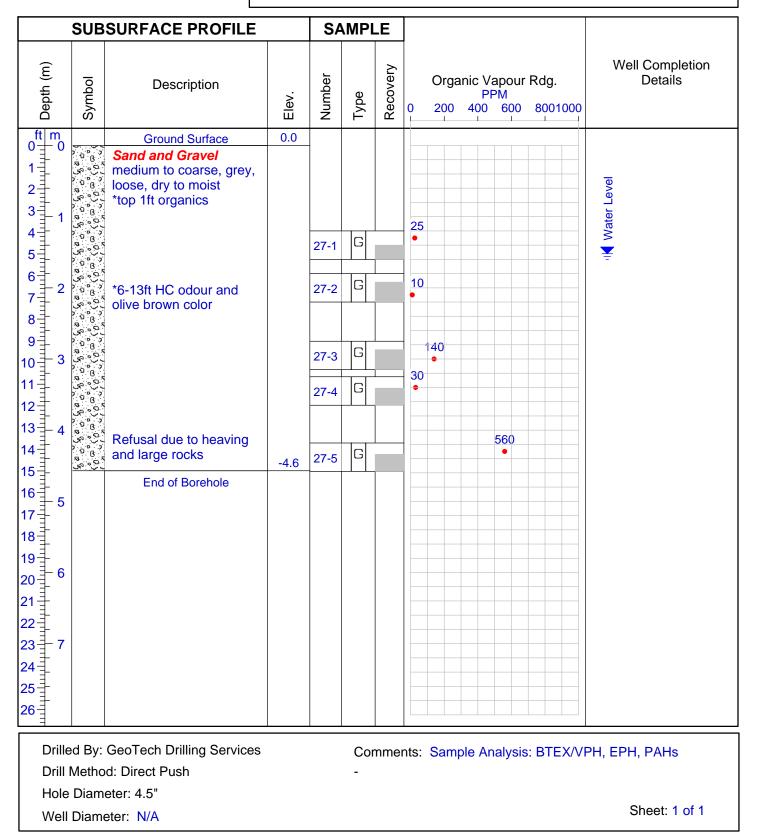
Borehole Log: BH09-7-27

Project: Watson Lake Supplemental Drilling

Site ID: 7 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 21, 2009

Client: PWGSC/TC

Location: Watson Lake, Yukon



Project No: 639-0904

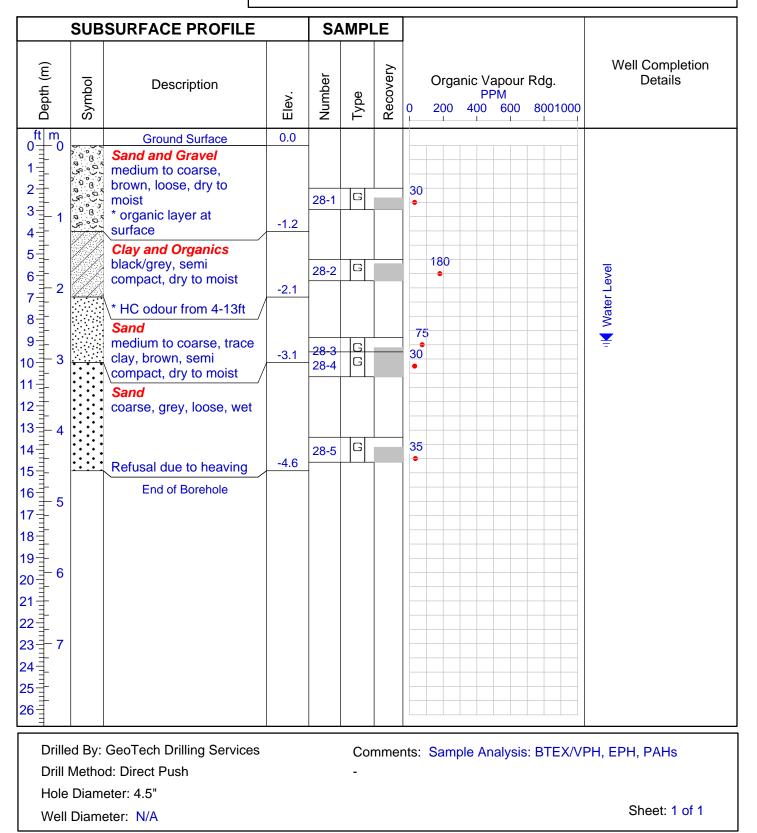
Client: PWGSC/TC

Location: Watson Lake, Yukon

Borehole Log: BH09-7-28

Project: Watson Lake Supplemental Drilling

Site ID: 7 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 21, 2009



Project No: 639-0904

Borehole Log: BH09-7-29

Project: Watson Lake Supplemental Drilling

Site ID: 7 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 21, 2009

Client: PWGSC/TC

Location: Watson Lake, Yukon

	SUB	SURFACE PROFILE		SA	MPL	.E			
Depth (m)	Symbol	Description	Elev.	Number	Type	Recovery	Organic Vapour Rdg. PPM 0 200 400 600 8001000		
ft m		Ground Surface	0.0						
ft m 0 1 1 1 2 1 1 3 1 1 4 1 1 6 1 1 9 10 1 11 11 11 13 14 14 15 16 5 18 19 1 20 1 1 21 1 1 16 5 1 19 10 6 21 14 14 15 16 17 10 14 14 15 17 14 10 14 14 10 14 14 11 14 14 12 14 14 14 14 14 15 18 14 17 14 14 <		Sand and Gravel medium to coarse, brown, loose, dry to moist *surface layer of organics *large granite boulders at 4ft	-2.1	29-2	G				
Drill	Drilled By: GeoTech Drilling Services Comments: Sample Analysis: EPH, PAHs Drill Method: Direct Push -								
		eter: 4.5"							
Well	Diame	eter: N/A					Sheet: 1 of 1		

Well Diameter: N/A

Project No: 639-0904

Client: PWGSC/TC

Borehole Log: BH09-7-30

Project: Watson Lake Supplemental Drilling

Site ID: 7 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 21, 2009

			Locatio	n: Wa	e: Oct. 21, 2009				
	SUB	SURFACE PROFILE	•	SA	MPI	E			
Depth (m)	Symbol	Description	Elev.	Number	Type	Recovery	Organic Vapo PPM 0 200 400 60	ur Rdg. 10 8001000	Well Completion Details
$ \begin{array}{c} ft & m \\ 0 & 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\$	$ \left\{ \begin{array}{c} \left\{ \begin{array}{c} \left\{ \begin{array}{c} \left\{ \left\{ \begin{array}{c} \left\{ \right\} \right\} \\ \left\{ $	Ground Surface Sand and Gravel medium to coarse, traace clay, brown, loose, dry to moist *10-15ft HC odour and grey in color Refusal due to heaving End of Borehole	-4.6	30-1 30-2 30-3 30-4	G				Mater Level
Drill I	Vetho	GeoTech Drilling Service d: Direct Push eter: 4.5"	es		Coi -	mme	nts: Sample Analy	sis: BTEX/VF	PH, EPH, PAHs

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Project No: 639-0904

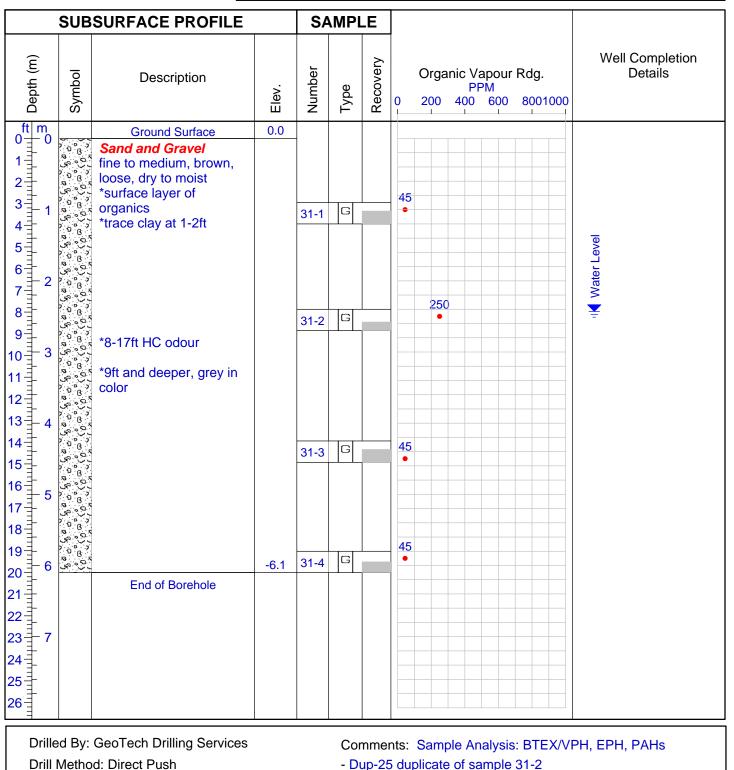
Client: PWGSC/TC

Borehole Log: BH09-7-31

Project: Watson Lake Supplemental Drilling

Site ID: 7 Logged By: Chelsea Dupuis Checked By: Ivy Liu Date: Oct. 21, 2009

Location: Watson Lake, Yukon



Drill Method: Direct Push

Hole Diameter: 4.5"

Well Diameter: N/A



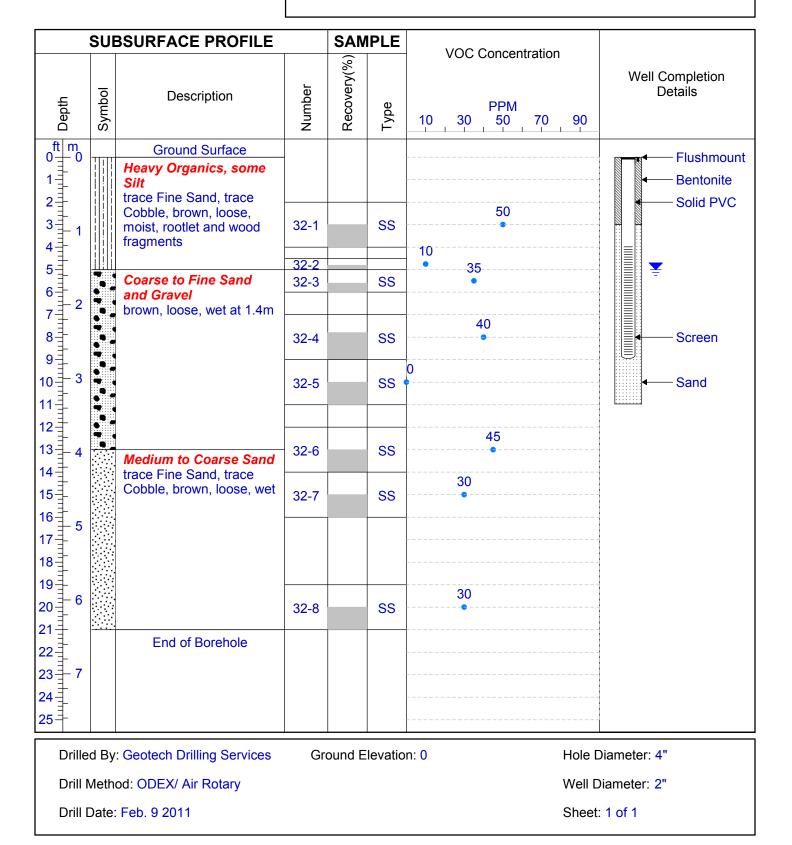
Site Location: AEC 7

Client: PWGSC

Borehole Log: 7-BH11-32

Project: Post Remedial Drilling

Well ID: 7-MW11-32 Logged by: CD





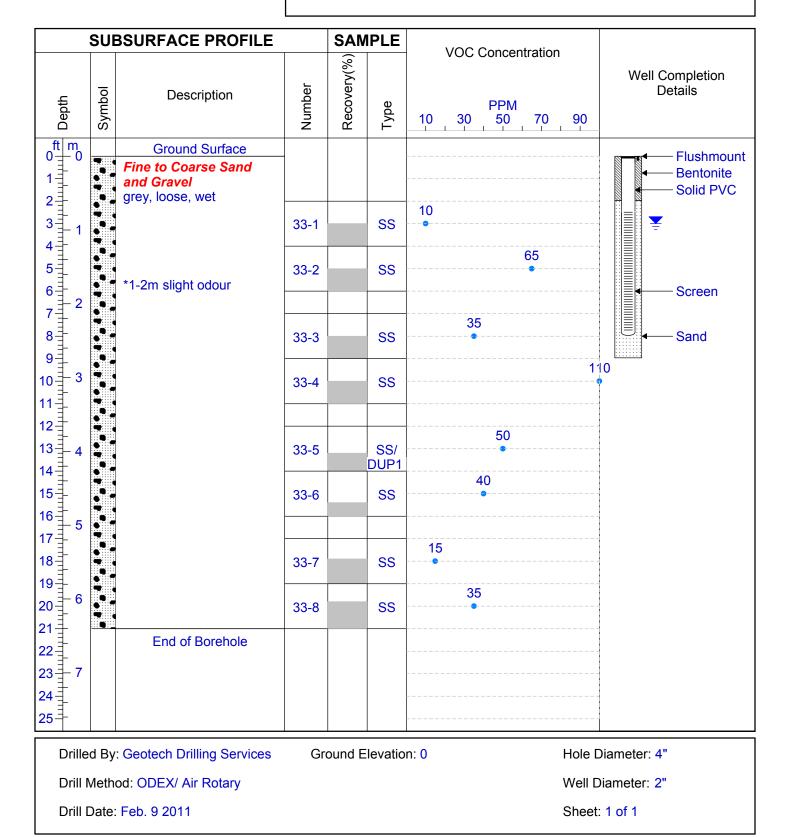
Site Location: AEC 7

Client: PWGSC

Borehole Log: 7-BH11-33

Project: Post Remedial Drilling

Well ID: 7-MW11-33 Logged by: CD



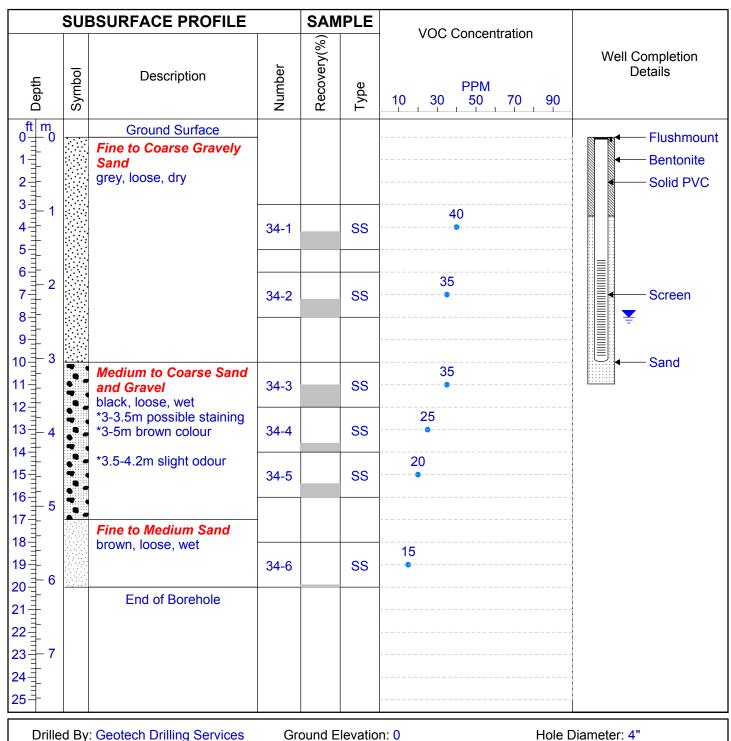


Borehole Log: 7-BH11-34

Project: Post Remedial Drilling

Well ID: 7-MW11-34 Logged by: CD Checked By: MR

Client: PWGSC Site Location: AEC 7



Ground Elevation: 0

Well Diameter: 2"

Drill Method: ODEX/ Air Rotary

Drill Date: Feb. 25 2011



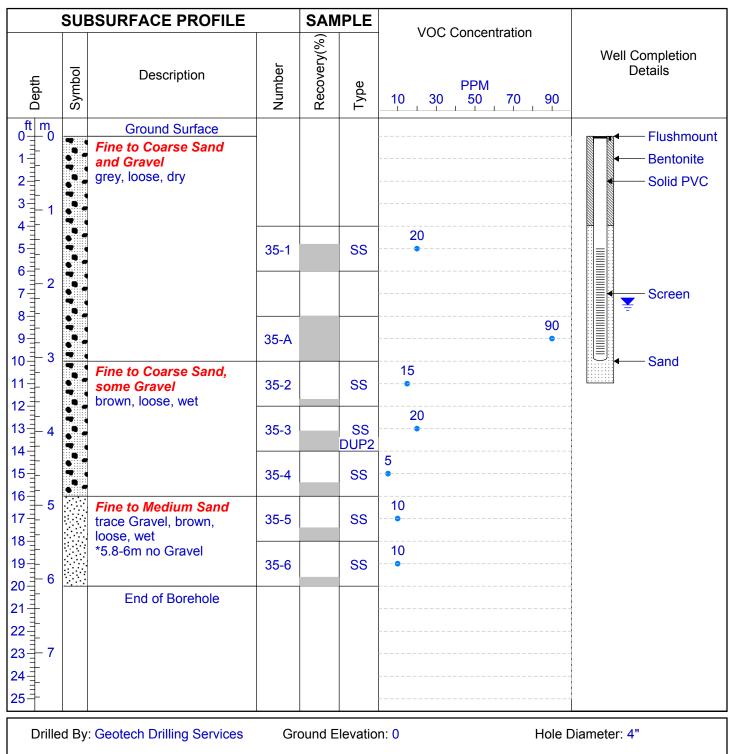
Borehole Log: 7-BH11-35

Project: Post Remedial Drilling

Well ID: 7-MW11-35 Logged by: CD Checked By: MR

Client: PWGSC

Site Location: AEC 7



Drill Method: ODEX/ Air Rotary

Drill Date: March 1 2011

Sheet: 1 of 1

Well Diameter: 2"



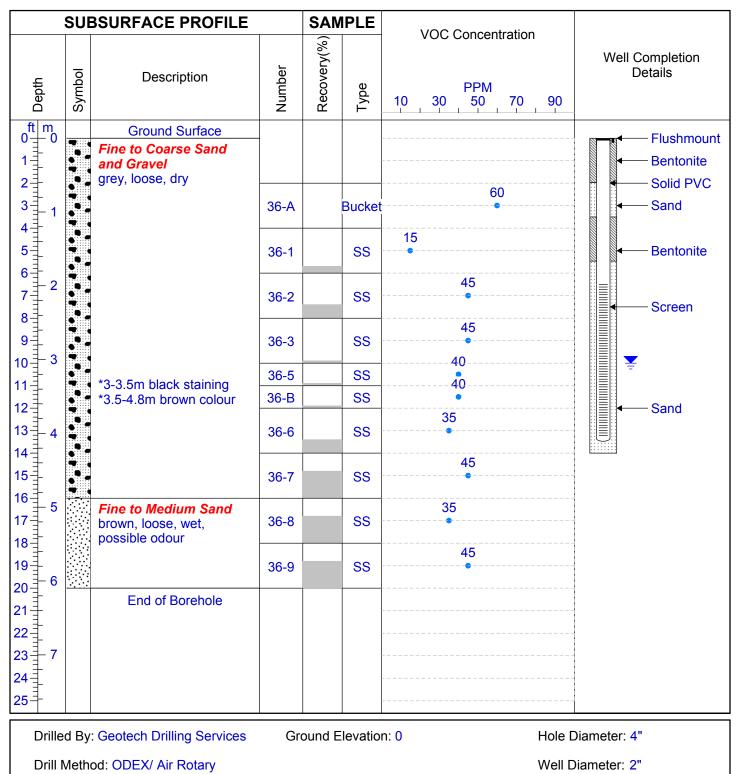
Borehole Log: 7-BH11-36

Project: Post Remedial Drilling

Well ID: 7-MW11-36 Logged by: CD Checked By: MR

Client: PWGSC

Site Location: AEC 7



Drill Date: March 2 2011



Borehole Log: 7-BH11-37

Project: Post Remedial Drilling

Well ID: Borehole Logged by: CD

Client: PWGSC Site Location: AEC 7

SUBSURFACE PROFILE				SAMPLE		VOC Concentration	
Depth	Symbol	Description	Number	Recovery(%)	Type	PPM 10 30 50 70 90	Well Completion Details
ft m 0 - 0		Ground Surface					
1 1 2 1 3 1 1 1 1 1 1 1 1		Fine to Coarse Sand and Gravel grey, loose, dry					
	••••		37-1		SS	20	
2 7 8		*2.4-3m slight HC odour	37-2		SS	20	
9 10 3			37-3		SS	30	Ţ
11 12		*3.5-4.3m strong HC odour	37-4		SS	30	
13 4 14	•	*no odour past 4.3m	37-5		SS	35	
15 16			37-6		SS	30	
17 - 5 17 - 18 - 18 - 18 - 18 - 18 - 18 - 18 -	••••		37-7		SS	70	50
19 20 21		End of Borehole					
22 <u>-</u> 22 <u>-</u> 23 <u>-</u> 7							
24 <u>-</u> 25 <u>-</u>							
Drille	Drilled By: Geotech Drilling Services Gro					n: 0 Hole E	Diameter: 4"
Drill N	Drill Method: ODEX/ Air Rotary Well Diameter:						
Drill [Date:	March 3 2011				Sheet	1 of 1



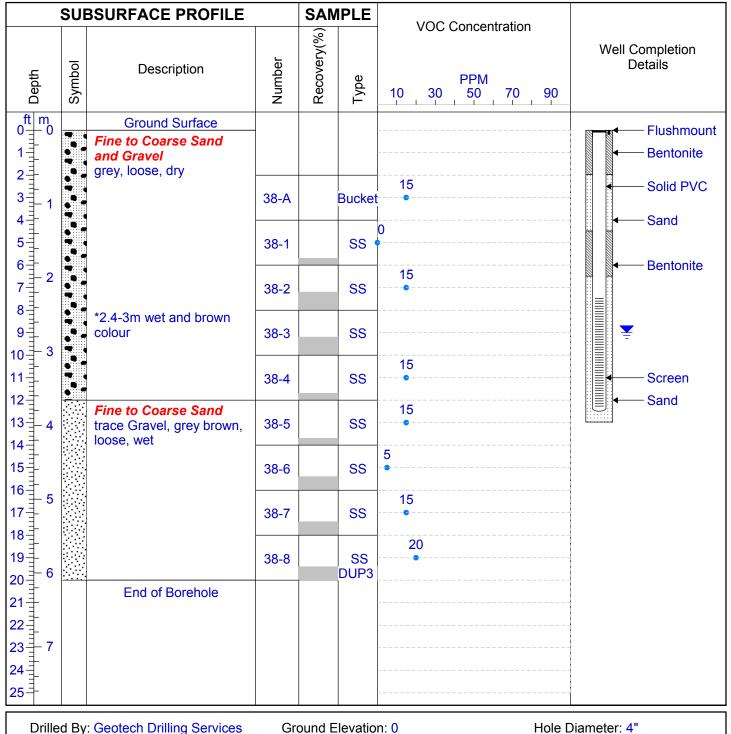
Borehole Log: 7-BH11-38

Project: Post Remedial Drilling

Well ID: 7-MW11-38 Logged by: CD Checked By: MR

Client: PWGSC

Site Location: AEC 7



Drilled By: Geolech Drilling Service

Drill Method: ODEX/ Air Rotary

Drill Date: March 3 2011

Well Diameter: 2" Sheet: 1 of 1



Site Location: AEC 7

Client: PWGSC

Borehole Log: 7-BH11-39

Project: Post Remedial Drilling

Well ID: Borehole Logged by: CD

	SUBSURFACE PROFILE			SAN	IPLE		
Depth	Symbol	Description	Number	Recovery(%)	Type	VOC Concentration PPM 10 30 50 70 90	Well Completion Details
$0 \frac{\text{ft}}{1} 0$		Ground Surface					
1 2 1 1 1 1 1 1 1		Fine to Coarse Sand and Gravel grey, loose, dry					
4 5 6 6	••••		39-1		SS	30	
7-1-2 7-1- 8-1-	•••		39-2		SS		
9- 10		<i>Medium to Coarse</i> <i>Gravely Sand</i> grey, loose, wet	39-3		SS	0	Ţ
11 11 12		*2.4-4.3m HC odour	39-4		SS	20	
13 – 4 14 –		*3.6-4.2m slight odour	39-5		SS	10	
15			39-6		SS	5	
10 <u>+</u> 5 17 <u>+</u> 18 <u>-</u>		*4.8-5.5m odour	39-7		SS O DUP4	0	
19 20 - 6			39-8		SS	20	
20 21 22 23 23 24 24 25		End of Borehole					
Drille	d By	: Geotech Drilling Services	Gr	ound E	levatio	n: 0 Hole D	liameter: 4"
Drill N	Neth	od: ODEX/ Air Rotary				Well D	iameter:
Drill D	Date:	March 3 2011				Sheet:	1 of 1



Borehole Log: 7-BH11-40

Project: Post Remedial Drilling

Well ID: 7-MW11-40 Logged by: CD

Client: PWGSC Site Location: AEC 7

Checked By: MR

	SUBSURFACE PROFILE			SAN	IPLE	VOC Concentration	
Depth	Symbol	Description	Number	Recovery(%)	Type	PPM 10 30 50 70 90	Well Completion Details
ft m 0 = 0 1 = 1 2 = 1 3 = -1		Ground Surface Silt and Fine to Coarse Sand trace Cobbles, dark brown, semi-compact, moist	-				Flushmount Bentonite Solid PVC
4 5 6 1			40-1		SS DUP5	40 •	Sand
7			40-2		SS	45 •	Y
8 ⁻¹⁻ 9 ⁻¹⁻ 10 ⁻¹⁻ 3	••••	Fine to Coarse Sand and Gravel brown, loose, wet	40-3		SS	45	Screen
			40-4		SS	50 •	
12 13 14	••••		40-5		SS	35	
14 15 16			40-6		SS	45 • 45	
17 <u>+</u> 5	•		40-7		SS	•	
	•	*5.2-5.6m trace Gravel	40-8		SS		
18 19 20 	••••		40-9		SS	35	
21 22		End of Borehole					
23 - 7 24 - 7 25 - 7							
Drille	d Bv	: Geotech Drilling Services	Gr	ound E	levatio	n: 0 Hole D	Diameter: 4"
		od: ODEX/ Air Rotary			-		Diameter: 2"

Drill Date: March 4 2011



Site Location: AEC 7

Client: PWGSC

Borehole Log: 7-BH11-41

Project: Post Remedial Drilling

Well ID: 7-MW11-41 Logged by: CD

	SUBSURFACE PROFILE		SAN	IPLE			
Depth	Symbol	Description	Number	Recovery(%)	Type	VOC Concentration PPM 10 30 50 70 90	Well Completion Details
_ft m		Ground Surface					
ft m 0 0 0 1 0		Silt and Fine to Coarse	1				Flushmount
2		Sand trace Cobbles, dark					Bentonite
		brown, semi-compact,					Solid PVC
3-1		moist					
						35	
5			41-1		SS		
						45	
/ +			41-2		SS		Sand
8	•	Fine to Coarse Sand				45	← Sand ← Screen ▼
9	•	and Gravel brown, loose, wet	41-3		SS		¥
		brown, loose, wet				10	
	•••		41-4		SS		
12						40	<u></u>
13 4			41-5		SS		
14						35	
15	•		41-6		SS		
						35	
17	•••	*5.2-5.6m trace Gravel	41-A		Bucket		
18-	•••						
$19\frac{1}{10} = 6$							
		End of Borehole	-				
21							
22							
23 7							
24							
25-							
Drille	ed By	: Geotech Drilling Services	Gro	ound E	Elevatio	n: 0 Hole E	Diameter: 4"
Drill	Meth	od: ODEX/ Air Rotary				Well D	Diameter: 2"
Drill	Date:	March 4 2011				Sheet	: 1 of 1



Borehole Log: 7-BH11-42

Project: Post Remedial Drilling

Well ID: 7-MW11-42 Logged by: CD Checked By: MR

Client: PWGSC Site Location: AEC 7

SUBSURFACE PROFILE SAMPLE **VOC Concentration** Recovery(%) Well Completion Symbol Number Details Description Depth Type **PPM** 10 30 50 70 90 **Ground Surface** Flushmount • Fine to Coarse Sand •• Bentonite and Gravel 15 brown, loose, dry 2 42-A **Bucket** Solid PVC 3 Sand 1 4 *1.8-6m dark grey 15 5 42-1 **Bentonite** SS 6 10 2 7 Sand 42-2 SS 8 Screen 50 -9 *2.4-3m moist 42-3 Ŧ SS 3 10 35 11 42-4 SS 12 *3-6m wet 13 42-5 SS 4 DUP9 14 20 15 42-6 SS 16 5 17 18 35 19 42-7 SS - 6 20 End of Borehole 21 **22**– 23 7

Drilled By: Geotech Drilling Services

Ground Elevation: 0

Hole Diameter: 4"

Drill Method: ODEX/ Air Rotary

Drill Date: March 5 2011

24 – 25 –

Well Diameter: 2"



Project: Watson Lake AEC 7

Project No: 639-1302

Client: PWGSC

Site Location: Watson Lake Airport

Well ID:

Logged by: CMc

	SUBSURFACE PROFILE			SAN	IPLE	VOC Concentration	
Depth	Symbol	Description	Number	Recovery(%)	Type	PPM 10 30 50 70 90	Well Completion Details
ft m 0 − 0		Ground Surface					
		SAND Sand, trace gravel, cobables, brown, dry, compact	SA-1			0.0	J-Plug Concrete Backfill
3 - 1 4			SA-2			1.9	Solid Pipe
1 1 2 1 2 3 1 4 1 4 1 1 4 1 1 1 1 5 1 1 1 1 2 2 8 1 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1		Trace gravel @ 5 ft Moist @ 6 ft	SA-3			2.2	<pre></pre>
8 9 10 3			SA-4			2.7	▲Sand
10		Wet @ 10.5 ft	SA-5			-11-2	7.5-12.5 ft Screen
13 4 14		SAND Sand, grey, medium, wet, loose	SA-6			25.4	
15 16 17 17		Coarse @ 17.5 ft	SA-7			4.3 •	<pre></pre>
18 19 20			SA-8			1.2	<backfill< td=""></backfill<>
20		End of Borehole					
Drill I	Meth	: Geotech Drilling od: Odex Dec. 9, 2013	Gr	ound E	levatio	Well	Diameter: 4" Diameter: 2" t: 1 of 1
	Dale.	060. 3, 2013				3166	



Project: Watson Lake AEC 7

Project No: 639-1302

Client: PWGSC

Well ID: Logged by: CMc

Checked By: MC

Site Location: Watson Lake Airport

SUBSURFACE PROFILE SAMPLE **VOC Concentration** Recovery(%) Well Completion Symbol Number Details Description Depth Type PPM 30 50 70 90 10 $0\frac{\text{ft}}{\pm}0$ **Ground Surface** J-Plug SAND AND GRAVEL 1-Trace silt, brown, dry, 2.1 Concrete SA-1 compact 2 Backfill 3 - 1 1.0 SA-2 4 Ξ 5 • Solid Pipe Moist @ 6 ft 6 6.4 Bentonite SA-3 2 7 -8 2.3 SA-4 9 Sand 3 10 SILTY SAND Brown, moist, dense 11 1.1 SA-5 12 • 10-15 ft Wet @ 11 ft Screen SAND AND GRAVEL 13 - 4 Trace cobble, coarse, 0.0 SA-6 brown, wet, compact 14 -15· 0.3 16 SA-7 5 Bentonite 17- Backfill 18-0.0 SA-8 19 6 20 End of Borehole 21 Drilled By: Geotech Drilling Ground Elevation: 0 Hole Diameter: 4" Drill Method: Odex Well Diameter: 2" Drill Date: Dec. 9, 2013 Sheet: 1 of 1



Project: Watson Lake AEC 7

Site Location: Watson Lake Airport

Client: PWGSC

Project No: 639-1302

Well ID:

Logged by: CMc

SUBSURFACE PROFILE				SAN	IPLE	VOC Concentratio	'n		
Depth	Symbol	Description	Number	Recovery(%)	Type	PPM 10 30 50 70	Well C	ompletion etails	
ft m 0 - 0		Ground Surface							
2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		SAND AND GRAVEL Trace cobble, trace silt, brown, dry, compact	SA-1			3.2		 J-Pluq Concrete Backfill 	
4		SAND Trace gravel, medium- coarse, brown, moist, soft	SA-2			0.0		Bentonite Solid Pipe	
5 6 7 7 8 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			SA-3			0.0			
			SA-4			0.0		 Sand 	
10 ⁻¹ -3 11 ⁻¹ -1 12 ⁻¹ -1		Wet @ 10 ft	SA-5			1.8		• 7.5-13.5 ft Screen	
13 4 14 1 15 -			SA-6			0.0		■ ■Bentonite	
16 		No sample recovery for SA-7	SA-7						
18 19 20			SA-8			0.0		<backfill< td=""></backfill<>	
20- <u>-</u> 21		End of Borehole							
Drille	Drilled By: Geotech Drilling Grou					n: 0	Hole Diameter: 4"		
Drill N	Drill Method: Odex						Well Diameter: 2"		
Drill Date: Dec. 9, 2013 Sheet: 1 of 1									



Project: Watson Lake AEC 7

Site Location: Watson Lake Airport

Client: PWGSC

Project No: 639-1302

Well ID:

Logged by: CMc Checked By: MC

SUBSURFACE PROFILE SAMPLE **VOC Concentration** Recovery(%) Well Completion Number Symbol Details Description Depth Type PPM 10 30 50 70 90 I. $0\frac{\text{ft}}{\pm}0$ **Ground Surface** J-Plug SAND AND GRAVEL Concrete 1-Trace cobbles, trace silt, brown, dry, dense 2 Bentonite Solid Pipe 3 - 1 3.2 SA-1 4 Moist @ 5 ft Ξ 5 Sand 6 4.3 SA-2 2 7 SAND AND GRAVEL Trace cobbles, coarse 5-10 ft 8 • Screen 9 Wet @ 7.5 ft No recovery between 7.5-3 10 19 ft 11 90 Slight HC odour @ 10.5-SA-3 11.5 ft 12 Bentonite 13-]___ 4 7.5 SA-4 14 -- 🔵 15 Backfill/Sand 5.0 16 SA-5 5 17-18-4.5 SA-6 19 6 20 End of Borehole 21 Drilled By: Geotech Drilling Ground Elevation: 0 Hole Diameter: 4" Drill Method: Odex and Split Spoon Well Diameter: 2" Drill Date: Dec. 8, 2013 Sheet: 1 of 1



Project: Watson Lake Delineation

Client: PWGSC

Project No: 639-1302

Site Location: Watson Lake Airport

Well ID: Logged by: CMc

SUBSURFACE PROFILE				SAM	IPLE	VOC Concentration	
Depth	Symbol	Description	Number	Recovery(%)	Type	VOC Concentration	Well Completion Details
ft m 0 _ 0		Ground Surface					
2 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1		SAND AND GRAVEL Trace cobbles, trace silt, brown, dry, compact	SA-1			3.2	J-Plug Concrete
4		SAND trace gravel, medium - coarse, brown, moist, soft	SA-2			0	Solid Pipe
5 6 7 7 8 9			SA-3			0.5	
8 ⁻¹ 9 ⁻¹ 10 ⁻¹ 3			SA-4			1.8	7 - 12 ft Screen
11 11 12		wet @ 10 ft	SA-5			2	Sand
13 4 14 1 15			SA-6			25	Bentonite
16 <u>5</u> 17 <u>5</u>							<backfill< td=""></backfill<>
18 19 20			SA-8			1	
20 <u>+</u> 21 +		End of Borehole					
	-	: Geotech Drilling	Gr	ound E	levatio		Diameter: 4"
Drill Method: Odex and Split SpoonWell Diameter: 2"Drill Date: December 9, 2013Sheet: 1 of 1							



Project: Watson Lake AEC 7

Project No: 639-1302

Well ID:

Client: PWGSC

Site Location: Watson Lake Airport

Logged by: CMc

SUBSURFACE PROFILE				SAN	IPLE		
Depth	Symbol	Description	Number	Recovery(%)	Type	VOC Concentration PPM 10 30 50 70 90	Well Completion Details
$0 \frac{\text{ft}}{\pm} 0$		Ground Surface					
		SAND AND GRAVEL					J-Plug
1 1 1		Trace cobbles, fill, brown	SA-1			0.7	■Backfill
2 3 4 4 5 6 7 8 9							
3-1						0.1	
4			SA-2				Bentonite
5							Solid Pipe
62			SA-3			6.8 •	
7-							
8						3.0	Sand
9-1		Wet @ 9.5 ft	SA-4			•	
10 - 3		Wet @ 9.5 ft					• 7-12 ft
							Screen
11			SA-5			•	
12							
13 _ 4						60.1	
14			SA-6			•	Bentonite
15							
16 - 5		SAND AND GRAVEL	SA-7			•18.1	
17		Grey, coarse, wet, loose					
18						6.1	 Backfill
19			SA-8			•	
20 - 6							
		End of Borehole					
21-							
Drille	d By	: Geotech Drilling	Gr	ound E	levatio	n: 0 Hole I	Diameter: 4"
Drill N	/leth	od: Odex				Well [Diameter: 2"
Drill E	Date:	Dec. 8, 2013				Sheet	: 1 of 1



Project: Watson Lake Delineation

Client: PWGSC

Project No: 639-1401

Site Location: Watson Lake Airport

Well ID: Logged by: CMc

SUBSURFACE PROFILE			_	SAN	IPLE	VOC Concentration	
Depth	Symbol	Description	Number	Recovery(%)	Type	РРМ	Well Completion Details
ft m 0 _ 0		Ground Surface					
0 1 1 2		SAND AND GRAVEL Trace cobbles, brown, dry, loose					J-Plug Concrete
3		Odex to 2.5 to seat					
4		casing	SA-1			0.0	Solid Pip
5 6 2 2		Moist @ 6 ft	SA-2			0.0	
7-		Organic Layer 1" @ 6 ft					
8 9 1		Wet @ 7 ft	SA-3			0.6	5-10 ft Screen
10 ⁻¹ -3 11 ⁻¹ - 12 ⁻¹ -		SAND Some gravel, trace cobbles, grey-black, coarse, wet, loose	SA-4			2.1	
13 – 4 14 – 1 15 –		Limited recovery: 1 jar	SA-5		DUP 1	25	
10 16 17 17 18			SA-6			0.0	■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■
19			SA-7			0.5	
20-1-0 21-		End of Borehole					
Drilled By: Geotech Drilling				ound E	levatio	n: 0 Ho	le Diameter: 4"
Drill N	od: Odex and Split Spoon				We	ell Diameter: 2"	
Drill D	Date:	Dec. 10, 2013				Sh	eet: 1 of 1



Project: Watson Lake Delineation

Client: PWGSC

Project No: 639-1302

Site Location: Watson Lake Airport

Well ID: Logged by: CMc

SUBSURFACE PROFILE			SAM	IPLE	VOC Concentration			
Depth	Symbol	Description	Number	Recovery(%)	Type	PPM 10 30 50 70 90	Well Comple Details	etion
$\begin{array}{c c} ft m \\ 0 \\ \hline \pm \end{array} \end{array} = 0$		Ground Surface						
2 1 2		SAND AND GRAVEL Some silt/top soil, dry, loose						J-Plua Concrete Bentonite
3-1		Odex to 2 ft to seat casing	SA-1			0.5		Solid Pipe
6 		SAND	SA-2			0.6		
1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 2 3 1 1 1 2 2 3 1 1 1 2 1 1 1 1		Some gravel, black/brown, coarse, wet, loose	SA-3			1.4		5-10 ft Screen
11 12			SA-4			1.1		Bentonite
13 4 14 1 15			SA-5			1.6		
16 5 17			SA-6			1.0		Backfill
18 19 20 			SA-7			1.3		
21 22		End of BH @ 22.5 ft due	SA-8			0.0		
23 - 7 24		End of Borehole						
Drilled By: Geotech Drilling			Gr	ound E	levatio	n: 0 Hole	e Diameter: 4"	
Drill N	Drill Method: Odex and Split Spoon					Wel	I Diameter: 2"	
Drill Date: Dec. 10, 2013						She	et: 1 of 1	



Project: Watson Lake Delineation

Client: PWGSC

Project No: 639-1401

Site Location: Watson Lake Airport

Well ID: Logged by: CMc

SUBSURFACE PROFILE				SAN	SAMPLE VOC Concentration				
Depth	Symbol	Description	Number	Recovery(%)	Type	PPM 10 30 50 70 90	Well Completion Details		
ft_m 00		Ground Surface							
2 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1		SAND AND GRAVEL Trace cobbles, brown, dry, loose					J-Plug Concrete Bentonite		
4			SA-2			0.0	Solid Pipe		
5 6 7 8 9 9		Moist @ 7.5 ft Coarse @ 8 ft	SA-3			0.5			
			SA-4			32	7 - 12 ft Screen		
10 ⁻¹ -3 11 ⁻¹ - 12 ⁻¹ -1		Slight Sheen @ 11 ft	SA-5			10	Sand		
13 4 14 4 15 4			SA-6			0.8	Bentonite		
16 16 17 17			SA-7			0.0	<backfill< td=""></backfill<>		
18 ⁻¹ 19 ⁻¹ 20 ⁻¹ 6			SA-8			0.4			
20		End of Borehole							
		Geotech Drilling	Gr	ound E	levatio		Diameter: 4"		
Drill Method: Odex and Split SpoonWell Diameter: 2"Drill Date: January 23, 2014Sheet: 1 of 1									



Project No: 639-1401 Borehole Log: MW 13-7-4

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