

APPENDIX B

Soil Borehole Logs

Project No:

Project: Alaska Highway Maintenance Camps

Client:

Location: Steamboat

Log of Borehole: SB-01

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration		Lab Analysis	
Depth	Symbol	Description	Number	Type	Recovery	ppm			
						100	200		300
						%LEL			
						20	40	60	80
0		Ground Surface							
		Clay. Domestic debris.	1						
1		Clay with trapped water. Discoloration due to free product. Domestic debris.	2						
2		Clay and gravel. Sheen on trapped water.	3						
3									
4									
5									
6									

Drill Method:

Drill Date:

Hole Size:



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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps




Client:

Location: Steamboat

Log of Borehole: SB-02

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration		Lab Analysis	
Depth	Symbol	Description	Number	Type	Recovery	ppm			
						100	200		300
						%LEL			
						20	40	60	80
0		Ground Surface							
		Pit run fill material. No odour. No debris.	1						
1									
		Pit run fill material. No odour. No debris.	2						
2									
		Clay and organics. No odour. No debris.	3						
3									
4									
5									
6									

Drill Method:

Drill Date:

Hole Size:



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Project No:

Project: Alaska Highway Maintenance Camps

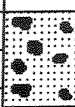

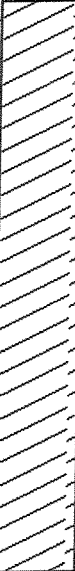
Client:

Location: Steamboat

Log of Borehole: SB-03

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration ppm		Lab Analysis		
Depth	Symbol	Description	Number	Type	Recovery	100	200		300	400
						%LEL				
						20	40	60	80	
0		Ground Surface Pit run fill materials. No odour. No debris.	1							
1		Clay. No odour. Crushed drum at 1.0 m. Parent geological material at 3.5 m.	2							
2										
3										
4										
5										
6										

Drill Method:

Drill Date:

Hole Size:



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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps

Client:

Location: Steamboat

Log of Borehole: SB-04

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration	Lab Analysis
Depth	Symbol	Description	Number	Type	Recovery	ppm	
						100 200 300 400	
						%LEL	
						20 40 60 80	
0		Ground Surface					
		Clay. No debris. No odour.					
1			1				
2							
3							
4							
5							
6							

Drill Method:

Drill Date:

Hole Size:



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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps

Client:

Location: Steamboat

Log of Borehole: SB-05

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration		Lab Analysis	
Depth	Symbol	Description	Number	Type	Recovery	ppm			
						100	200		300
						%LEL			
						20	40	60	80
0		Ground Surface							
		Pit run fill materials. No debris. No odour.	1						
1		Dense Clay. No debris. No odour.							
2			2						
3									
4									
5									
6									

Drill Method:

Drill Date:

Hole Size:



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Project No:

Project: Alaska Highway Maintenance Camps


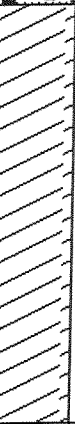
Client:

Location: Steamboat

Log of Borehole: SB-06

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration ppm		Lab Analysis		
Depth	Symbol	Description	Number	Type	Recovery	100	200		300	400
						%LEL				
						20	40	60	80	
0		Ground Surface								
		Pit run fill material. No debris. No odour.	1							
1		Dense Clay. Very odorous. Some rebar debris.								
2			2							
3										
4										
5										
6										

Drill Method:

Drill Date:

Hole Size:



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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps

Client:

Location: Steamboat

Log of Borehole: SB-07

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration ppm		Lab Analysis		
Depth	Symbol	Description	Number	Type	Recovery	100	200		300	400
						%LEL				
						20	40	60	80	
0		Ground Surface								
0		Pit run fill material. Odour resembling diesel fuel.	1							
1		Clay with gravel. No odour. No debris.	2							
2		Fractured parent geological material. No debris. No odour.								
3			3							
4										
5										
6										

Drill Method:

Drill Date:

Hole Size:



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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps

Client:

Location: Steamboat

Log of Borehole: SB-08

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration		Lab Analysis	
Depth	Symbol	Description	Number	Type	Recovery	ppm			
						100	200		300
						%LEL			
						20	40	60	80
0		Ground Surface							
1		Pit run fill material. No odour. No debris.	1						
2									
3									
3.2		Large rock at 3.2 m. Excavation stopped.							
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Drill Method:

Drill Date:

Hole Size:



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Project No:

Project: Alaska Highway Maintenance Camps

Client:

Location: Steamboat

Log of Borehole: SB-09

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration		Lab Analysis		
Depth	Symbol	Description	Number	Type	Recovery	ppm				
						100	200		300	400
						%LEL				
						20	40	60	80	
0		Ground Surface								
1		Pit run fill material. No odour. No debris. Black material, possibly oil - no odour - at 2.5 m.	1							
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

Drill Method:

Drill Date:

Hole Size:



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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps

Client:

Location: Steamboat

Log of Borehole: SB-10

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration		Lab Analysis	
Depth	Symbol	Description	Number	Type	Recovery	ppm			
						100	200		300
						%LEL			
						20	40	60	80
0		Ground Surface							
1		Pit run fill material. Sample taken for salt concentration analysis. Creosote lumber encountered.	1						
2									
3		Fill material and fractured parent geological material. Large fractured rock at 4 m. No debris. No odour.							
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Drill Method:

Drill Date:

Hole Size:



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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps




Client:

Location: Steamboat

Log of Borehole: SB-11

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration	Lab Analysis
Depth	Symbol	Description	Number	Type	Recovery	ppm	
						%LEL	
						100 200 300 400	
						20 40 60 80	
0		Ground Surface					
		Pit run fill material. Sample taken for salinity analysis. Bedrock after 0.1 m. No odour. No debris.	1				
2							

Drill Method:

Drill Date:

Hole Size:



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Project No:

Project: Alaska Highway Maintenance Camps

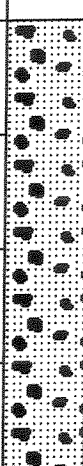

Client:

Location: Steamboat

Log of Borehole: SB-12

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration	Lab Analysis
Depth	Symbol	Description	Number	Type	Recovery	ppm	
						%LEL	
						100 200 300 400	
						20 40 60 80	
0		Ground Surface Pit run fill material. Sample taken for salinity at 0.5 m. Bedrock at 0.8 m.	1				
1							
2							

Drill Method:

Drill Date:

Hole Size:



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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps

Client:

Location: Steamboat

Log of Borehole: SB-13

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration	Lab Analysis
Depth	Symbol	Description	Number	Type	Recovery	ppm	
						%LEL	
0		Ground Surface					
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

Drill Method:

Drill Date:

Hole Size:



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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps

Client:

Location: Steamboat

Log of Borehole: SB-14

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration		Lab Analysis	
Depth	Symbol	Description	Number	Type	Recovery	ppm			
						100	200		300
						%LEL			
						20	40	60	80
0		Ground Surface							
1		Native soils. Sample taken at 3.2 m has definite hydrocarbon odour. No debris.	1						
2									
3									
4		Silt, gravel and small amounts of clay. Bedrock at 4.6 m. No apparent odour.	2						
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Drill Method:

Drill Date:

Hole Size:



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Project No:

Project: Alaska Highway Maintenance Camps

Client:

Location: Steamboat

Log of Borehole: SB-15

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration		Lab Analysis	
Depth	Symbol	Description	Number	Type	Recovery	ppm			
						100	200		300
						%LEL			
						20	40	60	80
0		Ground Surface							
1		Clayey silt. Slight hydrocarbon odour. No debris.	1						
2		Clayey silt. Slight hydrocarbon odour. No debris.	2						
3		Clayey silt. No apparent odour. No debris.	3						
4		Clay, red in color. No apparent odour. Bedrock at 4.8 m.	4						
5									
6									

Drill Method:

Drill Date:

Hole Size:



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Project No:

Project: Alaska Highway Maintenance Camps


Client:

Location: Steamboat

Log of Borehole: SB-16

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration		Lab Analysis	
Depth	Symbol	Description	Number	Type	Recovery	ppm			
						100	200		300
						%LEL			
						20	40	60	80
0		Ground Surface							
		Rock, clay, silt mix. No apparent odour.	1						
1		Rock, clay, silt mix. No apparent odour.	2						
2		Rock, clay, silt mix. No apparent odour.	3						
3									
4									
5									
6									

Drill Method:

Drill Date:

Hole Size:



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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps


Client:

Location: Steamboat

Log of Borehole: SB-17

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration	Lab Analysis
Depth	Symbol	Description	Number	Type	Recovery	ppm	
						100 200 300 400	
						%LEL	
						20 40 60 80	
0		Ground Surface					
		Clays with gravel. Slight hydrocarbon odour. Staining on soils.	1				
1		Clays with gravel. Slight hydrocarbon odour. Staining on soils.	2				
2							
3							
4							
5							
6							

Drill Method:

Drill Date:

Hole Size:



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Project No:

Project: Alaska Highways Maintenance Camps


Client:

Location: Steamboat

Log of Borehole: SB-18

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration		Lab Analysis	
Depth	Symbol	Description	Number	Type	Recovery	ppm			
						100	200		300
						%LEL			
						20	40	60	80
0		Ground Surface							
		Clay with gravel. No apparent odour.	1						
1		Clay with gravel. No apparent odour. Bedrock at 3.6 m.							
2			2						
3									
4									
5									
6									

Drill Method:

Drill Date:

Hole Size:



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Datum:

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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps

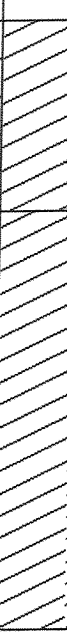
Client:

Location: Steamboat

Log of Borehole: SB-19

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration ppm	Lab Analysis
Depth	Symbol	Description	Number	Type	Recovery	100 200 300 400	
						%LEL 20 40 60 80	
0		Ground Surface					
		Hard pack clay. Hydrocarbon fuel odour.	1				
1			Hard pack clay. No apparent odour. Soils appeared stained.				
2			2				
3							
4							
5							
6							

Drill Method:

Drill Date:

Hole Size:



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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps

Client:

Location: Steamboat

Log of Borehole: SB-20

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration		Lab Analysis	
Depth	Symbol	Description	Number	Type	Recovery	ppm			
						100	200		300
						%LEL			
						20	40	60	80
0		Ground Surface							
		Hard pack clay. No apparent odour. Sample taken along contour of bedrock. Bedrock at 1.8 m.							
1			1						
2									
3									

Drill Method:

Drill Date:

Hole Size:



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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps

Client:

Location: Steamboat

Log of Borehole: SB-21

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration		Lab Analysis	
Depth	Symbol	Description	Number	Type	Recovery	ppm			
						100	200		300
						%LEL			
						20	40	60	80
0		Ground Surface							
1		Native soils, red and grey clays. Household debris, wire debris at 0.5 m.	1						
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Drill Method:

Drill Date:

Hole Size:



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Project No:

Project: Alaska Highway Maintenance Camps

Client:

Location: Steamboat

Log of Borehole: SB-22

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration		Lab Analysis	
Depth	Symbol	Description	Number	Type	Recovery	ppm			
						100	200		300
						%LEL			
						20	40	60	80
0		Ground Surface							
		Clay intermixed with shale. 205 L drum debris as well as oil can debris.	1						
1		Clay and shales. More debris of similar nature. Bedrock at 3.5 m.							
2			2						
3									
4									
5									
6									

Drill Method:

Drill Date:

Hole Size:



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Sheet: 1 of 1

Project No:

Project: Alaska Highway Maintenance Camps


Client:

Location: Steamboat

Log of Borehole: SB-23

Enclosure:

Technician: Laurie Washington

SUBSURFACE PROFILE			SAMPLE			VOC Concentration ppm	Lab Analysis
Depth	Symbol	Description	Number	Type	Recovery	100 200 300 400	
						%LEL 20 40 60 80	
0		Ground Surface					
		Clay, gravel and shale. No apparent odour.	1				
1		Clay, shale. Bedrock at 3.1 m. No apparent odour.					
2			2				
3							
4							
5							
6							

Drill Method:

Drill Date:

Hole Size:



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APPENDIX C
BOREHOLE LOGS

CLIENT: PWGSC			BOREHOLE LOG		SAMPLE LOCATION:				
PROJECT: Steamboat Maintenance Camp			BOREHOLE No. URSBH-01		ELEVATION: Top of Casing:				
JOB#: 39548674					Ground:				
DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM	WELL INSTALLATION DETAILS
0.0			Ground Surface	0.0				0 200 600 1000	
0.0		SW	SAND AND GRAVEL, some silt, some organics, brown, frozen, firm	0.3	URSBH-01 0.2	Grab	5		
1.0		GM	SAND AND SILT, with gravel, medium to coarse sand, brown, moist, soft						
2.0					URSBH-01 0.8	Grab	300		
3.0									
4.0				1.4					
5.0			SILT, some sand, some gravel, cobbles from 2.1-2.4m, grey-brown, moist, soft		URSBH-01 1.7	Grab	200		
6.0		ML							
7.0									
8.0					URSBH-01 2.6	Grab	150		
9.0									
10.0				3.0					
11.0			SILT, some gravel, some sand, brown, moist, firm		URSBH-01 3.5	Grab	95		
12.0		ML							
13.0									
14.0					URSBH-01 4.3	Grab	25		
15.0			End of Log	4.5					
16.0									

DRILLING CONTRACTOR: Uniwide Drilling Ltd

DRILLING METHOD: Solid Stem Auger

DATE: November 23, 2005

LOGGED BY: Dan McCrank

URS

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CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-02	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH		USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM				WELL INSTALLATION DETAILS
ft	m								0	200	600	1000	
0.0	0.0		SW	SAND AND GRAVEL, some silt, fine to coarse sand, brown, frozen, hard	0.0				150				
1.0					URSBH-02 0.3	Grab							
2.0							0.6						
3.0	1.0		SW	SAND AND GRAVEL, some silt, fine to coarse sand, brown, dry, compact					25				
4.0					URSBH-02 0.9	Grab							
5.0													
6.0					URSBH-02 1.8 + DUP1	Grab							
7.0	2.0						2.3						
8.0			SM	SILT, with sand, some clay, some gravel, brown, moist, firm, refusal at 3.9m					40				
9.0					URSBH-02 2.5	Grab							
10.0	3.0												
11.0					URSBH-02 3.4	Grab							
12.0							3.9						
13.0	4.0			End of Log									
14.0													
15.0													
16.0													



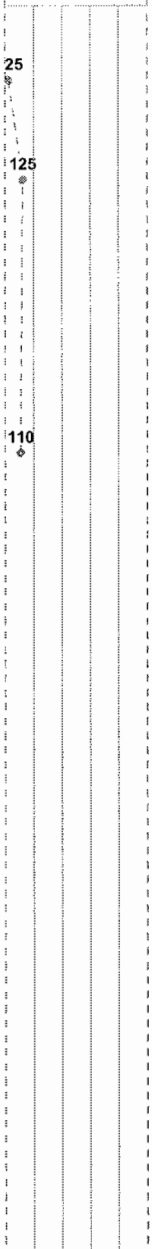






DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 23, 2005 LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-03	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH		USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM				WELL INSTALLATION DETAILS	
ft	m								0	200	600	1000		
0.0	0.0		SW	SAND AND GRAVEL, some silt, brown, moist, soft	0.0				60					
1.0					URSBH-03 0.3	Grab								
2.0					URSBH-03 0.7	Grab								
3.0	1.0													
4.0			ML	SILT, grey 1.1-1.2m, brown 1.2-2.1m, very moist, soft	1.1				60					
5.0					URSBH-03 1.3	Grab								
6.0														
7.0	2.0													
8.0			ML	SILT, brown, moist, firm, refusal at 4.0m	2.1	URSBH-03 2.2	Grab		205					
9.0														
10.0	3.0													
11.0					URSBH-03 3.3	Grab		190						
12.0														
13.0	4.0			End of Log	4.0	URSBH-03 4.0	Grab		125					
14.0														
15.0														
16.0														

DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 23, 2005 LOGGED BY: Dan McCrank	 PAGE 1 of 1
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CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-04	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH		USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM				WELL INSTALLATION DETAILS
ft	m								0	200	600	1000	
0.0	0.0		SW	SAND AND GRAVEL, fine to coarse sand, brown, dry, loose	0.0				25				
1.0					URSBH-04 0.3	Grab							
2.0					URSBH-04 0.7	Grab							
3.0	1.0												
4.0			SM	SAND, with silt, some gravel, fine to coarse sand, brown, firm, moist	1.2				110				
5.0													
6.0					URSBH-04 1.8 + DUP2	Grab							
7.0	2.0												
8.0			-	ROCK, no recovery	2.5								
9.0													
10.0	3.0			End of Log	2.9								
11.0													
12.0													
13.0	4.0												
14.0													
15.0													
16.0													

DRILLING CONTRACTOR: **Uniwide Drilling Ltd**

DRILLING METHOD: **Solid Stem Auger**

DATE: **November 23, 2005**

LOGGED BY: **Dan McCrank**



CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-05	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM 0 200 600 1000	WELL INSTALLATION DETAILS
0.0			Ground Surface	0.0					
0.0	SW		SAND , some gravel, fine to medium sand, brown, dry, loose						
1.0									
2.0									
3.0									
4.0			ROCK, no recovery, refusal at 1.4m	1.2					
5.0			End of Log	1.4					
6.0									
7.0									
8.0									
9.0									
10.0									
11.0									
12.0									
13.0									
14.0									
15.0									
16.0									





DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 23, 2005 LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-06	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM 0 200 600 1000	WELL INSTALLATION DETAILS
0.0			Ground Surface	0.0					
0.0	SW		SAND AND GRAVEL , some cobbles, fine to medium sand, brown, dry, loose						
1.0									
2.0									
3.0									
1.0				1.4	URSBH-06 1.4	Grab	X	80	
4.0	SM		SAND , with silt, some gravel, fine to medium sand, brown-grey, moist, very firm, refusal at 2.9m						
5.0									
6.0									
7.0									
2.0					URSBH-06 2.1	Grab	X	30	
8.0									
9.0									
3.0				2.9	URSBH-06 2.8	Grab	X	40	
10.0			End of Log						
11.0									
12.0									
13.0									
4.0									
14.0									
15.0									
16.0									







DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 23, 2005 LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-07	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH		USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM	WELL INSTALLATION DETAILS
0.0				Ground Surface	0.0				0 200 600 1000	
0.0			SW	SAND, some gravel, mostly fine sand, some medium sand, light brown, dry, soft, refusal at 1.2m (Sandstone Bedrock)					55	<div></div>
1.0					URSBH-07 0.3	Grab				
2.0										
3.0					URSBH-07 0.8	Grab		25		
1.0										
4.0				End of Log	1.2	URSBH-07 1.1 + DUP3	Grab		20	
4.0										
5.0										
6.0										
2.0										
7.0										
8.0										
9.0										
3.0										
10.0										
11.0										
12.0										
13.0										
4.0										
14.0										
15.0										
16.0										

DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 23, 2005 LOGGED BY: Dan McCrank
PAGE 1 of 1

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-08	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH		USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM				WELL INSTALLATION DETAILS
ft	m								0	200	600	1000	
0.0	0.0		SW	SAND AND GRAVEL, some silt, brown, moist, firm	0.0								
1.0					URSBH-08 0.2	Grab		15					
2.0					URSBH-08 0.6	Grab		20					
3.0	1.0												
4.0					URSBH-08 1.3	Grab		125					
5.0													
6.0													
7.0	2.0				2.1	URSBH-08 2.0	Grab		140				
8.0			SS/SH	BEDROCK, sandstone/shale, dry, hard									
9.0													
10.0	3.0			End of Log	2.7								
11.0													
12.0													
13.0	4.0												
14.0													
15.0													
16.0													

DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 23, 2005 LOGGED BY: Dan McCrank	 PAGE 1 of 1
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CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-09	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM 0 200 600 1000	WELL INSTALLATION DETAILS
0.0			Ground Surface	0.0					
0.0			SILT , some gravel, some sand, light brown, moist, firm						
1.0		ML			URSBH-09 0.3 + DUP4	Grab	✕	140	
2.0				0.6					
3.0			SILT , some sand, grey, moist, soft		URSBH-09 0.9	Grab	✕	275	
4.0									
5.0		ML			URSBH-09 1.5	Grab	✕	660	
6.0									
7.0									
8.0				2.6					
9.0		SW	SAND , some silt, fine grained sand, brown, moist, soft		URSBH-09 2.8	Grab	✕	225	
10.0				2.9					
11.0			SILT AND SAND , fine grained sand, light brown, moist, firm		URSBH-09 3.4	Grab	✕	175	
12.0		SM							
13.0									
14.0					URSBH-09 4.3	Grab	✕	130	
15.0				4.5					
16.0			SILT AND SAND , dry, loose, low recovery, refusal at 5.5m						
17.0		SM			URSBH-09 5.5	Grab	✕		
18.0			End of Log	5.5					

DRILLING CONTRACTOR: **Uniwide Drilling Ltd**






DRILLING METHOD: **Solid Stem Auger**

DATE: **November 23, 2005**

LOGGED BY: **Dan McCrank**



CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-10	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH		USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM	WELL INSTALLATION DETAILS		
ft	m								0		200	600
0.0	0.0	GM		SAND AND GRAVEL, with silt, coarse to fine sand, brown, moist, hard	0.0							
1.0								URSBH-10 0.4	Grab			100
2.0												
3.0	1.0							URSBH-10 0.9	Grab			75
4.0												
5.0								URSBH-10 1.5	Grab			70
6.0												
7.0	2.0											
8.0								URSBH-10 2.5	Grab			40
9.0												
10.0	3.0											
11.0												
12.0												
13.0	4.0					URSBH-10 3.9	Grab		65			
14.0												
15.0				End of Log	4.5							
16.0												

DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 23, 2005 LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-11	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM 0 200 600 1000	WELL INSTALLATION DETAILS
0.0			Ground Surface	0.0					
0.0	GM		SAND AND GRAVEL , with silt, fine to coarse sand, brown, moist, very firm						
1.0									
2.0									
3.0									
4.0									
5.0									
6.0									
7.0									
8.0									
9.0									
10.0									
11.0									
12.0									
13.0									
14.0									
15.0									
16.0									

DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 23, 2005 LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-12	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH		USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM 0 200 600 1000	WELL INSTALLATION DETAILS		
0.0	0.0		GM	SAND, SILT, AND GRAVEL, rocks at 2.4m, fine to medium sand, brown, moist, soft	0.0							
1.0							URSBH-12 0.2	Grab				200
2.0							URSBH-12 0.7	Grab				70
3.0	1.0											
4.0												
5.0												
6.0						URSBH-12 1.8	Grab		80			
7.0	2.0											
8.0												
9.0						URSBH-12 2.6	Grab		100			
10.0	3.0											
11.0												
12.0				End of Log	3.6							
13.0	4.0											
14.0												
15.0												
16.0												

DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 24, 2005 LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-13	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH		USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM				WELL INSTALLATION DETAILS
ft	m								0	200	600	1000	
0.0	0.0		GM	SILT, SAND, AND GRAVEL, some boulders, fine to medium sand, brown, moist, soft	0.0				0				
1.0					URSBH-13 0.3	Grab							
2.0					URSBH-13 0.7	Grab				35			
3.0	1.0												
4.0			ML	SILT, some gravel, grey, moist, soft	1.2				30				
5.0					URSBH-13 1.4	Grab							
6.0			GM	SAND, SILT, AND GRAVEL, some cobbles, fine to medium sand, brown, moist, firm, refusal at 3.6m	1.5								
7.0	2.0												
8.0					URSBH-13 2.5	Grab				0			
9.0													
10.0	3.0												
11.0						URSBH-13 3.3	Grab		5				
12.0				End of Log	3.6								
13.0	4.0												
14.0													
15.0													
16.0													

DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 24, 2005 LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-14	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM 0 200 600 1000	WELL INSTALLATION DETAILS
0.0			Ground Surface	0.0					
0.0			SILT AND SAND , some cobbles, some gravel, some organics top 1.0m, fine grained sand, brown-grey, moist, soft						
1.0					URSBH-14 0.3 + DUP6	Grab	✕	50	
2.0									
3.0					URSBH-14 0.8	Grab	✕	25	
4.0									
5.0		SM							
6.0									
7.0									
8.0									
9.0									
10.0									
11.0				3.2					
12.0			SILT AND SAND , brown-grey, moist, firm						
13.0					URSBH-14 3.5	Grab	✕	125	
14.0		SM							
15.0									
16.0									
			End of Log	4.5					

DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 24, 2005 LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-15	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM 0 200 600 1000	WELL INSTALLATION DETAILS
0.0			Ground Surface	0.0					
0.0			SAND AND GRAVEL , some silt, coarse to fine sand, brown, dry, loose						
1.0		SW			URSBH-15 0.4	Grab	25		
2.0			SAND AND SILT , some gravel, fine grained sand, brown, moist, soft	0.6					
3.0		SM			URSBH-15 0.8	Grab	20		
4.0									
5.0			SAND , some gravel, fine to medium sand, grey-brown, powdery, dry, hard	1.5					
6.0					URSBH-15 1.7 + DUP7	Grab	10		
7.0		SW							
8.0									
9.0					URSBH-15 2.6	Grab	5		
10.0			End of Log	3.0					
11.0									
12.0									
13.0									
14.0									
15.0									
16.0									

DRILLING CONTRACTOR: **Uniwide Drilling Ltd**

DRILLING METHOD: **Solid Stem Auger**

DATE: **November 24, 2005**

LOGGED BY: **Dan McCrank**

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-16	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM 0 200 600 1000	WELL INSTALLATION DETAILS
			Ground Surface	0.0					
0.0	SW		SAND AND GRAVEL , fine to coarse sand, brown, moist, firm						
1.0									
2.0									
3.0									
4.0	SW		SAND , some gravel, fine to medium sand, grey-brown, powdery, dry, hard, refusal at 2.7m	1.6					
5.0									
6.0									
7.0									
8.0									
9.0			End of Log	2.7					
10.0									
11.0									
12.0									
13.0									
14.0									
15.0									
16.0									


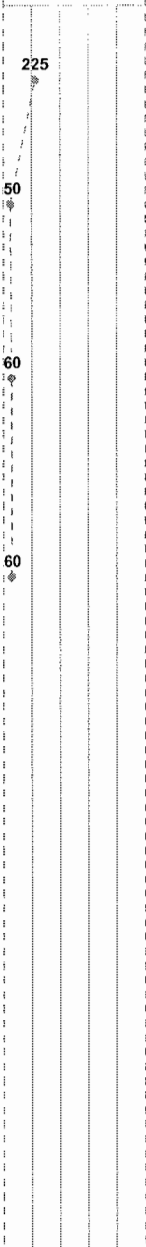
DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 24, 2005 LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-17	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH		USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc. PPM 0 200 600 1000	WELL INSTALLATION DETAILS
0.0	ft m				0.0					
0.0			SW	SAND AND GRAVEL, some silt, fine to medium sand, brown, moist, compact						
1.0					URSBH-17 0.3	Grab		40		
2.0										
3.0			SM	SAND AND SILT, some gravel, some concrete 2.1-2.3m, fine to medium sand, brown, moist, firm	0.7	URSBH-17 0.8 + DUP8	Grab		20	
4.0										
5.0										
6.0					URSBH-17 1.8	Grab		65		
7.0										
8.0						URSBH-17 2.4	Grab			
9.0				End of Log	2.6					
10.0										
11.0										
12.0										
13.0										
14.0										
15.0										
16.0										

DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 24, 2005 LOGGED BY: Dan McCrank







CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548674	BOREHOLE LOG BOREHOLE No. URSBH-18	SAMPLE LOCATION: ELEVATION: Top of Casing: Ground:
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DEPTH		USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE TYPE	SAMPLE SYMBOL	Vapour Conc.	WELL INSTALLATION DETAILS			
ft	m								0		200	600	1000
0.0	0.0		GM	SAND AND GRAVEL , with silt, fine to medium sand, brown, moist, compact, refusal at 2.5m	0.0								
1.0													
2.0													
3.0	1.0												
4.0													
5.0													
6.0													
7.0	2.0												
8.0					2.5								
				End of Log									
9.0													
10.0	3.0												
11.0													
12.0													
13.0	4.0												
14.0													
15.0													
16.0													

DRILLING CONTRACTOR: Uniwide Drilling Ltd DRILLING METHOD: Solid Stem Auger DATE: November 24, 2005 LOGGED BY: Dan McCrank

APPENDIX D
TEST PIT LOGS

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548746	TEST PIT LOG TEST PIT No. UTP A	SAMPLE LOCATION: On SW corner of garage ELEVATION: Ground: 1069m
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DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE SYMBOL	Vapour Conc. PPM
							0 100 300 500
0.0			Ground Surface	0.0			
0.0		GP	SAND AND COBBLES, with gravel, brown, firm, moist				
1.0					UTP A - 0.3		5
		GP	COBBLES AND SILT, some sand, some gravel, fine grained sand, brown, firm, moist	0.4			
2.0							
3.0					UTP A - 0.9		0
4.0				1.4			
5.0		ML	SILT, some cobbles, some gravel, brown, firm, moist				
6.0					UTP A - 1.7		10
7.0							
8.0							
9.0							
10.0				3.0			
			End of Log				
11.0							

DRILLING CONTRACTOR: LaPrairie Group Contractors

EXCAVATION METHOD: Excavator

DATE: August 2, 2006

LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548746			TEST PIT LOG TEST PIT No. UTP B		SAMPLE LOCATION: NE of metal and drum debris pile ELEVATION: _____ Ground: _____		
DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE SYMBOL	Vapour Conc. PPM 0 100 300 500
0.0 0.0 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0	 GP		Ground Surface SAND AND GRAVEL , brown with yellow bits of silt, trace garbage (paper, plastics), moist	0.0 1.2 2.7 3.0	UTP B - 0.2 UTP B - 0.7 UTP B - 1.5 UTP B - 2.6	 	5 15 10 20
	 ML		SILT , some sand, some gravel, fine grained sand, brown, firm, moist				
	 BR		BEDROCK - REFUSAL , grey				
			End of Log				

DRILLING CONTRACTOR: LaPrairie Group Contractors
 EXCAVATION METHOD: Excavator
 DATE: August 2, 2006
 LOGGED BY: Dan McCrank

PAGE 1 of 1

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548746			TEST PIT LOG TEST PIT No. UTP C		SAMPLE LOCATION: East of drum area ELEVATION: Ground:		
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DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE SYMBOL	Vapour Conc. PPM 0 100 300 500
0.0			Ground Surface	0.0			
0.0		GP	SAND AND GRAVEL, fine to coarse grained sand, brown moist, loose				
1.0				UTP C - 0.2		15	
2.0							
3.0				1.0			
3.0		SM	SANDSTONE, grey, hard, dry				
4.0							
5.0		BR	BEDROCK - REFUSAL	1.3			
6.0							
7.0			End of Log	1.5			
8.0							

DRILLING CONTRACTOR: LaPrairie Group Contractors EXCAVATION METHOD: Excavator DATE: August 2, 2006 LOGGED BY: Dan McCrank	
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PAGE 1 of 1

CLIENT: PWGSC

PROJECT: Steamboat Maintenance Camp

JOB#: 39548746

TEST PIT LOG

TEST PIT No. UTP D

SAMPLE LOCATION: 9m SW of URS BH03

ELEVATION:

Ground:

DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE SYMBOL	Vapour Conc. PPM 0 100 300 500
0.0			Ground Surface	0.0			
0.0		OL	TOPSOIL, with roots, dark brown, wet, soft	0.1			
			SILT, some sand, trace gravel, brown-grey, soft, moist				
1.0					UTP D - 0.3		25
2.0							
3.0					UTP D - 0.8		15
4.0							
5.0		ML			UTP D - 1.5 +DUP3		10
6.0							
7.0							
8.0							
9.0					UTP D - 2.8		10
10.0			End of Log	3.0			
11.0							

DRILLING CONTRACTOR: LaPrairie Group Contractors

EXCAVATION METHOD: Excavator

DATE: August 3, 2006

LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548746	TEST PIT LOG TEST PIT No. UTP E	SAMPLE LOCATION: Between UTP G & UTP F ELEVATION: Ground: 1064 m
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DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE SYMBOL	Vapour Conc. PPM 0 100 300 500
0.0			Ground Surface	0.0			
0.0		GP	SAND AND GRAVEL, some silt, brown, moist, loose,		UTP E - 0.2	X	25
1.0			SILT AND SAND, some gravel, trace cobbles, brown, moist, firm	0.3			
2.0					UTP E - 0.7	X	15
3.0							
4.0		ML					
5.0					UTP E - 1.5	X	10
6.0							
7.0				2.1	UTP E - 2.0	X	10
		SM	SANDSTONE - REFUSAL				
			End of Log	2.3			
8.0							
9.0							

DRILLING CONTRACTOR: LaPrairie Group Contractors

EXCAVATION METHOD: Track mounted excavator

DATE: August 2, 2006

LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548746	TEST PIT LOG TEST PIT No. UTP F	SAMPLE LOCATION: 10m east of trailer ELEVATION: Ground: 1064 m
--	---	--

DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE SYMBOL	Vapour Conc. PPM 0 100 300 500
0.0			Ground Surface	0.0			
0.0			SAND AND GRAVEL, with silt, brown, dry, firm				
1.0		GP			UTP F - 0.4	X	5
2.0			SILT, some sand, some gravel, brown, moist, firm	0.6			
					UTP F - 0.8	X	30
3.0							
4.0							
5.0					UTP F - 1.5	X	10
6.0		ML					
7.0							
8.0							
9.0					UTP F - 2.8 +DUP2	X	10
10.0		SM	SANDSTONE - REFUSAL	3.0			
				3.2			
			End of Log				

DRILLING CONTRACTOR: LaPrairie Group Contractors
 EXCAVATION METHOD: Track mounted excavator
 DATE: August 2, 2006
 LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548746	TEST PIT LOG TEST PIT No. UTP G	SAMPLE LOCATION: 10m east of trailer ELEVATION: Ground: 1068 m
--	---	--

DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE SYMBOL	Vapour Conc. PPM 0 100 300 500
0.0			Ground Surface	0.0			
0.0			SAND AND GRAVEL, some silt, brown, moist, loose				
1.0		GP			UTP G - 0.3	X	5
				0.5			
2.0			SILT AND SAND, some gravel, trace cobbles, brown, moist, firm		UTP G - 0.7	X	10
3.0							
4.0							
5.0		ML			UTP G - 1.6	X	10
6.0							
7.0							
8.0				2.4	UTP G - 2.3 +DUP1	X	15
		SM	FRACTURED BEDROCK - REFUSAL				
				2.6			
			End of Log				
















DRILLING CONTRACTOR: LaPrairie Group Contractors

EXCAVATION METHOD: Track mounted excavator

DATE: August 2, 2006

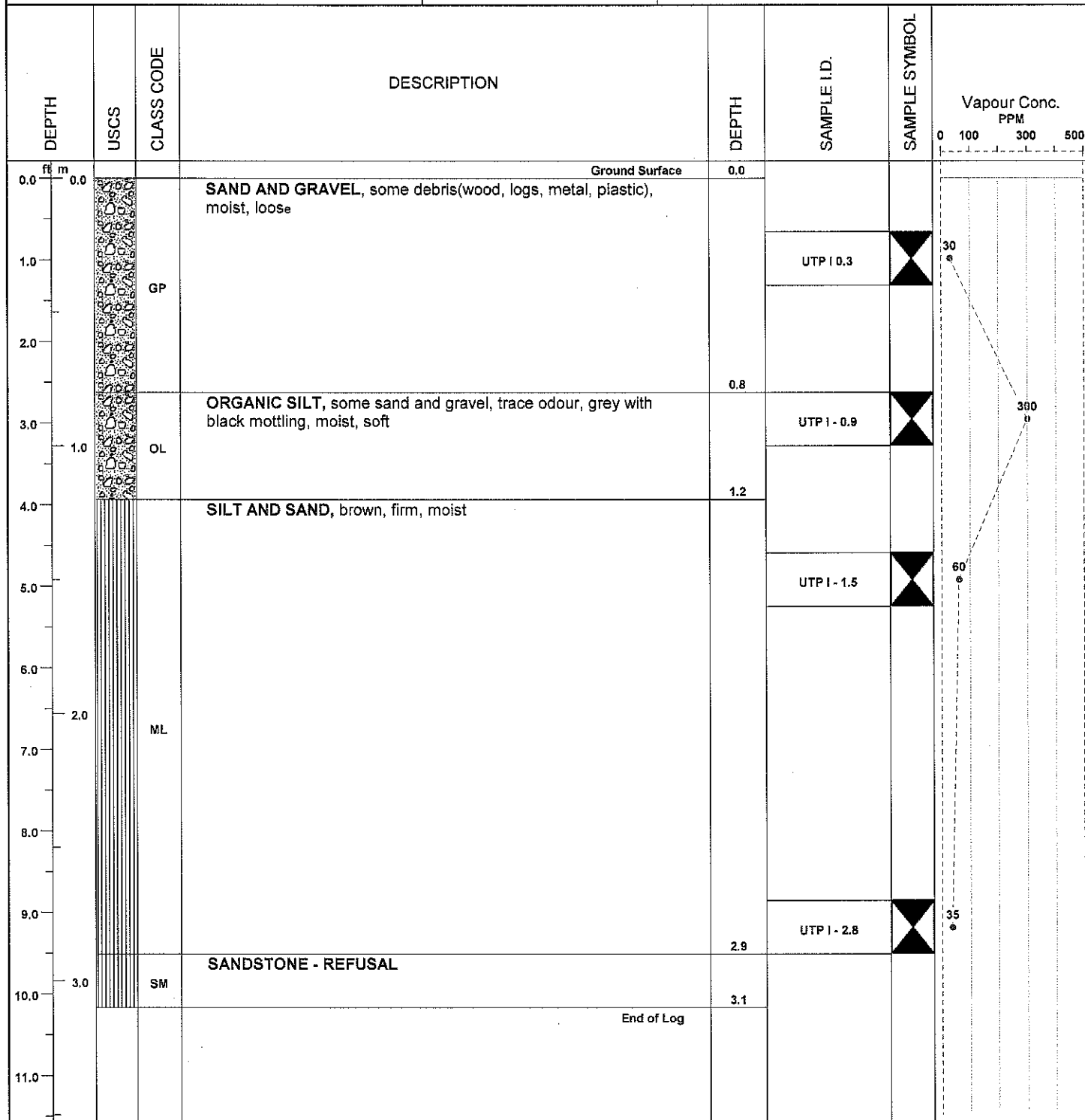
LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548746	TEST PIT LOG TEST PIT No. UTP H	SAMPLE LOCATION: SE of TP 5 ELEVATION: Ground: 1064 m
--	---	---

DEPTH	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE SYMBOL	Vapour Conc. PPM 0 100 300 500
0.0			Ground Surface	0.0			
0.0		GP	GRAVEL AND SAND, fine to coarse sand, brown-grey, dry, loose	0.2	UTP H - 0.1		5
1.0			SILT, some gravel, some sand, brown, moist, soft				
2.0					UTP H - 0.7		20
3.0							
4.0							
5.0					UTP H - 1.5		25
6.0							
7.0							
8.0							
9.0					UTP H - 2.7		15
10.0		SM	SANDSTONE - REFUSAL	3.0			
11.0			End of Log	3.4			

DRILLING CONTRACTOR: LaPrairie Group Contractors
 EXCAVATION METHOD: Track mounted excavator
 DATE: August 3, 2006
 LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548746	TEST PIT LOG TEST PIT No. UTP I	SAMPLE LOCATION: ELEVATION: Ground: 1061 m
---	--	---



DRILLING CONTRACTOR: **LaPrairie Group Contractors**
 EXCAVATION METHOD: **Excavator**
 DATE: **August 3, 2006**
 LOGGED BY: **Dan McCrank**

JOB#: 39548746



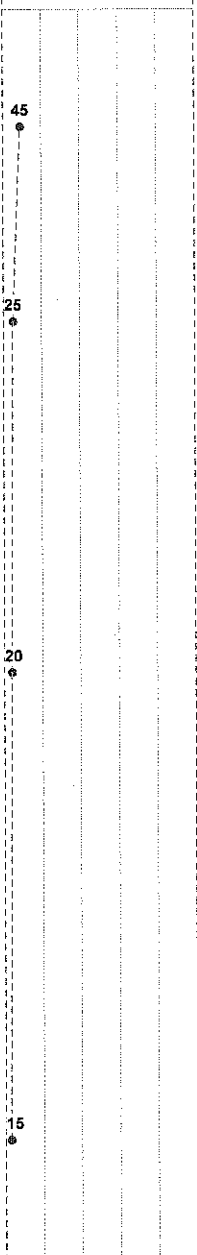





TEST PIT No. UTP J

Ground: 1064 m

DEPTH ft m	USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE SYMBOL	Vapour Conc.
							PPM
							0 100 300 500
0.0			Ground Surface	0.0			
0.0			SAND AND GRAVEL, some silt, some metal debris, moist, loose				
1.0	GP				UTP J - 0.2		15
2.0			SILT, some sand, some gravel, brown, moist, firm	0.6			
3.0					UTP J - 0.8		25
4.0							
5.0					UTP J - 1.5 +DUP5		20
6.0							
7.0							
8.0							
9.0					UTP J - 2.7		10
10.0			End of Log	3.0			

LOGGED BY: Dan McCrank

CLIENT: PWGSC PROJECT: Steamboat Maintenance Camp JOB#: 39548746	TEST PIT LOG TEST PIT No. UTP L	SAMPLE LOCATION: At SS URS 25 ELEVATION: Ground: 1063 m
--	---	---

DEPTH		USCS	CLASS CODE	DESCRIPTION	DEPTH	SAMPLE I.D.	SAMPLE SYMBOL	Vapour Conc. PPM			
ft	m							0	100	300	500
0.0	0.0		GP	SAND AND GRAVEL, some silt, brown with lenses of asphalt chunks and black staining, brown, dry, loose	0.0				45		
1.0				UTP L - 0.3 +DUP4							
2.0			GP	SAND AND SILT AND GRAVEL, come cobbles, moist, soft	0.6				25		
3.0				UTP L - 0.8							
4.0	1.0		ML	SANDY SILT, some gravel, sandstone cobbles at approximately 3m, brown, firm, moist,	1.1				20		
5.0											
6.0				UTP K - 1.7							
7.0											
8.0											
9.0											
10.0	3.0			End of Log	3.0				15		

DRILLING CONTRACTOR: LaPrairie Group Contractors
 EXCAVATION METHOD: Excavator
 DATE: August 3, 2006
 LOGGED BY: Dan McCrank

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-01

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration ppm 125 250 375 %LEL 10 30 50 70 90	Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery		
ft m								
0 0		Ground Surface	0					Blow Count: 13@0"
		Drill start time: 3:39pm						
1			-1					
2		A cloud of grey-beige smoke emanated suddenly from the borehole. A distinct, yet unidentifiable odour was noted.	-2					
3			-3					
4		A cloud of grey-beige smoke emanated suddenly from the borehole. A distinct, yet unidentifiable odour was noted.						
5								
6		SB-BH-01-01						
7		Sampling at 2.5' due to refusal w/ hollow stem. No sample.						
8		Shale bedrock encountered.						
9		Abandon due to refusal						
10		End of Borehole						
11								
12								
13								
14								
15								

Drill Method: Hollow Stem - Split Spoon

Drill Date: 03-02-01

Hole Size: 6"

PWGSC Environmental Services

Western Region

1000, 9700 Jasper Avenue

Edmonton, AB T5J 4E2

Datum:

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Sheet: 1 of 1

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-02

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration	Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm	
							125 250 375	
							%LEL	
							10 30 50 70 90	
0		Ground Surface	0					GPS: 10m accuracy 10 V 0455771 UTM 6504843
0		Drill start time: 4:30pm						
1								
2			-3					Blow Count: None
3		Hollow stem refused. Switch to solid stem. 4:50pm						
4			-4				70	
5		SB-BH-02-01 (4:55pm) Sample taken from auger flyte Clay (60%) and silt No odour apparent						Blow Count: 12-20@12"
6								
7								
8								
9			-9				80	
10		SB-BH-02-02 (5:10pm) Clay (90%) and silt Very cohesive No odour apparent						
11								
12			-12					
13		Bedrock encountered. Abandon due to refusal.						
14		End of Borehole						
15								

Drill Method: Hollow Stem - Split Spoon

Drill Date: 03-02-01

Hole Size: 6"

PWGSC Environmental Services

Western Region

1000, 9700 Jasper Avenue

Edmonton, AB T5J 4E2

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Sheet: 1 of 1

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-03

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration			Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm			
							125	250	375	
							%LEL			
10	30	50	70	90						
ft m										
0 0		Ground Surface	0						GPS: 10m accuracy 10 V 0455778 UTM 6504831 Lowest Oxygen reading was 19.2%	
		Drill start time: 5:45pm								
1										
2										
3 1										
4			-4				85			
5		SB-BH-03-01 (5:50pm) Sample taken from auger flyte Clay (80%), silt(10%), gravel(5%) and wood fibres. Slight odour noted, uncertain if it is PHCs. Alarm 1 on the EAGLE probe, apparently for oxygen rich environments (>21%), sounded immediately when sample was tested.								
6 2										
7										
8										
9			-9							
10 3		SB-BH-03-02 (6:05pm) Clay Extremely cohesive PHC odour noted								
11			-12							
12		Bedrock encountered. Abandon due to refusal.								
13 4		End of Borehole								
14										
15										

Drill Method: Solid stem

Drill Date: 03-02-01

Hole Size: 6"

PWGSC Environmental Services
Western Region
1000, 9700 Jasper Avenue
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Sheet: 1 of 1

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-04

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration	Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm	
							125 250 375	
							%LEL	
ft m							10 30 50 70 90	
0		Ground Surface	0					
0		Drill start time: 10:20am						
1								
2			-2					
3		Solid stem used because hollow stem was refused at 2.5'.	-3					
4		SB-BH-04-01 (10:34am)	-4				50	
5		Sample taken from auger flyte						
6		Clay (30%), silt(60%) and wood fibres.						
7		Slight creosote-like odour noted						
8		High organic content						
9		Absolute refusal						
10		Abandon						
11		End of Borehole						
12								
13								
14								
15								

Drill Method: Solid stem

Drill Date: 03-02-02

Hole Size: 6"

PWGSC Environmental Services

Western Region

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Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-05

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration	Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm	
							125 250 375	
							%LEL	
							10 30 50 70 90	
0		Ground Surface	0					GPS: 10m accuracy 10 V 0455673 UTM 6504983
0		Drill start time: 11:00am						
1								
2								
3								Blow Count: 11-17-18
4			-4				150	
5		SB-BH-05-01 (11:15am) Sample taken from auger flyte Silt No odour apparent						
6								
7								
8								
9			-9				65	
10		SB-BH-05-02 (11:30am) Sample taken from auger flyte Clay No odour apparent	-10				70	
11								
12		SB-BH-05-03 (11:38am) Split spoon sampling Clay (hard packed) Very cohesive No odour apparent Orange colour noted throughout sample						
13								Blow Count: 18-18-18
14			-14				55	
15			-15					

Drill Method: Solid stem

Drill Date: 03-02-02

Hole Size: 6"

PWGSC Environmental Services

Western Region

1000, 9700 Jasper Avenue

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Datum:

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Sheet: 1 of 2

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-05

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration			Well Completion Details		
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm					
							125	250	375			
							%LEL					
							10	30	50	70	90	
16	5	SB-BH-05-04 (11:58am) Taken from auger flyte Clay No odour apparent	=18				45					Blow Count: 10-10-10
17		SB-BH-05-05 (12:02pm) Clay (70%) and cobbles Very cohesive No odour apparent Orange-red (copper) colour noted throughout										
18												
19												
20	6	Absolute refusal Abandon										
21		End of Borehole										
22												
23	7											
24												
25												
26	8											
27												
28												
29												
30	9											

Drill Method: Solid stem

Drill Date: 03-02-02

Hole Size: 6"

PWGSC Environmental Services

Western Region

1000, 9700 Jasper Avenue
Edmonton, AB T5J 4E2

Datum:

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Sheet: 2 of 2

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-06

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration	Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm	
							125 250 375	
							%LEL	
							10 30 50 70 90	
0		Ground Surface	0					GPS: 9m accuracy 10 V 0455668 UTM 6504967
0		Photo 601 shows location						
1								
2								
3								
4								
5			-5					
5		SB-BH-06-01 (12:42am)					55	
6		Sample taken from auger flyte	-6					
6		Silt (50%) and clay						
7		Non-cohesive						
7		No odour apparent						
8		Absolute refusal (shale bedrock)						
8		Abandon						
9		End of Borehole						
10								
11								
12								
13								
14								
15								

Drill Method: Solid stem

Drill Date: 03-02-02

Hole Size: 6"

PWGSC Environmental Services

Western Region

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Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-07

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration ppm 125 250 375 %LEL 10 30 50 70 90	Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery		
ft m								
0 0		Ground Surface	0					GPS: 9m accuracy 10 V 0455779 UTM 6504808
1		Drill start time: 1:45pm Photo 601 shows location						
2								
3 1								Alarm 1 (oxygen) went off
4			-4				90	
5								
6		SB-BH-07-01 (1:50pm) Sample taken from auger flyte Silt (20%), clay (75%) and sand Somewhat cohesive No odour apparent						Alarm 1 (oxygen) went off
7 2								
8								
9			-9				55	Blow Count: 10-18-12
10 3		SB-BH-07-02 (2:00pm) Taken from auger flyte Cohesive clay No odour apparent					55	
11			-11				45	
12		SB-BH-07-02 (2:00pm) Cohesive clay No odour apparent						
13 4		SB-BH-07-04 (2:15pm) Taken from auger flyte Clay (33%), silt (33%) and sand No odour apparent Absolute refusal Abandon						
14								
15								

Drill Method: Solid stem

Drill Date: 03-02-02

Hole Size: 6"

PWGSC Environmental Services

Western Region

1000, 9700 Jasper Avenue
Edmonton, AB T5J 4E2

Datum:

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Sheet: 1 of 1

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-08

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration			Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm			
							125	250	375	
							%LEL			
10	30	50	70	90						
ft	m									
0	0	Ground Surface	0							GPS: 9m accuracy 10 V 0455785 UTM 6504804
		Drill start time: 2:27pm Photo 603 shows location								
1										
2										
3	1									
4			-4					140		
5		SB-BH-08-01 (2:30pm) Sample taken from auger flyte Small sample size Clay (80%) and wood fibres Somewhat cohesive Faint PHC odour noted								
6										
7	2									
8										
9			-9					120		
10	3	SB-BH-08-02 (2:48pm) Taken from auger flyte Extremely moist clay (50%) and cobbles Bottom of sample was dry Cohesive Faint PHC odour noted								Blow Count: 7-77-7@14"
11										
12			-12							
13	4	Absolute refusal Abandon								
		End of Borehole								
14										
15										

Drill Method: Solid stem

Drill Date: 03-02-02

Hole Size: 6"

PWGSC Environmental Services
Western Region
1000, 9700 Jasper Avenue
Edmonton, AB T5J 4E2

Datum:

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Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-09

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration	Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm	
							125 250 375	
							%LEL	
							10 30 50 70 90	
0		Ground Surface	0					GPS: 9m accuracy 10 V 0455786 UTM 6504811
1		Drill start time: 3:15pm Photo 604 shows location						
2								
3								
4			-4				75	
5		SB-BH-09-01 (3:26pm) Sample taken from auger flyte Clay Non-cohesive No odour apparent						
6								
7								
8			-8				65	
9		SB-BH-09-02 (3:38pm) Taken from auger flyte Clay (50%) Somewhat cohesive No odour apparent	-9					
10		Absolute refusal Abandon						
11		End of Borehole						
12								
13								
14								
15								

Drill Method: Solid stem

Drill Date: 03-02-02

Hole Size: 6"

PWGSC Environmental Services
Western Region
1000, 9700 Jasper Avenue
Edmonton, AB T5J 4E2

Datum:

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Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-10

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration		Well Completion Details	
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm			
							125	250		375
							%LEL			
10	30	50	70	90						
ft m										
0		Ground Surface	0						Blow Count: 50-15@12" GPS: 9m accuracy 10 V 0455721 UTM 6504892	
		Drill start time: 3:51pm Photo 606 shows location								
1										
2										
3	1									
4			-4					>500		
5		SB-BH-10-01 (3:56pm) Sample taken from auger flyte Clay (90%) and cobbles Cohesive PHC odour noted								
6										
7	2									
8			-8				80			
9		SB-BH-10-02 (4:08pm) Taken from auger flyte Clay PHC odour noted	-9				80			
10	3	SB-BH-10-03 (4:15pm) Crushed bedrock and clay PHC odour noted	-10							
11		Absolute refusal Abandon								
12		End of Borehole								
13	4									
14										
15										

Drill Method: Solid stem

Drill Date: 03-02-02

Hole Size: 6"

PWGSC Environmental Services
Western Region
1000, 9700 Jasper Avenue
Edmonton, AB T5J 4E2

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Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-11

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration		Well Completion Details	
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm			
							125	250		375
							%LEL			
10	30	50	70	90						
ft m		Ground Surface	0						Blow Count: 50-15@12" GPS: 9m accuracy 10 V 0455722 UTM 6504896	
0		Drill start time: 4:35pm								
1										
2										
3			-3							
4	1	SB-BH-11-01 (4:45pm) Clay Somewhat cohesive No odour apparent	-4							
5		Absolute refusal Abandon								
6		End of Borehole								
7	2									
8										
9										
10	3									
11										
12										
13	4									
14										
15										

Drill Method: Solid stem

Drill Date: 03-02-02

Hole Size: 6"

PWGSC Environmental Services
Western Region
1000, 9700 Jasper Avenue
Edmonton, AB T5J 4E2

Datum:

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Sheet: 1 of 1

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-12

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration		Well Completion Details	
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm			
							125	250		375
							%LEL			
10	30	50	70	90						
ft	m								GPS: 9m accuracy 10 V 0455725 UTM 6504895	
0	0	Ground Surface	0							
		Drill start time: 4:56pm								
1										
2			-2							
3		SB-BH-12-01	-3							
1		Sample taken from auger flyte								
		Silt								
4		Non-cohesive								
		PHC odour noted								
5		Absolute refusal								
		Abandon								
6		End of Borehole								
2										
7										
8										
9										
10	3									
11										
12										
13	4									
14										
15										

Drill Method: Solid stem

Drill Date: 03-02-02

Hole Size: 6"

PWGSC Environmental Services

Western Region

1000, 9700 Jasper Avenue

Edmonton, AB T5J 4E2

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Sheet: 1 of 1

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-13

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration	Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm	
							125 250 375	
							%LEL	
							10 30 50 70 90	
ft m		Ground Surface	0					GPS: 9m accuracy 10 V 0455736 UTM 6504898
0		Drill start time: 5:11pm						
1								
2			-2					
3		SB-BH-13-01 (5:15pm)	-3				90	
4		Sample taken from						
5		auger flyte						
6		Silt						
7		Non-cohesive						
8		No odour apparent						
9		Absolute refusal						
10		Abandon						
11								
12								
13								
14								
15		End of Borehole						

Drill Method: Solid stem

Drill Date: 03-02-02

Hole Size: 6"

PWGSC Environmental Services

Western Region

1000, 9700 Jasper Avenue

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Sheet: 1 of 1

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-14

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration	Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm	
							125	
							%LEL	
							10 30 50 70 90	
0		Ground Surface	0					GPS: 5m accuracy 10 V 0455728 UTM 6504897
0		Drill start time: 5:30pm						
1			-2					
2		SB-BH-14-01 (5:37pm)	-3					
3		Sample taken from						
3		auger flyte						
3		Silt						
3		Non-cohesive						
3		PHC odour noted						
3		Absolute refusal						
3		Abandon						
3		End of Borehole						
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

Drill Method: Solid stem

Drill Date: 03-02-02

Hole Size: 6"

PWGSC Environmental Services
Western Region
1000, 9700 Jasper Avenue
Edmonton, AB T5J 4E2

Datum:

Checked by:

Sheet: 1 of 1

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-15

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration	Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm	
							125	
							%LEL	
							10 30 50 70 90	
0		Ground Surface	0					GPS: 9m accuracy 10 V 0455728 UTM 6504902 500
0		Drill start time: 5:43pm						
1			-1					
2		SB-BH-15-01 (5:50pm)	-2					
2		Sample taken from						
3		auger flyte						
3		Fine powder						
4		Non-cohesive						
4		Odour like varnish or						
4		turpentine						
5		Absolute refusal						
5		Abandon						
6		End of Borehole						
7								
8								
9								
10								
11								
12								
13								
14								
15								

Drill Method: Solid stem

Drill Date: 03-02-02

Hole Size: 6"

PWGSC Environmental Services

Western Region

1000, 9700 Jasper Avenue

Edmonton, AB T5J 4E2

Datum:

Checked by:

Sheet: 1 of 1

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-16

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration	Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm	
							125 250 375	
							%LEL	
							10 30 50 70 90	
ft m		Ground Surface	0					GPS: 9m accuracy 10 V 0455744 UTM 6504898
0		Drill start time: 10:21am Photo 607 shows location	-1					
1		SB-BH-16-01 (10:26am) Sample taken from auger flyte	-2					
2		Silt						
3		Non-cohesive						
4		No odour						
5		Absolute refusal						
6		Abandon						
7		End of Borehole						
8								
9								
10								
11								
12								
13								
14								
15								

Drill Method: Solid stem

Drill Date: 03-02-03

Hole Size: 6"

PWGSC Environmental Services

Western Region

1000, 9700 Jasper Avenue

Edmonton, AB T5J 4E2

Datum:

Checked by:

Sheet: 1 of 1

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-17

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration			Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm			
							125	250	375	
							%LEL			
10	30	50	70	90						
ft m		Ground Surface	0							GPS: 9m accuracy 10 V 0455748 UTM 6504898
0		Drill start time: 10:40am								
		Photo 608 shows location								
1		Strong PHC odour noted								
2			-2							
3	1									
4										
5			-5							
6		SB-BH-17-01								
		Sample taken from auger flyte	-6							
7	2	Silt								
		Non-cohesive								
8		PHC odour noted								
		Absolute refusal								
9		Abandon								
		End of Borehole								
10	3									
11										
12										
13	4									
14										
15										

Drill Method: Solid stem

Drill Date: 03-02-03

Hole Size: 6"

PWGSC Environmental Services
Western Region
1000, 9700 Jasper Avenue
Edmonton, AB T5J 4E2

Datum:

Checked by:

Sheet: 1 of 1

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-18

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration			Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm			
							125	250	375	
							%LEL			
10	30	50	70	90						
ft m										
0 0		Ground Surface	0							
		Drill start time: 11:04am Photo 611 shows location								
1										
2										
3			-3							
4	1	SB-BH-18-01 Sample taken from auger flyte Silt Non-cohesive No odour apparent	-4				25			
5		Absolute refusal								
6		Abandon								
7	2	End of Borehole								
8										
9										
10	3									
11										
12										
13	4									
14										
15										

Drill Method: Solid stem

Drill Date: 03-02-03

Hole Size: 6"

PWGSC Environmental Services
Western Region
1000, 9700 Jasper Avenue
Edmonton, AB T5J 4E2

Datum:

Checked by:

Sheet: 1 of 1

Project No: 408169

Project: Phase III ESA

Client: PWGSC Alaska Highway

Location: Steamboat Maintenance Camp

Log of Borehole: SB-BH-19

Enclosure:

Engineer: B. Overton

SUBSURFACE PROFILE				SAMPLE			VOC Concentration			Well Completion Details
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm			
							125	250	375	
							%LEL			
10	30	50	70	90						
ft	m									
0	0	Ground Surface	0						GPS: 9m accuracy 10 V 0455756 UTM 6504910	
		Drill start time: 11:19am Photo 612 shows location								
1										
2										
3	1									
4			-4							
		SB-BH-19-01 (11:28am)						150		
5		Sample taken from auger flyte	-5							
6		Silt (50%) and sand								
7		Non-cohesive								
8		No odour apparent								
9	2	Absolute refusal								
10		Abandon								
11		End of Borehole								
12										
13	3									
14										
15	4									

Drill Method: Solid stem

Drill Date: 03-02-03

Hole Size: 6"

PWGSC Environmental Services
Western Region
1000, 9700 Jasper Avenue
Edmonton, AB T5J 4E2

Datum:

Checked by:

Sheet: 1 of 1

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: BH10-04

SHEET 1 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: October 10, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -78°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			PID ppm		HYDRAULIC CONDUCTIVITY, k, cm/s					ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION			
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	PID ppm		WATER CONTENT PERCENT								
									5	10	15	20	10 ⁻⁶	10 ⁻⁵			10 ⁻⁴	10 ⁻³	
										Wp I ———— W ———— I WI NP - Non-Plastic									
										100	200	300	400	10	20	30	40		
0	Fraste Mito DR225 Odex Downhole Hammer	Ground Surface		0.00															
		Concrete																	
		Very dense, moist to dry, grey-brown, silty SAND and GRAVEL. - dark grey staining from 0.13m - 0.20m with moderate hydrocarbon-like odour.		0.42	1	AS													
1																			
		Firm to stiff, dry, grey-brown, silty CLAY, trace sand, trace gravel. - slight to moderate hydrocarbon-like odour.		1.50															
2																			
		Firm, moist, grey-brown, fine sandy SILT, trace gravel. - faint hydrocarbon-like odour.		3.00															
3																			
4																			
5																			
6																			
7		Dense, dry, grey-brown, silty SAND and GRAVEL. - moderate hydrocarbon-like odour.		7.00															
8																			
9																			
10																			

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: BH10-04

SHEET 2 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: October 10, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -78°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			PID		HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	PID		WATER CONTENT PERCENT					
									5	10	15	20			10 ⁻⁶	10 ⁻⁵
10	Frase Mito DR225 Odex Downhole Hammer	Dense, dry, grey-brown, silty SAND and GRAVEL. - moderate hydrocarbon-like odour. (continued)														
11				6	AS											
12		Weathered BEDROCK.		12.00												
13																
14																
15																
16																
17																
18																
19																
20																

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

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PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: BH10-05

SHEET 1 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: October 10, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -75°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			PID		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	WATER CONTENT PERCENT			
									Wp	Wi		
0	Fraser Mito DR225 Odex Downhole Hammer	Ground Surface Concrete		0.00								
		Dense, dry to moist, grey-brown, silty SAND and GRAVEL. - moderate hydrocarbon-like odour. - stained dark grey from 0.08m - 0.13m depth.		0.25	1	AS						
1												
2												
3												
4												
		Firm, moist, grey-brown, sandy SILT, some gravel. - moderate hydrocarbon-like odour.		4.00								
5												
6												
7												
8												
9												
10												
CONTINUED NEXT PAGE												

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: BH10-05

SHEET 2 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: October 10, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -75°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			PID		HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	PID		WATER CONTENT PERCENT					
									5	10	15	20			10 ⁻⁶	10 ⁻⁵
10	Frasco Mito DR225 Odex Downhole Hammer	Firm, moist, grey-brown, sandy SILT, some gravel. - moderate hydrocarbon-like odour. (continued)														
11																
12				5	AS											
		End of Monitoring Well.		12.50												
13																
14																
15																
16																
17																
18																
19																
20																

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

Bentonite
Backfill

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PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: BH10-06

SHEET 1 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: October 11, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -72°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			PID		HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	5 10 15 20		10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³					
									PID ppm		WATER CONTENT PERCENT Wp ———— W ———— WI NP - Non-Plastic					
0	Fraser Mito DR225 Odex Downhole Hammer	Ground Surface		0.00												
		Concrete														
		Dense, dry to moist, grey-brown, silty SAND and GRAVEL. - strong hydrocarbon-like odour.		0.33	1	AS										
1																
2																
3		Moist, grey-brown, fine silty SAND, some gravel, trace clay. - moderate hydrocarbon-like odour.		3.00	2	AS										
4																
5																
6																
7																
8																
9		Dense, moist, light brown, silty SAND, trace gravel. - moderate hydrocarbon-like odour.		9.00												
10																
		CONTINUED NEXT PAGE														

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: BH10-06

SHEET 2 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: October 11, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -72°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES				PID ppm		HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	5 10 15 20		10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³					
									PID ppm		WATER CONTENT PERCENT Wp W WI NP - Non-Plastic					
									100 200 300 400		10 20 30 40					
10	Fraste Mito DR225 Odex Downhole Hammer	Dense, moist, light brown, silty SAND, trace gravel. - moderate hydrocarbon-like odour. <i>(continued)</i>													Bentonite Backfill	
11																
12																
13					4	AS										
14			Firm, moist, light brown SILT, some clay, trace gravel. - slight hydrocarbon-like odour.		14.00											
15		Weathered BEDROCK.														
16																
17				End of Monitoring Well.		16.50										
18																
19																
20																

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: BH10-07

SHEET 1 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: October 11, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -72°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			PID		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	WATER CONTENT PERCENT				
									Wp	Wi			
0	Fraser Mito DR225 Odex Downhole Hammer	Ground Surface Concrete.		0.00									
1		Dense, dry, brown, silty SAND, trace to some gravel. - moderate hydrocarbon-like odour.		0.33	1	AS							
2					2	AS							
3		Very dense, dry, brown, silty SAND, trace to some gravel. - moderate hydrocarbon-like odour.		2.00									
4													
5		Firm, moist, grey-brown SILT, some sand, trace clay, trace gravel. - moderate hydrocarbon-like odour. - grades to some gravel at 2.59m depth.		4.00									
6													
7													
8													
9													
10													

CONTINUED NEXT PAGE

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: BH10-07

SHEET 2 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: October 11, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -72°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES				PID ppm		HYDRAULIC CONDUCTIVITY, k, cm/s					ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	5		10		15		20				
									PID ppm		10 ⁻⁶		10 ⁻⁵		10 ⁻⁴				10 ⁻³
											WATER CONTENT PERCENT Wp ———— W ———— WI NP - Non-Plastic								
									100	200	300	400	10	20	30	40			
10	Fraste Mito DR225 Odex Downhole Hammer	Firm, moist, grey-brown SILT, some sand, trace clay, trace gravel. - moderate hydrocarbon-like odour. - grades to somr gravel at 2.59m depth. <i>(continued)</i>																	
11																			
12																			
13		Stiff, moist, light brown to grey SILT. - moderate hydrocarbon-like odour.		12.50	5	AS													
14																			
15		Weathered BEDROCK.		15.00															
16				16.00															
17		End of Monitoring Well.																	
18																			
19																			
20																			

Bentonite
Backfill

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-01 (D)

SHEET 1 OF 5

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 21, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	SHEAR STRENGTH Cu, kPa			WATER CONTENT PERCENT Wp — W — Wi NP - Non-Plastic
0	Fraser Mito DR225 Odex Downhole Hammer	Ground Surface		0.00								
		Loose to dense, wet, brown ORGANICS with roots.										
1		Compact, wet, brown, silty SAND, some gravel, trace clay. - no odour or staining.		0.50								
2												
3												
4		BEDROCK.		3.75								
5												
6												
7												
8												
9												
10												

CONTINUED NEXT PAGE

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-01 (D)

SHEET 2 OF 5

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 21, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES				DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	SHEAR STRENGTH		WATER CONTENT PERCENT			
									nat V. + Cu, kPa	rem V. ⊕ Pocket Pen -	Q - ● U - ○			Wp
10	Fraste Mito DR225 Odex Downhole Hammer	BEDROCK. (continued)												
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
		CONTINUED NEXT PAGE												

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-01 (D)

SHEET 3 OF 5

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 21, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES				DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	SHEAR STRENGTH		WATER CONTENT PERCENT			
									nat V. + Cu, kPa	rem V. ⊕ Pocket Pen -	Q - ● U - ○			Wp
20	Fraste Mito DR225 Odex Downhole Hammer	BEDROCK. (continued)												
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
		CONTINUED NEXT PAGE												

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

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PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-01 (D)

SHEET 4 OF 5

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 21, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION			
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	SHEAR STRENGTH			WATER CONTENT PERCENT		
									nat V. + Cu, kPa			rem V. ⊕ Q - U - Pocket Pen -	Wp	W
30	Fraste Mito DR225 Odex Downhole Hammer	BEDROCK. (continued)												
31														
32														
33														
34														
35														
36														
37														
38														
39														
40														
CONTINUED NEXT PAGE														

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-01 (D)

SHEET 5 OF 5

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 21, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	SHEAR STRENGTH Cu, kPa			WATER CONTENT PERCENT Wp — W — Wi
40	Fraste Mito DR225 Odex Downhole Hammer	BEDROCK. (continued)										
41												
42												
43												
44												
45												
46												
47												
48												
49												
50												
		End of Monitoring Well.										

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

Slotted PVC
Pipe

File Y:\BURNABY\CAD-GIS\BURNABY\PROJECTS\2009-1436-5005\DRAWING\GINT\2010 BH & MW\09-1436-5005.GPJ Output Form BC BOREHOLE (AUTO) Template BC REGION TEMPLATE BETA 3.GDT Library BC REGION LIBRARY GLB sreddy 04/07/17

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-01 (S)

SHEET 1 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 20, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES				PID		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	5 10 15 20		10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³			
									PID ppm		WATER CONTENT PERCENT Wp — W — WI NP - Non-Plastic			
0	Fraser Mito DR225 Odex Downhole Hammer	Ground Surface		0.00										
		Loose to dense, wet, brown ORGANICS with roots.												
1		Compact, wet, brown, silty SAND, some gravel, trace clay. - no odour or staining.												
2														
3														
4		BEDROCK. - no odour or staining. - wet at 2.90m depth.		3.75										
5														
6														
7														
8														
9														
10														

CONTINUED NEXT PAGE

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-01 (S)

SHEET 2 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment


LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 20, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES				PID		HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	PID		WATER CONTENT PERCENT					
									5	10	15	20	10 ⁻⁶			10 ⁻⁵
10		BEDROCK. - no odour or staining. - wet at 2.90m depth. <i>(continued)</i>													Slotted PVC Pipe	
10.42		End of Monitoring Well.														
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-02

SHEET 1 OF 4

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 22, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			PID		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	WATER CONTENT PERCENT			
									Wp	Wi		
0	Fraste Mito DR225 Odex Downhole Hammer	Ground Surface Soft, moist, brown, silty CLAY, trace sand and gravel. - no odour or staining.		0.00								
1		Firm, damp to moist, silty medium SAND, some gravel. - no odour or staining.		1.00	1	SS		⊕				
2												
3												
4												
5												
6					2	SS		⊕				
7												
8												
9												
10												
CONTINUED NEXT PAGE												

DEPTH SCALE

1 : 50

LOGGED: M.T.

CHECKED: JL

DRILLING DATE: September 22, 2010
DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES				HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION									
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	WATER CONTENT PERCENT												
									Wp	Wi											
													NP - Non-Plastic								
10	Fraste Mito DR225 Odex Downhole Hammer	Firm, damp to moist, silty medium SAND, some gravel. - no odour or staining. <i>(continued)</i>			3	SS		⊕													
11																					
12																					
13		SANDSTONE. (BEDROCK)		13.00																	
14																					
15																					
16																					
17																					
18																					
19																					
20																					
CONTINUED NEXT PAGE																					

DEPTH SCALE

1 : 50

LOGGED: M.T.

CHECKED: JL

DRILLING DATE: September 22, 2010
DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES				HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	PID ppm	⊕		
									PID ppm	□		
20	<div>Fraite Mito DR225 Odex Downhole Hammer</div>	SANDSTONE. (BEDROCK) <i>(continued)</i>										
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
CONTINUED NEXT PAGE												

DEPTH SCALE

1 : 50

LOGGED: M.T.

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-02

SHEET 4 OF 4

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 22, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		PID		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	WATER CONTENT PERCENT			
									Wp			W
30	Frasco Mito DR225 Odex Downhole Hammer	SANDSTONE. (BEDROCK) (continued)										
31												
32												
33												
34												
35												
36												
37												
38												
39												
40		End of Monitoring Well.		36.00								

Slotted PVC
Pipe

DEPTH SCALE

1 : 50

LOGGED: M.T.

CHECKED: J.L.

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-03

SHEET 1 OF 8

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 23, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			PID		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	WATER CONTENT PERCENT			
									Wp	Wi		
0	Fraser Mito DR225 Odex Downhole Hammer	Ground Surface		0.00								
		Dense, moist, grey-brown, silty SAND, some organics, some gravel, some organics (twigs, rootlets). - no odour or staining.			1	SS						
1		Lost core - no recovery.		1.00								
2												
3												
4												
5		Dense, moist, grey, sandy SILT, trace clay, trace gravel. - no odour or staining.		5.00		2	SS					
6		Very dense, moist, grey to dark grey, silty SAND and GRAVEL. - no odour or staining.		6.00		3	SS					
7												
8												
9		BEDROCK		9.00								
10												

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DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-03

SHEET 2 OF 8

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 23, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES				HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	WATER CONTENT PERCENT			
									Wp			Wi
10	Fraste Mito DR225 Odex Downhole Hammer	BEDROCK (continued)										
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
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DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-03

SHEET 3 OF 8

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 23, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES				HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	PID ppm			WATER CONTENT PERCENT Wp ———— W ———— WI NP - Non-Plastic
20	Fraste Mito DR225 Odex Downhole Hammer	BEDROCK (continued)										
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
		CONTINUED NEXT PAGE										

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

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PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-03

SHEET 4 OF 8

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 23, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES				HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	WATER CONTENT PERCENT			
									Wp			Wi
30	Fraste Mito DR225 Odex Downhole Hammer	BEDROCK (continued)										
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
		CONTINUED NEXT PAGE										

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-03

SHEET 5 OF 8

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 23, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES				HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	WATER CONTENT PERCENT			
									Wp			Wi
40	Fraste Mito DR225 Odex Downhole Hammer	BEDROCK (continued)										
41												
42												
43												
44												
45												
46												
47												
48												
49												
50												
CONTINUED NEXT PAGE												

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-03

SHEET 6 OF 8

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 23, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES				HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	WATER CONTENT PERCENT			
									Wp			Wi
50	Fraste Mito DR225 Odex Downhole Hammer	BEDROCK (continued)										
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
		CONTINUED NEXT PAGE										

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

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CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 23, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	WATER CONTENT PERCENT			
									Wp			W
60	Fraste Mito DR225 Odex Downhole Hammer	BEDROCK (continued)										
61												
62												
63												
64												
65												
66												
67												
68												
69												
70	CONTINUED NEXT PAGE											

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

PROJECT No.: 09-1436-5005

RECORD OF MONITORING WELL: MW10-03

SHEET 8 OF 8

CLIENT: Public Works and Government Services Canada

PROJECT: Groundwater and Soil Vapour Assessment

LOCATION: Steamboat Maintenance Camp, Kilometer 537.5, Alaska Highway

DRILLING DATE: September 23, 2010

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES				HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RECOVERY %	WATER CONTENT PERCENT			
									Wp			W
70	Fraser Mito DR225 Odex Downhole Hammer	BEDROCK (continued)										
71												
72												
73												
74												
75												
76												
77												
78												
79												
80												
		End of Monitoring Well.										

DEPTH SCALE

1 : 50

LOGGED: EvK

CHECKED: JL

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PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-01

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: September 6, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504939.65 E: 455732.95

TEST PIT DIMENSIONS:

INCLINATION: -90°

8.5 m Length x 1.7 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE		GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN			ANALYSED
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1063.17												
		FILL - (SP/GP) SAND and GRAVEL, trace fines, fine gravel; brown to grey; non-cohesive, dry, compact.		1062.97 0.20				⊕				S1	02025-01			
1		FILL - (SC/GC) CLAYEY SAND and GRAVEL; brown to dark grey; cohesive, w<PL, firm. - contains angular cobble to boulder-sized fragments of slightly weathered, grey, medium grained, non-porous to faintly porous, strong, SANDSTONE			S1	G		⊕				S2	02025-01			
2		Slightly weathered, grey, with iron and black staining, medium grained, non-porous to faintly porous, strong, SANDSTONE.		1061.17 2.00				⊕				S4	02025-03			
3																
4		- bedrock not exposed until ~ 3.65 m depth at north end of test pit. - becomes grey, very strong at 3.95 m depth End of Test Pit.		1059.22 3.95												
5																
6																
7																
8																
9																
10																

DEPTH SCALE

1 : 76.9

LOGGED: AB

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-02

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: September 6, 2016

LOCATION: km 537.5 Alaska Highway





EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504901.80 E: 455764.76

TEST PIT DIMENSIONS:

INCLINATION: -90°

6.9 m Length x 1.3 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED			
								PID ppm									
								100	200	300	400						
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1062.07													
		FILL - (GC) sandy CLAYEY GRAVEL, fine gravel; brown to grey, with some plastic refuse; cohesive, w<PL, stiff.		0.00				⊕					S1	02025-04			
1		FILL - (CL) sandy SILTY CLAY, some fine gravel; brown, with organics (wood debris); cohesive, w<PL, firm to stiff.		0.85													
2		FILL - (SC) CLAYEY SAND, some gravel; grey; cohesive, w<PL, firm. - contains angular cobble to boulder-sized fragments of slightly weathered, grey, medium grained, non-porous to faintly porous, strong, SANDSTONE		1059.57				⊕					S3	02025-06			
3		Slightly weathered, grey, with iron and black staining, medium grained, non-porous to faintly porous, medium strong to strong, SANDSTONE. - becomes grey, very strong at 2.8 m depth		1059.27 2.80													
4		End of Test Pit.															
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

LOGGED: AB

1 : 76.9

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-03

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504822.30 E: 455784.92

EXCAVATION DATE: September 6, 2016


EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

DATUM: NAD 83 UTM Zone 10

TEST PIT DIMENSIONS:

7.5 m Length x 1.2 m Width

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE		GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN		ANALYSED
								PID ppm							
								100	200	300	400				
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1062.47											
		FILL - (GP/GM) sandy GRAVEL, some non-plastic fines, fine gravel; brown, with organics (rootlets); non-cohesive, moist, compact.		1062.27 0.20				⊕				S1/2	02025-07/08		Seepage 
1		FILL - (GC) sandy CLAYEY GRAVEL, fine gravel; brown to grey, with debris (metal cable, sheet metal pipe, wooden planks); cohesive, w<PL, firm to stiff.		1061.77 0.70				⊕				S3	02025-09		
2		- some asphalt (wet, with fine crushed gravel) from 0.50 m to 0.60 m depth						⊕				S4	02025-10		
3		FILL - (CI) SILTY CLAY, some sand, some gravel; dark grey, with organics (rootlets); cohesive, w>PL, firm. - car engine ~ 0.75 m x 0.30 m at 1.3 m depth observed and removed during excavation; some motor oil observed in surrounding soil		1058.97				⊕				S5	02025-11		
4		- few angular cobble to boulder-sized fragments of slightly weathered, grey, medium grained, non-porous to faintly porous, strong, SANDSTONE below 1.5 m depth - some iron stained sand pockets at 2.5 m depth		3.60											
5		Slightly weathered, grey, with some iron staining, medium grained, non-porous to faintly porous, strong, SANDSTONE. - becomes very strong at 3.6 m depth													
6		End of Test Pit.													
7															
8															
9															
10															

DEPTH SCALE

1 : 76.9

LOGGED: AB

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-04

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: September 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504793.63 E: 455834.73

TEST PIT DIMENSIONS:

INCLINATION: -90°

3 m Length x 0.8 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1059.76												
		Grass and organic overburden.		1059.51												
		(CL/ML) CLAYEY SILT, moist with some pieces of fractured silt/sandstone, some gravel, no shear, no odour, loose.		0.25			⊕					S1	01129-01			
1																
					1058.01			⊕					S2	01129-02		
2		Weathered SILTSTONE.		1.75												
				1057.36												
				2.40												
3		End of Test Pit.														
4																
5																
6																
7																
8																
9																
10																

DEPTH SCALE

1 : 76.9

LOGGED: IM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-05

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: September 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504881.18 E: 455752.09

TEST PIT DIMENSIONS:

INCLINATION: -90°

3 m Length x 0.8 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1062.81												
		Grass and organic overburden.		1062.56												
		(CL/ML) CLAYEY SILT, moist with pieces of trace rock (siltstone/sandstone).		0.25									S1	01129-03		
		Weathered SILTSTONE.		1062.01												
1			X X X X	0.80												
			X X X X	1061.41	S1	RC										
			X X X X	1.40												
2		End of Test Pit.														
3																
4																
5																
6																
7																
8																
9																
10																

DEPTH SCALE

1 : 76.9

LOGGED: IM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-06

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: September 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504797.04 E: 455838.14

TEST PIT DIMENSIONS:

3 m Length x 0.8 m Width

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	PID ppm				NUMBER	SCN	ANALYSED		
								5	10	15	20					
														</		

DEPTH SCALE

1 : 76.9

LOGGED: IM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-07

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: September 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504798.26 E: 455842.60

TEST PIT DIMENSIONS:

INCLINATION: -90°

3 m Length x 0.8 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES		PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	PID ppm				NUMBER	SCN		ANALYSED
								5	10	15	20				

DEPTH SCALE

1 : 76.9

LOGGED: IM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-08

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

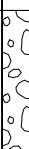

N: 6504885.00 E: 455731.00

EXCAVATION DATE: November 7, 2016

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1063.06												
		(GP) GRAVEL with some sand.		0.00												
1													S1	02028-01		
2			(ML) CLAYEY SILT, some gravel; brown; moist.		1061.56									S2	02028-02	
			1.50													
3													S3	02028-03		
4		- BEDROCK at 3.40 m depth..		1059.66									S4	02028-04		
		End of Test Pit.		3.40												
5																
6																
7																
8																
9																
10																

DEPTH SCALE

1 : 76.9

LOGGED: IM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-09

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard


EXCAVATION DATE: November 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504874.00 E: 455709.00

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED			
								PID ppm									
								100	200	300	400						
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1063.18													
		(GP) GRAVEL with some sand.		0.00									S1	02028-05			
1		- garbage observed at 1.0 m depth.															
2		(ML) CLAYEY SILT, some gravel; brown; moist.		1061.68 1.50													
3																	
4		- BEDROCK at 3.40 m depth.		1059.78 3.40													
5		End of Test Pit.															
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 76.9

LOGGED: IM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-10

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504900.00 E: 455716.00

EXCAVATION DATE: November 7, 2016

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1063.88												
		(GP) GRAVEL, with some sand.		0.00												
1		- organics observed at 1.0 m depth														
2		- garbage observed at 1.5 m depth		1062.38												
		(ML) CLAYEY SILT, some gravel; brown; moist.		1.50								S1	02028-06			
3																
4		- BEDROCK at 3.5 m depth.		1060.38												
		End of Test Pit.		3.50												
5																
6																
7																
8																
9																
10																

DEPTH SCALE

1 : 76.9

LOGGED: IM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-11

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

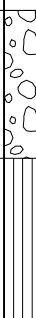
EXCAVATION DATE: November 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504905.00 E: 455710.00

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1063.57												
		(GP) GRAVEL, with some sand.		0.00												
1		- organics observed at 1.0 m depth											S1	02028-07		
2		(ML) CLAYEY SILT, some gravel; brown; moist. - garbage observed at 1.5 m depth.		1062.07 1.50									S2	02028-08		
3				1060.37								S3	02028-09			
4		- BEDROCK at 3.2 m depth.		3.20												
5		End of Test Pit.														
6																
7																
8																
9																
10																

DEPTH SCALE

1 : 76.9

LOGGED: IM

CHECKED: JL

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504874.00 E: 455722.00

EXCAVATION DATE: November 7, 2016

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

DATUM: NAD 83 UTM Zone 10

INCLINATION: -90°

[illegible]

DEPTH SCALE

1 : 76.9

LOGGED: IM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-13

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard


EXCAVATION DATE: November 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504880.00 E: 455731.00

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED			
								PID ppm									
								100	200	300	400						
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface (GP) GRAVEL with some sand.		1062.75 0.00													
1		- hydrocarbon staining and few tree branches at 1.45 m depth (ML) CLAYEY SILT, some rock.		1061.25 1.50									S1	02029-01			
2													S2/3	02029-02/03			
3														S4	02029-04		
4		- BEDROCK at 3.2 m depth. End of Test Pit.		1059.55 3.20													
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

LOGGED: IM

1 : 76.9

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-14

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504877.00 E: 455738.00

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20 ⊕				NUMBER	SCN	ANALYSED	
								PID ppm							

DEPTH SCALE

LOGGED: IM

1 : 76.9

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-15

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 6, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

TEST PIT DIMENSIONS:

N: ~6504985 E: ~455680

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

6 m Length x 1.3 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		0.00												
		(ML) SILT, some gravel, trace roots and wood debris; brown, no staining, no odour, cohesive, moist, stiff.											S1	509271-03-01		
1																
2		(CL) SILTY CLAY, trace rootlets; red-brown, no staining, no odour; cohesive, w~PL, soft. - grades to grey at 1.5 m depth.		1.30										S2	509271-03-02	
3		(ML) CLAYEY SILT, some gravel; grey, no staining, no odour; cohesive, w>PL, stiff. - weathered sandstone cobble and boulders starting at 2.9 m depth (grey and orange).		2.30												
4																
5		- BEDROCK at 4.6 m depth.		4.60												
		End of Test Pit.														
6																
7																
8																
9																
10																

DEPTH SCALE

1 : 76.9

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-16

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504961.81 E: 455672.53

EXCAVATION DATE: November 6, 2016

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

DATUM: NAD 83 UTM Zone 10

TEST PIT DIMENSIONS:

6.25 m Length x 1.6 m Width

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1059.56												
		(ML) CLAYEY SILT, some weathered bedrock cobbles; grey, no staining, no odour; cohesive, w>PL, very stiff.		0.00												
1							⊕					S1	TP16-16-S1			
2																
3			- grades to light brown at 3.0 m depth.				⊕						S2	TP16-16-S2		
4																
5						⊕						S3	TP16-16-S3			
6		- BEDROCK at 5.6 m depth.		1053.96												
		End of Test Pit.		5.60												
7																
8																
9																
10																

DEPTH SCALE

1 : 76.9

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-17

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

EXCAVATION DATE: November 6, 2016

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

DATUM: NAD 83 UTM Zone 10

TEST PIT DIMENSIONS:

7 m Length x 1.6 m Width

N: ~6504955 E: ~455625

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface														
1		(ML) CLAYEY SILT, some organics and tree roots, some cobble, gravel; brown, no staining, no odour; cohesive, moist, soft. - organic seam with tree roots at 0.8 m depth.		0.00								S1	TP16-17-S1			
2																
3		(CL) SILTY CLAY, some sand, medium to coarse, gravel; brown, no staining, no odour; cohesive, moist, firm.		2.30												
4																
5		(ML) CLAYEY SILT, some sand, trace cobble, fine sand; brown, no staining, no odour; cohesive, moist, firm.		4.20								S2	TP16-17-S2			
6		(ML) CLAYEY SILT, with 40% gravel and cobble; brown, no staining, no odour; cohesive, moist, firm.		5.90								S3	TP16-17-S3			
7		- BEDROCK at 7.0 m depth.		7.00												
8		End of Test Pit.														
9																
10																

DEPTH SCALE

1 : 76.9

LOGGED: IM/RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-18

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 6, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504968.86 E: 455722.49

TEST PIT DIMENSIONS:

INCLINATION: -90°

7 m Length x 1.6 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED			
								PID ppm									
								100	200	300	400						
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1060.00													
		(ML) CLAYEY SILT, some organics, trace cobbles; brown, no staining, no odour; cohesive, moist, firm.		0.00													
1		- concrete and metal debris at 0.7 m depth.											S1	TP16-18-S1			
		- red stained soil seam approx. 0.1 m thick at 1.1 m depth.															
2				1057.70													
		(ML) CLAYEY SILT, 40% cobble; brown, no staining, no odour; cohesive, moist, firm.		2.30									S2	TP16-18-S2			
3		- oil filter found at 2.5 m depth.															
		(ML) sandy SILT, trace clay, cobble; dark brown, no staining, no odour; cohesive, moist, compact.		1056.80									S3	TP16-18-S3			
		- BEDROCK at 3.2 m depth.		3.20													
4		End of Test Pit.															
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

LOGGED: IM/RM

1 : 76.9

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-19

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 6, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504957.56 E: 455716.54

TEST PIT DIMENSIONS:

INCLINATION: -90°

7 m Length x 1.6 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1060.00												
		(ML) CLAYEY SILT, with organics, some cobble; brown, no staining, no odour; cohesive, moist, soft to firm. - wood garbage spotted at 0.3 m depth.		0.00									S1	TP16-19-S1		
1																
2													S2	TP16-19-S2		
		(SM) SILTY SAND, some gravel, fine sand; brown, no staining, no odour; non-cohesive, moist, loose.		1057.70												
				2.30												
3																
				1056.20									S3	TP16-19-S3		
4		- BEDROCK at 3.8 m depth.		3.80												
		End of Test Pit.														
5																
6																
7																
8																
9																
10																

DEPTH SCALE

LOGGED: IM/RM

1 : 76.9

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-20

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 6, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

TEST PIT DIMENSIONS:

N: ~6504939 E: ~455754

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

6 m Length x 1.6 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	PID ppm				NUMBER	SCN	ANALYSED		
								5	10	15	20					
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		0.00												
1		(SW) SAND, medium to coarse, some gravel; brown, no staining, no odour; non-cohesive, moist, loose. - garbage and metal debris (car trim pieces) - organic seam at 1.0 m depth.					⊕					S1	TP16-20-S1			
2		(SP) SAND, some gravel, some cobble; brown, no staining, no odour; non-cohesive, moist, loose.		2.00			⊕						S2	TP16-20-S2		
3																
4																
4		- BEDROCK at 4.2 m depth. End of Test Pit.		4.10				⊕					S3	TP16-20-S3		
5																
6																
7																
8																
9																
10																

DEPTH SCALE

1 : 76.9

LOGGED: IM/RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-21

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 6, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: ~6504908 E: ~455807

TEST PIT DIMENSIONS:

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

6 m Length x 1.6 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface														
		(ML) CLAYEY SILT, some cobble, silty sand, trace clay; brown, no staining, no odour; cohesive, moist, stiff - tree roots at 0.2 m depth.		0.00									S1	TP16-21-S1		
1																
2		Weathered siltstone/sandstone; no odour, no sheen.	x x x x x x x x x x	1.40									S2	TP16-21-S2		
3		- BEDROCK at 2.6 m depth.		2.60												
4		End of Test Pit.														
5																
6																
7																
8																
9																
10																

DEPTH SCALE

LOGGED: IM/RM

1 : 76.9

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-22

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 6, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

TEST PIT DIMENSIONS:

N: ~6504908 E: ~455794

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

7 m Length x 1.6 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface														
		ROAD BASE FILL - (SP/GP) gravelly SAND, some cobbles; brown, no staining, no odour; non-cohesive, moist, loose.		0.00									S1	TP16-22-S1		
1																
2		- some light brown soil at 2.0 m depth.		2.10									S2	TP16-22-S2		
3		(ML) SILT, some clay, trace gravel; brown, no staining, no odour; cohesive, moist, firm.														
		(ML) SILT, some clay, trace gravel; dark brown, no staining, no odour; cohesive, moist, firm.		3.10												
4		sandy SILT, some cobble (siltstone/standstone); dark brown, no staining, no odour; cohesive, moist, compact.		4.00								S3	TP16-22-S3			
5		- BEDROCK at 4.5 m depth. End of Test Pit.		4.50												
6																
7																
8																
9																
10																

DEPTH SCALE

LOGGED: IM/RM

1 : 76.9

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-23

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

TEST PIT DIMENSIONS:

N: ~6504889 E: ~455785

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

6.2 m Length x 1.2 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE		GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	PID ppm				NUMBER	SCN		ANALYSED
								5	10	15	20				
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		0.00											
1		(SM) SILTY SAND, some gravel; brown, no staining, no odour; non-cohesive, moist, very dense.										S1	TP16-23-S1		
2		(SP) SAND, fine with cobbles and boulders; grey to brown, no staining, no odour; non-cohesive, moist, compact										S2	TP16-23-S2		
2.10		- BEDROCK at 2.1 m depth.													
3		End of Test Pit.													
4															
5															
6															
7															
8															
9															
10															

DEPTH SCALE

1 : 76.9

LOGGED: IM/RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-24

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

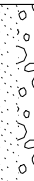
TEST PIT DIMENSIONS:

N: ~6504877 E: ~455791

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

6 m Length x 1.4 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	PID ppm				NUMBER	SCN	ANALYSED			
								5	10	15	20						
								100	200	300	400						
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		0.00													
		(SP/GP) SAND and GRAVEL; brown, no staining, no odour; non cohesive, moist, dense.															
1		- weathered sandstone cobbles and boulders at 1.0 m depth.															
2		- BEDROCK at 1.8 m depth.		1.80									S1	TP16-24-S1			
													S2	TP16-24-S2			
		End of Test Pit.															
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 76.9

LOGGED: IM/RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-25

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504896.65 E: 455757.03

TEST PIT DIMENSIONS:

INCLINATION: -90°

5.5 m Length x 1.4 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES				CHEMISTRY ANALYSIS			ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION
		DESCRIPTION	STRATA PLOT	ELEV.	NUMBER	TYPE	RECOVERY %		NUMBER	SCN	ANALYSED		
				DEPTH (m)									
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1060.00									
		(SM) SILTY SAND, some gravel, sandstone cobble; brown; moist, very dense.		0.00				S1	TP16-25-S1				
1								S2	TP16-25-S2				
2		- BEDROCK at 3.2 m depth.		1058.20									
		End of Test Pit.		1.80									
3													
4													
5													
6													
7													
8													
9													
10													

DEPTH SCALE

LOGGED: IM/RM

1 : 76.9

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-26

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

EXCAVATION DATE: November 7, 2016

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

DATUM: NAD 83 UTM Zone 10




TEST PIT DIMENSIONS:

5.5 m Length x 1.6 m Width

N: ~6504808 E: ~455805

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED			
								PID ppm									
								100	200	300	400						
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface															
		(SP/GP) SAND and GRAVEL; brown, no staining, no odour; non cohesive, moist, dense.		0.00													
		(CL) SILTY CLAY, trace gravel; brown, no staining, no odour; cohesive, moist, very stiff.		0.40			⊕						S1	TP16-26-S1			
2																	
		(CH) CLAY, trace gravel, occasional sandstone cobble; dark brown, no staining, no odour; cohesive, w~PL, stiff.		2.40			⊕						S2	TP16-26-S2			
3		- BEDROCK at 3.2 m depth.		3.20													
4		End of Test Pit.															
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 76.9

LOGGED: IM/RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-27

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

EXCAVATION DATE: November 7, 2016

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

DATUM: NAD 83 UTM Zone 10

TEST PIT DIMENSIONS:

7 m Length x 1.6 m Width

N: ~6504829 E: ~455774

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED			
								PID ppm									
								100	200	300	400						
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		0.00													
		(SP/GP) SAND and GRAVEL; brown, no staining, no odour; non- cohesive, moist, compact.															
1		(CL) SILTY CLAY, trace gravel, organics; brown, no staining, no odour; cohesive, w~PL, firm.		0.80			⊕						S1	TP16-27-S1			
2																	
3																	
4		- sandstone cobble and boulders at 3.5 m depth.				⊕							S2	TP16-27-S2			
		- BEDROCK at 4.1 m depth.		4.10													
		End of Test Pit.															
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 76.9

LOGGED: IM/RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-28

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.




TEST PIT DIMENSIONS:

N: ~6504839 E: ~455752

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

6 m Length x 1.3 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED			
								PID ppm									
								100	200	300	400						
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface															
		(SP/GP) SAND and GRAVEL (ROAD BASE FILL)		0.00													
1		(ML) SILTY CLAY, some gravel; brown, no staining, no odour; cohesive, w~PL, firm. - organic lens from 1.2 m to 1.4 m depth.		0.60													
2		(ML) CLAY, some sandstone cobble, trace sand; brown, no staining, no odour; cohesive, w<PL, dense.		1.70									S1	TP16-28-S1			
3																	
4												S2	TP16-28-S2				
		- BEDROCK at 4.1 m depth.		4.10													
		End of Test Pit.															
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 76.9

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-29

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

TEST PIT DIMENSIONS:

N: ~6504927 E: ~455670

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

6 m Length x 1.6 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	PID ppm				NUMBER	SCN	ANALYSED	
								5	10	15	20				

DEPTH SCALE

1 : 76.9

LOGGED: IM/RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-30

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

EXCAVATION DATE: November 7, 2016

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

DATUM: NAD 83 UTM Zone 10

TEST PIT DIMENSIONS:

5 m Length x 1.8 m Width

N: ~6504938 E: ~455640

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface														
		(ML) CLAYEY SILT, cobbles and gravel, trace rootlets; dark brown; w~PL.		0.00									S1	TP16-30-S1		
1																
2		- organic seam from 1.6 m to 1.8 m depth.														
		(SM) SILTY SAND, with roots, sandstone cobbles; grey, no staining, no odour; non- cohesive, wet, stiff.		2.10									S2	TP16-30-S2		
3																
		(ML) CLAYEY SILT, trace sand, gravel; light brown, no staining, no odour; cohesive, moist, stiff.		3.50									S3	TP16-30-S3		
4		- sandstone cobbles at 3.9 m depth.														
		- BEDROCK at 4.2 m depth.		4.20												
5		End of Test Pit.														
6																
7																
8																
9																
10																

DEPTH SCALE

1 : 76.9

LOGGED: IM/RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-31

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 7, 2016

LOCATION: km 537.5 Alaska Highway



EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

N: 6504791.81 E: 455817.98

TEST PIT DIMENSIONS:

INCLINATION: -90°

6 m Length x 1.3 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	PID ppm				NUMBER	SCN	ANALYSED	
								5	10	15	20				
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		1059.56											
		(SP/GP) SAND and GRAVEL, with cobble. (ROAD BASE FILL)		0.00											
1		(ML) CLAYEY SILT, trace gravel; light brown, no staining, no odour; cohesive, w~PL, firm.		1058.96 0.60									S1	TP16-31-S1	
2													S2	TP16-31-S2	
3		- BEDROCK at 2.8 m depth.		1056.76 2.80											
		End of Test Pit.													
4															
5															
6															
7															
8															
9															
10															

DEPTH SCALE

LOGGED: RM

1 : 76.9

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-32

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

EXCAVATION DATE: November 7, 2016

LOCATION: km 537.5 Alaska Highway

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.



TEST PIT DIMENSIONS:

N: ~6504814 E: ~455851

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

6 m Length x 1.4 m Width

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface														
		(SP/GP) SAND and GRAVEL (ROAD BASE FILL)		0.00												
1		(SP) SAND, fine, some sandstone gravel and cobble; brown, red staining, no odour; non-cohesive, moist, very dense.		1.00									S1	TP16-32-S1		
2		- BEDROCK at 1.8 m depth.		1.80									S2	TP16-32-S2		
		End of Test Pit.														
3																
4																
5																
6																
7																
8																
9																
10																

DEPTH SCALE

LOGGED: RM

1 : 76.9

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-33

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

EXCAVATION DATE: November 7, 2016

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

DATUM: NAD 83 UTM Zone 10

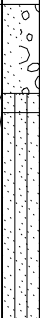
TEST PIT DIMENSIONS:

6 m Length x 1.4 m Width

N: ~6504973 E: ~455689

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED			
								PID ppm									
								100	200	300	400						
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface		0.00													
		(SP/GP) SAND and GRAVEL. ROAD BASE FILL															
1		- organic lens from 0.8 m to 0.9 m depth.		0.90										S1	TP16-33-S1		
		(SM) SILTY SAND, some gravel; light yellow-brown, no staining, no odour; non-cohesive, moist, dense.		1.10													
2		(SM) SILTY SAND, some gravel; grey, no staining, no odour; non-cohesive, moist, dense.											S2	TP16-33-S2			
3													S3	TP16-33-S3			
		- BEDROCK at 3.2 m depth.		3.20													
4		End of Test Pit.															
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 76.9

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF TEST PIT: TP16-34

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

EXCAVATION DATE: November 7, 2016

EXCAVATION CONTRACTOR: Radar Road Transport Ltd.

DATUM: NAD 83 UTM Zone 10

TEST PIT DIMENSIONS:

6 m Length x 1.4 m Width

N: ~6504933 E: ~455786

Note: Northing and Easting Coordinates have been determined by GPS in the field and are approximate only.

INCLINATION: -90°

DEPTH SCALE METRES	EXCAVATION METHOD	SOIL PROFILE			GEOTECH SAMPLES			PID ppm				CHEMISTRY ANALYSIS			ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE, THERMISTOR INSTALLATION OR SEEPAGE OBSERVATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY %	5 10 15 20				NUMBER	SCN	ANALYSED		
								PID ppm								
								100	200	300	400					
0	John Deere 250G LC Excavator Excavator Bucket	Ground Surface														
		(CL) SILTY CLAY, trace sand, organics; brown, no staining, no odour; cohesive, w~PL, soft.		0.00												
1													S1	TP16-34-S1		
		(SM) SILTY SAND, with sandstone cobble; grey, no staining, no odour; non-cohesive, moist, dense.		1.40									S2	TP16-34-S2		
2		- increasing sandstone cobbles at 2.0 m depth.											S3	TP16-34-S3		
		- BEDROCK at 2.2 m depth.		2.20												
3		End of Test Pit.														
4																
5																
6																
7																
8																
9																
10																

DEPTH SCALE

1 : 76.9

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF BOREHOLE: BH16-01

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: September 6, 2016

LOCATION: km 537.5 Alaska Highway

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

N: 6504958.06 E: 455678.03

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	WATER CONTENT %					
												5	10	15	20		
0	B80 Solid Stem Auger (Casing: 152 mm.)	Ground Surface		1065.39													
		(SP) SAND, fine, some silt, angular gravel; brown; moist, dense. - interbedded medium sand seams throughout		0.00													
1																	
2																	
3		(CH) SILTY CLAY, some angular gravel; brown; moist, w<PL, stiff.		1062.44													
				2.95													
4																	
5		End of Borehole. (Refusal)		1061.07													
				4.32													
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: AV

REV:

0

PROJECT No.: 1660199 / 1000

RECORD OF BOREHOLE: BH16-02

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: September 6, 2016

LOCATION: km 537.5 Alaska Highway

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

N: 6504968.42 E: 455694.10

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	WATER CONTENT %					
												5	10	15	20		
0	B80 Solid Stem Auger (Casing 152 mm;)	Ground Surface		1063.99													
		(SP) SAND, fine, some angular gravel; brown; moist, dense.		0.00													
1																	
2		(ML) CLAYEY SILT, some angular gravel; brown; w<PL, stiff.		1062.32													
				1.68													
3																	
4																	
4		End of Borehole. (Refusal)		1060.03													
				3.96													
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: AV

REV:

0

[illegible]

PROJECT No.: 1660199 / 1000

RECORD OF BOREHOLE: BH16-04

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: September 6, 2016

LOCATION: km 537.5 Alaska Highway

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

N: 6504941.42 E: 455687.99

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	WATER CONTENT %					
												5	10	15	20		
0	B80 Solid Stem Auger (Casing: 152 mm.)	Ground Surface (CL) SILTY CLAY, trace angular gravel; brown; w<PL, stiff.		1065.16 0.00													
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
		End of Borehole. (Refusal)		1059.97 5.18													

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: AV

REV:

0

PROJECT No.: 1660199 / 1000

RECORD OF BOREHOLE: BH16-05

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

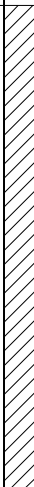
PROJECT: Steamboat Maintenance Yard

DRILLING DATE: September 6, 2016

LOCATION: km 537.5 Alaska Highway

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

N: 6504921.82 E: 455716.51

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES			CHEMISTRY SAMPLES			PID ppm				DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION				
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	PID ppm				WATER CONTENT %							
												5	10	15	20	20	40			60	80	Wp	W
												100	200	300	400	10	20	30	40				
0	B80 Solid Stem Auger (Casing: 152 mm;)	Ground Surface (CL) SILTY CLAY, trace sand, angular gravel; light brown; moist, stiff.		1064.14 0.00																			
1																							
2																							
3																							

National IM Server GINT_GAL_NATIONAL IM Unique Project ID: Outfall From B.C. BOREHOLE (GEOENVIRO). RY James, 18/9/17

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: AV

REV:

0

PROJECT No.: 1660199 / 1000

RECORD OF BOREHOLE: BH16-06

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: September 6, 2016

LOCATION: km 537.5 Alaska Highway

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	WATER CONTENT %					
												5	10	15	20		
0	B80 Solid Stem Auger (Casing: 152 mm.)	Ground Surface (ML) SILT; light grey; dry, stiff.		0.00													
1		(CL) SILTY CLAY, trace gravel; light brown; w<PL, stiff.		0.61			2	100		Sa1 02021-01	X						
2										Sa2 02021-02							
2		- trace piece of sandstone from 2.13 m to 2.44 m depth					2	100		Sa3 02021-03	X						
3		End of Borehole. (Refusal)		2.44													
4																	
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: AV

REV:

0

PROJECT No.: 1660199 / 1000

RECORD OF BOREHOLE: BH16-07

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: September 6, 2016

LOCATION: km 537.5 Alaska Highway

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

N: 6504881.18 E: 455752.09

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	WATER CONTENT %					
												5	10	15	20		
0	B80 Solid Stem Auger (Casing: 152 mm;)	Ground Surface (CL) SILTY CLAY, trace angular gravel; light brown, interbedded grey silt seems throughout; moist, stiff.		1062.81 0.00													
1							1	100	Sa1 02021-04	X ⊕							
2									Sa2 02021-05	⊕							
3							2	100	Sa3 02021-06	X ⊕							
4		End of Borehole. (Refusal)		1060.24 2.57													
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: AV

REV:

0

PROJECT No.: 1660199 / 1000

RECORD OF BOREHOLE: BH16-08

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: September 6, 2016

LOCATION: km 537.5 Alaska Highway

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

N: 6504874.04 E: 455749.23

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE			GEOTECH SAMPLES				CHEMISTRY SAMPLES			PID ppm				DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	PID ppm				WATER CONTENT %					
												5	10	15	20	20	40	60	80		
										</											

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: AV

REV:

0

[illegible]

PROJECT No.: 1660199 / 1000

RECORD OF BOREHOLE: BH16-10

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: September 8, 2016

LOCATION: km 537.5 Alaska Highway

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

N: 6504875.00 E: 455778.03

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE			GEOTECH SAMPLES				CHEMISTRY SAMPLES			PID ppm				DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	PID ppm				WATER CONTENT %						
												5	10	15	20	20	40	60	80			
												100	200	300	400	10	20	30	40			
0	B80 Solid Stem Auger (Casing: 152 mm.)	Ground Surface		1062.47																		
		(SM) SILTY SAND, some rounded gravel; brown; moist, dense.		0.00					Sa1	02026-01	X ⊕											
1								1	100													
										Sa2	02026-02/03	X ⊕										
				1060.97																		
		End of Borehole. (Refusal)		1.50																		
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

National IM Server GINT_GAL_NATIONAL IM Unique Project ID: Output From BOREHOLE (GEOENVIRO). RV James, 18/9/17

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: AV

REV:

0

DATUM: NAD 83 UTM Zone 10

[illegible]

DEPTH SCALE
1 : 50



SOIL CLASSIFICATION SYSTEM: GACS
LOGGED: RM
CHECKED: AV

REV: 0

DATUM: NAD 83 UTM Zone 10

[illegible]

PROJECT No.: 1660199 / 1000

RECORD OF BOREHOLE: BH16-13

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504919.33 E: 455690.78

DRILLING DATE: September 8, 2016

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES			PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION			
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	5 10 15 20				20 40 60 80					
												PID ppm				WATER CONTENT % Wp — W — Wi					
												100	200	300	400	10	20	30	40		
0	B80 Solid Stem Auger (Casing: 152 mm.)	Ground Surface		1064.49																	
		(CL) SILTY CLAY, trace angular gravel; brown, moderate hydrocarbon-like odour; w~PL, stiff.		0.00																	
1								1	100												
												X									
2																					
3			(ML) SANDY SILT, some clay; light brown; w>PL, soft. - trace organics from 2.74 m to 2.90 m depth		1062.00			2	100												
					2.49																
4																					
5		- strong hydrocarbon-like odour from 4.57 m to 4.93 m depth - hydrocarbon-like odour dissipates at 5.89 m depth																			
		(CH) CLAY; dark grey; w>PL, soft.		1059.38							X										
				5.11																	
		- some sandstone fragments; odour and PID dissipate at 5.89 m depth																			
				1058.65																	
				5.84																	
6		End of Borehole. (Refusal)																			
7																					
8																					
9																					
10																					

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: AV

REV:

0

PROJECT No.: 1660199 / 1000

RECORD OF BOREHOLE: BH16-14

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504910.55 E: 455687.42

DRILLING DATE: September 8, 2016

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES			PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION			
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	5 10 15 20				20 40 60 80					
												PID ppm				WATER CONTENT % Wp — W — WI					
0	B80 Solid Stem Auger (Casing: 152 mm;)	Ground Surface		1064.34																	
		(SP/GP) SAND and GRAVEL, some silt; grey, slight hydrocarbon-like odour, trace rootlets; moist, compact.		0.00					Sa1	01132-08	X	⊕									
		(SP) SAND, fine, some silt, trace sandstone fragments; grey, strong hydrocarbon-like odour; moist, dense.		0.41				1	100	Sa2	01132-09										
1																					
		(CL) SILTY SAND, trace angular gravel; light brown, strong hydrocarbon-like odour; w>PL, soft.		1.32																	
2																					
3																					
4																					
		- grades to stiff at 3.96 m depth																			
5																					
6																					
6																					

Bentonite Chips

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: AV

REV:

0

PROJECT No.: 1660199 / 1000

RECORD OF BOREHOLE: BH16-15

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504915.35 E: 455681.70

DRILLING DATE: September 8, 2016

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	WATER CONTENT %					
												5	10	15	20		
0	B80 Solid Stem Auger (Casing: 152 mm;)	Ground Surface (CL) SILTY CLAY, some sand, rounded gravel; grey; w>PL, firm.		1064.21 0.00													
1		- metal debris at 1.22 m depth															
2		- standing water at 1.83 m depth															
3		(CL) SILTY CLAY, trace angular gravel; red-brown; w~PL, stiff.		1061.77 2.44													
4		(CH) CLAY, some angular gravel; light brown; w<PL, soft.		1061.00 3.20													
5		- grades to grey at 5.18 m depth															
6		End of Borehole. (Refusal)		1058.26 5.94													
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: AV

REV:

0

PROJECT No.: 1660199 / 1000

RECORD OF BOREHOLE: BH16-16

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504939.70 E: 455679.61

DRILLING DATE: September 8, 2016

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES			PID ppm				DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	PID ppm				WATER CONTENT %					
												5	10	15	20	20	40	60			80

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: AV

REV:

0

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504893.85 E: 455743.50

DRILLING DATE: September 8, 2016

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

[illegible]

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: AV

REV:

0

PROJECT No.: 1660199 / 1000

RECORD OF MONITORING WELL: MW16-01

SHEET 1 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard











LOCATION: km 537.5 Alaska Highway

N: 6504998.79 E: 455633.08

DRILLING DATE: August 31, 2016

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES			PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION				
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	PID ppm				WATER CONTENT %						
												5	10	15	20	20			40	60	80	Wp
												100	200	300	400	10	20	30	40			
0	B80 Solid Stem Auger (Casing: 152 mm;)	Ground Surface		1066.65																	Concrete	
		(SM) gravelly SILTY SAND, fine, rounded gravel; brown, with organics (roots and rootlets); non-cohesive, wet, loose.		1066.55 0.10																		
		(SP) gravelly SAND, fine, rounded gravel; light brown to orange; non-cohesive, wet, compact.		1066.04 0.61			1	100														
1		(SC) gravelly CLAYEY SAND, rounded gravel; brown; cohesive, w~PL, firm.																				
2		(CI) gravelly sandy SILTY CLAY, sub-rounded gravel; brown mottled with orange; cohesive, w>PL, stiff.		1064.67 1.98			2	100														
3	B80 Solid Stem Auger (Casing: 102 mm;)	Note: angular fragments of SILTSTONE, inferred to be bedrock, at 2.9 m depth																			Bentonite Chips	
		(GC) CLAYEY GRAVEL, some sand, coarse, angular gravel; grey mottled with light brown and orange; cohesive, w~PL, stiff.		1063.30 3.35			3	100														
4		Note: angular gravel is SILTSTONE, inferred to be bedrock																				
5	B80 Odex Downhole Hammer																				Coated Bentonite Chips	
		Inferred weathered BEDROCK.		1061.47			4	100														
6		Bedrock Encountered. Refer to Record of DRILLHOLE log for continuation of rock description.		1060.86 5.79																		
7																						
8																						
9																						
10																						

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: AB

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF MONITORING WELL: MW16-02

SHEET 1 OF 3

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504928.54 E: 455762.74

DRILLING DATE: September 1, 2016

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE			GEOTECH SAMPLES				CHEMISTRY SAMPLES			PID ppm				DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No.	CORE RECOVERY %	NUMBER	SCN	ANALYSED	PID ppm				WATER CONTENT %					
													5	10	15	20	20	40	60			80
													100	200	300	400	Wp	W	WI			
0	B80 Solid Stem Auger (Casing: 152 mm;)	Ground Surface		1061.55																		
		(SP) SAND, some sub-angular gravel, some fines; brown-grey; moist, dense.		0.00																		
1		- with wood fibers from 1.07 m to 1.22 m depth						1	100													
2	B80 Solid Stem Auger (Casing: 102 mm;)	(ML) SILT, trace angular gravel; light brown; w<PL, stiff.		1059.95																		
				1.60																		
3								2	100													
4	B80 Solid Stem Auger (Casing: 102 mm;)	Inferred weathered BEDROCK.		1058.35																		
				3.20																		
5								3	100													
6	Odex Downhole Hammer (Casing: 102 mm;)	Bedrock Encountered. Refer to Record of DRILLHOLE log for continuation of rock description.		1057.28																		
				4.27																		
7																						
8	Odex Downhole Hammer (Casing: 102 mm;)																					
9																						
10	Odex Downhole Hammer (Casing: 102 mm;)																					

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF MONITORING WELL: MW16-03

SHEET 1 OF 3

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard







LOCATION: km 537.5 Alaska Highway

N: 6504956.93 E: 455622.76

DRILLING DATE: September 2, 2016

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES			CHEMISTRY SAMPLES			PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION				
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	5 10 15 20						20 40 60 80			
												PID ppm						WATER CONTENT %			
												100 200 300 400						Wp — W — WI 10 20 30 40			
0	B80 Solid Stem Auger (Casing: 152 mm;)	Ground Surface		1066.12 0.00													Concrete				
		(SP/GP) SAND and GRAVEL (Road Base), some silt; grey; moist, dense.		1065.66 0.46			1	100													
		(MH) CLAYEY SILT, some gravel, trace sand; brown to grey; w~PL, dense.																			
1	B80 Solid Stem Auger (Casing: 152 mm;)																Bentonite Chips				
2	B80 Solid Stem Auger (Casing: 152 mm;)	(ML) SILT, some gravel, trace sand; grey, mottled orange; w<PL, dense.		1064.24 1.88			2	100									Bentonite Chips				
3	B80 Solid Stem Auger (Casing: 152 mm;)																Bentonite Chips				
4	B80 Solid Stem Auger (Casing: 152 mm;)	Inferred weathered SANDSTONE.		1062.36 3.76													Bentonite Chips				
5	B80 Odex Downhole Hammer (Casing: 102 mm;)	Bedrock Encountered. Refer to Record of DRILLHOLE log for continuation of rock description.		1061.85 4.27													Bentonite Chips				
6	B80 Odex Downhole Hammer (Casing: 102 mm;)																Bentonite Chips				
7	B80 Odex Downhole Hammer (Casing: 102 mm;)																Bentonite Chips				
8	B80 Odex Downhole Hammer (Casing: 102 mm;)																Bentonite Chips				
9	B80 Odex Downhole Hammer (Casing: 102 mm;)																Bentonite Chips				
10	B80 Odex Downhole Hammer (Casing: 102 mm;)																Bentonite Chips				

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF MONITORING WELL: MW16-04

SHEET 1 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504920.13 E: 455676.68

DRILLING DATE: September 2, 2016

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES			CHEMISTRY SAMPLES			PID ppm				DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	PID ppm				WATER CONTENT %					
												5	10	15	20	20	40			60	80
												100	200	300	400	Wp	W			WI	
0	B80 Solid Stem Auger (Casing: 152 mm;)	Ground Surface (SP/GP) SAND and GRAVEL (Road Base), some silt; grey; moist, compact.		1064.47 0.00															Concrete		
1		(ML) CLAYEY SILT, trace gravel, sand; light brown, mottled orange; w~PL, dense.		1063.71 0.76			1	100											Granular Bentonite		
2																			10/20 Silica		
3		(ML) CLAYEY SILT; light brown; w~PL, soft.		1061.32 3.15																Bentonite Chips	
4	B80 Odex Downhole Hammer (Casing: 102 mm;)	(ML) CLAYEY SILT, trace angular gravel; grey; w~PL, stiff.		1060.61 3.86			3	100													
5																					
6		Inferred weathered BEDROCK.		1058.93 5.54																	
7		Bedrock Encountered. Refer to Record of DRILLHOLE log for continuation of rock description.		1057.46 7.01																Coated Bentonite Chips	
8																					
9																					
10																					

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504935.22 E: 455690.48

DRILLING DATE: September 3, 2016

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

[illegible]

DEPTH SCALE

1 : 50

SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF MONITORING WELL: MW16-06

SHEET 1 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504916.72 E: 455709.13

DRILLING DATE: September 4, 2016

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES			CHEMISTRY SAMPLES			PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION				
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	5 10 15 20						20 40 60 80			
												PID ppm						WATER CONTENT % Wp — W — WI			
0	B80 Solid Stem Auger (Casing: 152 mm;)	Ground Surface		1064.09																	
		(SP/GP) SAND and GRAVEL (Road Base).	0	0.00																	
		(ML) CLAYEY SILT, trace sand; light grey; w~PL, soft.		1063.89																	
		- grades to firm at 0.56 m depth		0.20																	
1		- grades to light brown at 0.88 m depth					1	100													
2																					
							2	100													
3		- grades to stiff at 3.05 m depth																			
	B80 Odex Downhole Hammer (Casing: 102 mm;)	(CL) SILTY CLAY, trace sand; light brown; w~PL, firm.		1060.74																	
		- dry sand pockets throughout		3.35				3	100												
		- mottled orange from 3.66 m to 3.81 m depth		1060.13																	
4		Inferred weathered BEDROCK.		3.96																	
				1059.82																	
				4.27																	
5		Bedrock Encountered. Refer to Record of DRILLHOLE log for continuation of rock description.																			
6																					
7																					
8																					
9																					
10																					

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF MONITORING WELL: MW16-07

SHEET 1 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504904.92 E: 455704.28

DRILLING DATE: September 4, 2016

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES			PID ppm				DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	PID ppm				WATER CONTENT %					
												5	10	15	20	20	40	60			80

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF MONITORING WELL: MW16-08

SHEET 1 OF 2

CLIENT: Public Works and Government Services Canada

PROJECT: Steamboat Maintenance Yard

LOCATION: km 537.5 Alaska Highway

N: 6504882.12 E: 455733.83

DRILLING DATE: September 5, 2016

DRILLING CONTRACTOR: Geotech Drilling Services Ltd.

DATUM: NAD 83 UTM Zone 10

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES			PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	WATER CONTENT %						
												5	10	15	20	20		
0	B80 Solid Stem Auger (Casing: 152 mm;)	Ground Surface (SM) SILTY SAND, some rounded gravel; grey, strong hydrocarbon-like odour; moist, dense.		1062.95 0.00													Concrete	
1		(ML) CLAYEY SILT, trace rounded gravel; light grey, strong hydrocarbon-like odour, with organics (roots); w<PL, firm.		1061.86 1.09			1	100										
2	B80 Odex Downhole Hammer (Casing: 102 mm;)																Bentonite Chips	
3		- grades to brown at 3.05 m depth - no organics (roots) below 3.20 m depth Inferred weathered BEDROCK.		1059.91 3.05			2	100										
4	Odex Downhole Hammer																Coated Bentonite Pellets	
5		Bedrock Encountered. Refer to Record of DRILLHOLE log for continuation of rock description.		1058.68 4.27														
6																		
7																		
8																		
9																		
10																		

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF AUGERHOLE: AH16-01

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: November 5, 2016

LOCATION: km 537.5 Alaska Highway

N: 6504859.01 E: 455711.50

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	WATER CONTENT %					
												5	10	15	20		
0	75mm Hand Auger Hand Augering	Ground Surface		1060.00													
		(CL/ML) silty CLAY, some gravel; brown, no staining, no odour.		0.00					1	AH16-01-S1	⊕						
1				1059.00													
		End of Augerhole.		1.00													
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF AUGERHOLE: AH16-02

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: November 5, 2016

LOCATION: km 537.5 Alaska Highway

N: 6504869.28 E: 455714.64

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION				
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	PID ppm						WATER CONTENT %			
												5	10	15	20			20	40	60	80
0	75mm Hand Auger Hand Augering	Ground Surface (CL/ML) silty CLAY, some gravel; brown, no staining, no odour, compact.		1060.00 0.00																	
								1	AH16-02-S1	⊕											
				1059.10 0.90				2	AH16-02-S2	⊕											
1		End of Augerhole.																			
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF AUGERHOLE: AH16-03

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: November 5, 2016

LOCATION: km 537.5 Alaska Highway

N: 6504865.18 E: 455711.50

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	WATER CONTENT %					
												5	10	15	20		
0	75mm Hand Auger Hand Augering	Ground Surface (CL/ML) Silty CLAY, some gravel; brown, no staining, no odour; compact.		1060.00 0.00													
								1	AH16-03-S1	⊕							
				1059.10 0.90				2	AH16-03-S2	⊕							
1		End of Augerhole.															
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF AUGERHOLE: AH16-04

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: November 5, 2016

LOCATION: km 537.5 Alaska Highway

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	WATER CONTENT %					
												5	10	15	20		
0	75mm Hand Auger Hand Augering	Ground Surface (CL/ML) silty CLAY, some sand and gravel; dark brown, no staining, slight hydrocarbon like odour; wet, soft.		0.00													
								1	AH16-04-S1								
				0.50				2	AH16-04-S2								
1		End of Augerhole.															
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF AUGERHOLE: AH16-05

SHEET 1 OF 1


CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: November 5, 2016

LOCATION: km 537.5 Alaska Highway

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	PID ppm		WATER CONTENT %					
												5	10	15	20			20	40
0	75mm Hand Auger Hand Augering	Ground Surface		0.00															
		(CL/ML) silty CLAY, some sand and gravel; dark brown, no staining, slight hydrocarbon like odour; wet, soft.																	
1		End of Augerhole.		0.85															
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF AUGERHOLE: AH16-06

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: November 5, 2016

LOCATION: km 537.5 Alaska Highway

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	WATER CONTENT %						
												Wp	W	WI				
0	75mm Hand Auger Hand Augering	Ground Surface (CL/ML) silty CLAY, trace gravel; light brown, no staining, no odour; moist, very stiff.		0.00														
1		End of Augerhole.		0.95														
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF AUGERHOLE: AH16-07

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada

DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: November 5, 2016

LOCATION: km 537.5 Alaska Highway

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	PID ppm		WATER CONTENT %					
												5	10	15	20			20	40
0	75mm Hand Auger Hand Augering	Ground Surface (CL/ML) clayey SILT, some gravel; dark brown to black, no staining, no odour; moist, compact.		0.00															
								1	AH16-07-S1	⊕									
								2	AH16-07-S2	⊕									
								3	AH16-07-S3	⊕									
1		End of Augerhole.		0.90															
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL

PROJECT No.: 1660199 / 1000

RECORD OF AUGERHOLE: AH16-08

SHEET 1 OF 1

CLIENT: Public Works and Government Services Canada


DATUM: NAD 83 UTM Zone 10

PROJECT: Steamboat Maintenance Yard

DRILLING DATE: November 5, 2016

LOCATION: km 537.5 Alaska Highway

N: 6504908.85 E: 455678.87

DEPTH SCALE METRES	DRILLING RIG DRILLING METHOD	SOIL PROFILE		GEOTECH SAMPLES				CHEMISTRY SAMPLES		PID ppm		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				ADDITIONAL LAB. TESTING	PIEZOMETER, STANDPIPE OR THERMISTOR INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	CORE No. CORE RECOVERY %	NUMBER	SCN	ANALYSED	PID ppm		WATER CONTENT %					
												5	10	15	20			20	40
0	75mm Hand Auger Hand Augering	Ground Surface (CL/ML) SAND and GRAVEL, fine gravel; no staining, no odour; moist, loose.		1060.00 0.00 1059.70 0.30															
1		End of Augerhole.																	
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

DEPTH SCALE

1 : 50



SOIL CLASSIFICATION SYSTEM: GACS

LOGGED: RM

CHECKED: JL