

[illegible]

Project: Marine Geotechnical Investigation
Location: St. John's, NL
Client: Public Works Government Services Canada
Drilling Supervisor: Howard Howlett

Project No: 390
Date: January 6 - 7, 2007

Log of Geotech Borehole: BH11

SUBSURFACE PROFILE				SAMPLE				Standard Penetration Test "N" Value per 300 mm
Depth below Ground Surface m	Symbol	Geologic Description	Elevation (m)	Sample Type	Sample No.	"N" Value	Recovery (%)	
0		Ground Surface	1.8					20 40 60 80
1		Fill and Boulders						
2								
2.685		SPT: 50 for 0.03 m (Refusal) No Sample Recovery SS1: "N" Value = 50, Recovery = 0%						
3		Grity boulders						
4								
4.221		SPT: 5 / 5 / 4 / 4 No Sample Recovery	-2.21	SS	2	9	0	
5		Grity boulders						
6								
6.373		SPT: 4 / 6 / 5 / 4 No Sample Recovery	-3.73	SS	3	12	0	
7		Grity boulders						
8								
8.26		SPT: 4 / 5 / 3 / 3 No Sample Recovery	-5.26	SS	4	8	0	
9								
9.586			-5.86					

The figure is a geotechnical log for borehole BH11. It is a table with 9 columns: Depth below Ground Surface (m), Symbol, Geologic Description, Elevation (m), Sample Type, Sample No., "N" Value, Recovery (%), and a column for Standard Penetration Test (SPT) results. The log shows data from 0 to 9.586 meters depth. The geologic description includes 'Ground Surface', 'Fill and Boulders', and 'Grity boulders'. The SPT results are recorded at depths of 4.221 m, 6.373 m, and 8.26 m. The log also includes a vertical scale on the left and a horizontal scale at the top for SPT values.

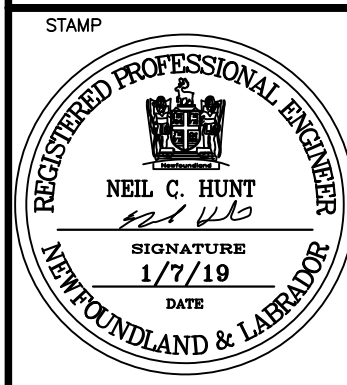
[illegible]

Log of Geotechnical Borehole: BH11

Project: Marine Geotechnical Investigation
Location: St. John's, NL
Client: Public Works Government Services Canada
Drilling Supervisor: David Howlett

Project No: 390
Date: January 6 - 7, 2007

SUBSURFACE PROFILE			SAMPLE						
Depth below Ground Surface	Symbol	Geologic Description	Elevation (m)	Sample Type	Sample No.	"N" Value	Recovery (%)	RQD (%)	Standard Penetration Test Test "N" Values per 300 mm
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24									20 40 60 80
		Broken reddish bedrock or boulders	-15.6						
		End of Borehole							



Project: Marine Geotechnical Investigation

Location: St. John's, NL

Client: Public Works Government Services Canada

Drilling Supervisor: Todd Bowie

Log of Geotech Borehole BH11B

Project No: 390

Date: February 27 - March 2, 2007

SUBSURFACE PROFILE		SAMPLE				Standard Penetration Test		
Depth (m)	Symbol	Geologic Description	Elevation (m)	Sample Type	Sample No.	"N" Value	Recovery (%)	"N" Value per 300 mm
0		Ground Surface	1.8					20 40 60 80
0.1		SPT: 8 / 7 / 12 / 10 Rock chips	1.25	SS	1	19	10	
0.2		SPT: 7 / 5 / 3 / 2 No Sample Recovery	0.600	SS	2	8	0	
0.3		SPT: 50 for 0.05 m (Refusal) No Sample Recovery SS3; "N" Value = 50, Recovery = 0% Gray boulders and broken rock with 71% RGD	-0.085	SS	4	29	0	
0.4		SPT: 8 / 11 / 16 / 9 No Sample Recovery	-0.695	SS	5	62	7	
0.5		Broken gray rock and boulders	-1.15	SS	6	13	0	
0.6		SPT: 14 / 12 / 50 for 0.05 m (Refusal) Broken rock chips	-2.29	SS	6	7	0	
0.7		Broken gray rock or boulders with 30% RGD	-2.9	SS	7	6	0	
0.8		SPT: 6 / 4 / 3 / 6 Rock chips	-3.52	SS	7	6	0	
0.9		Gray sandstone boulders	-4.12	SS	8	13	0	
1.0		SPT: 2 / 2 / 4 / 1 No Sample Recovery	-5.05	SS	8	13	0	
1.1		Gray sandstone boulders	-5.65	SS	8	13	0	
1.2		SPT: 6 / 3 / 10 / 7 No Sample Recovery						
1.3		Broken gray rock or boulders with 12% RGD						

<

Project: Marine Geotechnical Investigation

Location: St. John's, NL

Client: Public Works Government Services Canada


Drilling Supervisor: Todd Bowles

Log of Geotech Borehole BH11B

Project No: 390

Date: February 27 - March 2, 2007

SUBSURFACE PROFILE			SAMPLE					
Depth below Ground Surface	Symbol	Geologic Description	Elevation (m)	Sample No.	Sample Type	Recovery (%)	Recovery (%)	Standard Penetration Test Test "N" Value per 300 mm
								20 40 60 80
16.00		SPT: 8 / 7 / 5 / 50 for 0.05 m (Refusal) Broken rock with sandy gravel	-14.3					
16.50			-14.8	SS	14	12	10	
17.00		Compacted fill (I) followed by broken rock or boulders						
17.50		SPT: 50 for 0.00 m (Refusal) No Sample Recovery SS15: "N" Value = 50, Recovery 0%	-15.6	66	16	66	9	
18.00								
18.50		Gray broken rock with cobble size rock fragments						
19.00								
19.50			-17.6	RC	—	—	100	0
20.00				RC	—	—	100	22
20.50				RC	—	—	99	71
21.00		Bedrock: Gray sandstone		RC	—	—	72	41
21.50				RC	—	—	99	0
22.00				RC	—	—	100	76
22.50			-20.7					
23.00		End of Borehole						
23.50								
24.00								



Fractech Consultants Inc.

154 Major's Path

St. John's, NL A1A 5A1

Phone: (709) 739-7270

Fax: (709) 753-5101

Drilling Method: HW/HQ & NW/NQ Casing/Coring

Driller: NES Ltd.

Datum: Geodetic

Sheet: 3 of 3

E	ISSUED FOR TENDER	1/7/19
D	RE-ISSUED FOR 99% REVIEW	12/19/18
C	ISSUED FOR 99% REVIEW	11/6/18
B	ISSUED FOR 66% REVIEW	10/19/18
A	ISSUED FOR REVIEW	8/17/18
revisions		date

project	project
---------	---------

HARBOUR DEVELOPMENT
PROSSER ROCK, NL

drawing	dessin
---------	--------

BOREHOLE LOGS

designed	N.H.	conçu
date	JANUARY 7, 2019	
drawn	P.H.	dessiné
date	JANUARY 7, 2019	
approved	N.H.	approuvé
date	JANUARY 7, 2019	
Tender	Soumission	
PWGSC Project Manager Administrateur de projets TPSCG		
project number	no. du projet	
R.100138.001		
drawing no.	no. du dessin	