BOREHOLE LOG

Englobe

PROJECT: Geotechnical Investigation - Clyburn Brook Bridge, CBHNP, NS

LOGGED/DWN: LL | CKD: TKM | DATE OF INVEST: 7/7/15 | JOB NO: 20333 | HOLE NO: BH 1

DRILL TYPE: Drill Rig

SOIL DESCRIPTION — DATUM: Ground Surface Elevation provided by SNC Lavalin

SURFACE ELEVATION: 5.40 meters

Asphalt Pavement (50 mm)

FILL : sand and gravel, trace silt, cobble and small boulders, compact, moist, brown.

SAND AND GRAVEL : silty, trace to some gravel, compact to dense, moist, brown.

End of Borehole at 9.14 metres in Sand.

Sample	Elev.	Depth (m)	Type	Resist.	Water Content (%)
SS	4	1.2	SS	N=10	
SS	3	2.4	SS	N=17	
SS	2	3.6	SS	N=17	
SS	1	4.8	SS	N=17	
SS	0	6.0	SS	N=21	
SS	-1	7.2	SS	N=49	

OTHER TESTS: PLATE 1

BOREHOLE LOG

Englobe

PROJECT: Geotechnical Investigation - Clyburn Brook Bridge, CBHNP, NS

LOGGED/DWN: LL | CKD: TKM | DATE OF INVEST: 7/6/15 | JOB NO: 20333 | HOLE NO: BH 2

DRILL TYPE: Drill Rig

SOIL DESCRIPTION — DATUM: Ground Surface Elevation provided by SNC Lavalin

SURFACE ELEVATION: 5.70 meters

Gravel, loose, gray, dry to moist.

FILL : sand, some gravel, trace silt, occasionnal cobble, compact, moist, brown to pink.

SAND AND GRAVEL : trace to some gravel, cobble and boulders, compact to dense, moist, brown to pink.

Becoming with numerous boulders.

Sample	Elev.	Depth (m)	Type	Resist.	Water Content (%)
SS	4	1.2	SS	N=21	
SS	3	2.4	SS	N=10	
SS	2	3.6	SS	N=14	Sieve
SS	1	4.8	SS	N=22	
SS	-1	7.2	SS	N=16	
SS	-3	9.6	SS	N=39	
SS	-4	10.8	SS	N=46	
RC	-5	12.0	RC		
RC	-6	13.2	RC		
RC	-7	14.4	RC		
RC	-8	15.6	RC		
RC	-9	16.8	RC		
RC	-10	18.0	RC		

OTHER TESTS: TCR - Total Core Recovery; RQD - Rock Quality Designation; UCS - Unconfined Compressive Strength

PLATE 2

BOREHOLE LOG

Englobe

PROJECT: Geotechnical Investigation - Clyburn Brook Bridge, CBHNP, NS

LOGGED/DWN: LL | CKD: TKM | DATE OF INVEST: 7/8/15 | JOB NO: 20333 | HOLE NO: BH 3

DRILL TYPE: Drill Rig

SOIL DESCRIPTION — DATUM: Ground Surface Elevation provided by SNC Lavalin

SURFACE ELEVATION: 7.36 meters

TOPSOIL : silty sand, loose, moist, dark brown.

FILL : sand and gravel, some silt, occasionnal cobble, compact, moist, brown to gray.

SAND AND GRAVEL : trace of silt, cobble and boulders, compact to dense, moist, gray.

BEDROCK : Granodiorite, very poor to poor quality, greenish gray.

Sample	Elev.	Depth (m)	Type	Resist.	Water Content (%)
SS	4	1.2	SS	N=20	
SS	3	2.4	SS	N=14	
SS	2	3.6	SS	N=17	
SS	1	4.8	SS	N=32	
SS	0	6.0	SS	N=35	
SS	-1	7.2	SS	N=24	
SS	-2	8.4	SS	N=16	
SS	-3	9.6	SS	N=19	
SS	-4	10.8	SS	N=16	
SS	-6	13.2	SS	N=41	
SS	-7	14.4	SS	N=45	
SS	-8	15.6	SS	50/5	
RC	-9	16.8	RC		
RC	-10	18.0	RC		
RC	-11	19.2	RC		
RC	-12	20.4	RC		

OTHER TESTS: TCR = 91% RQD =0%; TCR = 67% RQD =0%; TCR = 0%

PLATE 4

BOREHOLE LOG

Englobe

PROJECT: Geotechnical Investigation - Clyburn Brook Bridge, CBHNP, NS

LOGGED/DWN: LL | CKD: TKM | DATE OF INVEST: 7/9/15 | JOB NO: 20333 | HOLE NO: BH 4

DRILL TYPE: Drill Rig

SOIL DESCRIPTION — DATUM: Ground Surface Elevation provided by SNC Lavalin

SURFACE ELEVATION: 1.81 meters

TOPSOIL (Grass) : silty sand, loose, moist, dark brown.

SAND AND GRAVEL : trace of silt, cobble and boulders, compact to dense, moist, gray.

Becoming with numerous boulders.

BEDROCK : Granodiorite, very poor to poor quality, greenish gray.

Sample	Elev.	Depth (m)	Type	Resist.	Water Content (%)
SS	1	0.6	SS	N=14	
SS	0	1.2	SS	N=20	
SS	-3	2.4	SS	N=21	
SS	-6	3.6	SS	N=65	
RC	-9	4.8	RC		
RC	-12	6.0	RC		
RC	-13	6.6	RC		
RC	-14	7.2	RC		
RC	-15	7.8	RC		
RC	-16	8.4	RC		

OTHER TESTS: TCR - Total Core Recovery; RQD - Rock Quality Designation; UCS - Unconfined Compressive Strength

PLATE 6

BOREHOLE LOG

Englobe

PROJECT: Geotechnical Investigation - Clyburn Brook Bridge, CBHNP, NS

LOGGED/DWN: LL | CKD: TKM | DATE OF INVEST: 7/6/15 | JOB NO: 20333 | HOLE NO: BH 2

DRILL TYPE: Drill Rig

SOIL DESCRIPTION — DATUM: Ground Surface Elevation provided by SNC Lavalin

SURFACE ELEVATION: 5.70 meters

BEDROCK : Granite and Granodiorite, poor quality, greenish gray and pink.

End of Borehole at 23.77 metres in Bedrock.

Sample	Elev.	Depth (m)	Type	Resist.	Water Content (%)
RC	-17	22.8	RC		
RC	-18	23.4	RC		

OTHER TESTS: TCR = 100% RQD =92% UCS=16.7 MPa; TCR = 78% RQD =50%

PLATE 3

BOREHOLE LOG

Englobe

PROJECT: Geotechnical Investigation - Clyburn Brook Bridge, CBHNP, NS

LOGGED/DWN: LL | CKD: TKM | DATE OF INVEST: 7/5/15 | JOB NO: 20333 | HOLE NO: BH 3

DRILL TYPE: Drill Rig

SOIL DESCRIPTION — DATUM: Ground Surface Elevation provided by SNC Lavalin

SURFACE ELEVATION: 7.36 meters

End of Borehole at 23.16 metres in Bedrock.

Sample	Elev.	Depth (m)	Type	Resist.	Water Content (%)
RC	-17	22.8	RC		
RC	-18	23.4	RC		
RC	-19	24.0	RC		
RC	-20	24.6	RC		

OTHER TESTS: TCR = 100% RQD = 31%; TCR = 100% RQD =18%; TCR = 100% RQD =0%; TCR = 100% RQD =50%

PLATE 5

BOREHOLE LOG

Englobe

PROJECT: Geotechnical Investigation - Clyburn Brook Bridge, CBHNP, NS

LOGGED/DWN: LL | CKD: TKM | DATE OF INVEST: 7/9/15 | JOB NO: 20333 | HOLE NO: BH 4

DRILL TYPE: Drill Rig

SOIL DESCRIPTION — DATUM: Ground Surface Elevation provided by SNC Lavalin

SURFACE ELEVATION: 1.81 meters

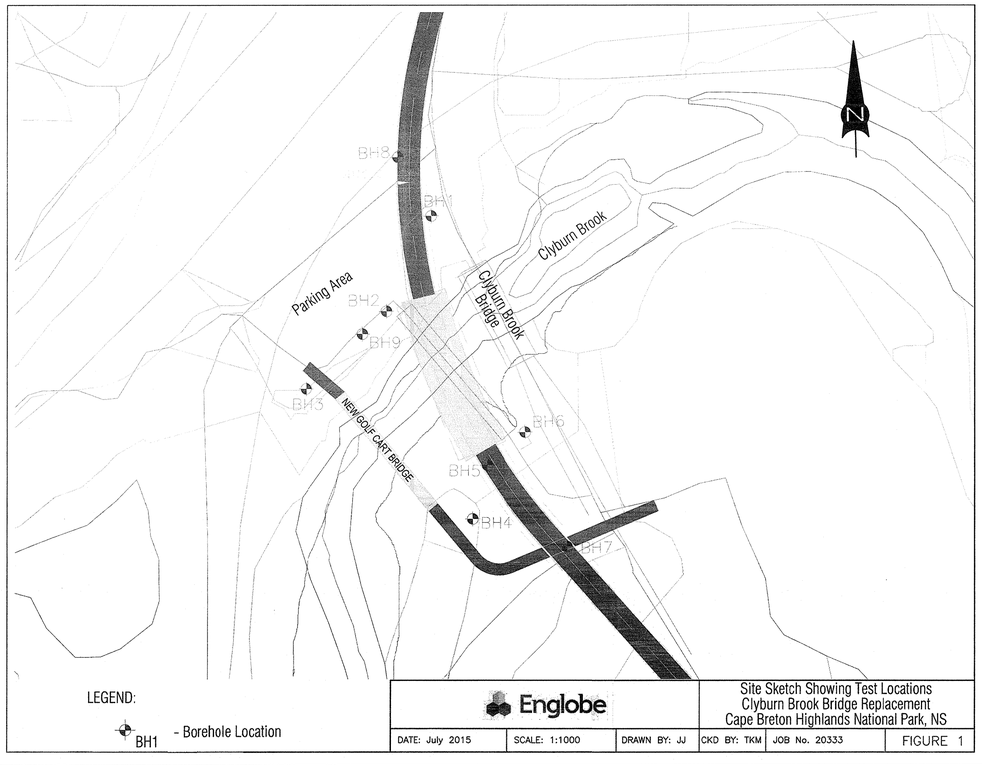
Red intrusion from 20.8 to 21.6 metres.

End of Borehole at 22.86 metres in Bedrock.

Sample	Elev.	Depth (m)	Type	Resist.	Water Content (%)
RC	-17	22.8	RC		
RC	-18	23.4	RC		

OTHER TESTS: TCR = 86% RQD = 0%; TCR = 100% RQD = 37% UCS = 125.5 MPa

PLATE 7



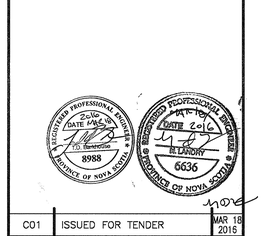
Englobe

Site Sketch Showing Test Locations
Clyburn Brook Bridge Replacement
Cape Breton Highlands National Park, NS

DATE: July 2015 | SCALE: 1:1000 | DRAWN BY: JJ | CKD BY: TKM | JOB No. 20333 | FIGURE 1

BOREHOLE LAYOUT

Public Works and Government Services Canada / Travaux Publics et Services gouvernementaux Canada



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Halifax, Nova Scotia, Canada

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revisions		date
C01	ISSUED FOR TENDER	MAR 18 2016

project / projet: CLYBURN BROOK BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK, NS

drawing / dessin: BOREHOLE LOGS SHEET 1

designed / conçu: TDB — date

drawn / dessiné: TMB — date

approved / approuvé: NDL — date

Tender / Soumission: 2016-3-30 — PWGSC Project Manager / Administrateur de projets TPSGC

project number / no. du projet: R.072239.001

drawing no. / no. du dessin: S25

526789-0001-D-43-DWG-000-0039-01

PWGSC B1 (2004)

E-DRM/GDD-E: 280475 VERSION 1