

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION CONSTRUCTION AND MATERIALS BUREAU CENTRAL LABORATORY		BORING LOG		Boring No.: B-101							
		Williston-Essex STP SGNL(46) VT 2A		Page No.: 1 of 1		Pin No.: 151017							
		Checked By: ZMH		Groundwater Observations									
Boring Crew: HOOK, JUDKINS, GARROW		Casing: H.S.A.		Sampler: SS		Date: 03/31/16							
Date Started: 3/29/16 Date Finished: 3/31/16		I.D.: 3.25 in 1.5 in		Date: 03/31/16		Depth: 15.4							
VTSPG NAD83: N 732020.02 ft E 1486709.90 ft		Hammer Wt: N.A. 140 lb.		Notes: W.T. during drilling									
Station: 199+54.90 Offset: -46.00		Hammer Fall: N.A. 30 in.											
Ground Elevation: 495.3 ft		Hammer/Rod Type: Auto/AWJ											
		Rig: CME 55 TRACK CE = 1.41											
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (ROD %)	Drill Rate minutes/ft	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %	
5		A-1-a, SaGr, gry-brn, Moist, Rec. = 1.2 ft, Lab note: Asphalt pavement, broken rock, and plant material was within sample.				4-8-10-25 (18)	4.8	66.8	24.9	8.3			
		A-1-a, SaGr, gry, Moist, Rec. = 1.5 ft, Lab note: Asphalt pavement and broken rock was within sample.				45-25-20-R@3.5" (45)	2.8	56.4	32.3	11.3			
		A-1-a, SaGr, gry, Moist, Rec. = 0.6 ft, Lab note: Broken rock was within sample				30-17-27-28 (44)	4.3	69.1	20.9	10.0			
		A-1-a, SaGr, gry, Moist, Rec. = 0.5 ft, Lab note: Broken rock was within sample				R@6.0" (R)	9.4	61.0	25.9	13.1			
		A-1-a, SaGr, gry, Moist, Rec. = 0.8 ft, Lab note: Broken rock was within sample				14-10-8-7 (18)	7.6	73.2	22.2	4.6			
10		A-1-a, Gr, gry, Moist, Rec. = 0.9 ft, Lab note: Broken rock was within sample				8-10-17-17 (27)	7.1	79.2	17.1	3.7			
		Field Note: NXDC, Cleaned out casing											
15		A-6, Cl, brn-gry, Moist, Rec. = 0.9 ft				14-6-6-10 (12)	27.6	4.7	9.8	85.5	39	15	
		Field Note: NXDC, Cleaned out casing											
25		A-1-b, SiSaGr, brn, Moist, Rec. = 0.2 ft	1	88	5	R@3.5" (R)	11.2	34.7	45.0	20.3			
		20.3 ft - 25.3 ft, Light gray/green, Phyllite, with quartz veins. Penetrative rust staining along vertical joint at 21.1 to 21.3. Surface rust staining and slickensides present on remaining joints. Moderately hard, Slightly weathered, Poor rock, NX, RMR=28	(40-45)	(9)	5								
		25.3 ft - 30.3 ft, Light gray/green, Phyllite, with quartz veins. Surface rust staining on joints. Moderately hard, Very slightly weathered, Fair rock, NX, RMR=46	2	86	5								
			(40-45)	(63)	6								
					6								
					6								
30		Hole stopped @ 30.3 ft											
		Remarks: Hole collapsed at 15.9 feet. 1.) Refusal with H.S.A. at 6.8 feet. 2.) Continued hole with 4.0 inch washbore drilling from 6.8 feet.											
		Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. <<SUB>><<SUB>> is the hammer energy correction factor. 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.											

2010 COPY 2 WILLISTON-ESSEX STP SGNL(46) GPJ VERMONT AOT.GDT 1/11/17

VT		STATE OF VERMONT AGENCY OF TRANSPORTATION CONSTRUCTION AND MATERIALS BUREAU CENTRAL LABORATORY		BORING LOG		Boring No.: B-102							
		Williston-Essex STP SGNL(46) VT 2A		Page No.: 1 of 1		Pin No.: 151017							
		Checked By: ZMH		Groundwater Observations									
Boring Crew: JUDKINS, GARROW		Casing: WB		Sampler: SS		Date: 04/11/16							
Date Started: 4/07/16 Date Finished: 4/11/16		I.D.: 4 in 1.5 in		Date: 04/11/16		Depth: No W.T. to depth							
VTSPG NAD83: N 732034.63 ft E 1486760.79 ft		Hammer Wt: N.A. 140 lb.		Notes: No W.T. to depth									
Station: 20+06.80 Offset: -30.50		Hammer Fall: N.A. 30 in.											
Ground Elevation: 497.4 ft		Hammer/Rod Type: Auto/AWJ											
		Rig: CME 55 TRACK CE = 1.41											
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (ROD %)	Drill Rate minutes/ft	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %	
5		Asphalt Pavement, 0.0 ft - 0.42 ft											
		A-1-a, SaGr, gry, Moist, Rec. = 1.2 ft, Lab Note: A lot of broken rock and some asphalt pavement was within sample.				15-18-13-16 (31)	5.4	72.5	21.1	6.4			
		Field Note: Cleaned out casing											
		A-1-a, SaGr, gry, Moist, Rec. = 0.5 ft, Lab Note: A lot of broken rock was within sample.				16-13-10-10 (23)	6.7	69.1	23.2	7.7			
		Field Note: Cleaned out casing											
		A-3, Sa, brn, Moist, Rec. = 0.8 ft				7-3-3-4 (6)	15.3	6.0	87.3	6.7			
		Field Note: Cleaned out casing											
		A-3, Sa, gry, MTW, Rec. = 1.0 ft											
		Field Note: Cleaned out casing											
		A-1-b, SaGr, gry, Moist, Rec. = 0.5 ft, Lab Note: Broken rock was within sample.				4-8-12-18 (20)	8.4	55.0	38.2	6.8			
10		A-1-a, Gr, gry, Moist, Rec. = 0.5 ft, Lab Note: Sample consisted entirely of clean broken rock.				10-8-9-10 (17)	6.4	91.3	8.3	0.4			
		Field Note: Cleaned out casing											
15		A-1-a, Gr, gry, Moist, Rec. = 0.9 ft, Lab Note: A lot of broken rock and asphalt pavement was within sample.				11-15-8-R@3.5" (23)	6.8	88.1	10.9	1.0			
		Field Note: Cleaned out casing											
20		A-6, SiCl, gry, Moist, Rec. = 1.2 ft, Lab Note: Wood fibers were within sample.				2-3-5-5 (5)	30.3	0.7	19.0	80.3	39	16	
		Field Note: Pushed Shelby Tube, gry, Moist											
25		A-4, GrSaSi, brn, Moist, Rec. = 0.8 ft, Lab Note: Sample tested non-plastic.				5-6-R@2.5" (R)	11.7	28.4	33.6	38.0			
		Field Note: Cleaned out casing											
30		21.6 ft - 26.2 ft, Light gray/green, Phyllite, with quartz veins. Rust staining on joints. Moderately hard, Very slightly weathered, Fair rock, NX, RMR=41	1	90	5								
			(40-45)	(36)	8								
					5								
					5								
30		26.2 ft - 31.2 ft, Light gray/green, Phyllite, with quartz veins. Massive quartz vein at 28.8 to 29.25 feet. Rust staining along joints. Moderately hard, Very slightly weathered, Poor rock, NX, RMR=36	2	92	5								
			(40-45)	(21)	3								
					3								
					4								
		Hole stopped @ 31.2 ft											
Notes:		1. Stratification lines represent approximate boundary between material types. Transition may be gradual. <<SUB>><<SUB>> is the hammer energy correction factor. 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.											

2010 COPY 2 WILLISTON-ESSEX STP SGNL(46) GPJ VERMONT AOT.GDT 1/11/17

PROJECT NAME:	WILLISTON-ESSEX
PROJECT NUMBER:	STPG SGNL(46)
FILE NAME:	t151017fm.dgn
PROJECT LEADER:	M. LACROIX
DESIGNED BY:	K. RECORD
BORING LOG SHEET 1	
PLOT DATE:	3/21/2017
DRAWN BY:	K. RECORD
CHECKED BY:	M. LACROIX
SHEET 8	OF 66