



STATE OF VERMONT
 AGENCY OF TRANSPORTATION
 MATERIALS & RESEARCH SECTION
 SUBSURFACE INFORMATION

BORING NUMBER: B-101
 SHEET 1 of 1
 DATE STARTED: 9/09/05
 DATE COMPLETED: 9/09/05

PROJECT NAME: BRIDGEWATER
 SITE NAME: RT. 100-A
 STATION: 109+86
 OFFSET: 12.50
 VTSPG: N 396082.69 ft E 1598868.92 ft

PROJECT NUMBER: BRS 0149(4)
 SITE NUMBER: BRIDGE #14 & TEMP. BRIDGE
 GROUND ELEVATION: 855.92 ft
 GROUNDWATER DEPTH: Hole caved in at 8.0'
 PROJECT PIN NUMBER: 86E062

BORING CREW
 CREW CHIEF: RUSSELL
 DRILLER: RUSSELL
 LOGGER: WERNER

BORING RIG: TRUCK
 BORING TYPE: HOLLOW STEM AUGER
 SAMPLE TYPE:
 CHECKED BY: CCB

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
		Gravel material, 0.0 ft - 3.0 ft					
5		Boulders and gravel material, 3.0 ft - 7.0 ft					
10		Cobbles, gravel and small boulders, 7.0 ft - 17.0 ft					
15							
20		Sandy gravel material, 17.0 ft - 24.0 ft					
25		Boulders, cobbles, and gravel material, 24.0 ft - 30.0 ft					
30		Hole stopped @ 30.0 ft					
35		DRILLER'S NOTES: 1. No water, hole caved in at 8.0 ft. 2. Very slow and hard drilling. 3. Broke bottom auger off and lost bit. 4. All soil classifications were done in the field. 5. Station & Offset revised for new alignment.					
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LOG OF BORING BRIDGEWATER BRS0149(4).GPJ - VT.MOT.GDT 9/14/08



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BORING NUMBER: B-102
 SHEET 1 of 1
 DATE STARTED: 9/07/05
 DATE COMPLETED: 9/08/05

PROJECT NAME: BRIDGEWATER
 SITE NAME: RT. 100-A
 STATION: 109+82
 OFFSET: 39.50
 VTSPG: N 396071.18 ft E 1598893.89 ft

PROJECT NUMBER: BRS 0149(4)
 SITE NUMBER: BRIDGE #14 & TEMP. BRIDGE
 GROUND ELEVATION: 853.78 ft
 GROUNDWATER DEPTH: Hole caved in at 11.0'
 PROJECT PIN NUMBER: 86E062

BORING CREW
 CREW CHIEF: RUSSELL
 DRILLER: RUSSELL
 LOGGER: WERNER

BORING RIG: TRUCK
 BORING TYPE: HOLLOW STEM AUGER
 SAMPLE TYPE: SPLIT BARREL
 CHECKED BY: CCB

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-1-b, GrSa, brn, Moist, Rec. = 0.4 ft	7	6.3	31.0	55.4	13.6
		Cobbles, 7.0 ft - 8.0 ft					
10		A-2-4, SiGrSa, brn, Moist, Rec. = 1.4 ft	20	14.2	34.9	41.0	24.1
		Cobbles, 12.0 ft - 13.0 ft					
15		A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft	24	12.6	35.3	45.3	19.4
20		A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft	18	12.9	38.7	48.0	13.3
25		A-1-b, Sa, brn, Moist, Rec. = 1.0 ft	20	14.6	16.4	66.9	16.7
		Boulders and Cobbles, 28.0 ft - 30.0 ft					
30		A-1-b, SiGrSa, brn-gry, Moist, Rec. = 0.4 ft	R	11.9	24.8	52.3	22.9
		Hole stopped @ 31.0 ft					
35		DRILLER'S NOTES: 1. No water, hole caved in at 11.0 ft. 2. Could not penetrate further than 31.0 ft. 3. No bedrock to depth. 4. Station & Offset revised for new alignment.					
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LOG OF BORING BRIDGEWATER BRS0149(4).GPJ - VT.MOT.GDT 9/4/08



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BORING NUMBER: B-103
SHEET 1 of 1
DATE STARTED: 8/30/05
DATE COMPLETED: 9/01/05

PROJECT NAME: BRIDGEWATER
SITE NAME: RT. 100-A
STATION: 111+24
OFFSET: 31.50
VTSPG: N 396212.75 ft E 1598926.76 ft

PROJECT NUMBER: BRS 0149(4)
SITE NUMBER: BRIDGE #14 & TEMP. BRIDGE
GROUND ELEVATION: 846.75 ft
GROUNDWATER DEPTH: 5.9 ft 9/01/05
PROJECT PIN NUMBER: 86E062

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: RUSSELL

BORING RIG: TRUCK
BORING TYPE: HOLLOW STEM AUGER
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CCB

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		Visual Class: A-2-4, Si Sa Gr with roots and wood material, brn, Moist, Rec. = 0.8 ft, 5.0 ft - 7.0 ft	47	8.3			
		Coarse gravel material, 8.0 ft - 9.5 ft					
10		A-1-b, SaGr, brn, MTW, Rec. = 0.9 ft	25	11.5	45.8	37.9	16.3
15		A-3, Sa, brn, MTW, Rec. = 1.5 ft	6	24.2	6.0	84.9	9.1
20		A-2-4, SiSa, brn, Moist, Rec. = 1.8 ft	8	20.7	2.5	74.7	22.8
25		A-2-4, Sa, brn, Moist, Rec. = 1.4 ft	10	20.3	1.0	86.1	12.9
		A-2-4, SiGrSa, brn, Moist, Rec. = 0.4 ft		15.6	28.0	51.7	20.3
30		A-2-4, Sa, gry-brn, Moist, Rec. = 2.0 ft	49	14.2	5.0	81.4	13.6
35		No Recovery, Trace of brown sand in sampler, 35.0 ft - 36.0 ft	R				
		No Recovery, Very hard drilling, Could not penetrate further, 36.0 ft - 39.0 ft					
40		Hole stopped @ 39.0 ft					
45		DRILLER'S NOTES: 1. Could not penetrate further than 39.0 ft. 2. Very hard drilling from 36.0 ft. to 39.0 ft. 3. No bedrock to depth. 4. Station & Offset revised for new alignment.					

LOG OF BORING BRIDGEWATER BRS0149(4).GPJ VT.MOT.GDT 9/4/08



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BORING NUMBER: B-104
 SHEET 1 of 1
 DATE STARTED: 9/01/05
 DATE COMPLETED: 9/07/05

PROJECT NAME: BRIDGEWATER
 SITE NAME: RT. 100-A
 STATION: 111+22
 OFFSET: 60.00
 VTSPG: N 396199.08 ft E 1598956.19 ft

PROJECT NUMBER: BRS 0149(4)
 SITE NUMBER: BRIDGE #14 & TEMP. BRIDGE
 GROUND ELEVATION: 846.31 ft
 GROUNDWATER DEPTH:
 PROJECT PIN NUMBER: 86E062

BORING CREW
 CREW CHIEF: GARROW
 DRILLER: GARROW
 LOGGER: RUSSELL

BORING RIG: TRUCK
 BORING TYPE: HOLLOW STEM AUGER
 SAMPLE TYPE: SPLIT BARREL
 CHECKED BY: CCB

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-1-a, SaGr, brn, Moist, Rec. = 1.4 ft	20	6.2	49.8	41.5	8.7
10		A-1-b, GrSa, brn, MTW, Rec. = 1.5 ft	22	15.4	37.1	50.5	12.4
15		A-3, Sa, brn, Moist, Rec. = 1.0 ft	11	22.7	2.7	89.5	7.8
20		A-2-4, GrSiSa, gry-brn, Moist, Rec. = 1.1 ft	32	14.9	22.6	52.8	24.6
25		A-2-4, GrSa, brn, Moist, Rec. = 1.7 ft	24	14.8	28.5	54.3	17.2
30		A-4, SaSi, brn, Moist, Rec. = 1.0 ft	8	24.3	14.1	30.2	55.7
35		A-4, SaSi, brn, Moist, Rec. = 0.2 ft	10	24.6	8.7	26.3	65.0
40		A-1-b, GrSa, brn, MTW, Rec. = 1.1 ft	18	15.2	36.1	44.1	19.8
42.0		Hole stopped @ 42.0 ft					
45		DRILLER'S NOTES: 1. No water found. 2. No bedrock to depth. 3. Station & Offset revised for new alignment.					

LOG OF BORING BRIDGEWATER BRS0149(4).GPJ - VT AOT.GDT 9/14/08



STATE OF VERMONT
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BORING NUMBER: B-201
SHEET 1 of 2
DATE STARTED: 6/05/08
DATE COMPLETED: 6/13/08

PROJECT NAME: BRIDGEWATER
SITE NAME: RT. 100-A
STATION: 110+00
OFFSET: -15.00
VTSPG: N 396103.71 ft E 1598845.58 ft

PROJECT NUMBER: BRS 0149(4)
SITE NUMBER: BRIDGE #14 & TEMP. BRIDGE
GROUND ELEVATION: 856.05 ft
GROUNDWATER DEPTH: 15.4 ft 6/12/08
PROJECT PIN NUMBER: 86E062

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LAG TRACK RIG #08 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CCB

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
		Asphalt Pavement, 0.0 ft - 0.5 ft					
		A-1-a, SaGr, gry, Moist, Rec. = 0.5 ft	13	3.8	51.5	39.8	8.7
5		A-1-a, SaGr, gry-brn, MTW, Rec. = 0.7 ft	7	12.0	64.5	27.5	8.0
10		NXDC, Cleaned out casing., 9.3 ft - 10.0 ft					
		Visual Classification, A-1-a, Gr, Rec. = 0.3 ft, Insufficient sample for testing.	29				
		Field Note, Cobbles, Cored ahead, Cleaned out casing.					
15							
		Field Note, NXDC, Cored ahead, Cleaned out casing.					
		Field Note, Concrete footing, 18.5'-21.5'					
		Field Note, Cored ahead.					
		Field Note, Sleaved down to 3.5" casing, Advanced casing.					
25		Field Note, No Recovery.	31				
30		Field Note, NXDC, Cleaned out casing.					
		A-1-a, SaGr, gry, MTW, Rec. = 0.6 ft	32	14.6	55.2	32.2	12.6

LOG OF BORING BRIDGEWATER BRS0149(4).GPJ VT AOT.GDT 9/4/08



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BORING NUMBER: B-201
SHEET 2 of 2
DATE STARTED: 6/05/08
DATE COMPLETED: 6/13/08

PROJECT NAME: BRIDGEWATER
SITE NAME: RT. 100-A
STATION: 110+00
OFFSET: -15.00
VTSPG: N 396103.71 ft E 1598845.58 ft

PROJECT NUMBER: BRS 0149(4)
SITE NUMBER: BRIDGE #14 & TEMP. BRIDGE
GROUND ELEVATION: 856.05 ft
GROUNDWATER DEPTH: 15.4 ft 6/12/08
PROJECT PIN NUMBER: 86E062

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LAG TRACK RIG #08 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CCB

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
		A-1-a, SaGr, gry, MTW, Rec. = 0.9 ft	26	14.9	55.2	29.4	15.4
40		Field Note, No Recovery.	24				
45		Visual Classification, A-1-b, Gr Sa, gry, Moist, Rec. = 0.2 ft, Insufficient sample for testing.	39				
		Field Note, Cleaned out casing.					
50		A-2-4, Sa, brn-gry, Moist, Rec. = 1.9 ft	79	15.2	15.2	66.6	18.2
		Field Note, 52.0'-55.0', Flowing sand, Started mud drilling.					
55		A-1-b, SaGr, brn-gry, Moist, Rec. = 1.5 ft	67	10.4	45.1	35.8	19.1
60		Field Note, BXMDC, Cobbles					
		A-2-4, GrSiSa, gry, Moist, Rec. = 1.5 ft	52	14.9	30.0	39.4	30.6
65		Hole stopped @ 65.0 ft					

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STATE OF VERMONT
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SUBSURFACE INFORMATION

BORING NUMBER: B-203
SHEET 1 of 2
DATE STARTED: 6/16/08
DATE COMPLETED: 7/03/08

PROJECT NAME: BRIDGEWATER
SITE NAME: RT. 100-A
STATION: 111+20
OFFSET: -15.00
VTSPG: N 396219.46 ft E 1598877.22 ft

PROJECT NUMBER: BRS 0149(4)
SITE NUMBER: BRIDGE #14 & TEMP. BRIDGE
GROUND ELEVATION: 856.06 ft
GROUNDWATER DEPTH: 16.1 ft 6/24/08
PROJECT PIN NUMBER: 86E062

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LAG TRACK RIG #08 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CCB

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
0.0 - 0.3		Asphalt Pavement, 0.0 ft - 0.3 ft					
		A-1-a, SaGr, gry, Moist, Rec. = 1.1 ft	12	5.5	54.2	38.8	7.0
5		A-1-b, SaGr, gry, MTW, Rec. = 0.9 ft	12	10.8	54.6	36.4	9.0
		Field Note, NXDC, Cobbles, Cored ahead.					
10							
15		Field Note, NXDC, Cobbles, Cored ahead.					
20		Field Note, Concrete Footing, 18.0'-21.0'					
25		Field Note, NXDC, Cobbles, Cored ahead.					
30		A-1-b, Sa, gry, Moist, Rec. = 0.8 ft	4	24.0	7.9	87.0	5.1
		Field Note, Sleaved casing to 3.5", Started mud drilling.					
35		A-2-4, SiSaGr, gry, Moist, Rec. = 1.9 ft	56	15.0	37.5	37.5	25.0
40		A-1-b, GrSa, brn-gry, MTW, Rec. = 1.6 ft	23	14.3	29.4	52.9	17.7
45		A-2-4, Sa, brn-gry, MTW, Rec. = 1.5 ft	13	23.9	0.3	88.1	11.6

LOG OF BORING BRIDGEWATER BRS0149(4).GPJ VT AOT.GDT 9/4/08



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BORING NUMBER: B-203
SHEET 2 of 2
DATE STARTED: 6/16/08
DATE COMPLETED: 7/03/08

PROJECT NAME: BRIDGEWATER
SITE NAME: RT. 100-A
STATION: 111+20
OFFSET: -15.00
VTSPG: N 396219.46 ft E 1598877.22 ft

PROJECT NUMBER: BRS 0149(4)
SITE NUMBER: BRIDGE #14 & TEMP. BRIDGE
GROUND ELEVATION: 856.06 ft
GROUNDWATER DEPTH: 16.1 ft 6/24/08
PROJECT PIN NUMBER: 86E062

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: MAHMUTOVIC

BORING RIG: LAG TRACK RIG #08 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CCB

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
			RUN	REC (%)	RQD (%)	Dip (deg)	Drill Rate (min/ft)
		A-4, SiSa, brn-gry, MTW, Rec. = 1.7 ft	16	27.1	0.0	55.9	44.1
55		A-4, SiSa, brn-gry, MTW, Rec. = 1.9 ft	17	25.1	13.0	44.6	42.4
60		A-2-4, SaSiGr, gry, Moist, Rec. = 0.3 ft	R	11.2	43.6	27.2	29.2
65		Field Note, BXDC, Cobbles, Cored ahead.					
70		A-1-b, SaGr, gry, MTW, Rec. = 0.5 ft Field Note, BXDC, Cored ahead.	R	11.1	46.9	34.6	18.5
75		Visual Classification, A-2-4, GrSiSa, gry, MTW, Rec. = 0.2 ft, insufficient sample for testing.	R				
		Top of Bedrock @ 77.5 ft					
		Pink, Quartzite and quartz-plagioclase Granulite, Very closely spaced, unstained fresh horizontal jointing., Hard, Unweathered, BXDC, 77.5 ft - 78.8 ft, Rec. = 1.3 ft	1	100	0	60	8
		Pink, Quartzite and quartz-plagioclase Granulite, Very closely spaced, horizontal jointing., Hard, Unweathered to slightly weathered, BXMDC, 78.8 ft - 83.8 ft, Rec. = 5.0 ft	2	100	24	60	10
		Same as Run #2., BXMDC, 83.8 ft - 84.8 ft, Rec. = 0.8 ft	3	80	0	60	14
		Pink, Quartzite and quartz-plagioclase Granulite, Very closely spaced, horizontal jointing in upper 1.5 ft. of core run., Hard, Moderately weathered at 86.3 ft., BXMDC, 84.8 ft - 88.8 ft, Rec. = 4.0 ft	4	100	63	0	12
							4
							10
							10
90		Hole stopped @ 88.8 ft					
95							

LOG OF BORING BRIDGEWATER BRS0149(4).GPJ VT AOT.GDT 9/4/08