

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





HOLE NO.: B-01
SHEET 1 OF 1
DATE STARTED: 7/30/01
DATE COMPLETED: 7/30/01

PROJECT NAME: HARTFORD
SITE NAME: BR #8
STATION: 31+61.00
GROUND EL.: 403.04

PROJECT NUMBER: BTN 2004(II)
SITE NO.: TH #4
OFFSET: -36.00
G.W. DEPTH: No water found 7/31/01

BORING CREW
CREW CHIEF: YOUNG
DRILLER: CHABOT
LOGGER: RUSSELL

BORING RIG: TRACK RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Described)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5		A-2-4, S1Sa, brn, moist, Rec. = 1.25'	6	19.4	19.3	50.3	30.4		
10		A-1-a, SaGr, Lt/gry, Dry, Rec. = 0.60'	R Top	7.3	52.7	37.8	9.5		
		Run#1: BXDC, 11.2' - 16.2', Rec. = 4.5', See Geologist's Report.	RUN	REC%	ROD%	Dip°			
15			1	90	80	30-40			
20		Run#2: BXDC, 16.2' - 21.2', Rec. = 4.0', See Geologist's Report.	2	80	40	50			
Hole stopped @ 21.80'									
25		DRILLER'S NOTES: Small seam @ 15.50'. No water found on 07/31/01.							
30		GEOLOGIST'S REPORT: Run#1: Gray quartz muscovite schist with quartz veins, Hard, Unweathered, Competent. Run#2: Same as Run#1 with closely spaced jointing along foliation.							
35									
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HOLE NO.: B-02A
SHEET 1 OF 1
DATE STARTED: 7/30/01
DATE COMPLETED: 7/31/01

PROJECT NAME: HARTFORD
SITE NAME: BR #8
STATION: 3H+67.00
GROUND EL.: 402.83

PROJECT NUMBER: BTN 2004D
SITE NO.: TH #4
OFFSET: -38.00
G.W. DEPTH: No water found 8/1/01

BORING CREW
CREW CHIEF: YOUNG
DRILLER: CHABOT
LOGGER: RUSSELL

BORING RIG: TRACK RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS <i>(Description)</i>	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5		A-4, SiSa, brn, MTW, Rec. = 0.01', Stone in end of sampler.	5	23	2.1	55.8	42.1		
10		A-2-4, SiSa, brn, Moist, Rec. = 0.45'	9	19.5	9.6	63.8	26.6		
11.5 - 16.5		Run#1: BXGDC, 11.5'-16.5', Rec. = 1.5', Possible Boulders See Geologist's Report.	RUN	REC%	ROD%	Dip°			
12.4 - 15.5			1	30	0	-			
15		Possible Top of bedrock @ 16.5'							
16.5 - 21.5		Run#2: BXGDC, 16.5'-21.5', Rec. = 0.9', See Geologist's Report.	2	18	0	35			
21.5 - 22.5		Run#3: BXGDC, 21.5'-22.5', Rec. = 0.9', See Geologist's Report.	3	90	0	35			
22.5 - 27.5		Run#4: BXGDC, 22.5'-27.5', Rec. = 2.8', See Geologist's Report.	4	56	0	40			
27.5		Hole stopped @ 27.5'							
30		DRILLER'S NOTES: No water found 08/01/01.							
35		GEOLOGIST'S REPORT: Run#1: Run consists of short pieces of quartz, schist and quartz schist with garnet. Core is very broken up. Run does not appear to represent bedrock. Possible boulders. Drillers report numerous breaks from 12.4'-15.5'							
40		Run#2: Gray quartz muscovite schist, Hard, Unweathered, May contain numerous foliation joints, Not competent.							
45		Run#3: Same as Run#2, Not competent. Run#4: Same as Run#2, Not competent.							

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HOLE NO.: B-04
 SHEET 1 OF 1
 DATE STARTED: 8/7/01
 DATE COMPLETED: 8/7/01

PROJECT NAME: HARTFORD
 SITE NAME: BR #8
 STATION: 3H+77.00
 GROUND EL.: 384.56

PROJECT NUMBER: BTN 20040
 SITE NO.: TH #4
 OFFSET: 19.00
 G.W. DEPTH: 4.5 (08/07/01)

BORING CREW
 CREW CHIEF: YOUNG
 DRILLER: CHABOT
 LOGGER: RUSSELL

BORING RIG: TRACK RIG
 BORING TYPE: WASH BORE
 SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS <i>(Described)</i>	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
3.75		BXGDC, 3.75' - 4.75', Boulder							
5.75		Run#1: BXGDC, 5.75' - 8.75' Rec. = 1.33 See Geologist's Report.	1	44	0	40			
8.75		Run#2: BXGDC, 8.75' - 13.75' Rec. = 2.66 See Geologist's Report.	2	53	32	40			
13.75		Run#3: BXGDC, 13.75' - 17.75' Rec. = 2.0 See Geologist's Report.	3	50	25	40			
17.75		Hole stopped @ 17.75'							
20		DRILLER'S NOTES: Water elev. @ 4.5' (8/07/01)							
25		GEOLOGIST'S REPORT: Run#1: Gray quartz schist, Hard, Unweathered. Run#2: Same as Run#1. Run#3: Same as Run#1.							
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HOLE NO.: B-05
 SHEET 1 OF 1
 DATE STARTED: 8/1/01
 DATE COMPLETED: 8/1/01

PROJECT NAME: HARTFORD
 SITE NAME: BR #8
 STATION: 3+48.00
 GROUND EL.: 397.18

PROJECT NUMBER: BTN 20040
 SITE NO.: TH #4
 OFFSET: 34.00
 G.W. DEPTH: No water found 8/1/01

BORING CREW
 CREW CHIEF: YOUNG
 DRILLER: CHABOT
 LOGGER: TALLMAN

BORING RIG: TRACK RIG
 BORING TYPE: WASH BORE
 SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Describe)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5		A-4, SaS, brn, moist, Rec. = 0.9'	4	16	16	4	43		
10		No Sample, Boulder							
			Top of bedrock @ 11.8'						
		Run#1: BXGDC, 11.8'-16.8' Rec. = 1.85' See Geologist's Report.	RUN	REC%	RQD%	Dip°			
15			1	37	0	45			
		Run#2: BXGDC, 16.8'-21.8' Rec. = 4.5', See Geologist's Report.	2	90	65	45			
20			3	83	75	45			
		Run#3: BXGDC, 21.8'-24.8' Rec. = 2.5', See Geologist's Report.							
25		Hole stopped @ 24.80'							
30		DRILLER'S NOTES: No water found 08/01/01.							
35		GEOLOGIST'S REPORT: Run#1: Light gray quartz schist, Hard, Unweathered, Poor RQD Run#2: Same as Run#1. Run#3: Same as Run#1.							
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HOLE NO.: B-06
 SHEET 1 OF 1
 DATE STARTED: 8/2/01
 DATE COMPLETED: 8/2/01

PROJECT NAME: HARTFORD
 SITE NAME: BR #8
 STATION: 32+13.00
 GROUND EL.: 375.54

PROJECT NUMBER: BTN 2004(II)
 SITE NO.: TH #4
 OFFSET: -16.00
 G.W. DEPTH:

BORING CREW
 CREW CHIEF: YOUNG
 DRILLER: TALLMAN
 LOGGER: CHABOT

BORING RIG: TRACK RIG
 BORING TYPE: WASH BORE
 SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS <i>(See Report)</i>	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		Sand							
5		Run#1: BXGDC, 3.5'-8.5', Rec. = 0.65', Boulders See Geologist's Report.	RUN	REC%	ROD%	Dip°			
			1		Boulders				
			Top of bedrock @ 8.5'						
10		Run#2: BXGDC, 8.5'-11.5', Rec. = 1.95', See Geologist's Report.	2	65	53	40			
15		Run#3: BXGDC, 11.5'-16.5', Rec. = 3.25', See Geologist's Report.	3	65	50	45			
		Hole stopped @ 16.50'							
20		GEOLOGIST'S REPORT:							
		Run#1: Boulders							
		Run#2: Light gray quartz schist, Hard, Unweathered.							
		Run#3: Same as Run#2.							
25									
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HOLE NO.: B-07
SHEET 1 OF 1
DATE STARTED: 8/8/01
DATE COMPLETED: 8/8/01

PROJECT NAME: HARTFORD
SITE NAME: BR #8
STATION: 32+10.00
GROUND EL.: 374.69

PROJECT NUMBER: BTN 200410
SITE NO.: TH #4
OFFSET: 0.00
G.W. DEPTH: Drilled in water.

BORING CREW
CREW CHIEF: YOUNG
DRILLER: CHABOT
LOGGER: SOMERS

BORING RIG: TRACK RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS <i>(as described)</i>	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		Sand							
5		A-2-4, Sa with Rock Chips brn. Moist. Rec. = 1.1'							
		Run#1: BXGDC, 5.8'-8.8', Rec. = 1.1' See Geologist's Report.	RUN	REC%	ROD%	Dip°			
		Run#2: BXGDC, 8.8'-13.8', Rec. = 2.8', See Geologist's Report.	1	37	12	45			
10			2	56	28	45			
		Run#3: BXGDC, 13.8'-18.3', Rec. = 2.9', See Geologist's Report.	3	73	68	45			
15									
20		Hole stopped @ 18.30'							
25		GEOLOGIST'S REPORT:							
		Run#1: Gray quartz schist, Hard, Unweathered, Poor ROD.							
		Run#2: Same as Run#1, but weathered open joint at 10.3', Poor ROD.							
		Run#3: Same as Run#1, but color becomes darker at 14.8'							
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R 13.9 Visual Class.
Top of bedrock @ 5.8'

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HOLE NO.: B-07A
SHEET 1 OF 1
DATE STARTED: 10/1/01
DATE COMPLETED: 10/3/01

PROJECT NAME: HARTFORD
SITE NAME: BR #8
STATION: 32+09.00
GROUND EL.: 374.91

PROJECT NUMBER: BTN 20040
SITE NO.: TH #4
OFFSET: -3.00
G.W. DEPTH: River level

BORING CREW

CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: SOMERS

BORING RIG: TRACK RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS <i>(Described)</i>								
		Sand								
5		4.5' - 5.5', Boulder								
			Top of bedrock @ 6.0'							
		Run#1: BXMDC, 6.0' - 9.0', Rec. = 1.55' See Geologist's Report.	RUN	RECZ	RQDZ	Dip	SD	Co	EO	
			1	52	0	40				
10		Run#2: NXMDC, 9.0' - 10.5', Rec. = 1.10' See Geologist's Report.	2	73	0	40				
		Run#3: NXMDC, 10.5' - 14.5', Rec. = 3.90' See Geologist's Report.	3	98	65	40	11.2	3,212	2460	
15		Run#4: NXMDC, 14.5' - 19.0', Rec. = 4.25', See Geologist's Report.	4	94	92	40	15.2 16.3 17.8 18.0	2,640 13,883 8,087 2,071	1243 8131 2927 1214	
20		Hole stopped @ 19.0'								
		GEOLOGIST'S REPORT:								
25		Run#1: BXMDC, Gray quartz-biotite-sericite schist, Hard, Slightly weathered, Close to very closely spaced jointing, Poor RQD.								
		Run#2: NXMDC, Same as Run#1, Poor RQD.								
30		Run#3: NXMDC, Gray quartz-sericite schist, Hard, Unweathered.								
		Run#4: NXMDC, Gray quartz-sericite schist, Hard, Unweathered.								
35		SD = Sample Center Depth, ft.								
		Co = Uniaxial Compressive Strength of Intact Rock, psi								
		Eo = Elastic Modulus of Intact Rock, ksi								
40										
45										

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HOLE NO.: B-11
SHEET 1 OF 1
DATE STARTED: 8/23/01
DATE COMPLETED: 8/23/01

PROJECT NAME: HARTFORD
SITE NAME: BR #8
STATION: 33+63.00
GROUND EL.: 380.56

PROJECT NUMBER: BTN 2004(II)
SITE NO.: TH #4
OFFSET: 16.00
G.W. DEPTH: 3.2 (08/23/01)

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: SOMERS

BORING RIG: TRACK RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Standard)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0									
4.0'									
5		Run#1: BXGDC, 4.0'-6.5', Rec. = 1.7', See Geologist's Report.	1	68	60	45			
		Run#2: BXGDC, 6.5'-11.5', Rec. = 2.8', See Geologist's Report.	2	56	50	45			
10									
		Run#3: BXGDC, 11.5'-16.5', Rec. = 3.4', See Geologist's Report.	3	68	60	45			
15									
Hole stopped @ 16.5'									
20		DRILLER'S NOTES: Water elev. @ 3.2' (08/23/01).							
25		GEOLOGIST'S REPORT: Run#1: Gray quartz-sericite schist with garnet porphyroblasts, Hard, Unweathered. Run#2: Same as Run#1. Run#3: Same as Run#1.							
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HOLE NO.: B-13
 SHEET 1 OF 1
 DATE STARTED: 8/13/01
 DATE COMPLETED: 8/14/01

PROJECT NAME: HARTFORD
 SITE NAME: BR #8
 STATION: 34+09.00
 GROUND EL.: 386.47

PROJECT NUMBER: BTN 2004D
 SITE NO.: TH #4
 OFFSET: -19.00
 G.W. DEPTH: 5.5 08/14/01

BORING CREW
 CREW CHIEF: YOUNG
 DRILLER: CHABOT
 LOGGER: SOMERS

BORING RIG: TRACK RIG
 BORING TYPE: WASH BORE
 SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOCKS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5		A-2-4, Silty-sa, brn, MW, Rec. = 1.0'	2	25.6	27.5	49.1	23.4		
10		BXGDC, 10.0'-11.5', No Rec., Boulder							
15		No Sample, Stone in end of sampler.	7						
20		BXGDC, 19.5'-21.5', No Rec., Boulders & Seams							
		Run#1: BXGDC, 21.5'-25.5' Rec. = 2.0', See Geologist's Report.							
		Run#2: BXGDC, 25.5'-30.5' Rec. = 2.0', See Geologist's Report.							
		Run#3: BXGDC, 30.5'-35.5' Rec. = 2.9', See Geologist's Report.							
35									

Top of bedrock @ 21.5'

RUN REC% ROD% Dip°

1 50 0 40

2 40 0 40

3 58 45 40

Hole stopped @ 35.5'

DRILLER'S NOTES:

Water elev. @ 5.5' (8/14/01)

GEOLOGIST'S REPORT:

Run#1: Gray quartz sericite schist, Hard, Unweathered,
 Poor Recovery and RGD may be due to mechanical
 breakage.

Run#2: Same as Run#1.

Run#3: Same as Run#1.

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HOLE NO.: B-14
SHEET 1 OF 1
DATE STARTED: 8/20/01
DATE COMPLETED: 8/21/01

PROJECT NAME: HARTFORD
SITE NAME: BR #8
STATION: 34+00.00
GROUND EL.: 384.55

PROJECT NUMBER: BTN 2004(1)
SITE NO.: TH #4
OFFSET: 0.00
G.W. DEPTH: 6.2 (08/21/01)

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: SOMERS

BORING RIG: TRACK RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS <i>Described</i>	BLOBS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5		No Rec., Boulder	3						
10		A-1-a, Gr, gry, Dry, Rec. = 0.5'	17	9.2	80.2	15.2	4.6		
15		BXGDC, 13.9'-15.0', No Rec., Boulder	Top of bedrock @ 15.0'						
		Run#1: BXGDC, 15.0'-20.0' Rec. = 2.75' See Geologist's Report.	RUN	RECZ	RODZ	Dip			
			1	55	42	40			
20		Run#2: BXGDC, 20.0'-25.0' Rec. = 2.6', See Geologist's Report.	2	52	52	40			
25		Run#3: BXGDC, 25.0'-30.0' Rec. = 1.5', See Geologist's Report.	3	30	30	40			
30		Hole stopped @ 30.0'							
35		DRILLER'S NOTES: Water elev. @ 6.2' (08/21/01)							
40		GEOLOGIST'S REPORT: Run#1: Dark gray quartz biotite sericite schist, Moderately hard, Unweathered. Run#2: Same as Run#1, but with some garnet porphyroblasts Run#3: Same as Run#2.							
45									

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HOLE NO.: B-5
SHEET 1 OF 1
DATE STARTED: 8/21/01
DATE COMPLETED: 8/22/01

PROJECT NAME: HARTFORD
SITE NAME: BR #8
STATION: 34+09.00
GROUND EL.: 385.93

PROJECT NUMBER: BTN 2004(D)
SITE NO.: TH #4
OFFSET: 19.00
G.W. DEPTH: 7.7 (08/22/01)

BORING CREW

CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: SOMERS

BORING RIG: TRACK RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS <i>Descriptive</i>	BLOBS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5		A-1-a, SaGr with wood particles, brn, Moist, Rec. = 0.75'	7	11.1	51.8	42.3	5.9		
10		A-1-b, Sa, gry, Moist, Rec. = 0.5'	10	15.1	1.2	94.8	4		
		Top of bedrock @ 13.5'							
15		Run#1: BXGDC, 13.5'-18.0' Rec. = 1.0', See Geologist's Report.	RUN	REC%	ROD%	Dip°			
			1	22	0	40			
20		Run#2: BXGDC, 18.0'-23.0' Rec. = 2.5', See Geologist's Report.	2	50	50	40			
25		Run#3: BXGDC, 23.0'-28.0' Rec. = 1.6', See Geologist's Report.	3	32	32	40			
		Hole stopped @ 28.0'							
30		DRILLER'S NOTES: Water elev. @ 7.7' (08/22/01)							
35		GEOLOGIST'S REPORT: Run#1: Gray quartz sericite schist, Hard, Unweathered. Run#2: Same as Run#1, but with some biotite and garnet porphyroblasts. Run#3: Same as Run#2, but with quartz vein at 24.5'.							
40									
45									

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HOLE NO.: B-17
 SHEET 1 OF 1
 DATE STARTED: 10/3/01
 DATE COMPLETED: 10/4/01

PROJECT NAME: HARTFORD
 SITE NAME: BR #8
 STATION: 34+15.00
 GROUND EL.: 385.63

PROJECT NUMBER: BTN 20040
 SITE NO.: TH #4
 OFFSET: -9.00
 G.W. DEPTH: 7.5 (10/4/01)

BORING CREW
 CREW CHIEF: YOUNG
 DRILLER: YOUNG
 LOGGER: SOMERS

BORING RIG: TRACK RIG
 BORING TYPE: WASH BORE
 SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)							
5		4.5'-5.5', Boulder, No sample							
10		10.0'-12.0', No sample							
15		14.0'-15.5', Boulder, No sample							
			Top of bedrock @ 18.0'						
20		Run#1: NXMDC, 18.0'-23.0' Rec. = 4.45' See Geologist's Report.	RUN	REC	ROD	DIP	SD	Co	EO
			1	89	85	40-45	18.8 20.1 20.7	3,112 6,167 2,367	1616 3249 878
25		Run#2: NXMDC, 23.0'-28.0' Rec. = 5.00' See Geologist's Report.	2	100	90	40-45	24.2 25.4	10,094 3,147	6640 2130

Hole stopped @ 28.0'

DRILLER'S NOTES:

Water elev. @ 7.5' (10/4/01)

GEOLOGIST'S REPORT:

Run#1: Gray quartz-sericite schist with some quartz veins and scattered garnet, Hard, Unweathered,
 Run#2: Same as Run#1.

SD = Sample Center Depth, ft.

Co = Uniaxial Compressive Strength of Intact Rock, psi

Eo = Elastic Modulus of Intact Rock, ksi

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HOLE NO.: B-18
SHEET 1 OF 1
DATE STARTED: 9/4/02
DATE COMPLETED: 9/5/02

PROJECT NAME: HARTFORD
SITE NAME: BR #8
STATION: 32+20.50
GROUND EL.: 372.40

PROJECT NUMBER: BTN 20040
SITE NO.: TH #4
OFFSET: 0.00
G.W. DEPTH: Drilled in River

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: TALLMAN

BORING RIG: SMALL SKID RIG & RAFT
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		0.5' - 3.0', Boulders							
			Top of bedrock @ 4.0'						
5		Run#1: NXMDC, 4.0' - 6.0', Rec. = 1.4' See Geologist's Report.	1	70	0	45			
		Run#2: NXMDC, 6.0' - 11.0', Rec. = 4.4', See Geologist's Report.	2	88	26	45			
10		Run#3: NXMDC, 11.0' - 14.0', Rec. = 2.9', See Geologist's Report.	3	97	50	45			
15		Hole stopped @ 14.0'							
		<p>GEOLOGIST'S REPORT:</p> <p>Run#1: Gray quartz sericite schist, Hard, Unweathered, Poor competency.</p> <p>Run#2: Same as Run #1, but fair to poor competency.</p> <p>Run#3: Same as Run #1, but with felsic veins at 11.7', Fair competency.</p>							
20									
25									
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STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-19
SHEET 1 OF 1
DATE STARTED: 9/5/02
DATE COMPLETED: 9/1/02

PROJECT NAME: HARTFORD
SITE NAME: BR #8
STATION: 32+22.00
GROUND EL.: 373.40

PROJECT NUMBER: BTN 20040
SITE NO.: TH #4
OFFSET: 16.00
G.W. DEPTH: Drilled in River

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: TALLMAN

BORING RIG: SMALL SKID RIG & RAFT
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS <i>(described)</i>	BLOWS PER FOOT	MC %	GRAVEL %	SAND %	FINES %	LL	PI
5		A-1-b, Gr-Sa, brn, Moist, Rec. = 1.0'	22	16.3	25.3	64.3	10.4		
10		NXDC, 9.5'-12.5', No sample, Boulders							
		Top of bedrock @					12.5'		
15		Run#1: NXGDC, 12.5'-16.0', Rec. = 1.3', See Geologist's Report.	RUN	REC	RQD	Dip			
			1	37	26	40			
		Run#2: NXGDC, 16.0'-20.0', Rec. = 3.5', See Geologist's Report.	2	88	0	45			
20		Run#3: NXGDC, 20.0'-21.0', Rec. = 0.8'	3	80	0	45			
		Run#4: NXGDC, 21.0'-23.0', Rec. = 1.3'	4	65	0	45			
25		Run#5: NXGDC, 23.0'-26.0', Rec. = 1.75', See Geologist's Report.	5	58	0	45			
		Run#6: NXGDC, 26.0'-27.5', Rec. = 0.75'	6	50	0	45			
		Run#7: NXGDC, 27.5'-28.25', Rec. = 0.65'	7	87	0	45			
30		Run#8: NXGDC, 28.25'-31.45', Rec. = 1.8', See Geologist's Report.	8	56	25	45			
		Run#9: NXGDC, 31.45'-32.45', Rec. = 0.5'	9	50	0	45			
35		Run#10: NXGDC, 32.45'-33.45', Rec. = 1.0', See Geologist's Report.	10	100	0	45			
		Hole stopped @ 33.45'							

GEOLOGIST'S REPORT:

Core barrel plugged on every attempt of coring each Run.

Run#1: Greenish gray amphibolite meta-volcanic,
Very hard, Unweathered, May be loose rock (boulder).

Run#2: 16.0'-17.20' Gray quartz sericite schist, Hard,
Unweathered, May be loose rock (boulder).

17.20'-20.0' Greenish gray quartz sericite schist with
numerous felsic veins. hard to very hard, Unweathered,
Poor RQD may be due to mechanical breakage during drilling.

Run#3, to Run#10: Greenish gray quartz sericite schist with
numerous felsic veins. hard to very hard, Unweathered,
Poor RQD may be due to mechanical breakage during drilling.

DRILLER'S NOTES: Could not advance casing below 16.0'.

Fragments of rock would fall in hole and create problems.

STATE OF VERMONT
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 SUBSURFACE INFORMATION

HOLE NO.: B-20
 SHEET 1 OF 1
 DATE STARTED: 9/3/02
 DATE COMPLETED: 9/4/02

PROJECT NAME: HARTFORD
 SITE NAME: BR #8
 STATION: 32+21.00
 GROUND EL.: 372.19

PROJECT NUMBER: BTN 200410
 SITE NO.: TH #4
 OFFSET: -16.00
 G.W. DEPTH: Drilled in River

BORING CREW
 CREW CHIEF: YOUNG
 DRILLER: YOUNG
 LOGGER: TALLMAN

BORING RIG: SMALL SKID RIG & RAFT
 BORING TYPE: WASH BORE
 SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		A-1-a, SaGr, brn, Wet, Rec. = 0.9'	9	11.1	52.7	43	4.3		
5		A-1-a, SaGr, brn-gry, Wet, Rec. = 0.5'	35	7.5	69.7	24.7	5.6		
		Two pieces of broken rock	R						
			Top of bedrock @ 8.0'						
		Run#1: NXMDC, 8.0'-13.0', Rec. = 4.6', See Geologist's Report.	RUN	RECZ	RQDZ	Dip°			
10			1	92	66	45			
		Run#2: NXMDC, 13.0'-18.05', Rec. = 5.05', See Geologist's Report.	2	100	100	45			
15									

Hole stopped @ 18.05'

GEOLOGIST'S REPORT:

Run#1: Gray quartz sericite schist, Hard, Unweathered,
Competent.

Run#2: Same as Run#1.