

August 15, 2008

Mr. Bruce Long
Long Foundation Drilling
P.O. Box 226
3014 Brandau Road
Hermitage, Tennessee 37076

Re: Drilling Results
Long Foundation Yard
Hermitage, Tennessee

Dear Mr. Long:

Professional Service Industries, Inc.(PSI), previously performed two soil and rock test borings at the above mentioned site to determine rock quality information at the site. Based on the information obtained, additional borings in these areas were requested. Six additional borings, three at each site, were performed at the site to further evaluate the area.

Site One, borings B-2A, B-2B and B-2C, encountered auger refusal at depths of about 12 to 16 feet below existing grade. Rock recovery percentages ranged from 22 to 100 percent and RQD values ranged from 0 to 59 percent. Site Two, borings B-3, B-4 and B-6, encountered auger refusal at depths of about 20 to 28 feet below existing grade. Rock recovery percentages ranged from about 42 to 100 percent and RQD values ranged from 19 to 78 percent.

Rock compression tests were also performed on sections of the retrieved rock cores. The table below lists the locations and compressive results of each sample.

Rock Compressive Strength Results		
Boring	Core Run	Compressive Strength (psi)
B-2A	2	8,100
B-2A	3	4,750
B-2B	2	10,870
B-2B	3	14,170
B-2C	1	9,300
B-2C	3	1,660
B-3	1	33700
B-3	1	20400
B-3	2	29850
B-3	2	33050
B-4	1	9783
B-4	1	11405
B-4	2	15885
B-4	2	12026
B-6	1	9142
B-6	2	10653
B-6	3	12896

Long Foundation Drilling
8/15/08

Rock photos, boring location plan and boring logs are attached.

We appreciate the opportunity to be of service to you. If you have any questions pertaining to this letter, or if we may be of further service, please contact our office.

Respectfully submitted,

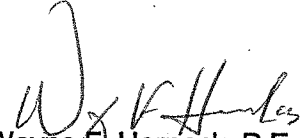
PROFESSIONAL SERVICE INDUSTRIES, INC.



Micah T. McNeer
Department Manager
Geotechnical Services

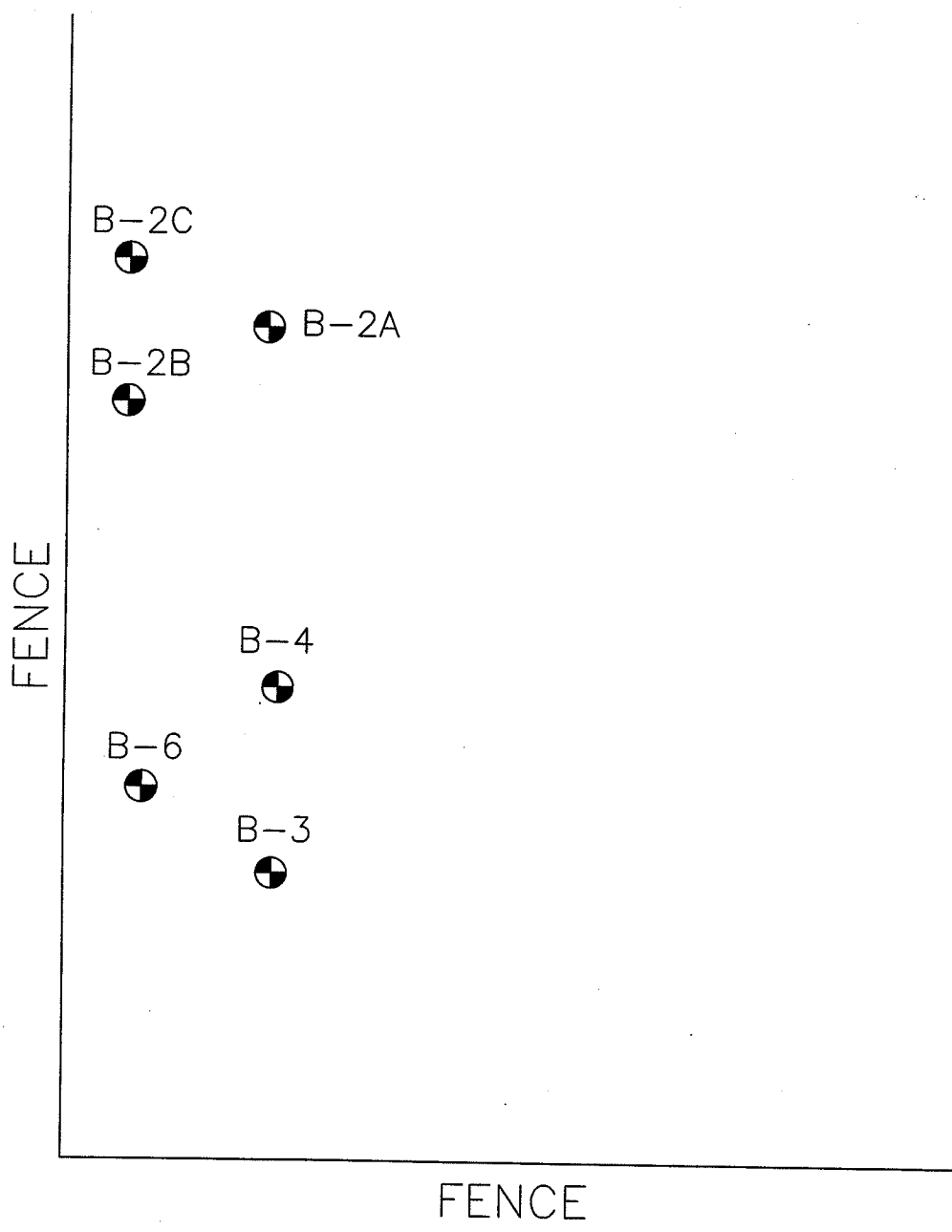


Stephen R. Bryant
Vice President



Wayne E. Harnack, P.E.
Senior Vice President

MTM/SRB/WFH/tb



⊕ APPROXIMATE BORING LOCATION

BORING LOCATION PLAN
 LONG PROJECT
 HERMITAGE, TN

psi Information
 To Build On

DRAWN	WD	SCALE	NOT TO SCALE	PROJ. NO.
CHECKED	MM	DATE	AUGUST 2008	PLATE 1

GENERAL NOTES

FINE AND COARSE GRAINED SOIL PROPERTIES

PARTICLE SIZE

BOULDERS:	GREATER THAN 300 mm
COBBLES:	75 mm to 300 mm
GRAVEL:	4.74 mm to 75 mm
COARSE SAND:	2 mm to 4.75 mm
MEDIUM SAND:	0.425 mm to 2 mm
FINE SAND:	0.075 mm to 0.425 mm
SILTS & CLAYS:	LESS THAN 0.075 mm

COARSE GRAINED SOILS (SANDS & GRAVELS)

N-VALUE	RELATIVE DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
OVER 50	VERY DENSE

FINE GRAINED SOILS (SILTS & CLAYS)

N-VALUE	CONSISTENCY	Qu, PSF
0-2	VERY SOFT	0 - 500
3-4	SOFT	500 - 1000
5-8	FIRM	1000 - 2000
9-15	STIFF	2000 - 4000
16-30	VERY STIFF	4000 - 8000
OVER 31	HARD	8000+

STANDARD PENETRATION TEST (ASTM D1586)



















THE STANDARD PENETRATION TEST AS DEFINED BY ASTM D1586 IS A METHOD TO OBTAIN A DISTURBED SOIL SAMPLE FOR EXAMINATION AND TESTING AND TO OBTAIN RELATIVE DENSITY AND CONSISTENCY INFORMATION. THE 1.4 INCH I.D./2.0 INCH O.D. SAMPLER IS DRIVEN 3-SIX INCH INCREMENTS WITH A 140 LB. HAMMER FALLING 30 INCHES. THE BLOW COUNTS REQUIRED TO DRIVE THE SAMPLER THE FINAL 2 INCREMENTS ARE ADDED TOGETHER AND DESIGNATE THE N-VALUE. AT TIMES, THE SAMPLER CAN NOT BE DRIVEN THE FULL 18 INCHES. THE FOLLOWING PRESENTS OUR INTERPRETATION OF THE STANDARD PENETRATION TEST WITH VARIATIONS.

BLOWS/FOOT (N-VALUE)

25.....	25 BLOWS DROVE SAMPLER 12" AFTER INITIAL 6" SEATING
75/10".....	75 BLOWS DROVE SAMPLER 10" AFTER INITIAL 6" SEATING
50/PR.....	SAMPLER ENCOUNTERED PENETRATION REFUSAL AFTER 50 BLOWS WITH NO PENETRATION
50/2".....	50 BLOWS DROVE SAMPLER 2" AFTER NO INITIAL 6" SEATING

DESCRIPTION







KEY TO MATERIAL CLASSIFICATION

	TOPSOIL		LIMESTONE BEDROCK
	SOIL FILL MATERIAL		CRUSHED LIMESTONE
	CL LEAN CLAY		SANDSTONE
	CH FAT CLAY		SILTSTONE
	ML LOW PLASTIC SILT		SHALE
	MH HIGH PLASTIC SILT		GRAVEL
	SP POORLY GRADED SAND		SHOTROCK FILL
	SC CLAYEY SAND		ASPHALT
	SM SILTY SAND		CONCRETE

SOIL PROPERTY SYMBOLS

N:	STANDARD PENETRATION, BPF
M:	MOISTURE CONTENT, %
LL:	LIQUID LIMIT, %
Pi:	PLASTICITY INDEX, %
Qp:	POCKET PENETROMETER VALUE, TSF
Qu:	UNCONFINED COMPRESSIVE STRENGTH, TSF
DUW:	DRY UNIT WEIGHT, PCF

SAMPLING SYMBOLS

	UNDISTURBED SAMPLE
	SPLIT SPOON SAMPLE
	ROCK CORE SAMPLE
	AUGER OR BAG SAMPLE
	WATER LEVEL AFTER DRILLING
	WATER LEVEL AFTER 24 HRS

ROCK PROPERTIES

ROCK QUALITY DESIGNATION (RQD)

PERCENT ROD	QUALITY
90 to 100	EXCELLENT
75 to 90	GOOD
50 to 75	FAIR
25 to 50	POOR
0 to 25	VERY POOR

ROCK HARDNESS

VERY SOFT:	ROCK DISINTEGRATES OR EASILY COMPRESSES TO TOUCH; CAN BE HARD TO VERY HARD SOIL.
SOFT:	ROCK IS COHERANT BUT BREAKS EASILY TO THUMB PRESSURE AT SHARP EDGES AND CRUMBLES WITH FIRM HAND PRESSURE.
MODERATELY HARD:	SMALL PIECES CAN BE BROKEN OFF ALONG SHARP EDGES BY CONSIDERABLE HARD THUMB PRESSURE; CAN BE BROKEN BY LIGHT HAMMER BLOWS.
HARD:	ROCK CANNOT BE BROKEN BY THUMB PRESSURE, BUT CAN BE BROKEN BY MODERATE HAMMER BLOWS.
VERY HARD:	ROCK CAN BE BROKEN BY HEAVY HAMMER BLOWS.

BORING LOG



Project: Long Project	PSI No.:	Date: 7/2/08
Location: Nashville, TN		

Boring No.: B-2A	Total Depth: 39.2'	Elev.:	Water at Completion of Drilling: Not Encountered
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Boring Method: Hollow Stem Auger	Drill Type: CME-550	Driller: LS
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Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲										% M	LL	PI	Qp	Qu	% Pass #200
					10	20	30	40	50	60	70	80	90							
		Sample	Soil Overburden																	

NVI LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project					PSI No.:		Date: 7/2/08												
Boring No.: B-2A			Total Depth: 39.2'	Elev.:		Location: Nashville, TN													
Boring Method: Hollow Stem Auger			Drill Type: CME-550		Water at Completion of Drilling: Not Encountered														
Driller: LS																			
Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲														
					10	20	30	40	50	60	70	80	90	% M	LL	PI	Qp	Qu	% Pass #200
	30.8		Light Gray to Gray, Fine to Medium Grained Limestone with clay seams, weathered, moderately fractured. REC = 100% ; RQD = 59% Clay Seam/Crack Clay Seam/Crack Clay Seam/Crack 1 inch void 1 inch void Clay Seam/Crack Clay Seam/Crack Clay Seam/Crack Clay Seam/Crack Clay Seam/Crack Clay Seam/Crack Clay Seam/Crack																
	39.0		End of Coring 39.0 Feet																

NVI LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project			PSI No.:	Date: 7/2/08
Boring No.: B-2B		Total Depth: 41.0'	Location: Nashville, TN	
Boring Method: Hollow Stem Auger		Elev:	Water at Completion of Drilling: Not Encountered	
Drill Type: CME-550		Driller: LS		

Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲										% M	LL	PI	Qp	Qu	% Pass #200
					10	20	30	40	50	60	70	80	90							
		[Hatched Pattern]																		
	16.0	[Brick Pattern]	Light Gray to Gray, Fine to Medium Grained LIMESTONE with clay seams, weathered, very highly fractured. REC=22%, RQD=0% 1 inch void Clay Seam/Crack 32.4 inch void (17.0 to 19.7 feet)																	

NVI LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project					PSI No.:		Date: 7/2/08												
Boring No.: B-2B			Total Depth: 41.0'	Elev.:		Location: Nashville, TN													
Boring Method: Hollow Stem Auger			Drill Type: CME-550			Water at Completion of Drilling: Not Encountered													
Driller: LS																			
Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲														
					10	20	30	40	50	60	70	80	90	% M	LL	PI	Qp	Qu	% Pass #200
			2.5 inch void																
			12 inch void																
	21.8		Light Gray to Gray, Fine to Medium Grained LIMESTONE with clay seams, weathered, moderately fractured. REC=72%, RQD=44% Clay Seam/Crack 6 inch clay seam																
			1 inch void																
			Clay Seam/Crack																
			Clay Seam/Crack																
			Clay Seam/Crack																
			Clay Seam/Crack																
	27.3		Light Gray to Gray, Fine to Medium Grained LIMESTONE with clay seams, weathered, very highly fractured. REC=97%, RQD=17%																
			Clay Seam/Crack																
			Clay Seam/Crack																

NVI LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project			PSI No.:	Date: 7/2/08
Boring No.: B-2B			Location: Nashville, TN	
Total Depth: 41.0'	Elev.:	Water at Completion of Drilling: Not Encountered		

Boring Method: Hollow Stem Auger	Drill Type: CME-550	Driller: LS
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Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲										% M	LL	PI	Qp	Qu	% Pass #200
					10	20	30	40	50	60	70	80	90							
			Clay Seam/Crack																	
			Clay Seam/Crack																	
			Clay Seam/Crack																	
	32.4		Light Gray to Gray, Fine to Medium Grained LIMESTONE with clay seams, weathered, highly fractured. REC=62%, RQD=40%																	
			Clay Seam/Crack																	
			1 inch void																	
			Clay Seam/Crack																	
			Clay Seam/Crack																	
			Clay Seam/Crack																	
			Clay Seam/Crack																	
			Clay Seam/Crack																	

NVI LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project	PSI No.:	Date: 7/2/08
Location: Nashville, TN		

Boring No.: B-2B	Total Depth: 41.0'	Elev.:	Water at Completion of Drilling: Not Encountered
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Boring Method: Hollow Stem Auger	Drill Type: CME-550	Driller: LS
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Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲											% M	LL	PI	Qp	Qu	% Pass #200	
					10	20	30	40	50	60	70	80	90									
	41.0	□	Clay Seam/Crack																			
		□	1 inch void																			
		□	End of Coring 41.0 Feet																			

BORING LOG



Project: Long Project					PSI No.:		Date: 7/2/08														
Boring No.: B-2C			Total Depth: 37.2'	Elev.:		Location: Nashville, TN															
Boring Method: Hollow Stem Auger			Drill Type: CME-550			Water at Completion of Drilling: Not Encountered															
Driller: LS																					
Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲																
					10	20	30	40	50	60	70	80	90	% M	LL	PI	Qp	Qu	% Pass #200		
		Sample	Soil Overburden																		

NVI LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project	PSI No.:	Date: 7/2/08
Location: Nashville, TN		

Boring No.: B-2C	Total Depth: 37.2'	Elev.:	Water at Completion of Drilling: Not Encountered
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Boring Method: Hollow Stem Auger	Drill Type: CME-550	Driller: LS
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Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲										% M	LL	PI	Qp	Qu	% Pass #200
					10	20	30	40	50	60	70	80	90							
	12.3	[Hatched Box]	Light Gray to Gray, Fine to Medium Grained LIMESTONE with clay seams, weathered, highly fractured. REC=33%, RQD=23%																	
		[Hatched Box]	30 inch clay seam (13.5 to 16.0 feet)																	
	16.0	[Hatched Box]	Light Gray to Gray, Fine to Medium Grained LIMESTONE with clay seams, weathered, very highly fractured. REC=74%, RQD=9%																	
		[Hatched Box]	Clay Seam/Crack																	
		[Hatched Box]	3 inch void																	
		[Hatched Box]	Clay Seam/Crack																	
		[Hatched Box]	Clay Seam/Crack																	
		[Hatched Box]	Clay Seam/Crack																	

NVI LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project	PSI No.:	Date: 7/2/08
Location: Nashville, TN		

Boring No.: B-2C	Total Depth: 37.2'	Elev.:	Water at Completion of Drilling: Not Encountered
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Boring Method: Hollow Stem Auger	Drill Type: CME-550	Driller: LS
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Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲										% M	LL	PI	Qp	Qu	% Pass #200
					10	20	30	40	50	60	70	80	90							
			Clay Seam/Crack																	
			Clay Seam/Crack																	
			Clay Seam/Crack																	
	37.0		End of Coring 37.0 Feet																	

NV1 LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project	PSI No.:	Date: 7/23/08
Location: Nashville, TN		

Boring No.: B-3	Total Depth: 45.9'	Elev.:	Water at Completion of Drilling: Not Encountered
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Boring Method: Hollow Stem Auger	Drill Type: CME-550	Driller: JH
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Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲											% M	LL	PI	Qp	Qu	% Pass #200	
					10	20	30	40	50	60	70	80	90									
		[Hatched Pattern]																				
	26.0	[Hatched Pattern]	<p style="text-align: center;">Auger Refusal 26.0 Feet; Begin Coring</p> <p>Light Gray to Gray, Fine to Medium Grained LIMESTONE with clay seam and shale partings, slightly fractured. REC=95%; RQD=66% Clay Seam/Crack Clay Seam/Crack</p>																			
		[Hatched Pattern]																				

NVI LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project						PSI No.:		Date: 7/24/08												
Boring No.: B-4			Total Depth: 47.5'		Elev.:		Location: Nashville, TN													
Boring Method: Hollow Stem Auger				Drill Type: CME-550			Driller: JH													
Water at Completion of Drilling: Not Encountered																				
Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲															
					10	20	30	40	50	60	70	80	90	% M	LL	PI	Qp	Qu	% Pass #200	
			Soil Overburden																	

NV1 LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project			PSI No.:	Date: 7/24/08
Boring No.: B-4			Location: Nashville, TN	
Total Depth: 47.5'	Elev.:	Water at Completion of Drilling: Not Encountered		
Boring Method: Hollow Stem Auger		Drill Type: CME-550	Driller: JH	

Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲										% M	LL	PI	Qp	Qu	% Pass #200
					10	20	30	40	50	60	70	80	90							
			Clay Seam/Crack																	
			Clay Seam/Crack																	
			Clay Seam/Crack																	
			Clay Seam/Crack																	
			Clay Seam/Crack																	
	37.5		Light Gray to Gray, Fine to Medium Grained LIMESTONE with clay seams, ly fractured. REC=95%, RQD=39%																	

NV1 LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project				PSI No.:	Date: 7/24/08
Boring No.: B-4				Location: Nashville, TN	
Total Depth: 47.5'		Elev.:		Water at Completion of Drilling: Not Encountered	
Boring Method: Hollow Stem Auger			Drill Type: CME-550		Driller: JH

Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲										% M	LL	PI	Qp	Qu	% Pass #200
					10	20	30	40	50	60	70	80	90							
		[Hatched Box]	Clay Seam/Crack																	
	47.5	[Hatched Box]	Coring Terminated at 47.5 Feet Water Level After Coring at 33.3 Feet																	

NV1 LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project	PSI No.:	Date: 8/1/08
Location: Nashville, TN		

Boring No.: B-6	Total Depth: 44.6'	Elev.:	Water at Completion of Drilling: Not Encountered
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Boring Method: Hollow Stem Auger	Drill Type: CME -55	Driller: JH
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Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲										% M	LL	PI	Qp	Qu	% Pass #200
					10	20	30	40	50	60	70	80	90							
		Sample	Soil Overburden																	

NV1 LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project					PSI No.:		Date: 8/1/08		
Boring No.: B-6			Total Depth: 44.6'	Elev.:		Location: Nashville, TN			
Boring Method: Hollow Stem Auger			Drill Type: CME -55			Water at Completion of Drilling: Not Encountered			
Driller: JH									

Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲										% M	LL	PI	Qp	Qu	% Pass #200
					10	20	30	40	50	60	70	80	90							
			and shale partings, weathered, very highly fractured. VOIDS between 20.0' to 21.3' and 23.0' to 26.8' REC=42%; RQD=19%																	
	29.2		Light Gray to Gray, Fine to Medium Grained LIMESTONE with clay seams and shale partings, weathered, moderately fractured.																	

NVI LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project					PSI No.:		Date: 8/1/08													
Boring No.: B-6			Total Depth: 44.6'	Elev.:		Location: Nashville, TN														
Boring Method: Hollow Stem Auger			Drill Type: CME -55		Water at Completion of Drilling: Not Encountered		Driller: JH													
Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲															
					10	20	30	40	50	60	70	80	90	% M	LL	PI	Qp	Qu	% Pass #200	
			REC=100%; RQD=41%																	
	34.6		Light Gray to Gray, Fine to Medium Grained LIMESTONE with clay seams and shale partings, weathered, moderately fractured. REC=96%; RQD=64%																	

NVI LONG PROJECT.GPJ 8/15/08

BORING LOG



Project: Long Project	PSI No.:	Date: 8/1/08
Location: Nashville, TN		

Boring No.: B-6	Total Depth: 44.6'	Elev.:	Water at Completion of Drilling: Not Encountered
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Boring Method: Hollow Stem Auger	Drill Type: CME -55	Driller: JH
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Elevation (MSL)	Depth (feet)	Sample	DESCRIPTION OF MATERIALS	N	N VALUE (bpf) ▲										% M	LL	PI	Qp	Qu	% Pass #200
					10	20	30	40	50	60	70	80	90							
		44.6'	Coring Terminated at 44.6 Feet																	