



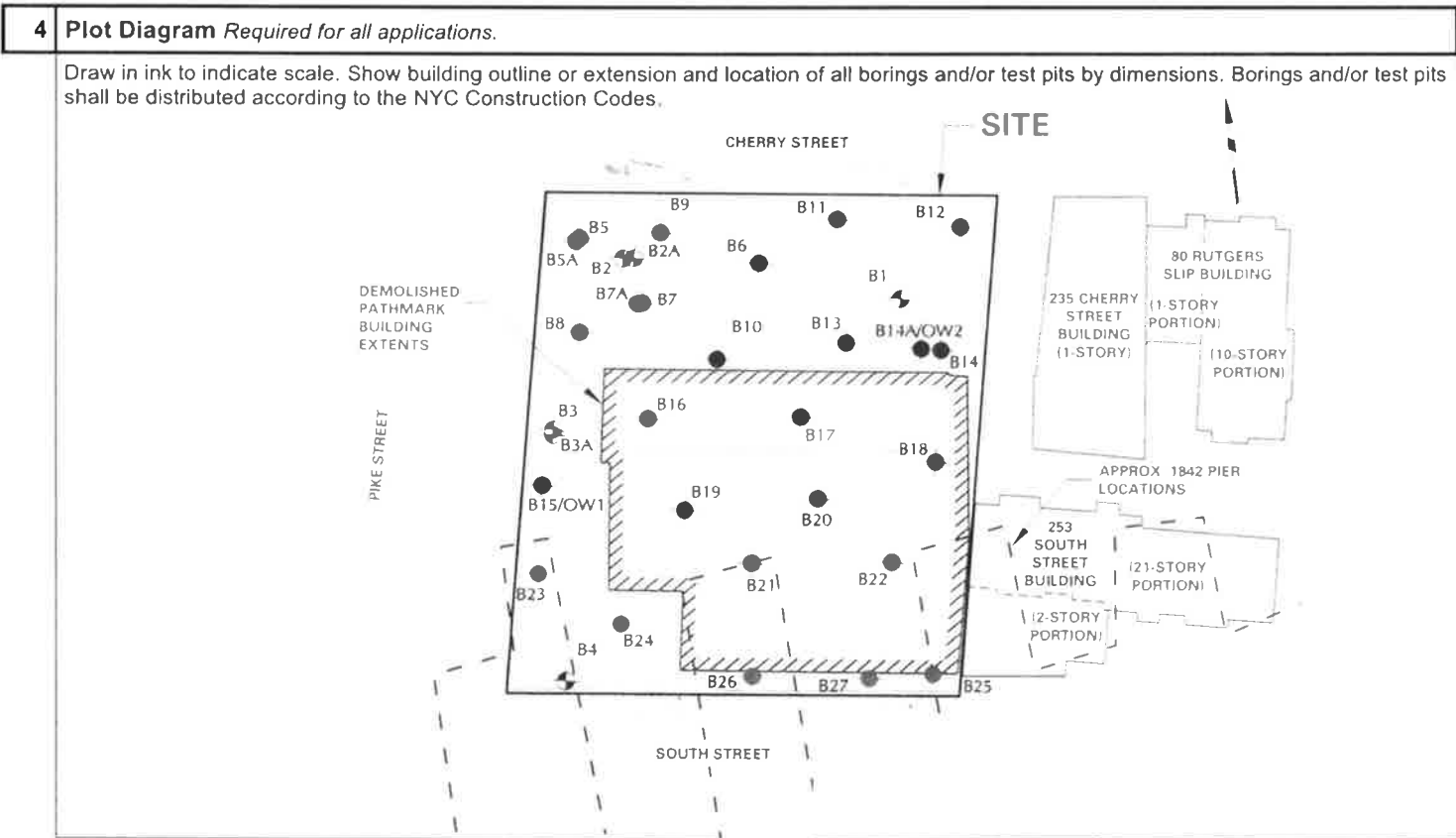
**TR4: Technical Report  
Soil Investigation**  
*Must be typewritten.*

Orient and affix BIS job number label here

<b>1 Location Information</b> <i>Required for all applications.</i>					
House No(s)	250				
Street Name	SOUTH STREET				
Borough	MANHATTAN	Block	248	Lot	01
		BIN	1003203	CB No.	103
Work on Floor(s)	ENTIRE				
	Apt/Condo No(s)				

<b>2 Applicant Information</b> <i>Required for all applications.</i>					
Last Name	BOYER	First Name	RONALD	Middle Initial	D
Business Name	Langan Eng, Env, Survey, and Landscape Arch, D.P.C.		Business Telephone	(201)794-6900	
Business Address	619 RIVER DRIVE, Ctr. 1, 4th Floor,		Business Fax	(201)794-0366	
City	Elmwood Pk.	State	NJ	Zip	07407
E-Mail	rboyer@Langan.com		Mobile Telephone		
		License Number	085831		
		<input checked="" type="checkbox"/> P.E.	<input type="checkbox"/> R.A.		

<b>3 Required Borings / Test Pits</b> <i>Required for all applications.</i>	
Number of Test Pits as Required as per NYC Construction Codes:	27 Borings



**5 Test Report** Required for all applications.

Date	Boring/ Test Pit #	Feet Below Curb	Soil Description	Class Number	Remarks
			See attached boring logs.		

**6 Statements and Signatures** Required for all applications.

I hereby state that the above information is correct and complete to the best of my knowledge and that the above tests were performed in accordance with all Administrative Code Provisions and Departmental Rules, Regulations and Directives.

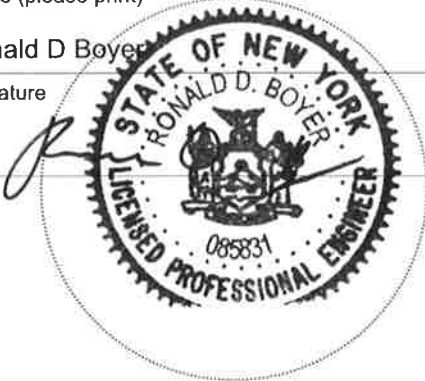
Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both.

It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both.

Name (please print)

Ronald D Boyer

Signature



Date

9/10/14

P.E. / R.A. Seal (apply seal, then sign and date over seal)

Approvals - Internal Use Only			
Examined and Recommended for Approval		Approved	
Examiner Name		Borough Commissioner Signature	Date
Signature	Date		

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Project Proposed 250 South Street Development				Project No. 009225510				
Location New York, NY				Elevation and Datum Approx. el 11 MBPD				
Drilling Company Craig Test Boring				Date Started 10/16/07		Date Finished 10/26/07		
Drilling Equipment CME 75 Truck-Mounted Drill Rig				Completion Depth 105 ft		Rock Depth 95 ft		
Size and Type of Bit 3-7/8", 2-7/8", 1-7/8" Tri-cone Roller Bits				Number of Samples		Disturbed	Undisturbed	Core
Casing Diameter (in) 4"		Casing Depth (ft) 93		Water Level (ft.)		First	Completion	24 HR.
Casing Hammer Auto		Weight (lbs) 140	Drop (in) 30	Drilling Foreman Jonathan Bedsole/Paul Mullins				
Sampler 2" O.D. Split Spoon				Inspecting Engineer Sandy Sze/Himanshu Tripathi				
Sampler Hammer Safety		Weight (lbs) 140	Drop (in) 30					

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Casing blvs/ft Coring (min)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist B/L/in	N-Value (Blows/ft)		
	+11.0					0							
	+10.8		3-INCH-THICK ASPHALT										Started drilling at 9:25 AM
	+10.3		6-INCH-THICK CONCRETE										Drilled to 4" with roller bit Hand augered to 2'
			Black f-c SAND, some brick, trace f-c gravel, trace silt, trace wood (dry) [FILL]	1.3		2							
			Reddish brown f-c SAND, some f-c gravel, trace brick, trace glass (moist) [FILL]	1.3		3	S-1	SS	13	25	39	60	SS 2'-4' PID: VOC = 1.3ppm Drilled to 4'
			Reddish brown f-c SAND, some f-c gravel, trace brick, trace glass (moist) [FILL]	1.3		4	S-2	SS	7	12	12	11	SS 4'-6' PID: VOC = 1.3ppm Organic odor detected
			Reddish brown f-c SAND, some f-c gravel, trace brick (moist) [FILL]	1.2		5				9			
	+3.8		Reddish brown f-m SAND, some silt (moist) [FILL]	1.2		6	S-3	SS	19	9	6	11	SS 6'-8' PID: VOC = 1.2ppm Organic odor detected
	+3.0		Reddish brown f-c SAND, some f-c gravel, trace brick, trace wood, trace glass (wet) [FILL]	1.4		7				5	3		
		Class 7	Reddish brown Silty f-c SAND, some f-c gravel (wet) [FILL]	1.2		8	S-4	SS	24	4	3	3	SS 8'-10' PID: VOC = 1.4ppm Organic odor detected Drove casing to 10' Drilled to 10'
			Reddish brown f-m SAND, trace f. gravel, trace silt (wet) [FILL]	1.1		9				4	3	4	SS 10'-12' PID: VOC = 1.2ppm Organic odor detected Drove casing to 15' Drilled to 15'
						10	S-5	SS	6	4	3	4	SS 10'-12' PID: VOC = 1.2ppm Organic odor detected Drove casing to 15' Drilled to 15'
						11				5			Brown wash
						12							
						13							
						14							
						15							
						16	S-6	SS	7	13	9	7	SS 15'-17' PID: VOC = 1.1ppm Drove casing to 15' Drilled to 20' Brown wash
						17							
						18							
						19							
						20							

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Log of Boring

**B1**

Sheet

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of

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Project			Project No.									
Proposed 250 South Street Development			009225510									
Location			Elevation and Datum									
New York, NY			Approx. el 11 MBPD									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Casing blws/ft Coring (min)	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Depth Scale	Number	Type	Recov. (in)		Penetr. resist. BL/6in	N-Value (Blows/ft)
	-14.0	Class 6	Reddish brown f-m SAND, trace silt, trace c. sand (wet) [FORMER RIVER BOTTOM DEPOSIT]	1.1	20					4	SS 20'-22' PID: VOC = 1.1ppm Drove casing to 25' Drilled to 25' Brown wash	
							S-7	SS	1	2		5
										2		
										2		
	-19.0	Class 3b	Brown f-m SAND, trace silt, trace c. sand, trace f. gravel (wet)	1.2	25					34	SS 25'-27' PID: VOC = 1.2ppm Drove casing to 30' Drilled to 30' Brown wash	
							S-8	SS	6	9		18
										9		
										8		
	-21.0	Class 2b	Gray f-c GRAVEL (wet)	0.9	30					9	SS 30'-32' PID: VOC = 0.9ppm Drilled to 35' Brown wash	
							S-9	SS	0.5	12		22
										10		
										12		
		Class 3b	Brown f-c SAND, trace silt (wet)	0.5	35					5	SS 35'-37' PID: VOC = 0.5ppm Organic odor detected Installed casing to 35' Drilled to 40' Brown wash	
							S-10	SS	8	6		16
										10		
										8		
		Class 3b	No Recovery	0	40					5	SS 40'-42' Installed casing to 40' Drilled to 45' Brown wash	
							S-11	SS	0	12		26
										14		
										17		

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Project		Proposed 250 South Street Development		Project No.		009225510										
Location		New York, NY		Elevation and Datum		Approx. el 11 MBPD										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Casing blws/ft Coring (min)	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)						
						Depth Scale	Number	Type	Recov. (in)		Penetr. resist BL/6in	N-Value (Blows/ft)				
		Class 3b	Brown f-c SAND, trace silt (wet)	0.8		45	S-12	SS	3	10		SS 45'-47' PID: VOC = 0.8ppm Organic odor detected Drilled to 50' Brown wash				
		Class 3a	Brown c-f SAND, trace f-c gravel, trace silt (wet)	0.8		50	S-13	SS	12	10		SS 50'-52' PID: VOC = 0.8ppm Drilled to 55' Brown wash				
		Class 2a	GRAVEL (inferred from drilling)			55	S-14	SS	12	10		SS 55'-57' PID: VOC = 0.8ppm Drilled to 60' Brown wash Difficult drilling from 57'-59'; gravel inferred				
		Class 3a	Brown f-c SAND, trace f-c gravel, trace silt (wet)	0.6		56	S-15	SS	13	10		SS 60'-62' PID: VOC = 0.6ppm Drilled to 65' Brown wash				
		Class 3b	Brown f-c SAND, some f-c gravel, trace silt (wet)	0.8		57	S-16	SS	14	13		SS 65'-67' PID: VOC = 0.8ppm Stopped at 1:45 PM at 67' on 10/16/07. Resumed work at 7:00 AM on 10/17/07. Redrilled from 55'-70' using 3-7/8" drill collar. Brown wash Rig chattering from 69'-70'				

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Project		Proposed 250 South Street Development		Project No.		009225510								
Location		New York, NY		Elevation and Datum		Approx. el 11 MBPD								
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Casing blws/ft Coring (min)	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
						Depth Scale	Number	Type	Recov. (in)		Penetr. resist BL/6in	N-Value (Blows/ft)		
		Class 3b	Brown f-c SAND, trace f-c gravel, trace silt (wet)	0.8		70	S-17	SS	13	16		<p>SS 70'-72'</p> <p>PID: VOC = 0.8ppm</p> <p>Rods clogged due to insufficient pump pressure.</p> <p>Resumed work on 10/18/07. Advanced casing to 41'. Redrilled from 40'-75'. Brown wash</p>		
		Class 3b	Brown f-m SAND, trace c. gravel, trace silt (wet)	0.6		75	S-18	SS	13	9		<p>SS 75'-77'</p> <p>PID: VOC = 0.6ppm</p> <p>Drilled to 80'</p> <p>Brown wash</p> <p>Water loss</p>		
		Class 3b	Brown f-m SAND, trace c. gravel, trace silt (wet)	0.5		80	S-19	SS	13	12		<p>SS 80'-82'</p> <p>PID: VOC = 0.5ppm</p> <p>Mix revert into mud tub</p> <p>Drilled to 85'-8"</p> <p>Brown wash</p>		
		Class 3b	Brown f-m SAND, trace silt (wet)	0.5		86	S-20	SS	16	9		<p>SS 85'-8" to 87'-8"</p> <p>PID: VOC = 0.5ppm</p> <p>Drilled to 90'</p> <p>Brown wash</p>		
	-77.0	Class 2b	GRAVEL (inferred from drilling)			88						<p>Chattering from 88'-89.5'</p> <p>Gravel inferred from drilling</p>		
	-78.5	Class 3b	Grayish brown Gravelly f. SAND and SILT	0.5		90	S-21	SS	3	20		<p>SS 90'-92'</p> <p>PID: VOC = 0.5ppm</p> <p>Hole collapsed</p> <p>Installed casing to 65'</p> <p>Casing broke</p> <p>Stopped drilling at 12:30 PM on 10/17/07.</p> <p>Resume work at 7:15 AM on 10/23/07. Drilled to 95' and advanced casing to 92'. Rig chattering from 92'-95'. Brown wash</p>		

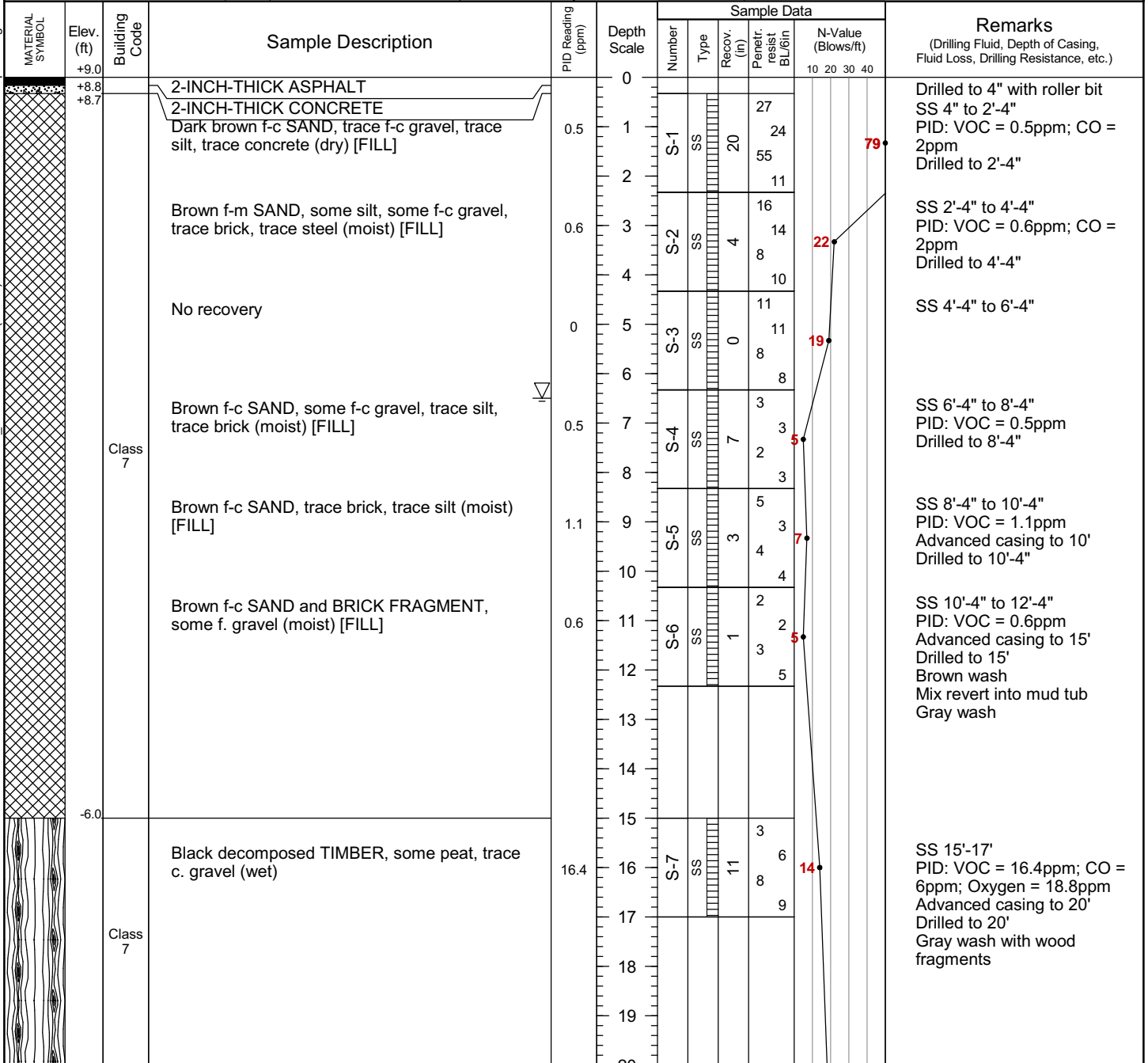
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Project		Proposed 250 South Street Development		Project No.		009225510													
Location		New York, NY		Elevation and Datum		Approx. el 11 MBPD													
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Casing blws/ft Coring (min)	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)									
						Depth Scale	Number	Type	Recov. (in)		Penetr. resist. BL/6in	N-Value (Blows/ft)							
	-94.0	Class 1c	Gray MICA SCHIST			C-1	NX CORE	REC=57"/60" =95%	RQD=22"/60" =37%					NX Core 95'-100' Start C-1 at 11:30 AM Water loss - no return  Finish C-1 at 11:45 AM NX Core 100'-105' Start C-2 at 12:00 PM. Water loss - no return					
										95	3:48								
										96	1:27								
										97	1:12								
										98	1:30								
										99	2:25								
										100	1:30								
										101	1:39								
										102	1:45								
										103	1:51								
		104	2:12																
		105			Boring completed at 105' on 10/26/07, 7:40 AM.								End of work for day at 2:00 PM.  10/24/07 Redrilled to 105' with roller bit. Attempted to core from 105' to 110'. NX core barrel clogged with sand. Advanced casing to 93'. Rained at 8:10 AM.  End of work for day at 8:30 AM. 10/25/07 Rain - no work for the day. 10/26/07 Driller backfilled hole using drill cuttings and patched with cement.						
		106											Note: Rock classified per NYC Bldg Code rock classification modified based on RQD						
		107																	
		108																	
		109																	
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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 9 MBPD			
Drilling Company Craig Test Boring				Date Started 10/18/07		Date Finished 10/19/07	
Drilling Equipment CME 75 Truck-Mounted Drill Rig				Completion Depth 27 ft		Rock Depth -	
Size and Type of Bit 3-7/8", 2-7/8", 1-7/8" Tri-cone Roller Bits				Number of Samples		Disturbed 9	Undisturbed -
Casing Diameter (in) 4"		Casing Depth (ft) 25		Water Level (ft.) First 6.5		Completion -	Core 24 HR. -
Casing Hammer Auto		Weight (lbs) 140	Drop (in) 30	Drilling Foreman Paul Mullins			
Sampler 2" & 3" O.D. Split Spoon				Inspecting Engineer Sandy Sze			
Sampler Hammer Safety		Weight (lbs) 140	Drop (in) 30				





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Log of Boring

**B2**

Sheet

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of

2

Project		Proposed 250 South Street Development		Project No.		009225510					
Location		New York, NY		Elevation and Datum		Approx. el 9 MBPD					
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
	-18.0	Class 7	Black decomposed TIMBER (wet)	2.0	20	S-8	SS	24	15	19	SS 20'-22' No recovery with 2" split spoon, use 3" split spoon to recover sample. PID: VOC = 2.0ppm; CO = 1ppm Advanced casing to 22', refusal on casing. Drilled to 25' Grayish black wash with wood fragments. Water loss End work for day at 2:00 PM. Resume work at 7:00 AM on 10/19/07.
			Black TIMBER (wet)	252	21	S-9	SS	8	48	79	
			Boring completed at 27' on 10/22/07, 1:20 PM.		22			9	6		
					23						
					24						
					25						
					26						
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Project Proposed 250 South Street Development				Project No. 009225510				
Location New York, NY				Elevation and Datum Approx. el 9 MBPD				
Drilling Company Craig Test Boring				Date Started 10/19/07		Date Finished 10/22/07		
Drilling Equipment CME 75 Truck-Mounted Drill Rig				Completion Depth 110 ft		Rock Depth 95 ft		
Size and Type of Bit 3-7/8", 2-7/8", 1-7/8" Tri-cone Roller Bits				Number of Samples		Disturbed 18	Undisturbed -	Core 3
Casing Diameter (in) 4"		Casing Depth (ft) 91		Water Level (ft.)		First ▽	Completion ▽	24 HR. ▽
Casing Hammer Auto		Weight (lbs) 140	Drop (in) 30	Drilling Foreman Paul Mullins				
Sampler 2" O.D. Split Spoon				Inspecting Engineer Sandy Sze				
Sampler Hammer Safety		Weight (lbs) 140	Drop (in) 30					

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist BL/ft	N-Value (Blows/ft)		
	+9.0					0							
	+8.7		3-INCH-THICK ASPHALT			1							Started drilling at 8:00 AM on 10/19/07. Refer to log of boring B2 for information on the first 12'.  Drilled to 12'
		Class 7				2							
						3							
						4							
						5							
						6							
						7							
						8							
						9							
						10							
						11							Advanced casing to 10' Drilled to 12' Brown wash consisting of c. gravel and sand
						12							
			Reddish brown m-f SAND, trace f. gravel, trace silt (wet) [FILL]	2.5		13	S-1	SS	10	12	6	10	SS 12'-14' PID: VOC = 2.5ppm Advanced casing to 15' Drilled to 15' Brown wash
						14							
						15							
						16	S-2	SS	15	4	2	4	SS 15'-17' PID: VOC = 1.9ppm Advanced casing to 20' Drilled to 20' Brown wash
						17							
						18							
						19							
						20							

Project		Project No.											
Proposed 250 South Street Development		009225510											
Location		Elevation and Datum											
New York, NY		Approx. el 9 MBPD											
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)	
[Pattern: Reddish brown f-c SAND, trace f-c gravel, trace silt (wet) [FILL] [FORMER RIVER BOTTOM DEPOSIT]]	-20.0	Class 6	Reddish brown f-c SAND, trace f-c gravel, trace silt (wet) [FILL] [FORMER RIVER BOTTOM DEPOSIT]	1.8		20							SS 20'-22' PID: VOC = 1.8ppm Advanced casing to 25' Drilled to 25' Brown wash
						21	S-3	SS	1.5	2	4		
						22				2			
						23							
						24							
						25							
						26	S-4	SS	19	1	3		
						27				2			
						28				3			
						29							
[Pattern: Dark gray f-c SAND and SILT, some gravel (wet)]	-23.0	Class 5b	Dark gray f-c SAND and SILT, some gravel (wet)	1.4		30							SS 30'-32' PID: VOC = 1.4ppm Advanced casing to 35' Drilled to 35' Gray wash
						31	S-5	SS	5	4	11		
						32				5			
						33							
[Pattern: Gray Sandy f-c GRAVEL, some silt (wet)]	-31.0	Class 2b	Gray Sandy f-c GRAVEL, some silt (wet)	7.8		34							Grayish brown wash Rig chattering Water loss
						35							
						36	S-6	SS	2	6	18		
						37				9			
						38				9			
						39				17			
[Pattern: Black and white c-f GRAVEL, trace f-c sand (wet)]	-35.0	Class 2a	Black and white c-f GRAVEL, trace f-c sand (wet)	1.0		40							SS 40'-42' PID: VOC = 1.0ppm Advanced casing to 45' Drilled to 45'
						41	S-7	SS	3	23	45		
						42				29			
						43				16			
[Pattern: Blank]	-35.0	Class 3b				44						Grayish brown wash Rig chattering Water loss	
						45							

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Project		Project No.												
Proposed 250 South Street Development		009225510												
Location		Elevation and Datum												
New York, NY		Approx. el 9 MBPD												
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)		
	-53.0	Class 3b	Brown c-f SAND, trace silt, trace mica flakes (wet)	2.7		45				21		SS 45'-47' PID: VOC = 2.7ppm; CO = 299ppm, LEL = 2.2 Advanced casing to 50' Drilled to 50'  Grayish brown wash Rig chattering  SS 50'-52' PID: VOC = 2.2ppm; CO = 20ppm Advanced casing to 55' Drilled to 55' Brown wash with gravel and sand. Water loss  SS 55'-57' Advanced casing to 60' Drilled to 60' Brown gravelly wash Water loss Rig chattering 58'-60'  SS 60'-62' Advanced casing to 65' Drilled to 65'  Light brown to white wash Brown wash, rig chattering with scraping noises  SS 65'-67' PID: VOC = 0.1ppm Advanced casing to 70' Drilled to 70' Rig chattering Light brown gravelly wash		
	-61.0	Class 2b	Gray f-c GRAVEL, trace c-f sand, trace silt (wet) - gravel stuck in spoon tip	0.1		50	S-8	SS	4	6	15			

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Project		Project No.												
Proposed 250 South Street Development		009225510												
Location		Elevation and Datum												
New York, NY		Approx. el 9 MBPD												
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)		
	-66.0	Class 2a	Dark gray c. GRAVEL	0.2		70	S-13	SS	2	23	10 20 30 40			SS 70'-72' PID: VOC = 0.2ppm Advanced casing to 75' Light brown gravelly wash Rig chattering
						71					20	39		
						72					19			
						73					11			
						74								
	-71.0	Class 3b	Brown Gravelly f-c SAND, trace silt (wet)	0		75	S-14	SS	10	30	10 20 30 40			SS 75'-77' Advanced casing to 80' Drilled to 80' Brown gravelly wash
						76					15	27		
						77					12			
						78					12			
	-78.0	Class 3a	Brown f. SAND, trace clay, trace silt, trace f-c gravel (wet)	0		80	S-15	SS	7	19	10 20 30 40			SS 80'-82' Resume drilling at 8:15 AM on 10/22/07. Drilled to 85'
						81					23	43		
						82					20			
						83					16			
						84								
						85								
						86								
	-78.0	Class 3a	Brown f. SAND, some f-c gravel, some silt, trace m-c sand (wet)	0.5		86	S-16	SS	12	14	10 20 30 40			SS 85'-87' PID: VOC = 0.5ppm Drilled to 90' Gray wash Rig chattering 87'-88' and 89'-90' Water loss
						87					18	36		
						88					16			
	-84.0	Class 2a	Grayish brown f-c GRAVEL, trace f-c sand, trace silt (wet)	0.9		89	S-17	SS	9	13	10 20 30 40			Hole collapsed SS 88'-90' PID: VOC = 0.9ppm Advanced casing to 91' Drilled to 95'
						90					16	40		
						91					24			
						92					56			
						93								
	-86.0	Class 1d	Weathered Rock inferred from drilling			94					10 20 30 40			Rig chattering at 90'-9" Difficult drilling at 91' and 93' Gray wash with rock cuttings. Bedrock at 93' inferred from drillings.
						95						56/8"		

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Project			Project No.													
Proposed 250 South Street Development			009225510													
Location			Elevation and Datum													
New York, NY			Approx. el 9 MBPD													
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)					
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)				
[Hatched Pattern]	-101.0	Class 1a	Gray MICA SCHIST			95	S-18	S	0	50/0"					SS at 95'	
						3:30	C-1	NX CORE	REC=55"/60" =92%	RQD=53"/60" =88%					NX Core 95'-100' Start C-1 @ 10:22 AM	
						96					2:50					
						97					3:15					
						98					2:40					
						99					3:29					
						100	2:37	C-2	NX CORE	REC=60"/60" =100%	RQD=57"/60" =95%					Finish C-1 at 10:41 AM  NX Core 100'-105' Start C-2 at 10:50 AM  Beige wash, water loss
						101	2:39									
						102	2:51									
						103	3:22									
104	4:14															
105	3:10	C-3	NX CORE	REC=59"/60" =98%	RQD=59"/60" =98%					Finish C-2 at 11:08 AM  NX Core 105'-110' Start C-3 at 11:20 AM						
106	3:41															
107	3:56															
108	4:03															
109	3:37															
			Boring completed at 110' on 10/22/07, 1:20 PM.			110								Finish C-3 at 11:50 AM.  Driller backfilled hole with drill cuttings and patched with cement.  <u>Note:</u> Rock classified per NYC Bldg Code rock classification modified based on RQD.		
111																
112																
113																
114																
115																
116																
117																
118																
119																
120																

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 7 MBPD			
Drilling Company Craig Test Boring				Date Started 11/12/07		Date Finished 11/12/07	
Drilling Equipment CME 75 Truck-Mounted Drill Rig				Completion Depth 32 ft		Rock Depth -	
Size and Type of Bit 2-15/16" & 3-7/8" Tri-cone Roller Bits				Number of Samples Disturbed 11		Undisturbed -	
Casing Diameter (in) 4"		Casing Depth (ft) 28		Water Level (ft.) First 6.5		Completion 24 HR.	
Casing Hammer Auto		Weight (lbs) 140		Drop (in) 30		Drilling Foreman Dave Cooke	
Sampler 2" O.D. Split Spoon				Inspecting Engineer Sandy Sze/Chris McMahon			
Sampler Hammer Safety		Weight (lbs) 140		Drop (in) 30			

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist B/6in		N-Value (Blows/ft)
	+7.0				0						
	+6.5		6-INCH-THICK ASPHALT		0						8:15AM Set up Rig Drilled through 6" asphalt using drag bit. SS: 6" to 2'6"
		Class 7	Dark brown f-c SAND, some red brick, trace f-c gravel, trace silt (dry) [FILL]		1	S-1	SS	15	15		
			Light gray f-c SAND, some f-c gravel, trace brick, trace silt (dry) [FILL]		2			36	40		
			Light gray f-c SAND, some f-c gravel, trace brick, trace silt (dry) [FILL]		3	S-2	SS	4	15		SS: 2'6" to 4'6"
			Reddish brown f-m SAND, some brick, trace silt, trace f-c gravel, trace wood (moist) [FILL]		4			13	12		Advanced casing to 4'. Drilled to 4'6".
			Reddish brown f-m SAND, some brick, trace silt, trace f-c gravel, trace wood (moist) [FILL]		5	S-3	SS	9	3		SS: 4'6" to 6'6"
			Grayish brown f-m SAND, some f-c gravel, some silt, trace brick, trace c sand, trace wood, trace concrete, trace glass, trace clay (wet) [FILL]		6			5	10		
			Black Gravelly f-c SAND, some silt (wet) [FILL]		7	S-4	SS	10	30		SS: 6'6" to 8'6"
			Black TIMBER (wet) [FILL]		8			3	4		Advanced casing to 8'. Drilled to 8'6".
			Black to brown TIMBER (wet) [FILL]		9	S-5	SS	13	14		SS: 8'6" to 10'6"
			Black TIMBER, some f-c sand, some brick, some silt, trace f-c gravel (wet) [FILL]		10			5	10		Advanced casing to 10'. Drilled to 10'6".
			Black to brown TIMBER (wet) [FILL]		11	S-6	SS	3	1		SS: 10'6" to 12'6"
			Black TIMBER, some f-c sand, some brick, some silt, trace f-c gravel (wet) [FILL]		12			5	3		
			Black TIMBER, some f-c sand, some brick, some silt, trace f-c gravel (wet) [FILL]		13	S-7	SS	5	3		SS: 12'6" to 14'6"
			Black to brown TIMBER, trace brick, trace f sand (wet) [FILL]		14			5	10		Advanced casing to 15'. Drilled to 15'.
		Class 7	Black to brown TIMBER, trace brick, trace f sand (wet) [FILL]		15			3	3		Black wash.
			Black to brown TIMBER, trace brick, trace f sand (wet) [FILL]		16	S-8	SS	5	16		SS: 15' to 17'
					17			3	4		Advanced casing to 17'. Drilled to 17'.
					18			8	8		
					19						Grayish brown wash with wood fragments. Water loss at 18'-20'. Advanced casing to 20'. Drilled to 20'.
					20						

Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, NY		Approx. el 7 MBPD										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
	-18.0	Class 7	Black to brown TIMBER, some silt, trace f-c gravel (wet) [FILL]	0	20	S-9	SS	3	7	100/3"	10 20 30 40	SS: 20' to 21'9" Drilled to 25'.  No return/water loss. Rig chattering at 23.5'-25'.
					21				2			
					22				4			
	-18.8	Class 7	Gray f-c SAND, trace silt, trace f-c gravel, trace wood, trace shells (wet) [FILL] Boulder - inferred from drilling		25	S-10	SS	2	6	100/3"	100/3"	SS: 25' to 25'9" Advanced casing to 25'. Drilled to 30'.  No return/water loss. Difficult drilling at 25'6" to 27'. Boulder - inferred from drilling.
					26							
	-20.0	Class 4b	Dark gray CLAY, some silt, trace f sand, trace wood, trace roots, trace f gravel (wet) [FORMER RIVER BOTTOM DEPOSIT]		30	S-11	SS	24	2	100/3"	100/3"	SS: 30' to 32' Advanced casing to 28'. Drilled to 30'. Gray wash/clear wash. Chattering at 28.5'. Casing damaged after being advanced through possible boulder. 5' casing lost in hole.  Driller backfilled hole with drill cuttings and bentonite pellets (hole plug) and patched on top with hole plug.
					31				4			
					32				11			
	-25.0		Abandoned B3 at 32' on 11/12/07 at 2:00pm.		32			4				
					33							
					34							
					35							
					36							
					37							
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					39							
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					44							
					45							

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Project		Project No.									
Proposed 250 South Street Development		009225510									
Location		Elevation and Datum									
New York, NY		Approx. el 7 MBPD									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
[Cross-hatch pattern]	-18.7	Class 7	Grayish brown f-c SAND, some silt, some f-c gravel, trace brick, trace wood, trace shells(wet) [FILL]		20	S-1	SS	9	2	2	SS: 20' to 22' Advanced casing to 25'. Drilled to 25'.  Gray wash.
				21				2	4		
[Diagonal lines pattern]	-27.5	Class 6	Dark gray f-m SAND, some silt, trace clay, trace brick, trace wood (wet) [FILL] Dark brown to black CLAY, some silt, trace f-c sand, trace f gravel, trace shells (wet) [FORMER RIVER BOTTOM DEPOSIT]		25	S-2	SS	10	4	1	SS: 25' to 27' Advanced casing to 30'. Drilled to 30'.  Gray wash.
				26				2	3		
[Diagonal lines pattern]	-30.0	Class 4c	Black to Gray CLAY, some silt, trace to some wood and organics, trace shells (wet) [FORMER RIVER BOTTOM DEPOSIT]		30	S-3	SS	10	1	1	SS: 30' to 32' Advanced casing to 35'. Drilled to 35'.  Black wash.
				31				2	3		
[Diagonal lines pattern]	-33.0	Class 4b	BOULDER - inferred from drilling [FORMER RIVER BOTTOM DEPOSIT]	3:58	35						Difficult drilling at 34.5' Boulder - inferred from drilling.  Black wash with rock cuttings.
				36	4:34						
[Diagonal lines pattern]	-34.5	Class 3b	Black to Gray CLAY, some silt, trace f-c sand, trace wood, trace shells (wet) [FORMER RIVER BOTTOM DEPOSIT]		37	S-4	SS	21	1	1	SS: 37' to 39'. qu = 0.6 tsf Drilled to 40'.  Black wash.
				38				3	4		
[Diagonal lines pattern]	-34.5	Class 3b	Black to Gray Sandy CLAY, some silt, some f-c gravel, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]		40	S-5	SS	10	2	8	SS: 40' to 42'. Drilled to 45'.  Black wash.
				41				3	11		
[Dotted pattern]	-34.5	Class 3b	Reddish Brown f-m SAND, trace silt (wet)		42					3	Gray wash.
				43							
					44						
					45						

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Project		Project No.											
Proposed 250 South Street Development		009225510											
Location		Elevation and Datum											
New York, NY		Approx. el 7 MBPD											
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)		
			Reddish brown f-m SAND, trace c gravel, trace silt (wet)		45								
						S-6	SS	8	5	12		SS: 45' to 47' No recovery - use 3" Split Spoon. Drilled to 50'.	
									6				
									6				
									7				
						48						Gray wash.	
						49							
				Reddish brown f-c SAND, trace f-c gravel, trace silt (wet)		50							
						51	S-7	SS	13	5	12		SS: 50' to 52' Drilled to 55'.
						52				6			
					53				6			Gray wash.	
					54				6				
			Reddish brown f-m SAND, trace f-c gravel, trace silt (wet)		55								
					56	S-8	SS	15	5	14		SS: 55' to 57' Drilled to 60'.	
					57				7				
					58				7			Gray wash.	
					59								
			Reddish brown f SAND, trace silt (wet)		60								
					61	S-9	SS	15	10	30		SS: 60' to 62' Drilled to 65'.	
					62				14				
					63				16			Gray wash.	
					64				15				
			Reddish brown f SAND, trace f-c gravel, trace silt (wet)		65				7				
					66	S-10	SS	16	11	25		SS: 65' to 67' Drilled to 70'.	
					67				14				
					68				15			Gray wash.	
					69								
					70								

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Project		Project No.									
Proposed 250 South Street Development		009225510									
Location		Elevation and Datum									
New York, NY		Approx. el 7 MBPD									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
		Class 3b	Reddish brown f SAND, trace f-c gravel, trace silt (wet)		70				8		SS: 70' to 72' Drilled to 75'.  Gray wash. Slight chattering of the rig at 74.5'
				71	S-11	SS	15		13	25	
				72					12		
				73					16		
		-67.5	Class 2a	Gray c-f GRAVEL, trace f sand, trace silt (wet)		74					SS: 75' to 77' Drilled to 80'.  Gray wash.
		75			S-12	SS	1		24	66	
		76							38		
		-70.0	Class 3a	Gray f SAND, trace silt (wet)		77					SS: 80' to 82' Drilled to 85'.  Gray wash.
		78									
		79									
		80			S-13	SS	16		11	42	
		81							21		
		-78.0	Class 4a	Reddish brown CLAY, some silt, trace f-c sand, trace f gravel (wet)		82					SS: 85' to 87' qu = 0.65 tsf Drilled to 90'.  Gray wash.
		83									
	84										
	-82.0	Class 2a	Brown Sandy f-c GRAVEL, trace silt (wet)		85	S-14	SS	17		11	SS: 85' to 87' qu = 0.65 tsf Drilled to 90'.  Gray wash.
	86							13	33		
	-84.5	Class 3a	Brown f-m SAND, some silt, trace f gravel (wet)		87					20	SS: 90' to 92' Drilled to 95'.
	88							15			
	-85.5	Class 2a	Brown f-m SAND, some silt, trace f gravel (wet)		89						SS: 90' to 92' Drilled to 95'.  Brown wash. Chattering of the rig at 92.5' to 95'
	90			S-15	SS	10		18	43		
	91							20			
					92					23	
					93					25	
					94						
					95						

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Project		Project No.									
Proposed 250 South Street Development		009225510									
Location		Elevation and Datum									
New York, NY		Approx. el 7 MBPD									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
	-88.2	Class 1b	Gray f-c GRAVEL (wet)	95	95	C-1 NX CORE	2	100/2"	100/2"	100/2"	SS: 95' to 95'2" NX Core: 95'2" to 100'2" Start C-1 at 11:36am.
			Gray MICA SCHIST	3:23	96						
				3:45	97						
				3:33	98						
				3:43	99						
				4:57	100						
				2:55	101						
				3:24	102						
				4:08	103						
				4:17	104						
	-93.2	Class 1a	Gray MICA SCHIST	100	100	C-2 NX CORE	REC=60"/60" =100%	RQD=57"/60" =95%			Finish C-1 at 12:04pm. NX Core: 100'2" to 105'2" Start C-2 at 12:28pm.  Grayish brown wash.  Finish C-2 at 1:00pm. Driller backfilled hole with drill cuttings and bentonite pellets (hole plug) and patched on top with asphalt .  <b>Note:</b> Rock classified per NYC Bldg Code rock classification modified based on RQD
				5:10	105						
					106						
					107						
					108						
					109						
					110						
					111						
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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 3 MBPD			
Drilling Company Craig Test Boring				Date Started 11/14/07		Date Finished 11/16/07	
Drilling Equipment CME 75 Truck-Mounted Drill Rig				Completion Depth 101 ft		Rock Depth 90.2 ft	
Size and Type of Bit 2-15/16" & 3-7/8" Tri-cone Roller Bits				Number of Samples Disturbed 22		Undisturbed - Core 2	
Casing Diameter (in) 4"		Casing Depth (ft) 55		Water Level (ft.) First 5		Completion 24 HR. -	
Casing Hammer Auto		Weight (lbs) 140		Drop (in) 30		Drilling Foreman Dave Cooke	
Sampler 2" O.D. Split Spoon				Inspecting Engineer Sandy Sze			
Sampler Hammer Safety		Weight (lbs) 140		Drop (in) 30			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist B/ft		N-Value (Blows/ft)
	+3.0				0						
		Red to black f-c SAND, some brick, trace f-c gravel, trace silt, trace grass (dry) [FILL]	0.7		1	S-1	SS	6	6	17	SS: 0'-2', followed by 3" SS: 0'-2'
		Red to brown BRICK, some f-m sand, trace silt (dry) [FILL]			2						
		Red to black f-c SAND, some brick, trace silt (moist) [FILL]			3	S-2	SS	12	8	20	SS: 2'-4', followed by 3" SS: 2'-4'
		Black TIMBER (wet) [FILL]			4						Observed 3" hole opened to 4'. Lowered 2" split spoon to 4'. SS: 4'-6', followed by 3" SS: 4'-6'
	-2.0		1146		5	S-3	SS	7	2	16	
		Black f-c GRAVEL, some wood, some f-c sand, trace brick, trace silt (wet) [FILL]	804		6						
		Brown to black Gravelly f-c SAND, some wood, trace brick, trace silt (wet) [FILL]	0		7	S-4	SS	12	6	50	SS: 6'-8', followed by 3" SS: 6'-8'
			0		8						3" hole opened to 8'. Lowered 2" split spoon to 8' without resistance.
			0		9	S-5	SS	8	5	7	SS: 8'-10', followed by 3" SS: 8'-10'
	-7.0		0		10						Advanced casing to 10' Drilled to 10'
		Brown TIMBER, trace f-c gravel, trace shell, trace brick, trace shell, trace concrete (wet) [FILL]	0		11	S-6	SS	5	9	10	SS: 10'-12', followed by 3" SS: 10'-12'
			0		12						Advanced casing to 15' Drilled to 15'
			0		13						Black wash.
			0		14						
			0		15						SS: 15'-17'
		Black Gravelly f-c SAND, trace silt, trace shells, trace brick, trace concrete (wet) [FILL]	0.1		16	S-7	SS	5	3	10	Advanced casing to 20' Drilled to 20'
			0		17						
			0.2		18						Black wash with shells and red bricks
			0		19						
			0		20						

Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, NY		Approx. el 3 MBPD										
MATERIAL SYMBOL	Elev. (ft)	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)	
[Cross-hatched pattern]	Class 7	Brown Sandy f-c GRAVEL, some brick, trace silt, trace shell (wet) [FILL]	0		20				8		SS: 20'-25'	
					21	S-8	SS	3	3	7	10	Advanced casing to 25' Drilled to 25'
					22					3		
					23					4		Black to dark brown wash with red bricks
					24							
					25					5		SS: 25'-27'
					26	S-9	SS	5	1	3	4	Advanced casing to 30' End work for the day at 11:04AM. 11/15/10-10:00AM: Drilled to 30'
					27					4		Black wash at 28'
					28							Brown wash at 29' Black wash at 29.5'
					29							
					30					2		SS: 30'-32'
					31	S-10	SS	9	2	2	8	Advanced casing to 35' Drilled to 35'
32					6							
33							Black wash					
34												
[Gravel pattern]	Class 2b	Black and white c-f GRAVEL, some f-c sand (wet)			35				11		SS: 35'-37'	
					36	S-11	SS	5	12	26	Advanced casing to 40' Drilled to 40'	
					37				14			
					38				17		Black to gray wash Rig chattering at 38.5'-40'	
[Gravel pattern]	Class 2a	Gray f-c GRAVEL, trace silt, trace f-c sand (wet)			39							
					40				6		SS: 40'-42'	
					41	S-12	SS	8	10	37	Advanced casing to 45' Drilled to 45'	
					42				7		Black to gray wash Rig chattering at 44'-45'	
43												
44												
45												

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Project		Project No.									
Proposed 250 South Street Development		009225510									
Location		Elevation and Datum									
New York, NY		Approx. el 3 MBPD									
MATERIAL SYMBOL	Elev. (ft)	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
	-47.0	Reddish Brown f-c GRAVEL, some silt, trace clay, trace f-c sand (wet)			45				21		SS: 45'-47'  Advanced casing to 50' Drilled to 50'  Gray wash with gravel  Chattering at 48'-50'
					46	S-13	SS	5	9	32	
					47				8		
					48						
					49						
	-47.0	Grayish Brown f-c SAND, trace silt (wet)			50				4		SS: 50'-52'  Advanced casing to 55' Drilled to 55'  Mix revert  Gray wash Rig chattering at 54'-55'
					51	S-14	SS	13	6	11	
					52				12		
					53						
	-53.0	Grayish Brown Gravelly f-c SAND, trace silt (wet)			55				9		SS: 55'-57'  Drilled to 60'
					56	S-15	SS	13	4	9	
	-53.0	Reddish Brown f SAND, trace silt (wet)			57				4		Drilled to 60'  Gray wash
					56				6		
					57						
	-57.0	Gray c GRAVEL (wet)			60				12		SS: 60'-62'  Drilled to 65'
					61	S-16	SS	.5	13	29	
					62				16		
					63				23		
	-59.0	Brown f-m SAND, trace silt (wet)			65				9		SS: 65'-67'  Drilled to 70'  Grayish brown wash
					66	S-17	SS	10	10	20	
					67				10		
					68				12		
					69						
					70						Grayish brown wash

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Project		Project No.																		
Proposed 250 South Street Development		009225510																		
Location		Elevation and Datum																		
New York, NY		Approx. el 3 MBPD																		
MATERIAL SYMBOL	Elev. (ft)	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)										
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)									
[Symbol: Dotted pattern]	Class 3b	Brown f SAND, trace silt (wet)			70	S-18	SS	17	12	26				SS: 70'-72' Drilled to 75'						
					71					13										
					72					13										
					73					14										
					74															
					75															
					76					S-19	SS	10	17		22				SS: 75'-77' Drilled to 80'	
					77										11					
					78										11					
					79					9										
80																				
[Symbol: Dotted pattern]	Class 3a	Brown f SAND, some silt (wet)			80	S-20	SS	3	22	79				SS: 80'-82' Drilled to 85'						
					81					26										
					82					53										
					83					26										
					84															
					85															
					86					S-21	SS	3	79		35				SS: 85'-87' Drilled to 90'	
					87										20					
					88										15					
					89										17					
90																				
[Symbol: Dotted pattern]	Class 2a	Gray to Brown c-f GRAVEL, some f sand, trace silt (wet)			90	S-22	SS	2	100/2"	100/2"				SS: 90'-90'2" Drilled to 90'2" Rig chattering at 90'2", brown wash.						
					91															
					92															
					93															
					94															
[Symbol: Diagonal lines]	Class 1b	Gray MICA SCHIST with Quartz inclusions			95	C-1	NX CORE	REC=54"/60" =90%	RQD=46"/60" =77%					End work for the day at 2:15PM 11/16/07-7:10AM: Drilled to 91' - difficult drilling Brown wash  NX Core: 91'-96' Start C-1 at 7:55AM						
					5:42															
					3:19															
					5:40															
					5:13															
6:05																				

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
Project		Proposed 250 South Street Development		Project No.		009225510								
Location		New York, NY		Elevation and Datum		Approx. el 3 MBPD								
MATERIAL SYMBOL	Elev. (ft)	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)			
[Symbol]	-93.0	Class 1b			95	C-1						Brown wash Water loss at 93.5'-96' Finish C-1 at 8:21AM NX Core: 96'-101' Start C-2 at 8:32AM		
					96									
[Symbol]		Gray MICA SCHIST			97	C-2 NX CORE	REC=60"/60" = 100%	RQD=51"/60" = 85%					Water loss from 96'-101'	
					98									
					99									
					100									
					101									
					102									
	-98.0	Boring completed at 101' on 11/16/07 at 10:05AM.			103							Finish C-2 at 8:50AM Driller backfilled hole with bentonite pellets (hole plug) and patched on top with hole plug.  <u>Note:</u> Rock classified per NYC Bldg Code rock classification modified based on RQD		
					104									
					105									
					106									
					107									
					108									
					109									
					110									
					111									
					112									
					113									
					114									
					115									
					116									
					117									
					118									
					119									
					120									

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 9 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 4/23/13		Date Finished 4/24/13	
Drilling Equipment AD II Truck-Mounted Rig				Completion Depth 1.5 ft		Rock Depth -	
Size and Type of Bit 4 7/8" Tricone Roller Bit				Number of Samples		Disturbed 1	Undisturbed -
Casing Diameter (in)				Casing Depth (ft)		Water Level (ft.)	Core -
Casing Hammer		Weight (lbs)	Drop (in)	Water Level (ft.)		First ▽	Completion ▽
Sampler 2" O.D. Split Spoon		Weight (lbs)	Drop (in)	Drilling Foreman Jim Wilson			
Sampler Hammer Safety		Weight (lbs)	Drop (in)	Inspecting Engineer Karinna Diaz			
		140	30				

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist	BL/Join		N-Value (Blows/ft)
	+9.0				0							
	+8.8		2-INCH-THICK ASPHALT		1	S-1	SS	8	100/5"			Started drilling at 2:30 PM on 4/23/13
	+7.5	Class 7	Grayish brown f-c SAND, trace silt, trace brick fragments (moist) [FILL]	0.0								Drilled through 2-inch-thick asphalt.
			End of Boring 1.5' at 7:45 AM on 4/24/13.		2							Stopped work at 3:00 PM on 4/23/13
					3							Resumed work at 7:00 AM on 4/24/13
					4							SS 2"-1'1"
					5							Drilled to 1.5'
					6							Bit refusal at 1.5'
					7							Obstruction encountered at 1.5'
					8							Boring terminated and relocated.
					9							Borehole backfilled with cuttings and patched with cement upon completion.
					10							
					11							
					12							
					13							
					14							
					15							
					16							
					17							
					18							
					19							
					20							

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 9 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 4/24/13		Date Finished 4/25/13	
Drilling Equipment AD II Truck-Mounted Rig				Completion Depth 97 ft		Rock Depth 87 ft	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" Tricone Roller Bits				Number of Samples		Disturbed 20	Undisturbed -
Casing Diameter (in) 3", 4" I.D. Steel Casing				Casing Depth (ft) 87		Water Level (ft.) First 7	Completion 24 HR. -
Casing Hammer Donut		Weight (lbs) 300	Drop (in) 30	Drilling Foreman Jim Wilson			
Sampler 2" O.D. Split Spoon				Inspecting Engineer Karinna Diaz			
Sampler Hammer Safety		Weight (lbs) 140	Drop (in) 30				

MATERIAL SYMBOL	Elev. (ft) +9.0	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
						Number	Type	Recov. (in)	Penetr. resist	Blow/in	N-Value (Blows/ft) 10 20 30 40	
[Cross-hatched pattern]			Brown f-c SAND, trace brick fragments (moist) [FILL]		0							Started drilling at 8:00 AM on 4/24/13 Drilled to 2' Refer to log of boring B-5 for information on the first 2'. SS 2'-4' Advanced 4" casing to 5' Drilled to 5' Brown wash
					1							
					2							
					3	S-2	SS	8	7	13		
					4				6			
					5				11			
					6				2			
			Brown f-c SAND, trace silt, trace brick fragments (moist) [FILL]		0.0	S-3	SS	6	3	8		SS 5'-7'
					7			5				
					8	S-4	SS	8	6	16		SS 7'-9' Advanced 4" casing to 10' Drilled to 10' Brown wash
			Grayish brown f-c SAND, trace clay, trace brick fragments (wet) [FILL]		0.0			6				
					9			10				
		Class 7			10			8				SS 10'-12'
			Brown f-c SAND, trace clay, trace brick fragments (wet) [FILL]		0.0	S-5	SS	5	2			
					11			2				
					12			3				SS 12'-14' Advanced 4" casing to 15' Drilled to 15' Brown wash
			Brown f-c SAND, trace silt, trace brick fragments (wet) [FILL]		0.0	S-6	SS	10	2	4		
					13			2				
					14			3				
					15			2				SS 15'-17' Advanced 4" casing to 20' Drilled to 20' Brown wash
			Brown f-c SAND, trace fine gravel (wet)		0.0	S-7	SS	13	2	4		
					16			2				
					17			3				
					18							
					19							
					20							

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Project		Proposed 250 South Street Development		Project No.		009225510					
Location		New York, NY		Elevation and Datum		Approx. el 9 (MBPD)					
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
		Class 7	No Recovery		20	S-8	SS	0	2		SS 20'-22' Drilled to 25' Brown wash
					21				3		
					22				3		
					23				WOH		
	-14.5	Class 4c	Dark gray Sandy CLAY, trace wood (wet)		24						
					25	S-9	SS	9	2		SS 25'-27' Drilled to 30' Brown wash
				4.6	26				WOH		
					27				7		
					28				3		
	-19.5	Class 3b	Brown f-c SAND, trace fine gravel, trace silt (wet)		29						
					30	S-10	SS	8	5		SS 30'-32' Drilled to 35' Brown wash
				0.0	31				6		
					32				5		
					33				4		
					34						
	-26.0	Class 6	Brown f-c SAND, trace silt (wet)		35	S-11	SS	12	5		SS 35'-37' Drilled to 40' Brown wash
				0.0	36				5		
					37				4		
					38				5		
					39				5		
	-31.0	Class 3b	Brown f-c SAND, trace silt (wet)		40	S-12	SS	10	4		SS 40'-42' Drilled to 45' Brown wash
				0.0	41				4		
					42				6		
					43				4		
					44						
					45						


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Project		Proposed 250 South Street Development		Project No.		009225510																																													
Location		New York, NY		Elevation and Datum		Approx. el 9 (MBPD)																																													
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)																																									
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)																																								
	-41.0	Class 3b	Brown f-c SAND, trace silt (wet)	0.0	45	S-13	SS	10	4	11	SS 45'-47' Drilled to 50' Brown wash																																								
												0.0	46	5	6	5	4																																		
																		47	4	4	4																														
																						48	4	4	4																										
																										49	4	4	4																						
																														50	4	4	4																		
																																		51	5	4	5														
																																						52	5	4	5										
																																										53	5	4	5						
																																														54	5	4	5		
55	11	9	18																																																
				56	9	9	18																																												
								57	6	9	18																																								
												58	6	9	18																																				
																59	6	9	18																																
																				60	5	8	17																												
																								61	9	9	17																								
																												62	7	9	17																				
																																63	7	9	17																
																																				64	7	9	17												
65	34	25	38																																																
				66	13	13	38																																												
								67	13	13	38																																								
												68	13	13	38																																				
																69	13	13	38																																
																				70	13	13	38																												
																								56.0	Class 2b	Brown Sandy f-c GRAVEL, trace mica flakes (wet)	0.0													55	S-15	SS	3	11	18	SS 55'-57' Advanced 4" casing to 60' Drilled to 60' Brown wash with gray and reddish brown gravel					
																												56	9	9	18																				
																																57	6	9	18																
																																				58	6	9	18												
59	6	9	18																																																
				60	5	8	17																																												
								61	9	9	17																																								
												62	7	9	17																																				
																63	7	9	17																																
																				64	7	9	17																												
																								65	34	25	38																								
																												66	13	13	38																				
																																67	13	13	38																
																																				68	13	13	38												
69	13	13	38																																																
				70	13	13	38																																												
								-56.0	Class 2a	Tan Sandy fine GRAVEL, trace silt (wet)	0.0																													65	S-17	SS	1	34	25	38	SS 60'-62' Drilled to 65' Rig chattering from 62'-65'				
												66	13	13	38																																				
																67	13	13	38																																
																				68	13	13	38																												
																								69	13	13	38																								
																												70	13	13	38																				
																																-59.0	Class 3a		0.0													65	S-17	SS	1
																																				66	13	13	38												
67	13	13	38																																																
				68	13	13	38																																												
								69	13	13	38																																								
												70	13	13	38																																				

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Project		Proposed 250 South Street Development		Project No.		009225510						
Location		New York, NY		Elevation and Datum		Approx. el 9 (MBPD)						
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
[Dotted Pattern]	-66.0	Class 3a	Brown f-c SAND, trace fine gravel, trace silt (wet)	0.0	70	S-18	SS	14	14	31	SS 70'-72'	Stopped work at 3:00 PM on 4/24/13 Resumed work at 7:00 AM on 4/25/13 Hole collapsed at 63' Advanced 4" casing to 70' Drilled to 70' Brown wash Drilled to 75' Brown wash
					71							
					72							
					73							
					74							
					75							
					76							
					77							
					78							
					79							
[Dotted Pattern]	-66.0	Class 3b	Brown f-c SAND, trace fine gravel, trace silt (wet)	0.0	80	S-19	SS	14	14	26	SS 75'-77'	Drilled to 80' Brown wash Rig chattering at 79'
					81							
					82							
					83							
					84							
					85							
					86							
					87							
					88							
					89							
[Dotted Pattern]	-76.0	Class 3a	Grayish brown f-c SAND, trace silt (wet)	0.0	90	S-20	SS	12	15	26	SS 80'-82'	Drilled to 85' Brown wash
					91							
					92							
					93							
					94							
					95							
					96							
					97							
					98							
					99							
[Dotted Pattern]	-78.0	Class 3a	Grayish brown f-c SAND, trace silt (wet)	0.0	100	S-21	SS	12	7	67	SS 85'-86'9"	Drilled to 87' Bit refusal at 87' Installed 3" casing to 87' Redrilled to 87'
					101							
					102							
					103							
					104							
					105							
					106							
					107							
					108							
					109							
[Dotted Pattern]	-83.0	Class 1a	Gray MICA SCHIST	0.0	110	C-1	NX CORE	REC=54"/60" =90%	RQD=51"/60" =85%	67	Started NX Rock core run C-1 at 87' at 11:05 AM Light gray wash	
					111							
					112							
					113							
					114							
					115							
					116							
					117							
					118							
					119							
[Dotted Pattern]	-83.0	Class 1b	Gray MICA SCHIST	0.0	120	C-2	NX CORE	REC=59"/60" =98%	RQD=42"/60" =70%	67	Finished core run C-1 at 92' at 11:40 AM Started NX Rock core run C-2 at 92' at 11:55 AM Light gray wash	
					121							
					122							
					123							
					124							
					125							
					126							
					127							
					128							
					129							

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Project		Proposed 250 South Street Development		Project No.		009225510																			
Location		New York, NY		Elevation and Datum		Approx. el 9 (MBPD)																			
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)															
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)														
	-88.0	Class 1b	End of Boring at 97' at 3:00 PM on 4/25/13.		95	C-2	NX CORE					Finished core run C-2 at 12:25 PM at 97'													
					96								97	98	99	100	101	102	103	104	105	106	107	108	109



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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 10 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 4/16/13		Date Finished 4/18/13	
Drilling Equipment DK525 Truck-Mounted Rig				Completion Depth 104 ft		Rock Depth 94 ft	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" Tricone Roller Bits				Number of Samples		Disturbed	Undisturbed
Casing Diameter (in) 3", 4" I.D. Steel Casing				Casing Depth (ft) 92		Water Level (ft.) First	Completion
Casing Hammer Donut		Weight (lbs) 300	Drop (in) 30	Drilling Foreman Eddie Cardona			
Sampler 2" O.D. Split Spoon				Inspecting Engineer Karinna Diaz			
Sampler Hammer Safety		Weight (lbs) 140	Drop (in) 30				

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist B/ft	N-Value (Blows/ft)		
	+10.0		2-INCH-THICK ASPHALT			0							
	+9.8					1	S-1	SS	14	30			
			Dark brown f-c SAND, trace silt, trace brick fragments (moist) [FILL]	2.6		2			11	20			
						3	S-2	SS	12	15		35	
			Dark brown f-c SAND, trace silt, trace brick fragments (moist) [FILL]	0.5		4			27	15			
						5			28	32		59	
						6	S-3	SS	16	5			
			Dark brown f-c SAND, trace silt, trace brick fragments (moist) [FILL]	0.5		7			3	8		14	
		Class 7	Reddish brown f-c SAND, trace silt (moist)	0.0		8	S-4	SS	16	9			
						9			6	9		19	
						10			6	10			
			Reddish brown f-c SAND, trace silt (moist)	0.3		11	S-5	SS	12	5			
						12			7	9		20	
						13	S-6	SS	20	9			
			Reddish brown f-c SAND, trace silt (wet)	0.3		14			9	12		21	
						15			9	9			
						16	S-7	SS	10	2			
			Reddish brown f-c SAND, trace silt (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		17			3	2		5	
		Class 6				18			3	3			
						19							
						20							

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Project		Project No.												
Proposed 250 South Street Development		009225510												
Location		Elevation and Datum												
New York, NY		Approx. el 10 (MBPD)												
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)		
[Dotted pattern]	-20.0	Class 6	Brown f-c SAND, trace silt (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		20						SS 20'-22' Drilled to 25' Brown wash		
						21	S-8	SS	12	3	2		5	
						22				4	2			
						23								
						24								
						25								
	-20.0	Class 6	Brown f-c SAND, trace silt (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0			26	S-9	SS	10	3	2	5	SS 25'-27' Drilled to 30' Brown wash
							27				3	3		
							28							
							29							
							30							
							31	S-10	SS	10	8	6	13	
-20.0	Class 3b	Brown and gray-brown f-c SAND, trace silt (wet)	0.0			32				7	7	SS 30'-32' Drilled to 35' Gray-brown wash		
						33								
						34								
						35								
						36	S-11	SS	10	5	7		17	
						37					10		7	
-20.0	Class 3b	Brown f-c SAND, trace silt (wet)	0.1			38						SS 35'-37' Drilled to 40' Brown wash		
						39								
						40								
						41	S-12	SS	8	5	5		11	
						42					6		7	
						43								
-20.0	Class 3b	Brown f-c SAND, trace silt (wet)	0.0			44						SS 40'-42' Drilled to 45' Brown wash		
						45								

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Project		Project No.											
Proposed 250 South Street Development		009225510											
Location		Elevation and Datum											
New York, NY		Approx. el 10 (MBPD)											
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
			Brown f-c SAND, trace silt, trace f-c gravel (wet)	0.4		45	S-13	SS	8	8	12	SS 45'-47' Drilled to 50' Brown wash	
						46			8	6			
						47			8	6			
						48							
						49							
				Brown f-c SAND, trace fine gravel (wet)	0.8		50	S-14	SS	8	12	20	SS 50'-52' Drilled to 55' Brown wash
						51			8	11			
						52				9			
						53				7			
						54							
				Brown f-c SAND, trace fine gravel (wet)	0.3		55	S-15	SS	14	9	21	SS 55'-57' Drilled to 60' Brown wash
			Class 3b				56			14	10		
							57			11	11		
							58			13			
							59						
				Brown f-c SAND (wet)	0.2		60	S-16	SS	14	8	18	SS 60'-62' Drilled to 65' Brown wash
							61			14	8		
						62			10	10			
						63			10				
						64							
			Brown f-c SAND (wet)	0.0		65	S-17	SS	10	9	22	SS 65'-67' Drilled to 70' Brown wash	
						66			10	10			
						67			12	12			
						68			12				
						69							
						70							

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Project		Proposed 250 South Street Development		Project No.		009225510						
Location		New York, NY		Elevation and Datum		Approx. el 10 (MBPD)						
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
[Symbol: Dotted pattern]	-65.0	Class 3b	Brown f-m SAND, some silt (wet)	0.0		70						SS 70'-72' Drilled to 75' Brown wash
						71	S-18	SS	10	9	21	
						72				12		
						73				13		
						74						
[Symbol: Dotted pattern]	-70.0	Class 3a	Brown Silty f-m SAND (wet)	0.0		75						SS 75'-77' Drilled to 80' Brown wash
						76	S-19	SS	14	11	32	
						77				14		
						78				18		
						79				17		
[Symbol: Dotted pattern]	-75.0	Class 3a	Brown f-c SAND, trace silt (wet)	0.3		80						SS 80'-82' Rig chattering from 82'-85' Drilled to 85' Brown wash
						81	S-20	SS	8	8	32	
						82				9		
						83				23		
						84				38		
[Symbol: Dotted pattern]	-80.0	Class 3b	Brown Silty f-m SAND, some clay, trace fine gravel (wet)	0.2		85						SS 85'-87' Drilled to 90' Brown wash
						86	S-21	SS	6	9	24	
						87				10		
						88				14		
						89				14		
[Symbol: Dotted pattern]	-84.0	Class 3a	Grayish brown Silty f-c SAND, trace f-c gravel (wet)	0.2		90						SS 90'-91'11" Advanced 3" casing to 92' Drilled to 92' Gray wash Stopped work at 3:00 PM on 4/17/13 Resumed work at 7:00 AM on 4/18/13 Drilled to 94'
						91	S-22	SS	11	48	65	
						92				36		
						93				29		
						94				100/5"		
[Symbol: Triangular pattern]		Class 1b			4:19	C-1						Started NX Rock core run C-1 at 94' at 8:00 AM

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Project		Proposed 250 South Street Development		Project No.		009225510												
Location		New York, NY		Elevation and Datum		Approx. el 10 (MBPD)												
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)							
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)						
	-89.0	Class 1b	Gray MICA SCHIST			95	C-1	NX CORE	REC=60"/60" =100%	RQD=44"/60" =73%					Light gray wash			
						4:12					96	4:40	97	5:32		98	5:18	99
	-94.0	Class 1a	Gray MICA SCHIST			104	C-2	NX CORE	REC=58"/60" =97%	RQD=57"/60" =95%					Finished core run C-2 at 104' at 9:15 AM Borehole backfilled with cuttings and patched with cement upon completion.			
						105					106	107	108	109		110	111	112
			End of Boring at 104' at 10:30 AM on 4/18/13.															



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Log of Boring

**B-7A**

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Project Proposed 250 South Street Development				Project No. 009225510				
Location New York, NY				Elevation and Datum Approx. el 9 (MBPD)				
Drilling Company Warren George, Inc.				Date Started 4/15/13		Date Finished 4/16/13		
Drilling Equipment DK525 Truck-Mounted Rig				Completion Depth 100 ft		Rock Depth 90 ft		
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" Tricone Roller Bits				Number of Samples		Disturbed 16	Undisturbed -	Core 2
Casing Diameter (in) 3", 4" I.D. Steel Casing		Casing Depth (ft) 90		Water Level (ft.)		First ▽	Completion ▽	24 HR. ▽
Casing Hammer Donut	Weight (lbs) 300	Drop (in) 30		Drilling Foreman Jim Wilson				
Sampler 2" O.D. Split Spoon				Inspecting Engineer Karinna Diaz				
Sampler Hammer Safety	Weight (lbs) 140	Drop (in) 30						

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)					
							Number	Type	Recov. (in)	Penetr. resist	BL/Join	N-Value (Blows/ft)						
	+9.0					0												
	+8.8		3-INCH-THICK ASPHALT			1												Started drilling at 10:55 AM on 4/15/13 Refer to log of boring B-7 for information on the first 14'.  Drilled to 10' Brown wash  Advanced 4" casing to 15' Drilled to 15' Brown wash  SS 15'-17' Drilled to 17' Gray wash  SS 17'-19' Advanced 4" casing to 20' Drilled to 20' Gray wash
						2												
						3												
						4												
						5												
						6												
						7												
						8												
						9												
						10												
						11												
						12												
						13												
						14												
	-6.0	Class 7				15												
			Dark gray and black decomposed WOOD, some f-c sand, some peat (wet) [FILL]	10.0		16	S-7	SS	8	4	2	7						
						17				5	6							
						18	S-8	SS	14	2	3	6						
			Dark gray decomposed WOOD, some peat (wet) [FILL]	0.0		19				3	3							
						20				3								

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Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, NY		Approx. el 9 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
[Cross-hatched pattern]	-16.0	Class 7	Grayish brown f-c SAND, trace peat, trace wood (wet) [FILL]	0.0		20				6	10 20 30 40	SS 20'-22' Advanced 4" casing to 25' Drilled to 25' Brown wash
						21	S-9	SS	10	5	15	
						22			10	7		
						23						
[Dotted pattern]	-22.0	Class 6	Dark gray Silty fine SAND, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		25				WOH		SS 25'-27' Advanced 4" casing to 30' Drilled to 30' Gray wash
						26	S-10	SS	12	3		
						27				4		
						28						
[Dotted pattern]	-26.0	Class 6	Dark gray Silty f-m SAND, some clay (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		30				WOH	SS 30'-32' Drilled to 35' Brown wash	
						31	S-11A	SS	14	WOH		
			Dark brown f-c SAND, trace silt (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		32	S-11B			4		WOH
						33						
[Dotted pattern]	-36.0	Class 3b	Brown f-c SAND, trace silt (wet)	0.0		35				9	SS 35'-37' Drilled to 40' Brown wash	
						36	S-12	SS	14	9		20
						37				11		
						38				12		
[Dotted pattern]	-36.0	Class 3b	Reddish brown f-c SAND, trace silt (wet)	1.8		40				6	SS 40'-42' Drilled to 45' Brown wash	
						41	S-13	SS	12	6		12
						42				6		
						43				6		




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Project		Proposed 250 South Street Development		Project No.		009225510								
Location		New York, NY		Elevation and Datum		Approx. el 9 (MBPD)								
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)		
		Class 6	Reddish brown f-c SAND, trace silt, trace f-c gravel (wet)	0.1		45	S-14	SS	8	5	9		SS 45'-47' Drilled to 50' Brown wash	
	46					4								
	47					6								
		-41.0		Reddish brown f-c SAND, trace fine gravel, trace silt (wet)	0.9		50	S-15	SS	8	5	10		SS 50'-52' Drilled to 55' Brown wash
	51	4												
	52	6												
				Brown f-c SAND, some fine gravel, trace silt (wet)	3.6		55	S-16	SS	4	4	10		SS 55'-57' Drilled to 60' Brown wash
	56	5												
	57	5												
			Class 3b	Brown fine SAND, trace silt (wet)	0.1		60	S-17	SS	18	6	16		SS 60'-62' Stopped work at 3:00 PM on 4/15/13 Resumed work at 7:00 AM on 4/16/13 Drilled to 65' Brown wash
	61	7												
	62	8												
				Brown f-c SAND, trace silt, trace f-c gravel (wet)	0.5		65	S-18	SS	8	7	13		SS 65'-67' Drilled to 70' Brown wash
66	5													
67	6													
						68								
						69								
						70								

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Project		Proposed 250 South Street Development		Project No.		009225510						
Location		New York, NY		Elevation and Datum		Approx. el 9 (MBPD)						
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
		Class 3b	Brown f-c SAND, trace silt (wet)	0.6		70	S-19	SS	14	6	16	SS 70'-72' Drilled to 75' Brown wash
	71					7						
	72					9						
	73					8						
	74											
	75					11						
	76					18						
	77					23						
	78					18						
	79											
		Class 3a	Brown f-m SAND, trace silt (wet)	0.2		80	S-21	SS	12	11	34	SS 80'-82' Drilled to 85' Brown wash
	81					15						
	82					19						
	83					20						
	84											
	85											
		Class 3b	Brown f-c SAND, trace silt (wet)	0.0		86	S-22	SS	7	16	20	SS 85'-87' Advanced 3" casing to 90' Rig chattering from 87'-90' Drilled to 90'
	87					13						
	88					7						
	89					10						
	90											
	91											
		Class 1a	Gray MICA SCHIST			90	C-1	NX CORE	REC=60"/60" =100%	RQD=54"/60" =90%		Started NX Rock core run C-1 at 90' at 12:45 PM  Light gray wash
	91					7:28						
	92					4:22						
	93					4:37						
	94					3:04						
95	4:10											
												Finished core run C-1 at 95' at 1:10 PM

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Project		Proposed 250 South Street Development		Project No.		009225510																
Location		New York, NY		Elevation and Datum		Approx. el 9 (MBPD)																
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)											
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)										
	-91.0	Class 1a	Gray MICA SCHIST			95	C-2	NX CORE	REC=60"/60" =100%	RQD=54"/60" =90%					<p>Started NX Rock core run C-2 at 95' at 1:26 PM</p> <p>Light gray wash</p>  <p>Finished core run C-2 at 100' at 1:46 PM</p> <p>Stopped work at 3:00 PM on 4/16/13</p> <p>Borehole backfilled with cuttings and patched with cement upon completion.</p>							
						3:49					96	3:23	97	3:11		98	3:52	99	3:36	100		
						101					102	103	104	105		106	107	108	109	110		
						111					112	113	114	115		116	117	118	119	120		
						End of Boring at 100' at 3:00 PM on 4/16/13.																

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 7 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 4/18/13		Date Finished 4/23/13	
Drilling Equipment DK525 Truck-Mounted Rig				Completion Depth 105 ft		Rock Depth 85 ft	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" Tricone Roller Bits				Number of Samples		Disturbed	
Casing Diameter (in) 3", 4" I.D. Steel Casing				Casing Depth (ft) 87		Undisturbed	
Casing Hammer Donut				Weight (lbs) 300		Drop (in) 30	
Sampler 2" O.D. Split Spoon				Drilling Foreman Eddie Cardona			
Sampler Hammer Safety				Weight (lbs) 140		Drop (in) 30	
				Inspecting Engineer Karinna Diaz			

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist B/6in	N-Value (Blows/ft)		
	+7.0					0							
	+6.7		4-INCH-THICK ASPHALT										Started drilling at 11:30 AM on 4/18/13.
			Tan f-c SAND, trace fine gravel (moist) [FILL]	0.0		1	S-1	SS	10	8	10		Drilled through 4-inch-thick asphalt.
			Reddish brown f-m SAND, trace silt, trace brick fragments (moist) [FILL]	0.0		2			2	2			SS 4"-2'4"
			Reddish brown f-c SAND, trace fine gravel, trace brick fragments, trace wood (moist) [FILL]	0.0		3	S-2	SS	5	10	17		SS 2'4"-4'4"
			Reddish brown f-c SAND, trace fine gravel, trace brick fragments, trace wood (moist) [FILL]	0.0		4			7	4			Drilled to 5'
			Reddish brown f-c SAND, trace fine gravel, trace brick fragments, trace wood (moist) [FILL]	0.0		5	S-3	SS	12	6			Brown wash
			Reddish brown f-c SAND, trace fine gravel, trace brick fragments (wet) [FILL]	0.0		6			10	100/5"	100/5"		Rig chattering from 4'-5'
			Reddish brown f-c SAND, trace fine gravel, trace brick fragments (wet) [FILL]	0.0		7	S-4	SS	10	8	16		SS 5'-6'5"
			Brown f-c SAND, trace f-c gravel, trace brick fragments (wet) [FILL]	0.0		8			6	6			Drilled to 7'
		Class 7	Dark gray f-m SAND, trace fine gravel, trace wood, trace brick fragments (wet) [FILL]	0.3		9	S-5	SS	6	6	8		Rig chattering from 6'-7'
			Brown f-c SAND, some fine gravel, trace silt, trace wood (wet) [FILL]	0.0		10			10	6			SS 7'-9'
				0.0		11	S-6	SS	24	8	18		Advanced 4" casing to 10'
				0.0		12			10	8			Drilled to 10'
				0.0		13	S-7	SS	5	2	8		Gray-brown wash
				0.0		14			9	3			Rig chattering from 14'-15'
				0.0		15			9	6			SS 10'-12'
				0.0		16			5	2			SS 12'-14'
				0.0		17			5	2			Advanced 4" casing to 15'
				0.0		18			5	2			Drilled to 15'
				0.0		19			5	2			Gray-brown wash
				0.0		20			5	2			Rig chattering from 14'-15'
				0.0		21			5	2			SS 15'-17'
				0.0		22			5	2			Drilled to 20'
				0.0		23			5	2			Dark gray wash

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Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, NY		Approx. el 7 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
[Cross-hatched pattern]	-23.0	Class 7	Dark gray and dark brown f-c SAND, some f-c gravel (wet) [FILL]	0.0		20	S-8	SS	5	9	18	SS 20'-22' Advanced 4" casing to 25' Drilled to 25' Gray wash Stopped work at 3:00 PM on 4/18/13 Resumed work at 7:00 AM on 4/19/13
						21			9			
						22			7			
						23						
						24						
						25			4			
						26			17	36		
[Dotted pattern]	-28.0	Class 6	Dark gray and brown SILT and f-m SAND, trace fine gravel (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		26	S-9	SS	14	19	SS 25'-27' Advanced casing to 30' Drilled to 30' Gray wash	
						27			23			
						28						
						29						
						30			10			
						31			3	5		
						32			2			
[Dotted pattern]	-33.0	Class 3b	Brown f-c SAND, trace silt (wet)	0.1		30	S-10	SS	14	3	SS 30'-32' Drilled to 35' Gray-brown wash	
						31			2			
						32			3			
						33						
						34						
						35			8			
						36			7	13		
[Dotted pattern]	-38.0	Class 3a	Brown f-c SAND, some f-c gravel, trace silt (wet)	0.0		36	S-11	SS	12	6	SS 35'-37' Drilled to 40' Gray-brown wash Water loss Rig chattering from 38'-40'	
						37			8			
						38						
						39						
						40			7			
						41			38	54		
						42			16			
43			11									
44												
45												


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Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, NY		Approx. el 7 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
	-43.0	Class 3a	Brown Silty f-c SAND, trace f-c gravel (wet)	0.0		45	S-13	SS	14	28	35	SS 45'-47' Drilled to 50' Brown wash
						46			16			
						47			19			
						48			18			
	-48.0	Class 3b	Brown Silty f-m SAND (wet)	0.0		50	S-14	SS	10	10	24	SS 50'-52' Drilled to 55' Brown wash
						51			13			
						52			11			
						53			10			
	-53.0	Class 3b	Brown f-m SAND, some silt (wet)	0.0		55	S-15	SS	10	10	29	SS 55'-57' Drilled to 60' Brown wash
						56			15			
						57			14			
						58			16			
	-58.0	Class 3b	Brown Silty fine SAND (wet)	0.0		60	S-16	SS	7	7	24	SS 60'-62' Drilled to 65' Brown wash
						61			11			
						62			13			
						63			14			
	-63.0	Class 3b	Brown f-c SAND, trace silt, trace f-c gravel (wet)	0.0		65	S-17	SS	12	16	30	SS 65'-67' Drilled to 70' Brown wash
						66			18			
						67			12			
						68			14			

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Project		Proposed 250 South Street Development		Project No.		009225510							
Location		New York, NY		Elevation and Datum		Approx. el 7 (MBPD)							
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)	
[Dotted Pattern]	-78.0	Class 3a	Brown f-c SAND, trace f-c gravel, trace silt (wet)	0.0		70							SS 70'-72' Drilled to 75' Brown wash
						71	S-18	SS	10	16	34		
						72				14			
						73				20			
						74				14			
						75							
						76	S-19	SS	12	20	31		
						77				15			
						78				16			
						79				17			
[Dotted Pattern]	-78.0	Class 3a	Brown f-c SAND, trace fine gravel, trace silt (wet)	0.0		80						SS 75'-77' Drilled to 80' Brown wash	
						81	S-20	SS	18	20	64		
						82				15			
						83				25			
						84				39			
						85				70			
						86							
						87							
						88							
						89							
[Wavy Pattern]	-88.0	Class 1d	Gray Weathered MICA SCHIST			90	S-21	SS	0	50/0"	50/0"	SS 80'-82' Drilled to 85' Brown wash Borehole collapsed at 82' Redrilled to 85' Brown wash Stopped work at 3:00 PM on 4/19/13 Resumed work at 7:00 AM on 4/22/13 Borehole collapsed at 70' Advanced 3" casing to 80' Drilled to 85' SS refusal at 85' Advanced 3" casing to 87' Drilled to 87'  Started NX Rock core run C-1 at 87' at 12:40 PM  Light gray wash REC=33"/36" =92% RQD=11"/36" =31%  Finished core run C-1 at 90' at 1:00 PM Sand clogged in casing Stopped work at 3:00 PM on 4/22/13 Resumed work at 7:00 AM on 4/23/13 Started NX Rock core run C-2 at 90' at 10:05 AM  Light gray wash  Finished core run C-2 at 95' at 10:45 AM	
						91							
						92							
						93							
						94							
						95							
						96							
						97							
						98							
						99							
100													

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Project		Proposed 250 South Street Development		Project No.		009225510																			
Location		New York, NY		Elevation and Datum		Approx. el 7 (MBPD)																			
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)														
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)													
	-93.0	Class 1a	Gray MICA SCHIST			95	C-3	NX CORE	REC=58"/60" =97%	RQD=52"/60" =87%					Started NX Rock core run C-3 at 95' at 11:00 AM  Light gray wash   Finished core run C-3 at 100' at 11:50 AM Sand clogged in casing Started NX Rock core run C-4 at 100' at 1:40 PM  Light gray wash										
						4:18					96	5:15	97	7:02		98	6:44	99	6:31	100					
						5:47					101	6:32	102	6:55		103	7:13	104	5:17	105					
						106					107	108	109	110		111	112	113	114	115	116	117	118	119	120
											End of Boring at 105' at 3:00 PM on 4/23/13								Finished core run C-4 at 105' at 2:25 PM Borehole backfilled with cuttings and patched with cement upon completion.						



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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 10 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 4/17/13		Date Finished 4/19/13	
Drilling Equipment AD II Truck-Mounted Rig				Completion Depth 96 ft		Rock Depth 87 ft	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" Tricone Roller Bits				Number of Samples		Disturbed	Undisturbed
Casing Diameter (in) 3", 4" I.D. Steel Casing				Casing Depth (ft) 87		Water Level (ft.) First 10	Completion 24 HR. -
Casing Hammer Donut		Weight (lbs) 300	Drop (in) 30	Drilling Foreman Jim Wilson			
Sampler 2" O.D. Split Spoon				Inspecting Engineer Karinna Diaz			
Sampler Hammer Safety		Weight (lbs) 140	Drop (in) 30				

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist Bl/ft	N-Value (Blows/ft)		
	+10.0		3-INCH-THICK ASPHALT			0							
	+9.8					1	S-1	SS	8	13	20		Started drilling at 8:00 AM on 4/17/13.
			Brown f-c SAND, trace f-c gravel, trace brick fragments, trace silt (moist) [FILL]	0.0		2				7			Drilled through 3-inch-thick asphalt.
						3	S-2	SS	8	5			SS 3"-2'3"
			Brown f-c SAND, trace silt, trace fine gravel, trace brick fragments (moist) [FILL]	0.0		4				5			SS 2'3"-4'3"
		Class 7				5				14	19		Advanced 4" casing to 5'
			Brown f-m SAND, trace f-c gravel, trace brick fragments (moist) [FILL]	0.0		6	S-3	SS	4	5			Drilled to 5'
						7				14			Brown wash
			Brown f-m SAND, trace silt, trace brick fragments (moist) [FILL]	0.1		8	S-4	SS	12	2			SS 5'-7'
						9				3			
						10				3			
			Brown f-m SAND, trace silt (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.2		11	S-5	SS	12	2			SS 7'-9'
						12				3			Drilled to 10'
			Brown f-c SAND, trace fine gravel (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.1		13	S-6	SS	12	2			Brown wash
						14				3			
		Class 6				15				3			
			Brown f-c SAND, trace silt, trace fine gravel (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.3		16	S-7	SS	10	2			SS 10'-12'
						17				3			SS 12'-14'
						18				3			Drilled to 15'
						19				3			Brown wash
						20				3			
						21				2			SS 15'-17'
						22				2			Drilled to 20'
						23				2			Brown wash



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Project		Proposed 250 South Street Development		Project No.		009225510						
Location		New York, NY		Elevation and Datum		Approx. el 10 (MBPD)						
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
[Dotted Pattern]	-70.0	Class 3b	Brown f-c SAND, trace f-c gravel, trace silt (wet)	0.0		70	S-18	SS	11	15	26	SS 70'-72' Drilled to 75' Brown wash
						71						
						72						
						73						
						74						
						75						
						76						
						77						
						78						
						79						
[Dotted Pattern]	-73.0	Class 3a	Brown Silty fine SAND, some clay (wet)	0.0		80	S-20	SS	16	14	26	SS 75'-77' Drilled to 80' Brown wash
						81						
						82						
						83						
[Dotted Pattern]	-77.0	Class 3a	Brown f-c SAND, trace silt, trace f-c gravel (wet)	0.0		84	S-21	SS	8	18	100/5"	SS 80'-82' Drilled to 85' Brown wash
						85						
						86						
						87						
[Diagonal Pattern]	-81.0	Class 1b	Gray MICA SCHIST			87	C-1	NX CORE	REC=43"/48" =90%	RQD=38"/48" =79%	100/5"	SS 85'-85'11" Drilled to 87' Roller bit refusal at 87' Advanced casing to 87'
						88						
						89						
						90						
						91						
[Diagonal Pattern]	-81.0	Class 1a	Gray MICA SCHIST			91	C-2	NX CORE	REC=56"/60" =93%	RQD=51"/60" =85%		Started NX Rock core run C-1 at 87' at 1:35 PM  Light gray wash  Finished core run C-1 at 91' at 2:00 PM Rig pump broke at 2:30 PM on 4/18/13 Stopped work at 3:00 PM on 4/18/13 Replaced pump at 7:00 AM on 4/19/13 Resumed work at 8:30 AM on 4/19/13 Started NX Rock core run C-2 at 91' at 9:11 AM
						92						
						93						
						94						
						95						





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Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, NY		Approx. el 10 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
[Cross-hatched pattern]	-15.0	Class 7	Brown f-c SAND, trace silt (wet) [FILL]	0.0		20	S-8	SS	10	12	22	SS 20'-22' Drilled to 25' Brown wash
						21			10	12		
						22			10	10		
						23			10	11		
[Dotted pattern]	-25.0	Class 6	Brown f-c SAND, trace fine gravel, trace silt (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		25	S-9	SS	19	5	9	SS 25'-27' Stopped work at 3:00 PM on 4/11/13 Resumed work at 7:00 AM on 4/15/13 Drilled to 30' Brown wash
						26			19	3		
						27			19	6		
						28			19	5		
						29			19			
						30			19			
						31			19			
[Dotted pattern]	-25.0	Class 3b	Dark gray Silty f-m SAND (wet)	0.0		31	S-10	SS	16	5	8	SS 30'-32' Drilled to 35' Brown wash
						32			16	4		
						33			16	4		
						34			16	5		
						35			16			
[Dotted pattern]	-30.0	Class 3a	Light brown f-m SAND, trace silt (wet)	0.2		35	S-11	SS	16	10	10	SS 35'-37' Drilled to 40' Brown wash
						36			16	3		
						37			16	7		
						38			16	14		
						39			16			
						40			16			
						41			16			
						42			16			
[Dotted pattern]	-35.0	Class 3a	Light brown f-m SAND, trace silt (wet)	0.2		40	S-12	SS	18	13	33	SS 40'-42' Drilled to 45' Brown wash
						41			18	16		
						42			18	17		
						43			18	20		

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Project		Project No.											
Proposed 250 South Street Development		009225510											
Location		Elevation and Datum											
New York, NY		Approx. el 10 (MBPD)											
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
[Dotted Pattern]	-70.0	Class 3b	Brown f-c SAND, trace silt (wet)	0.6		70							SS 70'-72' Drilled to 75' Brown wash
						71	S-18	SS	6	10	24		
						72				11			
						73				13			
						74				15			
						75				10			
						76	S-19	SS	0	6	14		
						77				8			
						78				9			
						79							
[Dotted Pattern]	-75.0	Class 3b	Grayish brown Silty f-m SAND, some f-c gravel (wet)	0.2		80						SS 80'-82' Drilled to 85' Brown wash	
						81	S-20	SS	10	19	24		
						82				12			
						83				12			
[Dotted Pattern]	-75.0	Class 3a	Grayish brown Silty f-m SAND, some clay (wet)	0.0		85						SS 85'-85'11" Advanced 3" casing to 50' Drilled to 86' Rig pump broke at 12:30 PM on 4/15/13 Stopped work at 1:00 PM at 86' on 4/15/13 Resumed work at 7:00 AM on 4/16/13	
						86	S-21	SS	9	17	100/5"		
[Wavy Pattern]	-78.0	Class 1b	Gray MICA SCHIST			88						Advanced 3" casing to 88' Drilled to 88' Started NX Rock core run C-1 at 88' at 10:30 AM  Light gray wash	
						89							
						90	C-1	NX CORE					
						91							
						92							
						93							
						94	C-2	NX CORE					
						95							

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Project		Project No.																									
Proposed 250 South Street Development		009225510																									
Location		Elevation and Datum																									
New York, NY		Approx. el 10 (MBPD)																									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks <small>(Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)</small>																
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)															
	-88.0	Class 1b				95	C-2	NX CORE	REC=60"/60" = 100%	RQD=41"/60" = 68%					Finished core run C-2 at 98' at 11:42 AM  Borehole backfilled with cuttings and patched with cement upon completion.												
						4:25					96	4:02	97	4:18		98	99	100	101	102	103	104	105	106	107	108	109
			End of Boring at 98' at 12:30 PM on 4/16/13.																								

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 12 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 4/24/13		Date Finished 4/26/13	
Drilling Equipment D-50 and Acker Soil Max Truck-Mounted Rigs				Completion Depth 106 ft		Rock Depth 95 ft	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" Tricone Roller Bits				Number of Samples Disturbed 23		Undisturbed -	
Casing Diameter (in) 3", 4" I.D. Steel Casing				Casing Depth (ft) 96		Core 2	
Casing Hammer Donut		Weight (lbs) 300		Drop (in) 30		Water Level (ft.) First 10	
Casing Hammer Safety		Weight (lbs) 140		Drop (in) 30		Completion -	
Sampler 2" O.D. Split Spoon				Drilling Foreman Eddie Cardona			
Sampler Hammer				Inspecting Engineer Karinna Diaz			

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist B/ft	N-Value (Blows/ft)		
	+12.0				0							
	+11.8		3-INCH-THICK ASPHALT		0.0	S-1	SS	8	7			Started drilling at 8:00 AM on 4/24/13. Drilled through 3-inch-thick asphalt. SS 3"-2'3"
			Brown f-c SAND, trace f-c gravel, trace silt, trace brick fragments (moist) [FILL]		1							SS 2'3"-4'3"
			Light brown f-c GRAVEL, some f-c sand, trace silt, trace brick fragments (moist) [FILL]		2	S-2	SS	6	23			Drilled to 5' Brown wash
			Brown f-c GRAVEL, some f-c sand, trace brick fragments (moist) [FILL]		3							SS 5'-6'4"
			Brown f-c SAND, trace f-c gravel, trace brick fragments (moist) [FILL]		4	S-3	SS	5	100/4"			Drilled to 7' Rig chattering from 6'-7'
			Brown f-c SAND, trace f-c gravel, trace brick fragments (moist) [FILL]		5							SS 7'-9"
			Brown f-c SAND, trace f-c gravel, trace brick fragments (moist) [FILL]		6	S-4	SS	5	51			Advanced 4" casing to 10' Drilled to 10' Rig chattering from 8'-10' Reddish brown wash
		Class 7	Brown f-c SAND, trace fine gravel, trace brick fragments (wet) [FILL]		7							SS 10'-12'
			Brown f-c SAND, some fine gravel, trace brick fragments (wet) [FILL]		8	S-5	SS	4	5			SS 12'-14"
			Brown f-c SAND, trace fine gravel, trace brick fragments (wet) [FILL]		9							Advanced 4" casing to 15' Drilled to 15' Brown wash
			Brown f-c SAND, trace fine gravel (wet) [FILL]		10	S-6	SS	8	7			SS 15'-17"
					11							Drilled to 20' Brown wash
					12	S-7	SS	10	7			
					13							
					14							
					15							
					16							
					17							
					18							
					19							
					20							

Project		Project No.									
Proposed 250 South Street Development		009225510									
Location		Elevation and Datum									
New York, NY		Approx. el 12 (MBPD)									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
[Cross-hatch pattern]	-11.5	Class 7	Brownish gray f-c SAND, trace fine gravel (wet) [FILL]	0.0	20	S-8	SS	8	4	7	SS 20'-22' Drilled to 25' Brown wash
					21				4		
					22				3		
[Diagonal lines pattern]	-16.5	Class 4b	Grayish brown Sandy CLAY, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0	23						SS 25'-27' Drilled to 30' Brown wash
					24						
					25	S-9	SS	20	2	5	
					26				7	12	
					27				6		
					28						
[Dotted pattern]	-16.5	Class 3b	Brown f-m SAND, some f-c gravel (wet)	0.0	29						SS 30'-32' Drilled to 35' Brown wash
					30						
					31	S-10	SS	10	9	8	
					32				7	15	
					33				7		
					34						
					35						
[Dotted pattern]	-16.5	Class 3b	Brown f-c SAND, trace silt (wet)	0.0	36	S-11	SS	12	5	6	SS 35'-37' Drilled to 40' Brown wash
					37				7	13	
					38				6		
					39						
					40						
					41	S-12	SS	24	4	8	
					42				9	17	
[Dotted pattern]	-16.5	Class 3b	Brown f-c SAND, some fine gravel (wet)	0.0	43					SS 40'-42' Drilled to 45' Brown wash	
					44						
					45						

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Project		Project No.									
Proposed 250 South Street Development		009225510									
Location		Elevation and Datum									
New York, NY		Approx. el 12 (MBPD)									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
		Class 3b	Brown f-c SAND, trace silt (wet)	0.0	45	S-13	SS	12	7 8 6 8	14	SS 45'-47' Drilled to 50' Brown wash
			Brown f-c SAND, trace silt (wet)	0.0	50	S-14	SS	11	14 12 13 10	25	SS 50'-52' Drilled to 55' Brown wash
			Brown f-c SAND, trace silt (wet)	0.0	55	S-15	SS	10	9 8 11 10	19	SS 55'-57' Drilled to 60' Brown wash
			Brown f-m SAND (wet)	0.0	60	S-16	SS	11	17 11 10 11	21	SS 60'-62' Drilled to 65' Brown wash
			Brown f-c SAND, trace silt (wet)	0.0	65	S-17	SS	10	13 13 13	26	SS 65'-67' Drilled to 70' Brown wash

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Project		Project No.									
Proposed 250 South Street Development		009225510									
Location		Elevation and Datum									
New York, NY		Approx. el 12 (MBPD)									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
[Dotted Pattern]	-73.0	Class 3b	Brown f-m SAND, trace coarse sand, trace silt (wet)	0.0	70				18		SS 70'-72' Stopped work at 3:00 PM on 4/24/13 Removed D-50 Rig from site for service on 4/24/13 Returned to site with Acker Soil Max Rig on 4/25/13 at 9:00 AM Resumed work at 9:30 AM on 4/25/13 Drilled to 75' Brown wash  SS 75'-77' Drilled to 80' Brown wash  SS 80'-82' Drilled to 85' Brown wash  SS 85'-87' Drilled to 90' Brown wash Water loss  SS 90'-92' Drilled to 95' Brown gray wash Water loss
				71	S-18	SS	8		16	30	
				72					14		
				73					15		
				74							
				75					8		
				76	S-19	SS	24		11	29	
				77					18		
				78					16		
				79							
[Dotted Pattern]	-73.0	Class 3a	Brown f-c SAND (wet)	0.0	80			9			
				81	S-20	SS	13		13	29	
				82					16		
				83					17		
				84							
				85					44		
				86	S-21	SS	20		25	49	
				87					24		
				88					29		
				89							
[Dotted Pattern]	-83.0	Class 3a	Brown f-c SAND, trace silt (wet)	0.0	90			19			
				91	S-22	SS	14		31	78	
				92					47		
				93					55		
				94							
				95							

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Project		Proposed 250 South Street Development		Project No.		009225510						
Location		New York, NY		Elevation and Datum		Approx. el 12 (MBPD)						
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)	
	-84.0	Class 1d	Gray ROCK FRAGMENTS, some fine sand (wet)	0.0	95	S-23	SS	3	100/5"	100/5"	SS 95'-95'5" Stopped work at 3:00 PM on 4/25/13	
			Gray MICA SCHIST		96						Resumed work at 7:00 AM on 4/26/13	
		Class 1b	Gray MICA SCHIST		97	C-1	NX CORE	REC=57"/60" =95%	RQD=36"/60" =60%		Light gray wash	
				98								
				99								
				100								
				101								
				102								
				103								
				104								
				105								
				106								
	-94.0		End of Boring at 106' at 11:30 AM on 4/26/2013		106	C-2	NX CORE	REC=60"/60" =100%	RQD=49"/60" =82%		Light gray wash	
				107								
				108								
				109								
				110								
				111								
				112								
				113								
				114								
				115								
				116								
				117								
				118								
				119								
				120								
											Finished core run C-1 at 101' at 9:25 AM Started NX Rock core run C-2 at 101' at 9:50 AM	
											Finished core run C-2 at 106' at 10:30 AM Borehole backfilled with cuttings and patched with cement upon completion.	

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 12 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 4/26/13		Date Finished 5/1/13	
Drilling Equipment Acker Soil Max Truck-Mounted Rig				Completion Depth 106 ft		Rock Depth 96 ft	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" Tricone Roller Bits				Number of Samples		Disturbed	
Casing Diameter (in) 3", 4" I.D. Steel Casing				Casing Depth (ft) 96		Undisturbed	
Casing Hammer Donut				Weight (lbs) 300		Drop (in) 30	
Sampler 2" O.D. Split Spoon				Water Level (ft.) First		Completion	
Sampler Hammer Safety				Weight (lbs) 140		Drop (in) 30	
				Drilling Foreman Eddie Cardona			
				Inspecting Engineer Karinna Diaz			

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist B/ft	N-Value (Blows/ft)		
	+12.0				0							
	+11.8		3-INCH-THICK-ASPHALT		0.0	S-1	SS	4	7	12	19	Started drilling at 12:00 PM on 4/26/13. Drilled through 3-inch-thick asphalt. SS 3"-2'3"
			Grayish brown f-c SAND, trace fine gravel, trace silt, trace brick fragments (moist) [FILL]		2.0					5		SS 2'3"-4'3"
			Light brown f-m SAND, trace f-c gravel, trace silt, trace brick fragments (moist) [FILL]		3.0	S-2	SS	13	10	17	24	Advanced 4" casing to 5' Drilled to 5' Brown wash
					4.0					7		
					5.0					3		SS 5'-7'
			Light brown f-m SAND, trace fine gravel, trace coarse sand, trace brick fragments (moist) [FILL]		6.0	S-3	SS	4	2	2	4	SS 7'-9'
					7.0					3		Advanced 4" casing to 10' Drilled to 10' Brown wash
			Brown f-m SAND, some f-c gravel, trace brick fragments (moist) [FILL]		8.0	S-4	SS	3	4	5	9	
		Class 7			9.0					3		SS 10'-12'
			Brown f-m SAND, trace coarse sand (moist) [FILL]		11.0	S-5	SS	13	5	5	9	SS 12'-14'
					12.0					4		Advanced 4" casing to 15' Drilled to 15' Brown wash
			Brown f-c SAND, trace fine gravel, trace silt (wet) [FILL]		13.0	S-6	SS	20	7	8	15	
					14.0					5		
					15.0					3		SS 15'-17'
			Brown f-m SAND, trace coarse sand, trace silt (wet) [FILL]		16.0	S-7	SS	11	4	4	8	Drilled to 20' Brown wash Difficult drilling at 18'
					17.0					4		
					18.0							
					19.0							
					20.0							

-6.0

Class 7



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Project		Proposed 250 South Street Development		Project No.		009225510						
Location		New York, NY		Elevation and Datum		Approx. el 12 (MBPD)						
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
	-12.0	Class 7	Dark brown WOOD (wet)	0.0	20							SS 20'-22' Drilled to 25' Gray brown wash Easy drilling at 24'
					21	S-8	SS	10	24	28	53	
					22				25	19		
					23							
					24							
					25							
					26	S-9	SS	12	9	13	22	
					27				9	7		
					28							
					29							
					30							
					31	S-10	SS	12	13	7	16	
32				9	6							
33												
34												
35												
36	S-11	SS	10	4	5	10						
37				5	5							
38												
39												
40												
41	S-12	SS	9	3	3	8						
42				5	3							
43												
44												
45												
	-28.0	Class 3b	Grayish brown f-c SAND, trace fine gravel, trace silt (wet)	0.0	25							SS 25'-27' Advanced 4" casing to 30' Stopped work at 3:00 PM on 4/26/13 No work on 4/29/13 due to rain Resumed work at 7:00 AM on 4/30/13 Drilled to 30' Brown wash
					26							
					27							
					28							
					29							
					30							
					31							
					32							
					33							
					34							
					35							
					36							
37												
38												
39												
40												
41												
42												
43												
44												
45												
	-33.0	Class 6	Brown f-c SAND, trace silt (wet)	0.9	40							SS 40'-42' Drilled to 45' Brown wash
					41							
					42							
					43							
					44							
					45							



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Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, NY		Approx. el 12 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
			Brown f-c SAND, trace f-c gravel, trace silt (wet)	0.0	70	S-18	SS	10	13 24 25 34	49	SS 70'-72' Drilled to 75' Brown wash	
			Brown f-m SAND, trace silt (wet)	0.0	71	S-19	SS	22	12 24 24 31	48	SS 75'-77' Drilled to 80' Brown wash	
			Brown f-m SAND, trace silt, trace clay (wet)	0.0	72							
						73						
						74						
						75						
						76						
						77						
						78						
						79						
						80						
						81	S-20	SS	12	11 16 15 14	31	SS 80'-82' Drilled to 85' Brown wash
			Class 3a			82						
						83						
						84						
						85						
						86	S-21	SS	11	19 19 20 18	39	SS 85'-87' Drilled to 90' Brown wash
						87						
						88						
						89						
						90						
						91	S-22	SS	8	25 46 16 50/3"	62	SS 90'-91'9" Drilled to 95' Brown gray wash Advanced 3" casing to 96' Drilled to 96' Roller bit refusal Stopped work at 3:00 PM on 4/30/13 Resumed work at 7:00 AM on 5/1/13
					92							
					93							
					94							
					95							

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Project		Proposed 250 South Street Development		Project No.		009225510									
Location		New York, NY		Elevation and Datum		Approx. el 12 (MBPD)									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)					
						Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)				
	-84.0	Class 3a			95										
	-84.0	Class 1b	Gray MICA SCHIST		96	C-1 NX CORE	REC=52"/60" =87%	RQD=46"/60" =77%					Started NX Rock core run C-1 at 96' at 8:00 AM  Light gray wash		
	-84.0	Class 1b	Gray MICA SCHIST		97										
	-84.0	Class 1b	Gray MICA SCHIST		98										
	-84.0	Class 1b	Gray MICA SCHIST		99										
	-89.0	Class 1a	Gray MICA SCHIST		100										
	-89.0	Class 1a	Gray MICA SCHIST		101	C-2 NX CORE	REC=57"/60" =95%	RQD=57"/60" =95%					Finished core run C-1 at 101' at 8:40 AM Started NX Rock core run C-2 at 101' at 9:00 AM  Light gray wash		
	-89.0	Class 1a	Gray MICA SCHIST		102										
	-89.0	Class 1a	Gray MICA SCHIST		103										
	-89.0	Class 1a	Gray MICA SCHIST		104										
	-89.0	Class 1a	Gray MICA SCHIST		105										
	-89.0	Class 1a	Gray MICA SCHIST		106										
	-94.0		End of Boring at 106' at 10:00 AM on 5/1/13.		107								Finished core run C-2 at 106' at 9:30 AM  Borehole backfilled with cuttings and patched with cement upon completion.		
	-94.0		End of Boring at 106' at 10:00 AM on 5/1/13.		108										
	-94.0		End of Boring at 106' at 10:00 AM on 5/1/13.		109										
	-94.0		End of Boring at 106' at 10:00 AM on 5/1/13.		110										
	-94.0		End of Boring at 106' at 10:00 AM on 5/1/13.		111										

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Project Proposed 250 South Street Development				Project No. 009225510				
Location New York, NY				Elevation and Datum Approx. el 12 (MBPD)				
Drilling Company Warren George, Inc.				Date Started 4/26/13		Date Finished 4/30/13		
Drilling Equipment AD II Truck-Mounted Rig				Completion Depth 105 ft		Rock Depth 95 ft		
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" Tricone Roller Bits				Number of Samples		Disturbed	Undisturbed	Core
Casing Diameter (in) 3", 4" I.D. Steel Casing				Casing Depth (ft) 95		Water Level (ft.) First	Completion	24 HR.
Casing Hammer Donut		Weight (lbs) 300	Drop (in) 30	Drilling Foreman Jim Wilson				
Sampler 2" O.D. Split Spoon				Inspecting Engineer Karinna Diaz				
Sampler Hammer Safety		Weight (lbs) 140	Drop (in) 30					

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist Bl/6in	N-Value (Blows/ft)		
	+12.0				0							
	+11.6		5-INCH-THICK ASPHALT		0							Started drilling at 8:00 AM Drilled through 5-inch-thick asphalt to 1'. SS 1'-3' Odor detected
			Brown fine SAND, trace clay, trace silt, trace fine gravel (moist) [FILL]	25.6	2	S-1	SS	16	31	55		56
			Dark brown f-m SAND, some f-c gravel, trace silt, trace brick fragments (moist) [FILL]	0.0	3	S-2	SS	8	25	50/3"		50/3"
			Brown f-m SAND, trace f-c gravel, trace brick fragments (moist) [FILL]	0.0	6	S-3	SS	5	11	13		22
			Brown f-c SAND, trace clay, trace brick fragments (moist) [FILL]	1.7	8	S-4	SS	10	6	8		14
		Class 7	Brown f-m SAND, trace fine gravel, trace brick fragments (wet) [FILL]	0.0	11	S-5	SS	8	4	4		8
			Reddish brown f-m SAND and BRICK FRAGMENTS (wet) [FILL]	0.2	12	S-6	SS	3	4	50/3"		50/3"
			Grayish brown f-c SAND, trace fine gravel, trace mica flakes, trace brick fragments (wet) [FILL]	0.0	16	S-7	SS	5	4	9		15

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Project		Project No.									
Proposed 250 South Street Development		009225510									
Location		Elevation and Datum									
New York, NY		Approx. el 12 (MBPD)									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
[Cross-hatched pattern]	-11.5	Class 7	Brown f-c SAND, trace silt, trace brick fragments, trace wood (wet) [FILL]	0.0	20	S-8	SS	4	5	19	SS 20'-22' Advanced 4" casing to 25' Drilled to 25' Gray brown wash
					21				2		
					22				17		
					23				26		
					24						
[Diagonal hatched pattern]	-16.5	Class 4c	Gray Sandy CLAY, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0	25	S-9	SS	6	10	SS 25'-27' Advanced 4" casing to 30' Drilled to 30' Water loss	
					26				5		
					27				3		
					28				8		
					29						
[Dotted pattern]	-23.0	Class 6	Gray f-c SAND, some fine gravel, trace silt (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0	30	S-10	SS	4	4	SS 30'-32' Advanced 4" casing to 35' Stopped work at 3:00 PM on 4/26/13 Resumed work at 7:00 AM on 4/29/13 Drilled to 35' Gray brown wash	
					31				4		
					32				5		
					33						
					34						
[Dotted pattern]	-28.0	Class 3a	Brown f-m SAND, trace coarse sand, trace fine gravel, trace silt (wet)	0.0	35	S-11	SS	6	8	SS 35'-37' Advanced 4" casing to 40' Drilled to 40' Brown wash	
					36				31		
					37				15		
					38				10		
					39						
[Dotted pattern]	-33.0	Class 3b	Brown f-c SAND, trace fine gravel, trace silt (wet)	0.0	40	S-12	SS	10	9	SS 40'-42' Drilled to 45' Brown wash	
					41				7		
					42				12		
					43				13		
					44						
				45							

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Project		Project No.																							
Proposed 250 South Street Development		009225510																							
Location		Elevation and Datum																							
New York, NY		Approx. el 12 (MBPD)																							
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)															
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)														
	-38.0	Class 3a	Brown f-c SAND, trace f-c gravel (wet)	0.1	45	S-13	SS	3	17	31	SS 45'-47' Drilled to 50' Brown wash														
												46	13												
												47	18												
												48	17												
													-43.0	Class 3b	Brown Gravelly f-c SAND (wet)	1.1	50	S-14	SS	2	18	28	SS 50'-52' Drilled to 55' Brown wash		
																								51	14
																								52	12
																								53	7
													-43.0	Class 3b	Brown f-c SAND, trace fine gravel, trace mica flakes (wet)	0.1	55	S-15	SS	11	12	12	SS 55'-57' Drilled to 60' Brown wash		
																								56	6
57	6																								
58	7																								
	-43.0	Class 3b	Brown f-c SAND (wet)	0.0	60	S-16	SS	13	13	22	SS 60'-62' Drilled to 65' Brown wash														
																								61	9
												62	10												
												63													
												64													
	-43.0	Class 3b	Light brown f-c SAND, trace f-c gravel (wet)	0.0	65	S-17	SS	12	33	25	SS 65'-67' Drilled to 70' Brown wash														
												66	15												
												67	10												
												68	8												
					69																				
					70																				

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Project		Proposed 250 South Street Development		Project No.		009225510						
Location		New York, NY		Elevation and Datum		Approx. el 12 (MBPD)						
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
	-70.0	Class 3b	Brown f-c SAND (wet)	0.0	70						SS 70'-72' Drilled to 75' Brown wash	
					71	S-18	SS	12	10	21		
					72				10			
					73							
					74							
					75				9			
					76	S-19	SS	22	10	21		
					77				11			
					78				11			
					79							
	-70.0	Class 3b	Brown f-c SAND, trace silt (wet)	0.0	80						SS 80'-82' Drilled to 82' Bit refusal at 82' Brown wash Advanced 3" casing to 82'	
					81	S-20	SS	14	14	28		
					82				14			
	-71.0	Class 2a	Gray COBBLE		82	C-1	NX CORE	67%			Started NX Rock core run C-1 at 82' at 8:30 AM REC=8"/12" =67% RQD=N/A Brown wash Finished core run C-1 at 83' at 8:35 AM Drilled to 85' SS refusal at 85' Drilled to 90' Brown wash	
					83							
	-71.0	Class 3a	No Recovery		84						SS 90'-92' Advanced 3" casing to 95' Drilled to 95' Bit refusal at 95'	
					85	S-21	SS	0	50/0"	50/0"		
					86							
					87							
					88							
					89							
					90				6			
					91	S-22	SS	16	12	60		
					92				48			
					93				16			
	-83.0	Class 3a	Grayish brown f-m SAND, trace fine gravel, trace clay (wet)	0.0	94							
					95							



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Project		Proposed 250 South Street Development		Project No.		009225510																	
Location		New York, NY		Elevation and Datum		Approx. el 12 (MBPD)																	
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)													
						Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)												
	-93.0	Class 1b	Gray MICA SCHIST		95	C-2	NX CORE	REC=39"/60" =65%	RQD=33"/60" =55%					Started NX Rock core run C-2 at 95' at 10:40 AM  Light gray wash  Finished core run C-2 at 100' at 11:15 AM Started NX Rock core run C-3 at 100' at 12:50 PM  Light gray wash									
			Gray MICA SCHIST		96					97	98	99	100		101	102	103	104					
			End of Boring at 105' at 3:00 PM on 4/30/13		105	C-3	NX CORE	REC=53"/60" =88%	RQD=39"/60" =65%					Finished core run C-3 at 105' at 1:30 PM  Borehole backfilled with cuttings and patched with cement upon completion.									
					106					107	108	109	110		111	112	113	114	115	116	117	118	119

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 12 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 5/1/13		Date Finished 5/1/13	
Drilling Equipment AD II Truck-Mounted Rig				Completion Depth 6 ft		Rock Depth -	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" Tricone Roller Bits				Number of Samples		Disturbed 3	Undisturbed -
Casing Diameter (in) 3", 4" I.D. Steel Casing		Casing Depth (ft) 5		Water Level (ft.)		First ▽	Completion ▽
Casing Hammer Donut		Weight (lbs) 300	Drop (in) 30	Drilling Foreman Jim Wilson			
Sampler 2" O.D. Split Spoon				Inspecting Engineer Karinna Diaz			
Sampler Hammer Safety		Weight (lbs) 140	Drop (in) 30				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
					Number	Type	Recov. (in)	Penetr. resist	BL/ft		N-Value (Blows/ft)
	+12.0			0							
	+11.6	5-INCH-THICK ASPHALT		0.0	S-1	SS	18			28	Started drilling at 8:00 AM Drilled through 5-inch-thick asphalt. SS 5"-2'5"
		Brown f-m SAND, trace silt (moist) [FILL]		1			18				SS 2'5"-4'5" Advanced 4" casing to 5' Drilled to 5' Brown wash
		Dark brown f-m SAND, trace coarse gravel, trace silt, trace brick fragments (moist) [FILL]		2	S-2	SS	20			82	
		No Recovery		3			21				
				4			45				
				5	S-3	SS	0	50/0"		50/0"	SS refusal at 5' Drilled to 6' Bit refusal at 6' Obstruction encountered at 6' Boring terminated and relocated. Borehole backfilled with cuttings and patched with cement upon completion.
	+6.0	End of Boring at 6' at 9:15 AM on 5/1/13.		6							
				7							
				8							
				9							
				10							
				11							
				12							
				13							
				14							
				15							
				16							
				17							
				18							
				19							
				20							



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Project		Proposed 250 South Street Development		Project No.		009225510					
Location		New York, NY		Elevation and Datum		Approx. el 12 (MBPD)					
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
[Cross-hatched pattern]	-19.0	Class 7	Brown f-c SAND, trace silt (wet) [FILL]	0.0	20				5		SS 20'-22' Advanced 4" casing to 25' Drilled to 25' Brown wash
					21	S-6	SS	14	3	6	
					22				3		
					23				3		
					24						
					25				4		
					26	S-7	SS	0	5	9	
					27				4		
					28				4		
					29						
[Diagonal hatched pattern]	-19.0	Class 4c	Grayish brown f-m SAND, trace fine gravel, trace clay (wet) [FILL]	0.0	30				5		SS 30'-32' Drilled to 30' Gray brown wash
					31	S-8A	SS	14	4	7	
					32	S-8B			3		
					33				2		
[Dotted pattern]	-23.0	Class 3a	Grayish brown Clayey SAND, some f-c gravel (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0	35				16		SS 35'-37' Drilled to 40' Brown wash
					36	S-9	SS	8	20	41	
					37				21		
					38				12		
					39						
					40						
					41	S-10	SS	14	6	12	
					42				5		
[Dotted pattern]	-28.0	Class 3b	Brown f-c SAND, some f-c gravel, trace silt, trace mica flakes (wet)	0.0	43						SS 40'-42' Drilled to 45' Brown wash
					44						
					45						

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Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, NY		Approx. el 12 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
[Material Symbol: Dotted pattern]		Class 3b	Brown f-c SAND, some f-c gravel, trace silt (wet)	0.0	45	S-11	SS	4	13	27	SS 45'-47' Drilled to 50' Brown wash	
			Brown f-c SAND, trace f-c gravel, trace silt, trace mica flakes (wet)	0.0	46	S-12	SS	12	16	23	SS 50'-52' Drilled to 55' Brown wash	
			Brown f-c SAND (wet)	0.0	47				11			
			Brown f-c SAND (wet)	0.0	48							
			Brown f-c SAND (wet)	0.0	49							
			Brown f-c SAND (wet)	0.0	50							
			Brown f-c SAND (wet)	0.0	51							
			Brown f-c SAND (wet)	0.0	52							
			Brown f-c SAND (wet)	0.0	53							
			Brown f-c SAND (wet)	0.0	54							
			Brown f-c SAND (wet)	0.0	55							
			Brown f-c SAND (wet)	0.0	56	S-13	SS	2	14	20	SS 55'-57' Drilled to 60' Brown wash	
			Brown f-c SAND (wet)	0.0	57				12			
			Brown f-c SAND (wet)	0.0	58				8			
			Brown f-c SAND (wet)	0.0	59				8			
	Brown f-m SAND, trace silt (wet)	0.0	60									
	Brown f-m SAND, trace silt (wet)	0.0	61	S-14	SS	10	13	26	SS 60'-62' Drilled to 65' Brown wash			
	Brown f-m SAND, trace silt (wet)	0.0	62				15					
	Brown f-m SAND, trace silt (wet)	0.0	63				11					
	Brown f-m SAND, trace silt (wet)	0.0	64				10					
	Brown f-m SAND, trace silt (wet)	0.0	65									
	Brown f-c SAND, trace silt (wet)	0.0	66	S-15	SS	12	14	27	SS 65'-67' Drilled to 70' Brown wash			
	Brown f-c SAND, trace silt (wet)	0.0	67				14					
	Brown f-c SAND, trace silt (wet)	0.0	68				14					
	Brown f-c SAND, trace silt (wet)	0.0	69				13					
	Brown f-c SAND, trace silt (wet)	0.0	70				14					



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Project		Proposed 250 South Street Development		Project No.		009225510										
Location		New York, NY		Elevation and Datum		Approx. el 12 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)						
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)					
		Class 3a	No Recovery		95	S-21	SS	0	50/0"	10 20 30 40	50/8"	SS refusal at 95' Drilled to 100' Bit refusal at 100' Advanced 3" casing to 100'				
	-88.0	Class 1c	Gray MICA SCHIST		100	C-1 NX CORE	NX CORE	REC=52"/60" =87%	RQD=22"/60" =37%			Started NX Rock core run C-1 at 100' at 1:00PM  Light gray wash				
					101											
					102											
					103											
	-93.0	Class 1b	Gray MICA SCHIST		105	C-2 NX CORE	NX CORE	REC=58"/60" =97%	RQD=48"/60" =80%			Finished core run C-1 at 105' at 12:15 PM Started NX Rock core run C-2 at 105' at 1:00PM.  Light gray wash				
					106											
					107											
					108											
			Gray MICA SCHIST		110	C-3 NX CORE	NX CORE	REC=37"/60" =62%	RQD=35"/60" =58%			Finished core run C-2 at 110' at 1:40 PM Started NX Rock core C-3 at 110' at 2:15PM.  Light gray wash				
					111											
					112											
					113											
	-103.0		End of Boring at 115' at 5:00 PM on 5/2/13		115							Finished core run C-3 at 115' at 2:55 PM  Upon completion of boring, installed 2-inch-diameter temporary observation well to a depth of 30'. The well was screened between 10' and 20'. A flush mount cover was installed.				
					116											
					117											
					118											
					119											
					120											

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 6 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 4/19/13		Date Finished 4/23/13	
Drilling Equipment DK575 Truck-Mounted Rig				Completion Depth 110 ft		Rock Depth 100 ft	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" Tricone Roller Bits				Number of Samples Disturbed 23		Undisturbed - Core 2	
Casing Diameter (in) 3", 4" I.D. Steel Casing		Casing Depth (ft) 100		Water Level (ft.) First 5		Completion - 24 HR. 8	
Casing Hammer Donut	Weight (lbs) 300	Drop (in) 30		Drilling Foreman Jim Wilson			
Sampler 2" O.D. Split Spoon				Inspecting Engineer Karinna Diaz			
Casing Hammer Safety	Weight (lbs) 140	Drop (in) 30					

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist B/ft		N-Value (Blows/ft)
	+6.0					0						
	+5.6		5-INCH-THICK ASPHALT									Started drilling at 12:00 PM on 4/19/13.
			Brown f-c SAND, trace f-c gravel (moist) [FILL]	0.0		1	S-1	SS	16	43	70	Drilled through 5-inch-thick asphalt.
			Brown f-c SAND, trace f-c gravel, trace clay, trace brick fragments (moist) [FILL]	0.0		2			27			SS 5"-2'5"
						3	S-2	SS	14	34		SS 2'5"-3'7"
						4			96	50/2"		Advanced 4" casing to 5'
						5						Drilled to 5'
						6	S-3	SS	2	27	44	Brown wash
						7			6			SS 5'-7'
						8	S-4	SS	3	11		SS 7'-9'
						9			16			Advanced 4" casing to 10'
						10			10			Drilled to 10'
						11	S-5	SS	6	4	6	Brown wash
						12			2			SS 10'-12'
						13	S-6	SS	5	5	10	SS 12'-14'
						14			5			Drilled to 15'
						15			5			Gray wash
						16	S-7	SS	6	5	14	SS 15'-17'
						17			7			Stopped work at 3:00 PM on 4/19/13
						18			7			Resumed work at 7:00 AM on 4/22/13
						19			3			Advanced 4" casing to 20'
						20						Drilled to 20'
												Brown wash

Class 7



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Project		Project No.													
Proposed 250 South Street Development		009225510													
Location		Elevation and Datum													
New York, NY		Approx. el 6 (MBPD)													
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)			
[Cross-hatched pattern]	-33.0	Class 7	Gray f-c SAND, trace fine gravel, trace brick fragments (wet) [FILL]	0.5		20	S-8	SS	8	3	2	4	SS 20'-22' Advanced 4" casing to 25' Drilled to 25' Brown wash		
						21				2					
						22					2				
						23									
						24									
						25						3			SS 25'-27' Drilled to 25' Gray wash
						26	0.2		S-9	SS	14	2	5		
						27					3				
						28									
						29									
						30						7			SS 30'-32' Drilled to 35' Dark gray wash
						31	0.0		S-10	SS	10	11	21		
			32						10						
			33						7						
			34												
			35												
			36	0.0		S-11	SS	14	6	5	11	SS 35'-37' Drilled to 40' Gray wash			
			37						6						
			38												
			39												
			40												
			41	6.2		S-12	SS	5	3	3	8	SS 40'-42' Drilled to 45' Gray brown wash			
			42						5						
			43												
			44												
			45												
												Inferred transition at 43' based on drilling observations.			

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Project		Project No.														
Proposed 250 South Street Development		009225510														
Location		Elevation and Datum														
New York, NY		Approx. el 6 (MBPD)														
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)					
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)				
	-59.0	Class 3b	Brown f-m SAND, trace silt (wet)	0.0		45							SS 45'-47' Drilled to 50' Gray brown wash			
						46	S-13	SS	14	5	6	13				
						47			7	7						
						Brown f-m SAND, trace coarse sand (wet)	0.0		50							SS 50'-52' Drilled to 55' Gray brown wash
									51	S-14	SS	10	9	13	27	
									52			14	14	15		
					Class 3b	Brown f-c SAND (wet)	0.2		55							SS 55'-57' Drilled to 60' Gray brown wash
									56	S-15	SS	4	8	10	28	
									57			18	23			
					Class 3b	Brown f-c SAND, trace silt (wet)	0.0		60							SS 60'-62' Drilled to 65' Gray brown wash
									61	S-16	SS	14	16	13	27	
									62			14	14	14		
					Class 3a	Brown f-c SAND, trace silt (wet)	0.1		65							SS 65'-67' Drilled to 70' Gray brown wash
66	S-17	SS							14	12	21	40				
67										19	14					
68																
						69										
						70										

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Project		Proposed 250 South Street Development		Project No.		009225510						
Location		New York, NY		Elevation and Datum		Approx. el 6 (MBPD)						
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
[Symbol: Dotted pattern]	-69.0	Class 3a	Brown f-m SAND, trace coarse sand (wet)	0.0		70	S-18	SS	12	11	36	SS 70'-72' Drilled to 75' Brown wash
						71				19		
						72				17		
						73				16		
[Symbol: Dotted pattern]	-79.0	Class 3b	Brown f-m SAND, trace silt (wet)	0.0		75	S-19	SS	12	7	26	SS 75'-77' Drilled to 80' Brown wash
						76				11		
						77				15		
						78				14		
[Symbol: Dotted pattern]	-79.0	Class 3b	Brown f-m SAND, trace silt (wet)	0.0		80	S-20	SS	12	WOR	27	SS 80'-82' Drilled to 85' Brown wash Stopped work at 3:00 PM on 4/22/13 Resumed work at 7:00 AM on 4/23/13
						81				10		
						82				17		
						83				16		
[Symbol: Dotted pattern]	-84.0	Class 5b	Brown Sandy SILT, trace clay (wet)	0.0		85	S-21	SS	10	9	18	SS 85'-87' Drilled to 90' Brown wash
						86				7		
						87				11		
						88				11		
[Symbol: Dotted pattern]	-89.0	Class 3b	Brown Silty fine SAND, trace f-c gravel (wet)	0.0		90	S-22	SS	16	12	19	SS 90'-92' Drilled to 95' Brown wash
						91				10		
						92				9		
						93				10		
						94						
						95						

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Project		Project No.													
Proposed 250 South Street Development		009225510													
Location		Elevation and Datum													
New York, NY		Approx. el 6 (MBPD)													
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)			
	-94.0	Class 3a	Grayish brown Silty fine SAND, some f-c gravel (wet)	0.0		95	S-23	SS	10	41					SS 95'-96'1" Drilled to 100' Brown wash
						96			50	50/1"				50/1"	
							97								
		Class 1b	Gray MICA SCHIST		7:29	100	C-1 NX CORE		REC=57"/60" =95%	RQD=41"/60" =68%					Roller bit refusal at 100' Advanced 3" casing to 100' Drilled to 100' Started NX Rock core run C-1 at 100' at 10:40 AM  Light gray wash  Finished core run C-1 at 105' at 11:30 AM Started NX Rock core run C-2 at 105' at 12:20 PM  Light gray wash
				6:47	101										
				7:50	102										
				6:04	103										
				5:28	104										
				5:47	105										
				7:28	106										
			Gray MICA SCHIST		6:49	107	C-2 NX CORE		REC=52"/60" =87%	RQD=39"/60" =65%					Finished core run C-2 at 110' at 1:00 PM  Upon completion of boring, installed 2-inch-diameter temporary observation well to a depth of 30'. The well was screened between 10' and 20'. A flush mount cover was installed.
		5:20		108											
				109											
		5:31		110											
	-104.0		End of Boring at 110' at 1:30 PM on 4/23/13			110									
						111									
						112									
						113									
						114									
						115									
						116									
						117									
						118									
						119									
						120									

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Log of Boring

**B-16**

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 13 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 5/30/13		Date Finished 6/11/13	
Drilling Equipment DK-525 Track Mounted Drill Rig				Completion Depth 110 ft		Rock Depth 101 ft	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" 5 7/8" Tricone Roller Bits/ 4" Thin Wall Core				Number of Samples Disturbed 22		Undisturbed 2	
Casing Diameter (in) 3", 4", and 5" ID Steel Casing		Casing Depth (ft) 92		Water Level (ft.) First 15		Completion 24 HR.	
Casing Hammer Donut	Weight (lbs) 300	Drop (in) 30		Drilling Foreman Gilbert Canelo			
Sampler 2" O.D. Split Spoon				Inspecting Engineer Ransom Hennefer			
Casing Hammer Donut	Weight (lbs) 140	Drop (in) 30					

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
							Number	Type	Recov. (in)	Penetr. resist BL/ft	N-Value (Blows/ft)					
	+13.0		4-INCH-THICK CONCRETE SLAB BASEMENT			0						Started day at 7:00 AM on 5/30/13 Set up rig at new location Drilled through first floor slab using 5 7/8" bit Cored through basement slab using 4" thin wall core Drilled to 13.5' using 4 7/8" bit Installed 5-Inch flange onto basement floor slab and connected it to the first floor level using 5" ID casing				
	+12.7						1									
							2									
							3									
							4									
							5									
							6									
							7									
							8									
							9									
							10									
							11									
	+1.3		2-INCH-THICK ASPHALT			12										
	+1.2		2-INCH-THICK CONCRETE SLAB			13										
	+1.0		No Recovery			14	S-1	SS	0	50/0"	50/0"	SS refusal at 13.5' Drilled to 15' using 3 7/8" bit Brown wash				
		Class 7	Brown f-c SAND, trace brick fragments, trace silt, trace fine gravel (wet) [FILL]	0.1		15							SS 15'-17'			
						16	S-2	SS	8	17	21	13	7	34		
						17				30	28	33	21			SS 17'-19'
						18	S-3	SS	20					61		En Core samples taken from 18.5'-19' Advanced 4" ID casing to 19' Drilled to 20' using 3 7/8" bit Light brown wash
			Brown f-c SAND, some fine gravel, trace silt, trace brick fragments (wet) [FILL]	0.0		19										
						20										

Project		Project No.												
Proposed 250 South Street Development		009225510												
Location		Elevation and Datum												
New York, NY		Approx. el 13 (MBPD)												
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)		
										10	20	30	40	
			Brown f-c SAND, trace brick fragments (wet) [FILL]	0.0		20				2				SS 20'-22'
						21	S-4	SS	3	5	7			
						22				3				
		Class 7	Grayish brown f-c SAND, trace fine gravel, trace pottery fragments (wet) [FILL]	0.3		23	S-5	SS	16	7	15			SS 22'-24' Drilled to 25' using 3 7/8" bit Light brown wash
						24				8				
						25				20				SS 25'-27'
			Grayish brown f-m SAND, trace brick fragments, trace silt (wet) [FILL]	0.0		26	S-6	SS	1	11	29			
	-14.0	Class 7	WOOD, some clay (wet) [FORMER RIVER BOTTOM DEPOSIT]			27	S-7A			2				
	-14.5	Class 6	Gray CLAY, some silt, trace fine sand, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		28	S-7B	SS	8	2	3			SS 27'-29' Advanced 4" ID casing to 27' Ended day at 2:45 PM on 5/30/13. Started day at 7:00 AM on 5/31/13. Drilled to 30' using 3 7/8" bit Gray wash
						29				1				
						30				2				SS 30'-32' Drilled to 35' using 3 7/8" bit Gray wash
		Class 4c	No Recovery (Inferred Clay layer based on drilling observations) [FORMER RIVER BOTTOM DEPOSIT]	0.0		31	S-8	SS	0	2	5			
						32				3				
						33				2				
			No Recovery (Inferred Clay layer based on drilling observations) [FORMER RIVER BOTTOM DEPOSIT]	0.0		34	ST-1	SH	0					Attempted Shelby Tube 33'-35' No recovery Tip of Shelby Tube observed to be damaged Advanced 4" ID casing to 35' Drilled to 35' using 3 7/8" bit Gray wash
	-22.0					35				19				SS 35'-37' Drilled to 38' using 3 7/8" bit Gray wash
		Class 4b	Gray CLAY, some silt, trace f-m sand (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		36	S-9	SS	12	5	11			
						37				6				
						38				5				
						39	ST-2	SH	16					Shelby Tube 38'-40' Large piece of wood removed from tip of Shelby tube
	-26.5		WOOD (horizontal grain) [FORMER RIVER BOTTOM DEPOSIT]	0.2		40	S-10	SS	6	45				SS 40'-40" Advanced 4" ID casing to 45' Drilled to 45' using 3 7/8" bit No water return
		Class 7	WOOD (horizontal grain), trace clay (wet) [FORMER RIVER BOTTOM DEPOSIT]			41				100/3"				
						42								
						43								
						44								
						45								

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Project		Proposed 250 South Street Development		Project No.		009225510								
Location		New York, NY		Elevation and Datum		Approx. el 13 (MBPD)								
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)		
		Class 7	WOOD (horizontal grain), trace clay (wet) [FORMER RIVER BOTTOM DEPOSIT]			45	S-11	SS	3	100/3"		100/3"	SS 45'-45'3" Advanced 4" I.D. casing to 50' Drilled to 50' using 3 7/8" bit No water return	
	-37.0		0.0	Reddish brown f-m SAND, trace silt (wet)			50	S-12	SS	16	9	34	34	SS 50'-52' Drilled to 55' using 3 7/8" bit No water return
						51	14							
						52	20							
		Class 3a	Light brown f-m SAND (wet)	0.0		53	S-13	SS	12	27	43	43	SS 55'-57' Ended day at 3:00PM on 5/31/13. Started day at 7:30AM on 6/3/13. Drilled to 60' using 3 7/8" bit No water return	
										54				12
										55				19
										56				24
										57				30
			Light brown f-m SAND (wet)	0.0		58	S-14	SS	10	23	79	79	SS 60'-62' Unable to advance 4" ID casing beyond 50' Drilled to 65' using 3 7/8" bit	
						59				38				
						60				41				
						61				46				
			Light brown f-m SAND (wet)	0.0		62	S-15	SS	18	24	75	75	SS 65'-67' Drilled to 70' using 3 7/8" bit Hole collapsed to 60' Advanced 3" ID casing to 62' Drilled to 70' using 2 7/8" bit Brown wash	
						63				32				
						64				43				
						65	41							
						66								
						67								
						68								
						69								
						70								

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Project		Project No.													
Proposed 250 South Street Development		009225510													
Location		Elevation and Datum													
New York, NY		Approx. el 13 (MBPD)													
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)			
	-85.5	Class 2a	Light brown f-c GRAVEL, trace f-m sand, (wet)	0.0		95	S-21	SS	1	27					SS 95'-96'9" Advanced 3" ID casing to 92' Ended day at 3:00 PM on 6/5/13. Started day at 7:00 AM on 6/6/13. Drilled to 100' using 2 7/8" bit Light brown wash Mica flakes in wash  Inferred transition at 98.5' based on drilling observations.
						96					61	171			
	-88.0	Class 3a	Light brown f-c SAND, some fine gravel, trace silt (wet)	0.0		97	S-22	SS	6	88					SS 100-100'9" Drilled to 101 using 2 7/8" bit Light brown wash Mica flakes in wash Rig chattering at 101' Roller bit refusal at 101' Advanced 3" ID casing to 92' Unable to advance casing beyond 92' Ended day at 3:00PM on 6/6/13. Started day at 7:00PM on 6/7/13. Removed all 3" ID casing. Drilled to 101' using 3 7/8" bit Light brown wash Advanced 3" ID casing to 70' Casing observed to have broken at 50' Ended day at 3:00 PM on 6/7/13. Started day at 7:00 AM on 6/10/13. Removed broken casing Advanced 3" ID casing to 95' Ended day at 3:00 PM on 6/10/13. Started day at 7:00 AM on 6/11/13. Advanced 3" ID casing to 100' Drilled to 101' using 2 3/8" bit Light brown wash Started NX Rock core run C-1 at 101' at 9:55 AM Light grayish brown wash Drill rods observed to rapidly advance 1/2" at 102.5' Finished core run C-1 at 106' at 10:15 AM Started NX Rock core run C-2 at 106' at 10:45 AM Light gray wash Core barrel jammed at 110' Finished core run C-2 at 110' at 11:15 AM Boring backfilled with drill cuttings and patched with cement upon completion
						98					110	100/3"	100/3"	100/3"	
	-97.0	Class 1b	Gray MICA SCHIST			101	C-1	NX CORE BARREL	REC=42"/60" =70%	RQD=32"/60" =53%					
						102					3:00	103	3:30	104	
	-97.0	Class 1b	Gray MICA SCHIST			107	C-2	NX CORE BARREL	REC=46"/48" =96%	RQD=25"/48" =52%					
						108					4:10	109	4:00	110	
			End of Boring at 110' at 11:15 AM on 6/11/13			111									
						112									
						113									
						114									
						115									
						116									
						117									
						118									
						119									
						120									

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 13 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 5/7/13		Date Finished 5/16/13	
Drilling Equipment DK-50 Track-Mounted Rig				Completion Depth 115 ft		Rock Depth 102 ft	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8", 5 7/8" Tricone Roller Bits and 4" Thin Wall Core				Number of Samples Disturbed 23		Undisturbed - Core 3	
Casing Diameter (in) 3", 4", 5" I.D. Steel Casing		Casing Depth (ft) 105		Water Level (ft.) First 13.5		Completion 24 HR. -	
Casing Hammer Donut	Weight (lbs) 300	Drop (in) 30		Drilling Foreman Gilbert Canelo			
Sampler 2" O.D. Split Spoon				Inspecting Engineer Ransom Hennefer			
Casing Hammer Donut	Weight (lbs) 140	Drop (in) 30					

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist BL/ft	N-Value (Blows/ft) 10 20 30 40		
	+13.0				0							Rig delivered on 5/7/13 Started drilling at 2:00 PM on 5/7/13 Drilled through the first floor slab using 5 7/8" bit Ended day at 3:15 PM on 5/7/13 Started day at 7:10 AM on 5/8/13  Drilled through basement slab to 13.5' using 4 7/8" bit Mounted 5" flange and sponge on basement slab, connected to first floor with 5" casing
	+12.7		4-INCH-THICK CONCRETE SLAB		1							
			BASEMENT		2							
					3							
					4							
					5							
					6							
					7							
					8							
					9							
					10							
	+1.3		2-INCH-THICK ASPHALT		11							
	+1.2		6-INCH-THICK CONCRETE SLAB		12							
	+0.7				13							
		Class 7	Brown f-c SAND, trace silt, trace fine gravel, trace brick fragments (wet) [FILL]	0.6	14	S-1	SS	4	88 100/3"		100/3"	SS 13'6"-14'3" Slight odor observed Drilled to 15' using 3 7/8" bit Dark gray wash SS 15'-17' Slight odor observed
					15							
			Light brown f-m SAND, trace f-c gravel, trace silt, trace coarse sand, trace brick fragments (wet) [FILL]	1.2	16	S-2	SS	12	47 58 65 78		123	
					17							
			Brown f-c SAND, trace fine gravel, trace brick fragments, trace silt (wet) [FILL]	0.7	18	S-3	SS	14	53 55 64 100/3"		119	
					19							
					20							SS 17'-18'9" Slight odor observed Ended day at 3:15 PM on 5/8/13 Started day at 7:00 AM on 5/9/13 Advanced 4" casing to 17' Drilled to 20' using 3 7/8" bit

Project		Project No.									
Proposed 250 South Street Development		009225510									
Location		Elevation and Datum									
New York, NY		Approx. el 13 (MBPD)									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
[Cross-hatch pattern]	-10.0	Class 7	Brown f-c SAND, some silt, some fine gravel (wet) [FILL]		20	S-4	SS	8	80		Gray wash SS 20'-22' Slight odor observed Hole collapsed Drilled to 22' using 3 7/8" bit Gray wash SS 22'-24'
			Brown f-m SAND, some fine gravel, trace silt (wet) [FILL]		21	S-5A	SS	12	45	79	
[Diagonal lines pattern]	-12.0	Class 4b	Gray CLAY, some silt, some wood (wet) [FORMER RIVER BOTTOM DEPOSIT]		22	S-5B	SS	5	20		q <sub>u</sub> =0.9 tsf s <sub>u</sub> =0.4 tsf Drilled to 25' using 3 7/8" bit Dark gray wash
			Light brown fine SAND, trace silt, trace clay (wet) [FORMER RIVER BOTTOM DEPOSIT]		23			10	15		
[Dotted pattern]	-17.0	Class 3b	Brown fine SAND, trace silt, trace m-c sand, trace clay (wet) [FORMER RIVER BOTTOM DEPOSIT]		24			3			SS 25'-27'  SS 27'-29' Advanced 4" casing to 25' Drilled to 30' using 3 7/8" bit Dark gray wash
			Gray CLAY, some silt, some plant fibers (wet) [FORMER RIVER BOTTOM DEPOSIT]		25	S-6	SS	12	25	20	
[Diagonal lines pattern]	-22.0	Class 4c	Gray CLAY, some silt, trace plant fiber, trace fine sand (wet) [FORMER RIVER BOTTOM DEPOSIT]		26			10			SS 30'-32' q <sub>u</sub> =0.75 tsf Drilled to 35' using 3 7/8" bit Dark gray wash
			Gray CLAY, some silt, trace fine sand (wet) [FORMER RIVER BOTTOM DEPOSIT]		27	S-7	SS	6	5	28	
[Diagonal lines pattern]	-27.0	Class 6	Gray CLAY, some silt, trace plant fibers, trace fine to coarse sand (wet) [FORMER RIVER BOTTOM DEPOSIT]		28			12			SS 35'-37' q <sub>u</sub> =0.3 tsf s <sub>u</sub> =0.15 tsf  SS 37'-39' Drilled to 40' using 3 7/8" bit Dark gray wash
			Gray CLAY, some silt, trace fine sand (wet) [FORMER RIVER BOTTOM DEPOSIT]		29	S-8A	SS	20	2	4	
[Diagonal lines pattern]	-32.0	Class 4b	Gray CLAY, some silt, trace fine sand, trace plant fibers (wet) [FORMER RIVER BOTTOM DEPOSIT]		30	S-8B	SS	4	2		SS 40'-42' Drilled to 45' using 3 7/8" bit Dark gray wash
					31			2	2	9	
					32			2			
					33			2			
					34			2			
					35			2			
					36	S-9	SS	18	WOH		
					37			WOH			
					38	S-10	SS	1	WOH		
					39			WOH			
					40			WOH			
					41	S-11	SS	3	2		
					42			7			
					43			11			
					44						
					45						

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Project		Project No.												
Proposed 250 South Street Development		009225510												
Location		Elevation and Datum												
New York, NY		Approx. el 13 (MBPD)												
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)			
		Class 3b	Brown f-m SAND, trace clay (wet)		45					13		SS 45'-47' Drilled to 50' using 3 7/8" bit Dark gray wash		
			0.0	46	S-12	SS	8			8	18			
				47						10				
							48							
							49							
							50							SS 50'-52' Drilled to 55' using 3 7/8" bit Dark gray wash
			0.0	51	S-13	SS	5			29	28			
				52						15				
							53							
							54							
							55							SS 55'-57' Coarse gravel stuck in tip of spoon; no additional recovery Drilled to 60' using 3 7/8" bit Dark gray wash
			0.0	56	S-14	SS	<1			27	29			
				57						13				
					Limited Recovery (Sand inferred from drilling observations)		58							
							59							
					60							SS 60'-62' Ended day at 3:05 PM on 5/9/13 Started day at 7:15 AM on 5/10/13 Drilled to 65' using 3 7/8" bit Gray wash		
	0.0	61	S-15	SS	10			15	26					
		62						11						
			Brown f-m SAND (wet)		63									
					64									
					65							SS 65'-67' Drilled to 70' using 3 7/8" bit Gray wash		
	-52.0	66	S-16	SS	4			20	40					
		67						20						
			Brown f-c SAND, trace fine gravel, trace silt (wet)		68									
					69									
					70									

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Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, NY		Approx. el 13 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
			Light brown f-c SAND, trace fine gravel, trace silt (wet)	0.0	70	S-17	SS	4	20	46	SS 70'-72' Drilled to 75' using 3 7/8" bit Grayish brown wash	
					71			26				
					72			17				
				Grayish brown f-c SAND, some fine gravel, trace silt (wet)	0.0	75	S-18	SS	1	27	78	SS 75'-77' Drilled to 80' using 3 7/8" bit Grayish brown wash
					76			48				
					77			30		21		
				Grayish brown f-c SAND, trace fine gravel, trace silt (wet)	0.0	80	S-19	SS	2	31	43	SS 80'-82' Drilled to 85' using 3 7/8" bit Grayish brown wash
					81			22				
					82			21		20		
			Class 3a	Light brown f-c SAND, some f-c gravel, trace silt (wet)	0.0	85	S-20	SS	3	33	104	SS 85'-87' Drilled to 90' using 3 7/8" bit Grayish brown wash
					86			43				
					87			61		95		
				Light brown f-m SAND, trace mica flakes (wet)	0.0	90	S-21	SS	5	35	100/3"	SS 90'-91'3" Ended day at 3:00 PM on 5/10/13 Started day at 8:30 AM on 5/13/13 Drilled to 95' using 3 7/8" bit Grayish brown wash
					91			58				
					92			100/3"				
					93							
					94							
						95						

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Project		Project No.												
Proposed 250 South Street Development		009225510												
Location		Elevation and Datum												
New York, NY		Approx. el 13 (MBPD)												
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)			
	-89.0	Class 3a	Light brown Gravelly f-c SAND, trace silt (wet)	0.0	95	S-22	SS	2	54	100/6"				SS 95'-96' Drilled to 100' using 3 7/8" bit Light brown wash
			Light brown Gravelly f-c SAND, trace silt (wet)	0.0	100	S-23	SS	3	100/6"	100/6"				SS 100'-100'6" Hole observed to be collapsing Advanced 3" casing to 80' Ended day at 3:00 PM on 5/13/13 Started day at 6:45 AM on 5/14/13 Drilled to 103' using 2 7/8" bit Light brown wash Rig chattering observed 102'-103'
	-90.0	Class 1d	Weathered MICA SCHIST (inferred from drilling)		102									Mica flakes observed in wash at 102' Roller bit refusal at 103'. Advanced 3" I.D. casing to 103'
	-94.0	Class 1b	Gray MICA SCHIST		103	C-1	NX CORE	REC=45"/48" =94%	RQD=32"/48" =67%					Drilled to 103' using 2 7/8" bit Light brownish gray wash Started NX Rock core run C-1 at 103' at 12:35PM No water return Finished core run C-1 at 107' at 1:05 PM Ended day at 3:00 PM on 5/14/13 Started day at 7:00 AM on 5/15/13 Advanced 3" casing to 105' Drilled to 107' using 2 7/8" bit Attempted NX Rock core run at 107'. Core barrel jammed with sand; unable to remove inner barrel, drillers returned to shop for new barrel. Started NX Rock core run C-2 at 107' at 2:20PM Gray wash Finished core run C-2 at 110' at 2:40 PM REC=36"/36" =100% RQD=36"/36" =100% Ended day at 3:00 PM on 5/15/13 Started day at 7:00 AM on 5/16/13 Started NX Rock core run C-3 at 110' at 7:50 AM Gray wash Finished core run C-3 at 115' at 8:15 AM Boring backfilled with drill cuttings; basement slab patched with cement and 1st floor slab patched with plywood upon completion.
			Gray MICA SCHIST		104									
	-97.0	Class 1a	Gray MICA SCHIST		105	C-2	NX CORE	REC=100%	RQD=100%					
			Gray MICA SCHIST		106									
	-102.0	Class 1b	Gray MICA SCHIST		107	C-3	NX CORE	REC=57"/60" =95%	RQD=42"/60" =70%					
			Gray MICA SCHIST		108									
			End of Boring at 115' at 8:15 AM on 5/16/13		109									
					110									
					111									
					112									
					113									
					114									
					115									
					116									
					117									
					118									
					119									
					120									



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Project		Project No.											
Proposed 250 South Street Development		009225510											
Location		Elevation and Datum											
New York, NY		Approx. el 13 (MBPD)											
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)		
[Cross-hatched pattern]	-22.0	Class 7	Dark gray f-c SAND, trace fine gravel, trace silt, trace wood, trace brick fragments (wet) [FILL]		20						SS 20'-22'		
						21	S-4	SS	2	3	2		
						22				5			
				Gray f-c SAND, some brick fragments, trace silt (wet) [FILL]		23	S-5	SS	2	4	11	7	SS 22'-24' Drilled to 25' using 3 7/8" bit Dark gray wash
						24				5			
						25				2			
				Dark gray to black f-c SAND, some silt, trace brick fragments, trace glass fragments (wet) [FILL]		26	S-6	SS	12	2	4	2	SS 25'-27'
						27				4			
				Light brown fine SAND, some f-c gravel, trace silt, trace wood (wet) [FILL]		28	S-7	SS	1	5	12	7	SS 27'-29' Drilled to 30' using 3 7/8" bit Black wash
						29				9			
				No Recovery		30				3			
				31	S-8	SS	0	1	2	1	SS 30'-32'		
				32				1					
		Gray Gravelly f-c SAND, trace silt, trace clay, trace concrete and brick fragments (wet) [FILL]		33	S-9	SS	2	5	11	4	SS 32'-34' Advanced 4" casing to 30' Drilled to 35' using 3 7/8" bit Black wash		
				34				6					
	-22.0	Class 6	No Recovery [FORMER RIVER BOTTOM DEPOSIT] (Inferred clay layer based on drilling observations)		35			5			SS 35'-37' Gray clay observed on spoon		
	-24.0				36	S-10	SS	0	1	2	1		
		Class 4b	Gray CLAY, some silt, trace seashell fragments, trace fine sand, trace plant fibers (wet) [FORMER RIVER BOTTOM DEPOSIT]		37			4					
					38	S-11	SS	3	5	11	6	SS 37'-39' $q_u=0.8$ tsf $s_u=0.5$ tsf Drilled to 40' using 3 7/8" bit Black wash	
				39				9					
	-27.0	Class 4c	Gray CLAY, some silt, trace fine sand, trace plant fibers (wet) [FORMER RIVER BOTTOM DEPOSIT]		40			WOR			SS 40'-42'		
					41	S-12	SS	8	2	6	4		
		Class 4b	Gray CLAY, some silt, trace fine sand, trace plant fiber, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]		42			3					
	-29.0				43	S-13	SS	4	10	14	4	SS 42'-44' Advanced 4" casing to 40' Ended day at 3:05 PM on 5/9/13 Started day at 7:15 AM on 5/10/13 Drilled to 45' using 3 7/8" bit Black wash	
					44				4		15		
	-32.0			45									





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Project		Proposed 250 South Street Development		Project No.		009225510						
Location		New York, NY		Elevation and Datum		Approx. el 13 (MBPD)						
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
			Light brown f-c SAND, trace fine gravel (wet)	0.0	70	S-19	SS	4	17	34	SS 70'-72' Drilled to 75' using 3 7/8" bit Brownish gray wash	
		71		18								
		72		16								
		73		17								
				Light brown f-c SAND, trace silt (wet)	0.0	74	S-20	SS	3	19	32	SS 75'-77' Hole observed to have collapsed Ended day at 3:00 PM on 5/10/13 Started day at 8:00 AM on 5/13/13 Drilled to 80' Brown wash
		75	16									
		76	16									
		77	26									
				Light brown f-c SAND, trace silt (wet)	0.0	78	S-21	SS	2	23	55	SS 80'-82' Drilled to 85' using 3 7/8" bit Brown wash
		79	27									
		80	28									
		81	32									
				Light brown f-m SAND, trace coarse sand, trace silt (wet)	0.0	82	S-22	SS	14	22	67	SS 85'-87' Drilled to 90' using 3 7/8" bit Light brown wash
		83	32									
		84	35									
		85	52									
				Light brown f-m SAND, trace silt (wet)	0.0	86	S-23	SS	4	25	72	SS 90'-92' Drilled to 95' using 3 7/8" bit Light brown wash
		87	31									
		88	41									
		89	34									
					0.0	90						
						91						
						92						
						93						
					94							
					95							

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Project		Project No.												
Proposed 250 South Street Development		009225510												
Location		Elevation and Datum												
New York, NY		Approx. el 13 (MBPD)												
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
						Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)			
		Class 3a	Light brown f-m SAND, trace fine gravel (wet)		95	S-24	SS	5	16					SS 95'-96'10" Drilled to 100'
					96				19					
					97				38					
					98				100/4"					
					99									
					100									
					101									
					102									
					103									
					104									
		Class 3a	Light brown f-c SAND, some f-c gravel, trace silt (wet)		105	S-25	SS	3	59					SS 100'-102' Ended day at 3:00 PM on 5/13/13 Started day at 6:45 AM on 5/14/13 Drilled to 105' using 3 7/8" bit Light brown wash
					106				35					
					107				30					
					108				37					
					109									
					110									
					111									
					112									
					113									
					114									
		Class 3a	Light brown f-c SAND, some silt, some fine gravel (wet)		115	S-26	SS	14	75					SS 105'-106'8" Drilled to 110' using 3 7/8" bit Light brown wash
					116				115					
					117				122					
					118				100/2"					
					119									
					120									
					121									
					122									
					123									
					124									
		Class 3a	Light brown f-c SAND, some fine gravel, trace silt (wet)		125	S-27	SS	4	90					SS 110'-110'9" Drilled to 115' using 3 7/8" bit Light brown wash Rig chattering at 113' Mica flakes observed in wash Roller bit refusal at 115' Advanced 3" casing to 80' Ended day at 3:00 PM on 5/14/13 Started day at 7:00 AM on 5/15/13 Advanced 3" casing to 115' Drilled to 115' using 2 7/8" bit Light brown wash Ended day at 3:00 PM on 5/15/13 Started day at 7:00 AM on 5/16/13 SS refusal at 115' Started NX Rock core run C-1 at 115' at 9:20 AM Gray wash
					126				100/3"					
					127									
					128									
					129									
					130									
					131									
					132									
					133									
					134									
	100.0	Class 1d	Weathered MICA SCHIST (inferred from drilling)		113						100/0"			
					114									
	102.0	Class 1b	Gray MICA SCHIST		115	C-1	NX CORE	0	100/0"					Finished core run C-1 at 120' at 10:10 AM
					116					REC=60"/60" =100%				
					117					RQD=50"/60" =83%				
					118									
					119									
					120									
					121									
					122									
					123									
					124									

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Project		Proposed 250 South Street Development		Project No.		009225510									
Location		New York, NY		Elevation and Datum		Approx. el 13 (MBPD)									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)					
						Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)				
[Hatched Pattern]		Class 1c	Gray MICA SCHIST with pegmatite inclusions (Orange staining observed on fractures and joints)		120	C-2	NX CORE	REC=54"/60" =90%	RQD=27"/60" =45%					<p>Started NX Rock core run C-2 at 120' at 11:00 AM</p> <p>Gray wash</p> <p>Barrel jammed at 121.5'</p> <p>Core removed</p> <p>Resumed NX rock core C-2 at 121.5' at 12:15 PM</p> <p>Gray wash</p> <p>Finished core run C-2 at 125' at 1:00 PM</p> <p>Advanced 3" casing to 117'</p> <p>Ended day at 3:00 PM on 5/16/13</p> <p>Started day at 7:15 AM on 5/17/13</p> <p>Drilled to 125' using 2 7/8" bit</p> <p>Started NX Rock core run C-3 at 125' at 9:30 AM</p> <p>Barrel jammed at 126.5'</p> <p>REC=17"/18" =94%</p> <p>RQD=17"/18" =94%</p> <p>Finished core run C-3 at 126.5' at 10:10 AM</p> <p>Started NX rock core run C-4 at 126.5' at 10:45 AM</p> <p>No water return</p>	
					121										
					122										
					123										
					124										
	-112.0	Class 1a	Gray MICA SCHIST		125	C-3	NX CORE	94%	94%					<p>Finished core run C-4 at 131' at 12:40 PM</p> <p>Started NX Rock core run C-5 at 131' at 2:10 PM</p> <p>No water return</p> <p>Barrel jammed at 131'8"</p> <p>Removed NX Rock core barrel</p> <p>Advanced 3" casing to 120'.</p> <p>Ended day at 3:15 PM on 5/17/13</p> <p>Started day at 7:00 AM on 5/20/13</p> <p>Advanced 3" casing to 122'.</p> <p>Drilled to 131.5' using 2 7/8" bit</p> <p>Resumed core run C-5 at 131'8" at 9:40 AM</p> <p>Gray wash</p> <p>Finished core run C-5 at 136' at 10:55 AM</p> <p>Boring backfilled with drill cuttings; basement floor slab patched with cement and 1st floor slab patched with plywood upon completion.</p>	
				126											
	-113.5		Gray MICA SCHIST		127	C-4	NX CORE	REC=54"/54" =100%	RQD=43"/54" =80%						
				128											
				129											
		Class 1b	Gray MICA SCHIST with Pegmatite inclusions		130	C-5	NX CORE	REC=60"/60" =100%	RQD=38"/60" =63%						
				131											
				132											
				133											
				134											
	-123.0		End of boring at 136' at 10:55AM on 5/20/13.		135										
					136										
					137										
					138										
					139										
					140										
					141										
					142										
					143										
					144										
					145										

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 13 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 5/30/13		Date Finished 6/6/13	
Drilling Equipment DK-525 Track Mounted Drill Rig				Completion Depth 121 ft		Rock Depth 100 ft	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" 5 7/8" Tricone Roller Bits/ 4" Thin Wall Core				Number of Samples Disturbed 24		Undisturbed Core 4	
Casing Diameter (in) 3", 4", 5" I.D. Steel Casing		Casing Depth (ft) 105		Water Level (ft.) First 14		Completion 24 HR.	
Casing Hammer Donut	Weight (lbs) 300	Drop (in) 30		Drilling Foreman Chris Gibbs			
Sampler 2" O.D. Split Spoon				Inspecting Engineer Ransom Hennefer			
Casing Hammer Donut	Weight (lbs) 140	Drop (in) 30					

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
							Number	Type	Recov. (in)	Penetr. resist BL/ft	N-Value (Blows/ft)				
	+13.0					0									
	+12.7		4-INCH-THICK CONCRETE SLAB			1									Started day at 7:00 AM on 5/30/13. Set up rig at boring location Drilled through first floor slab using 5 7/8" bit Cored through basement slab using 4" thin wall core Drilled to 13' using 4 7/8" bit
			BASEMENT			2									
						3									
						4									
						5									
						6									
						7									
						8									
						9									
						10									
	+1.3		2-INCH-THICK ASPHALT			11									
	+1.2		2-INCH-THICK CONCRETE			12									
	+1.0					13	S-1	SS	0	50/0"		50/0"	SS refusal at 13' Drilled to 14' using 3 7/8" bit		
						14							SS 14'-16' Slight odor observed Installed 5-inch flange onto basement floor slab and connected it to the first floor level using 5" ID casing		
		Class 7	Dark brown f-c SAND, some f-c gravel, trace silt, trace brick fragments (wet) [FILL]	3.5		15	S-2	SS	18	35 45 63 61		108	En Core samples 15.5'-16' Advanced 4" ID casing to 14' Drilled to 17' using 3 7/8" bit Brown wash SS 17'-19'		
						16									
						17									
						18	S-3	SS	12	5 4 6 10		10			
			Light gray f-c SAND, some fine gravel, trace silt, trace brick fragments (wet) [FILL]	1.0		19									
						20	S-4	SS	2	5 6			SS 19'-21'		

Project		Proposed 250 South Street Development		Project No.		009225510							
Location		New York, NY		Elevation and Datum		Approx. el 13 (MBPD)							
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
						Depth Scale	Number	Type	Recov. (in)		Penetr. resist. BL/6in	N-Value (Blows/ft)	
[Cross-hatched pattern]	-24.0	Class 7	Light brown f-c SAND, trace pottery fragments, trace silt, trace brick fragments (wet) [FILL]	6.0		20	S-4	SS	2	5	11	Ended day at 3:00 PM on 5/30/13. Started dat at 7:00 AM on 5/31/13. Advanced 4" ID casing to 19' Drilled to 22' using 3 7/8" bit Brown wash SS 22'-24'  SS 24'-26' Advanced 4" ID casing to 24' Drilled to 27' using 3 7/8" bit Brown wash  SS 27'-29'  SS 29'-31' Drilled to 32' using 3 7/8" bit Brown wash  SS 32'-34' Drilled to 35' using 3 7/8" bit Brown wash  SS 35'-37'  SS 37'-39' q <sub>u</sub> =0.75 tsf Drilled to 40' using 3 7/8" bit Grayish brown wash  SS 40'-42' Drilled to 45' using 3 7/8" bit Gray wash	
			No Recovery			21			7				
						22				5			
						23		S-5	SS	0	3		6
						24				3			
						25	0.0	S-6	SS	1	5		11
						26				6			
						27				1			
						28		S-7	SS	0	1		1
						29				0	WOH		WOH
[Diagonal hatched pattern]	-27.0	Class 4b	Light brown f-m SAND, some f-c gravel, trace silt, trace brick fragments (wet) [FILL]	0.0		30	S-8	SS	4	4	8		
						31			4				
						32				4			
						33	0.0	S-9	SS	1	1	2	
						34				1		2	
[Diagonal hatched pattern]	-32.0	Class 4c	Light brown Sandy fine GRAVEL, some silt, trace brick fragments (wet) [FILL]	0.0		35			1				
						36	S-10	SS	1	1	2		
						37				1		4	
						38	0.0	S-11	SS	6	4	8	21
						39				6	13	11	
			40				3						
			41	0.0	S-12	SS	1	2	4				
			42				2						
			43				2						
			44				4						
			45										

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Project		Proposed 250 South Street Development		Project No.		009225510									
Location		New York, NY		Elevation and Datum		Approx. el 13 (MBPD)									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)			
[Diagonal Hatching]		Class 6	Gray CLAY, some silt, trace fine sand (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		45							SS 45'-47' q <sub>u</sub> =0.5 tsf s <sub>u</sub> =0.25 tsf Drilled to 50' using 3 7/8" bit Gray wash		
	46					S-13	SS	20							
	47														
	48														
	-37.0	Class 7	Gray WOOD, some clay, trace silt (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		50			1			SS 50'-52' Drilled to 50' using 3 7/8" bit Gray wash			
	51					S-14A	SS	8	2						
	-38.5	Class 6	Light brown f-m SAND, trace silt, trace clay (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		52	S-14B		1	3					
	-42.0	Class 3a	Gray f-m SAND, some coarse gravel, trace coarse sand, trace silt, trace clay (wet)	0.0		55			49				SS 55'-57' Drilled to 60' using 3 7/8" bit Gray wash		
		Class 3a	Light brown f-m SAND (wet)	0.0		56	S-15	SS	2			84			
		Class 3a	Light brown f-m SAND (wet)	0.0		60			14				SS 60'-62' Ended day at 3:00 PM on 5/31/13. Started day at 8:00 AM on 6/3/13. Drilled to 65' using 3 7/8" bit Gray wash		
		Class 3a	Light brown f-m SAND (wet)	0.0		61	S-16	SS	14			41			
		Class 3a	Light brown f-m SAND (wet)	0.0		65			21				SS 65'-67' Drilled to 70' using 3 7/8" bit Brownish gray wash		
		Class 3a	Light brown f-m SAND (wet)	0.0		66	S-17	SS	14			79			
		Class 3a	Light brown f-m SAND (wet)	0.0		66			21						

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Project		Proposed 250 South Street Development		Project No.		009225510			
Location		New York, NY		Elevation and Datum		Approx. el 13 (MBPD)			
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number, Type, Recov. (in), Penetr. resist. BL/6in, N-Value (Blows/ft)		
SS	-70.0		Light brown f-m SAND (wet)	0.0		70	S-18, SS, 12, 15, 25, 28, 37	53	SS 70'-72' Drilled to 75' using 3 7/8" bit Brownish gray wash
SS	-70.0		Light brown f-m SAND (wet)	0.0		75	S-19, SS, 12, 26, 30, 41, 44	71	SS 75'-77' Drilled to 80' using 3 7/8" bit Light brown wash
SS	-70.0		Light brown fine SAND, trace silt (wet)	0.0		80	S-20, SS, 10, 11, 20, 18, 17	38	SS 80'-82' Drilled to 85' using 3 7/8" bit Light brown wash
SS	-72.0	Class 3a	Light brown Silty fine SAND, trace mica flakes, trace fine gravel (wet)	0.0		85	S-21, SS, 8, 19, 25, 46, 57	71	SS 85'-87' Drilled to 90' using 3 7/8" bit Light brown wash
SS	-77.0		Light brown Gravelly f-c SAND, trace silt (wet)	0.0		90	S-22, SS, 2, 47, 45, 38, 33	83	SS 90'-92' Ended day at 3:00 PM on 6/3/13. Started day at 7:00 AM on 6/4/13. Drilled to 95' using 3 7/8" bit Light brown wash
SS	-82.0			0.0		95			



Project		Project No.														
Proposed 250 South Street Development		009225510														
Location		Elevation and Datum														
New York, NY		Approx. el 13 (MBPD)														
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)					
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)				
[Symbol: Dotted pattern]	-87.0	Class 3a	Light brown f-c SAND, trace silt, trace mica flakes (wet)	0.0		95	S-23	SS	8	32					SS 95'-97' Drilled to 100' using 3 7/8" bit Light brown wash	
						96					37					
						97					29					
						98					40					
						99										
						100										
						101										
						102										
						103										
						104										
[Symbol: Wavy pattern]	-91.0	Class 1d	Gray Decomposed GNEISS, some f-m sand (wet)	0.0		100	S-24	SS	1	100/3"					SS 100'-100'3" Drilled to 100.5' using 3 7/8" bit Roller bit refusal at 100.5' Advanced 3" ID casing to 100' Ended day at 3:10 PM on 6/4/13. Started day at 7:30 AM on 6/5/12. Drilled to 105' using 2 7/8" bit Slow drilling Light brownish gray wash Mica flakes in wash Advanced 3" ID casing to 102' Drilled to 105' using 2 7/8" bit Roller bit refusal at 105' Light gray-brown wash Mica flakes in wash Started NX Rock core run C-1 at 105' at 10:40 AM Light brownish gray wash Water lost from 108.5'-109' Light gray wash at 109' Finished core run C-1 at 110' at 11:14 AM	
						105										
						106										
						107										
						108										
						109										
						110										
						111										
						112										
						113										
[Symbol: Wavy pattern]	-97.0	Class 1d	Gray Fractured Schistic GNEISS with Pegmatite inclusions			5:00	C-1	NX CORE	REC=25"/60" =42%	RQD=9"/60" =15%						
						4:50										
						7:20										
						8:25										
						109										
						110										
						111										
						112										
						113										
						114										
[Symbol: Wavy pattern]	-97.0	Class 1b	Gray Schistic GNEISS			3:10	C-2	NX CORE	REC=96%	RQD=83%						
						8:35										
						112										
						113										
						114										
						115										
						116										
						117										
						118										
						119										
[Symbol: Wavy pattern]	-103.0	Class 1a	Gray Schistic GNEISS			10:00	C-3	NX CORE	REC=44"/48" =92%	RQD=30"/48" =63%						
						9:40										
						114										
						115										
						116										
						117										
						118										
						119										
						120										
						[Symbol: Wavy pattern]					-103.0	Class 1a	Gray Schistic GNEISS			4:45
4:50																
117																
118																
119																
120																
121																
122																
123																
124																

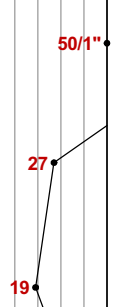
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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 13 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 5/16/13		Date Finished 5/29/13	
Drilling Equipment DK-50 Truck Mounted Drill Rig				Completion Depth 121 ft		Rock Depth 112 ft	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" 5 7/8" Tricone Roller Bits/ 4" Thin Wall Core				Number of Samples Disturbed 23		Undisturbed Core 2	
Casing Diameter (in) 3", 4", 5" I.D. Steel Casing		Casing Depth (ft) 112		Water Level (ft.) First 12.5		Completion 24 HR.	
Casing Hammer Donut	Weight (lbs) 300	Drop (in) 30		Drilling Foreman Gilbert Canelo			
Sampler 2" O.D. Split Spoon				Inspecting Engineer Ransom Hennefer			
Casing Hammer Safety	Weight (lbs) 140	Drop (in) 30					

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
							Number	Type	Recov. (in)	Penetr. resist	BL/ft	N-Value (Blows/ft)					
	+13.0					0											
	+12.7		4-INCH-THICK CONCRETE SLAB			1											<p>Started setting up at new location at 11:00 AM on 5/16/13.                      Drilled through first floor slab using 5 7/8" bit                      Cored through basement slab using 4" thin wall core                      Drilled to 12.5' using 4 7/8" bit                      Brown wash                      Ended day at 3:00 PM on 5/16/13.                      Started day at 7:15 AM on 5/27/13.</p>
			BASEMENT			2											
						3											
						4											
						5											
						6											
						7											
						8											
						9											
						10											
						11											
	+1.3		2-INCH-THICK ASPHALT			12											
	+1.1		2-INCH-THICK CONCRETE			13	S-1	SS	4	41	50/1"						
	+0.9		Brown f-c SAND, some fine gravel, trace silt, trace brick fragments (wet) [FILL]	2.1		14				44							
			Light brown Gravelly f-c SAND, trace silt (wet) [FILL]	0.9		15	S-2	SS	2	11							
		Class 7				16				16							
			Brown f-c SAND, some wood, trace brick fragments, trace silt (wet) [FILL]	0.2		17	S-3	SS	2	9							
						18				4							
						19				15							
						20				17							



SS 12'-13'1"  
 Installed 5-inch flange onto basement floor slab  
 Advanced 4" ID casing to 14'  
 Drilled to 14' using 3 7/8" bit  
 Brown wash  
 SS 14'-16'  
 Advanced 4" ID casing to 15'  
 Drilled to 16' using 3 7/8" bit  
 Brown wash  
 SS 16'-18'  
 Drilled to 20' using 3 7/8" bit  
 Brown wash

Project		Project No.													
Proposed 250 South Street Development		009225510													
Location		Elevation and Datum													
New York, NY		Approx. el 13 (MBPD)													
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)			
										10	20	30	40		
			Brown Gravelly f-c SAND, trace silt, trace brick fragments (wet) [FILL]	0.0		20	S-4	SS	6	9					SS 20'-21'9" Advanced 4" ID casing to 19' Difficulty advancing casing beyond 17' Drilled to 23' using 3 7/8" bit No water return Difficulty drilling beyond 21.75'
			No Recovery			21				24					
						22				35					
						23	S-5	SS	0	100/0"					100/0"
						24									
						25									
			Gray Gravelly f-c SAND, trace clay, trace brick fragments (wet) [FILL]	0.0		26	S-6	SS	3	41					
						27				87					108
						28				21					
			Gray f-c SAND, trace fine gravel, trace clay, trace brick fragments (wet) [FILL]	0.0		29	S-7	SS	1	15					
						30				37					97
						31				60					
						32				27					
			Gray f-c SAND, trace clay, trace brick fragments, trace fine gravel, trace wood (wet) [FILL]	0.0		33	S-8	SS	2	10					
		Class 7				34				10					
						35				10					
						36				66					76
						37				44					
			Gray f-c SAND, some f-c gravel, trace clay, trace brick fragments (wet) [FILL]	0.0		38	S-9	SS	6	104					
						39				85					
						40				36					121
						41				27					
			Gray f-c GRAVEL, some clay, some f-c sand, trace wood, trace brick fragments, (wet) [FILL]	0.0		42	S-10	SS	4	9					
						43				16					
						44				28					44
						45				12					
			Gray Gravelly f-c SAND, trace clay, trace brick fragments, (wet) [FILL]	0.0		46	S-11	SS	4	10					
						47				35					
						48				68					103
						49				110					
						50									

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Project		Project No.											
Proposed 250 South Street Development		009225510											
Location		Elevation and Datum											
New York, NY		Approx. el 13 (MBPD)											
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
[Diagonal Hatching]	-37.0	Class 4a	Gray CLAY, some silt, some plant fibers, trace fine sand (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		45	S-12	SS	8	10	34		SS 45'-47' q <sub>u</sub> =3.1 tsf s <sub>u</sub> =1.5 tsf Drilled to 50' using 3 7/8" bit No water return
						46			15				
						47			19				
						48			22				
[Dotted Pattern]	-42.0	Class 6	Gray CLAY, some silt, some f-m sand, trace plant fibers (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		50	S-13	SS	18	WOR			SS 50'-52' q <sub>u</sub> =0.1 tsf s <sub>u</sub> =0.0 tsf Ended day at 3:00 PM on 5/20/12. Started day at 7:15 AM on 5/21/13. Advanced 4" ID casing to 50' Drilled to 55' using 3 7/8" bit Gray wash
						51			WOR				
						52			WOR				
						53			WOR				
[Dotted Pattern]	-47.0	Class 3b	Brown f-c SAND, trace fine gravel, trace silt (wet)	0.0		55	S-14	SS	4	17	29		SS 55'-57' Drilled to 60' using 3 7/8" bit Brown wash
						56			14				
						57			15				
						58			15				
[Dotted Pattern]	-52.0	Class 3a	Brown f-m SAND, trace silt (wet)	0.0		60	S-15	SS	4	16	50		SS 60'-62' Drilled to 65' using 3 7/8" bit Brown wash
						61			25				
						62			25				
						63			30				
[Dotted Pattern]	-57.0	Class 3b	Brown f-m SAND (wet)	0.0		65	S-16	SS	14	10	29		SS 65'-67' Drilled to 70' using 3 7/8" bit Brown wash
						66			13				
						67			16				
						68			20				

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Project		Proposed 250 South Street Development		Project No.		009225510									
Location		New York, NY		Elevation and Datum		Approx. el 13 (MBPD)									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)			
		Class 3a	Brown fine SAND (wet)	0.0		70	S-17	SS	8	12		SS 70'-72' Drilled to 75' using 3 7/8" bit Brown wash			
			71				17			45					
			72				28								
			72				18								
						Brown fine SAND, trace silt (wet)	0.0		75	S-18	SS	10	22		SS 75'-77' Drilled to 80' using 3 7/8" bit Brown wash
			76				27			56					
			77				29								
						Brown f-c SAND, some fine gravel, trace silt (wet)	0.0		80	S-19	SS	5	24		SS 80'-82' Drilled to 85' using 3 7/8" bit Brown wash
			81				18			36					
			81				18								
			82				20								
						Brown f-m SAND, some f-c gravel, trace coarse sand (wet)	0.0		85	S-20	SS	4	35		SS 85'-87' Ended day at 3:00 PM on 5/21/13. Started day at 7:30 AM on 5/22/13.
			86				31			58					
			87				27								
						Light brown f-m SAND (wet)	0.0		90	S-21	SS	10	85		SS 90'-92' Drilled to 94' using 3 7/8" bit Roller bit refusal at 94' Advanced 3" ID casing to 94' Drilled to 95' using 2 7/8" bit Light brown wash
			91				61			124					
			91				63								
			92				62								

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 13 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 6/7/13		Date Finished 6/14/13	
Drilling Equipment DK-50 Track Mounted Drill Rig				Completion Depth 114 ft		Rock Depth 104 ft	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" 5 7/8" Tricone Roller Bits/ 4" Thin Wall Core				Number of Samples Disturbed 25		Undisturbed Core 2	
Casing Diameter (in) 3", 4", 5" I.D. Steel Casing		Casing Depth (ft) 102		Water Level (ft.) First 13		Completion 24 HR.	
Casing Hammer Donut	Weight (lbs) 300	Drop (in) 30		Drilling Foreman Chris Gibbs			
Sampler 2" O.D. Split Spoon				Inspecting Engineer Ransom Hennefer			
Casing Hammer Donut	Weight (lbs) 140	Drop (in) 30					

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)					
							Number	Type	Recov. (in)	Penetr. resist	BL/Join	N-Value (Blows/ft)						
	+13.0					0												
	+12.7		4-INCH-THICK CONCRETE SLAB			1												<p>Started day at 7:00 AM on 6/7/13. Set up rig at new location Drilled through first floor slab using 5 7/8" bit Cored through basement slab using 4" thin wall core Drilled to 12.5' using 4 7/8" bit</p>
			BASEMENT	0.1		2												
						3												
						4												
						5												
						6												
						7												
						8												
						9												
						10												
	+1.3		2-INCH-THICK ASPHALT			11												
	+1.1		3-INCH-THICK CONCRETE SLAB			12												
	+0.9		Brown f-c SAND, trace silt, trace brick fragments (wet) [FILL]			13	S-1	SS	4	32	50/0"							
			No Recovery			14												
		Class 7				15	S-2	SS	0	25/0"								
						16												
						17												
						18	S-3	SS	5	2	4	7						
			Brown f-c SAND, trace silt, trace brick fragments (wet) [FILL]	2.0		19												
						20												

SS 12'6"-13'  
Installed a 5-inch flange onto basement floor slab and connected it to the first floor level using 5" ID casing  
Advanced 4" ID casing to 14'  
Drilled to 15' using 3 7/8" bit  
Gray wash  
Rig chattering at 14'  
SS refusal at 15'  
Ended day at 3:00 PM on 6/7/13.  
Started day at 7:00 AM on 6/10/13.  
Drilled to 17' using 3 7/8" bit  
Gray wash  
Rig chattering 15'-16.5'  
SS 17'-19'  
Advanced 4" ID casing to 19'  
Drilled to 20' using 3 7/8" bit

Project		Proposed 250 South Street Development		Project No.		009225510							
Location		New York, NY		Elevation and Datum		Approx. el 13 (MBPD)							
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
[Cross-hatched pattern]	-27.0	Class 7	Brown f-c SAND, some brick fragments, some f-c gravel, trace silt (wet) [FILL]	0.1		20	S-4	SS	4	10	10	16	Gray wash SS 20'-22'
			Gray f-c SAND, trace silt, trace f-c gravel, trace concrete, trace brick fragments (wet) [FILL]			21	S-5	SS	8	10	18	SS 22'-24' Advanced 4" ID casing to 24' Drilled to 25' using 3 7/8" bit Gray wash	
			Brown f-c SAND, trace silt, trace fine gravel, trace brick fragments (wet) [FILL]	0.0		22	S-6	SS	4	10	24	SS 25'-27'	
			Light gray f-c SAND, some concrete, some brick fragments, trace silt (wet) [FILL]	0.0		23	S-7	SS	5	8	17	SS 27'-29' Advanced 4" ID casing to 29' Drilled to 30' using 3 7/8" bit Gray wash	
			Light gray f-c SAND, some concrete, some brick fragments, trace silt (wet) [FILL]	0.0		24	S-8	SS	6	11	22	SS 30'-32'	
			Dark brown f-c SAND, some silt, some fine gravel, trace brick fragments (wet) [FILL]	0.0		25	S-9	SS	6	8	16	SS 32'-34' Advanced 4" ID casing to 34' Drilled to 35' using 3 7/8" bit Gray wash	
			Gray f-c SAND, trace silt, trace clay, trace brick fragments, trace fine gravel (wet) [FILL]	0.0		26	S-10	SS	3	2	4	SS 35'-37'	
			Brown f-c SAND, some silt, trace fine gravel, trace wood, trace brick fragments, trace concrete fragments, trace pottery fragments (wet) [FILL]	0.0		27	S-11	SS	4	5	9	SS 37'-39' Ended day at 3:00 PM on 6/10/13 Started day at 7:00 AM on 6/11/13. Drilled to 40' using 3 7/8" bit Dark gray wash	
			WOOD, trace clay (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		28	S-12	SS	3	9	12	SS 40'-42' Spoon bouncing at 40'	
			Gray CLAY, some silt, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		29	S-13	SS	6	8	14	SS 42'-44' Drilled to 45' using 3 7/8" bit Gray wash	

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Project		Project No.											
Proposed 250 South Street Development		009225510											
Location		Elevation and Datum											
New York, NY		Approx. el 13 (MBPD)											
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
[Diagonal Hatching]	-37.0	Class 4c	Gray CLAY, some silt, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		45	S-14	SS	7	4	2	5	SS 45'-47' Drilled to 50' using 3 7/8" bit $q_u=0.2$ tsf $s_u=0.12$ tsf
						46			3				
						47			3				
						48							
[Dotted Pattern]	-40.5	Class 6	Gray CLAY, some silt, trace fine sand (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		50	S-15	SS	20	WOR		SS 50'-52' Drilled to 55' using 3 7/8" bit Gray wash	
						51			3				
						52			6				
						53							
[Dotted Pattern]	-47.0	Class 3a	Light brown f-m SAND, trace silt (wet)	0.0		55	S-16	SS	8	10		SS 55'-57' Drilled to 60' using 3 7/8" bit Gray wash	
						56			17		31		
						57			14				
						58			18				
[Dotted Pattern]	-52.0	Class 3b	Light brown f-m SAND (wet)	0.0		60	S-17	SS	16	13		SS 60'-62' Drilled to 65' using 3 7/8" bit Gray wash	
						61			13		28		
						62			14				
						63							
[Dotted Pattern]	-52.0	Class 3a	Light brown f-m SAND (wet)	0.0		65	S-18	SS	10	18		SS 65'-67' Drilled to 70' using 3 7/8" bit Gray wash	
						66			28		53		
						67			25				
						68			29				

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Project		Proposed 250 South Street Development		Project No.		009225510											
Location		New York, NY		Elevation and Datum		Approx. el 13 (MBPD)											
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)						
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)					
			Light brown fine SAND (wet)	0.0		70								SS 70'-72' Drilled to 75' using 3 7/8" bit Gray wash			
						71	S-19	SS	18	23							
										24							
				Light brown f-m SAND (wet)	0.0		72								SS 75'-77' Ended day at 3:00 PM on 6/11/13. Started day at 7:15 AM on 6/12/13. Drilled to 80' using 3 7/8" bit Grayish brown wash		
			73							23							
			74							28							
				Light brown f-m SAND, trace silt (wet)	0.0		75								SS 80'-82' Drilled to 85' using 3 7/8" bit Grayish brown wash		
			76				S-20	SS	14	36							
			77							34							
				Light brown fine SAND, trace silt (wet)	0.0		78								SS 85'-87' Drilled to 90' using 3 7/8" bit Grayish brown wash		
			79							18							
			80				S-21	SS	14	18							
			Class 3a	Light brown fine SAND, trace silt, trace m-c sand (wet)	0.0		81								SS 90'-92' Drilled to 95' Grayish brown wash		
			82							25							
			83							18							
				Light brown fine SAND, trace silt, trace m-c sand (wet)	0.0		84										
			85							21							
			86				S-22	SS	10	23							
				Light brown fine SAND, trace silt, trace m-c sand (wet)	0.0		87										
			88							23							
			89							37							
				Light brown fine SAND, trace silt, trace m-c sand (wet)	0.0		90										
			91				S-23	SS	16	25							
		92							33								
			Light brown fine SAND, trace silt, trace m-c sand (wet)	0.0		93											
		94							24								
		95							20								

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Project		Proposed 250 South Street Development		Project No.		009225510						
Location		New York, NY		Elevation and Datum		Approx. el 13 (MBPD)						
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
		Class 3a	Light brown f-c SAND, some silt, trace fine gravel (wet)	0.0		95	S-24	SS	8	92		SS 95'-97' Drilled to 100'
						96				26		
						97			33			
						98			35			
						99						
						100	S-25	SS	4	100/5"		
			Light brown f-c SAND, some silt, some f-c gravel (wet)	0.0		101						
						102						
						103						
		Class 1d	WEATHERED GNEISS (inferred from drilling)			103						
	-90.0					104						
	-91.0					104						
		Class 1a	Light gray Granitic GNEISS			10:00	C-1	NX CORE	REC=59"/60" =98%	RQD=51"/60" =85%		
												9:55
						106						
						11:40						
						12:00						
						14:30						
						109						
						11:00						
						110						
						10:00						
			Light gray GRANITE			111						
						10:00						
						112						
						11:30						
						113						
						11:15						
	-101.0		End of Boring at 114' at 12:30 PM on 6/14/2013.			114						
						115						
						116						
						117						
						118						
						119						
						120						

SS 95'-97'  
Drilled to 100'

SS 100'-100.5"  
Ended day at 3:00 PM on 6/12/13.  
Started day at 7:00 AM on 6/13/13.  
Drilled to 103' using 3 7/8" bit  
Grayish brown wash  
Roller bit refusal at 103'  
Advanced 3" ID casing to 102'  
Ended day at 3:00 PM on 6/13/13.  
Started day at 7:00 AM on 6/14/13.  
Drilled to 104' using 2 7/8" bit  
Light gray wash  
Rig chattering from 103'-104'  
Roller bit refusal at 104'.  
Started NX Rock core run C-1 at 104' at 9:35 AM  
Light gray wash  
Finished core run C-1 at 109' at 10:40 AM

Started NX Rock core run C-2 at 109' at 11:30 AM  
Light gray wash  
Finished core run C-2 at 114' at 12:30 PM

Boring backfilled with drill cuttings and patched with cement upon completion.

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Log of Boring

**B-22**

Sheet

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of

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, NY				Elevation and Datum Approx. el 13 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 5/21/13		Date Finished 5/29/13	
Drilling Equipment DK-525 Track Mounted Drill Rig				Completion Depth 122 ft		Rock Depth 111.5 ft	
Size and Type of Bit 2 7/8", 3 7/8", 4 7/8" 5 7/8" Tricone Roller Bits/ 4" Thin Wall Core				Number of Samples Disturbed 26		Undisturbed 1	Core 2
Casing Diameter (in) 3", 4", 5" I.D. Steel Casing		Casing Depth (ft) 112		Water Level (ft.) First 13		Completion	24 HR.
Casing Hammer Donut		Weight (lbs) 300	Drop (in) 30	Drilling Foreman Chris Gibbs			
Sampler 2" O.D. Split Spoon				Inspecting Engineer Ransom Hennefer			
Sampler Hammer Safety		Weight (lbs) 140	Drop (in) 30				

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
							Number	Type	Recov. (in)	Penetr. resist BL/ft	N-Value (Blows/ft)			
	+13.0					0								
	+12.7		4-INCH-THICK CONCRETE SLAB			1								<p>Started day at 7:15 AM on 5/21/13.                      Drilled through first floor slab using 5 7/8" bit                      Cored through basement slab using 4" thin walled core                      Drilled to 13' using 4 7/8" bit</p>
			BASEMENT			2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								
	+1.2		2-INCH-THICK ASPHALT			11								
	+1.0		3-INCH-THICK CONCRETE SLAB			12								
	+0.8		Brown Sandy f-c GRAVEL, trace silt, trace brick fragments (wet) [FILL]	1.3		13	S-1	SS	2	61	100/2"	100/2"	<p>SS 13'-13'8"                      Mounted 5-inch flange and sponge on basement slab and connected to first floor with 5" ID casing                      Advanced 4" ID casing to 14'                      Ended day at 3:00 PM on 5/21/13.                      Started day at 7:30 AM on 5/22/13.                      Drilled to 15'                      SS 15'-17'                      Drilled to 17' using 3 7/8" bit                      No water return                      SS 17'-17'4"                      Spoon bouncing observed                      Advanced 4" ID casing to 19'                      Drilled to 20' using 3 7/8" bit                      Dark gray wash</p>	
		Class 7	Brown f-c SAND, trace silt, trace brick fragments (wet) [FILL]	0.5		14	S-2	SS	2	95	63	38		101
			Brown f-c SAND, trace silt, trace brick fragments (wet) [FILL]	0.1		15	S-3	SS	2	30	100/4"	100/4"		
						16								
						17								
						18								
						19								
						20								

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Project		Proposed 250 South Street Development		Project No.		009225510							
Location		New York, NY		Elevation and Datum		Approx. el 13 (MBPD)							
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)	
			No Recovery	0.0		20						SS 20'-22'	
						21	S-4	SS	0	3	6		
						22				3			SS 22'-24'
			Black f-c SAND, some clay, trace brick fragments, trace wood (wet) [FILL]	0.0		23	S-5	SS	8	7	16		En Core samples taken from bottom 6 inches of S-5
						24				9			Drilled to 25' using 3 7/8" bit
						25				8			Dark gray wash
						26	S-6	SS	6	4			SS 25'-27'
			Brown to black f-c SAND, some brick fragments, trace silt, trace clay (wet) [FILL]	0.0		27				5	10		
						28	S-7	SS	8	6			SS 27'-29'
			Dark brown f-c SAND, some silt, trace brick fragments, trace wood, trace porcelain fragments (wet) [FILL]	0.0		29				4			Drilled to 30' using 3 7/8" bit
						30				7			Dark gray wash
		Class 7				31	S-8	SS	4	2	5		SS 30'-32'
			Brownish gray f-c SAND, some silt, trace clay, trace brick fragments, trace wood, trace plant fibers (wet) [FILL]	0.0		32				3			
						33	S-9	SS	6	4			SS 32' to 34'
			Brown f-c SAND, some silt, trace clay, trace brick fragments, trace porcelain fragments, trace wood (wet) [FILL]	0.0		34				7	16		Drilled to 35' using 3 7/8" bit
						35				9			Dark gray wash
						36	S-10	SS	2	13			SS 35'-37'
			Brown f-c SAND, some silt, trace clay, trace brick fragments (wet) [FILL]	0.0		37				12	19		
						38	S-11	SS	8	8			SS 37'-39'
			Gray f-c SAND, some silt, trace fine gravel, trace clay, trace brick fragments, trace metal fragments, trace seashell fragments (wet) [FILL]	0.0		39				7			Drilled to 40' using 3 7/8" bit
						40				9			Dark gray wash
	-27.0	Class 4c	Gray CLAY, some silt, trace f-m sand, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		41	S-12	SS	16	3	7		SS 40'-42'
						42				4			$q_u=0.5$ tsf
						43				6			Drilled to 43' using 3 7/8" bit
	-30.0	Class 4b		0.0		44	ST-1	SH	16				Dark gray wash
						45							Shelby Tube 43'-45'
													$q_u=2.0$ tsf $s_u=0.8$ tsf

Project		Project No.											
Proposed 250 South Street Development		009225510											
Location		Elevation and Datum											
New York, NY		Approx. el 13 (MBPD)											
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)	
[Diagonal Hatching]	-37.0	Class 4b	Dark gray CLAY, some silt, some fine sand, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		45	S-13	SS	10	7	23		SS 45'-47' $q_u=1.5 \text{ tsf}$ $s_u=0.5 \text{ tsf}$  Ended day at 3:15 PM on 5/22/13. Started day at 7:00 AM on 5/23/13. Drilled to 50' using 3 7/8" bit Gray wash
						46			11				
						47			12				
						48			10				
[Diagonal Dotted Hatching]	-42.0	Class 4c	Gray Sandy CLAY, some silt (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		50	S-14	SS	10	9	4		SS 50'-52' $q_u=0.5 \text{ tsf}$ $s_u=0.2 \text{ tsf}$  Drilled to 55' using 3 7/8" bit Gray wash
						51			2				
						52			2				
						53			5				
[Dotted Hatching]	-57.0	Class 3b	Light brown f-m SAND, trace silt (wet)	0.0		55	S-15	SS	14	11	29		SS 55'-57' Drilled to 60' using 3 7/8" bit Gray wash
						56			16				
						57			13				
						58			10				
[Dotted Hatching]	-57.0	Class 3b	Light brown f-m SAND, trace silt (wet)	0.0		60	S-16	SS	3	7	27		SS 60'-62' Drilled to 65' using 3 7/8" bit Brownish gray wash
						61			13				
						62			14				
						63			14				
[Dotted Hatching]	-57.0	Class 3b	Light brown f-c SAND, trace silt (wet)	0.0		65	S-17	SS	4	12	27		SS 65'-67' Drilled to 70' using 3 7/8" bit Grayish brown wash
						66			13				
						67			14				
						68			16				

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Project		Proposed 250 South Street Development		Project No.		009225510						
Location		New York, NY		Elevation and Datum		Approx. el 13 (MBPD)						
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks <small>(Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)</small>	
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
[Symbol: Dotted pattern]	-62.0	Class 3a	Light brown f-m SAND, trace silt (wet)	0.0		70	S-18	SS	6	17	38	SS 70'-72' Drilled to 75' using 3 7/8" bit Grayish brown wash
						71			20			
						72			18			
						73			20			
[Symbol: Dotted pattern]	-67.0	Class 3b	Light brown fine SAND, trace silt (wet)	0.0		75	S-19	SS	16	13	29	SS 75'-77' Drilled to 80' using 3 7/8" bit Grayish brown wash
						76			16			
						77			13			
						78			14			
[Symbol: Dotted pattern]	-67.0	Class 3a	Light brown fine sand, trace silt (wet)	0.0		80	S-20	SS	10	14	43	SS 80'-82' Drilled to 85' using 3 7/8" bit Grayish brown wash
						81			20			
						82			23			
						83			18			
[Symbol: Dotted pattern]	-77.0	Class 3a	Light brown f-m SAND (wet)	0.0		85	S-21	SS	6	17	49	SS 85'-87' Ended day at 3:00 PM on 5/23/13. Satrted day at 6:00 AM on 5/24/13. Drilled to 90' using 3 7/8" bit Brown wash
						86			23			
						87			26			
						88			24			
[Symbol: Dotted pattern]	-77.0	Class 3b	Light brown f-m SAND, trace silt (wet)	0.0		90	S-22	SS	15	10	24	SS 90'-92' Drilled to 95' using 3 7/8" bit Light brown wash
						91			13			
						92			11			
						93			13			
						94						
						95						

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Project		Proposed 250 South Street Development		Project No.		009225510												
Location		New York, NY		Elevation and Datum		Approx. el 13 (MBPD)												
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)							
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)						
[Dotted Pattern]		Class 3b	Light brown f-c SAND (wet)	0.0		95	S-23	SS	3	9	22	SS 95'-97' Drilled to 100' using 3 7/8" bit Light brown wash						
						96				11								
						97				11								
									Light brown fine SAND (wet)	0.0		100	S-24	SS	6	15	SS 100'-102' Drilled to 105' using 3 7/8" bit Light brown wash	
												101				14		25
												102				11		
												103				12		
						[Dotted Pattern]		Class 3a	Light brown f-m SAND, some silt, some f-c gravel (wet)			105	S-25	SS	6	31	SS 105'-106'9" Ended day at 2:00 PM on 5/24/13. Started day at 7:05 AM on 5/28/13. Drilled to 110' using 3 7/8" bit Light brown wash	
												106				26		111
												107				85		
108				100/3"														
109																		
[Dotted Pattern]		Class 1d	Weathered MICA SCHIST (inferred from drilling)			110	S-26	SS	3	100/5"	SS 110'-110'5" Drilled to 112' using 3 7/8" bit Light brown wash Rig chattering at 111.5' Mica flakes in wash Roller bit refusal at 112' Advanced 3" ID casing to 112'							
						111												
[Diagonal Pattern]		Class 1a	Gray Granitic MICA SCHIST			5:45	C-1	NX CORE	REC=56"/60" =93%	RQD=56"/60" =93%	111	Drilled to 112' using 2 7/8" bit Light brown wash Ended day at 3:00 PM on 5/28/13. Started day at 7:00 AM on 5/29/13. Started NX Rock core run C-1 at 112' at 8:10 AM Light gray wash Drill rods observed to rapidly advance about 1" at 114' No water return beyond 114' Finished core run C-1 at 117' at 8:55 AM Started NX Rock core run C-2 at 117' at 9:50 AM No water return Finished core run C-2 at 122' at 11:45 AM						
						7:10												
						9:35												
						9:10												
						9:20												
						13:30												
						14:20												
						20:00												
						118							C-2	NX CORE	REC=58"/60" =97%	RQD=58"/60" =97%	118	
						119											119	
120					120													

Project Proposed 250 South Street Development			Project No. 009225510											
Location New York, NY			Elevation and Datum Approx. el 13 (MBPD)											
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
							Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)		
[Pattern]	-109.0	Class 1a	End of Boring at 122' at 1:30 PM on 5/29/2013			120	C-2	[Shaded]						
						20:00								
						121								
						25:00								
						122								
						123								
						124								
						125								
						126								
						127								
						128								
						129								
						130								
						131								
						132								
						133								
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						135								
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Project		Proposed 250 South Street Development		Project No.		009225510																																																																									
Location		New York, New York		Elevation and Datum		Approx. el 5 (MBPD)																																																																									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)																																																																					
						Number	Type	Recov. (in)	Penetr. resist BL/ft		N-Value (Blows/ft)																																																																				
[Cross-hatched pattern]	-	Class 7	Dark gray to black f-m SAND, some brick, trace metal, trace concrete, trace coarse gravel, trace silt (wet) [FILL]		20	S-8	SS	8	6	4	8	SS 20'-22'	Advanced 4" I.D casing to 24' (hammer) Drilled to 25' with 3-7/8" roller bit Dark gray wash																																																																		
														21	4	5																																																															
																	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																																							
																																									S-9	SS	7	6	9	22	SS 25'-27'	Drilled to 30' with 3-7/8" roller bit Dark gray wash																															
																																																	13	10																													
																																																			S-10	SS	15	24	11	19	SS 30'-32'	Advanced 4" I.D. casing to 29' (push) End of day's work at 3:00 PM on 6/24/14 Resumed drilling at 7:25 AM on 6/25/14 Drilled to 35' with 3-7/8" roller bit Dark brown wash																					
																																																											8	12																			
																																																													S-11	SS	23	WOH	WOH	3	SS 35'-37'	qu=0.25 tsf Drilled to 37' with 3-7/8" roller bit Black wash Shelby Tube 37'-39'											
																																																																					19										
																																																																						S-12	SS	24	WOH	WOH	WOH	WOH	SS 39'-41'	qu=0.25 tsf Drilled to 45' with 3-7/8" roller bit Dark gray wash	
																																																																															19

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Project		Project No.								
Proposed 250 South Street Development		009225510								
Location		Elevation and Datum								
New York, New York		Approx. el 5 (MBPD)								
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
					Depth Scale	Number	Type	Recov (in)		Penetr resist BL/6in
	-50.0	Class 3b	Brown fine SAND, trace medium sand, trace silt (wet)	45	S-13	SS	15	7	29	SS 45'-47' Drilled to 50' with 3-7/8" roller bit Dark brown wash
								11		
								18		
			Brown fine SAND, trace silt (wet)	50	S-14	SS	24	7	20	SS 50'-52' Drilled to 55' with 3-7/8" roller bit Dark brown wash
								8		
								12		
								15		
								15		
			Brown f-m SAND, trace silt (wet)	55	S-15	SS	18	12	46	SS 55'-57' Drilled to 60' with 3-7/8" roller bit Brownish gray wash
								18		
								36		
			Brown fine SAND, trace silt (wet)	60	S-16	SS	18	12	53	SS 60'-62' Drilled to 65' with 3-7/8" roller bit Brownish gray wash
								17		
								36		
								34		
			Grayish brown fine SAND, trace silt (wet)	65	S-17	SS	11	19	56	SS 65'-67' Drilled to 70' with 3-7/8" roller bit Brownish gray wash
								26		
30										
	66				30					
	67									
	68									
	69									
	70									

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Project Proposed 250 South Street Development	Project No. 009225510
Location New York, New York	Elevation and Datum Approx. el 5 (MBPD)

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)					
						Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)						
										10		20	30 40			
	Class 3a		Grayish brown fine SAND (wet)		70	S-18	SS	15	11	13	21	21	34	SS 70'-72' Drilled to 75' with 3-7/8" roller bit Brownish gray wash		
			Grayish brown fine SAND, trace medium sand (wet)		71	S-19	SS	14	14	21	31	33	52	SS 75'-77' Drilled to 80' with 3-7/8" roller bit Brownish gray wash		
			Grayish brown fine SAND, some silt (wet)		72	S-20	SS	16	20	20	34	33	54	SS 80'-82' Drilled to 85' with 3-7/8" roller bit Brownish gray wash		
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		73											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		74											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		75											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		76											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		77											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		78											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		79											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		80											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		81											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		82											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		83											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		84											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		85											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		86											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		87											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		88											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		89											
			Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		90											
Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		91														
Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		92														
Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		93														
Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		94														
Grayish brown fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		95														

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Project		Project No.									
Proposed 250 South Street Development		009225510									
Location		Elevation and Datum									
New York, New York		Approx. el 5 (MBPD)									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Depth Scale	Sample Data				Remarks <small>(Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)</small>	
						Number	Type	Recov. (in)	Penetr. resist. BLU/in		N-Value (Blows/ft)
	-91.0	Class 3a	Grayish brown fine SAND, some fractured rock fragments, trace m-c sand, trace f-c gravel, trace silt (wet)	14:15	95	S-23	SS	6	78	10 20 30 40	SS 95'-95'10" Drilled to 96' with 3-7/8" roller bit Grayish brown wash Very hard, slow drilling observed 95'-96' Roller bit refusal at 96' Started NX Rock core run C-1 at 96' at 10:48 AM Gray wash
					96					100/4"	
	-96.0	Class 1d	Gray FRACTURED AND WEATHERED MICA SCHIST	24:32	98	C-1	NX CORE	REC=33"/60" = 55%	RQD=20"/60" = 33%		Finished core run C-1 at 101' at 12:14 PM Started NX Rock core run C-2 at 101' at 12:45 PM Gray wash Stopped coring C-2 at 12:58 PM for drill rig repair Resumed coring C-2 at 1:08 PM  Finished core run C-2 at 106' at 1:40 PM Started NX Rock core run C-3 at 106' at 2:06 PM Gray wash
				29:12	99						
				7:51	100						
				14:04	101						
				5:02	102						
				9:01	103						
				8:27	104						
				7:47	105						
				14:39	106						
				6:23	107						
	-106.0	Class 1a	Gray MICA SCHIST with quartz inclusions	6:38	108	C-2	NX CORE	REC=60"/60" = 100%	RQD=52.5"/60" = 88%		Finished core run C-2 at 106' at 1:40 PM Started NX Rock core run C-3 at 106' at 2:06 PM Gray wash
				8:04	109						
				8:58	110						
					111						
					111	C-3	NX CORE	REC=60"/60" = 100%	RQD=60"/60" = 100%		Finished core run C-3 at 111' at 2:51 PM Boring backfilled with drill cuttings upon completion
					112						
					113						
					114						
					115						
					116						
					117						
					118						
					119						
					120						
			End of boring at 111' at 3:15 PM on 6/26/14								

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, New York				Elevation and Datum Approx. el 8.5 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 6/24/14		Date Finished 6/30/14	
Drilling Equipment Acker AD-II Truck-Mounted Drill Rig				Completion Depth 104 ft		Rock Depth 93 ft	
Size and Type of Bit 2-15/16", 3-7/8", 4-7/8" Tricone Roller Bits				Number of Samples Disturbed 21		Undisturbed Core 2	
Casing Diameter (in) 3" and 4" I.D. Steel Casing		Casing Depth (ft) 89		Water Level (ft.) First 10		Completion 24 HR.	
Casing Hammer Safety		Weight (lbs) 140		Drop (in) 30		Drilling Foreman Eddie Cardona	
Sampler 2" O.D. Split Spoon & NX Core Barrel				Inspecting Engineer Keith Herman			
Sampler Hammer Safety		Weight (lbs) 140		Drop (in) 30			

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MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov (in)	Penetr. resist BLU/in	N-Value (Blows/ft)		
	+8.5		6-INCH-THICK ASPHALT		0							Started drilling at 1:00 PM on 6/24/14
	+8.0		Brown f-m SAND, trace coarse sand, trace fine gravel, trace asphalt (moist) [FILL]		1	S-1	SS	12				Drilled through approximately 6-inch-thick asphalt with 4-7/8" roller bit
			Brownish gray Sandy fine GRAVEL, trace coarse gravel, trace silt (moist) [FILL]		2	S-2	SS	9				SS 6"-2'6"
			Dark brown f-c SAND, trace brick, trace wood, trace concrete, trace silt (moist) [FILL]		3	S-3	SS	14				SS 2'6"-4'6"
			Red BRICK, trace f-c gravel, trace f-c sand, trace concrete (moist) [FILL]		4	S-4	SS	17				Drilled to 5' with 4-7/8" roller bit
			Black f-m SAND, some coarse gravel, trace brick (wet) [FILL]		5	S-5	SS	1	40/1"			Brown wash
		Class 7	Dark gray f-m SAND, trace brick, trace concrete, trace silt (wet) [FILL]		6	S-6	SS	7				SS 5'-7'
					7							Drilled to 7' with 4-7/8" roller bit
					8							Brown wash
					9							SS 7'-9'
					10							Advanced 4" I.D. casing to 9' (hammer)
					11							Drilled to 10' with 3-7/8" roller bit
					12							Brown wash
					13							Water loss observed at 9.5'
					14							SS 10'-10'1"
					15							SS observed to bounce
					16							Drilled to 15' with 3-7/8" roller bit
					17							Brown wash
					18							SS 15'-17'
					19							Advanced 4" I.D. casing to 14' (hammer)
					20							Drilled to 20' with 3-7/8" roller bit
												Dark brown wash

Project		Project No.																																																												
Proposed 250 South Street Development		009225510																																																												
Location		Elevation and Datum																																																												
New York, New York		Approx. el 8.5 (MBPD)																																																												
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)																																																				
						Number	Type	Recov. (ft)	Penetr. resist BL/6in		N-Value (Blows/ft)																																																			
[Cross-hatched pattern]	-26.5	Class 7	Dark gray f-m SAND, trace brick, trace silt (wet) [FILL]		20	S-7	SS	6	3	5	9	SS 20'-22' End of day's work at 3:00 PM on 6/24/14 Resumed drilling at 7:45 AM on 6/25/14 Drilled to 25' with 3 7/8" roller bit Dark brown wash																																																		
													4	7																																																
													[Diagonal hatched pattern]	-26.5	Class 7	Black f-c GRAVEL, some brick, some f-c sand (wet) [FILL]		25	S-8	SS	3	5	17	SS 25'-27' Drilled to 30' with 3-7/8" roller bit Dark brown wash																																						
																									8	6																																				
																									[Diagonal hatched pattern]	-26.5	Class 7	Black Silty f-m SAND, some fine gravel, trace brick (wet) [FILL]		30	S-9	SS	5	6	11	SS 30'-32' Advanced 4" I.D. casing to 24' (hammer) Drilled to 35' with 3-7/8" roller bit Dark brown wash																										
																																					7	7																								
																																					[Diagonal hatched pattern]	-26.5	Class 6	Black Silty CLAY, some f-m sand, trace fine gravel (wet) [FORMER RIVER BOTTOM DEPOSIT]		35	S-10	SS	18	3	6	SS 35'-37' Drilled to 40' with 3-7/8" roller bit Dark gray wash														
																																																	3	4												
																																																	[Dotted pattern]	-31.5	Class 3a	Black to gray Silty f-m SAND, trace coarse gravel, trace seashells (wet) [FORMER RIVER BOTTOM DEPOSIT]		40	S-11	SS	5	24	65	SS 40'-42' Drilled to 45' with 3-7/8" roller bit Water loss observed Moderate rig chatter observed 40'-43'		
																																																													39	26
																																																													21	

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Log of Boring

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Project		Project No.									
Proposed 250 South Street Development		009225510									
Location		Elevation and Datum									
New York, New York		Approx. el 8.5 (MBPD)									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Depth Scale	Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	Remarks
		Class 6	Black SILT, some fine sand, trace m-c sand (wet) [FORMER RIVER BOTTOM DEPOSIT]		45	S-12	SS	7	4	5	SS 45'-47' Advanced 4" I.D. casing to 44' (hammer) Drilled to 50' with 3-7/8" roller bit Dark gray wash
		Class 3b	Black Silty f-m SAND (wet) [FOMER RIVER BOTTOM DEPOSIT]		50	S-13A	SS	14	11	21	SS 50'-52' Drilled to 55' with 3-7/8" roller bit Gray wash
		Class 3b	Grayish brown f-m SAND, trace silt (wet)		51	S-13B	SS	12	10		
		Class 3b	Grayish brown f-m SAND, trace coarse sand, trace fine gravel, trace silt (wet)		55	S-14	SS	18	6	11	SS 55'-57' Drilled to 60' with 3-7/8" roller bit Gray wash
		Class 6	Brown fine SAND, trace silt (wet)		60	S-15	SS	12	3	9	SS 60'-62' Drilled to 65' with 3-7/8" roller bit Gray wash
		Class 3b	Grayish brown f-m SAND (wet)		65	S-16	SS	24	4	12	SS 65'-67' Drilled to 70' with 3-7/8" roller bit Gray wash

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Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, New York		Approx. el 8.5 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)	
[Dotted pattern]	-77.5	Class 3b	Grayish brown fine SAND (wet)		70							
					71	S-17	SS	14	7	10	20	SS 70'-72' Drilled to 75' with 3-7/8" roller bit Gray wash
					72				10			
					73				10			
					74				11			
					75				10			
					76	S-18	SS	14	11	13	24	SS 75'-77' Drilled to 80' with 3-7/8" roller bit Gray wash
					77				16			
					78							
					79							
[Dotted pattern]	-81.5	Class 3a	Grayish brown fine SAND, trace m-c sand, trace coarse gravel (wet)		80							
					81	S-19	SS	24	10	11	26	SS 80'-82' Drilled to 85' with 3-7/8" roller bit Gray wash
					82				15			
					83				17			
[Vertical lines]	-84.5	Class 5a	Grayish brown f-m SAND, trace silt (wet)		85							
			Grayish brown SILT, trace f-m sand (wet)		86	S-20A	SS	16	9	9	18	SS 85'-87' End of day's work at 3:00 PM on 6/25/14 Resumed drilling at 7:30 AM on 6/26/14 Drilled to 90' with 3-7/8" roller bit Gray wash Light rig chatter observed at 89' Difficult drilling observed 89'-90'
[Vertical lines]	-81.5	Class 3a			87	S-20B						
					88							
[Dotted pattern]	-84.5	Class 1b	Grayish brown fine SAND, trace m-c sand, trace coarse gravel, trace silt (wet)		90	S-21	SS	1	50/1"	50/1"		SS 90'-90'1" SS observed to bounce Advanced 3" I.D. casing to 84' (push/spin) Drilled to 94' with 2-15/16" roller bit Slow, difficult drilling observed 91'-92' Very slow, difficult drilling observed 93'-94' with mica flakes in wash Roller bit refusal at 94'
					91							
					92							
					93							
					94	C-1						
		95										

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Project		Project No.								
Proposed 250 South Street Development		009225510								
Location		Elevation and Datum								
New York, New York		Approx. el 8.5 (MBPD)								
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Depth Scale	Sample Data				Remarks <small>(Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)</small>
						Number	Type	Recov. (in)	Penetr. resist BLU/in	
	-95.5	Class 1b	Gray MICA SCHIST with quartz inclusions	5:40	95	C-1 NX CORE	REC=50.5"/60" =84%	RQD=50.5"/60" =84%		Started NX Rock core run C-1 at 94' at 11:41 AM Light gray wash
				4:32	96					
				4:50	97					
				2:55	98					
				7:14	99					
				6:02	100					
			Gray MICA SCHIST	9:27	101	C-2 NX CORE	REC=48"/60" =80%	RQD=44"/60" =73%		Finished core run C-1 at 99' at 12:08 PM Borehole observed to collapse at 85' when advancing core barrel Advanced 3" I.D. casing to 89' (hammer) Drilled to 99' with 2-15/16" roller bit Difficulty advancing core barrel to bottom of borehole End of day's work at 3:00 PM on 6/26/14 Resumed drilling at 7:45 AM on 6/30/14 Redrilled to 99' with 2-15/16" roller bit Started NX Rock core run C-2 at 99' at 8:50 AM Gray wash Finished core run C-2 at 104' at 9:22 AM Difficulty removing core barrel from borehole Boring backfilled with drill cutting upon completion
				5:20	102					
				4:54	103					
					104					
					105					
					106					
					107					
					108					
	109									
	110									
	111									
	112									
	113									
	114									
	115									
	116									
	117									
	118									
	119									
	120									
			End of boring at 104' at 10:00 AM on 6/30/2014							

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Project Proposed 250 South Street Development				Project No. 009225510			
Location New York, New York				Elevation and Datum Approx. el 4.5 (MBPD)			
Drilling Company Warren George, Inc.				Date Started 6/27/14		Date Finished 7/9/14	
Drilling Equipment Acker AD-II Truck-Mounted Drill Rig				Completion Depth 140 ft		Rock Depth 138.5 ft (inferred)	
Size and Type of Bit 2-15/16", 3-7/8", and 4-7/8" Tricone Roller Bits				Number of Samples Disturbed 31		Undisturbed - Core 0	
Casing Diameter (in) 3", 4" I.D. Steel Casing		Casing Depth (ft) 134		Water Level (ft) First 5		Completion 24 HR.	
Casing Hammer Donut		Weight (lbs) 300		Drop (in) 30		Drilling Foreman Dave Osuch	
Sampler 2" O.D. Split Spoon and NX Core Barrel				Inspecting Engineer Keith Herman			
Sampler Hammer Safety		Weight (lbs) 140		Drop (in) 30			

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov (in)	Penetr resist BU/in		N-Value (Blows/ft) 10 20 30 40	
	+4.5		6-INCH-THICK CONCRETE SLAB		0						Started drilling at 8:40AM on 6/27/14	
	+4.0		Brown fine SAND, trace m-c sand, trace fine gravel, trace silt (dry) [FILL]		1	S-1	SS	13	27		40	Drilled through approx. 6-inch-thick concrete slab with 4-7/8" roller bit
			Grayish brown fine SAND, trace m-c sand, trace f-c gravel, trace brick, trace concrete, trace silt (moist) [FILL]		2			18	22			SS 6"-2'
					3	S-2	SS	12	9		79	SS 2'-4'
			Grayish brown fine SAND, trace m-c sand, trace f-c gravel, trace brick, trace concrete, trace silt (moist) [FILL]	0.0	3			46	33			Drilled to 5' with 4-7/8" roller bit
					4			32	46			Gray wash
					5				11			Difficult drilling observed 4.5'-5'
			Grayish brown fine SAND, trace m-c sand, trace f-c gravel, trace brick, trace concrete, trace silt (moist) [FILL]	0.0	6	S-3	SS	6	13		30	SS 5'-7'
					7			8	17			
			Black f-c SAND, trace f-c gravel, trace silt, trace wood (wet) [FILL]	0.0	8	S-4	SS	7	20			SS 7'-8'3"
					9			75/3"	22		75/3"	Drilled to 10' with 4-7/8" roller bit
					10							Dark gray wash
		Class 7	Grayish brown f-c SAND, trace fine gravel, trace brick, trace pottery fragments, trace silt (wet) [FILL]	0.0	11	S-5	SS	3	16		32	Very difficult drilling observed 8'-9'
					12			12	16			SS 10'-12'
			Dark gray f-c SAND, trace fine gravel, trace pottery fragments, trace silt (wet) [FILL]	0.0	13	S-6	SS	6	11		51	SS 12'-14'
					14			14	24			Advanced 4" I.D. casing to 9' (Hammer)
					15				27			Drilled to 15' with 3-7/8" roller bit
			Black f-c SAND, trace f-c gravel, trace brick, trace silt, trace pottery fragments (wet) [FILL]	0.0	16	S-7	SS	9	14			Dark gray wash
					17				11			SS 15'-17'
					18				12		23	Drilled to 20' with 3-7/8" roller bit
					19				15			Dark gray wash
					20							

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# LANGAN

Project		Project No.											
Proposed 250 South Street Development		009225510											
Location		Elevation and Datum											
New York, New York		Approx. el 4.5 (MBPD)											
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov (in)	Penetr resist	BLU/in		N-Value (Blows/ft)	
[Cross-hatched pattern]	Class 7		Black f-c SAND, some brick, trace f-c gravel, trace pottery fragments, trace silt (wet) [FILL]	0.0	20	S-8	SS	6	11	12	24	SS 20'-22' Drilled to 25' with 3-7/8" roller bit Dark gray wash	
			Black f-c SAND, some brick, trace f-c gravel, trace pottery fragments, trace silt (wet) [FILL]	0.0	21	S-9	SS	11	10	13	11	23	Water loss observed at 24.5' SS 25'-27' Advanced 4" I.D. casing to 24' (Hammer). Drilled to 30' with 3-7/8" roller bit Dark gray wash and intermittent water loss observed
			Black f-c SAND, some silt, trace f-c gravel, trace brick (wet) [FILL]	0.0	22								
			Black f-c SAND, some silt, trace f-c gravel, trace brick (wet) [FILL]	0.0	23								
			Black f-c SAND, some silt, trace f-c gravel, trace brick (wet) [FILL]	0.0	24								
			Black f-c SAND, some silt, trace f-c gravel, trace brick (wet) [FILL]	0.0	25								
			Black f-c SAND, some silt, trace f-c gravel, trace brick (wet) [FILL]	0.0	26	S-10	SS	7	9	8	5	12	SS 30'-32' Advanced 4" I.D. casing to 29' (Push) Drilled to 35' with 3-7/8" roller bit Dark gray wash
			Black f-c SAND, some silt, trace f-c gravel, trace brick (wet) [FILL]	0.0	27								
			Black f-c SAND, some silt, trace f-c gravel, trace brick (wet) [FILL]	0.0	28	S-11	SS	14	7	5	7	12	SS 35'-37' Advanced 4" I.D. casing to 34' (Push) Drilled to 40' with 3-7/8" roller bit Dark gray wash
			Black f-c SAND, some silt, trace f-c gravel, trace brick (wet) [FILL]	0.0	29								
			Dark gray fine SAND, trace m-c sand, trace fine gravel, trace silt, trace rubber (wet) [FILL]	0.0	30	S-12A		3					SS 40'-42' Drilled to 45' with 3-7/8" roller bit Dark gray wash
[Dotted pattern]	Class 6		Black Silty fine SAND, trace medium sand, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0	31	S-12B	SS	17	1	2	3		
				0.0	32								
				0.0	33								
				0.0	34								
				0.0	35								

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# LANGAN

Project		Project No.									
Proposed 250 South Street Development		009225510									
Location		Elevation and Datum									
New York, New York		Approx. el 4.5 (MBPD)									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist. BLU/in		N-Value (Blows/ft)
[Diagonal Hatching]	-42.0	Class 4b	Black Silty CLAY, trace fine gravel, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0	45			4		15	SS 45'-47' qu=0.75 tsf
			Dark gray fine SAND, trace m-c sand, trace fine gravel, trace silt (wet)		46	S-13A	SS	12	5		
[Dotted Pattern]	-50.5	Class 3b	Brown fine SAND, trace medium sand, trace silt (wet)	0.0	50			5			Drilled to 50' with 3-7/8" roller bit Dark gray wash End of day's work at 3:00PM on 6/27/14 Resumed drilling at 8:00AM on 6/30/14 Redrilled to 50' with 3-7/8" roller bit SS 50'-52' Drilled to 55' with 3-7/8" roller bit Dark gray wash
			Brown fine SAND, trace silt (wet)		51	S-14	SS	20	7		
[Diagonal Hatching]	-51.6	Class 4b	Light brown CLAY, some f-m sand, trace fine gravel, trace silt (wet)	0.0	55			3		9	SS 55'-57' Drilled to 60' with 3-7/8" roller bit Dark brown wash
					56	S-15A	SS	14	3		
[Dotted Pattern]	-55.5	Class 3b	Brown f-m SAND, trace silt (wet)	0.0	60			8			SS 60'-62' Drilled to 65' with 3-7/8" roller bit Dark brown wash
					61	S-16	SS	24	10		
[Dotted Pattern]		Class 3b	Grayish brown f-m SAND, trace coarse sand, trace silt (wet)	0.0	65			6			SS 65'-67' Drilled to 70' with 3-7/8" roller bit
					66	S-17	SS	18	9		

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# LANGAN

Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, New York		Approx. el 4.5 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist. BU/in	N-Value (Blows/ft)		
	-69.0	Class 3b	Grayish brown f-c SAND, trace f-c gravel (wet)	0.0	70	S-18	SS	16	5	11		SS 70'-72' Drilled to 75' with 3-7/8" roller bit Grayish brown wash
					71							
	-70.0		COBBLE (inferred based on drilling observations)		72			5				
					73							
					74							Slow, difficult drilling observed 73.5'-74.5'
					75	S-19	SS	14	32			SS 75'-76.2" Drilled to 80' with 3-7/8" roller bit Grayish brown wash Slow, difficult drilling observed at 77'
			Grayish brown f-m SAND, trace f-c gravel, trace coarse sand, trace silt (wet)	0.0	76							
					77							
					78							
					79							
					80	S-20	SS	21	14			SS 80'-82' Drilled to 83.5' with 3-7/8" roller bit Grayish brown wash Slow, difficult drilling observed 82'-83.5' End of day's work at 3:00PM on 6/30/14 Resumed drilling at 7:40AM on 7/1/14 Slow difficult drilling observed 83.5-84'
			Grayish brown f-c SAND, trace f-c gravel (wet)	0.0	81							
					82							
					83							
					84							
					85	S-21	SS	2	100/2"			SS 85'-85.2"
			BOULDER (Inferred based on drilling observations)	0.0	86							
					87							Drilled to 90' with 3-7/8" roller bit Grayish brown wash Difficult drilling observed 85.5'-86'
					88							Light rig chatter observed at 88'
					89							
					90	S-22	SS	10	52			Slow, difficult drilling observed at 89.5' SS 90'-90.10"
			Grayish brown f-c SAND, some f-c gravel, trace silt (wet)	0.0	91							
					92							Drilled to 95' with 3-7/8" roller bit Grayish brown wash Slow, difficult drilling observed 91'-94'
					93							
					94							
					95							

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Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, New York		Approx. el 4.5 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
						Number	Type	Recov. (m)	Penetr. resist BL/6in		N-Value (Blows/ft)	
	-95.5	Class 3a	Grayish brown Gravelly f-c SAND, trace silt (wet)	0.0	95	S-23	SS	9	33	100/3"	SS 95'-95'9" Drilled to 100' with 3-7/8" roller bit Grayish brown wash	
						96						
						97						
						98						
						99						
						100			54			
						101			64			131
						102			67			
						103			48			
						104						
	-100.5	Class 2a	Grayish brown Sandy f-c GRAVEL (wet)	0.0	100	S-24	SS	2		131	SS 100'-102' Drilled to 105' with 3-7/8" roller bit Grayish brown wash	
						101						
						102						
						103						
						104						
						105			48			
						106			75/2"			75/2"
						107						
						108						
						109						
110			57									
	-105.5	Class 3a	Grayish brown f-c SAND, trace f-c gravel, trace silt (wet)	0.0	105	S-25	SS	8	48	75/2"	Borehole observed to collapse at 100' when attempting to advance split spoon to 105' End of day's work at 3:00PM on 7/1/14 Resumed drilling at 8:40AM on 7/2/14 Advanced 3" I.D. casing to 104' (Spin) Redrilled to 105' with 2-15/16" roller bit SS 105'-105'8" Drilled to 110' with 2-15/16" roller bit Grayish brown wash	
						106						
						107						
						108						
						109						
						110			47			
						111			49			96
						112			100/4"			
						113						
						114						
115			95									
	-115.5	Class 3a	Grayish brown Gravelly f-c SAND, trace silt (wet)	0.0	110	S-26	SS	12	57	96	SS 110'-111'10" End of days work at 3:00PM on 7/2/14 Resumed drilling at 7:45AM on 7/3/14 Advanced 3" I.D. casing to 109' (Spin) Drilled to 115' with 2-15/16" roller bit Light gray wash Slow drilling observed at 113' Light rig chatter observed at 114.5'	
						111						
						112						
						113						
						114						
						115			49			
						116			100/4"			50/1"
						117						
						118						
						119						
120												
	-115.5	Class 3a	Grayish brown Gravelly f-c SAND, trace silt (wet)	0.0	115	S-27	SS	7	95	50/1"	SS 115'-115'7" Drilled to 120' with 2-15/16" roller bit Light brownish gray wash	
						116						
						117						
						118						
						119						
						120						

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# LANGAN

Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, New York		Approx. el 4.5 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)		
		Class 3a	Grayish brown f-c SAND, some f-c gravel, trace silt (wet)	0.0	120	S-28	SS	23	70	168	SS 120'-122' Drilled to 125' with 2-15/16" roller bit Light brownish gray wash	
			121		81	168						
			122		87							
					Grayish brown f-c SAND, some fine gravel (wet)		123					Borehole observed to collapse at 120' when attempting to advance split spoon. Driller did not have enough 3" I.D. casing to continue drilling. End of day's work at 1:15PM on 7/3/14
					124							
					125	S-29	SS	6	170/6"	170/6"		
					Brownish gray f-c SAND, some f-c gravel, trace silt (wet)	0.0	126					Resumed drilling at 8:00AM on 7/7/14 Advanced 3" I.D. casing to 116' (Spin/Hammer) Casing refusal at 116' Removed all 3" I.D casing from borehole and replaced casing shoe Advanced 3" I.D. casing to 116' (Spin) End of day's work at 3:00PM on 7/7/14
					127							
					128							
					Brownish gray f-c SAND, some f-c gravel, trace silt (wet)	0.0	129					Resumed drilling at 7:15AM on 7/8/14 Redrilled to 120' with 2-15/16" roller bit Advanced 3" I.D. casing to 119' (Spin/Hammer) Redrilled to 125' with 2-15/16" roller bit Advanced 3" I.D. casing to 124' (Spin/Hammer) Redrilled to 125' with 2-15/16" roller bit SS 125'-125'6" Drilled to 130' with 2-15/16" roller bit
					130	S-30	SS	3	120/3"	120/3"		
					131							
					Gray f-c SAND, trace fine gravel, trace silt (wet)	0.0	132					Slow, difficult drilling observed 125'-126' SS 130'-130'3" Advanced 3" I.D. casing to 129' (Spin) Drilled to 135' with 2-15/16" roller bit Brownish gray wash Light rig chatter observed at 133.5'
					133							
					134							
	-132.0		COBBLE (Inferred based on drilling observations)		135					End of day's work at 3:00PM on 7/8/14		
	-133.0				136	S-31	SS	8	102			
	-134.0		BEDROCK (Inferred based on drilling observations)		137				75/2"			
	-135.5		End of boring at 140' at 3:00PM on 7/9/14		138					Resumed drilling at 7:30AM on 7/9/14 Redrilled to 135' with 2-15/16" roller bit SS 135'-135'8" Advanced 3" I.D. casing to 134' (Spin/Hammer) Drilled to 140' with 2-15/16" roller bit Brownish gray wash Very hard, slow drilling observed 136.5'-137.5' and 138.5'-140' Roller bit refusal at 140'		
					139							
					140							
					141							
					142							
					143							
					144							
					145							

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# LANGAN

Project			Project No.								
Proposed 250 South Street Development			009225510								
Location			Elevation and Datum								
New York, New York			Approx. el 4.5 (MBPD)								
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Depth Scale	Sample Data				Remarks <small>(Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)</small>	
						Number	Type	Recov (in)	Penetr resist		BLU/in
					145						<p>Borehole observed to collapse at 138' when attempting to advance core barrel. Core barrel observed to jam when attempting to advance to 140'.                      Removed all drill rods and core barrel. Core barrel bit observed to have been lost in borehole.                      Abandoned boring.                      Boring backfilled with drill cuttings upon completion.</p>
					146						
					147						
					148						
					149						
					150						
					151						
					152						
					153						
					154						
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					156						
					157						
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# LANGAN

Project <b>Proposed 250 South Street Development</b>				Project No. <b>009225510</b>			
Location <b>New York, New York</b>				Elevation and Datum <b>Approx. el 4.5 (MBPD)</b>			
Drilling Company <b>Warren George, Inc.</b>				Date Started <b>6/30/14</b>		Date Finished <b>7/7/14</b>	
Drilling Equipment <b>Acker AD-II Truck-Mounted Drill Rig</b>				Completion Depth <b>101 ft</b>		Rock Depth <b>88 ft</b>	
Size and Type of Bit <b>2-15/16", 3-7/8", and 4-7/8" Tricone Roller Bits</b>				Number of Samples Disturbed <b>22</b>		Undisturbed	Core <b>2</b>
Casing Diameter (in) <b>3", 4" I.D. Steel Casing</b>		Casing Depth (ft) <b>90</b>		Water Level (ft.) First <b>5</b>		Completion	24 HR
Casing Hammer <b>Safety</b>		Weight (lbs) <b>300</b>		Drop (in) <b>30</b>		Drilling Foreman <b>Eddie Cardona</b>	
Sampler <b>2" O.D. Split Spoon and NX Core Barrel</b>				Inspecting Engineer <b>Keith Herman</b>			
Sampler Hammer <b>Safety</b>		Weight (lbs) <b>140</b>		Drop (in) <b>30</b>			

MATERIAL SYMBOL	Elev. (ft) +4.5	Building Code	Sample Description	PID Reading (ppm)	Coming (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
							Number	Type	Recov (in)	Penetr resist BL/6in		N-Value (Blows/ft) 10 20 30 40	
						0							Started drilling at 1:00 PM on 6/30/14. SS 0'-2'
			Dark brown f-c SAND, some concrete, trace brick, trace fine gravel, trace silt (dry) [FILL]	0.0		1	S-1	SS	22	11		37	
			Dark brown f-c SAND, some brick, trace concrete, trace silt (moist) [FILL]	0.0		2				26			SS 2'-4'
						3	S-2	SS	14	32		61	Drilled to 5' with 4-7/8" roller bit Brown wash
						4				29			
						5				31			SS 5'-7'
			Dark brown f-c SAND, some silt, trace f-c gravel, trace brick (wet) [FILL]	0.0		6	S-3	SS	14	4	14		
						7				4			SS 7'-9'
			Dark gray f-c SAND, some silt, some brick, trace fine gravel (wet) [FILL]	0.5 - 1.1		8	S-4	SS	12	17		30	Advanced 4" I.D. casing to 9' (Push) Drilled to 10' with 3-7/8" roller bit Grayish brown wash
						9				13			
		Class 7	Dark gray to black f-c SAND, some silt, trace fine gravel (wet) [FILL]	0.0		11	S-5	SS	9	2			SS 10'-12'
						12				1			
			Dark gray to black f-c SAND, some silt, trace fine gravel, trace brick (wet) [FILL]	0.0		13	S-6	SS	8	3		7	SS 12'-14' Drilled to 15' with 3-7/8" roller bit Black wash
						14				2			
			No Recovery	0.0		15	S-7	SS	0	5			SS 15'-17' Drilled to 20' with 3-7/8" roller bit Black wash with brick fragments
						16				4		8	
						17				4			
						18				4			
						19							
						20							

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# LANGAN

Project		Project No.											
Proposed 250 South Street Development		009225510											
Location		Elevation and Datum											
New York, New York		Approx. el 4.5 (MBPD)											
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
							Number	Type	Recov. (in)	Penetr. resist. BLU/in		N-Value (Blows/ft)	
[Cross-hatched pattern]	-	Class 7	Black f-c SAND, trace brick, trace pottery fragments, trace silt (wet) [FILL]	0.0		20	S-8	SS	4	9	7	SS 20'-22' End of day's work at 3:00PM on 6/30/14 Resumed drilling at 7:40AM on 7/1/14 Advanced 4" I.D. casing to 19' (Push) Drilled to 25' with 3-7/8" roller bit Dark gray wash	
			Black Gravelly f-c SAND, some brick, trace silt, trace pottery fragments (wet) [FILL]	0.0		21	S-9	SS	2	9	18	SS 25'-27' Drilled to 30' with 3-7/8" roller bit Dark gray wash	
			Black f-c SAND, some fine gravel, trace brick, trace silt (wet) [FILL]	0.0		22							
						23							
						24							
						25							
						26							
						27							
						28							
						29							
						30							
						31				S-10	SS	11	16
			32										
			33										
			34										
			35										
			36				S-11	SS	7	13	SS 35'-37' Advanced 4" I.D. casing to 39' (Hammer) Drilled to 40' with 3-7/8" roller bit Dark gray wash		
			37										
			38										
			39										
			40										
			41				S-12A	SS	9	10	SS 40'-42' Drilled to 45' with 3-7/8" roller bit Dark gray wash		
			42				S-12B		6				
			43										
			44										
			45										
	36.2	Class 3b	Dark gray Silty fine SAND, trace m-c sand, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0									

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Project <b>Proposed 250 South Street Development</b>		Project No. <b>009225510</b>	
Location <b>New York, New York</b>		Elevation and Datum <b>Approx. el 4.5 (MBPD)</b>	

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MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coning (mm)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
							Number	Type	Recov. (in)	Penetr resist BU/in		N-Value (Blows/ft)		
[Pattern: Diagonal lines]	-41.0	Class 4b	Dark gray to black Silty CLAY, trace f-m sand, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		45	S-13A	SS	5	13	23			SS 45'-47' Drilled to 50' with 3-7/8" roller bit Dark gray wash
			46			S-13B	SS	10	10					
			47						9					
			48											
			49											
			50						8					
			51			S-14	SS	18	7	18				
			52						11					
			53						16					
			54											
[Pattern: Dotted]		Class 3a	Brown fine SAND (wet)	0.0		55			7				SS 55'-57' Advanced 4" I.D. casing to 54' (Hammer) Drilled to 60' with 3-7/8" roller bit. Dark gray wash	
			56			S-15	SS	20	9	22				
			57					13						
			58					14						
			59											
			60					17						
			61			S-16	SS	24	25	56				
			62					31						
			63					38						
			64											
[Pattern: Dotted]		Class 3a	Grayish brown f-c SAND, trace silt (wet)	0.0		65			11				SS 65'-67' Advanced 4" I.D casing to 64' (Hammer) End of day's work at 3:00PM on 7/1/14  Resumed drilling at 7:45AM on 7/2/14	
			66			S-17	SS	24	13	31				
			67					18						
			68					19						
			69											
			70											

Project			Project No.											
Proposed 250 South Street Development			009225510											
Location			Elevation and Datum											
New York, New York			Approx. el 4.5 (MBPD)											
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
							Number	Type	Recov. (in)	Penetr. resist. BLU/ft		N-Value (Blows/ft) 10 20 30 40		
	-70.5	Class 3a	Grayish brown f-c SAND, trace fine gravel (wet)	0.0		70						SS 70'-72' Drilled to 75' with 3-7/8" roller bit Gray wash		
						71	S-18	SS	24	23	55			
						72			32					
						73			32					
							-75.5	Class 5b	Grayish brown SILT, trace fine sand, trace fine gravel (wet)	0.0			75	
76	S-19	SS	17	9	26									
77			13											
78			13											
79			14											
	-75.5	Class 3a	Grayish brown f-c SAND, some f-c gravel, trace silt (wet)	0.0		80					SS 80'-82' Drilled to 85' with 3-7/8" roller bit Gray wash			
						81	S-20	SS	17	50		85		
						82			53					
						83			32					
						84			29					
	-83.5	Class 3a	Grayish brown f-c SAND, trace fine gravel, trace silt (wet)	0.0		85					SS 85'-87' Drilled to 90' with 3-7/8" roller bit Gray wash Light rig chatter observed 86'-87'			
						86	S-21	SS	22	77		116		
						87			54					
						88			62					
						89			51					
	-85.0	Class 1d	WEATHERED ROCK (Inferred based on drilling observations)			90	S-22	SS	0	50/0"	50/0"			
						91								
	-85.0	Class 1a	Gray MICA SCHIST			92					Slow, difficult drilling observed 88'-89.5' Very slow, difficult drilling observed 89.5'-90' SS at 90' SS observed to bounce Advanced 3" I.D. casing to 88' (Push) End of day's work at 2:30PM on 7/2/14 Resumed drilling on 7/7/14 Advanced 3" casing to 90' (Spin) Drilled to 91' with 2-15/16" roller bit Gray wash Very slow, difficult drilling observed 90'-91'			
						93	C-1	NX CORE				10:21		
						94							11:40	
						95								5:42

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Project				Project No.										
Proposed 250 South Street Development				009225510										
Location				Elevation and Datum										
New York, New York				Approx. el 4.5 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coning (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
							Number	Type	Recov. (in)	Penetr. resist. BU/6in		N-Value (Blows/ft)		
	96.5	Class 1a	Gray MICA SCHIST with quartz inclusions			95	C-1	NX CORE	REC=58"/60" =97%	RQD=58"/60" =97%		Roller bit refusal observed at 91' Started NX Rock core run C-1 at 91' at 8:44AM Light gray wash Driller increased drill rig revolution speed at 93' Finished core run C-1 at 96' at 9:26AM Started NX Rock core run C-2 at 96' at 9:52AM Light gray wash Finished core run C-2 at 101' at 10:34AM Boring backfilled with drill cuttings upon completion.		
						8:01								
						96								
						5:11								
						97								
						5:38								
						98								
						5:29								
						99								
						9:27								
						100								
			End of boring at 101' at 11:00 AM on 7/7/14			101								
						102								
						103								
						104								
						105								
						106								
						107								
						108								
						109								
						110								
						111								
						112								
						113								
						114								
						115								
						116								
						117								
						118								
						119								
						120								

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# LANGAN

Project				Project No.			
Proposed 250 South Street Development				009225510			
Location				Elevation and Datum			
New York, New York				Approx. el 4.5 (MBPD)			
Drilling Company				Date Started		Date Finished	
Warren George, Inc.				7/8/14		7/11/14	
Drilling Equipment				Completion Depth		Rock Depth	
Acker AD-II Truck-Mounted Drill Rig				118 ft		95 ft	
Size and Type of Bit				Number of Samples		Disturbed	Undisturbed
2-15/16", 3-7/8", and 4-7/8" Tricone Roller Bits				24			Core
Casing Diameter (in)		Casing Depth (ft)		Water Level (ft)		First	Completion
3", 4" I.D. Steel Casing		108		5		5	24 HR.
Casing Hammer		Weight (lbs)	Drop (in)	Drilling Foreman			
Safety		300	30	Eddie Cardona			
Sampler				Inspecting Engineer			
2" O.D. Split Spoon and NX Core Barrel				Keith Herman			
Sampler Hammer		Weight (lbs)	Drop (in)				
Safety		140	30				

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
							Number	Type	Recov (in)	Penetr resist BU/in		N-Value (Blows/ft)	
	+4.5					0							
			Brown f-c SAND, some silt, trace fine gravel, trace brick, trace concrete (dry) [FILL]	0.0		1	S-1	SS	14	13	26		Started drilling at 8:55AM on 7/8/14 SS 0'-2'
						2				11			SS 2'-4'
			Brown f-c SAND, some silt, trace f-c gravel, trace brick, trace glass (moist) [FILL]	0.0		3	S-2	SS	5	22	51		Drilled to 5' with 4-7/8" roller bit Dark brown wash Difficult drilling observed 4'-4.5'
						4				29			
						5				31			
			Dark brown f-c SAND, some silt, trace f-c gravel, trace brick (wet) [FILL]	0.0		6	S-3	SS	10	15	33		SS 5'-7' Advanced 4" I.D. casing to 9' (Hammer) Drilled to 10' with 3-7/8" roller bit Dark grayish brown wash
						7				11			
			Dark gray f-m SAND, some silt, trace wood, trace coarse sand (wet) [FILL]	0.0		8	S-4	SS	9	13	34		
						9				21			
						10				23			
		Class 7	Dark gray WOOD, some f-c sand, some silt, trace fine gravel (wet) [FILL]	0.0		11	S-5	SS	2	17	10		SS 10'-12'
						12				4			
			Dark gray f-c SAND, trace brick, trace silt, trace fine gravel (wet) [FILL]	0.0		13	S-6	SS	6	6	13		SS 12'-14' Drilled to 15' with 3-7/8" roller bit Dark gray wash
						14				7			
						15				10			
			Dark gray f-m SAND, trace silt, trace coarse sand, trace brick (wet) [FILL]	0.0		16	S-7	SS	8	5	21		SS 15'-17' Drilled to 20' with 3-7/8" roller bit Dark gray wash
						17				10			
						18				8			
						19							
						20							

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Project			Project No.									
Proposed 250 South Street Development			009225510									
Location			Elevation and Datum									
New York, New York			Approx. el 4.5 (MBPD)									
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks	
							Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
			Dark gray to black f-m SAND, trace coarse sand, trace silt, trace brick, trace glass (wet) [FILL]	0.0		20	S-8	SS	5	7	11	SS 20'-22' Advanced 4" I.D. casing to 24' (Hammer) Drilled to 25' with 3-7/8" roller bit Dark gray wash
			Black f-m SAND, trace coarse sand, trace f-c gravel, trace silt, trace brick, trace pottery fragments (wet) [FILL]	0.0		21			6			
						22			6			
						23						
						24						
						25						SS 25'-27' Drilled to 30' with 3-7/8" roller bit Dark gray wash
						26	S-9	SS	6	9	8	
						27			3	5		
						28						
						29						
		Class 7	Black f-m SAND, trace coarse sand, trace f-c gravel, trace silt, trace brick, trace pottery fragments (wet) [FILL]	0.0		30						
						31	S-10	SS	4	7	14	SS 30'-32' Drilled to 35' with 3-7/8" roller bit Dark gray wash
						32			6	8		
						33						
						34						
						35						
						36	S-11	SS	2	7	9	SS 35'-37' Drilled to 40' with 3-7/8" roller bit Dark gray wash
			Black f-m SAND, some concrete, trace silt, trace brick (wet) [FILL]	0.0		37			3	6		
						38						
						39						
						40						
						41	S-12	SS	6	8	5	SS 40'-42' End of day's work at 1:30PM on 7/8/14 Resumed drilling at 7:45AM on 7/9/14 Advanced 4" I.D. casing to 39' (Hammer) Drilled to 45' with 3-7/8" roller bit Dark gray wash
			Dark gray SILT, some fine sand, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		42			2	3		
		Class 6				43						
						44						
						45						

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Project		Project No.															
Proposed 250 South Street Development		009225510															
Location		Elevation and Datum															
New York, New York		Approx. el 4.5 (MBPD)															
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)						
							Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)					
[Diagonal Hatching]	-42.0	Class 4b	Dark gray Silty CLAY, trace fine gravel, trace fine sand, trace wood (wet) [FORMER RIVER BOTTOM DEPOSIT]	0.0		45				6		SS 45'-47' Drilled to 50' with 3-7/8" roller bit Dark gray wash					
			Dark gray f-c SAND, some silt, some f-c gravel (wet)			46	S-13A	SS	7	13	4		17				
[Dotted Pattern]			Brown fine SAND (wet)	0.0		47	S-13B	SS	7	7			SS 50'-52' Drilled to 55' with 3-7/8" roller bit Dark gray wash				
						48											
						49											
						50								9			
						51	S-14	SS	13	6	4	10					
						52								8			
						53											
						54											
						55									8		
						56	S-15	SS	16	9	7	16					
[Dotted Pattern]		Class 3b	Brown f-m SAND, trace coarse sand, trace fine gravel (wet)	0.0		57				10			SS 55'-57' Drilled to 60' with 3-7/8" roller bit Dark gray wash				
						58											
						59											
						60											
						61	S-16	SS	18	13	7	17					
						62								18			
						63											
						64											
[Dotted Pattern]	-60.5	Class 3a	Grayish brown f-m SAND, trace coarse sand (wet)	0.0		65							SS 60'-62' Drilled to 65' with 3-7/8" roller bit Brownish gray wash				
						66	S-17	SS	14	23	16	32					
						67								16			
						68											
						69											
						70											

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Project		Project No.													
Proposed 250 South Street Development		009225510													
Location		Elevation and Datum													
New York, New York		Approx. el 4.5 (MBPD)													
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coning (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)				
							Number	Type	Recov. (in)	Penetr resist. BL/6in		N-Value (Blows/ft)			
[Symbol: Fine Sand]	-70.5	Class 3b	Grayish brown f-c SAND, trace fine gravel, trace silt (wet)	0.0		70	S-18	SS	15	14	27	SS 70'-72'			
						71							13	Drilled to 75' with 3-7/8" roller bit	
						72							14		Grayish brown wash
						73							16		
						74									
75															
[Symbol: Medium Sand]	-75.5	Class 3a	Grayish brown f-m SAND, trace coarse sand, trace silt (wet)	0.0		75	S-19	SS	11	13	53	SS 75'-77'			
						76							20	Drilled to 85' with 3-7/8" roller bit	
						77							33		Grayish brown wash
						78							29		
						79									
80															
[Symbol: Gravelly Sand]	-78.5	Class 3a	Grayish brown Gravelly f-c SAND, trace silt (wet)	0.0		80	S-20	SS	14	92	107	SS 80'-82'			
						81							52	Drilled to 85' with 3-7/8" roller bit	
						82							55		Grayish brown wash
						83							74		
						84									
85															
[Symbol: Gravelly Sand]	-83.0	Class 3a	Grayish brown Gravelly f-c SAND, trace silt (wet)	0.0		85	S-21	SS	10	38	75	SS 85'-87'			
						86							35	Drilled to 90' with 3-7/8" roller bit	
						87							40		Grayish brown wash
						88							37		
						89									
90															
[Symbol: Cobble]	-84.0	Class 3a	COBBLE (Inferred based on drilling observations)	0.0		90	S-22	SS	1	75/1"	75/1"	SS 90'-90'1"			
						91								Drilled to 95' with 3-7/8" roller bit	
						92									Grayish brown wash
						93									
						94									
95															
[Symbol: Fine Sand]	-89.5	Class 3a	Brownish gray f-c SAND, some f-c gravel, trace silt (wet)	0.0		90	S-22	SS	1	75/1"	75/1"	SS 90'-90'1"			
						91								Drilled to 95' with 3-7/8" roller bit	
						92									Grayish brown wash
						93									
						94									
95															

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# LANGAN

Project		Project No.										
Proposed 250 South Street Development		009225510										
Location		Elevation and Datum										
New York, New York		Approx. el 4.5 (MBPD)										
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	PID Reading (ppm)	Coring (min)	Depth Scale	Sample Data				Remarks <small>(Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)</small>	
							Number	Type	Recov. (in)	Penetr resist BL/6in		N-Value (Blows/ft)
		Class 1d	Dark gray DECOMPOSED MICA SCHIST	0.0		95	S-23	SS	1	100/1"	100/1"	SS 95'-95'1" End of day's work at 3:00PM on 7/9/14
	-92.0		WEATHERED ROCK (inferred based on drilling observations)			96						Resumed drilling at 7:25AM on 7/10/14
	-93.0		WEATHERED ROCK (inferred based on drilling observations)			97						Drilled to 100' with 3-7/8" roller bit
	-94.0		WEATHERED ROCK (inferred based on drilling observations)			98						Grayish brown wash
	-94.5		WEATHERED ROCK (inferred based on drilling observations)			99						Hard drilling with light rig chatter observed 95'-96'
			No Recovery			100	S-24	SS	0	86	75/2"	Very slow, difficult drilling observed 96.5'-97.5' and 98.5'-99'
			No Recovery			101						Moderate rig chatter observed 99'-100'
			No Recovery			102						SS 100'-100'8"
			No Recovery			103						Drilled to 108' with 3-7/8" roller bit
			No Recovery			104						Grayish brown wash
		Class 1a	GRAY MICA SCHIST			105					Very slow, difficult drilling observed 103.5'-108'	
	-103.5		GRAY MICA SCHIST			106						
			GRAY MICA SCHIST			107						
			GRAY MICA SCHIST			108						Roller bit refusal at 108'
			GRAY MICA SCHIST			109						Advanced 3" I.D. casing to 103.5' (Spin)
			GRAY MICA SCHIST			110						End of day's work at 2:30PM on 7/10/14
			GRAY MICA SCHIST			111						Resumed drilling at 7:30AM on 7/11/14
			GRAY MICA SCHIST			112						Advanced 3" I.D. casing to 108' (Spin)
			GRAY MICA SCHIST			113						Redrilled to 108' with 2-15/16" roller bit
			GRAY MICA SCHIST			114						Started NX Rock core run C-1 at 108' at 9:47AM
		Class 1b	GRAY MICA SCHIST			115					Light brownish gray wash	
	-108.5		GRAY MICA SCHIST			116					Finished core run C-1 at 113' at 10:49AM	
			GRAY MICA SCHIST			117					Started NX Rock core run C-2 at 113' at 10:49AM	
			GRAY MICA SCHIST			118					Light brownish gray wash	
			GRAY MICA SCHIST			119						
			GRAY MICA SCHIST			120						
			End of Boring at 118' at 11:45 AM on 7/11/14.								Finished core run C-2 at 118' at 11:17AM	
											Boring backfilled with drill cuttings upon completion	

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