



PROJECT NUMBER:

338884.FL

BORING NUMBER:

MW-14D

SHEET 1 OF 7

SOIL BORING LOG

PROJECT : Progress Energy Florida - COLA Investigation, Levy County Site LOCATION : (1724099.3 N, 457695.6 E)

ELEVATION : 42.6 ft MSL (NGVD83)

DRILLING CONTRACTOR : Prosonic, Ocala, FL; Driller: N. Gamache

DRILLING EQUIPMENT AND METHOD : Rotosonic, S/N SR116, Sonic, 4" x 6"

ORIENTATION : Vertical

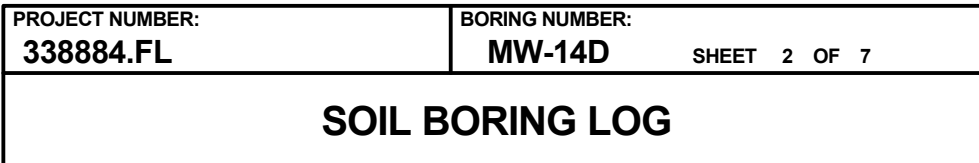
WATER LEVELS : ---

START : 2/6/2007

END : 2/6/2007

LOGGER : W. Elliot, C. Sump

DEPTH BELOW EXISTING GRADE (ft)		INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS		SOIL DESCRIPTION		SYMBOLIC LOG	COMMENTS	
		RECOVERY (in)		6"-6"-6" (N)		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY			DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION	
		#TYPE								
42.6	0.0						Poorly Graded Sand With Silt (SP-SM) 0.0-1.0' - pale yellowish brown, (10YR 6/2), moist, loose, fine grained, nonplastic, est. 5-10% fines, silica sand Silty Sand (SM) 1.0-3.0' - Same as 0.0-1.0' except moderate brown, (5YR 4/4), fines increase, organics			
		80.0	R1-SN				Silty Sand (SM) 3.0-4.0' - Same as 1.0-3.0' except dusky brown (5YR 2/2) sand/hematite nodules, up to 1.5" in diameter Clayey Sand (SC) 4.0-4.7' - pale olive gray, (5Y 5/2), moist, dense, fine grained, low to medium plasticity, bottom 0.3' missing but fine yellow material on bottom face, silica sand No Recovery 4.7-5.0' Silt (ML) 5.0-7.0' - pale yellowish orange, (5Y 5/2), moist, loose, nonplastic, mild HCl reaction, carbonate			
5 37.6	7.0						Silt (ML) 7.0-10.0' - Same as 5.0-7.0' except silica sand			





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SHEET 3 OF 7

SOIL BORING LOG

PROJECT : Progress Energy Florida - COLA Investigation, Levy County Site LOCATION : (1724099.3 N, 457695.6 E)

ELEVATION : 42.6 ft MSL (NGVD83)

DRILLING CONTRACTOR : Prosonic, Ocala, FL; Driller: N. Gamache

DRILLING EQUIPMENT AND METHOD : Rotosonic, S/N SR116, Sonic, 4" x 6"

ORIENTATION : Vertical

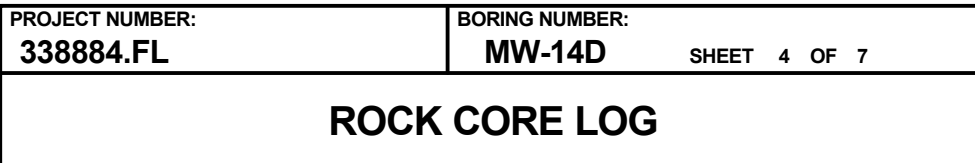
WATER LEVELS : ---

START : 2/6/2007

END : 2/6/2007

LOGGER : W. Elliot, C. Sump

WATER LEVELS:		START: 2/2/2007		END: 2/2/2007		LOGGERS: W. EMM, G. CAMP		
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS	SOIL DESCRIPTION		SYMBOLIC LOG	COMMENTS	
	RECOVERY (in)	#TYPE		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY			DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION	
								6"-6"-6" (N)
2.6					40.3-44.3' - increasing gravel-sized fragments			
45		96.0	R5-SN		Silty Sand (SM) 44.3-45.0' - fine to coarse sand-sized carbonate material, friable, all carbonate materials No Recovery 45.0-47.0'			
-2.4								
		47.0						
					Limestone And Lean Clay (CL) 47.0-48.3' - dark gray, (N3), low to medium plasticity, est. 25-40% limestone fragments, 70-80% 0.5-1mm voids on surface, few fossil molds Limestone 48.3-49.5' - yellowish gray, (5Y 7/2), silt/clay, 2" thick, interbeds spaced 5 to 6" apart with limestone fragments, limestone has 60 - 70% 1 - 2 mm voids, poorly to moderately fossiliferous (molds, casts) Limestone 49.5-51.9' - Same as 43.3-49.5' except silt and fine sand-sized interbeds, all carbonate materials			
50								
-7.4								
		120.0	R6-SN					
					Limestone 51.9-54.5' - dusky yellow, (5Y 6/4), silt/clay, 0.5-1.5 mm thick, interbeds spaced 2 to 6 inches apart, carbonate, limestone has 40% voids, poorly to moderately fossiliferous (molds, some casts)			
55								
-12.4					Silt (SM) 54.5-55.2' - moderate brown, (5YR 4/4), black laminae staining (organics) on surface, carbonate silt with est. 10% gravel-sized limestone fragments Lean Clay (CL) 55.2-55.8' - medium gray, (N5), moist, low plasticity, moderate to strong HCl reaction, est. 10% limestone fragments, all carbonate Limestone 55.8-56.7' - Same as 51.9-54.5' Begin Rock Coring at 56.7 ft bgs See the next sheet for the rock core log			
60								



ORIENTATION : Vertical

LOGGER : W. Elliot, C. Sump

WATER LEVEL (ft)		DISCONTINUITIES		SYMBOLIC LOG	LITHOLOGY		COMMENTS
DEPTH AND ELEVATION BELOW SURFACE (ft)	CORE RUN, LENGTH, AND RECOVERY (%)	R Q D (%)	FRACTURES PER FOOT		DESCRIPTION		
					DEPTH, TYPE, ORIENTATION, ROUGHNESS, PLANARITY, INFILLING MATERIAL AND THICKNESS, SURFACE STAINING, AND TIGHTNESS		
57.0 <							

ROCK CORE LOG

PROJECT : Progress Energy Florida - COLA Investigation, Levy County Site LOCATION : (1724099.3 N, 457695.6 E)

ELEVATION : 42.6 ft MSL (NGVD83)

DRILLING CONTRACTOR : Prosonic, Ocala, FL; Driller: N. Gamache

CORING EQUIPMENT AND METHOD : Rotosonic, S/N SR116, Sonic, 4" x 6"

ORIENTATION : Vertical

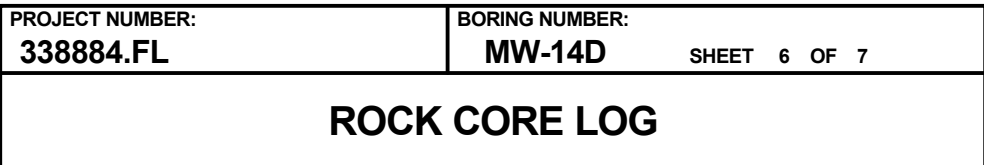
WATER LEVELS : ---

START : 2/6/2007

END : 2/6/2007

LOGGER : W. Elliot, C. Sump

WATER LEVELS		DISCONTINUITIES		SYMBOLIC LOG	LITHOLOGY		COMMENTS
DEPTH AND ELEVATION BELOW SURFACE (ft)	CORE RUN, LENGTH, AND RECOVERY (%)	R Q D (%)	FRACTURES PER FOOT		DESCRIPTION		
					DEPTH, TYPE, ORIENTATION, ROUGHNESS, PLANARITY, INFILLING MATERIAL AND THICKNESS, SURFACE STAINING, AND TIGHTNESS		
77.0							
80 -37.4	R9-SN 10 ft 45%	NA	NA	77.0-87.0' - NA		No Recovery 76.5-77.0' Limestone 77.0-81.5' - moderate yellowish brown, (10YR 5/4), est. 10-15% fossil molds and casts, dark brown/black inclusions (organic or lignite), numerous cavities 0.5-1.0 mm, voids covering nearly 100% of surface, cavities over 5-8% of surface decreasing with depth, up to 0.5" deep	
85 -42.4							
87.0							
90 -47.4	R8-SN 47 ft 21%	NA	NA	87.0-97.0' - NA		Silt (ML) 87.0-87.3' - pale yellowish brown, (10YR 6/2), strong HCl reaction, 1/8" dark blackish brown surface coating, soft (organic), carbonate material Limestone 87.3-88.0' - pale brown, (5YR 5/2), voids/fossil molds over 100% of surface, inclusions of light tan colored fine-grained limestone Limestone 88.0-90.0' - light brownish gray, (5YR 6/1), fine-grained, voids contained in irregular lenses, dark needle-like inclusions (lignite or organic), > 1" linear molds with dark brown surface staining, sparse cavities 0.25-1.0"+ Limestone 90.0-92.0' - moderate yellowish brown, (10YR 5/4), fossiliferous, numerous cavities Limestone 92.0-95.0' - yellowish gray to light gray, (5Y 8/1, N7), moderate HCl reaction, fine-grained, voids occur in irregular lenses	
95 -52.4	R10-SN 10 ft 100%	NA	NA				



LOGGER : W. Elliot, C. Sump

DEPTH AND ELEVATION BELOW SURFACE (ft)	CORE RUN, LENGTH, AND RECOVERY (%)	DISCONTINUITIES		SYMBOLIC LOG	LITHOLOGY		COMMENTS
		R Q D (%)	FRACTURES PER FOOT		DESCRIPTION	ROCK TYPE, COLOR, MINERALOGY, TEXTURE, WEATHERING, HARDNESS, AND ROCK MASS CHARACTERISTICS	
					DEPTH, TYPE, ORIENTATION, ROUGHNESS, PLANARITY, INFILLING MATERIAL AND THICKNESS, SURFACE STAINING, AND TIGHTNESS		
97.0							
100 -57.4	R11-SN 10 ft 65%	NA	NA		97.0-107.0' - NA	Disaggregated Limestone 95.0-97.0' - light gray, (N7), moderate to strong HCl reaction, silt-sized carbonate fiens, sand and gravel-sized limestone fragments Limestone 97.0-102.0' - light yellowish gray, (5Y 7/2), strong HCl reaction, fossiliferous, 30-60% of surface voids in irregular lenses, numerous fossil molds and casts, horizontal laminating, dark brown/black staining on some parting planes on fossil casts, dark black/brown void/fossil mold infilling, organics	
105 -62.4		NA	NA			No Recovery 102.0-106.0'	
107.0							
110 -67.4		NA	NA		107.0-120.0' - NA	Disaggregated Limestone 106.0-107.0' - yellowish gray, (5Y 7/2), carbonate silt and sand to gravel-sized limestone up to 2" Limestone 107.0-111.0' - strong HCl reaction, fossiliferous, variable void percent, zones of thin lamination, limestone fragments up to 3", sand-sized fragments from 0.25-0.5"	
115 -72.4	R12-SN 13 ft 31%	NA	NA			No Recovery 111.0-120.0'	
							R12 - 4' of material recovered; lost last 2' during retrieval (118-120'); remainder of recovered material is from unknown depth; presume most fine grained materials washed out.



PROJECT NUMBER: 338884.FL	BORING NUMBER: MW-14D	SHEET 7 OF 7
ROCK CORE LOG		

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ELEVATION : 42.6 ft MSL (NGVD83) DRILLING CONTRACTOR : Prosonic, Ocala, FL; Driller: N. Gamache

CORING EQUIPMENT AND METHOD : Rotosonic, S/N SR116, Sonic, 4" x 6" ORIENTATION : Vertical

WATER LEVELS : --- START : 2/6/2007 END : 2/6/2007 LOGGER : W. Elliot, C. Sump

DEPTH AND ELEVATION BELOW SURFACE (ft)	CORE RUN LENGTH AND RECOVERY (%)	DISCONTINUITIES			SYMBOLIC LOG	LITHOLOGY	COMMENTS
		R Q D (%)	FRACTURES PER FOOT	DESCRIPTION			
				DEPTH, TYPE, ORIENTATION, ROUGHNESS, PLANARITY, INFILLING MATERIAL AND THICKNESS, SURFACE STAINING, AND TIGHTNESS		ROCK TYPE, COLOR, MINERALOGY, TEXTURE, WEATHERING, HARDNESS, AND ROCK MASS CHARACTERISTICS	SIZE AND DEPTH OF CASING, FLUID LOSS, CORING RATE AND SMOOTHNESS, CAVING ROD DROPS, TEST RESULTS, ETC.
120 -77.4	120.0		NA				
			NA				
			NA				
						Bottom of Boring at 120.0 ft bgs on 2/6/2007	
125 -82.4							
130 -87.4							
135 -92.4							