



PROJECT NUMBER:

338884.FL

BORING NUMBER:

MW8D

SHEET 1 OF 8

SOIL BORING LOG

PROJECT : Progress Energy Florida - COLA Investigation, Levy County Site LOCATION : (1724922.2 N, 458475.1 E)

ELEVATION : 44.0 ft MSL (NGVD83)

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

DRILLING EQUIPMENT AND METHOD : Rotasonic, S/N SR116, sonic, 4" x 6"

ORIENTATION : Vertical

WATER LEVELS : ---

START : 1/30/2007

END : 1/31/2007

LOGGER : M. Faurote

WATER LEVELS:		START: 7/22/2007		END: 7/26/2007		LOGGERS: M. FARRIS		
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS		SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS	
	RECOVERY (in)	#TYPE	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			
44.0	0.0				Poorly Graded Sand (SW) 0-1.1' - grayish, red-purple, (5RP4/2), silica sand			
					Poorly Graded Sand With Silt (SW-SM) 1.1-2.8' - dusky brown mottled gray, (5YR 2/2), silica sand			
	76.8	R1-SN			Poorly Graded Sand To Poorly Graded Sand With Silt (SP-SM) 2.8-6.4' - gray, (5GY 6/1), silica sand, nonplastic fines increase with depth			
5 39.0	6.4				Limestone 6.4-13.0' - dark yellow to orange, (10YR 6/6), mild HCl reaction, very small fossil casts			
		115.2	R2-SN		Sandy Silt And Limestone (ML) 13.0-16.5' - dark yellow to orange, (10YR 6/6), strong HCl reaction, low plasticity fines, sand and silt sized carbonate materials, non indurated, with limestone up to 4" x 1/2" at 15-16'.			
	16.0				Silt With Sand (ML) 16.5-19.5' - dark yellowish to orange to light brown, (10YR 6/6; 5YR 6/4), wet, low plasticity, strong HCl reaction, carbonate materials			
10 34.0								
15 29.0								
20								



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SHEET 2 OF 8

SOIL BORING LOG

PROJECT : Progress Energy Florida - COLA Investigation, Levy County Site LOCATION : (1724922.2 N, 458475.1 E)

ELEVATION : 44.0 ft MSL (NGVD83)

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

DRILLING EQUIPMENT AND METHOD : Rotasonic, S/N SR116, sonic, 4" x 6"

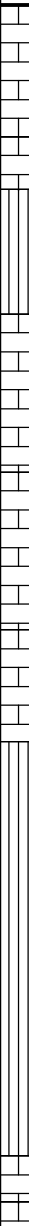
ORIENTATION : Vertical

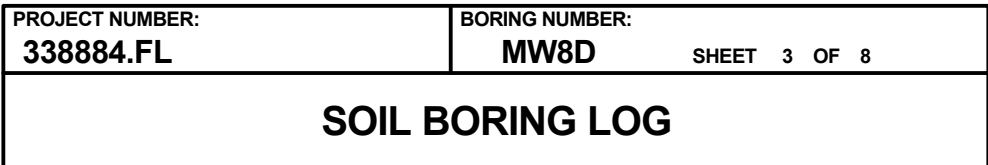
WATER LEVELS : ---

START : 1/30/2007

END : 1/31/2007

LOGGER : M. Faurote

DEPTH BELOW EXISTING GRADE (ft)		INTERVAL (ft)		STANDARD PENETRATION TEST RESULTS		SOIL DESCRIPTION		SYMBOLIC LOG	COMMENTS	
		RECOVERY (in)				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		6"-6"-6" (N)						
24.0		120.0	R3-SN			Sandy Silt With Limestone (ML) 19.5-22.0' - dusky yellow, (5Y 6/4), low plasticity, strong HCl reaction, gravel-sized limestone up to 2"x1.5", sand and silt-sized carbonate materials			DR: drilling changes from 31-36' into sand	
						Silt With Sand (ML) 22.0-22.8' - dusky yellow, (5Y 6/4), moist, low plasticity, mild to moderate HCl reaction, carbonate materials				
						Silt To Silt With Sand (ML) 22.8-24.7' - Same as 22.0-22.8' except trace fine gravel-sized limestone fragments				
25 19.0	26.0					Sandy Silt And Limestone (ML) 24.7-27.1' - dusky yellow, (5Y 6/4), moist, friable, loose, carbonate materials				
						Limestone 27.1-29.5' - light brown, (5Y 5/6), limestone fragments up to 3"x4"				
30 14.0	120.0	R4-SN				Sandy Silt And Limestone (ML) 29.5-31.2' - moderate yellowish brown, (10YR 5/4), moist, low plasticity, mild HCl reaction, limestone increased with depth; moisture decreases with depth, carbonate materials				
						Silt To Sandy Silt (ML) 31.0-37.5' - moderate brown, (5YR 4/4), silt grading into sandy silt, limestone fragments at 35-36', carbonate materials				
35 9.0	36.0									
40						Limestone 37.5-38.2' - dark yellowish brown, (10YR 4/2), voids over surface Silty Sand And Limestone (SM) 37.5-42.0' - moderate yellowish brown, (10YR 5/4), mild to moderate HCl reaction, sand and silt-sized carbonate materials, gravel-sized limestone				





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SHEET 4 OF 8

ROCK CORE LOG

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ELEVATION : 44.0 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 : 1/30/2007

END : 1/31/2007

LOGGER : M. Faurote

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.
55 -11.0	R6-SN 10 ft 100%	NA	NA	50.8-56.0' - NA		Limestone 50.8-57.9' - moderate brown, (5YR 4/4), mild HCl reaction, fossiliferous, voids over surface, angular fragments up to 3.5" x 4"	
			NA				
			NA				
			NA				
			NA				
60 -16.0	R7-SN 10 ft 100%	NA	NA	56.0-66.0' - NA		Disaggregated Limestone 57.9-60.3' - moderate yellowish brown, (10 YR 5/4), mild to moderate HCl reaction, silt, sand and gravel-sized limestone fragments	
			NA				
			NA				
			NA				
			NA				
65 -21.0	R7-SN 10 ft 100%	NA	NA			Disaggregated Limestone 60.3-66.4' - moderate yellowish brown, (10 YR 5/4), silt, sand and gravel-sized limestone, fossiliferous, mild HCl reaction, carbonate sand from 64.5-65.0' and 66.0-66.4'	
			NA				
			NA				
			NA				
			NA				
70 -26.0	R8-SN		NA	66.0-76.0' - NA		Limestone 66.4-70.0' - moderate yellowish brown, (10 YR 5/4), mild HCl reaction, fossil casts and molds, mild HCl reaction 67.1-67.2' - grayish orange pink, (5YR 7/2), Fat clay around limestone fragments	
			NA				
			NA				
			NA				
			NA				
							DR: Minimum effort needed to drill



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SHEET 5 OF 8

ROCK CORE LOG

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ELEVATION : 44.0 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

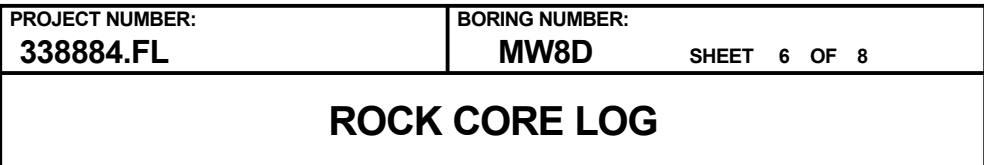
WATER LEVELS : ---

START : 1/30/2007

END : 1/31/2007

LOGGER : M. Faurote

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	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.
					DEPTH, TYPE, ORIENTATION, ROUGHNESS, PLANARITY, INFILLING MATERIAL AND THICKNESS, SURFACE STAINING, AND TIGHTNESS		
75 -31.0	10 ft 100%	NA	NA	76.0-86.0' - NA		Disaggregated Limestone 70.0-75.0' - light brown to moderate brown, (5YR 5/6 to 5YR 4/4), fossiliferous, fragments separated by 0.25-1.0" of grayish orange pink (5YR 7/2), silt/clay layers from 73.0-75.0'	
		NA				Lean Clay (CL) 75.0-75.5' - grayish orange pink, (5YR 7/2)	
		NA				Disaggregated Limestone 75.5-78.5' - olive brown, (5Y 4/4), moderate HCl reaction, well graded carbonate sand grains up to 3 mm, carbonate silts and gravel-sized limestone fragments	
		NA				Limestone 78.5-80.0' - moderate brown, (5Y 4/4), mild HCl reaction, vuggy limestone, abundant fossil molds, trace organics	
		NA				Disaggregated Limestone 80.0-81.5' - Same as 75.5-78.5' except light brown, (5YR 4/4)	
		NA				Silt With Sand (ML) 81.5-82.0' - moderate yellowish brown, (10YR 5/4), mild HCl reaction, black organic partings decreasing with depth	
		NA				Limestone Fragments 82.0-83.5' - pale yellowish brown, (10YR 6/2), mild HCl reaction, poorly fossiliferous limestone fragments	
		NA				Disaggregated Limestone 83.5-85.0' - moderate yellowish brown, (10YR 5/4), mild HCl reaction, high plasticity carbonate clay grading to carbonate sand and gravel-sized limestone	
		NA				Limestone Fragments 85.0-87.8' - dark greenish gray, (5GY 4/1), fragments up to 4" long, fossiliferous, carbonate sand and silt between fragments, voids on surface	
		NA				Disaggregated Limestone 87.8-94.0' - light olive gray, (5Y 5/2), mild to moderate HCl reaction, well graded silt, sand and gravel-sized carbonate materials	
80 -36.0	R9-SN 10 ft 100%	NA	NA	86.0-96.0' - NA			
		NA					
		NA					
		NA					
		NA					
		NA					
		NA					
		NA					
		NA					
		NA					
85 -41.0	86.0						
90 -46.0							
	R10-SN						



LOGGER : M. Faurote

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	ROCK TYPE, COLOR, MINERALOGY, TEXTURE, WEATHERING, HARDNESS, AND ROCK MASS CHARACTERISTICS	
					DEPTH, TYPE, ORIENTATION, ROUGHNESS, PLANARITY, INFILLING MATERIAL AND THICKNESS, SURFACE STAINING, AND TIGHTNESS		
95 -51.0 							



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SHEET 7 OF 8

ROCK CORE LOG

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

ORIENTATION : Vertical

WATER LEVELS : ---

START : 1/30/2007

END : 1/31/2007

LOGGER : M. Faurote

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	SIZE AND DEPTH OF CASING, FLUID LOSS, CORING RATE AND SMOOTHNESS, CAVING ROD DROPS, TEST RESULTS, ETC.
				DEPTH, TYPE, ORIENTATION, ROUGHNESS, PLANARITY, INFILLING MATERIAL AND THICKNESS, SURFACE STAINING, AND TIGHTNESS			
115 -71.0	10 ft 100%	NA	NA	116.0-126.0' - NA		Disaggregated Limestone 114.9-120.0' - grayish orange, (10YR 7/4), mild to moderate HCl reaction, well graded gravel sized limestone fragments in a matrix of silt and sand-sized carbonate grains, poorly fossiliferous, poorly indurated fragments	
			NA				
			NA				
			NA				
			NA				
120 -76.0	R13-SN 10 ft 100%	NA	NA	126.0-136.0' - NA		Disaggregated Limestone 120.0-127.0' - grayish orange pink, (5YR 7/2), mild HCl reaction, well graded friable gravel, sand and silt-sized carbonate materials, fossiliferous, poorly indurated	
			NA				
			NA				
			NA				
			NA				
125 -81.0	R14-SN		NA			Disaggregated Limestone 127.0-127.9' - pale reddish brown, (10R 5/4), mild HCl reaction, carbonate silt with limestone fragments Disaggregated Limestone 127.9-128.8' - yellow gray, (5Y 9/2), mild to strong HCl reaction, silt and sand-sized carbonate materials	
			NA				
			NA				
			NA				
			NA				
130 -86.0			NA				

ROCK CORE LOG

PROJECT : Progress Energy Florida - COLA Investigation, Levy County Site LOCATION : (1724922.2 N, 458475.1 E)

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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 : 1/30/2007

END : 1/31/2007

LOGGER : M. Faurote

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	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.
					DEPTH, TYPE, ORIENTATION, ROUGHNESS, PLANARITY, INFILLING MATERIAL AND THICKNESS, SURFACE STAINING, AND TIGHTNESS		
135 -91.0	10 ft 100%	NA	NA	136.0-146.0' - NA		Disaggregated Limestone 128.8-134.6' - very pale orange, (10YR 8/2), silt and sand-sized carbonate materials and gravel-sized limestone fragments to 4" x 1" Limestone 134.6-139.0' - gray, (N5), grading to brown with depth, fossil molds and casts, 136.0-136.5' highly fractured zone with sand and silt-sized carbonate grains Disaggregated Limestone 139.0-142.2' - pale yellowish brown, (10YR 6/2), carbonate silt and gravel-sized limestone fragments Elastic Silt With Sand (MH) 142.2-143.4' - pale yellowish brown, (10YR 6/2), medium plasticity, strong HCl reaction, non-indurated Limestone 143.4-148.7' - moderate yellowish brown, (10YR 5/4), very fine grained, mild HCl reaction, fossil molds and casts, voids over surface No Recovery 148.7-150.0'	
			NA				
			NA				
			NA				
			NA				
			NA				
			NA				
			NA				
			NA				
			NA				
			NA				
			NA				
140 -96.0	R15-SN 10 ft 100%	NA	NA	1460-150.0' - NA			
145 -101.0	R16-SN 4 ft 33%	NA	NA	1460-150.0' - NA			
150 -106.0	150.0		NA			Bottom of Boring at 150.0 ft bgs on 1/31/2007	