



PROJECT NUMBER:

338884.FL

BORING NUMBER:

OW-7

SHEET 1 OF 5

SOIL BORING LOG

PROJECT : Progress Energy Florida - COLA Investigation, Levy County Site LOCATION : (1724092.3 N, 457702.6 E)

ELEVATION : 42.6 ft MSL (NGVD83)

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

DRILLING EQUIPMENT AND METHOD : Rotasonic, S/N SR116, sonic, 4"x6"

ORIENTATION : Vertical

WATER LEVELS : ---

START : 2/8/2007

END : 2/9/2007

LOGGER : C. Wallestad, J. Burkard

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 (SP) 0.0-1.5' - pale yellowish brown, (10YR 6/6), fine grained, silica sand, trace organic material			
		72.0	R1-SN				Silty Sand (SM) 1.5-3.6' - dark yellowish orange to pale yellowish brown, (10YR 6/6, 10YR 6/2), mild HCl reaction, carbonate silt, increase in organic material with depth, fine grained silica sand			
5							Silt (ML) 3.6-6.0' - pale yellowish brown to moderate yellowish brown mottled dark yellowish orange, (10YR 6/2, 5/4, 6/6), mild HCl reaction, carbonate silt, <5% silica sand			
37.6	6.0						Poorly Graded Sand (SP) 6.0-7.6' - grayish orange, (10YR 7/4), <5% fine black gravel, 7.3-7.6' increasing fines, fine grained silica sand			
							Clayey Sand (SC) 7.6-8.1' - pale olive, (10Y 6/2), grades to fat clay (CH), silica sand			
		120.0	R2-SN				Silty Sand And Limestone (SM) 8.1-12.9' - pale yellowish orange, (10YR 8/6), moderate HCl reaction, carbonate materials 8.1-9.5' - very weakly indurated			
10							12.5-12.9' - very weakly indurated			
32.6							Limestone 12.9-15.2' - grayish orange, (10YR 7/4), 50-60% of surface covered in >1/16" voids, fossil molds and casts, interbedded with 1" thick clay/silt		Interbeds may be drilling induced	
15							Silty Sand And Limestone (SM) 15.2-26.0' - Same as 8.1-12.9' except very weakly indurated 16.0-26.0' - 30-40% of surface covered in voids, trace of glauconite 16.0-17.8' - very weakly indurated			
27.6	16.0									
							19.2-20.1' - very weakly indurated			
20										



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SHEET 2 OF 5

SOIL BORING LOG

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ELEVATION : 42.6 ft MSL (NGVD83)

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

DRILLING EQUIPMENT AND METHOD : Rotosonic, S/N SR116, sonic, 4"x6"

ORIENTATION : Vertical

WATER LEVELS : ---

START : 2/8/2007

END : 2/9/2007

LOGGER : C. Wallestad, J. Burkard

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									
22.6		120.0	R3-SN				22.9-23.2' - very weakly indurated				
25							24.6-25.2' - very weakly indurated				
17.6	26.0										
		120.0	R4-SN				Limestone 26.0-27.6' - grayish orange, (10YR 7/4), moderate HCl reaction, weak (R2), 50-70% of surface covered in voids to 1mm, fine grained, trace fossil casts and molds				
							Limestone 27.6-31.7' - dark yellowish orange, (10YR 6/6), moderate HCl reaction, silt and sand-sized carbonate materials, gravel-sized limestone fragments with 50-70% of surface covered in voids				
30							Limestone 31.7-37.2' - pale yellowish brown with pale yellowish orange mottling, (10YR 6/2, 8/6), moderate HCl reaction, strong to very strong (R4 to R5), 50% of surface covered in voids to 2mm, fossil molds and casts, 3" interbedded clays			Interbeds may be drilling induced	
12.6	36.0										
							Sandy Silt (ML) 37.2-39.7' - light olive gray, (5Y 5/2), moderate HCl reaction, silt and sand-sized carbonate materials				
35											
7.6											
40											



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SHEET 3 OF 5

SOIL BORING LOG

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ELEVATION : 42.6 ft MSL (NGVD83)

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

DRILLING EQUIPMENT AND METHOD : Rotasonic, S/N SR116, sonic, 4"x6"

ORIENTATION : Vertical

WATER LEVELS : ---

START : 2/8/2007

END : 2/9/2007

LOGGER : C. Wallestad, J. Burkard

WATER LEVELS:		START: 2/2/2007		END: 2/2/2007		LOGGERS: G. Winkler, S. B...		
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	
2.6								
	120.0	R5-SN			Silty Sand And Limestone (SM) 39.7-41.1' - light olive gray, (5Y 5/2), moderate HCl reaction, silt and sand-sized carbonate materials, gravel-sized limestone fragments Limestone 41.1-45.7' - yellowish gray, (5Y 7/2), moderate HCl reaction, weak to strong (R2 to R4), fine grained, 50-70% of surface covered in voids, fossil molds and casts			
45 -2.4					Sandy Silt (ML) 45.7-46.0' - yellowish gray, (5Y 7/2), strong HCl reaction, trace sand and gravel sized fragments, all carbonate materials Begin Rock Coring at 46.0 ft bgs See the next sheet for the rock core log			
50 -7.4								
55 -12.4								
60								



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SHEET 4 OF 5

ROCK CORE LOG

PROJECT : Progress Energy Florida - COLA Investigation, Levy County Site LOCATION : (1724092.3 N, 457702.6 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"x6"

ORIENTATION : Vertical

WATER LEVELS : ---

START : 2/8/2007

END : 2/9/2007

LOGGER : C. Wallestad, J. Burkard

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			
46.0	R6-SN 10 ft 100%	NA	NA	46.0-56.0' - NA		Limestone 46.0-51.0' - yellowish gray, (5Y 7/2), moderate HCl reaction, very strong to extremely weak (R5 to R0), fine to medium grained, up to 2mm voids on 50-100% of surface, moderately fossiliferous, black lignite at 46.1' well indurated except at: 46.0-46.5' - poorly indurated 47.4-47.7' - poorly indurated 47.75-48.1' - poorly indurated 48.8-49.8' - poorly indurated	
50 -7.4			NA			50.4-50.7' - poorly indurated	
			NA			Limestone 51.0-52.9' - pale yellowish brown, (10YR 6/2), moderate HCl reaction, fine to medium grained, well indurated, up to 1mm voids on 50% of surface, poorly fossiliferous, interbedded with carbonate Silt with Sand (ML) 1/4-1" thick, black lignite layer on upper and lower contact surfaces	
55 -12.4			NA			Limestone 52.9-54.3' - Same as 51.0-52.9' except poorly indurated	
			NA			Limestone 54.3-56.0' - pale yellowish brown, (10YR 6/2), moderate HCl reaction, strong (R4), very fine grained, well indurated, up to 2mm voids on 60-70% of surface, moderately fossiliferous, 1mm dark clast	
			NA	56.0-66.0' - NA		Limestone 56.0-57.2' - Same as 54.3-56.0' except increase in black material, thin lineations up to 5%	
60 -17.4			NA			Sandy Elastic Silt (MH) 57.2-58.2' - pale yellowish brown, (10YR 6/2), moist, fine to coarse grained, high plasticity, strong HCl reaction, fine to coarse sand sized and gravel sized fragments, all carbonate materials	
			NA			Limestone 58.2-59.1' - Same as 56.0-57.2'	
65 -22.4	R7-SN 10 ft 100%	NA	NA			Sandy Silt With Limestone (ML) 59.1-61.0' - moderate yellowish brown, (10YR 5/4), moist, moderate HCl reaction, fragments up to 4cm, black lignite laminations in limestone fragments	
			NA				
66.0			NA				



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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"x6"

ORIENTATION : Vertical

WATER LEVELS : ---

START : 2/8/2007

END : 2/9/2007

LOGGER : C. Wallestad, J. Burkard

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			
70 -27.4	R8-SN 9 ft 100%	NA	NA	66.0-75.0' - NA		Limestone 61.0-64.1' - pale yellowish brown, (10YR 6/2), moderate HCl reaction, medium strong to strong (R3 to R4), moderately to well indurated, up to 2mm voids over 50-70% of surface, moderately fossiliferous 62.7-63.2' - sand and gravel sized limestone fragments 63.8-64.1' - sand and gravel sized limestone fragments Silt With Sand (ML) 64.1-64.3' - grayish orange, (10YR 7/4), moist, nonplastic, strong HCl reaction, trace very fine sand-sized, all carbonate materials Limestone 64.3-66.0' - pale yellowish brown, (10YR 6/2), moderate HCl reaction, medium strong to strong (R3 to R4), 1mm voids on 25-35% of surface, poorly fossiliferous, fine grained, silt/clay in between segments at 65.4-65.7' Limestone 66.0-68.6' - grayish orange, (10YR 7/4), strong HCl reaction, weak to strong (R2 to R4), well indurated, up to 1mm voids on 25-50% of surface, up to 5mm voids on 50-70% of surface, moderately fossiliferous Fat Clay (CH) 68.6-68.95' - very pale orange, (10YR 8/2), dry, stiff, high plasticity, strong HCl reaction Limestone 68.95-69.9' - Same as 66.0-68.6' Disaggregated Limestone 69.9-71.5' - dark yellowish orange, (10YR 6/6), fine to coarse grained, strong HCl reaction, 10-20% fine to coarse sand sized and 10-20% gravel sized limestone fragments Limestone 71.5-72.15' - Same as 66.0-68.6' Fat Clay (CH) 72.15-73.5' - very pale orange, (10YR 8/2), dry, high plasticity, 5-10% fine to coarse sand sized particles Limestone 73.5-74.0' - Same as 66.0-68.6'	
75 -32.4	75.0					No Recovery 74.0-75.0' Bottom of Boring at 75.0 ft bgs on 2/9/2007	
80 -37.4							
85 -42.4							