



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0130.1000102.0000
REPORT NO.:	839985
PAGE:	B-2.1

PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 600 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-1**
 SECTION: 12

TOWNSHIP: 30 S

SHEET: **1 of 1**
 RANGE: 23 E

CLIENT:
 LOCATION: SEE BORING LOCATION PLAN

G.S. ELEVATION (ft): N.S.

DATE STARTED: 5/19/10

WATER TABLE (ft): 4.8

DATE FINISHED: 5/19/10

REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

DATE OF READING: 5/22/10

DRILLED BY: ORL-TWDW

EST. SHGWT (ft): 3

TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/DAY)	ORG. CONT. (%)
									LL	PI		
0												
		8-4-3	7			Loose gray brown fine SAND with silt [SP-SM]						
		3-3-5	8	▽		-- shade lighter						
5		5-3-4	7	▽			9	12				
		2-2-2	4			-- very loose						
		2-1-1	2				8	20				
10		3-3-5	8			-- loose, very light gray						
15		7-6-7	13			Medium dense very light gray clayey fine SAND [SC]						
						BORING TERMINATED AT 15.0 FT.						
20												
25												
30												
35												
40												
45												
50												

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UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0130.1000102.0000
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PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 500 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-2** SHEET: **1 of 1**
 SECTION: 12 TOWNSHIP: 30 S RANGE: 23 E

CLIENT: LOCATION: SEE BORING LOCATION PLAN

G.S. ELEVATION (ft): N.S. DATE STARTED: 5/19/10
 WATER TABLE (ft): 6.0 DATE FINISHED: 5/19/10
 DATE OF READING: 5/22/10 DRILLED BY: ORL-TWDW
 EST. SHGWT (ft): 3 TYPE OF SAMPLING: ASTM D 1586

REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/DAY)	ORG. CONT. (%)
									LL	PI		
0						Loose gray brown fine SAND with silt [SP-SM]						
4-4-4		8		▽		-- very light gray brown	6	4			9	
2-3-4		7				-- medium dense, very light gray to white						
5-6-6		12		▽		Medium dense gray brown silty fine SAND [SM]	14	17				
7-8-5		13				-- loose						
3-4-4		8				Medium dense light gray fine SAND with silt [SP-SM]						
5-6-5		11										
10												
5-5-6		11										
15						BORING TERMINATED AT 15.0 FT.						
20												
25												
30												
35												
40												
45												
50												

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UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0130.1000102.0000
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PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 600 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-3**
 SECTION: 12 TOWNSHIP: 30 S RANGE: 23 E

SHEET: **1 of 1**

CLIENT:
 LOCATION: SEE BORING LOCATION PLAN
 REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

G.S. ELEVATION (ft): N.S. DATE STARTED: 5/20/10
 WATER TABLE (ft): 6.2 DATE FINISHED: 5/20/10
 DATE OF READING: 5/22/10 DRILLED BY: ORL-TWDW
 EST. SHGWT (ft): 3 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/DAY)	ORG. CONT. (%)
									LL	PI		
0												
		5-7-8	15		▽	Medium dense gray brown fine SAND with silt [SP-SM]						
		7-5-4	9	-- loose								
		4-3-4	7	-- very dark brown								
		3-3-4	7	-- brown								
		7-10-5	15		▨	Medium dense gray clayey fine SAND [SC]						
10		5-6-7	13				21	18				
		2-2-1	3		▨	Very loose gray silty fine SAND [SM]						
15							BORING TERMINATED AT 15.0 FT.					
20												
25												
30												
35												
40												
45												
50												

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UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0130.1000102.0000
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PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 600 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-4** SHEET: **1 of 1**
 SECTION: 12 TOWNSHIP: 30 S RANGE: 23 E

CLIENT:
 LOCATION: SEE BORING LOCATION PLAN

G.S. ELEVATION (ft): N.S. DATE STARTED: 5/20/10
 WATER TABLE (ft): 6.8 DATE FINISHED: 5/20/10
 DATE OF READING: 5/22/10 DRILLED BY: ORL-TW/DW
 EST. SHGWT (ft): 4 TYPE OF SAMPLING: ASTM D 1586

REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

DEPTH (FT.)	SAMPLER	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/DAY)	ORG. CONT. (%)
									LL	PI		
0												
5-5-8		13				Medium dense gray brown fine SAND with silt, trace of clayey nodules and gravel [SP-SM, SM]	15	8			3	
11-11-8		19		▽								
4-5-5		10				Loose light gray clayey fine SAND [SC]	23	19				
4-4-5		9		▽								
5-6-6		12				Medium dense dark gray fine SAND with silt [SP-SM] -- gray						
7-7-6		13				Medium dense brown silty fine SAND [SM]						
10												
15		3-4-4	8			-- loose, gray brown BORING TERMINATED AT 15.0 FT.						
20												
25												
30												
35												
40												
45												
50												

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UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0130.1000102.0000
REPORT NO.: 839965
PAGE: B-2.5

PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 500 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-5** SHEET: **1 of 1**
 SECTION: 12 TOWNSHIP: 30 S RANGE: 23 E

CLIENT: [Redacted]
 LOCATION: SEE BORING LOCATION PLAN

G.S. ELEVATION (ft): N.S. DATE STARTED: 5/20/10
 WATER TABLE (ft): 6.7 DATE FINISHED: 5/20/10
 DATE OF READING: 5/22/10 DRILLED BY: ORL-TWDW
 EST. SHGWT (ft): 4 TYPE OF SAMPLING: ASTM D 1586

REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/DAY)	ORG. CONT. (%)
									LL	PI		
0		6-7-9	16			Medium dense mixed gray orange silty fine SAND with clayey sand pockets [SM, SC]	22	12				
5		7-6-5	11	▽		Loose gray brown fine SAND with silt, trace rock and clayey nodules [SP-SM, SM]	14	10				
		3-3-2	6			-- shade darker						
		2-2-8	10	▽								
		12-5-3	8			Loose very dark brown fine SAND with silt [SP-SM]						
10		3-5-6	11			-- medium dense; gray brown						
15		8-14-11	25			Medium dense dark brown silty fine SAND [SM]						
						BORING TERMINATED AT 15.0 FT.						
20												
25												
30												
35												
40												
45												
50												

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PROJECT NO.:	0130.1000102.0000
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PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 500 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-6**
 SECTION: 12

TOWNSHIP: 30 S

SHEET: **1 of 1**
 RANGE: 23 E

CLIENT: [Redacted]
 LOCATION: SEE BORING LOCATION PLAN

G.S. ELEVATION (ft): N.S.

DATE STARTED: 5/22/10

WATER TABLE (ft): 6.1

DATE FINISHED: 5/22/10

REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

DATE OF READING: 5/22/10

DRILLED BY: ORL-TW/DW

EST. SHGWT (ft): 4

TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/DAY)	ORG. CONT. (%)
									LL	PI		
0												
	X	7-6-6	12		▽	Medium dense gray brown fine SAND with silt, trace of clayey nodules [SP-SM, SM]						
	X	5-5-5	10			-- loose	14	12			3	
5	X	2-3-5	8		▽	Medium dense orange brown clayey fine SAND [SC] -- gray						
	X	5-6-7	13									
	X	12-12-10	22									
10	X	10-11-10	21									
15	X	6-7-8	15			BORING TERMINATED AT 15.0 FT.						
20												
25												
30												
35												
40												
45												
50												

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UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0130.1000102.0000
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PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 600 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-7**
 SECTION: 12

TOWNSHIP: 30 S

SHEET: **1 of 1**
 RANGE: 23 E

CLIENT:
 LOCATION: SEE BORING LOCATION PLAN

G.S. ELEVATION (ft): N.S.

DATE STARTED: 5/20/10

WATER TABLE (ft): 3.8

DATE FINISHED: 5/20/10

REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

DATE OF READING: 5/20/10

DRILLED BY: ORL-TWDW

EST. SHGWT (ft): 2

TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/DAY)	ORG. CONT. (%)
									LL	PI		
0						Loose brown fine SAND with silt [SP-SM]						
		3-5-4	9	▽		-- gray brown						
		4-4-4	8	▼								
5		2-4-8	12			Medium dense gray brown clayey fine SAND [SC]	27	18				
		9-9-9	18									
		7-8-7	15									
10		7-8-8	16			-- gray						
15		4-4-4	8			Loose brown silty fine SAND [SM]						
20		4-7-9	16			Medium dense light brown fine SAND with silt [SP-SM]						
25		2-3-4	7			-- loose						
30		15-25-13	38			Dense gray brown fine SAND with silt, trace phosphate nodules [SP-SM]						
35		13-36-22	58			Very dense light gray clayey fine SAND with phosphate nodules [SC]						
40		7-8-13	21			-- medium dense, gray						
45		50	50/1"			-- very dense						
50		50	50/2"			BORING TERMINATED AT 50.0 FT.						

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UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0130.1000102.0000
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PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 500 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-8**
 SECTION: 12 TOWNSHIP: 30 S RANGE: 23 E

SHEET: **1 of 1**

CLIENT:
 LOCATION: SEE BORING LOCATION PLAN

G.S. ELEVATION (ft): N.S. DATE STARTED: 6/22/10
 WATER TABLE (ft): 5.1 DATE FINISHED: 6/22/10
 DATE OF READING: 6/22/10 DRILLED BY: ORL-TW/DW
 EST. SHGWT (ft): 4 TYPE OF SAMPLING: ASTM D 1586

REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/DAY)	ORG. CONT. (%)
									LL	PI		
0						Loose gray fine SAND with silt [SP-SM]						
		3-5-3	8			-- gray brown						
		3-3-4	7	▽		-- medium dense, light gray						
5		4-5-10	15	▽								
		7-3-3	6			Loose gray brown clayey fine SAND [SC]						
		7-7-10	17			-- medium dense, orange						
10		12-15-10	25				14	16				
		8-9-16	25			Medium dense gray brown fine SAND with silt [SP-SM]						
15												
		10-12-16	28									
		19-23-18	41			-- dense						
25												
		4-4-4	8			Loose gray brown clayey fine SAND with gravel-sized limestone & phosphate fragments [SC]						
30												
		16-24-21	45			-- dense						
35												
		14-22-18	40			-- with consolidated silt, trace shell						
40												
		17-43-48	91			Hard gray sandy CLAY with phosphates [CL]						
45												
		18-20-14	34									
50						BORING TERMINATED AT 50.0 FT.						

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UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0130.1000102.0000
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PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 500 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-9**
 SECTION: 12

TOWNSHIP: 30 S
 RANGE: 23 E

SHEET: **1 of 1**

CLIENT:
 LOCATION: SEE BORING LOCATION PLAN

G.S. ELEVATION (ft): N.S.

DATE STARTED: 5/19/10

WATER TABLE (ft): 7.3

DATE FINISHED: 5/19/10

REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

DATE OF READING: 5/19/10

DRILLED BY: ORL-TWDW

EST. SHGWT (ft): 6

TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/DAY)	ORG. CONT. (%)
									LL	PI		
0												
		3-4-3	7			Loose gray brown fine SAND with silt, trace gravel [SP-SM]						
		4-5-3	8									
5		3-3-4	7	▽		Loose gray fine SAND with silt [SP-SM]						
		7-7-5	12	▽		-- medium dense, gray brown						
		5-6-7	13			-- light brown	10	16				
		6-6-6	12			-- shade lighter						
10												
						Medium dense orange brown silty fine SAND [SM]						
15		5-9-12	21									
20		7-6-5	11									
25		4-4-5	9			Stiff gray sandy CLAY with limestone fragments [CL]						
30		2-2-2	4			Very loose gray green silty fine SAND with shell [SM]						
35		3-5-4	9			Loose light gray clayey fine SAND, trace phosphates nodules [SC]						
40		33-21-23	44			-- dense light gray brown						
45		12-10-11	21			-- medium dense						
50		10-13-12	25			BORING TERMINATED AT 50.0 FT.						

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UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0130.1000102.0000
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PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 500 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-10**
 SECTION: 12 TOWNSHIP: 30 S

SHEET: **1 of 1**
 RANGE: 23 E

CLIENT: **U.S. F.A.**

G.S. ELEVATION (ft): N.S. DATE STARTED: 5/19/10

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): 6.5 DATE FINISHED: 5/19/10

REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

DATE OF READING: 5/19/10 DRILLED BY: ORL-TWDW

EST. SHGWT (ft): 4 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLER	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/ DAY)	ORG. CONT. (%)
									LL	PI		
0						Medium dense gray brown silty fine SAND with clay & gravel [SM]						
		3-5-7	12									
		6-11-11	22	▽								
5		1-2-2	4			Very loose dark gray fine SAND with silt [SP-SM]						
		4-4-4	8	▽		-- loose, brown						
		2-2-2	4			-- very loose, gray brown						
		2-3-2	5			-- loose						
10												
						Medium dense gray brown silty fine SAND [SM]						
15		8-8-7	15									
						Loose gray orange clayey fine SAND with shell & limestone fragments [SC]						
20		6-4-6	10									
						-- medium dense						
25		5-6-6	12									
						-- very loose, orange brown						
30		2-2-2	4									
						-- medium dense, gray brown						
35		12-7-8	15									
						Hard gray sandy CLAY with phosphate nodules [CL]						
40		12-17-18	35									
						-- very stiff						
45		7-10-16	26									
50		10-9-9	18									
						BORING TERMINATED AT 50.0 FT.						

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UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0130.1000102.0000
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PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 500 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-11**
 SECTION: 12 TOWNSHIP: 30 S

SHEET: **1 of 1**
 RANGE: 23 E

CLIENT:
 LOCATION: SEE BORING LOCATION PLAN

G.S. ELEVATION (ft): N.S. DATE STARTED: 5/20/10
 WATER TABLE (ft): 2.1 DATE FINISHED: 6/20/10
 DATE OF READING: 5/20/10 DRILLED BY: ORL-TW/DW
 EST. SHGWT (ft): 1 TYPE OF SAMPLING: ASTM D 1586

REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

DEPTH (FT.)	SAMPLER	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/DAY)	ORG. CONT. (%)
									LL	PI		
0				▽	▽	Loose gray brown fine SAND with silt [SP-SM]						
		3-4-3	7		▽							
		3-2-8	10		▽	Loose mixed brown silty fine SAND with root mat, wood & rock [SM]						
5		10-15-16	31		▽	Dense gray silty fine SAND [SM]						
		9-11-8	19		▽	-- medium dense, gray brown	14	14				
		9-8-8	16		▽							
10		9-9-9	18		▽							
15		9-14-10	24		▽	Medium dense gray brown clayey fine SAND with shell & limestone fragments [SC]						
20		3-4-5	9		▽	-- loose						
25		4-4-5	9		▽	-- gray green						
30		6-8-13	21		▽	-- medium dense, light gray brown						
35		8-10-28	38		▽	-- dense, light brown						
40		8-13-18	31		▽	Dense gray brown sandy CLAY with phosphate nodules [CL]						
45		10-11-11	22		▽	-- medium dense						
50		12-11-13	24		▽	BORING TERMINATED AT 60.0 FT.						

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UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0130.1000102.0000
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PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 600 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-12**
 SECTION: 12 TOWNSHIP: 30 S

SHEET: **1 of 1**
 RANGE: 23 E

CLIENT:
 LOCATION: SEE BORING LOCATION PLAN

G.S. ELEVATION (ft): N.S. DATE STARTED: 5/22/10
 WATER TABLE (ft): 4.7 DATE FINISHED: 5/22/10
 DATE OF READING: 5/22/10 DRILLED BY: ORL-TW/DW
 EST. SHGWT (ft): 3 TYPE OF SAMPLING: ASTM D 1586

REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/ DAY)	ORG. CONT. (%)
									LL	PI		
0						Loose gray fine SAND with silt [SP-SM]						
		3-5-5	10			-- gray brown						
		5-4-5	9	▽								
5		4-4-4	8	▽		--light gray						
		8-6-3	9									
		3-4-8	12			Medium dense gray brown clayey fine SAND [SC]	18	17				
10		11-11-11	22			-- orange brown						
						Medium dense gray brown fine SAND with silt [SP-SM]						
15		7-9-9	18									
						-- dense						
20		10-10-12	22									
						-- dense						
25		13-16-18	34									
						Medium dense gray clayey fine SAND with shell & phosphate nodules [SC]						
30		5-5-7	12									
						-- dense						
35		21-18-25	43									
						-- very dense, gray, with phosphates, no shell						
40		17-17-21	38									
45		16-24-40	64									
50		50	50/5'			BORING TERMINATED AT 50.0 FT.						

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UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 500 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-13**
 SECTION: 12 TOWNSHIP: 30 S

SHEET: **1 of 1**
 RANGE: 23 E

CLIENT:
 LOCATION: SEE BORING LOCATION PLAN

G.S. ELEVATION (ft): N.S. DATE STARTED: 5/20/10
 WATER TABLE (ft): 3.3 DATE FINISHED: 5/20/10
 DATE OF READING: 5/20/10 DRILLED BY: ORL-TW/DW
 EST. SHGWT (ft): 2 TYPE OF SAMPLING: ASTM D 1586

REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

DEPTH (FT.)	SAMPLER	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/DAY)	ORG. CONT. (%)
									LL	PI		
0												
		3-5-4	9	▽		Loose to medium dense gray brown fine SAND with silt [SP-SM]						
		5-5-6	11	▽		Loose gray brown clayey fine SAND [SC]						
5		2-4-6	10			-- medium dense						
		5-9-13	22			Dense gray brown fine SAND with silt [SP-SM]						
		20-22-25	47									
10		23-20-18	38									
						Medium dense gray brown silty fine SAND [SM]						
15		5-6-6	12									
						Loose light brown fine SAND with silt [SP-SM]						
20		3-4-4	8									
						Very loose light gray brown silty fine SAND with shell [SM]						
25		2-2-2	4									
						Loose light gray clayey fine SAND, trace shell, trace limestone fragments [SC]						
30		2-3-4	7									
						Dense gray brown silty fine SAND with clay, phosphate nodules & limestone fragments [SM]						
35		10-14-18	32									
						-- medium dense, dark gray green	22	37				
40		10-12-13	25									
						-- very dense, light gray						
45		60	50/3"									
50		25-20-31	51			BORING TERMINATED AT 50.0 FT.						

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UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.:	0130.1000102.0000
REPORT NO.:	839965
PAGE:	B-2.14

PROJECT: GEOTECHNICAL EXPLORATION
 MULBERRY MIDDLE SCHOOL, 500 MARTIN LUTHER KING AVENUE
 MULBERRY, POLK COUNTY, FLORIDA

BORING I.D.: **SB-14**
 SECTION: 12 TOWNSHIP: 30 S

SHEET: **1 of 1**
 RANGE: 23 E

CLIENT:
 LOCATION: SEE BORING LOCATION PLAN

G.S. ELEVATION (ft): N.S. DATE STARTED: 5/20/10
 WATER TABLE (ft): 3.8 DATE FINISHED: 5/20/10
 DATE OF READING: 5/20/10 DRILLED BY: ORL-TW/DW
 EST. SHGWT (ft): 2 TYPE OF SAMPLING: ASTM D 1588

REMARKS: SHGWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

DEPTH (FT.)	SAMPLING	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/ DAY)	ORG. CONT. (%)
									LL	PI		
0						Loose gray fine SAND with silt (SP-SM)						
		2-3-4	7	▽		-- brown						
		3-4-4	8	▼		-- shade lighter						
5		3-4-5	9									
		2-2-5	7			Medium dense gray clayey fine SAND [SC]						
		4-5-10	15									
10		7-8-9	17									
						Very loose brown silty fine SAND [SM]						
15		3-2-2	4									
						Medium dense light brown fine SAND [SP]						
20		7-11-9	20									
						Medium dense light gray fine SAND with silt, trace shell (SP-SM)	9	20				
25		5-5-7	12									
						-- dense						
30		11-16-26	42									
						Medium dense light gray clayey fine SAND with phosphate & limestone fragments [SC]						
35		6-7-7	14									
						Very stiff gray sandy CLAY with phosphate nodules [CL]						
40		15-12-16	28									
						Very dense gray silty fine SAND with clay & phosphate nodules [SM]						
45		50	50/4"									
50		35-41-40	81			BORING TERMINATED AT 50.0 FT.						

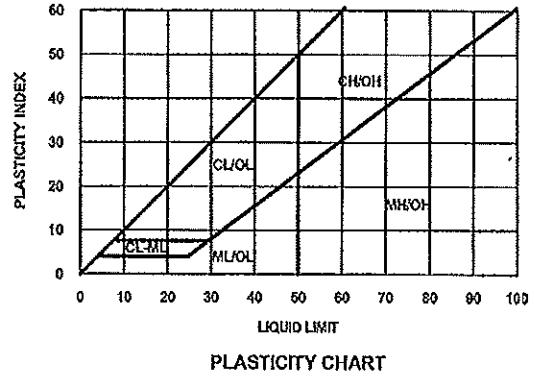
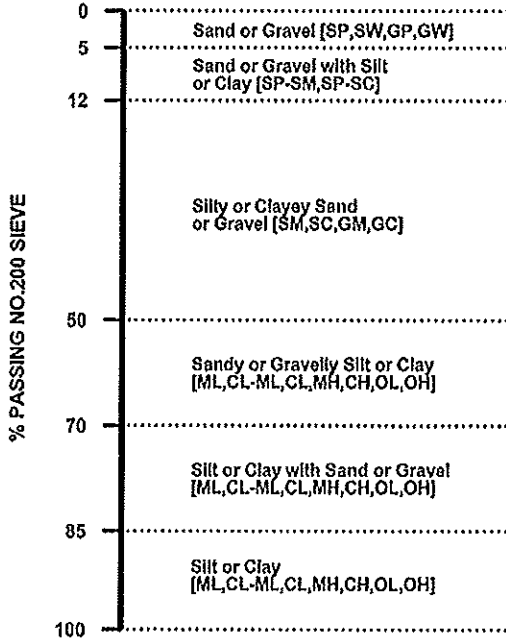
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KEY TO BORING LOGS

SOIL CLASSIFICATION CHART*



**UNIVERSAL
ENGINEERING
SCIENCES, INC.**



GROUP NAME AND SYMBOL

COARSE GRAINED SOILS

	POORLY-GRADED SANDS [SP]		WELL-GRADED GRAVELS [GW]
	POORLY-GRADED SANDS WITH SILT [SP-SM]		POORLY-GRADED GRAVELS [GP]
	POORLY-GRADED SANDS WITH CLAY [SP-SC]		POORLY-GRADED GRAVELS WITH SILT [GP-GM]
	SILTY SANDS [SM]		POORLY-GRADED GRAVELS WITH CLAY [GP-GC]
	CLAYEY SANDS [SC]		SILTY GRAVELS [GM]
	SILTY CLAYEY SANDS [SC-SM]		CLAYEY GRAVELS [GC]

FINE GRAINED SOILS

	INORGANIC SILTS SLIGHT PLASTICITY [ML]
	INORGANIC SILTY CLAY LOW PLASTICITY [CL-ML]
	INORGANIC CLAYS LOW TO MEDIUM PLASTICITY [CL]
	INORGANIC SILTS HIGH PLASTICITY [MH]
	INORGANIC CLAYS HIGH PLASTICITY [CH]

HIGHLY ORGANIC SOILS

	ORGANIC SILTS/CLAYS LOW PLASTICITY [OL]**
	ORGANIC SILTS/CLAYS MEDIUM TO HIGH PLASTICITY [OH]**
	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS [PT]**

* IN ACCORDANCE WITH ASTM D 2487 - UNIFIED SOIL CLASSIFICATION SYSTEM.

** LOCALLY MAY BE KNOWN AS MUCK.

RELATIVE DENSITY (SAND AND GRAVEL)

VERY LOOSE - 0 to 4 Blows/ft.
LOOSE - 5 to 10 Blows/ft.
MEDIUM DENSE - 11 to 30 Blows/ft.
DENSE - 31 to 50 Blows/ft.
VERY DENSE - more than 50 Blows/ft.

CONSISTENCY (SILT AND CLAY)

VERY SOFT - 0 to 2 Blows/ft.
SOFT - 3 to 4 Blows/ft.
FIRM - 5 to 8 Blows/ft.
STIFF - 9 to 16 Blows/ft.
VERY STIFF - 17 to 30 Blows/ft.
HARD - more than 30 Blows/ft.

MISCELLANEOUS SYMBOLS

	ENCOUNTERED WATER TABLE
	ESTIMATED SEASONAL HIGH WATER TABLE
-200	PERCENT PASSING NO. 200 SIEVE
MC	MOISTURE CONTENT, %
WOR	SPOON ADVANCES DUE TO WEIGHT OF RODS AND/OR HAMMER

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS