



DEPTH, FT	WATER LEVEL SYMBOL	SAMPLES	BLOWS PER FOOT	LOCATION: See Plate 2 COORDINATES: 29° 43' 32" N 95° 03' 22" W SURFACE EL.: -10.0' (Assumed)	STRATUM DEPTH, FT	CLASSIFICATION					SHEAR STRENGTH								
						UNIT DRY WT. POF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	KIPS PER SQ FT							
				STRATUM DESCRIPTION															
0 - 11.0				CLAY, very soft, gray, with sand pockets and shell fragments - stiff, with calcareous nodules below 4'	11.0			47											
11.0 - 22.0			12 5	SAND, medium-dense, fine-grained, gray - loose, with clay seams below 18'	22.0	104		24	50	12	38								
22.0 - 32.0				SILTY CLAY, very stiff, gray, with silt pockets	32.0														
32.0 - 35.0				CLAY, very stiff, red, brown, and gray - slickensided with siltstone nodules, 32' to 35'	35.0	99		27	75	18	57								

NOTES:

1. Water depth was 10' at time of drilling.
2. Terms and symbols defined on Plates A-32a and A-32b.
3. Coordinates were obtained by our field technician with a hand held GPS device.

DATE: April 14, 2011
 TOTAL DEPTH: 90'
 CAVED DEPTH: Not Applicable
 DRY AUGER: Not Applicable
 WET ROTARY: Mudline to 90'
 BACKFILL: Cuttings and Drilling Mud
 LOGGER: T. Mireles

R:1041202011 PROJECTS\0001-0069\0412-11-0003\INDUSTRIAL\INDUSTRIAL (WIR_MV) FUGRO_SO (LAB DATA)_INDUSTRIAL (WIR_MV) 6/2/2011

LOG OF BORING NO. B-21
DOCKS, BRIDGE, AND BARNES ISLAND IMPROVEMENTS
BATTLEGROUNDS OIL SPECIALTY TERMINAL COMPANY
HARRIS COUNTY, TEXAS





DEPTH, FT	WATER LEVEL SYMBOL SAMPLES	BLOWS PER FOOT	LOCATION: See Plate 2 COORDINATES: 29° 43' 32" N 95° 03' 22" W SURFACE EL.: -10.0' (Assumed)	STRATUM DEPTH, FT	CLASSIFICATION						SHEAR STRENGTH						
					UNIT DRY WT. POF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	KIPS PER SQ FT						
			STRATUM DESCRIPTION														
			CLAY, very stiff, red, brown, and gray														
45			SANDY CLAY, very stiff, gray and brown, with calcareous nodules	42.0													□+
50					111		19										□+
55			CLAY, very stiff, red, brown, and gray	51.0													□+
60			- brown and gray below 58' - with sand pockets, 58' to 63'														□+
65			- with calcareous nodules, 63' to 68' - with silt pockets below 63'														□+
70			- stiff at 68'		102		24										□+
75			SILTY CLAY, very stiff, brown and gray	76.0													□+

<p>NOTES:</p> <ol style="list-style-type: none"> 1. Water depth was 10' at time of drilling. 2. Terms and symbols defined on Plates A-32a and A-32b. 3. Coordinates were obtained by our field technician with a hand held GPS device. 	<p>DATE: April 14, 2011 TOTAL DEPTH: 90' CAVED DEPTH: Not Applicable DRY AUGER: Not Applicable WET ROTARY: Mudline to 90' BACKFILL: Cuttings and Drilling Mud LOGGER: T. Mireles</p>
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R:041202011 PROJECTS\0001-0099\0412-11-0003\INDUSTRIAL (WIR_MV) 6/2/2011 FUGRO_SO (LAB DATA)_INDUSTRIAL (WIR_MV)

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