



DEPTH, FT	WATER LEVEL SYMBOL	SAMPLES	BLOWS PER FOOT	LOCATION: See Plate 2 COORDINATES: 29° 43' 46" N 95° 03' 04" W SURFACE EL.: 6.0'	STRATUM DEPTH, FT	CLASSIFICATION						SHEAR STRENGTH				
				STRATUM DESCRIPTION		UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	KIPS PER SQ FT				
												□ Penetrometer Unconfined ▼ ◇ Torvane Triaxial ● ○ Remolded Miniature Vane ▲ M.Vane				
												0.5	1.0	1.5	2.0	2.5
			8	CLAY, firm to stiff, dark brown, with wood fragments												
					4.0			17	51	11	40					
5			3	SANDY CLAY, soft to stiff, dark gray												
			12													
10					10.0		51		45	12	33					
			5	SILTY SAND, loose, fine-grained, gray												
			8													
15			3	- very loose below 14'			15									
					18.0											
20				SANDY CLAY, soft, gray		95	65	29	38	9	29					
					23.0											
25			5	SILTY SAND, loose, fine-grained, gray			36									
30			4													
					33.0											
35				SANDY CLAY, firm, gray, with sand pockets		93	44	28	51	12	39					

NOTES:

1. ∇: Water First Noticed. ▼: Depth To Water after 12 hours.
2. Terms and symbols defined on Plates A-32a and A-32b.
3. Coordinates obtained from handheld GPS.
4. Consolidated Undrained test performed at 10'.

DATE: March 16, 2011

TOTAL DEPTH: 75'

CAVED DEPTH: Not Applicable

DRY AUGER: Surface to 20'

WET ROTARY: Below 20'

BACKFILL: Cement-Bentonite Grout

LOGGER: C. Alvarado

R:\041202011 PROJECTS\0001-0099\0412-11-0003\INDUSTRIAL (WIR_MV) 6/2/2011 FUGRO_SO (LAB DATA)_INDUSTRIAL (WIR_MV)

LOG OF BORING NO. B-27

DOCKS, BRIDGE, AND BARNES ISLAND IMPROVEMENTS
BATTLEGROUND OIL SPECIALTY TERMINAL COMPANY
HARRIS COUNTY, TEXAS

PLATE A-18a





DEPTH, FT	WATER LEVEL SYMBOL	SAMPLES	BLOWS PER FOOT	LOCATION: See Plate 2 COORDINATES: 29° 43' 46" N 95° 03' 04" W SURFACE EL.: 6.0'	STRATUM DEPTH, FT	CLASSIFICATION						SHEAR STRENGTH				
				STRATUM DESCRIPTION		UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	KIPS PER SQ FT				
				SANDY CLAY, firm, gray, with sand pockets												
45				CLAYEY SAND, gray	43.0		22									
50				CLAY, very stiff, with sand pockets	48.0		80	21	32	11	21					
55				CLAYEY SAND, medium-dense, gray	53.0		35									
60			29													
65				CLAY, very stiff, gray	63.0			16	47	12	35					
70			29													
75			37		75.0			18								

NOTES:

1. ▽: Water First Noticed. ▼: Depth To Water after 12 hours.
2. Terms and symbols defined on Plates A-32a and A-32b.
3. Coordinates obtained from handheld GPS.
4. Consolidated Undrained test performed at 10'.

DATE: March 16, 2011

TOTAL DEPTH: 75'

CAVED DEPTH: Not Applicable

DRY AUGER: Surface to 20'

WET ROTARY: Below 20'

BACKFILL: Cement-Bentonite Grout

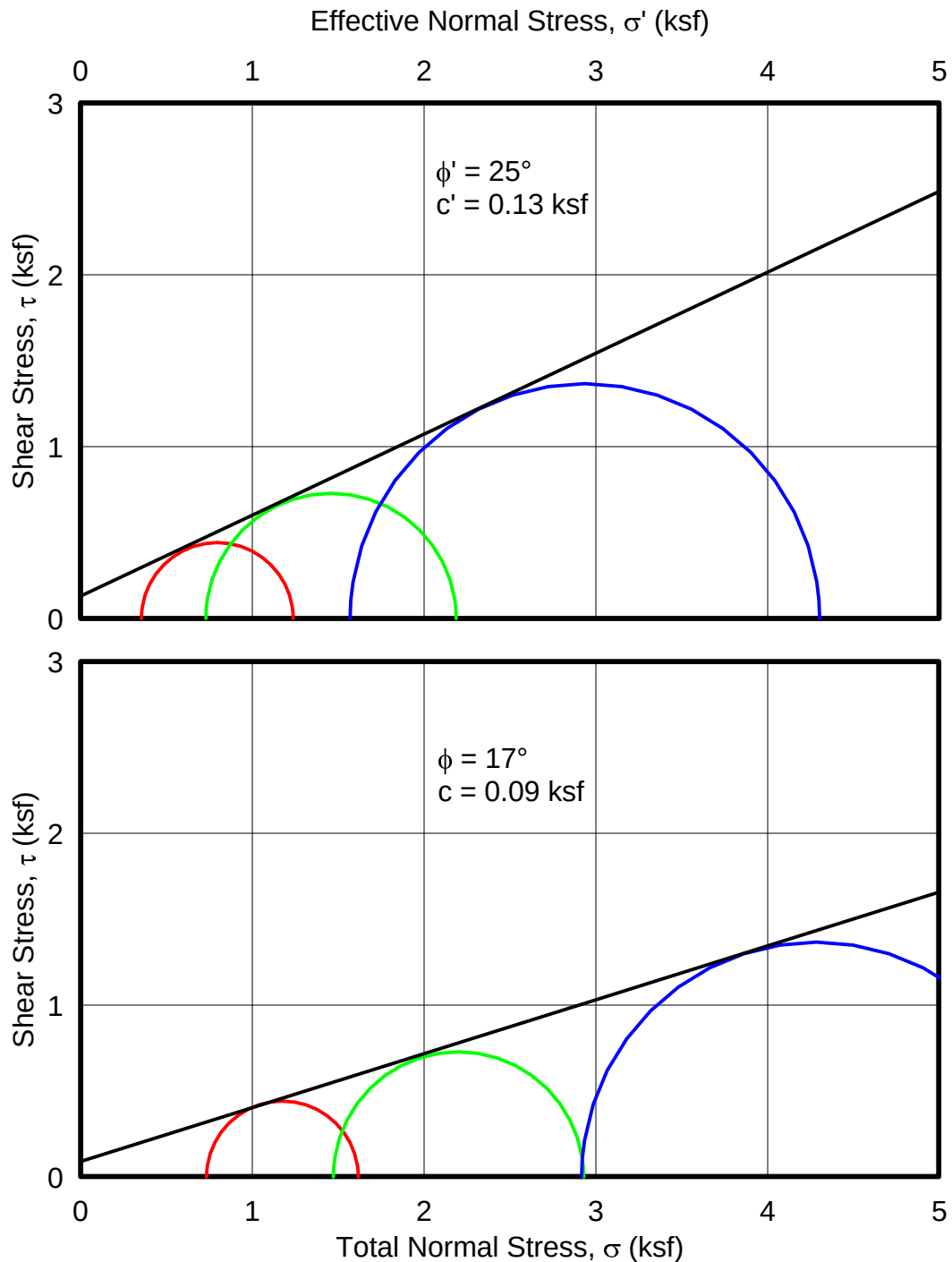
LOGGER: C. Alvarado

R:041202011 PROJECTS\0001-0099\0412-11-0003\DRAWING\0412-11-0003.GPJ FUGRO_SO (LAB DATA)_INDUSTRIAL (WIR_MV) 6/2/2011

LOG OF BORING NO. B-27

DOCKS, BRIDGE, AND BARNES ISLAND IMPROVEMENTS
BATTLEGROUND OIL SPECIALTY TERMINAL COMPANY
HARRIS COUNTY, TEXAS





MATERIAL: SANDY CLAY, dark gray
 INITIAL WATER CONTENT: 23 %
 INITIAL WET UNIT WEIGHT: 124 pcf
 INITIAL DRY UNIT WEIGHT: 101 pcf
 INITIAL VOID RATIO: 0.689

LIQUID LIMIT: 45
 PLASTIC LIMIT: 12
 PLASTICITY INDEX: 33
 SPECIFIC GRAVITY: 2.75 (assumed)

MULTI STAGE CONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST RESULTS

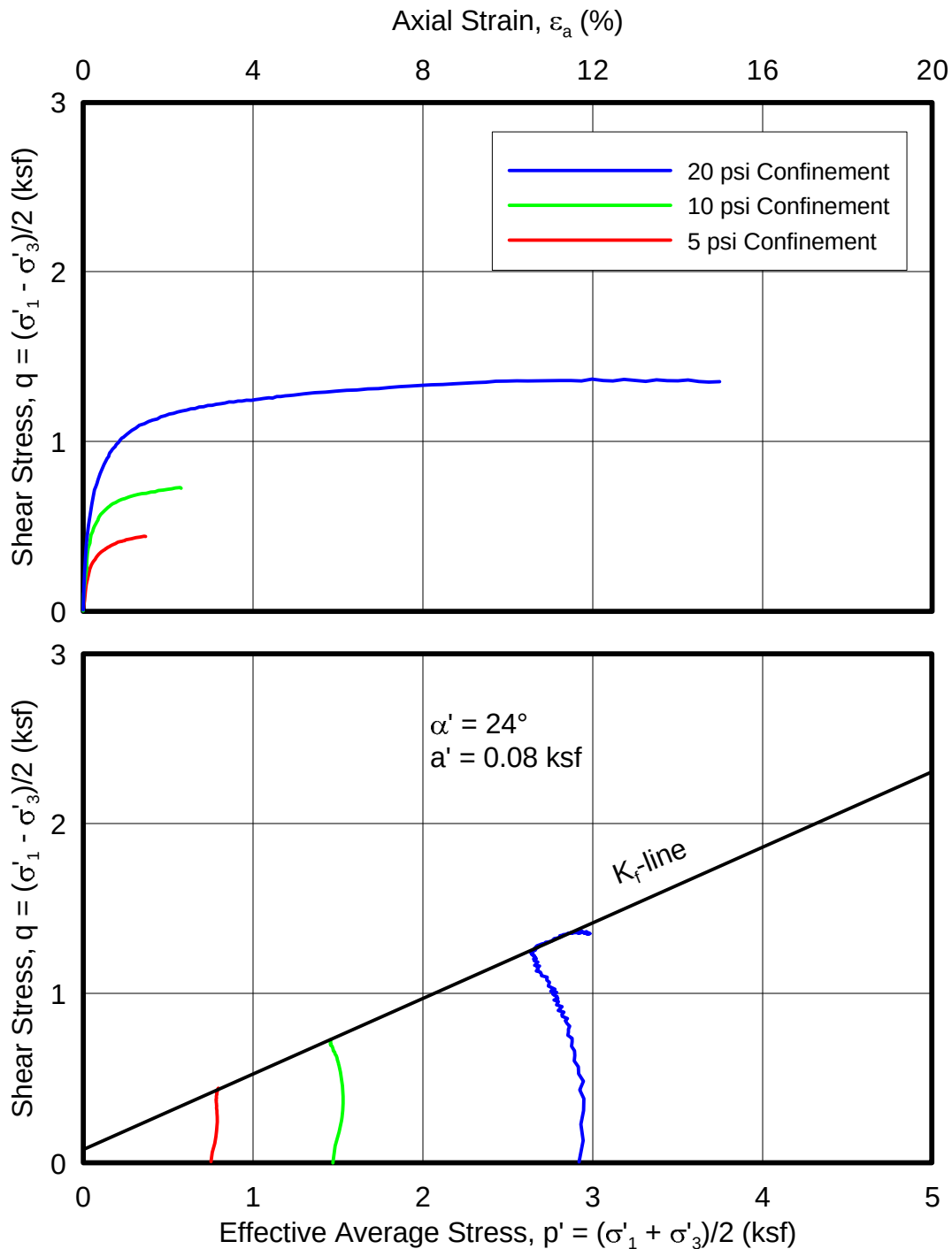
ISOTROPICALLY CONSOLIDATED - MOHR'S CIRCLES

BORING B-27, 10 FEET DEPTH

DOCKS, BRIDGE, AND BARNES ISLAND IMPROVEMENTS

BATTLEGROUNDS OIL SPECIALTY TERMINAL COMPANY

HARRIS COUNTY, TEXAS



MATERIAL: SANDY CLAY, dark gray
 INITIAL WATER CONTENT: 23 %
 INITIAL WET UNIT WEIGHT: 124 pcf
 INITIAL DRY UNIT WEIGHT: 101 pcf
 INITIAL VOID RATIO: 0.689

LIQUID LIMIT: 45
 PLASTIC LIMIT: 12
 PLASTICITY INDEX: 33
 SPECIFIC GRAVITY: 2.75 (assumed)

MULTI STAGE CONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST RESULTS

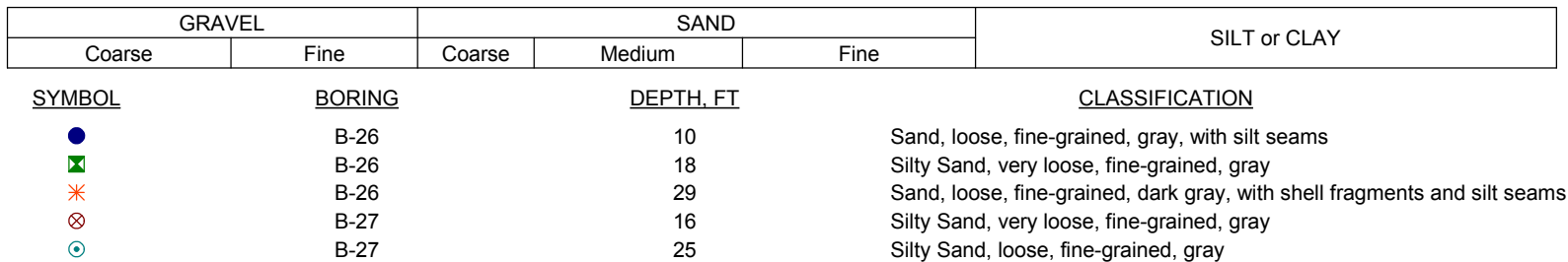
ISOTROPICALLY CONSOLIDATED - STRESS AND STRAIN CURVES

BORING B-27, 10 FEET DEPTH

DOCKS, BRIDGE, AND BARNES ISLAND IMPROVEMENTS

BATTLEGROUNDS OIL SPECIALTY TERMINAL COMPANY

HARRIS COUNTY, TEXAS



DOCKS, BRIDGE, AND BARNES ISLAND IMPROVEMENTS
BATTLEGROUND OIL SPECIALTY TERMINAL COMPANY
HARRIS COUNTY, TEXAS

