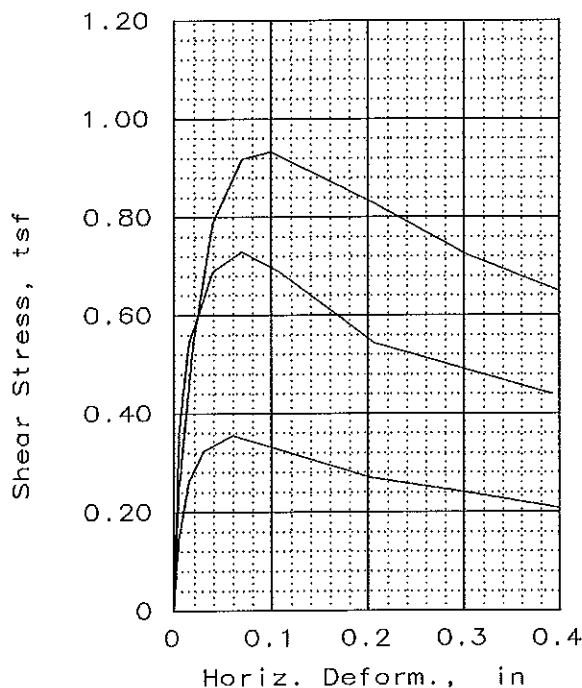
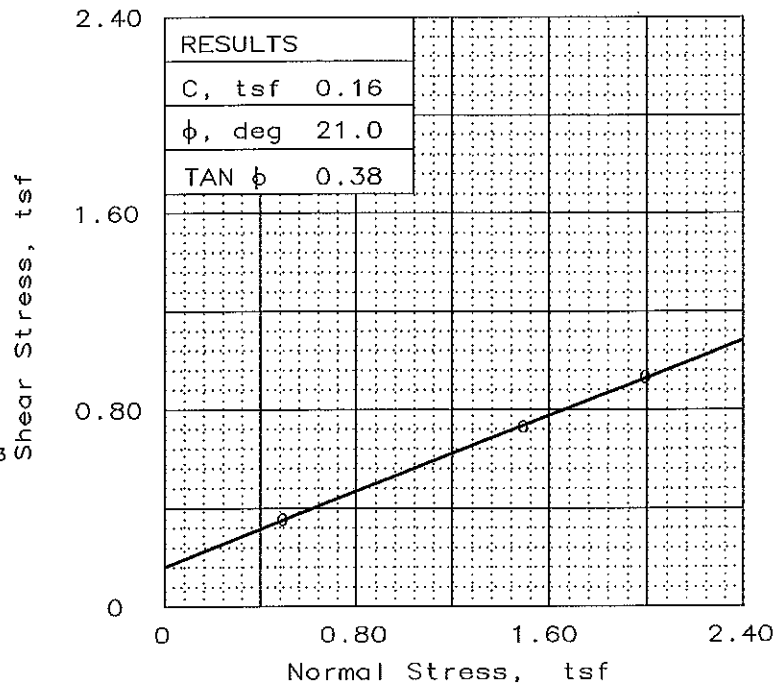
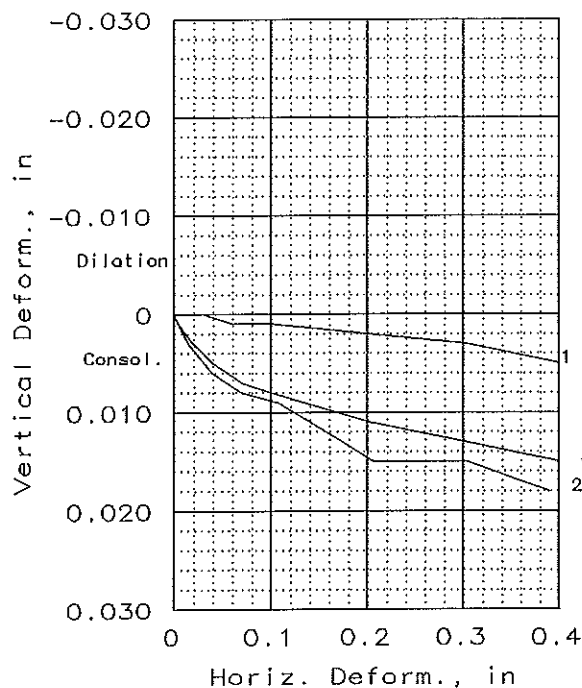




SAMPLE NO.		1	2	3
INITIAL	WATER CONTENT, %	34.7	33.5	31.6
	DRY DENSITY, pcf	84.7	85.8	86.3
	SATURATION, %	94.5	93.7	89.6
	VOID RATIO	0.991	0.964	0.952
	DIAMETER, in	2.51	2.51	2.51
	HEIGHT, in	1.00	1.00	1.00
AT TEST	WATER CONTENT, %	36.9	34.0	31.1
	DRY DENSITY, pcf	84.7	88.0	91.8
	SATURATION, %	100.7	100.4	100.5
	VOID RATIO	0.989	0.914	0.837
	DIAMETER, in	2.51	2.51	2.51
	HEIGHT, in	1.00	0.98	0.94
NORMAL STRESS, tsf		0.50	1.50	2.00
MAX. SHEAR, tsf		0.35	0.73	0.93
STRAIN RATE, %/min.		0.004	0.004	0.004
ULT. SHEAR, tsf		0.21	0.44	0.65

SAMPLE DATA

SAMPLE TYPE: Undisturbed
DESCRIPTION: Fat Clay with Sand
(CH)

LL= 65 PL= 19 PI= 46.0

SPECIFIC GRAVITY= 2.70

REMARKS: Specific Gravity Est.

FIG. NO.

CLIENT: US Army Corps of Engineers

Galveston District

PROJECT: Neches River Saltwater Barrier

SAMPLE LOCATION: Boring: 97-31, Fld No. 9
16.0-18.0, Lab No. 97/1085

PROJ. NO.: 16858

DATE: October 1997

DIRECT SHEAR TEST

CORPS OF ENGINEERS - SOUTHWESTERN

Summary of Laboratory Test Results

Boring No. 97-31

S #	Depth (ft)	P P (tsf)	SPT Blows per Foot	Visual Classification	U S C	M c (%)	Dry Unit Wt (pcf)	Wet Unit Wt (pcf)	L L (%)	P L (%)	Mechanical Analysis % Passing					Torvane Shear Strength (tsf)	q u (tsf)
											#4	#10	#40	#100	#200		
1	0 - 2			Silty Sand, w/gravel & rock fragments, Gray	S M												
2	2 - 4	1.75		Clay, w/roots, Stiff, Gray	C H	25.0											
3	4 - 6	1.50		Clay, w/ferrous nodules & roots, Stiff, Gray	C H	26.5	93.6	118.4	63.0	24.0	100.0	99.9	99.4	98.7	98.2		1.32
4	6 - 8	1.75		Clay, w/ferrous nodules & ferrous stains, Stiff, Gray	C H	21.3											
5	8 - 10	1.50		Clay, w/ferrous stains & sand seams, Stiff, Gray	C H	21.4											
6	10 - 12	1.25		Silty Clay, w/sand seams, Stiff, Gray	C L	22.4	103.3	126.5	35.0	18.0							
7	12 - 14	1.25		Clay, w/ferrous nodules & sand seams, Stiff, Gray	C H	40.5	80.3	112.9	82.0	30.0							1.22
8	14 - 16	1.25		Clay, w/ferrous nodules & sand seams, Stiff, Gray	C H	26.9											
9	16 - 18	1.25		Clay, w/ferrous nodules & sand seams, Stiff, Gray [SAND]	C H	37.7	85		65	19							$\phi = 21$ $c = .16 tsf$
10	18 - 20	1.25		Clay, w/organic material & sand seams, Stiff, Gray	C H	22.7											
11	20 - 22	0.50		Sandy Clay, w/sand layer, Medium stiff, Gray	C L	22.9											
12	22 - 24	0.50		Sandy Clay, w/organic material (4" wood), Medium Stiff, Gray	C L	28.3											
13	24-25	3.75		Sandy Clay, Very stiff, Olive gray	C L	18.5											

S # : Sample Number, P P : Pocket Penetrometer Reading, U S C : Unified Soil Classification, M c : Moisture Content
q u : Uncogined Compressive Strength, W O H : Weight of hammer, W O P : Weight of Pipe