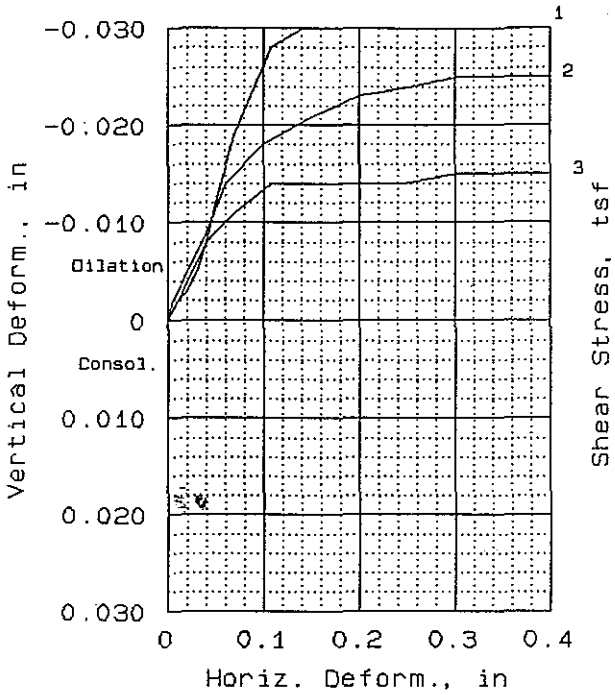
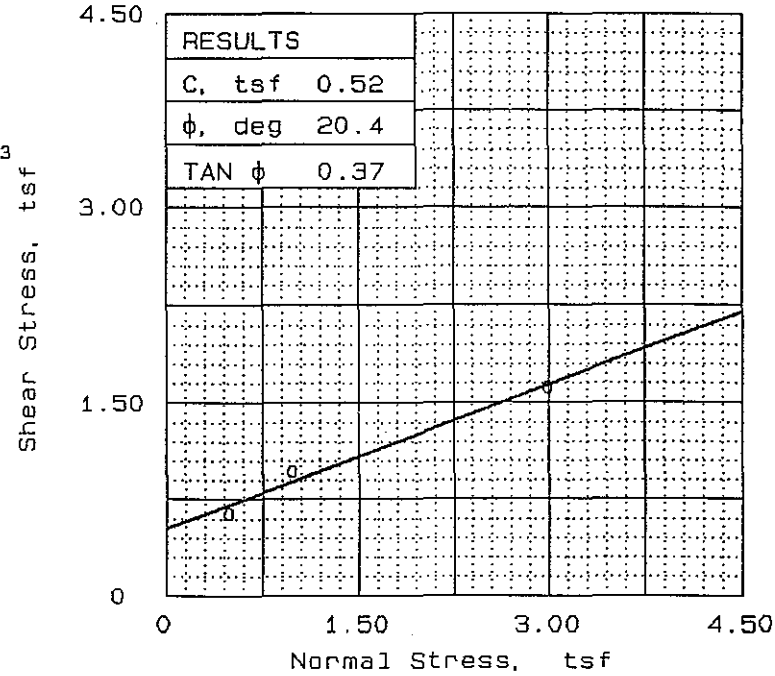
U.S. ARMY CORPS OF ENGINEERS

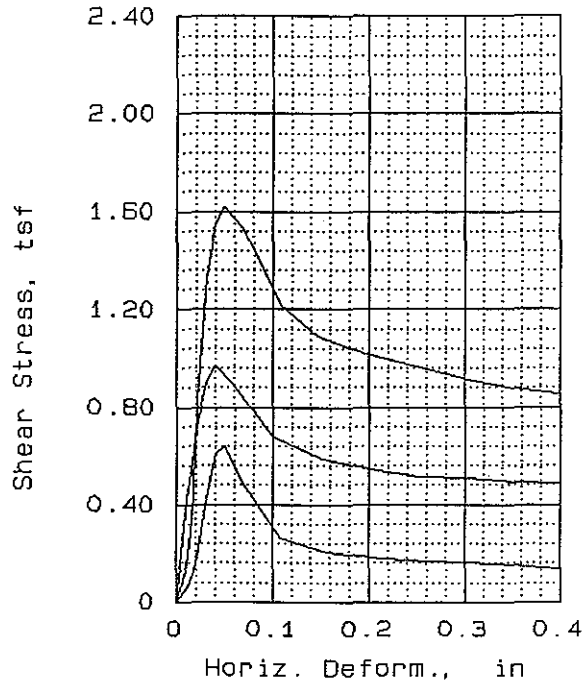
BORING NO. 96-20 DATE: BEGIN 12-6-96 PAGE 1 / 1
JOB NO. 1140086119 COMPLETE 12-6-96 Thin Walled Tube
PROJECT Brays Bayou ☒ 3" ☐ 6"
LOCATION along the Bank of Brays Bayou
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG Failing 36
GROUNDWATER: DEPTH ** ft., ELEV. ____ ft., at end of Drilling
WEATHER Cloudy
DRILLER Dempsey Geanes LOGGER Iraj Mostamand

DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0		1	1.25	Gray & Reddish Brown	clay	stiff		-w/roots, Sapkts, Fill 0-2'
		2	4.5+	DK. gray	Clay	Hard		
5		3	4.5+	DK. gray	Clay	Hard		
		4	4.5+	DK. gray	Clay	Hard		-w/calc nod, Fest, sasms
		5	4.5+	Yellowish gray	Clay	Hard		-w/calc & Fe nod, Fest, Sasms
10		6	4.5+	Yellowish gray	Clay	Hard		-w/calc & Fe nod, Fest, Sasms
		7	4.5+	Yellowish gray	Clay	Hard	Silty	-w/Calc & Fe nod, Fest, Sasms
15		8	4.5+	Yellowish Brown	Clay	Hard	Silty	-w/calc & Fe nod, Fest & sasms
	J	9		Yellowish Brown & Lt. Brown	Silt	Dense	Sandy	
	X	10	9 15 23	Yellowish Brown & Lt. Brown	Sand	Dense	Silty	
20								** encounter water @ 21½ Set wet Rotary
	X	11	8 11 17	Lt. Brown	Sand	M. Dense	Silty	
25								
	X	12	7 10 15	Lt. Brown	Sand	M. Dense	Silty	
30								
	X	13	12 18 21	Lt Brown	Sand	Dense	Silty	
35	X	14	18 16 19	Lt. Brown	Sand	Dense	Silty	

J: Jar Sample; Drilling Fluid level after drilling surface







	SAMPLE NO.	1	2	3
INITIAL	WATER CONTENT, %	20.0	20.4	20.0
	DRY DENSITY, pcf	106.0	106.0	106.7
	SATURATION, %	91.7	93.6	93.3
	VOID RATIO	0.590	0.590	0.579
	DIAMETER, in	2.51	2.51	2.51
	HEIGHT, in	1.00	1.00	1.00
AT TEST	WATER CONTENT, %	25.6	24.2	21.7
	DRY DENSITY, pcf	101.0	103.0	107.4
	SATURATION, %	103.3	102.8	102.6
	VOID RATIO	0.669	0.636	0.570
	DIAMETER, in	2.51	2.51	2.51
	HEIGHT, in	1.05	1.03	0.99
NORMAL STRESS, tsf		0.50	1.00	3.00
MAX. SHEAR, tsf		0.64	0.97	1.62
STRAIN RATE, %/min.		0.004	0.004	0.004
ULT. SHEAR, tsf		0.14	0.49	0.85

SAMPLE DATA

SAMPLE TYPE: UNDISTURBED

DESCRIPTION: FAT CLAY WITH SAND (CH)

LL= 70 PL= 16 PI= 54.0

SPECIFIC GRAVITY= 2.70

REMARKS: SPECIFIC GRAVITY EST.

CLIENT: US ARMY CORPS OF ENGINEERS
GALVESTON DISTRICT

PROJECT: BRAYS BAYOU
MID-BASIN

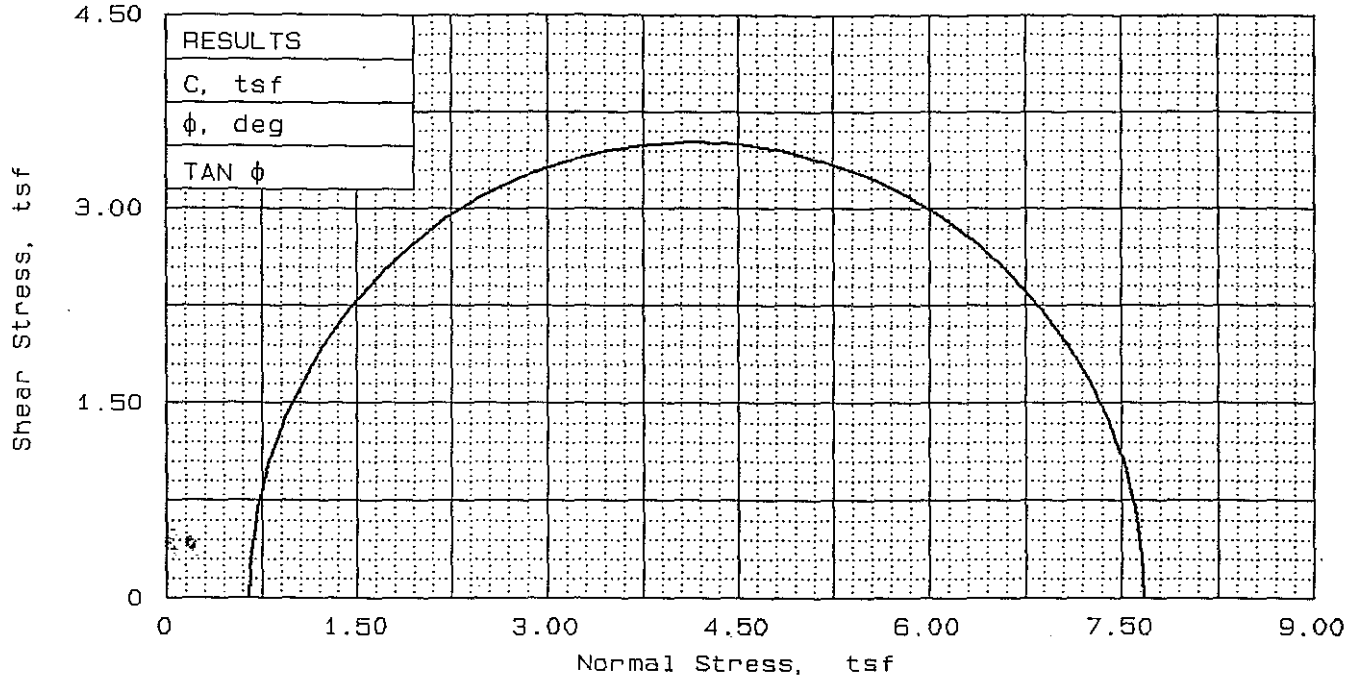
SAMPLE LOCATION: BORING: 96-20, ST-5, 9.0'-9.5', SWD LAB No. 97/72

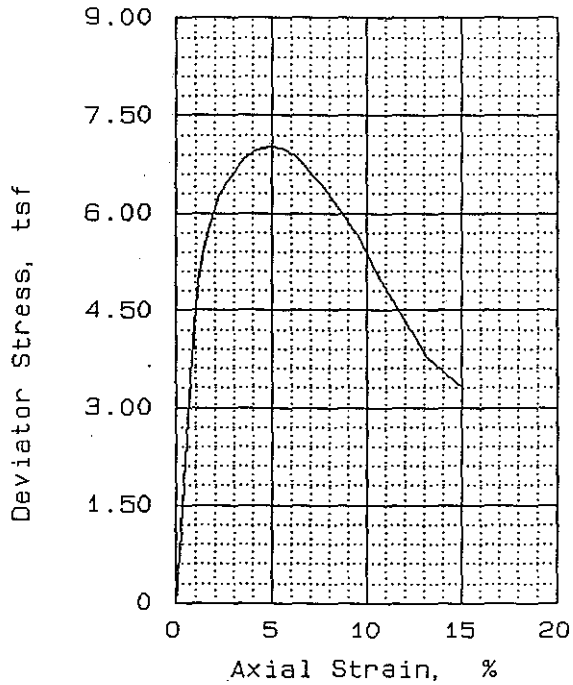
PROJ. NO.: 16724 DATE: FEB 1997

DIRECT SHEAR TEST

CORPS OF ENGINEERS – SOUTHWESTERN

FIG. NO.





SAMPLE NO.		1
INITIAL	WATER CONTENT, %	19.4
	DRY DENSITY, pcf	110.0
	SATURATION, %	98.5
	VOID RATIO	0.533
	DIAMETER, in	2.72
	HEIGHT, in	6.20
AT TEST	WATER CONTENT, %	19.4
	DRY DENSITY, pcf	110.0
	SATURATION, %	98.5
	VOID RATIO	0.533
	DIAMETER, in	2.72
	HEIGHT, in	6.20
BACK PRESSURE, tsf		0.00
CELL PRESSURE, tsf		0.65
FAILURE STRESS, tsf		7.03
PORE PRESSURE, tsf		
STRAIN RATE, %/min.		0.850
ULTIMATE STRESS, tsf		3.30
PORE PRESSURE, tsf		
σ_1 FAILURE, tsf		7.67
σ_3 FAILURE, tsf		0.65

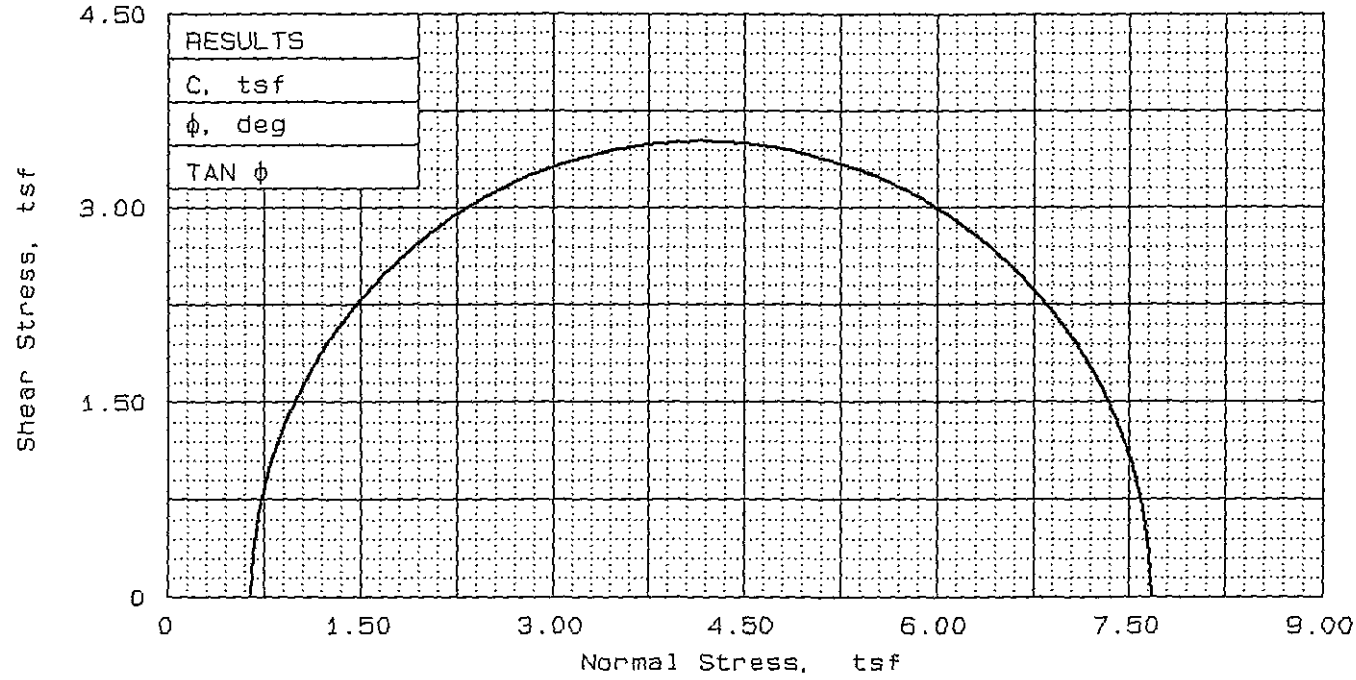
TYPE OF TEST:
Unconsolidated undrained
SAMPLE TYPE: UNDISTURBED
DESCRIPTION: FAT CLAY WITH SAND (CH)
LL= 70 PL= 16 PI= 54.0
SPECIFIC GRAVITY= 2.70
REMARKS: SPECIFIC GRAVITY EST.

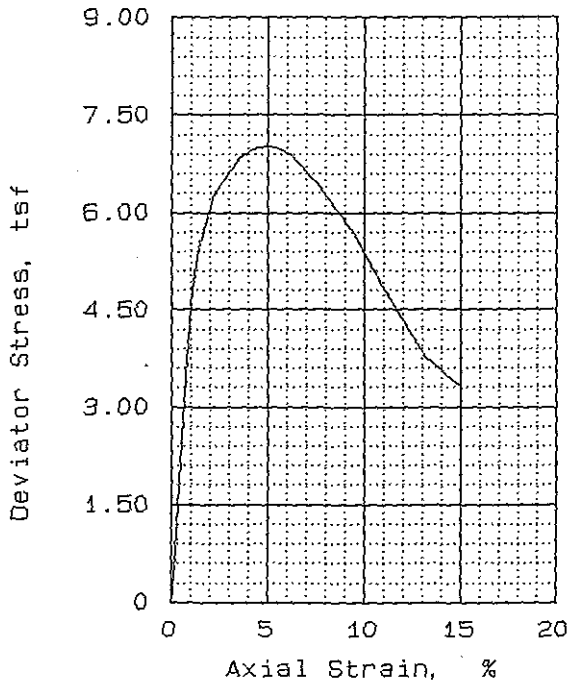
CLIENT: US ARMY CORPS OF ENGINEERS
GALVESTON DISTRICT
PROJECT: BRAYS BAYOU
MID-BASIN
SAMPLE LOCATION: BORING: 96-20, ST-5, 9.5'-10.0', SWD LAB No. 97/ 72
PROJ. NO.: 16724 DATE: MAR 1997

TRIAXIAL COMPRESSION TEST

CORPS OF ENGINEERS – SOUTHWESTERN

FIG. NO.





SAMPLE NO.		1
INITIAL	WATER CONTENT, %	19.4
	DRY DENSITY, pcf	110.0
	SATURATION, %	98.5
	VOID RATIO	0.533
	DIAMETER, in	2.72
	HEIGHT, in	6.20
AT TEST	WATER CONTENT, %	19.4
	DRY DENSITY, pcf	110.0
	SATURATION, %	98.5
	VOID RATIO	0.533
	DIAMETER, in	2.72
	HEIGHT, in	6.20
BACK PRESSURE, tsf		0.00
CELL PRESSURE, tsf		0.65
FAILURE STRESS, tsf		7.03
PORE PRESSURE, tsf		
STRAIN RATE, %/min.		0.850
ULTIMATE STRESS, tsf		3.30
PORE PRESSURE, tsf		
σ_1 FAILURE, tsf		7.67
σ_3 FAILURE, tsf		0.65

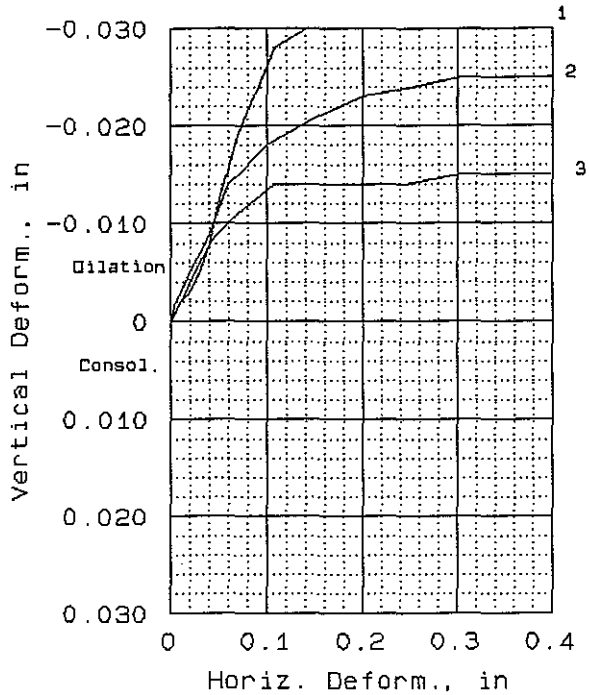
TYPE OF TEST:
Unconsolidated undrained
SAMPLE TYPE: UNDISTURBED
DESCRIPTION: FAT CLAY WITH SAND (CH)
LL= 70 PL= 16 PI= 54.0
SPECIFIC GRAVITY= 2.70
REMARKS: SPECIFIC GRAVITY EST.

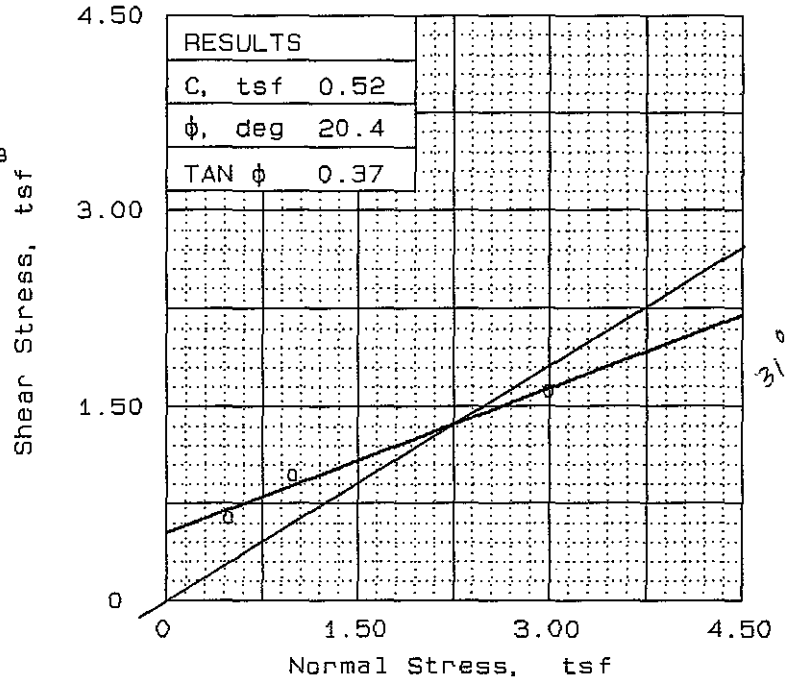
CLIENT: US ARMY CORPS OF ENGINEERS
GALVESTON DISTRICT
PROJECT: BRAYS BAYOU
MID-BASIN
SAMPLE LOCATION: BORING: 96-20, ST-5, 9.5'-10.0', SWD LAB No. 97/ 72
PROJ. NO.: 16724 DATE: MAR 1997

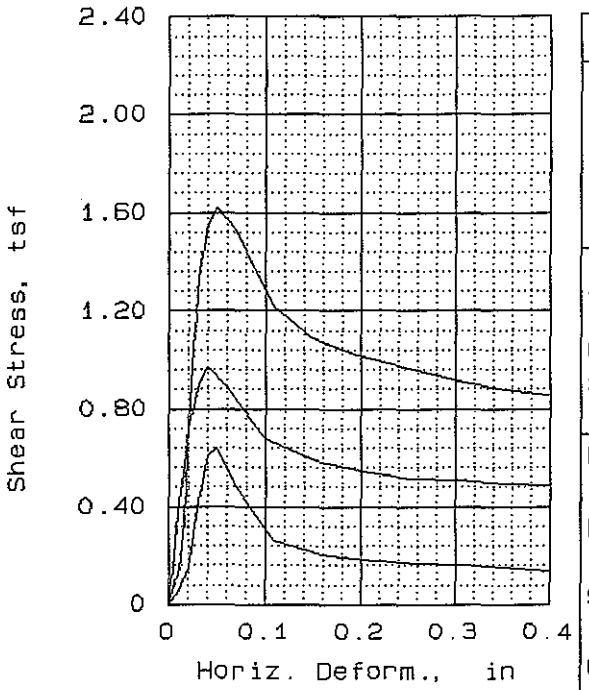
TRIAXIAL COMPRESSION TEST

CORPS OF ENGINEERS - SOUTHWESTERN

FIG. NO.







SAMPLE NO.		1	2	3
INITIAL	WATER CONTENT, %	20.0	20.4	20.0
	DRY DENSITY, pcf	106.0	106.0	106.7
	SATURATION, %	91.7	93.6	93.3
	VOID RATIO	0.590	0.590	0.579
	DIAMETER, in	2.51	2.51	2.51
	HEIGHT, in	1.00	1.00	1.00
AT TEST	WATER CONTENT, %	25.6	24.2	21.7
	DRY DENSITY, pcf	101.0	103.0	107.4
	SATURATION, %	103.3	102.8	102.6
	VOID RATIO	0.669	0.636	0.570
	DIAMETER, in	2.51	2.51	2.51
	HEIGHT, in	1.05	1.03	0.99
NORMAL STRESS, tsf		0.50	1.00	3.00
MAX. SHEAR, tsf		0.64	0.97	1.62
STRAIN RATE, %/min.		0.004	0.004	0.004
ULT. SHEAR, tsf		0.14	0.49	0.85

SAMPLE DATA

SAMPLE TYPE: UNDISTURBED

DESCRIPTION: FAT CLAY WITH SAND (CH)

LL= 70 PL= 16 PI= 54.0

SPECIFIC GRAVITY= 2.70

REMARKS: SPECIFIC GRAVITY EST.

CLIENT: US ARMY CORPS OF ENGINEERS
GALVESTON DISTRICT

PROJECT: BRAYS BAYOU
MID-BASIN

SAMPLE LOCATION: BORING: 96-20, ST-5, 9.0'-9.5', SWD LAB No. 97/72

PROJ. NO.: 16724 DATE: FEB 1997

DIRECT SHEAR TEST

CORPS OF ENGINEERS - SOUTHWESTERN

FIG. NO.