U.S. ARMY CORPS OF ENGINEERS

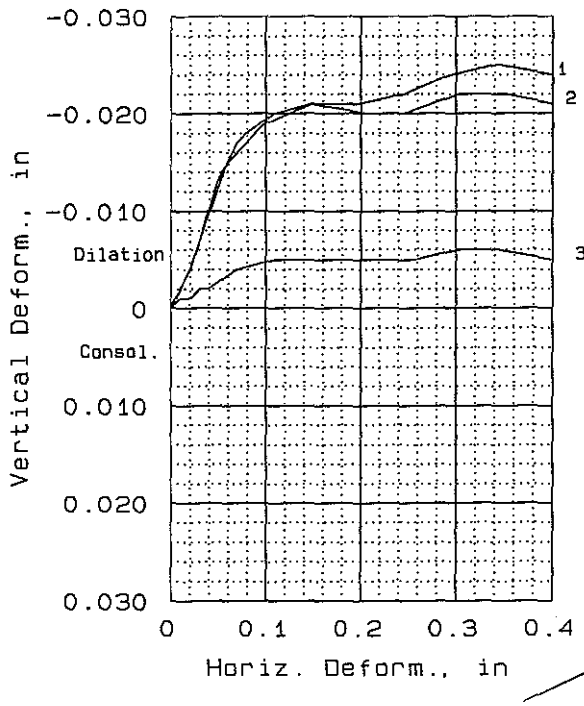
BORING NO. 96-28 DATE: BEGIN 12-5-96 PAGE 1 / 1
JOB NO. 1140086119 COMPLETE 12-5 96 Thin Walled Tube
PROJECT Brays Bayou ■ 3" ☐ 6"
LOCATION along the Bank of Brays Bayou
ELEVATION OF HOLE
MANUFACTURER'S DESIGNATION OF DRILL RIG Failing 36
GROUNDWATER: DEPTH ** ft., ELEV. ____ ft., at end of Drilling
WEATHER Clear & Sunny
DRILLER Dempsey Geaven LOGGER Iraj Mostamand

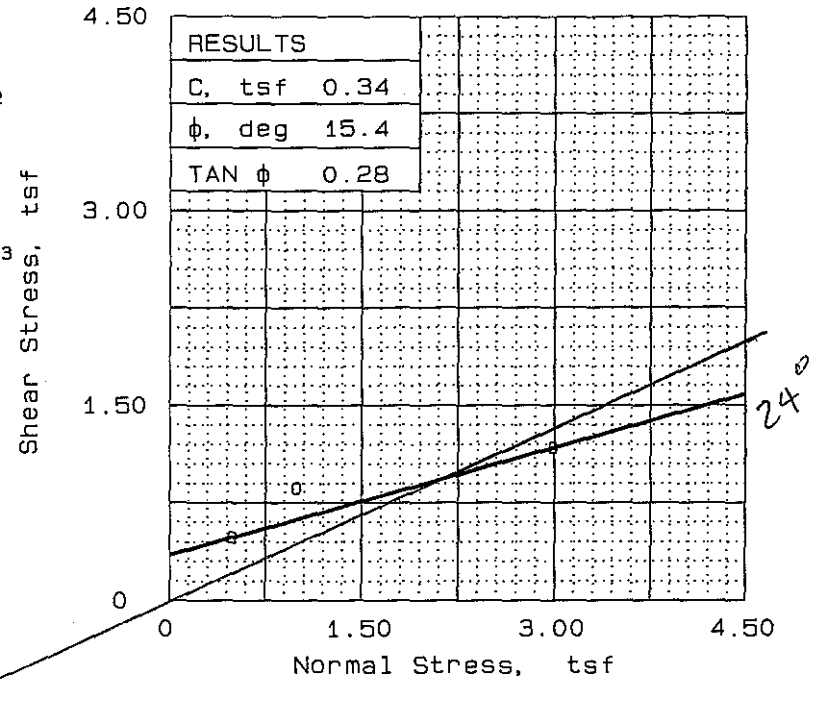
DEPTH, FEET	SAMPLE	SAMPLE NO.	PEN./TORVANE SPT.-BLOW COUNT	COLOR	MATERIAL TYPE	CONSISTENCY	SECONDARY CONSTITUENTS	STRUCTURAL FEATURES AND COMMENTS
0		1	2.00	Gray & Yellowish gray	Clay	V. stiff		-w/calc nod, Sa sms & Sa pkts
		2	4.5+	Dk. gray	Clay	Hard		-w/calc nod
5		3	4.5+	Dk. gray	Clay	Hard		-w/calc nod
		4	4.5+	Dk. gray	Clay	Hard		-w/calc nod
		5	4.5+	Yellowish gray	Clay	Hard		-w/calc nod & Fe st
10		6	3.25	Yellowish gray	Clay	V. stiff		-w/calc nod & Fe st
		7	3.00	Yellowish gray	Clay	V. stiff		-w/calc nod & Fe st
15		8	4.5+	Yellowish gray	Clay	Hard	Sandy	-w/calc & Fe nod & Fe st, Sa sms & Sa pkts
		9	4.5+	Yellowish gray	Clay	Hard	Sandy	-w/calc & Fe nod & Fe st, Sa sms & Sa pkts
		10	3.50	Yellowish gray	Clay	V. stiff	Sandy	-w/calc nod, Fe st, Sa sms & Sa pkts
20		11	2.75	Yellowish gray	Clay	V. stiff	Sandy	-w/calc nod, Fe st, Sa sms & Sa pkts
	J	12		Gray	Sand	M. Dense	Silty	
25	X	13	9/12/14	Gray	Sand	M. Dense	Silty	** encounter water @ 22' Set wet Rotary @ 28'
		14	3.50	Gray & Yellowish gray	Clay	V. stiff		-w/Fe st, Sa sm, slickensided
30		15	4.5+	Gray & Yellowish gray	Clay	Hard		-w/Fe st & Sa sms, slickensided
		16	4.5+	Gray & Yellowish gray	Clay	Hard		-w/Fe st, Sa sms, slickensided
35								J: Jar sample Drilling fluid level after completion of drilling @ 2'-8"

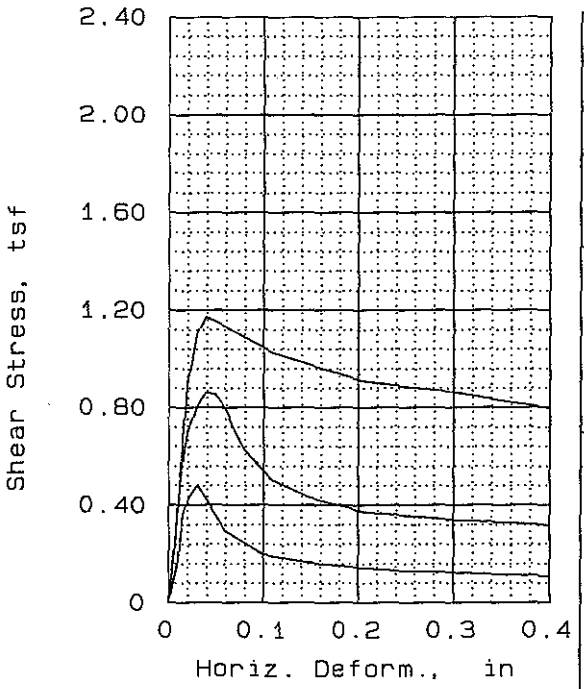
GEOTEST ENGINEERING, INC.

BRAYS BAYOU, HOUSTON, TX.
SAM HOUSTON PARKWAY CHANNEL REACH
FLOOD CONTROL PROJECT
SUMMARY OF SLOPE STABILITY ANALYSIS

CONDITION	BORING NO.	WATER ELEVATION	STA. NO	ARC NO.	CENTER OF CIRCLE		RADIUS	FACTOR OF SAFETY
					X	Y		
END OF	96-23	LOW FLOW	1177+70 RT	1	134.00	180.00	68.50	3.93
CONSTRUCTION								
		HIGH FLOW		2	134.00	180.00	72.00	4.00
LONG TERM	96-23	NORMAL FLOW	1177+70' RT	1	134.00	180.00	78.50	1.40
		HIGH FLOW		2	134.00	180.00	86.50	1.20
		SINGLE ARC		3	162.00	102.00	118.00	1.84
LONG TERM	96-20	UPSTREAM	1157+80' RT	1	24.00	118.50	76.00	1.60
		WEIR						
		STRUCTURE						
END OF CONSTR	96-19	DOWNSTREAM	1151+00' RT	1	20.00	101.00	59.50	4.50
LONG TERM		WEIR		2	-10.00	110.00	68.00	1.20
		STRUCTURE						







	SAMPLE NO.	1	2	3
INITIAL	WATER CONTENT, %	20.6	19.7	21.6
	DRY DENSITY, pcf	104.8	105.0	103.6
	SATURATION, %	91.4	87.9	93.3
	VOID RATIO	0.608	0.605	0.626
	DIAMETER, in	2.51	2.51	2.51
	HEIGHT, in	1.00	1.00	1.00
AT TEST	WATER CONTENT, %	24.3	24.9	22.7
	DRY DENSITY, pcf	103.2	101.9	106.0
	SATURATION, %	103.6	102.7	103.8
	VOID RATIO	0.633	0.653	0.591
	DIAMETER, in	2.51	2.51	2.51
	HEIGHT, in	1.02	1.03	0.98
NORMAL STRESS, tsf		0.50	1.00	3.00
MAX. SHEAR, tsf		0.48	0.86	1.17
STRAIN RATE, %/min.		0.004	0.004	0.004
ULT. SHEAR, tsf		0.11	0.32	0.80

SAMPLE DATA

SAMPLE TYPE: UNDISTURBED

DESCRIPTION: FAT CLAY (CH)

LL= 63 PL= 17 PI= 46.0

SPECIFIC GRAVITY= 2.70

REMARKS: SPECIFIC GRAVITY EST.

CLIENT: US ARMY CORPS OF ENGINEERS
GALVESTON DISTRICT

PROJECT: BRAYS BAYOU
MID-BASIN

SAMPLE LOCATION: BORING: 96-28, ST-6,
11.0'-12.0', SWD LAB No. 97/ 73

PROJ. NO.: 16724 DATE: MARCH 1997

DIRECT SHEAR TEST

CORPS OF ENGINEERS - SOUTHWESTERN

FIG. NO.