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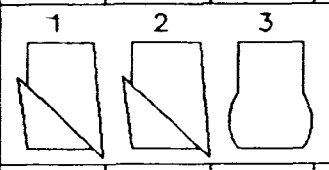

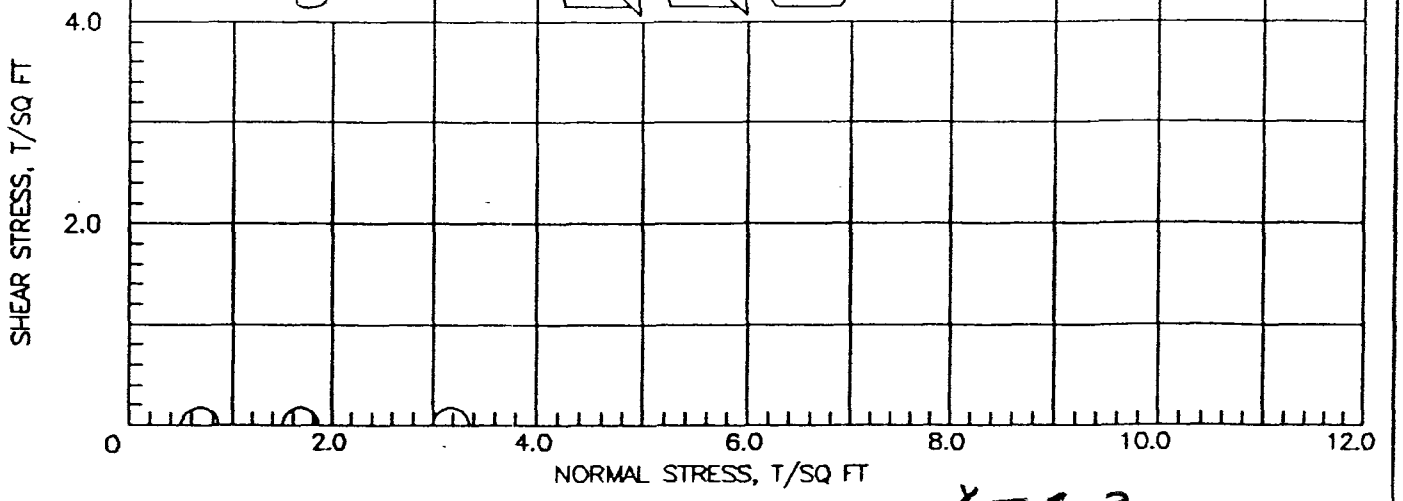

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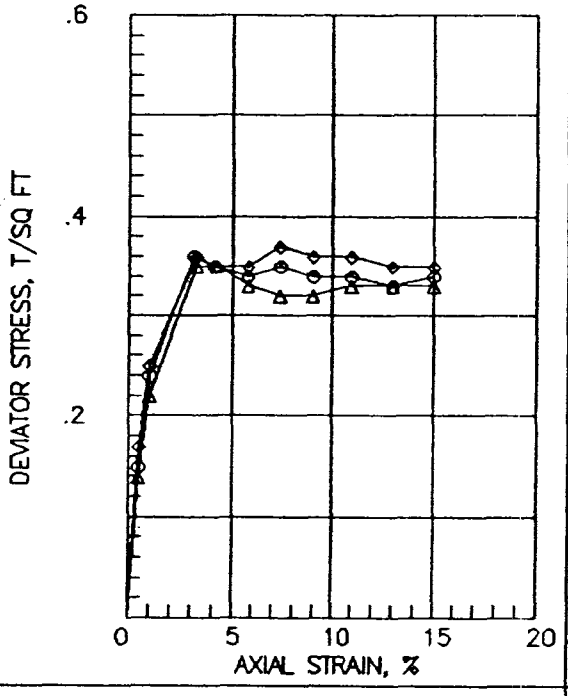


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	56.9	58.1	60.5	58.50
	DRY DENSITY, PCF	65.0	64.6	63.0	64.20
	SATURATION, %	96.4	97.4	97.5	97.10
	VOID RATIO	1.595	1.610	1.675	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		.36	.35	.36	.36
TIME TO FAILURE, MIN.		7	18	17	
STRAIN RATE INCR., %			7	5	
INITIAL DIAMETER, IN.		1.38	1.38	1.38	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: CLAY (CH), GRAY

LL 74	PL 24	PI 50	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

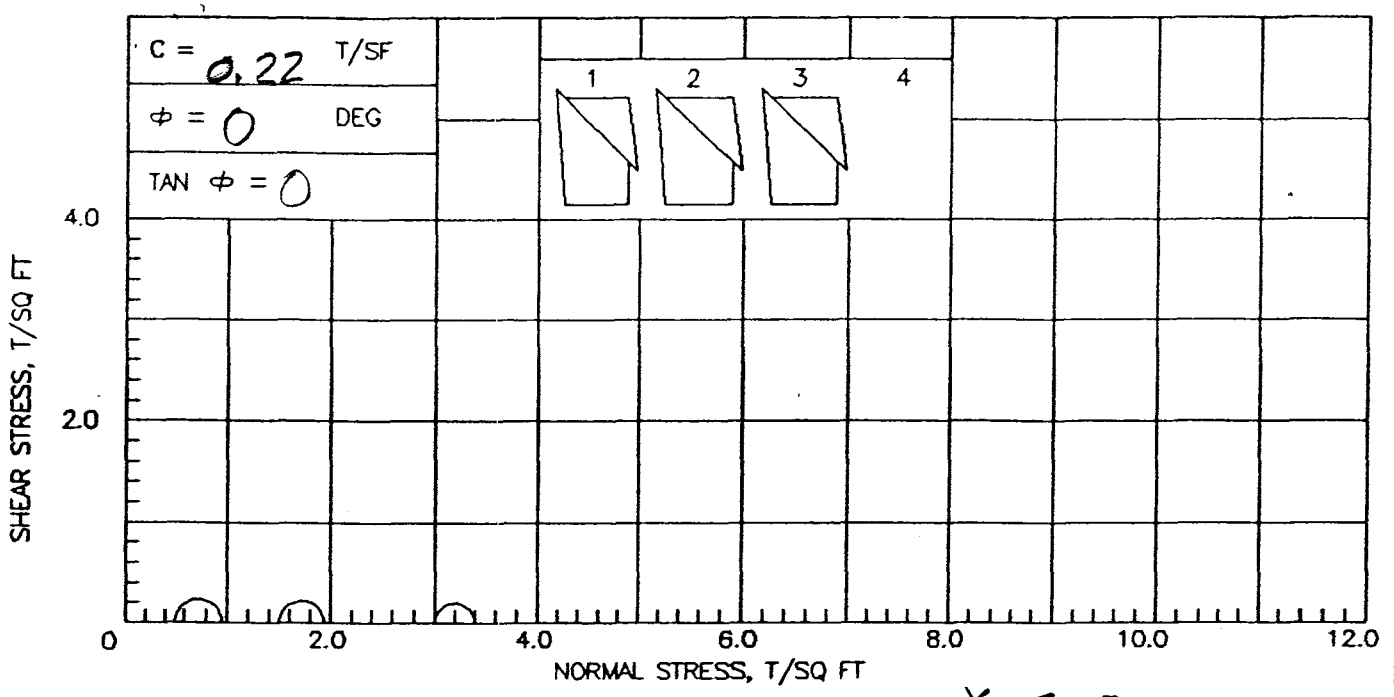
BAYOU SORREL LOCK

BORING NO. 9BYSU | SAMPLE NO. 9B

DEPTH/ELEV 32.5/-27.6 | TECH. JH

LABORATORY USAE WES - STF/GL | DATE 24 MAY 95

TRIAXIAL COMPRESSION TEST REPORT



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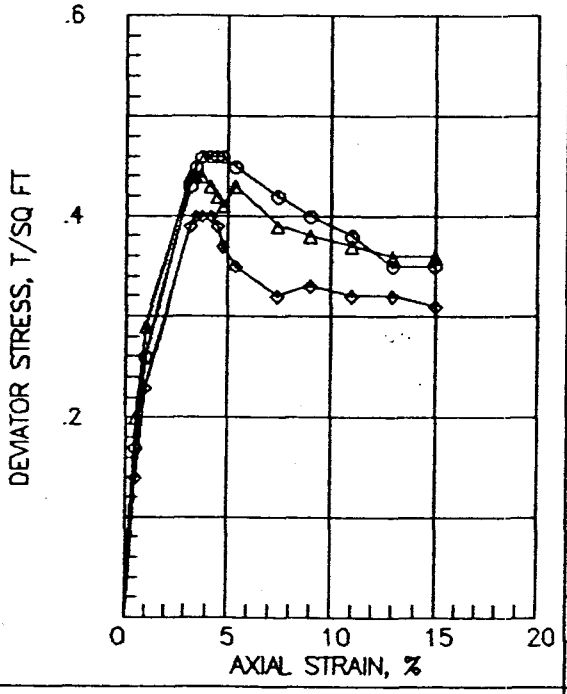


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	64.4	64.6	64.3	64.93
	DRY DENSITY, PCF	60.5	59.9	59.6	60.59
	SATURATION, %	97.3	96.3	95.0	96.25
	VOID RATIO	1.788	1.812	1.827	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		.46	.44	.40	.43
TIME TO FAILURE, MIN.		8	13	21	
STRAIN RATE INCR., %			5	7	
INITIAL DIAMETER, IN.		1.38	1.38	1.38	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: CLAY (CH), GRAY; SLICKENSIDED

LL 84	PL 24	PI 60	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

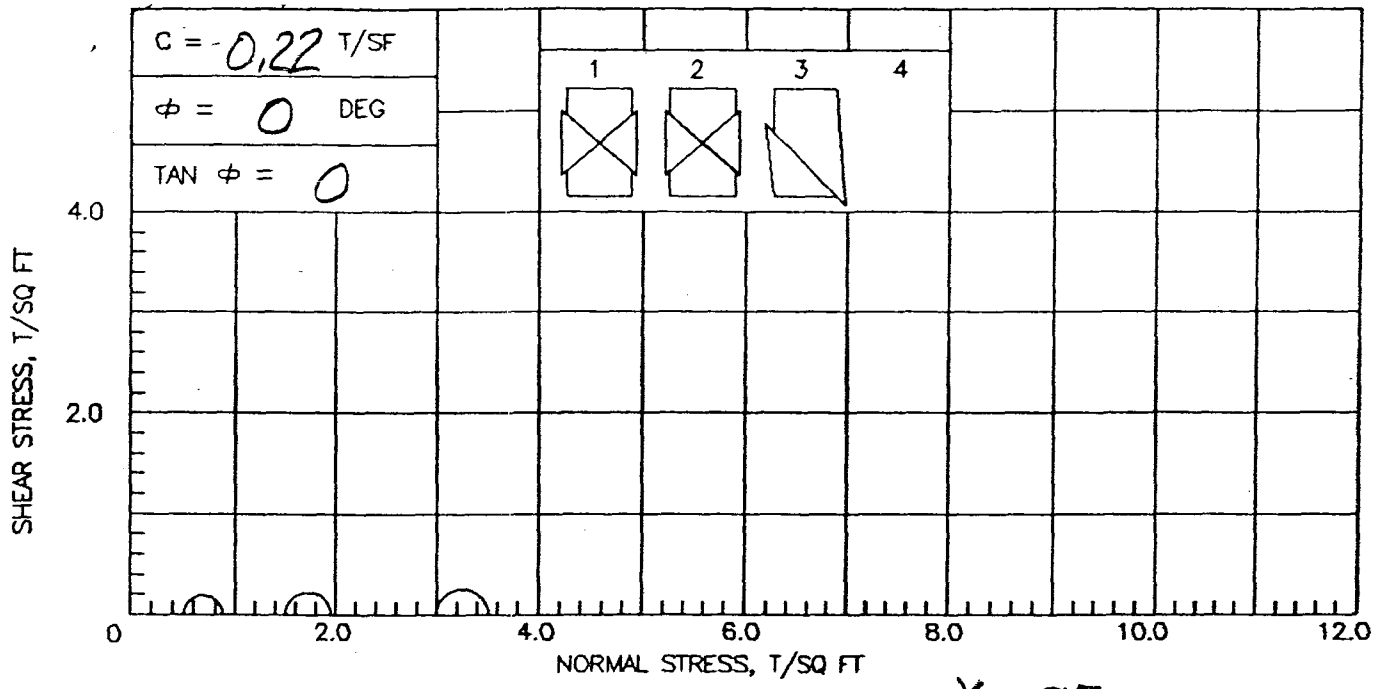
BAYOU SORREL LOCK

BORING NO. 9BYSU | SAMPLE NO. 10B

DEPTH/ELEV 35.7/-30.8 | TECH. JH

LABORATORY USAE WES - STF/GL | DATE 25 MAY 95

TRIAXIAL COMPRESSION TEST REPORT



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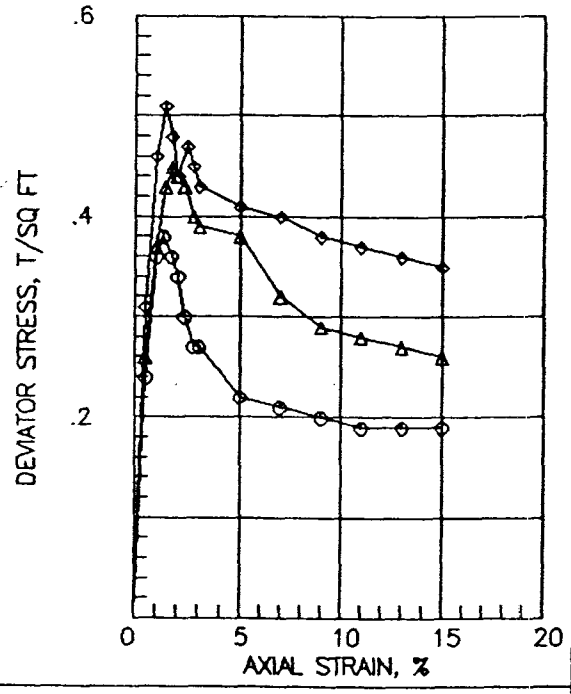


	SPECIMEN NO.	○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	75.3	72.8	72.0	73.37
	DRY DENSITY, PCF	54.6	55.5	55.8	55.30
	SATURATION, %	97.4	96.5	96.2	96.75
	VOID RATIO	2.089	2.037	2.021	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		.38	.45	.51	.45
TIME TO FAILURE, MIN.		3	10	15	
STRAIN RATE INCR., %			3	2	
INITIAL DIAMETER, IN.		1.38	1.38	1.38	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: CLAY (CH), GRAY

LL 94	PL 27	PI 67	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

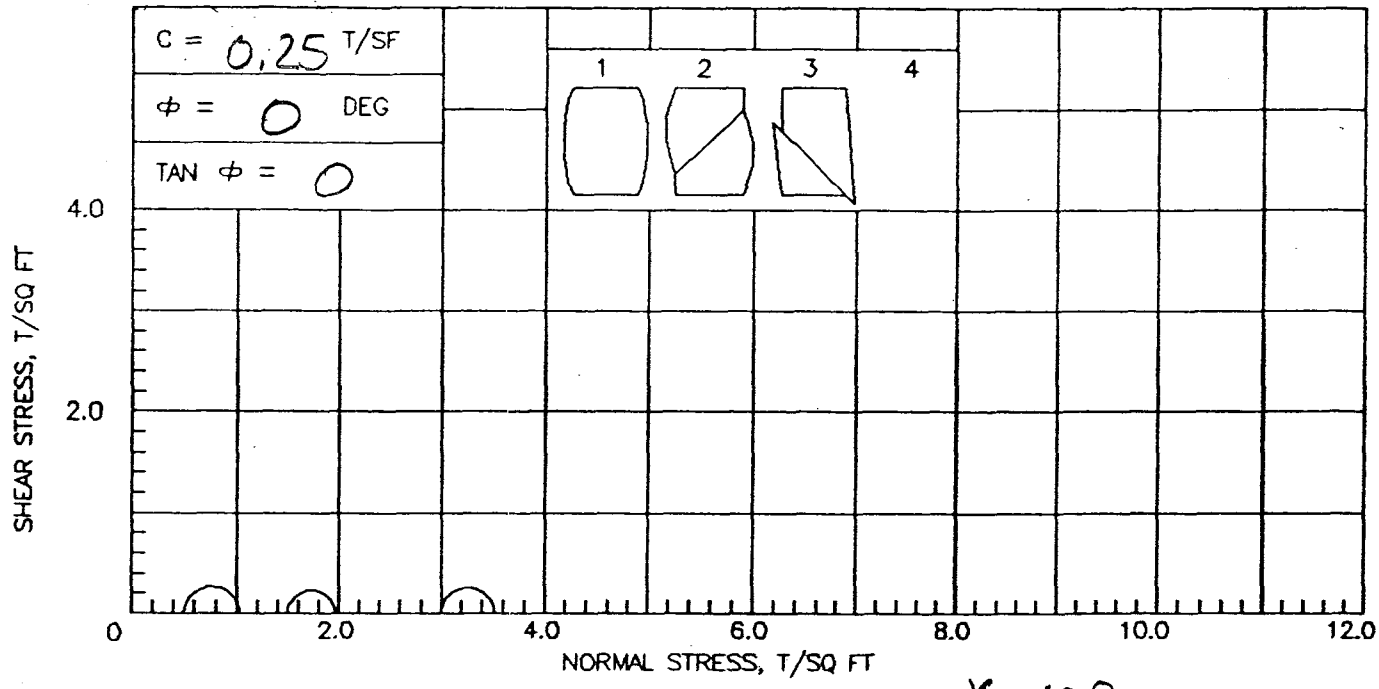
BAYOU SORREL LOCK

BORING NO. 9BYSU | SAMPLE NO. 11C

DEPTH/ELEV 41.0/-36.1 | TECH. JH

LABORATORY USAE WES - STF/GL | DATE 25 MAY 95

TRIAXIAL COMPRESSION TEST REPORT



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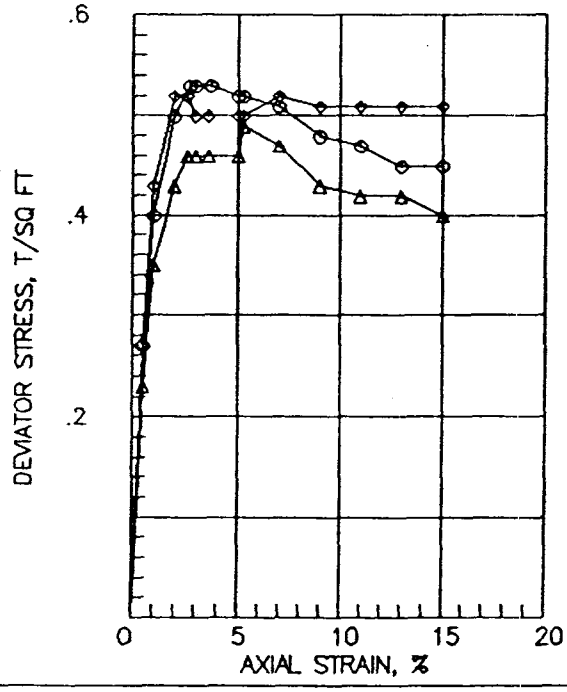


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	46.9	48.2	46.7	47.27
	DRY DENSITY, PCF	72.1	71.0	72.3	71.80
	SATURATION, %	94.6	94.7	94.6	94.63
	VOID RATIO	1.339	1.375	1.333	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		.53	.46	.52	.50
TIME TO FAILURE, MIN.		6	14	11	
STRAIN RATE INCR., %			5	5	
INITIAL DIAMETER, IN.		1.38	1.38	1.38	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: CLAY (CH), GRAY

LL 66	PL 20	PI 46	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

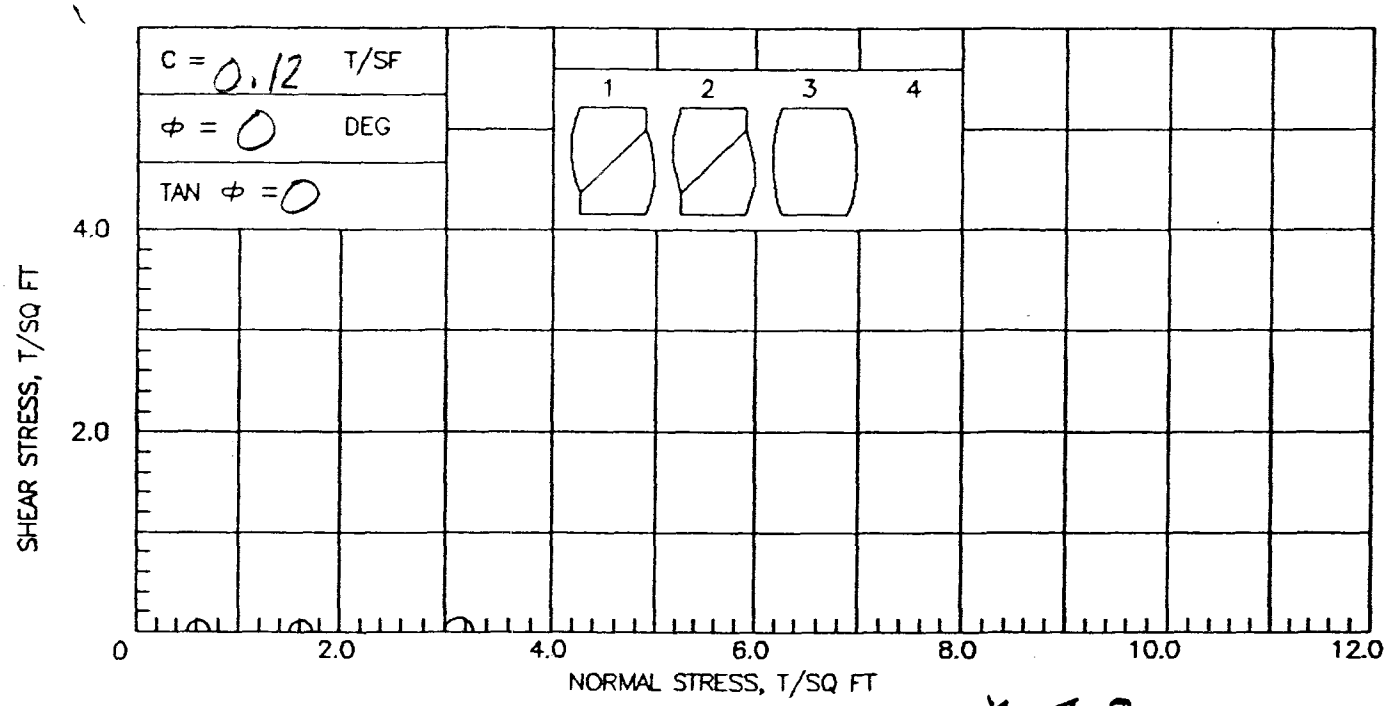
BAYOU SORREL LOCK

BORING NO. 9BYSU | SAMPLE NO. 12B

DEPTH/ELEV 43.8/-38.9 | TECH. JH

LABORATORY USAE WES - STF/GL | DATE 26 MAY 95

TRIAXIAL COMPRESSION TEST REPORT



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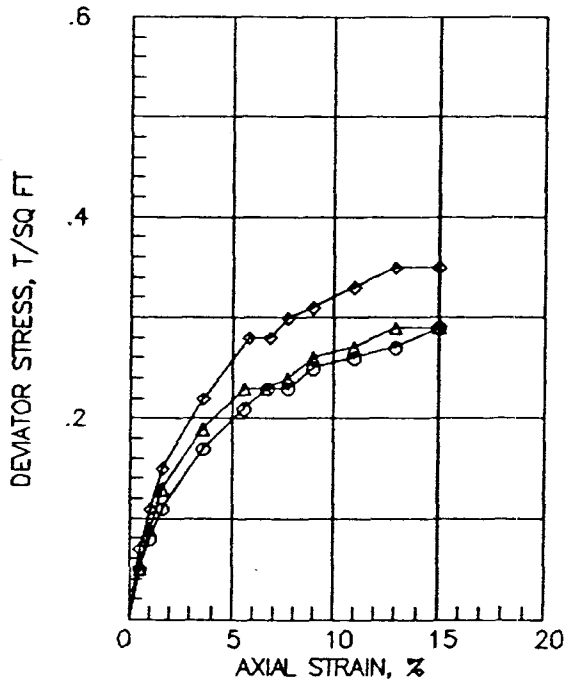


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	43.5	45.9	45.3	44.90
	DRY DENSITY, PCF	73.4	71.6	72.4	72.47
	SATURATION, %	90.5	91.5	92.2	91.40
	VOID RATIO	1.297	1.355	1.328	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		.23	.23	.28	.25
TIME TO FAILURE, MIN.		14	12	12	
STRAIN RATE INCR., %					
INITIAL DIAMETER, IN.		1.37	1.37	1.37	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: CLAY (CH), GRAY; SILT SEAMS

LL 52	PL 20	PI 32	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

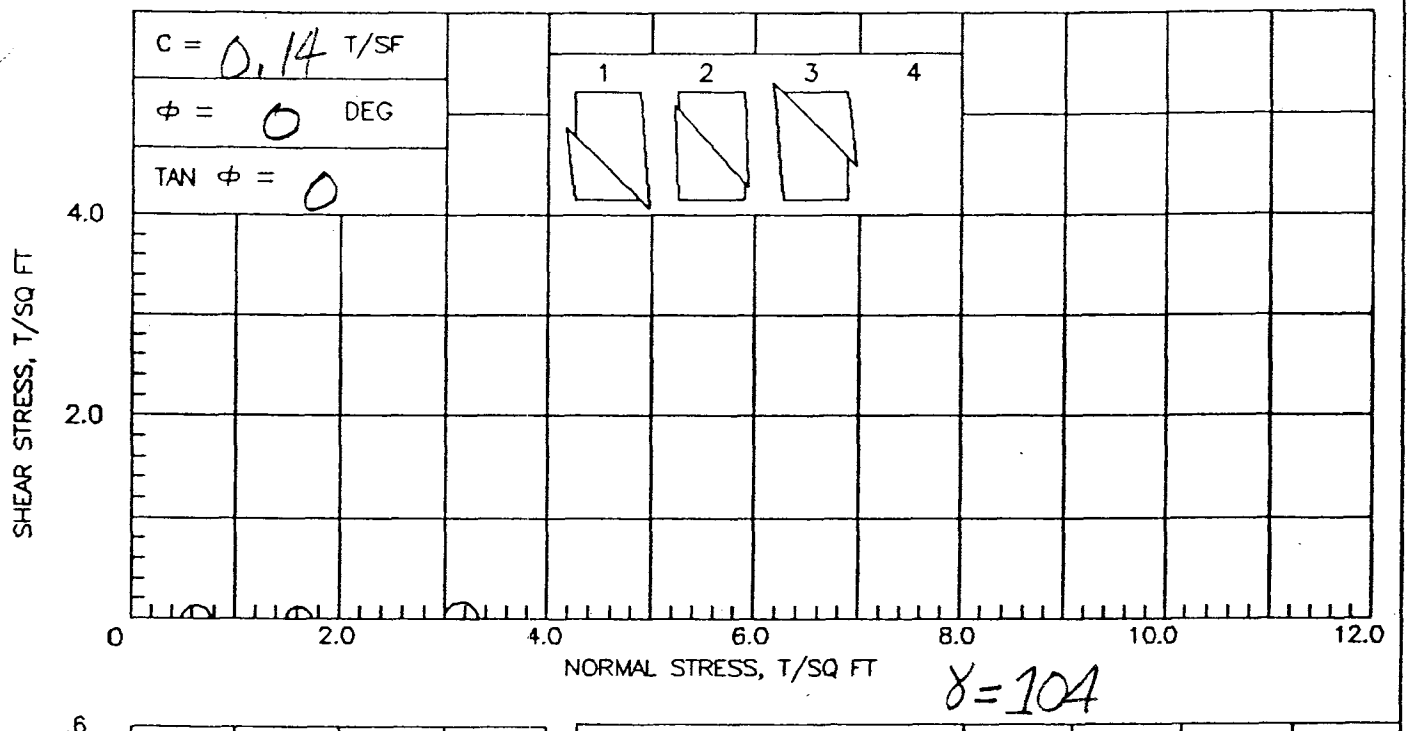
BAYOU SORREL LOCK

BORING NO. 9BYSU | SAMPLE NO. 14B

DEPTH/ELEV 51.6/-46.7 | TECH. JH

LABORATORY USAE WES - STF/GL | DATE 26 MAY 95

TRIAXIAL COMPRESSION TEST REPORT



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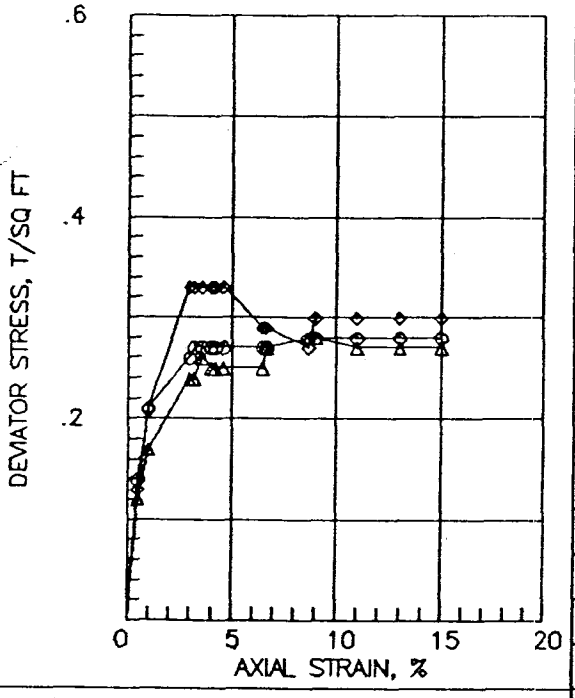


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	58.2	59.2	62.3	59.90
	DRY DENSITY, PCF	66.9	65.8	61.9	64.87
	SATURATION, %	100+	100+	97.6	99.20
	VOID RATIO	1.518	1.562	1.722	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		.27	.24	.33	.28
TIME TO FAILURE, MIN.		6	14	22	
STRAIN RATE INCR., %			6	8	
INITIAL DIAMETER, IN.		1.36	1.36	1.36	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

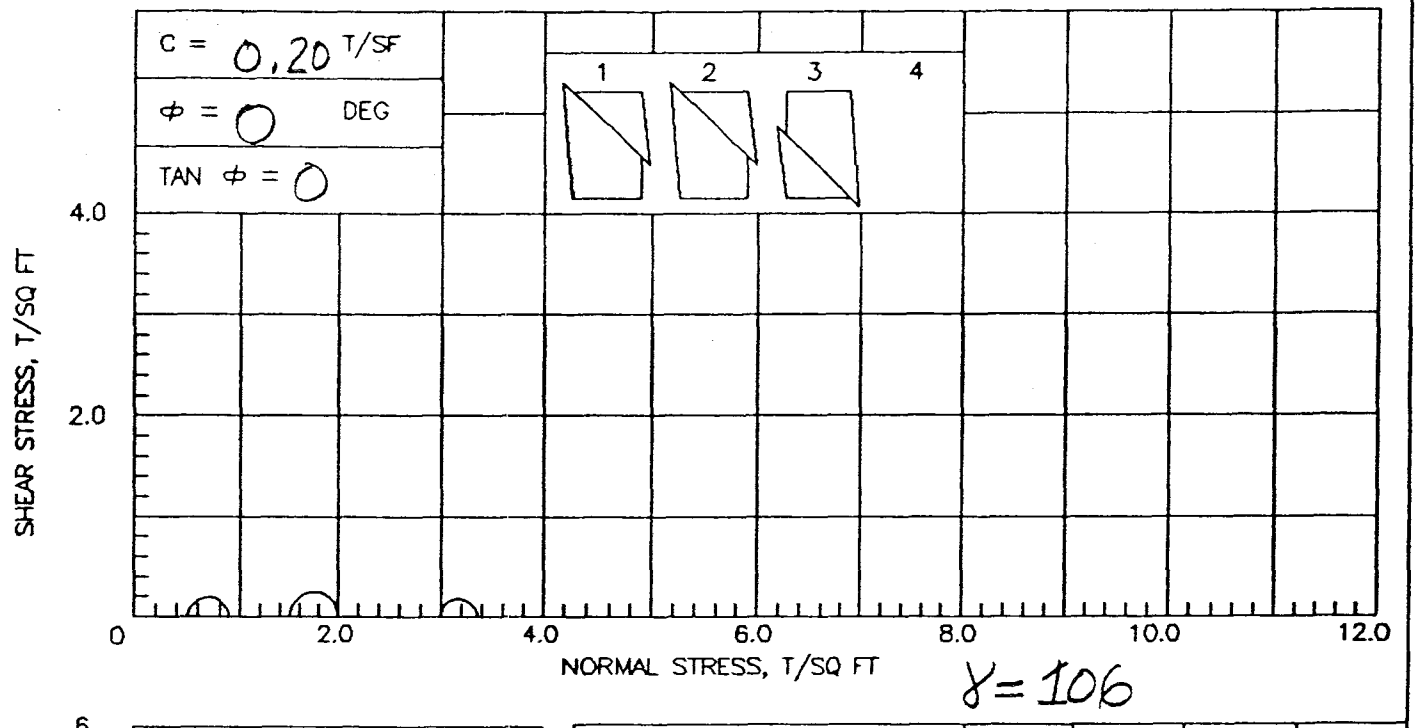
DESCRIPTION OF SPECIMENS: CLAY (CH), GRAY; IRON OXIDE PARTICLES

LL	PL	PI	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA	
BAYOU SORREL LOCK	
BORING NO. 9BYSU	SAMPLE NO. 15B
DEPTH/ELEV 56.5/-51.6	TECH. GM
LABORATORY USAE WES - STF/GL	DATE 26 JUL 95

TRIAXIAL COMPRESSION TEST REPORT



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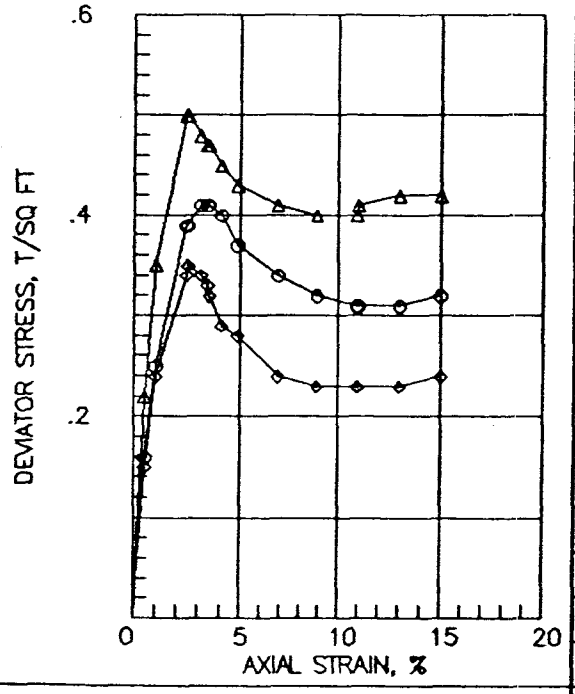


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	59.7	54.7	59.3	57.90
	DRY DENSITY, PCF	65.6	69.2	65.7	66.83
	SATURATION, %	100+	100+	100+	100
	VOID RATIO	1.571	1.436	1.564	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		.39	.50	.35	.41
TIME TO FAILURE, MIN.		5	9	9	
STRAIN RATE INCR., %			10		
INITIAL DIAMETER, IN.		1.36	1.36	1.36	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: CLAY (CH), GRAY; SILT SEAMS

LL 87	PL 26	PI 61	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

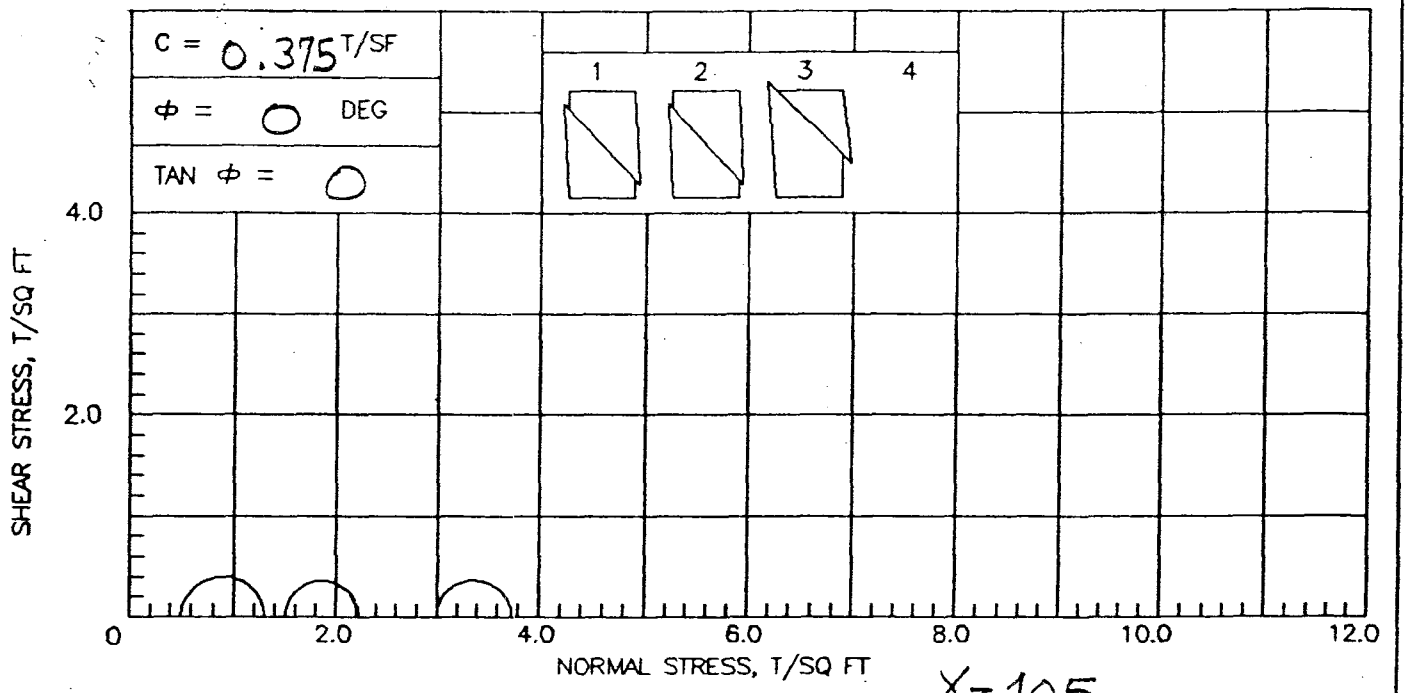
BAYOU SORREL LOCK

BORING NO. 9BYSU | SAMPLE NO. 16C

DEPTH/ELEV 61/-56.1 | TECH. GM

LABORATORY USAE WES - STF/GL | DATE 27 JUL 95

TRIAXIAL COMPRESSION TEST REPORT



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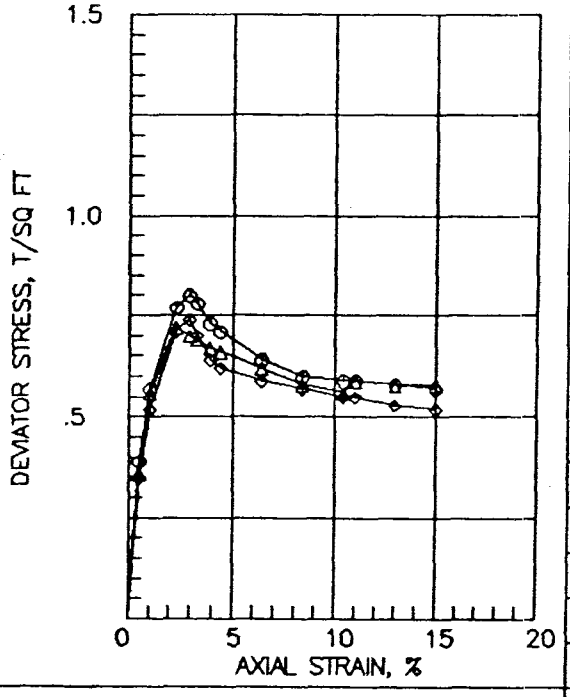


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	57.1	57.8	57.9	57.60
	DRY DENSITY, PCF	67.0	67.0	66.7	66.90
	SATURATION, %	100+	100+	100+	100
	VOID RATIO	1.515	1.518	1.528	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		.80	.72	.74	.75
TIME TO FAILURE, MIN.		5	7	9	
STRAIN RATE INCR., %			10		
INITIAL DIAMETER, IN.		1.36	1.36	1.36	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

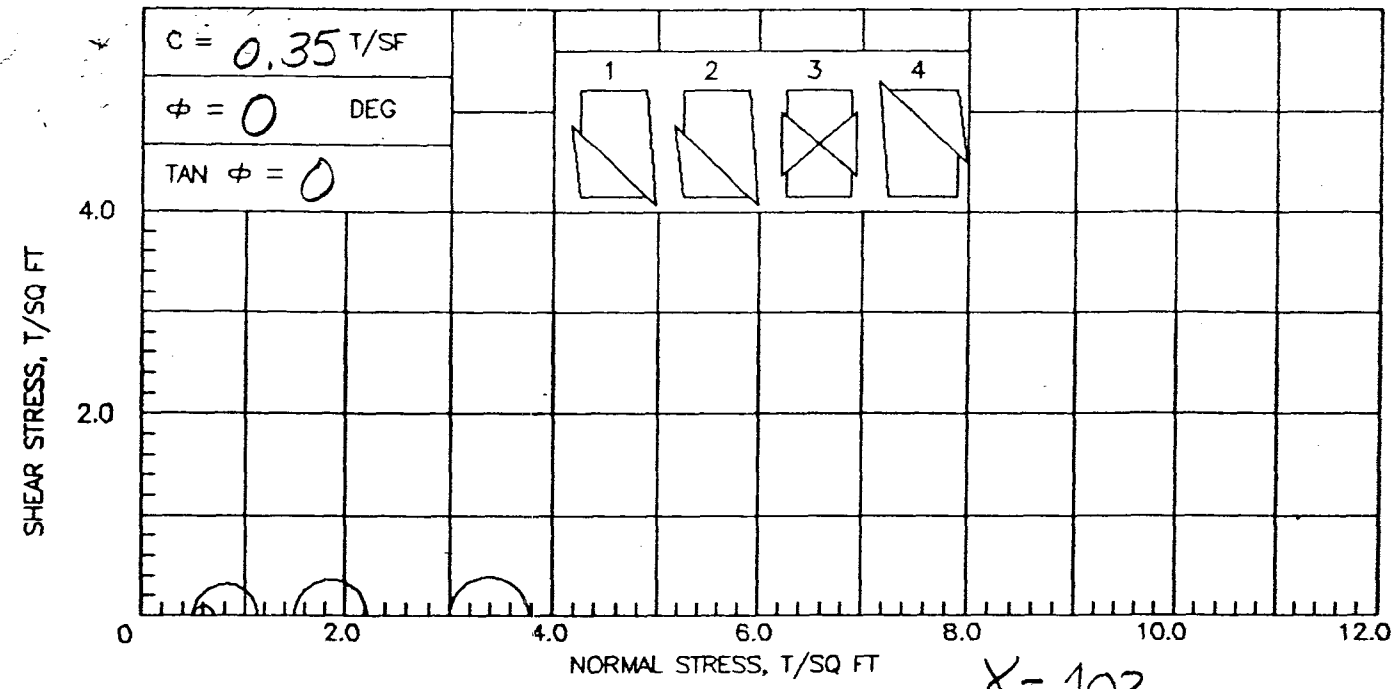
DESCRIPTION OF SPECIMENS: CLAY (CH), GRAY

LL	PL	PI	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA	
BAYOU SORREL LOCK	
BORING NO. 9BYSU	SAMPLE NO. 17C
DEPTH/ELEV 65.3/-60.4	TECH. GM
LABORATORY USAE WES - STF/GL	DATE 31 JUL 95

TRIAXIAL COMPRESSION TEST REPORT



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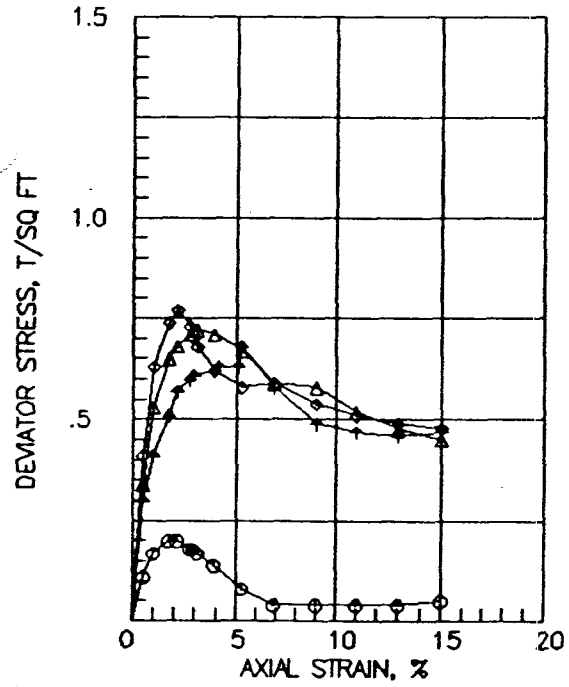


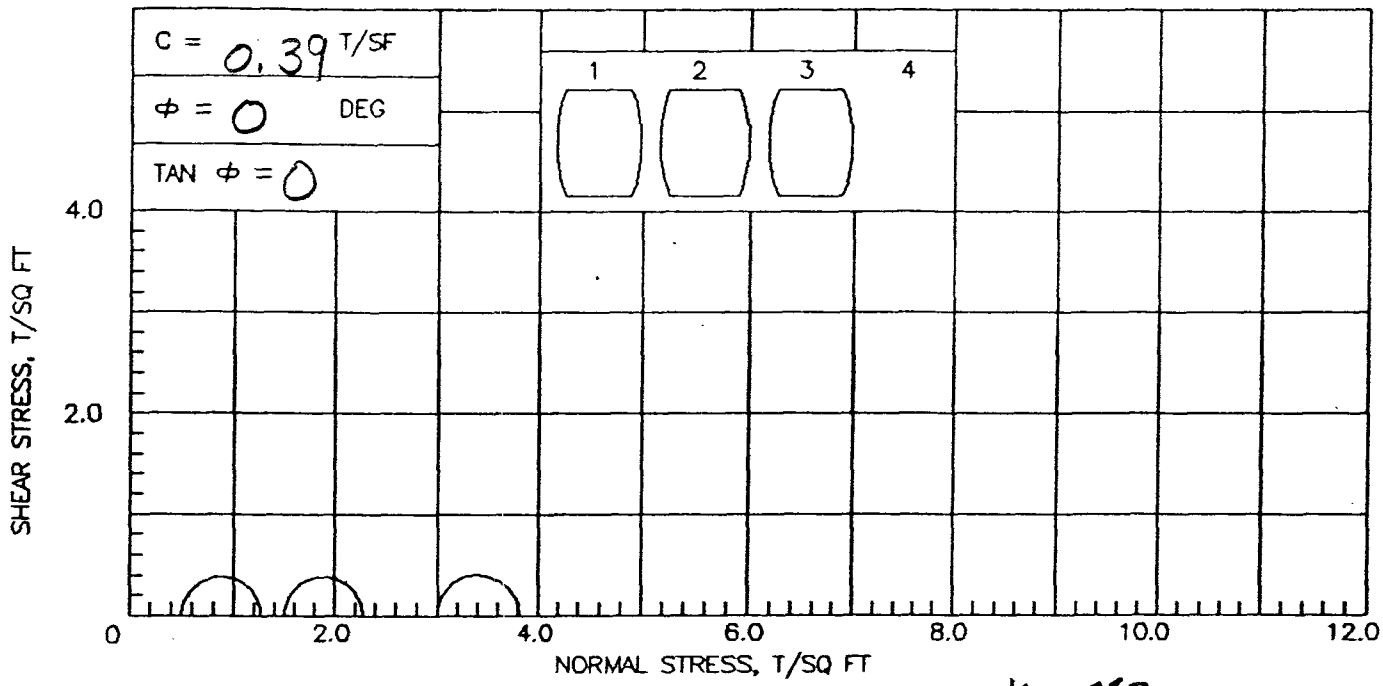
SPECIMEN NO.		○ 1	△ 2	◇ 3	+ 4	
INITIAL	WATER CONTENT, %	62.4	62.4	62.6	64.7	63.20
	DRY DENSITY, PCF	63.3	63.2	62.9	61.4	62.50
	SATURATION, %	100+	100+	100+	100+	100
	VOID RATIO	1.663	1.668	1.678	1.744	
BEFORE SHEAR	WATER CONTENT, %					
	DRY DENSITY, PCF					
	SATURATION, %					
	VOID RATIO					
	BACK PRESSURE, TSF					
CHAMBER PRESSURE, TSF		.50	1.50	3.00	.50	
MAX. DEV. STRESS, TSF		.20	.72	.77	.63	.71
TIME TO FAILURE, MIN.		3	32	15	57	
STRAIN RATE INCR., %			6	5	5	
INITIAL DIAMETER, IN.		1.36	1.36	1.36	1.36	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: CLAY (CH), GRAY

LL 91	PL 26	PI 65	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:	PROJECT INTRACOASTAL WATERWAY LOCKS, LA	
	BAYOU SORREL LOCK	
	BORING NO. 9BYSU	SAMPLE NO. 19C
	DEPTH/ELEV 73.0/-68.1	TECH. GM
	LABORATORY USAE WES - STF/GL	DATE 03 AUG 95
	TRIAXIAL COMPRESSION TEST REPORT	



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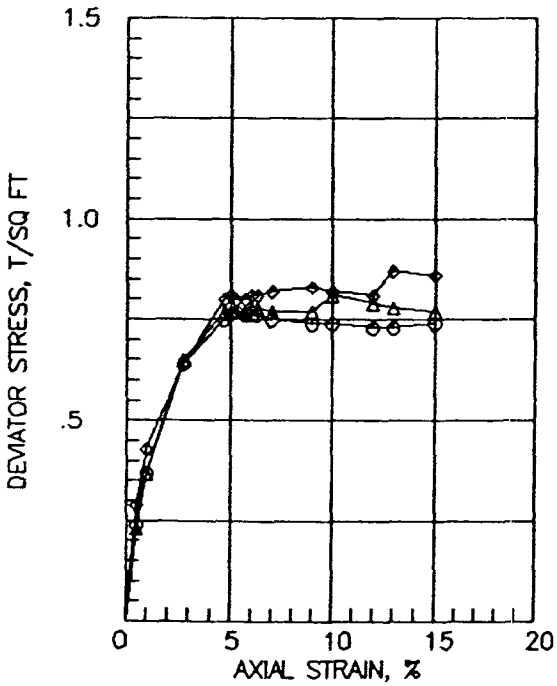


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	37.1	39.2	37.3	37.86
	DRY DENSITY, PCF	81.8	81.0	83.3	82.83
	SATURATION, %	94.5	98.0	98.3	96.93
	VOID RATIO	1.061	1.080	1.024	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		.77	.77	.81	.78
TIME TO FAILURE, MIN.		9	15	16	
STRAIN RATE INCR., %			9	12	
INITIAL DIAMETER, IN.		1.36	1.36	1.35	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: CLAY (CL), GRAY; FRIABLE

LL 46	PL 19	PI 27	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

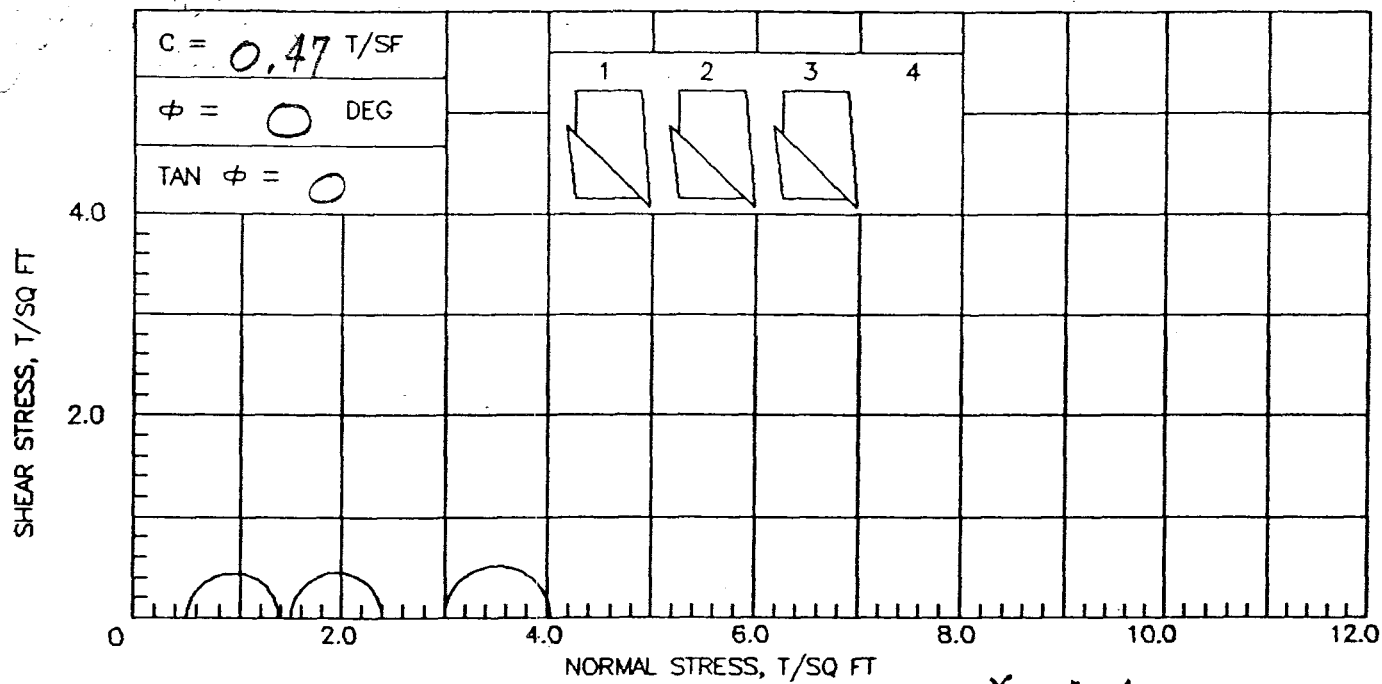
BAYOU SORREL LOCK

BORING NO. 9BYSU — SAMPLE NO. 23B

DEPTH/ELEV 88.0/-83.1 — TECH. GM

LABORATORY USAE WES - STF/GL — DATE 01 AUG 95

TRIAXIAL COMPRESSION TEST REPORT



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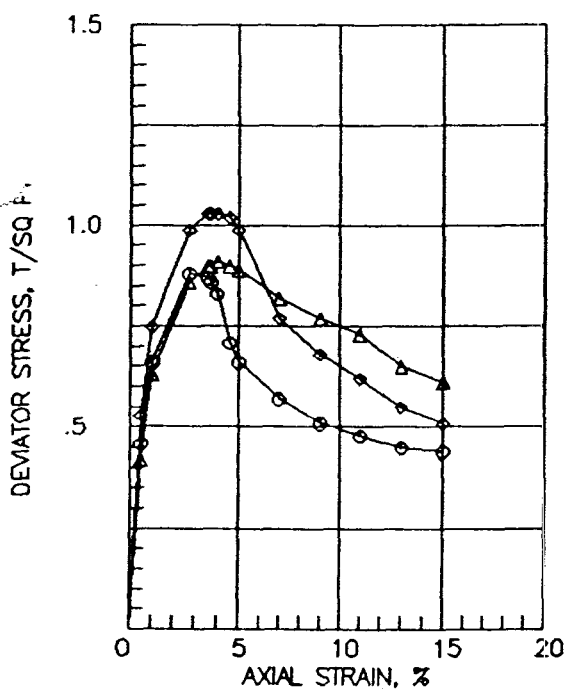


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	60.6	59.7	59.8	60.00
	DRY DENSITY, PCF	64.3	65.0	65.3	64.37
	SATURATION, %	100+	100+	100+	100
	VOID RATIO	1.620	1.594	1.581	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		.88	.90	1.03	.94
TIME TO FAILURE, MIN.		5	21	28	
STRAIN RATE INCR., %					
INITIAL DIAMETER, IN.		1.36	1.36	1.36	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: CLAY (CH), GRAY

LL 98	PL 27	PI 71	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

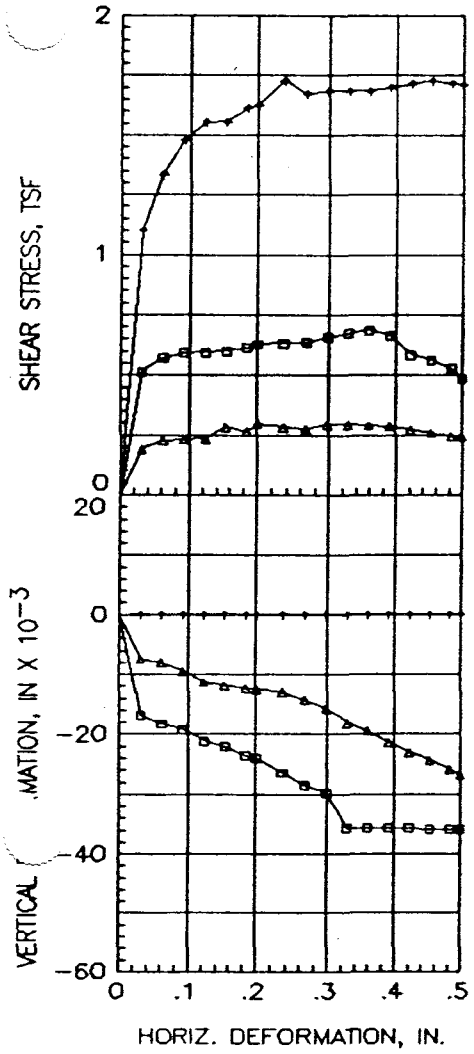
BAYOU SORREL LOCK

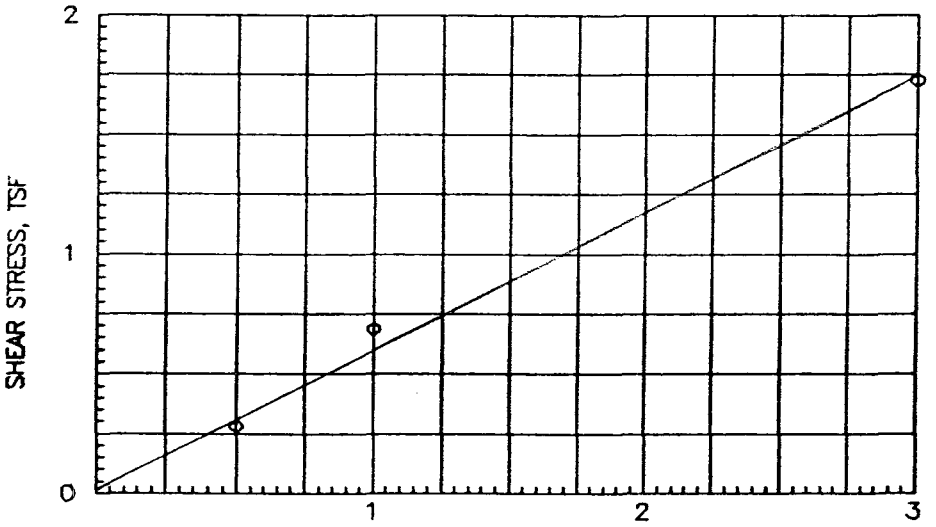
BORING NO. 9BYSU -92.9 | SAMPLE NO. 25D

DEPTH/ELEV 97.8/-92.1 | TECH. GM

LABORATORY USAE WES - STF/GL | DATE 02 AUG 95

TRIAXIAL COMPRESSION TEST REPORT





$\gamma = 120$

	TEST NO.	1 ▲	2 □	3 ✦	
INITAL	WATER CONTENT, %	22.3	22.2	23.0	22.50
	VOID RATIO	.699	.715	.695	
	SATURATION, %	85.1	82.9	88.3	85.43
	DRY DENSITY, PCF	98.1	97.1	98.3	97.88
VOID RATIO AFTER CONSOL					
FIFTY PERCENT CONSOL, MIN		< 1	< 1	< 1	
FINAL	WATER CONTENT, %	25.8	26.4	26.6	
	VOID RATIO				
	SATURATION, %				
NORMAL STRESS, TSF		.50	1.00	3.00	
MAXIMUM SHEAR STRESS, TSF		.28	.69	1.73	
TIME TO FAILURE, MIN		874	2040	1341	
RATE OF STRAIN, IN/MIN		.00018	.00018	.00018	
ULTIMATE SHEAR STRESS, TSF		.24	.48	1.67	

ϕ = 30 DEG

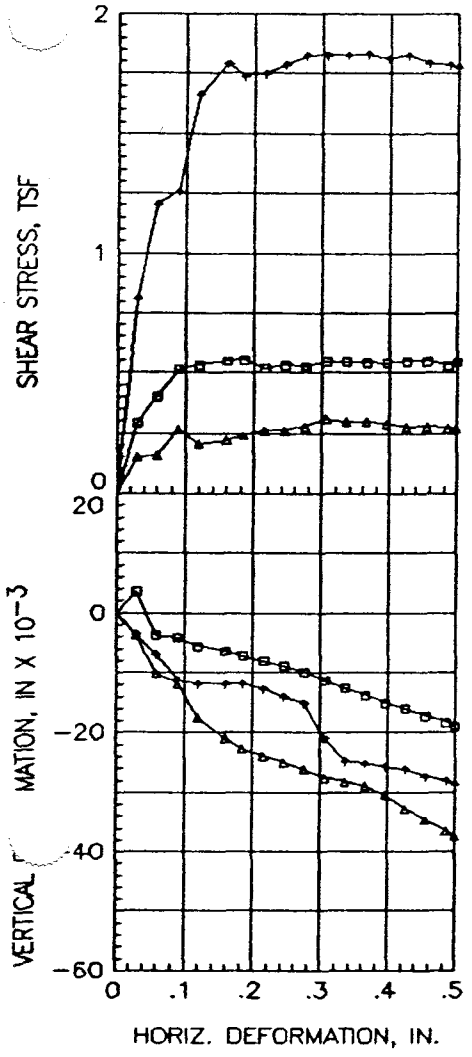
TAN ϕ = .57

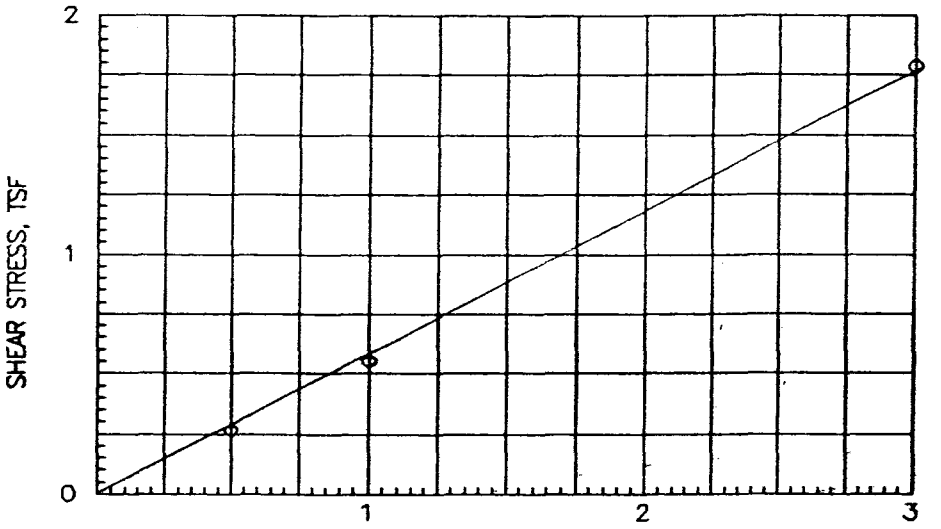
C = 0 T/SF

TYPE SPECIMEN UNDISTURBED	3.00 IN. SQUARE	.628 IN. THICK
CLASSIFICATION SILTY SAND (SM), GRAY		

LL	PL	PI		GS 2.67 (EST)

REMARKS;	PROJECT INTRACOASTAL WATERWAY LOCKS, LA	
NO VERTICAL DEFORMATION READINGS	BAYOU SORREL LOCK	
RECORDED FOR SPECIMEN NO. 3 SINCE	BORING NO. 5 BYSU	SAMPLE 258
POTIENTIOMETER WAS OUT OF CONTACT	DEPTH/ELEV 96.5 / -88.5	TECH. US
	LABORATORY USAE WES – STF/GL	DATE 26 AUG 94
	DIRECT SHEAR TEST REPORT	





$\gamma = 116$

	TEST NO.	1 ▲	2 □	3 ◆	
INITAL	WATER CONTENT, %	19.5	21.0	22.2	20.90
	VOID RATIO	.702	.684	.771	
	SATURATION, %	73.7	81.3	76.2	77.07
	DRY DENSITY, PCF	97.1	98.2	93.4	96.28
VOID RATIO AFTER CONSOL					
FIFTY PERCENT CONSOL, MIN		< 1	< 1	< 1	
FINAL	WATER CONTENT, %	23.9	24.9	24.0	
	VOID RATIO				
	SATURATION, %				
NORMAL STRESS, TSF		.50	1.00	3.00	
MAXIMUM SHEAR STRESS, TSF		.27	.55	1.79	
TIME TO FAILURE, MIN		487	1005	869	
RATE OF STRAIN, IN/MIN		.00018	.00018	.00018	
ULTIMATE SHEAR STRESS, TSF		.21	.52	1.74	

ϕ = 30 DEG

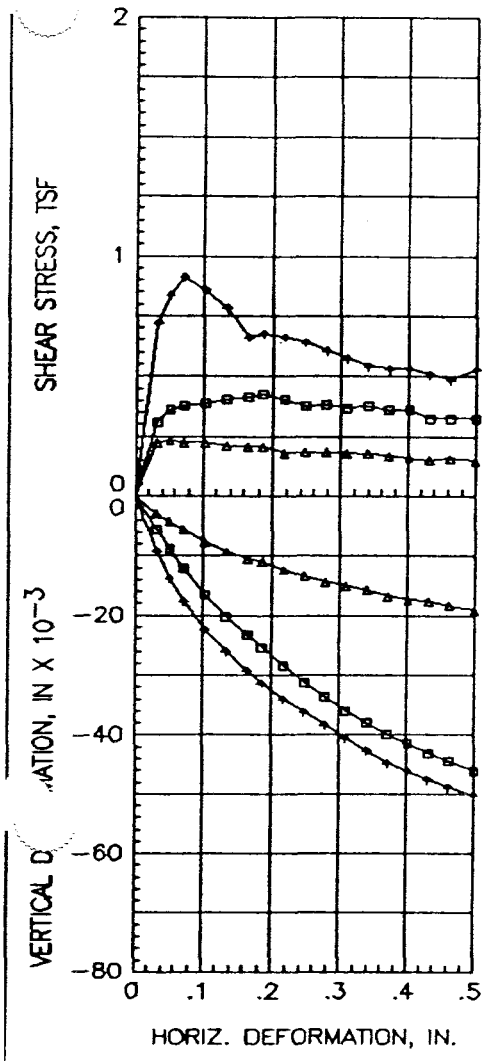
TAN ϕ = .57

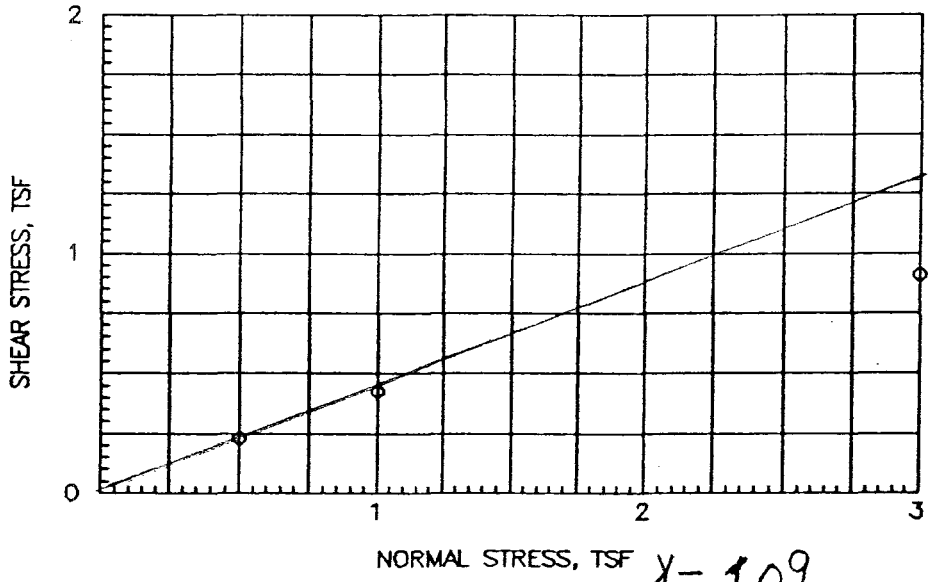
C = 0 T/SF

TYPE SPECIMEN UNDISTURBED	3.00 IN. SQUARE	.628 IN. THICK
CLASSIFICATION SAND (SP), GRAY		

LL	PL	PI		GS 2.65 (EST)

REMARKS:	PROJECT INTRACOASTAL WATERWAY LOCKS, LA	
	BAYOU SORREL LOCK	
	BORING NO. 5 BYSU	SAMPLE 27C
	DEPTH/ELEV 105.0/-97.0	TECH. US
	LABORATORY USAE WES – STF/GL	DATE 26 AUG 94
	DIRECT SHEAR TEST REPORT	





$\gamma = 109$

$\phi =$ 23° DEG

TAN $\phi =$ .4245

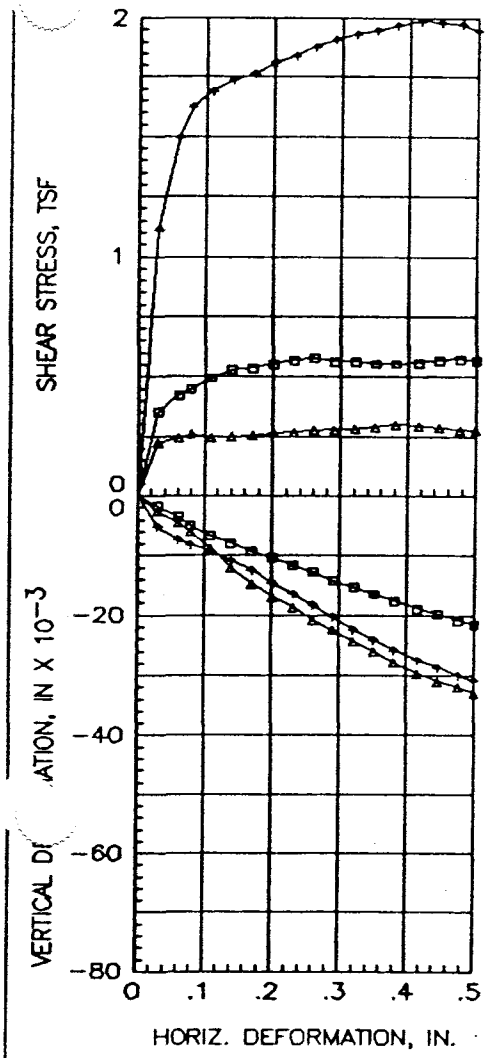
C = 0.0 T/SF

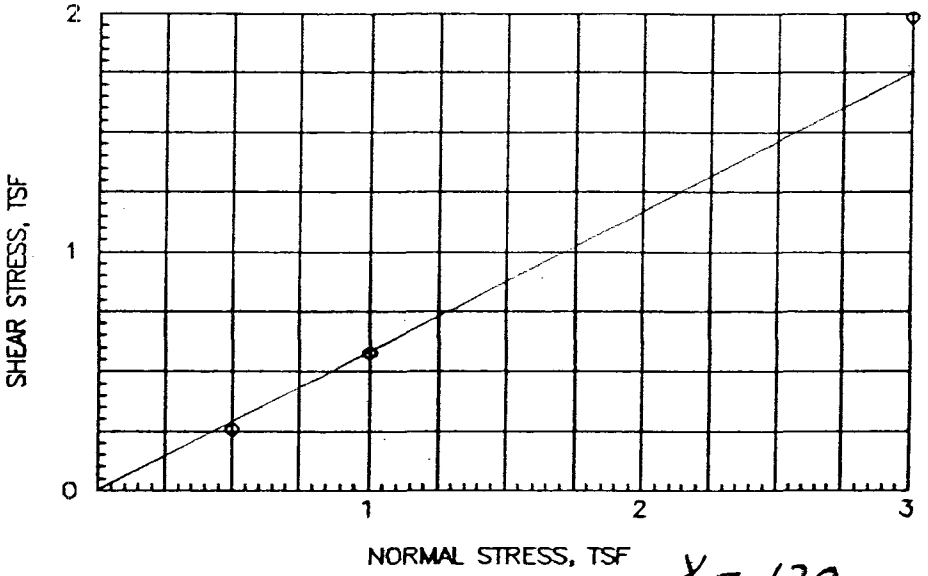
	TEST NO.	1 ▲	2 □	3 ◆	
INITAL	WATER CONTENT, %	45.7	44.1	45.0	44.93
	VOID RATIO	1.277	1.264	1.274	
	SATURATION, %	96.7	94.3	95.3	95.43
	DRY DENSITY, PCF	74.0	74.4	74.1	[illegible]
VOID RATIO AFTER CONSOL					
FIFTY PERCENT CONSOL, MIN		< 1	< 1	< 1	
FINAL	WATER CONTENT, %	40.9	38.7	34.2	
	VOID RATIO				
	SATURATION, %				
NORMAL STRESS, TSF		.50	1.00	3.00	
MAXIMUM SHEAR STRESS, TSF		.23	.43	.91	
TIME TO FAILURE, MIN		286	1026	400	
RATE OF STRAIN, IN/MIN		.00018	.00018	.00018	
ULTIMATE SHEAR STRESS, TSF		.15	.33	.49	

TYPE SPECIMEN UNDISTURBED	3.00 IN. SQUARE	.552 IN. THICK
CLASSIFICATION CLAY (CH), GRAY		

LL 76	PL 21	PI 55		GS 2.70 (EST)

REMARKS;	PROJECT INTRACOASTAL WATERWAY LOCKS, LA	
	BAYOU SORREL LOCK	
	BORING NO. 7BYSU	SAMPLE 2C
	DEPTH/ELEV 16.0/-14.7	TECH. JL
	LABORATORY USAE WES - STF/GL	DATE 02 MAY 95
	DIRECT SHEAR TEST REPORT	





$\gamma = 120$

	TEST NO.	1 ▲	2 □	3 ◆	
INITAL	WATER CONTENT, %	27.3	26.2	25.4	26.30
	VOID RATIO	.809	.807	.802	
	SATURATION, %	90.5	87.1	84.9	87.50
	DRY DENSITY, PCF	92.4	92.6	92.8	92.60
VOID RATIO AFTER CONSOL					
FIFTY PERCENT CONSOL, MIN		< 1	< 1	< 1	
FINAL	WATER CONTENT, %	25.8	28.7	30.0	
	VOID RATIO				
	SATURATION, %				
NORMAL STRESS, TSF		.50	1.00	3.00	
MAXIMUM SHEAR STRESS, TSF		.26	.58	1.99	
TIME TO FAILURE, MIN		445	1455	2324	
RATE OF STRAIN, IN/MIN		.00018	.00018	.00018	
ULTIMATE SHEAR STRESS, TSF		.25	.56	1.95	

ϕ = 30° DEG

TAN ϕ = .5774

C = 0.0 T/SF

TYPE SPECIMEN UNDISTURBED	3.00 IN. SQUARE	.552 IN. THICK
CLASSIFICATION SILT (ML), GRAY		

LL	PL	PI		GS 2.68 (EST)

REMARKS;	PROJECT INTRACOASTAL WATERWAY LOCKS, LA	
	BAYOU SORREL LOCK	
	BORING NO. 7BYSU	SAMPLE 23D
	DEPTH/ELEV 89.8/-88.5	TECH. JL
	LABORATORY USAE WES - STF/GL	DATE 02 MAY 95
	DIRECT SHEAR TEST REPORT	