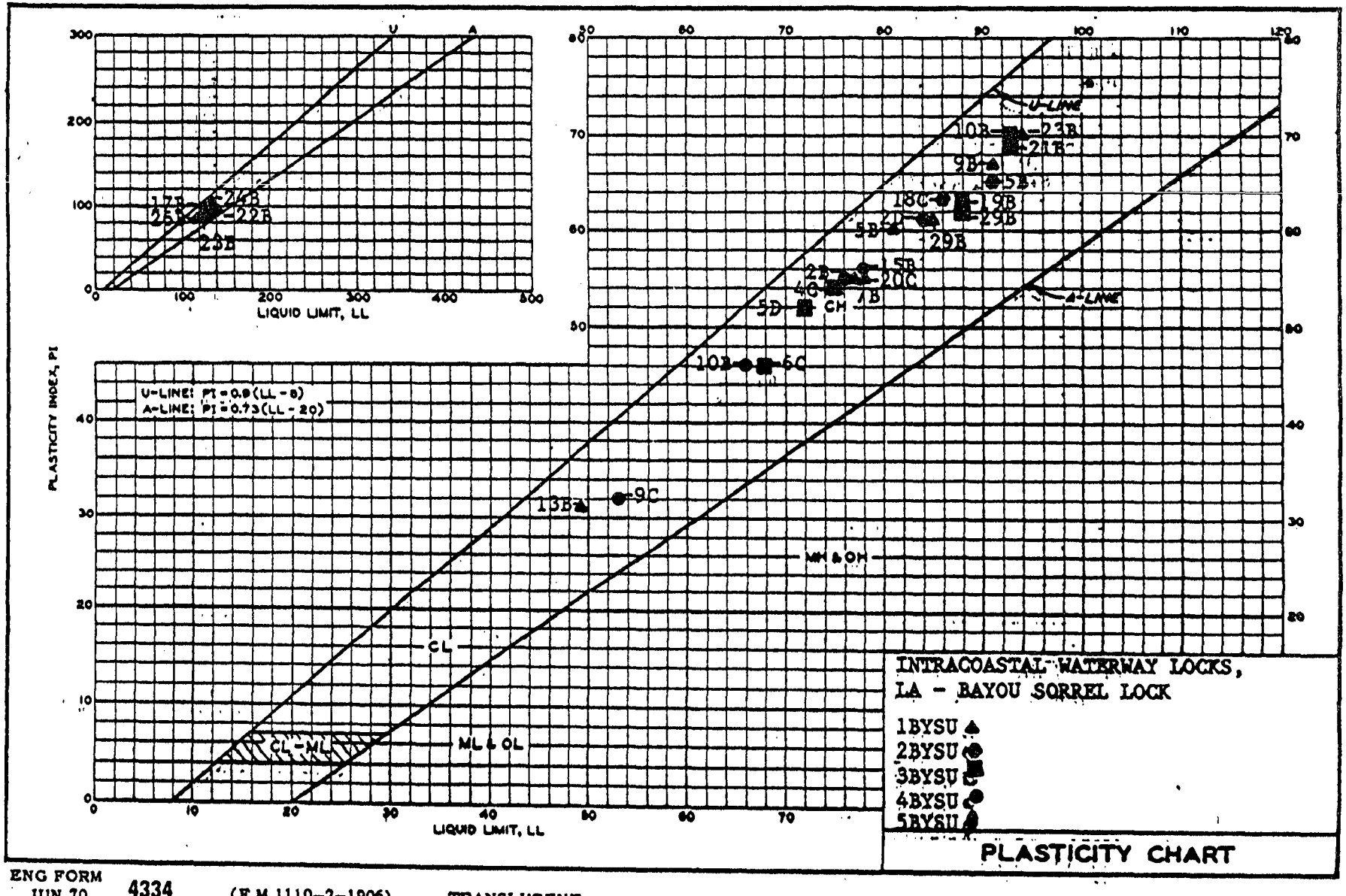
ANNEX 3 – GEOTECHNICAL ENGINEERING DATA



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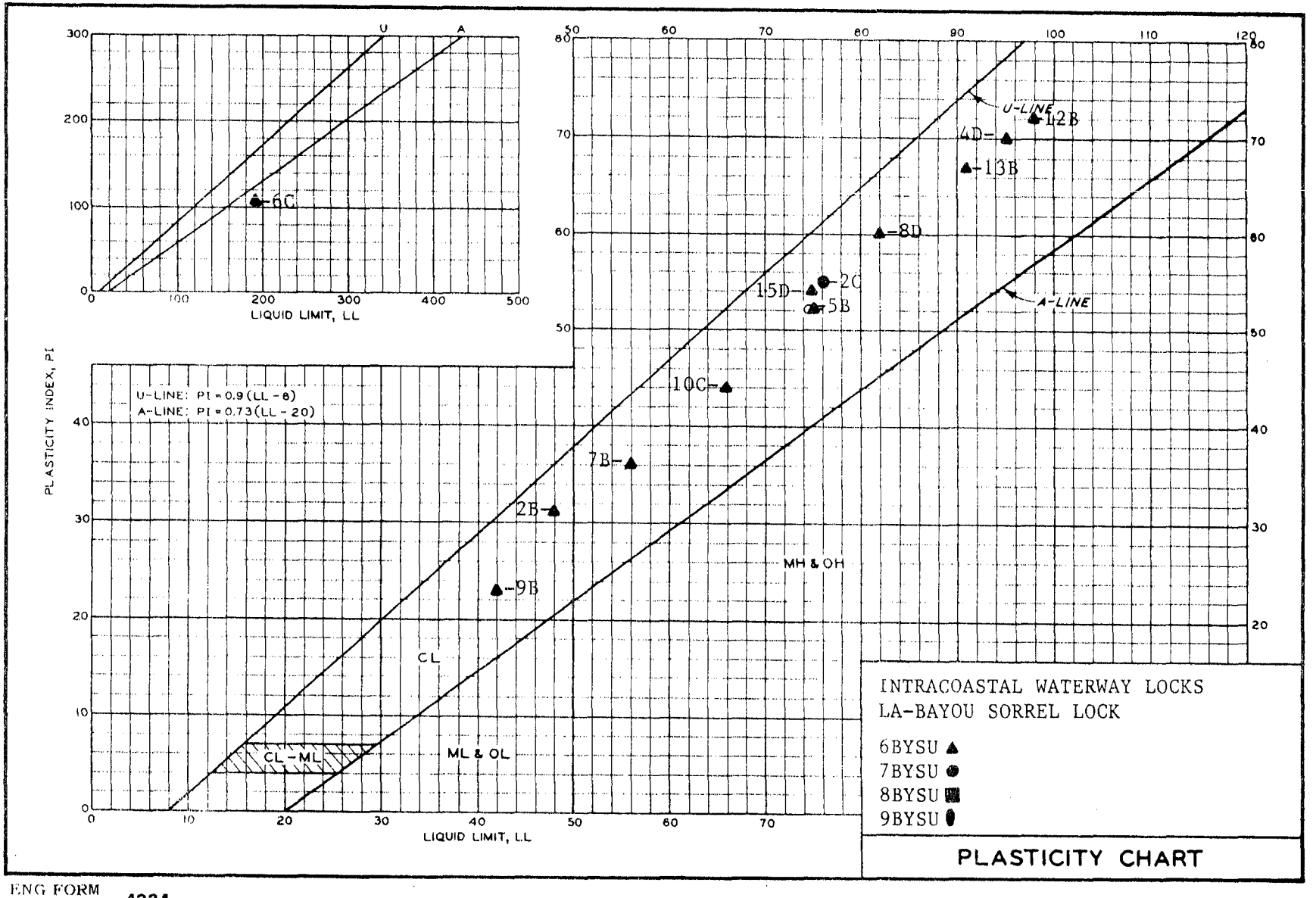
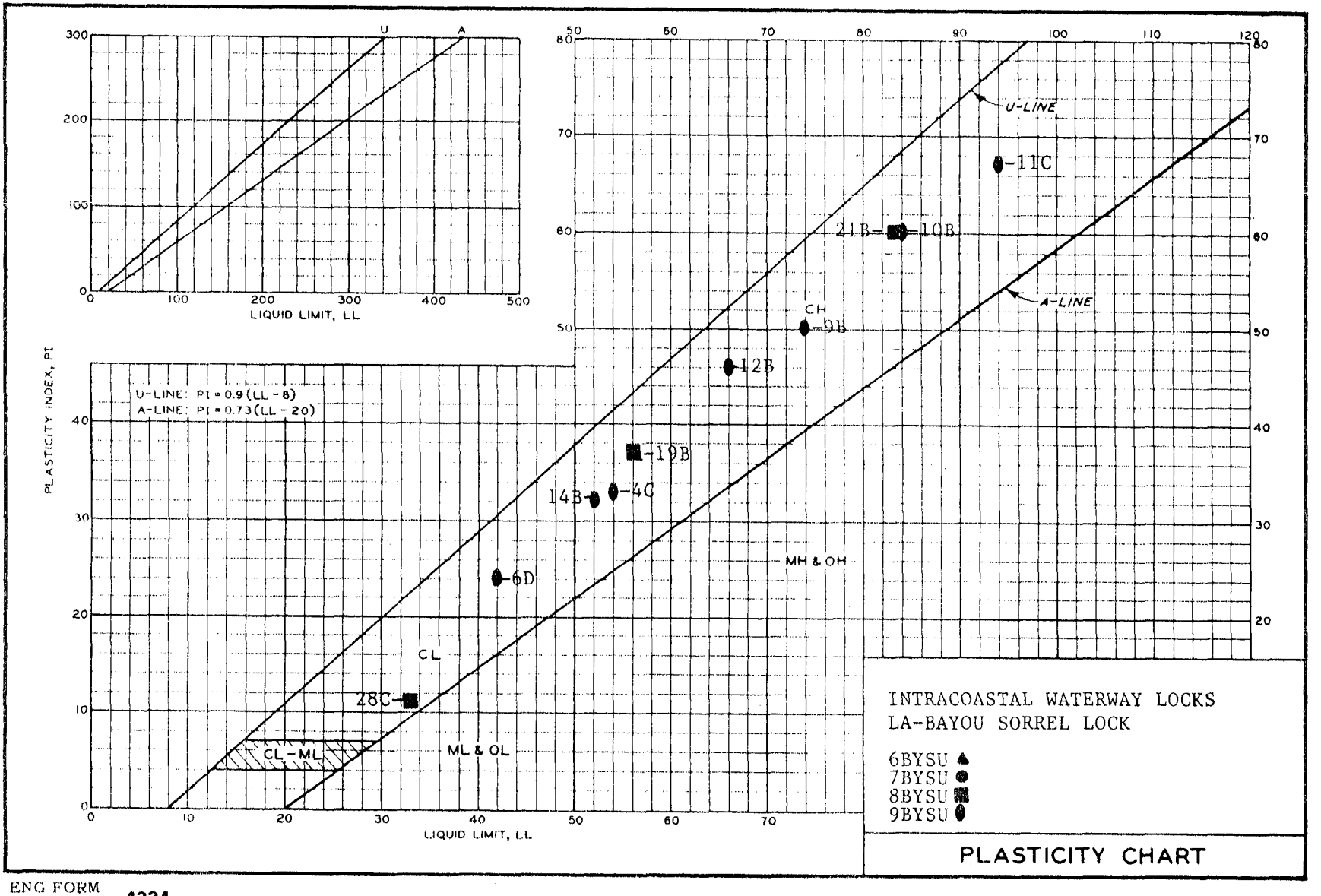
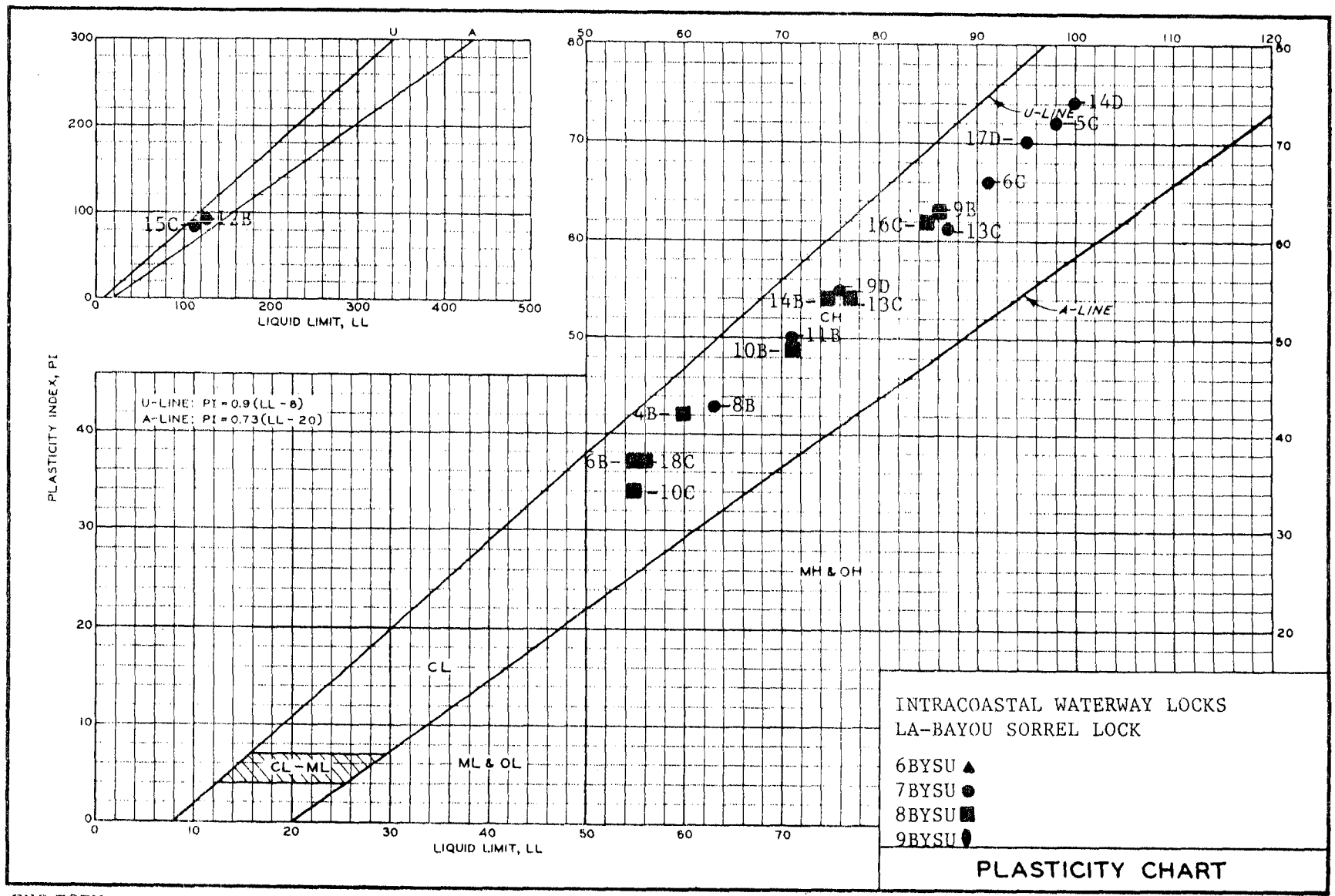


ENG FORM JUN 70 4334 (EM 1110-2-1906) TRANSLUCENT



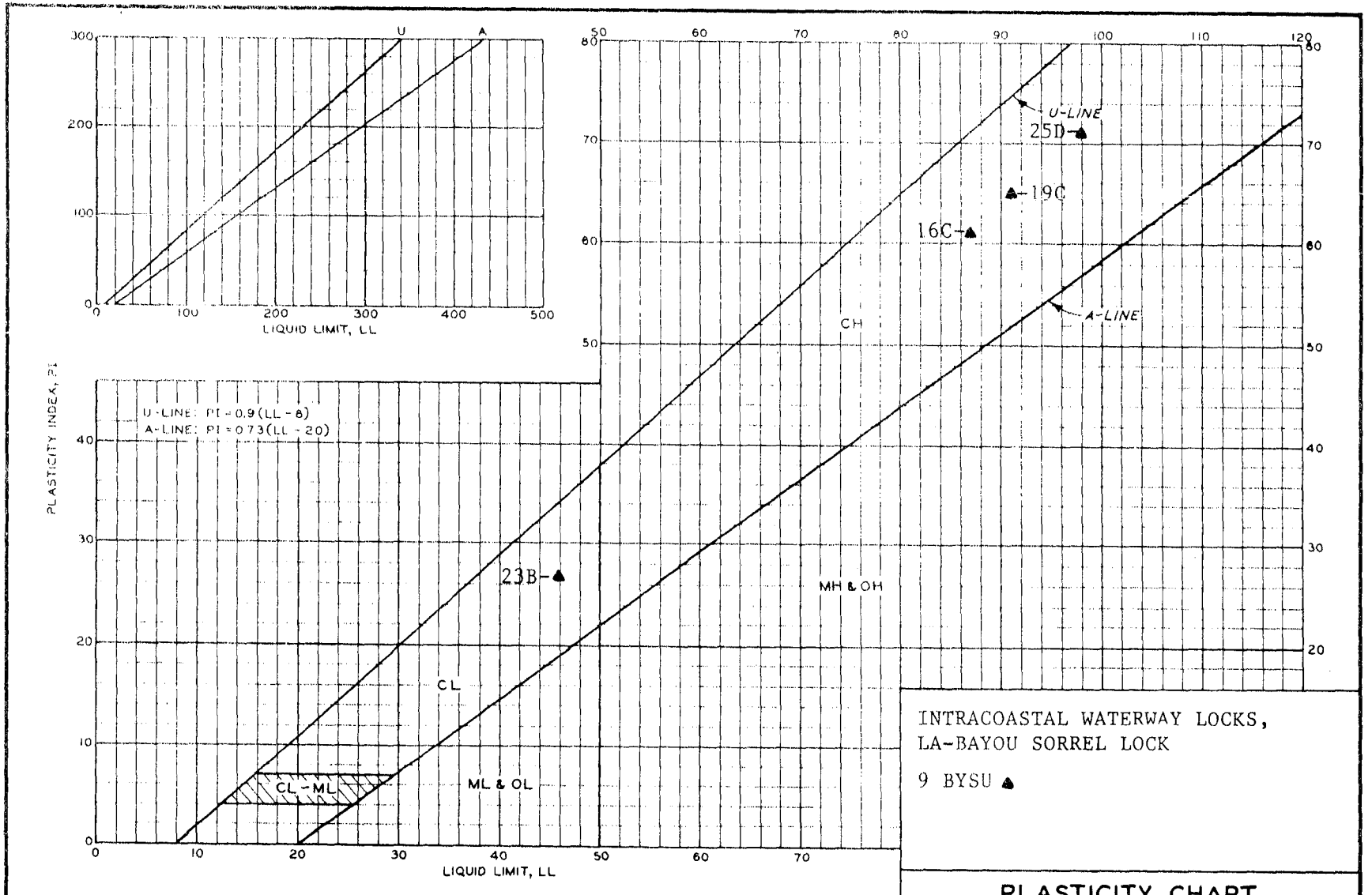
PLASTICITY CHART

ENG FORM JUN 70 4334 (EM 1110-2-1906) TRANSLUCENT



PLASTICITY CHART

ENG FORM JUN 70 4334 (EM 1110-2-1906) TRANSLUCENT

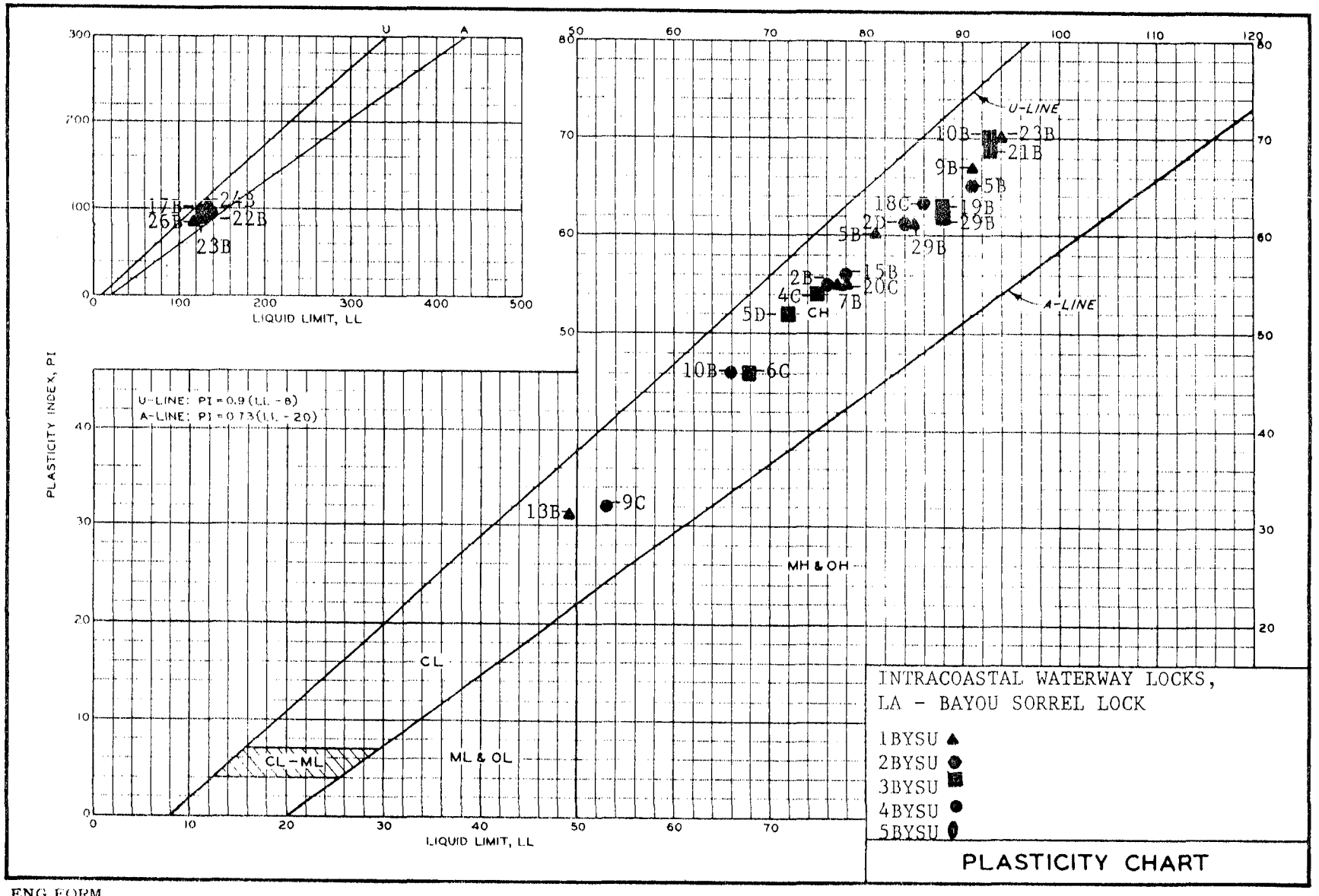


INTRACOASTAL WATERWAY LOCKS,
LA-BAYOU SORREL LOCK

9 BYSU ▲

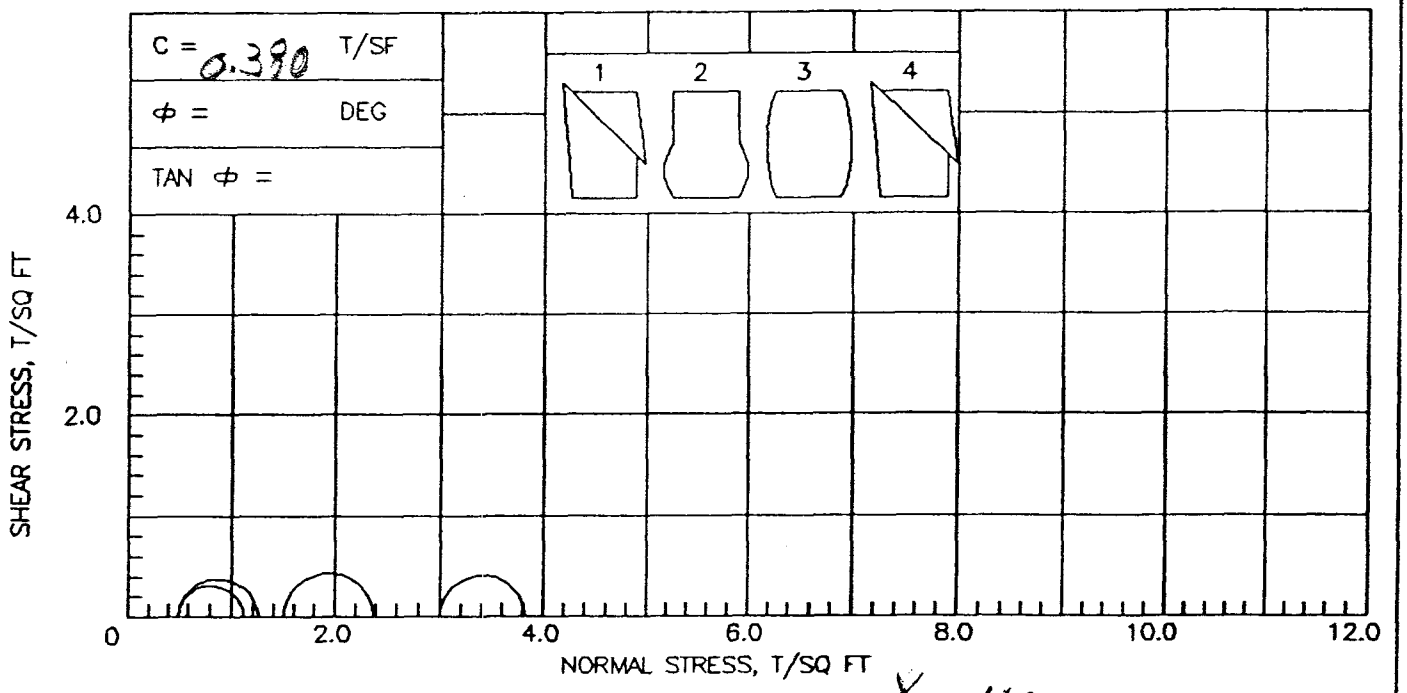
PLASTICITY CHART

ENG FORM JUN 70 4334 (EM 1110-2-1906) TRANSLUCENT

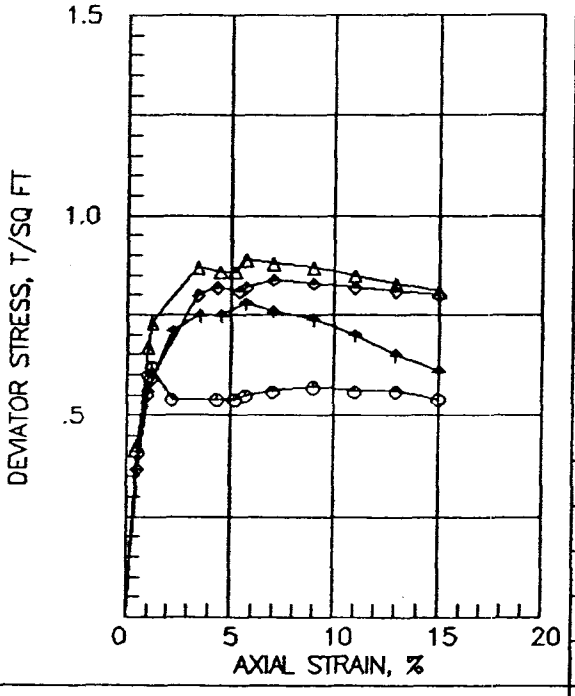


PLASTICITY CHART

ENG FORM JUN 70 4334 (EM 1110-2-1906) TRANSLUCENT



γ ≅ 110



SPECIMEN NO.		○ 1	△ 2	◇ 3	↑ 4	
INITIAL	WATER CONTENT, %	43.2	42.8	42.3	42.0	42.6
	DRY DENSITY, PCF	76.8	77.4	77.0	77.8	77.08
	SATURATION, %	97.6	98.1	96.1	97.3	97.26
	VOID RATIO	1.195	1.179	1.188	1.165	
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		.62	.87	.82	.75	.76
TIME TO FAILURE, MIN.		3	20	25	18	
STRAIN RATE INCR., %			5	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 81	PL 21	PI 60	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

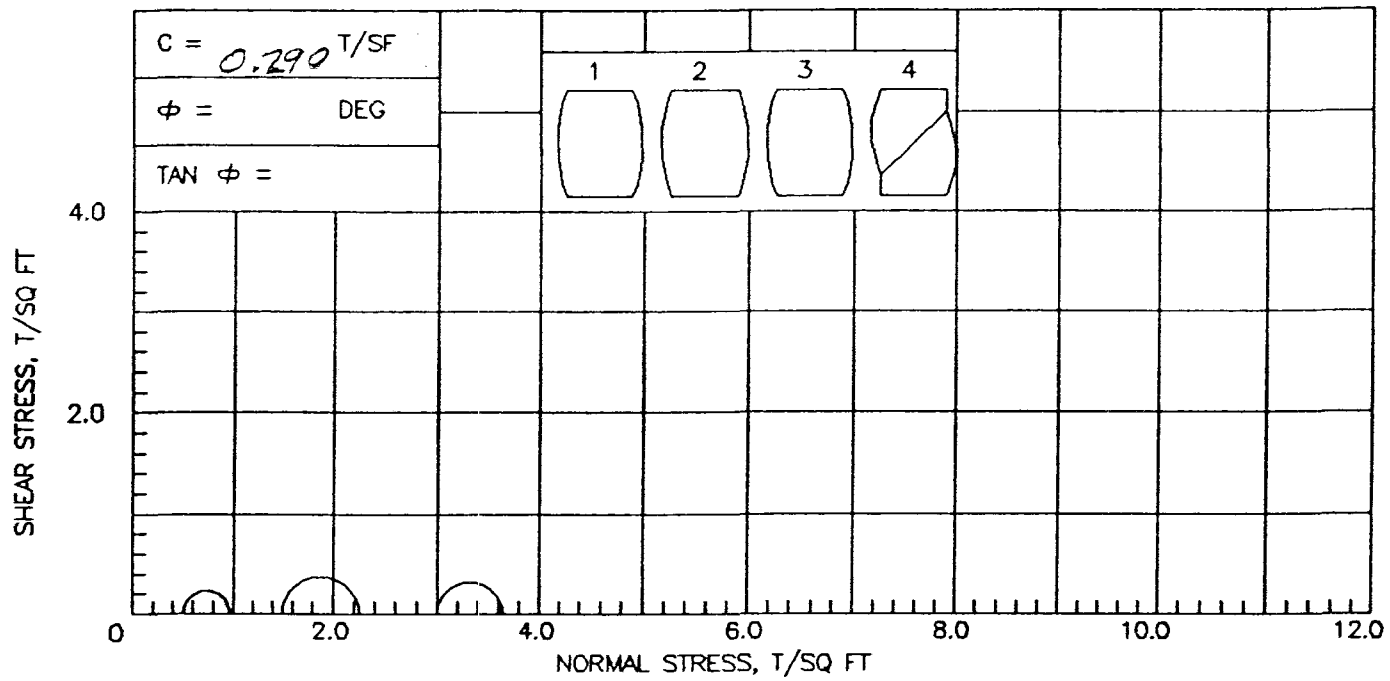
BAYOU SORREL LOCK

BORING NO. 1 BYSU | SAMPLE NO. 5B

DEPTH/ELEV 16/+15.4 | TECH. JH

LABORATORY USAE WES – STF/GL | DATE 09 JUN 94

TRIAXIAL COMPRESSION TEST REPORT



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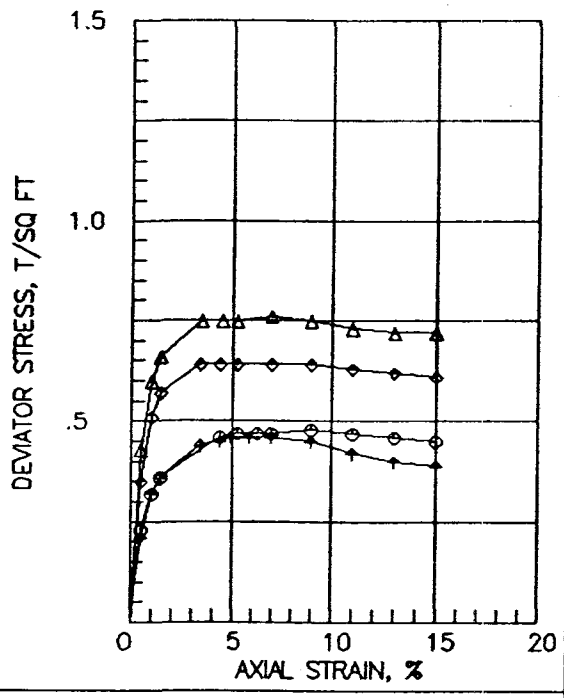


	SPECIMEN NO.	○ 1	△ 2	◇ 3	+ 4	
INITIAL	WATER CONTENT, %	47.2	41.4	45.3	44.1	44.63
	DRY DENSITY, PCF	72.6	78.4	74.9	75.0	75.23
	SATURATION, %	96.5	97.1	97.9	95.4	97.16
	VOID RATIO	1.321	1.150	1.249	1.247	
BEFORE SHEAR	WATER CONTENT, %					
	DRY DENSITY, PCF					
	SATURATION, %					
	VOID RATIO					
	BACK PRESSURE, TSF					
	CHAMBER PRESSURE, TSF	.50	1.50	3.00	.50	
	MAX. DEV. STRESS, TSF	.47	.75	.64	.46	.53
	TIME TO FAILURE, MIN.	12	19	18	19	
	STRAIN RATE INCR., %					
	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; ORGANIC MATERIAL

LL 77	PL 22	PI 55	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

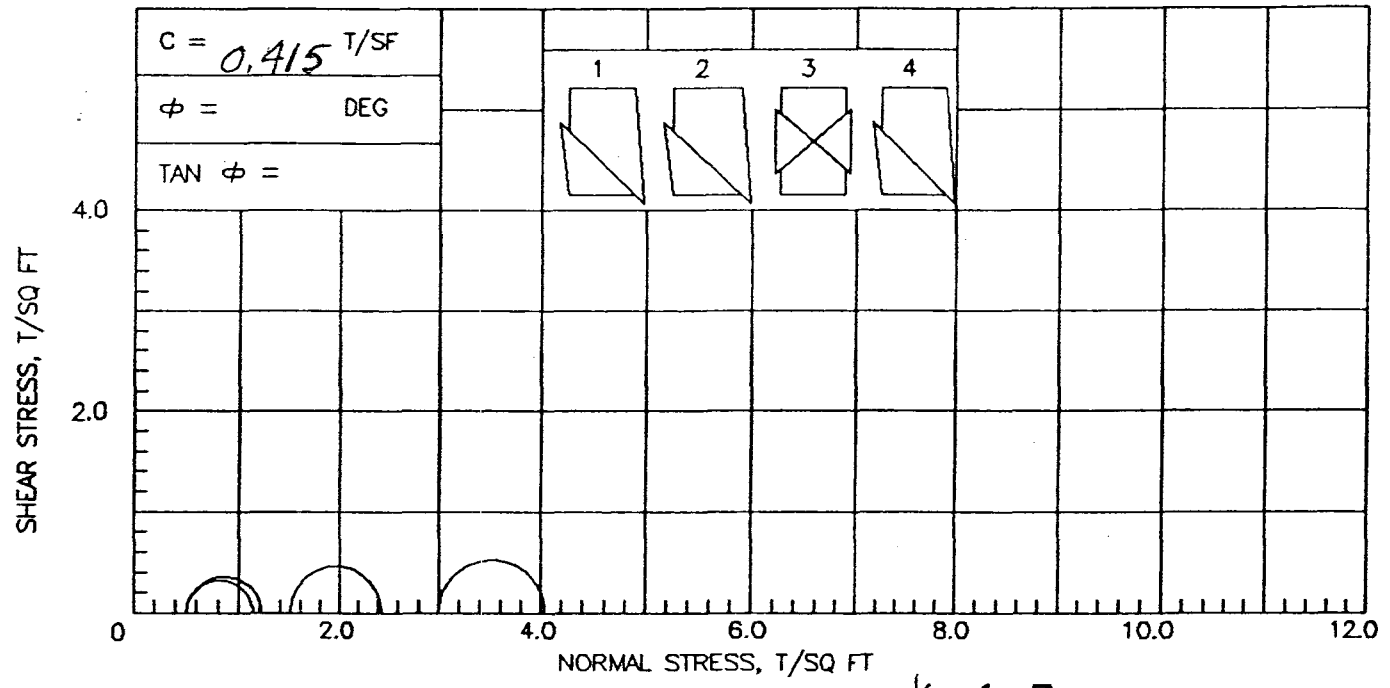
BAYOU SORREL LOCK

BORING NO. 1 BYSU | SAMPLE NO. 7B

DEPTH/ELEV 24/+7.4 | TECH. JH

LABORATORY USAE WES - STF/GL | DATE 09 JUN 94

TRIAXIAL COMPRESSION TEST REPORT



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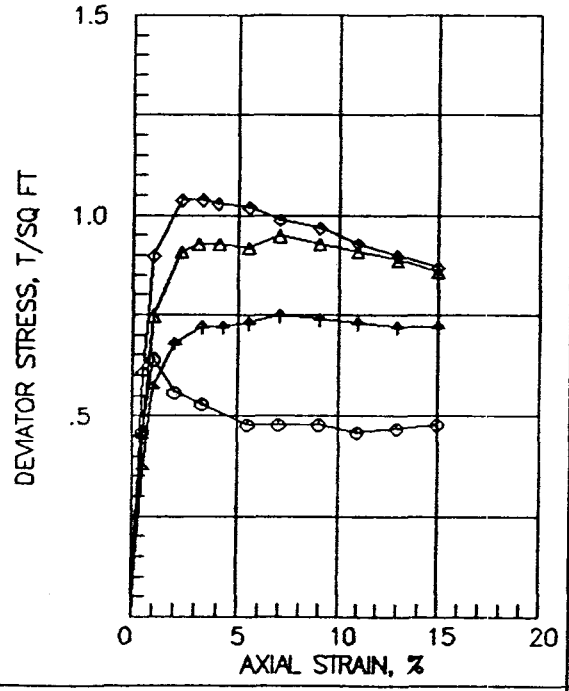


SPECIMEN NO.		○ 1	△ 2	◇ 3	✦ 4	
INITIAL	WATER CONTENT, %	46.6	47.5	46.9	48.1	47.03
	DRY DENSITY, PCF	72.8	72.2	73.0	72.4	72.66
	SATURATION, %	95.5	95.9	96.7	97.8	95.96
	VOID RATIO	1.317	1.336	1.310	1.329	
BEFORE SHEAR	WATER CONTENT, %					
	DRY DENSITY, PCF					
	SATURATION, %					
	VOID RATIO					
	BACK PRESSURE, TSF					
CHAMBER PRESSURE, TSF		.50	1.50	3.00	.50	
MAX. DEV. STRESS, TSF		.64	.93	1.04	.72	.83
TIME TO FAILURE, MIN.		2	17	13	17	
STRAIN RATE INCR., %			5	4	6	
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; SLICKENSIDED

LL 91	PL 24	PI 67	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

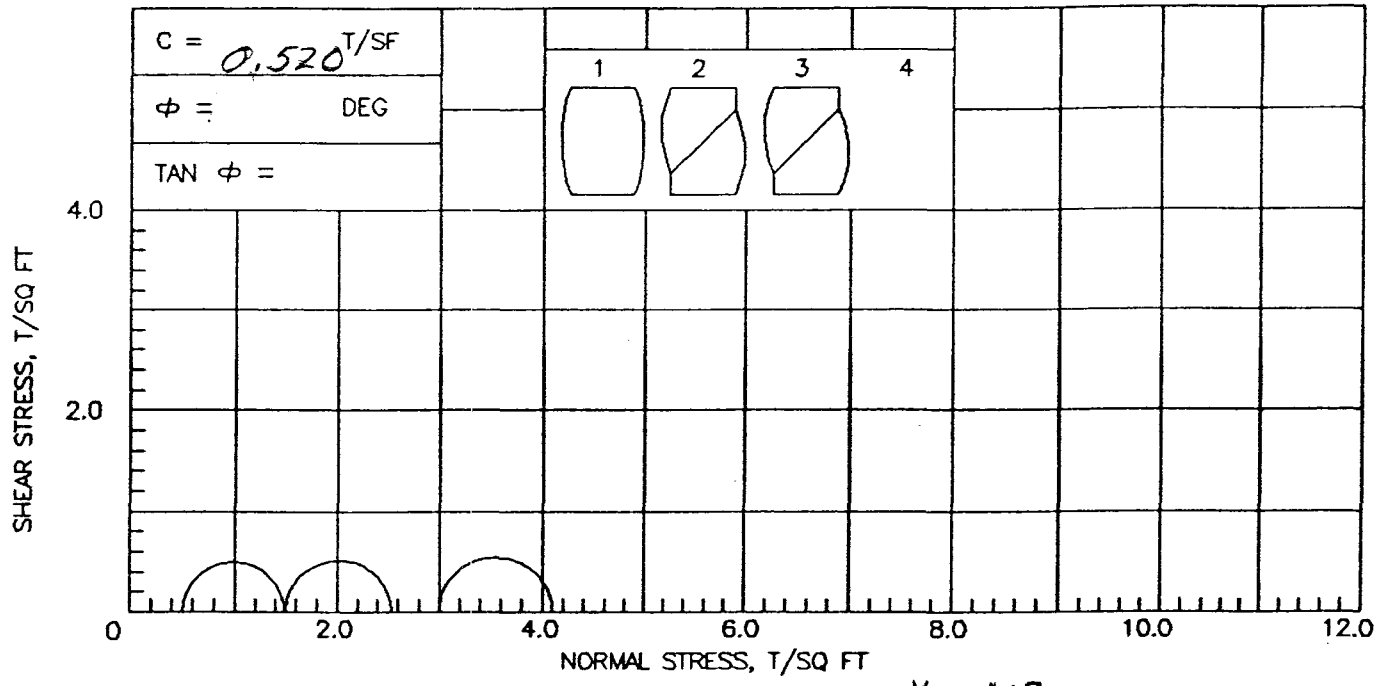
BAYOU SORREL LOCK

BORING NO. 1 BYSU | SAMPLE NO. 9B

DEPTH/ELEV 32/-0.6 | TECH. JH

LABORATORY USAE WES - STF/GL | DATE 13 JUN 94

TRIAXIAL COMPRESSION TEST REPORT



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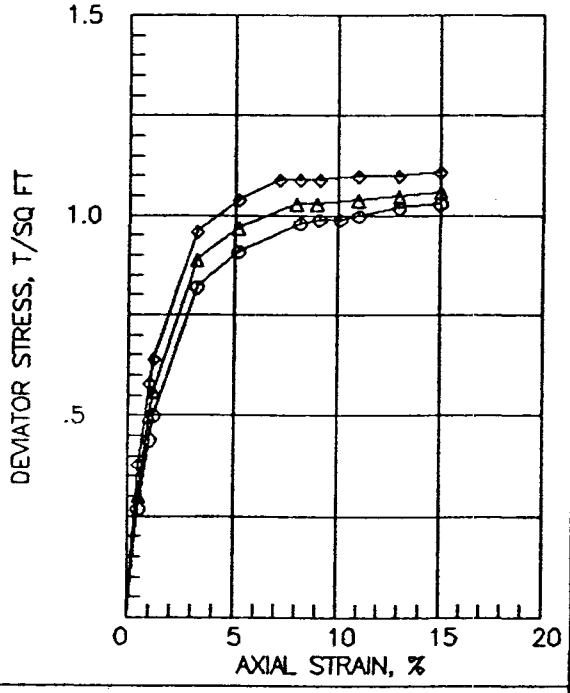


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	29.3	29.3	29.2	29.27
	DRY DENSITY, PCF	92.4	91.7	92.0	92.03
	SATURATION, %	96.1	94.5	94.8	95.13
	VOID RATIO	.824	.838	.832	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		.99	1.03	1.09	1.04
TIME TO FAILURE, MIN.		21	18	16	
STRAIN RATE INCR., %					
INITIAL DIAMETER, IN.		1.36	1.36	1.37	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

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

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

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

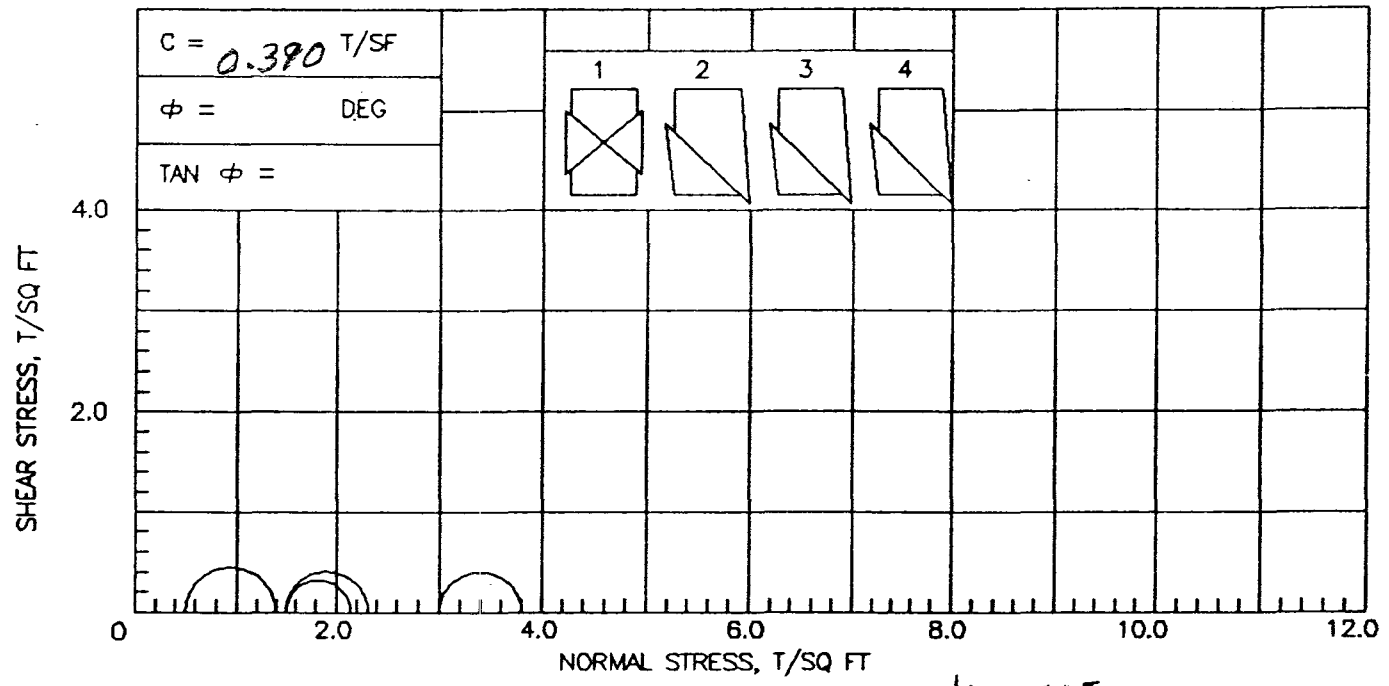
BAYOU SORREL LOCK

BORING NO. 1 BYSU | SAMPLE NO. 11C

DEPTH/ELEV 41.5/-10.1 | TECH. JH

LABORATORY USAE WES - STF/GL | DATE 15 JUN 94

TRIAXIAL COMPRESSION TEST REPORT



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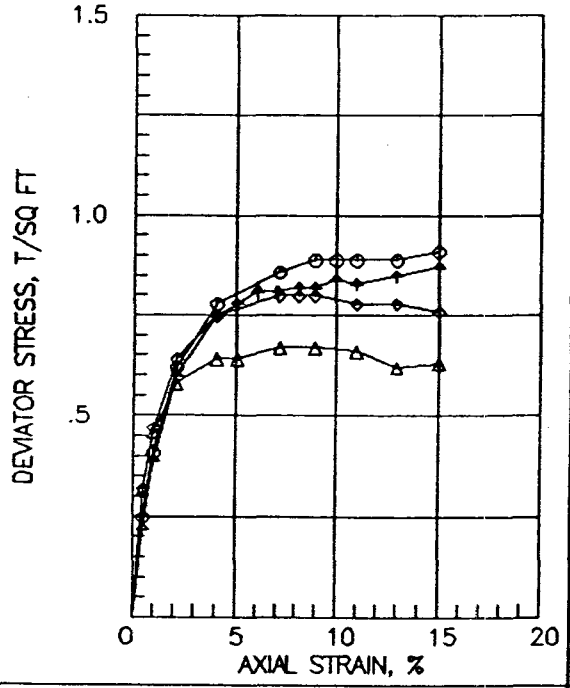


SPECIMEN NO.		○ 1	△ 2	◇ 3	+ 4	
INITIAL	WATER CONTENT, %	34.5	39.9	37.7	35.1	36.80
	DRY DENSITY, PCF	86.2	80.3	83.0	85.7	83.30
	SATURATION, %	97.5	97.9	98.6	98.1	98.02
	VOID RATIO	.955	1.099	1.031	.967	
BEFORE SHEAR	WATER CONTENT, %					
	DRY DENSITY, PCF					
	SATURATION, %					
	VOID RATIO					
	BACK PRESSURE, TSF					
CHAMBER PRESSURE, TSF		.50	1.50	3.00	1.50	
MAX. DEV. STRESS, TSF		.89	.64	.80	.81	
TIME TO FAILURE, MIN.		21	10	16	22	
STRAIN RATE INCR., %						
INITIAL DIAMETER, IN.		1.37	1.37	1.36	1.36	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: CLAY (CL), GRAY

LL 49	PL 18	PI 31	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

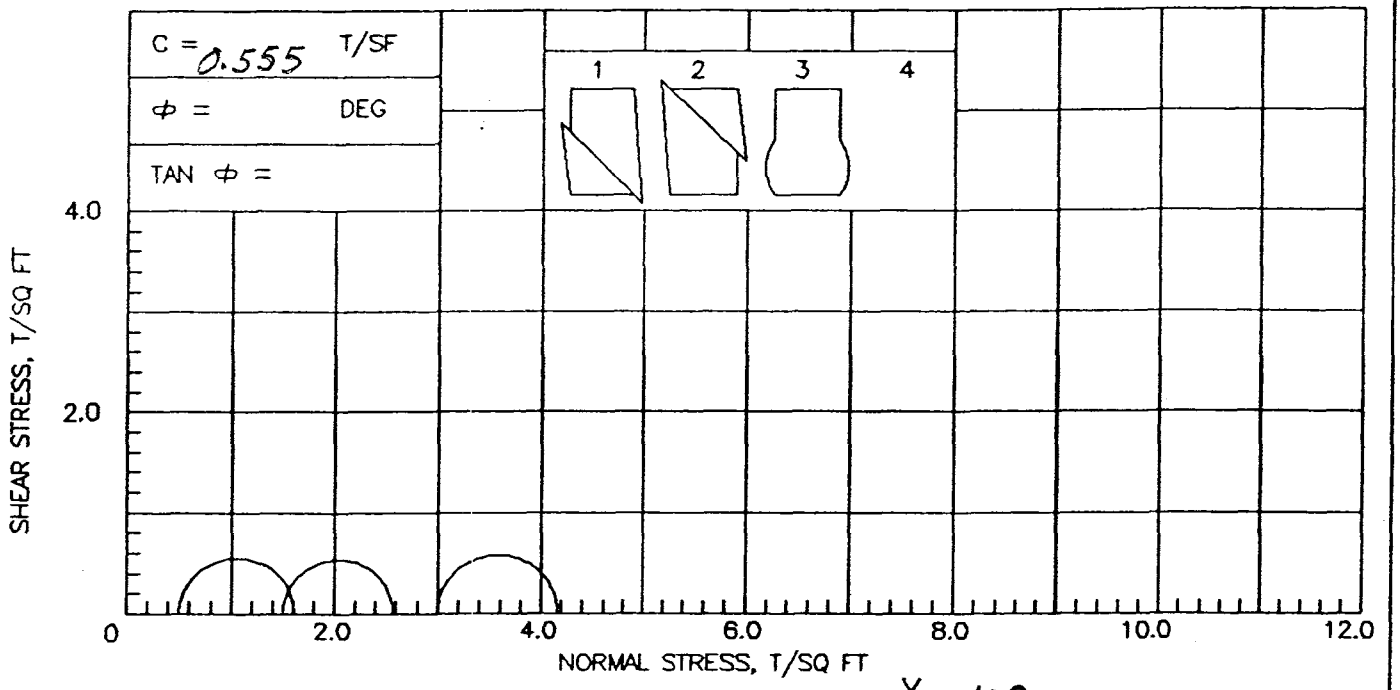
BAYOU SORREL LOCK

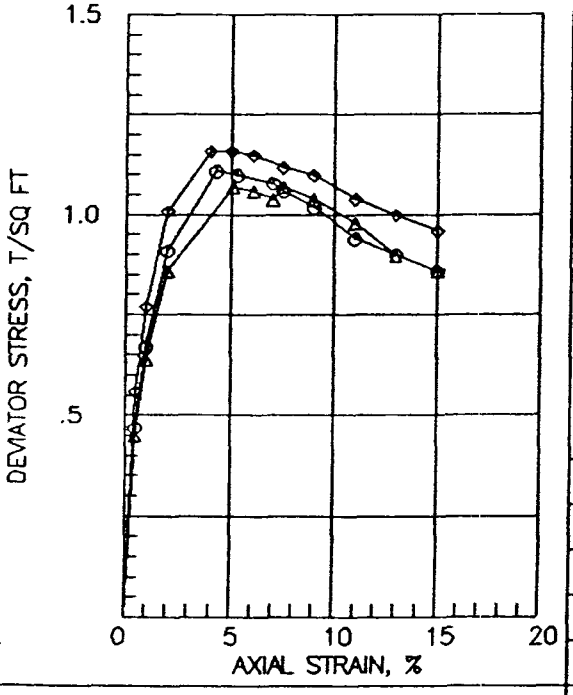
BORING NO. 1 BYSU | SAMPLE NO. 13B

DEPTH/ELEV 48/-16.6 | TECH. JH

LABORATORY USAE WES - STF/GL | DATE 13 JUN 94

TRIAXIAL COMPRESSION TEST REPORT





γ = 108

SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	48.4	48.2	46.9	47.83
	DRY DENSITY, PCF	72.4	72.8	73.9	73.03
	SATURATION, %	98.6	98.9	98.8	98.77
	VOID RATIO	1.327	1.316	1.282	
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		1.11	1.07	1.16	1.11
TIME TO FAILURE, MIN.		10	18	14	
STRAIN RATE INCR., %			7	7	
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 78	PL 23	PI 55	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

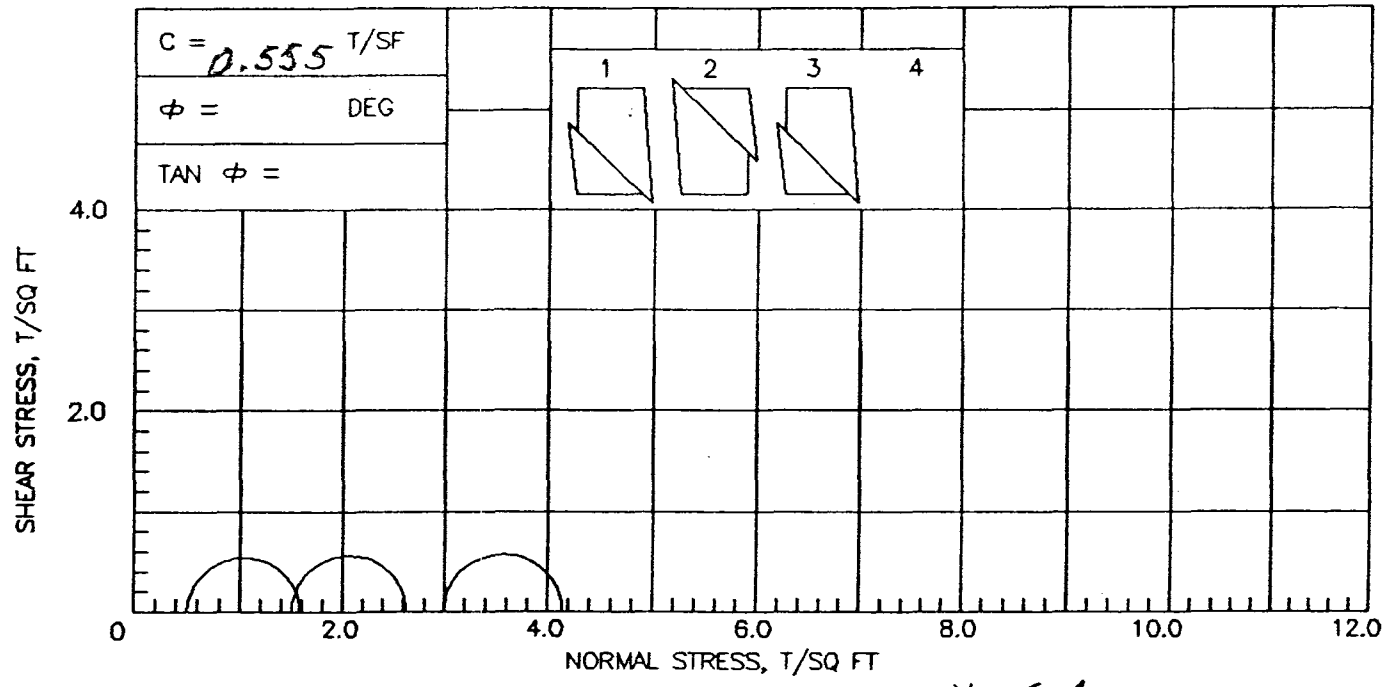
BAYOU SORREL LOCK

BORING NO. 1 BYSU | SAMPLE NO. 20C

DEPTH/ELEV 77/-45.6 | TECH. JH

LABORATORY USAE WES - STF/GL | DATE 14 JUN 94

TRIAXIAL COMPRESSION TEST REPORT



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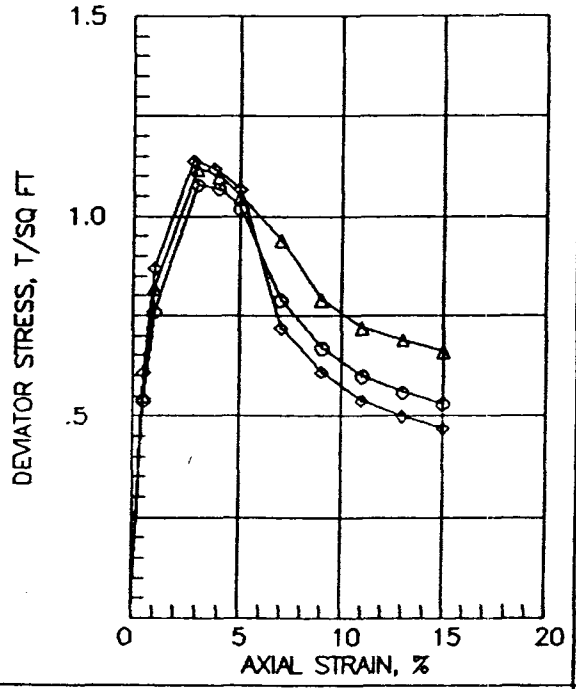


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	57.0	57.3	57.8	57.37
	DRY DENSITY, PCF	66.4	66.1	65.8	66.10
	SATURATION, %	99.9	99.8	99.8	99.83
	VOID RATIO	1.540	1.552	1.563	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		1.08	1.12	1.14	1.11
TIME TO FAILURE, MIN.		7	16	15	
STRAIN RATE INCR., %				5	
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; CONCRETIONS

LL 94	PL 24	PI 70	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

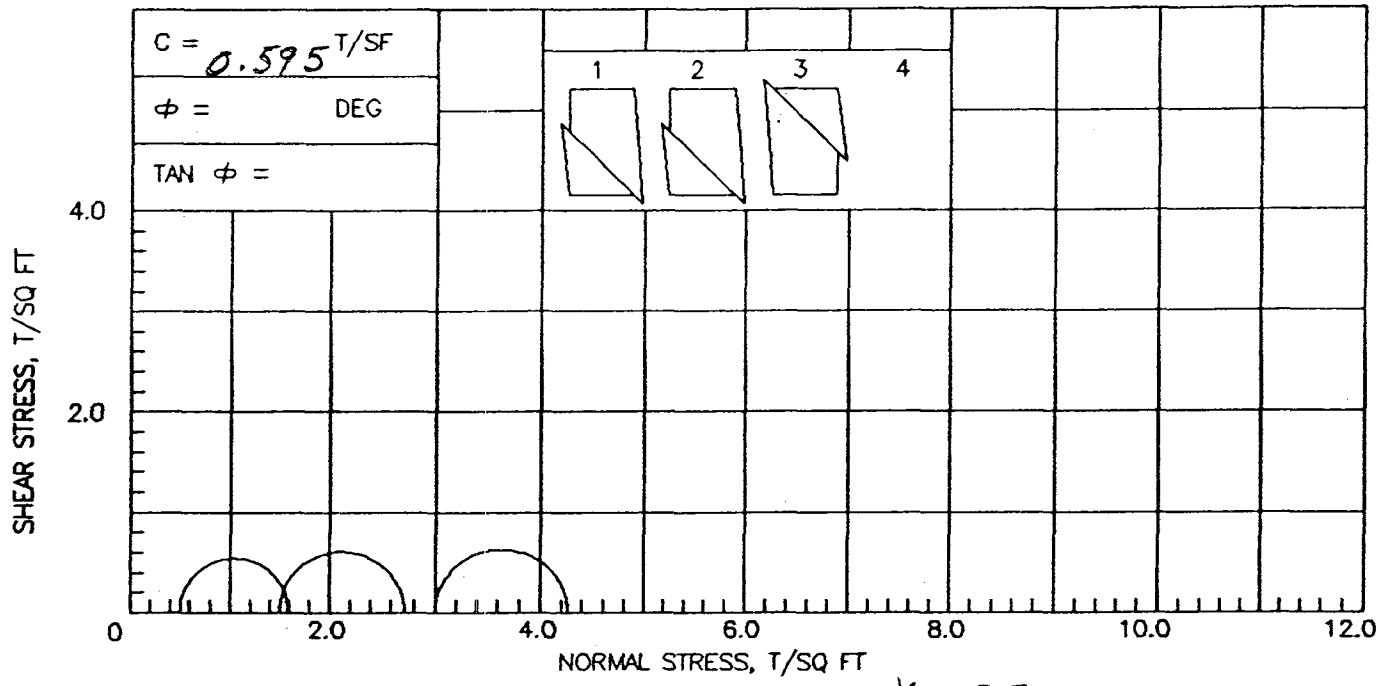
BAYOU SORREL LOCK

BORING NO. 1 BYSU | SAMPLE NO. 23B

DEPTH/ELEV 88/-56.6 | TECH. JH

LABORATORY USAE WES - STF/GL | DATE 14 JUN 94

TRIAXIAL COMPRESSION TEST REPORT



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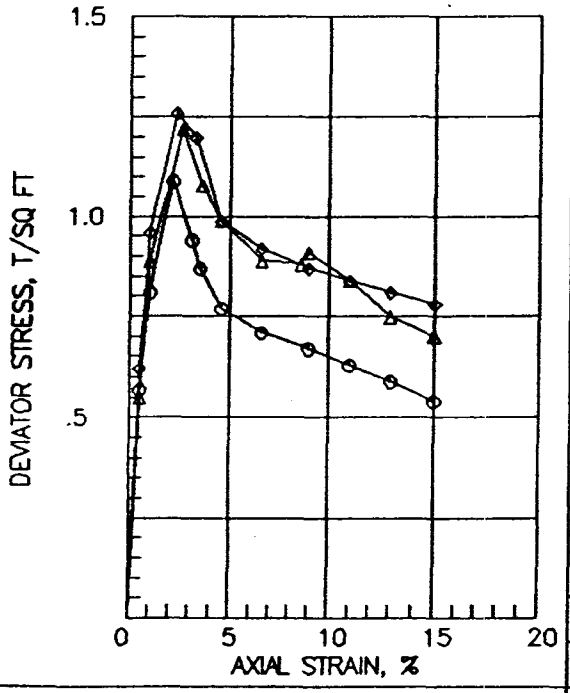


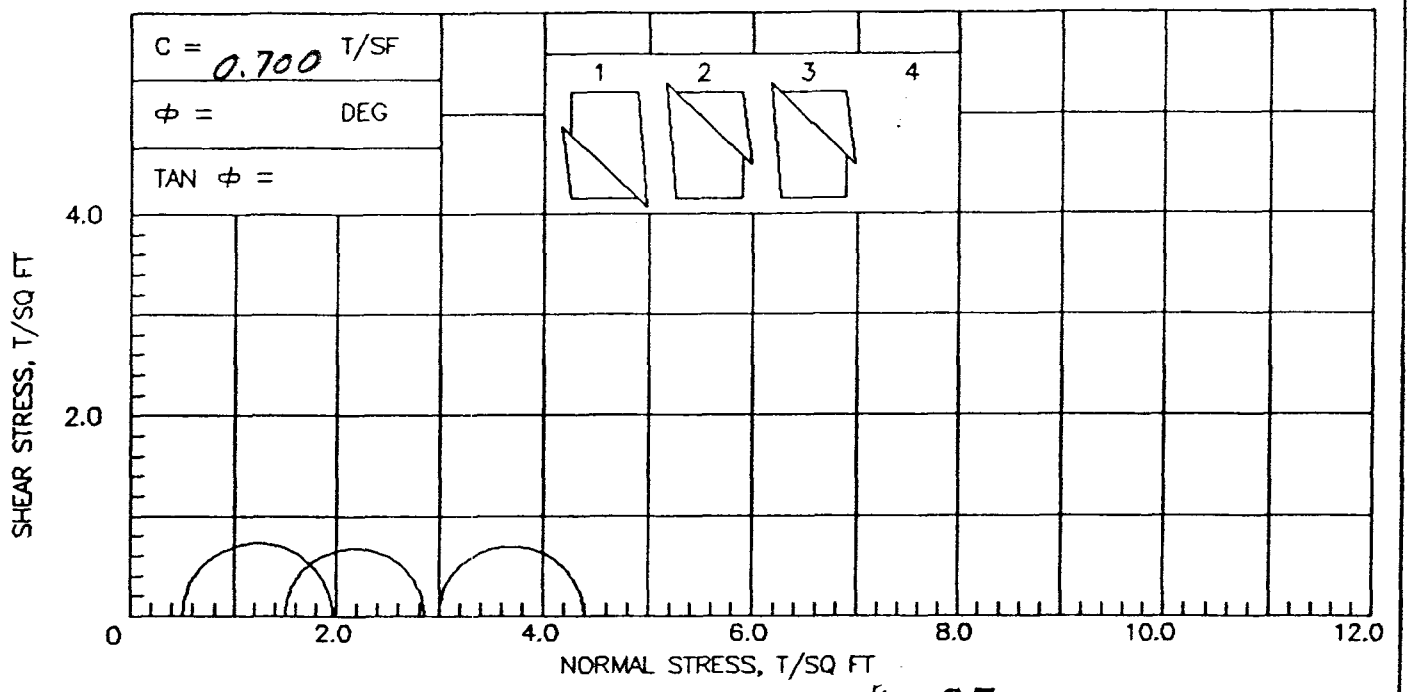
SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	80.6	80.0	79.9	80.17
	DRY DENSITY, PCF	52.5	53.0	52.3	52.60
	SATURATION, %	98.4	99.2	97.0	98.20
	VOID RATIO	2.210	2.178	2.224	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		1.09	1.22	1.26	1.19
TIME TO FAILURE, MIN.		5	12	22	
STRAIN RATE INCR., %			8	3	
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; ORGANIC MATERIAL

LL 134	PL 30	PI 104	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:	PROJECT INTRACOASTAL WATERWAY LOCKS, LA
	BAYOU SORREL LOCK
	BORING NO. 1 BYSU / SAMPLE NO. 24B
	DEPTH/ELEV 92/-60.6 / TECH. JH
	LABORATORY USAE WES - STF/GL / DATE 17 JUN 94
	TRIAXIAL COMPRESSION TEST REPORT



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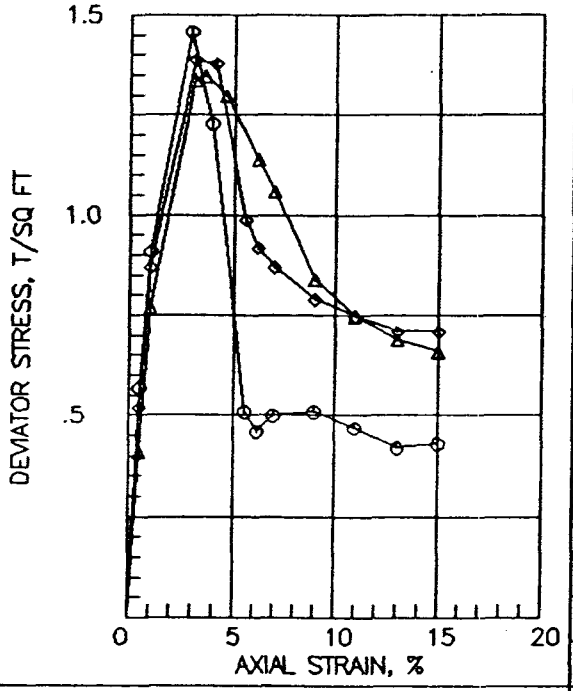

	SPECIMEN NO.	○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	68.0	71.4	70.7	70.63
	DRY DENSITY, PCF	58.0	56.2	56.4	56.27
	SATURATION, %	96.2	96.4	96.0	96.20
	VOID RATIO	1.908	1.999	1.988	
BEFORE SHEAR	WATER CONTENT, %				
	DRY DENSITY, PCF				
	SATURATION, %				
	VOID RATIO				
	BACK PRESSURE, TSF				
CHAMBER PRESSURE, TSF		.50	1.50	3.00	
MAX. DEV. STRESS, TSF		1.46	1.35	1.39	1.40
TIME TO FAILURE, MIN.		7	24	17	
STRAIN RATE INCR., %			6	5	
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; ORGANIC MATERIAL

LL 118	PL 33	PI 85	GS 2.70 (ESTIMATED)	UNDISTURBED SPECIMEN	Q TEST

REMARKS:

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

BAYOU SORREL LOCK

BORING NO. 1 BYSU | SAMPLE NO. 26B

DEPTH/ELEV 100/-68.6 | TECH. JH

LABORATORY USAE WES - STF/GL | DATE 21 JUN 94

TRIAXIAL COMPRESSION TEST REPORT