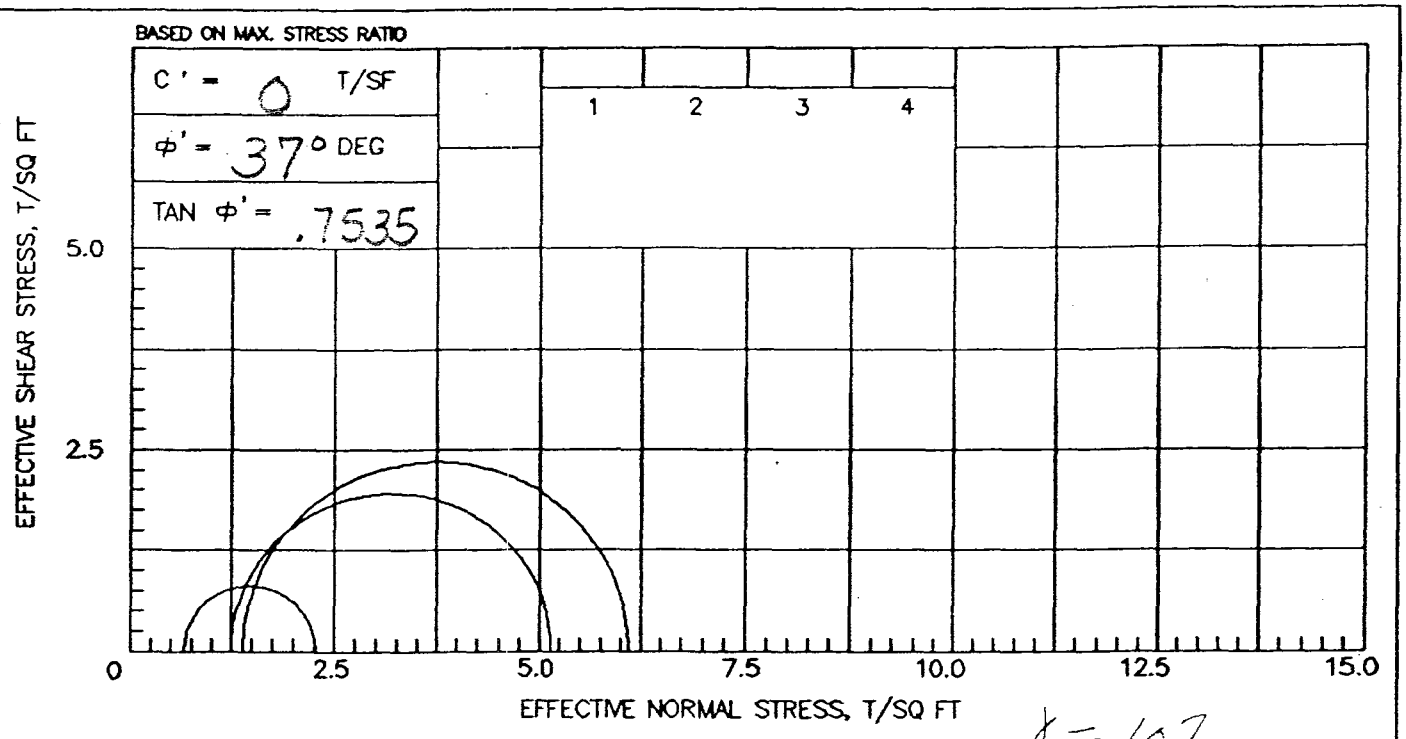
BASED ON MAX. STRESS RATIO

C' = 0 T/SF

φ' = 37° DEG

TAN φ' = .7535



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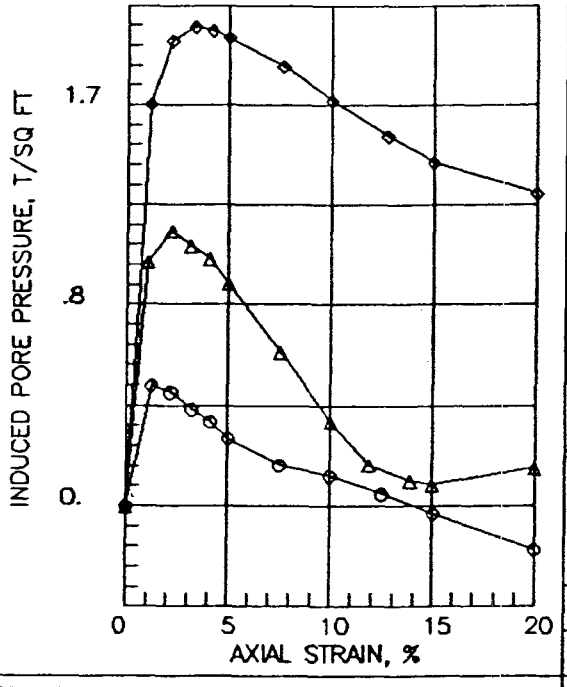


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	30.5	29.5	31.1	30.36
	DRY DENSITY, PCF	90.3	93.1	90.9	91.43
	SATURATION, %	96.0	99.3	99.0	98.10
	VOID RATIO	.852	.797	.841	
BEFORE SHEAR	WATER CONTENT, %	29.6	27.7	27.6	
	DRY DENSITY, PCF	91.7	96.0	95.6	
	SATURATION, %	96.3	100+	98.8	
	VOID RATIO	.824	.742	.750	
	BACK PRESS., TSF	4.32	4.32	4.32	
● σ'1/σ'3 MAX	MIN PRIN EFF STRESS, TSF	.66	1.39	1.24	
	DEV. STRESS, TSF	1.61	4.70	3.91	
	TIME TO FAILURE, MIN.	262	480	489	
RATE OF STRAIN, %/MIN		.016	.016	.016	
INITIAL DIAMETER, IN.		1.36	1.36	1.36	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: SILT (ML), GRAY

LL	PL	PI	GS 2.68 (ESTIMATED)	UNDISTURBED SPECIMEN	R̄ TEST

REMARKS:

CASEN DESIGN SHEAR STRENGTH

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

BAYOU SORREL LOCK

BORING NO. 6BYSU SAMPLE NO. 21C

DEPTH/ELEV 80.7/-79.6 TECH. US

LABORATORY USAE WES - STF/GL DATE 03 MAY 95

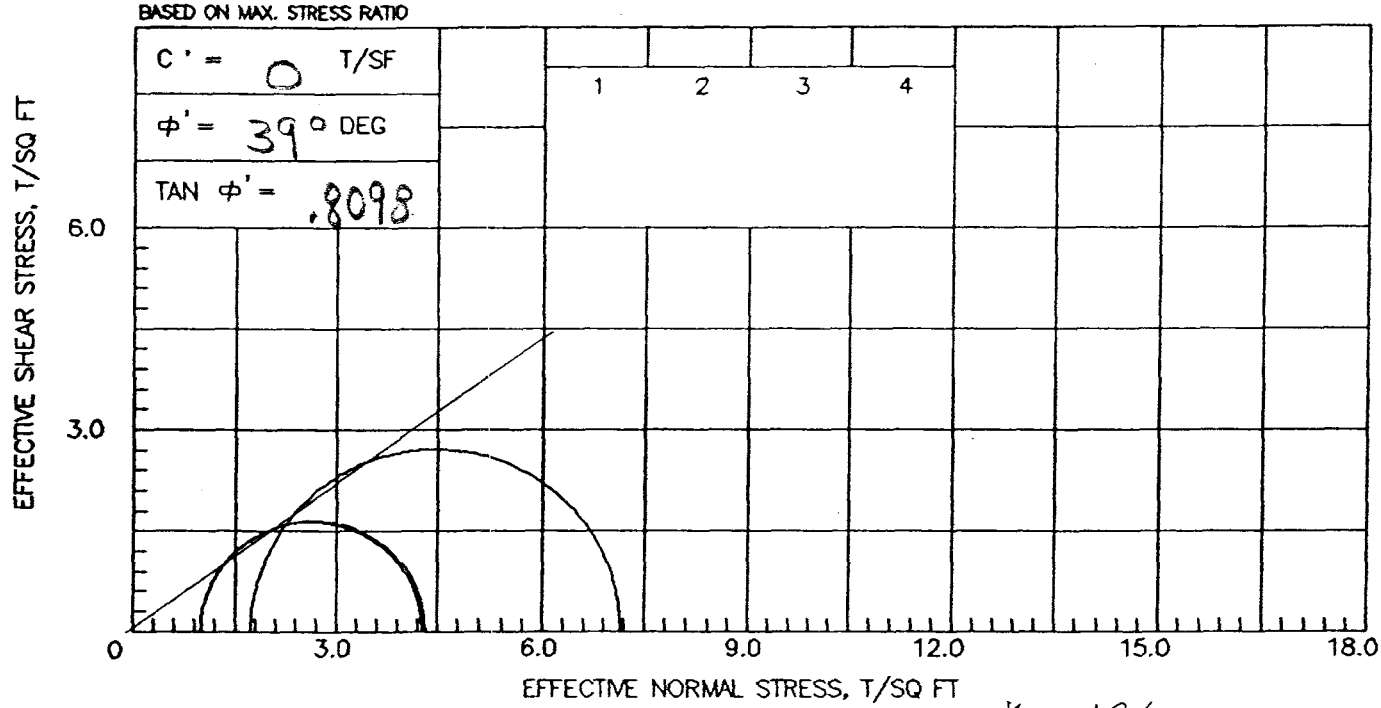
R̄-TRIAXIAL COMPRESSION TEST REPORT

BASED ON MAX. STRESS RATIO

C ' = 0 T/SF

φ' = 39° DEG

TAN φ' = .8098



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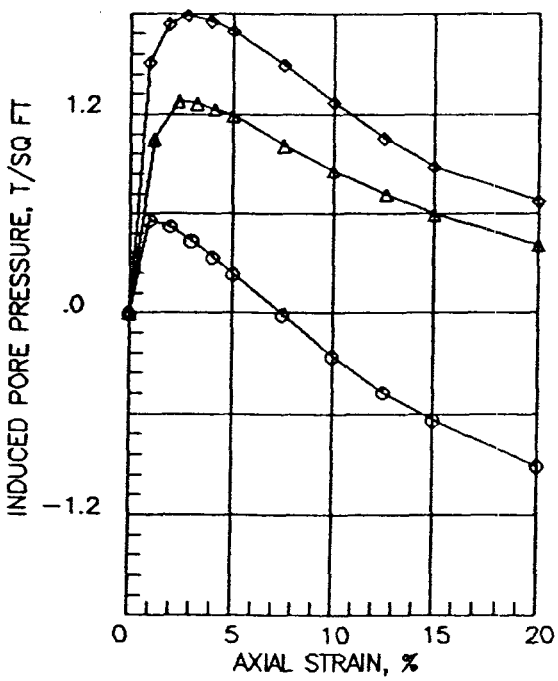


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	26.2	27.5	29.1	27.66
	DRY DENSITY, PCF	102.6	98.6	96.1	99.13
	SATURATION, %	100+	100+	100+	105
	VOID RATIO	.630	.697	.742	
BEFORE SHEAR	WATER CONTENT, %	25.7	26.3	26.7	
	DRY DENSITY, PCF	103.7	102.5	100.3	
	SATURATION, %	100+	100+	100+	
	VOID RATIO	.613	.633	.668	
	BACK PRESS., TSF	4.32	4.32	4.32	
● σ'1/σ'3 MAX	MIN PRIN EFF STRESS, TSF	1.01	.98	1.73	
	DEV. STRESS, TSF	3.31	3.28	5.42	
	TIME TO FAILURE, MIN.	481	487	648	
RATE OF STRAIN, %/MIN		.016	.016	.016	
INITIAL DIAMETER, IN.		1.33	1.34	1.34	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: SILT (ML), GRAY

LL	PL	PI	GS 2.68 (ESTIMATED)	UNDISTURBED SPECIMEN	$\bar{R}$ TEST

REMARKS:

CASE V DESIGN SHEAR STRENGTH

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

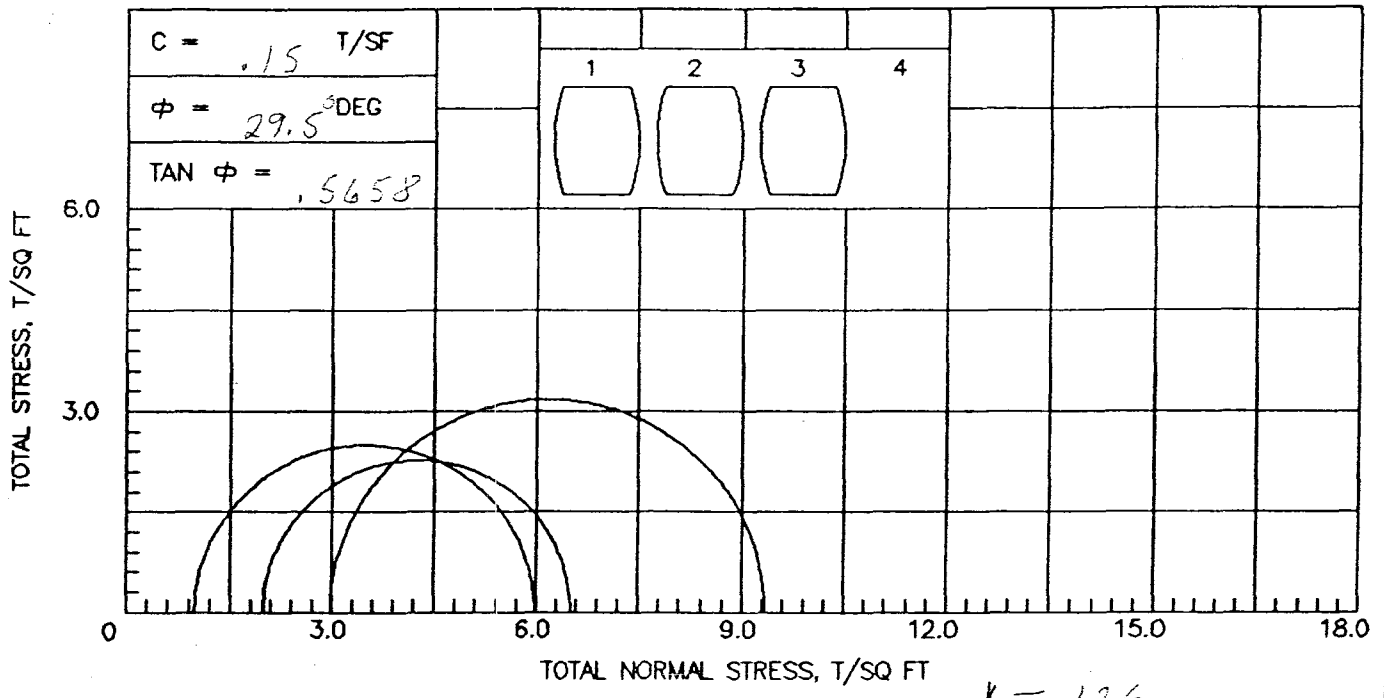
BAYOU SORREL LOCK

BORING NO. 7 BYSU | SAMPLE NO. 258

DEPTH/ELEV 96/−97.3 | TECH. US

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

$\bar{R}$–TRIAXIAL COMPRESSION TEST REPORT



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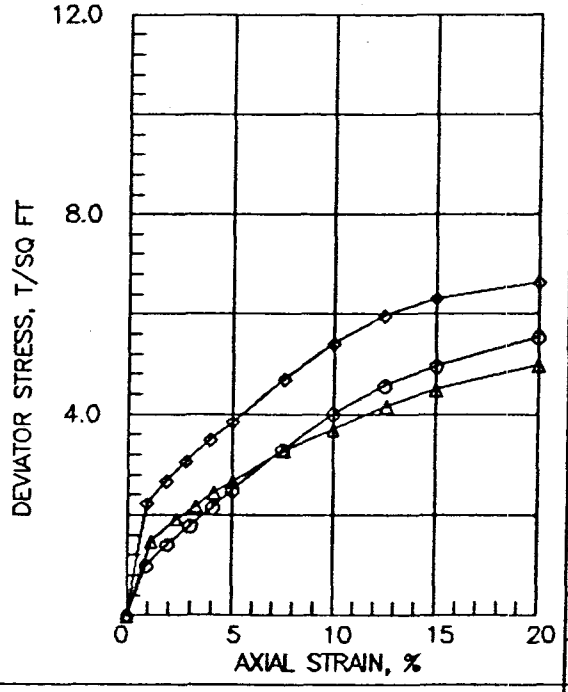


SPECIMEN NO.		⊙ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	26.2	27.5	29.1	27.60
	DRY DENSITY, PCF	102.6	98.6	96.1	99.10
	SATURATION, %	100+	100+	100+	100
	VOID RATIO	.630	.697	.742	
BEFORE SHEAR	WATER CONTENT, %	25.7	26.3	26.7	
	DRY DENSITY, PCF	103.7	102.5	100.3	
	SATURATION, %	100+	100+	100+	
	VOID RATIO	.613	.633	.668	
	BACK PRESS., TSF	4.32	4.32	4.32	
MIN. PRIN. STRESS, TSF		1.00	2.00	3.00	
MAX. DEV. STRESS, TSF		4.96	4.51	6.33	
TIME TO FAILURE, MIN.		964	971	970	
RATE OF STRAIN, %/MIN		.016	.016	.016	
INITIAL DIAMETER, IN.		1.33	1.34	1.34	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: SILT (ML), GRAY

LL	PL	PI	GS 2.68 (ESTIMATED)	UNDISTURBED SPECIMEN	$\bar{R}$ TEST

REMARKS:

CASE V DESIGN SHEAR STRENGTH

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

BAYOU SORREL LOCK

BORING NO. 7 BYSU | SAMPLE NO. 258

DEPTH/ELEV 96/-97.3 | TECH. US

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

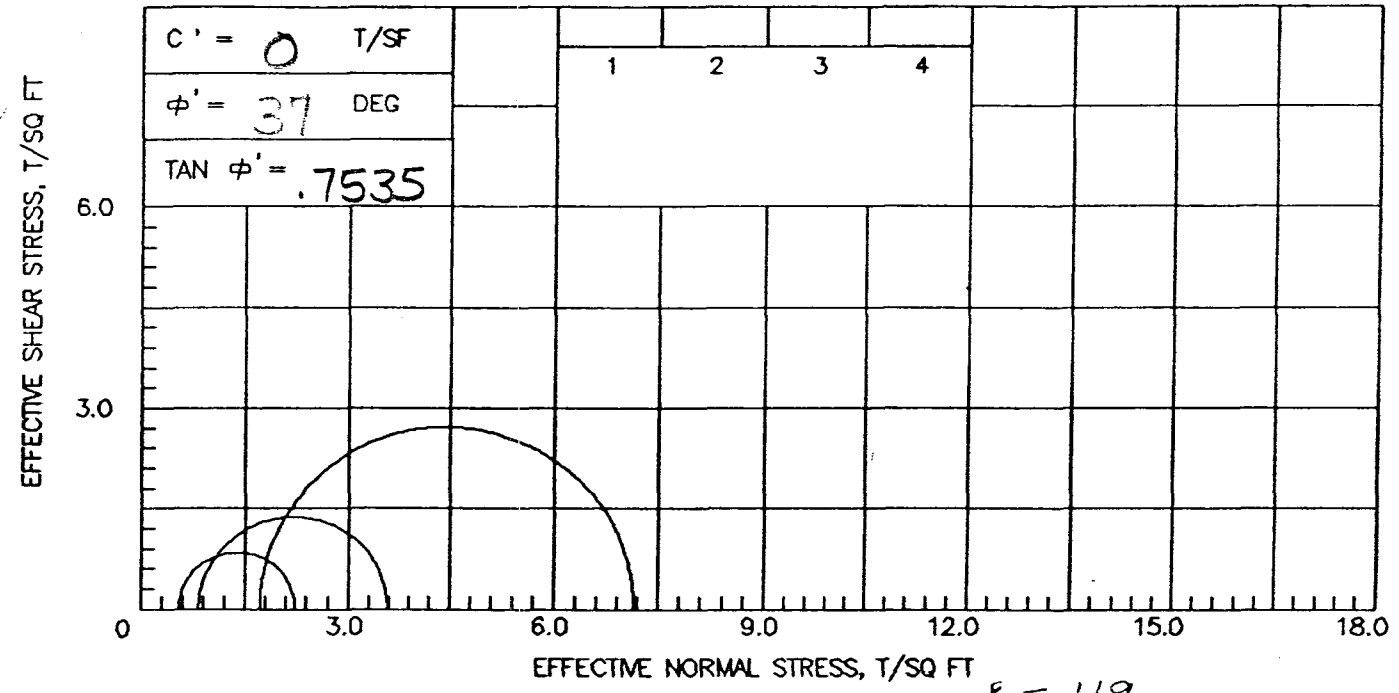
$\bar{R}$-TRIAXIAL COMPRESSION TEST REPORT

BASED ON MAX. STRESS RATIO

C ' = 0 T/SF

φ' = 37 DEG

TAN φ' = .7535



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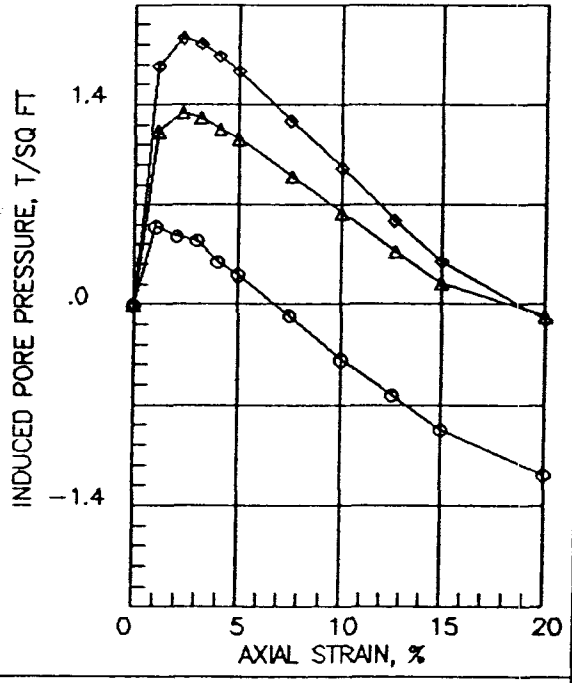


SPECIMEN NO.		⊙ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	29.0	29.7	29.2	29.30
	DRY DENSITY, PCF	89.0	88.3	91.8	89.70
	SATURATION, %	88.7	89.2	95.4	91.16
	VOID RATIO	.873	.888	.816	
BEFORE SHEAR	WATER CONTENT, %	30.2	29.6	28.7	
	DRY DENSITY, PCF	90.2	91.5	95.4	
	SATURATION, %	95.0	96.3	100+	
	VOID RATIO	.848	.822	.747	
	BACK PRESS., TSF	5.04	5.04	5.04	
● σ_1'/σ_3' MAX	MIN PRIN EFF STRESS, TSF	.55	.83	1.71	
	DEV. STRESS, TSF	1.69	2.74	5.44	
	TIME TO FAILURE, MIN.	193	325	489	
RATE OF STRAIN, %/MIN		.016	.016	.016	
INITIAL DIAMETER, IN.		1.38	1.37	1.36	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: SILTY SAND (SM), GRAY

LL	PL	PI	GS 2.67 (ESTIMATED)	UNDISTURBED SPECIMEN	$\bar{R}$ TEST

REMARKS:

CASE V DESIGN SHEAR STRENGTH

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

BAYOU SORREL LOCK

BORING NO. 8BYSU | SAMPLE NO. 24B

DEPTH/ELEV 92.0/-86.0 | TECH. US

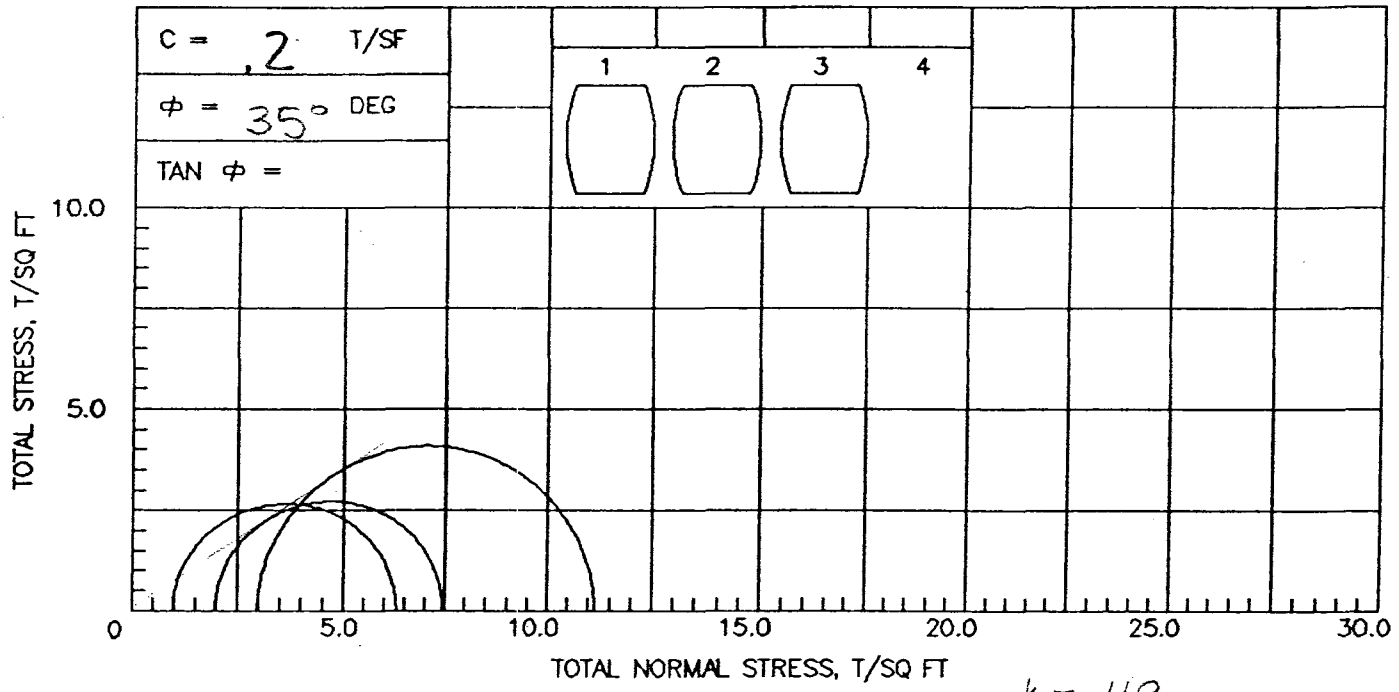
LABORATORY USAE WES - STF/GL | DATE 03 MAY 95

$\bar{R}$-TRIAXIAL COMPRESSION TEST REPORT

C = .2 T/SF

ϕ = 35° DEG

TAN ϕ =



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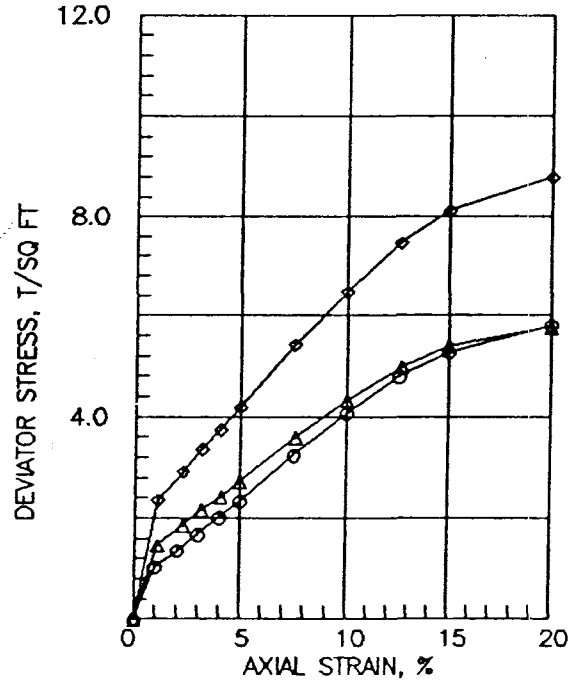


SPECIMEN NO.		○ 1	△ 2	◇ 3	4
INITIAL	WATER CONTENT, %	29.0	29.7	29.2	29.30
	DRY DENSITY, PCF	89.0	88.3	91.8	89.70
	SATURATION, %	88.7	89.2	95.4	91.10
	VOID RATIO	.873	.888	.816	
BEFORE SHEAR	WATER CONTENT, %	30.2	29.6	28.7	
	DRY DENSITY, PCF	90.2	91.5	95.4	
	SATURATION, %	95.0	96.3	100+	
	VOID RATIO	.848	.822	.747	
	BACK PRESS., TSF	5.04	5.04	5.04	
MIN. PRIN. STRESS, TSF		1.00	2.00	3.00	
MAX. DEV. STRESS, TSF		5.28	5.41	8.13	
TIME TO FAILURE, MIN.		965	973	971	
RATE OF STRAIN, %/MIN		.016	.016	.016	
INITIAL DIAMETER, IN.		1.38	1.37	1.36	
INITIAL HEIGHT, IN.		3.00	3.00	3.00	

CONTROLLED-STRAIN TEST

DESCRIPTION OF SPECIMENS: SILTY SAND (SM), GRAY

LL	PL	PI	GS 2.67 (ESTIMATED)	UNDISTURBED SPECIMEN	$\bar{R}$ TEST

REMARKS:

CASE V DESIGN SHEAR STRENGTH

PROJECT INTRACOASTAL WATERWAY LOCKS, LA

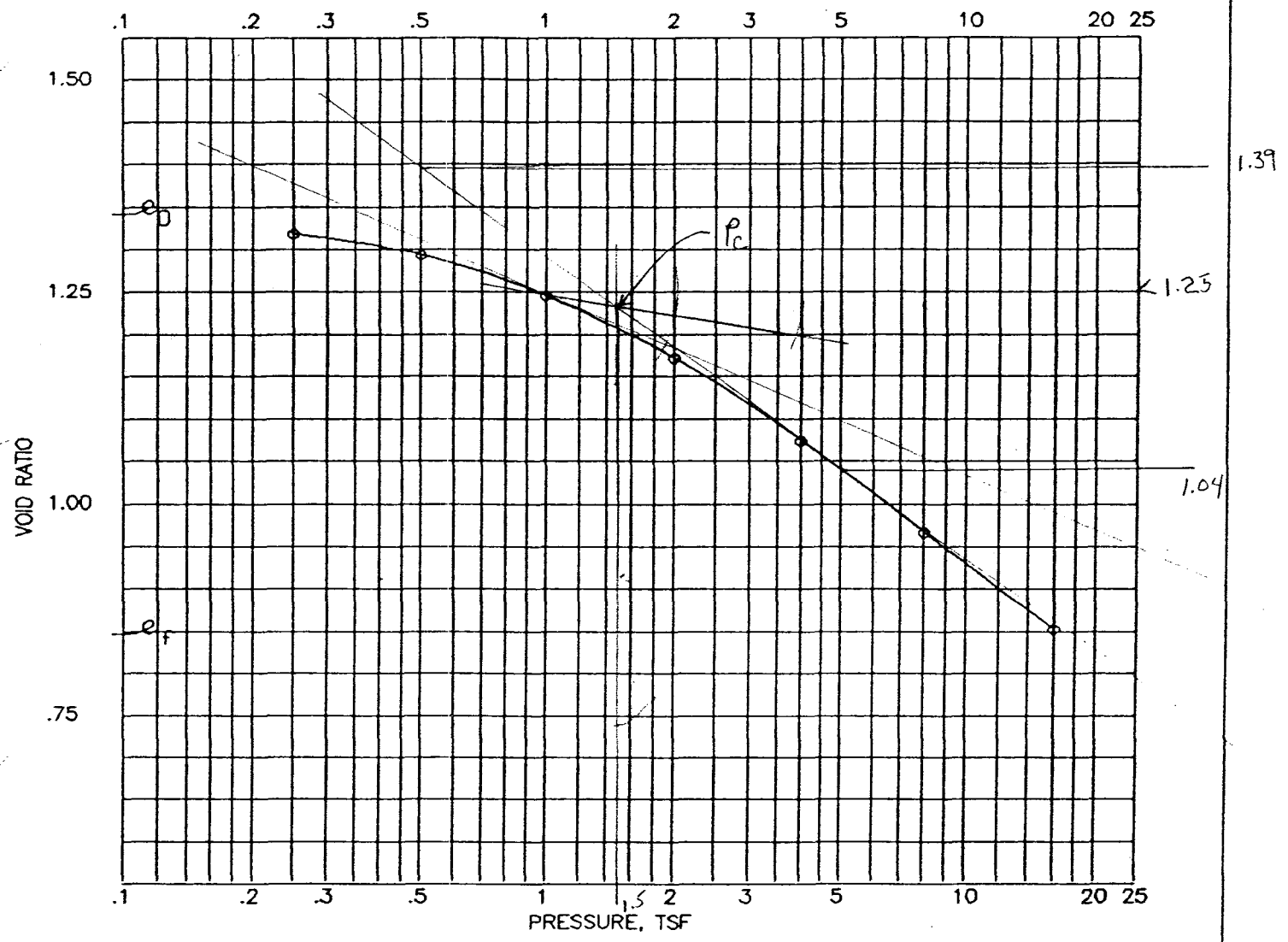
BAYOU SORREL LOCK

BORING NO. 8BYSU | SAMPLE NO. 24B

DEPTH/ELEV 92.0/-86.0 | TECH. US

LABORATORY USAE WES - STF/GL | DATE 03 MAY 95

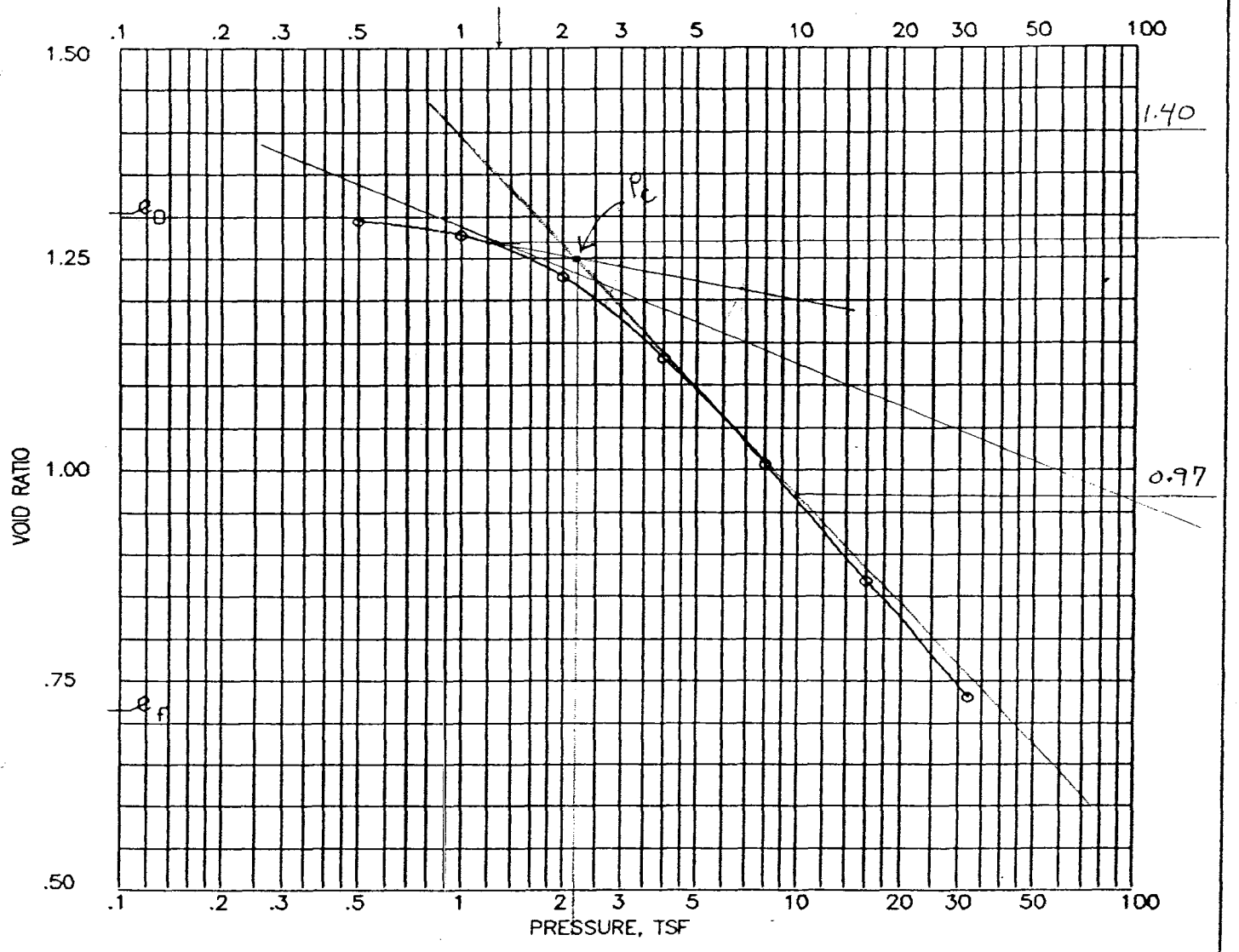
$\bar{R}$-TRIAXIAL COMPRESSION TEST REPORT



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	48.3	33.8
PRECONSOL. PRESSURE, TSF	1.5	DRY DENSITY, PCF	72.1	91.4
COMPRESSION INDEX	0.35	SATURATION, %	97.4	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.339	.845
DIA. IN 4.44	HT. IN 1.120	BACK PRESSURE, TSF		

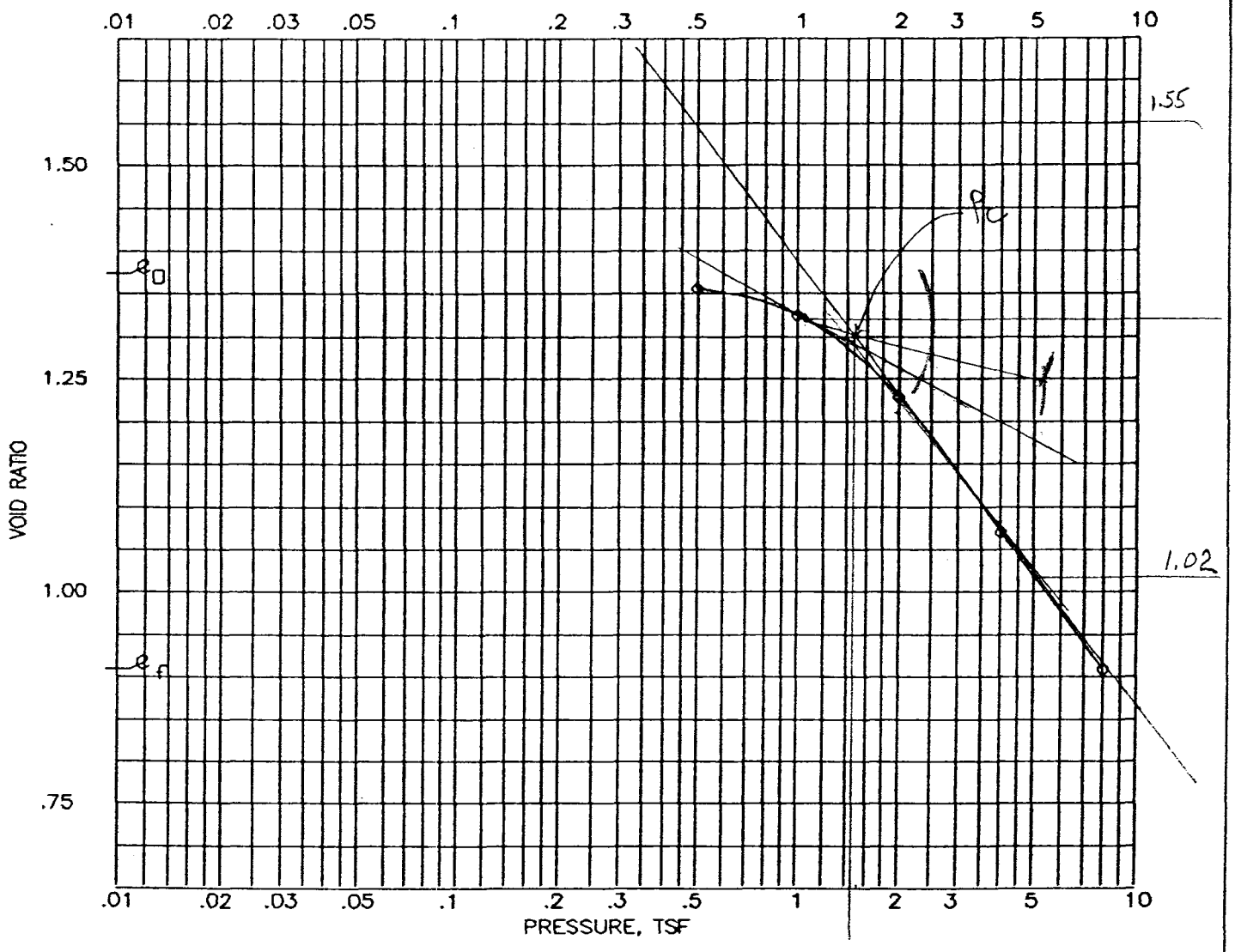
CLASSIFICATION CLAY (CH), GRAY; IRON OXIDE PARTICLES

LL	PL	PI	PROJECT INTRACOASTAL WATERWAY LOCKS, LA	
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK	
REMARKS:			BORING NO. 2 BYSU	SAMPLE NO. 5B
			DEPTH/ELEV 16.6/+0.1	TECH. US
			LABORATORY USAE WES – STF/GL	DATE 18 JUL 94
			CONSOLIDATION TEST REPORT	

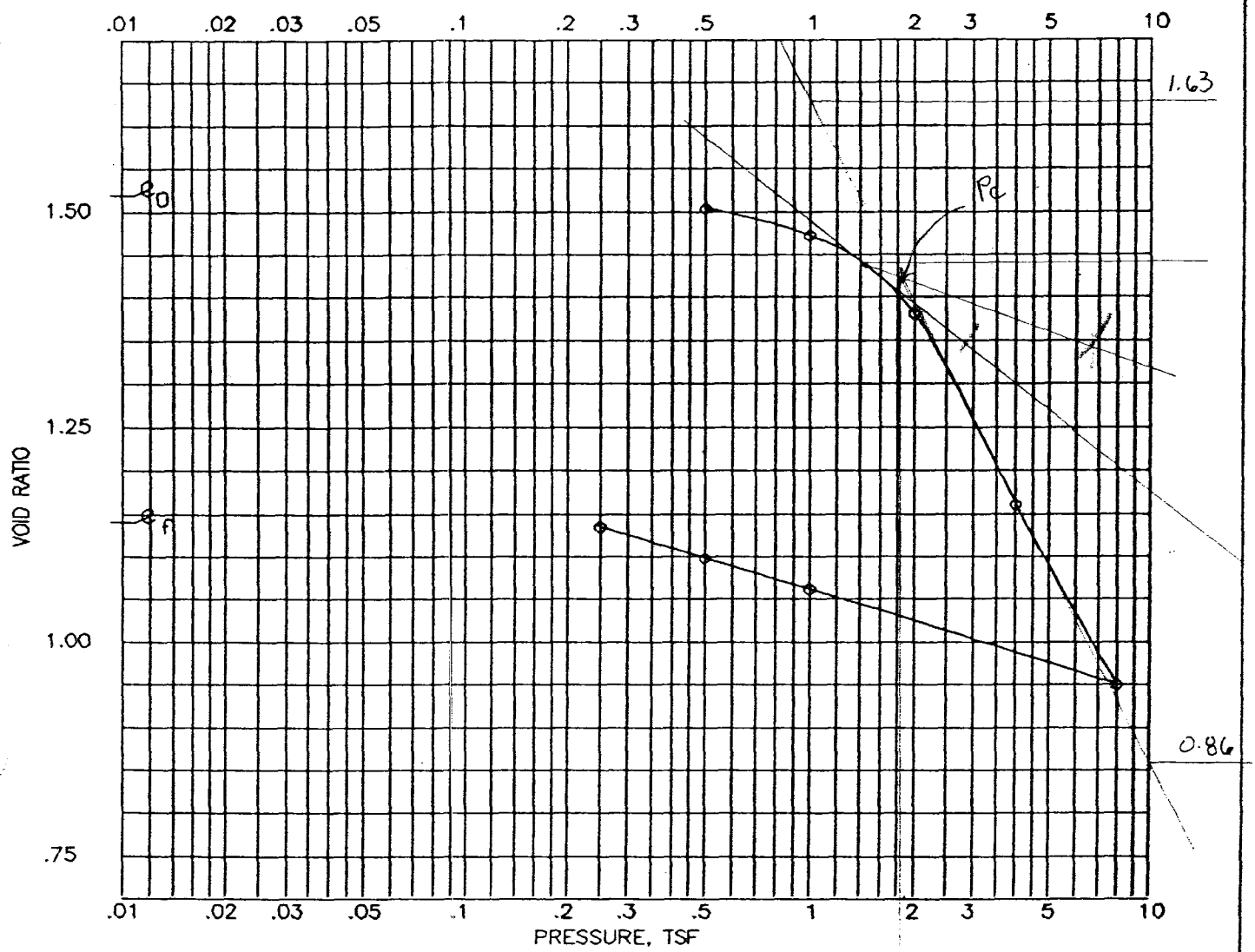


			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	44.7	29.0
PRECONSOL. PRESSURE, TSF	2.2	DRY DENSITY, PCF	73.2	98.4
COMPRESSION INDEX	0.43	SATURATION, %	92.7	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.302	.714
DIA. IN 4.44	HT. IN 1.104	BACK PRESSURE, TSF		

CLASSIFICATION	CLAY (CH), GRAY; DECAYED WOOD			
LL	PL	PI	PROJECT	INTRACOASTAL WATERWAY LOCKS, LA
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK	
REMARKS:			BORING NO. 3 BYSU	SAMPLE NO. 9C
			DEPTH/ELEV 32.5/−8.4	TECH. US
			LABORATORY USAE WES – STF/GL	DATE 18 JUL 94
			CONSOLIDATION TEST REPORT	

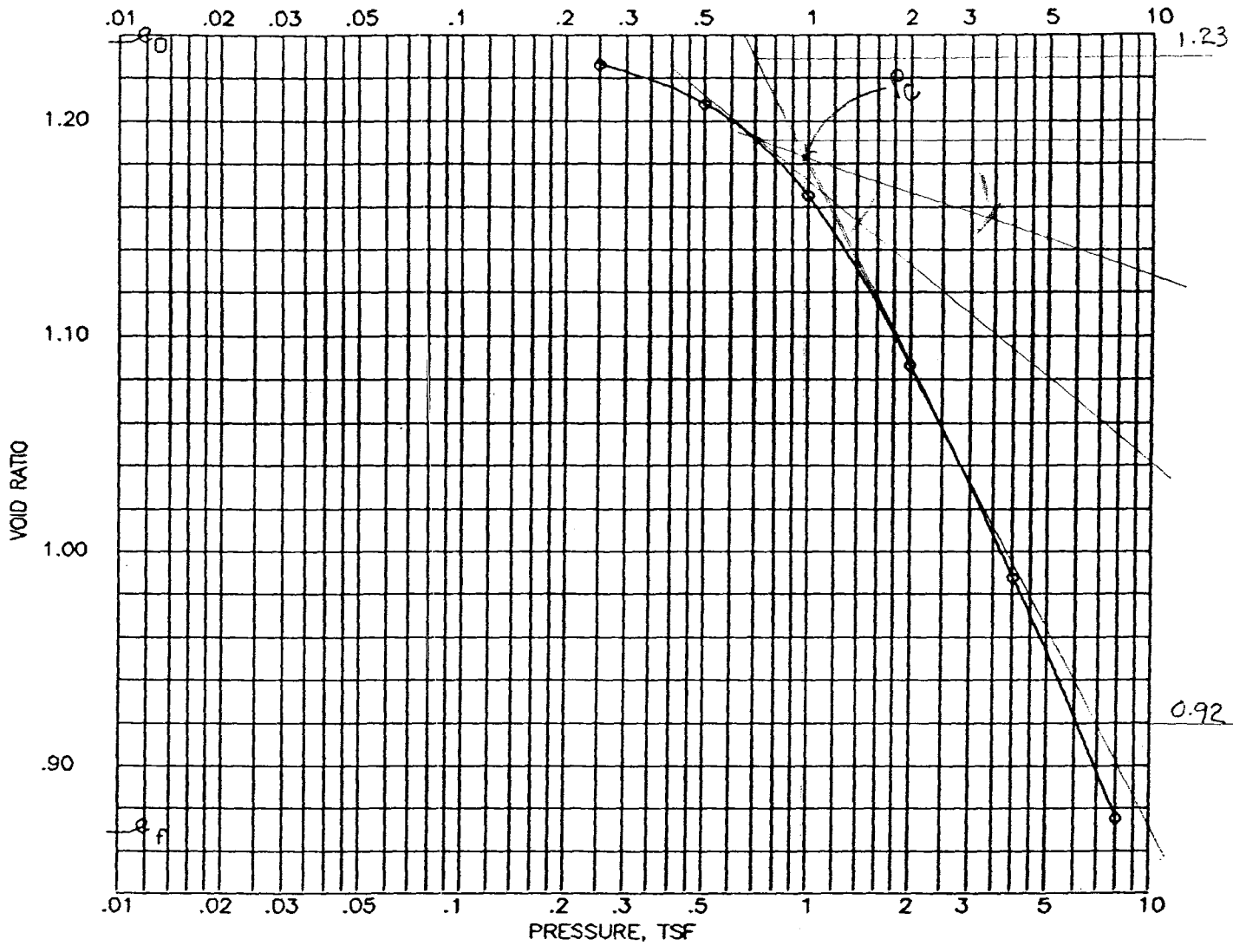


			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	50.2	35.7
PRECONSOL. PRESSURE, TSF	1.43	DRY DENSITY, PCF	71.1	88.4
COMPRESSION INDEX	0.53	SATURATION, %	98.7	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.372	.908
DIA. IN 4.44	HT. IN 1.115	BACK PRESSURE, TSF		
CLASSIFICATION	CLAY (CH), GRAY			
LL / PL / PI		PROJECT	INTRACOASTAL WATERWAY LOCKS, LA	
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK	
REMARKS:		BORING NO. 4 BYSU	SAMPLE NO. 4C	
		DEPTH/ELEV 12.7/-1.0	TECH. US	
		LABORATORY USAE WES – STF/GL	DATE 19 JUL 94	
		CONSOLIDATION TEST REPORT		



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	54.1	42.8
PRECONSOL. PRESSURE, TSF	1.83	DRY DENSITY, PCF	67.0	78.8
COMPRESSION INDEX	0.77	SATURATION, %	96.3	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.517	1.138
DIA. IN 4.44	HT. IN 1.123	BACK PRESSURE, TSF		

CLASSIFICATION	CLAY (CH), GRAY; SHELL PARTICLES			
LL	PL	PI	PROJECT	INTRACOASTAL WATERWAY LOCKS, LA
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK	
REMARKS:			BORING NO. 4 BYSU	SAMPLE NO. 15C
			DEPTH/ELEV 56.9/−45.2	TECH. US
			LABORATORY USAE WES – STF/GL	DATE 19 JUL 94
			CONSOLIDATION TEST REPORT	

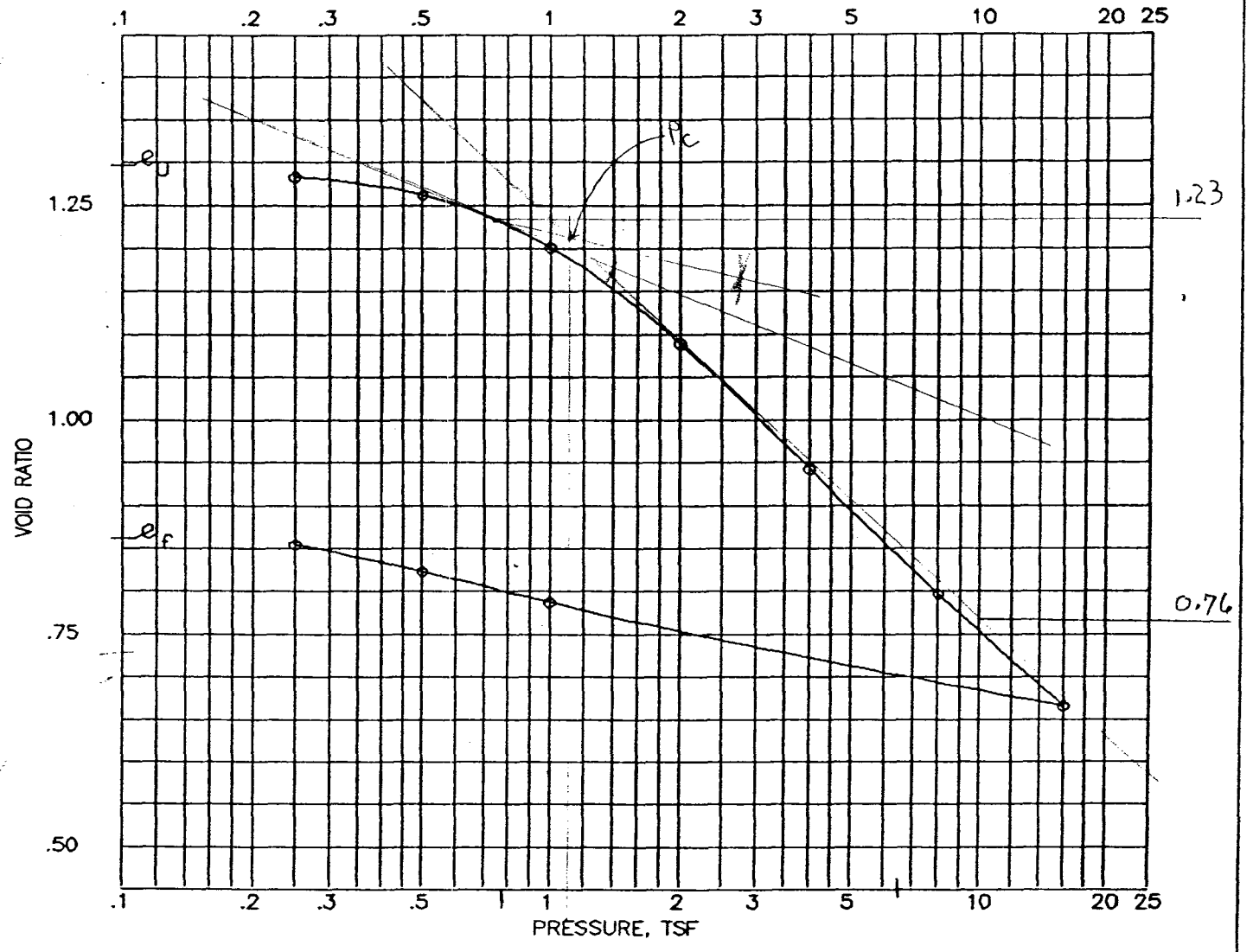


			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	42.7	32.3
PRECONSOL. PRESSURE, TSF	0.96	DRY DENSITY, PCF	75.4	90.2
COMPRESSION INDEX	0.31	SATURATION, %	93.2	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.236	.868
DIA. IN 4.44	HT. IN 1.115	BACK PRESSURE, TSF		

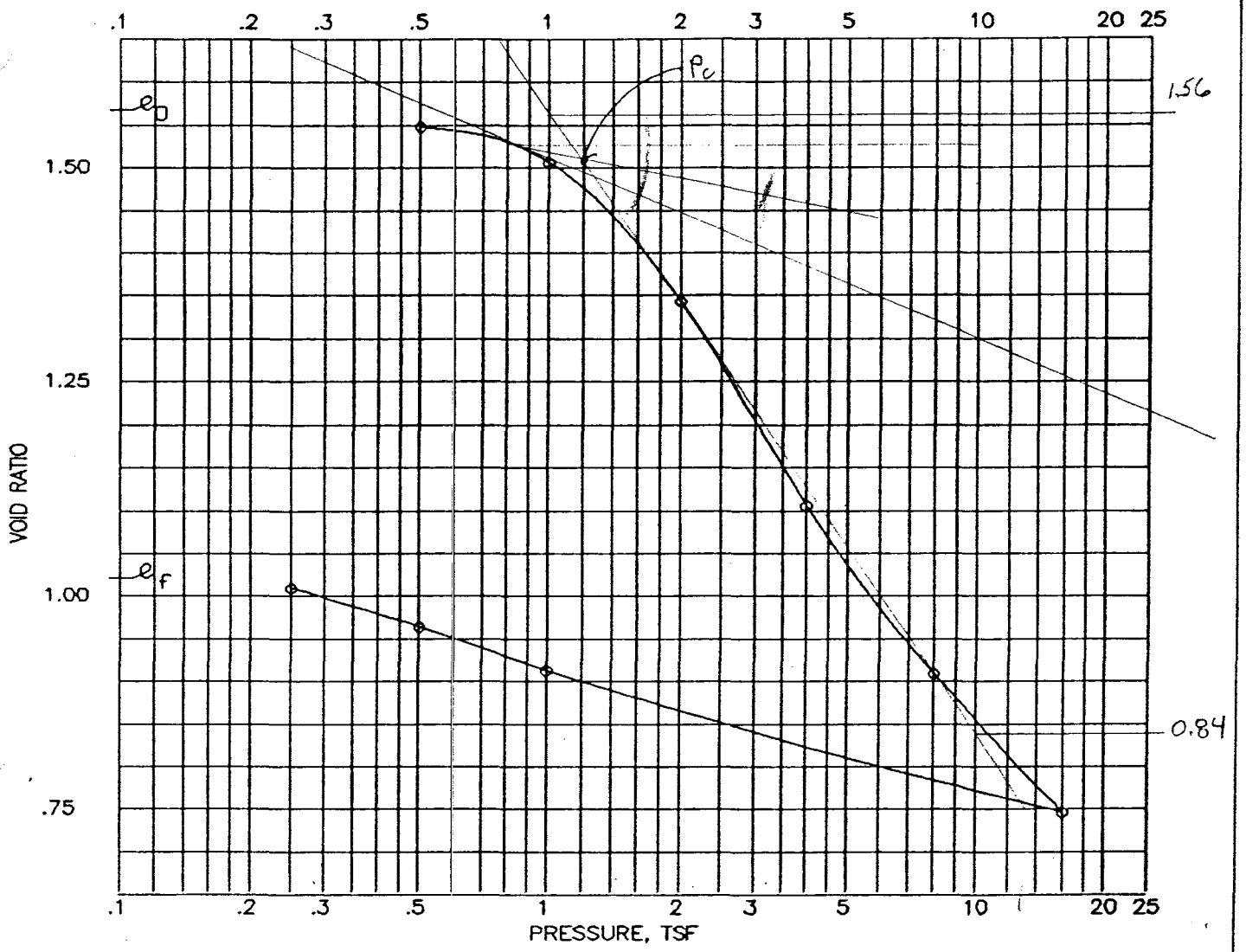
CLASSIFICATION CLAY (CH), GRAY; IRON OXIDE PARTICLES

LL	PL	PI	PROJECT INTRACOASTAL WATERWAY LOCKS, LA	
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK	
REMARKS:			BORING NO. 5 BYSU	SAMPLE NO. 4C
			DEPTH/ELEV 12.8 / -4.8	TECH. US
			LABORATORY USAE WES – STF/GL	DATE 18 JUL 94
			CONSOLIDATION TEST REPORT	

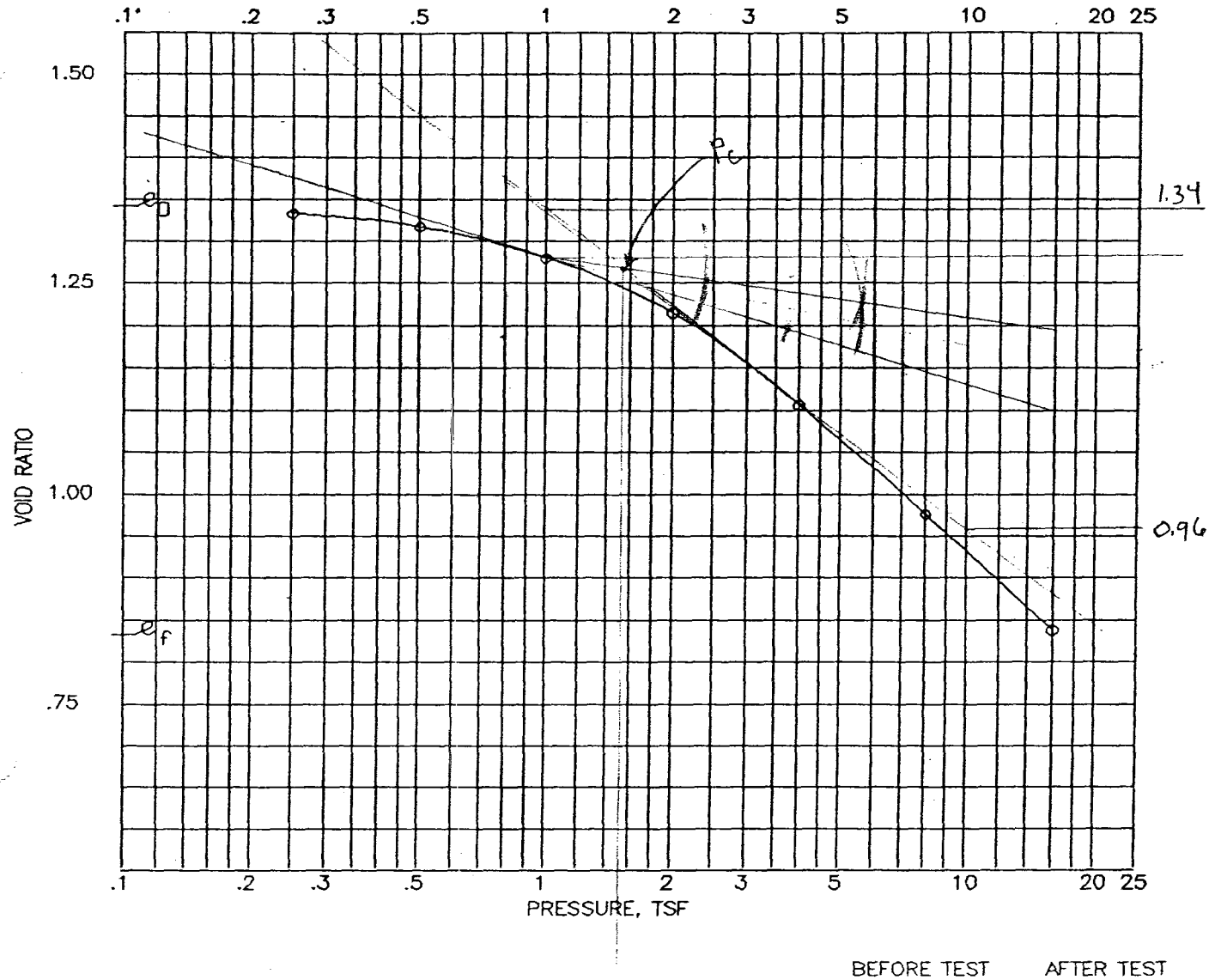
SHEET 1 OF 8



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	46.5	32.5
PRECONSOL. PRESSURE, TSF	1.10	DRY DENSITY, PCF	73.5	90.7
COMPRESSION INDEX	0.47	SATURATION, %	97.0	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.295	.859
DIA. IN 4.44	HT. IN 1.121	BACK PRESSURE, TSF		
CLASSIFICATION	CLAY (CH), GRAY			
LL / PL	PI	PROJECT	INTRACOASTAL WATERWAY LOCKS, LA	
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK	
REMARKS:		BORING NO. 5 BYSU	SAMPLE NO. 9D	
		DEPTH/ELEV 33.8 / -25.8	TECH. US	
		LABORATORY USAE WES – STF/GL	DATE 21 JUL 94	
		CONSOLIDATION TEST REPORT		



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	55.7	38.5
PRECONSOL. PRESSURE, TSF	1.20	DRY DENSITY, PCF	65.7	83.5
COMPRESSION INDEX	0.72	SATURATION, %	96.1	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.566	1.020
DIA. IN 4.44	HT. IN 1.109	BACK PRESSURE, TSF		
CLASSIFICATION	CLAY (CH), GRAY; SHELL PARTICLES			
LL	PL / PI	PROJECT	INTRACOASTAL WATERWAY LOCKS, LA	
GS 2.70 (EST)	D_{10}	BAYOU SORREL LOCK		
REMARKS:		BORING NO. 5 BYSU	SAMPLE NO. 13B	
		DEPTH/ELEV 47.9 / -39.9	TECH. US	
		LABORATORY USAE WES – STF/GL	DATE 21 JUL 94	
		CONSOLIDATION TEST REPORT		

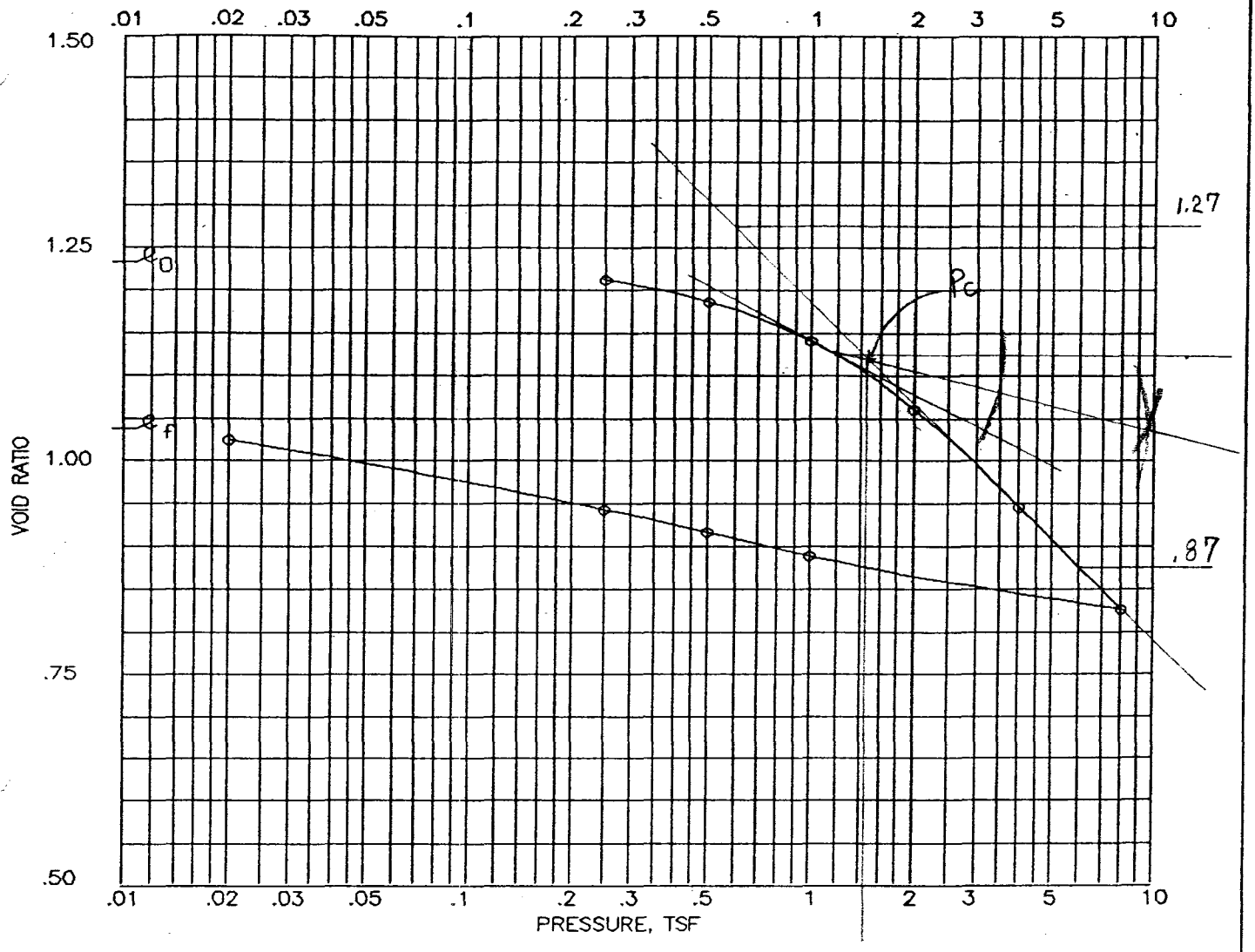


			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	45.0	32.8
PRECONSOL. PRESSURE, TSF	1.50	DRY DENSITY, PCF	72.0	92.1
COMPRESSION INDEX	0.38	SATURATION, %	90.6	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.340	.831
DIA. IN 4.44	HT. IN 1.112	BACK PRESSURE, TSF		

CLASSIFICATION CLAY (CH), GRAY; SLICKENSIDED; FRIABLE

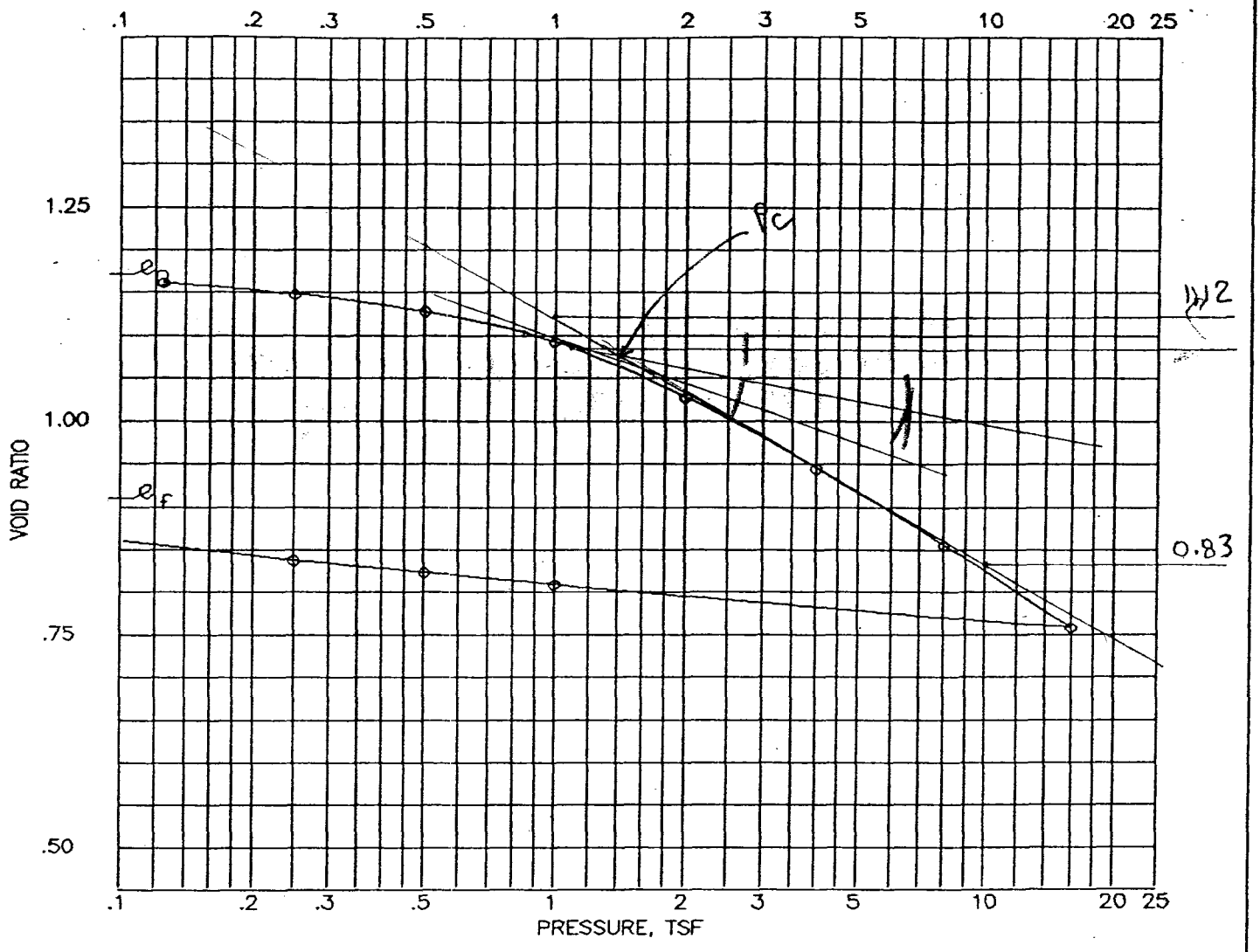
LL	PL	PI	PROJECT INTRACOASTAL WATERWAY LOCKS, LA	
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK	
REMARKS: NO REBOUND			BORING NO. 6BYSU	SAMPLE NO. 4D
			DEPTH/ELEV 13.8/-12.7	TECH. JL
			LABORATORY USAE WES - STF/GL	DATE 21 APR 95

CONSOLIDATION TEST REPORT



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	44.6	38.4
PRECONSOL. PRESSURE, TSF	1.42	DRY DENSITY, PCF	75.5	82.8
COMPRESSION INDEX	0.40	SATURATION, %	97.7	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.232	1.036
DIA. IN 4.44	HT. IN 1.118	BACK PRESSURE, TSF		

CLASSIFICATION	CLAY (CH), GRAY		
LL 56	PL 20	PI 36	PROJECT INTRACOASTAL WATERWAY LOCKS, LA
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK
REMARKS:			BORING NO. 6BYSU / SAMPLE NO. 7B
			DEPTH/ELEV 23.7/−22.6 / TECH. JL
			LABORATORY USAE WES – STF/GL / DATE 21 APR 95
			CONSOLIDATION TEST REPORT



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	41.9	32.4
PRECONSOL. PRESSURE, TSF	1.40	DRY DENSITY, PCF	77.7	88.3
COMPRESSION INDEX	0.29	SATURATION, %	96.8	96.4
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.169	.908
DIA. IN 4.44	HT. IN 1.138	BACK PRESSURE, TSF		

CLASSIFICATION CLAY (CL), GRAY

LL 42	PL 19	PI 23	PROJECT INTRACOASTAL WATERWAY LOCKS, LA
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK
REMARKS:			BORING NO. 6BYSU / SAMPLE NO. 9B
			DEPTH/ELEV 32.0/-30.9 / TECH. JL
			LABORATORY USAE WES – STF/GL / DATE 21 APR 95

CONSOLIDATION TEST REPORT