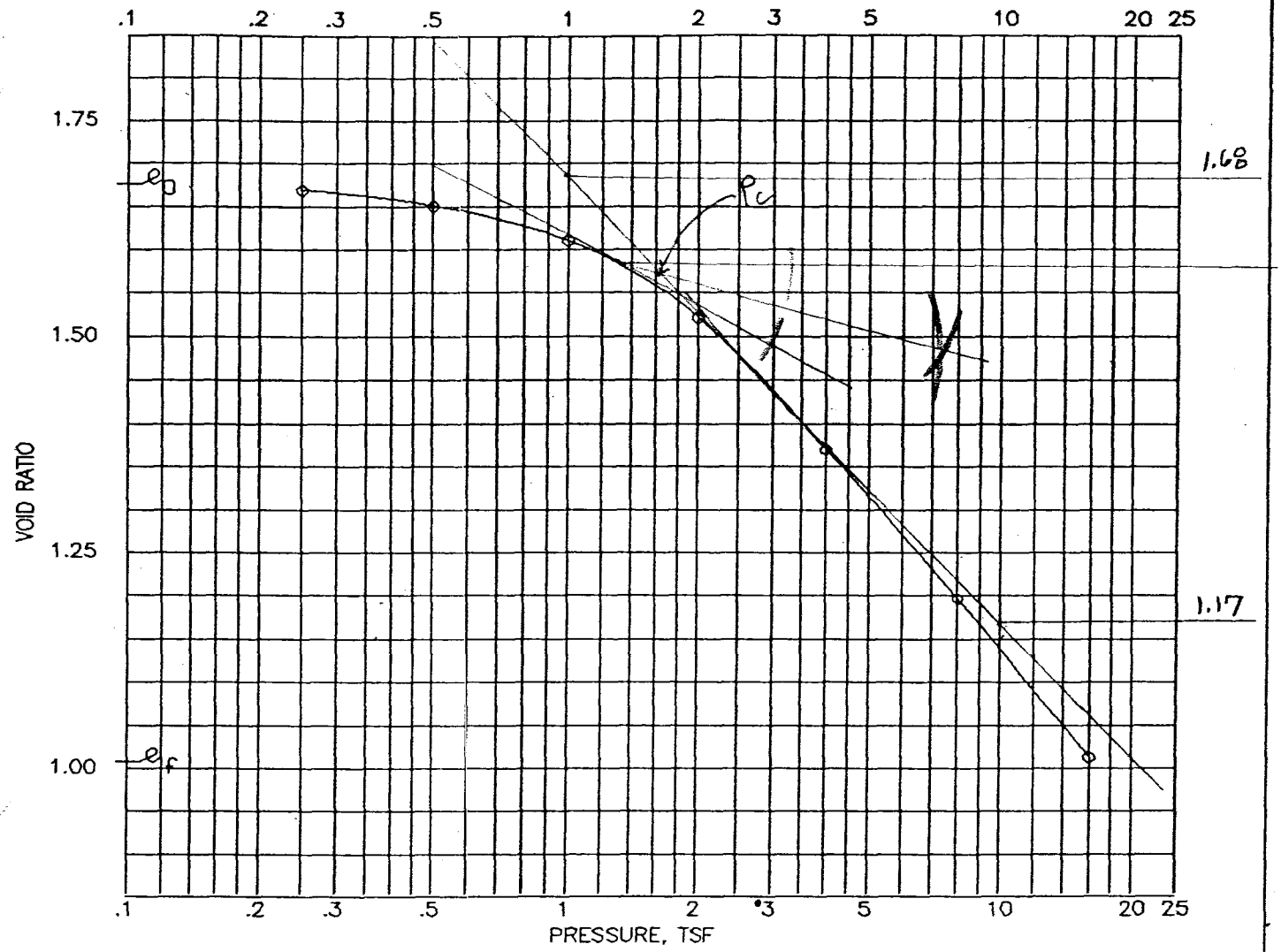
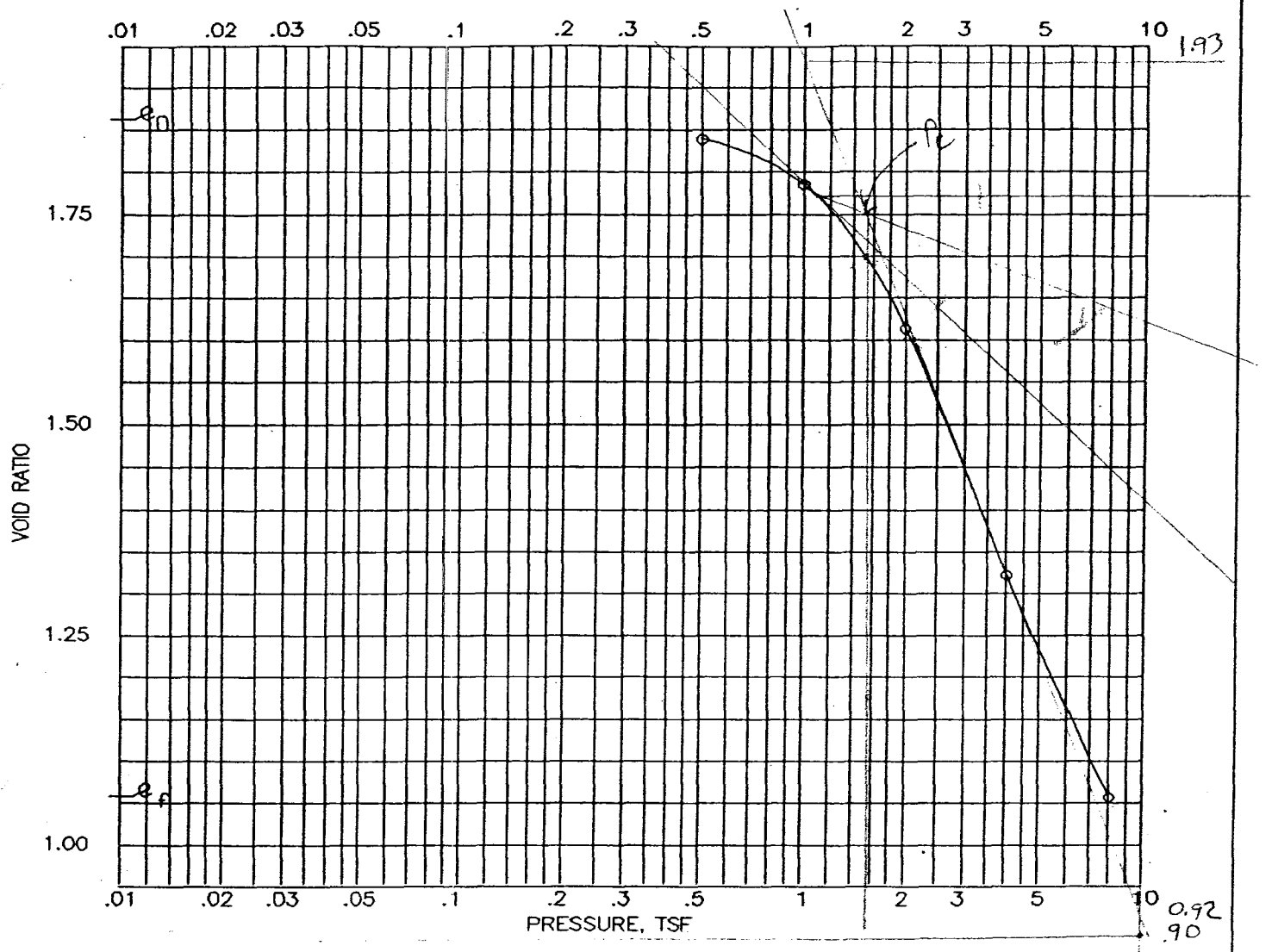


			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	59.2	40.2
PRECONSOL. PRESSURE, TSF	1.60	DRY DENSITY, PCF	63.0	84.1
COMPRESSION INDEX	0.51	SATURATION, %	95.5	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.674	1.005
DIA. IN 4.44	HT. IN 1.108	BACK PRESSURE, TSF		

CLASSIFICATION	CLAY (CH), GRAY; SLICKENSIDED; FRIABLE		
LL 98	PL 26	PI 72	PROJECT INTRACOASTAL WATERWAY LOCKS, LA
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK
REMARKS: NO REBOUND			BORING NO. 7BYSU / SAMPLE NO. 5C
			DEPTH/ELEV 16.0/−14.7 / TECH. JL
			LABORATORY USAE WES – STF/GL / DATE 21 APR 95
			CONSOLIDATION TEST REPORT

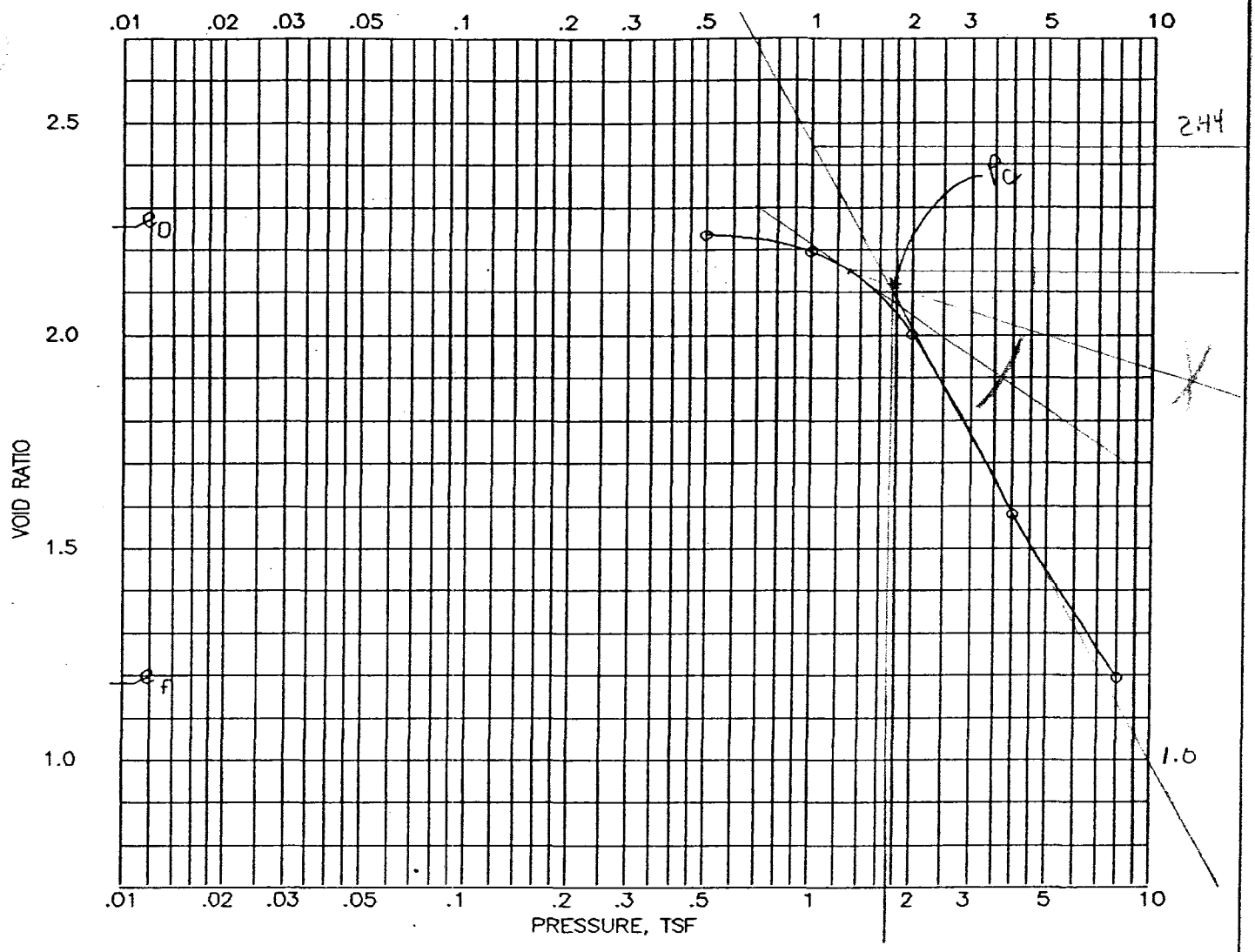


			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	68.4	40.8
PRECONSOL. PRESSURE, TSF	1.52	DRY DENSITY, PCF	58.9	82.0
COMPRESSION INDEX	1.01	SATURATION, %	99.2	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.860	1.056
DIA. IN 4.44	HT. IN 1.111	BACK PRESSURE, TSF		

CLASSIFICATION CLAY (CH), GRAY; FISSURED

LL 100	PL 26	PI 74	PROJECT INTRACOASTAL WATERWAY LOCKS, LA
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK
REMARKS: NO REBOUND			BORING NO. 7BYSU / SAMPLE NO. 14D
			DEPTH/ELEV 53.8/-52.5 / TECH. JL
			LABORATORY USAE WES – STF/GL / DATE 07 JUN 95

CONSOLIDATION TEST REPORT

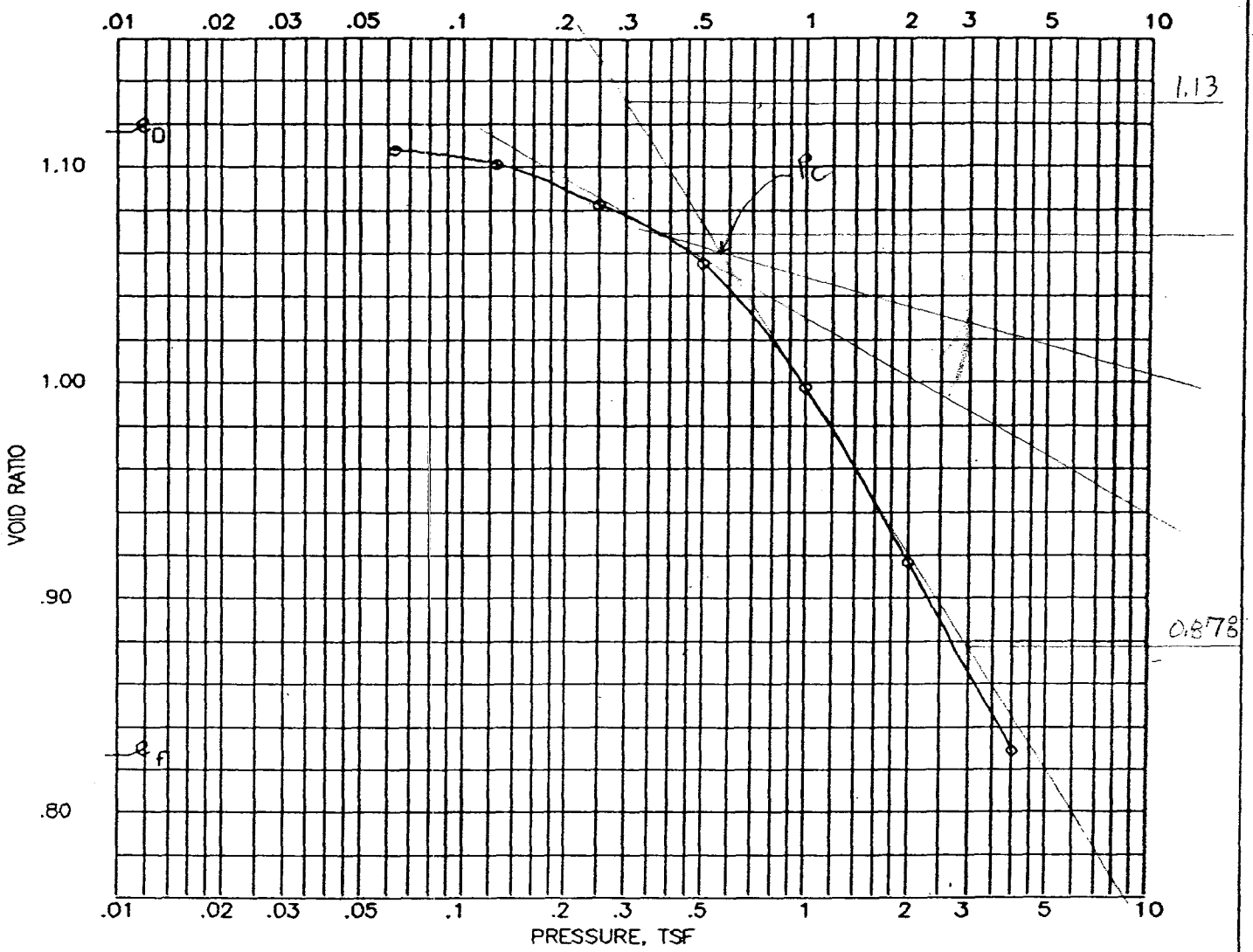


			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	77.6	40.7
PRECONSOL. PRESSURE, TSF	1.71	DRY DENSITY, PCF	51.8	77.4
COMPRESSION INDEX	1.44	SATURATION, %	93.0	93.4
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	2.252	1.178
DIA. IN 4.44	HT. IN 1.114	BACK PRESSURE, TSF		

CLASSIFICATION CLAY (CH), GRAY; ORGANIC MATERIAL

LL	PL	PI	PROJECT INTRACOASTAL WATERWAY LOCKS, LA	
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK	
REMARKS: NO REBOUND			BORING NO. 7BYSU	SAMPLE NO. 12B
			DEPTH/ELEV 44.1/-42.8	TECH. JL
			LABORATORY USAE WES – STF/GL	DATE 16 MAY 95

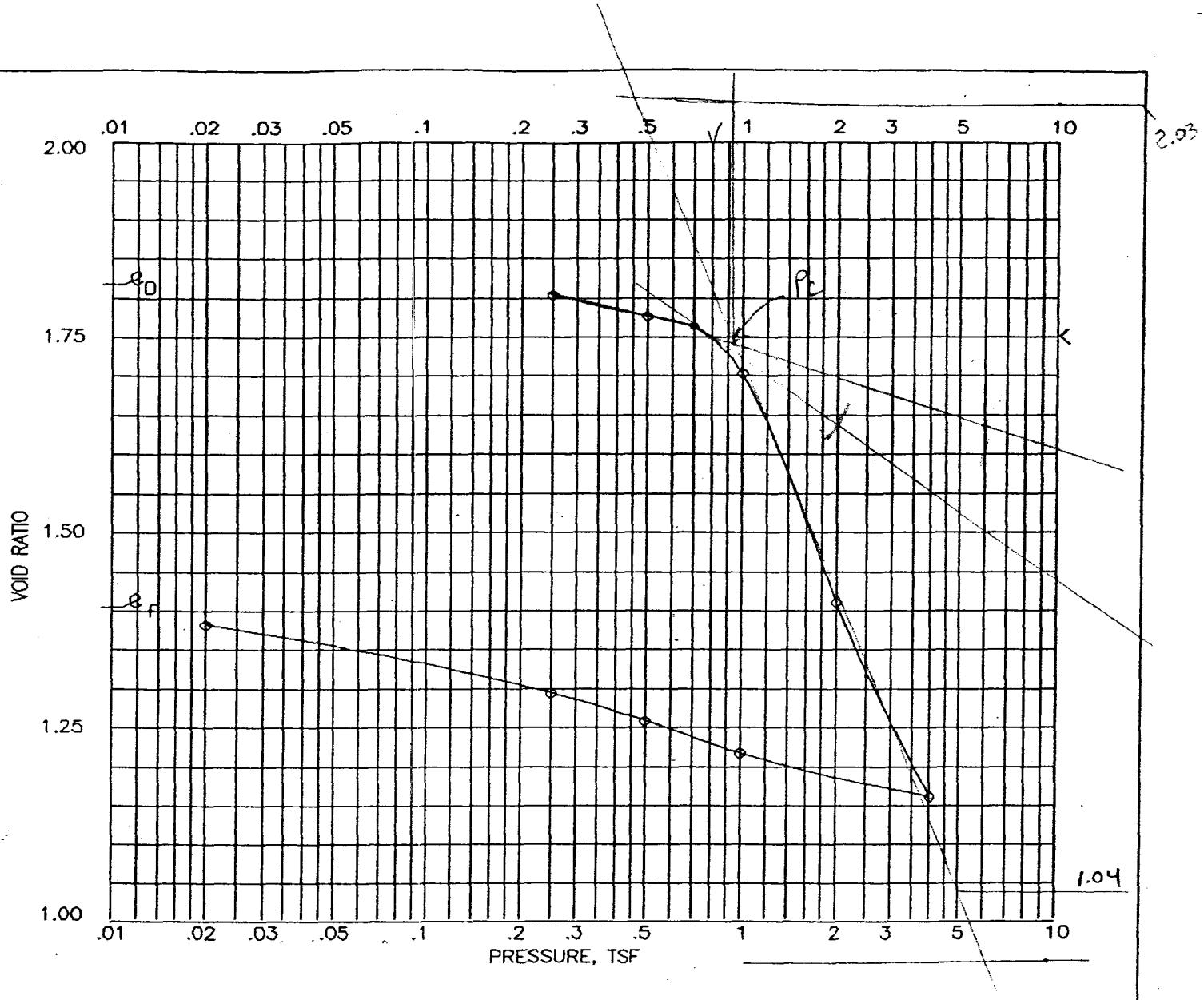
CONSOLIDATION TEST REPORT



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	39.5	29.2
PRECONSOL. PRESSURE, TSF	0.55	DRY DENSITY, PCF	79.7	92.3
COMPRESSION INDEX	0.252	SATURATION, %	95.6	95.6
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.115	.826
DIA. IN 4.44	HT. IN 1.132	BACK PRESSURE, TSF		

CLASSIFICATION CLAY (CH), BROWN; ORGANIC MATERIAL

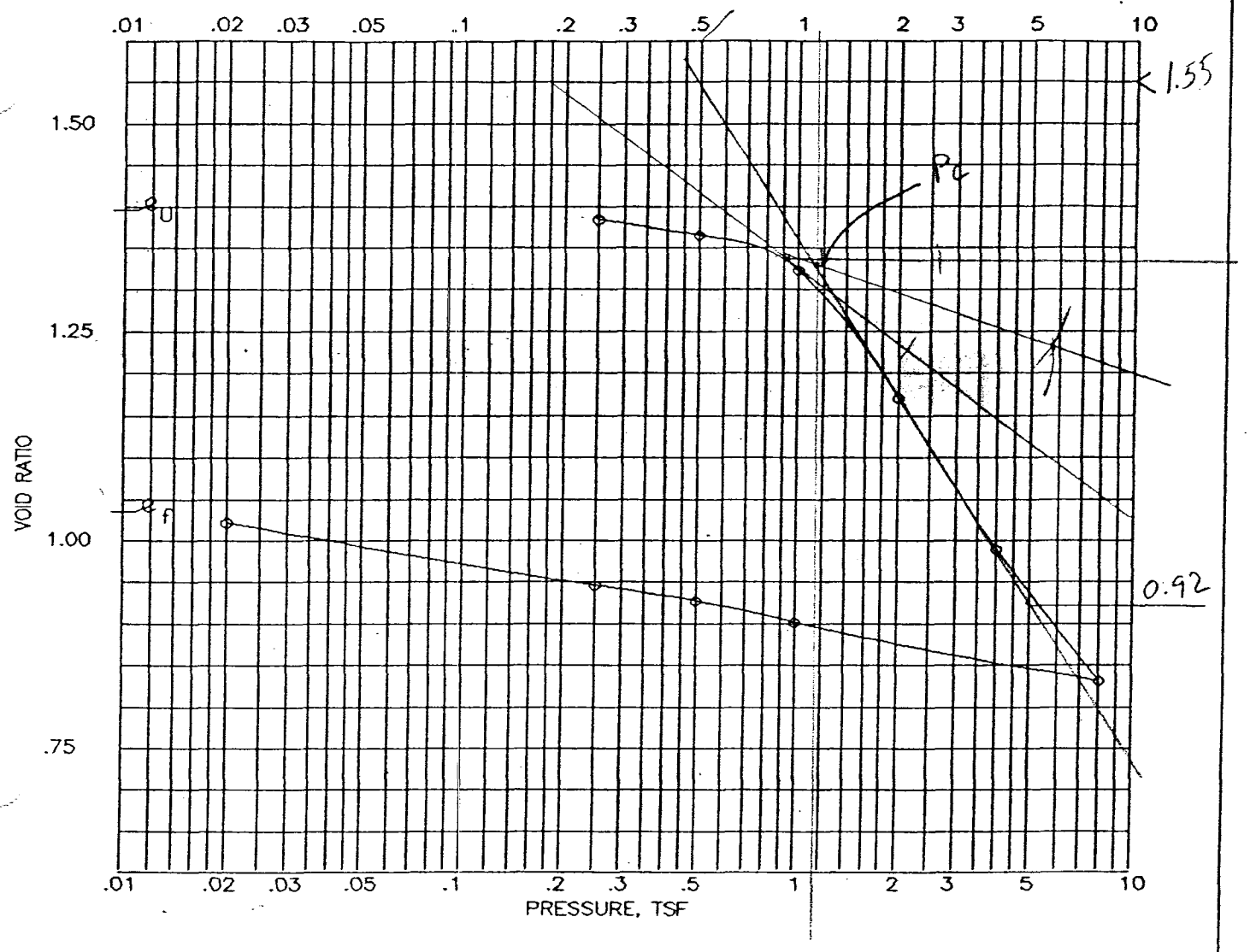
LL	PL	PI	PROJECT INTRACOASTAL WATERWAY LOCKS, LA	
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK	
REMARKS: NO REBOUND			BORING NO. 8BYSU	SAMPLE NO. 6B
			DEPTH/ELEV 20.5/−14.5	TECH. JL
			LABORATORY USAE WES – STF/GL	DATE 07 JUN 95
			CONSOLIDATION TEST REPORT	



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	67.3	52.1
PRECONSOL. PRESSURE, TSF	0.92	DRY DENSITY, PCF	59.9	70.1
COMPRESSION INDEX	0.99	SATURATION, %	100 +	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.816	1.404
DIA. IN 4.44	HT. IN 1.124	BACK PRESSURE, TSF		

CLASSIFICATION	CLAY (CH), REDDISH BROWN		
LL 71	PL 22	PI 49	PROJECT INTRACOASTAL WATERWAY LOCKS, LA
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK
REMARKS:			BORING NO. 8BYSU / SAMPLE NO. 10B
			DEPTH/ELEV 35.7/-29.7 / TECH. JL
			LABORATORY USAE WES – STF/GL / DATE 07 JUN 95
			CONSOLIDATION TEST REPORT

SHEET 1 OF 11

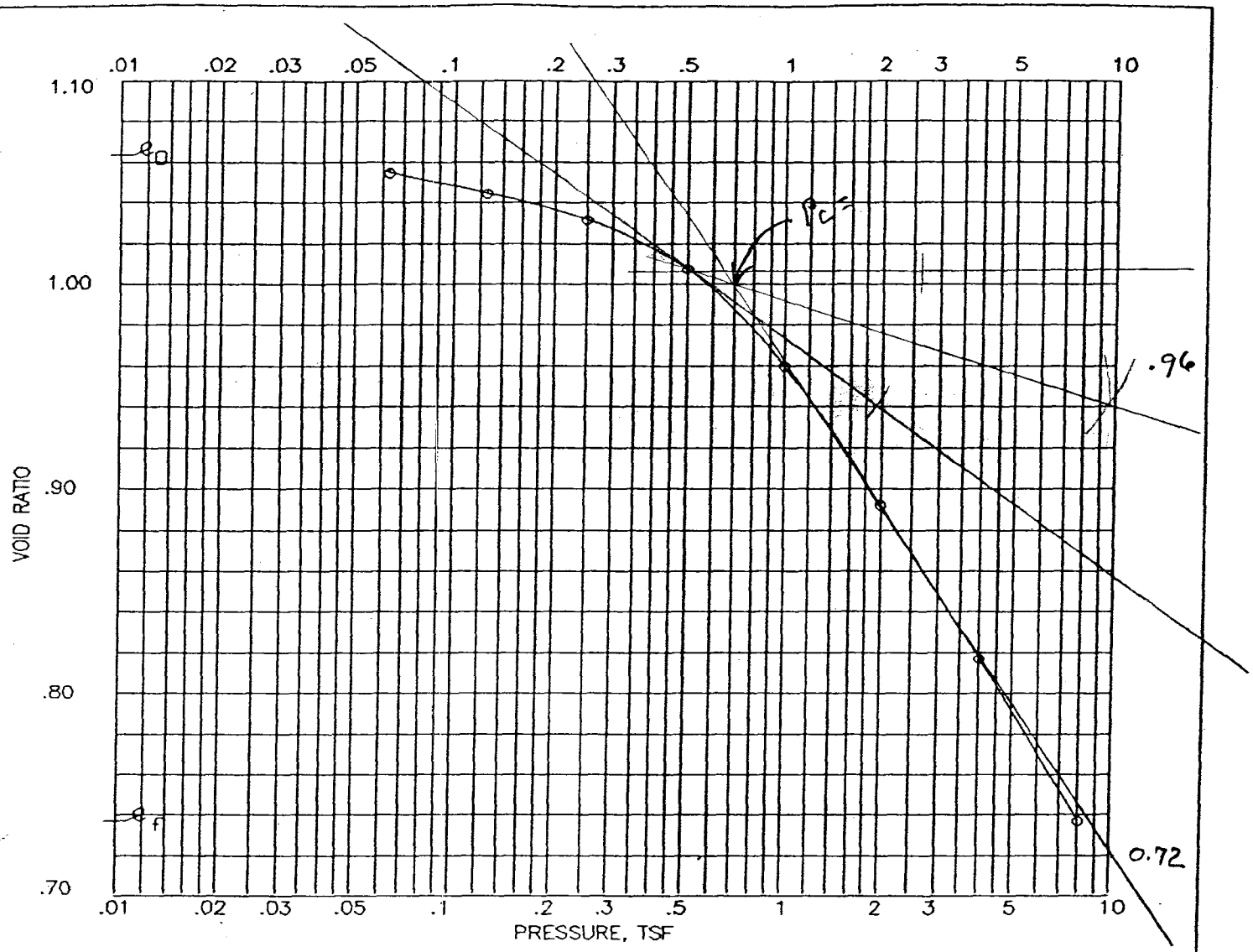


			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	50.2	38.2
PRECONSOL. PRESSURE, TSF	1.10	DRY DENSITY, PCF	70.4	82.9
COMPRESSION INDEX	0.63	SATURATION, %	97.3	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.393	1.033
DIA. IN 4.44	HT. IN 1.113	BACK PRESSURE, TSF		

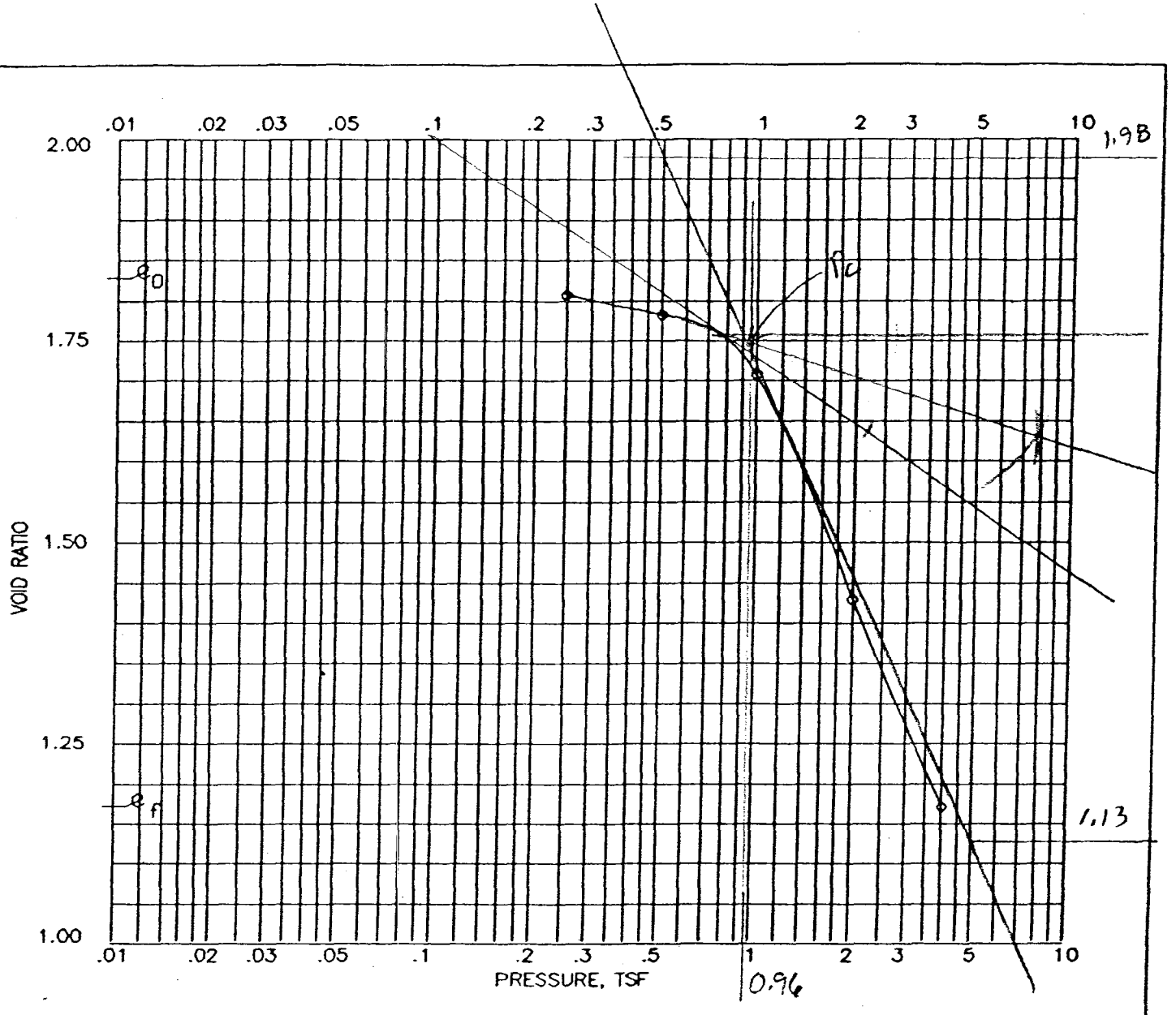
CLASSIFICATION CLAY (CH), GRAY

LL 75	PL 21	PI 54	PROJECT INTRACOASTAL WATERWAY LOCKS, LA
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK
REMARKS:			BORING NO. 8BYSU / SAMPLE NO. 14B
			DEPTH/ELEV 52.2/−46.2 / TECH. JL
			LABORATORY USAE WES – STF/GL / DATE 07 JUN 95

CONSOLIDATION TEST REPORT



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	37.4	26.2
PRECONSOL. PRESSURE, TSF	0.70	DRY DENSITY, PCF	81.7	97.1
COMPRESSION INDEX	0.24	SATURATION, %	95.1	96.1
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.063	.736
DIA. IN 4.44	HT. IN 1.139	BACK PRESSURE, TSF		
CLASSIFICATION	CLAY (CL), GRAY			
LL / PL / PI		PROJECT	INTRACOASTAL WATERWAY LOCKS, LA	
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK	
REMARKS: NO REBOUND		BORING NO. 9BYSU	SAMPLE NO. 6D	
		DEPTH/ELEV 22.3/−17.4	TECH. JL	
		LABORATORY USAE WES – STF/GL	DATE 19 JUN 95	
		CONSOLIDATION TEST REPORT		

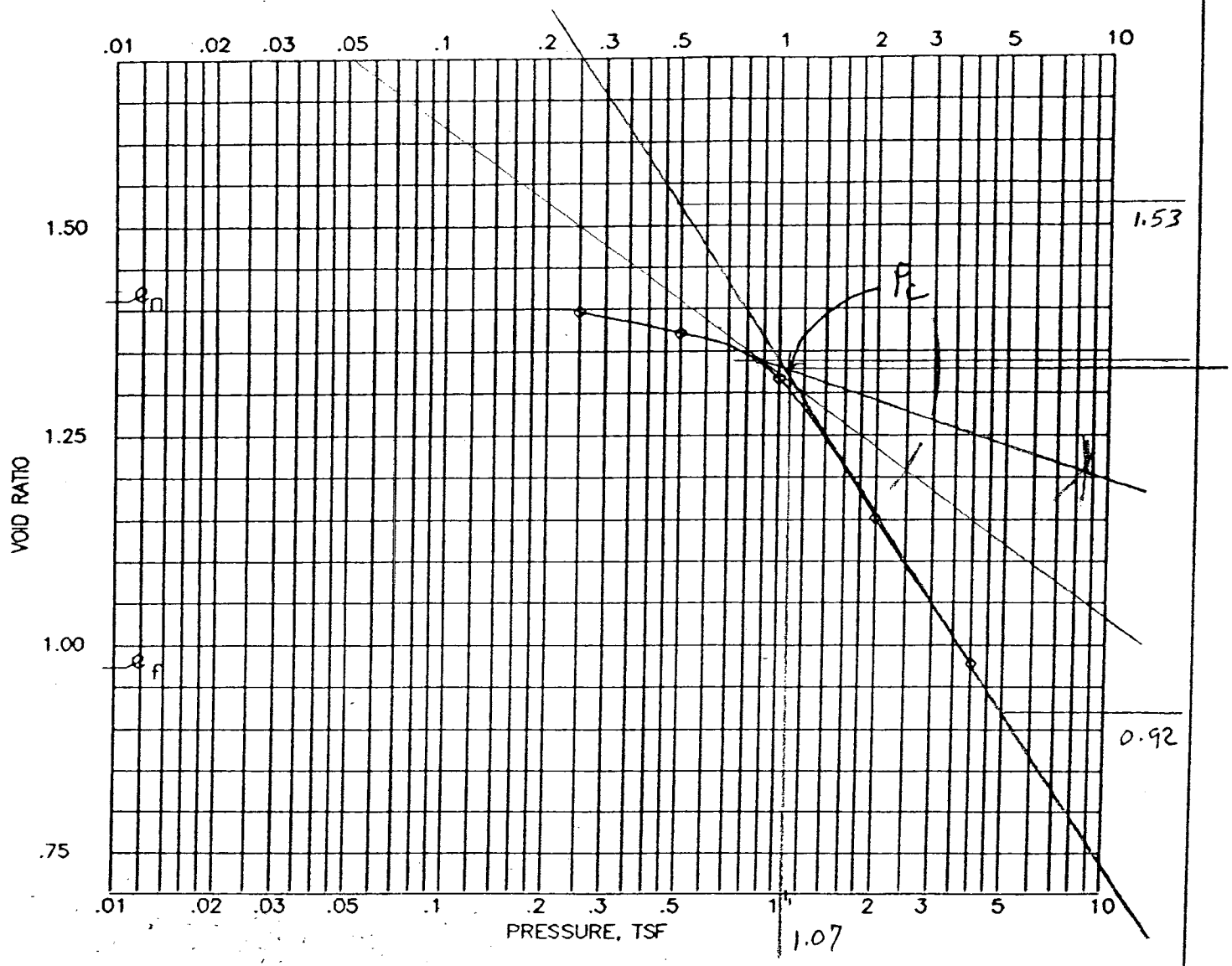


			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	66.6	45.0
PRECONSOL. PRESSURE, TSF	0.96	DRY DENSITY, PCF	59.6	77.7
COMPRESSION INDEX	0.85	SATURATION, %	98.4	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.827	1.170
DIA. IN 4.44	HT. IN 1.116	BACK PRESSURE, TSF		

CLASSIFICATION CLAY (CH), GRAY

LL	PL	PI	PROJECT INTRACOASTAL WATERWAY LOCKS, LA	
GS 2.70 (EST)	D_{10}		BAYOU SORREL LOCK	
REMARKS: NO REBOUND			BORING NO. 9BYSU	SAMPLE NO. 10B
			DEPTH/ELEV 36.2/-31.3	TECH. JL
			LABORATORY USAE WES - STF/GL	DATE 21 JUN 95

CONSOLIDATION TEST REPORT



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, TSF		WATER CONTENT, %	51.4	36.4
PRECONSOL. PRESSURE, TSF	1.07	DRY DENSITY, PCF	69.9	85.5
COMPRESSION INDEX	0.61	SATURATION, %	98.5	100 +
TYPE SPECIMEN	UNDISTURBED	VOID RATIO	1.411	.971
DIA. IN 4.44	HT. IN 1.123	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: NO REBOUND			BORING NO. 9BYSU	SAMPLE NO. 14B
			DEPTH/ELEV 52.1/-47.2	TECH. JL
			LABORATORY USAE WES - STF/GL	DATE 29 JUN 95
			CONSOLIDATION TEST REPORT	

Bayou Sorrel Lock Tabulated Piezometer Readings G2

Date	Piez. 1 Tip Elev. -108 Elevation	Piez. 2 Tip Elev. -98 Elevation	Piez. 3 Tip Elev. -71 Elevation	Piez. 4 Tip Elev. -30.5 Elevation	Piez. 5 Tip Elev. -35.3 Elevation
19-Mar-97	10.3	11.5	9.33	8.98	8.63
26-Mar-97	10.3	12.54	9.36	9.65	9.23
3-Apr-97	10.3	13.13	9.33	9.95	9.38
9-Apr-97	10.3	13.47	9.25	9.9	9.52
24-Apr-97	10.3	12.77	9.41	8.81	8.35
9-Sep-97	6.31	5.89	9.67	3.13	2.98
7-Oct-97	4.91	4.69	9.53	2.56	3.25
17-Oct-97	4.58	4.27	9.44	2.6	2.53
20-Nov-97	3.87	3.59	9.1	2.66	2.6
8-Jan-98	4.98	4.73	8.65	5.13	5.13
20-Jan-98	6.38	6.16	8.58	6.99	6.94
5-Feb-98		7.88		6.23	
19-Feb-98	8.48	8.17	8.47	7.24	7.1
3-Mar-98	8.95	8.77	8.4	7.63	7.41
19-Mar-98	9.94	9.62	8.45	7.91	7.71
31-Mar-98		10.01		7.81	
14-Apr-98	10.3	10.5	8.42	7.55	7.24
1-May-98	10.3	11.08	8.5	7.75	7.52
13-May-98		11.36		7.81	
29-May-98	10.3	11.78	8.6	7.57	7.24
10-Jun-98		10.86		6.43	
26-Jun-98	9.98	9.66	8.66	5.5	5.21
8-Jul-98	10.05	9.65	8.75	5.69	5.43
4-Aug-98		8.73		4.38	

Piezometer location shown on Plate G2

20-Aug-98	7.75	7.7	8.66	3.87	3.69
2-Sep	7.09	7.03	8.7	3.25	3.18
16-Sep	7.01	6.64	8.66	4.53	4.48
25-Sep-98	5.74	5.38	8.72	3.31	3.21
18-Nov-98	4.89	4.6	8.43	3.98	3.85
7-Jan-99		4.86	8.12	4.69	
3-Feb-99	6.58	6.38	7.97	6.12	5.83
8-Apr-99	10	9.63	7.96	7.08	6.68
21-Jun-99	9.41	9.17	8.12	5.83	5.47
30-Aug-99	5.65	5.38	8.11	2.88	2.72
27-Sep-99	4.07	3.83	8.07	2.56	2.5
28-Mar-00	3.67	3.42	6.5	4.68	4.43
14-Aug-00	3.88	3.61	5.95	2.79	2.66
27-Nov-00	1.61	1.34	5.34	3.94	3.89
17-Jan-01	2.45	2.19	5.02	4.28	4.14
22-Mar-01	7.68	7.37	4.83	8.05	7.76
25-Apr-01	7.6	7.27	6.55	8.95	4
20-Jun-01	No Reading	7.71	5.11	6.96	6.85
10-Sep-01	4.3	4.05	5.26	4.1	4.15
10-Apr-02	8.96	5.15	8.73	7.66	7.47
17-Apr-02	9.76	5.18	9.41	8.24	7.99

Piezometer location shown on Plate G2

CREEP RATIO

ASSUME ROOFING AND 4 ft SCOUR to EL -19.0

L = 1184 ft

FOR ROOFING L = 0

H = 28.7' - 4' = 24.7

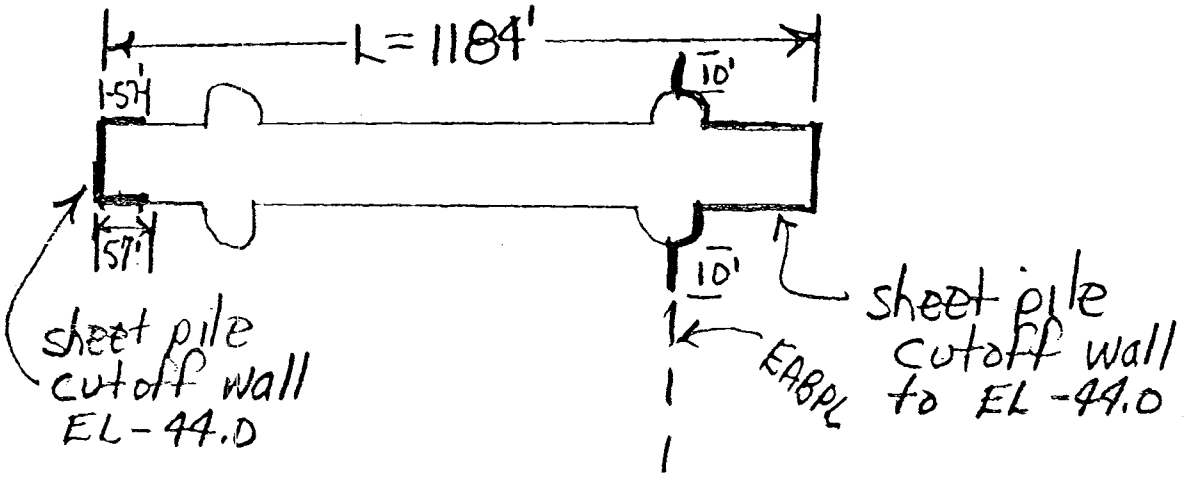
D = EL-44 - EL-19 = 25 ft

Assume Granular Foundation material.

Minimum Creep Ratio = 4.0

Sheet pile cutoff under both ends of lock

$$= \frac{25' + 25' + 25' + 25'}{24.7'} = 4 \geq 4 \quad (OK)$$

Check where sheet pile cut off wall stops 57 ft from North end of lock.

$$= \frac{25' + 25' + \frac{4}{1.8}(23')^{\text{clay backfill}}}{24.7} = 4.1$$