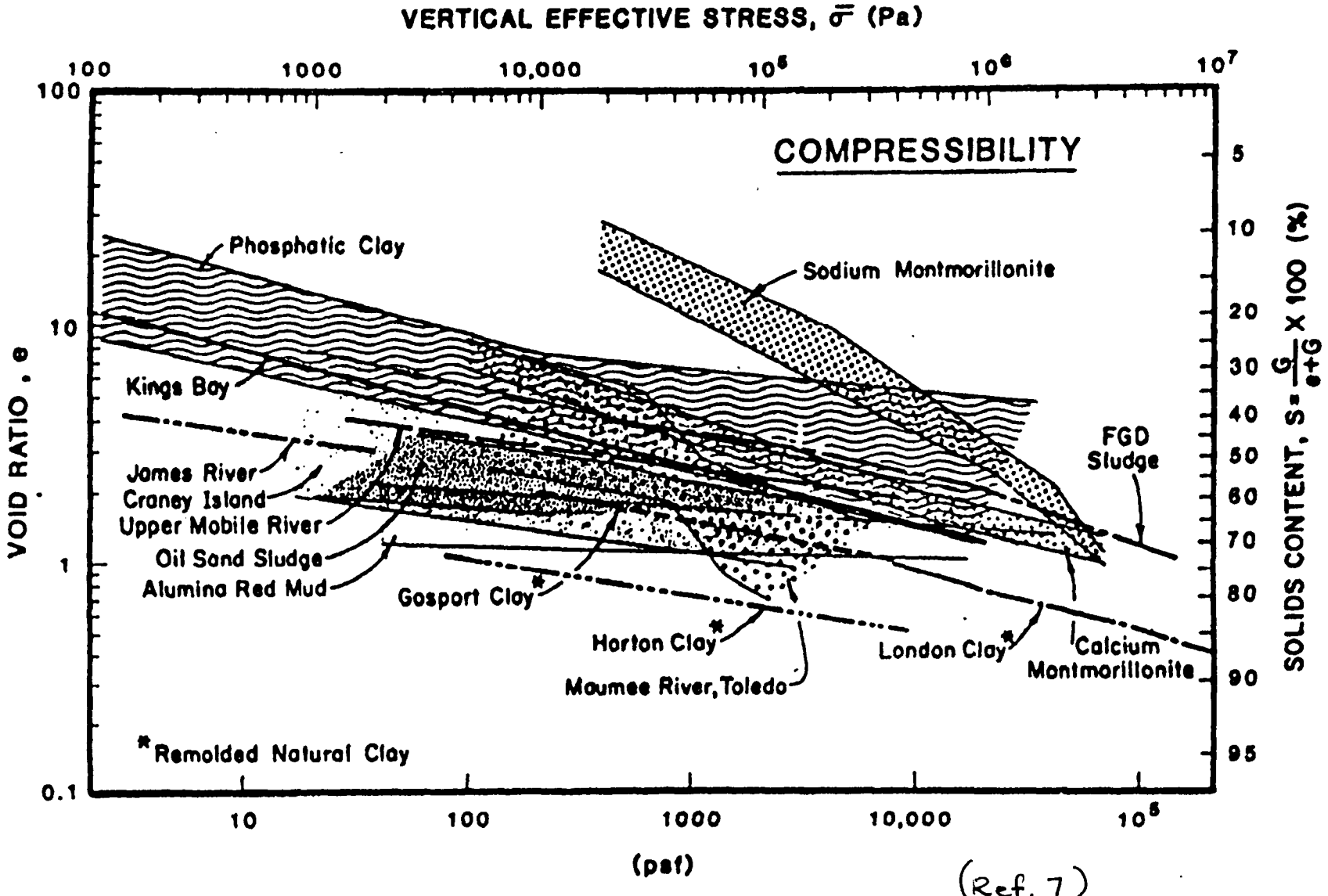
F. CONSOLIDATION CHARACTERISTICS

Included herein are data from several references.


VERTICAL EFFECTIVE STRESS, $\bar{\sigma}$ (Pa)
100
1000
10,000
10^5
10^6
10^7
COMPRESSIBILITY
Phosphatic Clay
Sodium Montmorillonite
Kings Bay
James River
Craney Island
Upper Mobile River
Oil Sand Sludge
Alumina Red Mud
Gosport Clay*
Horton Clay*
Maumee River, Toledo
London Clay*
Calcium Montmorillonite
FGD Sludge
*Remolded Natural Clay
VOID RATIO, e
100
10
1
0.1
SOLIDS CONTENT, $S = \frac{G}{e+G} \times 100$ (%)
5
10
20
30
40
50
60
70
80
90
95
10
100
1000
10,000
10^5
(psf)

(Ref. 7)

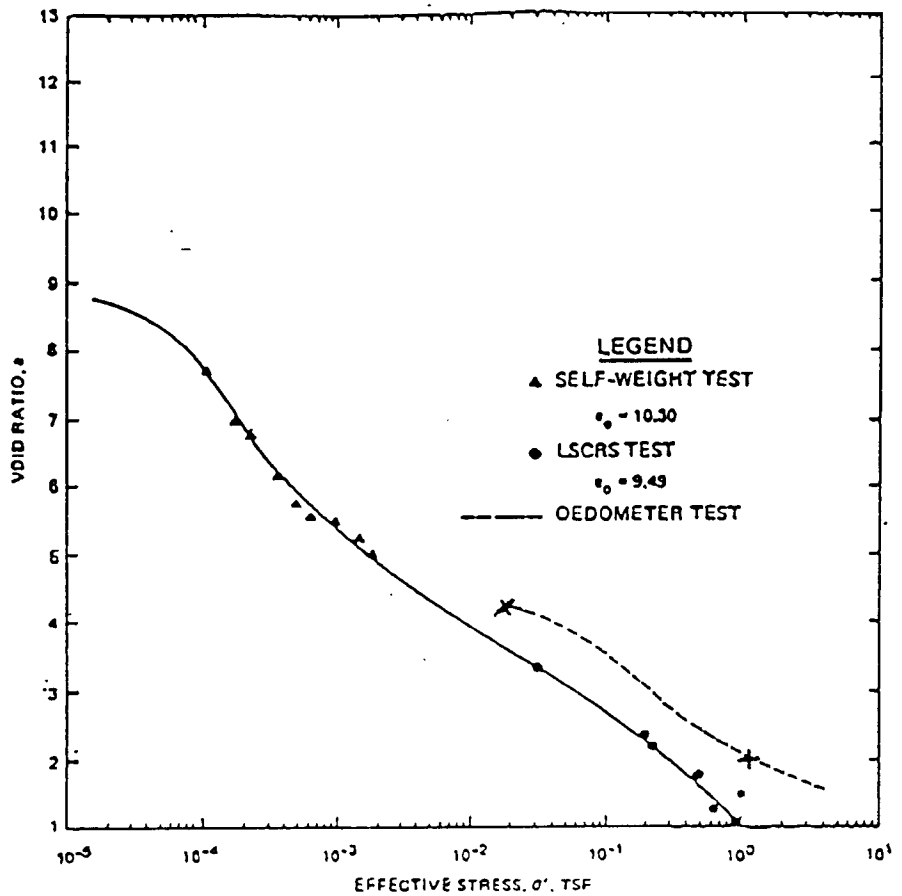
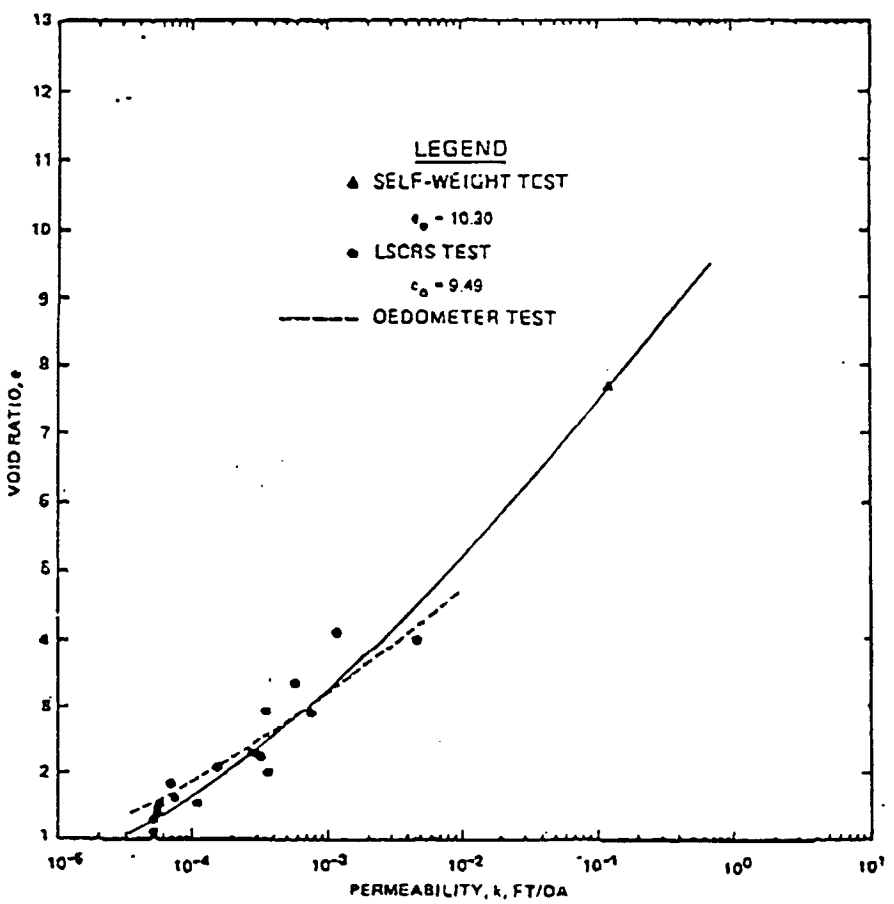
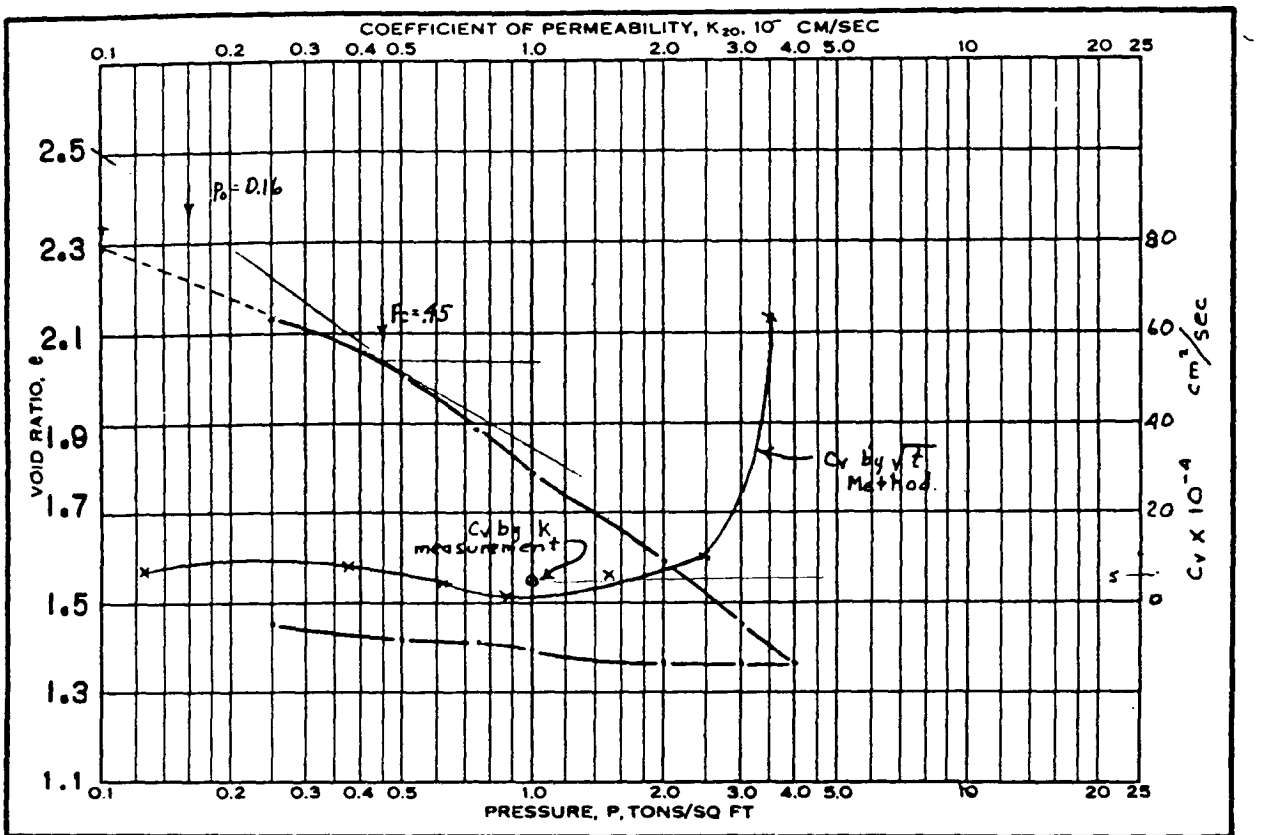


Figure 11. Void ratio - effective stress relationship for New York Harbor material



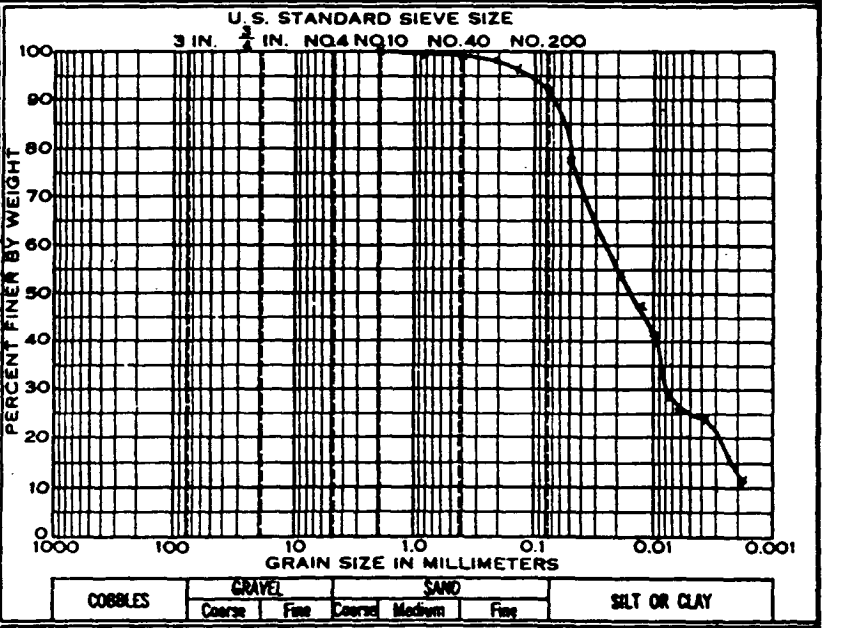
(Ref. 11)

Figure 12. Void ratio - permeability relationship for New York Harbor material



TEST DATA

Type of Specimen	TUBE
Overburden Pressure, P_o	0.16 Tons/Sq Ft
Preconsol Pressure, P_c	0.45 Tons/Sq Ft
Compression Index, C_c	0.70
Permeability at Initial e 1.79	K_{20} 7.87 x 10^{-8} Cm/Sec; Ft/Min
Initial Ht. 0.74800 in.	Diam 2.497 in.
Initial Saturation, S_o %	100
Final Saturation, S_f %	100
Initial Dry Density 49.5 lbs/Cu Ft	49.5
Initial Water Content, W_o 88.6%	88.6



Remarks:

Specific Gravity	2.64
In. Voids Ratio	2.3360
Fin. Voids Ratio	1.3670
% Organics	8.8%

Classification

LL	63.8	G	2.64
PL	35.6	D_{50}	0.0018 mm.

Project: HUDSON RIVER SILTATION STUDY

Sayreville - Raritan River Comparison

Area: CORPS OF ENGINEERS, New York District - Ass.Sh. 63

Boring No. R2	Sample No. U2
Elev or Depth 4' - 5'7"	Date Nov. 8, 1981

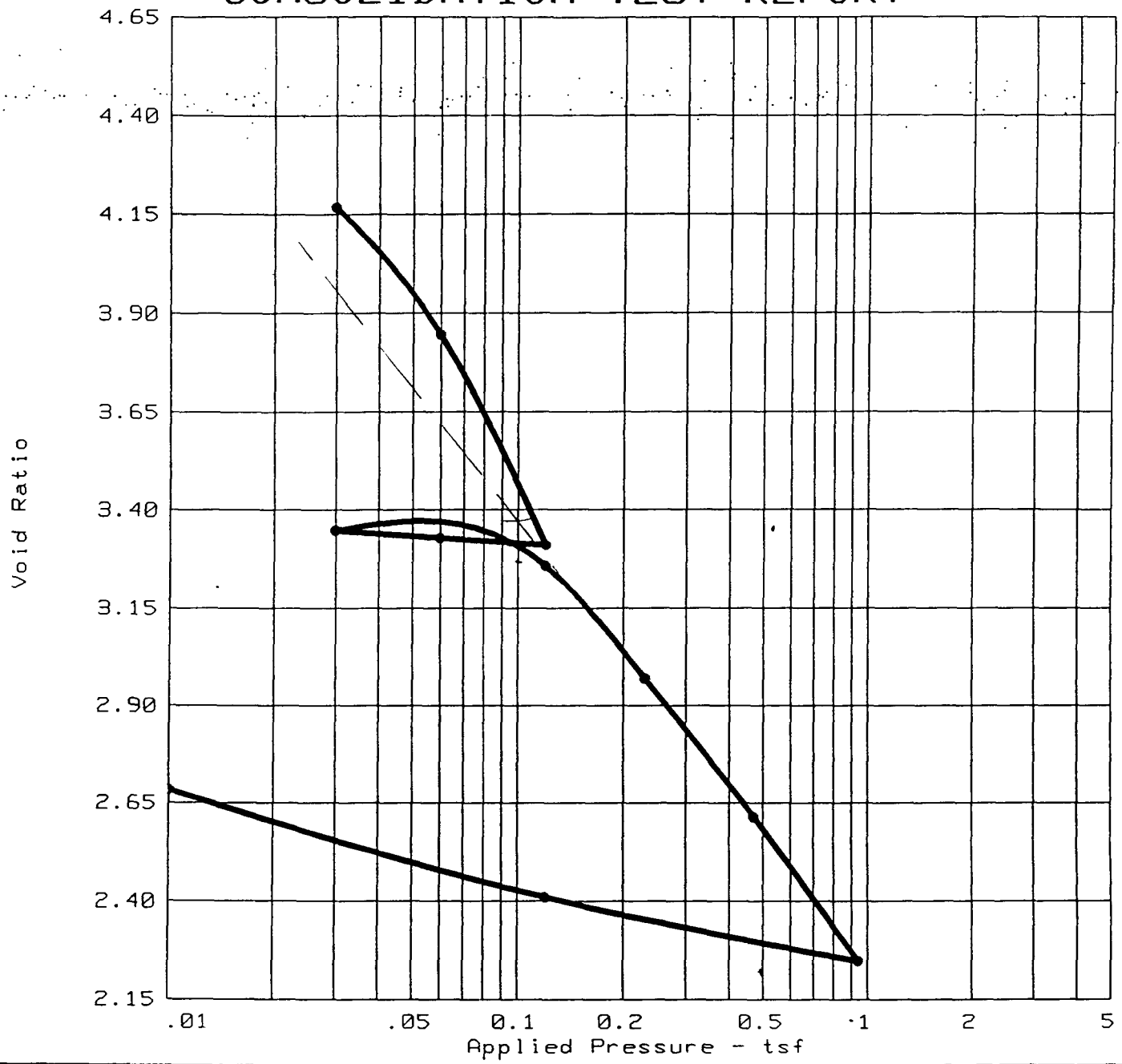
CONSOLIDATION TEST REPORT

Eng Form 1 Dec 51 2090

(Ref. 12)

FIGURE C18

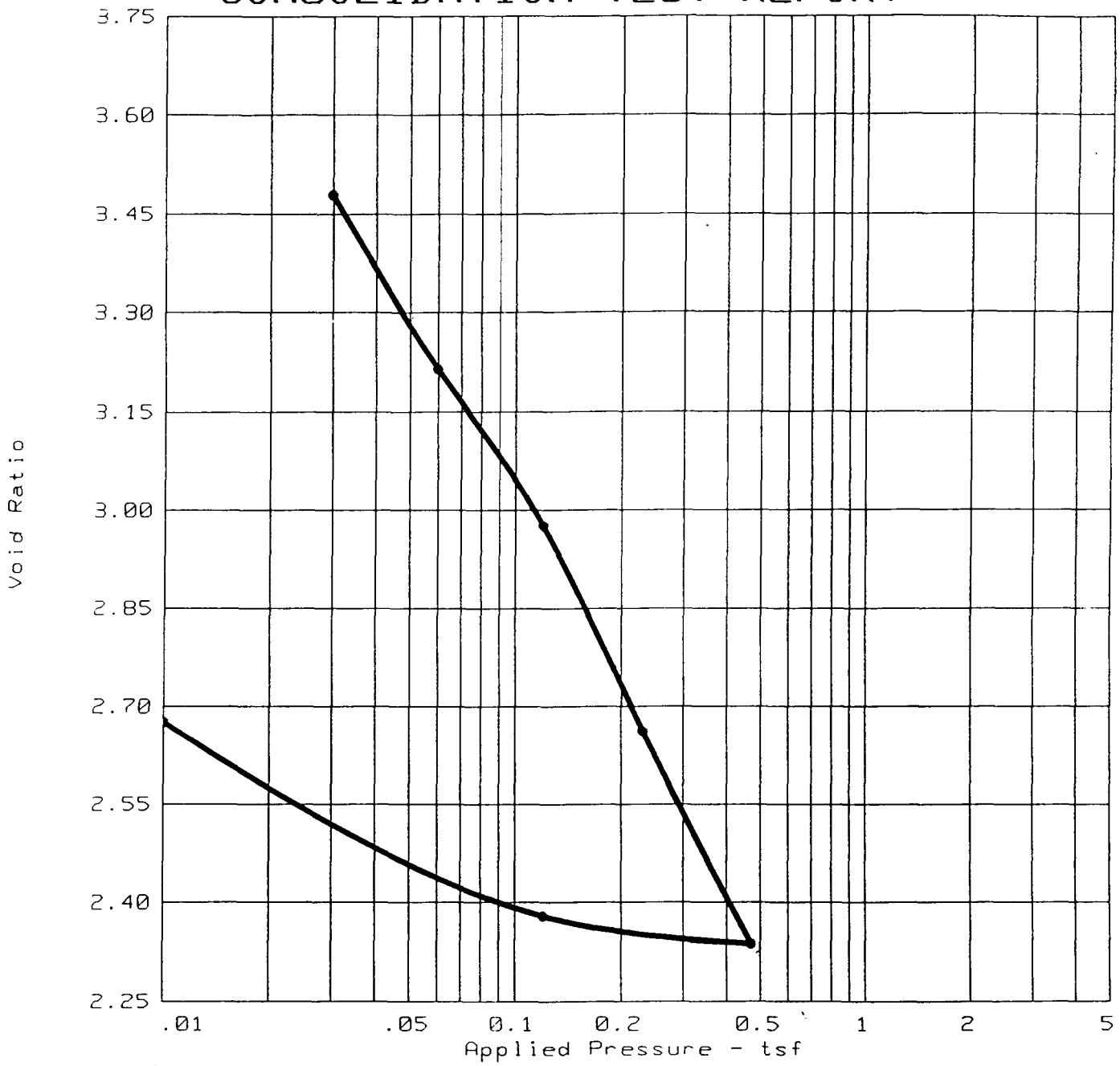
CONSOLIDATION TEST REPORT



Natural Saturation	Natural Moisture	Dry Density	LL	PI	Sp.Gr.	Initial void ratio
101.2 %	173.8	29.6	134.4	81.7	2.530	4.3443

TEST RESULTS	MATERIAL DESCRIPTION
C_v @ t_{50} ~ 0.01 ft^2/day	dk gray Organic Clay
Project No.: P91-969.105 Lab File No. 564 Project: BPAMT Dredging Materials Location: Vibro Core 730 / 731 Date: May 1, 1996	Remarks:
CONSOLIDATION TEST REPORT THE PORT AUTHORITY OF N.Y. & N.J.	Tested by: T. Spero Reviewed by: DPC Fig. No. _____

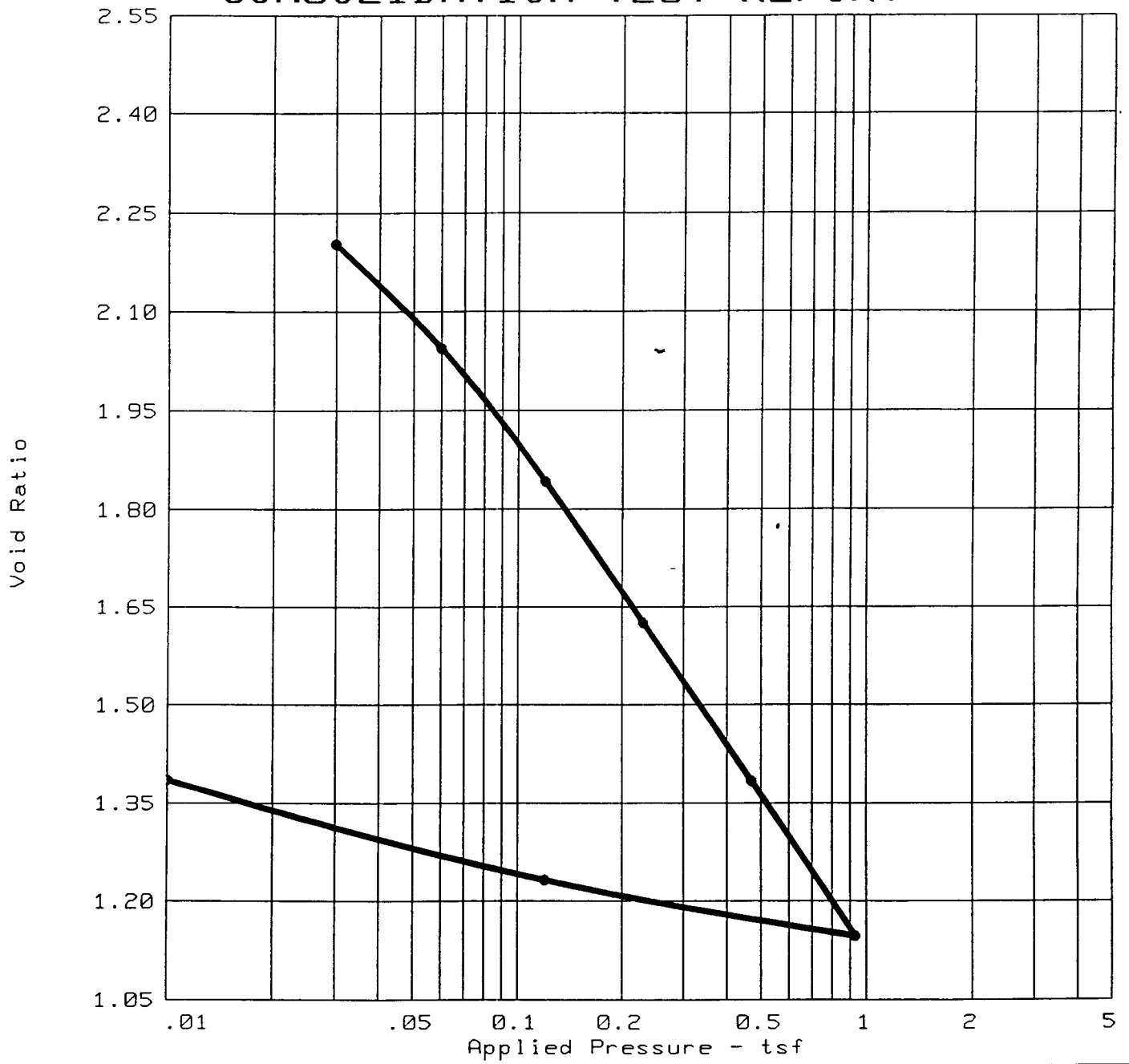
CONSOLIDATION TEST REPORT



Natural Saturation	Natural Moisture	Dry Density	LL	PI	Sp.Gr.	Initial void ratio
101.5 %	174.2	29.6			2.530	4.3429

TEST RESULTS	MATERIAL DESCRIPTION
C_v @ t_{50} ~ 0.01 ft^2/day	gray Organic Clay
Project No.: P11-233.167 Lab File No. 545 Project: Howland Hook Location: Dredge Material Date: July 19, 1995	Remarks: Torvane tsf
CONSOLIDATION TEST REPORT THE PORT AUTHORITY OF N.Y. & N.J.	Tested by: T. Spero Fig. No. _____

CONSOLIDATION TEST REPORT



Natural Saturation	Natural Moisture	Dry Density	LL	PI	Sp.Gr.	Initial void ratio
123.6 %	130.7	43.0	104.5	60.0	2.540	2.6874

TEST RESULTS	MATERIAL DESCRIPTION
C_v @ t_{50} ~ 0.01 ft^2/day	gray Organic Clay
Project No.: Lab File # 564 Project: PST Dredge Material Location: Date: May 9, 1996	Remarks: Tested by: T. Spero Reviewed by: DPC Fig. No. _____
CONSOLIDATION TEST REPORT THE PORT AUTHORITY OF N.Y. & N.J.	