

18 November 2022

State of Louisiana  
Coastal Protection and Restoration Authority  
150 Terrace Avenue  
Baton Rouge, Louisiana 70802

Attention Ms. Jessica Diez  
PN 1-225-342-1477  
Email [Jessica.diez@la.gov](mailto:Jessica.diez@la.gov)

Ladies and Gentlemen:

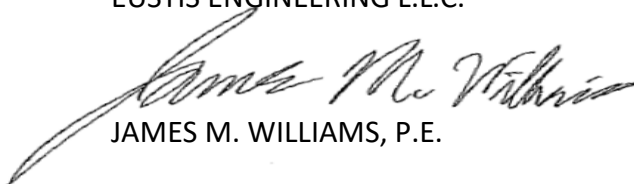
Geotechnical Investigation Data Report (**Final**)  
State of Louisiana  
Coastal Protection and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard Parish, Louisiana  
Contract No. 4400022838  
CPRA Project No. BS-0041  
Eustis Engineering Project No. 24762

Transmitted is an electronic copy of our **final** report covering professional geotechnical services for the subject project. Hard copies are available upon request.

Thank you for asking us to perform these geotechnical services. If you have any questions or require further clarification, please do not hesitate to contact us.

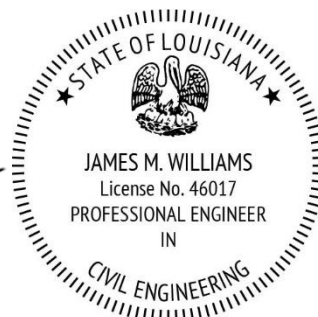
Yours very truly,

EUSTIS ENGINEERING L.L.C.



JAMES M. WILLIAMS, P.E.

H. C. Worley:sec/brp



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GEOTECHNICAL INVESTIGATION DATA REPORT (**FINAL**)

STATE OF LOUISIANA

COASTAL PROTECTION AND RESTORATION AUTHORITY

NORTH DELACROIX MARSH CREATION PROJECT

LAKE AMEDEE AND BAYOU JUANITA

ST. BERNARD PARISH, LOUISIANA

CONTRACT NO. 4400022838

CPRA PROJECT NO. BS-0041

EUSTIS ENGINEERING PROJECT NO. 24762

FOR  
STATE OF LOUISIANA  
COASTAL PROTECTION AND RESTORATION AUTHORITY  
BATON ROUGE, LOUISIANA

BY



**EUSTIS**

ENGINEERING L.L.C.

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METAIRIE, LOUISIANA

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18 NOVEMBER 2022

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NORTH DELACROIX MARSH CREATION PROJECT  
LAKE AMEDEE AND BAYOU JUANITA  
ST. BERNARD PARISH, LOUISIANA  
CONTRACT NO. 4400022838  
CPRA PROJECT NO. BS-0041  
EUSTIS ENGINEERING PROJECT NO. 24762

INTRODUCTION

1. This *final* report contains the results of geotechnical field and laboratory test data obtained for the proposed North Delacroix Marsh Creation Project (CPRA Project No. BS-0041). This project is located in Region 2, Breton Basin, St. Bernard Parish, Louisiana, along the eastern side of Delacroix Island. Refer to Figure 1 for a site vicinity map. Our geotechnical services were performed in accordance with our revised proposal dated 24 February 2022. The project is funded under the Coastal Wetland Planning Protection and Restoration Act (CWPPRA) in Priority List 29. Authorization to proceed with these services was provided by the State of Louisiana, Coastal Protection and Restoration Authority (CPRA) in partnership with the National Oceanic and Atmospheric Administration (NOAA). Notice to proceed was received from the CPRA on 4 March 2022.

PURPOSE

2. The objective of this project is to create, maintain, and nourish existing deteriorating wetlands by hydraulic dredging material from a borrow source located at Lake Amedee.



Specifically, 322 acres of confined marsh will be placed in designated marsh creation areas formed by constructing earthen containment dikes around the perimeter. Approximately 8,550 linear feet of terraces will also be strategically designed to serve as sediment retention features and reduce wake erosion adjacent to the marsh creation areas. Proposed terraces will be constructed to maintain an elevation that is 1 foot above the mean high water elevation at the end of the design life of the project. Furnished information showing proposed project feature locations is provided in Appendix I.

### SCOPE OF SERVICE

3. The scope of service for the geotechnical investigation portion of the project comprises a geotechnical exploration and subsequent laboratory testing, as well as geotechnical engineering analyses. The geotechnical exploration was performed at 38 locations to evaluate subsurface conditions and stratification and to obtain samples of the various substrata. These locations generally correspond to those identified in a Coastal Use Permit (CUP) obtained by the CPRA. Our exploration included soil borings and cone penetration tests (CPTs). A summary of the locations and designations for the marsh creation area, terrace field, and Lake Amedee borrow area are provided in Table 1. Refer to Figure 2, Sheets 1 and 2 for locations of the borings and CPTs. Surveying information including water depth, elevation, and coordinates of each location was also collected.
4. Soil mechanics laboratory tests, performed on samples obtained from the soil borings, were used to evaluate the physical properties of the subsoils.



TABLE 1: SUMMARY OF EXPLORATION PLAN

FEATURE	BORING DESIGNATION	CPT DESIGNATION	PROPOSED EXPLORATION DEPTH (IN FEET)	
Lake Amedee Borrow Area	BA-1	-	20	
	BA-2			
	BA-3			
	BA-4			
	BA-5			
	BA-6			
	BA-7			
	BA-8			
	BA-9			
	BA-10			
	BA-11			
	BA-12			
Marsh Creation and Ridge Restoration Areas	B-1	-	30	
	B-2	-		
	B-3*	CPT-3		
	B-4	-		
	B-5*	CPT-5		
	B-6	-		
	B-7*	CPT-7		
	-	CPT-8		
		CPT-9		
		CPT-10		
		CPT-11*		
		CPT-12		
	R-2*	RCPT-2		
	R-4	-		
	-	RCPT-1		
RCPT-3				
Earthen Terraces	T-1	-	30	
	T-2			
	-	TCPT-1		
		TCPT-2		
		TCPT-3		
		TCPT-4		
TCPT-5				
Tidal Levee	L-1	-	40	
	-			LCPT-1
				LCPT-2

\*Co-located



## MAGNETOMETER SURVEY

5. T. Baker Smith, LLC (TBS) performed a magnetometer survey at each boring and CPT location to ensure no pipelines or obstructions existed at the proposed geotechnical exploration points before Eustis Engineering field operations. TBS ran a closed loop path with the magnetometer. This path completely enclosed exploration locations at the center and maintained a minimum path over a 25' x 25' x 25' circular area. TBS staked each boring/CPT location. The TBS survey crew used a RTK unit at each boring/CPT location and recorded water depths and mud line elevations. Elevations are referenced to North American Vertical Datum of 1988 (NAVD 88) Geoid 12A. The topographic and magnetometer survey results by TBS are provided in Appendix II.

## FIELD EXPLORATION

### General

6. Prior to commencing field operations, Eustis Engineering completed the following tasks as noted in the scope of service document provided by CPRA:
  - contacted the landowner (identified by the CPRA) by telephone;
  - coordinated with the landowners during waterfowl hunting and alligator nesting seasons, as applicable;
  - coordinated with St. Bernard Parish Public Works Department for locations within the tidal levee;
  - contacted Louisiana One Call to clear underground utilities; and
  - performed magnetometer and hazard surveys (performed by T. Baker Smith) at the proposed soil boring/CPT locations.
7. Exploration Locations and Depths. Refer to Appendix II for a summary of the boring and CPT depths and locations. These locations are generally consistent with the CUP provided





by CPRA and are based on the furnished location plan presented in Appendix I. TBS staked boring locations in Lake Amedee and the marsh creation areas based on the location plan provided in the scope of service document. GPS coordinates for the boring/CPT locations are provided on the boring and CPT logs in terms of latitude and longitude in Appendices III and IV.

8. The undisturbed-type soil test borings within the Lake Amedee borrow were drilled between 10 and 12 May 2022 using a drill rig mounted on pontoons. Airboat-mounted equipment was utilized to complete the marsh creation and terrace field borings and CPTs between 3 and 8 May 2022. This third-party equipment was provided by Specialized Environmental Resources, Inc. (SER). Upon completion of the drilling operations, each boring was backfilled and/or grouted with cement-bentonite grout mix in accordance with current State of Louisiana requirements.

#### Undisturbed Soil Borings

9. Undisturbed samples of cohesive or semi-cohesive subsoils were obtained continuously for the first 20 feet and then at intervals of 5 feet or changes in stratum, thereafter, using a 3-in. diameter thinwall Shelby tube sampler in accordance with ASTM D1587. Soil samples were retained within the Shelby tubes and transported to our laboratory located in Metairie, Louisiana. The samples were extruded in our laboratory in an effort to preserve sample quality. Detailed descriptive logs of the borings are shown in both tabular and graphical forms in Appendix III. Please note, borings designated with “B” were performed in the MCA zone; with “BA” were performed in the borrow area zone, with “L” were performed in the Tidal Levee zone; and with “T” were performed in the Earthen Terrace zone.



10. Pocket penetrometer tests were performed on the soil samples to give a general indication of their shear strength or consistency. The results of these tests are shown on the boring logs under the column heading "PP."
11. Samples of cohesionless and semi-cohesive materials were obtained during the performance of in-situ Standard Penetration Tests. This test consists of driving a 2-in. diameter sampler 1 foot into the soil after first seating it 6 inches. A 140-lb weight dropped 30 inches is used to advance the sampler. The number of blows required to drive the sampler is indicative of the relative density of cohesionless soils and the consistency of cohesive soils. The results of the Standard Penetration Tests are shown on the boring logs under the column heading "SPT."

#### Cone Penetration Tests

12. The CPTs were performed using a 15-cm<sup>2</sup> cross-sectional area cone with a 60° apex angled tip and 150-cm<sup>2</sup> sleeve area. The soundings were hydraulically advanced into the ground at a rate of approximately 2 cm/sec. The sleeve friction was measured directly using a tension load cell. The testing was performed in accordance with methods and procedures outlined in ASTM D5778-12. During CPT testing, CPT parameters (tip resistance, friction resistance, and pore pressure) were recorded at 5-cm depth intervals.
13. Undrained shear strengths in cohesive and semi-cohesive strata and standard penetration blow counts in granular strata are interpreted from the CPT soundings using available software. These CPT plots provide measurements of corrected cone tip resistance ( $q_t$ ), sleeve friction resistance ( $f_s$ ), and pore pressure behind the cone tip ( $u_2$ ). The plots also provide interpreted data based on measured parameters: undrained shear strength ( $S_u$ ), equivalent blow count from a SPT ( $N_{60}$ ), and soil behavior type. These values are interpreted from correlations developed by Lunne, Robertson and Powell (1997 and 1986) and our engineering experience in southeastern Louisiana. Our standard practice,



and that of others in the southeastern Louisiana area, has been to use one site-specific correction factor based on a study performed by the U.S. Army Corps of Engineers (USACE) entitled “Cone Penetration Test Correlations in New Orleans Area Practice, Report Submitted to the New Orleans District, USACE,” by the Department of Civil and Environmental Engineering, Virginia Tech, Blacksburg, Virginia, dated November 2010; and other projects where CPT and 5-in. diameter undisturbed borings were performed. One correlation method for interpreting undrained shear strength is presented on the CPT logs. The CPT logs include  $(S_u)(6)$  based on a cone factor of  $N_c = 20$ . The plots of interpreted shear strength are included in Appendix IV.

LABORATORY TESTS

14. Soil mechanics laboratory tests, consisting of natural water content, unit weight, and one-point unconsolidated undrained triaxial compression shear (OB), were performed on undisturbed samples obtained from the borings. Atterberg liquid limits (LL), plastic limits (PL), organic content (ORG) tests, and tests to determine the percent passing the No. 200 (-#200) sieve were performed on selected representative samples to aid in the classification of the subsoils and to give an indication of their relative compressibility. The results of these laboratory tests are tabulated on the boring logs in Appendix III.

Boring Name	Sample Number	Depth	Percent Organic Contents
B-1	4B	7	6.7
	7B	13	33.2
B-2	5B	9	37.7
	9B	17	8.1
B-3	1B	1	10.6
	4A	7	36.3
B-4	3B	5	32.4
	4B	7	51.9
B-5	4A	6	27.2
	5A	8	29.5



Boring Name	Sample Number	Depth	Percent Organic Contents
B-6	1A	0	33.6
	2B	3	12.8
	4B	7	25.4
B-7	1A	0	17.8
	2A	2	14.2
	3A	4	14.7
R-2	1B	1	16.5
	3A	4	10.6
R-4	2A	2	73.2
	3B	5	46.7
BA-1	1A	0	14.4
	2A	2	7.0
	3B	5	5.1
	4B	7	7.0
	5B	9	2.4
	7A	12	4.0
BA-2	1B	1	16.5
	2B	3	7.8
	3B	5	10.5
	4B	7	8.4
	5B	9	9.8
	7B	13	4.7
	9B	17	4.7
BA-3	1B	1	10.0
	3A	4	9.9
	4A	6	11.5
BA-4	1A	0	10.0
	1B	1	5.3
	2A	2	32.9
	2B	3	9.4
	3B	5	52.2
	4B	7	6.4
	5B	9	9.5
BA-5	1B	1	39.7
	2B	3	5.9
	3B	5	9.5
	4B	7	34.8
	5A	9	6.8
	6B	11	3.6
	8A	14	5.8



Boring Name	Sample Number	Depth	Percent Organic Contents
BA-6	1A	0	3.5
	4B	7	4.3
	5B	9	3.4
	9B	17	3.2
	10B	19	6.7
BA-7	1B	1	4.1
	2B	3	5.2
	3B	5	4.8
	5B	9	3.3
	6B	11	4.6
BA-8	1A	0	6.3
	2A	2	9.9
	5B	9	5.7
	6B	11	3.9
BA-9	1A	0	10.1
	1B	1	5.0
	2B	3	3.2
	3B	5	4.0
BA-10	1B	1	4.1
	2B	3	5.0
	3B	5	5.4
	4B	7	5.1
BA-11	1A	0	14.4
	2B	3	3.1
	4B	7	3.1
BA-12	1A	0	15.4
	2B	3	11.3
	3B	5	7.8
	4B	7	20.5
	5B	9	3.2

15. In addition, consolidation (CONS) tests were performed on selected representative samples from the borings performed at the project site. These tests were performed to help define the stress history of the site and to develop settlement parameters. The results of these tests are provided on the consolidation test report sheets in Appendix V.
16. Grain size distribution from sieve and hydrometer testing was completed from select samples. The results of these tests are provided in Appendix VI.



17. Settling Column. To evaluate the hydraulically dredged material from the proposed borrow area (shown in Figure 2), one settling column test was performed on a composite sample. The samples used to make the composite mixture were determined by the CPRA. The soil and water samples were combined to generate a composite slurry with an approximate concentration of 150 g/L. The test results are presented in Appendix VII. The test was performed in an 8-in. diameter by 8-ft high column. In addition, a particle size distribution (PD) curve was obtained for the composite sample used for the settling column test. Settling column data and other additional information are also provided in Appendix VII. The settling column test results will be evaluated and incorporated into the settlement analyses to determine the amount of marsh fill required to be pumped into the marsh creation areas to meet the final elevation criterion.
  
18. Low Pressure Consolidation. One low pressure consolidation test was performed on the same composite material used for the settling column test to further define the borrow material's self-weight consolidation properties. A higher concentration of approximately 530 g/L was used for the low pressure consolidation test. Compression ratios and coefficients of vertical consolidation and estimates of permeability were determined as a function of the initial void ratio for each load step to assist in the evaluation of long-term self-weight consolidation of the marsh creation fill. The results of this test are provided in Appendix VIII. The low pressure consolidation test results will be evaluated and incorporated into the settlement analyses to determine the amount of marsh fill required to be pumped into the marsh creation areas to meet the final elevation criterion.
  
19. In addition, unconfined compression shear (UC) and unconsolidated undrained triaxial compression shear (OB) tests were performed on selected representative samples from the borings performed at the project site. The results of these tests are provided on the shear test report sheets in Appendix IX.



## DESCRIPTION OF SUBSURFACE SOIL CONDITIONS

### Area Geology

20. The project area is located east of Delacroix Island. Surface geology maps available for the project area indicate the marsh creation area is primarily deposits of the St. Bernard delta lobe of the Mississippi River. These deposits are composed of cyclically interbedded interdistributary peat and clay, natural levee silt and clay, distributary sand, delta front sand, and prodelta mud and clay. The near-surface soils encountered within the marsh creation area are consistent with relatively recent saline marsh deposits. The saline marsh deposits are composed of extremely soft to very soft organic clays, peat, and humus.
21. Delacroix Island and the subsurface of the adjacent tidal levee are primarily deposits of a meander belt of the distributary course of the Plaquemines and Balize delta lobes of the Mississippi River. These deposits comprise sandy point bar deposits and natural levee deposits.
22. Figures 3, 4, 5, and 6 present the general subsoil profile across the project site for the borrow area, marsh creation area, earthen terrace, and tidal levee, respectively.

### Stratigraphy

23. Marsh Creation, Ridge Restoration, and Terrace Areas. A review of borings and CPTs completed in the marsh creation, ridge restoration, and terrace areas indicates the general stratigraphy for these project areas comprises extremely soft to soft gray and brown humus, peat, and organic clay to approximate depths of 0 to 15 feet below the mud line. These organic clays were underlain by extremely soft to soft gray clay and silty clay with interbedded strata of very loose to loose gray silty sand, clayey sand, and fine



sand and very loose to medium compact silt to boring termination depths of 30 feet below the mud line.

24. Borrow Area Borings. A review of Borings BA-1 through BA-12 indicate a general stratigraphy of an alternating stratum of extremely soft to soft dark gray, gray, and brown humus/organic clay and extremely soft to soft gray clay. Some interbedded strata of very loose gray silty sand and gray silt were also encountered in some of the borrow borings. Pockets of shells and shell fragments were encountered in all borings in the borrow area.
25. Tidal Levee Boring and CPTs. A review of Boring L-1 and CPTs LCPT-1 through LCPT-2 indicates approximately 5 to 8 feet of existing levee fill. Beneath these stiffer fill materials, we encountered soft gray and brown lean clay and fat clay.

#### Depth to Mud Line/Depth to Groundwater

26. Standing water was encountered at most boring and CPT locations during the duration of our fieldwork, as summarized in Table 2. Please note that the approximate depths presented in the following table correspond to the depths at the time of our exploration. Slight differences in the depths presented in Appendix II are anticipated. The site survey by TBS was conducted when the mean water level in the vicinity of the site was approximate el 1.0 (NAVD 88).





TABLE 2: DEPTH OF STANDING WATER

PROJECT FEATURE	EQUIPMENT TYPE	FIELD EXPLORATION POINT DESIGNATION	APPROXIMATE DEPTH OF STANDING WATER (IN FEET)
Borrow Area	Pontoon-Mounted Drill Rig	BA-1	6
		BA-2	6.2
		BA-3	6
		BA-4	6
		BA-5	6
		BA-6	6
		BA-7	6
		BA-8	6
		BA-9	6
		BA-10	6
		BA-11	6
		BA-12	6
Marsh Creation/ Terrace Areas	Airboat-Mounted Drill/CPT Rig	B-1	2.58
		B-2	2.75
		B-3/CPT-3	2.83
		B-4	2.5
		B-5/CPT-5	2.67
		B-6	1.75
		B-7/CPT-7	2
		CPT-8	2
		CPT-9	2
		CPT-10	2.0
		CPT-11	2.0
		CPT-12	2.0
		L-1	-
		LCPT-1	-
		LCPT-2	-
		R-2/CPT-2	2.41
		R-4	3
		RCPT-1	3
		RCPT-2	3
		RCPT-3	3
		T-1	3
		T-2	3
		TCPT-1	3
		TCPT-2	3
TCPT-3	3		
TCPT-4	3		
TCPT-5	3		



27. The water depth/depth to groundwater will vary with tidal fluctuations, climatic conditions, drainage improvements, and other factors. The water level and site conditions should be investigated by those persons responsible for construction immediately prior to beginning work.

#### Preliminary Data Plots

28. Plots of the data are presented in Appendix X. A live copy of this file is included with our submittal.

#### LIMITATIONS

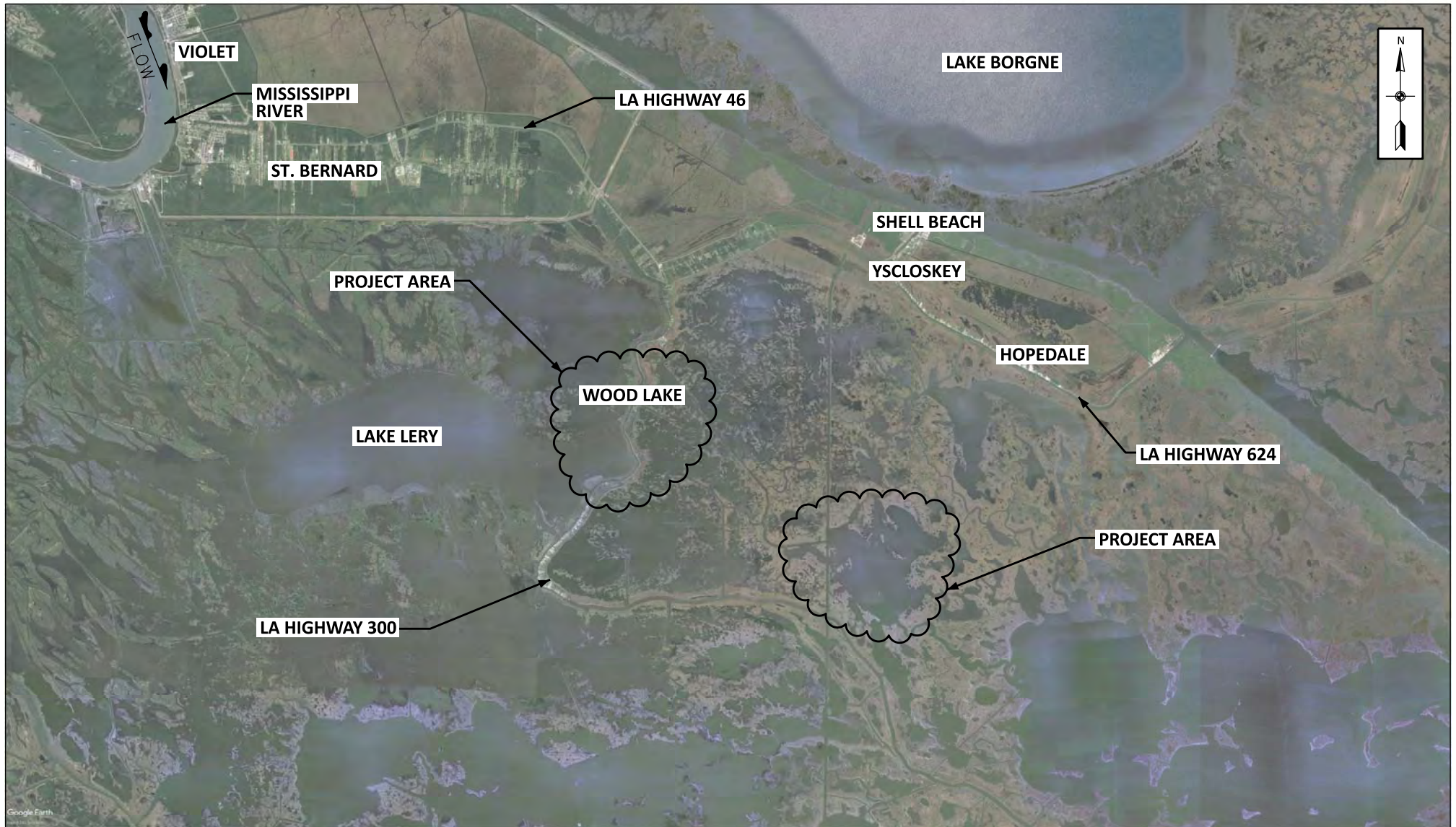
29. This report has been prepared in accordance with generally accepted geotechnical engineering practice for the exclusive use of CPRA for specific application to the subject site. In the event of any changes in the nature or location of the proposed marsh creation and ridge restoration features, the information contained in this report shall not be considered valid unless the changes are reviewed, and this report is modified and verified in writing. Should these data be used by anyone other than CPRA, the user should contact Eustis Engineering for interpretation of data and to secure any other information pertinent to this project.
30. Our findings in this report are based on selected points of field exploration, laboratory testing, and our understanding of the proposed project. Further variations in soil or groundwater conditions could exist between and beyond the exploration points. The nature and extent of these variations may not become evident until construction. Variations in soil or groundwater may require additional studies, consultation, and possible revisions to our recommendations.
31. Eustis Engineering has striven to provide our services in accordance with accepted geotechnical engineering practices in this locality at this time. No warranty or guarantee



is expressed or implied. The results of the soil borings, CPTs, and laboratory tests contained in Appendices III through VII of this report may be included in the plans and specifications.

32. The scope of our services does not include an environmental assessment or an investigation for the presence or absence of wetlands and hazardous or toxic materials in the soil; surface water; groundwater; or air on, below, or adjacent to the subject property. Furthermore, the scope does not include the investigation or detection of biological pollutants at the site. The term “biological pollutants” includes but is not limited to molds, fungi, spores, bacteria, viruses, and the byproducts of any such biological organisms.





SATELLITE IMAGERY DATED: 21 MARCH 2019

**NOT TO SCALE**

SITE VICINITY MAP

STATE OF LOUISIANA  
 COASTAL PROTECTION AND RESTORATION AUTHORITY  
 NORTH DELACROIX MARSH CREATION PROJECT  
 LAKE AMEDEE AND BAYOU JUANITA  
 ST. BERNARD PARISH, LOUISIANA



DRAWN BY: S.T.S.	JOB NO.: 24762
CHECKED BY: J.M.W.	DATE: 23 JUN 2022
CADD FILE: VICINITY PLAN.DGN	FIGURE 1



SATELLITE IMAGERY DATED: 21 MARCH 2019

NOT TO SCALE

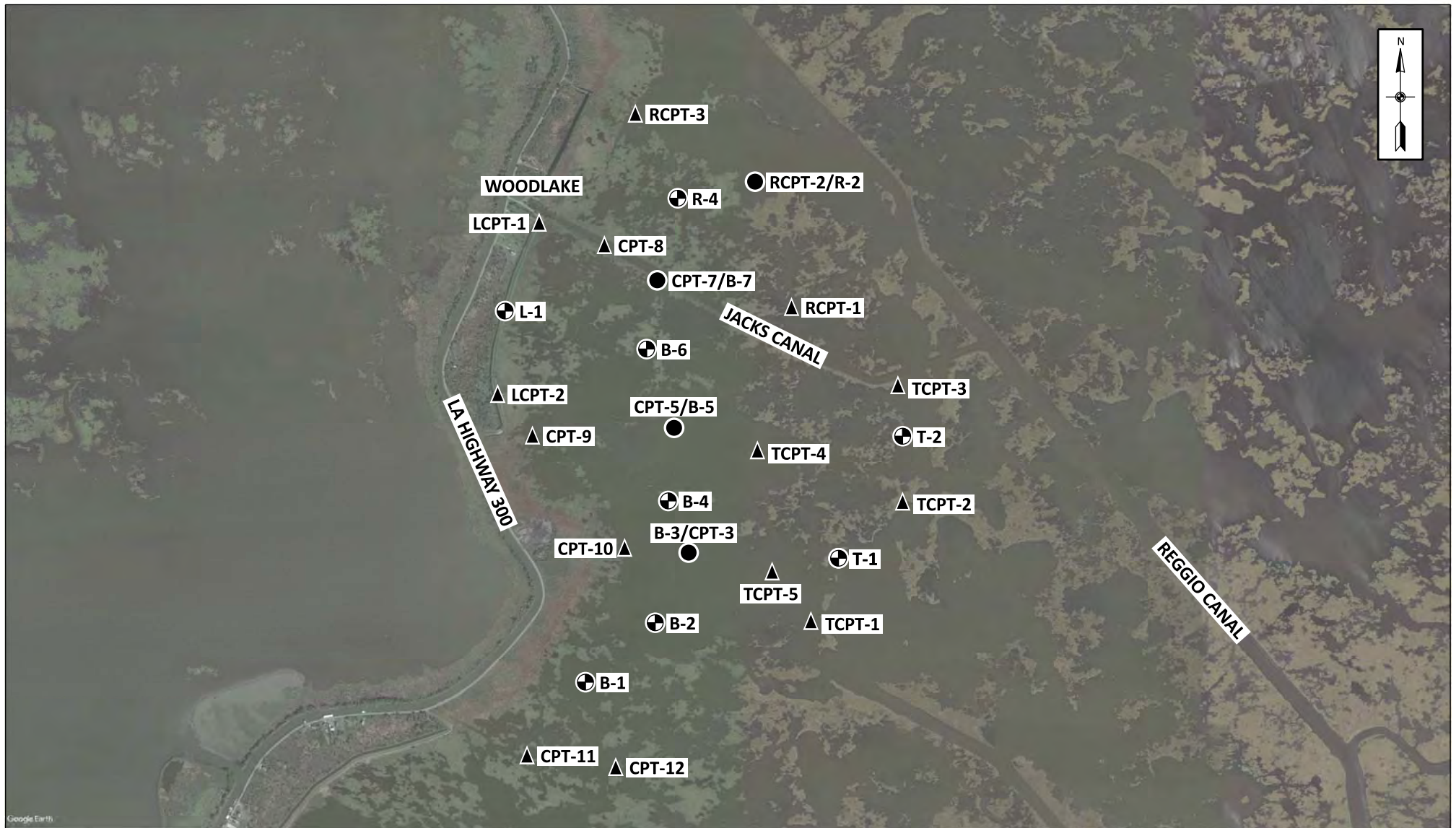
● DENOTES LOCATIONS OF SOIL BORINGS DRILLED BETWEEN 10 AND 12 MAY 2022

BORING LOCATION PLAN

STATE OF LOUISIANA  
 COASTAL PROTECTION AND RESTORATION AUTHORITY  
 NORTH DELACROIX MARSH CREATION PROJECT  
 LAKE AMEDEE AND BAYOU JUANITA  
 ST. BERNARD PARISH, LOUISIANA



DRAWN BY: S.T.S.	JOB NO.: 24762
CHECKED BY: J.M.W.	DATE: 23 JUN 2022
CADD FILE: LOCATION PLAN.DGN	FIGURE 2 (SHEET 1 OF 2)



SATELLITE IMAGERY DATED: 15 NOVEMBER 2019

**NOT TO SCALE**

- ⊕ DENOTES LOCATIONS OF SOIL BORINGS DRILLED BETWEEN 3 MAY AND 15 JUNE 2022
- ▲ DENOTES LOCATIONS OF CONE PENETRATION TESTS BETWEEN 31 MAY AND 16 JUNE 2022
- DENOTES LOCATIONS OF CO-LOCATED SOIL BORINGS AND CONE PENETRATION TESTS BETWEEN 4 MAY AND 2 JUNE 2022

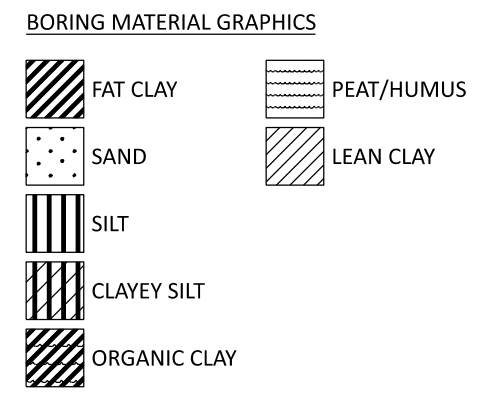
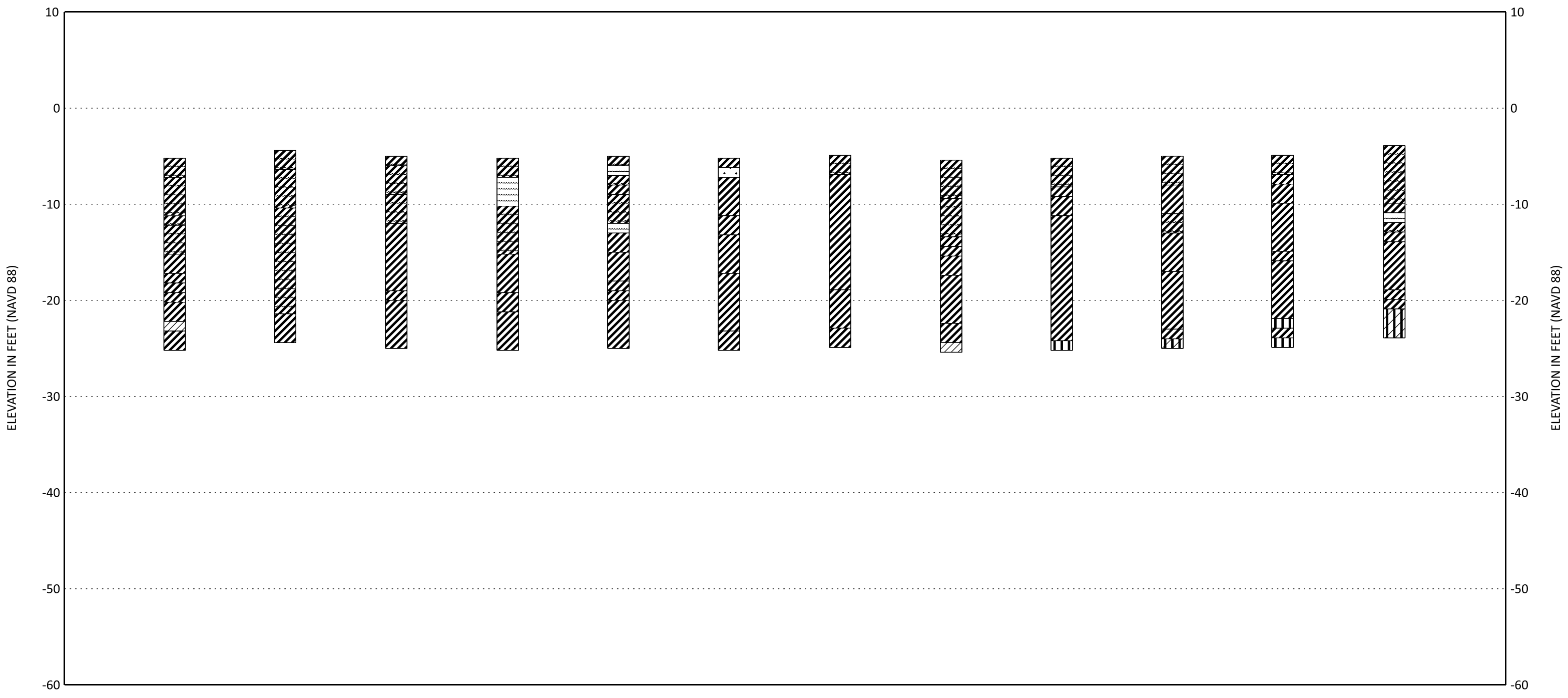
**BORING AND CONE PENETRATION TEST LOCATION PLAN**

STATE OF LOUISIANA  
 COASTAL PROTECTION AND RESTORATION AUTHORITY  
 NORTH DELACROIX MARSH CREATION PROJECT  
 LAKE AMEDEE AND BAYOU JUANITA  
 ST. BERNARD PARISH, LOUISIANA



DRAWN BY: S.T.S.	JOB NO.: 24762
CHECKED BY: J.M.W.	DATE: 23 JUN 2022
CADD FILE: LOCATION PLAN.DGN	FIGURE 2 (SHEET 2 OF 2)

BA-1 10 MAY 2022 G.S.E. -5.2	BA-2 10 MAY 2022 G.S.E. -4.4	BA-3 10 MAY 2022 G.S.E. -5.0	BA-4 12 MAY 2022 G.S.E. -5.2	BA-5 12 MAY 2022 G.S.E. -5.0	BA-6 10 MAY 2022 G.S.E. -5.2	BA-7 12 MAY 2022 G.S.E. -4.9	BA-8 11 MAY 2022 G.S.E. -5.4	BA-9 11 MAY 2022 G.S.E. -5.2	BA-10 11 MAY 2022 G.S.E. -5.0	BA-11 12 MAY 2022 G.S.E. -4.9	BA-12 11 MAY 2022 G.S.E. -3.9
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SUBSURFACE SOIL PROFILE  
LAKE AMEDEE BORROW AREA

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STATE OF LOUISIANA  
COASTAL PROTECTION AND RESTORATION AUTHORITY  
NORTH DELACROIX MARSH CREATION PROJECT  
LAKE AMEDEE AND BAYOU JUANITA  
ST. BERNARD PARISH, LOUISIANA

	DRAWN BY: S.T.S.	JOB NO.: 24762
	CHECKED BY: P.T.D.	DATE: 1 SEP 2022
	CADD FILE: PROFILE.DGN	FIGURE 3

B-1  
3 MAY 2022  
G.S.E. -1.9

B-2  
4 MAY 2022  
G.S.E. -2.6

B-3  
4 MAY 2022  
G.S.E. -2.5

CPT-3  
1 JUN 2022  
G.S.E. -2.5

B-4  
4 MAY 2022  
G.S.E. -2.3

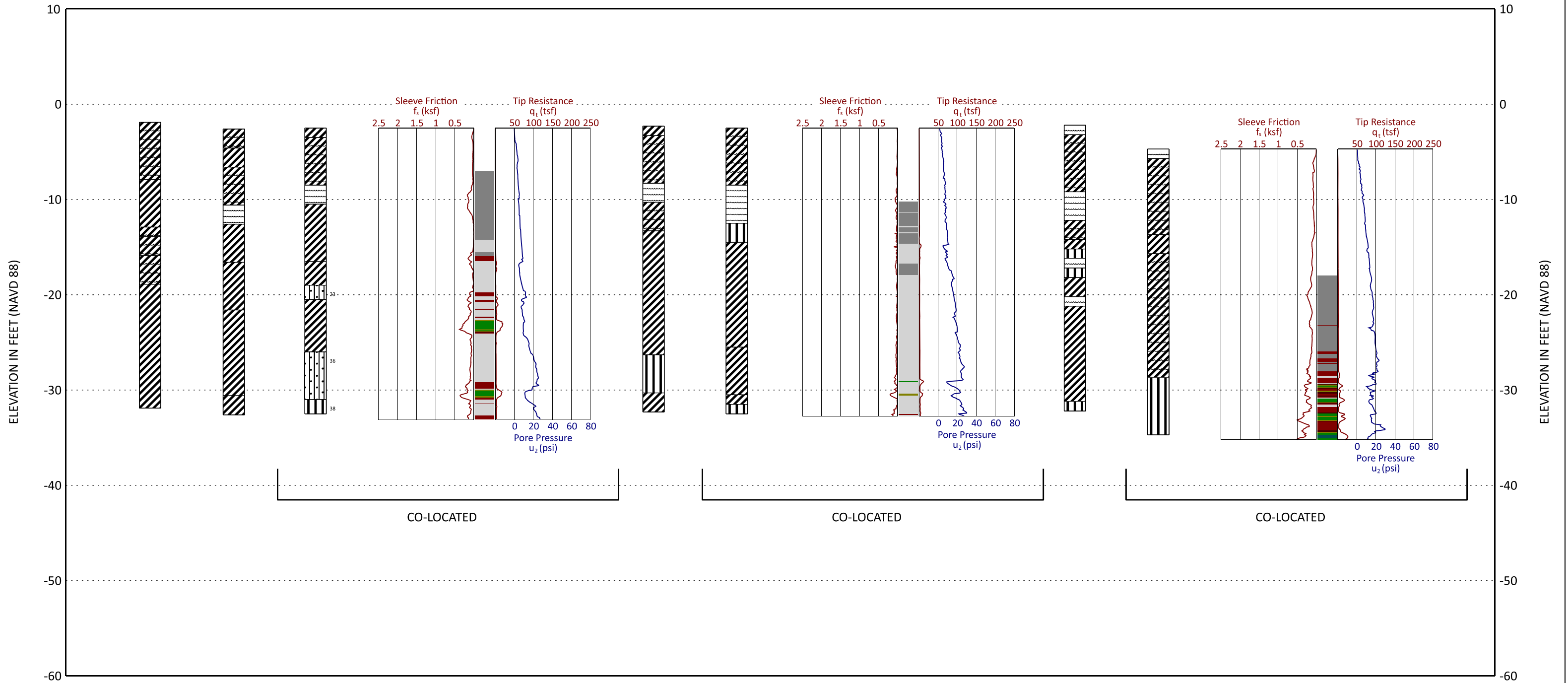
B-5  
5 MAY 2022  
G.S.E. -2.5

CPT-5  
1 JUN 2022  
G.S.E. -2.5

B-6  
7 MAY 2022  
G.S.E. -2.2

B-7  
7 MAY 2022  
G.S.E. -4.7

CPT-7  
2 JUN 2022  
G.S.E. -4.7



**CPT MATERIAL GRAPHICS**

- SENSITIVE FINE GRAINED
  - ORGANIC SOILS, PEATS
  - CLAY
  - SILTY CLAY TO CLAY
  - CLAYEY SILT TO SILTY CLAY
  - SANDY SILT TO CLAYEY SILT
  - SILTY SAND TO SANDY SILT
  - SAND TO SILTY SAND
  - SAND
  - GRAVELLY SAND TO SAND
  - VERY STIFF FINE GRAINED (\*)
  - SAND TO CLAYEY SAND (\*)
- \* OVERCONSOLIDATED OR CEMENTED  
Robertson et al (1986)  $q_c$  vs  $R_f$

**BORING MATERIAL GRAPHICS**

- FAT CLAY
- SILTY SAND
- SILT
- ORGANIC CLAY
- PEAT/HUMUS

**NOTE:**

1. THE NUMBERS TO THE RIGHT OF THE BORING LOGS REPRESENT THE RESULTS OF THE STANDARD PENETRATION TESTS.

SUBSURFACE SOIL PROFILE  
MARSH CREATION AREA

---

STATE OF LOUISIANA  
COASTAL PROTECTION AND RESTORATION AUTHORITY  
NORTH DELACROIX MARSH CREATION PROJECT  
LAKE AMEDEE AND BAYOU JUANITA  
ST. BERNARD PARISH, LOUISIANA

	DRAWN BY: S.T.S.	JOB NO.: 24762
	CHECKED BY: P.T.D.	DATE: 1 SEP 2022
	CADD FILE: PROFILE.DGN	FIGURE 4 (SHEET 1 OF 3)



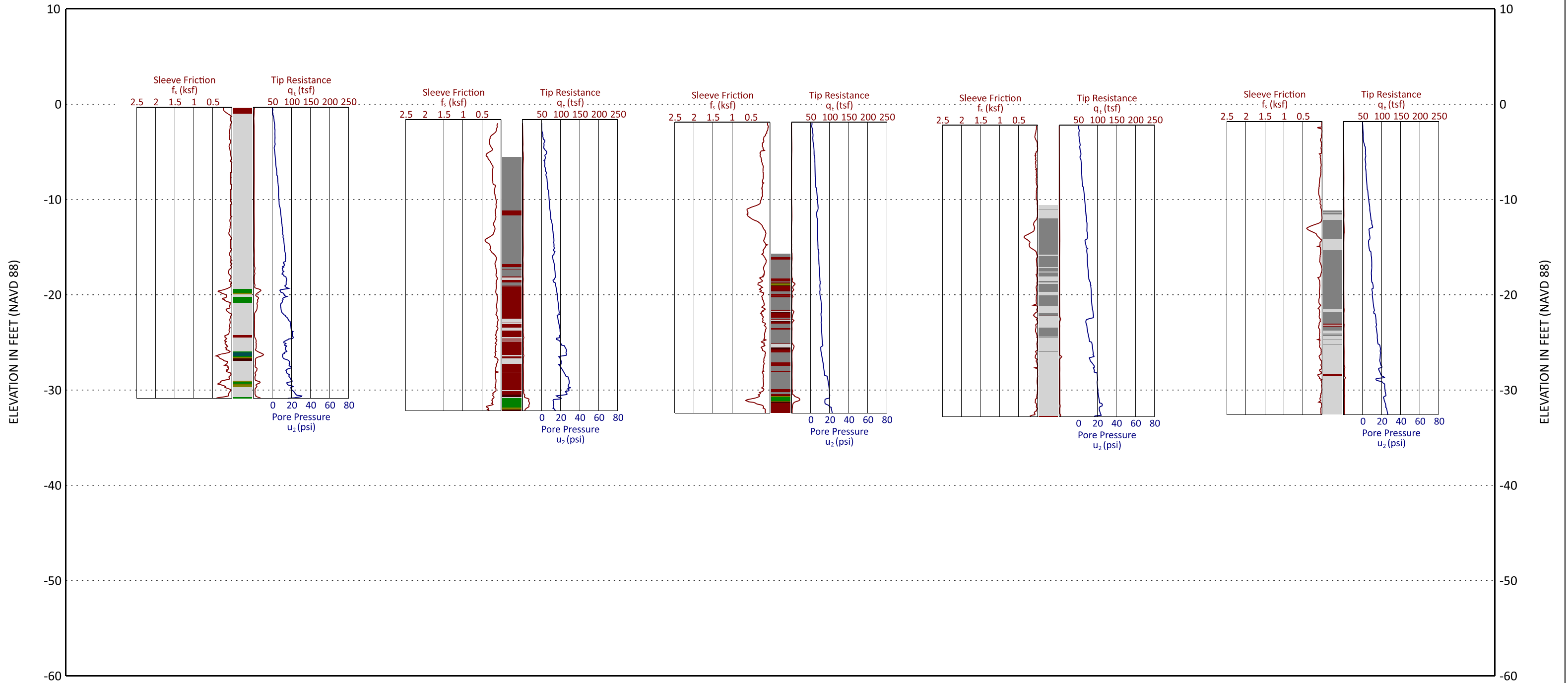
CPT-8  
2 JUN 2022  
G.S.E. -0.3

CPT-9  
1 JUN 2022  
G.S.E. -1.6

CPT-10  
31 MAY 2022  
G.S.E. -1.9

CPT-11  
31 MAY 2022  
G.S.E. -2.2

CPT-12  
31 MAY 2022  
G.S.E. -1.8



CPT MATERIAL GRAPHICS

- SENSITIVE FINE GRAINED
  - ORGANIC SOILS, PEATS
  - CLAY
  - SILTY CLAY TO CLAY
  - CLAYEY SILT TO SILTY CLAY
  - SANDY SILT TO CLAYEY SILT
  - SILTY SAND TO SANDY SILT
  - SAND TO SILTY SAND
  - SAND
  - GRAVELLY SAND TO SAND
  - VERY STIFF FINE GRAINED (\*)
  - SAND TO CLAYEY SAND (\*)
- \* OVERCONSOLIDATED OR CEMENTED  
Robertson et al (1986)  $q_c$  vs  $R_f$

NOTE:

1. THE NUMBERS TO THE RIGHT OF THE BORING LOGS REPRESENT THE RESULTS OF THE STANDARD PENETRATION TESTS.

SUBSURFACE SOIL PROFILE  
MARSH CREATION AREA

---

STATE OF LOUISIANA  
COASTAL PROTECTION AND RESTORATION AUTHORITY  
NORTH DELACROIX MARSH CREATION PROJECT  
LAKE AMEDEE AND BAYOU JUANITA  
ST. BERNARD PARISH, LOUISIANA

	DRAWN BY: S.T.S.	JOB NO.: 24762
	CHECKED BY: P.T.D.	DATE: 1 SEP 2022
	CADD FILE: PROFILE.DGN	FIGURE 4 (SHEET 2 OF 3)

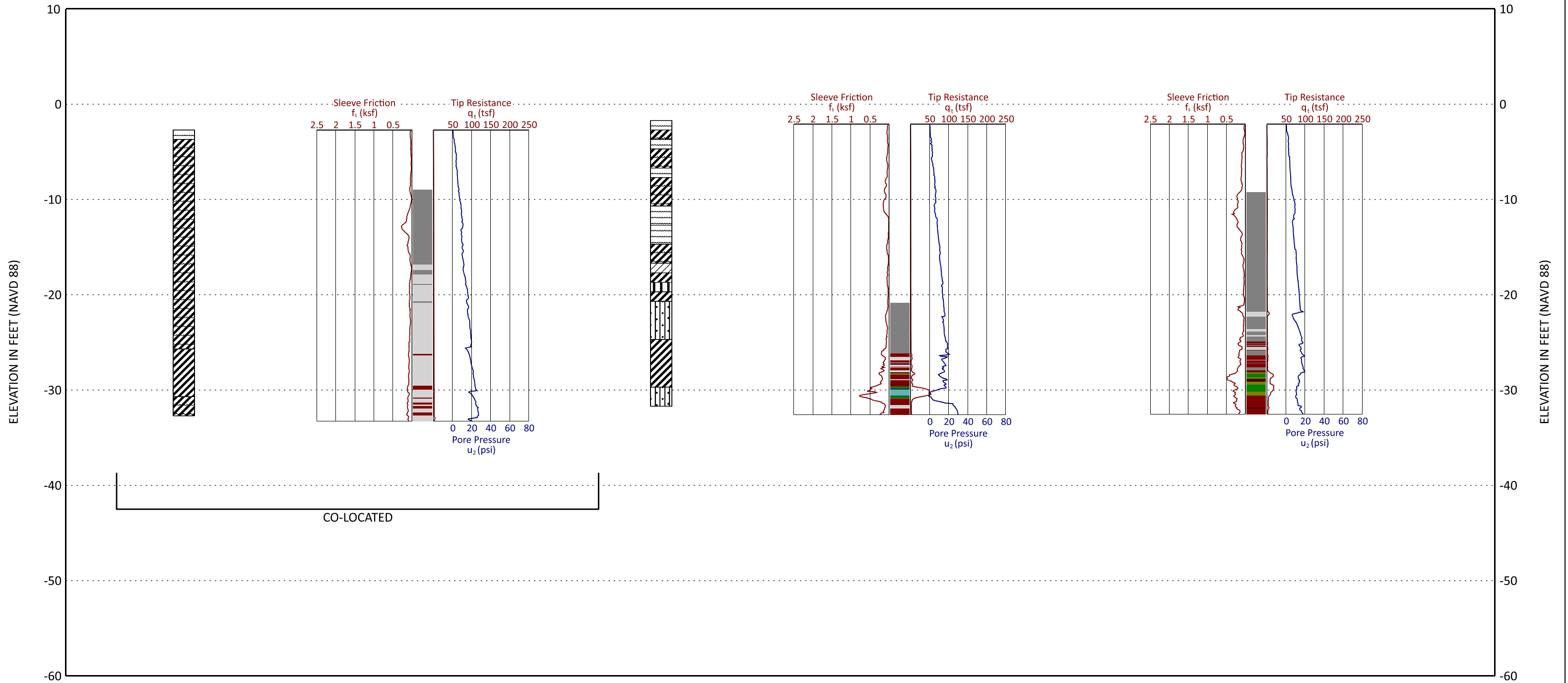
R-2  
8 MAY 2022  
G.S.E. -2.7

RCPT-2  
2 JUN 2022  
G.S.E. -2.7

R-4  
7 MAY 2022  
G.S.E. -1.7

RCPT-1  
2 JUN 2022  
G.S.E. -2.1

RCPT-3  
2 JUN 2022  
G.S.E. -2.1



**CPT MATERIAL GRAPHICS**

- SENSITIVE FINE GRAINED
  - ORGANIC SOILS, PEATS
  - CLAY
  - SILTY CLAY TO CLAY
  - CLAYEY SILT TO SILTY CLAY
  - SANDY SILT TO CLAYEY SILT
  - SILTY SAND TO SANDY SILT
  - SAND TO SILTY SAND
  - SAND
  - GRAVELLY SAND TO SAND
  - VERY STIFF FINE GRAINED (\*)
  - SAND TO CLAYEY SAND (\*)
- \* OVERCONSOLIDATED OR CEMENTED  
Robertson et al (1986)  $q_c$  vs  $R_f$

**BORING MATERIAL GRAPHICS**

- FAT CLAY
- LEAN CLAY
- SILTY SAND
- SILT
- ORGANIC CLAY
- PEAT/HUMUS

**NOTE:**

1. THE NUMBERS TO THE RIGHT OF THE BORING LOGS REPRESENT THE RESULTS OF THE STANDARD PENETRATION TESTS.

SUBSURFACE SOIL PROFILE  
MARSH CREATION AREA

---

STATE OF LOUISIANA  
COASTAL PROTECTION AND RESTORATION AUTHORITY  
NORTH DELACROIX MARSH CREATION PROJECT  
LAKE AMEDEE AND BAYOU JUANITA  
ST. BERNARD PARISH, LOUISIANA



DRAWN BY: S.T.S.	JOB NO.: 24762
CHECKED BY: P.T.D.	DATE: 1 SEP 2022
CADD FILE: PROFILE.DGN	FIGURE 4 (SHEET 3 OF 3)

T-1  
5 MAY 2022  
G.S.E. -3.0

T-2  
8 MAY 2022  
G.S.E. -1.9

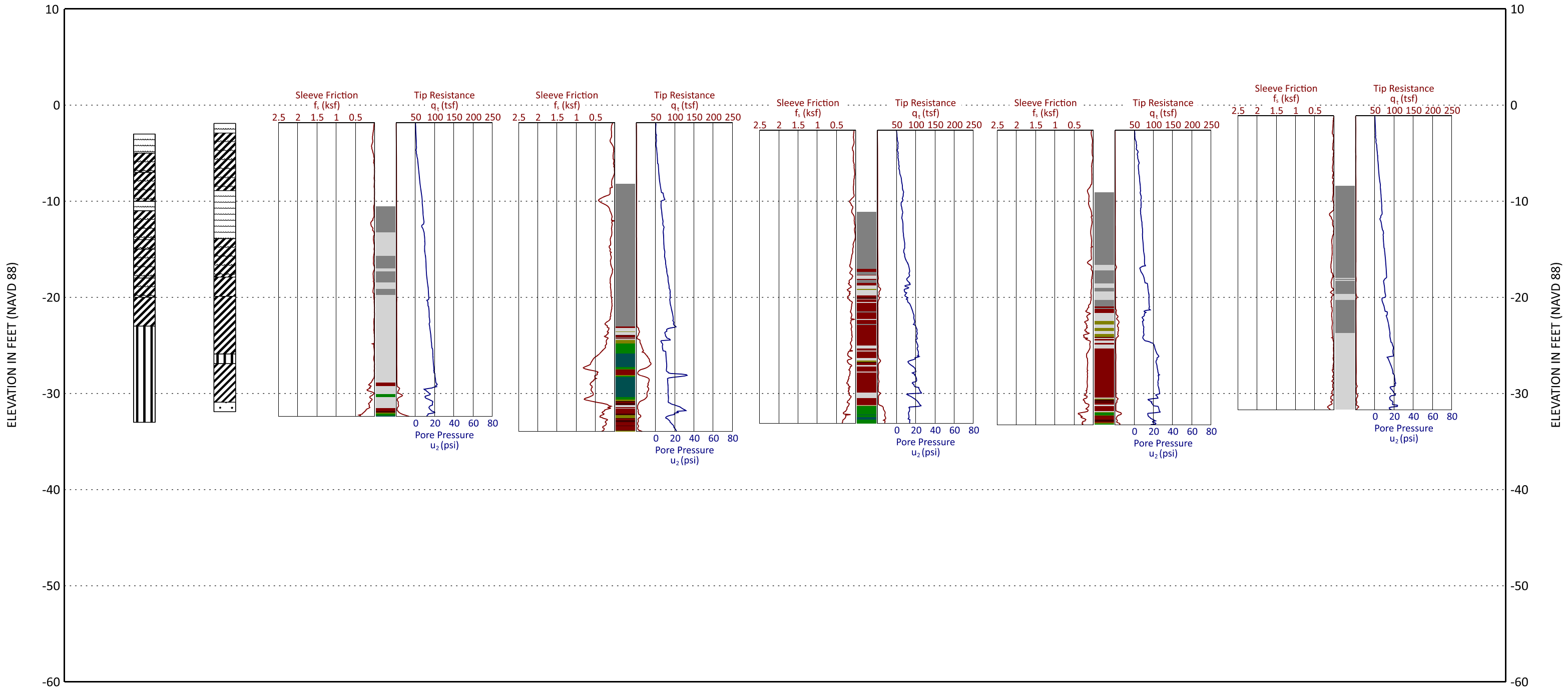
TCPT-1  
1 JUN 2022  
G.S.E. -1.8

TCPT-2  
1 JUN 2022  
G.S.E. -1.8

TCPT-3  
2 JUN 2022  
G.S.E. -2.6

TCPT-4  
1 JUN 2022  
G.S.E. -2.6

TCPT-5  
1 JUN 2022  
G.S.E. -1.1



CPT MATERIAL GRAPHICS

- SENSITIVE FINE GRAINED
- ORGANIC SOILS, PEATS
- CLAY
- SILTY CLAY TO CLAY
- CLAYEY SILT TO SILTY CLAY
- SANDY SILT TO CLAYEY SILT
- SILTY SAND TO SANDY SILT
- SAND TO SILTY SAND
- SAND
- GRAVELLY SAND TO SAND
- VERY STIFF FINE GRAINED (\*)
- SAND TO CLAYEY SAND (\*)

\* OVERCONSOLIDATED OR CEMENTED  
Robertson et al (1986)  $q_c$  vs  $R_f$

BORING MATERIAL GRAPHICS

- FAT CLAY
- SAND
- SILT
- ORGANIC CLAY
- PEAT/HUMUS

SUBSURFACE SOIL PROFILE  
EARTHEN TERRACE AREA

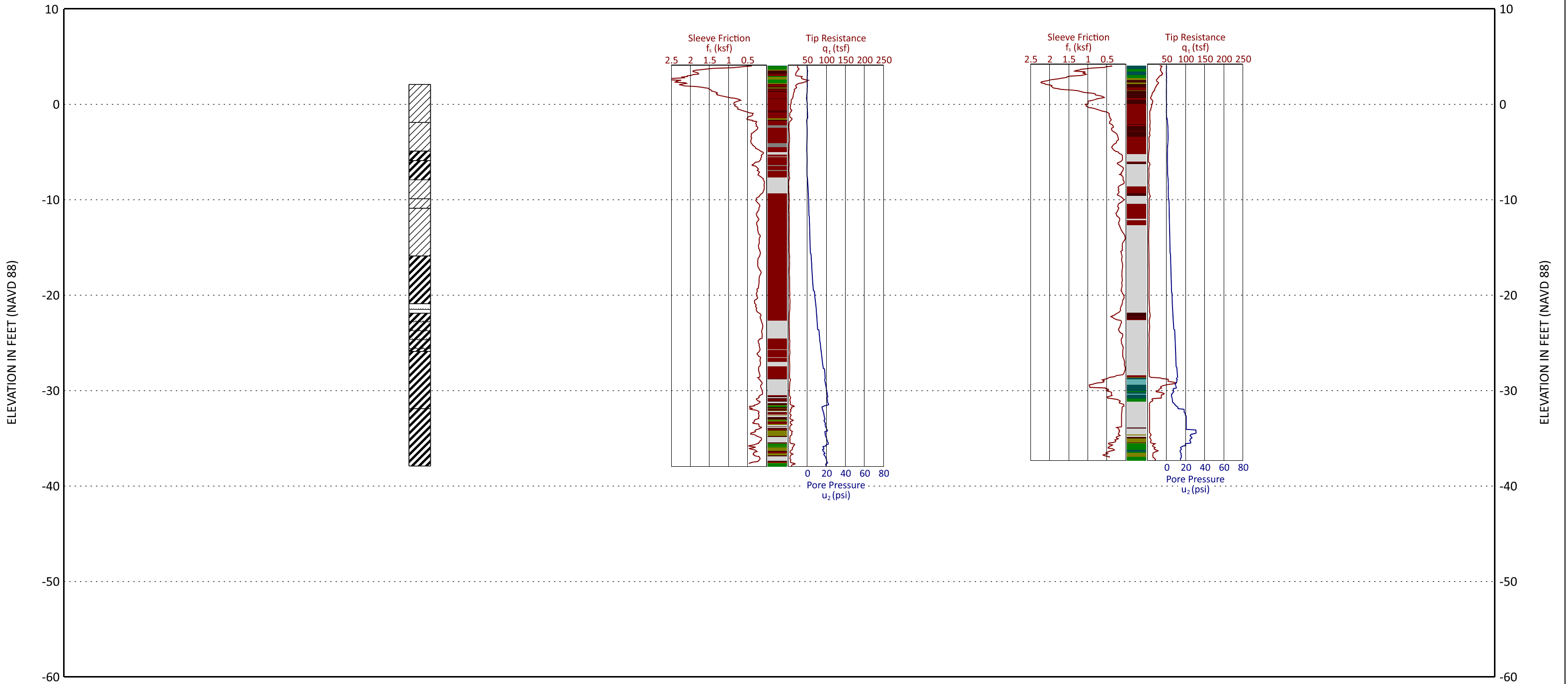
STATE OF LOUISIANA  
COASTAL PROTECTION AND RESTORATION AUTHORITY  
NORTH DELACROIX MARSH CREATION PROJECT  
LAKE AMEDEE AND BAYOU JUANITA  
ST. BERNARD PARISH, LOUISIANA

	DRAWN BY: S.T.S.	JOB NO.: 24762
	CHECKED BY: P.T.D.	DATE: 1 SEP 2022
	CADD FILE: PROFILE.DGN	FIGURE 5

L-1  
15 JUN 2022  
G.S.E. 2.1

LCPT-1  
16 JUN 2022  
G.S.E. 4.1

LCPT-2  
16 JUN 2022  
G.S.E. 4.2



**CPT MATERIAL GRAPHICS**

- SENSITIVE FINE GRAINED
  - ORGANIC SOILS, PEATS
  - CLAY
  - SILTY CLAY TO CLAY
  - CLAYEY SILT TO SILTY CLAY
  - SANDY SILT TO CLAYEY SILT
  - SILTY SAND TO SANDY SILT
  - SAND TO SILTY SAND
  - SAND
  - GRAVELLY SAND TO SAND
  - VERY STIFF FINE GRAINED (\*)
  - SAND TO CLAYEY SAND (\*)
- \* OVERCONSOLIDATED OR CEMENTED  
Robertson et al (1986)  $q_c$  vs  $R_f$

**BORING MATERIAL GRAPHICS**

- FAT CLAY
- ORGANIC CLAY
- PEAT/HUMUS
- LEAN CLAY

**SUBSURFACE SOIL PROFILE  
TIDAL LEVEE**

---

STATE OF LOUISIANA  
COASTAL PROTECTION AND RESTORATION AUTHORITY  
NORTH DELACROIX MARSH CREATION PROJECT  
LAKE AMEDEE AND BAYOU JUANITA  
ST. BERNARD PARISH, LOUISIANA

	DRAWN BY: S.T.S.	JOB NO.: 24762
	CHECKED BY: P.T.D.	DATE: 6 SEP 2022
	CADD FILE: PROFILE.DGN	FIGURE 6

## APPENDIX I



# North Delacroix Marsh Creation and Terracing (BS-41)

## Project Status

**Approved Date:** 2020 **Project Area:** 411 acres  
**Approved Funds:** \$3.71 M **Total Est. Cost:** \$35.5 M  
**Net Benefit After 20 Years:** 294 acres  
**Status:** Engineering and Design  
**Project Type:** Marsh Creation  
**PPL #:** 29

## Location

The project is located in Region 2, Breton Basin, St. Bernard Parish.

## Problems

Hurricanes Katrina and Rita caused the majority of wetland loss in the project site. Wind erosion and saltwater intrusion have resulted in loss of marsh vegetation and wetland soils. Marsh loss has increased exposure of Delacroix to flooding from the east/southeast. The 1984 to 2019 USGS loss rate is -1.4%/year for the extended project boundary area.

## Restoration Strategy

The project goal is to create and nourish approximately 389 acres of marsh and construct approximately 8,548 linear feet of terraces utilizing a layout to help protect the community of Delacroix.

Sediment would be hydraulically dredged from Lake Lery and placed into two confined disposal areas creating 322 acres of marsh and nourishing 67 acres of existing marsh. Two creation cells allow a channel for drainage. Approximately 8,548 ft of earthen terraces would be constructed. The terraces would be strategically placed east of the northern marsh creation cell and south of the southern cell. Dewatering of the marsh creation cells into areas adjacent to the terraces would take advantage of sediment laden water trapping the particulates to create additional marsh. Terraces would be planted with appropriate bare root plants 2.5 ft apart in one row per side and crown. Created marsh will not be planted.



NOAA staff gather data to inform project design.

Containment dikes will be gapped no later than three years after construction. Two additional areas of deteriorating marsh south and east of the proposed project will be investigated. Data acquisition for engineering and design would include an additional 349 acres to allow robustness for these additive or alternate features during Phase I.

## Progress to Date

The project was approved for Phase I Engineering and Design in January 2020.

The project is on Priority Project List (PPL) 29.

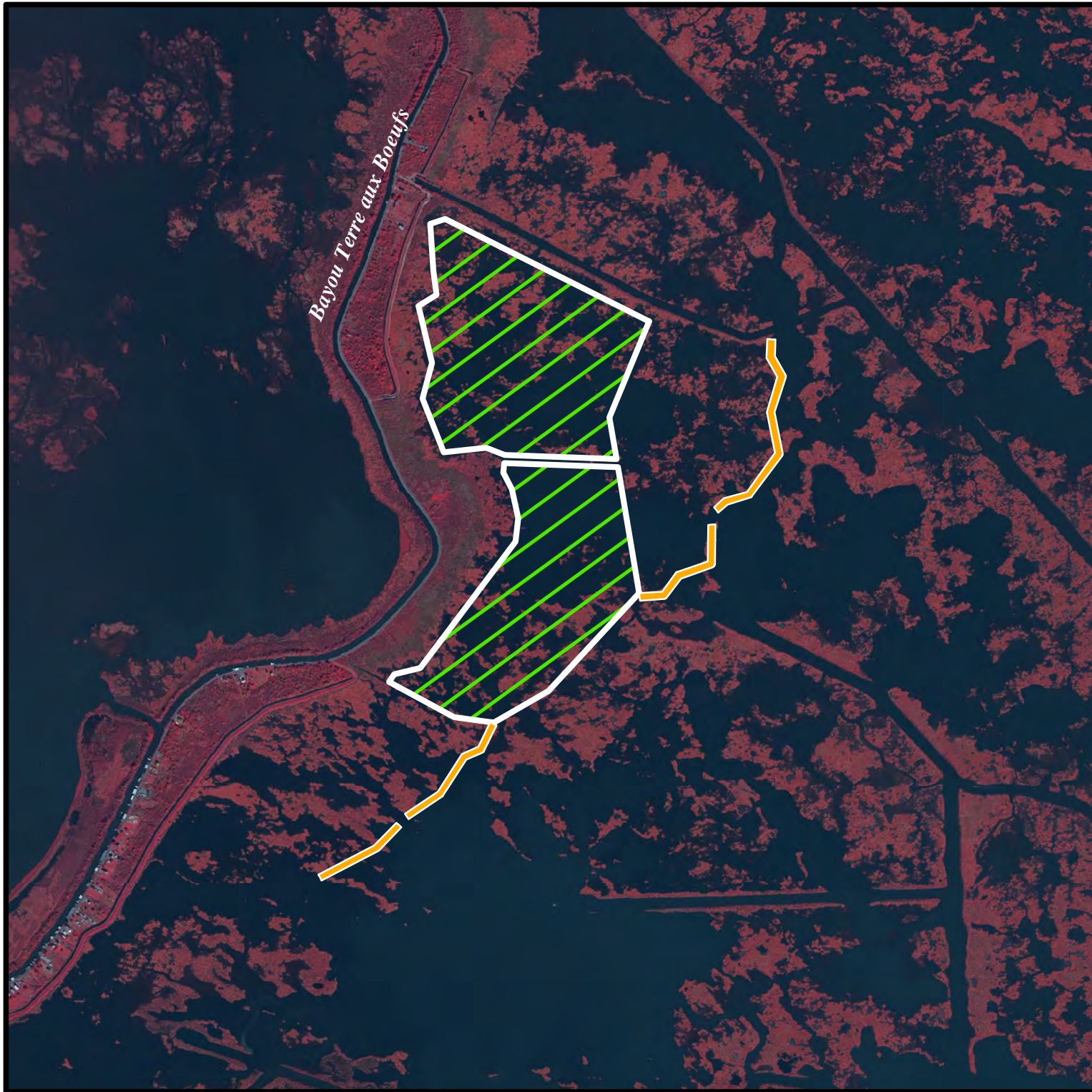
*For more information, please contact:*



**Federal Sponsor:**  
National Marine Fisheries Service  
Baton Rouge, LA  
(225) 389-0508






**Local Sponsor:**  
Coastal Protection and Restoration Authority  
Baton Rouge, LA  
(225) 342-4733

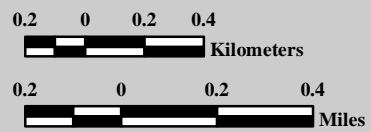


*Bayou Terre aux Boeufs*

# North Delacroix Marsh Creation and Terracing (BS-41)

-  Marsh Creation \*
-  Retention Terrace \*
-  Project Boundary

\*denotes proposed features



Map Produced by:  
U.S. Department of the Interior  
U.S. Geological Survey  
Wetland and Aquatic Research Center  
Coastal and Oceans Restoration Branch  
Baton Rouge, La.

Background Imagery:  
2018 NAIP

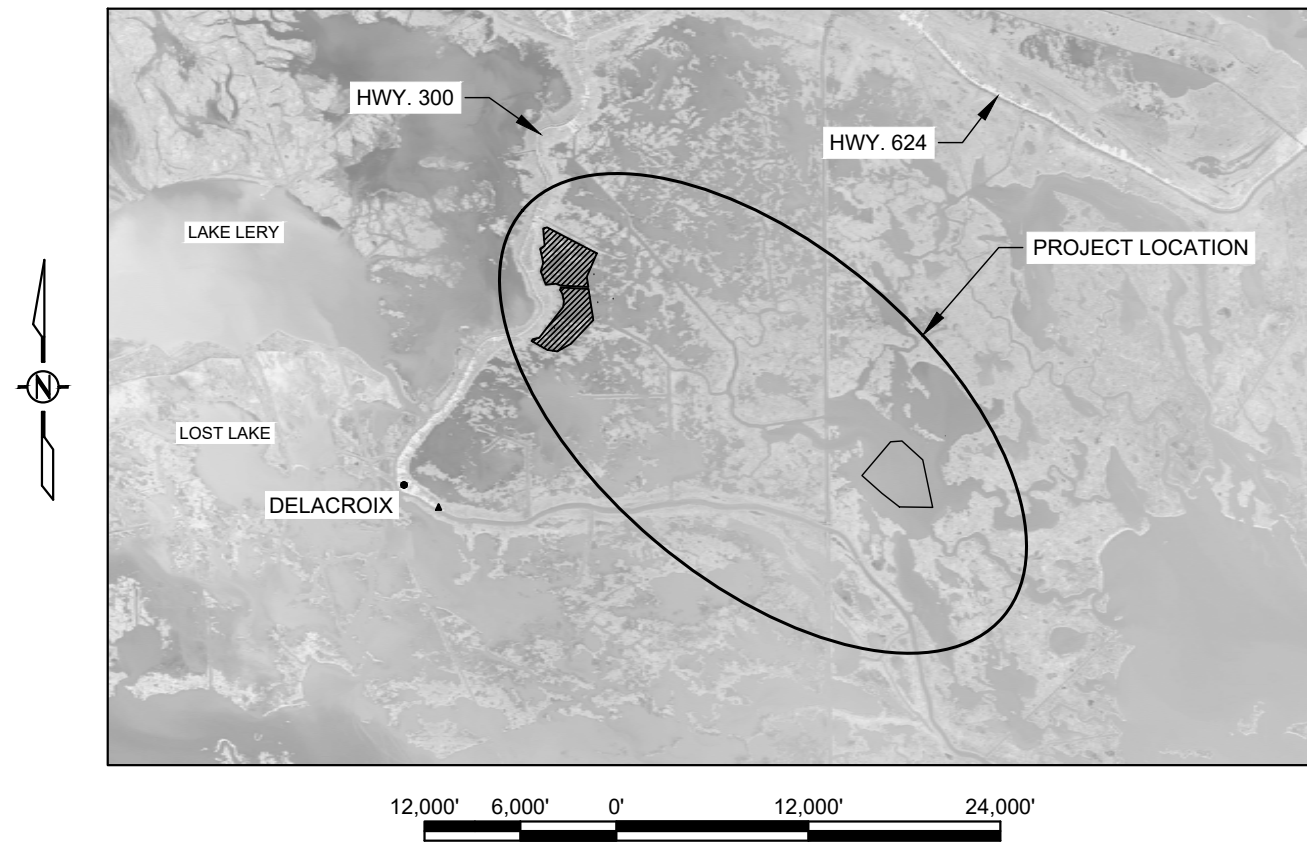
Map Date: February 13, 2020  
Map ID: USGS-NWRC 2020-11-0010  
Data accurate as of: January 30, 2020

STATE OF LOUISIANA  
COASTAL PROTECTION AND RESTORATION AUTHORITY

NORTH DELACROIX  
MARSH CREATION & TERRACING  
BS-0041  
ST. BERNARD PARISH

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	PROJECT LAYOUT
3	BORROW AREA SOIL BORING LAYOUT
4	MARSH CREATION AREA SOIL BORING AND CPT LAYOUT



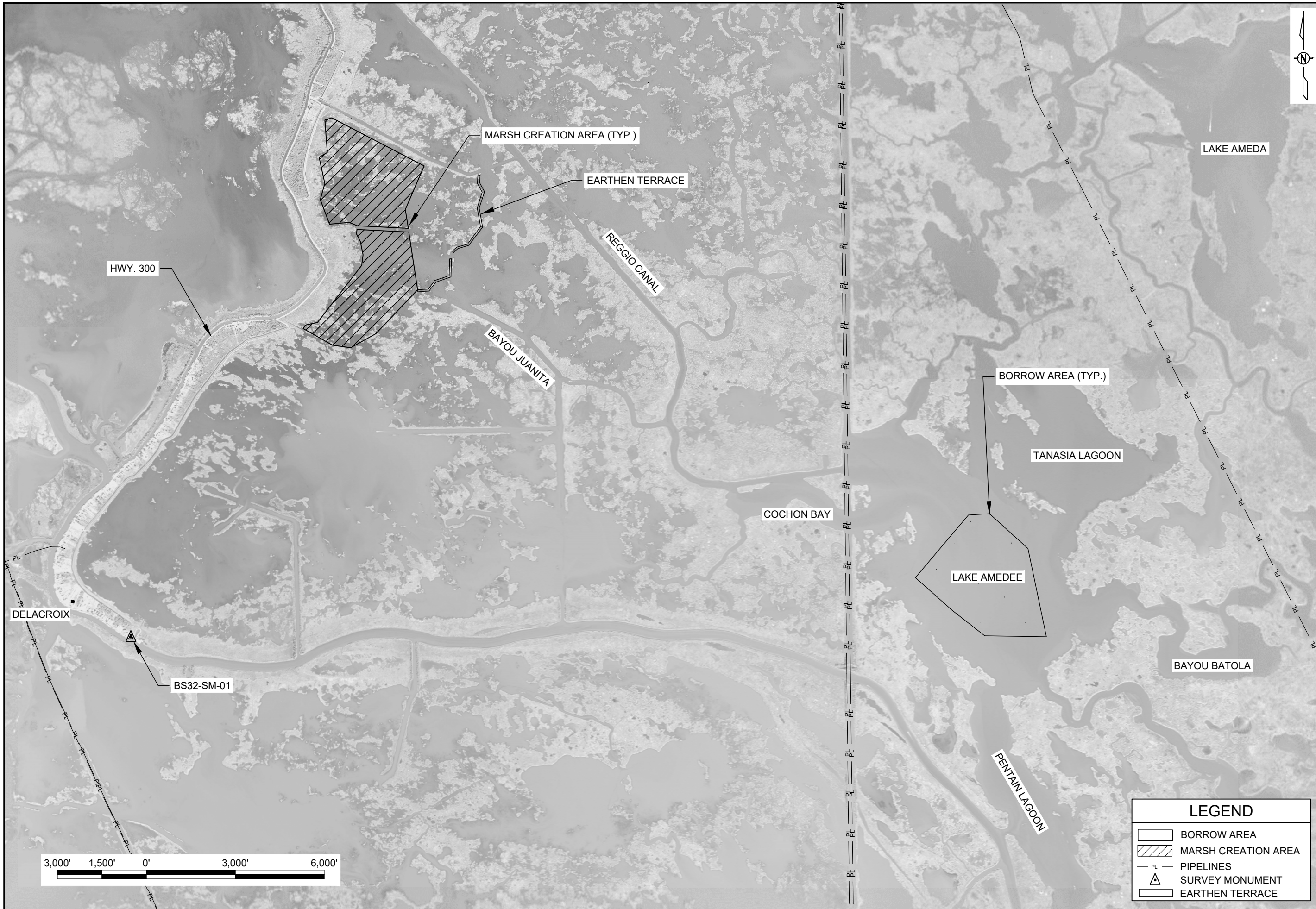
**GEOTECHNICAL SOIL BORINGS**  
DOCUMENTS ARE NOT TO BE USED FOR  
CONSTRUCTION, BIDDING, RECORDATION,  
CONVEYANCE, SALES, OR AS THE BASIS FOR THE  
ISSUANCE OF A PERMIT.

NO.	DATE	REV.	DESCRIPTION	BY

COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	
TITLE SHEET	DESIGNED BY: STEPHEN COOK, E.I. APPROVED BY: THOMAS MCLAIN, P.E.
NORTH DELACROIX MARSH CREATION & TERRACING	STATE PROJECT NUMBER: BS-0041 DRAWN BY: JOHN BLADES
DATE: JANUARY 2022	
SHEET 1 OF 4	





LEGEND	
	BORROW AREA
	MARSH CREATION AREA
	PIPELINES
	SURVEY MONUMENT
	EARTHEN TERRACE

REV.	DATE	DESCRIPTION	BY

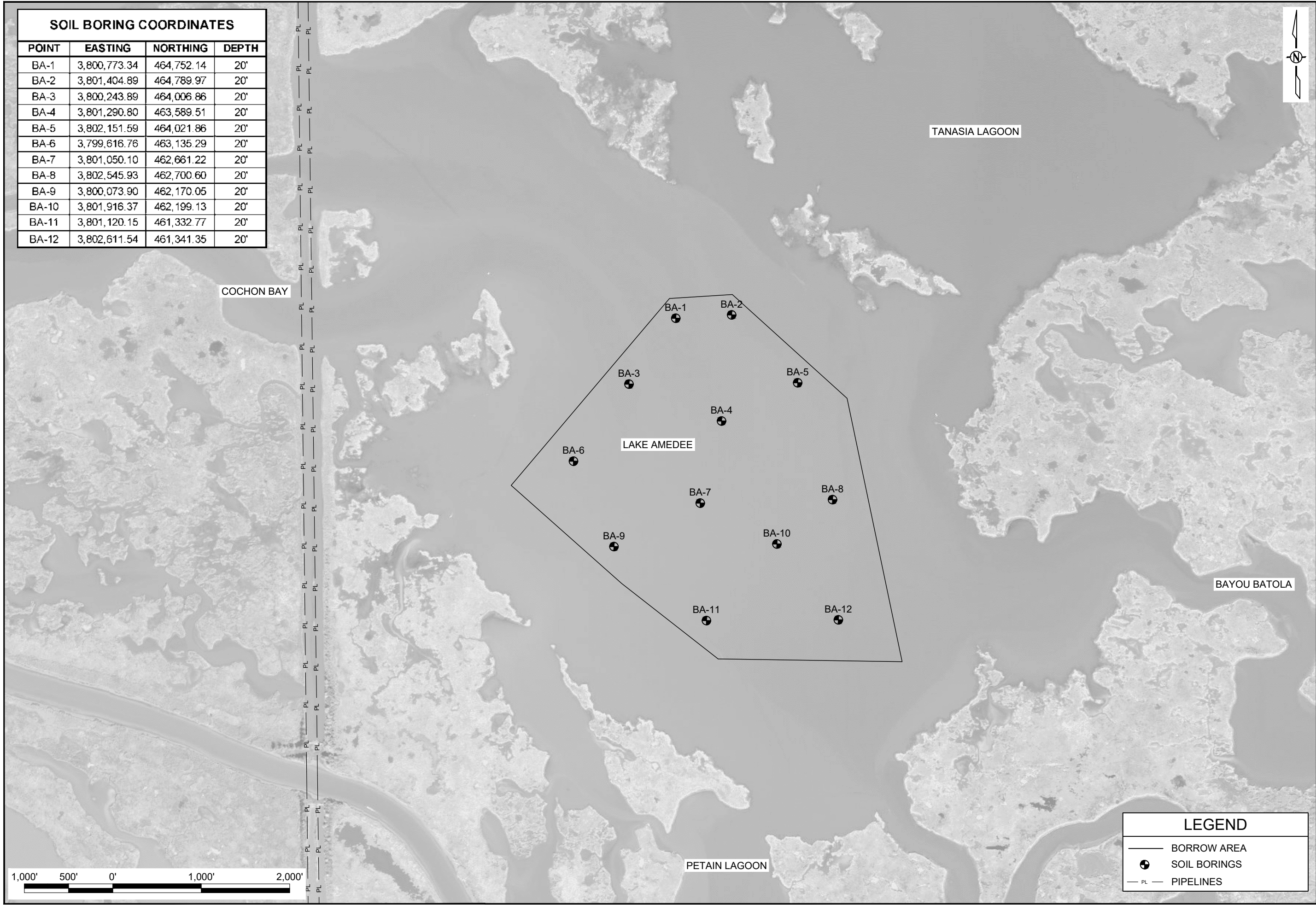
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 150 TERRACE AVENUE  
 BATON ROUGE, LOUISIANA 70802

**PROJECT LAYOUT**  
 DESIGNED BY: STEPHEN COOK, E.I.  
 APPROVED BY: THOMAS MCLAIN, P.E.

**NORTH DELACROIX MARSH CREATION & TERRACING**  
 STATE PROJECT NUMBER: BS-0041  
 DRAWN BY: JOHN BLADES

**SOIL BORING COORDINATES**

POINT	EASTING	NORTHING	DEPTH
BA-1	3,800,773.34	464,752.14	20'
BA-2	3,801,404.89	464,789.97	20'
BA-3	3,800,243.89	464,006.86	20'
BA-4	3,801,290.80	463,589.51	20'
BA-5	3,802,151.59	464,021.86	20'
BA-6	3,799,616.76	463,135.29	20'
BA-7	3,801,050.10	462,661.22	20'
BA-8	3,802,545.93	462,700.60	20'
BA-9	3,800,073.90	462,170.05	20'
BA-10	3,801,916.37	462,199.13	20'
BA-11	3,801,120.15	461,332.77	20'
BA-12	3,802,611.54	461,341.35	20'



LEGEND	
	BORROW AREA
	SOIL BORINGS
	PIPELINES

REV.	DATE	DESCRIPTION	BY

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 150 TERRACE AVENUE  
 BATON ROUGE, LOUISIANA 70802

**BORROW AREA SOIL BORING LAYOUT**  
 DESIGNED BY: STEPHEN COOK, E.I.  
 APPROVED BY: THOMAS MCLAIN, P.E.

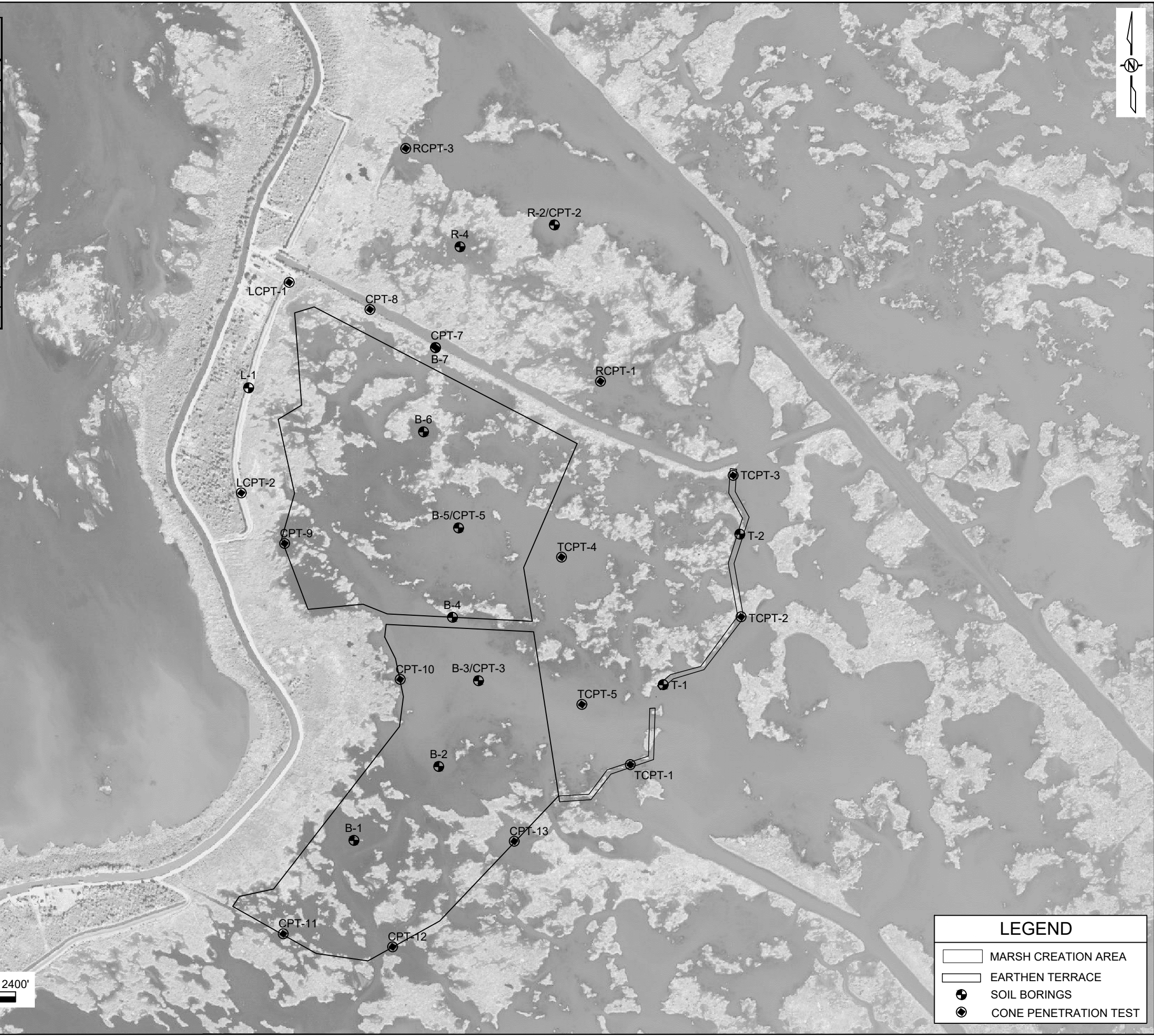
**NORTH DELACROIX MARSH CREATION & TERRACING**  
 STATE PROJECT NUMBER: BS-0041  
 DRAWN BY: JOHN BLADES

**SOIL BORING COORDINATES**

POINT	EASTING	NORTHING	DEPTH
B-1	3,779,695.49	472,047.04	30
B-2	3,780,072.15	472,925.24	30
B-3	3,781,702.01	472,924.99	30
B-4	3,780,864.56	474,694.21	30
B-5	3,780,937.22	475,753.37	30
B-6	3,780,521.51	476,892.00	30
B-7	3,780,664.18	477,891.18	30
L-1	3,778,449.18	477,413.67	40
R-2	3,782,072.01	479,344.56	30
R-4	3,780,953.36	479,086.00	30
T-1	3,783,361.70	473,895.26	30
T-2	3,784,269.44	475,679.30	30

**CPT COORDINATES**

POINT	EASTING	NORTHING	DEPTH
CPT-3	3,781,702.01	472,924.99	30
CPT-5	3,802,151.59	464,021.86	30
CPT-7	3,780,664.18	477,891.18	30
CPT-8	3,779,886.73	478,342.45	30
CPT-9	3,778,875.94	475,568.81	30
CPT-10	3,780,244.79	473,958.44	30
CPT-11	3,778,859.20	470,941.88	30
CPT-12	3,780,155.03	470,787.27	30
LCPT-1	3,778,929.63	478,664.13	40
LCPT-2	3,778,362.08	476,167.64	40
RCPT-1	3,782,626.24	477,483.68	30
RCPT-2	3,782,072.34	479,344.04	30
RCPT-3	3,780,310.71	480,252.21	30
TCPT-1	3,782,972.19	472,947.22	30
TCPT-2	3,784,285.26	474,699.58	30
TCPT-3	3,784,191.13	476,375.84	30
TCPT-4	3,782,157.10	475,407.06	30
TCPT-5	3,782,397.84	473,665.51	30



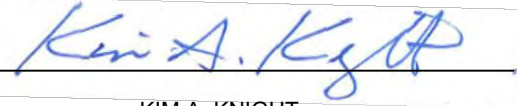
LEGEND	
	MARSH CREATION AREA
	EARTHEN TERRACE
	SOIL BORINGS
	CONE PENETRATION TEST

<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> <small>150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802</small>		REV.	DATE	DESCRIPTION	BY
MARSH CREATION AREA SOIL BORING AND CPT LAYOUT					
NORTH DELACROIX MARSH CREATION & TERRACING		DESIGNED BY: STEPHEN COOK, E.I. APPROVED BY: THOMAS MCLAIN, P.E.		STATE PROJECT NUMBER: BS-0041 DRAWN BY: JOHN BLADES	
DATE: JANUARY 2022					
SHEET 4 OF 4					

## APPENDIX II

I CERTIFY THAT THE HAZARD SURVEY DEPICTED ON THIS PLAT WAS PERFORMED ON THE GROUND UNDER MY SUPERVISION IN ACCORDANCE WITH GENERALLY ACCEPTED SURVEY PRACTICES. THIS SURVEY DOES NOT MEET THE STANDARDS OF PRACTICE FOR BOUNDARY SURVEYS AS SET FORTH BY THE LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD.

APPROVED:



KIM A. KNIGHT  
LA. LAND SURVEYOR REG. NO. 5249



**NORTH DELACROIX MARSH CREATION PROJECT (BS-0041)**

**SOIL BORING LOCATIONS**




Point No.	Coordinates (NAD 83)		Coordinates (NAD 83)		Water Depth	Ground Elevation
	Northing	Easting	Latitude	Longitude		
BA-1	464,752	3,800,773	29° 46' 03.91"	89° 41' 40.12"	6.2'	-5.2'
BA-2	464,790	3,801,405	29° 46' 04.19"	89° 41' 32.95"	5.4'	-4.4'
BA-3	464,007	3,800,244	29° 45' 56.60"	89° 41' 46.25"	6.0'	-5.0'
BA-4	463,590	3,801,291	29° 45' 52.36"	89° 41' 34.44"	6.2'	-5.2'
BA-5	464,022	3,802,152	29° 45' 56.48"	89° 41' 24.60"	6.0'	-5.0'
BA-6	463,135	3,799,617	29° 45' 48.07"	89° 41' 53.51"	6.2'	-5.2'
BA-7	462,661	3,801,050	29° 45' 43.17"	89° 41' 37.32"	5.9'	-4.9'
BA-8	462,701	3,802,546	29° 45' 43.35"	89° 41' 20.35"	6.4'	-5.4'
BA-9	462,170	3,800,074	29° 45' 38.45"	89° 41' 48.48"	6.2'	-5.2'
BA-10	462,199	3,801,916	29° 45' 38.47"	89° 41' 27.57"	6.0'	-5.0'
BA-11	461,333	3,801,120	29° 45' 30.01"	89° 41' 36.74"	5.9'	-4.9'
BA-12	461,341	3,802,612	29° 45' 29.88"	89° 41' 19.82"	4.9'	-3.9'

BS32-SM-01  
ELEV. 2.69' NAVD88 (GEOID 12B)  
X = 3,772,450.51'  
Y = 460,856.72' NAD 83  
LAT = 29° 45' 29.25"  
LONG = 89° 47' 02.07" NAD 83

N 85° 12' 20" E 27.261'

LAKE AMEDEE

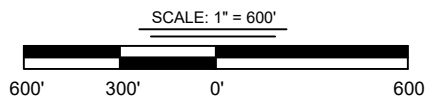
**LEGEND**

-  PROPOSED SOIL BORING LOCATION
-  APPROXIMATE LOCATION OF PIPELINE
-  BORROW AREA

**DISCLAIMER:**  
WHILE REASONABLE EFFORTS ARE MADE TO LOCATED ALL PIPELINES, METAL OBJECTS, OR OTHER OBSTRUCTIONS IN THE SURVEYED AREA, THE EQUIPMENT USED AND THE CHARACTERISTICS OF PIPELINES THEMSELVES MAKE IT IMPOSSIBLE TO GUARANTEE TOTAL SUCCESS. ACCORDINGLY, IT IS INCUMBENT UPON THE OWNERS, OPERATORS, AND/OR CONTRACTORS CONDUCTING OPERATIONS INCLUDING DREDGING AND EXCAVATION TO CONDUCT THEIR OPERATIONS WITH EXTREME CAUTION AND RECOGNIZE THAT HAZARDS IN ADDITION TO THOSE DETECTED AND MARKED BY T. BAKER SMITH, LLC MAY EXIST.

- NOTES:**
- SURVEY WAS PERFORMED APRIL 20, 2022 THROUGH APRIL 22, 2022 BY T. BAKER SMITH, LLC.
  - THE MAGNETOMETER SURVEY WAS PERFORMED USING AIRBOAT SURVEY VESSEL UTILIZING THE FOLLOWING:
    - A. RTK INTEGRATED, COMPUTER BASED DATA COLLECTION AND NAVIGATION SYSTEM
    - B. SUBSURFACE INSTRUMENTS MUL-1 GRADIOMETER
  - T. BAKER SMITH, LLC FIELD CREW PULLED THE MAGNETOMETER ON TRACKLINES AT 25' X 25' RECTANGULAR PATH OR 25' DIAMETER SPIRAL PATH AROUND EACH CPT OR SOIL BORING SITE STAKE. LOCATIONS SHOWN ON MAP ARE AS STAKED LOCATIONS.
  - ALL GRID COORDINATES ARE EXPRESSED IN LOUISIANA STATE PLANE, SOUTH ZONE, NAD83, U.S. SURVEY FEET. GEOGRAPHIC COORDINATES ARE NAD83.
  - THE VERTICAL DATUM FOR ALL ELEVATIONS IS NAVD88 (GEOID 12B), U.S. SURVEY FEET.
  - ALL SOUNDINGS ARE REFERENCED AVERAGE TOP OF WATER DURING THE SURVEY PERIOD. THE AVERAGE TOP OF WATER FOR APRIL 20-22, 2022 WAS +1.0' NAVD88. ALL DEPTHS HAVE BEEN REDUCED TO NAVD88 ELEVATIONS.
  - BACKGROUND IMAGERY WAS SOURCED FROM 2015 DOQQ AERIAL PHOTOGRAPHY.
  - MONUMENT BS32-SM-01 WAS USED FOR HORIZONTAL AND VERTICAL CONTROL FOR THIS SURVEY. THE NOTED VALUES FOR BS32-SM-01 WERE USED FOR CONTROL.

NOTES:



REV. NO:	00	REV. DATE:	--/--	REV. BY:	---
REVISION DESCRIPTION:					
--					

DRAWN BY: CDS APPROVED BY: KAK

DATE: 4/29/2022 JOB NO: 2022.0190

DRAWING NAME: 2022.0190.DWG

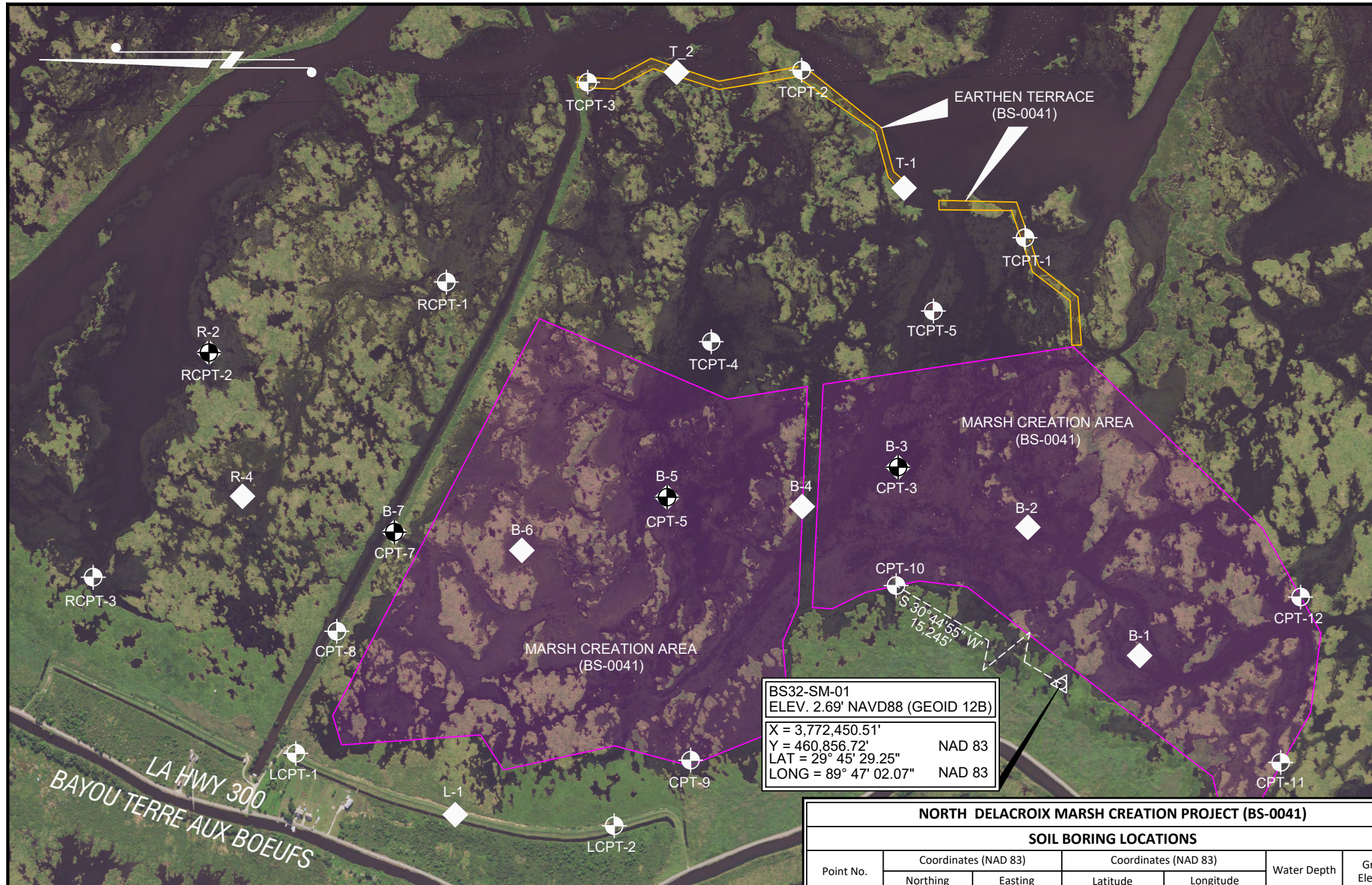
PROJECTION: LA SOUTH 1702  
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88 (GEOID12B)  
GRID UNITS: US SURVEY FEET

SHEET NO: 1 OF 2

**HAZARD SURVEY**

**EUSTIS ENGINEERING**  
MAGNETOMETER SURVEY FOR PROPOSED SOIL BORING AND CONE PENETRATION TEST LOCATIONS FOR COASTAL PROTECTION AND RESTORATION AUTHORITY  
NORTH DELACROIX MARSH CREATION PROJECT (BS-0041)  
ST. BERNARD PARISH, LOUISIANA

P:\Y-2022\2022.0190\DWG\2022.0190.DWG



**DISCLAIMER:**  
WHILE REASONABLE EFFORTS ARE MADE TO LOCATED ALL PIPELINES, METAL OBJECTS, OR OTHER OBSTRUCTIONS IN THE SURVEYED AREA, THE EQUIPMENT USED AND THE CHARACTERISTICS OF PIPELINES THEMSELVES MAKE IT IMPOSSIBLE TO GUARANTEE TOTAL SUCCESS. ACCORDINGLY, IT IS INCUMBENT UPON THE OWNERS, OPERATORS, AND/OR CONTRACTORS CONDUCTING OPERATIONS INCLUDING DREDGING AND EXCAVATION TO CONDUCT THEIR OPERATIONS WITH EXTREME CAUTION AND RECOGNIZE THAT HAZARDS IN ADDITION TO THOSE DETECTED AND MARKED BY T. BAKER SMITH, LLC MAY EXIST.

- NOTES:**
1. SURVEY WAS PERFORMED APRIL 20, 2022 THROUGH APRIL 22, 2022 BY T. BAKER SMITH, LLC.
  2. THE MAGNETOMETER SURVEY WAS PERFORMED USING AIRBOAT SURVEY VESSEL UTILIZING THE FOLLOWING:
    - A. RTK INTEGRATED, COMPUTER BASED DATA COLLECTION AND NAVIGATION SYSTEM
    - B. SUBSURFACE INSTRUMENTS MUL-1 GRADIOMETER
  3. T. BAKER SMITH, LLC FIELD CREW PULLED THE MAGNETOMETER ON TRACKLINES AT 25' X 25' RECTANGULAR PATH OR 25' DIAMETER SPIRAL PATH AROUND EACH CPT OR SOIL BORING SITE STAKE. LOCATIONS SHOWN ON MAP ARE AS STAKED LOCATIONS.
  4. ALL GRID COORDINATES ARE EXPRESSED IN LOUISIANA STATE PLANE, SOUTH ZONE, NAD83, U.S. SURVEY FEET. GEOGRAPHIC COORDINATES ARE NAD83.
  5. THE VERTICAL DATUM FOR ALL ELEVATIONS IS NAVD88 (GEOID 12B), U.S. SURVEY FEET.
  6. ALL SOUNDINGS ARE REFERENCED AVERAGE TOP OF WATER DURING THE SURVEY PERIOD. THE AVERAGE TOP OF WATER FOR APRIL 20-22, 2022 WAS +1.0' NAVD88. ALL DEPTHS HAVE BEEN REDUCED TO NAVD88 ELEVATIONS.
  7. BACKGROUND IMAGERY WAS SOURCED FROM 2015 DOQQ AERIAL PHOTOGRAPHY.
  8. MONUMENT BS32-SM-01 WAS USED FOR HORIZONTAL AND VERTICAL CONTROL FOR THIS SURVEY. THE NOTED VALUES FOR BS32-SM-01 WERE USED FOR CONTROL.

**LEGEND**

- PROPOSED SOIL BORING LOCATION
- PROPOSED CONE PENETRATION TEST LOCATION
- PROPOSED SOIL BORING & CONE PENETRATION TEST LOCATION
- MARSH CREATION AREA
- EARTHEN TERRACE

BS32-SM-01  
ELEV. 2.69' NAVD88 (GEOID 12B)  
X = 3,772,450.51' NAD 83  
Y = 460,856.72' NAD 83  
LAT = 29° 45' 29.25" NAD 83  
LONG = 89° 47' 02.07" NAD 83

**NORTH DELACROIX MARSH CREATION PROJECT (BS-0041)**

**SOIL BORING LOCATIONS**

Point No.	Coordinates (NAD 83)		Coordinates (NAD 83)		Water Depth	Ground Elevation
	Northing	Easting	Latitude	Longitude		
B-1	472,049	3,779,697	29° 47' 19.06"	89° 45' 38.12"	2.9'	-1.9'
B-2	472,925	3,780,702	29° 47' 27.59"	89° 45' 26.57"	3.6'	-2.6'
B-3	473,942	3,781,173	29° 47' 37.60"	89° 45' 21.06"	3.5'	-2.5'
B-4	474,694	3,780,865	29° 47' 45.08"	89° 45' 24.45"	3.3'	-2.3'
B-5	475,753	3,780,937	29° 47' 55.56"	89° 45' 23.46"	3.5'	-2.5'
B-6	476,892	3,780,522	29° 48' 06.89"	89° 45' 28.00"	3.2'	-2.2'
B-7	477,891	3,780,664	29° 48' 16.76"	89° 45' 26.23"	5.7'	-4.7'
L-1	477,414	3,778,449	29° 48' 12.33"	89° 45' 51.44"	N/A	2.1'
R-2	479,345	3,782,072	29° 48' 30.95"	89° 45' 10.02"	3.7'	-2.7'
R-4	479,082	3,780,945	29° 48' 28.51"	89° 45' 22.85"	2.7'	-1.7'
T-1	473,895	3,783,362	29° 47' 36.83"	89° 44' 56.24"	4.0'	-3.0'
T-2	475,679	3,784,269	29° 47' 54.37"	89° 44' 45.65"	2.9'	-1.9'

**NORTH DELACROIX MARSH CREATION PROJECT (BS-0041)**

**CONE PENETRATION TEST (CPT) LOCATIONS**

Point No.	Coordinates (NAD 83)		Coordinates (NAD 83)		Water Depth	Ground Elevation
	Northing	Easting	Latitude	Longitude		
CPT-3	473,942	3,781,173	29° 47' 37.60"	89° 45' 21.06"	3.5'	-2.5'
CPT-5	475,753	3,780,937	29° 47' 55.56"	89° 45' 23.46"	3.5'	-2.5'
CPT-7	477,891	3,780,664	29° 48' 16.76"	89° 45' 26.23"	5.7'	-4.7'
CPT-8	478,342	3,779,887	29° 48' 21.33"	89° 45' 34.98"	1.3'	-0.3'
CPT-9	475,569	3,778,876	29° 47' 54.01"	89° 45' 46.88"	2.6'	-1.6'
CPT-10	473,958	3,780,245	29° 47' 37.89"	89° 45' 31.60"	2.9'	-1.9'
CPT-11	470,942	3,778,859	29° 47' 08.22"	89° 45' 47.79"	3.2'	-2.2'
CPT-12	470,787	3,780,155	29° 47' 06.51"	89° 45' 33.11"	2.8'	-1.8'
LCPT-1	478,664	3,778,930	29° 48' 24.64"	89° 45' 45.79"	N/A	4.1'
LCPT-2	476,168	3,778,362	29° 48' 00.01"	89° 45' 52.62"	N/A	4.9'
RCPT-1	477,484	3,782,627	29° 48' 12.46"	89° 45' 04.02"	3.1'	-2.1'
RCPT-2	479,345	3,782,072	29° 48' 30.95"	89° 45' 10.02"	3.7'	-2.7'
RCPT-3	480,252	3,780,311	29° 48' 40.18"	89° 45' 29.87"	3.1'	-2.1'
TCPT-1	472,947	3,782,972	29° 47' 27.50"	89° 45' 00.81"	2.8'	-1.8'
TCPT-2	474,700	3,784,285	29° 47' 44.67"	89° 44' 45.63"	2.8'	-1.8'
TCPT-3	476,376	3,784,191	29° 48' 01.28"	89° 44' 46.43"	3.6'	-2.6'
TCPT-4	475,407	3,782,157	29° 47' 51.96"	89° 45' 09.67"	3.6'	-2.6'
TCPT-5	473,666	3,782,398	29° 47' 34.69"	89° 45' 07.21"	2.1'	-1.1'

I CERTIFY THAT THE HAZARD SURVEY DEPICTED ON THIS PLAT WAS PERFORMED ON THE GROUND UNDER MY SUPERVISION IN ACCORDANCE WITH GENERALLY ACCEPTED SURVEY PRACTICES. THIS SURVEY DOES NOT MEET THE STANDARDS OF PRACTICE FOR BOUNDARY SURVEYS AS SET FORTH BY THE LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD.

APPROVED:   
KIM A. KNIGHT  
LA. LAND SURVEYOR REG. NO. 5249



P:\Y-2022\2022.0190\DWG\2022.0190.DWG

NOTES:

**T. BAKER SMITH**  
A CENTURY OF SOLUTIONS  
412 South Van Ave, Houma, LA 70363  
(985)868-1050 - tbsmith.com

SCALE: 1" = 1000'

REV. NO: 00    REV. DATE: --/--    REV. BY: --  
REVISION DESCRIPTION: --

DRAWN BY: CDS    APPROVED BY: KAK  
DATE: 4/29/2022    JOB NO: 2022.0190  
DRAWING NAME: 2022.0190.DWG  
PROJECTION: LA SOUTH 1702  
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88 (GEOID12B)  
GRID UNITS: US SURVEY FEET  
SHEET NO: 2 OF 2







**HAZARD SURVEY**

**EUSTIS ENGINEERING**  
MAGNETOMETER SURVEY FOR PROPOSED SOIL BORING AND CONE PENETRATION TEST LOCATIONS FOR COASTAL PROTECTION AND RESTORATION AUTHORITY  
NORTH DELACROIX MARSH CREATION PROJECT (BS-0041)  
ST. BERNARD PARISH, LOUISIANA

APPENDIX III

PP Pocket penetrometer: Resistance in tons per square foot  
 SPT Standard Penetration Test: Number of blows of a 140-lb hammer dropped 30 inches required to drive 2-in. O.D., 1.4-in. I.D. sampler a distance of 1 foot into the soil after first seating it 6 inches. Values shown have not been corrected.

SPLR Type of Sampling  Shelby  SPT  Auger  Vibracore  Geoprobe  No sample

SYMBOL Clay  Silt  Sand  Peat/Humus  Shells  Stone/Gravel   
 Predominant type shown heavy; modifying type shown light

USC Unified Soil Classification

DENSITY Unit weight in pounds per cubic foot

SHEAR TESTS

TYPE

- UC Unconfined compression shear
- OB Unconsolidated undrained triaxial compression shear on one specimen confined at the approximate overburden pressure
- UU Unconsolidated undrained triaxial compression shear
- $\phi$  Angle of internal friction in degrees
- c Cohesion in pounds per square foot

ATTERBERG LIMITS

- LL Liquid Limit
- PL Plastic Limit
- PI Plasticity Index

OTHER TESTS

- CON Consolidation
- #200 Percent passing a U.S. No. 200 sieve
- SV Particle size distribution (sieve only)
- PD Particle size distribution (sieve and hydrometer)
- k Coefficient of permeability in centimeters per second
- SP Swelling pressure in pounds per square foot

Other laboratory test results reported on separate figures

GENERAL NOTES

- (1) If a ground water depth is shown on the boring log, these observations were made at the time of drilling and were measured below the existing ground surface. These observations are shown on the boring logs. However, ground water levels may vary due to seasonal fluctuations and other factors. If important to construction, the depth to ground water should be determined by those persons responsible for construction immediately prior to beginning work.
- (2) While the individual logs of borings are considered to be representative of subsurface conditions at their respective locations on the dates shown, it is not warranted that they are representative of subsurface conditions at other locations and times.





State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: B-1**

Project No: 24762  
Date: 05/03/2022  
Latitude: 29.78863°  
Longitude: -89.76059°

Elevation: -1.9  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 30.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Moist, extremely soft to very soft gray & dark gray ORGANIC CLAY w/few roots	OH	1A	0	123									
0.00							1B	1	127	36	82	OB	0	91	136	42	94	#200 = 97.2%
							2A	2	159									
0.00							2B	3	159									
							3A	4	135									
5							3B	5	87	50	94	OB	0	106	132	34	98	
0.00					Moist, very soft gray FAT CLAY w/few organic matter & roots	CH	4A	6	131									ORG = 6.7%
							4B	7	111									
0.00							5A	8	120									
							5B	9	116									
10							6A	10	69									
0.00					Wet, very soft brown ORGANIC CLAY w/humus	OH	6B	11	264	19	69	OB	0	133	144	61	83	#200 = 96.7%
							7A	12	366									
0.00					Moist, medium stiff brown & gray HUMUS w/trace of decayed wood	OH	7B	13	320	17	73	OB	0	517	387	193	194	ORG = 33.2%; CONS; SPEC GRAV
							8A	14	220									
0.00					Moist, extremely soft gray & black ORGANIC CLAY w/few decayed wood & trace of silt pockets	OH	8B	15	189									
							9A	16	175	29	81	OB	0	67	155	35	120	
15							9B	17	151									
0.00					Moist, very soft gray & tan FAT CLAY w/few decayed wood & organic matter w/trace of silt pockets & organic matter	CH	10A	18	139									
							NS	19										
20																		
0.00					w/trace of silt pockets		11A	23	87									
							11B	24	85	51	95	OB	0	176	78	28	50	
25																		
0.00																		
					w/trace of silt pockets & lenses		12A	28	69									
30	1.25						12B	29	72	57	97	UC	--	162	76	24	52	

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE STANDARD BORING LOG\_24762.GPJ 11/17/22

NOTES: Boring B-1 was drilled in 2 feet 7 inches of water.



State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

LOG OF BORING AND TEST RESULTS

**Boring: B-2**

Project No: 24762  
Date: 05/04/2022  
Latitude: 29.79100°  
Longitude: -89.75738°

Elevation: -2.6  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 30.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, extremely soft dark gray & brown ORGANIC CLAY w/roots	OH	1A	0	236									
0.00							1B	1	203	26	78	OB	0	119	141	84	57	
					Moist, very soft gray & tan FAT CLAY w/roots & trace of silt pockets	CH	2A	2	100									
0.00							2B	3	89									
5					Moist, very soft gray & brown ORGANIC CLAY w/few decayed wood, roots, & organic matter	OH	3A	4	219									
0.00							3B	5	175	28	78	OB	0	135	212	86	126	
0.00							4A	6	275									
0.00							4B	7	275									
0.00					Moist, very soft brown & dark gray HUMUS w/few decayed wood & roots	PT	5A	8	353									
10							5B	9	340	16	70	OB	0	149	386	128	258	ORG = 37.7%
0.00					Moist, extremely soft gray & tan FAT CLAY	CH	6A	10	178									
0.00							6B	11	125	38	87	OB	0	104	161	44	117	
0.00							7A	12	125									
0.00							7B	13	131									#200 = 96.5%
15					Moist, extremely soft gray FAT CLAY w/trace of silt pockets, organic matter, & shell fragments	CH	8A	14	61									
0.00							8B	15	91	48	93	OB	0	119	94	57	37	
0.00							9A	16	92									
0.00							9B	17	83									ORG = 8.1%
0.00							10A	18	85									
20					Moist, very soft gray FAT CLAY w/few silt pockets	CH	10B	19	85	51	94	OB	0	156	86	27	59	
0.25							11A	23	96									
25							11B	24	91	48	92	UC	--	142	104	43	61	
0.50					Moist, soft gray FAT CLAY w/few silt pockets & lenses	CH	12A	28	77									
30							12B	29	46									#200 = 98.5% CONS; SPEC GRAV

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring B-2 was drilled in 2 feet 9 inches of water.



State of Louisiana  
Coastal Protection  
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North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

LOG OF BORING AND TEST RESULTS

**Boring: B-3**

Project No: 24762  
Date: 05/04/2022  
Latitude: 29.79379°  
Longitude: -89.75585°

Elevation: -2.5  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 30.0 ft

Scale in Feet	PP	SPT	SPLR	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Moist, very soft gray & tan FAT CLAY w/few roots & organic matter	CH	1A	0	175									
0.00					Moist, very soft gray & brown ORGANIC CLAY w/trace of roots & decayed wood	OH	1B	1	202	26	79	OB	0	172	234	76	158	ORG = 10.6%
							2A	2	223									
0.00							2B	3	145	34	83	OB	0	107	202	41	161	
							3A	4	228									
5							3B	5	274	20	75	OB	0	139	216	63	153	
0.00					Moist, very soft to soft brown & gray HUMUS w/few roots & decayed wood	PT	4A	6	382									ORG = 36.3%
0.00							4B	7	565	10	67	OB	0	260	531	238	293	
					Moist, extremely soft to very soft gray & brown FAT CLAY w/few silt pockets & lenses, trace of decayed wood, & organic matter	CH	5A	8	166						205	50	155	CONS; SPEC GRAV
10							5B	9	35	87	117	OB	0	269	58	23	35	
0.00							6A	10	74									
0.00							6B	11	87	50	94	OB	0	122	68	26	42	
0.00							7A	12	102									
							NS	13										
15					Wet, extremely soft gray FAT CLAY w/SAND	CH	PB-8	14	35									
		23			Wet, medium dense gray fine SILTY SAND w/trace of clay pockets	SM	PB-9	16.5	35									#200 = 87.8%
					Wet, extremely soft gray FAT CLAY w/few silt pockets & lenses, & trace of organic matter	CH	10A	18	98									
20							10B	19	94	47	90	UC	--	90	103	23	80	
							PB-11	23	33									
25		36			Moist, dense gray fine SILTY SAND w/trace of clay pockets	SM												
							PB-12	28	30									
30		38			Moist, compact gray SILT W/CLAY	ML												

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring BA-3 was drilled in 2 feet 10 inches of water.



State of Louisiana  
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North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

LOG OF BORING AND TEST RESULTS

**Boring: B-4**

Project No: 24762  
Date: 05/04/2022  
Latitude: 29.79586°  
Longitude: -89.75679°

Elevation: -2.3  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 30.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, very soft gray & tan FAT CLAY w/few organic matter & roots	CH	1A	0	177									
0.00					Wet, extremely soft to very soft brown, gray, & tan ORGANIC CLAY w/few organic matter, roots, & decayed wood	OH	1B	1	213	24	74	OB	0	54	171	63	108	
0.00							2A	2	135									
5							2B	3	122									
0.00							3A	4	314						433	126	307	CONS; SPEC GRAV
0.00							3B	5	198	25	75	OB	0	173	236	87	149	ORG = 32.4%
0.00					Wet, very soft gray HUMUS w/few decayed wood	Pt	4A	6	461									
0.00							4B	7	560	10	64	OB	0	217	512	319	193	ORG = 51.9%
10					Moist, very soft to soft brown & gray ORGANIC CLAY w/few decayed wood & trace of humus	OH	5A	8	241									
0.00							5B	9	143									
0.00							6A	10	220									
0.00					Moist, extremely soft to very soft gray & tan FAT CLAY w/few silt pockets & layers, & trace of organic matter	CH	6B	11	71	57	97	UC	--	41	104	29	75	#200 = 95.8%
0.00							7A	12	80									
0.00							7B	13	72									
15							8A	14	90									
0.00							8B	15	88	50	94	OB	0	131	85	34	51	
0.00							9A	16	77									
0.00							NS	17										
0.00							PB-10	18	66									
20																		
0.25							11A	23	63									
0.25					Moist, loose gray SILT w/trace of clay lenses & layers	ML	11B	24	41	78	110	OB	0	325	29	24	5	
0.25																		
0.25					Moist, soft gray FAT CLAY w/trace of silt pockets & lenses	CH	12A	28	56									
0.25							12B	29	72	57	99	OB	0	336	77	32	45	

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE STANDARD BORING LOG\_24762.GPJ\_11/17/22

NOTES: Boring B-4 was drilled in 2 feet 6 inches of water.



State of Louisiana  
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and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

LOG OF BORING AND TEST RESULTS

**Boring: B-5**

Project No: 24762  
Date: 05/05/2022  
Latitude: 29.79877°  
Longitude: -89.75652°

Elevation: -2.5  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 30.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, very soft dark gray, gray, & brown ORGANIC CLAY w/few roots	OH	PB-1	0	217									ORG = 15.0%
0.00							2A	2	164									
0.00							2B	3	141	35	84	OB	0	221	157	57	100	
					w/few decayed wood		3A	4	225									
5							3B	5	258	21	75	OB	0	149	263	68	195	
0.00					Wet, very soft dark gray & brown HUMUS w/few clay lenses & trace of decayed wood	PT	4A	6	321									ORG = 27.2%
0.00							NS	7										
							5A	8	331									ORG = 29.5%
0.25							5B	9	307	17	69	OB	0	83	299	113	186	CONS; SPEC GRAV
10					Wet, loose gray SILT W/SAND (fine)	ML	6A	10	34									
0.50							6B	11	34									#200 = 89.6%
					Moist, extremely soft to very soft gray FAT CLAY w/few silt pockets & lenses	CH	7A	12	59									
0.50							7B	13	45	73	105	OB	0	237	92	27	65	
15							8A	14	89									
0.00							NS	15										
							9A	16	85									
0.00							9B	17	57	66	103	OB	0	92	59	24	35	
0.00							10A	18	113									
20							10B	19	46	71	104	OB	0	205	102	28	74	
0.00					Wet, soft gray FAT CLAY w/few fine sand layers	CH	11A	23	59									
25							11B	24	54									
0.00																		
					Moist, very soft gray FAT CLAY w/few silt pockets & lenses	CH	12A	28	55	68	105	OB	0	174	57	22	35	
0.00					Moist, loose gray SILT W/SAND (fine)	ML	12B	29	40									

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE STANDARD BORING LOG\_24762.GPJ 11/17/22

NOTES: Boring B-5 was drilled in 2 feet 8 inches of water.



State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

LOG OF BORING AND TEST RESULTS

**Boring: B-6**

Project No: 24762  
Date: 05/07/2022  
Latitude: 29.80191°  
Longitude: -89.75778°

Elevation: -2.2  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 30.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, extremely soft dark gray & brown HUMUS w/few roots	PT	1A	0	328									ORG = 33.6%
0.00					Wet, extremely soft to very soft dark gray & gray ORGANIC CLAY w/few roots	OH	1B	1	186									
0.00							2A	2	171									
							2B	3	129	37	86	OB	0	37	145	40	105	ORG = 12.8%
							3A	4	182									
5							3B	5	150	33	82	UC	--	11	163	40	123	CONS; SPEC GRAV
							4A	6	173									
					Wet, extremely soft gray & brown HUMUS	PT	4B	7	609	9	64	OB	0	79	419	172	247	ORG = 25.4%
							5A	8	554									
							5B	9	431						536	266	270	
10					Wet, extremely soft gray & tan ORGANIC CLAY	OH	6A	10	209									
							6B	11	157	32	82	OB	0	24	131	46	85	
					Wet, soft gray FAT CLAY w/trace of organic matter	CH	7A	12	43									
					Wet, loose gray SILT W/SAND (fine)	ML	7B	13	33									
					Wet, soft brown & gray HUMUS	PT	8A	14	317									
15					Wet, medium compact gray SILT w/few fine sand	ML	8B	15	28									
					Wet, very soft gray FAT CLAY w/trace of silt pockets, organic matter, & shell fragments	CH	9A	16	88									
							9B	17	108	43	89	OB	0	150	137	55	82	
					Wet, soft brown & gray HUMUS	PT	10A	18	188									
20					Wet, very soft to soft gray & brown FAT CLAY w/few silt pockets & lenses, trace of concretions, & organic matter	CH	10B	19	35									
							11A	23	94									
							11B	24	103	45	91	OB	0	143	109	29	80	
25																		
					w/few humus layers		12A	28	76									
					Moist, soft gray SILT W/SAND (fine)	ML	12B	29	34									
30																		

EUSTIS\_GINT\_LIBRARY\_11\_ & 2022.GLB EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring B-6 was drilled in 1 foot 9 inches of water.



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North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: B-7**

Project No: 24762  
Date: 05/07/2022  
Latitude: 29.80466°  
Longitude: -89.75729°

Elevation: -4.7  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 30.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, extremely soft brown & gray HUMUS w/few roots	PT	1A	0	219									ORG = 17.8%
					Wet, extremely soft brown & gray ORGANIC CLAY w/few roots, wood, & trace of shell fragments	OH	1B	1	127									ORG = 14.2%
							2A	2	177									CONS; SPEC GRAV
							2B	3	154	32	83	OB	0	34	145	63	82	ORG = 14.7%
							3A	4	185									
5							3B	5	142	35	84	OB	0	22	168	51	117	
							4A	6	174									
							4B	7	140									
							5A	8	131									
					Wet, extremely soft gray & dark gray FAT CLAY w/few organic matter & roots	CH	5B	9	84	51	94	OB	0	38	78	25	53	
10							6A	10	96									#200 = 93.3%
					Wet, extremely soft to very soft brown & gray ORGANIC CLAY w/few wood, roots, & shell fragments	OH	6B	11	100	45	91	UC	--	56	122	42	80	
							7A	12	89									
							7B	13	94	47	91	OB	0	73	118	35	83	
							8A	14	103									
15							8B	15	100									
							9A	16	89									
							9B	17	158	32	82	OB	0	132	198	51	147	
							10A	18	159									
20							10B	19	128						165	55	110	
							11A	23	128	38	86	OB	0	19	147	38	109	
25					Wet, medium compact gray SILT w/few fine sand	ML	11B	24	33									
30							PB-12	28	25									

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring B-7 was drilled in 2 feet of water.



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North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: L-1**

Project No: 24762  
Date: 06/15/2022  
Latitude: 29.80343°  
Longitude: -89.76429°

Elevation: 2.1  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 40.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Moist, very stiff gray, tan, & brown LEAN CLAY w/trace of roots	CL	1A	0	20									
4.00							1B	1	19	97	116	OB	0	2868				
							2A	2	21									
4.00																		
5					Moist, medium stiff brown & gray LEAN CLAY	CL	3A	4	32									
2.00							3B	5	29	94	121	OB	0	791				
							4A	6	32									
1.50					Moist, medium stiff gray & brown FAT CLAY w/trace of roots	CH	4B	7	50									
0.50					Moist, extremely soft gray & brown FAT CLAY w/trace of silt pockets & roots	CH	5A	8	49	72	107	OB	0	65	81	21	60	
10							NS	9										
1.00					Moist, soft to medium stiff gray LEAN CLAY	CL	6A	10	40									
1.00							6B	11	38									
1.00					Moist, very soft gray LEAN CLAY	CL	7A	12	33	89	118	OB	0	220	30	19	11	
1.00							7B	13	41									
15					Moist, soft to medium stiff gray LEAN CLAY	CL	8A	14	47									
1.50							8B	15	48									
1.50							9A	16	40	79	111	OB	0	340	46	20	26	
1.50							9B	17	36									
1.00					Moist, soft to medium stiff gray FAT CLAY	CH	10A	18	57	67	105	OB	0	320	74	25	49	
20							10B	19	57									
1.00					Moist, stiff dark brown HUMUS w/trace of decayed wood	PT												
25					Moist, stiff brown & gray ORGANIC CLAY	OH	11A	24	265	19	70	OB	0	1133	346	77	269	
							11B	25	175									
1.25					Moist, stiff gray FAT CLAY w/few shell fragments	CH	12A	28	73									
30							12B	29	73									

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_STANDARD BORING LOG\_24762.GPJ\_11/17/22

NOTES:





State of Louisiana  
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 Lake Amedee and Bayou Juanita  
 St. Bernard, Louisiana

LOG OF BORING AND TEST RESULTS

**Boring: L-1**

Project No: 24762  
 Date: 06/15/2022  
 Latitude: 29.80343°  
 Longitude: -89.76429°

Elevation: 2.1  
 Datum: NAVD88  
 Water Depth: See Text  
 Total Depth: 40.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
30					Moist, stiff gray FAT CLAY w/few shell fragments	CH												
35	1.50				Moist, very to soft gray FAT CLAY w/trace of silt pockets	CH	13A 13B	34 35	82 67	61	101	OB	0	362	83	25	58	
40	0.75						14A	38	66									
45																		
50																		
55																		
60																		

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES:



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North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: R-2**

Project No: 24762  
Date: 05/08/2022  
Latitude: 29.80860°  
Longitude: -89.75278°

Elevation: -2.7  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 30.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, extremely soft brown & gray HUMUS w/trace of roots	PT	1A	0	354									
0.00					Wet, extremely soft gray & brown ORGANIC CLAY w/trace of wood & roots	OH	1B	1	132	35	81	OB	0	72	138	30	108	ORG = 16.5%
0.00							2A	2	162									
5							2B	3	152									ORG = 10.6%
0.00							3A	4	135									
0.00							3B	5	101	45	91	UC	--	22	91	23	68	
0.00							4A	6	95									
0.00							4B	7	98	46	91	OB	0	85	101	25	76	
0.00							5A	8	109									
0.00							5B	9	127	36	83	OB	0	78	172	49	123	CONS; SPEC GRAV
0.00							6A	10	100									
0.00							6B	11	207	25	76	OB	0	120	233	59	174	
0.00							7A	12	108									
0.00							7B	13	132									
0.00							8A	14	119									
0.00							8B	15	176	29	79	OB	0	93	227	36	191	
0.00							9A	16	118									
0.00							9B	17	243									
0.00							10A	18	143									
0.00							10B	19	128									
0.00							11A	23	140									
0.00					Moist, extremely soft gray FAT CLAY w/few silt pockets & organic matter	CH	11B	24	105	44	90	OB	0	69	123	33	90	
0.00							12A	28	158									
0.00					Moist, soft gray & brown ORGANIC CLAY w/few roots, decayed wood, & trace of humus layers	OH	12B	29	136									

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring R-2 was drilled in 2-ft 5-in of water.



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North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: R-4**

Project No: 24762  
Date: 05/07/2022  
Latitude: 29.80792°  
Longitude: -89.75635°

Elevation: -1.7  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 30.0 ft

Scale in Feet	PP	SPT	SPLR	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, extremely soft dark gray & brown HUMUS w/few roots	PT	1A	0	1213									
0.00					Wet, extremely soft gray ORGANIC CLAY w/few roots	OH	1B	1	198									
0.00					Wet, extremely soft brown HUMUS w/few roots, decayed wood, & trace of organic clay layers	PT	2A	2	279									ORG = 73.2% CONS; SPEC GRAV
0.00					Wet, extremely soft gray ORGANIC CLAY w/few decayed wood & roots	OH	2B	3	153	33	83	OB	0	67	174	41	133	
5					Wet, extremely soft black HUMUS w/few decayed wood & roots	Pt	3B	4	187									
0.00					Wet, extremely soft gray ORGANIC CLAY	OH	3A	5	459	12	67	OB	0	120	529	131	398	ORG = 46.7%
0.00					Wet, extremely soft black HUMUS w/few decayed wood & roots	PT	4A	6	160									
0.00					Wet, extremely soft gray ORGANIC CLAY	OH	4B	7	253									
0.00					Wet, extremely soft black HUMUS w/few decayed wood & roots	PT	5A	8	230									
10					Wet, extremely soft black HUMUS w/few decayed wood & roots	PT	5B	9	476	11	65	OB	0	73	448	118	330	
0.00					Wet, extremely soft brown & gray HUMUS w/few roots & decayed wood	PT	6A	10	296									
0.00					Wet, extremely soft brown & gray HUMUS w/few roots & decayed wood	PT	6B	11	508									
0.00					Wet, extremely soft brown & gray ORGANIC CLAY w/trace of decayed wood	OH	7A	12	461									
0.00					Wet, extremely soft brown & gray ORGANIC CLAY w/trace of decayed wood	OH	7B	13	169	30	81	OB	0	54	145	39	106	
15					Moist, soft gray LEAN CLAY W/SAND (fine)	CL	8A	14	165									
0.00					Moist, soft gray LEAN CLAY W/SAND (fine)	CL	8B	15	43	78	112	UC	--	91	41	22	19	
0.00					Wet, extremely soft brown & gray FAT CLAY w/few organic matter	CH	9A	16	108									
0.00					Moist, loose gray SILT w/few clay	ML	9B	17	33	89	118	OB	0	650	NP	NP	NP	
0.00					Moist, extremely soft gray & tan FAT CLAY w/trace of organic matter	CH	10A	18	108									
0.00					Moist, medium loose fine SILTY SAND w/trace of clay pockets	SM	10B	19	29									
20					Moist, extremely soft gray, tan, & brown FAT CLAY w/few organic matter & fine sand layers	CH	11A	23	104	45	91	OB	0	197	112	30	82	
25					Moist, extremely soft gray, tan, & brown FAT CLAY w/few organic matter & fine sand layers	CH	11B	24	37									
30					Wet, loose gray fine SILTY SAND	SM	PB-12	28	27									

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring R-4 was drilled in 3 feet of water.



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North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: T-1**

Project No: 24762  
Date: 05/05/2022  
Latitude: 29.79356°  
Longitude: -89.74896°

Elevation: -3.0  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 30.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, extremely soft dark gray & brown HUMUS	PT	1A	0	1142									
0.00							NS	1										
0.00					Wet, very soft gray & brown ORGANIC CLAY w/few humus layers	OH	2A	2	273									
							NS	3										
5					Wet, extremely soft gray & brown ORGANIC CLAY w/trace of roots & decayed wood	OH	3A	4	144									
0.00							3B	5	181	29	80	UC	--	38	179	38	141	
							4A	6	205									
0.00					Moist, very soft dark gray & gray HUMUS w/few roots	PT	4B	7	237	22	74	OB	0	36	209	60	149	
0.00					Wet, extremely soft brown, gray, & tan ORGANIC CLAY w/few roots & decayed wood	OH	5A	8	177									
							5B	9	163									
10					Wet, very soft dark brown ORGANIC CLAY w/few humus, roots, & decayed wood	OH	6B	11	266	20	72	OB	0	181	254	116	138	
0.00							7A	12	257									
0.25					Wet, extremely soft to very soft brown & gray ORGANIC CLAY w/few roots & trace of shell fragments	OH	7B	13	156									
							8A	14	259									
15					Wet, very soft brown ORGANIC CLAY w/trace of decayed wood	OH	8B	15	151	33	83	OB	0	133	184	41	143	
0.50							9A	16	142									
0.50					Wet, extremely soft to very soft gray FAT CLAY w/few organic matter, decayed wood, & trace of silt pockets & lenses	CH	9B	17	128									
							10A	18	86									
20					Wet, very loose gray SILT W/CLAY	ML	10B	19	90	49	93	OB	0	75	105	27	78	CONS; SPEC GRAV
							11A	23	36									
25							11B	24	37	82	112	OB	0	178	NP	NP	NP	
							12A	28	59									
30					w/trace of organic matter & sand		12B	29	31	91	119	OB	0	777	NP	NP	NP	

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NOTES: Boring T-1 was drilled in 1-ft of water.



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North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

## LOG OF BORING AND TEST RESULTS

**Boring: T-2**

Project No: 24762  
Date: 05/08/2022  
Latitude: 29.79844°  
Longitude: -89.74601°

Elevation: -1.9  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 30.0 ft

Scale in Feet	PP	SPT	SPLR	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, extremely soft brown humus w/few roots & trace of humus	PT	1A	0	672									
0.00					Wet, extremely soft gray & brown ORGANIC CLAY w/few roots & humus layers	OH	1B	1	285						254	67	187	
0.00							2A	2	113									
0.00							2B	3	140	35	84	OB	0	43	154	35	119	
5							3A	4	120									
0.00					w/few decayed wood		3B	5	183	27	77	OB	0	58	176	38	138	
0.00							4A	6	105									
0.00					Wet, extremely soft brown & gray HUMUS w/few decayed wood & roots	PT	4B	7	254	21	75	UC	--	41				
0.00							5A	8	243									
10							5B	9	161	30	78	OB	0	67	200	52	148	
0.00							6A	10	220									
0.00							6B	11	261									
0.00					Wet, extremely soft brown & gray ORGANIC CLAY w/few roots	OH	7A	12	167									
0.00							7B	13	90	49	94	OB	0	25	90	26	64	
15							8A	14	144									
0.00							8B	15	114									
0.00					Wet, extremely soft brown & gray FAT CLAY w/few organic matter & roots	CH	9A	16	79									
0.00							9B	17	84	51	95	OB	0	31	91	25	66	
0.00					Moist, extremely soft to very soft gray & tan FAT CLAY w/trace of organic matter & roots	CH	10A	18	120									
0.00							10B	19	127									
0.00							11A	23	102									
25					Wet, very loose gray SILT W/CLAY	ML	11B	24	38	83	115	OB	0	200	NP	NP	NP	
0.00					Moist, very soft gray FAT CLAY w/trace of decayed wood & silt lenses	CH												
0.00							12A	28	62									
0.00					Wet, loose gray fine POORLY GRADED	SP	12B	29	34									

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NOTES: Boring T-2 was drilled in 2-ft of water.



State of Louisiana  
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North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

LOG OF BORING AND TEST RESULTS

**Boring: T-2**

Project No: 24762  
Date: 05/08/2022  
Latitude: 29.79844°  
Longitude: -89.74601°

Elevation: -1.9  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 30.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C <sub>psf</sub>	LL	PL	PI	
30					SAND w/trace of clay pockets & lenses													
35																		
40																		
45																		
50																		
55																		
60																		

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring T-2 was drilled in 2-ft of water.



State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: BA-1**

Project No: 24762  
Date: 05/10/2022  
Latitude: 29.76775°  
Longitude: -89.69448°

Elevation: -5.2  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 20.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C pcf	LL	PL	PI	
0					Wet, extremely soft brown ORGANIC CLAY w/trace of shell fragments & decayed wood	OH	1A	0	238	24	82				171	44	127	ORG = 14.4%
0.00						OH	1B	1	177									
0.00					Wet, extremely soft brown & gray ORGANIC CLAY w/trace of decayed wood	OH	2A	2	120	35	78				106	33	73	ORG = 7.0%
						OH	2B	3	223									
5						OH	3A	4	97	40	79							ORG = 5.1%
						OH	3B	5	225						275	59	216	#200 = 93.1%
0.00					Wet, extremely soft gray & brown ORGANIC CLAY w/few fine sand & trace of decayed wood	OH	4A	6	241	23	80				159	37	122	ORG = 7.0%
					Wet, extremely soft gray & brown ORGANIC CLAY w/few decayed wood & shell fragments	OH	4B	7	262									
0.00						OH	5A	8	171	32	87				84	24	60	ORG = 2.4%
						CH	5B	9	141									
10					Wet, extremely soft gray FAT CLAY w/trace of shell fragments	CH	6A	10	106	47	97				90	24	66	#200 = 98.8% PD
						CH	6B	11	121									ORG = 4.0%
0.00					Wet, extremely soft gray & brown FAT CLAY w/few organic matter	CH	7A	12	128	39	89				87	23	64	#200 = 93.8%
					Wet, extremely soft gray FAT CLAY w/few fine sand, trace of organic matter, & shell fragments	CH	7B	13	108									
15						CH	8A	14	101	45	90							
0.25					Wet, extremely soft gray FAT CLAY w/trace of organic matter	CH	8B	15	72						58	22	36	
					Wet, extremely soft gray FAT CLAY w/trace of silt pockets & lenses	CH	9A	16	69	60	102							
0.25					Moist, soft gray LEAN CLAY	CL	9B	17	37						57	18	39	
						CH	10A	18	78	57	102							#200 = 99.8% PD
0.25					Moist, extremely soft gray FAT CLAY w/few silt pockets, & shell fragments & lenses	CH	10B	19	69						34	20	14	
20																		
25																		
30																		

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring BA-1 was drilled in 6 feet of water.



State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: BA-2**

Project No: 24762  
Date: 05/10/2022  
Latitude: 29.76783°  
Longitude: -89.69249°

Elevation: -4.4  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 20.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests	
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI		
0					Wet, extremely soft gray ORGANIC CLAY w/trace of shell fragments & decayed wood	OH	1A	0	165	31	83				203	48	155	ORG = 16.5%	
					Wet, extremely soft gray & tan ORGANIC CLAY w/trace of decayed wood	OH	1B	1	155										
								2A	2	210	26	80				128	32	96	ORG = 7.8%
								2B	3	239									
5								3A	4	218	25	81				186	48	138	ORG = 10.5%
								3B	5	123									
						Wet, extremely soft gray & brown ORGANIC CLAY w/trace of decayed wood & shell fragments	OH	4A	6	138	35	82				133	33	100	ORG = 8.4%
								4B	7	203									
10								5A	8	146	33	81				125	36	89	#200 = 99.6% ORG = 9.8% HYDRO
								5B	9	134									
								6A	10	133	36	83				137	40	97	
								6B	11	134									
								7A	12	125	40	91				87	27	60	#200 = 99.6% ORG = 4.7%
								7B	13	126									
15								8A	14	143	37	90				97	27	70	
								8B	15	137									
						Wet, extremely soft gray, tan, & brown FAT CLAY w/trace of decayed wood, shell fragments, organic matter, & silt pockets & lenses	CH	9A	16	129	39	90							
20	0.50							9B	17	118									#200 = 99.7% ORG = 4.7%
								10A	18	116	45	98				37	21	16	
							10B	19	102										

EUSTIS\_GINT\_LIBRARY\_11\_ & 2022.GLB\_EE STANDARD BORING LOG\_24762.GPJ 11/17/22

NOTES: Boring BA-2 was drilled in 6 feet 2 inches of water.





State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

LOG OF BORING AND TEST RESULTS

**Boring: BA-3**

Project No: 24762  
Date: 05/10/2022  
Latitude: 29.76572°  
Longitude: -89.69618°

Elevation: -5.0  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 20.0 ft

Scale in Feet	PP	SPT	SPT R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0	0.00				Wet, extremely soft dark gray ORGANIC CLAY w/few shell fragments	OH	1A	0	174	31	85							
					Wet, extremely soft gray & brown ORGANIC CLAY w/trace of decayed wood & organic matter	OH	1B	1	165									
	0.00						PB-2	2	93									#200 = 95.7% ORG = 10.0%
							3A	4	168	31	83							ORG = 9.9%
5	0.00				Wet, extremely soft gray & brown ORGANIC CLAY w/trace of roots & shell fragments	OH	3B	5	114									
							4A	6	155	35	90							ORG = 11.5%
	0.00				Wet, extremely soft gray FAT CLAY w/trace of shell fragments	CH	4B	7	96									
							5A	8	110	42	87							
10	0.00						5B	9	98									
							6A	10	104	43	87							
	0.00						6B	11	102									#200 = 99.5%
							7A	12	115	34	74							
	0.00				Moist, extremely soft gray & tan FAT CLAY w/trace of decayed wood & shell fragments	CH	7B	13	122									
15	0.00					CH	8A	14	123	41	91							#200 = 98.5% PD
					Moist, extremely soft gray & tan FAT CLAY w/trace of silt pockets & shell fragments	CH	8B	15	68									#200 = 99.5% PD
	0.00						9A	16	123	42	93							
							9B	17	90									
	0.50						10A	18	135	40	93							
20							10B	19	68									
25																		
30																		

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring BA-3 was drilled in 6 feet of water.



State of Louisiana  
Coastal Protection  
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North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: BA-3**

Project No: 24762  
Date: 05/10/2022  
Latitude: 29.76572°  
Longitude: -89.69618°

Elevation: -5.0  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 20.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C pcf	LL	PL	PI	
0	0.00				Wet, extremely soft dark gray ORGANIC CLAY w/few shell fragments	OH	1A	0	174	31	85							
					Wet, extremely soft gray & brown ORGANIC CLAY w/trace of decayed wood & organic matter	OH	1B	1	165									#200 = 95.7% ORG = 10.0%
	0.00						PB-2	2	93									
5	0.00				Wet, extremely soft gray & brown ORGANIC CLAY w/trace of roots & shell fragments	OH	3A	4	168	31	83							ORG = 9.9%
							3B	5	114									
	0.00						4A	6	155	35	90							ORG = 11.5%
							4B	7	96									
	0.00				Wet, extremely soft gray FAT CLAY w/trace of shell fragments	CH	5A	8	110	42	87							
							5B	9	98									
10	0.00						6A	10	104	43	87							
							6B	11	102									
	0.00						7A	12	115	34	74							
							7B	13	122									
	0.00				Moist, extremely soft gray & tan FAT CLAY w/trace of decayed wood & shell fragments	CH	8A	14	123	41	91							#200 = 98.5% PD
15	0.00					CH	8B	15	68									#200 = 99.5% PD
					Moist, extremely soft gray & tan FAT CLAY w/trace of silt pockets & shell fragments		9A	16	123	42	93							
	0.00						9B	17	90									
							10A	18	135	40	93							
20	0.50						10B	19	68									

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE STANDARD BORING LOG\_24762.GPJ 11/17/22

NOTES: Boring BA-3 was drilled in 6 feet of water.



State of Louisiana  
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North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: BA-4**

Project No: 24762  
Date: 05/12/2022  
Latitude: 29.76454°  
Longitude: -89.69290°

Elevation: -5.2  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 20.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, extremely soft brown & gray ORGANIC CLAY w/trace of decayed wood	OH	1A	0	200	28	84							ORG = 10.0%
0.50							1B	1	129									ORG = 5.3%
					Wet, extremely soft brown & gray HUMUS	PT	2A	2	462	15	82							ORG = 32.9%
0.50							2B	3	555									ORG = 9.4%
							3A	4	205	31	95							
5					Wet, extremely soft brown & gray ORGANIC CLAY w/few decayed wood	OH	3B	5	245									ORG = 52.2%
0.50							4A	6	184	31	88							ORG = 6.4%
0.50							4B	7	153									
							5A	8	171	33	90							
0.50							5B	9	159									ORG = 9.5%
10					Wet, extremely soft tan & gray FAT CLAY w/trace of silt pockets & organic matter	CH	6A	10	153	37	94							
0.50							6B	11	86									
							7A	12	150	38	95							
0.50							7B	13	94									#200 = 99.8%
					Wet, extremely soft tan & gray FAT CLAY w/trace of silt pockets, organic matter, & shell fragments	CH	8A	14	88	52	98							
15							8B	15	97									#200 = 99.4% PD
0.50							9A	16	102	50	101							
					Wet, extremely soft gray FAT CLAY w/trace of silt pockets	CH	9B	17										
1.00							10A	18	97	47	93							
							10B	19	103									
20																		
25																		
30																		

EUSTIS\_GINT\_LIBRARY\_11\_ & 2022.GLB\_EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring BA-4 was drilled in 6 feet of water.



State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: BA-5**

Project No: 24762  
Date: 05/12/2022  
Latitude: 29.76569°  
Longitude: -89.69017°

Elevation: -5.0  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 20.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, extremely soft brown & gray ORGANIC CLAY w/trace of shell fragments	OH	1A	0	163	28	73							
0.50					Wet, extremely soft brown & gray HUMUS w/trace of shell fragments	PT	1B	1	206									#200 = 72.1% ORG = 39.7%
0.50					Wet, extremely soft brown & gray ORGANIC CLAY	OH	2A	2	177	28	76							ORG = 5.9%
0.50					Wet, extremely soft brown & gray FAT CLAY w/organic clay lenses	OH	3A	4	209	26	79							ORG = 9.5%
5					Wet, extremely soft brown & gray ORGANIC CLAY	CH	2B	3	137									
0.50					Wet, extremely soft brown & gray HUMUS	PT	3B	5	152									
0.50					Wet, extremely soft brown & gray FAT CLAY w/trace of shell fragments	CH	4A	6	172	29	79							ORG = 34.8%
0.50					Wet, extremely soft gray & dark gray FAT CLAY w/few organic matter & trace of shell fragments	CH	4B	7	339	35	88							ORG = 6.8%
10					Wet, extremely soft tan & gray ORGANIC CLAY w/trace of decayed wood	CH	5A	8	148	32	84							#200 = 98.2%
0.50					Wet, extremely soft tan & gray ORGANIC CLAY	CH	5B	9	90									
0.50					Wet, extremely soft tan & gray FAT CLAY	CH	6A	10	164	33	82							ORG = 3.6%
0.50					Wet, extremely soft tan & gray FAT CLAY	CH	6B	11	161									
0.50					Wet, extremely soft gray & tan ORGANIC CLAY w/trace of clay lenses, silt pockets, & organic matter	CH	7A	12	149	33	82							
15					Wet, extremely soft gray & tan FAT CLAY w/trace of decayed wood & shell fragments	CH	7B	13	98									
0.50					Wet, extremely soft gray & tan ORGANIC CLAY w/trace of clay lenses, silt pockets, & organic matter	CH	8A	14	152	34	86							#200 = 98.5% ORG = 5.8% PD
0.50					Wet, extremely soft gray & tan FAT CLAY w/trace of decayed wood & shell fragments	CH	8B	15	86									
0.50					Wet, extremely soft gray & tan FAT CLAY w/trace of decayed wood & shell fragments		9A	16	96	45	89							
0.50					Wet, extremely soft gray & tan FAT CLAY w/trace of decayed wood & shell fragments		9B	17	99									
1.00					Wet, extremely soft gray & tan FAT CLAY w/trace of decayed wood & shell fragments		10A	18	99	46	91							
20					Wet, extremely soft gray & tan FAT CLAY w/trace of decayed wood & shell fragments		10B	19	95									

EUSTIS\_GINT\_LIBRARY\_11\_ & 2022.GLB EE STANDARD BORING LOG\_24762.GPJ 11/17/22

NOTES: Boring BA-5 was drilled in 6 feet of water.



State of Louisiana  
Coastal Protection  
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North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: BA-6**

Project No: 24762  
Date: 05/10/2022  
Latitude: 29.76335°  
Longitude: -89.69820°

Elevation: -5.2  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 20.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Moist, extremely soft gray FAT CLAY w/trace of silt pockets & organic matter	CH	1A	0	73	60	103							ORG = 3.5%
0.00					Moist, loose gray & tan fine POORLY GRADED SAND w/few clay layers	SP	1B	1	69									
0.00					Wet, extremely soft gray FAT CLAY w/trace of shell fragments	CH	2A	2	102	44	88							#200 = 99.4% PD
5							2B	3	65									
0.00							3A	4	93	49	95							#200 = 99.3%
0.00					Wet, extremely soft gray FAT CLAY w/trace of silt pockets & shell fragments	CH	3B	5	78									
0.00							4A	6	90	50	95							ORG = 4.3%
0.00							4B	7	98									
0.25					Moist, very soft gray FAT CLAY w/few decayed wood & shell fragments	CH	5A	8	92	53	101							ORG = 3.4%
10							5B	9	100									
0.00							6A	10	101	47	94							
0.00					Wet, extremely soft gray FAT CLAY w/trace of silt pockets, fine sand pockets, organic matter, & shell fragments	CH	6B	11	96									
0.00							7A	12	105	46	95							#200 = 96.8% PD
0.00							7B	13	92									
15							8A	14	107	47	97							
0.00							8B	15	106									
0.00							9A	16	99	48	96							ORG = 3.2%
0.00							9B	17	95									
0.25					Wet, extremely soft gray & tan FAT CLAY w/few roots, trace of shell fragments, & organic matter	CH	10A	18	92	49	94							ORG = 6.7%
20							10B	19	99									

EUSTIS\_GINT\_LIBRARY\_11\_ & 2022.GLB EE STANDARD BORING LOG\_24762.GPJ 11/17/22

NOTES: Boring BA-6 was drilled in 6 feet of water.



State of Louisiana  
Coastal Protection  
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North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: BA-7**

Project No: 24762  
Date: 05/12/2022  
Latitude: 29.76199°  
Longitude: -89.69370°

Elevation: -4.9  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 20.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, extremely soft brown & gray ORGANIC CLAY w/trace of shell fragments * roots	OH	1A	0	232	28	93							
0.50							1B	1	137									ORG = 4.1%
					Wet, extremely soft gray & tan FAT CLAY w/few organic matter & shell fragments	CH	2A	2	121	41	91							#200 = 97.1%
0.50							2B	3	120									ORG = 5.2%
5							3A	4	114	45	95							
0.50							3B	5	115									#200 = 91.9% ORG = 4.8%
0.50							4A	6	104	42	86							
0.50							4B	7	102									
0.50							5A	8	101	48	96							
10							5B	9	62									#200 = 98.0% ORG = 3.3%
0.50							6A	10	119	41	89							
0.50							6B	11	105									ORG = 4.6%
0.50							7A	12	85	50	94							
0.50							7B	13	88									
15					Wet, extremely soft gray & tan FAT CLAY w/trace of silt pockets	CH	8A	14	88	51	96							
0.50							8B	15	91									#200 = 99.3% PD
0.50							9A	16	87	50	94							
0.50							9B	17	75									
20					Moist, extremely soft gray & tan FAT CLAY w/trace of silt pockets & shell fragments	CH	10A	18	80	53	95							
1.00							10B	19	86									

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring BA-7 was drilled in 6 feet of water.



State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: BA-8**

Project No: 24762  
Date: 05/11/2022  
Latitude: 29.76204°  
Longitude: -89.68899°

Elevation: -5.4  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 20.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests	
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI		
0					Wet, extremely soft gray & brown ORGANIC CLAY w/trace of decayed wood & shell fragments	OH	1A	0	136	35	83				109	28	81	ORG = 6.3% -#200 = 97.3% ORG = 9.9%	
0.00			1B				1	116											
			2A				2	111				42	89				104		26
0.00					Wet, extremely soft gray & tan FAT CLAY w/trace of silt pockets, shell fragments, & few fine sand pockets	OH	3A	3	114										-#200 = 92.0%
5			3B				4	111				44	92						
0.00			4A				5	126				37	82				113	31	
0.00					Wet, extremely soft gray FAT CLAY w/few organic matter & trace of shell fragments	CH	5A	6	123										ORG = 5.7%
10			5B				7	122				44	96						
0.00			6A				8	118				37	82				80	23	
0.00					Wet, extremely soft gray & brown FAT CLAY w/few decayed wood	CH	6A	9	133										ORG = 3.9%
0.00			6B				10	118				44	96						
0.00			7A				11	98				47	97				86	21	
0.00					Wet, extremely soft gray & tan FAT CLAY w/trace of organic matter & shell fragments	CH	7A	12	106										-#200 = 99.0%
0.00			7B				13	86				52	98						
0.00			8A				14	89				47	97				88	23	
15					Wet, extremely soft gray & tan FAT CLAY w/trace of silt pockets & shell fragments	CH	8A	15	97										-#200 = 99.0%
0.00			8B				16	87				52	98						
0.00			9A				17	77				52	98				65	21	
0.00					Wet, extremely soft to soft gray FAT CLAY w/trace of silt pockets & lenses	CH	9B	18	67										-#200 = 99.2% PD
0.00			10A	19			34				61	101							
20				Moist, soft gray LEAN CLAY	CL	10B	19	34											

EUSTIS\_GINT\_LIBRARY\_11\_ & 2022.GLB EE STANDARD BORING LOG\_24762.GPJ 11/17/22

NOTES: Boring BA-8 was drilled in 6 feet of water.



State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: BA-9**

Project No: 24762  
Date: 05/11/2022  
Latitude: 29.76068°  
Longitude: -89.69680°

Elevation: -5.2  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 20.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, extremely soft brown & gray ORGANIC CLAY	OH	1A	0	239	27	91							ORG = 10.1% ORG = 5.0%
0.00							1B	1	130									
							2A	2	109	45	94							
0.00					Wet, extremely soft gray & tan FAT CLAY w/trace of shell fragments	CH	2B	3	99									#200 = 97.0% ORG = 3.2%
							3A	4	119	42	92							
5					Wet, extremely soft gray & tan FAT CLAY w/trace of silt pockets & organic matter	CH	3B	5	81									#200 = 98.1% ORG = 4.0%
0.00							4A	6	109	45	94							
0.00					Wet, extremely soft gray & tan FAT CLAY w/few shell fragments & trace of silt pockets	CH	4B	7	111									
							5A	8	97	51	100							
0.00							5B	9	109									
10							6A	10	96	50	99							
0.00							6B	11	89									
0.00							7A	12	75	55	95							#200 = 98.1% PD
0.00							7B	13	82									
							8A	14	79	52	93							
15							8B	15	90									
0.50							9A	16	69	55	94							
							9B	17	90									
0.50							10A	18	88	56	105							
20					Moist, loose gray SILT W/SAND (fine), & trace of clay pockets & lenses	ML	10B	19	29									#200 = 71.6% SV
25																		
30																		

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring BA-9 was drilled in 6 feet of water.





State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: BA-10**

Project No: 24762  
Date: 05/11/2022  
Latitude: 29.76069°  
Longitude: -89.69099°

Elevation: -5.0  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 20.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests	
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI		
0					Wet, extremely soft brown & gray ORGANIC CLAY w/trace of shell fragments	OH	1A	0	257	28	100								
							1B	1	278										#200 = 98.4% ORG = 4.1%
							2A	2	140	41	99								
					Wet, extremely soft gray & tan FAT CLAY w/few organic matter	CH	2B	3	121										#200 = 92.2% ORG = 5.0%; SV
5							3A	4	109	47	99								ORG = 5.4%
							3B	5	116										ORG = 5.1%
					Wet, extremely soft gray & tan ORGANIC CLAY w/trace of shell fragments	OH	4A	6	94	50	98								
							4B	7	109										
					Wet, extremely soft gray & tan FAT CLAY w/trace of silt pockets & shell fragments	CH	5A	8	96	50	98								
10							5B	9	71										#200 = 99.4% PD
							6A	10	113	44	94								
							6B	11	68										
					Wet, extremely soft gray FAT CLAY w/trace of silt pockets & shell fragments	CH	7A	12	129	40	92								
							7B	13	121										
15							8A	14	88	51	95								
							8B	15	92										
	0.50						9A	16	90	52	99								
							9B	17	74										
					Wet, extremely soft gray FAT CLAY w/few silt pockets & lenses & trace of shell fragments	CH	10A	18	66	59	98								
20	0.50				Moist, loose gray CLAYEY SILT	ML	10B	19	35										#200 = 98.8%

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring BA-10 was drilled in 6-ft of water.



State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: BA-11**

Project No: 24762  
Date: 05/12/2022  
Latitude: 29.75834°  
Longitude: -89.69354°

Elevation: -4.9  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 20.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, extremely soft tan & gray ORGANIC CLAY w/trace of shell fragments	OH	1A	0	257	25	89							ORG = 14.4%
0.50							1B	1	218									
					Wet, extremely soft tan & gray FAT CLAY w/trace of organic clay pockets & organic matter	CH	2A	2	123	39	87							
0.50							2B	3	97									#200 = 97.9% ORG = 3.1%
					Wet, extremely soft tan & gray FAT CLAY w/trace of organic matter, shell fragments, & decayed wood	CH	3A	4	130	36	82							
5							3B	5	114									#200 = 96.3%
0.50					Wet, extremely soft gray FAT CLAY w/trace of silt pockets & shell fragments	CH	4A	6	111	43	90							
0.50							4B	7	99									ORG = 3.1%
							5A	8	89	54	103							
0.50							5B	9	84									
10					Wet, extremely soft gray & tan SANDY FAT CLAY w/trace of shell fragments	CH	6A	10	58	63	100							#200 = 63.2% PD
0.50							6B	11	76									
							7A	12	86	51	95							
0.50							7B	13	87									
					w/trace of silt pockets & shell fragments		8A	14	80	58	105							
15					w/few fine sand pockets & trace of shell fragments		8B	15	67									
1.00					w/trace of silt pockets		9A	16	74	60	105							
0.50							9B	17	31									#200 = 90.9% SV
1.00					Moist, medium compact gray & tan SILT w/few fine sand & trace of clay layers	ML	10A	18	75	59	103							
0.50					Moist, extremely soft gray & tan FAT CLAY w/trace of silt pockets & layers	CH	10B	19	27									#200 = 95.2% SV
1.00					Moist, medium compact tan & gray SILT w/trace of fine sand & clay layers	ML												

EUSTIS\_GINT\_LIBRARY\_11\_ & 2022.GLB EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring BA-11 was drilled in 6-ft of water.



State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

**LOG OF BORING AND TEST RESULTS**

**Boring: BA-12**

Project No: 24762  
Date: 05/11/2022  
Latitude: 29.75830°  
Longitude: -89.68884°

Elevation: -3.9  
Datum: NAVD88  
Water Depth: See Text  
Total Depth: 20.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Wet, extremely soft gray & brown ORGANIC CLAY w/trace of roots	OH	1A	0	228	27	89							ORG = 15.4%
0.00							1B	1	159						85	20	65	
							2A	2	166	35	92							ORG = 11.3%
0.00							2B	3	175						289	76	213	
5							3A	4	147	38	94							ORG = 7.8%
0.00							3B	5	177									
					Wet, extremely soft gray FAT CLAY w/trace of organic matter & shell fragments	CH	4A	6	113	43	92							ORG = 20.5%
0.00					Wet, extremely soft brown HUMUS	PT	4B	7	447									
					Wet, extremely soft gray & tan ORGANIC CLAY w/trace of decayed wood	OH	5A	8	135	44	104							ORG = 3.2%
0.00					Wet, extremely soft gray & tan FAT CLAY w/trace of decayed wood	CH	5B	9	51									
10					Wet, extremely soft gray FAT CLAY w/trace of silt pockets & shell fragments	CH	6A	10	54	66	102							#200 = 98.5% PD
0.00							6B	11	86									
0.00							7A	12	64	62	101							
							7B	13	81									
0.00							8A	14	76	58	102							
15					Wet, extremely soft gray FAT CLAY w/trace of fine sand layers & shell fragments	CH	8B	15	81									#200 = 99.6% PD
0.00							9A	16	54	66	102							
0.25					Wet, extremely soft gray FAT CLAY w/trace of silt pockets & shell fragments	CH	9B	17	29									
					Moist, medium compact gray CLAYEY SILT w/fat clay layers	ML	10A	18	82	55	101							#200 = 96.7%
20							10B	19	32									
25																		
30																		

EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB EE STANDARD BORING LOG 24762.GPJ 11/17/22

NOTES: Boring BA-12 was drilled in 6 feet of water.

APPENDIX IV

-  1 - SENSITIVE FINE GRAINED
-  2 - ORGANIC MATERIAL
-  3 - CLAY
-  4 - SILTY CLAY TO CLAY
-  5 - CLAYEY SILT TO SILTY CLAY
-  6 - SANDY SILT TO CLAYEY SILT
-  7 - SILTY SAND TO SANDY SILT
-  8 - SAND TO SILTY SAND
-  9 - SAND
-  10 - GRAVELLY SAND TO SAND
-  11 - VERY STIFF FINE GRAINED (\*)
-  12 - SAND TO CLAYEY SAND (\*)

\*OVERCONSOLIDATED OR CEMENTED



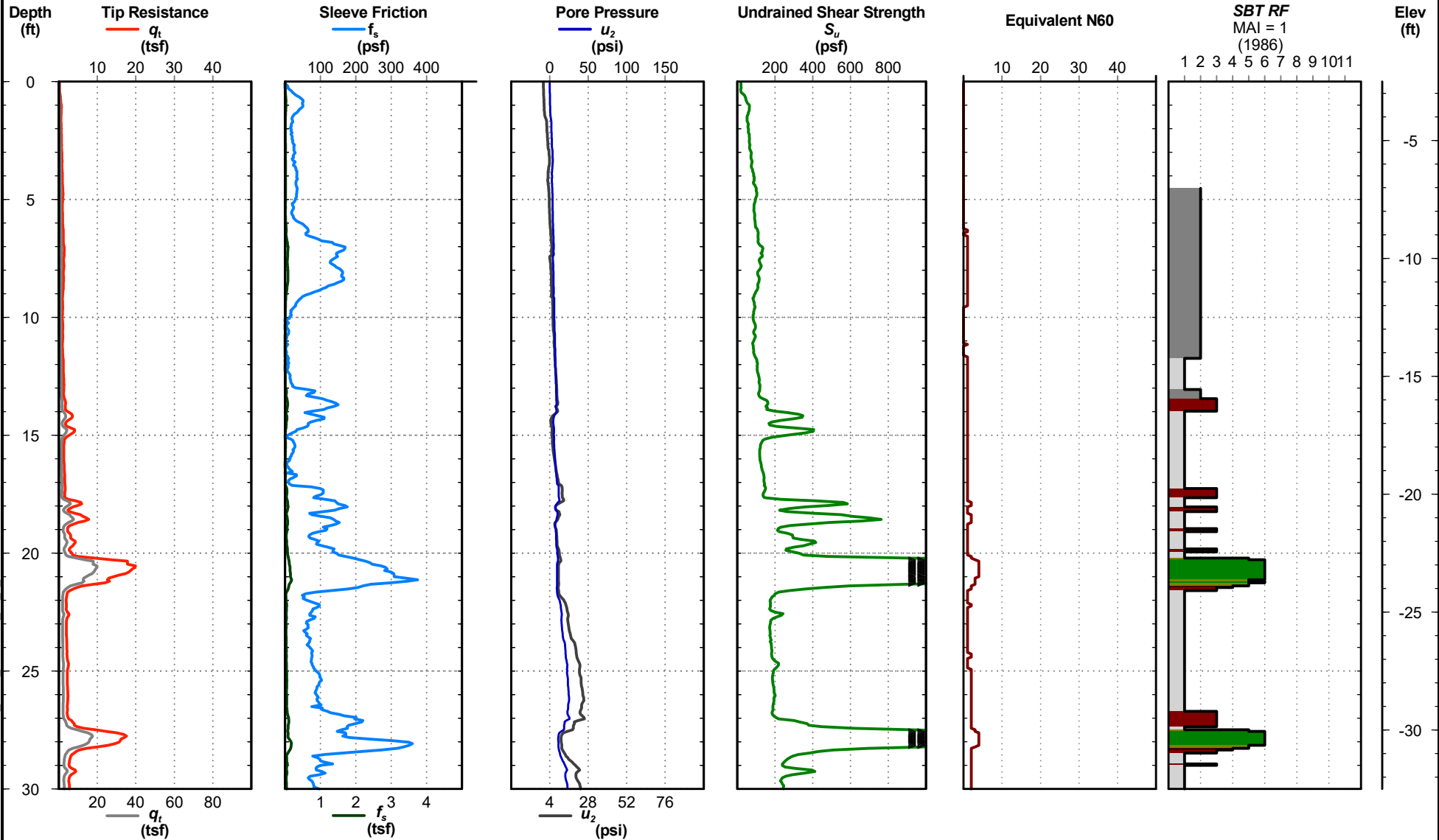
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-3

Project No: 24762  
Date: 06/01/2022  
Latitude: 29.79379°  
Longitude: -89.75588°  
CPT ID: DTA1043

Elevation: -2.5  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022\_GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)



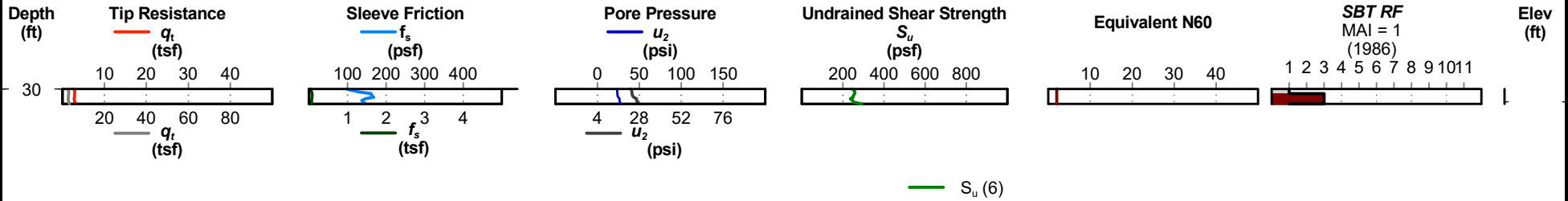
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-3

Project No: 24762  
Date: 06/01/2022  
Latitude: 29.79379°  
Longitude: -89.75588°  
CPT ID: DTA1043

Elevation: -2.5  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



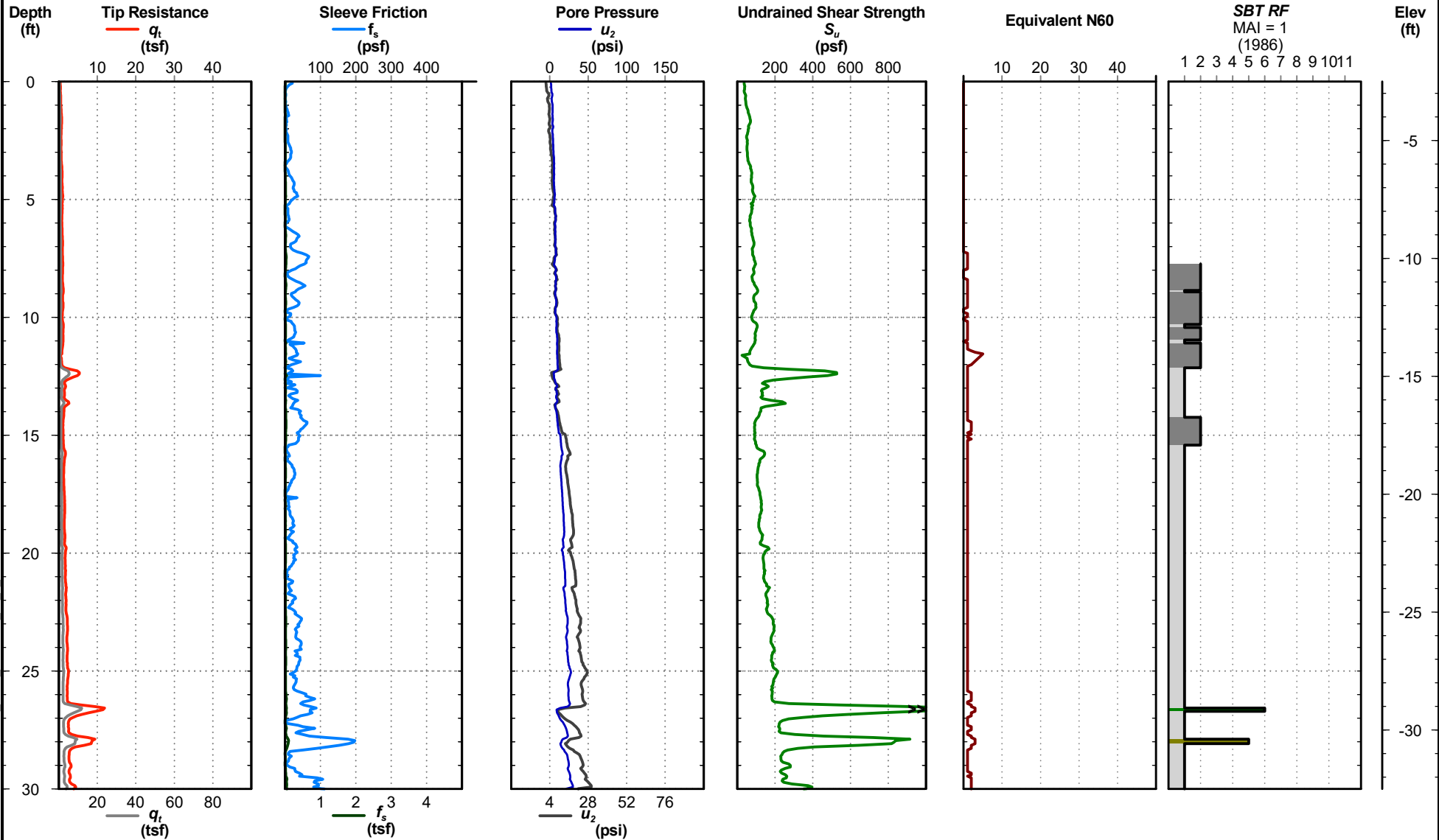
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-5

Project No: 24762  
Date: 06/01/2022  
Latitude: 29.79880°  
Longitude: -89.75674°  
CPT ID: DTA1043

Elevation: -2.5  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.3 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)





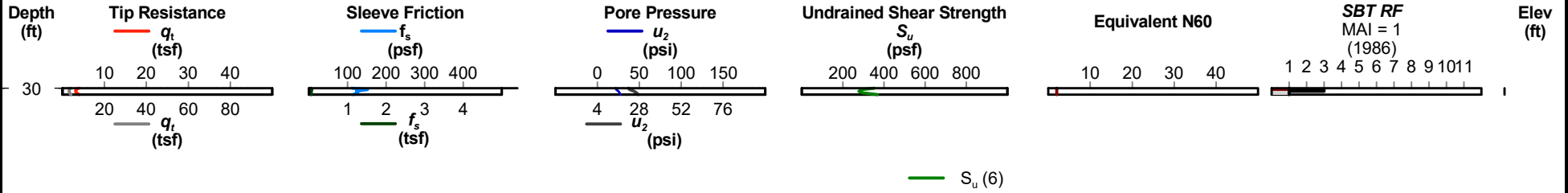
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-5

Project No: 24762  
Date: 06/01/2022  
Latitude: 29.79880°  
Longitude: -89.75674°  
CPT ID: DTA1043

Elevation: -2.5  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.3 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



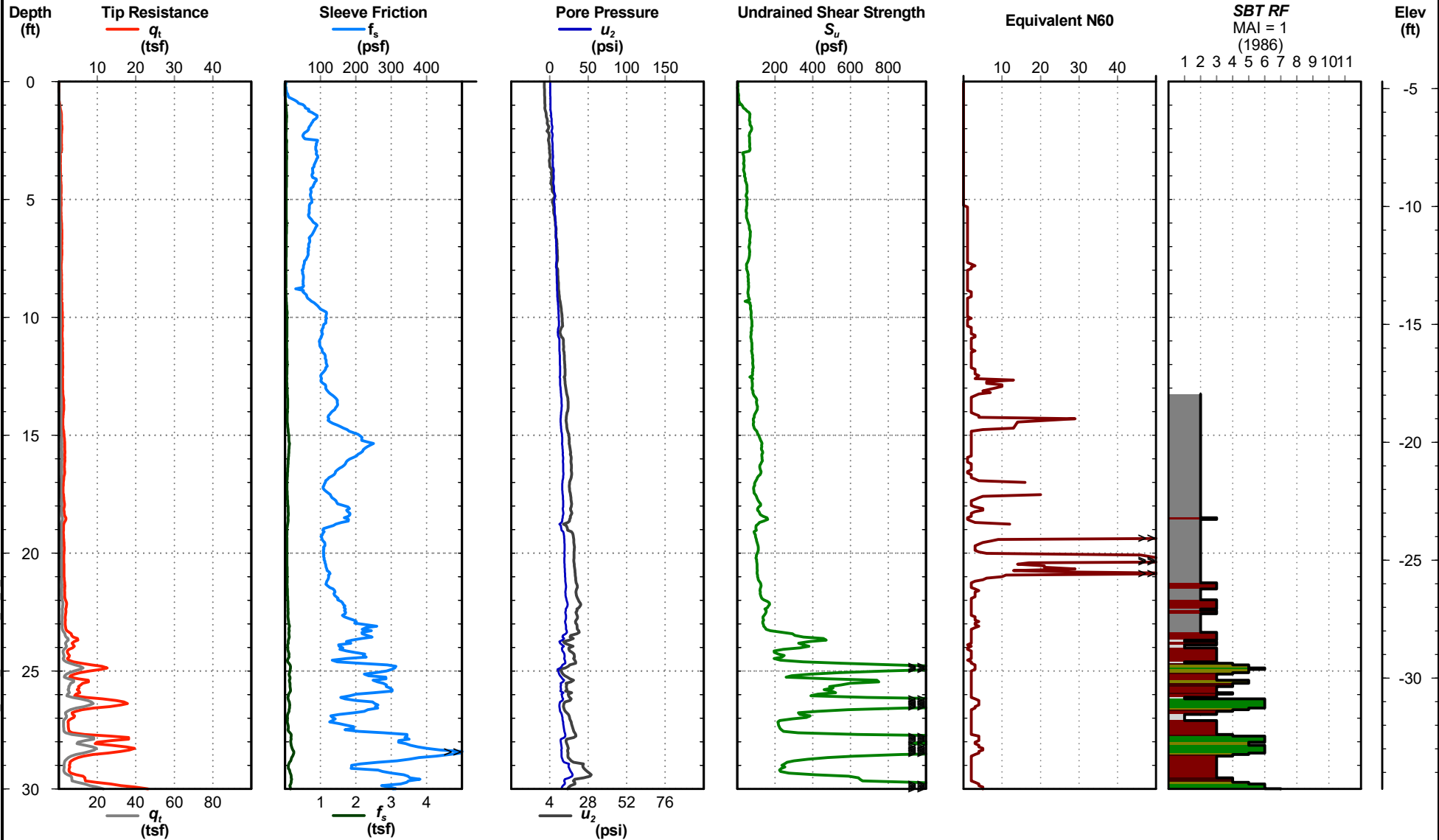
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-7

Project No: 24762  
Date: 06/02/2022  
Latitude: 29.80460°  
Longitude: -89.73728°  
CPT ID: DTA1043

Elevation: -4.7  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.5 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)



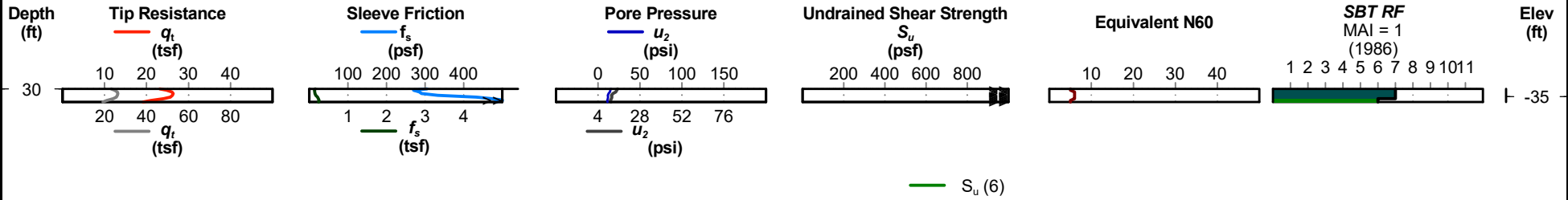
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-7

Project No: 24762  
Date: 06/02/2022  
Latitude: 29.80460°  
Longitude: -89.73728°  
CPT ID: DTA1043

Elevation: -4.7  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.5 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



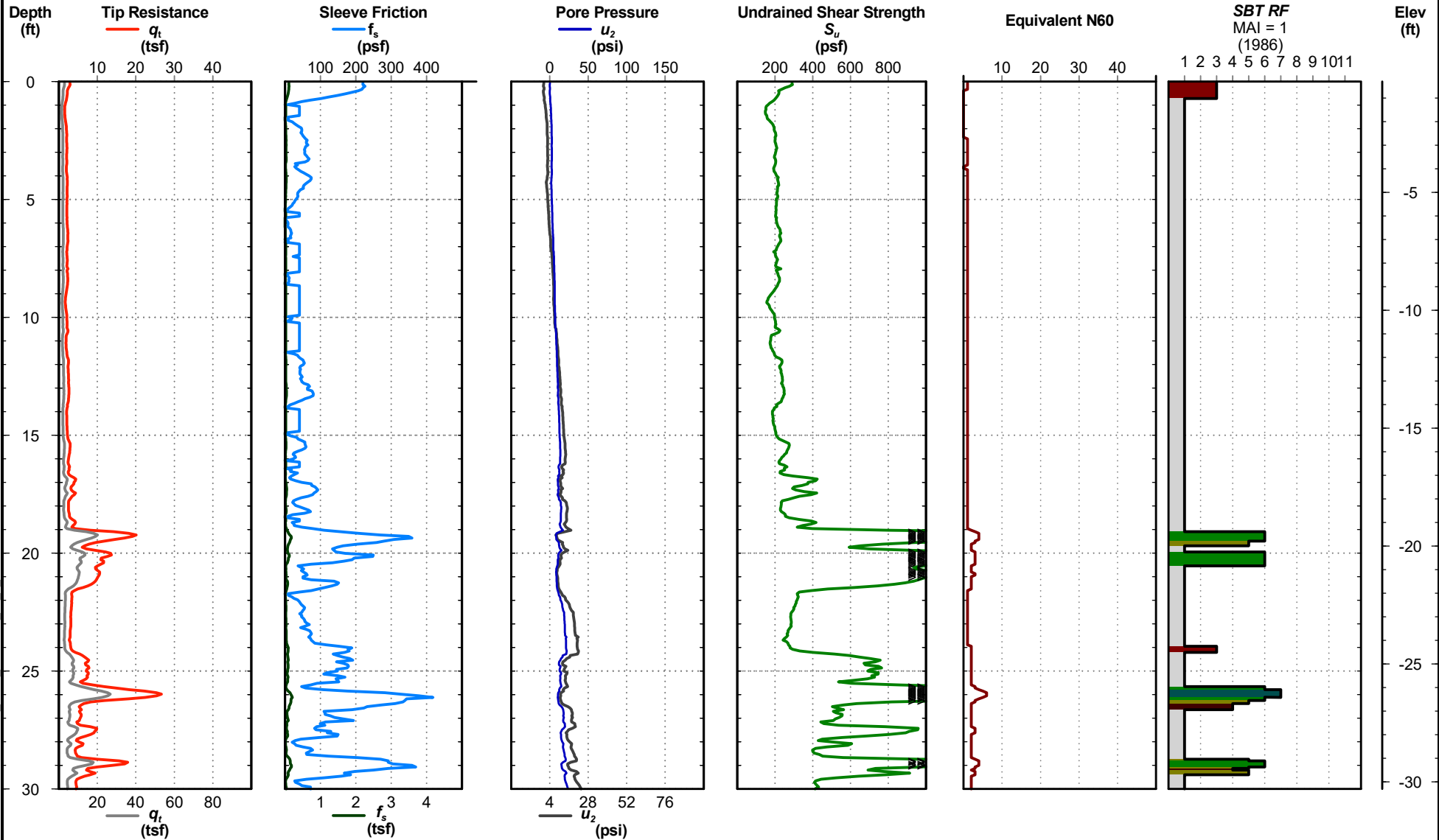
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-8

Project No: 24762  
Date: 06/02/2022  
Latitude: 29.80595°  
Longitude: -89.75973°  
CPT ID: DTA1043

Elevation: -0.3  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)



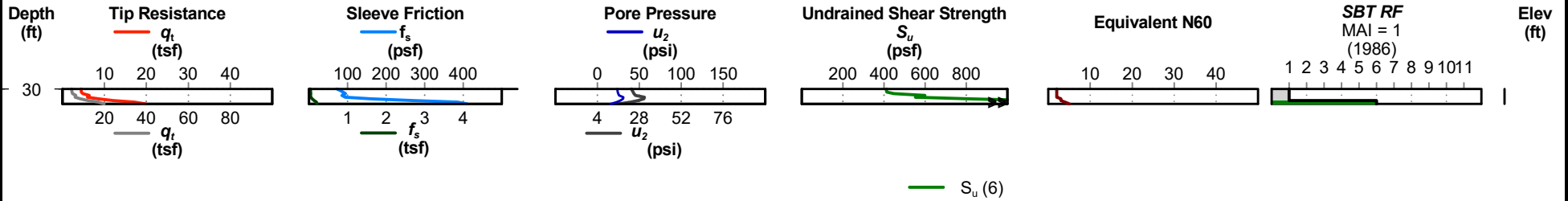
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-8

Project No: 24762  
Date: 06/02/2022  
Latitude: 29.80595°  
Longitude: -89.75973°  
CPT ID: DTA1043

Elevation: -0.3  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



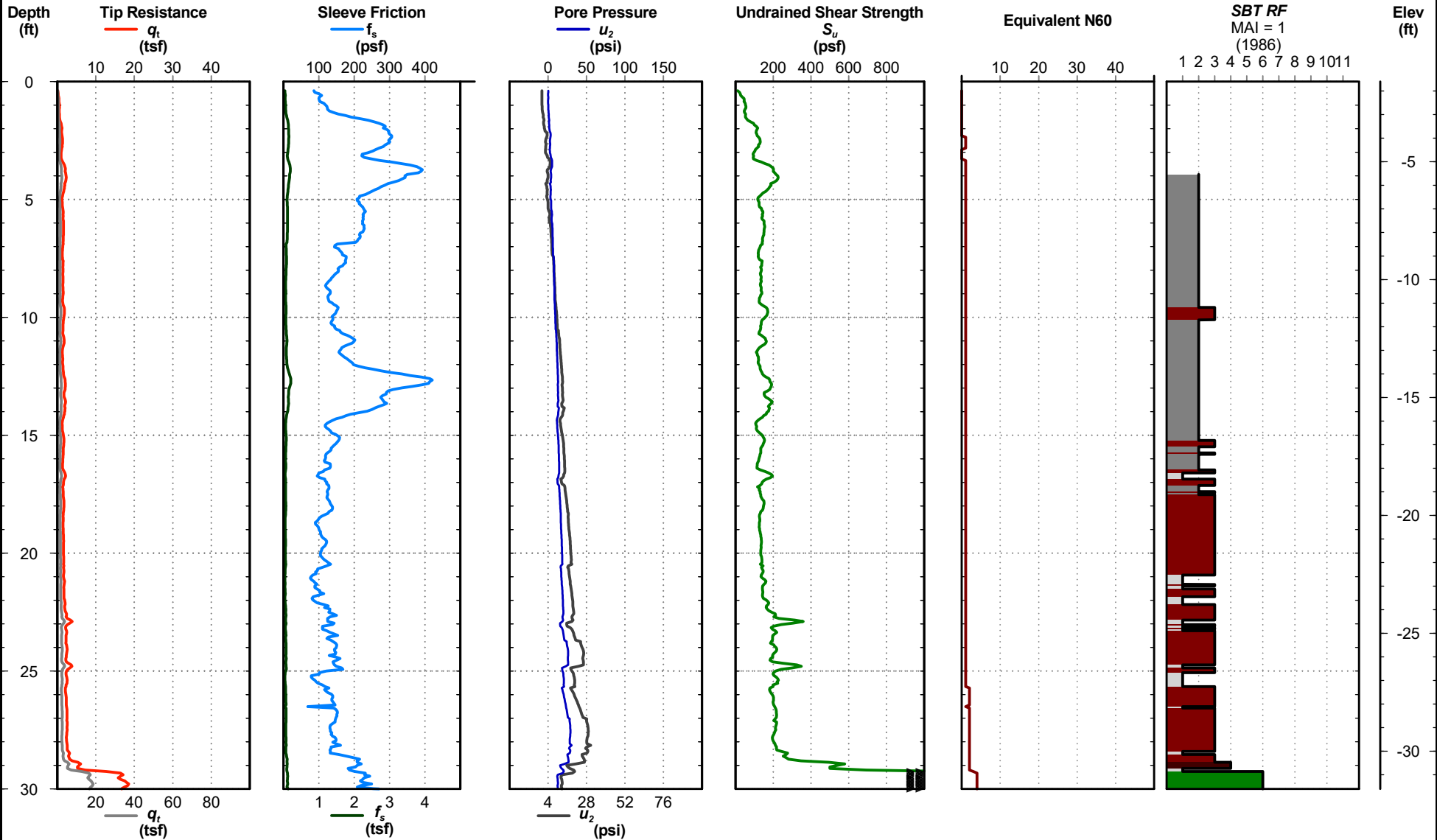
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-9

Project No: 24762  
Date: 06/01/2022  
Latitude: 29.79834°  
Longitude: -89.76305°  
CPT ID: DTA1043

Elevation: -1.6  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)



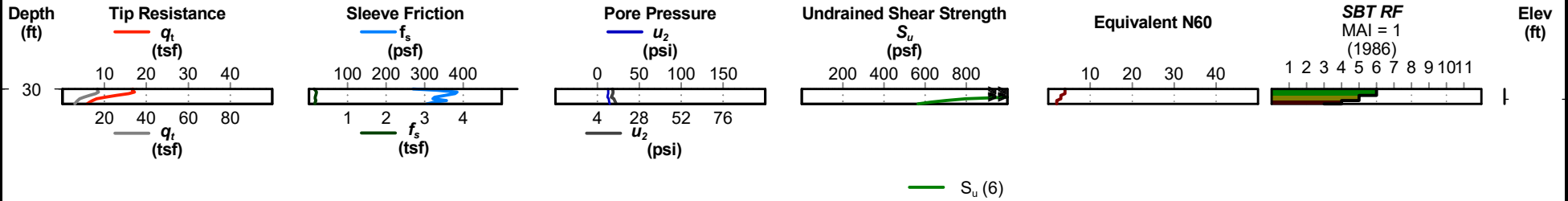
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-9

Project No: 24762  
Date: 06/01/2022  
Latitude: 29.79834°  
Longitude: -89.76305°  
CPT ID: DTA1043

Elevation: -1.6  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



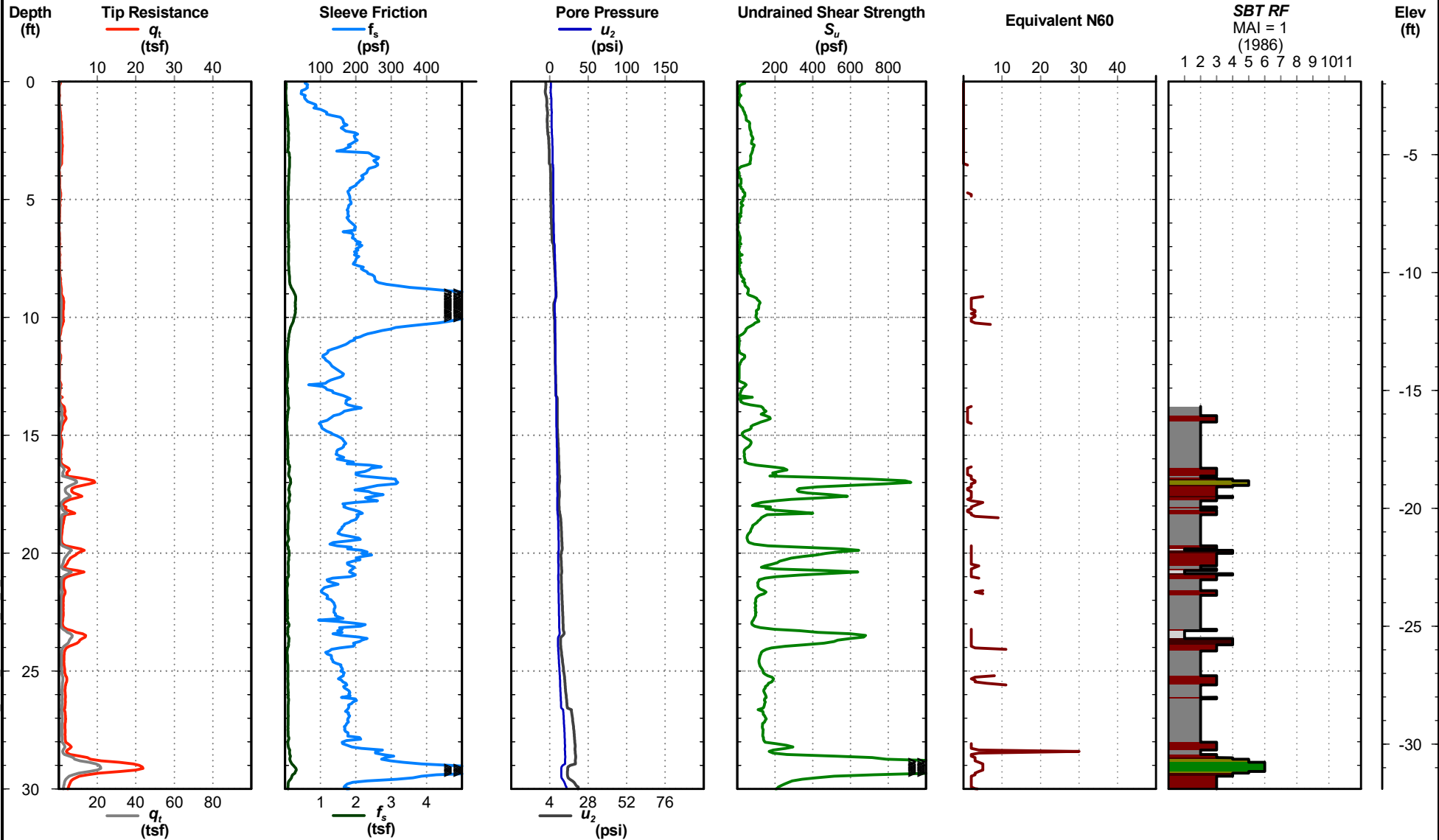
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-10

Project No: 24762  
Date: 05/31/2022  
Latitude: 29.79385°  
Longitude: -89.75878°  
CPT ID: DTA1043

Elevation: -1.9  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.5 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)





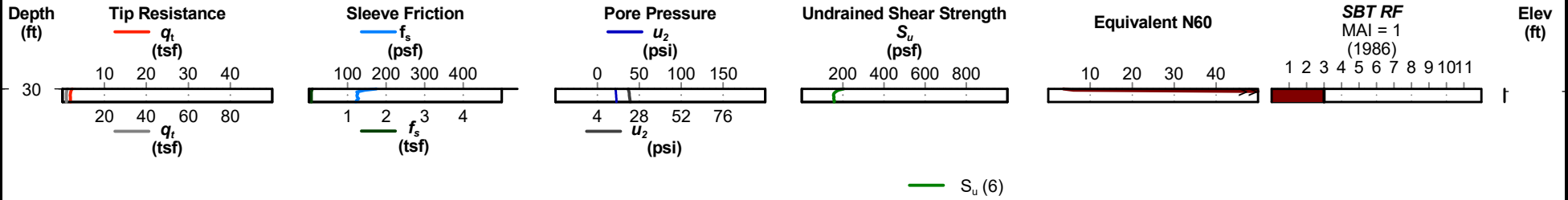
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

**CPT-10**

Project No: 24762  
Date: 05/31/2022  
Latitude: 29.79385°  
Longitude: -89.75878°  
CPT ID: DTA1043

Elevation: -1.9  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.5 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



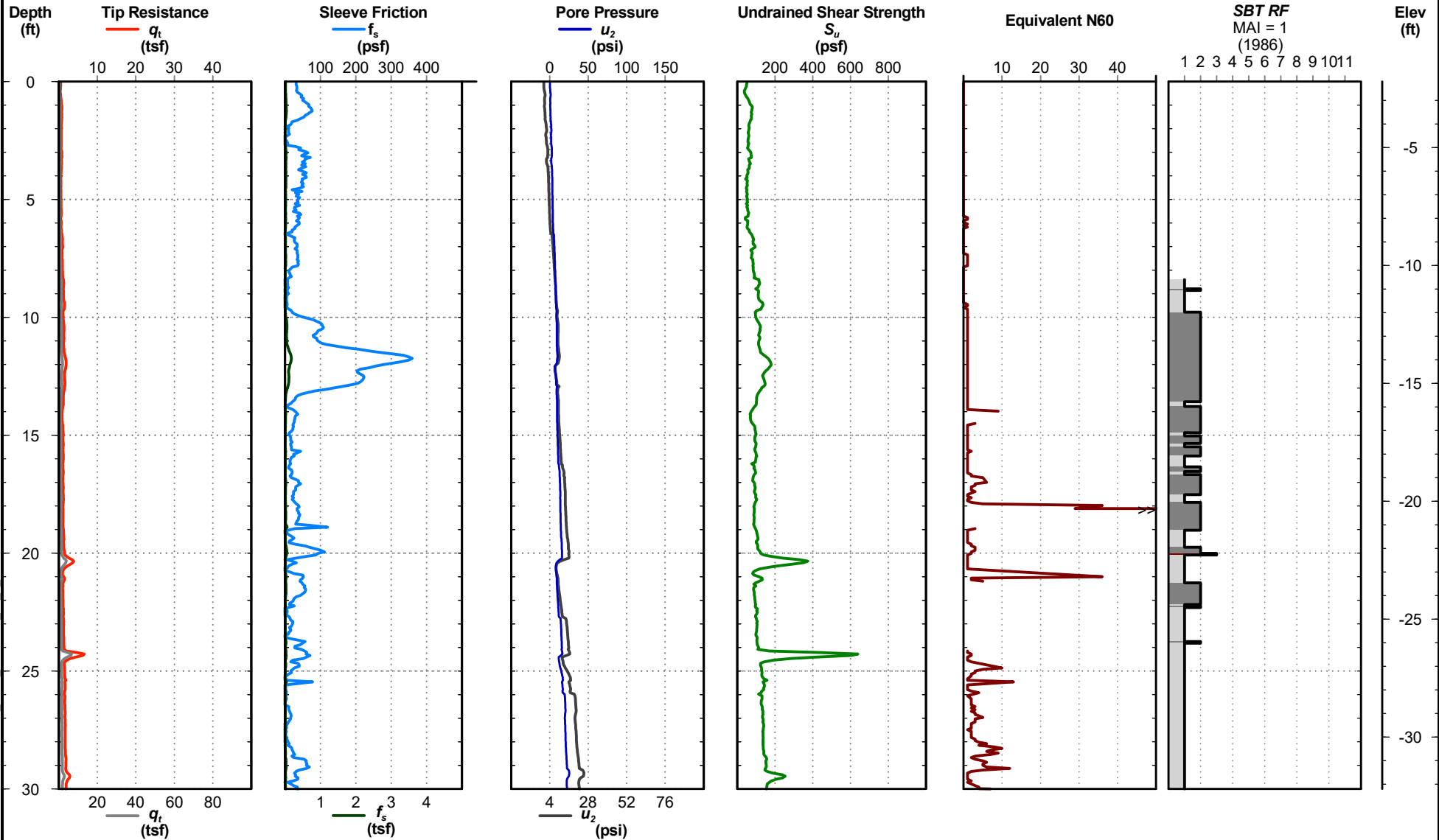
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-11

Project No: 24762  
Date: 05/31/2022  
Latitude: 29.78560°  
Longitude: -89.76328°  
CPT ID: DTA1043

Elevation: -2.2  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)



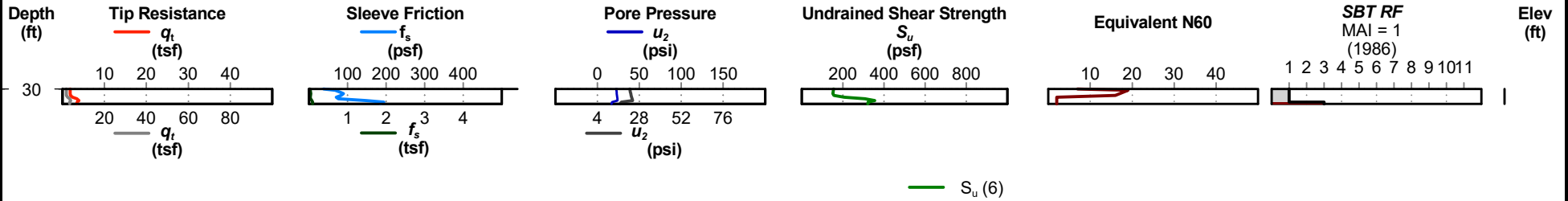
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-11

Project No: 24762  
Date: 05/31/2022  
Latitude: 29.78560°  
Longitude: -89.76328°  
CPT ID: DTA1043

Elevation: -2.2  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



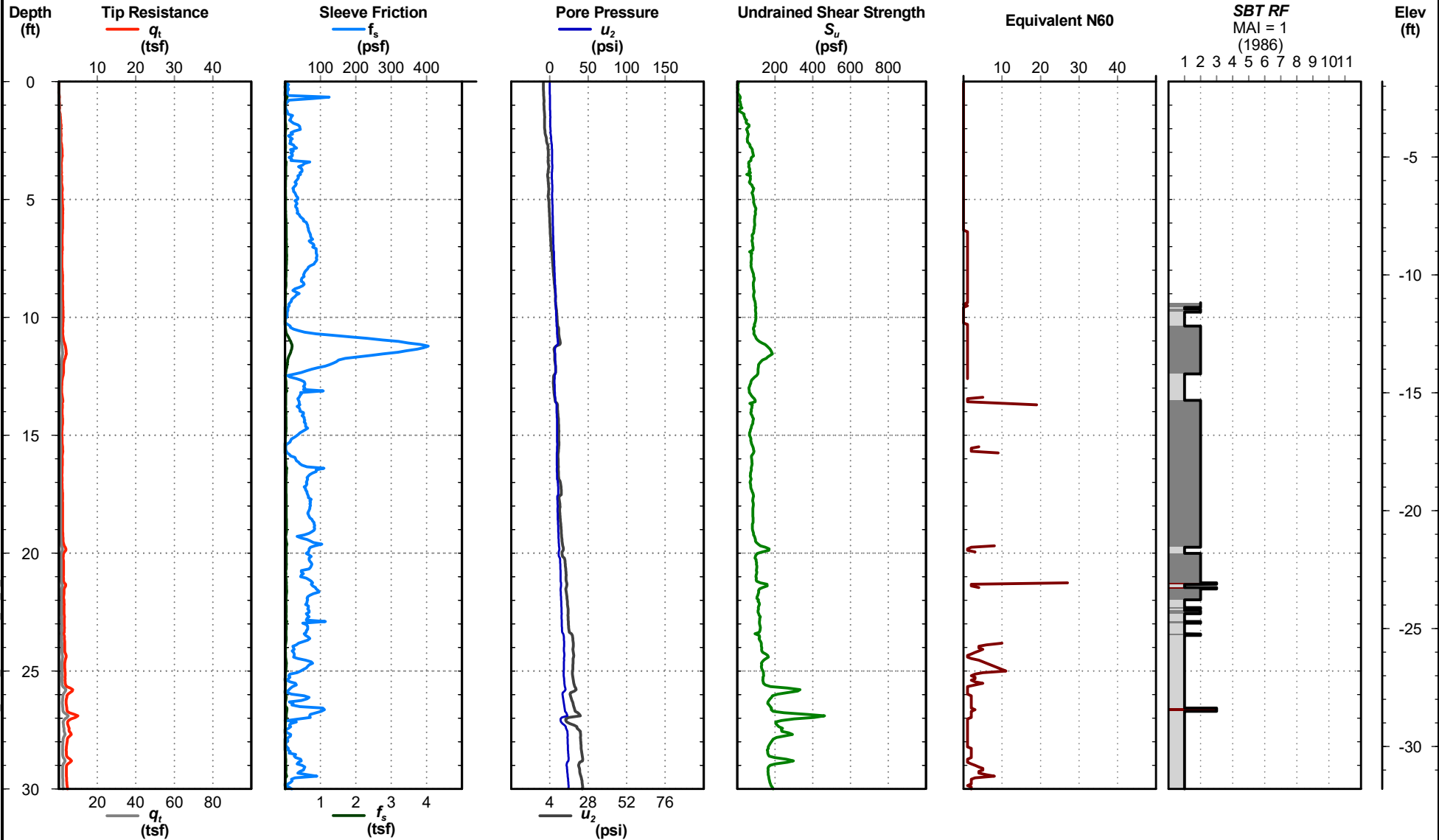
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-12

Project No: 24762  
Date: 05/31/2022  
Latitude: 29.78515°  
Longitude: -89.75927°  
CPT ID: DTA1043

Elevation: -1.8  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.8 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)



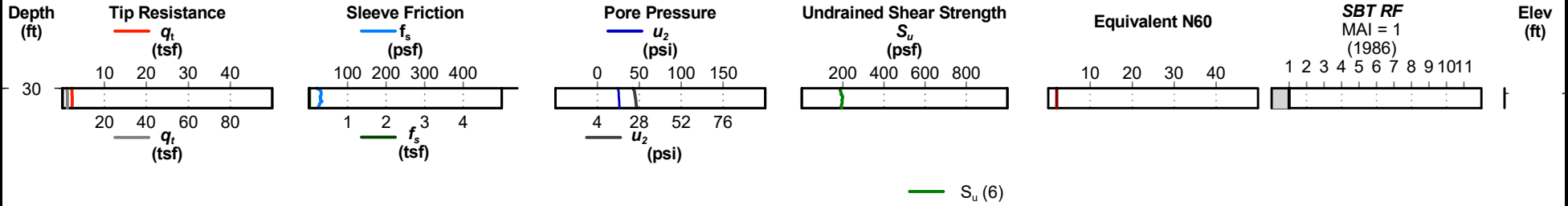
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

CPT-12

Project No: 24762  
Date: 05/31/2022  
Latitude: 29.78515°  
Longitude: -89.75927°  
CPT ID: DTA1043

Elevation: -1.8  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.8 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



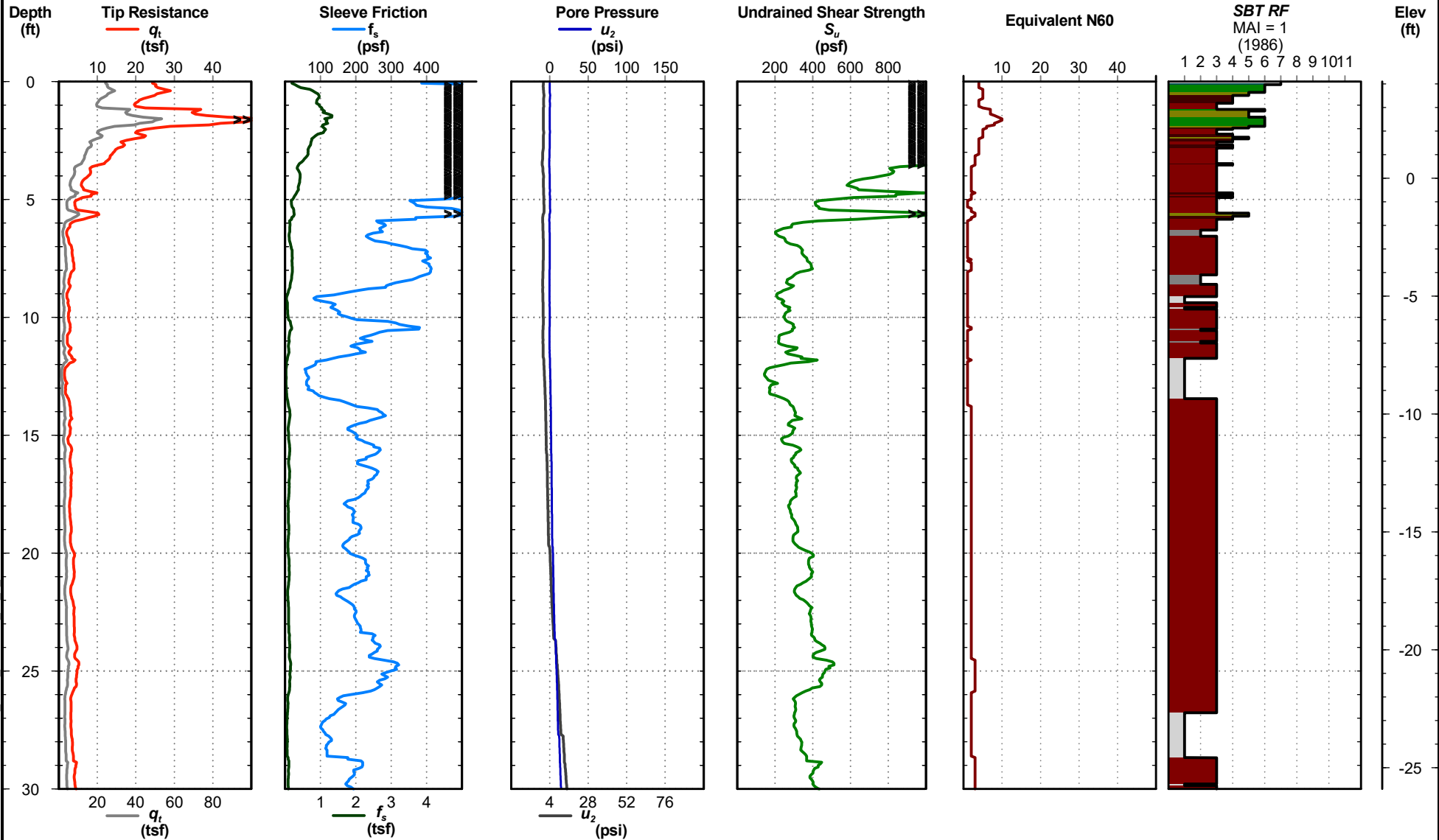
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

LCPT-1

Project No: 24762  
Date: 06/16/2022  
Latitude: 29.80685°  
Longitude: -89.76272°  
CPT ID: 5500

Elevation: 4.1  
Datum: NAVD88  
Est. Water Depth:  
Total Depth: 42.1 ft  
Operator: E. Held



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)



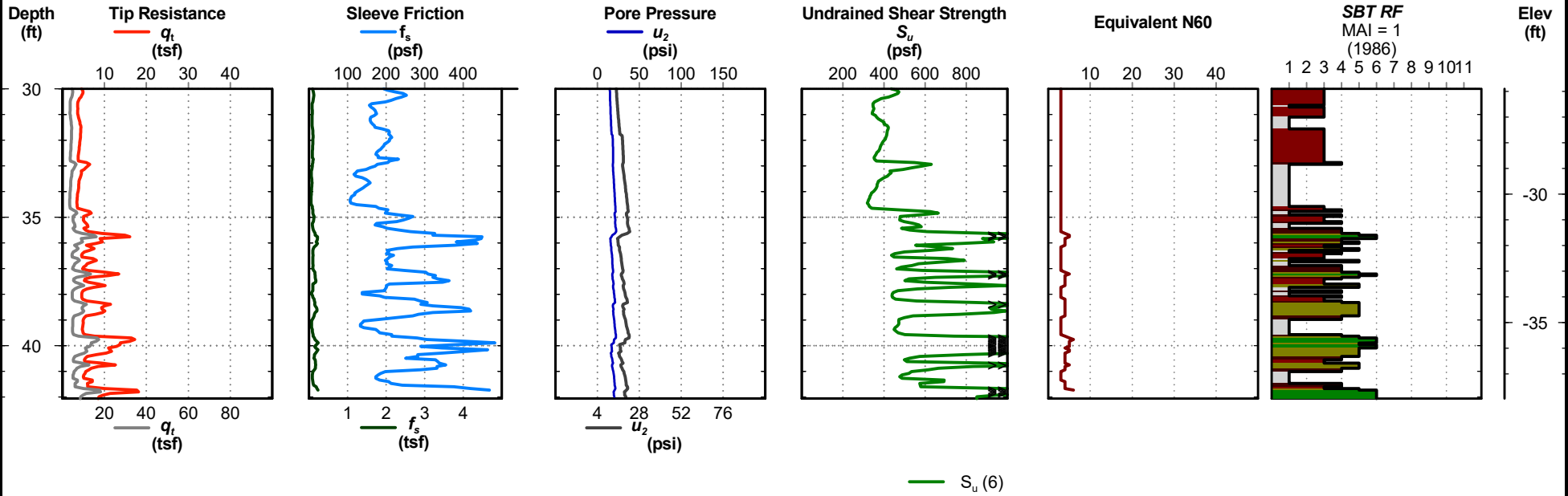
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

LCPT-1

Project No: 24762  
Date: 06/16/2022  
Latitude: 29.80685°  
Longitude: -89.76272°  
CPT ID: 5500

Elevation: 4.1  
Datum: NAVD88  
Est. Water Depth:  
Total Depth: 42.1 ft  
Operator: E. Held



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.G.I.B. EE 5 GRAPH CPT LOG 24762.GPJ 11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



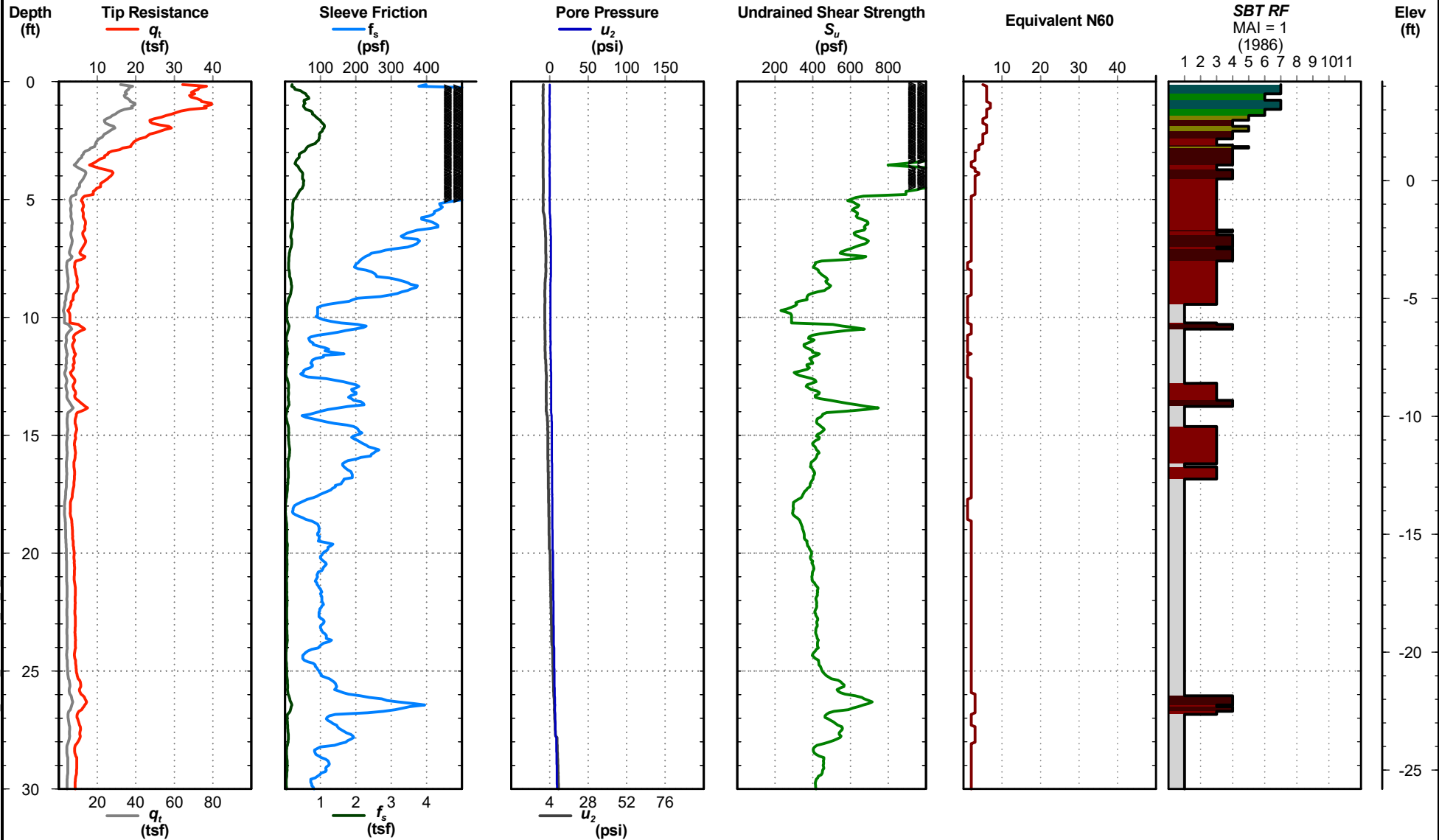
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

LCPT-2

Project No: 24762  
Date: 06/16/2022  
Latitude: 29.80010°  
Longitude: -89.76462°  
CPT ID: 5500

Elevation: 4.2  
Datum: NAVD88  
Est. Water Depth:  
Total Depth: 41.5 ft  
Operator: E. Held



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)





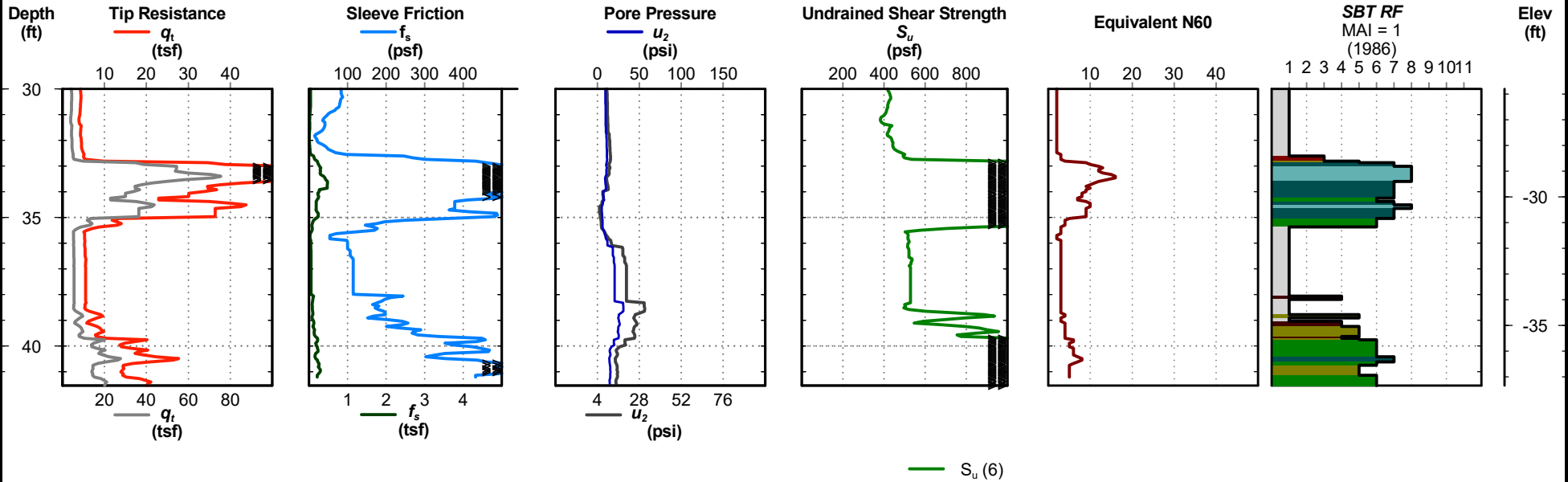
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

LCPT-2

Project No: 24762  
Date: 06/16/2022  
Latitude: 29.80010°  
Longitude: -89.76462°  
CPT ID: 5500

Elevation: 4.2  
Datum: NAVD88  
Est. Water Depth:  
Total Depth: 41.5 ft  
Operator: E. Held



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.G.I.B. EE 5 GRAPH CPT LOG 24762.GPJ 11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



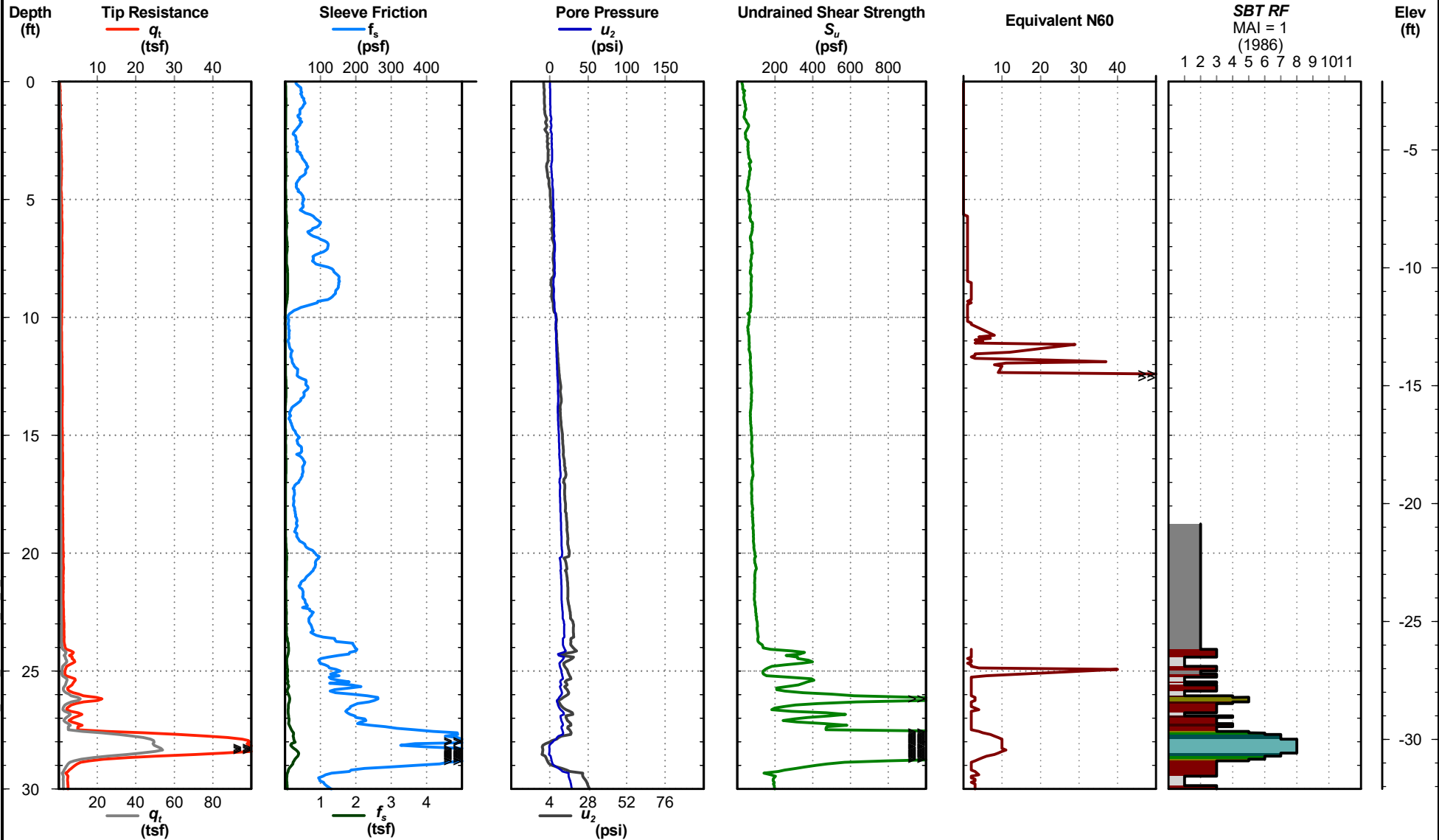
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

RCPT-1

Project No: 24762  
Date: 06/02/2022  
Latitude: 29.80348°  
Longitude: -89.75113°  
CPT ID: DTA1043

Elevation: -2.1  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.5 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)



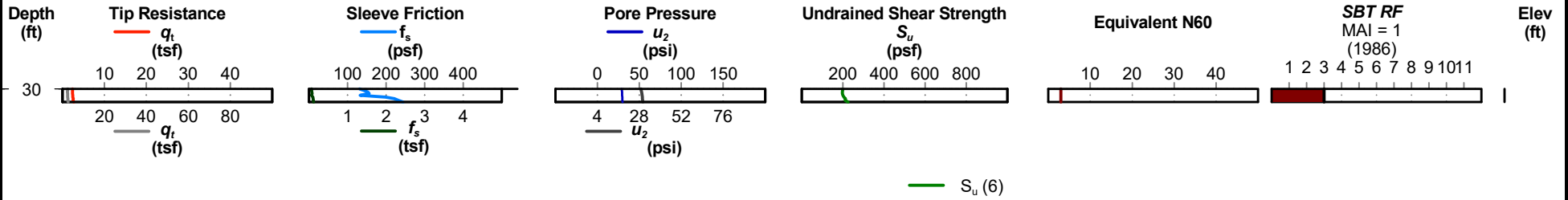
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

RCPT-1

Project No: 24762  
Date: 06/02/2022  
Latitude: 29.80348°  
Longitude: -89.75113°  
CPT ID: DTA1043

Elevation: -2.1  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.5 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



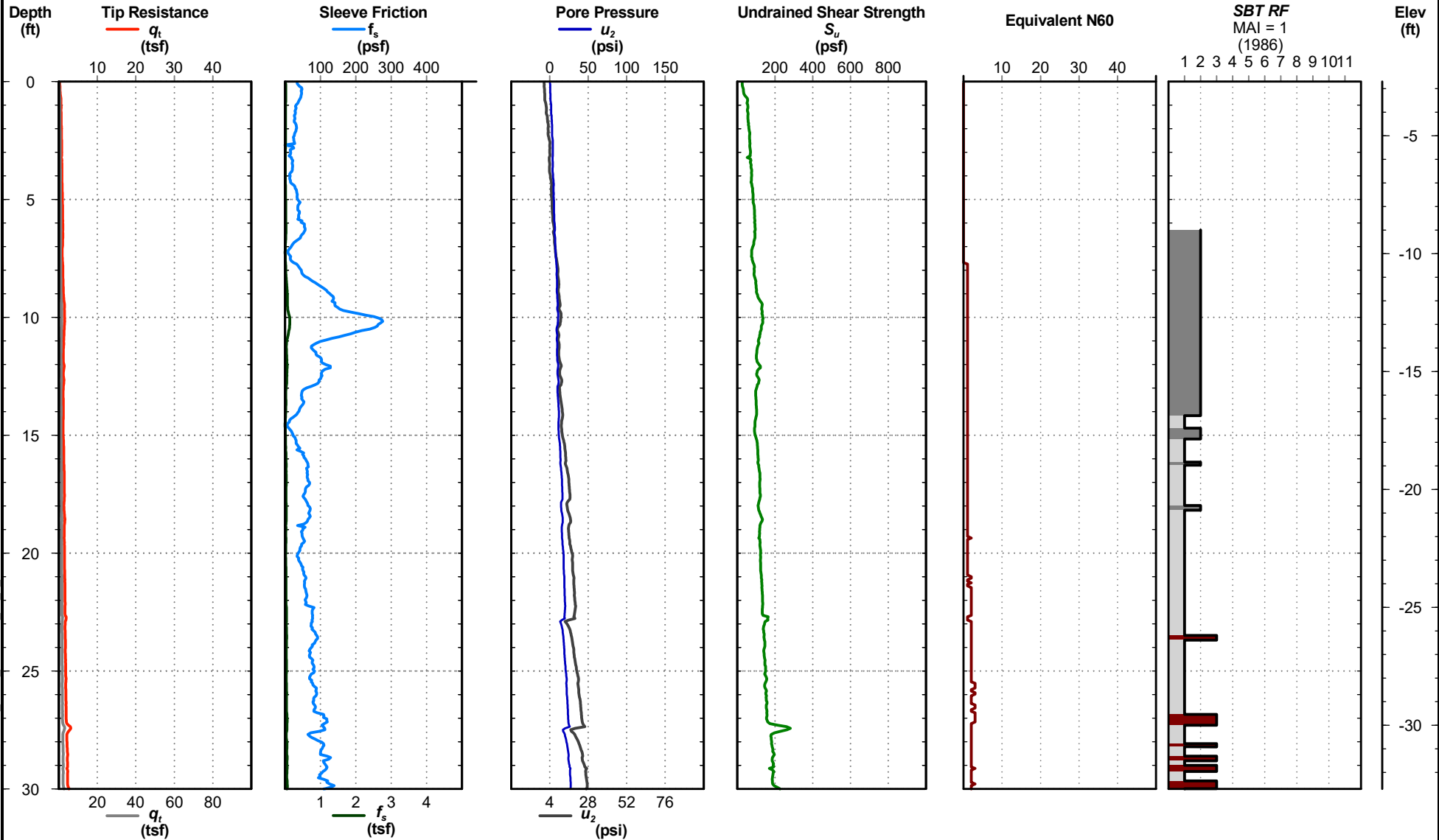
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

RCPT-2

Project No: 24762  
Date: 06/02/2022  
Latitude: 29.80857°  
Longitude: -89.75277°  
CPT ID: DTA1043

Elevation: -2.7  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)



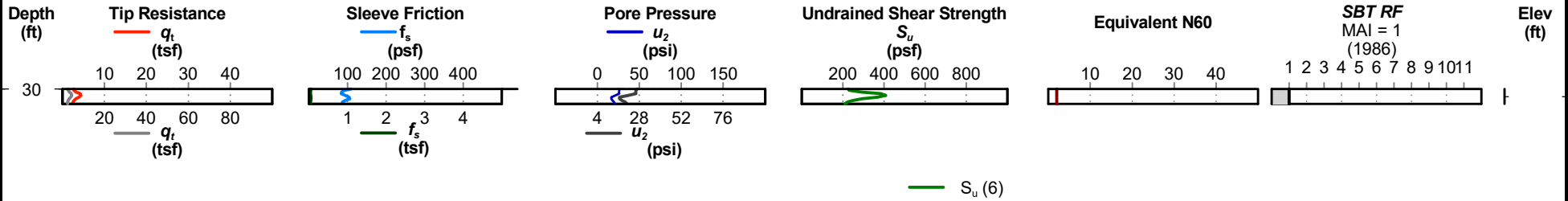
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

RCPT-2

Project No: 24762  
Date: 06/02/2022  
Latitude: 29.80857°  
Longitude: -89.75277°  
CPT ID: DTA1043

Elevation: -2.7  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



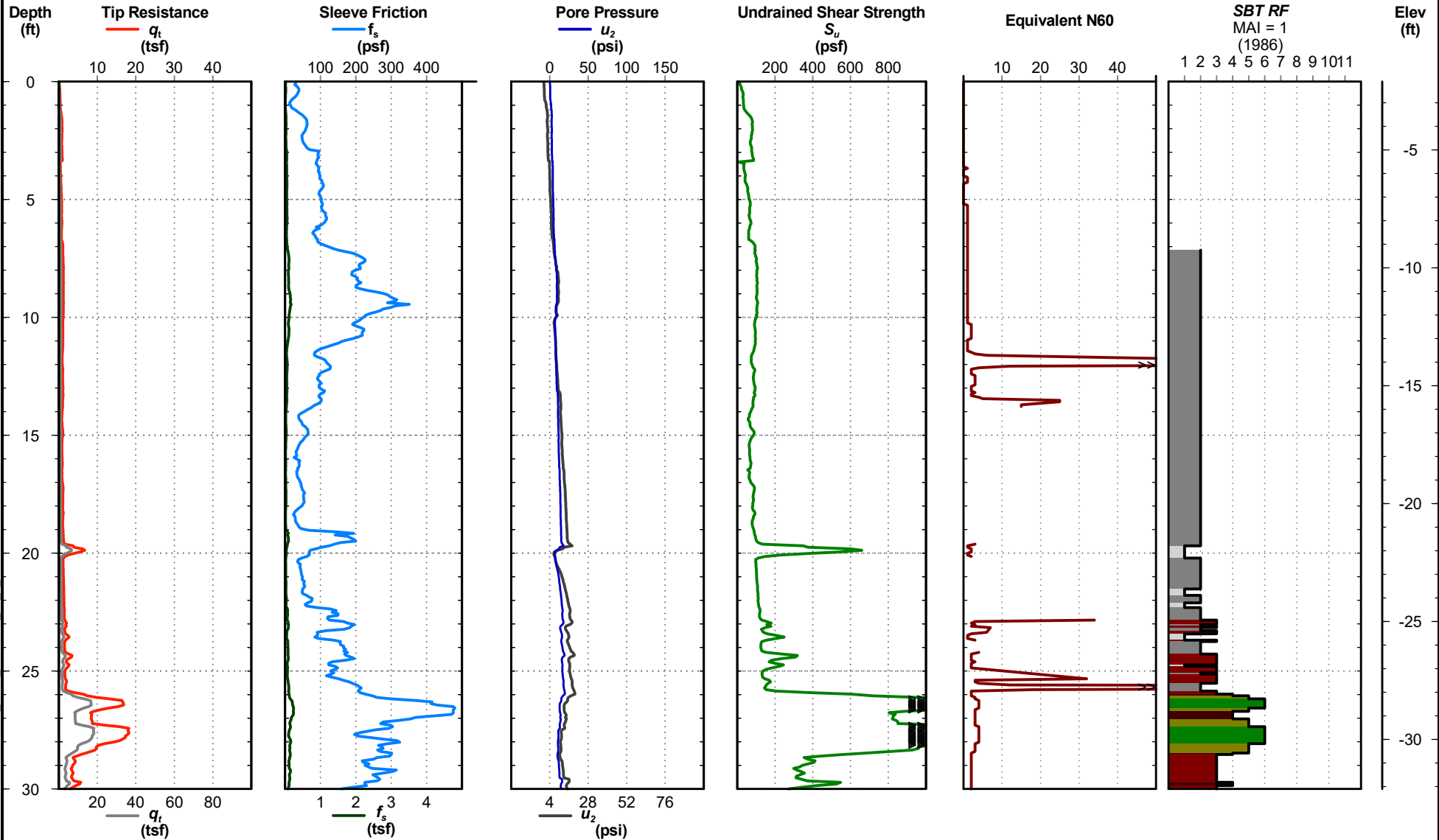
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

RCPT-3

Project No: 24762  
Date: 06/02/2022  
Latitude: 29.81119°  
Longitude: -89.75831°  
CPT ID: DTA1043

Elevation: -2.1  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.5 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)



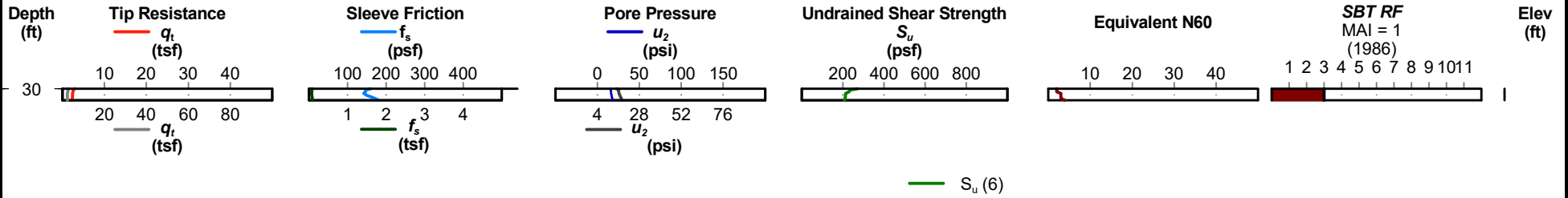
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

RCPT-3

Project No: 24762  
Date: 06/02/2022  
Latitude: 29.81119°  
Longitude: -89.75831°  
CPT ID: DTA1043

Elevation: -2.1  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.5 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



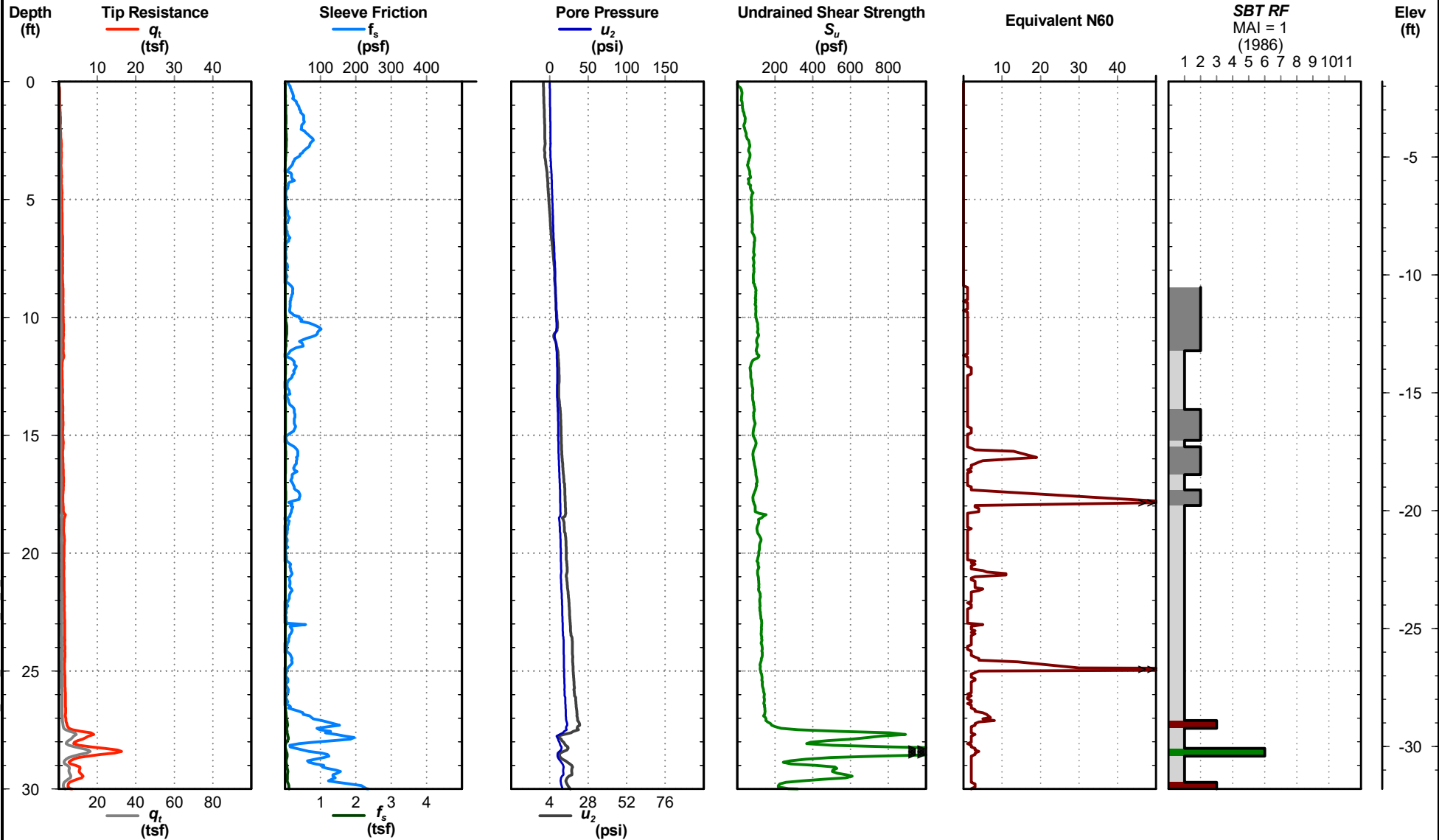
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

TCPT-1

Project No: 24762  
Date: 06/01/2022  
Latitude: 29.79098°  
Longitude: -89.75020°  
CPT ID: DTA1043

Elevation: -1.8  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)





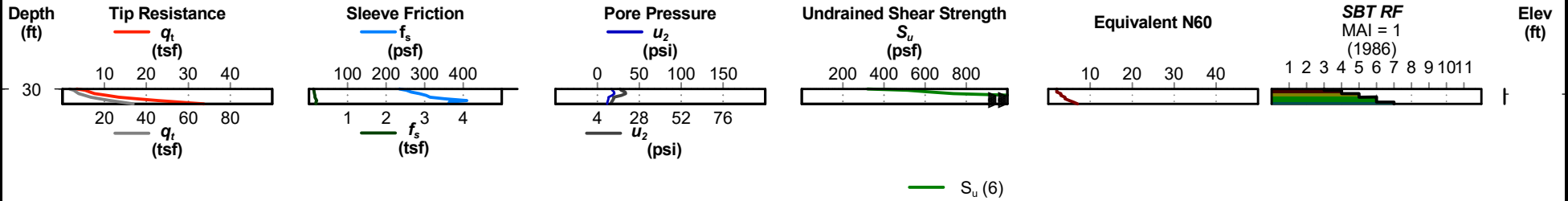
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

TCPT-1

Project No: 24762  
Date: 06/01/2022  
Latitude: 29.79098°  
Longitude: -89.75020°  
CPT ID: DTA1043

Elevation: -1.8  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



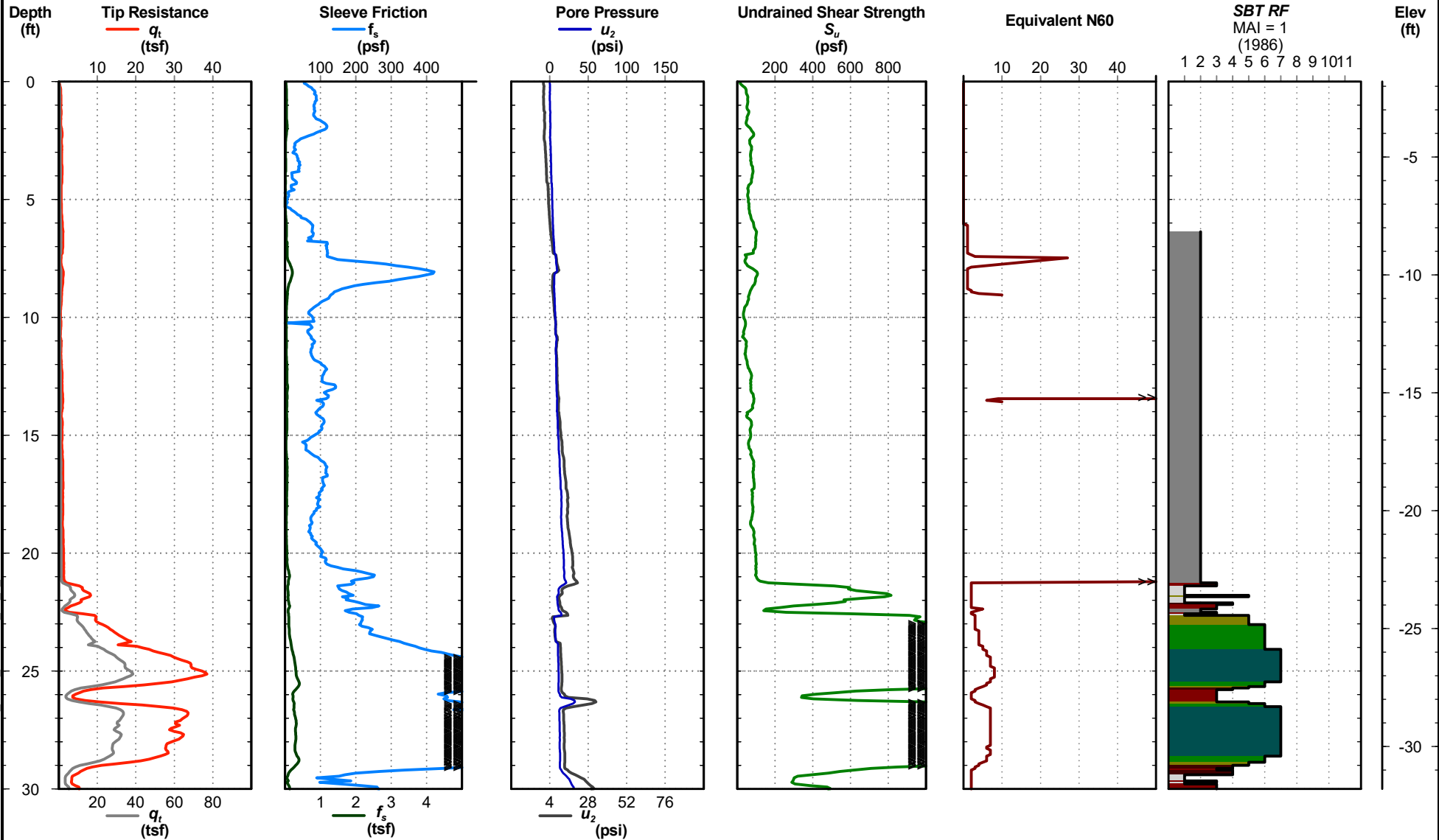
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

TCPT-2

Project No: 24762  
Date: 06/01/2022  
Latitude: 29.79574°  
Longitude: -89.74602°  
CPT ID: DTA1043

Elevation: -1.8  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 32.2 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)



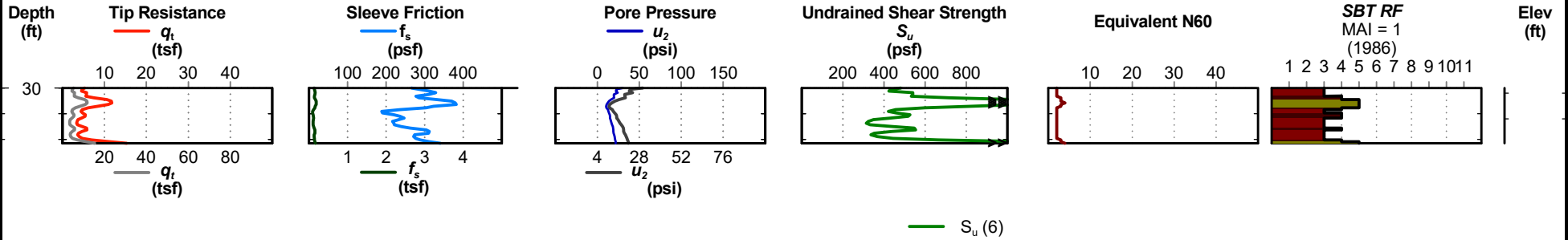
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

CONE PENETRATION TEST

TCPT-2

Project No: 24762  
Date: 06/01/2022  
Latitude: 29.79574°  
Longitude: -89.74602°  
CPT ID: DTA1043

Elevation: -1.8  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 32.2 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



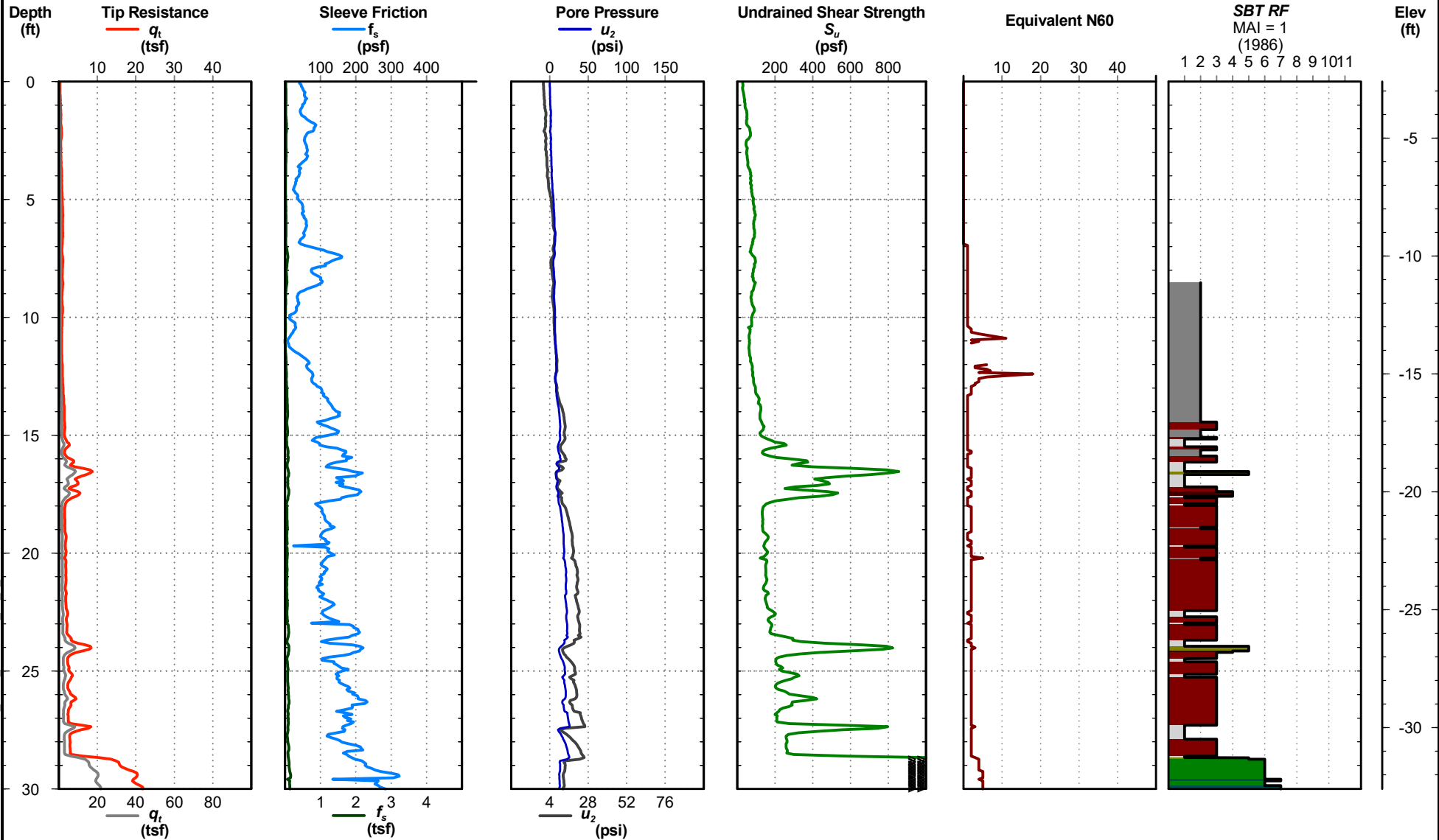
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

TCPT-3

Project No: 24762  
Date: 06/02/2022  
Latitude: 29.80035°  
Longitude: -89.74625°  
CPT ID: DTA1043

Elevation: -2.6  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.5 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)



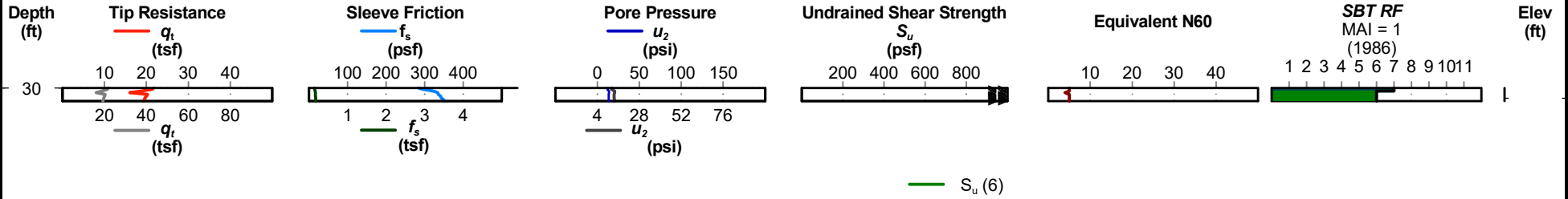
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

TCPT-3

Project No: 24762  
Date: 06/02/2022  
Latitude: 29.80035°  
Longitude: -89.74625°  
CPT ID: DTA1043

Elevation: -2.6  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.5 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



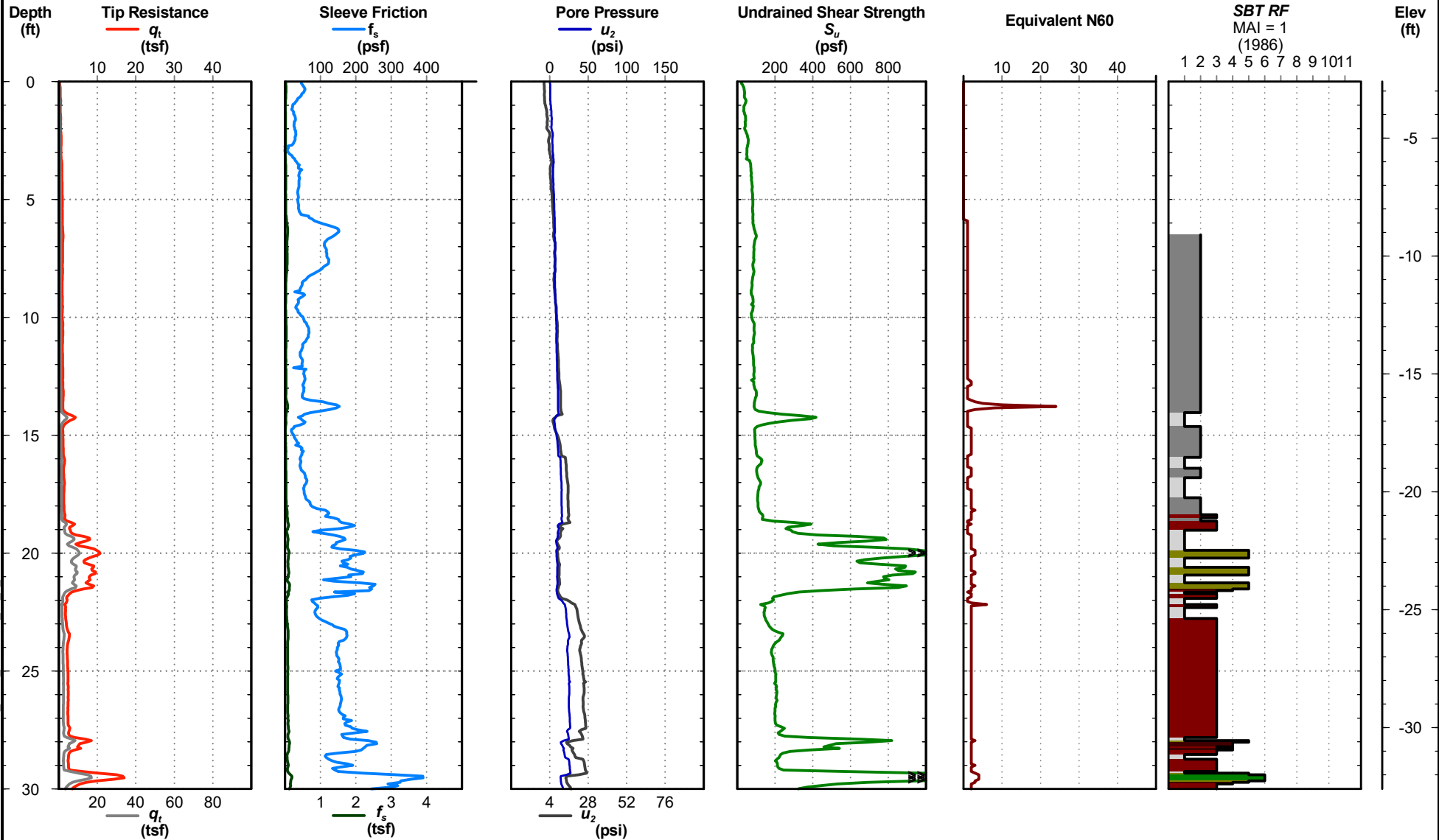
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

TCPT-4

Project No: 24762  
Date: 06/01/2022  
Latitude: 29.79778°  
Longitude: -89.75272°  
CPT ID: DTA1043

Elevation: -2.6  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.G.L.B.EE.5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)



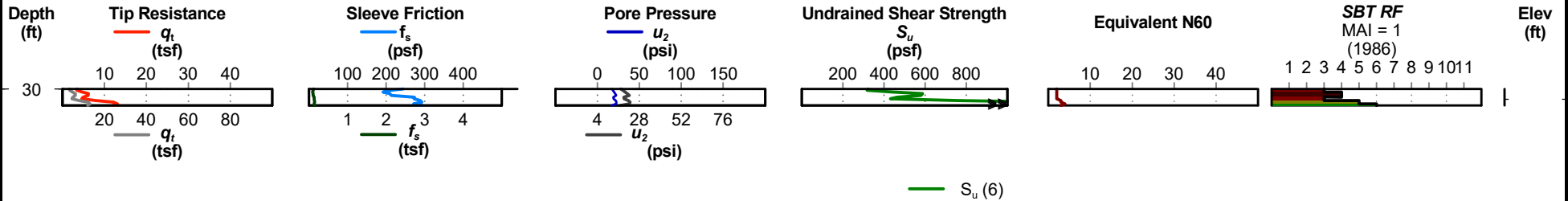
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

TCPT-4

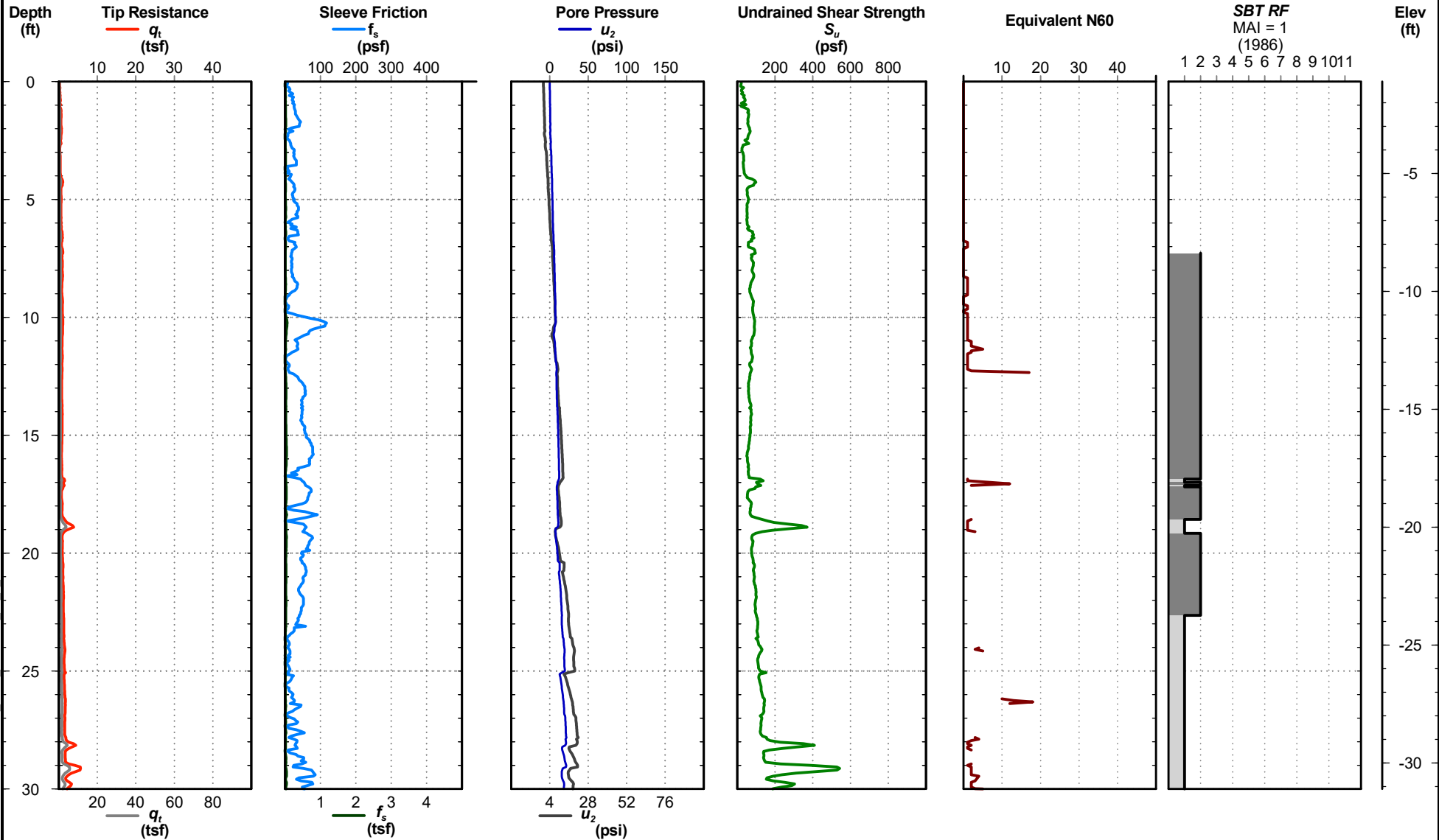
Project No: 24762  
Date: 06/01/2022  
Latitude: 29.79778°  
Longitude: -89.75272°  
CPT ID: DTA1043

Elevation: -2.6  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.



EUSTIS\_GINT\_LIBRARY\_11.8\_2022.GLB\_EE\_5\_GRAPH\_CPT.LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

—  $S_u$  (6)





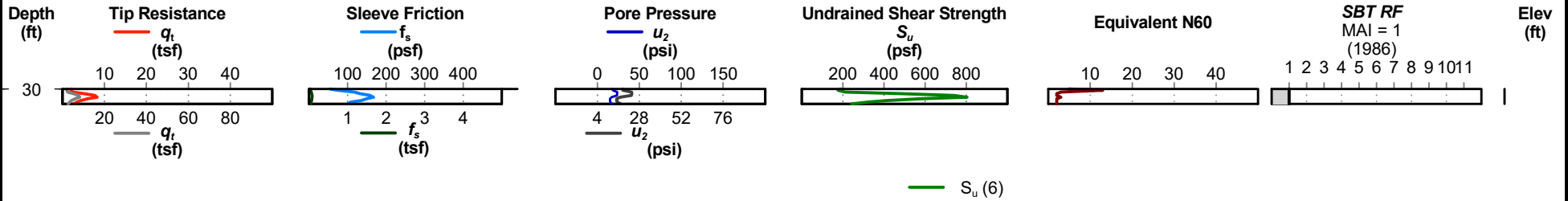
State of Louisiana  
Coastal Protection  
and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee and Bayou Juanita  
St. Bernard, Louisiana

# CONE PENETRATION TEST

TCPT-5

Project No: 24762  
Date: 06/01/2022  
Latitude: 29.79296°  
Longitude: -89.75203°  
CPT ID: DTA1043

Elevation: -1.1  
Datum: NAVD88  
Est. Water Depth: 0.0 ft  
Total Depth: 30.6 ft  
Operator: G.Reitmeyer



EUSTIS\_GINT\_LIBRARY\_11\_8\_2022.GLB\_EE\_5\_GRAPH\_CPT\_LOG\_24762.GPJ\_11/17/22

Notes: Soil behavior type was determined using friction ratio classification chart (after Robertson *et al.*, 1986).  
Test performed in general accordance with ASTM D5778-20.

# CPT Correlations

References are in parenthesis next to the appropriate equation.

## General

$p_a$ =atmospheric pressure (for unit normalization)

$q_t$ =corrected cone tip resistance (tsf)

$f_s$ =friction sleeve resistance (tsf)

$R_f = 100\% \cdot (f_s/q_t)$

$u_2$ =pore pressure behind cone tip (tsf)

$u_0$ =hydrostatic pressure

$$B_q = (u_2 - u_0) / (q_t - \sigma_{vo})$$

$$Q_t = (q_t - \sigma_{vo}) / \sigma'_{vo}$$

$$F_r = 100\% \cdot f_s / (q_t - \sigma_{vo})$$

$$I_c = ((3.47 - \log Q_t)^2 + (\log F_r + 1.22)^2)^{0.5} \quad 2$$

$$I_{SBT} = ((3.47 - \log(q_c/p_a))^2 + (\log F_r + 1.22)^2)^{0.5} \quad 23$$

$$I_{cJ\&D} = \sqrt{\{3 - \log(Q_t \cdot (1 - B_q))\}^2 + [1.5 + 1.3 \cdot \log(F_r)]^2} \quad 27$$

$$I_{cJ\&B} = \sqrt{\{3 - \log(Q_t \cdot (1 - B_q) + 1)\}^2 + [1.5 + 1.3 \cdot \log(F_r)]^2} \quad 28$$

## $K_o$

$$K_o(1) \quad K_o = (1 - \sin \phi) OCR^{\sin \phi}$$

$$K_o(2) \quad K_o = 0.1(Q_t) \quad 1$$

## Stress History

$$OCR = \sigma_p' / \sigma'_{vo}$$

$$OCR(1) \quad \sigma_p' = 0.33(q_t - \sigma_{vo}) - \text{clays} \quad 8$$

$$OCR(2) \quad \sigma_p' = 0.53(u_2 - u_0) - \text{clays} \quad 9$$

$$OCR(3) \quad \sigma_p' = 0.60(q_t - u_2) - \text{clays} \quad 9$$

$$OCR(4) \quad OCR = 0.25 Q_t^{1.25} - \text{clays} \quad 37$$

$$OCR(5) \quad OCR = \left[ \frac{0.192 * (q_t / p_a)^{0.22}}{(1 - \sin(\phi')) * (\sigma'_{vo} / p_a)^{0.31}} \right]^{\frac{1}{\sin(\phi' - 0.27)}} - \text{sands} \quad 35$$

$$OCR(6) \quad \sigma_p' = .101 \cdot p_a^{0.102} \cdot G_{max}^{0.478} \cdot \sigma'_{vo}{}^{0.420} - \text{all soils} \quad 36$$

## N-Value

$$N_{60} = (q_t/p_a) / [8.5(1 - I_c/4.6)] \quad 6$$

## Undrained Shear Strength

$$S_u(1) \quad S_u = (u_2 - u_0) / N_u \quad \text{where } 7 \leq N_u \leq 9 \quad 10$$

$$S_u(2) \quad S_u = (q_t - \sigma_{vo}) / N_{kT} \quad \text{where } 15 \leq N_{kT} \leq 20 \quad 11$$

$$S_u(3) \quad S_u = 0.091 * ((\sigma'_{vo})^{0.2}) * (q_t - \sigma_{vo})^{0.8} \quad 21$$

$$S_u(4) \quad S_u = (q_c - \sigma_{vo}) / N_k \quad \text{where } 15 \leq N_k \leq 20 \quad 11$$

$$S_u(5) \quad S_u = q_t / N_c \quad \text{where } XXX \leq N_c \leq YYY$$

$$S_u(6) \quad S_u = q_c / N_c \quad \text{where } XXX \leq N_c \leq YYY$$

## Effective Cohesion

$$c' = 0.02 * \sigma_p' \quad 38$$

### Drained Friction Angle

$\phi' (1)$	$\phi' = 17.6 + 11.0 \text{Log}[q_t/(\sigma_{vo}')^{0.5}]$	1
$\phi' (2)$	$\phi' = \arctan[0.1 + 0.38 \text{Log}(q_t/\sigma_{vo}')] $	13
$\phi' (3)$	$\phi' = 30.8 \text{Log}[(f_s/\sigma_{vo}') + 1.26]$ (for clays or sands)	14
$\phi' (4)$	$\phi' = 29.5 B_q^{0.121} (0.256 + 0.33 B_q + \text{Log}(Q_t))$	24

### Unit Weight

$$\rho = \gamma/\gamma_w$$

$$\rho = 0.8 \text{Log}(V_s) \quad V_s \text{ in m/sec} \quad 17$$

### Relative Density and Void Ratio

$D_R (1)$	$D_R = 100(q_{c1}/305)^{1/2}$	where, $q_{c1} = q_c/(\sigma_{vo}')^{1/2}$	1
$D_R (2)$	$D_R = -1.292 + 0.268 \ln(q_c \cdot (\sigma_{vo}')^{-0.5})$		18
$D_R (3)$	$D_R = (1/2.41) \cdot \ln(q_{c1}/15.7)$		3
$D_R (4)$	$D_R = 1/2.91 * \ln((q_c/(61 * \sigma_{vo}')^{0.71})) * 100$		20
$D_R (5)$	$D_R = 100 * (0.268 * \ln((q_t/p_a)/(\sigma_{vo}')/p_a)^{0.5} - 0.675)$		34

$$e_o = 1.099 - 0.204 \log(q_{c1}) \quad 1$$

$$E_D = 5 q_t \quad I_D = 2.0 - 0.14(R_f) \quad K_D = E_D/(34.7 \cdot I_D \cdot \sigma_{vo}')$$

### Compressibility

$$M (1) = R_m E_D \text{ where } R_m = \text{function}(I_D, K_D) \text{ see the following table} \quad 22$$

$I_D \leq 0.6$	$R_M = 0.14 + 2.36 \log K_D$
$I_D \geq 3$	$R_M = 0.5 + 2 \log K_D$
$0.6 < I_D < 3$	$R_M = R_{M,D} + (2.5 - R_{M,D}) \log K_D$
	$R_{M,D} = 0.14 + 0.15(I_D - 0.6)$
$K_D > 10$	$R_M = 0.32 + 2.18 \log K_D$
$R_M < 0.85$	$R_M = 0.85$

$M (2)$	$M = q_c \cdot 10^{(1.09 - 0.0075 D_R)}$ sands	1
$M (3)$	$M = 8.25 (q_t - \sigma_{vo}')$ clays	1
$M (4)$	$M = \alpha \cdot G_{max}$ where $0.02 < \alpha < 2$ and $G_{max}$ is from Vs	33

### Rigidity Index

$$I_R = \exp \left[ \left( \frac{1.5}{M} + 2.925 \right) \cdot \left( \frac{q_t - \sigma_{vo}'}{q_t - u_2} \right) - 2.925 \right] \text{ where } M = 6 \sin \phi' / (3 - \sin \phi') \quad 39$$

### Sensitivity

$S_t (1)$	$S_t = 7.5/R_f$	2
$S_t (2)$	$S_t = (q_t - \sigma_{vo}')/(15 \cdot f_s)$	2

### Fines Content

$$FC = [(3.58 - \log(q_t))^2 + (1.43 + \log(R_f))^2]^{1.8} \quad 4$$

$$FC = [5.31(I_{cfs})^{2.31}] + 9.61, \text{ where } I_{cfs} = [(1.95 - \text{Log} Q_t)^2 + (\log F_r + 1.78)^2]^{0.5}$$

### **Shear Wave Velocity**

$$V_s(1) = 277 \cdot q_t^{0.13} \cdot \sigma'_{vo}{}^{0.27} \quad (\text{sands}) - \text{m/s and MPa} \quad 29$$

$$V_s(2) = 1.75 \cdot q_t^{0.627} \quad (\text{clays}) - \text{m/s and kPa} \quad 30$$

$$V_s(3) = (10.1 \cdot \log q_t - 11.4)^{1.67} \cdot \left(\frac{f_s}{q_t} \cdot 100\right)^{0.3} \quad (\text{all soils}) - \text{m/s and kPa} \quad 31$$

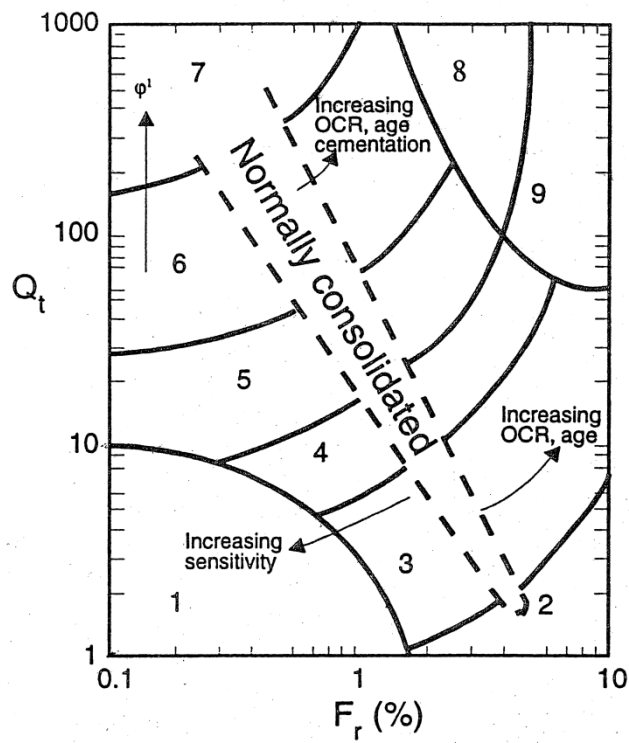
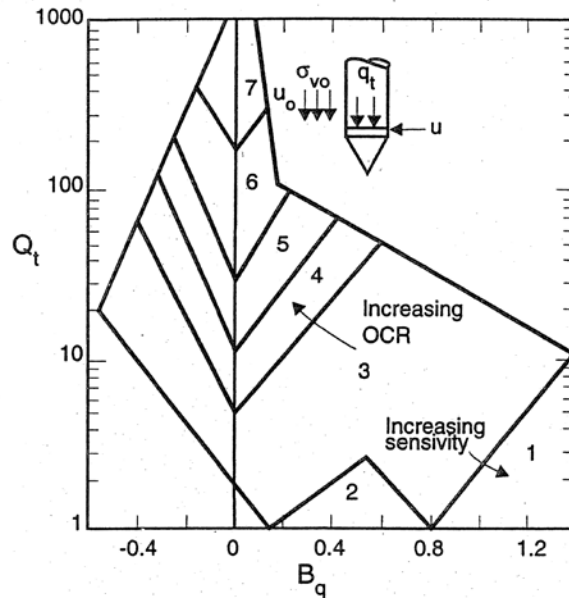
$$V_s(4) = 118.8 \cdot \log f_s + 18.5 \quad (\text{all soils}) - \text{m/s and kPa} \quad 32$$

$$G_{max} = \rho V_s^2$$

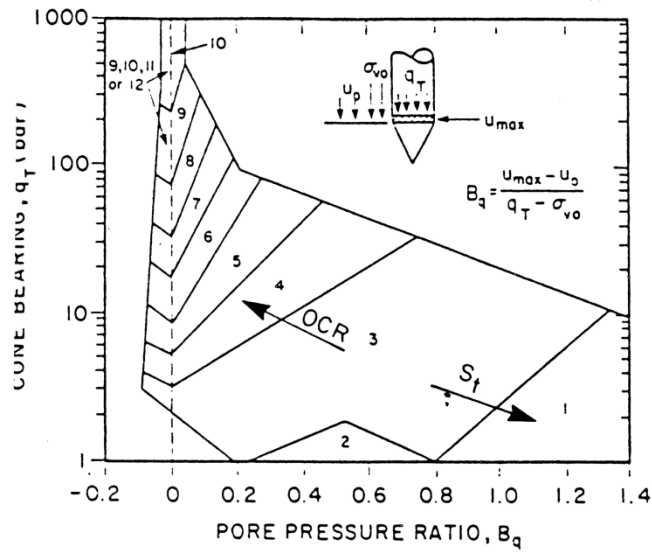
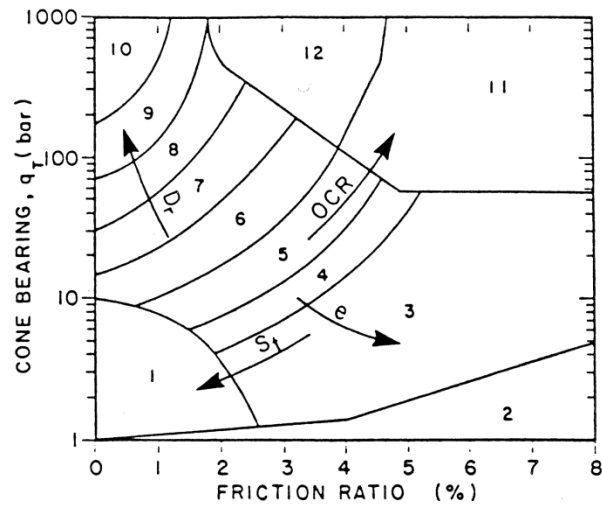
### **Hydraulic Conductivity**

Lookup based on SBT and SBTn (1986 and 1990) 40

# Normalized Soil Behavior Types - Robertson & Campanella (1990)



# Non-Normalized Soil Behavior Types – Robertson & Campanella (1986)



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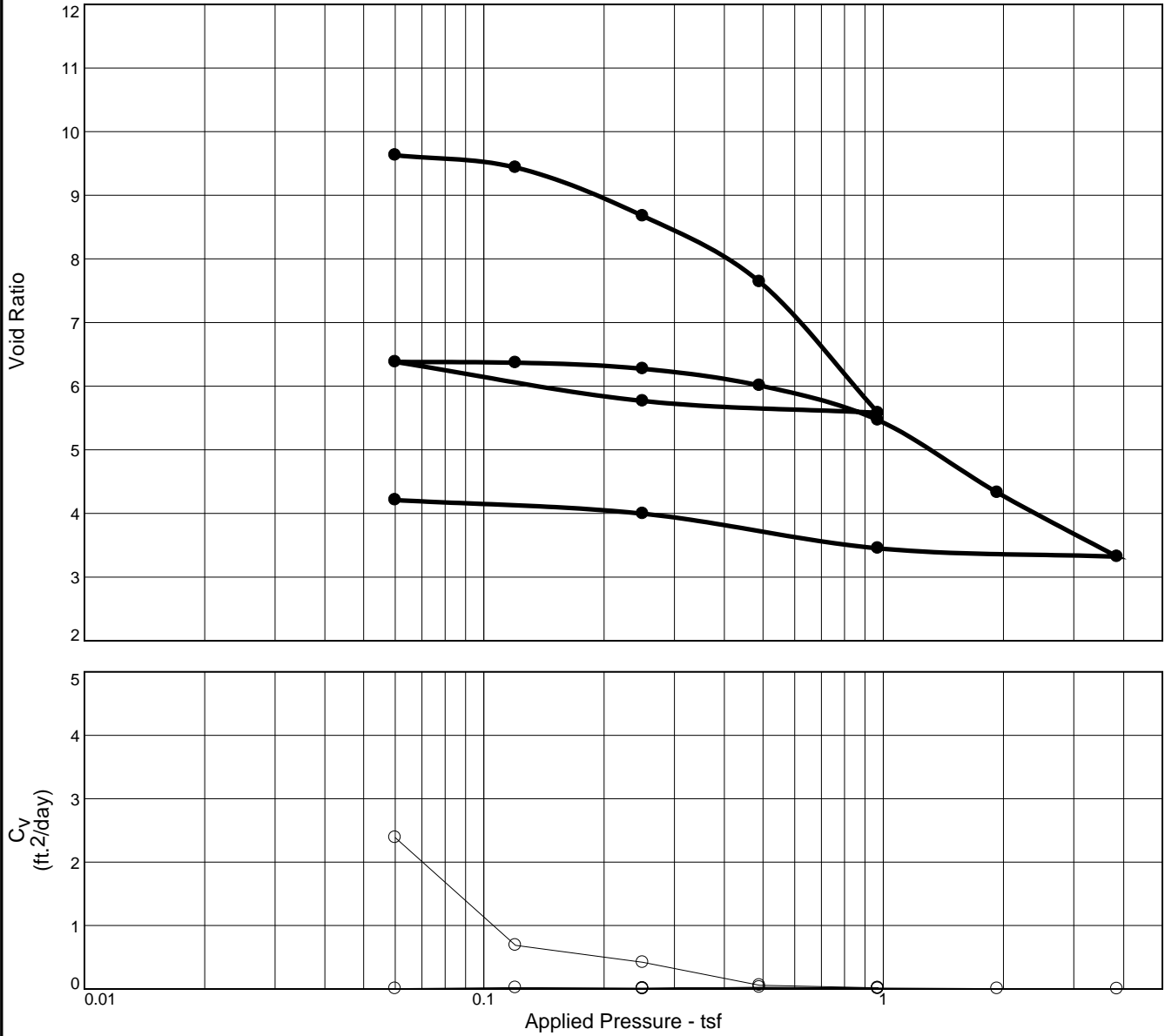
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## APPENDIX V

# CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	$P_c$ (tsf)	$C_c$	Initial Void Ratio
Saturation	Moisture							
95.0 %	411.4 %	13.1	387	194	2.25	0.5	7.48	9.743

<b>MATERIAL DESCRIPTION</b>							<b>USCS</b>	<b>AASHTO</b>
W, vso dbr HUM w/ fw wd & rts							PT	

<b>Project No.</b> 24762 <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE <b>Source of Sample:</b> B-1	<b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL <b>Depth:</b> 13 <b>Sample Number:</b> 7B		<b>Remarks:</b>   <div style="text-align: right;"><b>Figure</b></div>
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**Tested By:** RR \_\_\_\_\_ **Checked By:** RR \_\_\_\_\_

# Dial Reading vs. Time

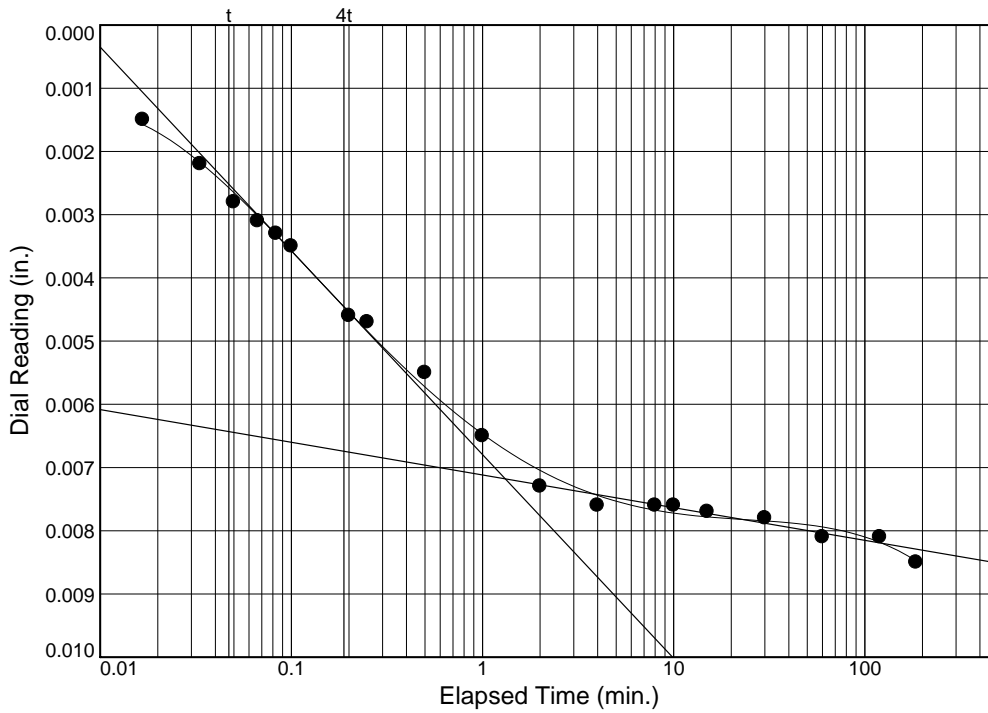
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-1

Depth: 13

Sample Number: 7B



Load No.= 1

Load= 0.06 tsf

$D_0 = 0.0007$

$D_{50} = 0.0039$

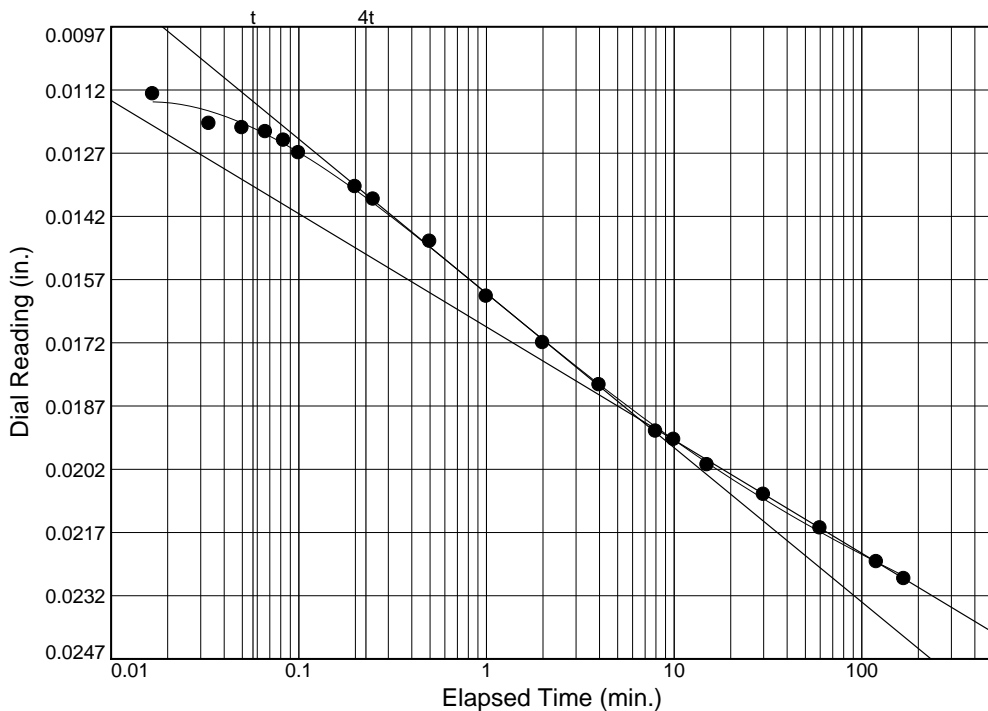
$D_{100} = 0.0072$

$T_{50} = 0.13$  min.

$C_v @ T_{50}$

2.387 ft.<sup>2</sup>/day

$C_\alpha = 0.001$



Load No.= 2

Load= 0.12 tsf

$D_0 = 0.0104$

$D_{50} = 0.0147$

$D_{100} = 0.0190$

$T_{50} = 0.44$  min.

$C_v @ T_{50}$

0.688 ft.<sup>2</sup>/day

$C_\alpha = 0.003$

Figure

# Dial Reading vs. Time

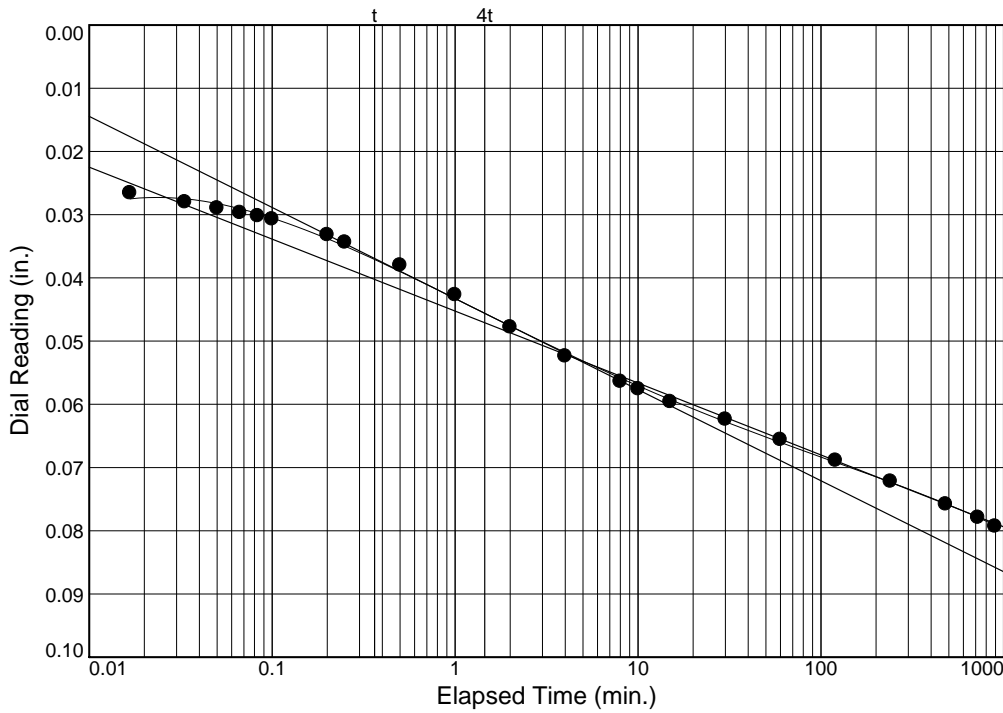
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-1

Depth: 13

Sample Number: 7B



Load No.= 3

Load= 0.25 tsf

$D_0 = 0.0286$

$D_{50} = 0.0406$

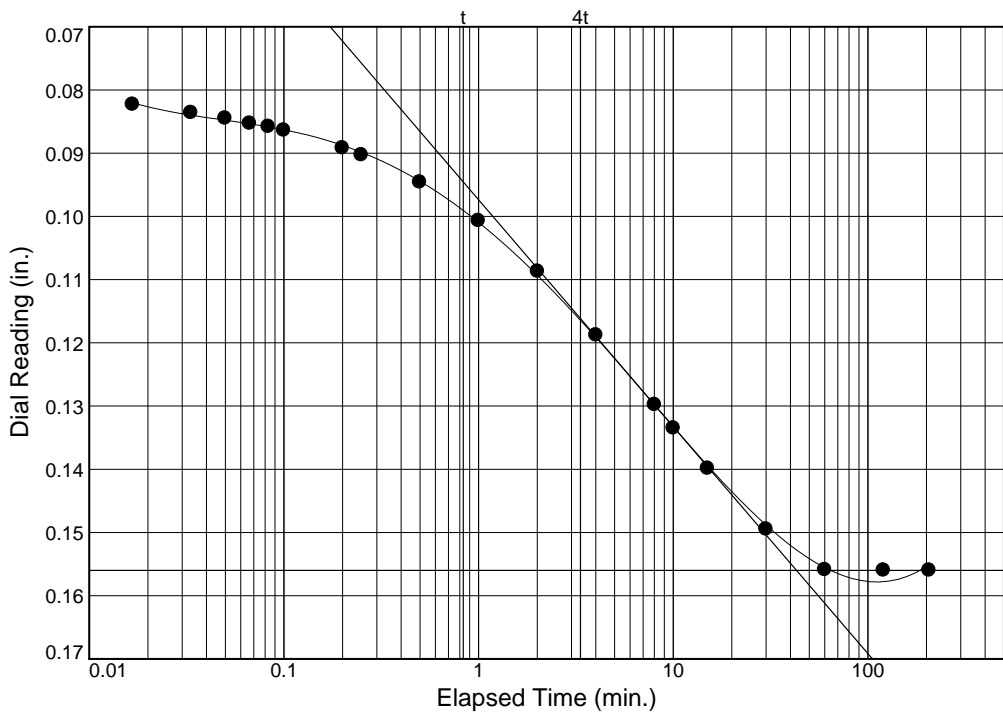
$D_{100} = 0.0527$

$T_{50} = 0.65$  min.

$C_v @ T_{50}$

0.420 ft.<sup>2</sup>/day

$C_\alpha = 0.014$



Load No.= 4

Load= 0.49 tsf

$D_0 = 0.0817$

$D_{50} = 0.1188$

$D_{100} = 0.1560$

$T_{50} = 3.93$  min.

$C_v @ T_{50}$

0.058 ft.<sup>2</sup>/day

$C_\alpha = 0.000$

# Dial Reading vs. Time

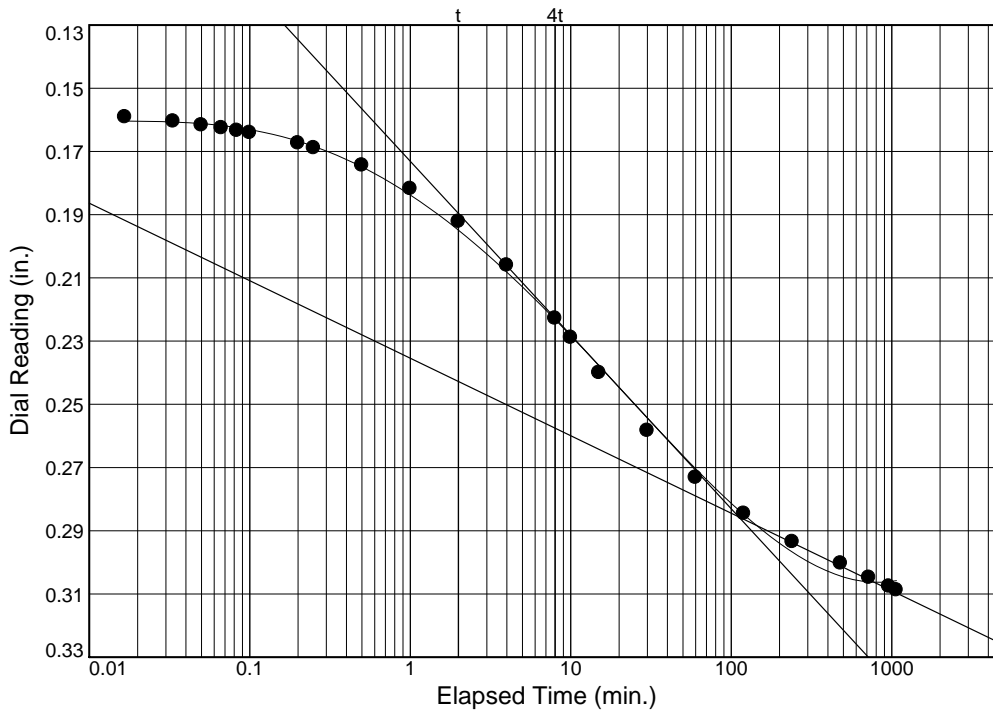
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-1

Depth: 13

Sample Number: 7B



Load No.= 5

Load= 0.97 tsf

$D_0 = 0.1666$

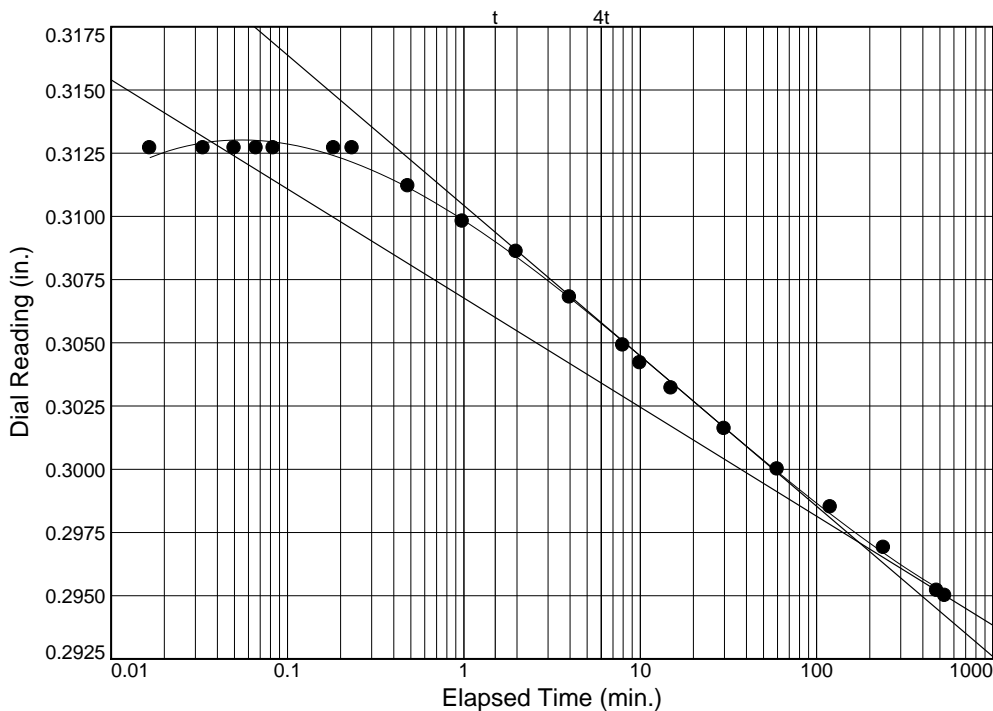
$D_{50} = 0.2261$

$D_{100} = 0.2856$

$T_{50} = 9.09 \text{ min.}$

$C_v @ T_{50}$   
0.017 ft.<sup>2</sup>/day

$C_\alpha = 0.031$



Load No.= 6

Load= 0.25 tsf

$D_0 = 0.3122$

$D_{50} = 0.3047$

$D_{100} = 0.2971$

$T_{50} = 9.29 \text{ min.}$

$C_v @ T_{50}$   
0.013 ft.<sup>2</sup>/day

# Dial Reading vs. Time

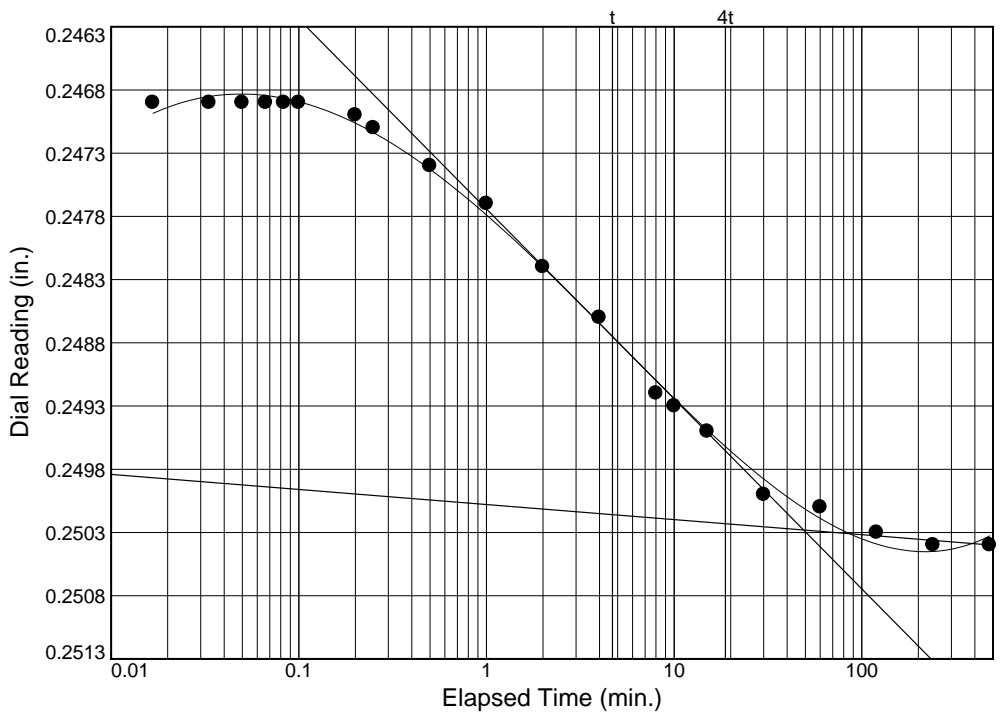
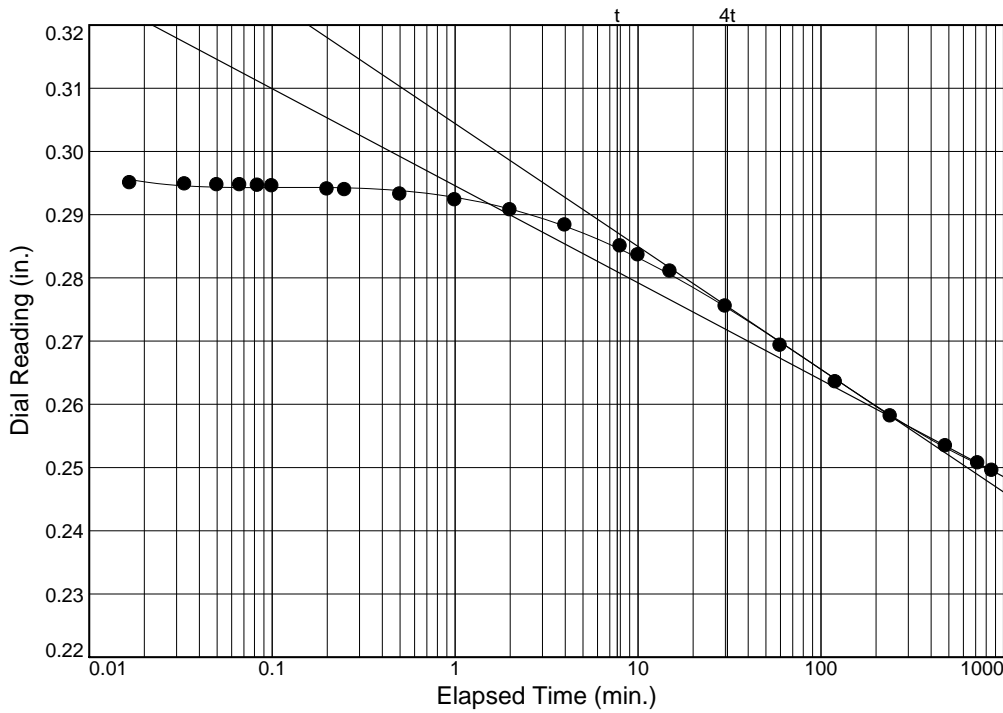
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-1

Depth: 13

Sample Number: 7B



# Dial Reading vs. Time

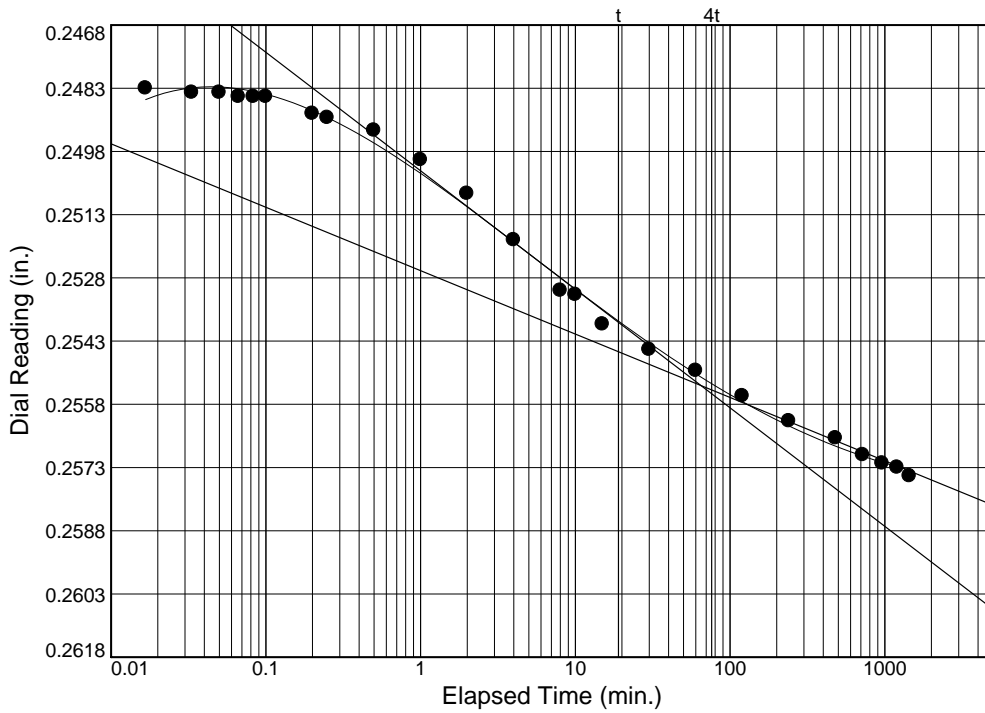
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-1

Depth: 13

Sample Number: 7B



Load No.= 9

Load= 0.25 tsf

$D_0 = 0.2523$

$D_{50} = 0.2538$

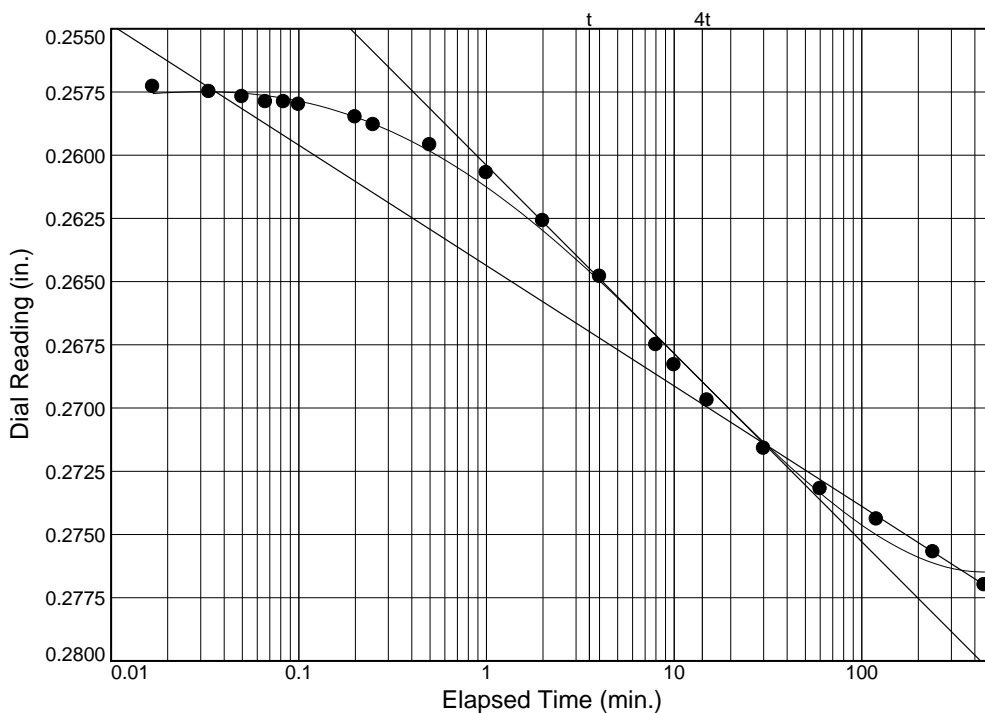
$D_{100} = 0.2554$

$T_{50} = 19.35 \text{ min.}$

$C_v @ T_{50}$

0.008 ft.<sup>2</sup>/day

$C_\alpha = 0.002$



Load No.= 10

Load= 0.49 tsf

$D_0 = 0.2602$

$D_{50} = 0.2658$

$D_{100} = 0.2714$

$T_{50} = 5.28 \text{ min.}$

$C_v @ T_{50}$

0.026 ft.<sup>2</sup>/day

$C_\alpha = 0.006$

Figure



# Dial Reading vs. Time

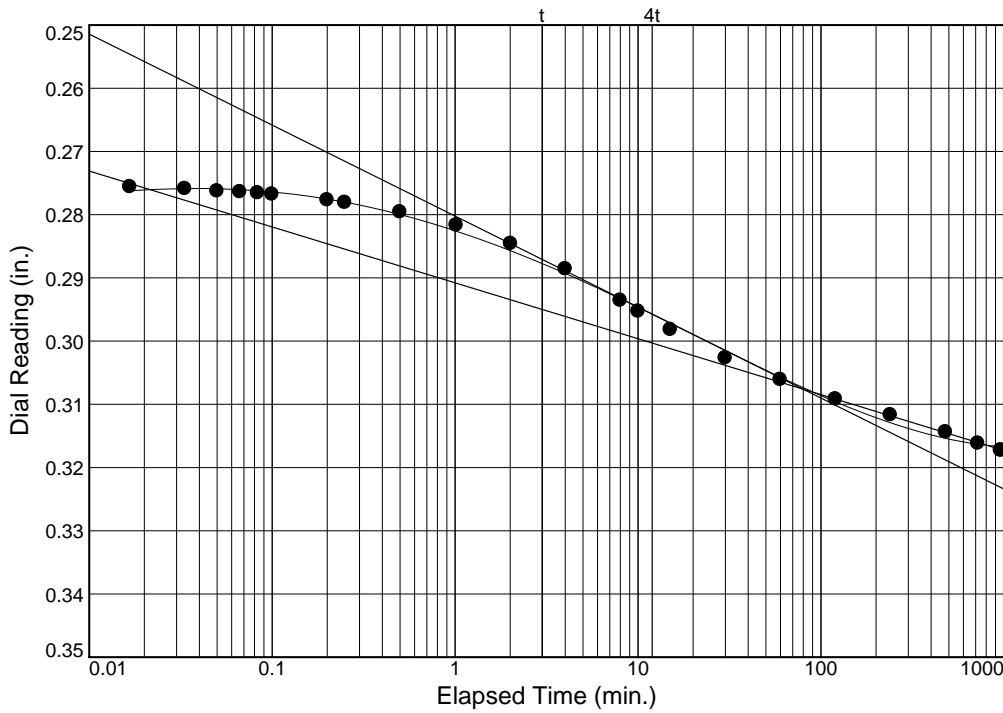
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-1

Depth: 13

Sample Number: 7B



Load No.= 11

Load= 0.97 tsf

$D_0 = 0.2797$

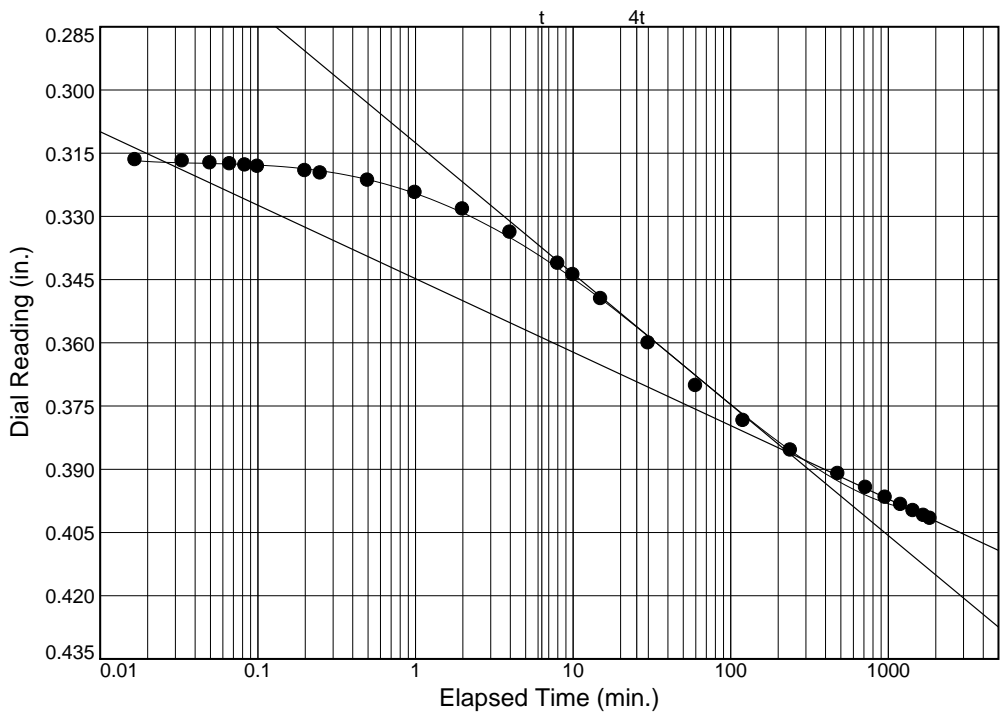
$D_{50} = 0.2936$

$D_{100} = 0.3076$

$T_{50} = 8.46 \text{ min.}$

$C_v @ T_{50}$   
0.015 ft.<sup>2</sup>/day

$C_\alpha = 0.011$



Load No.= 12

Load= 1.93 tsf

$D_0 = 0.3231$

$D_{50} = 0.3545$

$D_{100} = 0.3860$

$T_{50} = 22.21 \text{ min.}$

$C_v @ T_{50}$   
0.004 ft.<sup>2</sup>/day

$C_\alpha = 0.022$

# Dial Reading vs. Time

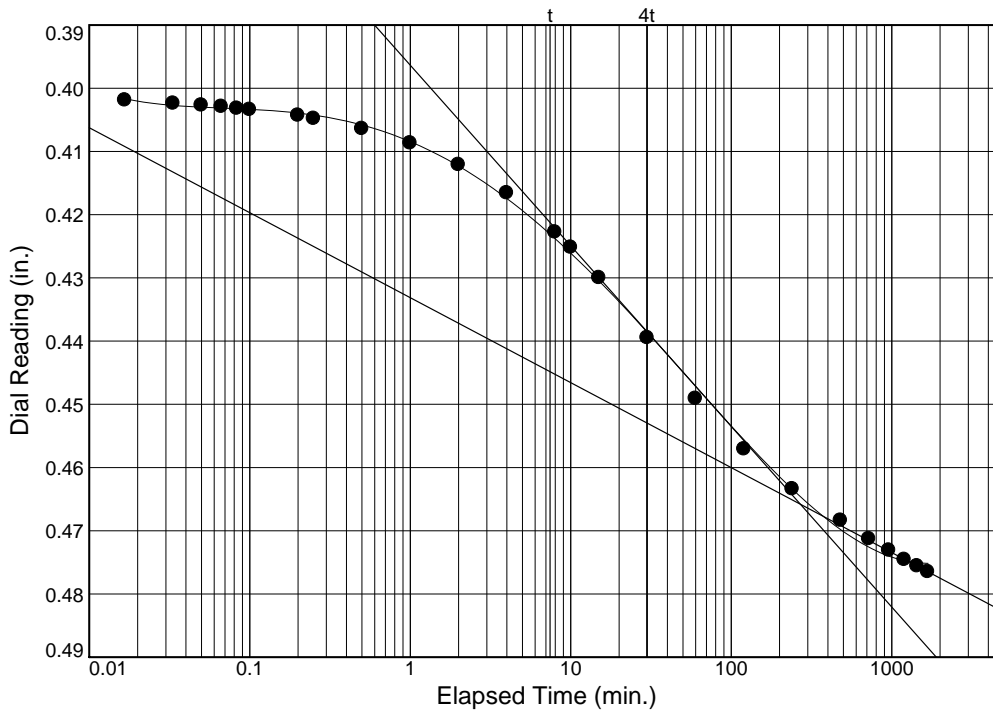
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-1

Depth: 13

Sample Number: 7B



Load No.= 13

Load= 3.85 tsf

$D_0 = 0.4077$

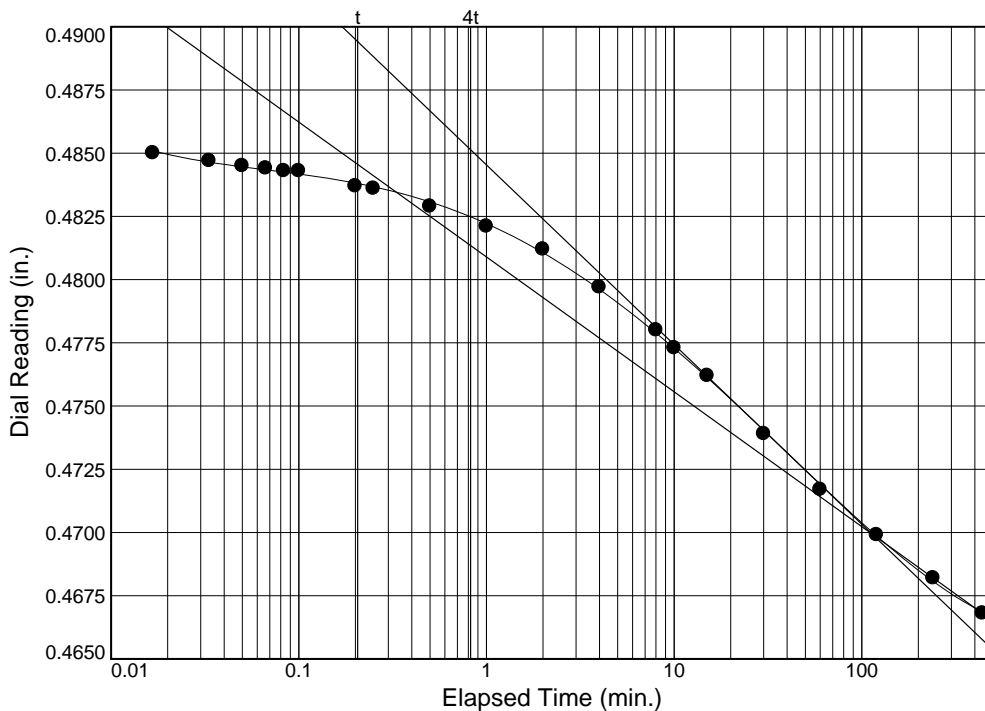
$D_{50} = 0.4367$

$D_{100} = 0.4658$

$T_{50} = 25.68 \text{ min.}$

$C_v @ T_{50}$   
0.002 ft.<sup>2</sup>/day

$C_\alpha = 0.017$



Load No.= 14

Load= 0.97 tsf

$D_0 = 0.4851$

$D_{50} = 0.4775$

$D_{100} = 0.4699$

$T_{50} = 9.12 \text{ min.}$

$C_v @ T_{50}$   
0.006 ft.<sup>2</sup>/day

# Dial Reading vs. Time

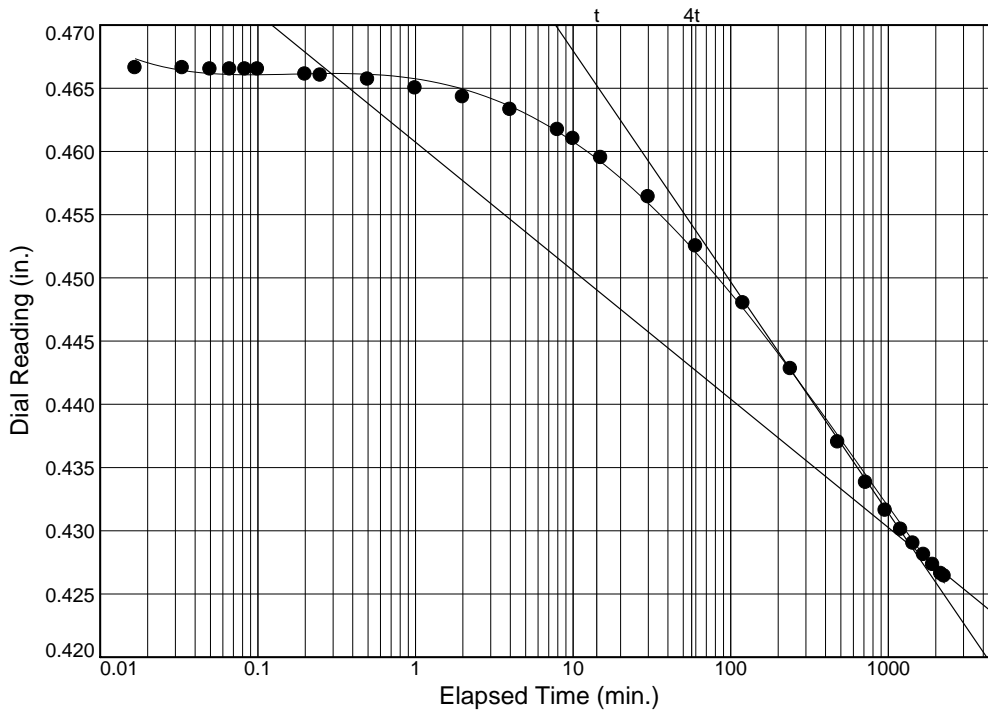
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-1

Depth: 13

Sample Number: 7B



Load No.= 15

Load= 0.25 tsf

$D_0 = 0.4665$

$D_{50} = 0.4476$

$D_{100} = 0.4288$

$T_{50} = 118.86 \text{ min.}$

$C_v @ T_{50}$

0.001 ft.2/day

**CONSOLIDATION TEST DATA**

8/29/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST.  
BERNARD PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** B-1

**Depth:** 13

**Sample Number:** 7B

**Material Description:** W, vso dbr HUM w/ fw wd & rts

**Liquid Limit:** 387

**Plasticity Index:** 194

**USCS:** PT

**Tested by:** RR

**Checked by:** RR

**Test Specimen Data**

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	46.13 g.	Spec. Gr. =	2.25	Wet w+t =	59.02 g.
Dry w+t =	9.02 g.	Est. Ht. Solids =	0.074 in.	Dry w+t =	40.45 g.
Tare Wt. =	0.00 g.	Init. V.R. =	9.743	Tare Wt. =	31.43 g.
Moisture =	411.4 %	Init. Sat. =	95.0 %	Moisture =	205.9 %
UNIT WEIGHT		TEST START			
Height =	0.797 in.	Height =	0.797 in.	Dry Wt. =	9.02* g.
Diameter =	2.049 in.	Diameter =	2.049 in.		
Weight =	46.13 g.				
Dry Dens. =	13.1 pcf				

\* Final dry weight used as mineral solids weight

**End-Of-Load Summary**

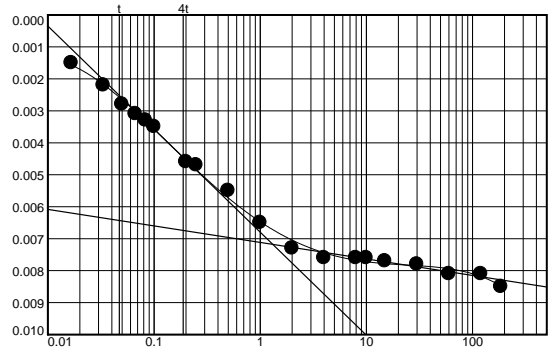
Pressure (tsf)	Final Dial (in.)	Machine Defl. (in.)	Deformation (in.)	C <sub>v</sub> (ft.2/day)	C <sub>α</sub>	Void Ratio	% Strain
start	0.00010		0.00000			9.743	
0.06	0.01000	0.00150	0.00840	2.387	0.001	9.629	1.1 Compr.
0.12	0.02560	0.00280	0.02270	0.688	0.003	9.437	2.8 Compr.
0.25	0.08360	0.00430	0.07920	0.420	0.014	8.675	9.9 Compr.
0.49	0.16220	0.00620	0.15590	0.058	0.000	7.641	19.6 Compr.
0.97	0.31720	0.00840	0.30870	0.017	0.031	5.582	38.7 Compr.
0.25	0.29790	0.00290	0.29490	0.013		5.768	37.0 Compr.
0.06	0.25130	0.00180	0.24940	0.005		6.381	31.3 Compr.
0.12	0.25520	0.00480	0.25030	0.019	0.000	6.369	31.4 Compr.
0.25	0.26410	0.00660	0.25740	0.008	0.002	6.273	32.3 Compr.
0.49	0.28590	0.00890	0.27690	0.026	0.006	6.010	34.7 Compr.
0.97	0.32860	0.01130	0.31720	0.015	0.011	5.467	39.8 Compr.
1.93	0.41520	0.01350	0.40160	0.004	0.022	4.330	50.4 Compr.
3.85	0.49200	0.01550	0.47640	0.002	0.017	3.321	59.8 Compr.
0.97	0.47660	0.00980	0.46670	0.006		3.452	58.6 Compr.
0.25	0.43400	0.00760	0.42630	0.001		3.997	53.5 Compr.
0.06	0.41470	0.00420	0.41040			4.211	51.5 Compr.

**TEST RESULTS SUMMARY**

Compression index ( $C_c$ ), tsf = 7.48    Preconsolidation pressure ( $P_p$ ), tsf = 0.5    Void ratio at  $P_p$  ( $e_m$ ) = 7.609  
 Recompression index ( $C_r$ ) = 0.77

Pressure: 0.06 tsf TEST READINGS Load No. 1

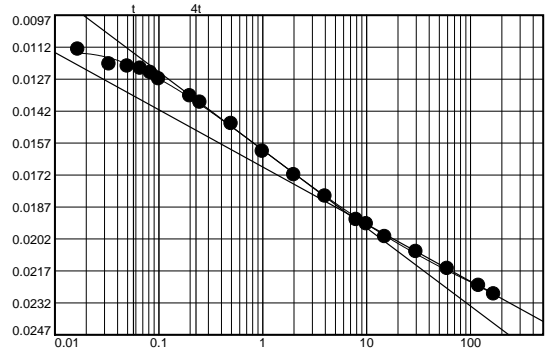
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0001	11	1.0000	0.0080
2	0.0167	0.0030	12	2.0000	0.0088
3	0.0333	0.0037	13	4.0000	0.0091
4	0.0500	0.0043	14	8.0000	0.0091
5	0.0667	0.0046	15	10.0000	0.0091
6	0.0833	0.0048	16	15.0000	0.0092
7	0.1000	0.0050	17	30.0000	0.0093
8	0.2000	0.0061	18	60.0333	0.0096
9	0.2500	0.0062	19	120.0000	0.0096
10	0.5000	0.0070	20	185.4500	0.0100



Void Ratio = 9.629    Compression = 1.1%  
 $D_0 = 0.0007$      $D_{50} = 0.0039$      $D_{100} = 0.0072$      $C_v$  at 0.13 min. = 2.387 ft.<sup>2</sup>/day     $C_\alpha = 0.001$

Pressure: 0.12 tsf TEST READINGS Load No. 2

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0104	11	1.0000	0.0189
2	0.0167	0.0141	12	2.0000	0.0200
3	0.0333	0.0148	13	4.0000	0.0210
4	0.0500	0.0149	14	8.0000	0.0221
5	0.0667	0.0150	15	10.0000	0.0223
6	0.0833	0.0152	16	15.0167	0.0229
7	0.1000	0.0155	17	30.0333	0.0236
8	0.2000	0.0163	18	60.0833	0.0244
9	0.2500	0.0166	19	120.1667	0.0252
10	0.5000	0.0176	20	168.0667	0.0256



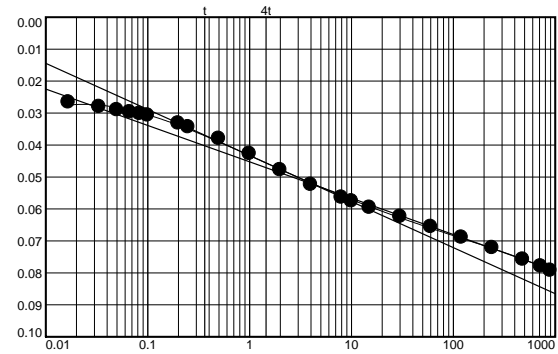
Void Ratio = 9.437    Compression = 2.8%  
 $D_0 = 0.0104$      $D_{50} = 0.0147$      $D_{100} = 0.0190$      $C_v$  at 0.44 min. = 0.688 ft.<sup>2</sup>/day     $C_\alpha = 0.003$

Pressure: 0.25 tsf

TEST READINGS

Load No. 3

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0259	13	4.0000	0.0567
2	0.0167	0.0309	14	8.0000	0.0607
3	0.0333	0.0323	15	10.0167	0.0619
4	0.0500	0.0333	16	15.0167	0.0639
5	0.0667	0.0340	17	30.0333	0.0667
6	0.0833	0.0345	18	60.0833	0.0699
7	0.1000	0.0350	19	120.1667	0.0732
8	0.2000	0.0375	20	240.3500	0.0765
9	0.2500	0.0387	21	480.6833	0.0801
10	0.5000	0.0423	22	721.0333	0.0822
11	1.0000	0.0470	23	893.8667	0.0836
12	2.0000	0.0521			



Void Ratio = 8.675    Compression = 9.9%

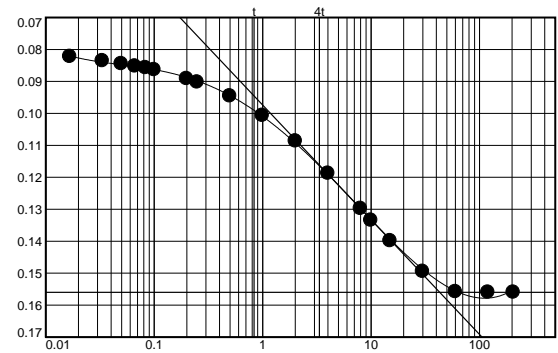
$D_0 = 0.0286$      $D_{50} = 0.0406$      $D_{100} = 0.0527$      $C_v$  at 0.65 min. = 0.420 ft.<sup>2</sup>/day     $C_\alpha = 0.014$

Pressure: 0.49 tsf

TEST READINGS

Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0842	11	1.0000	0.1069
2	0.0167	0.0885	12	2.0167	0.1149
3	0.0333	0.0898	13	4.0167	0.1250
4	0.0500	0.0907	14	8.0333	0.1360
5	0.0667	0.0915	15	10.0333	0.1397
6	0.0833	0.0920	16	15.0500	0.1461
7	0.1000	0.0926	17	30.1000	0.1557
8	0.2000	0.0954	18	60.2167	0.1621
9	0.2500	0.0965	19	120.4000	0.1622
10	0.5000	0.1008	20	206.3833	0.1622



Void Ratio = 7.641    Compression = 19.6%

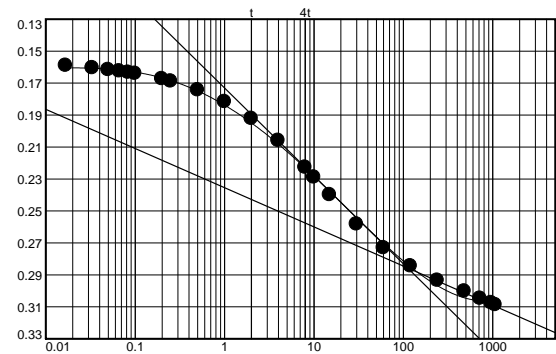
$D_0 = 0.0817$      $D_{50} = 0.1188$      $D_{100} = 0.1560$      $C_v$  at 3.93 min. = 0.058 ft.<sup>2</sup>/day     $C_\alpha = 0.000$

Pressure: 0.97 tsf

TEST READINGS

Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1625	13	4.0000	0.2144
2	0.0167	0.1675	14	8.0000	0.2312
3	0.0333	0.1689	15	10.0167	0.2373
4	0.0500	0.1701	16	15.0167	0.2484
5	0.0667	0.1710	17	30.0167	0.2667
6	0.0833	0.1718	18	60.0333	0.2816
7	0.1000	0.1725	19	120.1000	0.2930
8	0.2000	0.1758	20	240.2667	0.3019
9	0.2500	0.1773	21	480.6333	0.3087
10	0.5000	0.1828	22	720.9833	0.3132
11	1.0000	0.1902	23	961.3333	0.3160
12	2.0000	0.2006	24	1069.6500	0.3172



Void Ratio = 5.582 Compression = 38.7%

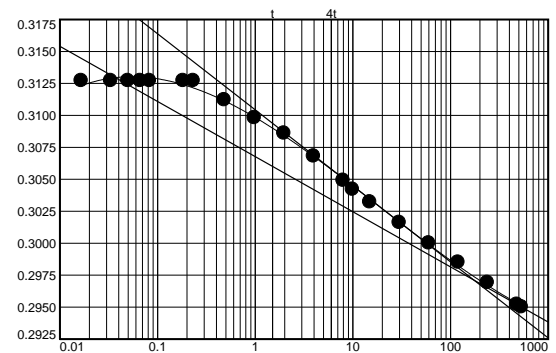
$D_0 = 0.1666$   $D_{50} = 0.2261$   $D_{100} = 0.2856$   $C_v$  at 9.09 min. = 0.017 ft.<sup>2</sup>/day  $C_\alpha = 0.031$

Pressure: 0.25 tsf

TEST READINGS

Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0167	0.3156	12	4.0000	0.3097
2	0.0333	0.3156	13	8.0000	0.3078
3	0.0500	0.3156	14	10.0000	0.3071
4	0.0667	0.3156	15	15.0167	0.3061
5	0.0833	0.3156	16	30.0333	0.3045
6	0.1000	0.3156	17	60.0833	0.3029
7	0.2000	0.3156	18	120.1667	0.3014
8	0.2500	0.3156	19	240.3333	0.2998
9	0.5000	0.3141	20	480.6833	0.2981
10	1.0000	0.3127	21	534.8333	0.2979
11	2.0000	0.3115			



Void Ratio = 5.768 Compression = 37.0%

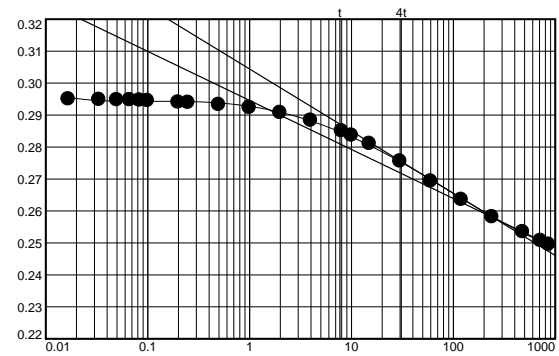
$D_0 = 0.3122$   $D_{50} = 0.3047$   $D_{100} = 0.2971$   $C_v$  at 9.29 min. = 0.013 ft.<sup>2</sup>/day

Pressure: 0.06 tsf

TEST READINGS

Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2977	13	4.0000	0.2901
2	0.0167	0.2968	14	8.0167	0.2868
3	0.0333	0.2966	15	10.0167	0.2854
4	0.0500	0.2965	16	15.0167	0.2828
5	0.0667	0.2965	17	30.0500	0.2773
6	0.0833	0.2964	18	60.0833	0.2711
7	0.1000	0.2963	19	120.1667	0.2653
8	0.2000	0.2958	20	240.3500	0.2599
9	0.2500	0.2957	21	480.7000	0.2552
10	0.5000	0.2950	22	721.0333	0.2525
11	1.0000	0.2941	23	863.2333	0.2513
12	2.0000	0.2925			



Void Ratio = 6.381 Compression = 31.3%

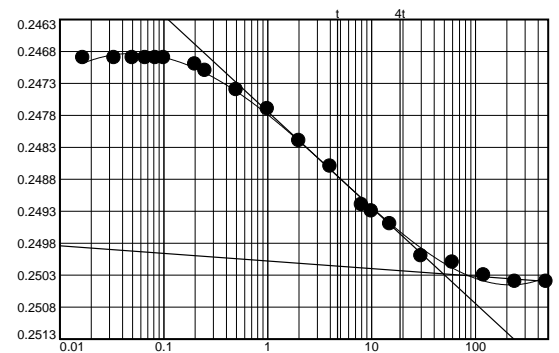
$D_0 = 0.2943$   $D_{50} = 0.2760$   $D_{100} = 0.2577$   $C_v$  at 27.94 min. = 0.005 ft.<sup>2</sup>/day

Pressure: 0.12 tsf

TEST READINGS

Load No. 8

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2514	12	2.0000	0.2530
2	0.0167	0.2517	13	4.0000	0.2534
3	0.0333	0.2517	14	8.0167	0.2540
4	0.0500	0.2517	15	10.0167	0.2541
5	0.0667	0.2517	16	15.0167	0.2543
6	0.0833	0.2517	17	30.0500	0.2548
7	0.1000	0.2517	18	60.0833	0.2549
8	0.2000	0.2518	19	120.1667	0.2551
9	0.2500	0.2519	20	240.3500	0.2552
10	0.5000	0.2522	21	480.6833	0.2552
11	1.0000	0.2525			



Void Ratio = 6.369 Compression = 31.4%

$D_0 = 0.2479$   $D_{50} = 0.2491$   $D_{100} = 0.2503$   $C_v$  at 7.79 min. = 0.019 ft.<sup>2</sup>/day  $C_\alpha = 0.000$

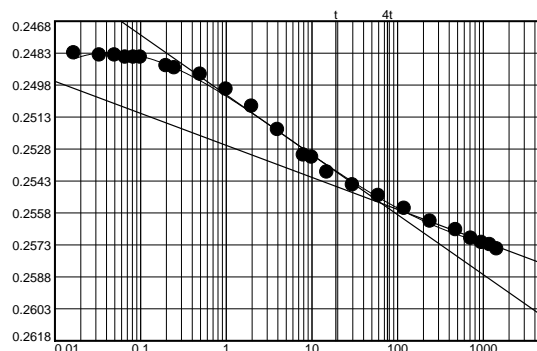


Pressure: 0.25 tsf

TEST READINGS

Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2552	14	8.0000	0.2597
2	0.0167	0.2549	15	10.0167	0.2598
3	0.0333	0.2550	16	15.0167	0.2605
4	0.0500	0.2550	17	30.0167	0.2611
5	0.0667	0.2551	18	60.0667	0.2616
6	0.0833	0.2551	19	120.1500	0.2622
7	0.1000	0.2551	20	240.3333	0.2628
8	0.2000	0.2555	21	480.6667	0.2632
9	0.2500	0.2556	22	721.0167	0.2636
10	0.5000	0.2559	23	961.3667	0.2638
11	1.0000	0.2566	24	1201.7167	0.2639
12	2.0000	0.2574	25	1442.0667	0.2641
13	4.0000	0.2585			



Void Ratio = 6.273 Compression = 32.3%

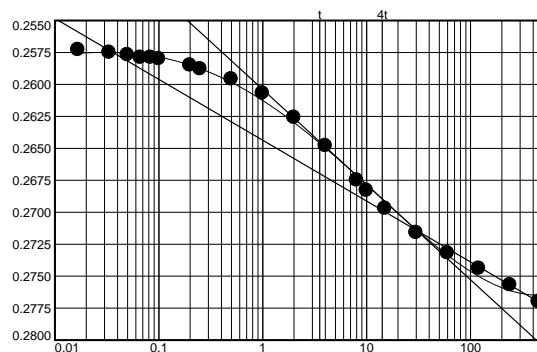
D<sub>0</sub> = 0.2523 D<sub>50</sub> = 0.2538 D<sub>100</sub> = 0.2554 C<sub>v</sub> at 19.35 min. = 0.008 ft.<sup>2</sup>/day C<sub>α</sub> = 0.002

Pressure: 0.49 tsf

TEST READINGS

Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2641	12	2.0000	0.2612
2	0.0167	0.2662	13	4.0000	0.2686
3	0.0333	0.2664	14	8.0000	0.2698
4	0.0500	0.2666	15	10.0167	0.2701
5	0.0667	0.2668	16	15.0333	0.2707
6	0.0833	0.2668	17	30.0500	0.2745
7	0.1000	0.2669	18	60.1000	0.2784
8	0.2000	0.2674	19	120.2000	0.2812
9	0.2500	0.2677	20	240.4000	0.2845
10	0.5000	0.2685	21	450.8000	0.2856
11	1.0000	0.2696			



Void Ratio = 6.010 Compression = 34.7%

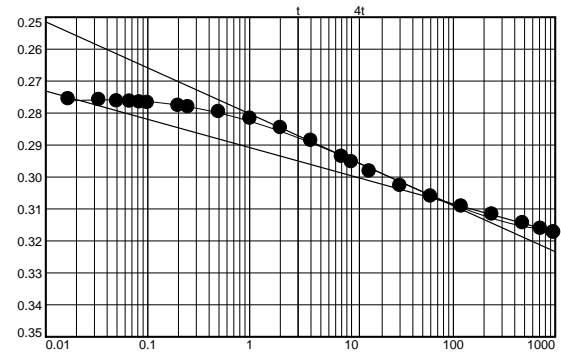
D<sub>0</sub> = 0.2602 D<sub>50</sub> = 0.2658 D<sub>100</sub> = 0.2714 C<sub>v</sub> at 5.28 min. = 0.026 ft.<sup>2</sup>/day C<sub>α</sub> = 0.006

Pressure: 0.97 tsf

TEST READINGS

Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2854	13	4.0167	0.2999
2	0.0167	0.2869	14	8.0167	0.3049
3	0.0333	0.2872	15	10.0167	0.3066
4	0.0500	0.2876	16	15.0333	0.3095
5	0.0667	0.2877	17	30.0500	0.3140
6	0.0833	0.2879	18	60.1000	0.3174
7	0.1000	0.2881	19	120.1833	0.3205
8	0.2000	0.2890	20	240.3500	0.3230
9	0.2500	0.2894	21	480.7000	0.3257
10	0.5000	0.2909	22	721.0500	0.3275
11	1.0167	0.2930	23	961.4000	0.3286
12	2.0167	0.2959	24	970.9500	0.3286



Void Ratio = 5.467 Compression = 39.8%

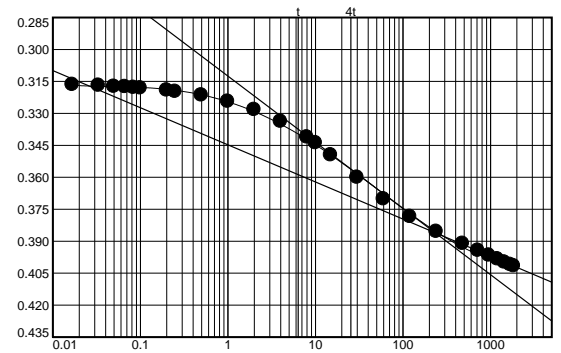
$D_0 = 0.2797$   $D_{50} = 0.2936$   $D_{100} = 0.3076$   $C_v$  at 8.46 min. = 0.015 ft.<sup>2</sup>/day  $C_\alpha = 0.011$

Pressure: 1.93 tsf

TEST READINGS

Load No. 12

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.3280	15	10.0167	0.3574
2	0.0167	0.3301	16	15.0167	0.3631
3	0.0333	0.3304	17	30.0500	0.3736
4	0.0500	0.3309	18	60.1000	0.3837
5	0.0667	0.3311	19	120.2000	0.3920
6	0.0833	0.3314	20	240.4000	0.3990
7	0.1000	0.3317	21	480.7833	0.4046
8	0.2000	0.3327	22	721.1833	0.4079
9	0.2500	0.3333	23	961.5833	0.4102
10	0.5000	0.3350	24	1201.9667	0.4119
11	1.0000	0.3379	25	1442.3667	0.4134
12	2.0000	0.3418	26	1682.7500	0.4145
13	4.0000	0.3473	27	1845.7833	0.4152
14	8.0167	0.3547			



Void Ratio = 4.330 Compression = 50.4%

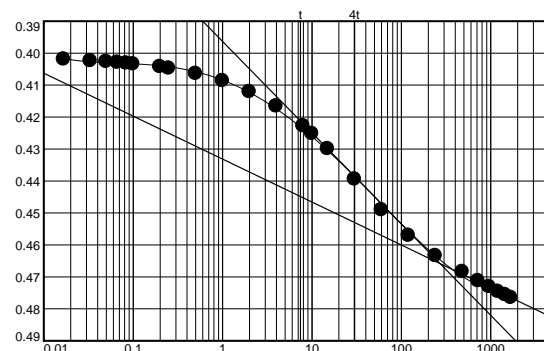
$D_0 = 0.3231$   $D_{50} = 0.3545$   $D_{100} = 0.3860$   $C_v$  at 22.21 min. = 0.004 ft.<sup>2</sup>/day  $C_\alpha = 0.022$

Pressure: 3.85 tsf

TEST READINGS

Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.4156	14	8.0000	0.4383
2	0.0167	0.4174	15	10.0000	0.4407
3	0.0333	0.4179	16	15.0167	0.4455
4	0.0500	0.4182	17	30.0333	0.4550
5	0.0667	0.4184	18	60.0833	0.4646
6	0.0833	0.4187	19	120.1667	0.4726
7	0.1000	0.4189	20	240.3333	0.4789
8	0.2000	0.4198	21	480.6833	0.4839
9	0.2500	0.4203	22	721.0333	0.4868
10	0.5000	0.4219	23	961.3667	0.4886
11	1.0000	0.4242	24	1201.7167	0.4901
12	2.0000	0.4276	25	1442.0667	0.4911
13	4.0000	0.4321	26	1682.4167	0.4920



Void Ratio = 3.321 Compression = 59.8%

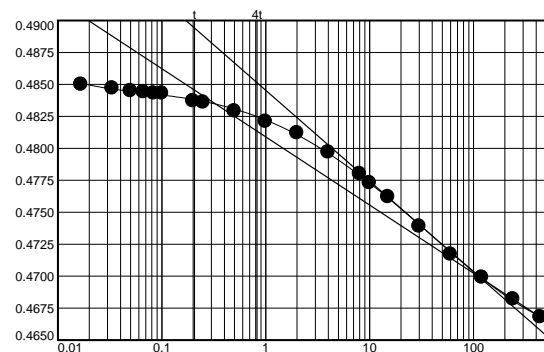
$D_0 = 0.4077$   $D_{50} = 0.4367$   $D_{100} = 0.4658$   $C_v$  at 25.68 min. = 0.002 ft.<sup>2</sup>/day  $C_\alpha = 0.017$

Pressure: 0.97 tsf

TEST READINGS

Load No. 14

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.4960	12	2.0000	0.4910
2	0.0167	0.4948	13	4.0000	0.4895
3	0.0333	0.4945	14	8.0167	0.4878
4	0.0500	0.4943	15	10.0167	0.4871
5	0.0667	0.4942	16	15.0167	0.4860
6	0.0833	0.4941	17	30.0500	0.4837
7	0.1000	0.4941	18	60.0833	0.4815
8	0.2000	0.4935	19	120.1667	0.4797
9	0.2500	0.4934	20	240.3500	0.4780
10	0.5000	0.4927	21	439.8833	0.4766
11	1.0000	0.4919			



Void Ratio = 3.452 Compression = 58.6%

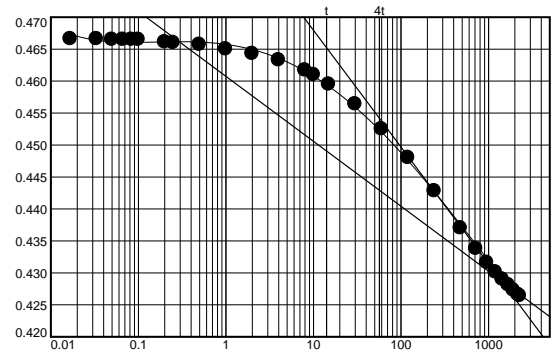
$D_0 = 0.4851$   $D_{50} = 0.4775$   $D_{100} = 0.4699$   $C_v$  at 9.12 min. = 0.006 ft.<sup>2</sup>/day

Pressure: 0.25 tsf

TEST READINGS

Load No. 15

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.4755	16	15.0167	0.4671
2	0.0167	0.4742	17	30.0333	0.4640
3	0.0333	0.4742	18	60.0833	0.4601
4	0.0500	0.4741	19	120.1667	0.4556
5	0.0667	0.4741	20	240.3333	0.4504
6	0.0833	0.4741	21	480.6833	0.4446
7	0.1000	0.4741	22	721.0333	0.4414
8	0.2000	0.4737	23	961.3833	0.4392
9	0.2500	0.4736	24	1201.7333	0.4377
10	0.5000	0.4733	25	1442.1500	0.4366
11	1.0000	0.4726	26	1682.5500	0.4357
12	2.0000	0.4719	27	1922.9167	0.4349
13	4.0000	0.4709	28	2163.3000	0.4342
14	8.0000	0.4693	29	2269.5333	0.4340
15	10.0167	0.4686			



Void Ratio = 3.997 Compression = 53.5%

$D_0 = 0.4665$   $D_{50} = 0.4476$   $D_{100} = 0.4288$   $C_v$  at 118.86 min. = 0.001 ft.<sup>2</sup>/day

Pressure: 0.06 tsf

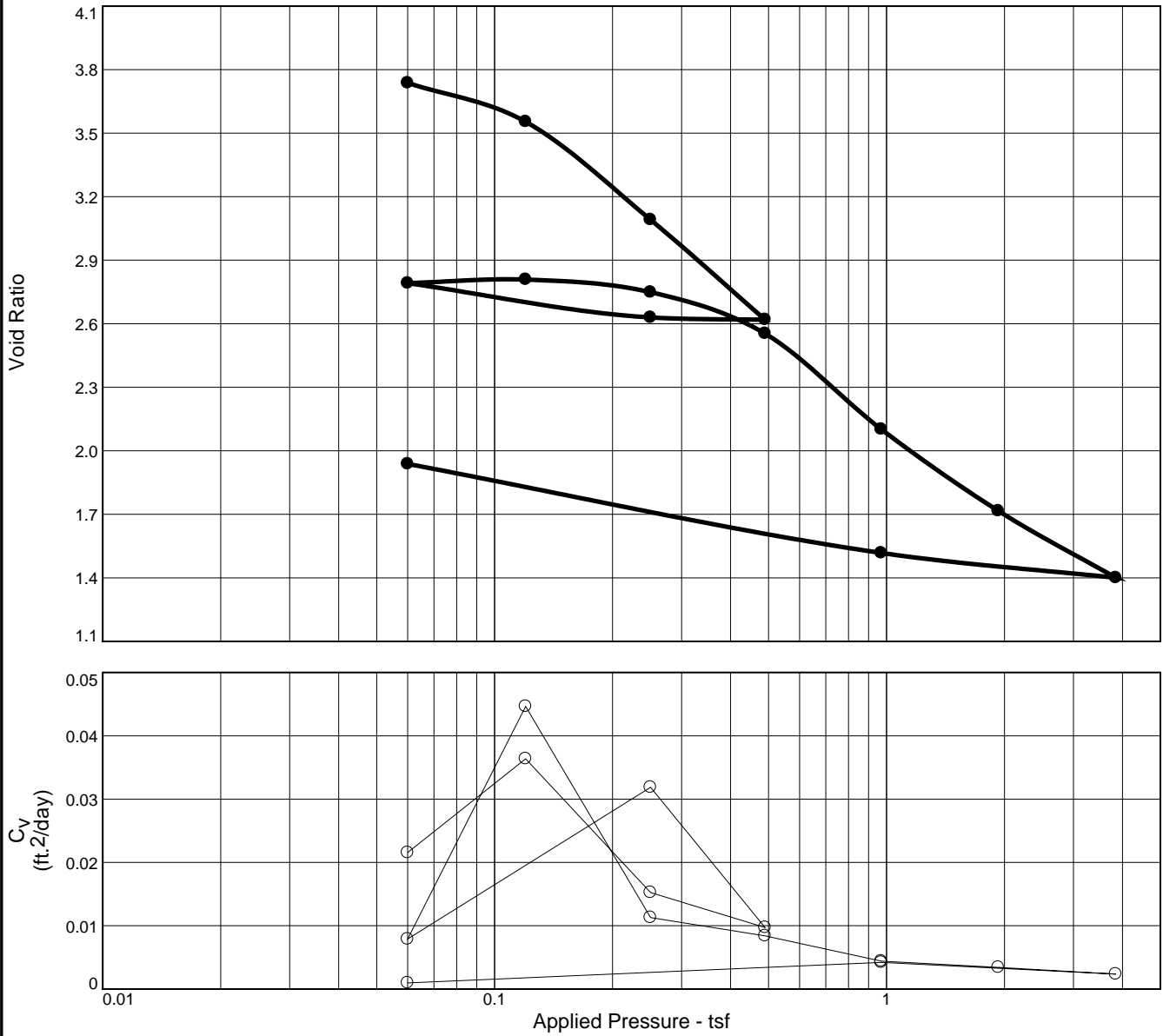
TEST READINGS

Load No. 16

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0000	11	1.0000	0.4338	21	480.7167	0.4148
2	0.0167	0.4338	12	2.0000	0.4338	22	481.8833	0.4147
3	0.0333	0.4338	13	4.0000	0.4324			
4	0.0500	0.4338	14	8.0167	0.4310			
5	0.0667	0.4338	15	10.0167	0.4307			
6	0.0833	0.4338	16	15.0167	0.4297			
7	0.1000	0.4338	17	30.0500	0.4278			
8	0.2000	0.4338	18	60.0833	0.4256			
9	0.2500	0.4338	19	120.1667	0.4227			
10	0.5000	0.4338	20	240.3500	0.4191			


Void Ratio = 4.211 Compression = 51.5%

# CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	$P_c$ (tsf)	$C_c$	Initial Void Ratio
Saturation	Moisture							
99.7 %	148.3 %	33.2	141	57	2.55	0.2	1.59	3.791

<b>MATERIAL DESCRIPTION</b>							<b>USCS</b>	<b>AASHTO</b>
W, xso dkg ORG CL							OH	

Project No. 24762	Client: STATE OF LOUISIANA, OFFICE OF COASTAL	Remarks:
Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE		
Source of Sample: B-2	Depth: 1      Sample Number: 1B	
		Figure

Tested By: RR, BH

Checked By: RR

# Dial Reading vs. Time

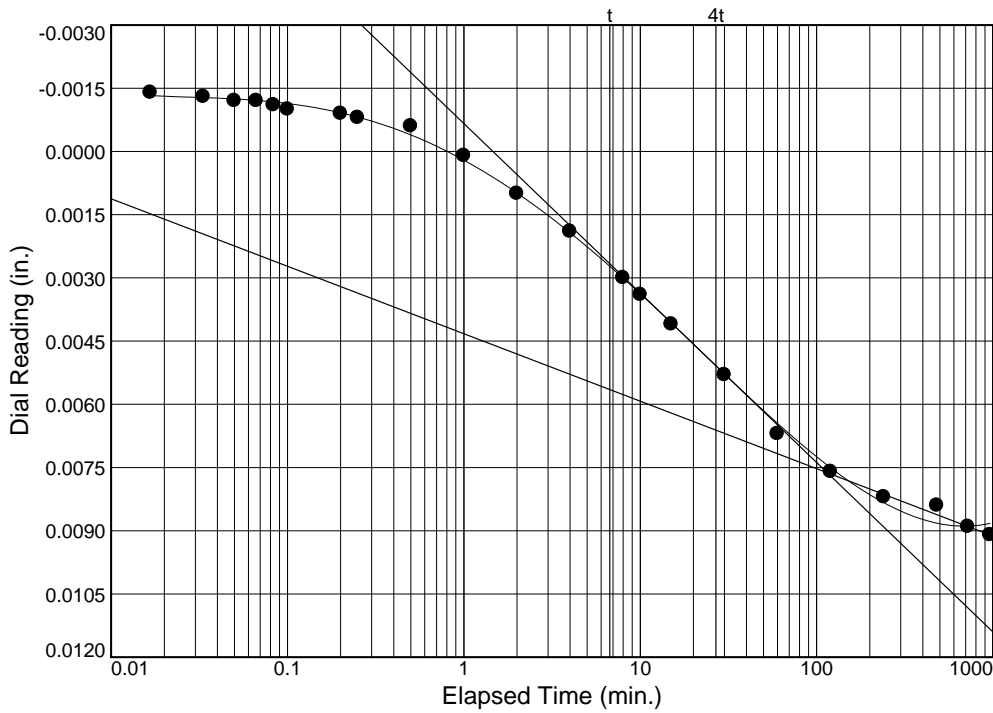
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-2

Depth: 1

Sample Number: 1B



Load No.= 1

Load= 0.06 tsf

$D_0 = 0.0004$

$D_{50} = 0.0040$

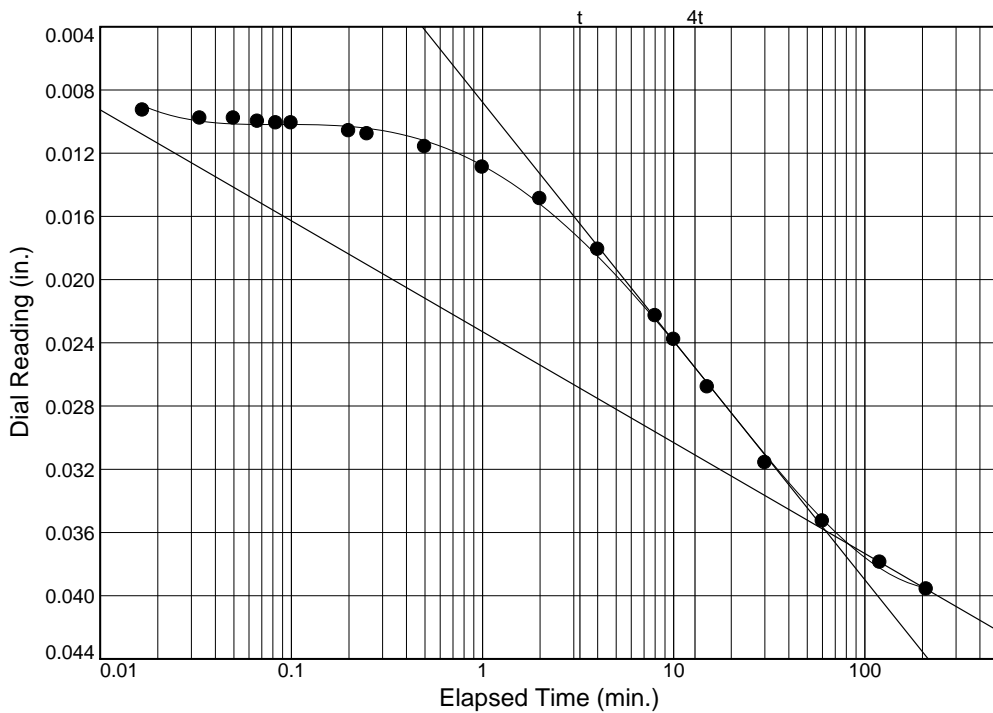
$D_{100} = 0.0076$

$T_{50} = 14.35$  min.

$C_v @ T_{50}$

0.022 ft.<sup>2</sup>/day

$C_\alpha = 0.002$



Load No.= 2

Load= 0.12 tsf

$D_0 = 0.0093$

$D_{50} = 0.0226$

$D_{100} = 0.0359$

$T_{50} = 8.09$  min.

$C_v @ T_{50}$

0.036 ft.<sup>2</sup>/day

$C_\alpha = 0.009$

# Dial Reading vs. Time

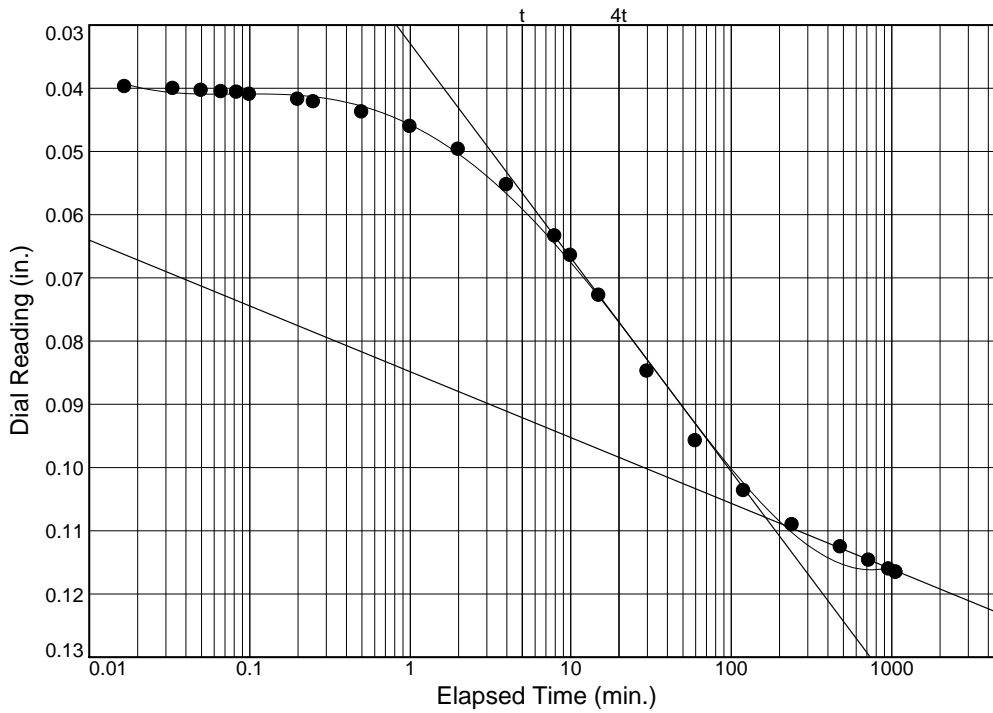
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-2

Depth: 1

Sample Number: 1B



Load No.= 3

Load= 0.25 tsf

$D_0 = 0.0412$

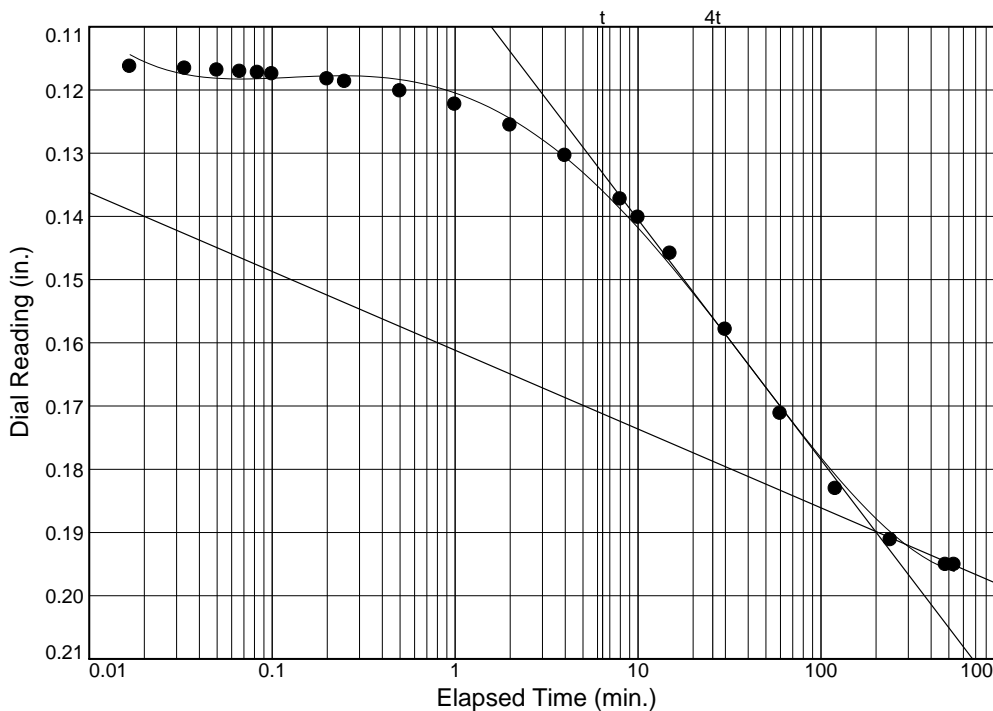
$D_{50} = 0.0745$

$D_{100} = 0.1079$

$T_{50} = 16.72$  min.

$C_v @ T_{50}$   
0.015 ft.<sup>2</sup>/day

$C_\alpha = 0.013$



Load No.= 4

Load= 0.49 tsf

$D_0 = 0.1159$

$D_{50} = 0.1528$

$D_{100} = 0.1898$

$T_{50} = 20.91$  min.

$C_v @ T_{50}$   
0.010 ft.<sup>2</sup>/day

$C_\alpha = 0.016$

# Dial Reading vs. Time

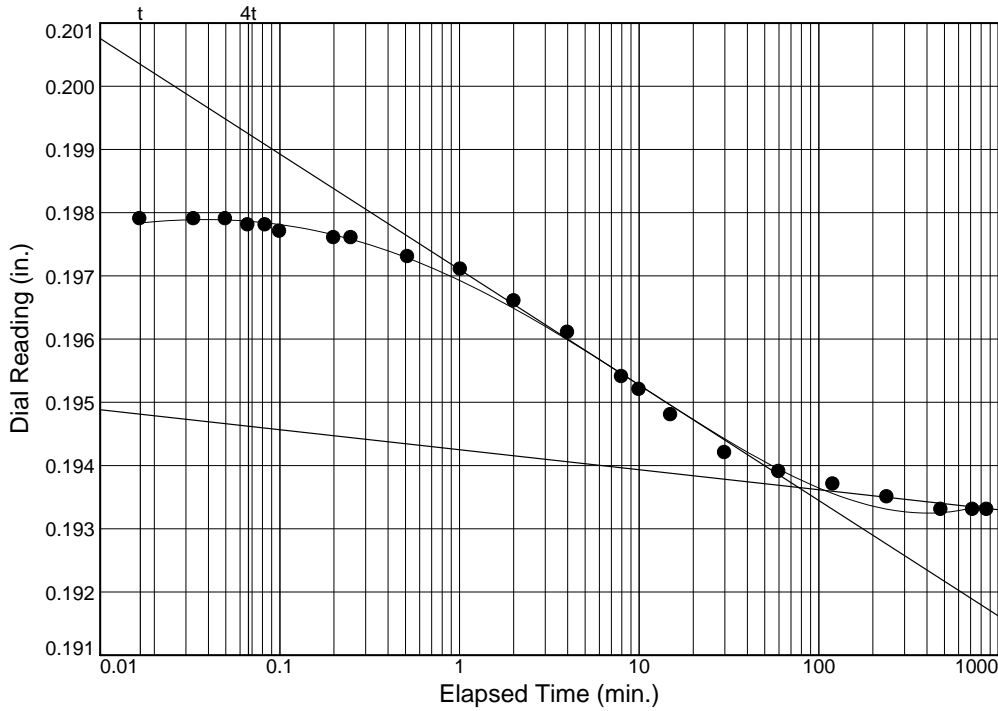
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-2

Depth: 1

Sample Number: 1B



Load No.= 5

Load= 0.25 tsf

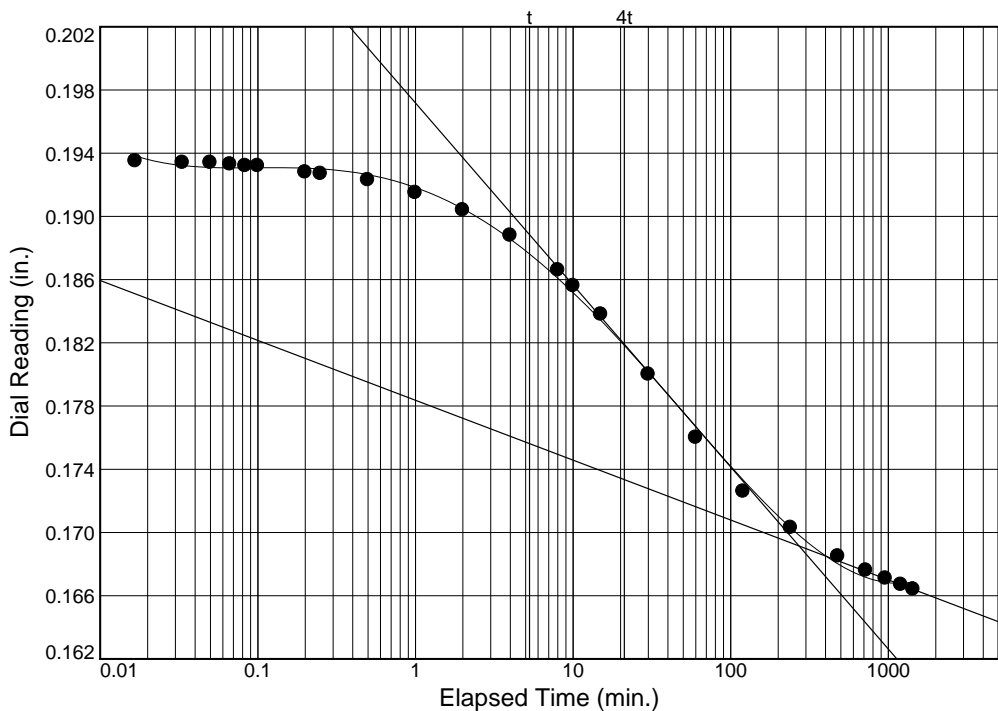
$D_0 = 0.1978$

$D_{50} = 0.1957$

$D_{100} = 0.1937$

$T_{50} = 5.59$  min.

$C_v @ T_{50}$   
0.032 ft.<sup>2</sup>/day



Load No.= 6

Load= 0.06 tsf

$D_0 = 0.1934$

$D_{50} = 0.1813$

$D_{100} = 0.1691$

$T_{50} = 23.74$  min.

$C_v @ T_{50}$   
0.008 ft.<sup>2</sup>/day



# Dial Reading vs. Time

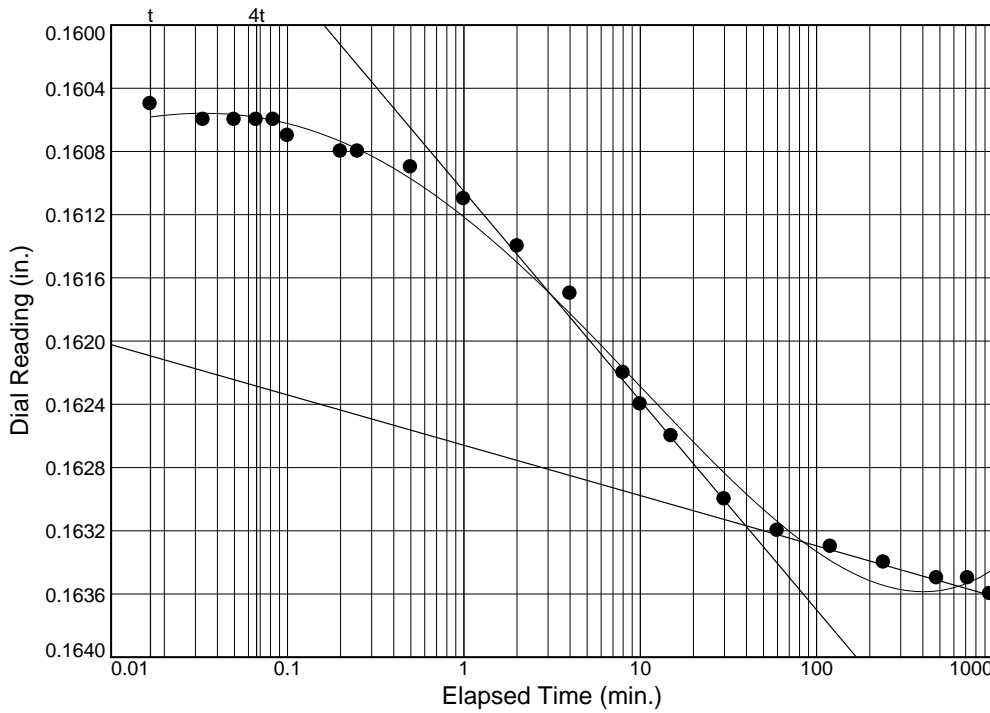
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-2

Depth: 1

Sample Number: 1B



Load No.= 7

Load= 0.12 tsf

$D_0 = 0.1606$

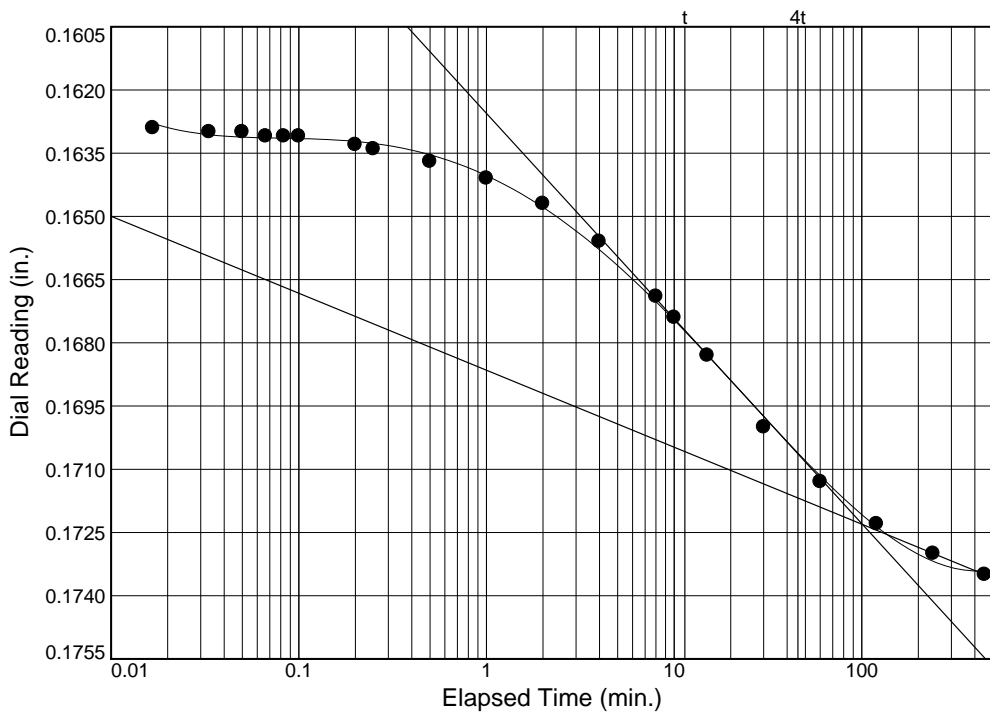
$D_{50} = 0.1619$

$D_{100} = 0.1632$

$T_{50} = 4.41 \text{ min.}$

$C_v @ T_{50}$   
0.045 ft.<sup>2</sup>/day

$C_\alpha = 0.000$



Load No.= 8

Load= 0.25 tsf

$D_0 = 0.1648$

$D_{50} = 0.1686$

$D_{100} = 0.1723$

$T_{50} = 17.23 \text{ min.}$

$C_v @ T_{50}$   
0.011 ft.<sup>2</sup>/day

$C_\alpha = 0.002$

# Dial Reading vs. Time

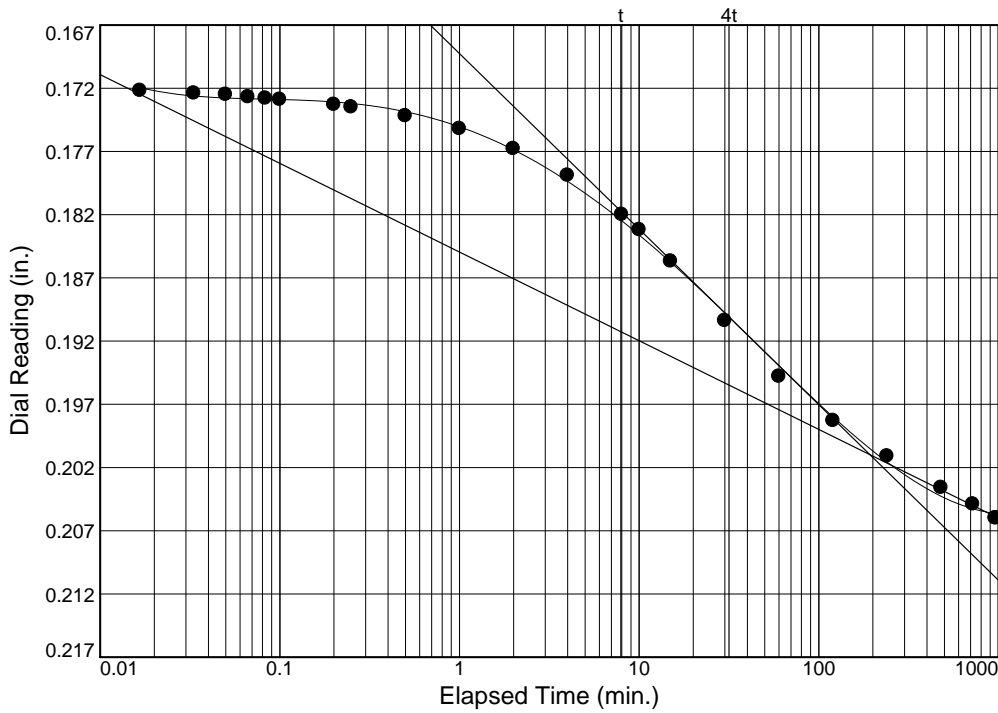
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-2

Depth: 1

Sample Number: 1B



Load No.= 9

Load= 0.49 tsf

$D_0 = 0.1748$

$D_{50} = 0.1879$

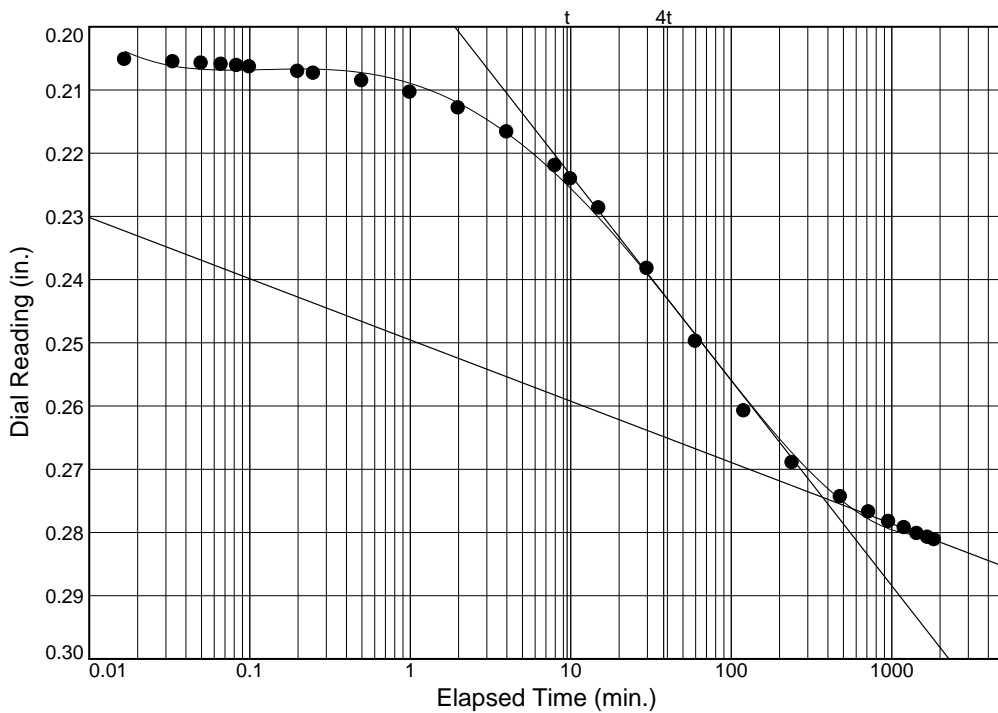
$D_{100} = 0.2010$

$T_{50} = 21.71 \text{ min.}$

$C_v @ T_{50}$

0.008 ft.<sup>2</sup>/day

$C_\alpha = 0.009$



Load No.= 10

Load= 0.97 tsf

$D_0 = 0.2077$

$D_{50} = 0.2411$

$D_{100} = 0.2744$

$T_{50} = 34.54 \text{ min.}$

$C_v @ T_{50}$

0.004 ft.<sup>2</sup>/day

$C_\alpha = 0.012$

Figure

# Dial Reading vs. Time

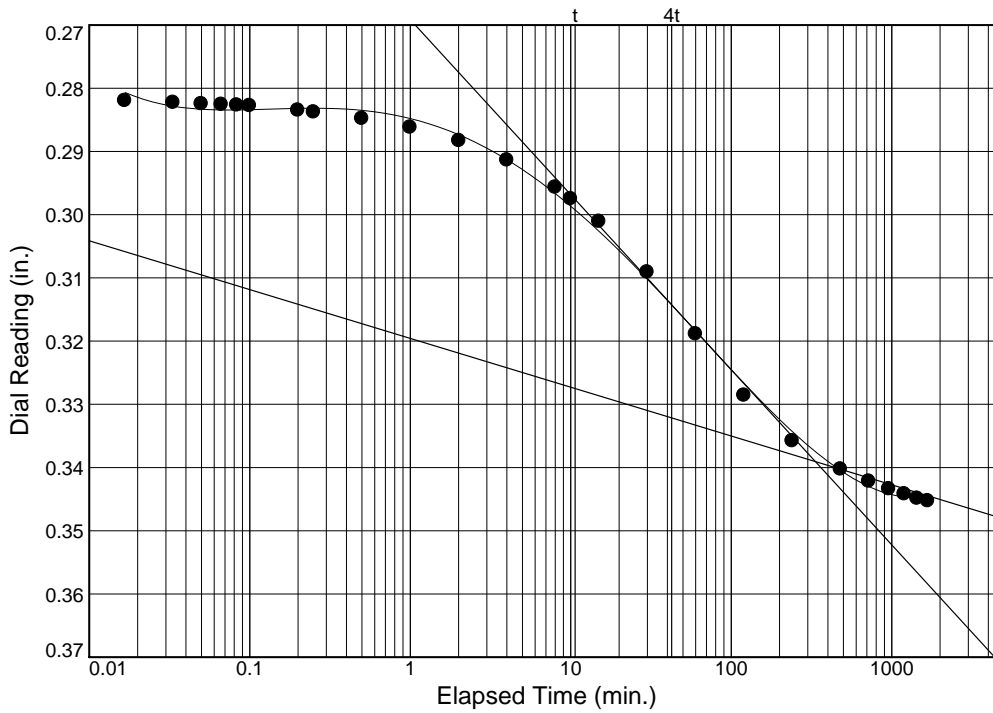
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-2

Depth: 1

Sample Number: 1B



Load No.= 11

Load= 1.93 tsf

$D_0 = 0.2842$

$D_{50} = 0.3116$

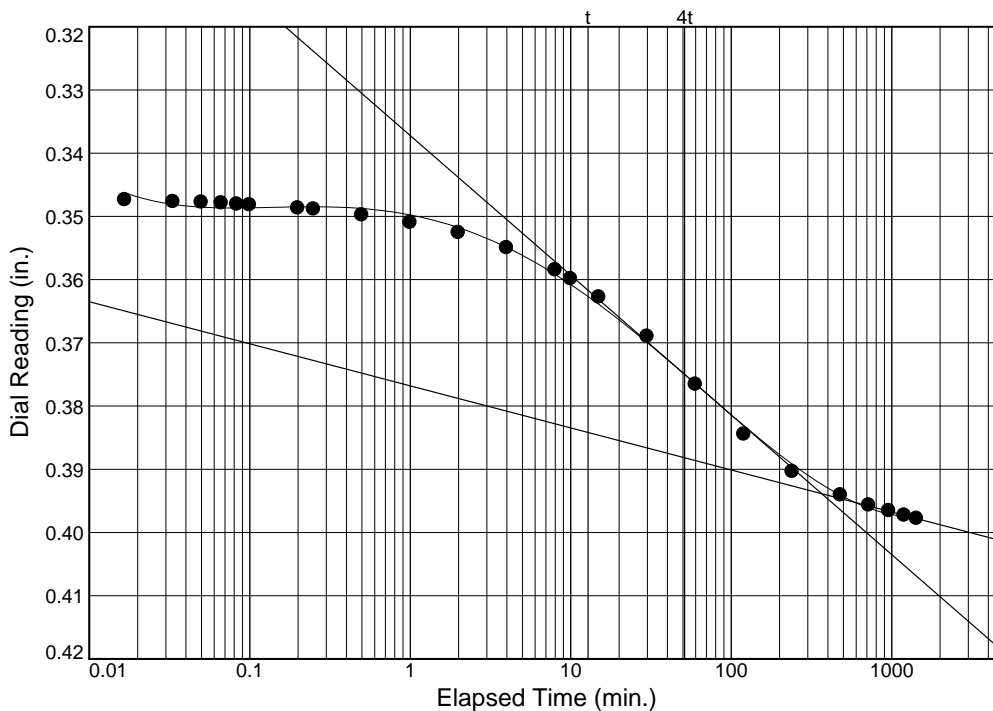
$D_{100} = 0.3391$

$T_{50} = 33.93$  min.

$C_v @ T_{50}$

0.003 ft.<sup>2</sup>/day

$C_\alpha = 0.010$



Load No.= 12

Load= 3.85 tsf

$D_0 = 0.3504$

$D_{50} = 0.3721$

$D_{100} = 0.3939$

$T_{50} = 37.75$  min.

$C_v @ T_{50}$

0.002 ft.<sup>2</sup>/day

$C_\alpha = 0.008$

# Dial Reading vs. Time

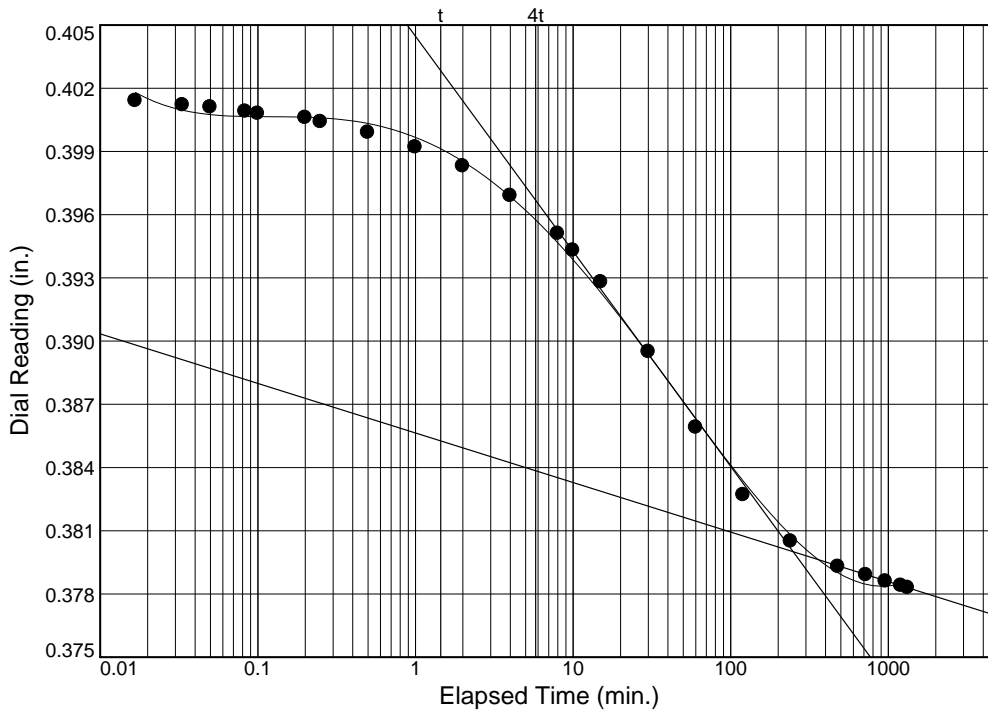
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-2

Depth: 1

Sample Number: 1B



Load No.= 13

Load= 0.97 tsf

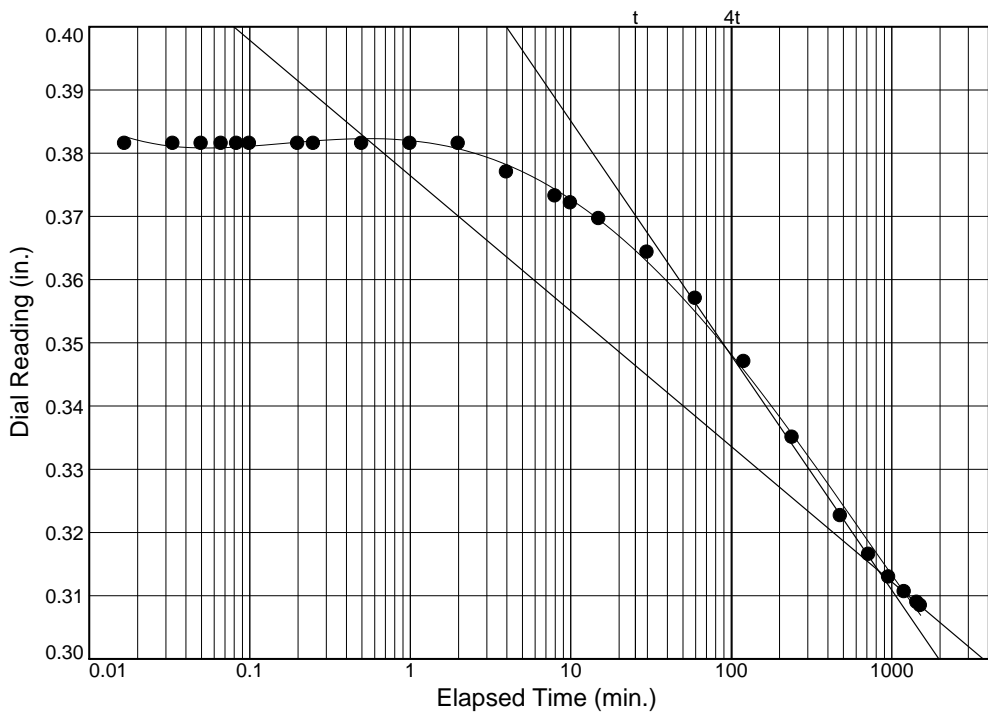
$D_0 = 0.4025$

$D_{50} = 0.3913$

$D_{100} = 0.3800$

$T_{50} = 19.36 \text{ min.}$

$C_v @ T_{50}$   
0.004 ft.<sup>2</sup>/day



Load No.= 14

Load= 0.06 tsf

$D_0 = 0.3812$

$D_{50} = 0.3476$

$D_{100} = 0.3140$

$T_{50} = 104.51 \text{ min.}$

$C_v @ T_{50}$   
0.001 ft.<sup>2</sup>/day

**CONSOLIDATION TEST DATA**

8/29/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST.  
BERNARD PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** B-2

**Depth:** 1

**Sample Number:** 1B

**Material Description:** W, xso dkg ORG CL

**Liquid Limit:** 141

**Plasticity Index:** 57

**USCS:** OH

**Tested by:** RR, BH

**Checked by:** RR

**Test Specimen Data**

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	56.90 g.	Spec. Gr. =	2.55	Wet w+t =	73.56 g.
Dry w+t =	22.92 g.	Est. Ht. Solids =	0.166 in.	Dry w+t =	54.46 g.
Tare Wt. =	0.00 g.	Init. V.R. =	3.791	Tare Wt. =	31.54 g.
Moisture =	148.3 %	Init. Sat. =	99.7 %	Moisture =	83.3 %

UNIT WEIGHT		TEST START		Dry Wt. = 22.92* g.	
Height =	0.797 in.	Height =	0.797 in.		
Diameter =	2.049 in.	Diameter =	2.049 in.		
Weight =	56.90 g.				
Dry Dens. =	33.2 pcf				

\* Final dry weight used as mineral solids weight

**End-Of-Load Summary**

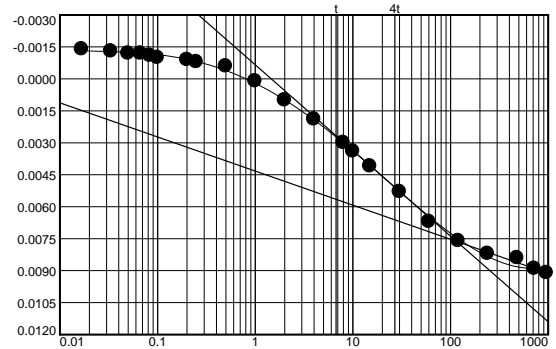
Pressure (tsf)	Final Dial (in.)	Machine Defl. (in.)	Deformation (in.)	C <sub>v</sub> (ft.2/day)	C <sub>α</sub>	Void Ratio	% Strain
start	0.00010		0.00000			3.791	
0.06	0.01060	0.00150	0.00900	0.022	0.002	3.737	1.1 Compr.
0.12	0.04240	0.00280	0.03950	0.036	0.009	3.554	5.0 Compr.
0.25	0.12090	0.00430	0.11650	0.015	0.013	3.091	14.6 Compr.
0.49	0.20130	0.00620	0.19500	0.010	0.016	2.619	24.5 Compr.
0.25	0.19620	0.00290	0.19320	0.032		2.630	24.2 Compr.
0.06	0.16820	0.00180	0.16630	0.008		2.792	20.9 Compr.
0.12	0.16840	0.00480	0.16350	0.045	0.000	2.808	20.5 Compr.
0.25	0.18010	0.00660	0.17340	0.011	0.002	2.749	21.8 Compr.
0.49	0.21490	0.00890	0.20590	0.008	0.009	2.554	25.8 Compr.
0.97	0.29250	0.01130	0.28110	0.004	0.012	2.101	35.3 Compr.
1.93	0.35880	0.01350	0.34520	0.003	0.010	1.716	43.3 Compr.
3.85	0.41330	0.01550	0.39770	0.002	0.008	1.400	49.9 Compr.
0.97	0.38810	0.00980	0.37820	0.004		1.518	47.5 Compr.
0.06	0.31390	0.00550	0.30830	0.001		1.938	38.7 Compr.

**TEST RESULTS SUMMARY**

Compression index ( $C_c$ ), tsf = 1.59    Preconsolidation pressure ( $P_p$ ), tsf = 0.2    Void ratio at  $P_p$  ( $e_m$ ) = 3.336  
 Recompression index ( $C_r$ ) = 0.30

Pressure: 0.06 tsf TEST READINGS Load No. 1

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0001	13	4.0000	0.0034
2	0.0167	0.0001	14	8.0000	0.0045
3	0.0333	0.0002	15	10.0167	0.0049
4	0.0500	0.0003	16	15.0167	0.0056
5	0.0667	0.0003	17	30.0333	0.0068
6	0.0833	0.0004	18	60.0833	0.0082
7	0.1000	0.0005	19	120.1833	0.0091
8	0.2000	0.0006	20	240.3500	0.0097
9	0.2500	0.0007	21	480.7000	0.0099
10	0.5000	0.0009	22	721.0500	0.0104
11	1.0000	0.0016	23	961.4000	0.0106
12	2.0000	0.0025			

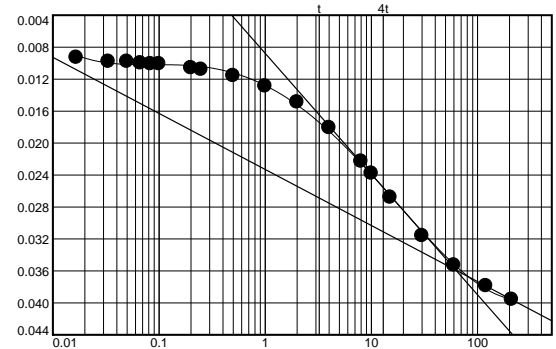


Void Ratio = 3.737    Compression = 1.1%

$D_0 = 0.0004$      $D_{50} = 0.0040$      $D_{100} = 0.0076$      $C_v$  at 14.35 min. = 0.022 ft.<sup>2</sup>/day     $C_\alpha = 0.002$

Pressure: 0.12 tsf TEST READINGS Load No. 2

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0106	11	1.0000	0.0157
2	0.0167	0.0121	12	2.0000	0.0177
3	0.0333	0.0126	13	4.0167	0.0209
4	0.0500	0.0126	14	8.0333	0.0251
5	0.0667	0.0128	15	10.0333	0.0266
6	0.0833	0.0129	16	15.0500	0.0296
7	0.1000	0.0129	17	30.1000	0.0344
8	0.2000	0.0134	18	60.2000	0.0381
9	0.2500	0.0136	19	120.4000	0.0407
10	0.5000	0.0144	20	210.3000	0.0424



Void Ratio = 3.554    Compression = 5.0%

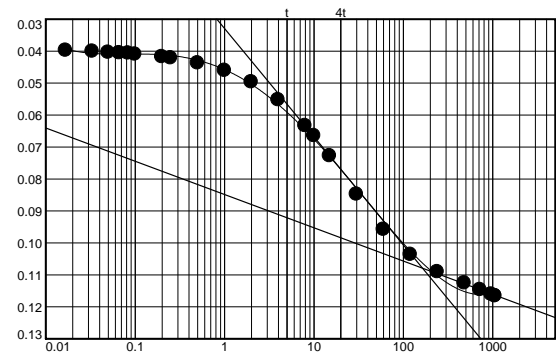
$D_0 = 0.0093$      $D_{50} = 0.0226$      $D_{100} = 0.0359$      $C_v$  at 8.09 min. = 0.036 ft.<sup>2</sup>/day     $C_\alpha = 0.009$

Pressure: 0.25 tsf

TEST READINGS

Load No. 3

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0428	14	8.0000	0.0677
2	0.0167	0.0441	15	10.0000	0.0708
3	0.0333	0.0444	16	15.0000	0.0771
4	0.0500	0.0447	17	30.0167	0.0891
5	0.0667	0.0449	18	60.0333	0.1001
6	0.0833	0.0450	19	120.1000	0.1080
7	0.1000	0.0453	20	240.2667	0.1134
8	0.2000	0.0461	21	480.6333	0.1169
9	0.2500	0.0465	22	720.9833	0.1190
10	0.5000	0.0481	23	961.3333	0.1204
11	1.0000	0.0504	24	1065.2667	0.1209
12	2.0000	0.0540	25	1065.3000	0.1209
13	4.0000	0.0596			



Void Ratio = 3.091 Compression = 14.6%

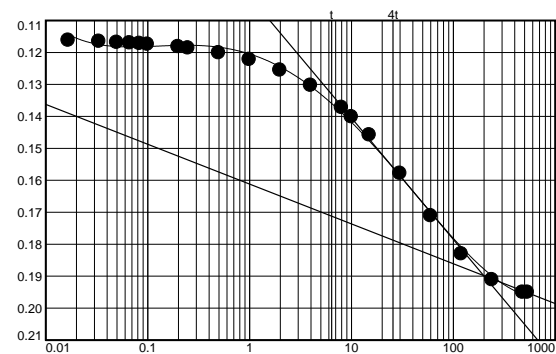
$D_0 = 0.0412$   $D_{50} = 0.0745$   $D_{100} = 0.1079$   $C_v$  at 16.72 min. = 0.015 ft.<sup>2</sup>/day  $C_\alpha = 0.013$

Pressure: 0.49 tsf

TEST READINGS

Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1204	12	2.0000	0.1318
2	0.0167	0.1225	13	4.0000	0.1366
3	0.0333	0.1228	14	8.0167	0.1435
4	0.0500	0.1231	15	10.0167	0.1464
5	0.0667	0.1233	16	15.0167	0.1521
6	0.0833	0.1235	17	30.0500	0.1641
7	0.1000	0.1237	18	60.0833	0.1774
8	0.2000	0.1245	19	120.1667	0.1893
9	0.2500	0.1249	20	240.3500	0.1974
10	0.5000	0.1264	21	480.6833	0.2013
11	1.0000	0.1285	22	535.5000	0.2013



Void Ratio = 2.619 Compression = 24.5%

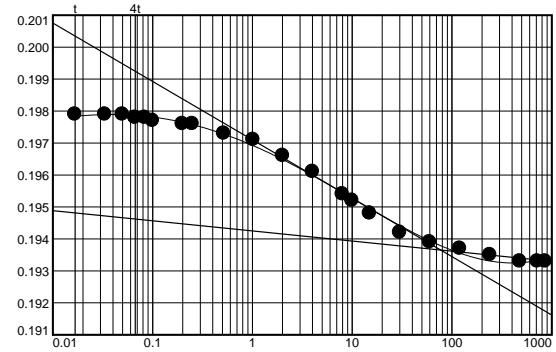
$D_0 = 0.1159$   $D_{50} = 0.1528$   $D_{100} = 0.1898$   $C_v$  at 20.91 min. = 0.010 ft.<sup>2</sup>/day  $C_\alpha = 0.016$

Pressure: 0.25 tsf

TEST READINGS

Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2008	13	4.0167	0.1990
2	0.0167	0.2008	14	8.0167	0.1983
3	0.0333	0.2008	15	10.0167	0.1981
4	0.0500	0.2008	16	15.0333	0.1977
5	0.0667	0.2007	17	30.0500	0.1971
6	0.0833	0.2007	18	60.1000	0.1968
7	0.1000	0.2006	19	120.1833	0.1966
8	0.2000	0.2005	20	240.3500	0.1964
9	0.2500	0.2005	21	480.7000	0.1962
10	0.5167	0.2002	22	721.0500	0.1962
11	1.0167	0.2000	23	863.8833	0.1962
12	2.0167	0.1995			



Void Ratio = 2.630 Compression = 24.2%

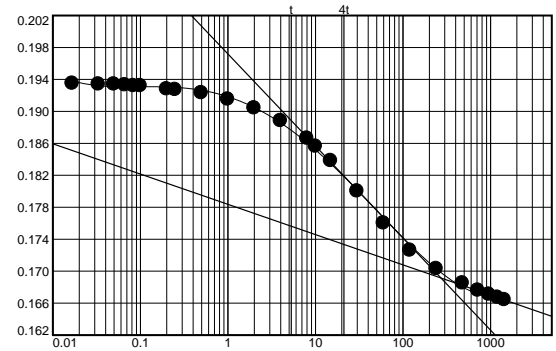
$D_0 = 0.1978$   $D_{50} = 0.1957$   $D_{100} = 0.1937$   $C_v$  at 5.59 min. = 0.032 ft.<sup>2</sup>/day

Pressure: 0.06 tsf

TEST READINGS

Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1959	14	8.0167	0.1884
2	0.0167	0.1953	15	10.0167	0.1874
3	0.0333	0.1952	16	15.0167	0.1856
4	0.0500	0.1952	17	30.0500	0.1818
5	0.0667	0.1951	18	60.0833	0.1778
6	0.0833	0.1950	19	120.1667	0.1744
7	0.1000	0.1950	20	240.3500	0.1721
8	0.2000	0.1946	21	480.6833	0.1703
9	0.2500	0.1945	22	721.0500	0.1694
10	0.5000	0.1941	23	961.3833	0.1689
11	1.0000	0.1933	24	1201.7333	0.1685
12	2.0000	0.1922	25	1442.0833	0.1682
13	4.0000	0.1906			



Void Ratio = 2.792 Compression = 20.9%

$D_0 = 0.1934$   $D_{50} = 0.1813$   $D_{100} = 0.1691$   $C_v$  at 23.74 min. = 0.008 ft.<sup>2</sup>/day

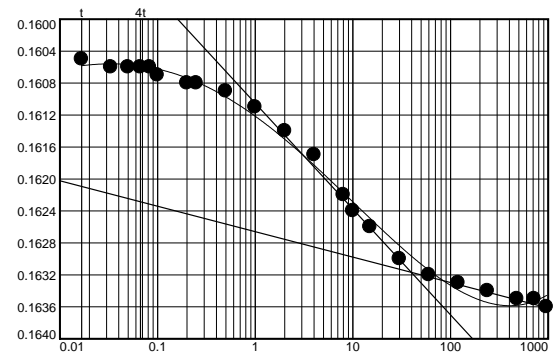


Pressure: 0.12 tsf

TEST READINGS

Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1682	13	4.0167	0.1665
2	0.0167	0.1653	14	8.0167	0.1670
3	0.0333	0.1654	15	10.0167	0.1672
4	0.0500	0.1654	16	15.0333	0.1674
5	0.0667	0.1654	17	30.0333	0.1678
6	0.0833	0.1654	18	60.0833	0.1680
7	0.1000	0.1655	19	120.1667	0.1681
8	0.2000	0.1656	20	240.3333	0.1682
9	0.2500	0.1656	21	480.6833	0.1683
10	0.5000	0.1657	22	721.0333	0.1683
11	1.0000	0.1659	23	961.3833	0.1684
12	2.0167	0.1662			



Void Ratio = 2.808 Compression = 20.5%

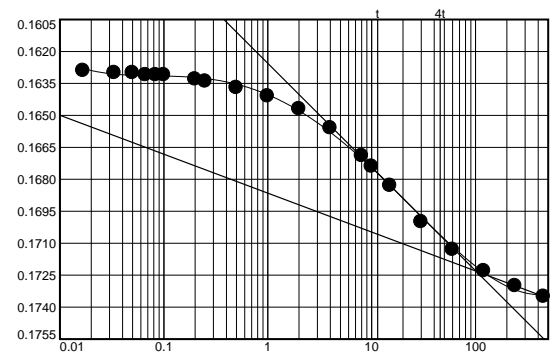
$D_0 = 0.1606$   $D_{50} = 0.1619$   $D_{100} = 0.1632$   $C_v$  at 4.41 min. = 0.045 ft.<sup>2</sup>/day  $C_\alpha = 0.000$

Pressure: 0.25 tsf

TEST READINGS

Load No. 8

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1684	12	2.0000	0.1713
2	0.0167	0.1695	13	4.0000	0.1722
3	0.0333	0.1696	14	8.0167	0.1735
4	0.0500	0.1696	15	10.0167	0.1740
5	0.0667	0.1697	16	15.0167	0.1749
6	0.0833	0.1697	17	30.0500	0.1766
7	0.1000	0.1697	18	60.1000	0.1779
8	0.2000	0.1699	19	120.2000	0.1789
9	0.2500	0.1700	20	240.3833	0.1796
10	0.5000	0.1703	21	451.4000	0.1801
11	1.0000	0.1707			



Void Ratio = 2.749 Compression = 21.8%

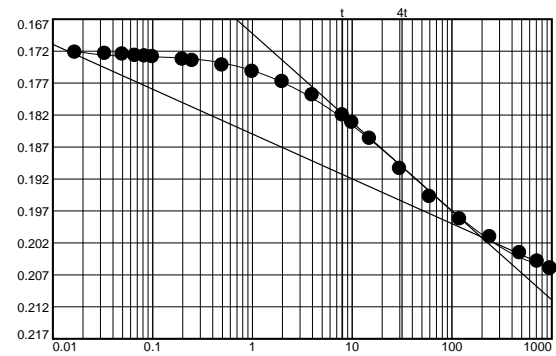
$D_0 = 0.1648$   $D_{50} = 0.1686$   $D_{100} = 0.1723$   $C_v$  at 17.23 min. = 0.011 ft.<sup>2</sup>/day  $C_\alpha = 0.002$

Pressure: 0.49 tsf

TEST READINGS

Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1805	13	4.0000	0.1878
2	0.0167	0.1811	14	8.0167	0.1909
3	0.0333	0.1813	15	10.0167	0.1921
4	0.0500	0.1814	16	15.0167	0.1946
5	0.0667	0.1816	17	30.0500	0.1993
6	0.0833	0.1817	18	60.0833	0.2037
7	0.1000	0.1818	19	120.1667	0.2072
8	0.2000	0.1822	20	240.3500	0.2100
9	0.2500	0.1824	21	480.7000	0.2125
10	0.5000	0.1831	22	721.0333	0.2138
11	1.0000	0.1841	23	961.3833	0.2149
12	2.0000	0.1857	24	972.5000	0.2149



Void Ratio = 2.554 Compression = 25.8%

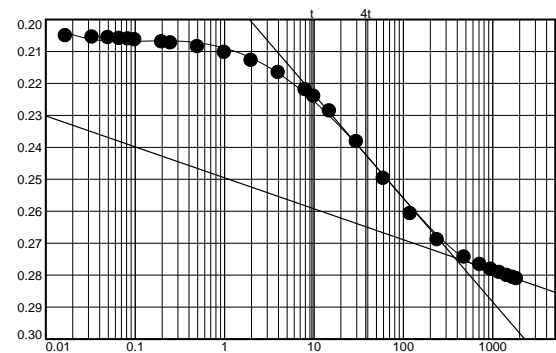
$D_0 = 0.1748$   $D_{50} = 0.1879$   $D_{100} = 0.2010$   $C_v$  at 21.71 min. = 0.008 ft.<sup>2</sup>/day  $C_\alpha = 0.009$

Pressure: 0.97 tsf

TEST READINGS

Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2138	15	10.0167	0.2354
2	0.0167	0.2165	16	15.0333	0.2400
3	0.0333	0.2169	17	30.0500	0.2496
4	0.0500	0.2171	18	60.1000	0.2611
5	0.0667	0.2173	19	120.2000	0.2721
6	0.0833	0.2175	20	240.4000	0.2803
7	0.1000	0.2177	21	480.8000	0.2857
8	0.2000	0.2184	22	721.1833	0.2881
9	0.2500	0.2187	23	961.5833	0.2896
10	0.5000	0.2199	24	1201.9833	0.2906
11	1.0000	0.2217	25	1442.3833	0.2915
12	2.0000	0.2242	26	1682.7667	0.2921
13	4.0167	0.2280	27	1850.6167	0.2925
14	8.0167	0.2333			



Void Ratio = 2.101 Compression = 35.3%

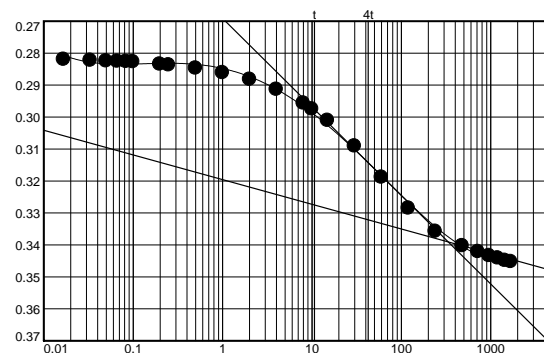
$D_0 = 0.2077$   $D_{50} = 0.2411$   $D_{100} = 0.2744$   $C_v$  at 34.54 min. = 0.004 ft.<sup>2</sup>/day  $C_\alpha = 0.012$

Pressure: 1.93 tsf

TEST READINGS

Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2929	14	8.0167	0.3092
2	0.0167	0.2955	15	10.0167	0.3110
3	0.0333	0.2958	16	15.0333	0.3146
4	0.0500	0.2960	17	30.0500	0.3226
5	0.0667	0.2961	18	60.1000	0.3324
6	0.0833	0.2962	19	120.1833	0.3421
7	0.1000	0.2963	20	240.3500	0.3493
8	0.2000	0.2970	21	480.7000	0.3538
9	0.2500	0.2973	22	721.0333	0.3557
10	0.5000	0.2983	23	961.3833	0.3569
11	1.0000	0.2997	24	1201.7333	0.3577
12	2.0167	0.3018	25	1442.0833	0.3584
13	4.0167	0.3049	26	1682.4333	0.3588



Void Ratio = 1.716 Compression = 43.3%

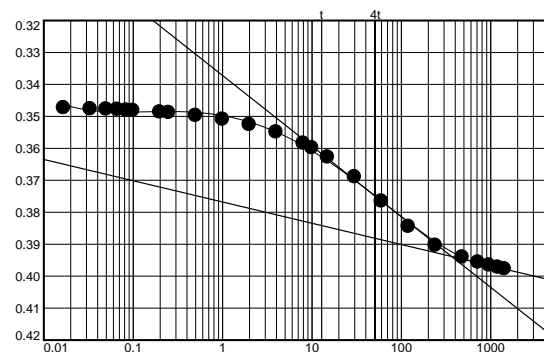
$D_0 = 0.2842$   $D_{50} = 0.3116$   $D_{100} = 0.3391$   $C_v$  at 33.93 min. = 0.003 ft.<sup>2</sup>/day  $C_\alpha = 0.010$

Pressure: 3.85 tsf

TEST READINGS

Load No. 12

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.3613	14	8.0167	0.3740
2	0.0167	0.3629	15	10.0167	0.3754
3	0.0333	0.3632	16	15.0167	0.3783
4	0.0500	0.3633	17	30.0500	0.3845
5	0.0667	0.3634	18	60.0833	0.3921
6	0.0833	0.3636	19	120.1667	0.4000
7	0.1000	0.3637	20	240.3500	0.4059
8	0.2000	0.3642	21	480.7000	0.4096
9	0.2500	0.3644	22	721.0500	0.4112
10	0.5000	0.3653	23	961.4000	0.4121
11	1.0000	0.3665	24	1201.7500	0.4128
12	2.0000	0.3681	25	1428.7000	0.4133
13	4.0000	0.3705			



Void Ratio = 1.400 Compression = 49.9%

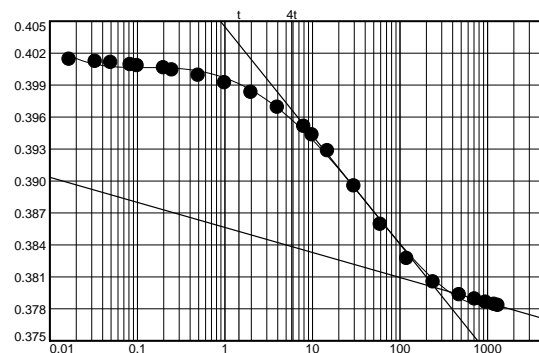
$D_0 = 0.3504$   $D_{50} = 0.3721$   $D_{100} = 0.3939$   $C_v$  at 37.75 min. = 0.002 ft.<sup>2</sup>/day  $C_\alpha = 0.008$

Pressure: 0.97 tsf

TEST READINGS

Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.4126	13	8.0000	0.4049
2	0.0167	0.4112	14	10.0000	0.4041
3	0.0333	0.4110	15	15.0167	0.4026
4	0.0500	0.4109	16	30.0333	0.3993
5	0.0833	0.4107	17	60.0833	0.3957
6	0.1000	0.4106	18	120.1667	0.3925
7	0.2000	0.4104	19	240.3333	0.3903
8	0.2500	0.4102	20	480.7333	0.3891
9	0.5000	0.4097	21	721.1500	0.3887
10	1.0000	0.4090	22	961.5167	0.3884
11	2.0000	0.4081	23	1201.9000	0.3882
12	4.0000	0.4067	24	1325.5333	0.3881



Void Ratio = 1.518 Compression = 47.5%

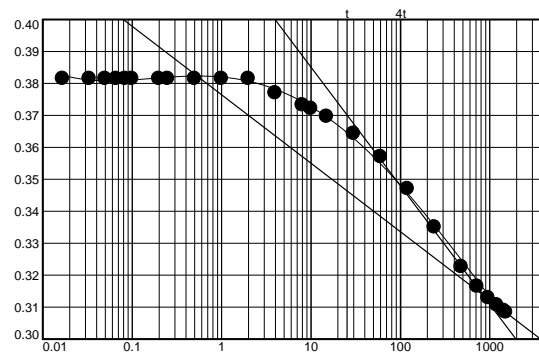
$D_0 = 0.4025$   $D_{50} = 0.3913$   $D_{100} = 0.3800$   $C_v$  at 19.36 min. = 0.004 ft.<sup>2</sup>/day

Pressure: 0.06 tsf

TEST READINGS

Load No. 14

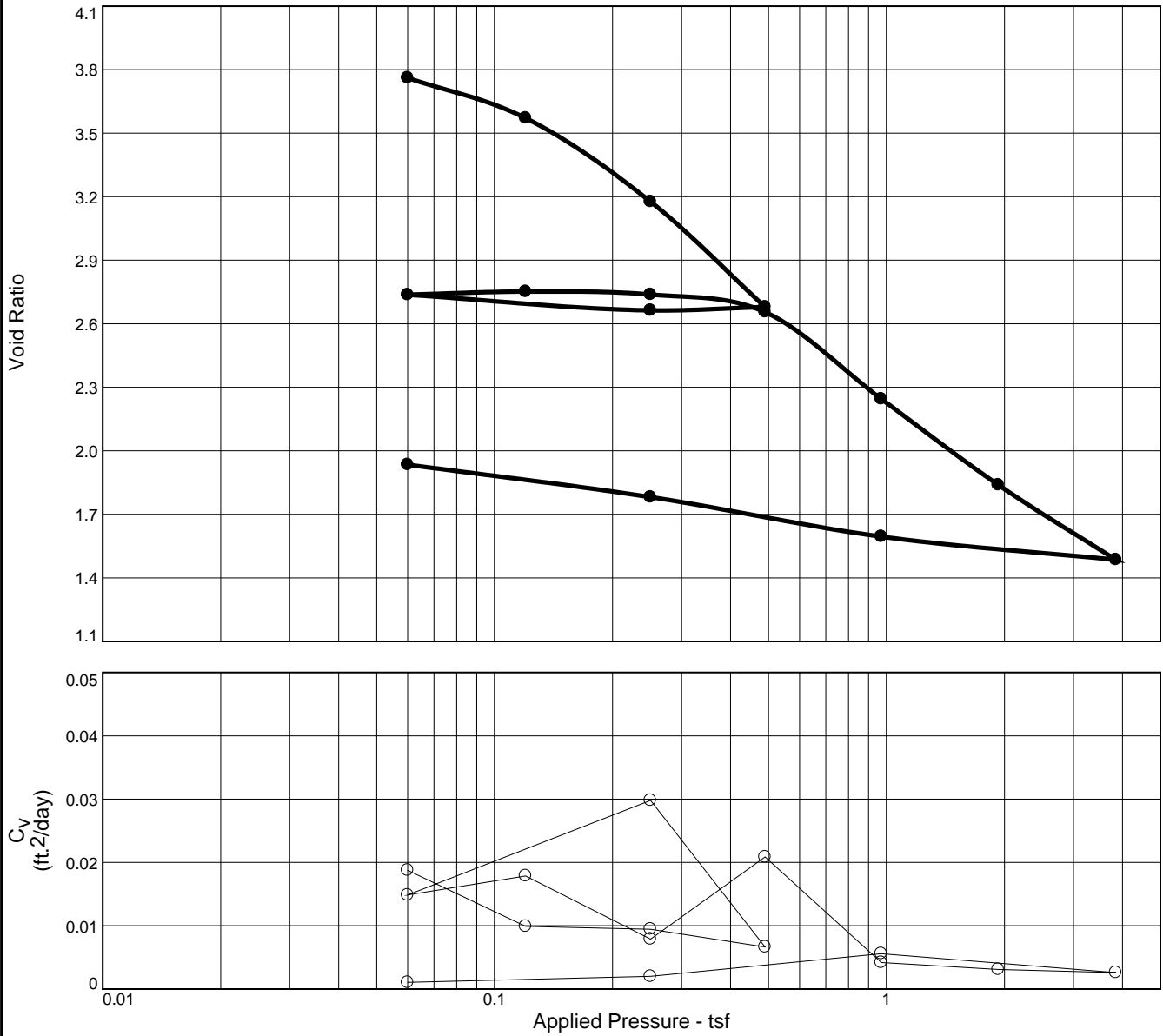
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.3870	14	8.0167	0.3787
2	0.0167	0.3870	15	10.0167	0.3776
3	0.0333	0.3870	16	15.0167	0.3751
4	0.0500	0.3870	17	30.0500	0.3698
5	0.0667	0.3870	18	60.0833	0.3625
6	0.0833	0.3870	19	120.1667	0.3525
7	0.1000	0.3870	20	240.3500	0.3405
8	0.2000	0.3870	21	480.7167	0.3281
9	0.2500	0.3870	22	721.1167	0.3220
10	0.5000	0.3870	23	961.5000	0.3184
11	1.0000	0.3870	24	1201.9000	0.3161
12	2.0000	0.3870	25	1442.2833	0.3144
13	4.0000	0.3825	26	1516.2833	0.3139



Void Ratio = 1.938 Compression = 38.7%

$D_0 = 0.3812$   $D_{50} = 0.3476$   $D_{100} = 0.3140$   $C_v$  at 104.51 min. = 0.001 ft.<sup>2</sup>/day

# CONSOLIDATION TEST REPORT



Natural								
Saturation	Moisture	Dry Dens. (pcf)	LL	PI	Sp. Gr.	P <sub>c</sub> (tsf)	C <sub>c</sub>	Initial Void Ratio
98.8 %	159.5 %	31.1	205	155	2.55	0.3	1.61	4.116

<b>MATERIAL DESCRIPTION</b>	<b>USCS</b>	<b>AASHTO</b>
W, xso g ORG CL w/ tr rts	OH	

<b>Project No.</b> 24762 <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE <b>Source of Sample:</b> B-3 <b>Depth:</b> 8 <b>Sample Number:</b> 5A	<b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL	<b>Remarks:</b>   <div style="text-align: right;"><b>Figure</b></div>

**Tested By:** RR, \_\_\_\_\_ **Checked By:** RR \_\_\_\_\_

# Dial Reading vs. Time

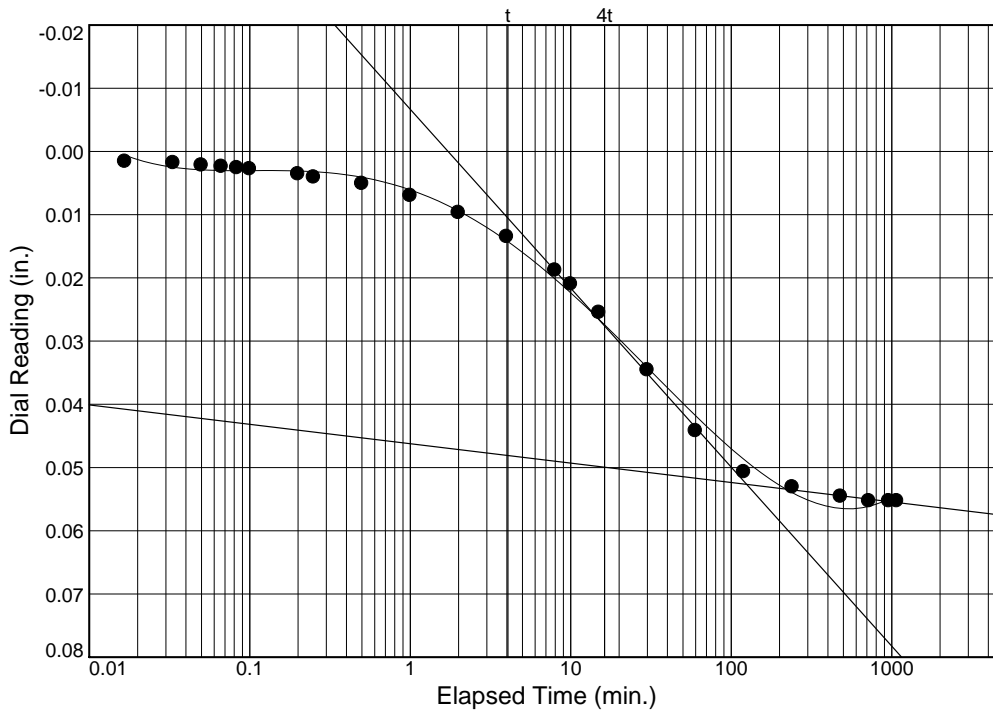
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-3

Depth: 8

Sample Number: 5A



Load No.= 1

Load= 0.06 tsf

$D_0 = 0.0011$

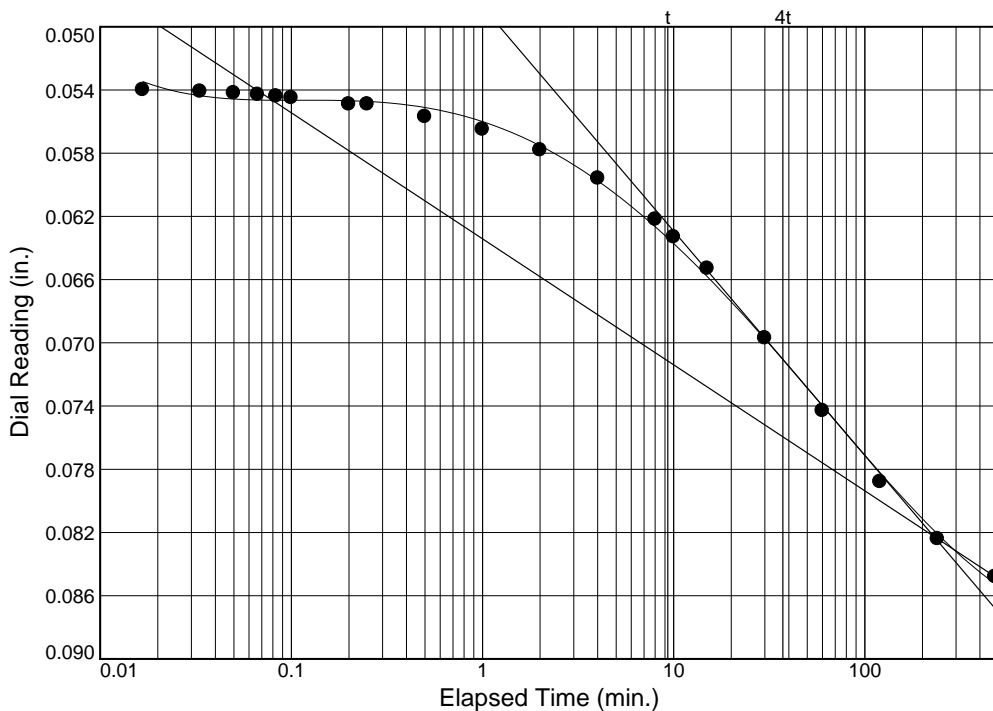
$D_{50} = 0.0269$

$D_{100} = 0.0527$

$T_{50} = 15.47$  min.

$C_v @ T_{50}$   
0.019 ft.<sup>2</sup>/day

$C_\alpha = 0.004$



Load No.= 2

Load= 0.12 tsf

$D_0 = 0.0557$

$D_{50} = 0.0690$

$D_{100} = 0.0822$

$T_{50} = 26.18$  min.

$C_v @ T_{50}$   
0.010 ft.<sup>2</sup>/day

$C_\alpha = 0.010$

# Dial Reading vs. Time

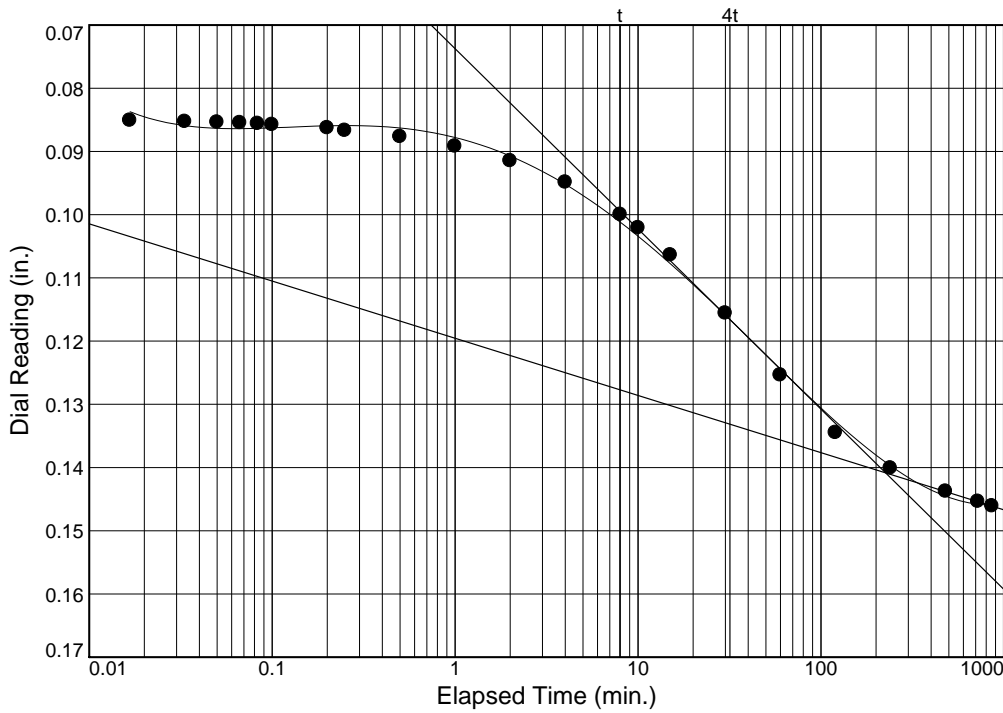
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-3

Depth: 8

Sample Number: 5A



Load No.= 3

Load= 0.25 tsf

$D_0 = 0.0857$

$D_{50} = 0.1132$

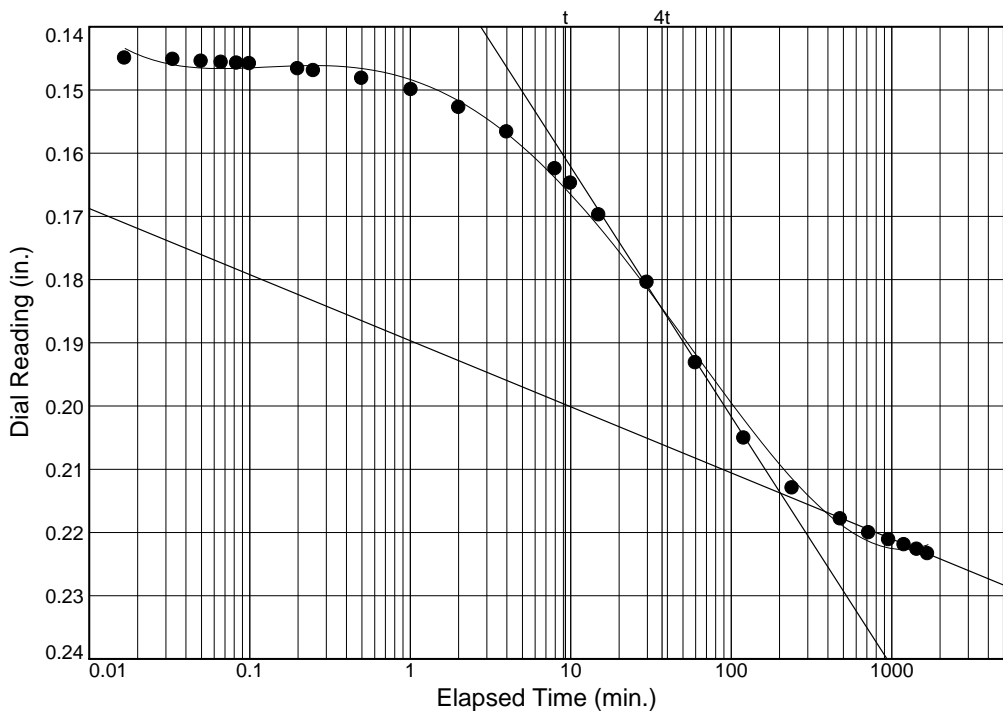
$D_{100} = 0.1408$

$T_{50} = 24.10$  min.

$C_v @ T_{50}$

0.009 ft.<sup>2</sup>/day

$C_\alpha = 0.011$



Load No.= 4

Load= 0.49 tsf

$D_0 = 0.1467$

$D_{50} = 0.1803$

$D_{100} = 0.2138$

$T_{50} = 27.74$  min.

$C_v @ T_{50}$

0.007 ft.<sup>2</sup>/day

$C_\alpha = 0.013$

# Dial Reading vs. Time

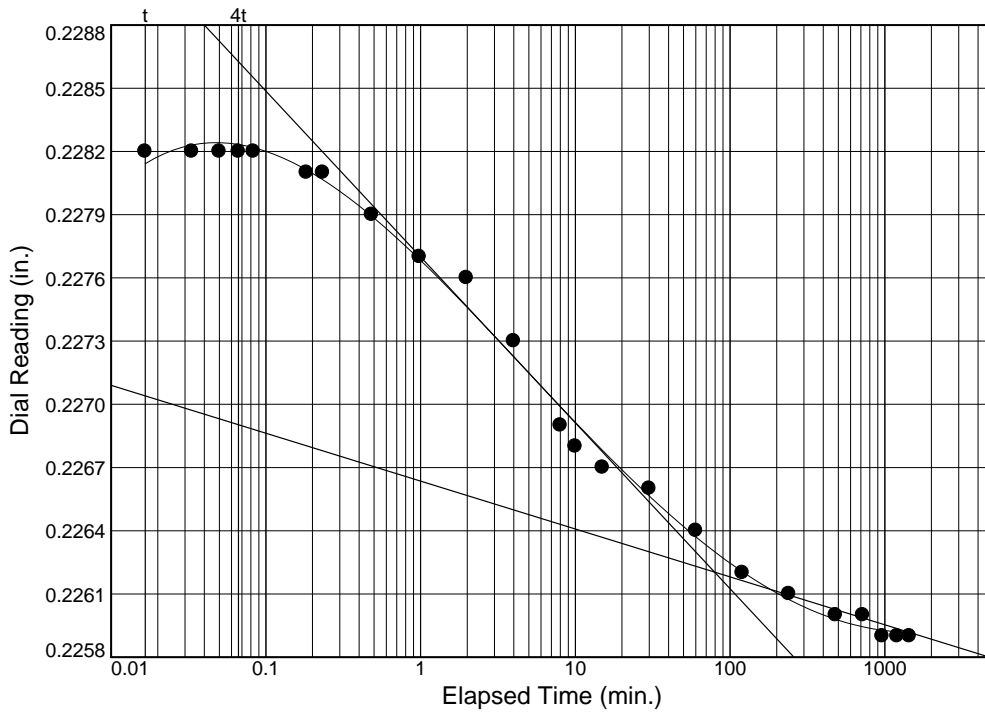
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-3

Depth: 8

Sample Number: 5A



Load No.= 5

Load= 0.25 tsf

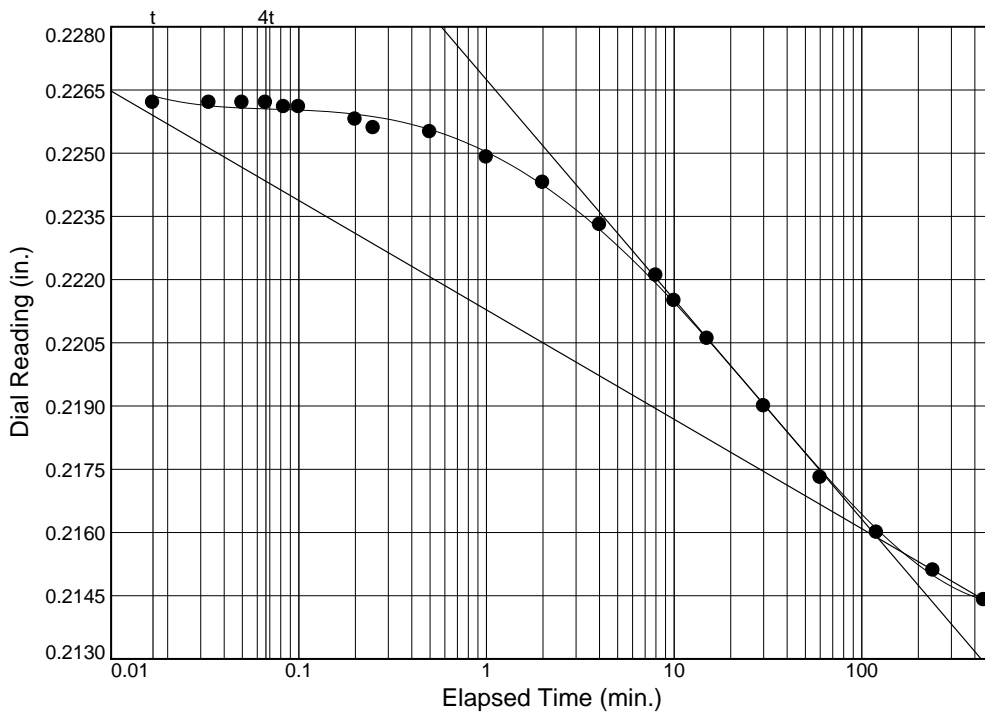
$D_0 = 0.2280$

$D_{50} = 0.2271$

$D_{100} = 0.2262$

$T_{50} = 5.33 \text{ min.}$

$C_v @ T_{50}$   
0.030 ft.<sup>2</sup>/day



Load No.= 6

Load= 0.06 tsf

$D_0 = 0.2267$

$D_{50} = 0.2213$

$D_{100} = 0.2159$

$T_{50} = 10.96 \text{ min.}$

$C_v @ T_{50}$   
0.015 ft.<sup>2</sup>/day

Figure



# Dial Reading vs. Time

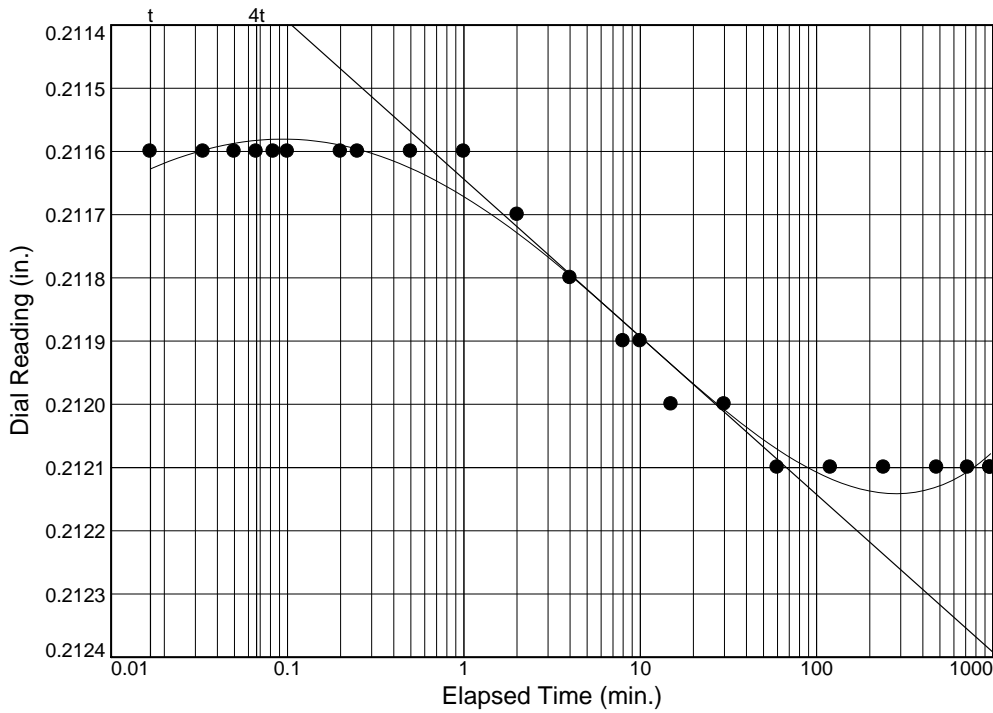
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-3

Depth: 8

Sample Number: 5A



Load No.= 7

Load= 0.12 tsf

$D_0 = 0.2117$

$D_{50} = 0.2119$

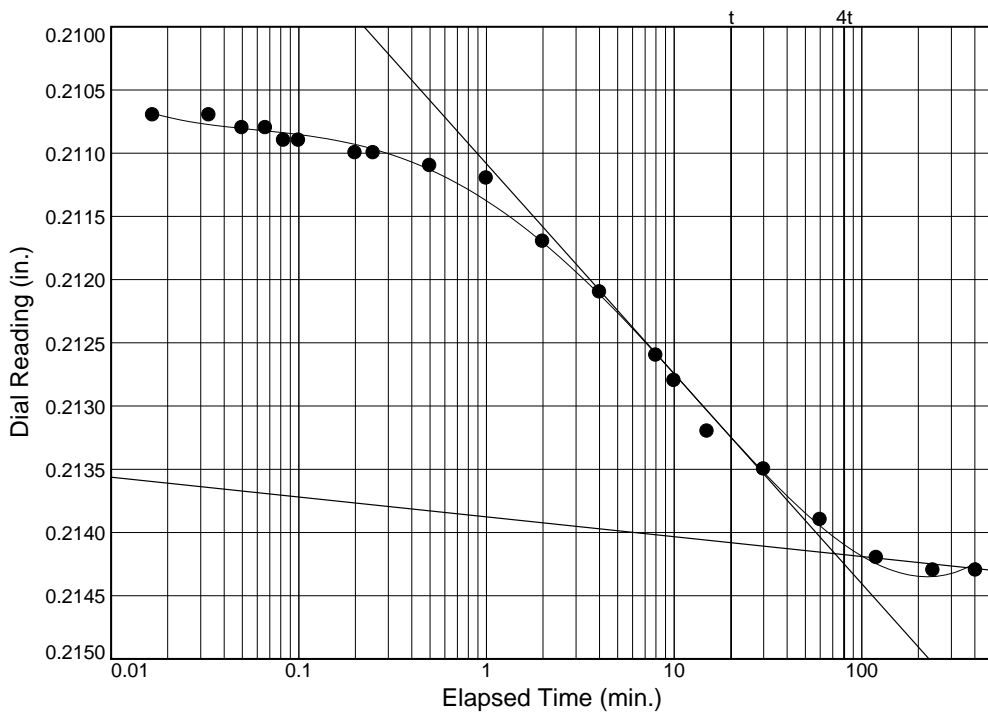
$D_{100} = 0.2121$

$T_{50} = 9.38 \text{ min.}$

$C_v @ T_{50}$

0.018 ft.<sup>2</sup>/day

$C_\alpha = 0.000$



Load No.= 8

Load= 0.25 tsf

$D_0 = 0.2124$

$D_{50} = 0.2133$

$D_{100} = 0.2142$

$T_{50} = 21.22 \text{ min.}$

$C_v @ T_{50}$

0.008 ft.<sup>2</sup>/day

$C_\alpha = 0.000$

# Dial Reading vs. Time

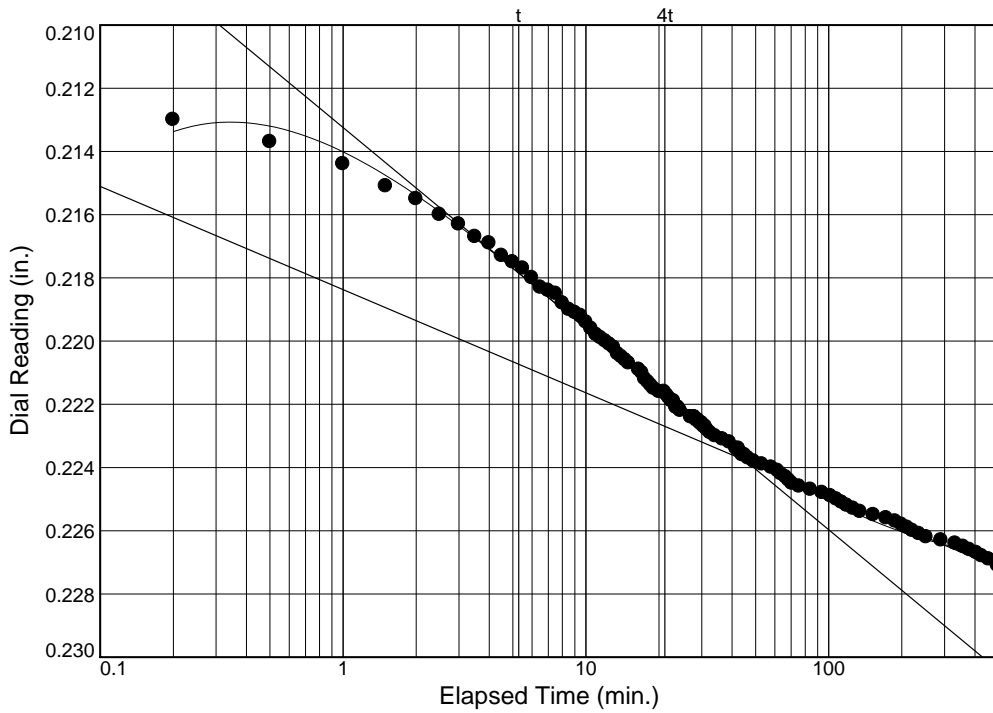
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-3

Depth: 8

Sample Number: 5A



Load No.= 9

Load= 0.49 tsf

$D_0 = 0.2141$

$D_{50} = 0.2189$

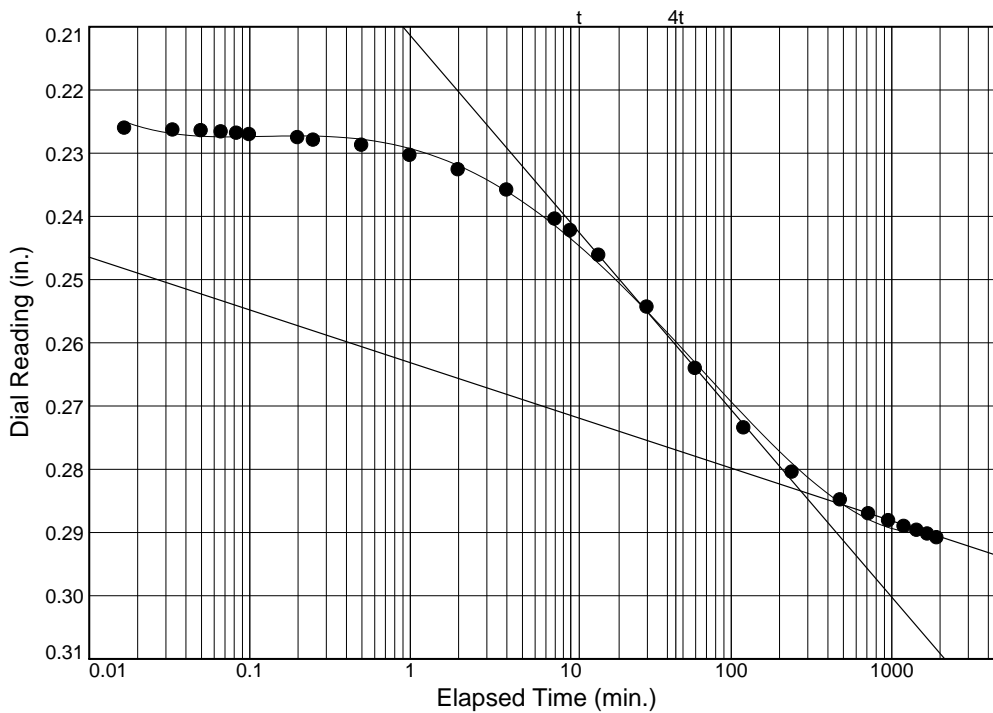
$D_{100} = 0.2238$

$T_{50} = 7.82$  min.

$C_v @ T_{50}$

0.021 ft.<sup>2</sup>/day

$C_\alpha = 0.004$



Load No.= 10

Load= 0.97 tsf

$D_0 = 0.2295$

$D_{50} = 0.2565$

$D_{100} = 0.2834$

$T_{50} = 33.86$  min.

$C_v @ T_{50}$

0.004 ft.<sup>2</sup>/day

$C_\alpha = 0.010$

Figure

# Dial Reading vs. Time

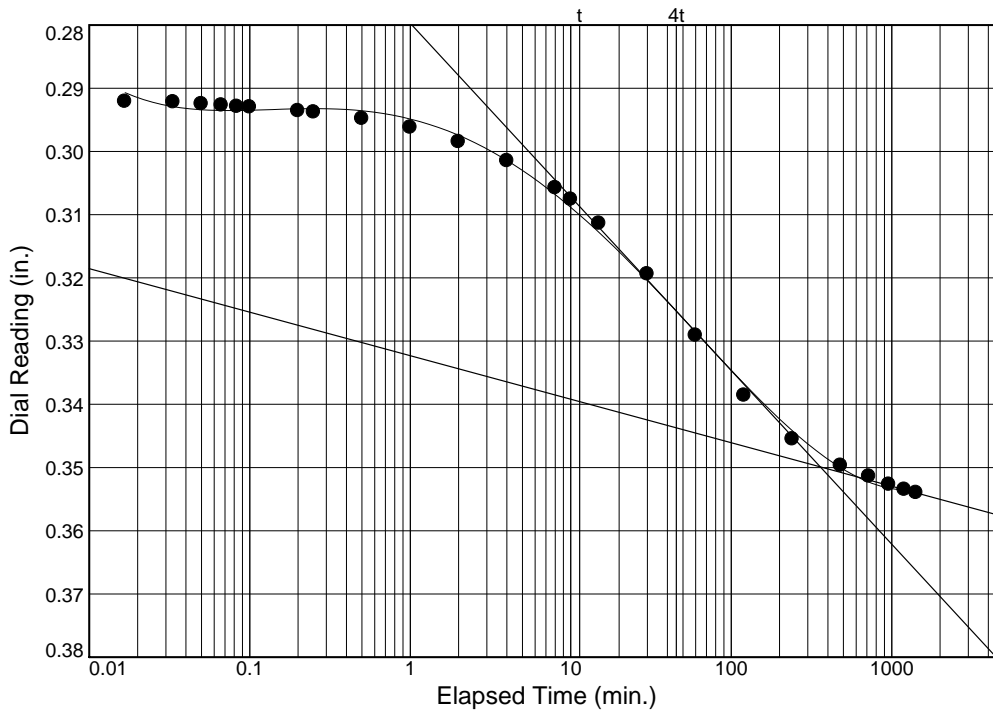
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-3

Depth: 8

Sample Number: 5A



Load No.= 11

Load= 1.93 tsf

$D_0 = 0.2949$

$D_{50} = 0.3224$

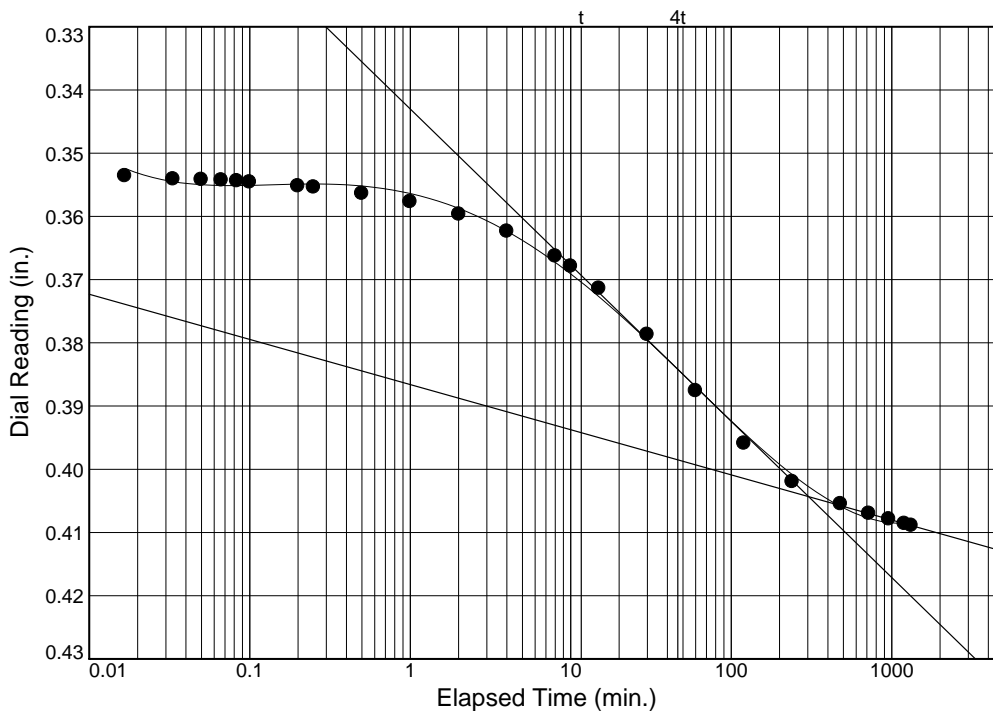
$D_{100} = 0.3499$

$T_{50} = 35.55$  min.

$C_v @ T_{50}$

0.003 ft.<sup>2</sup>/day

$C_\alpha = 0.009$



Load No.= 12

Load= 3.85 tsf

$D_0 = 0.3566$

$D_{50} = 0.3805$

$D_{100} = 0.4043$

$T_{50} = 32.65$  min.

$C_v @ T_{50}$

0.003 ft.<sup>2</sup>/day

$C_\alpha = 0.009$

# Dial Reading vs. Time

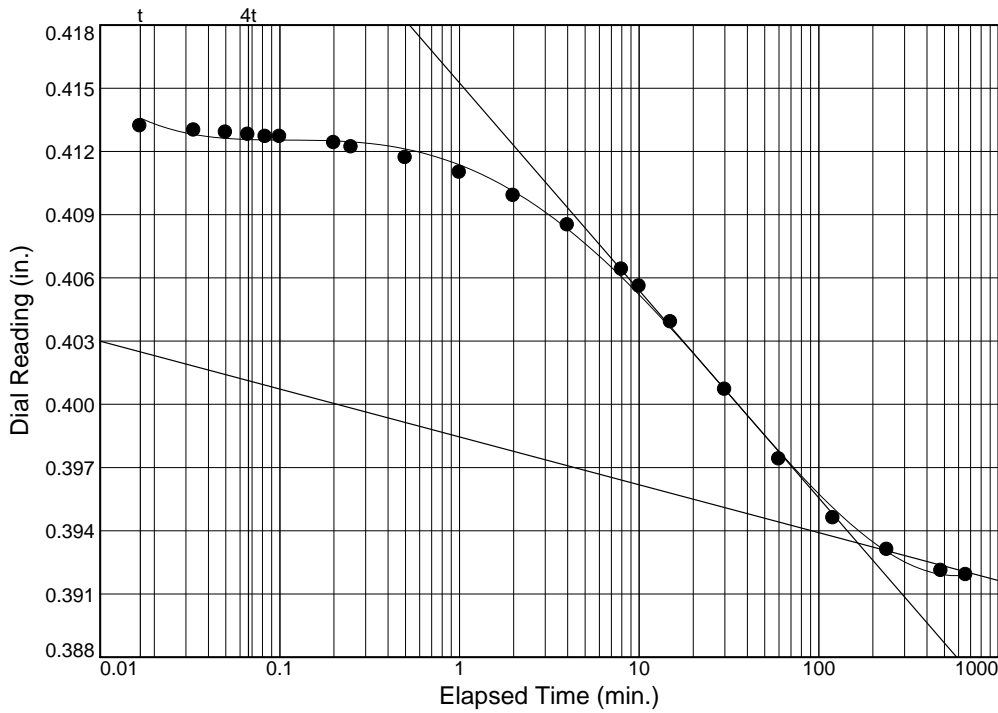
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-3

Depth: 8

Sample Number: 5A



Load No.= 13

Load= 0.97 tsf

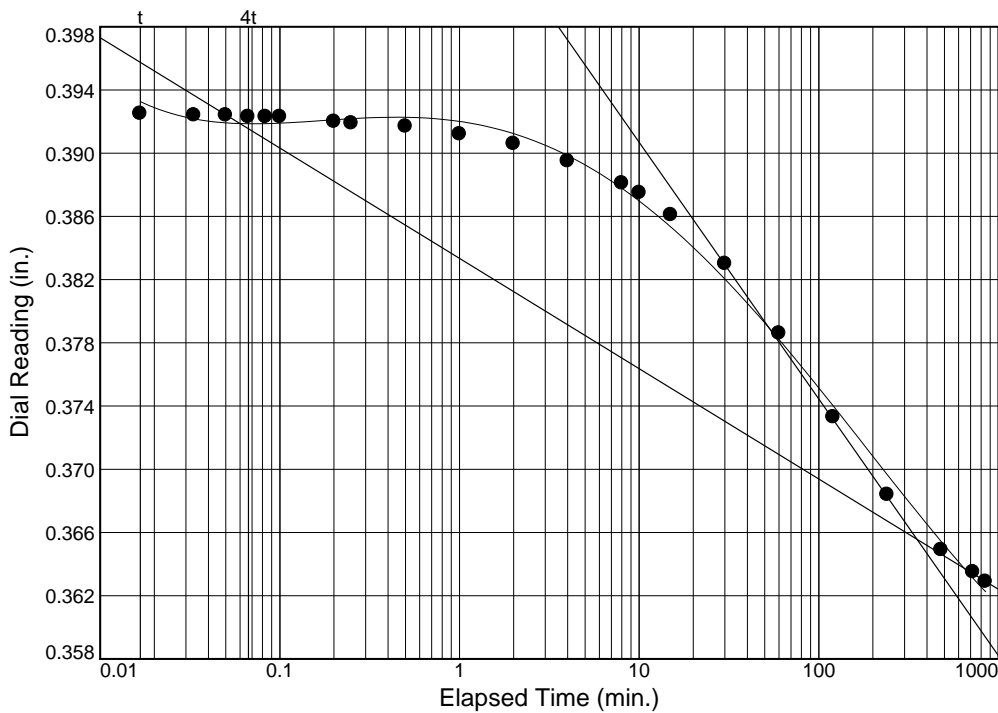
$D_0 = 0.4146$

$D_{50} = 0.4040$

$D_{100} = 0.3934$

$T_{50} = 13.57$  min.

$C_v @ T_{50}$   
0.006 ft.<sup>2</sup>/day



Load No.= 14

Load= 0.25 tsf

$D_0 = 0.3947$

$D_{50} = 0.3801$

$D_{100} = 0.3656$

$T_{50} = 42.92$  min.

$C_v @ T_{50}$   
0.002 ft.<sup>2</sup>/day

# Dial Reading vs. Time

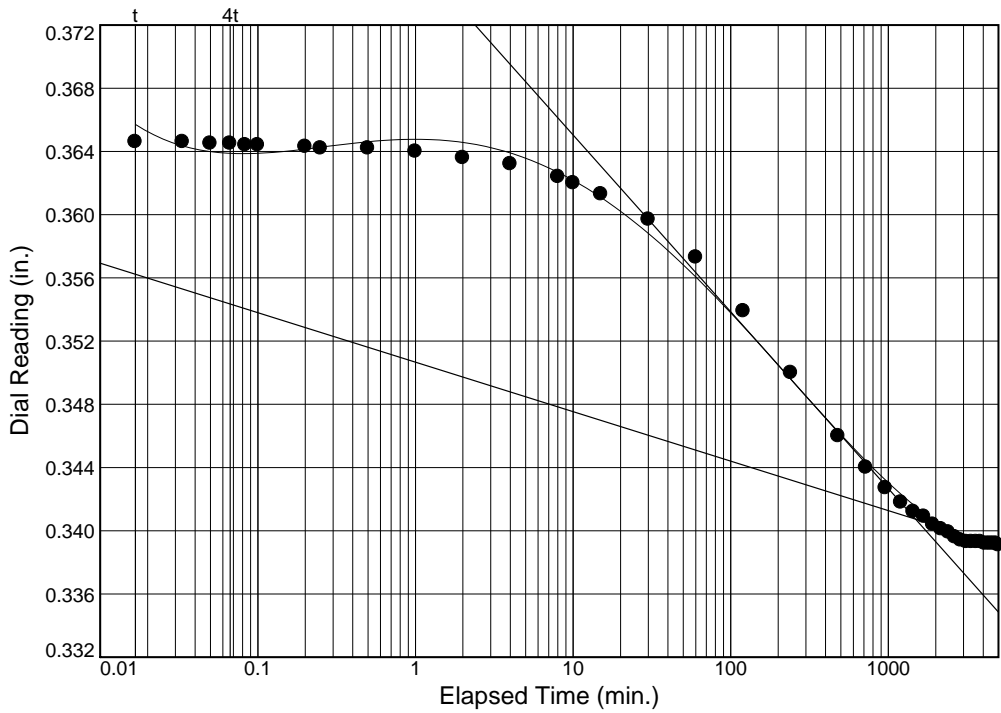
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-3

Depth: 8

Sample Number: 5A



Load No.= 15

Load= 0.06 tsf

$D_0 = 0.3676$

$D_{50} = 0.3541$

$D_{100} = 0.3407$

$T_{50} = 92.50$  min.

$C_v @ T_{50}$

0.001 ft.<sup>2</sup>/day

**CONSOLIDATION TEST DATA**

8/29/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST.  
BERNARD PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** B-3

**Depth:** 8

**Sample Number:** 5A

**Material Description:** W, xso g ORG CL w/ tr rts

**Liquid Limit:** 205

**Plasticity Index:** 155

**USCS:** OH

**Tested by:** RR,

**Checked by:** RR

**Test Specimen Data**

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	55.50 g.	Spec. Gr. =	2.55	Wet w+t =	68.61 g.
Dry w+t =	21.39 g.	Est. Ht. Solids =	0.155 in.	Dry w+t =	51.10 g.
Tare Wt. =	0.00 g.	Init. V.R. =	4.116	Tare Wt. =	29.71 g.
Moisture =	159.5 %	Init. Sat. =	98.8 %	Moisture =	81.9 %
UNIT WEIGHT		TEST START		Dry Wt. = 21.39* g.	
Height =	0.795 in.	Height =	0.795 in.		
Diameter =	2.048 in.	Diameter =	2.048 in.		
Weight =	55.50 g.				
Dry Dens. =	31.1 pcf	* Final dry weight used as mineral solids weight			

**End-Of-Load Summary**

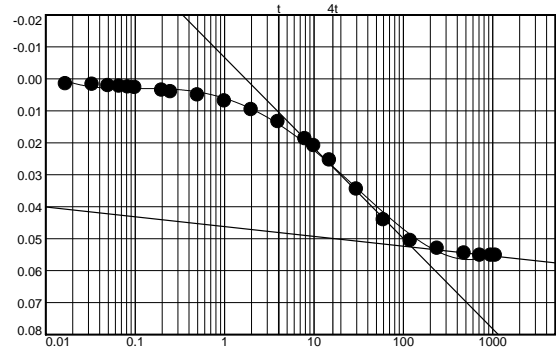
Pressure (tsf)	Final Dial (in.)	Machine Defl. (in.)	Deformation (in.)	C <sub>v</sub> (ft.2/day)	C <sub>α</sub>	Void Ratio	% Strain
start	0.00010		0.00000			4.116	
0.06	0.05680	0.00150	0.05520	0.019	0.004	3.761	6.9 Compr.
0.12	0.08760	0.00280	0.08470	0.010	0.010	3.571	10.7 Compr.
0.25	0.15040	0.00430	0.14600	0.009	0.011	3.177	18.4 Compr.
0.49	0.22960	0.00620	0.22330	0.007	0.013	2.679	28.1 Compr.
0.25	0.22880	0.00290	0.22580	0.030		2.663	28.4 Compr.
0.06	0.21620	0.00180	0.21430	0.015		2.737	27.0 Compr.
0.12	0.21690	0.00480	0.21200	0.018	0.000	2.752	26.7 Compr.
0.25	0.22090	0.00660	0.21420	0.008	0.000	2.738	26.9 Compr.
0.49	0.23600	0.00890	0.22700	0.021	0.004	2.655	28.6 Compr.
0.97	0.30220	0.01130	0.29080	0.004	0.010	2.245	36.6 Compr.
1.93	0.36750	0.01350	0.35390	0.003	0.009	1.839	44.5 Compr.
3.85	0.42440	0.01550	0.40880	0.003	0.009	1.485	51.4 Compr.
0.97	0.40170	0.00980	0.39180	0.006		1.595	49.3 Compr.
0.25	0.37050	0.00760	0.36280	0.002		1.781	45.6 Compr.
0.06	0.34460	0.00550	0.33900	0.001		1.935	42.6 Compr.

**TEST RESULTS SUMMARY**

Compression index ( $C_c$ ), tsf = 1.61    Preconsolidation pressure ( $P_p$ ), tsf = 0.3    Void ratio at  $P_p$  ( $e_m$ ) = 3.034  
 Recompression index ( $C_r$ ) = 0.13

Pressure: 0.06 tsf TEST READINGS Load No. 1

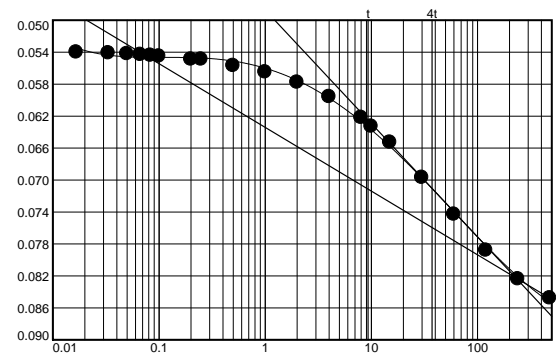
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0001	13	4.0000	0.0150
2	0.0167	0.0031	14	8.0000	0.0203
3	0.0333	0.0033	15	10.0000	0.0225
4	0.0500	0.0037	16	15.0000	0.0270
5	0.0667	0.0039	17	30.0167	0.0361
6	0.0833	0.0041	18	60.0333	0.0457
7	0.1000	0.0043	19	120.0833	0.0522
8	0.2000	0.0051	20	240.2500	0.0546
9	0.2500	0.0056	21	480.6167	0.0561
10	0.5000	0.0066	22	720.9667	0.0568
11	1.0000	0.0085	23	961.3167	0.0568
12	2.0000	0.0112	24	1076.9000	0.0568



Void Ratio = 3.761    Compression = 6.9%  
 $D_0 = 0.0011$      $D_{50} = 0.0269$      $D_{100} = 0.0527$      $C_v$  at 15.47 min. = 0.019 ft.<sup>2</sup>/day     $C_\alpha = 0.004$

Pressure: 0.12 tsf TEST READINGS Load No. 2

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0568	12	2.0000	0.0606
2	0.0167	0.0568	13	4.0167	0.0624
3	0.0333	0.0569	14	8.0167	0.0650
4	0.0500	0.0570	15	10.0167	0.0661
5	0.0667	0.0571	16	15.0167	0.0681
6	0.0833	0.0572	17	30.0500	0.0725
7	0.1000	0.0573	18	60.0833	0.0771
8	0.2000	0.0577	19	120.1833	0.0816
9	0.2500	0.0577	20	240.3500	0.0852
10	0.5000	0.0585	21	480.7000	0.0876
11	1.0000	0.0593			



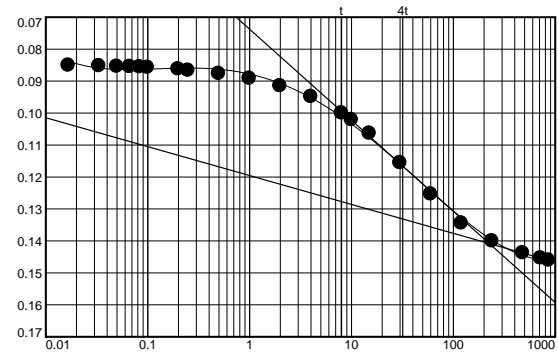
Void Ratio = 3.571    Compression = 10.7%  
 $D_0 = 0.0557$      $D_{50} = 0.0690$      $D_{100} = 0.0822$      $C_v$  at 26.18 min. = 0.010 ft.<sup>2</sup>/day     $C_\alpha = 0.010$

Pressure: 0.25 tsf

TEST READINGS

Load No. 3

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0890	13	4.0167	0.0992
2	0.0167	0.0894	14	8.0167	0.1043
3	0.0333	0.0896	15	10.0167	0.1064
4	0.0500	0.0897	16	15.0333	0.1107
5	0.0667	0.0898	17	30.0500	0.1199
6	0.0833	0.0899	18	60.1000	0.1297
7	0.1000	0.0901	19	120.1833	0.1388
8	0.2000	0.0906	20	240.3500	0.1444
9	0.2500	0.0910	21	480.7000	0.1481
10	0.5000	0.0920	22	721.0500	0.1497
11	1.0000	0.0935	23	861.6833	0.1504
12	2.0000	0.0958			



Void Ratio = 3.177 Compression = 18.4%

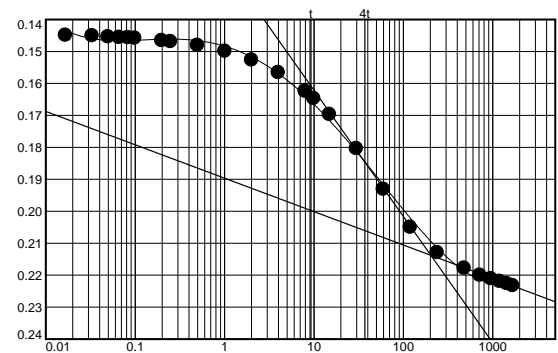
$D_0 = 0.0857$   $D_{50} = 0.1132$   $D_{100} = 0.1408$   $C_v$  at 24.10 min. = 0.009 ft.<sup>2</sup>/day  $C_\alpha = 0.011$

Pressure: 0.49 tsf

TEST READINGS

Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1505	14	8.0167	0.1687
2	0.0167	0.1512	15	10.0167	0.1710
3	0.0333	0.1514	16	15.0333	0.1760
4	0.0500	0.1517	17	30.0500	0.1867
5	0.0667	0.1519	18	60.1000	0.1994
6	0.0833	0.1520	19	120.1833	0.2113
7	0.1000	0.1521	20	240.3500	0.2192
8	0.2000	0.1529	21	480.7000	0.2241
9	0.2500	0.1532	22	721.0500	0.2263
10	0.5000	0.1544	23	961.4000	0.2274
11	1.0167	0.1562	24	1201.7500	0.2282
12	2.0167	0.1590	25	1442.1000	0.2289
13	4.0167	0.1629	26	1682.4333	0.2296



Void Ratio = 2.679 Compression = 28.1%

$D_0 = 0.1467$   $D_{50} = 0.1803$   $D_{100} = 0.2138$   $C_v$  at 27.74 min. = 0.007 ft.<sup>2</sup>/day  $C_\alpha = 0.013$

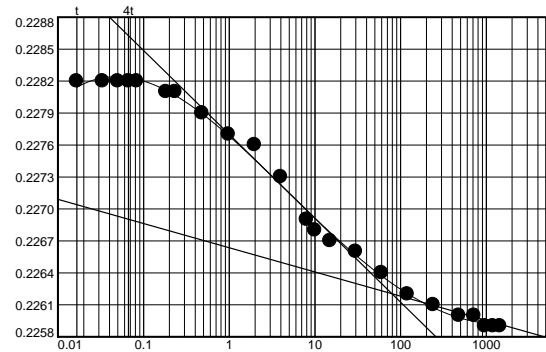


Pressure: 0.25 tsf

TEST READINGS

Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0167	0.2311	13	8.0167	0.2298
2	0.0333	0.2311	14	10.0167	0.2297
3	0.0500	0.2311	15	15.0333	0.2296
4	0.0667	0.2311	16	30.0333	0.2295
5	0.0833	0.2311	17	60.0833	0.2293
6	0.1000	0.2311	18	120.1667	0.2291
7	0.2000	0.2310	19	240.3333	0.2290
8	0.2500	0.2310	20	480.6833	0.2289
9	0.5000	0.2308	21	721.0333	0.2289
10	1.0000	0.2306	22	961.3833	0.2288
11	2.0000	0.2305	23	1201.7167	0.2288
12	4.0167	0.2302	24	1442.0667	0.2288



Void Ratio = 2.663    Compression = 28.4%

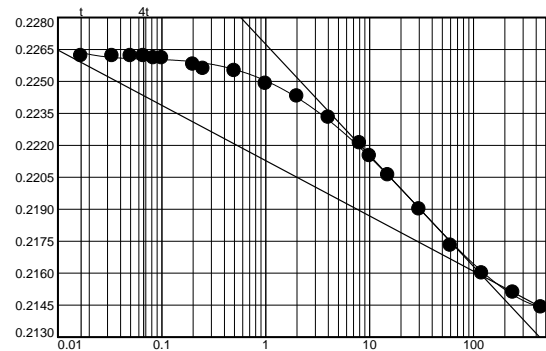
$D_0 = 0.2280$      $D_{50} = 0.2271$      $D_{100} = 0.2262$      $C_v$  at 5.33 min. = 0.030 ft.<sup>2</sup>/day

Pressure: 0.06 tsf

TEST READINGS

Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2288	12	2.0000	0.2261
2	0.0167	0.2280	13	4.0167	0.2251
3	0.0333	0.2280	14	8.0167	0.2239
4	0.0500	0.2280	15	10.0167	0.2233
5	0.0667	0.2280	16	15.0333	0.2224
6	0.0833	0.2279	17	30.0500	0.2208
7	0.1000	0.2279	18	60.1000	0.2191
8	0.2000	0.2276	19	120.2000	0.2178
9	0.2500	0.2274	20	240.4000	0.2169
10	0.5000	0.2273	21	447.2833	0.2162
11	1.0000	0.2267			



Void Ratio = 2.737    Compression = 27.0%

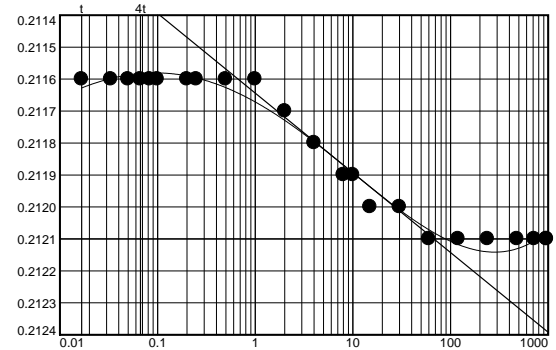
$D_0 = 0.2267$      $D_{50} = 0.2213$      $D_{100} = 0.2159$      $C_v$  at 10.96 min. = 0.015 ft.<sup>2</sup>/day

Pressure: 0.12 tsf

TEST READINGS

Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2164	13	4.0167	0.2166
2	0.0167	0.2164	14	8.0167	0.2167
3	0.0333	0.2164	15	10.0167	0.2167
4	0.0500	0.2164	16	15.0333	0.2168
5	0.0667	0.2164	17	30.0500	0.2168
6	0.0833	0.2164	18	60.1000	0.2169
7	0.1000	0.2164	19	120.1833	0.2169
8	0.2000	0.2164	20	240.3500	0.2169
9	0.2500	0.2164	21	480.7000	0.2169
10	0.5000	0.2164	22	721.0500	0.2169
11	1.0000	0.2164	23	961.3833	0.2169
12	2.0167	0.2165	24	969.4000	0.2169



Void Ratio = 2.752 Compression = 26.7%

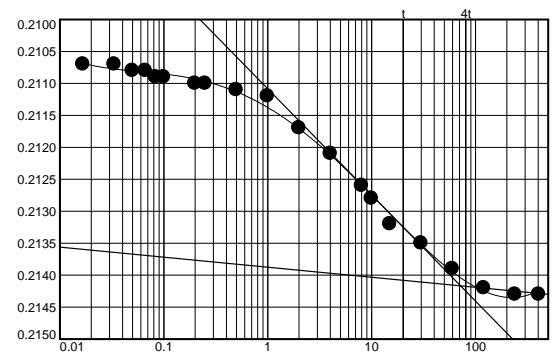
$D_0 = 0.2117$   $D_{50} = 0.2119$   $D_{100} = 0.2121$   $C_v$  at 9.38 min. = 0.018 ft.<sup>2</sup>/day  $C_\alpha = 0.000$

Pressure: 0.25 tsf

TEST READINGS

Load No. 8

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2173	12	2.0000	0.2183
2	0.0167	0.2173	13	4.0167	0.2187
3	0.0333	0.2173	14	8.0167	0.2192
4	0.0500	0.2174	15	10.0167	0.2194
5	0.0667	0.2174	16	15.0333	0.2198
6	0.0833	0.2175	17	30.0500	0.2201
7	0.1000	0.2175	18	60.1000	0.2205
8	0.2000	0.2176	19	120.2000	0.2208
9	0.2500	0.2176	20	240.4000	0.2209
10	0.5000	0.2177	21	405.9833	0.2209
11	1.0000	0.2178			



Void Ratio = 2.738 Compression = 26.9%

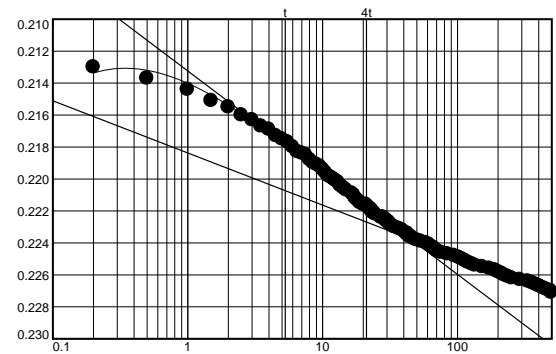
$D_0 = 0.2124$   $D_{50} = 0.2133$   $D_{100} = 0.2142$   $C_v$  at 21.22 min. = 0.008 ft.<sup>2</sup>/day  $C_\alpha = 0.000$

Pressure: 0.49 tsf

TEST READINGS

Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2207	41	21.5333	0.2306
2	0.2000	0.2219	42	22.0333	0.2307
3	0.5000	0.2226	43	22.5333	0.2308
4	1.0000	0.2233	44	23.0333	0.2308
5	1.5000	0.2240	45	23.5333	0.2310
6	2.0000	0.2244	46	24.0333	0.2310
7	2.5000	0.2249	47	24.5333	0.2311
8	3.0000	0.2252	48	27.0333	0.2313
9	3.5000	0.2256	49	28.0500	0.2313
10	4.0000	0.2258	50	28.5500	0.2314
11	4.5000	0.2262	51	29.0500	0.2314
12	5.0000	0.2264	52	29.5500	0.2315
13	5.5000	0.2266	53	30.0500	0.2315
14	6.0000	0.2269	54	30.5500	0.2316
15	6.5000	0.2272	55	31.0500	0.2316
16	7.0000	0.2273	56	31.5500	0.2317
17	7.5000	0.2274	57	32.5500	0.2318
18	8.0167	0.2277	58	34.0500	0.2319
19	8.5167	0.2279	59	36.5500	0.2320
20	9.0167	0.2280	60	39.0667	0.2321
21	9.5167	0.2281	61	41.5667	0.2323
22	10.0167	0.2283	62	42.5667	0.2323
23	10.5167	0.2285	63	43.0667	0.2324
24	11.0167	0.2287	64	44.0667	0.2325
25	11.5167	0.2288	65	45.0667	0.2325
26	12.0167	0.2289	66	46.5667	0.2326
27	12.5167	0.2290	67	49.0833	0.2327
28	13.0167	0.2291	68	53.0833	0.2328
29	13.5167	0.2293	69	58.0833	0.2329
30	14.0167	0.2294	70	61.6000	0.2330
31	14.5167	0.2295	71	63.6000	0.2331
32	15.0167	0.2296	72	66.6000	0.2332
33	16.5167	0.2298	73	68.6000	0.2333
34	17.0167	0.2299	74	70.6167	0.2334
35	17.5167	0.2301	75	75.6167	0.2335
36	18.0333	0.2302	76	84.1333	0.2336
37	18.5333	0.2303	77	94.1500	0.2337
38	19.0333	0.2304	78	101.6667	0.2338
39	20.0333	0.2305	79	107.6667	0.2339
40	21.0333	0.2305	80	113.1833	0.2340



Pressure: 0.49 tsf

TEST READINGS (continued)

Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
81	118.6833	0.2341	91	252.4167	0.2351
82	126.2000	0.2342	92	290.4667	0.2352
83	134.7167	0.2343	93	332.5333	0.2353
84	152.7500	0.2344	94	358.5833	0.2354
85	172.7833	0.2345	95	380.1167	0.2355
86	188.3000	0.2346	96	405.6667	0.2356
87	199.3167	0.2347	97	427.2000	0.2357
88	210.8333	0.2348	98	456.2500	0.2358
89	221.3667	0.2349	99	491.8000	0.2359
90	235.3833	0.2350	100	496.3167	0.2360

Void Ratio = 2.655 Compression = 28.6%

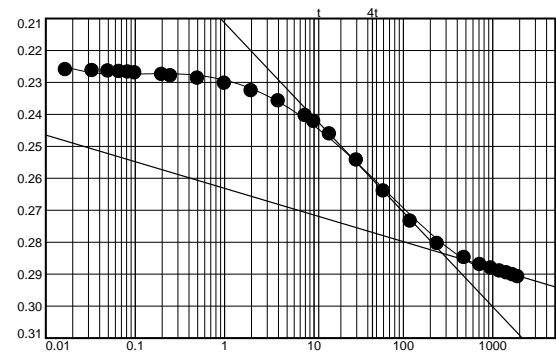
$D_0 = 0.2141$   $D_{50} = 0.2189$   $D_{100} = 0.2238$   $C_v$  at 7.82 min. = 0.021 ft.<sup>2</sup>/day  $C_\alpha = 0.004$

Pressure: 0.97 tsf

TEST READINGS

Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2368	15	10.0167	0.2536
2	0.0167	0.2374	16	15.0333	0.2575
3	0.0333	0.2377	17	30.0500	0.2657
4	0.0500	0.2378	18	60.0833	0.2754
5	0.0667	0.2380	19	120.1833	0.2848
6	0.0833	0.2382	20	240.3500	0.2918
7	0.1000	0.2384	21	480.6833	0.2962
8	0.2000	0.2389	22	721.0333	0.2984
9	0.2500	0.2393	23	961.3833	0.2995
10	0.5000	0.2401	24	1201.7333	0.3004
11	1.0000	0.2417	25	1442.0833	0.3010
12	2.0000	0.2440	26	1682.4333	0.3016
13	4.0167	0.2472	27	1922.7667	0.3022
14	8.0167	0.2518			



Void Ratio = 2.245 Compression = 36.6%

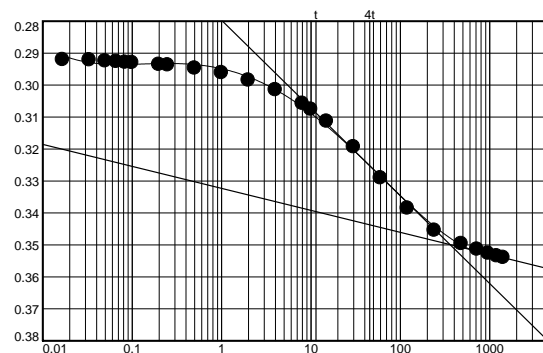
$D_0 = 0.2295$   $D_{50} = 0.2565$   $D_{100} = 0.2834$   $C_v$  at 33.86 min. = 0.004 ft.<sup>2</sup>/day  $C_\alpha = 0.010$

Pressure: 1.93 tsf

TEST READINGS

Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.3022	14	8.0167	0.3193
2	0.0167	0.3056	15	10.0167	0.3211
3	0.0333	0.3057	16	15.0333	0.3249
4	0.0500	0.3060	17	30.0500	0.3329
5	0.0667	0.3062	18	60.0833	0.3426
6	0.0833	0.3064	19	120.1833	0.3521
7	0.1000	0.3065	20	240.3500	0.3590
8	0.2000	0.3071	21	480.7000	0.3632
9	0.2500	0.3073	22	721.0500	0.3649
10	0.5000	0.3083	23	961.4000	0.3662
11	1.0000	0.3097	24	1201.7500	0.3670
12	2.0000	0.3120	25	1420.6333	0.3675
13	4.0167	0.3150			



Void Ratio = 1.839 Compression = 44.5%

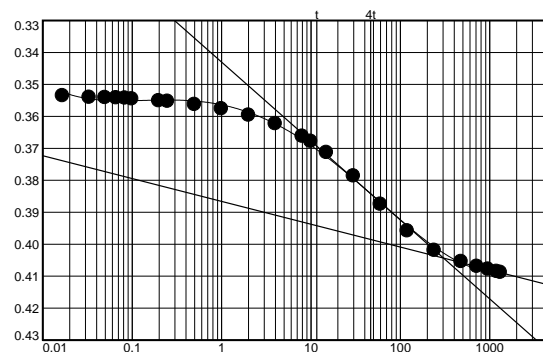
$D_0 = 0.2949$   $D_{50} = 0.3224$   $D_{100} = 0.3499$   $C_v$  at 35.55 min. = 0.003 ft.<sup>2</sup>/day  $C_\alpha = 0.009$

Pressure: 3.85 tsf

TEST READINGS

Load No. 12

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.3679	14	8.0167	0.3818
2	0.0167	0.3691	15	10.0167	0.3834
3	0.0333	0.3696	16	15.0333	0.3869
4	0.0500	0.3697	17	30.0500	0.3942
5	0.0667	0.3698	18	60.1000	0.4031
6	0.0833	0.3699	19	120.1833	0.4114
7	0.1000	0.3701	20	240.3500	0.4175
8	0.2000	0.3707	21	480.7500	0.4210
9	0.2500	0.3709	22	721.1500	0.4225
10	0.5000	0.3719	23	961.5333	0.4234
11	1.0000	0.3732	24	1201.9167	0.4241
12	2.0167	0.3752	25	1324.0000	0.4244
13	4.0167	0.3779			



Void Ratio = 1.485 Compression = 51.4%

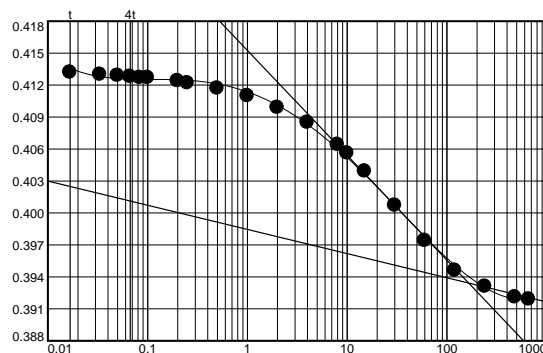
$D_0 = 0.3566$   $D_{50} = 0.3805$   $D_{100} = 0.4043$   $C_v$  at 32.65 min. = 0.003 ft.<sup>2</sup>/day  $C_\alpha = 0.009$

Pressure: 0.97 tsf

TEST READINGS

Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.4238	12	2.0000	0.4197
2	0.0167	0.4230	13	4.0000	0.4183
3	0.0333	0.4228	14	8.0000	0.4162
4	0.0500	0.4227	15	10.0167	0.4154
5	0.0667	0.4226	16	15.0167	0.4137
6	0.0833	0.4225	17	30.0333	0.4105
7	0.1000	0.4225	18	60.0833	0.4072
8	0.2000	0.4222	19	120.1667	0.4044
9	0.2500	0.4220	20	240.3333	0.4029
10	0.5000	0.4215	21	480.7167	0.4019
11	1.0000	0.4208	22	660.5500	0.4017



Void Ratio = 1.595 Compression = 49.3%

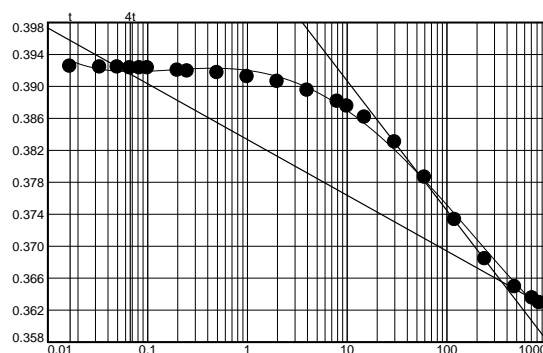
$D_0 = 0.4146$   $D_{50} = 0.4040$   $D_{100} = 0.3934$   $C_v$  at 13.57 min. = 0.006 ft.<sup>2</sup>/day

Pressure: 0.25 tsf

TEST READINGS

Load No. 14

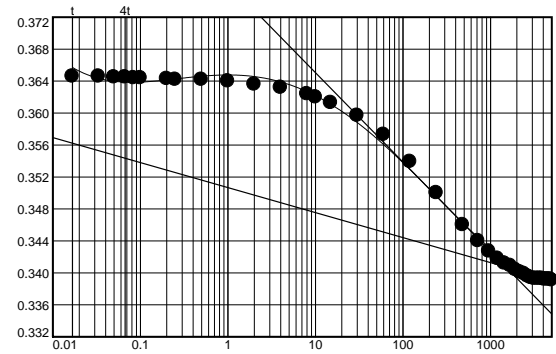
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.4003	13	4.0000	0.3971
2	0.0167	0.4001	14	8.0167	0.3957
3	0.0333	0.4000	15	10.0167	0.3951
4	0.0500	0.4000	16	15.0167	0.3937
5	0.0667	0.3999	17	30.0500	0.3906
6	0.0833	0.3999	18	60.1000	0.3862
7	0.1000	0.3999	19	120.2000	0.3809
8	0.2000	0.3996	20	240.3833	0.3760
9	0.2500	0.3995	21	480.7833	0.3725
10	0.5000	0.3993	22	721.1667	0.3711
11	1.0000	0.3988	23	847.9833	0.3705
12	2.0000	0.3982			



Void Ratio = 1.781 Compression = 45.6%

$D_0 = 0.3947$   $D_{50} = 0.3801$   $D_{100} = 0.3656$   $C_v$  at 42.92 min. = 0.002 ft.<sup>2</sup>/day

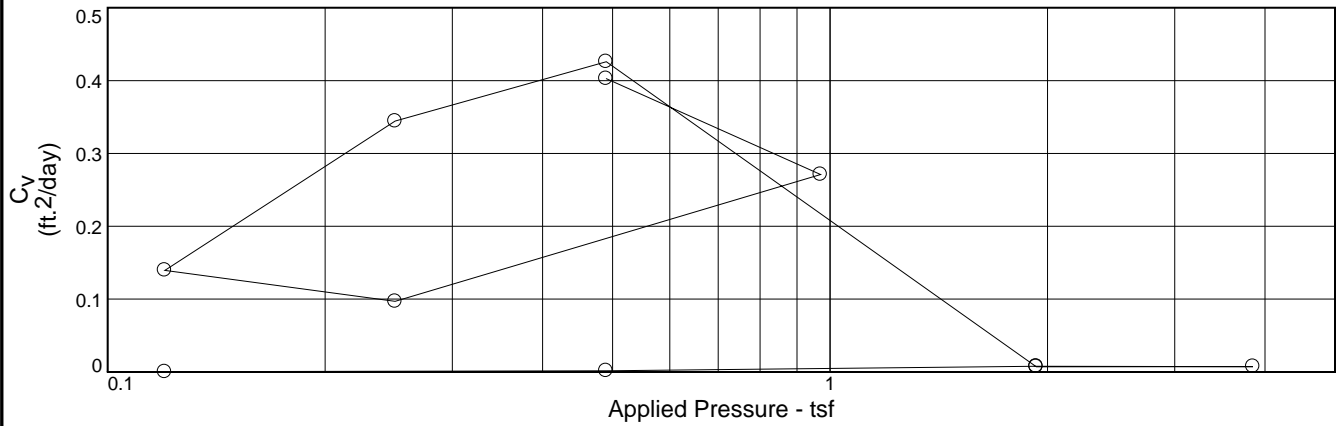
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.3703	21	480.9167	0.3515
2	0.0167	0.3701	22	721.2000	0.3495
3	0.0333	0.3701	23	961.6333	0.3482
4	0.0500	0.3700	24	1202.0667	0.3473
5	0.0667	0.3700	25	1442.4833	0.3467
6	0.0833	0.3699	26	1682.8167	0.3464
7	0.1000	0.3699	27	1923.1667	0.3459
8	0.2000	0.3698	28	2163.5500	0.3456
9	0.2500	0.3697	29	2403.9500	0.3454
10	0.5000	0.3697	30	2644.3500	0.3451
11	1.0000	0.3695	31	2884.7333	0.3449
12	2.0000	0.3691	32	3125.1333	0.3448
13	4.0000	0.3687	33	3365.5167	0.3448
14	8.0167	0.3679	34	3605.9167	0.3448
15	10.0167	0.3675	35	3846.3167	0.3448
16	15.0167	0.3668	36	4086.7000	0.3447
17	30.0500	0.3652	37	4327.1000	0.3447
18	60.1000	0.3628	38	4567.5000	0.3447
19	120.2000	0.3594	39	4807.8833	0.3447
20	240.4333	0.3555	40	4981.5167	0.3446



Void Ratio = 1.935    Compression = 42.6%

$D_0 = 0.3676$      $D_{50} = 0.3541$      $D_{100} = 0.3407$      $C_v$  at 92.50 min. = 0.001 ft.<sup>2</sup>/day

# CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P <sub>c</sub> (tsf)	C <sub>c</sub>	Initial Void Ratio
Saturation	Moisture							
94.1 %	739.3 %	7.6	433	307	2.55	0.5	10.85	20.039

<b>MATERIAL DESCRIPTION</b>		<b>USCS</b>	<b>AASHTO</b>
M, so br & g PT w/ fw rts & dec wd		PT	

<b>Project No.</b> 24762 <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE <b>Source of Sample:</b> B-4 <b>Depth:</b> 4 <b>Sample Number:</b> 3A	<b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL ENGINEERING 	<b>Remarks:</b>      <div style="text-align: right;"><b>Figure</b></div>
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**Tested By:** BH \_\_\_\_\_ **Checked By:** RR \_\_\_\_\_



# Dial Reading vs. Time

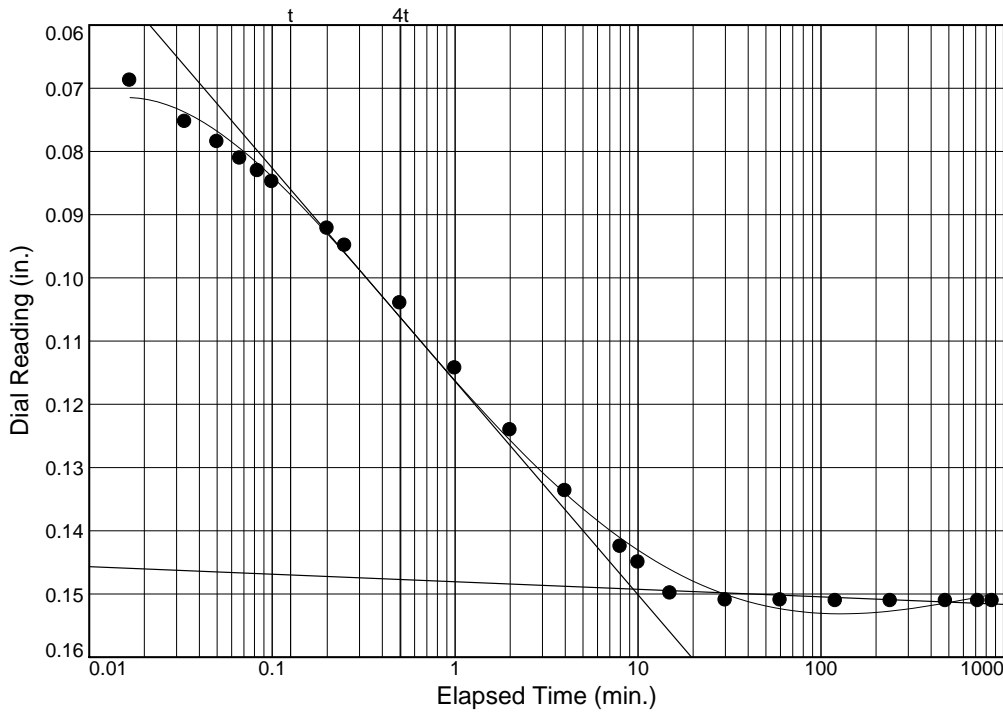
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-4

Depth: 4

Sample Number: 3A



Load No.= 3

Load= 0.49 tsf

$D_0 = 0.0674$

$D_{50} = 0.1083$

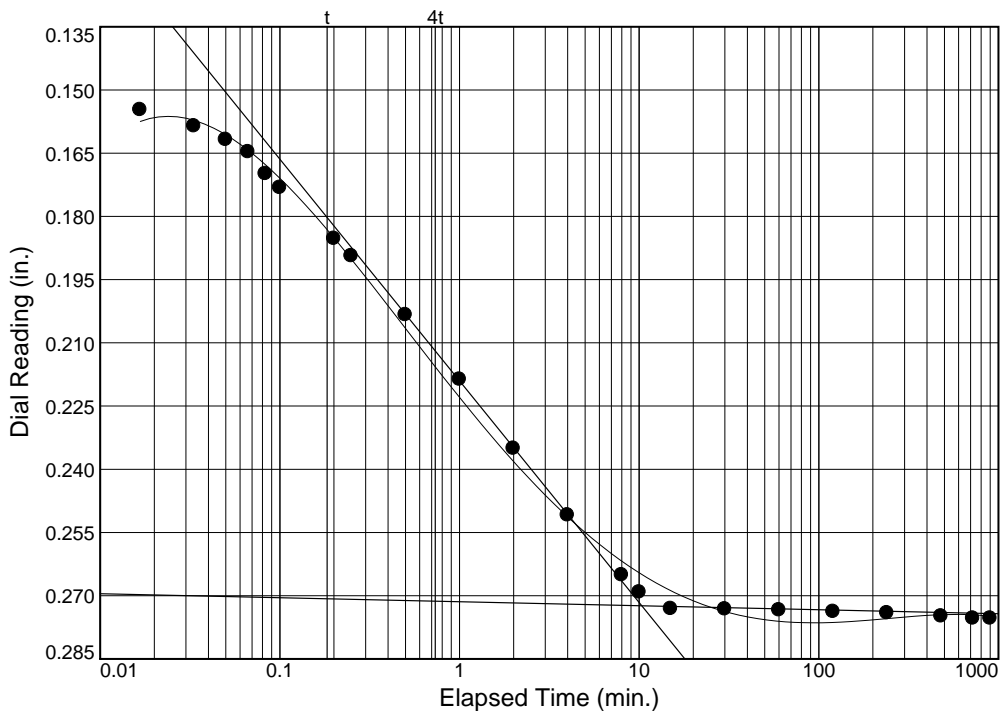
$D_{100} = 0.1492$

$T_{50} = 0.58 \text{ min.}$

$C_v @ T_{50}$

0.403 ft.<sup>2</sup>/day

$C_\alpha = 0.002$



Load No.= 4

Load= 0.97 tsf

$D_0 = 0.1506$

$D_{50} = 0.2115$

$D_{100} = 0.2724$

$T_{50} = 0.61 \text{ min.}$

$C_v @ T_{50}$

0.271 ft.<sup>2</sup>/day

$C_\alpha = 0.001$

# Dial Reading vs. Time

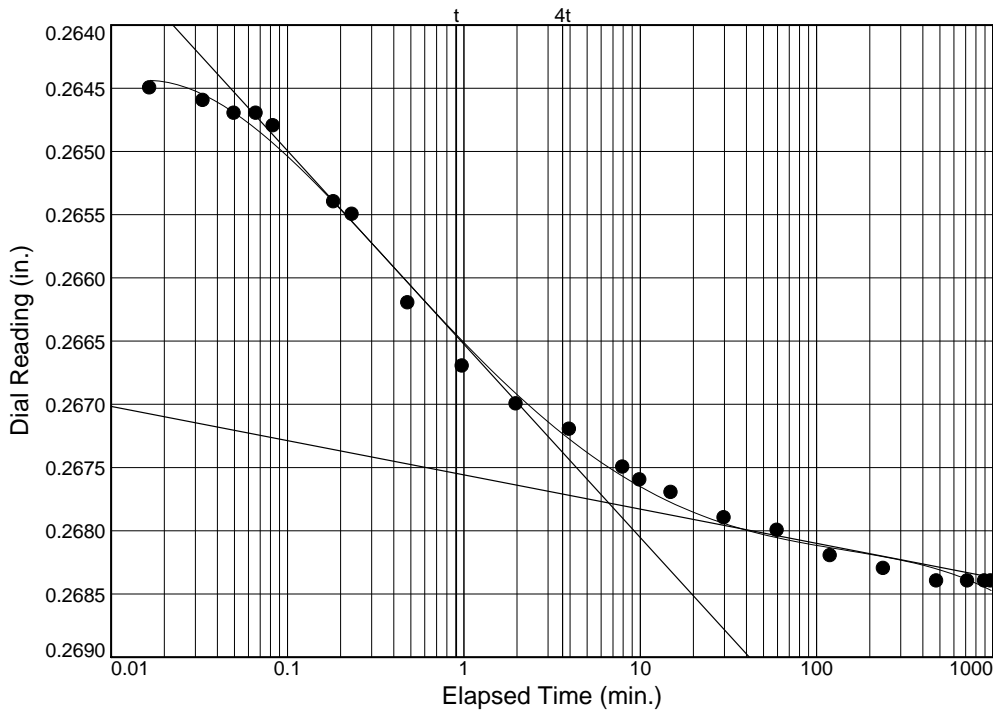
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-4

Depth: 4

Sample Number: 3A



Load No.= 5

Load= 0.25 tsf

$D_0 = 0.2657$

$D_{50} = 0.2667$

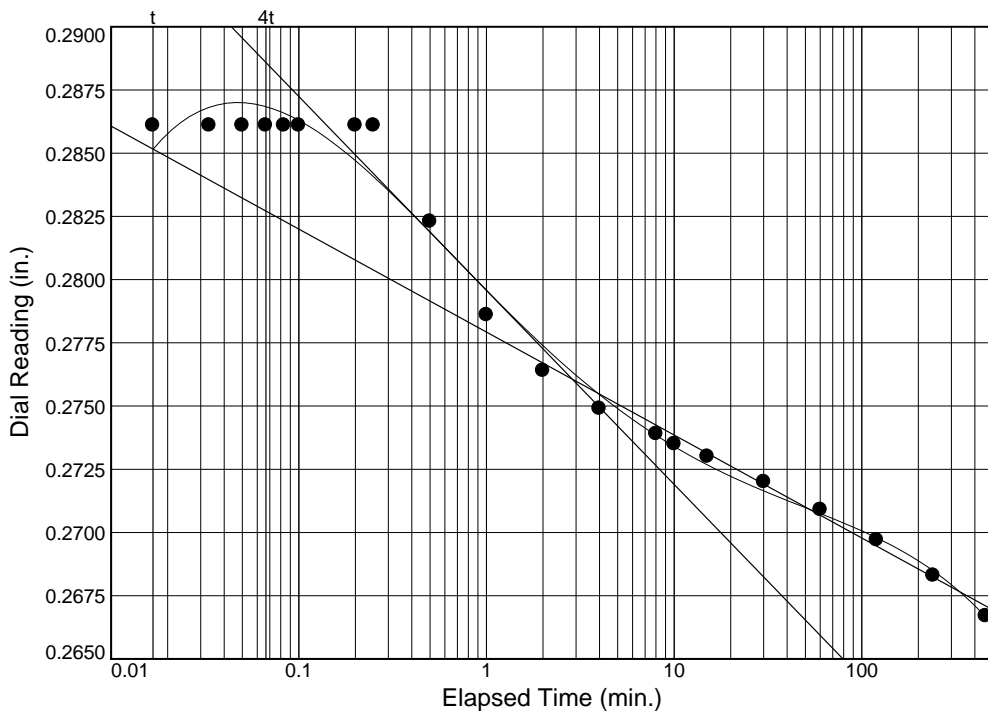
$D_{100} = 0.2678$

$T_{50} = 1.42 \text{ min.}$

$C_v @ T_{50}$

0.097 ft.<sup>2</sup>/day

$C_\alpha = 0.000$



Load No.= 6

Load= 0.12 tsf

$D_0 = 0.2835$

$D_{50} = 0.2798$

$D_{100} = 0.2761$

$T_{50} = 0.95 \text{ min.}$

$C_v @ T_{50}$

0.139 ft.<sup>2</sup>/day

# Dial Reading vs. Time

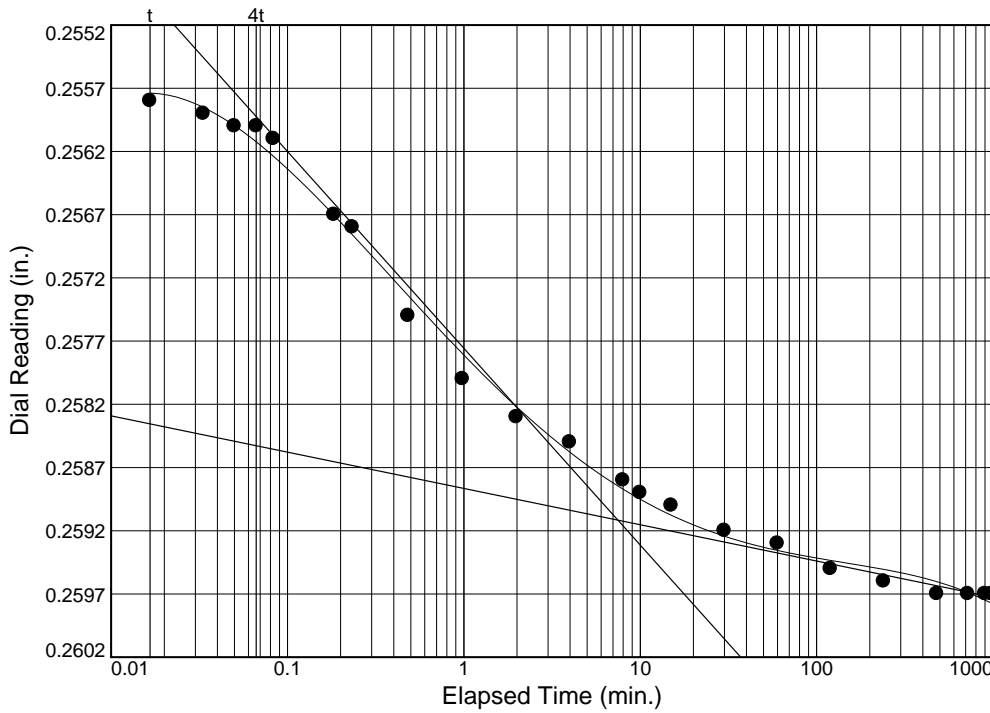
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-4

Depth: 4

Sample Number: 3A



Load No.= 7

Load= 0.25 tsf

$D_0 = 0.2554$

$D_{50} = 0.2572$

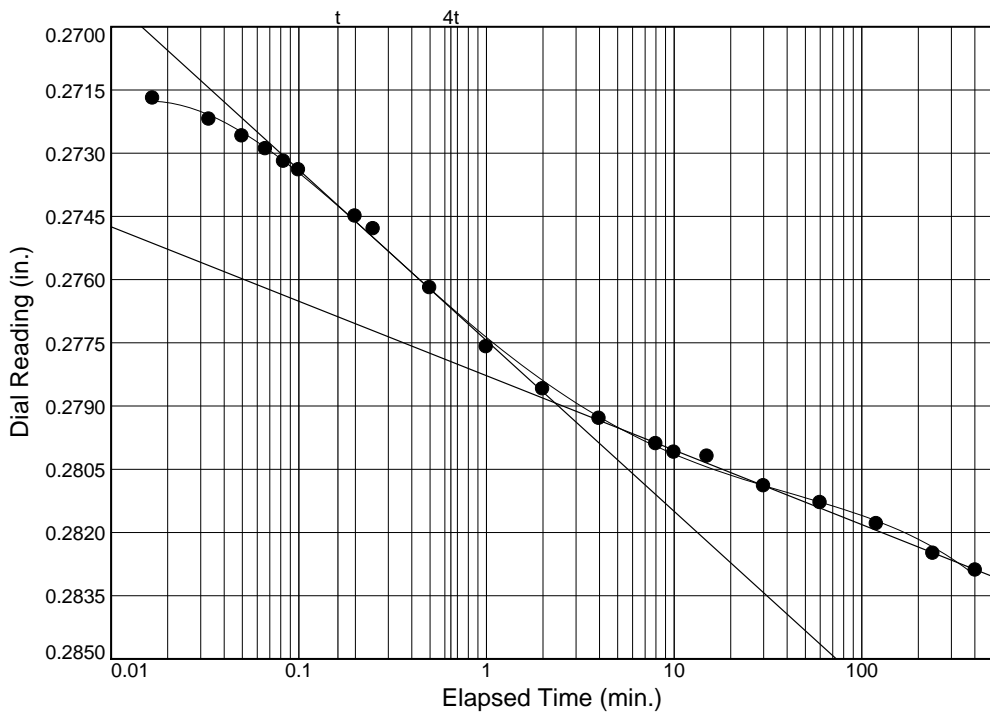
$D_{100} = 0.2591$

$T_{50} = 0.41 \text{ min.}$

$C_v @ T_{50}$

0.344 ft.<sup>2</sup>/day

$C_\alpha = 0.000$



Load No.= 8

Load= 0.49 tsf

$D_0 = 0.2718$

$D_{50} = 0.2754$

$D_{100} = 0.2789$

$T_{50} = 0.31 \text{ min.}$

$C_v @ T_{50}$

0.426 ft.<sup>2</sup>/day

$C_\alpha = 0.002$

## Dial Reading vs. Time

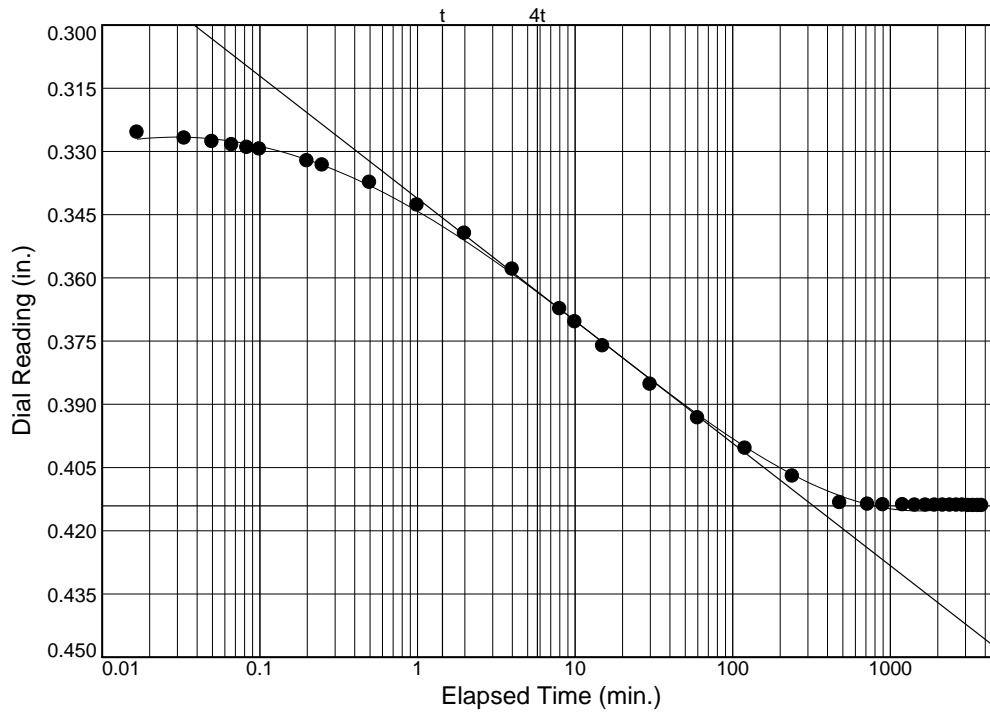
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-4

Depth: 4

Sample Number: 3A



Load No.= 10

Load= 1.93 tsf

$D_0 = 0.3321$

$D_{50} = 0.3731$

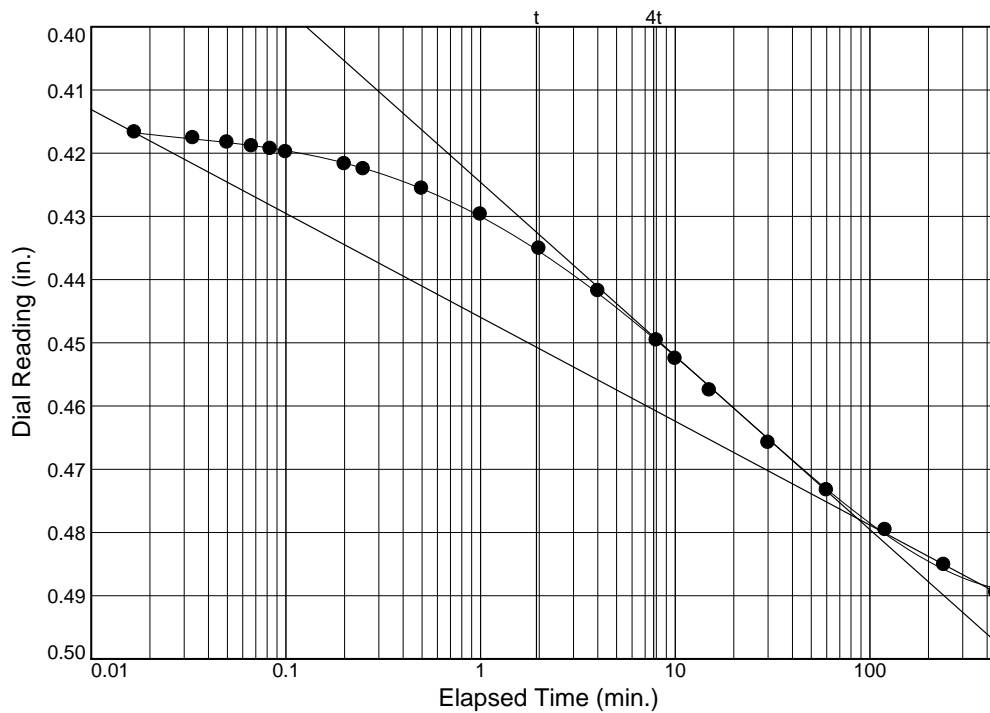
$D_{100} = 0.4141$

$T_{50} = 12.61 \text{ min.}$

$C_v @ T_{50}$

0.007 ft.<sup>2</sup>/day

$C_\alpha = 0.000$



Load No.= 11

Load= 3.85 tsf

$D_0 = 0.4213$

$D_{50} = 0.4495$

$D_{100} = 0.4778$

$T_{50} = 7.94 \text{ min.}$

$C_v @ T_{50}$

0.007 ft.<sup>2</sup>/day

$C_\alpha = 0.021$

# Dial Reading vs. Time

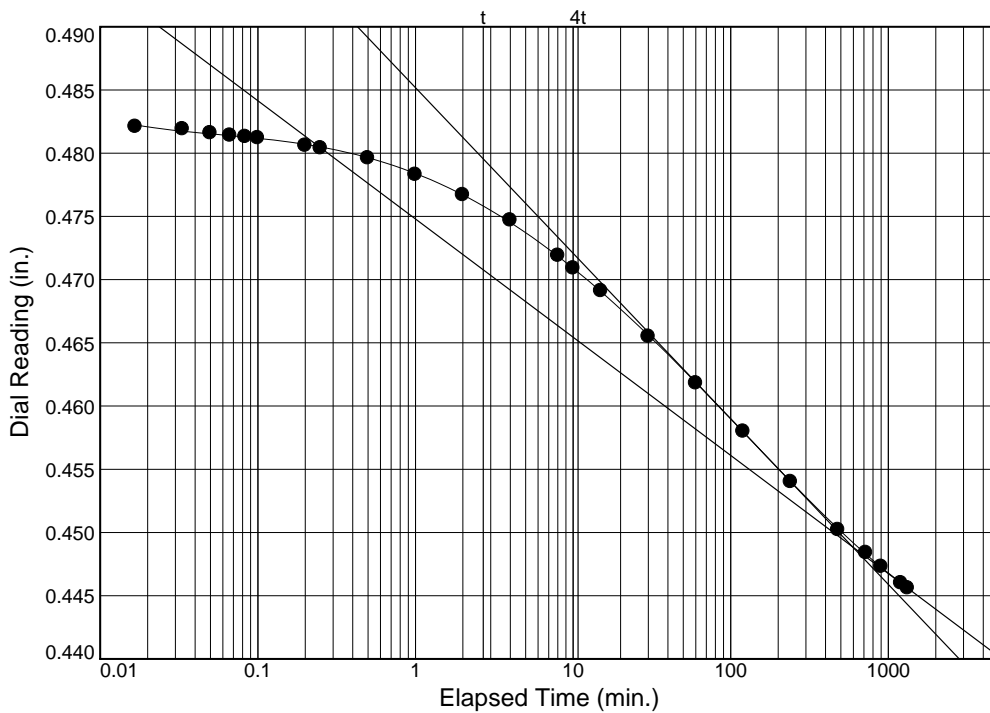
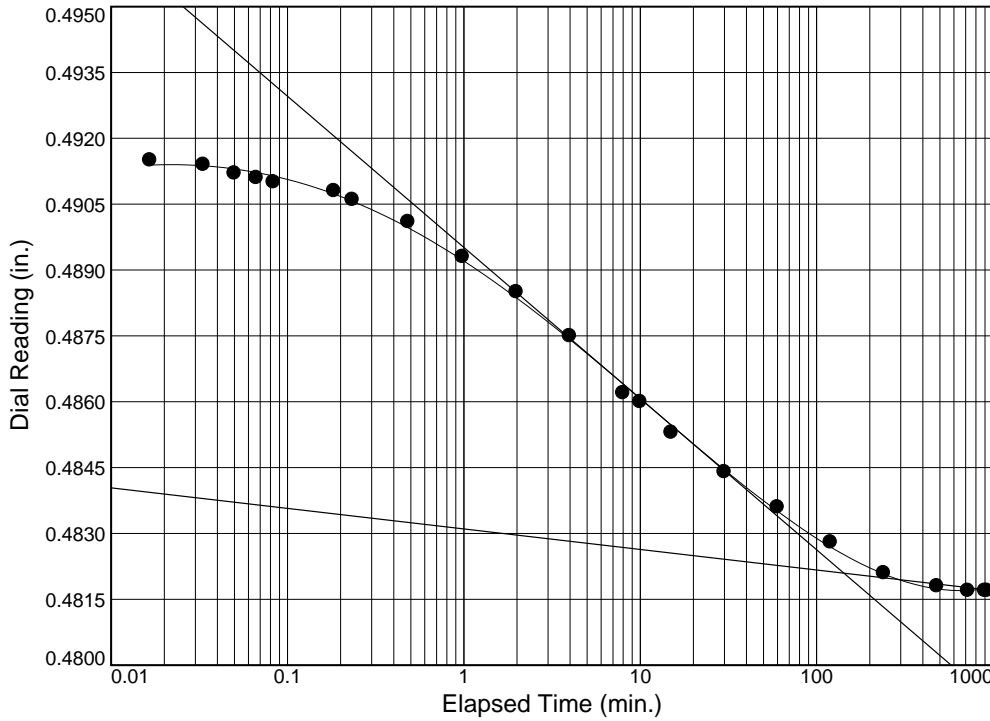
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-4

Depth: 4

Sample Number: 3A



# Dial Reading vs. Time

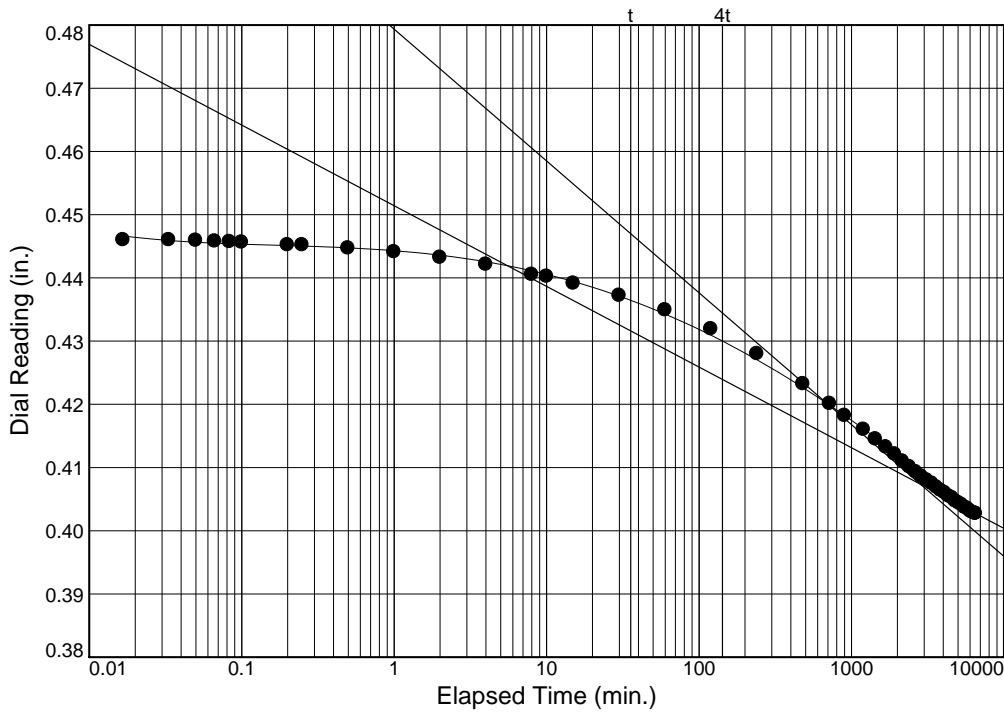
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-4

Depth: 4

Sample Number: 3A



Load No.= 14

Load= 0.12 tsf

$D_0 = 0.4429$

$D_{50} = 0.4251$

$D_{100} = 0.4073$

$T_{50} = 328.31 \text{ min.}$

$C_v @ T_{50}$

0.000 ft.<sup>2</sup>/day

**CONSOLIDATION TEST DATA**

8/29/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST.  
BERNARD PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** B-4

**Depth:** 4

**Sample Number:** 3A

**Material Description:** M, so br & g PT w/ fw rts & dec wd

**Liquid Limit:** 433

**Plasticity Index:** 307

**USCS:** PT

**Tested by:** BH

**Checked by:** RR

**Test Specimen Data**

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	43.56 g.	Spec. Gr. =	2.55	Wet w+t =	54.88 g.
Dry w+t =	5.19 g.	Est. Ht. Solids =	0.038 in.	Dry w+t =	36.87 g.
Tare Wt. =	0.00 g.	Init. V.R. =	20.039	Tare Wt. =	31.68 g.
Moisture =	739.3 %	Init. Sat. =	94.1 %	Moisture =	347.0 %
UNIT WEIGHT		TEST START		Dry Wt. = 5.19* g.	
Height =	0.794 in.	Height =	0.794 in.		
Diameter =	2.047 in.	Diameter =	2.047 in.		
Weight =	43.56 g.				
Dry Dens. =	7.6 pcf	* Final dry weight used as mineral solids weight			

**End-Of-Load Summary**

Pressure (tsf)	Final Dial (in.)	Machine Defl. (in.)	Deformation (in.)	C <sub>v</sub> (ft.2/day)	C <sub>α</sub>	Void Ratio	% Strain
start	0.00010		0.00000			20.039	
0.12	0.01190	0.00280	0.00900		0.003	19.800	1.1 Compr.
0.25	0.06880	0.00430	0.06440		0.021	18.332	8.1 Compr.
0.49	0.15730	0.00620	0.15100	0.403	0.002	16.038	19.0 Compr.
0.97	0.28380	0.00840	0.27530	0.271	0.001	12.744	34.7 Compr.
0.25	0.27320	0.00480	0.26830	0.097	0.000	12.930	33.8 Compr.
0.12	0.26850	0.00180	0.26660	0.139		12.975	33.6 Compr.
0.25	0.27320	0.01350	0.25960	0.344	0.000	13.160	32.7 Compr.
0.49	0.28580	0.00290	0.28280	0.426	0.002	12.545	35.6 Compr.
0.97	0.33260	0.00790	0.32460		0.025	11.438	40.9 Compr.
1.93	0.42540	0.01130	0.41400	0.007	0.000	9.069	52.1 Compr.
3.85	0.50300	0.01350	0.48940	0.007	0.021	7.071	61.6 Compr.
1.93	0.49150	0.00980	0.48160	0.008		7.278	60.7 Compr.
0.49	0.45220	0.00660	0.44550	0.002		8.234	56.1 Compr.
0.12	0.40690	0.00420	0.40260	0.000		9.371	50.7 Compr.

**TEST RESULTS SUMMARY**

Compression index ( $C_c$ ), tsf = 10.85    Preconsolidation pressure ( $P_p$ ), tsf = 0.5    Void ratio at  $P_p$  ( $e_m$ ) = 15.589  
Recompression index ( $C_r$ ) = 2.14

Pressure: 0.12 tsf

**TEST READINGS**

Load No. 1

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0001	11	1.0000	0.0011	21	480.7167	0.0098
2	0.0167	0.0002	12	2.0000	0.0014	22	721.0667	0.0110
3	0.0333	0.0003	13	4.0167	0.0019	23	901.3167	0.0117
4	0.0500	0.0005	14	8.0167	0.0025	24	980.3000	0.0119
5	0.0667	0.0006	15	10.0167	0.0028			
6	0.0833	0.0006	16	15.0333	0.0031			
7	0.1000	0.0006	17	30.0500	0.0041			
8	0.2000	0.0008	18	60.0833	0.0054			
9	0.2500	0.0009	19	120.1833	0.0065			
10	0.5000	0.0009	20	240.3667	0.0080			

Void Ratio = 19.800    Compression = 1.1%

Pressure: 0.25 tsf

**TEST READINGS**

Load No. 2

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0109	11	1.0000	0.0383	21	480.6833	0.0680
2	0.0167	0.0149	12	2.0000	0.0407	22	536.2333	0.0688
3	0.0333	0.0190	13	4.0000	0.0431			
4	0.0500	0.0225	14	8.0000	0.0455			
5	0.0667	0.0245	15	10.0167	0.0465			
6	0.0833	0.0257	16	15.0167	0.0481			
7	0.1000	0.0270	17	30.0333	0.0511			
8	0.2000	0.0309	18	60.0833	0.0544			
9	0.2500	0.0320	19	120.1667	0.0582			
10	0.5000	0.0355	20	240.3500	0.0626			

Void Ratio = 18.332    Compression = 8.1%

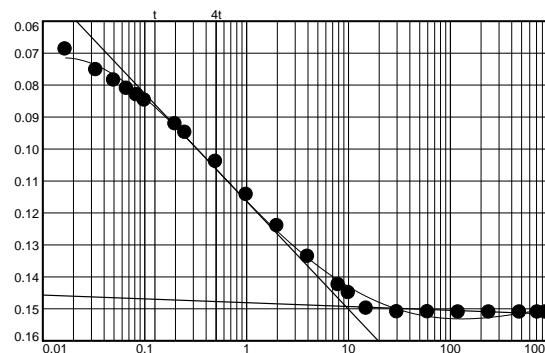


Pressure: 0.49 tsf

TEST READINGS

Load No. 3

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0696	13	4.0000	0.1399
2	0.0167	0.0750	14	8.0000	0.1487
3	0.0333	0.0815	15	10.0167	0.1512
4	0.0500	0.0847	16	15.0167	0.1561
5	0.0667	0.0873	17	30.0333	0.1572
6	0.0833	0.0893	18	60.0833	0.1572
7	0.1000	0.0910	19	120.1667	0.1573
8	0.2000	0.0984	20	240.3500	0.1573
9	0.2500	0.1011	21	480.6833	0.1573
10	0.5000	0.1102	22	721.0333	0.1573
11	1.0000	0.1205	23	865.1333	0.1573
12	2.0000	0.1303			



Void Ratio = 16.038 Compression = 19.0%

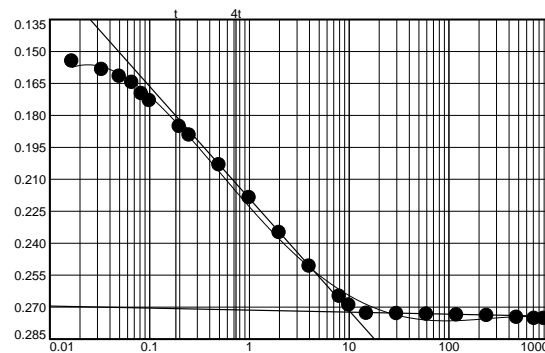
$D_0 = 0.0674$   $D_{50} = 0.1083$   $D_{100} = 0.1492$   $C_v$  at 0.58 min. = 0.403 ft.<sup>2</sup>/day  $C_\alpha = 0.002$

Pressure: 0.97 tsf

TEST READINGS

Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1580	13	4.0000	0.2593
2	0.0167	0.1631	14	8.0000	0.2735
3	0.0333	0.1670	15	10.0167	0.2776
4	0.0500	0.1702	16	15.0167	0.2815
5	0.0667	0.1731	17	30.0333	0.2816
6	0.0833	0.1783	18	60.0833	0.2818
7	0.1000	0.1816	19	120.1667	0.2822
8	0.2000	0.1937	20	240.3333	0.2825
9	0.2500	0.1978	21	480.6833	0.2833
10	0.5000	0.2118	22	721.0500	0.2838
11	1.0000	0.2271	23	901.3000	0.2838
12	2.0000	0.2435			



Void Ratio = 12.744 Compression = 34.7%

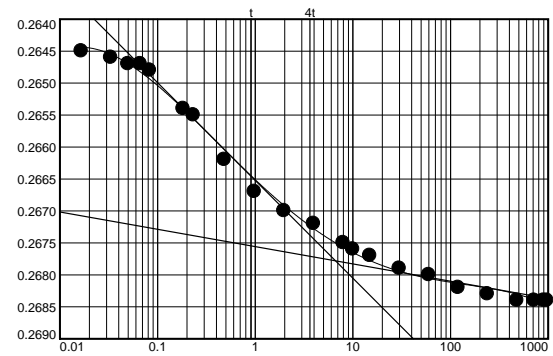
$D_0 = 0.1506$   $D_{50} = 0.2115$   $D_{100} = 0.2724$   $C_v$  at 0.61 min. = 0.271 ft.<sup>2</sup>/day  $C_\alpha = 0.001$

Pressure: 0.25 tsf

TEST READINGS

Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0167	0.2690	13	8.0000	0.2723
2	0.0333	0.2693	14	10.0167	0.2724
3	0.0500	0.2694	15	15.0167	0.2725
4	0.0667	0.2695	16	30.0333	0.2727
5	0.0833	0.2695	17	60.0833	0.2728
6	0.1000	0.2696	18	120.1667	0.2730
7	0.2000	0.2702	19	240.3333	0.2731
8	0.2500	0.2703	20	480.6833	0.2732
9	0.5000	0.2710	21	721.0333	0.2732
10	1.0000	0.2715	22	901.3000	0.2732
11	2.0000	0.2718	23	975.5667	0.2732
12	4.0000	0.2720			



Void Ratio = 12.930 Compression = 33.8%

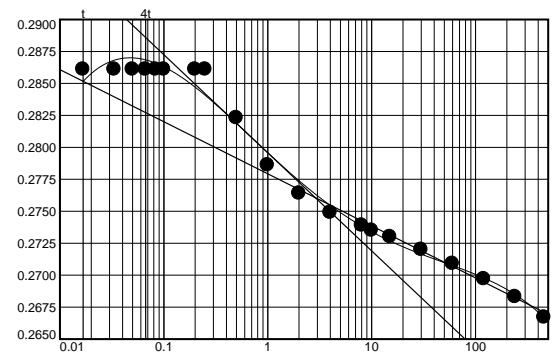
$D_0 = 0.2657$   $D_{50} = 0.2667$   $D_{100} = 0.2678$   $C_v$  at 1.42 min. = 0.097 ft.<sup>2</sup>/day  $C_\alpha = 0.000$

Pressure: 0.12 tsf

TEST READINGS

Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2879	12	2.0000	0.2782
2	0.0167	0.2879	13	4.0000	0.2767
3	0.0333	0.2879	14	8.0167	0.2757
4	0.0500	0.2879	15	10.0167	0.2753
5	0.0667	0.2879	16	15.0333	0.2748
6	0.0833	0.2879	17	30.0500	0.2738
7	0.1000	0.2879	18	60.1000	0.2727
8	0.2000	0.2879	19	120.2000	0.2715
9	0.2500	0.2879	20	240.4000	0.2701
10	0.5000	0.2841	21	456.8833	0.2685
11	1.0000	0.2804			



Void Ratio = 12.975 Compression = 33.6%

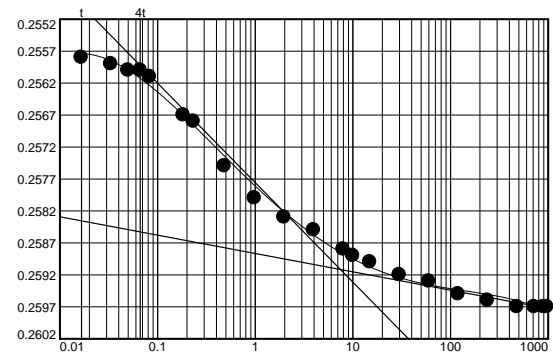
$D_0 = 0.2835$   $D_{50} = 0.2798$   $D_{100} = 0.2761$   $C_v$  at 0.95 min. = 0.139 ft.<sup>2</sup>/day

Pressure: 0.25 tsf

TEST READINGS

Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0167	0.2690	13	8.0000	0.2723
2	0.0333	0.2693	14	10.0167	0.2724
3	0.0500	0.2694	15	15.0167	0.2725
4	0.0667	0.2695	16	30.0333	0.2727
5	0.0833	0.2695	17	60.0833	0.2728
6	0.1000	0.2696	18	120.1667	0.2730
7	0.2000	0.2702	19	240.3333	0.2731
8	0.2500	0.2703	20	480.6833	0.2732
9	0.5000	0.2710	21	721.0333	0.2732
10	1.0000	0.2715	22	901.3000	0.2732
11	2.0000	0.2718	23	975.5667	0.2732
12	4.0000	0.2720			



Void Ratio = 13.160 Compression = 32.7%

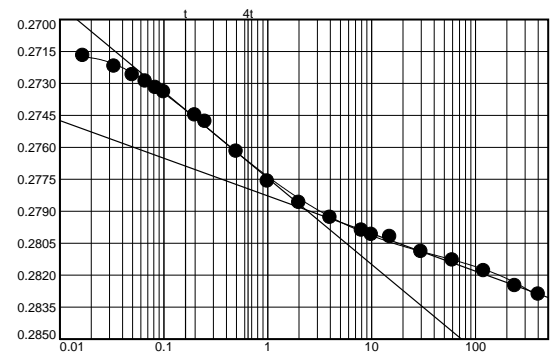
$D_0 = 0.2554$   $D_{50} = 0.2572$   $D_{100} = 0.2591$   $C_v$  at 0.41 min. = 0.344 ft.<sup>2</sup>/day  $C_\alpha = 0.000$

Pressure: 0.49 tsf

TEST READINGS

Load No. 8

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2733	12	2.0000	0.2815
2	0.0167	0.2746	13	4.0000	0.2822
3	0.0333	0.2751	14	8.0167	0.2828
4	0.0500	0.2755	15	10.0167	0.2830
5	0.0667	0.2758	16	15.0167	0.2831
6	0.0833	0.2761	17	30.0500	0.2838
7	0.1000	0.2763	18	60.1000	0.2842
8	0.2000	0.2774	19	120.2000	0.2847
9	0.2500	0.2777	20	240.4000	0.2854
10	0.5000	0.2791	21	404.6167	0.2858
11	1.0000	0.2805			



Void Ratio = 12.545 Compression = 35.6%

$D_0 = 0.2718$   $D_{50} = 0.2754$   $D_{100} = 0.2789$   $C_v$  at 0.31 min. = 0.426 ft.<sup>2</sup>/day  $C_\alpha = 0.002$

Pressure: 0.97 tsf

TEST READINGS

Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2851	11	1.0000	0.2985	21	480.7833	0.3239
2	0.0167	0.2879	12	2.0000	0.3014	22	721.1833	0.3271
3	0.0333	0.2887	13	4.0000	0.3038	23	901.4833	0.3288
4	0.0500	0.2894	14	8.0167	0.3060	24	1201.9667	0.3312
5	0.0667	0.2899	15	10.0167	0.3066	25	1421.8500	0.3326
6	0.0833	0.2903	16	15.0167	0.3079			
7	0.1000	0.2908	17	30.0500	0.3102			
8	0.2000	0.2926	18	60.1000	0.3127			
9	0.2500	0.2933	19	120.2000	0.3158			
10	0.5000	0.2958	20	240.4000	0.3195			

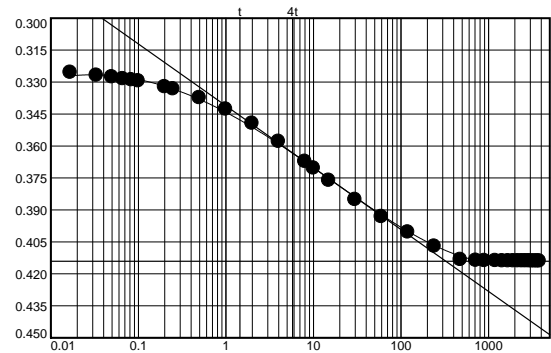
Void Ratio = 11.438    Compression = 40.9%

Pressure: 1.93 tsf

TEST READINGS

Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.3332	19	120.1833	0.4118
2	0.0167	0.3368	20	240.3500	0.4184
3	0.0333	0.3382	21	480.6833	0.4247
4	0.0500	0.3390	22	721.0333	0.4251
5	0.0667	0.3398	23	901.3000	0.4252
6	0.0833	0.3404	24	1201.7333	0.4252
7	0.1000	0.3408	25	1442.0833	0.4253
8	0.2000	0.3436	26	1682.4333	0.4253
9	0.2500	0.3446	27	1922.7667	0.4253
10	0.5000	0.3487	28	2163.1167	0.4253
11	1.0000	0.3541	29	2403.4667	0.4253
12	2.0000	0.3608	30	2643.8167	0.4253
13	4.0167	0.3693	31	2884.1667	0.4253
14	8.0167	0.3787	32	3124.5167	0.4254
15	10.0167	0.3818	33	3364.8500	0.4254
16	15.0333	0.3875	34	3605.2000	0.4254
17	30.0500	0.3966	35	3820.5500	0.4254
18	60.0833	0.4046			



Void Ratio = 9.069    Compression = 52.1%

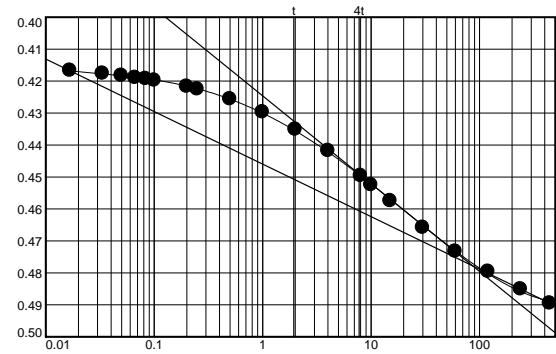
$D_0 = 0.3321$      $D_{50} = 0.3731$      $D_{100} = 0.4141$      $C_v$  at 12.61 min. = 0.007 ft.<sup>2</sup>/day     $C_\alpha = 0.000$

Pressure: 3.85 tsf

TEST READINGS

Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.4262	12	2.0000	0.4486
2	0.0167	0.4302	13	4.0167	0.4553
3	0.0333	0.4311	14	8.0167	0.4631
4	0.0500	0.4318	15	10.0167	0.4660
5	0.0667	0.4324	16	15.0167	0.4710
6	0.0833	0.4328	17	30.0500	0.4793
7	0.1000	0.4333	18	60.0833	0.4868
8	0.2000	0.4352	19	120.1833	0.4931
9	0.2500	0.4360	20	240.3500	0.4986
10	0.5000	0.4391	21	445.2167	0.5030
11	1.0000	0.4432			



Void Ratio = 7.071 Compression = 61.6%

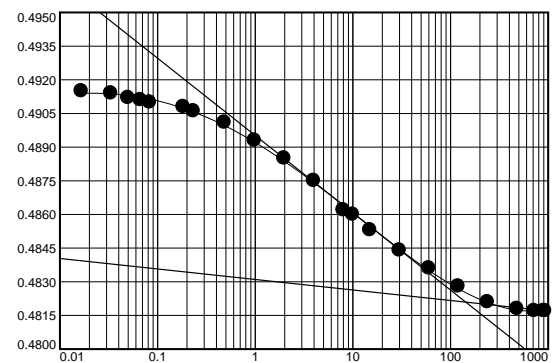
$D_0 = 0.4213$   $D_{50} = 0.4495$   $D_{100} = 0.4778$   $C_v$  at 7.94 min. = 0.007 ft.<sup>2</sup>/day  $C_\alpha = 0.021$

Pressure: 1.93 tsf

TEST READINGS

Load No. 12

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0167	0.5014	13	8.0000	0.4960
2	0.0333	0.5013	14	10.0000	0.4958
3	0.0500	0.5012	15	15.0167	0.4951
4	0.0667	0.5010	16	30.0333	0.4942
5	0.0833	0.5009	17	60.0833	0.4934
6	0.1000	0.5008	18	120.1667	0.4926
7	0.2000	0.5006	19	240.3333	0.4919
8	0.2500	0.5004	20	480.6833	0.4916
9	0.5000	0.4999	21	721.0333	0.4915
10	1.0000	0.4991	22	901.3000	0.4915
11	2.0000	0.4983	23	926.2667	0.4915
12	4.0000	0.4973			



Void Ratio = 7.278 Compression = 60.7%

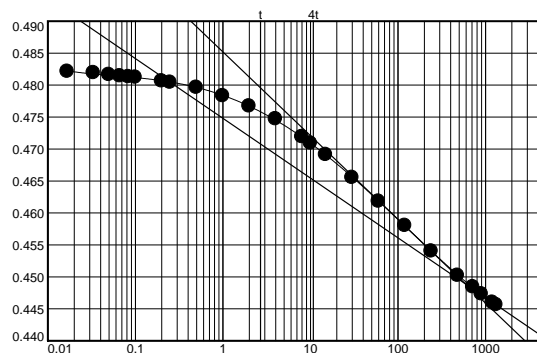
$D_0 = 0.4916$   $D_{50} = 0.4868$   $D_{100} = 0.4821$   $C_v$  at 5.92 min. = 0.008 ft.<sup>2</sup>/day

Pressure: 0.49 tsf

TEST READINGS

Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.4903	14	8.0167	0.4785
2	0.0167	0.4887	15	10.0167	0.4775
3	0.0333	0.4885	16	15.0167	0.4757
4	0.0500	0.4882	17	30.0500	0.4721
5	0.0667	0.4880	18	60.0833	0.4684
6	0.0833	0.4879	19	120.1667	0.4646
7	0.1000	0.4878	20	240.3500	0.4606
8	0.2000	0.4872	21	480.7500	0.4568
9	0.2500	0.4870	22	721.1500	0.4550
10	0.5000	0.4862	23	901.4333	0.4539
11	1.0000	0.4849	24	1201.9000	0.4526
12	2.0000	0.4833	25	1326.3167	0.4522
13	4.0000	0.4813			



Void Ratio = 8.234 Compression = 56.1%

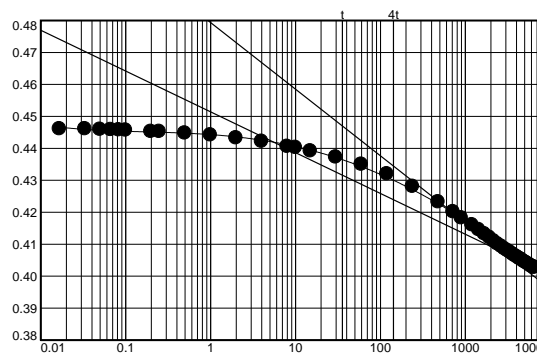
D<sub>0</sub> = 0.4811 D<sub>50</sub> = 0.4650 D<sub>100</sub> = 0.4489 C<sub>v</sub> at 33.89 min. = 0.002 ft.<sup>2</sup>/day

Pressure: 0.12 tsf

TEST READINGS

Load No. 14

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.4505	22	721.1167	0.4243
2	0.0167	0.4502	23	901.4000	0.4224
3	0.0333	0.4502	24	1201.9000	0.4202
4	0.0500	0.4501	25	1442.2833	0.4187
5	0.0667	0.4500	26	1682.7000	0.4174
6	0.0833	0.4499	27	1923.1833	0.4163
7	0.1000	0.4498	28	2163.6167	0.4152
8	0.2000	0.4494	29	2403.9167	0.4143
9	0.2500	0.4494	30	2644.3500	0.4135
10	0.5000	0.4489	31	2884.7833	0.4128
11	1.0000	0.4483	32	3125.1333	0.4122
12	2.0000	0.4474	33	3365.4833	0.4117
13	4.0000	0.4463	34	3605.8500	0.4111
14	8.0167	0.4447	35	3846.2500	0.4106
15	10.0167	0.4444	36	4086.6333	0.4102
16	15.0167	0.4433	37	4327.0333	0.4097
17	30.0333	0.4414	38	4567.4333	0.4094
18	60.0833	0.4391	39	4807.8167	0.4089
19	120.1667	0.4361	40	5048.2167	0.4086
20	240.3333	0.4322	41	5288.6167	0.4083
21	480.7167	0.4274	42	5529.0000	0.4079

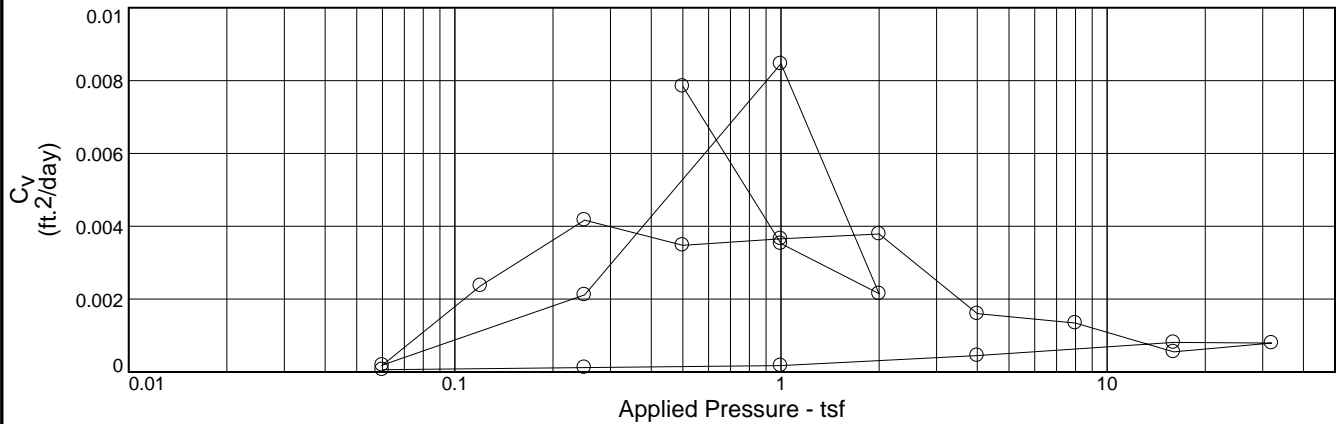


No.	Elapsed Time	Dial Reading
43	5769.4000	0.4077
44	6009.0667	0.4073
45	6249.0333	0.4071
46	6489.0167	0.4069
47	6512.0333	0.4069

Void Ratio = 9.371    Compression = 50.7%

$D_0 = 0.4429$      $D_{50} = 0.4251$      $D_{100} = 0.4073$      $C_v$  at 328.31 min. = 0.000 ft.<sup>2</sup>/day

# CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P <sub>c</sub> (tsf)	C <sub>c</sub>	Initial Void Ratio
Saturation	Moisture							
91.6 %	269.0 %	18.7	299	186	2.5	2869.4	1.65	7.345

<b>MATERIAL DESCRIPTION</b>		<b>USCS</b>	<b>AASHTO</b>
W, xso dk g & br HUM w/ fw cl lay, tr dec wd		PT	

<b>Project No.</b> 24762 <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE <b>Source of Sample:</b> B-5 <b>Depth:</b> 9 <b>Sample Number:</b> 5B	<b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL ENGINEERING 	<b>Remarks:</b>       <div style="text-align: right;"><b>Figure</b></div>
--	--	--

**Tested By:** BH \_\_\_\_\_ **Checked By:** RR \_\_\_\_\_



# Dial Reading vs. Time

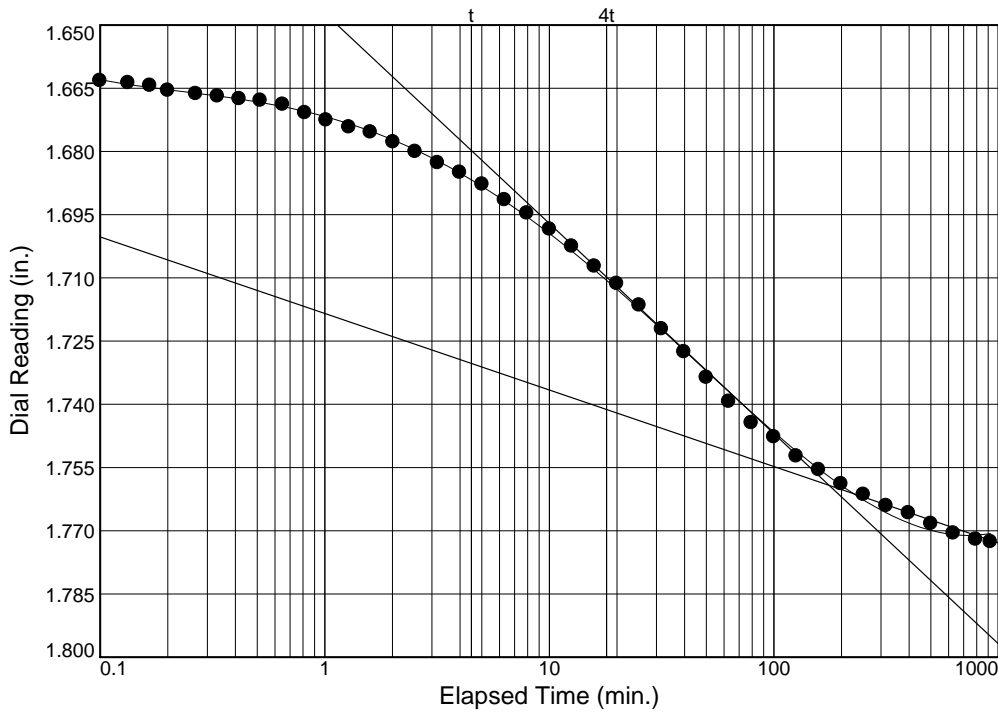
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-5

Depth: 9

Sample Number: 5B



Load No.= 4

Load= 0.50 tsf

$D_0 = 1.6629$

$D_{50} = 1.7111$

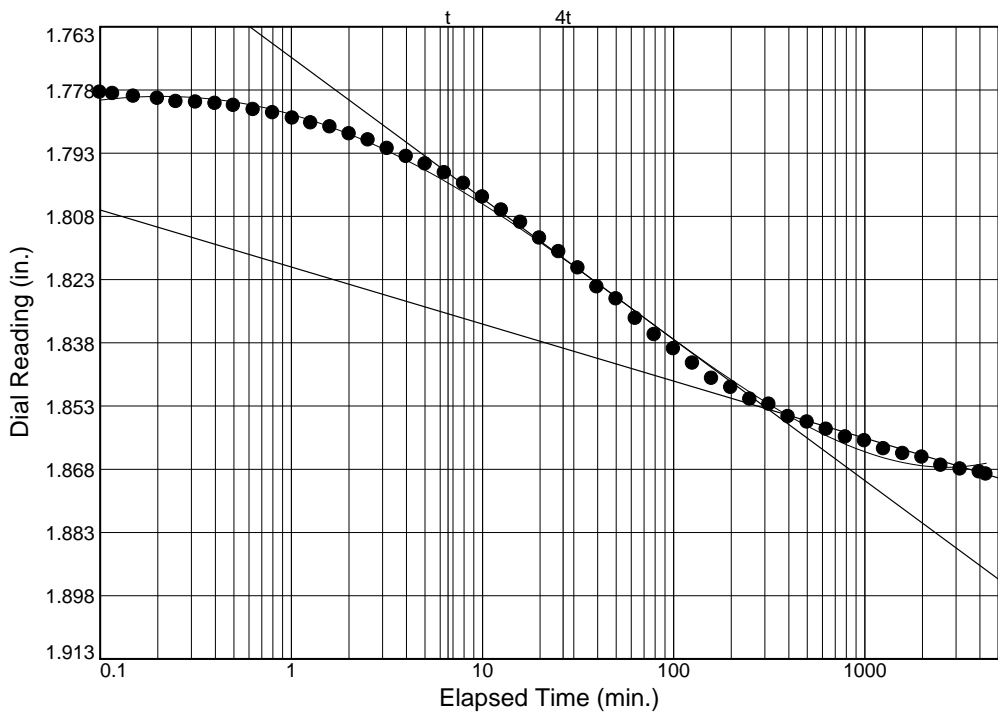
$D_{100} = 1.7592$

$T_{50} = 18.43 \text{ min.}$

$C_v @ T_{50}$

0.008 ft.<sup>2</sup>/day

$C_\alpha = 0.024$



Load No.= 5

Load= 1.00 tsf

$D_0 = 1.7822$

$D_{50} = 1.8179$

$D_{100} = 1.8537$

$T_{50} = 26.32 \text{ min.}$

$C_v @ T_{50}$

0.004 ft.<sup>2</sup>/day

$C_\alpha = 0.018$

Figure

# Dial Reading vs. Time

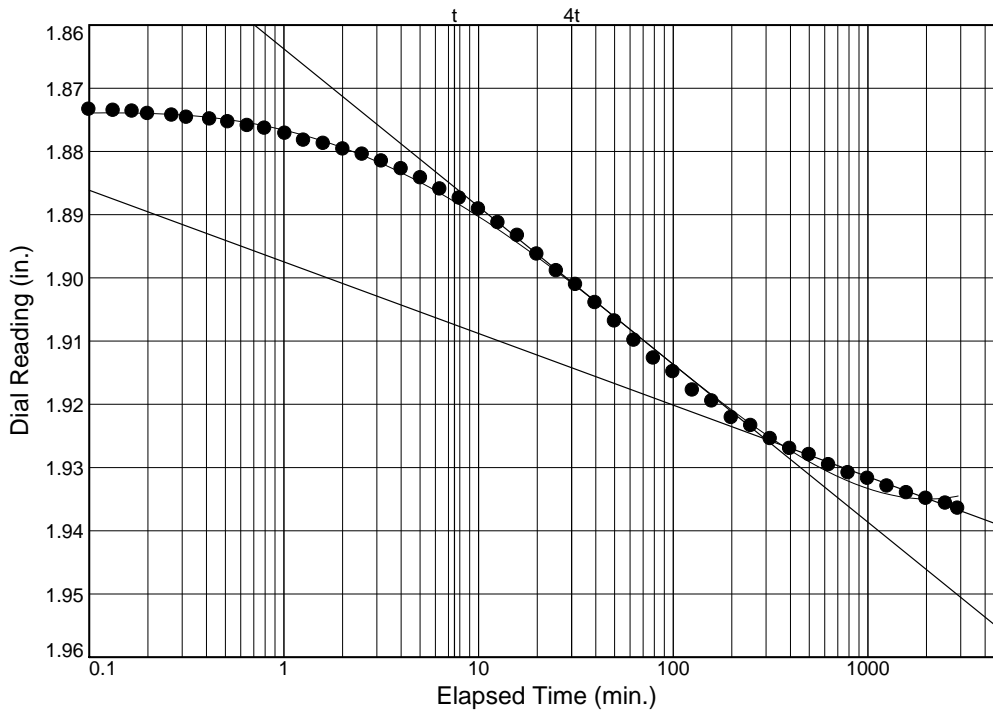
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-5

Depth: 9

Sample Number: 5B



Load No.= 6

Load= 2.00 tsf

$D_0 = 1.8751$

$D_{50} = 1.9003$

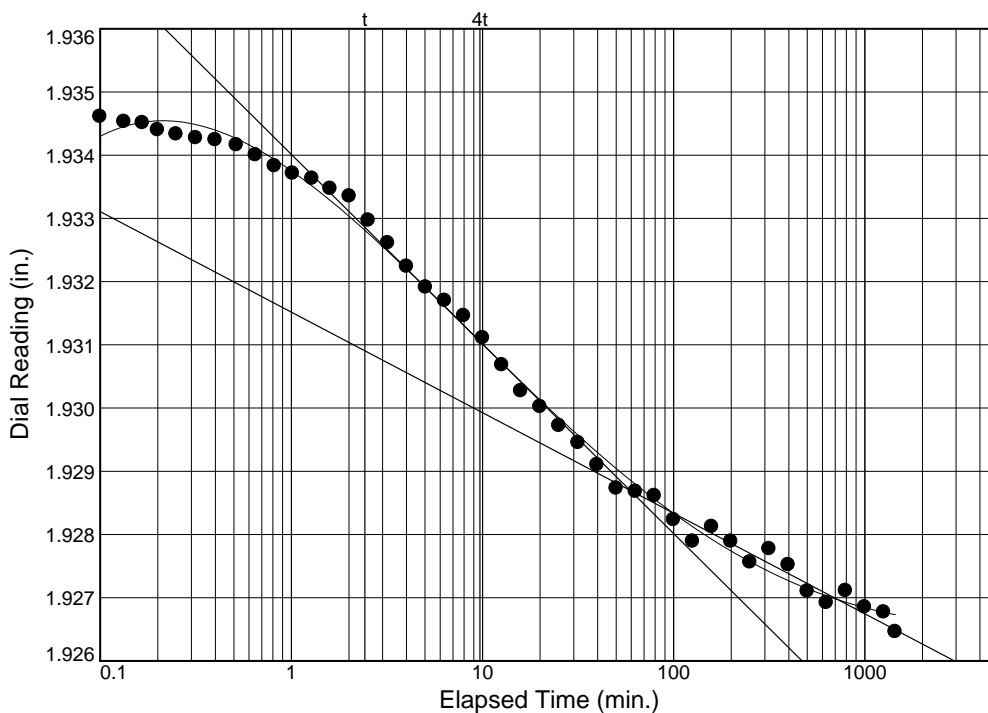
$D_{100} = 1.9255$

$T_{50} = 28.56$  min.

$C_v @ T_{50}$

0.002 ft.<sup>2</sup>/day

$C_\alpha = 0.015$



Load No.= 7

Load= 1.00 tsf

$D_0 = 1.9346$

$D_{50} = 1.9316$

$D_{100} = 1.9287$

$T_{50} = 6.20$  min.

$C_v @ T_{50}$

0.008 ft.<sup>2</sup>/day

# Dial Reading vs. Time

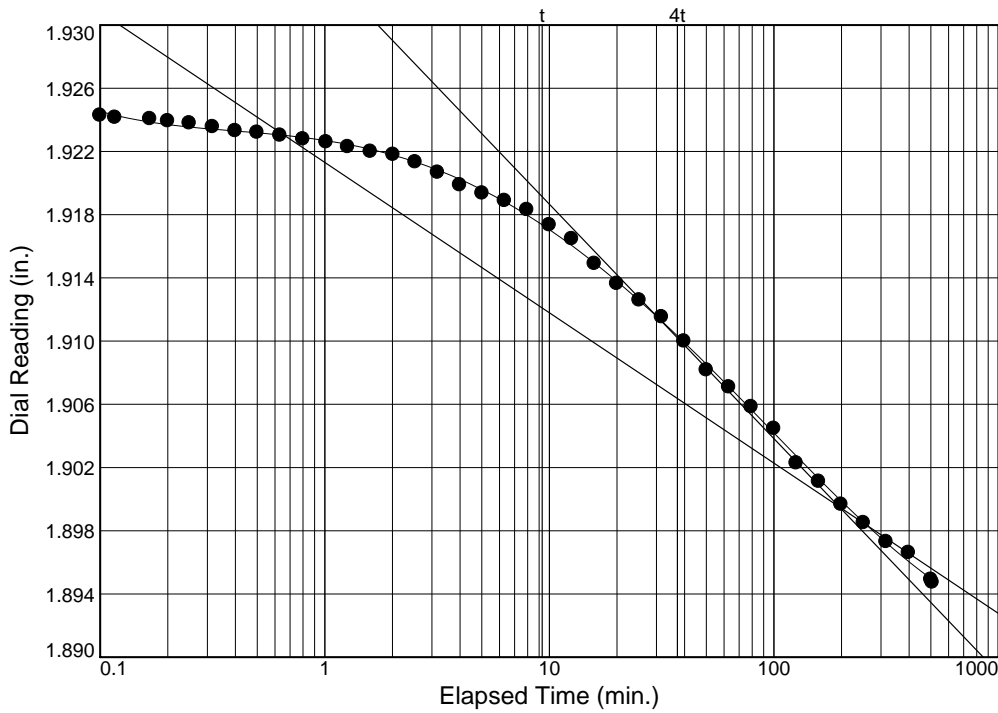
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-5

Depth: 9

Sample Number: 5B



Load No.= 8

Load= 0.25 tsf

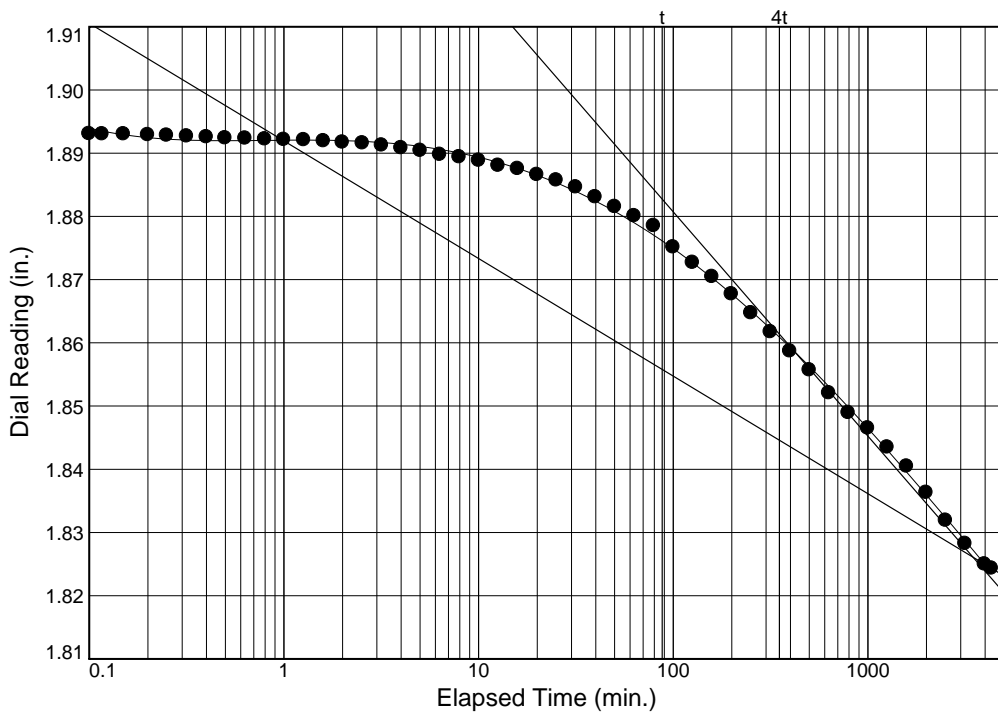
$D_0 = 1.9244$

$D_{50} = 1.9119$

$D_{100} = 1.8995$

$T_{50} = 28.08$  min.

$C_v @ T_{50}$   
0.002 ft.<sup>2</sup>/day



Load No.= 9

Load= 0.06 tsf

$D_0 = 1.8913$

$D_{50} = 1.8587$

$D_{100} = 1.8261$

$T_{50} = 416.46$  min.

$C_v @ T_{50}$   
0.000 ft.<sup>2</sup>/day

# Dial Reading vs. Time

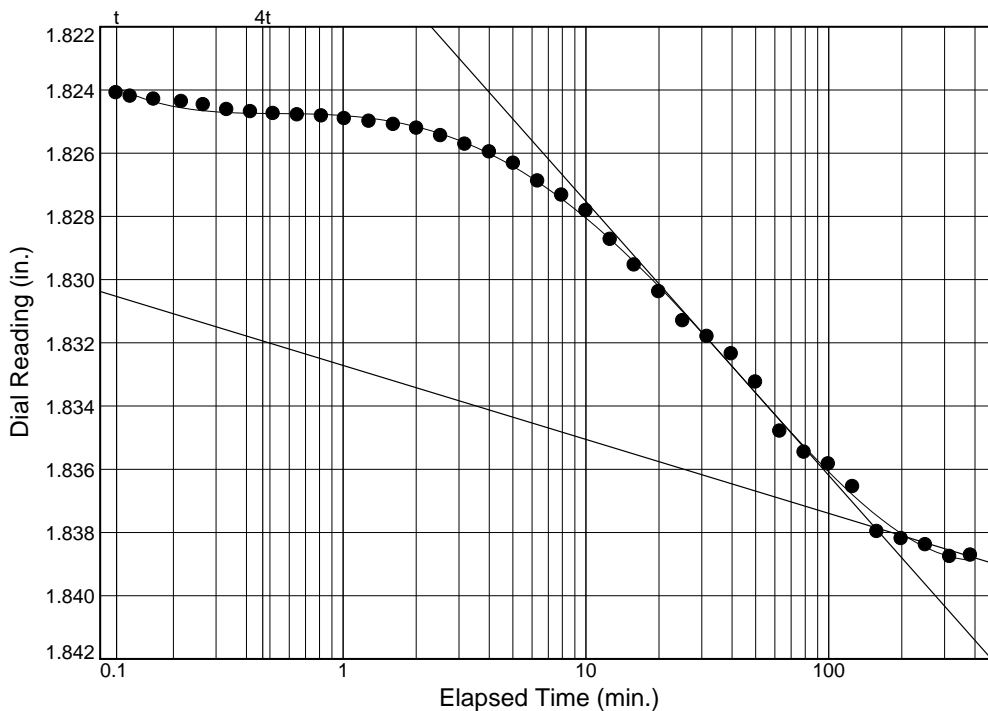
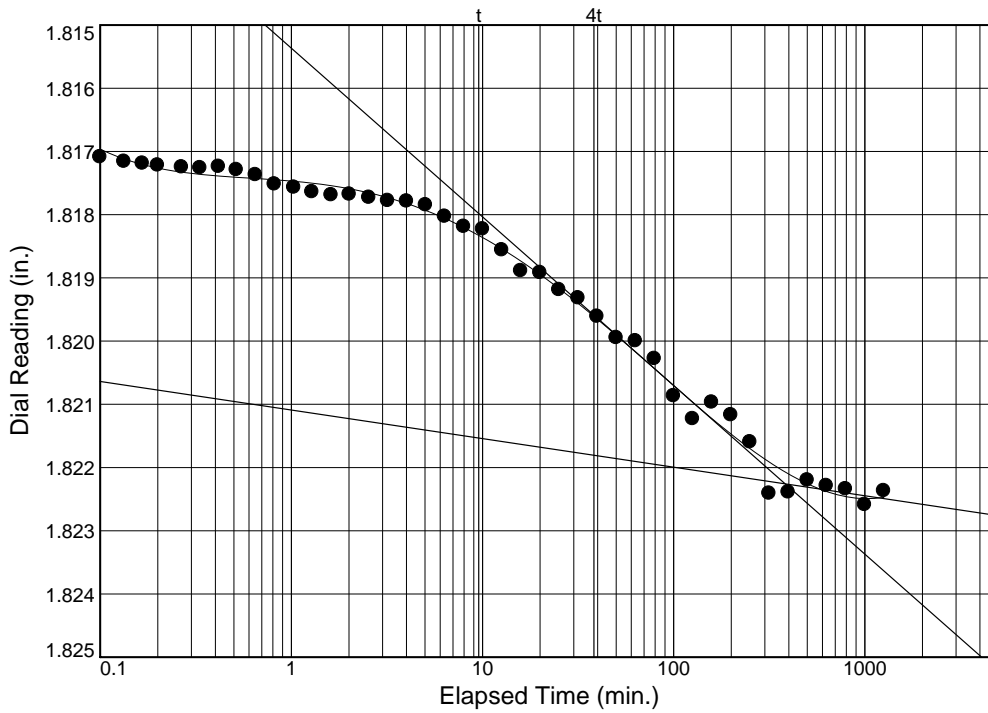
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-5

Depth: 9

Sample Number: 5B



Figure

# Dial Reading vs. Time

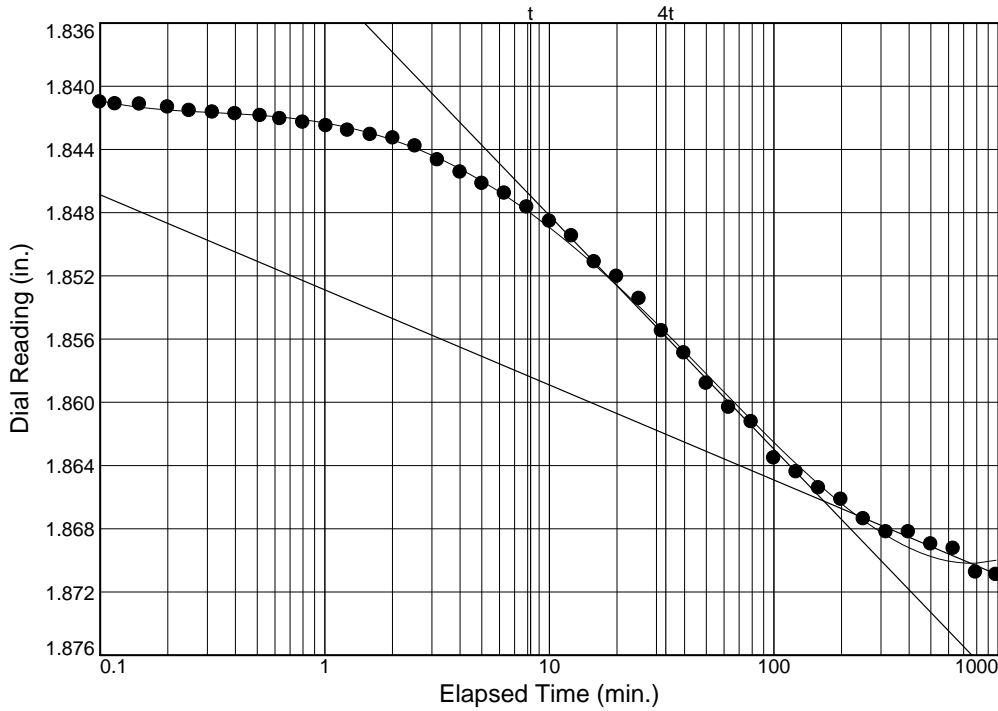
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-5

Depth: 9

Sample Number: 5B



Load No.= 12

Load= 0.50 tsf

$D_0 = 1.8405$

$D_{50} = 1.8534$

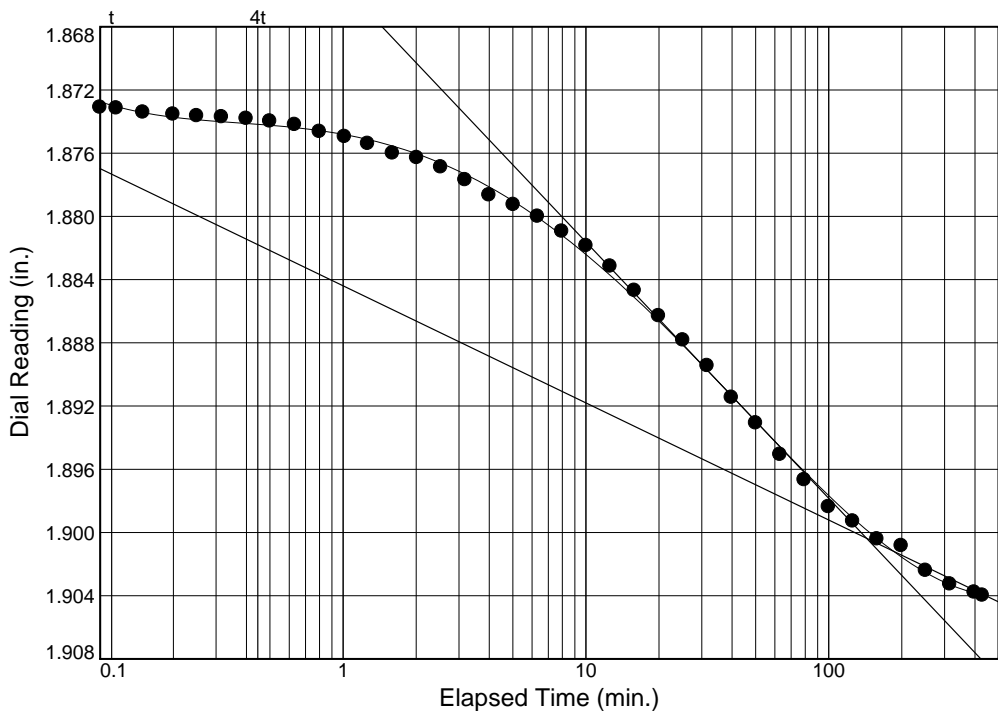
$D_{100} = 1.8663$

$T_{50} = 22.81 \text{ min.}$

$C_v @ T_{50}$

0.003 ft.<sup>2</sup>/day

$C_\alpha = 0.008$



Load No.= 13

Load= 1.00 tsf

$D_0 = 1.8718$

$D_{50} = 1.8861$

$D_{100} = 1.9004$

$T_{50} = 18.34 \text{ min.}$

$C_v @ T_{50}$

0.004 ft.<sup>2</sup>/day

$C_\alpha = 0.010$

Figure

# Dial Reading vs. Time

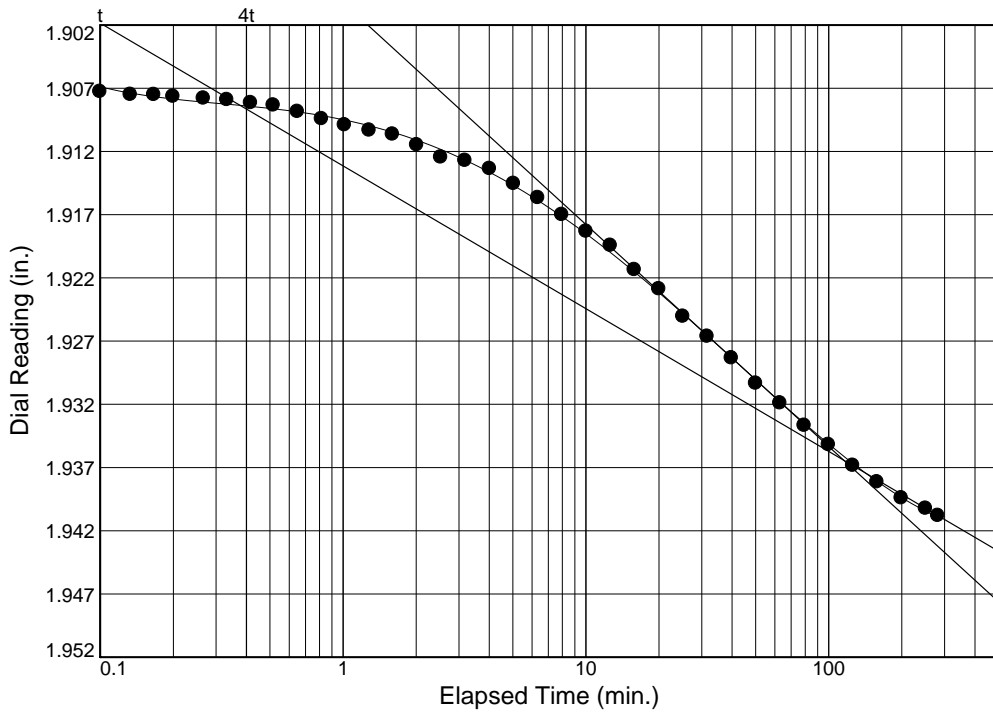
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-5

Depth: 9

Sample Number: 5B



Load No.= 14

Load= 2.00 tsf

$D_0 = 1.9054$

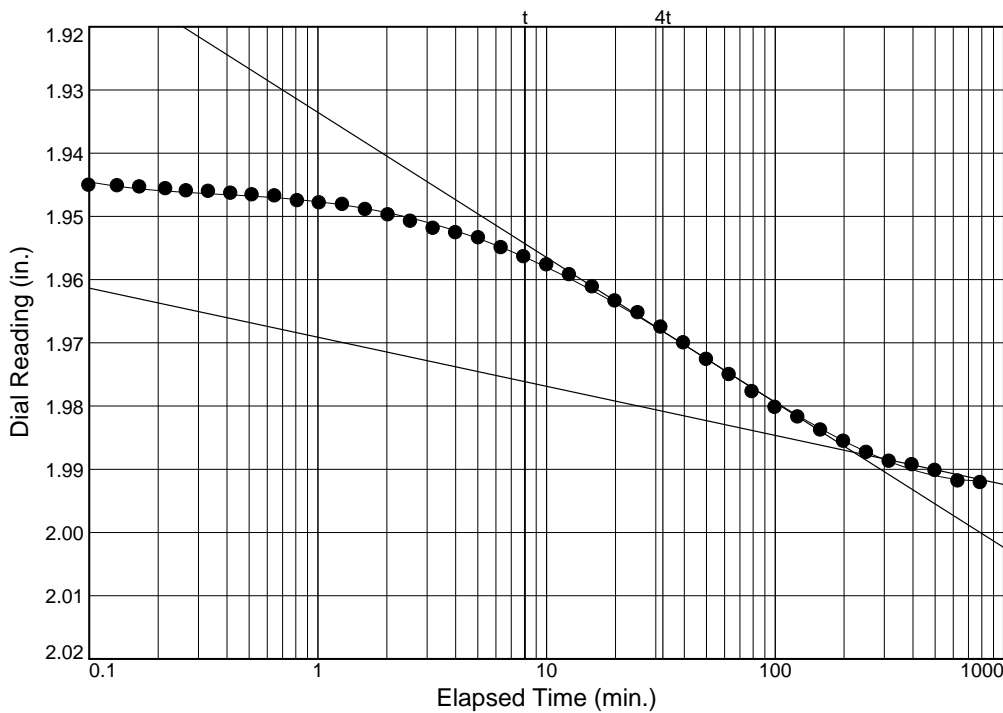
$D_{50} = 1.9209$

$D_{100} = 1.9364$

$T_{50} = 14.43 \text{ min.}$

$C_v @ T_{50}$   
0.004 ft.<sup>2</sup>/day

$C_\alpha = 0.015$



Load No.= 15

Load= 4.00 tsf

$D_0 = 1.9448$

$D_{50} = 1.9660$

$D_{100} = 1.9873$

$T_{50} = 25.62 \text{ min.}$

$C_v @ T_{50}$   
0.002 ft.<sup>2</sup>/day

$C_\alpha = 0.010$

# Dial Reading vs. Time

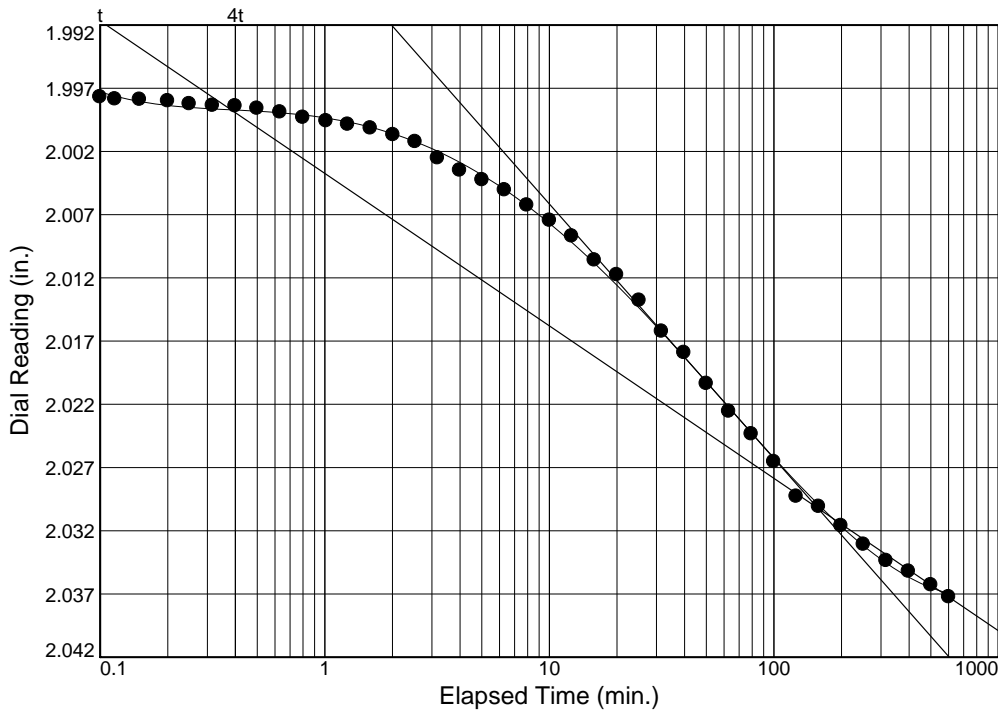
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-5

Depth: 9

Sample Number: 5B



Load No.= 16

Load= 8.00 tsf

$D_0 = 1.9958$

$D_{50} = 2.0130$

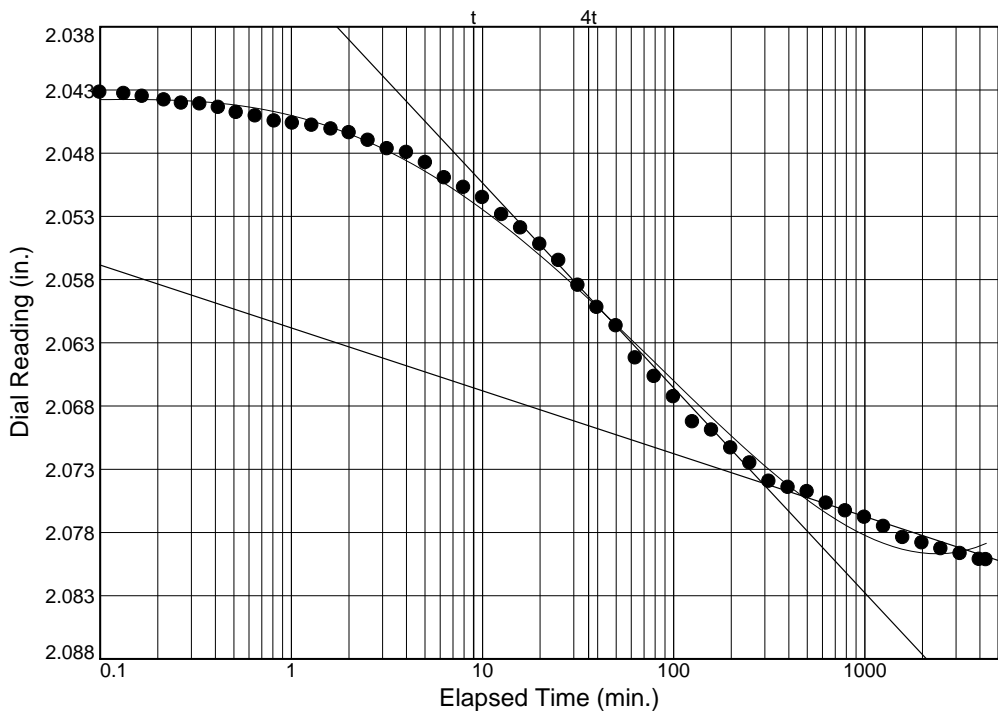
$D_{100} = 2.0302$

$T_{50} = 21.14$  min.

$C_v @ T_{50}$

0.001 ft.<sup>2</sup>/day

$C_\alpha = 0.016$



Load No.= 17

Load= 16.00 tsf

$D_0 = 2.0444$

$D_{50} = 2.0592$

$D_{100} = 2.0741$

$T_{50} = 34.09$  min.

$C_v @ T_{50}$

0.001 ft.<sup>2</sup>/day

$C_\alpha = 0.006$

# Dial Reading vs. Time

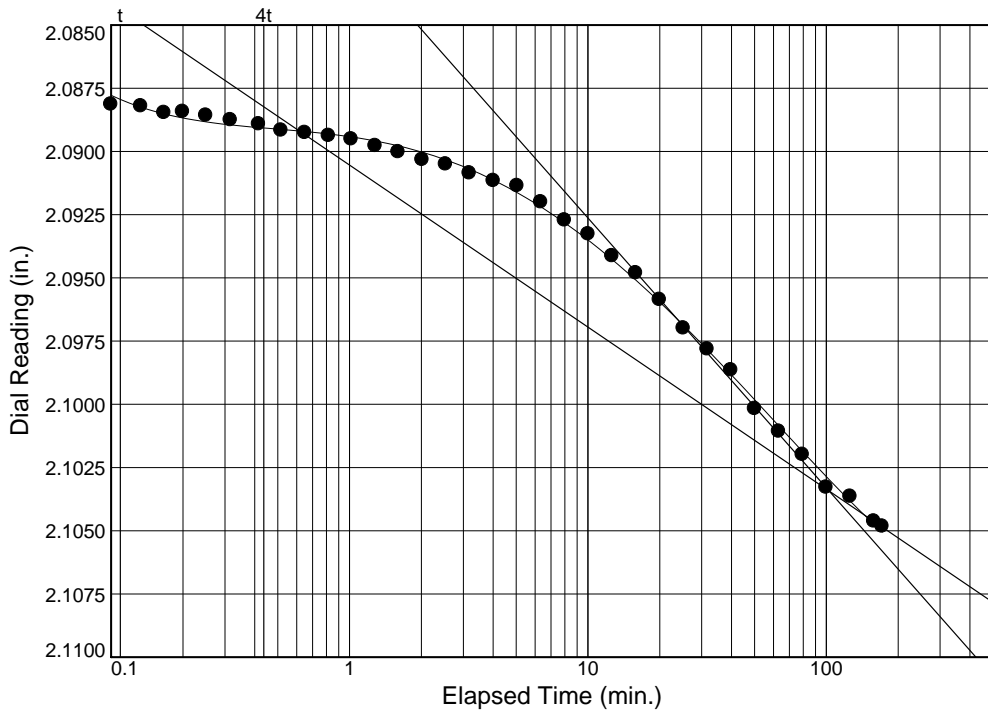
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-5

Depth: 9

Sample Number: 5B



Load No.= 18

Load= 32.00 tsf

$D_0 = 2.0868$

$D_{50} = 2.0951$

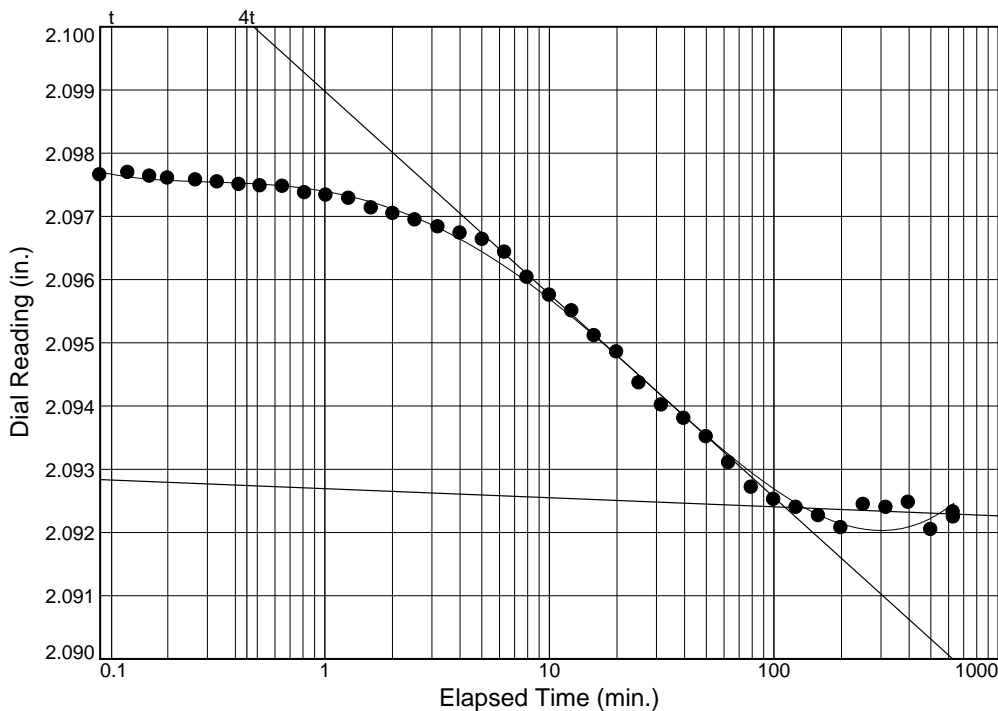
$D_{100} = 2.1034$

$T_{50} = 16.02 \text{ min.}$

$C_v @ T_{50}$

0.001 ft.<sup>2</sup>/day

$C_\alpha = 0.008$



Load No.= 19

Load= 16.00 tsf

$D_0 = 2.0978$

$D_{50} = 2.0951$

$D_{100} = 2.0924$

$T_{50} = 15.95 \text{ min.}$

$C_v @ T_{50}$

0.001 ft.<sup>2</sup>/day



# Dial Reading vs. Time

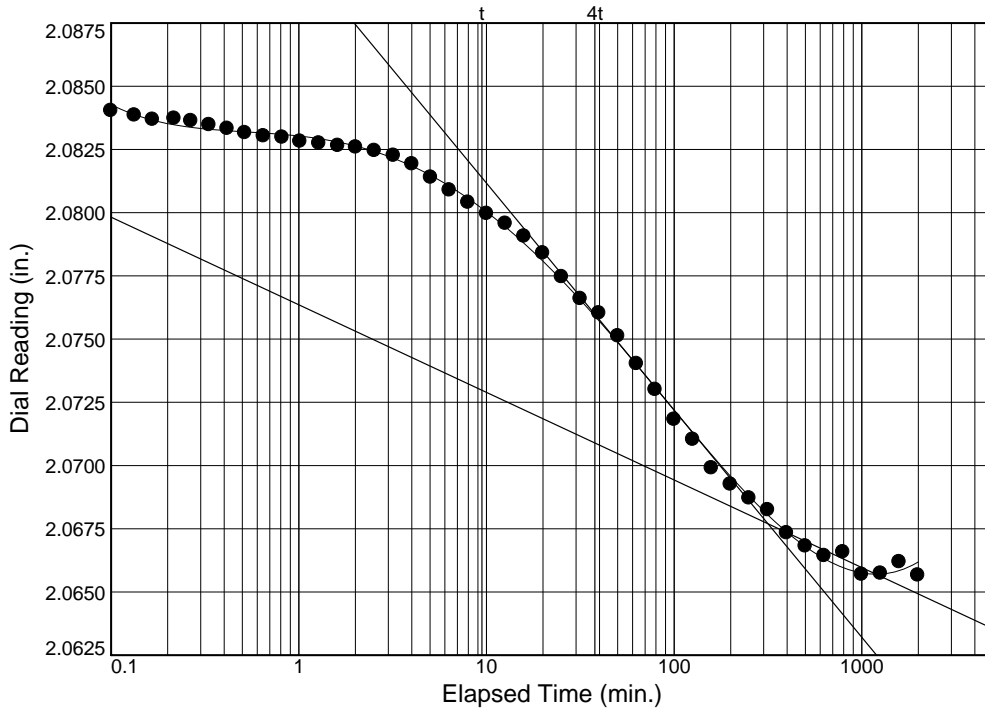
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-5

Depth: 9

Sample Number: 5B



Load No.= 20

Load= 4.00 tsf

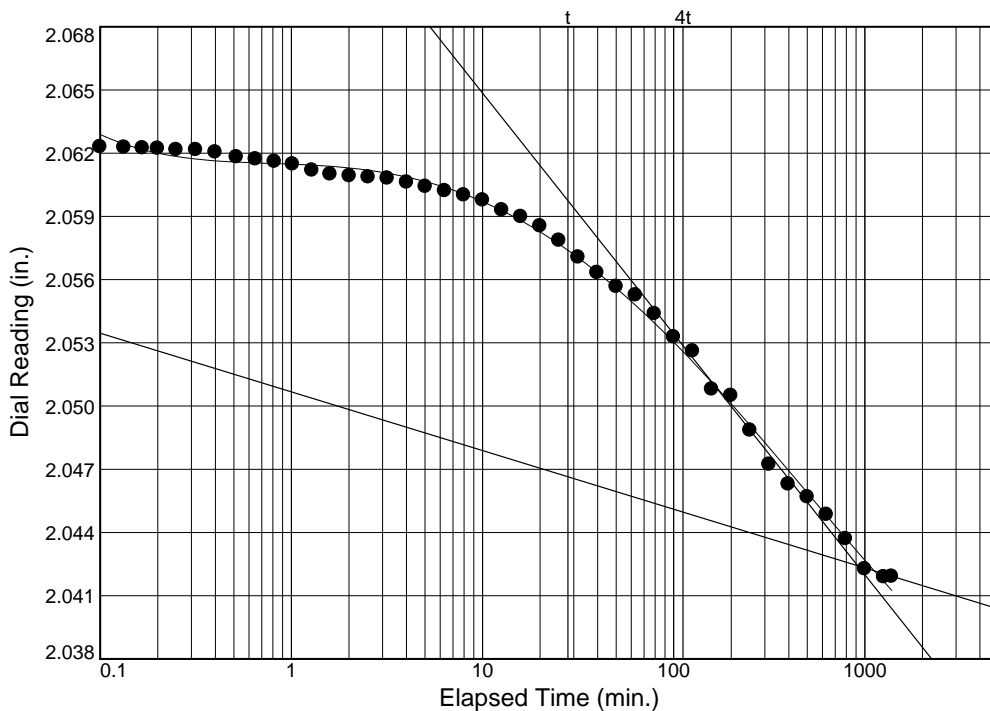
$D_0 = 2.0844$

$D_{50} = 2.0761$

$D_{100} = 2.0677$

$T_{50} = 36.16 \text{ min.}$

$C_v @ T_{50}$   
0.000 ft.<sup>2</sup>/day



Load No.= 21

Load= 1.00 tsf

$D_0 = 2.0622$

$D_{50} = 2.0523$

$D_{100} = 2.0424$

$T_{50} = 119.55 \text{ min.}$

$C_v @ T_{50}$   
0.000 ft.<sup>2</sup>/day

# Dial Reading vs. Time

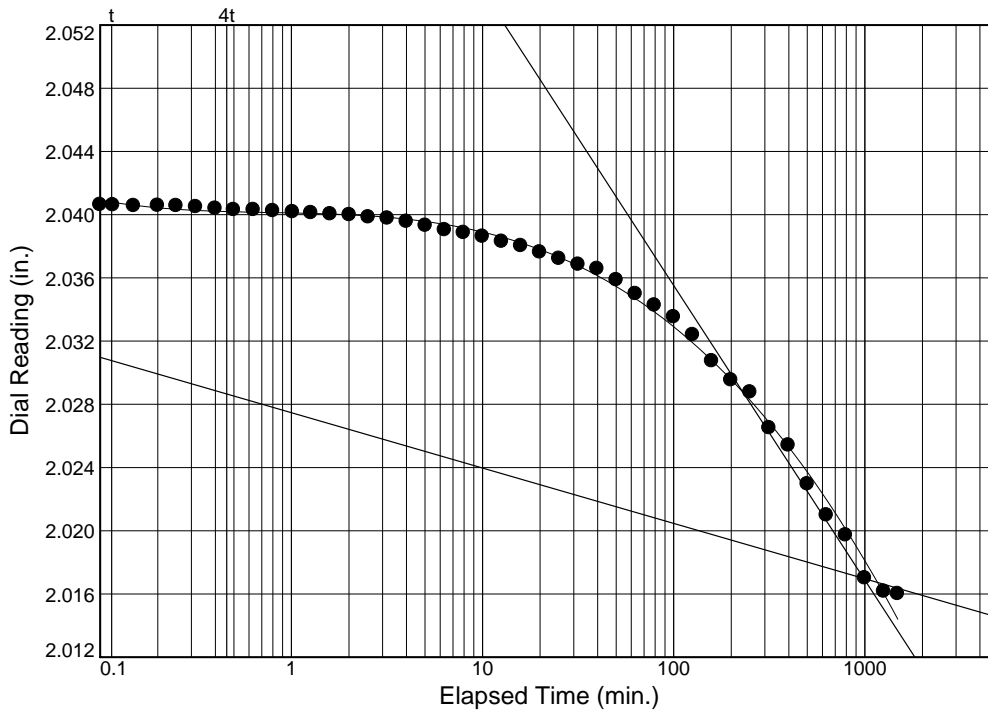
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-5

Depth: 9

Sample Number: 5B



Load No.= 22

Load= 0.25 tsf

$D_0 = 2.0414$

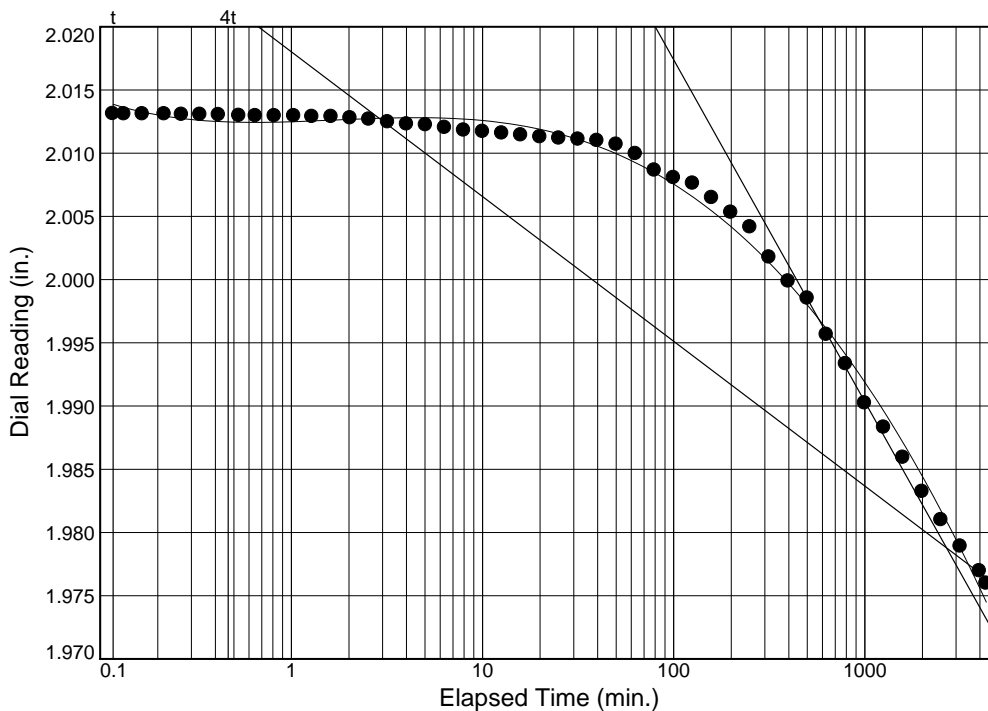
$D_{50} = 2.0292$

$D_{100} = 2.0170$

$T_{50} = 213.62 \text{ min.}$

$C_v @ T_{50}$

0.000 ft.<sup>2</sup>/day



Load No.= 23

Load= 0.06 tsf

$D_0 = 2.0153$

$D_{50} = 1.9970$

$D_{100} = 1.9788$

$T_{50} = 563.91 \text{ min.}$

$C_v @ T_{50}$

0.000 ft.<sup>2</sup>/day

**CONSOLIDATION TEST DATA**

8/29/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST.  
BERNARD PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** B-5

**Depth:** 9

**Sample Number:** 5B

**Material Description:** W, xso dk g & br HUM w/ fw cl lay, tr dec wd

**Liquid Limit:** 299

**Plasticity Index:** 186

**USCS:** PT

**Tested by:** BH

**Checked by:** RR

**Test Specimen Data**

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	43.69 g.	Spec. Gr. =	2.5	Wet w+t =	55.12 g.
Dry w+t =	11.84 g.	Est. Ht. Solids =	0.092 in.	Dry w+t =	43.59 g.
Tare Wt. =	0.00 g.	Init. V.R. =	7.345	Tare Wt. =	31.75 g.
Moisture =	269.0 %	Init. Sat. =	91.6 %	Moisture =	97.4 %
UNIT WEIGHT		TEST START		Dry Wt. = 11.84* g.	
Height =	0.770 in.	Height =	0.770 in.		
Diameter =	1.997 in.	Diameter =	1.997 in.		
Weight =	43.69 g.				
Dry Dens. =	18.7 pcf	* Final dry weight used as mineral solids weight			

**End-Of-Load Summary**

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C <sub>v</sub> (ft.2/day)	C <sub>α</sub>	Void Ratio	% Strain
start	1.48702	0.00000			7.345	
0.06	1.50541	0.01839		0.008	7.146	2.4 Compr.
0.12	1.56448	0.07746		0.015	6.506	10.1 Compr.
0.25	1.65567	0.16865		0.032	5.517	21.9 Compr.
0.50	1.77262	0.28560	0.008	0.024	4.250	37.1 Compr.
1.00	1.86920	0.38218	0.004	0.018	3.203	49.6 Compr.
2.00	1.93647	0.44945	0.002	0.015	2.474	58.4 Compr.
1.00	1.92646	0.43944	0.008		2.582	57.1 Compr.
0.25	1.89473	0.40771	0.002		2.926	52.9 Compr.
0.06	1.82432	0.33730	0.000		3.689	43.8 Compr.
0.12	1.82237	0.33535	0.002	0.001	3.711	43.6 Compr.
0.25	1.83873	0.35171	0.004	0.003	3.533	45.7 Compr.
0.50	1.87091	0.38389	0.003	0.008	3.185	49.9 Compr.
1.00	1.90399	0.41697	0.004	0.010	2.826	54.2 Compr.
2.00	1.94081	0.45379	0.004	0.015	2.427	58.9 Compr.
4.00	1.99216	0.50514	0.002	0.010	1.870	65.6 Compr.
8.00	2.03725	0.55023	0.001	0.016	1.382	71.5 Compr.
16.00	2.08018	0.59316	0.001	0.006	0.917	77.0 Compr.

**Eustis Engineering L.L.C.**

**End-Of-Load Summary (Continued)**

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	$C_v$ (ft.2/day)	$C_\alpha$	Void Ratio	% Strain
32.00	2.10483	0.61781	0.001	0.008	0.649	80.2 Compr.
16.00	2.09224	0.60522	0.001		0.786	78.6 Compr.
4.00	2.06566	0.57864	0.000		1.074	75.1 Compr.
1.00	2.04191	0.55489	0.000		1.331	72.1 Compr.
0.25	2.01600	0.52898	0.000		1.612	68.7 Compr.
0.06	1.97596	0.48894	0.000		2.046	63.5 Compr.

**Compression index ( $C_c$ ), tsf = 1.65      Preconsolidation pressure ( $P_p$ ), tsf = 2869.4**

**Recompression index ( $C_r$ ) = 0.86**

**Pressure: 0.06 tsf**

**TEST READINGS**

**Load No. 1**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.48702	11	0.7333	1.48781	21	7.9000	1.49738
2	0.0333	1.48705	12	0.9500	1.48809	22	9.9667	1.49819
3	0.0500	1.48706	13	1.2000	1.48835	23	12.5500	1.50014
4	0.0833	1.48707	14	1.5333	1.48881	24	15.8167	1.50123
5	0.1333	1.48703	15	1.9500	1.48925	25	19.9167	1.50253
6	0.1833	1.48705	16	2.4667	1.48981	26	25.0833	1.50293
7	0.2500	1.48706	17	3.1167	1.49052	27	31.6000	1.50371
8	0.3333	1.48716	18	3.9333	1.49128	28	39.7833	1.50460
9	0.4333	1.48714	19	4.9667	1.49246	29	50.1000	1.50494
10	0.5667	1.48747	20	6.2667	1.49440	30	60.2167	1.50541

**Void Ratio = 7.146      Compression = 2.4%**

**Pressure: 0.12 tsf**

**TEST READINGS**

**Load No. 2**

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0833	1.50565	15	2.1000	1.52204	29	50.2500	1.54844
2	0.1833	1.50632	16	2.6333	1.52286	30	63.2333	1.55017
3	0.2167	1.50646	17	3.2833	1.52403	31	79.5667	1.55232
4	0.2500	1.50698	18	4.1000	1.52671	32	100.1333	1.55294
5	0.3000	1.50787	19	5.1333	1.52924	33	126.0333	1.55315
6	0.3500	1.50835	20	6.4333	1.53276	34	158.6333	1.55371
7	0.4167	1.50898	21	8.0667	1.53517	35	199.6667	1.55580
8	0.5000	1.50967	22	10.1167	1.53738	36	251.3333	1.55641
9	0.6000	1.51115	23	12.7167	1.54039	37	316.3833	1.55718
10	0.7333	1.51399	24	15.9833	1.54214	38	398.2500	1.55747
11	0.9000	1.51616	25	20.0833	1.54342	39	501.3500	1.55795
12	1.1000	1.51850	26	25.2500	1.54486	40	631.1167	1.55929
13	1.3667	1.52094	27	31.7500	1.54575	41	794.5000	1.56192
14	1.7000	1.52135	28	39.9500	1.54719	42	1000.1667	1.56448

**Void Ratio = 6.506      Compression = 10.1%**

Pressure: 0.25 tsf

TEST READINGS

Load No. 3

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	1.56448	14	1.7167	1.58716	27	31.7833	1.62732
2	0.2167	1.56956	15	2.1333	1.58953	28	39.9833	1.63111
3	0.2500	1.56959	16	2.6500	1.59181	29	50.2833	1.63322
4	0.2833	1.56965	17	3.3000	1.59424	30	63.2667	1.63619
5	0.3167	1.56975	18	4.1333	1.59716	31	79.6000	1.63735
6	0.3667	1.56989	19	5.1667	1.60037	32	100.1667	1.63986
7	0.4500	1.57001	20	6.4667	1.60338	33	126.0667	1.64173
8	0.5167	1.57032	21	8.1000	1.60629	34	158.6667	1.64344
9	0.6333	1.57071	22	10.1500	1.60892	35	199.7000	1.64660
10	0.7500	1.57258	23	12.7500	1.61247	36	251.3667	1.65075
11	0.9167	1.57822	24	16.0000	1.61678	37	316.4167	1.65269
12	1.1333	1.58136	25	20.1167	1.62079	38	398.3000	1.65441
13	1.3833	1.58422	26	25.2833	1.62398	39	436.5167	1.65567

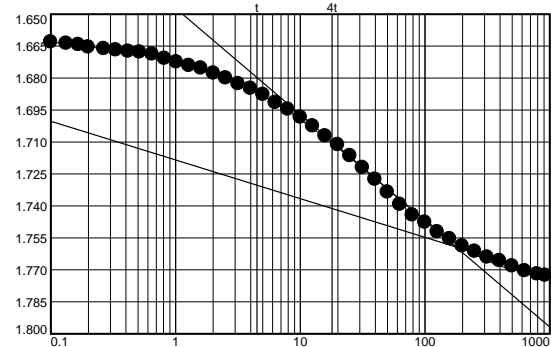
Void Ratio = 5.517 Compression = 21.9%

Pressure: 0.50 tsf

TEST READINGS

Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.65811	22	10.1333	1.69848
2	0.2000	1.66321	23	12.7167	1.70254
3	0.2333	1.66373	24	15.9833	1.70728
4	0.2667	1.66440	25	20.1000	1.71138
5	0.3000	1.66555	26	25.2667	1.71654
6	0.3667	1.66632	27	31.7667	1.72213
7	0.4333	1.66691	28	39.9500	1.72759
8	0.5167	1.66754	29	50.2667	1.73368
9	0.6167	1.66792	30	63.2333	1.73937
10	0.7500	1.66885	31	79.5833	1.74441
11	0.9167	1.67086	32	100.1500	1.74777
12	1.1167	1.67260	33	126.0500	1.75230
13	1.3833	1.67423	34	158.6500	1.75557
14	1.7000	1.67547	35	199.6833	1.75888
15	2.1167	1.67780	36	251.3500	1.76146
16	2.6333	1.68009	37	316.3833	1.76411
17	3.2833	1.68275	38	398.2667	1.76582
18	4.1000	1.68498	39	501.3500	1.76831
19	5.1333	1.68782	40	631.1333	1.77060
20	6.4333	1.69154	41	794.5000	1.77209
21	8.0667	1.69469	42	921.4167	1.77262



Void Ratio = 4.250 Compression = 37.1%

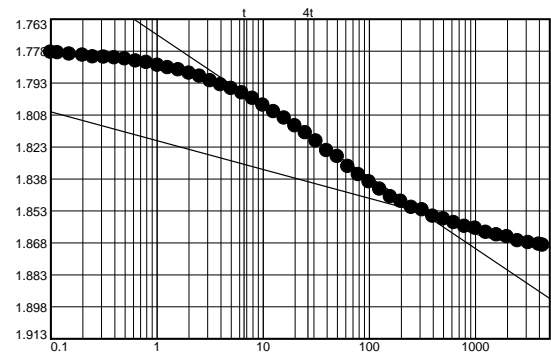
$D_0 = 1.6629$   $D_{50} = 1.7111$   $D_{100} = 1.7592$   $C_v$  at 18.43 min. = 0.008 ft.<sup>2</sup>/day  $C_\alpha = 0.024$

Pressure: 1.00 tsf

TEST READINGS

Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	1.77703	26	25.2833	1.81645
2	0.2167	1.77862	27	31.7833	1.82032
3	0.2333	1.77891	28	39.9667	1.82478
4	0.2667	1.77954	29	50.2833	1.82763
5	0.3167	1.78005	30	63.2667	1.83227
6	0.3667	1.78083	31	79.6000	1.83614
7	0.4333	1.78096	32	100.1667	1.83946
8	0.5167	1.78125	33	126.0667	1.84291
9	0.6167	1.78174	34	158.6667	1.84649
10	0.7500	1.78272	35	199.7000	1.84864
11	0.9167	1.78346	36	251.3667	1.85143
12	1.1333	1.78475	37	316.4000	1.85261
13	1.3833	1.78586	38	398.2833	1.85558
14	1.7167	1.78686	39	501.3667	1.85685
15	2.1333	1.78847	40	631.1500	1.85860
16	2.6500	1.78995	41	794.5333	1.86040
17	3.3000	1.79198	42	1000.2000	1.86130
18	4.1167	1.79387	43	1259.1333	1.86319
19	5.1500	1.79563	44	1585.1000	1.86434
20	6.4500	1.79773	45	1995.4833	1.86520
21	8.1000	1.80027	46	2512.1167	1.86710
22	10.1500	1.80348	47	3162.5167	1.86800
23	12.7333	1.80658	48	3981.3167	1.86872
24	16.0000	1.80951	49	4320.1167	1.86920
25	20.1000	1.81324			



Void Ratio = 3.203    Compression = 49.6%

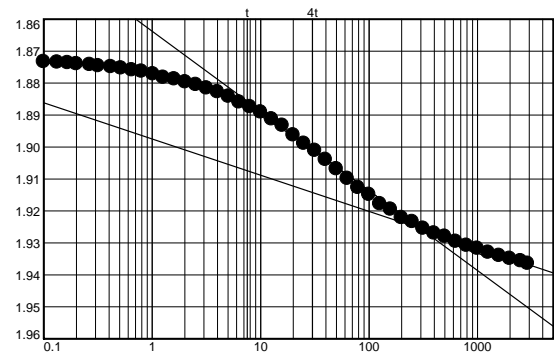
$D_0 = 1.7822$      $D_{50} = 1.8179$      $D_{100} = 1.8537$      $C_v$  at 26.32 min. = 0.004 ft.<sup>2</sup>/day     $C_\alpha = 0.018$

Pressure: 2.00 tsf

TEST READINGS

Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.87176	25	20.1000	1.89630
2	0.2000	1.87338	26	25.2667	1.89892
3	0.2333	1.87354	27	31.7667	1.90110
4	0.2667	1.87366	28	39.9500	1.90397
5	0.3000	1.87405	29	50.2667	1.90687
6	0.3667	1.87429	30	63.2500	1.90992
7	0.4167	1.87464	31	79.5833	1.91272
8	0.5167	1.87492	32	100.1500	1.91490
9	0.6167	1.87536	33	126.0500	1.91779
10	0.7500	1.87595	34	158.6500	1.91953
11	0.9000	1.87636	35	199.6833	1.92213
12	1.1167	1.87719	36	251.3500	1.92339
13	1.3667	1.87828	37	316.4000	1.92546
14	1.7000	1.87878	38	398.2833	1.92703
15	2.1167	1.87967	39	501.3500	1.92800
16	2.6333	1.88049	40	631.1333	1.92962
17	3.2833	1.88157	41	794.5000	1.93086
18	4.1167	1.88279	42	1000.1833	1.93177
19	5.1500	1.88421	43	1259.1167	1.93298
20	6.4500	1.88599	44	1585.0833	1.93404
21	8.0833	1.88743	45	1995.4667	1.93494
22	10.1333	1.88914	46	2512.1000	1.93568
23	12.7333	1.89129	47	2909.5333	1.93647
24	15.9833	1.89332			



Void Ratio = 2.474 Compression = 58.4%

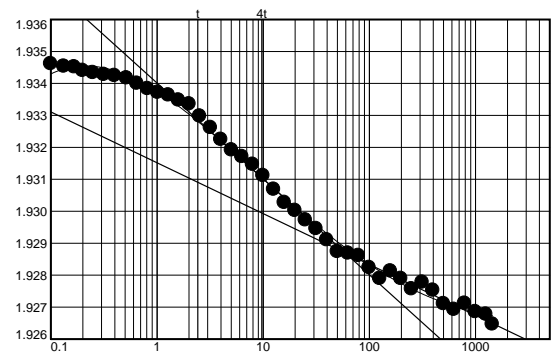
$D_0 = 1.8751$   $D_{50} = 1.9003$   $D_{100} = 1.9255$   $C_v$  at 28.56 min. = 0.002 ft.<sup>2</sup>/day  $C_\alpha = 0.015$

Pressure: 1.00 tsf

TEST READINGS

Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.93493	11	0.9167	1.93383
2	0.2000	1.93461	12	1.1167	1.93371
3	0.2333	1.93453	13	1.3833	1.93363
4	0.2667	1.93451	14	1.7000	1.93347
5	0.3000	1.93440	15	2.1167	1.93335
6	0.3500	1.93433	16	2.6333	1.93297
7	0.4167	1.93427	17	3.3000	1.93261
8	0.5000	1.93424	18	4.1167	1.93224
9	0.6167	1.93416	19	5.1500	1.93191
10	0.7500	1.93400	20	6.4500	1.93170



Pressure: 1.00 tsf

TEST READINGS (continued)

Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
21	8.0833	1.93146	31	79.5833	1.92861	41	794.5167	1.92711
22	10.1333	1.93111	32	100.1500	1.92823	42	1000.1833	1.92685
23	12.7333	1.93068	33	126.0500	1.92789	43	1259.1167	1.92677
24	15.9833	1.93027	34	158.6500	1.92812	44	1444.5333	1.92646
25	20.1000	1.93002	35	199.6833	1.92789			
26	25.2667	1.92972	36	251.3500	1.92756			
27	31.7667	1.92945	37	316.4000	1.92777			
28	39.9667	1.92910	38	398.2833	1.92752			
29	50.2667	1.92873	39	501.3667	1.92710			
30	63.2500	1.92868	40	631.1333	1.92692			

Void Ratio = 2.582 Compression = 57.1%

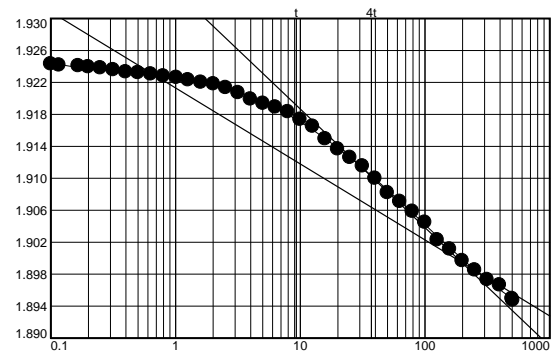
D<sub>0</sub> = 1.9346 D<sub>50</sub> = 1.9316 D<sub>100</sub> = 1.9287 C<sub>v</sub> at 6.20 min. = 0.008 ft.<sup>2</sup>/day

Pressure: 0.25 tsf

TEST READINGS

Load No. 8

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	1.92490	21	8.0833	1.91830
2	0.2167	1.92428	22	10.1333	1.91734
3	0.2333	1.92414	23	12.7333	1.91647
4	0.2833	1.92406	24	16.0000	1.91490
5	0.3167	1.92392	25	20.1000	1.91363
6	0.3667	1.92378	26	25.2667	1.91258
7	0.4333	1.92355	27	31.7667	1.91152
8	0.5167	1.92330	28	39.9667	1.90998
9	0.6167	1.92319	29	50.2667	1.90816
10	0.7500	1.92301	30	63.2500	1.90708
11	0.9167	1.92277	31	79.5833	1.90584
12	1.1333	1.92259	32	100.1500	1.90446
13	1.3833	1.92229	33	126.0500	1.90227
14	1.7167	1.92199	34	158.6500	1.90111
15	2.1333	1.92180	35	199.6833	1.89966
16	2.6500	1.92133	36	251.3500	1.89850
17	3.3000	1.92067	37	316.4000	1.89729
18	4.1167	1.91987	38	398.2833	1.89661
19	5.1500	1.91935	39	501.3667	1.89491
20	6.4500	1.91887	40	507.8500	1.89473



Void Ratio = 2.926 Compression = 52.9%

D<sub>0</sub> = 1.9244 D<sub>50</sub> = 1.9119 D<sub>100</sub> = 1.8995 C<sub>v</sub> at 28.08 min. = 0.002 ft.<sup>2</sup>/day

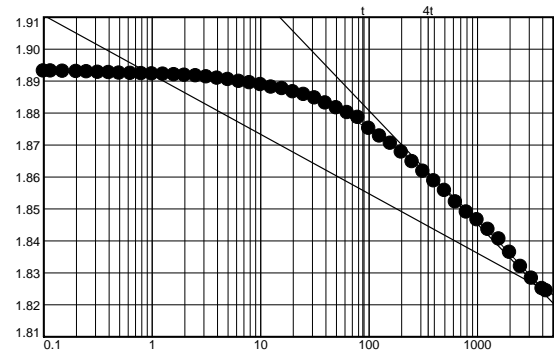


Pressure: 0.06 tsf

TEST READINGS

Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	1.89339	26	25.2667	1.88573
2	0.2167	1.89306	27	31.7667	1.88461
3	0.2333	1.89303	28	39.9667	1.88305
4	0.2667	1.89301	29	50.2667	1.88152
5	0.3167	1.89287	30	63.2500	1.88008
6	0.3667	1.89280	31	79.5833	1.87852
7	0.4333	1.89267	32	100.1500	1.87513
8	0.5167	1.89256	33	126.0500	1.87267
9	0.6167	1.89237	34	158.6500	1.87045
10	0.7500	1.89232	35	199.6833	1.86769
11	0.9167	1.89220	36	251.3500	1.86470
12	1.1167	1.89212	37	316.4000	1.86170
13	1.3833	1.89207	38	398.2667	1.85866
14	1.7167	1.89193	39	501.3667	1.85568
15	2.1167	1.89171	40	631.1333	1.85207
16	2.6500	1.89157	41	794.5000	1.84893
17	3.3000	1.89123	42	1000.1833	1.84647
18	4.1167	1.89083	43	1259.1167	1.84347
19	5.1500	1.89039	44	1585.1000	1.84047
20	6.4500	1.88978	45	1995.4667	1.83630
21	8.0833	1.88938	46	2512.1000	1.83190
22	10.1333	1.88884	47	3162.5000	1.82823
23	12.7333	1.88802	48	3981.3000	1.82498
24	16.0000	1.88753	49	4320.2500	1.82432
25	20.1000	1.88658			



Void Ratio = 3.689    Compression = 43.8%

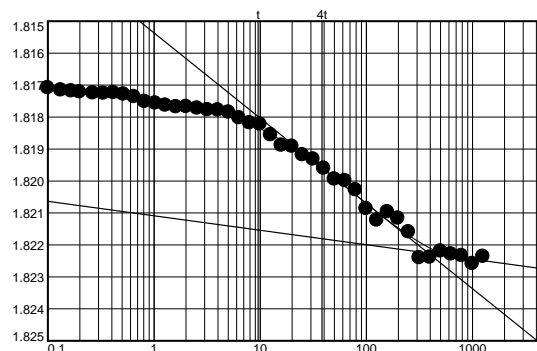
D<sub>0</sub> = 1.8913    D<sub>50</sub> = 1.8587    D<sub>100</sub> = 1.8261    C<sub>v</sub> at 416.46 min. = 0.000 ft.<sup>2</sup>/day

Pressure: 0.12 tsf

TEST READINGS

Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.81698	23	12.7333	1.81856
2	0.2000	1.81709	24	15.9833	1.81889
3	0.2333	1.81716	25	20.1000	1.81892
4	0.2667	1.81719	26	25.2667	1.81919
5	0.3000	1.81722	27	31.7667	1.81932
6	0.3667	1.81725	28	39.9500	1.81961
7	0.4333	1.81726	29	50.2667	1.81995
8	0.5167	1.81724	30	63.2500	1.82000
9	0.6167	1.81729	31	79.5833	1.82028
10	0.7500	1.81737	32	100.1500	1.82087
11	0.9167	1.81752	33	126.0500	1.82123
12	1.1333	1.81757	34	158.6500	1.82097
13	1.3833	1.81764	35	199.6833	1.82117
14	1.7167	1.81769	36	251.3500	1.82160
15	2.1167	1.81768	37	316.3833	1.82241
16	2.6500	1.81773	38	398.2667	1.82239
17	3.3000	1.81778	39	501.3500	1.82220
18	4.1167	1.81779	40	631.1333	1.82229
19	5.1500	1.81785	41	794.5000	1.82234
20	6.4500	1.81803	42	1000.1833	1.82259
21	8.0833	1.81819	43	1259.1167	1.82237
22	10.1333	1.81823			



Void Ratio = 3.711 Compression = 43.6%

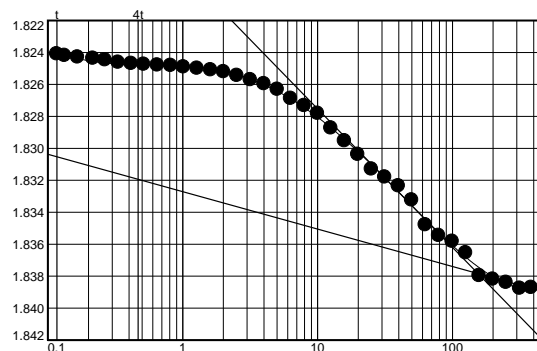
D<sub>0</sub> = 1.8170 D<sub>50</sub> = 1.8197 D<sub>100</sub> = 1.8223 C<sub>v</sub> at 39.79 min. = 0.002 ft.<sup>2</sup>/day C<sub>α</sub> = 0.001

Pressure: 0.25 tsf

TEST READINGS

Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.82311	13	1.3833	1.82500
2	0.2167	1.82410	14	1.7167	1.82510
3	0.2333	1.82421	15	2.1167	1.82522
4	0.2667	1.82430	16	2.6333	1.82546
5	0.3167	1.82438	17	3.2833	1.82573
6	0.3667	1.82448	18	4.1167	1.82597
7	0.4333	1.82463	19	5.1500	1.82633
8	0.5167	1.82470	20	6.4500	1.82689
9	0.6167	1.82476	21	8.0833	1.82734
10	0.7500	1.82480	22	10.1333	1.82783
11	0.9167	1.82483	23	12.7333	1.82874
12	1.1167	1.82492	24	15.9833	1.82955



Pressure: 0.25 tsf

TEST READINGS (continued)

Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
25	20.1000	1.83039	35	199.6833	1.83820
26	25.2667	1.83131	36	251.3500	1.83840
27	31.7667	1.83181	37	316.3833	1.83877
28	39.9500	1.83236	38	384.9333	1.83873
29	50.2667	1.83325			
30	63.2333	1.83480			
31	79.5833	1.83547			
32	100.1500	1.83584			
33	126.0500	1.83656			
34	158.6333	1.83798			

Void Ratio = 3.533    Compression = 45.7%

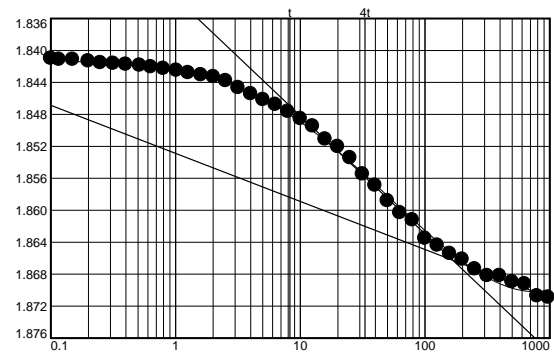
$D_0 = 1.8231$      $D_{50} = 1.8305$      $D_{100} = 1.8378$      $C_v$  at 21.46 min. = 0.004 ft.<sup>2</sup>/day     $C_\alpha = 0.003$

Pressure: 0.50 tsf

TEST READINGS

Load No. 12

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.84041	22	10.1333	1.84855
2	0.2000	1.84101	23	12.7167	1.84949
3	0.2167	1.84114	24	15.9833	1.85113
4	0.2500	1.84115	25	20.0833	1.85205
5	0.3000	1.84134	26	25.2500	1.85345
6	0.3500	1.84156	27	31.7667	1.85549
7	0.4167	1.84165	28	39.9500	1.85689
8	0.5000	1.84176	29	50.2667	1.85882
9	0.6167	1.84187	30	63.2333	1.86034
10	0.7333	1.84207	31	79.5833	1.86125
11	0.9000	1.84229	32	100.1500	1.86354
12	1.1167	1.84251	33	126.0500	1.86442
13	1.3667	1.84280	34	158.6333	1.86543
14	1.7000	1.84308	35	199.6833	1.86616
15	2.1167	1.84330	36	251.3500	1.86738
16	2.6333	1.84380	37	316.3833	1.86821
17	3.2833	1.84468	38	398.2667	1.86822
18	4.1167	1.84545	39	501.3500	1.86898
19	5.1333	1.84617	40	631.1333	1.86926
20	6.4333	1.84679	41	794.5000	1.87076
21	8.0667	1.84766	42	976.2833	1.87091



Void Ratio = 3.185    Compression = 49.9%

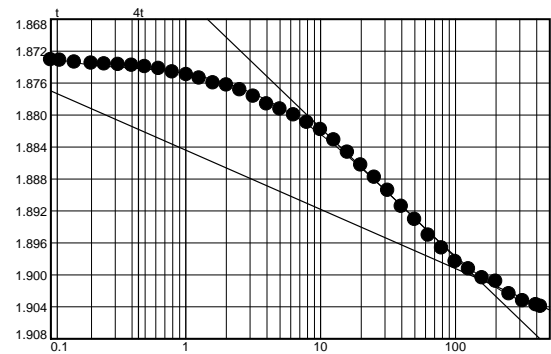
$D_0 = 1.8405$      $D_{50} = 1.8534$      $D_{100} = 1.8663$      $C_v$  at 22.81 min. = 0.003 ft.<sup>2</sup>/day     $C_\alpha = 0.008$

Pressure: 1.00 tsf

TEST READINGS

Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.87211	21	8.0667	1.88095
2	0.2000	1.87310	22	10.1333	1.88186
3	0.2167	1.87316	23	12.7167	1.88316
4	0.2500	1.87342	24	15.9833	1.88470
5	0.3000	1.87354	25	20.0833	1.88630
6	0.3500	1.87364	26	25.2500	1.88783
7	0.4167	1.87372	27	31.7667	1.88945
8	0.5000	1.87381	28	39.9500	1.89146
9	0.6000	1.87398	29	50.2500	1.89309
10	0.7333	1.87420	30	63.2333	1.89507
11	0.9000	1.87465	31	79.5667	1.89668
12	1.1167	1.87497	32	100.1333	1.89838
13	1.3667	1.87540	33	126.0333	1.89929
14	1.7000	1.87601	34	158.6333	1.90042
15	2.1167	1.87629	35	199.6667	1.90085
16	2.6333	1.87689	36	251.3333	1.90241
17	3.2833	1.87769	37	316.3833	1.90327
18	4.1000	1.87866	38	398.2500	1.90379
19	5.1333	1.87927	39	429.7500	1.90399
20	6.4333	1.88001			



Void Ratio = 2.826 Compression = 54.2%

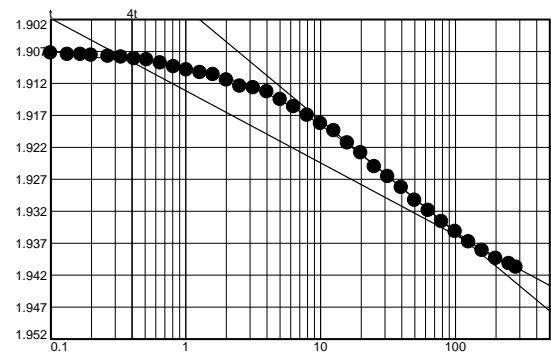
$D_0 = 1.8718$   $D_{50} = 1.8861$   $D_{100} = 1.9004$   $C_v$  at 18.34 min. = 0.004 ft.<sup>2</sup>/day  $C_\alpha = 0.010$

Pressure: 2.00 tsf

TEST READINGS

Load No. 14

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.90668	15	2.1167	1.91150
2	0.2000	1.90728	16	2.6333	1.91246
3	0.2333	1.90751	17	3.2833	1.91273
4	0.2667	1.90752	18	4.1167	1.91337
5	0.3000	1.90765	19	5.1500	1.91456
6	0.3667	1.90780	20	6.4500	1.91567
7	0.4333	1.90792	21	8.0833	1.91701
8	0.5167	1.90817	22	10.1333	1.91832
9	0.6167	1.90835	23	12.7333	1.91945
10	0.7500	1.90885	24	15.9833	1.92137
11	0.9167	1.90943	25	20.1000	1.92289
12	1.1167	1.90992	26	25.2667	1.92506
13	1.3833	1.91033	27	31.7667	1.92663
14	1.7000	1.91066	28	39.9500	1.92834



Pressure: 2.00 tsf

TEST READINGS (continued)

Load No. 14

No.	Elapsed Time	Dial Reading
29	50.2667	1.93035
30	63.2500	1.93192
31	79.5833	1.93368
32	100.1500	1.93520
33	126.0500	1.93684
34	158.6500	1.93816
35	199.6833	1.93942
36	251.3500	1.94024
37	282.3167	1.94081

Void Ratio = 2.427    Compression = 58.9%

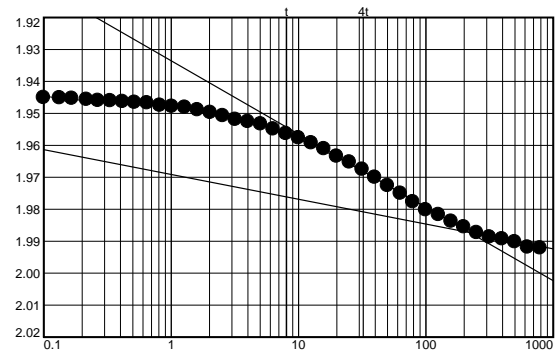
$D_0 = 1.9054$      $D_{50} = 1.9209$      $D_{100} = 1.9364$      $C_v$  at 14.43 min. = 0.004 ft.<sup>2</sup>/day     $C_\alpha = 0.015$

Pressure: 4.00 tsf

TEST READINGS

Load No. 15

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.94460	22	10.1500	1.95772
2	0.2000	1.94513	23	12.7333	1.95928
3	0.2333	1.94521	24	16.0000	1.96118
4	0.2667	1.94540	25	20.1000	1.96345
5	0.3167	1.94569	26	25.2667	1.96530
6	0.3667	1.94603	27	31.7833	1.96755
7	0.4333	1.94611	28	39.9667	1.97005
8	0.5167	1.94638	29	50.2667	1.97268
9	0.6167	1.94664	30	63.2500	1.97509
10	0.7500	1.94681	31	79.5833	1.97777
11	0.9167	1.94756	32	100.1667	1.98027
12	1.1167	1.94791	33	126.0500	1.98177
13	1.3833	1.94817	34	158.6500	1.98384
14	1.7167	1.94897	35	199.6833	1.98562
15	2.1333	1.94981	36	251.3500	1.98739
16	2.6500	1.95082	37	316.4000	1.98880
17	3.3000	1.95194	38	398.2833	1.98933
18	4.1167	1.95265	39	501.3667	1.99024
19	5.1500	1.95342	40	631.1500	1.99192
20	6.4500	1.95500	41	790.9167	1.99216
21	8.0833	1.95642			



Void Ratio = 1.870    Compression = 65.6%

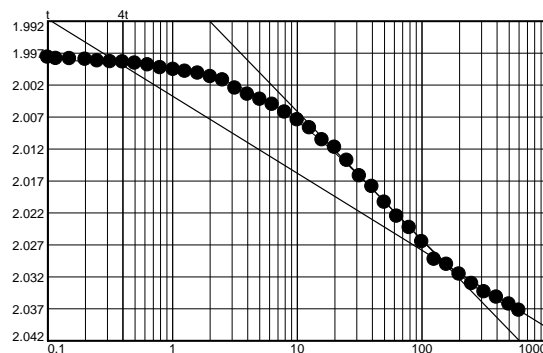
$D_0 = 1.9448$      $D_{50} = 1.9660$      $D_{100} = 1.9873$      $C_v$  at 25.62 min. = 0.002 ft.<sup>2</sup>/day     $C_\alpha = 0.010$

Pressure: 8.00 tsf

TEST READINGS

Load No. 16

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	1.99671	21	8.0833	2.00626
2	0.2167	1.99769	22	10.1500	2.00746
3	0.2333	1.99787	23	12.7333	2.00871
4	0.2667	1.99790	24	16.0000	2.01060
5	0.3167	1.99801	25	20.1000	2.01177
6	0.3667	1.99825	26	25.2667	2.01380
7	0.4333	1.99837	27	31.7833	2.01624
8	0.5167	1.99841	28	39.9667	2.01792
9	0.6167	1.99861	29	50.2833	2.02038
10	0.7500	1.99890	30	63.2500	2.02256
11	0.9167	1.99932	31	79.6000	2.02435
12	1.1333	1.99960	32	100.1667	2.02656
13	1.3833	1.99988	33	126.0667	2.02930
14	1.7167	2.00016	34	158.6667	2.03009
15	2.1333	2.00070	35	199.7000	2.03161
16	2.6500	2.00124	36	251.3667	2.03309
17	3.3000	2.00253	37	316.4167	2.03437
18	4.1167	2.00349	38	398.3000	2.03521
19	5.1500	2.00425	39	501.3833	2.03629
20	6.4500	2.00506	40	602.2333	2.03725



Void Ratio = 1.382 Compression = 71.5%

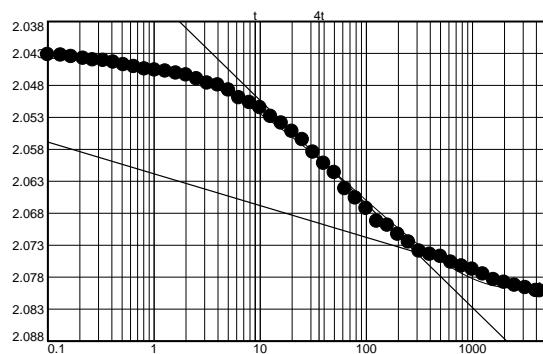
D<sub>0</sub> = 1.9958 D<sub>50</sub> = 2.0130 D<sub>100</sub> = 2.0302 C<sub>v</sub> at 21.14 min. = 0.001 ft.<sup>2</sup>/day C<sub>α</sub> = 0.016

Pressure: 16.00 tsf

TEST READINGS

Load No. 17

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.04253	15	2.1167	2.04641
2	0.2000	2.04321	16	2.6333	2.04701
3	0.2333	2.04330	17	3.2833	2.04767
4	0.2667	2.04353	18	4.1167	2.04797
5	0.3167	2.04381	19	5.1500	2.04878
6	0.3667	2.04407	20	6.4333	2.04997
7	0.4333	2.04414	21	8.0833	2.05073
8	0.5167	2.04441	22	10.1333	2.05153
9	0.6167	2.04481	23	12.7333	2.05289
10	0.7500	2.04508	24	16.0000	2.05393
11	0.9167	2.04548	25	20.1000	2.05522
12	1.1167	2.04565	26	25.2667	2.05651
13	1.3833	2.04582	27	31.7667	2.05848
14	1.7167	2.04612	28	39.9667	2.06023



Pressure: 16.00 tsf

TEST READINGS (continued)

Load No. 17

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
29	50.2833	2.06168	39	501.3833	2.07480	49	4320.0333	2.08018
30	63.2500	2.06422	40	631.1500	2.07570			
31	79.6000	2.06568	41	794.5167	2.07631			
32	100.1667	2.06729	42	1000.2000	2.07682			
33	126.0500	2.06928	43	1259.1333	2.07755			
34	158.6667	2.06992	44	1585.1000	2.07843			
35	199.7000	2.07134	45	1995.4833	2.07884			
36	251.3667	2.07253	46	2512.1167	2.07931			
37	316.4000	2.07397	47	3162.5333	2.07969			
38	398.2833	2.07445	48	3981.3333	2.08016			

Void Ratio = 0.917 Compression = 77.0%

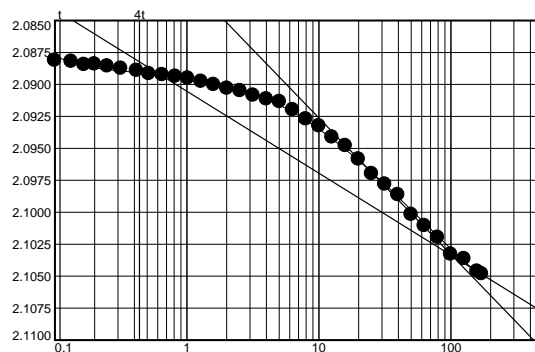
D<sub>0</sub> = 2.0444 D<sub>50</sub> = 2.0592 D<sub>100</sub> = 2.0741 C<sub>v</sub> at 34.09 min. = 0.001 ft.<sup>2</sup>/day C<sub>α</sub> = 0.006

Pressure: 32.00 tsf

TEST READINGS

Load No. 18

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.08769	19	5.1500	2.09136
2	0.2000	2.08814	20	6.4500	2.09200
3	0.2333	2.08821	21	8.0833	2.09272
4	0.2667	2.08847	22	10.1333	2.09327
5	0.3000	2.08843	23	12.7333	2.09413
6	0.3500	2.08858	24	15.9833	2.09481
7	0.4167	2.08876	25	20.1000	2.09586
8	0.5167	2.08892	26	25.2667	2.09699
9	0.6167	2.08917	27	31.7667	2.09782
10	0.7500	2.08926	28	39.9500	2.09865
11	0.9167	2.08938	29	50.2667	2.10018
12	1.1167	2.08952	30	63.2500	2.10107
13	1.3833	2.08978	31	79.5833	2.10199
14	1.7000	2.09002	32	100.1500	2.10329
15	2.1167	2.09033	33	126.0500	2.10365
16	2.6333	2.09051	34	158.6500	2.10463
17	3.2833	2.09086	35	171.8833	2.10483
18	4.1167	2.09116			



Void Ratio = 0.649 Compression = 80.2%

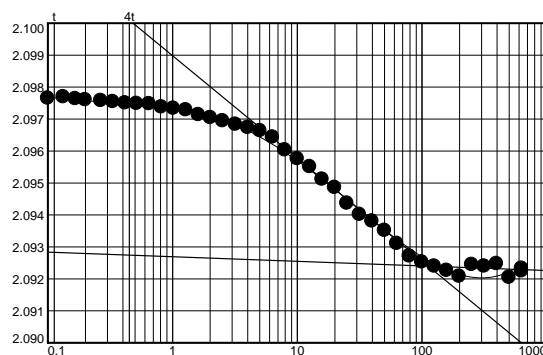
D<sub>0</sub> = 2.0868 D<sub>50</sub> = 2.0951 D<sub>100</sub> = 2.1034 C<sub>v</sub> at 16.02 min. = 0.001 ft.<sup>2</sup>/day C<sub>α</sub> = 0.008

Pressure: 16.00 tsf

TEST READINGS

Load No. 19

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.09784	22	10.1333	2.09575
2	0.2000	2.09765	23	12.7333	2.09550
3	0.2333	2.09769	24	16.0000	2.09511
4	0.2667	2.09763	25	20.1000	2.09485
5	0.3000	2.09760	26	25.2667	2.09436
6	0.3667	2.09757	27	31.7833	2.09401
7	0.4333	2.09754	28	39.9667	2.09380
8	0.5167	2.09750	29	50.2833	2.09351
9	0.6167	2.09748	30	63.2500	2.09310
10	0.7500	2.09747	31	79.6000	2.09271
11	0.9167	2.09737	32	100.1667	2.09252
12	1.1167	2.09733	33	126.0500	2.09239
13	1.3833	2.09728	34	158.6667	2.09226
14	1.7167	2.09713	35	199.7000	2.09207
15	2.1167	2.09704	36	251.3667	2.09244
16	2.6333	2.09694	37	316.4000	2.09239
17	3.3000	2.09683	38	398.2833	2.09247
18	4.1167	2.09673	39	501.3667	2.09204
19	5.1500	2.09663	40	631.1500	2.09232
20	6.4500	2.09643	41	633.0167	2.09224
21	8.0833	2.09603			



Void Ratio = 0.786 Compression = 78.6%

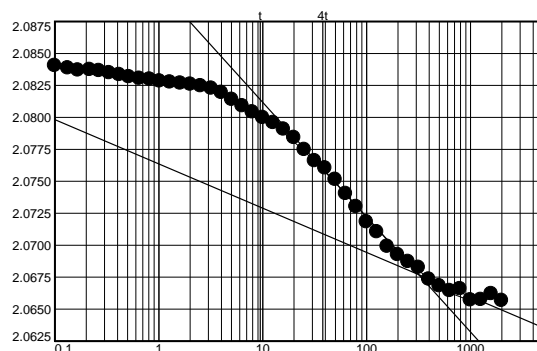
D<sub>0</sub> = 2.0978 D<sub>50</sub> = 2.0951 D<sub>100</sub> = 2.0924 C<sub>v</sub> at 15.95 min. = 0.001 ft.<sup>2</sup>/day

Pressure: 4.00 tsf

TEST READINGS

Load No. 20

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.08501	14	1.7167	2.08265
2	0.2000	2.08403	15	2.1167	2.08258
3	0.2333	2.08385	16	2.6333	2.08245
4	0.2667	2.08368	17	3.3000	2.08226
5	0.3167	2.08372	18	4.1167	2.08192
6	0.3667	2.08363	19	5.1500	2.08139
7	0.4333	2.08347	20	6.4500	2.08089
8	0.5167	2.08332	21	8.0833	2.08040
9	0.6167	2.08315	22	10.1333	2.07996
10	0.7500	2.08303	23	12.7333	2.07957
11	0.9167	2.08297	24	15.9833	2.07906
12	1.1167	2.08282	25	20.1000	2.07840
13	1.3833	2.08274	26	25.2667	2.07746





Pressure: 4.00 tsf

TEST READINGS (continued)

Load No. 20

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
27	31.7667	2.07659	37	316.4000	2.06824
28	39.9667	2.07602	38	398.2833	2.06733
29	50.2667	2.07512	39	501.3667	2.06681
30	63.2500	2.07402	40	631.1333	2.06643
31	79.5833	2.07300	41	794.5167	2.06658
32	100.1667	2.07182	42	1000.1833	2.06569
33	126.0500	2.07103	43	1259.1333	2.06573
34	158.6500	2.06990	44	1585.1000	2.06619
35	199.6833	2.06925	45	1995.4833	2.06566
36	251.3500	2.06871			

Void Ratio = 1.074 Compression = 75.1%

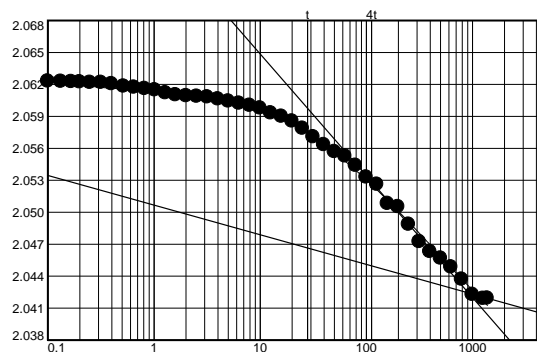
D<sub>0</sub> = 2.0844 D<sub>50</sub> = 2.0761 D<sub>100</sub> = 2.0677 C<sub>v</sub> at 36.16 min. = 0.000 ft.<sup>2</sup>/day

Pressure: 1.00 tsf

TEST READINGS

Load No. 21

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.06255	23	12.7333	2.05930
2	0.2000	2.06230	24	15.9833	2.05898
3	0.2333	2.06227	25	20.1000	2.05854
4	0.2667	2.06224	26	25.2667	2.05785
5	0.3000	2.06222	27	31.7667	2.05706
6	0.3500	2.06216	28	39.9667	2.05632
7	0.4167	2.06216	29	50.2667	2.05567
8	0.5000	2.06204	30	63.2500	2.05526
9	0.6167	2.06182	31	79.5833	2.05437
10	0.7500	2.06171	32	100.1500	2.05327
11	0.9167	2.06160	33	126.0500	2.05260
12	1.1167	2.06147	34	158.6500	2.05079
13	1.3833	2.06118	35	199.6833	2.05049
14	1.7000	2.06100	36	251.3500	2.04885
15	2.1167	2.06092	37	316.3833	2.04722
16	2.6333	2.06086	38	398.2667	2.04629
17	3.2833	2.06080	39	501.3500	2.04568
18	4.1167	2.06061	40	631.1333	2.04485
19	5.1333	2.06041	41	794.5000	2.04369
20	6.4500	2.06021	42	1000.1833	2.04226
21	8.0833	2.06001	43	1259.1167	2.04188
22	10.1333	2.05977	44	1383.1833	2.04191



Void Ratio = 1.331 Compression = 72.1%

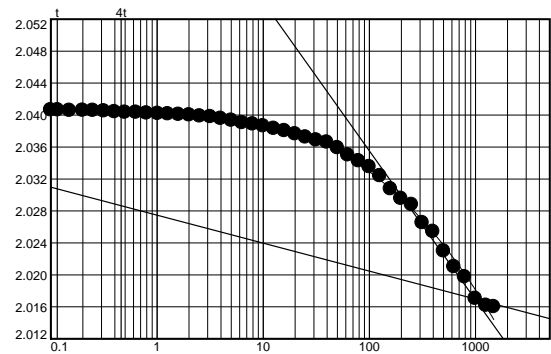
D<sub>0</sub> = 2.0622 D<sub>50</sub> = 2.0523 D<sub>100</sub> = 2.0424 C<sub>v</sub> at 119.55 min. = 0.000 ft.<sup>2</sup>/day

Pressure: 0.25 tsf

TEST READINGS

Load No. 22

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	2.04070	23	12.7333	2.03830
2	0.2167	2.04062	24	15.9833	2.03803
3	0.2333	2.04061	25	20.1000	2.03762
4	0.2667	2.04056	26	25.2667	2.03722
5	0.3167	2.04057	27	31.7667	2.03684
6	0.3667	2.04055	28	39.9667	2.03657
7	0.4333	2.04049	29	50.2667	2.03587
8	0.5167	2.04039	30	63.2500	2.03499
9	0.6167	2.04031	31	79.5833	2.03426
10	0.7500	2.04031	32	100.1500	2.03352
11	0.9167	2.04023	33	126.0500	2.03239
12	1.1333	2.04017	34	158.6500	2.03074
13	1.3833	2.04011	35	199.6833	2.02953
14	1.7167	2.04004	36	251.3500	2.02877
15	2.1333	2.03998	37	316.3833	2.02650
16	2.6500	2.03984	38	398.2833	2.02540
17	3.3000	2.03977	39	501.3667	2.02295
18	4.1167	2.03956	40	631.1333	2.02099
19	5.1500	2.03931	41	794.5000	2.01972
20	6.4500	2.03903	42	1000.1833	2.01701
21	8.0833	2.03885	43	1259.1167	2.01616
22	10.1333	2.03862	44	1486.5833	2.01600



Void Ratio = 1.612 Compression = 68.7%

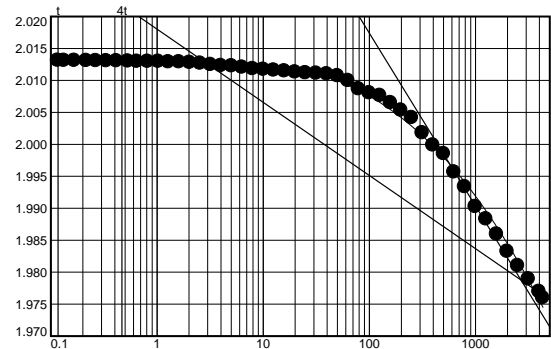
$D_0 = 2.0414$   $D_{50} = 2.0292$   $D_{100} = 2.0170$   $C_v$  at 213.62 min. = 0.000 ft.<sup>2</sup>/day

Pressure: 0.06 tsf

TEST READINGS

Load No. 23

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.01347	13	1.3833	2.01287
2	0.2167	2.01311	14	1.7167	2.01288
3	0.2333	2.01309	15	2.1333	2.01277
4	0.2667	2.01309	16	2.6500	2.01267
5	0.3167	2.01308	17	3.3000	2.01245
6	0.3667	2.01305	18	4.1167	2.01228
7	0.4333	2.01304	19	5.1500	2.01223
8	0.5167	2.01303	20	6.4500	2.01201
9	0.6333	2.01297	21	8.0833	2.01180
10	0.7500	2.01294	22	10.1500	2.01170
11	0.9167	2.01294	23	12.7333	2.01157
12	1.1333	2.01295	24	16.0000	2.01143



Pressure: 0.06 tsf

TEST READINGS (continued)

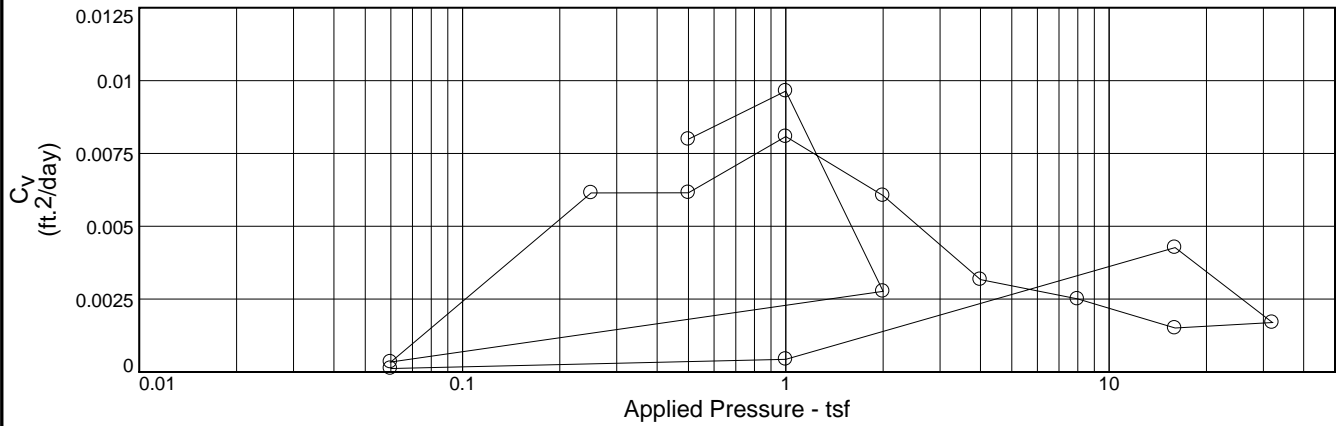
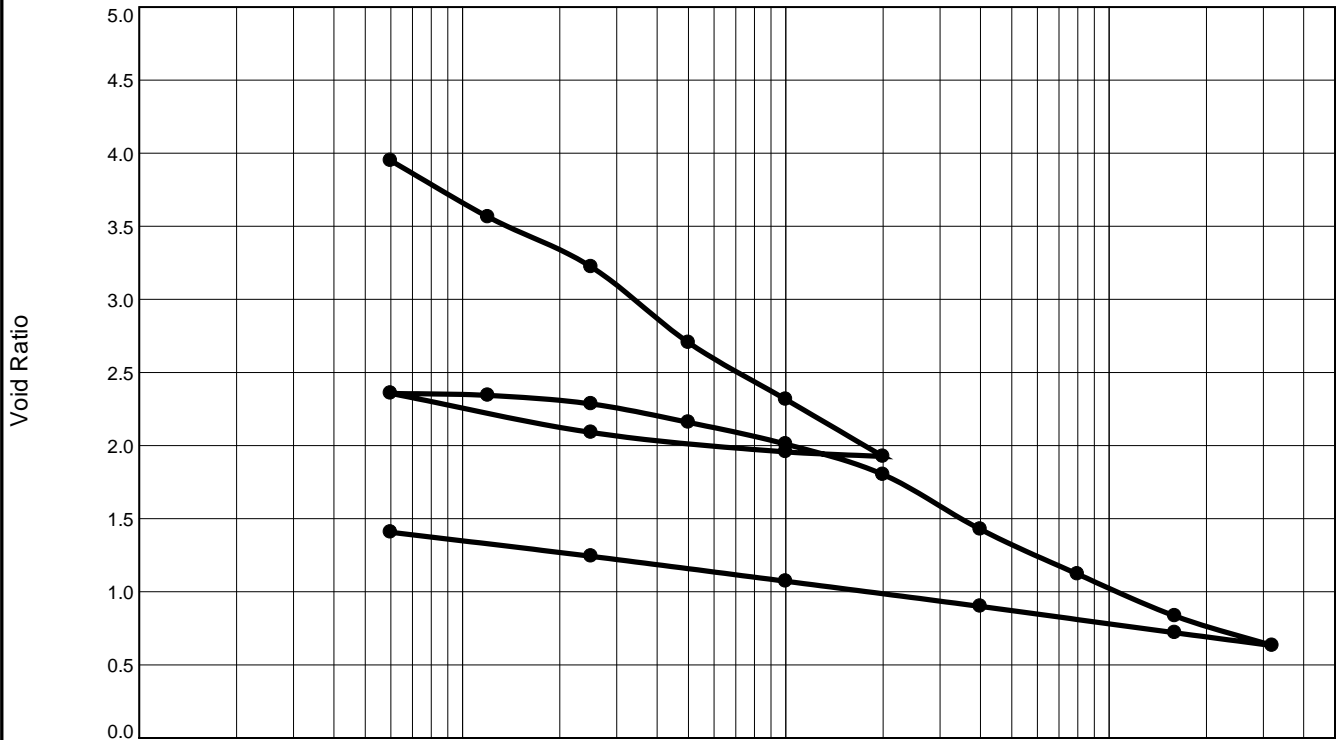
Load No. 23

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
25	20.1000	2.01127	35	199.7000	2.00530	45	1995.4667	1.98322
26	25.2667	2.01117	36	251.3667	2.00415	46	2512.1167	1.98099
27	31.7667	2.01109	37	316.4000	2.00176	47	3162.5333	1.97891
28	39.9667	2.01097	38	398.2833	1.99986	48	3981.3333	1.97695
29	50.2667	2.01068	39	501.3667	1.99851	49	4320.2833	1.97596
30	63.2500	2.00994	40	631.1500	1.99564			
31	79.5833	2.00863	41	794.5167	1.99332			
32	100.1667	2.00804	42	1000.2000	1.99023			
33	126.0500	2.00760	43	1259.1333	1.98830			
34	158.6500	2.00647	44	1585.1000	1.98592			

Void Ratio = 2.046    Compression = 63.5%


$D_0 = 2.0153$      $D_{50} = 1.9970$      $D_{100} = 1.9788$      $C_v$  at 563.91 min. = 0.000 ft.<sup>2</sup>/day

# CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	$P_c$ (tsf)	$C_c$	Initial Void Ratio
Saturation	Moisture							
99.8 %	167.0 %	30.2	163	123	2.55	0.2	1.36	4.265

<b>MATERIAL DESCRIPTION</b>							<b>USCS</b>	<b>AASHTO</b>
W, xso g ORG CL w/ fw rts							OH	

<b>Project No.</b> 24762 <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE <b>Source of Sample:</b> B-6 <b>Depth:</b> 5 <b>Sample Number:</b> 3B	<b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL	<b>Remarks:</b>   <div style="text-align: right;"><b>Figure</b></div>
		

**Tested By:** BH \_\_\_\_\_ **Checked By:** RR \_\_\_\_\_

# Dial Reading vs. Time

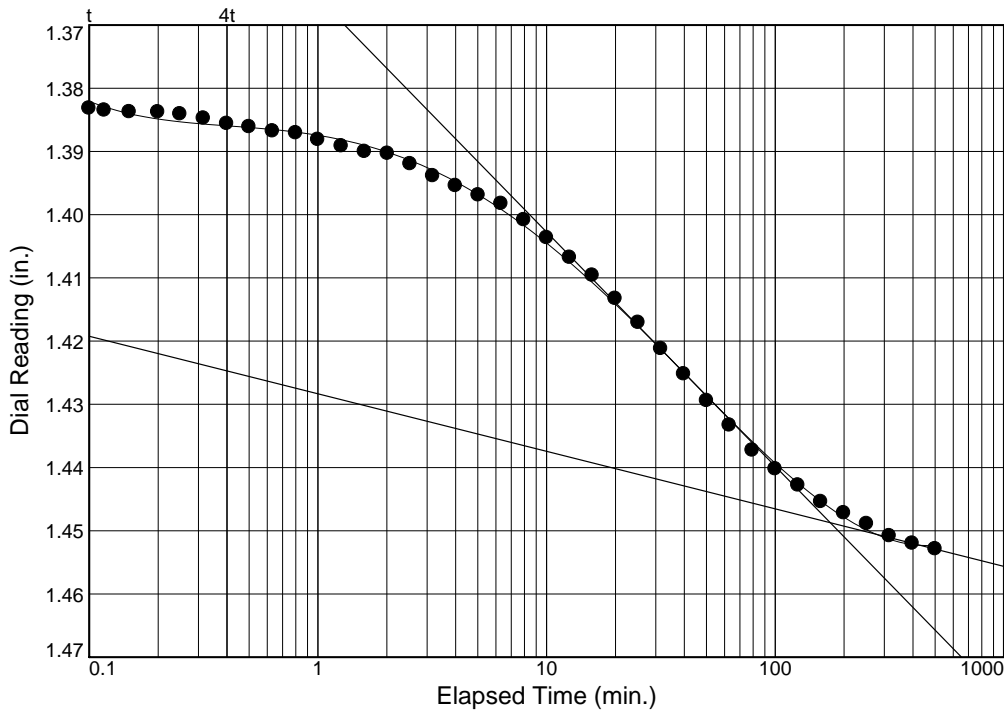
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-6

Depth: 5

Sample Number: 3B



Load No.= 4

Load= 0.50 tsf

$D_0 = 1.3782$

$D_{50} = 1.4135$

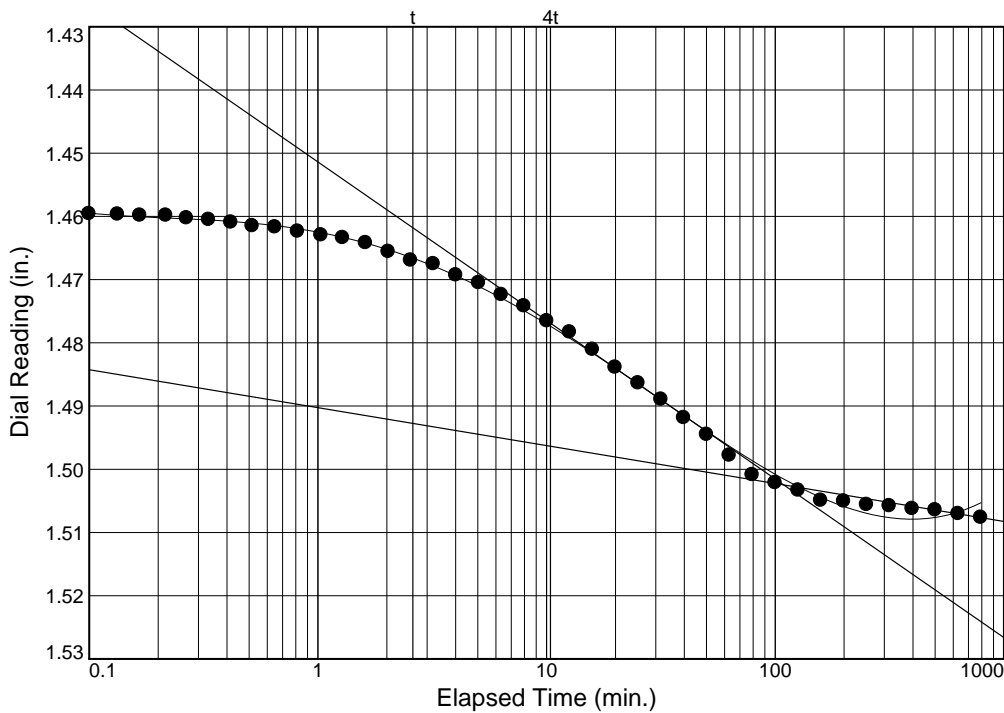
$D_{100} = 1.4487$

$T_{50} = 19.10 \text{ min.}$

$C_v @ T_{50}$

0.008 ft.<sup>2</sup>/day

$C_\alpha = 0.012$



Load No.= 5

Load= 1.00 tsf

$D_0 = 1.4558$

$D_{50} = 1.4792$

$D_{100} = 1.5025$

$T_{50} = 12.47 \text{ min.}$

$C_v @ T_{50}$

0.010 ft.<sup>2</sup>/day

$C_\alpha = 0.008$

Figure

# Dial Reading vs. Time

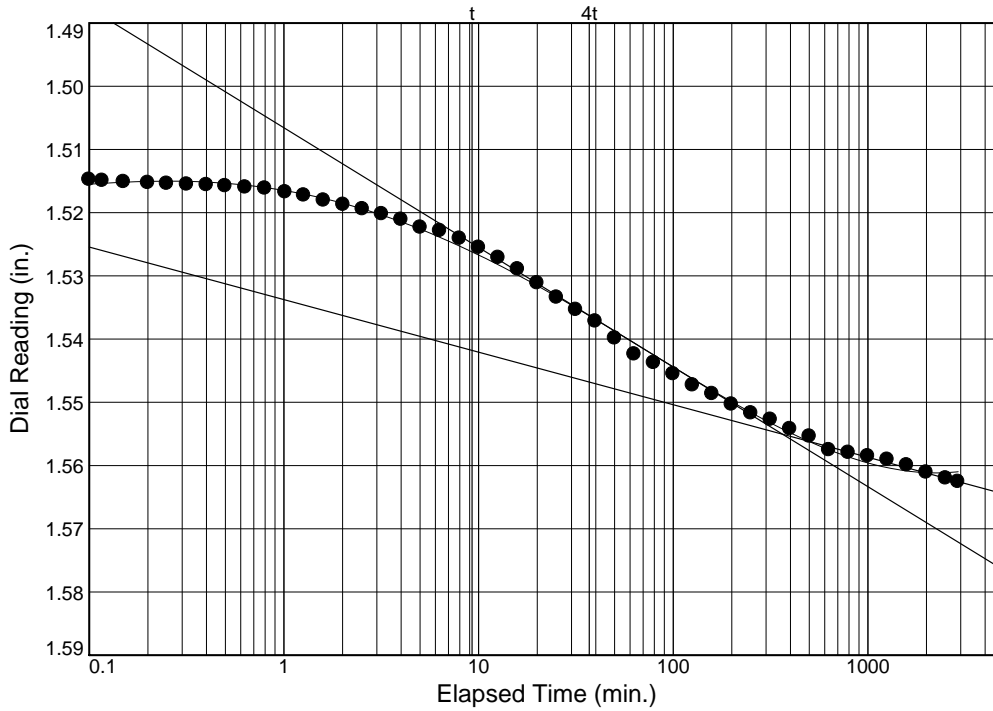
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-6

Depth: 5

Sample Number: 3B



Load No.= 6

Load= 2.00 tsf

$D_0 = 1.5161$

$D_{50} = 1.5356$

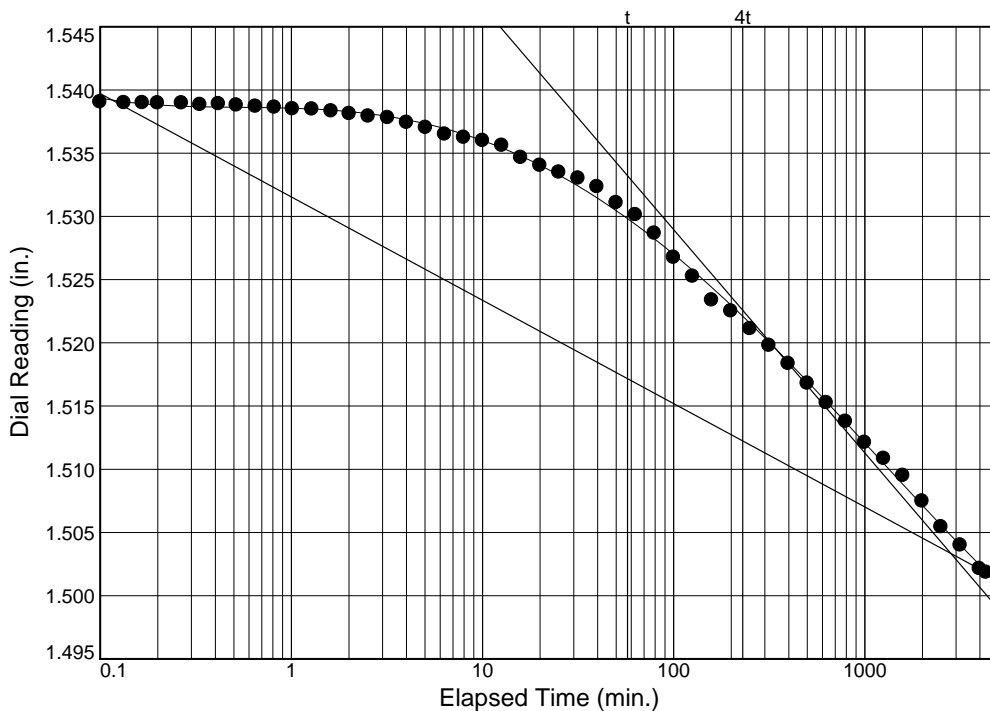
$D_{100} = 1.5551$

$T_{50} = 33.83$  min.

$C_v @ T_{50}$

0.003 ft.<sup>2</sup>/day

$C_\alpha = 0.011$



Load No.= 9

Load= 0.06 tsf

$D_0 = 1.5375$

$D_{50} = 1.5204$

$D_{100} = 1.5033$

$T_{50} = 297.40$  min.

$C_v @ T_{50}$

0.000 ft.<sup>2</sup>/day

# Dial Reading vs. Time

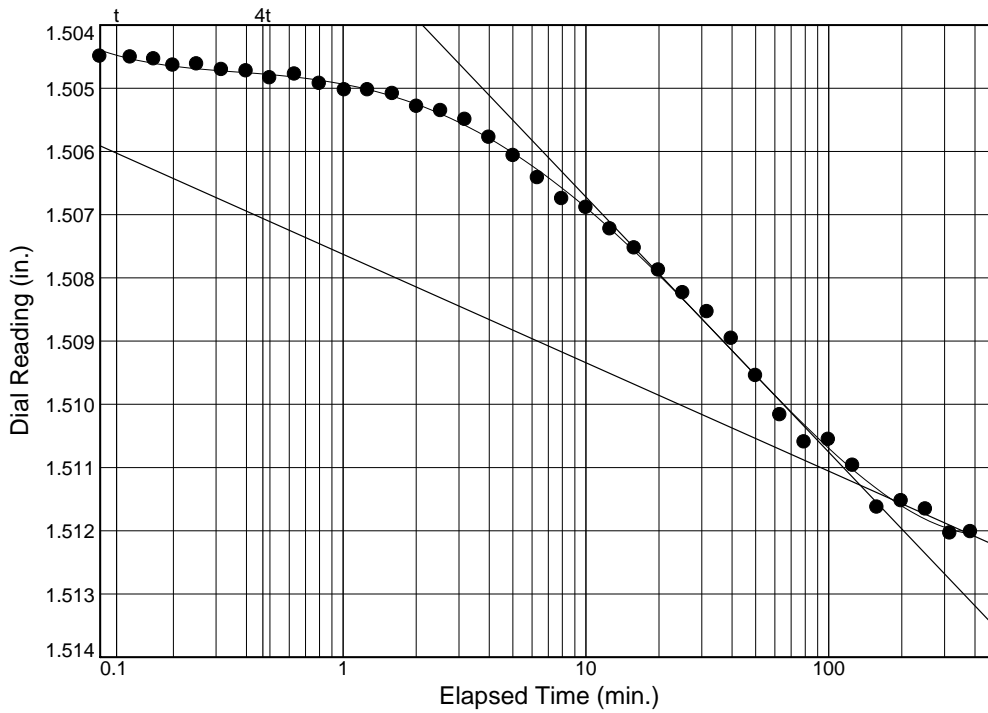
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-6

Depth: 5

Sample Number: 3B



Load No.= 11

Load= 0.25 tsf

$D_0 = 1.5042$

$D_{50} = 1.5077$

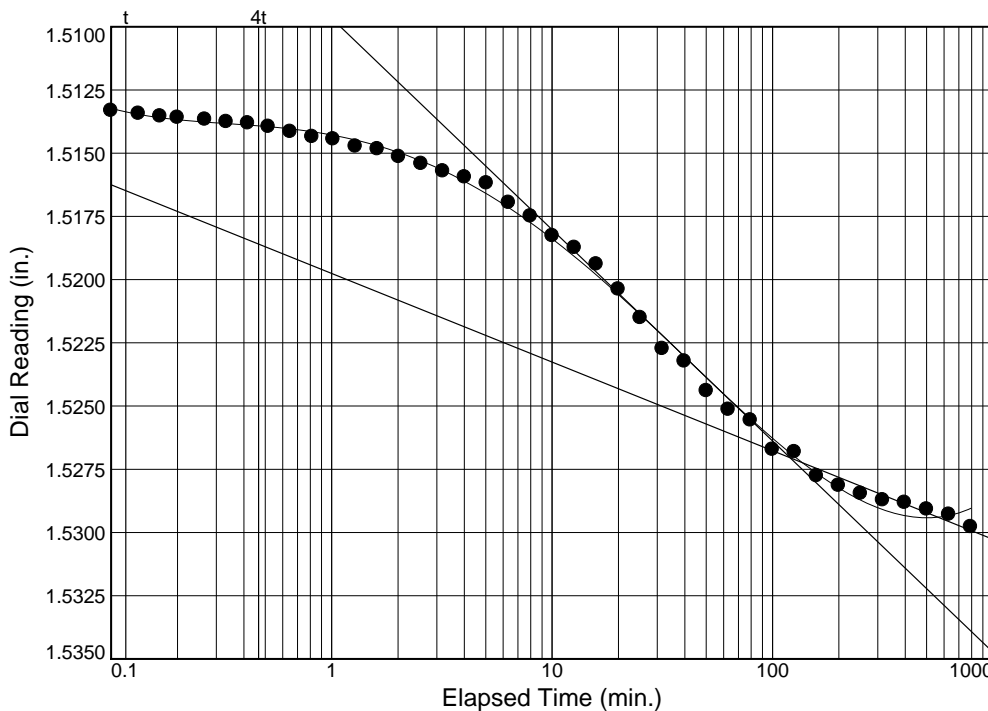
$D_{100} = 1.5113$

$T_{50} = 17.41 \text{ min.}$

$C_v @ T_{50}$

0.006 ft.<sup>2</sup>/day

$C_\alpha = 0.002$



Load No.= 12

Load= 0.50 tsf

$D_0 = 1.5128$

$D_{50} = 1.5199$

$D_{100} = 1.5270$

$T_{50} = 16.42 \text{ min.}$

$C_v @ T_{50}$

0.006 ft.<sup>2</sup>/day

$C_\alpha = 0.005$

Figure

# Dial Reading vs. Time

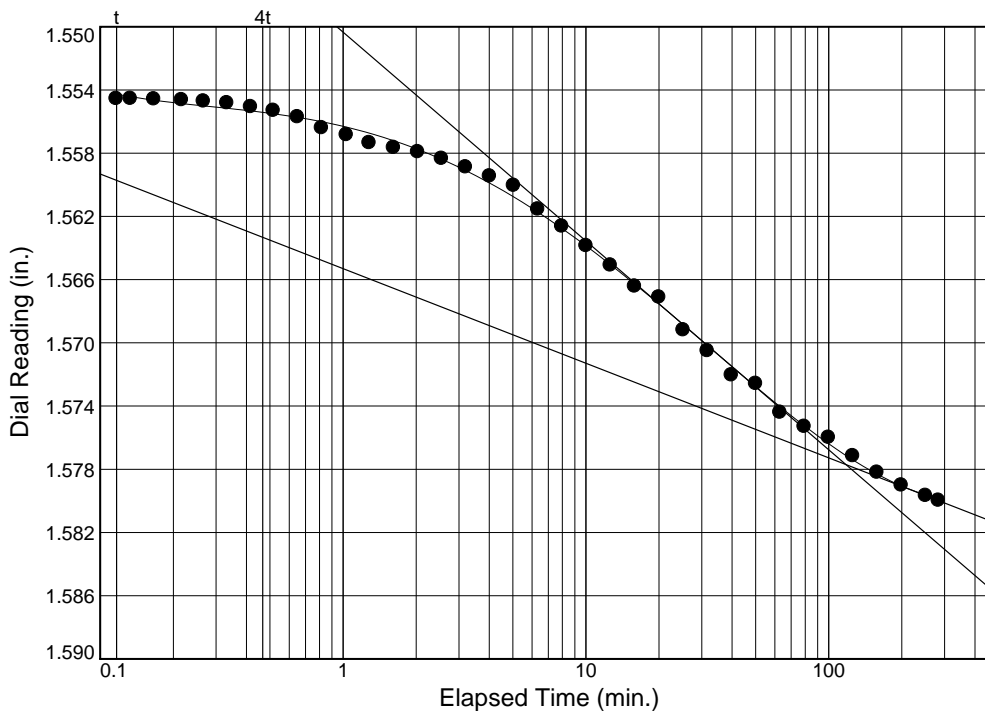
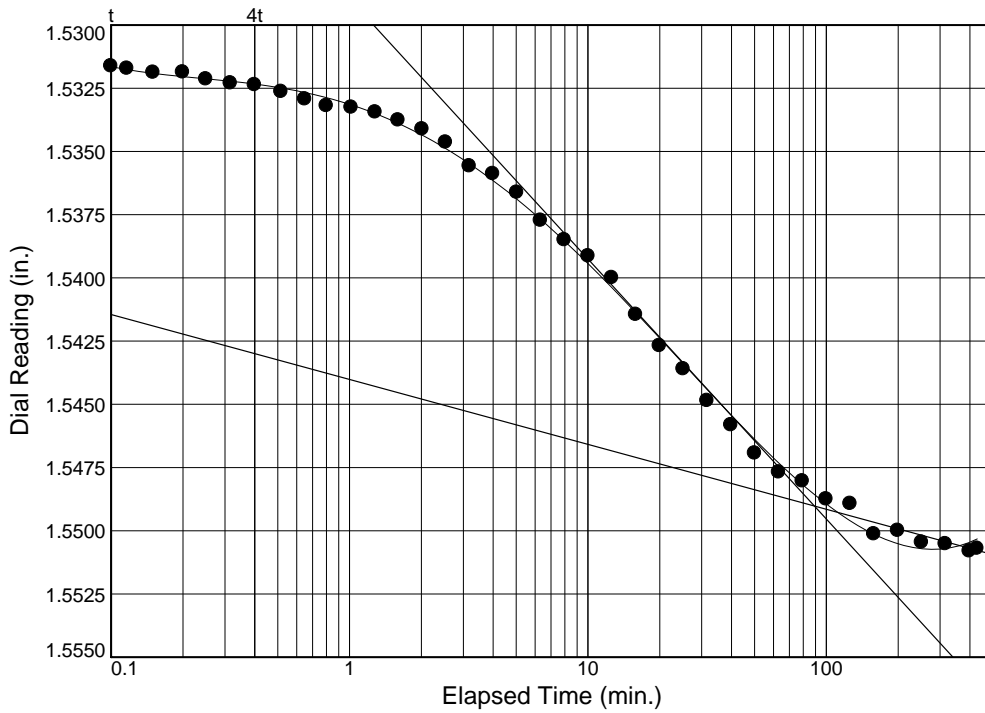
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-6

Depth: 5

Sample Number: 3B



Figure



# Dial Reading vs. Time

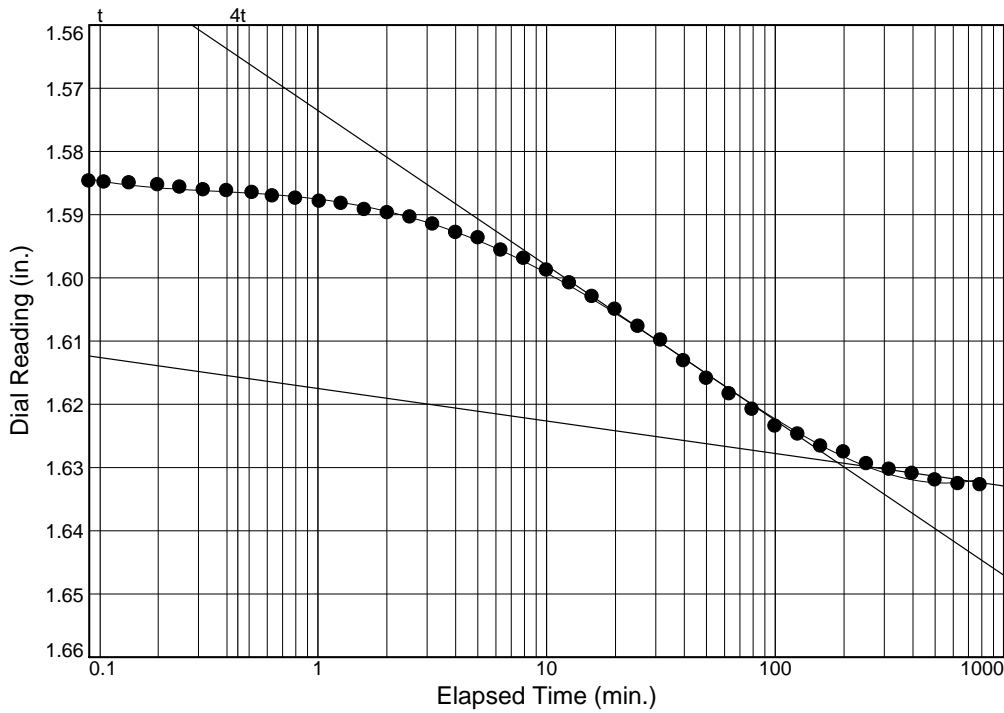
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-6

Depth: 5

Sample Number: 3B



Load No.= 15

Load= 4.00 tsf

$D_0 = 1.5829$

$D_{50} = 1.6060$

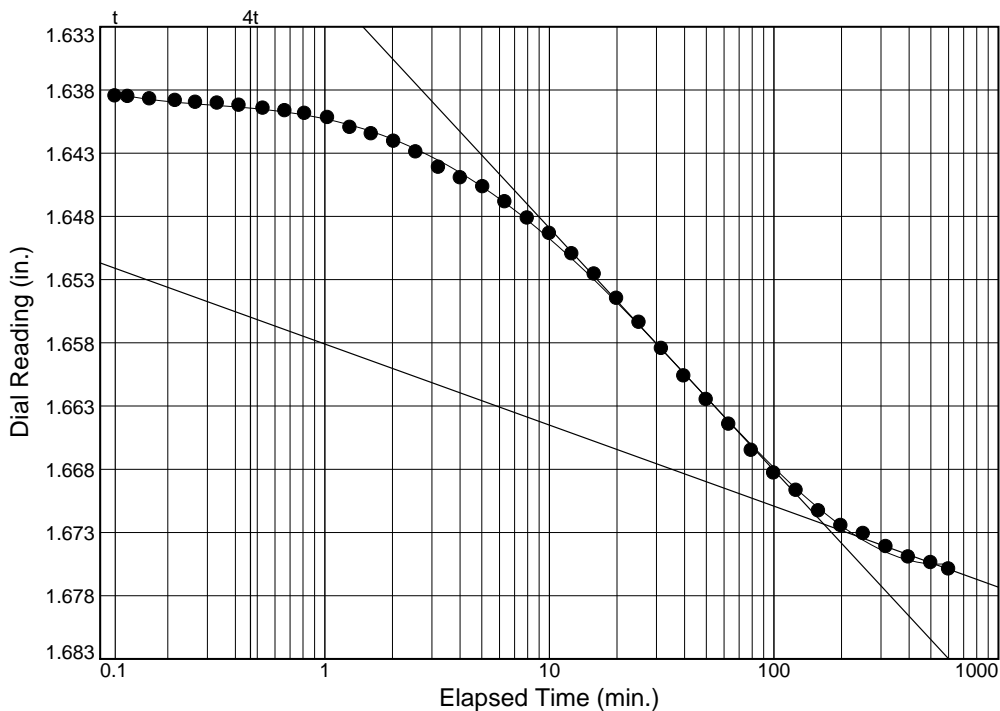
$D_{100} = 1.6292$

$T_{50} = 20.82$  min.

$C_v @ T_{50}$

0.003 ft.<sup>2</sup>/day

$C_\alpha = 0.007$



Load No.= 16

Load= 8.00 tsf

$D_0 = 1.6371$

$D_{50} = 1.6547$

$D_{100} = 1.6723$

$T_{50} = 19.81$  min.

$C_v @ T_{50}$

0.003 ft.<sup>2</sup>/day

$C_\alpha = 0.009$

Figure

# Dial Reading vs. Time

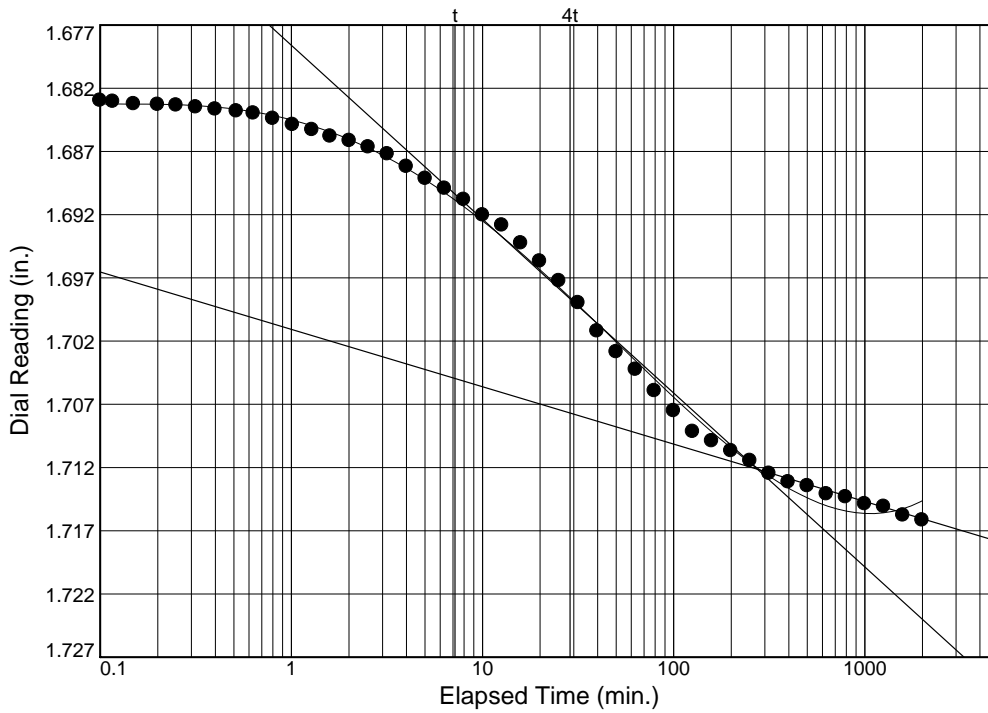
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-6

Depth: 5

Sample Number: 3B



Load No.= 17

Load= 16.00 tsf

$D_0 = 1.6831$

$D_{50} = 1.6976$

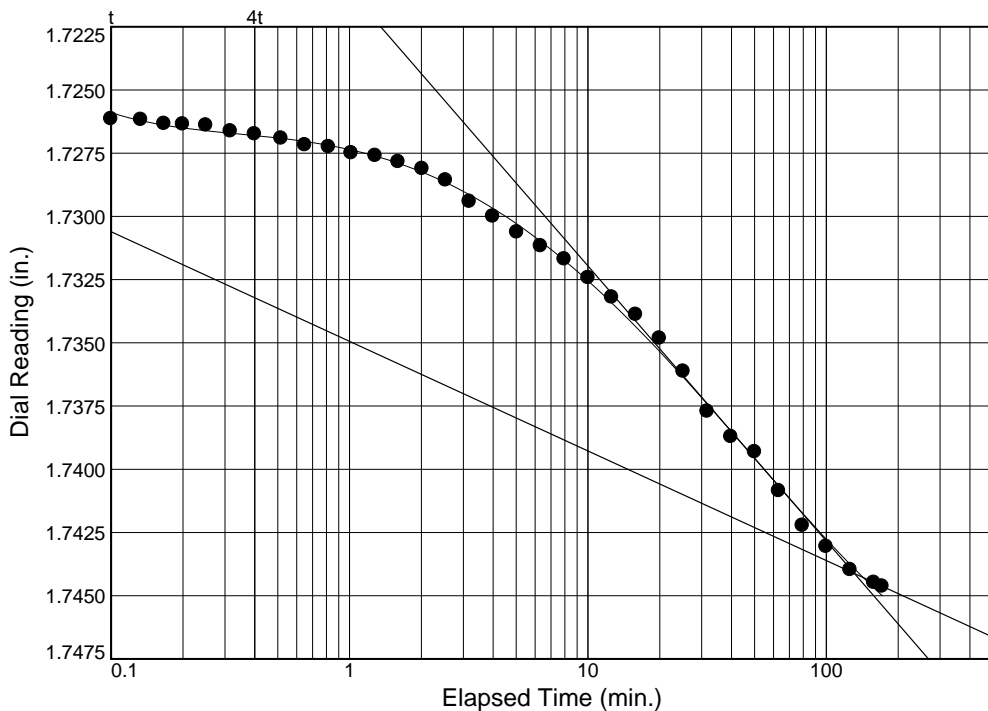
$D_{100} = 1.7121$

$T_{50} = 24.71$  min.

$C_v @ T_{50}$

0.002 ft.<sup>2</sup>/day

$C_\alpha = 0.006$



Load No.= 18

Load= 32.00 tsf

$D_0 = 1.7250$

$D_{50} = 1.7346$

$D_{100} = 1.7441$

$T_{50} = 16.62$  min.

$C_v @ T_{50}$

0.002 ft.<sup>2</sup>/day

$C_\alpha = 0.006$

Figure

# Dial Reading vs. Time

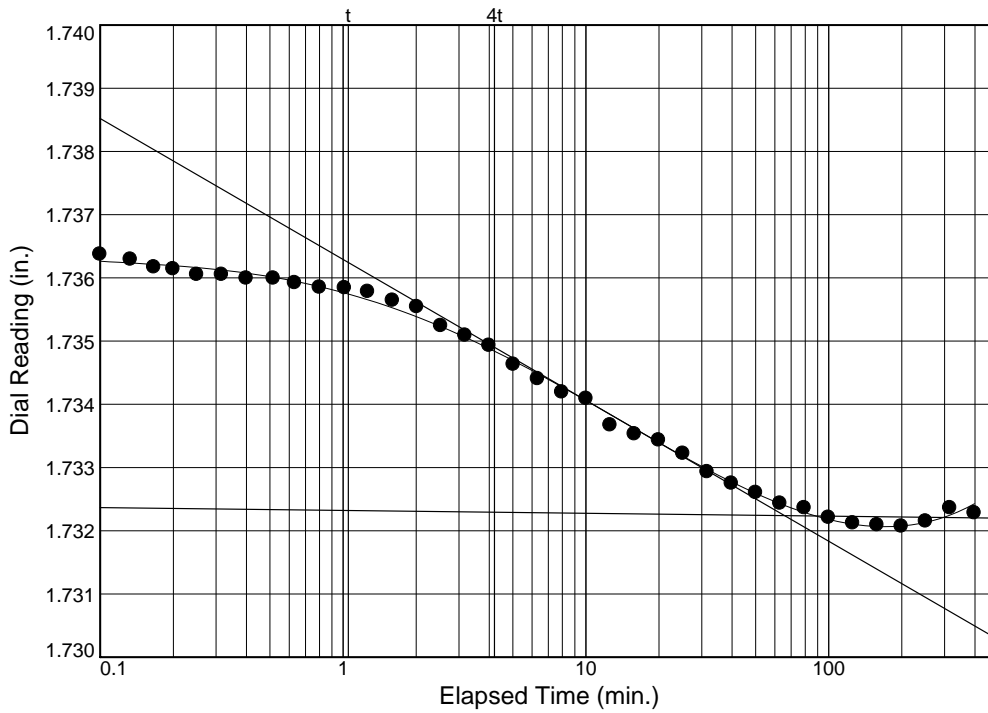
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-6

Depth: 5

Sample Number: 3B



Load No.= 19

Load= 16.00 tsf

$D_0 = 1.7366$

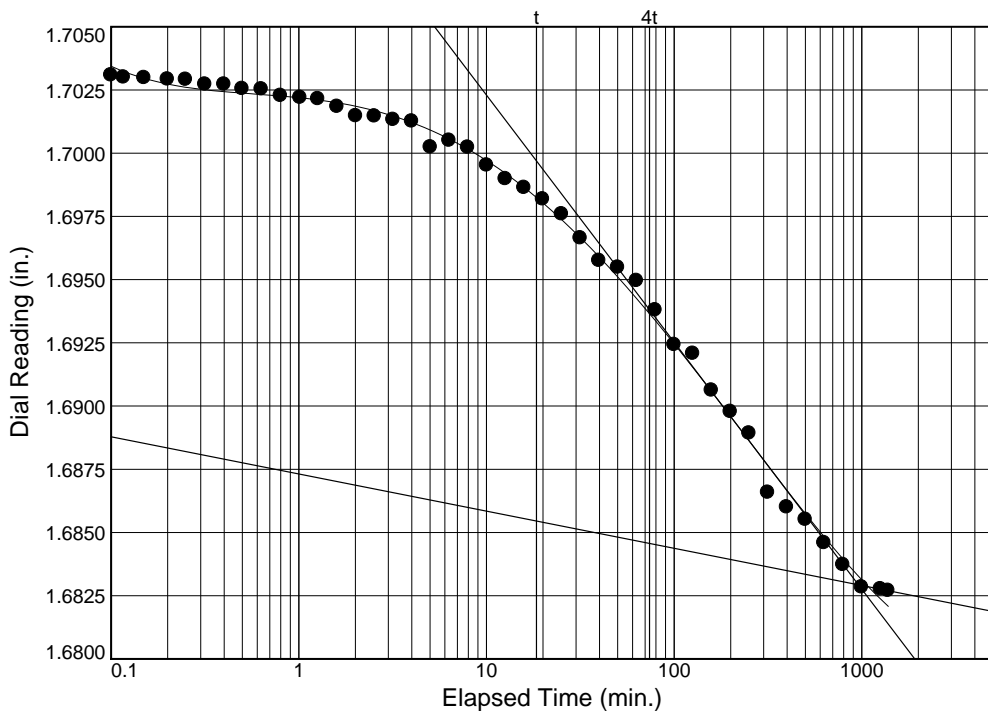
$D_{50} = 1.7344$

$D_{100} = 1.7322$

$T_{50} = 6.63 \text{ min.}$

$C_v @ T_{50}$

0.004 ft.<sup>2</sup>/day



Load No.= 21

Load= 1.00 tsf

$D_0 = 1.7028$

$D_{50} = 1.6929$

$D_{100} = 1.6829$

$T_{50} = 89.88 \text{ min.}$

$C_v @ T_{50}$

0.000 ft.<sup>2</sup>/day

# Dial Reading vs. Time

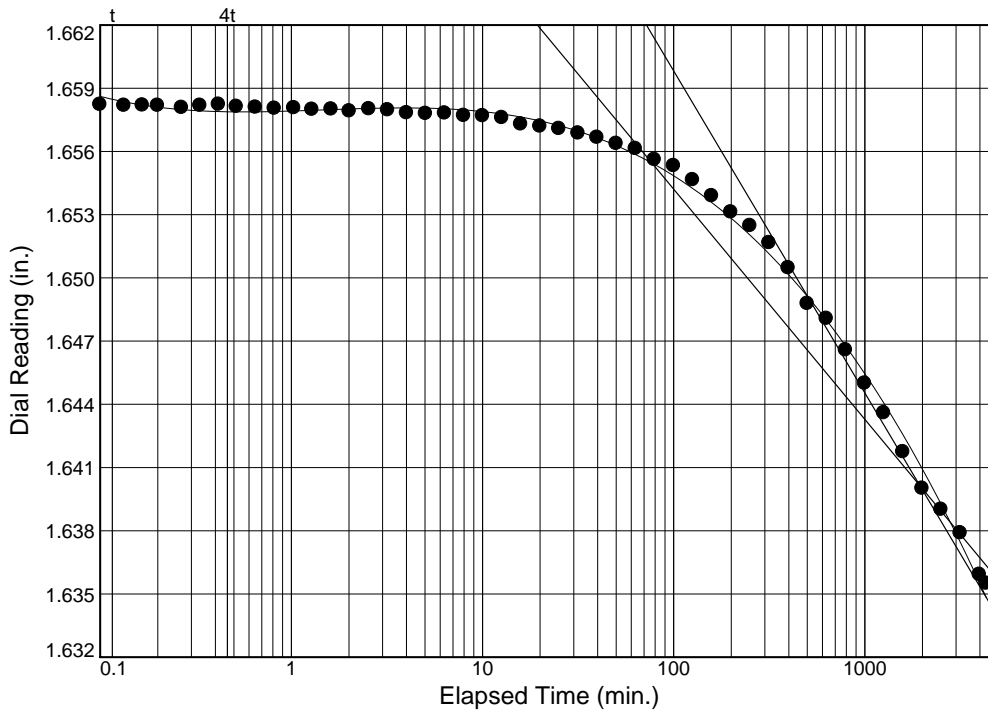
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-6

Depth: 5

Sample Number: 3B



Load No.= 23

Load= 0.06 tsf

$D_0 = 1.6591$

$D_{50} = 1.6496$

$D_{100} = 1.6401$

$T_{50} = 451.41$  min.

$C_v @ T_{50}$

0.000 ft.<sup>2</sup>/day

**CONSOLIDATION TEST DATA**

8/29/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST.  
BERNARD PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** B-6

**Depth:** 5

**Sample Number:** 3B

**Material Description:** W, xso g ORG CL w/ fw rts

**Liquid Limit:** 163

**Plasticity Index:** 123

**USCS:** OH

**Tested by:** BH

**Checked by:** RR

**Test Specimen Data**

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	49.18 g.	Spec. Gr. =	2.55	Wet w+t =	59.41 g.
Dry w+t =	18.42 g.	Est. Ht. Solids =	0.141 in.	Dry w+t =	48.33 g.
Tare Wt. =	0.00 g.	Init. V.R. =	4.265	Tare Wt. =	29.91 g.
Moisture =	167.0 %	Init. Sat. =	99.8 %	Moisture =	60.2 %
UNIT WEIGHT		TEST START		Dry Wt. = 18.42* g.	
Height =	0.741 in.	Height =	0.741 in.		
Diameter =	1.997 in.	Diameter =	1.997 in.		
Weight =	49.18 g.				
Dry Dens. =	30.2 pcf	* Final dry weight used as mineral solids weight			

**End-Of-Load Summary**

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C <sub>v</sub> (ft.2/day)	C <sub>α</sub>	Void Ratio	% Strain
start	1.23330	0.00000			4.265	
0.06	1.27780	0.04450		0.015	3.949	6.0 Compr.
0.12	1.33200	0.09870			3.564	13.3 Compr.
0.25	1.38000	0.14670		0.006	3.223	19.8 Compr.
0.50	1.45291	0.21961	0.008	0.012	2.705	29.6 Compr.
1.00	1.50766	0.27436	0.010	0.008	2.316	37.0 Compr.
2.00	1.56255	0.32925	0.003	0.011	1.926	44.4 Compr.
1.00	1.55813	0.32483			1.957	43.8 Compr.
0.25	1.53946	0.30616			2.090	41.3 Compr.
0.06	1.50183	0.26853	0.000		2.357	36.2 Compr.
0.12	1.50379	0.27049		0.001	2.343	36.5 Compr.
0.25	1.51202	0.27872	0.006	0.002	2.285	37.6 Compr.
0.50	1.52978	0.29648	0.006	0.005	2.159	40.0 Compr.
1.00	1.55070	0.31740	0.008	0.003	2.010	42.8 Compr.
2.00	1.57998	0.34668	0.006	0.008	1.802	46.8 Compr.
4.00	1.63276	0.39946	0.003	0.007	1.427	53.9 Compr.
8.00	1.67591	0.44261	0.003	0.009	1.120	59.7 Compr.
16.00	1.71617	0.48287	0.002	0.006	0.834	65.2 Compr.

**Eustis Engineering L.L.C.**

**End-Of-Load Summary (Continued)**

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	$C_v$ (ft.2/day)	$C_\alpha$	Void Ratio	% Strain
32.00	1.74463	0.51133	0.002	0.006	0.632	69.0 Compr.
16.00	1.73228	0.49898	0.004		0.720	67.3 Compr.
4.00	1.70696	0.47366			0.900	63.9 Compr.
1.00	1.68270	0.44940	0.000		1.072	60.6 Compr.
0.25	1.65871	0.42541			1.242	57.4 Compr.
0.06	1.63550	0.40220	0.000		1.407	54.3 Compr.

**Compression index ( $C_c$ ), tsf = 1.36    Preconsolidation pressure ( $P_p$ ), tsf = 0.2    Void ratio at  $P_p$  ( $e_m$ ) = 3.376**  
**Recompression index ( $C_r$ ) = 0.37**

Pressure: 0.06 tsf

**TEST READINGS**

Load No. 1

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.23330	11	0.7333	1.23381	21	7.9000	1.24826
2	0.0333	1.23346	12	0.9500	1.23419	22	9.9667	1.25114
3	0.0667	1.23338	13	1.2000	1.23492	23	12.5500	1.25319
4	0.1000	1.23344	14	1.5333	1.23564	24	15.8167	1.25555
5	0.1333	1.23332	15	1.9500	1.23670	25	19.9167	1.25825
6	0.1833	1.23348	16	2.4667	1.23781	26	25.1000	1.26191
7	0.2500	1.23350	17	3.1167	1.23872	27	31.6000	1.26673
8	0.3333	1.23357	18	3.9333	1.24109	28	39.7833	1.27160
9	0.4500	1.23347	19	4.9667	1.24373	29	50.1000	1.27431
10	0.5667	1.23367	20	6.2667	1.24611	30	60.2167	1.27780

**Void Ratio = 3.949    Compression = 6.0%**

Pressure: 0.12 tsf

**TEST READINGS**

Load No. 2

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.27830	15	2.1333	1.28236	29	50.2667	1.30994
2	0.2000	1.27875	16	2.6500	1.28301	30	63.2500	1.31275
3	0.2333	1.27892	17	3.3000	1.28369	31	79.5833	1.31620
4	0.2667	1.27912	18	4.1167	1.28476	32	100.1500	1.31996
5	0.3000	1.27932	19	5.1500	1.28560	33	126.0500	1.32274
6	0.3667	1.27976	20	6.4500	1.28698	34	158.6500	1.32529
7	0.4333	1.28003	21	8.0833	1.28850	35	199.6833	1.32750
8	0.5167	1.28043	22	10.1500	1.29052	36	251.3500	1.32909
9	0.6167	1.28092	23	12.7333	1.29302	37	316.4000	1.33084
10	0.7500	1.28132	24	16.0000	1.29593	38	398.2833	1.33153
11	0.9167	1.28151	25	20.1000	1.29933	39	501.3667	1.33282
12	1.1167	1.28161	26	25.2667	1.30247	40	631.1333	1.33280
13	1.3833	1.28163	27	31.7833	1.30474	41	794.5167	1.33220
14	1.7167	1.28197	28	39.9667	1.30800	42	1000.1833	1.33210

Pressure: 0.12 tsf

TEST READINGS (continued)

Load No. 2

No.	Elapsed Time	Dial Reading
43	1224.4667	1.33200

Void Ratio = 3.564 Compression = 13.3%

Pressure: 0.25 tsf

TEST READINGS

Load No. 3

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	1.33200	14	1.7167	1.34577	27	31.7833	1.36364
2	0.2167	1.34422	15	2.1333	1.34601	28	39.9667	1.36507
3	0.2500	1.34423	16	2.6500	1.34626	29	50.2833	1.36771
4	0.2833	1.34433	17	3.3000	1.34659	30	63.2667	1.37117
5	0.3167	1.34440	18	4.1167	1.34684	31	79.6000	1.37311
6	0.3667	1.34442	19	5.1500	1.34732	32	100.1667	1.37471
7	0.4333	1.34454	20	6.4500	1.34835	33	126.0667	1.37680
8	0.5167	1.34470	21	8.1000	1.34897	34	158.6667	1.37753
9	0.6333	1.34487	22	10.1500	1.34972	35	199.7000	1.37807
10	0.7500	1.34516	23	12.7500	1.35041	36	251.3667	1.37879
11	0.9167	1.34530	24	16.0000	1.35365	37	316.4000	1.37910
12	1.1333	1.34546	25	20.1167	1.35728	38	398.2833	1.38008
13	1.3833	1.34557	26	25.2833	1.36093	39	436.4667	1.38000

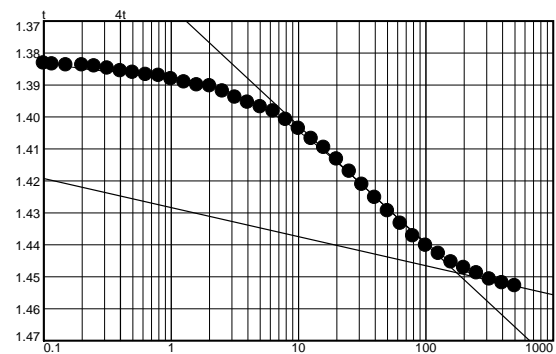
Void Ratio = 3.223 Compression = 19.8%

Pressure: 0.50 tsf

TEST READINGS

Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	1.38243	17	3.3000	1.39389
2	0.2167	1.38319	18	4.1167	1.39545
3	0.2333	1.38350	19	5.1500	1.39692
4	0.2667	1.38376	20	6.4500	1.39826
5	0.3167	1.38378	21	8.0833	1.40086
6	0.3667	1.38410	22	10.1333	1.40368
7	0.4333	1.38476	23	12.7333	1.40679
8	0.5167	1.38563	24	16.0000	1.40962
9	0.6167	1.38611	25	20.1000	1.41327
10	0.7500	1.38678	26	25.2667	1.41708
11	0.9167	1.38709	27	31.7833	1.42120
12	1.1167	1.38814	28	39.9667	1.42524
13	1.3833	1.38915	29	50.2667	1.42943
14	1.7167	1.39006	30	63.2500	1.43332
15	2.1333	1.39034	31	79.5833	1.43728
16	2.6500	1.39200	32	100.1667	1.44024



Pressure: 0.50 tsf

TEST READINGS (continued)

Load No. 4

No.	Elapsed Time	Dial Reading
33	126.0667	1.44280
34	158.6667	1.44543
35	199.7000	1.44721
36	251.3667	1.44891
37	316.4167	1.45083
38	398.2833	1.45200
39	501.3667	1.45291

Void Ratio = 2.705 Compression = 29.6%

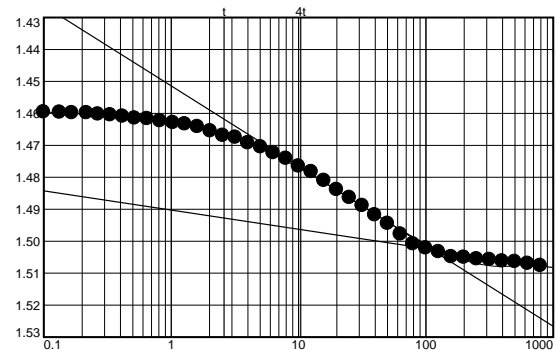
D<sub>0</sub> = 1.3782 D<sub>50</sub> = 1.4135 D<sub>100</sub> = 1.4487 C<sub>v</sub> at 19.10 min. = 0.008 ft.<sup>2</sup>/day C<sub>α</sub> = 0.012

Pressure: 1.00 tsf

TEST READINGS

Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.45291	22	10.1500	1.47655
2	0.2000	1.45960	23	12.7333	1.47831
3	0.2333	1.45969	24	16.0000	1.48108
4	0.2667	1.45987	25	20.1000	1.48389
5	0.3167	1.45987	26	25.2667	1.48638
6	0.3667	1.46027	27	31.7833	1.48894
7	0.4333	1.46053	28	39.9667	1.49187
8	0.5167	1.46095	29	50.2833	1.49451
9	0.6167	1.46152	30	63.2500	1.49782
10	0.7500	1.46171	31	79.6000	1.50089
11	0.9167	1.46239	32	100.1667	1.50217
12	1.1333	1.46298	33	126.0667	1.50333
13	1.3833	1.46339	34	158.6667	1.50495
14	1.7167	1.46421	35	199.7000	1.50508
15	2.1333	1.46559	36	251.3667	1.50562
16	2.6500	1.46696	37	316.4167	1.50581
17	3.3000	1.46752	38	398.2833	1.50626
18	4.1167	1.46931	39	501.3667	1.50647
19	5.1500	1.47054	40	631.1500	1.50706
20	6.4500	1.47240	41	794.5167	1.50766
21	8.0833	1.47418			



Void Ratio = 2.316 Compression = 37.0%

D<sub>0</sub> = 1.4558 D<sub>50</sub> = 1.4792 D<sub>100</sub> = 1.5025 C<sub>v</sub> at 12.47 min. = 0.010 ft.<sup>2</sup>/day C<sub>α</sub> = 0.008

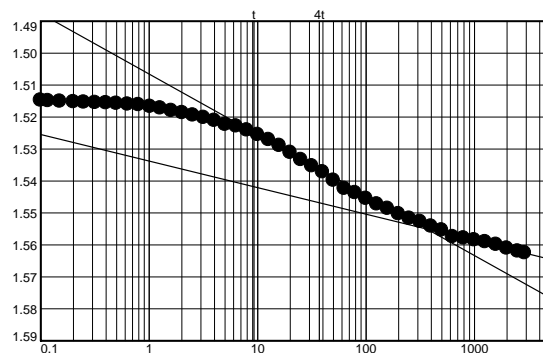


Pressure: 2.00 tsf

TEST READINGS

Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.51409	25	20.1000	1.53114
2	0.2000	1.51477	26	25.2667	1.53342
3	0.2167	1.51495	27	31.7667	1.53535
4	0.2500	1.51513	28	39.9667	1.53719
5	0.3000	1.51528	29	50.2667	1.53985
6	0.3500	1.51540	30	63.2500	1.54240
7	0.4167	1.51553	31	79.5833	1.54376
8	0.5000	1.51563	32	100.1500	1.54553
9	0.6000	1.51579	33	126.0500	1.54728
10	0.7333	1.51601	34	158.6500	1.54866
11	0.9000	1.51617	35	199.6833	1.55031
12	1.1167	1.51674	36	251.3500	1.55171
13	1.3667	1.51724	37	316.4000	1.55272
14	1.7000	1.51805	38	398.2833	1.55420
15	2.1167	1.51873	39	501.3667	1.55539
16	2.6333	1.51943	40	631.1333	1.55753
17	3.2833	1.52020	41	794.5000	1.55795
18	4.1000	1.52111	42	1000.1833	1.55850
19	5.1333	1.52234	43	1259.1167	1.55906
20	6.4333	1.52285	44	1585.0833	1.55993
21	8.0833	1.52411	45	1995.4667	1.56110
22	10.1333	1.52552	46	2512.1000	1.56202
23	12.7333	1.52711	47	2909.4167	1.56255
24	15.9833	1.52896			



Void Ratio = 1.926 Compression = 44.4%

$D_0 = 1.5161$   $D_{50} = 1.5356$   $D_{100} = 1.5551$   $C_v$  at 33.83 min. = 0.003 ft.<sup>2</sup>/day  $C_\alpha = 0.011$

Pressure: 1.00 tsf

TEST READINGS

Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	1.56247	11	0.7667	1.56021	21	6.4667	1.55906
2	0.1167	1.55971	12	0.9333	1.55943	22	8.1000	1.55892
3	0.2167	1.55897	13	1.1333	1.56009	23	10.1500	1.55895
4	0.2500	1.56019	14	1.4000	1.55974	24	12.7500	1.55878
5	0.2833	1.56020	15	1.7167	1.56004	25	16.0167	1.55881
6	0.3167	1.55991	16	2.1333	1.55942	26	20.1167	1.55882
7	0.3667	1.55997	17	2.6667	1.55978	27	25.2833	1.55877
8	0.4333	1.56003	18	3.3167	1.55915	28	31.7833	1.55862
9	0.5333	1.55992	19	4.1333	1.55909	29	39.9833	1.55866
10	0.6333	1.55994	20	5.1667	1.55911	30	50.2833	1.55872

Pressure: 1.00 tsf

TEST READINGS (continued)

Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
31	63.2667	1.55873	41	631.1500	1.55806
32	79.6000	1.55883	42	794.5333	1.55808
33	100.1833	1.55864	43	1000.2000	1.55804
34	126.0667	1.55840	44	1259.1333	1.55810
35	158.6667	1.55867	45	1444.1833	1.55813
36	199.7000	1.55838			
37	251.3667	1.55832			
38	316.4167	1.55843			
39	398.3000	1.55834			
40	501.3833	1.55809			

Void Ratio = 1.957    Compression = 43.8%

Pressure: 0.25 tsf

TEST READINGS

Load No. 8

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	1.55611	15	2.1333	1.55427	29	50.2833	1.54532
2	0.2167	1.55621	16	2.6500	1.55388	30	63.2667	1.54457
3	0.2333	1.55615	17	3.3167	1.55349	31	79.6000	1.54425
4	0.2667	1.55605	18	4.1333	1.55309	32	100.1667	1.54362
5	0.3167	1.55577	19	5.1667	1.55268	33	126.0667	1.54284
6	0.3667	1.55578	20	6.4667	1.55237	34	158.6667	1.54280
7	0.4333	1.55562	21	8.1000	1.55152	35	199.7000	1.54203
8	0.5167	1.55551	22	10.1500	1.55048	36	251.3667	1.54111
9	0.6333	1.55530	23	12.7500	1.54994	37	316.4167	1.54054
10	0.7500	1.55517	24	16.0000	1.54915	38	398.2833	1.54036
11	0.9333	1.55495	25	20.1167	1.54829	39	501.3667	1.53957
12	1.1333	1.55479	26	25.2833	1.54747	40	508.0000	1.53946
13	1.4000	1.55454	27	31.7833	1.54672			
14	1.7167	1.55454	28	39.9833	1.54611			

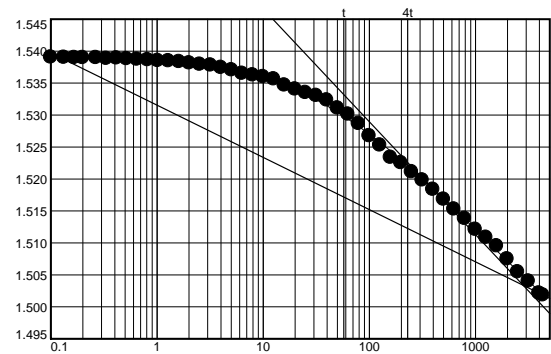
Void Ratio = 2.090    Compression = 41.3%

Pressure: 0.06 tsf

TEST READINGS

Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.53915	26	25.2667	1.53348
2	0.2000	1.53904	27	31.7667	1.53301
3	0.2333	1.53898	28	39.9667	1.53233
4	0.2667	1.53897	29	50.2667	1.53107
5	0.3000	1.53895	30	63.2500	1.53012
6	0.3667	1.53895	31	79.5833	1.52865
7	0.4333	1.53882	32	100.1667	1.52674
8	0.5167	1.53889	33	126.0500	1.52525
9	0.6167	1.53879	34	158.6500	1.52336
10	0.7500	1.53869	35	199.7000	1.52251
11	0.9167	1.53861	36	251.3667	1.52110
12	1.1167	1.53848	37	316.4000	1.51979
13	1.3833	1.53846	38	398.2833	1.51834
14	1.7167	1.53832	39	501.3667	1.51679
15	2.1167	1.53811	40	631.1333	1.51524
16	2.6333	1.53791	41	794.5167	1.51378
17	3.3000	1.53780	42	1000.1833	1.51210
18	4.1167	1.53742	43	1259.1167	1.51084
19	5.1500	1.53702	44	1585.0833	1.50949
20	6.4500	1.53649	45	1995.4667	1.50746
21	8.0833	1.53623	46	2512.1000	1.50543
22	10.1333	1.53597	47	3162.5000	1.50399
23	12.7333	1.53560	48	3981.3000	1.50212
24	16.0000	1.53464	49	4320.2167	1.50183
25	20.1000	1.53402			



Void Ratio = 2.357    Compression = 36.2%

$D_0 = 1.5375$      $D_{50} = 1.5204$      $D_{100} = 1.5033$      $C_v$  at 297.40 min. = 0.000 ft.<sup>2</sup>/day

Pressure: 0.12 tsf

TEST READINGS

Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.49995	16	2.6333	1.50084	31	79.5833	1.50198
2	0.2000	1.49996	17	3.2833	1.50103	32	100.1500	1.50225
3	0.2333	1.50003	18	4.1000	1.50103	33	126.0333	1.50226
4	0.2667	1.50009	19	5.1333	1.50117	34	158.6500	1.50234
5	0.3000	1.50018	20	6.4333	1.50126	35	199.6833	1.50237
6	0.3667	1.50027	21	8.0833	1.50132	36	251.3500	1.50290
7	0.4167	1.50030	22	10.1333	1.50146	37	316.3833	1.50349
8	0.5000	1.50026	23	12.7333	1.50148	38	398.2667	1.50331
9	0.6167	1.50043	24	15.9833	1.50162	39	501.3500	1.50323
10	0.7333	1.50055	25	20.1000	1.50164	40	631.1333	1.50278
11	0.9000	1.50059	26	25.2667	1.50170	41	794.5000	1.50329
12	1.1167	1.50061	27	31.7667	1.50180	42	1000.1833	1.50343
13	1.3833	1.50067	28	39.9500	1.50188	43	1259.1167	1.50363
14	1.7000	1.50066	29	50.2667	1.50181	44	1272.0167	1.50379
15	2.1167	1.50080	30	63.2333	1.50196			

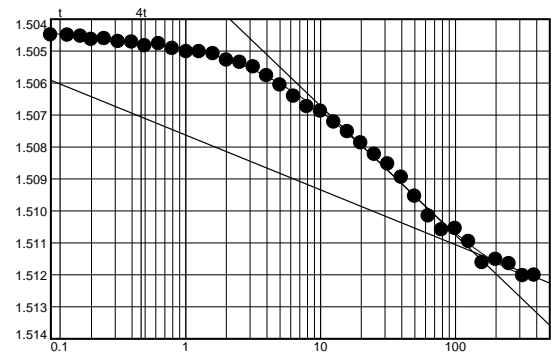
Void Ratio = 2.343    Compression = 36.5%

Pressure: 0.25 tsf

TEST READINGS

Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.50444	20	6.4333	1.50642
2	0.2000	1.50450	21	8.0667	1.50675
3	0.2333	1.50451	22	10.1333	1.50689
4	0.2667	1.50454	23	12.7167	1.50723
5	0.3000	1.50464	24	15.9833	1.50753
6	0.3500	1.50462	25	20.0833	1.50788
7	0.4167	1.50471	26	25.2667	1.50824
8	0.5000	1.50473	27	31.7667	1.50854
9	0.6000	1.50484	28	39.9500	1.50896
10	0.7333	1.50478	29	50.2667	1.50955
11	0.9000	1.50493	30	63.2500	1.51017
12	1.1167	1.50503	31	79.5833	1.51060
13	1.3667	1.50503	32	100.1500	1.51056
14	1.7000	1.50509	33	126.0500	1.51097
15	2.1167	1.50529	34	158.6500	1.51163
16	2.6333	1.50536	35	199.6833	1.51153
17	3.2833	1.50550	36	251.3500	1.51166
18	4.1000	1.50578	37	316.4000	1.51204
19	5.1333	1.50607	38	384.9167	1.51202



Void Ratio = 2.285    Compression = 37.6%

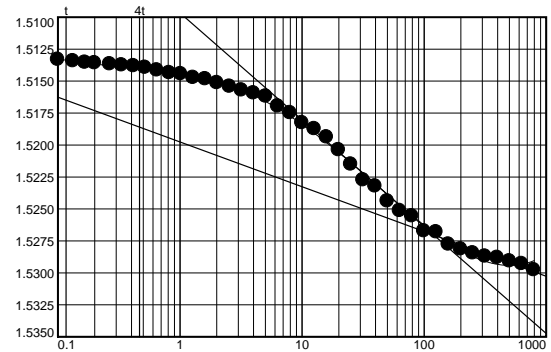
$D_0 = 1.5042$      $D_{50} = 1.5077$      $D_{100} = 1.5113$      $C_v$  at 17.41 min. = 0.006 ft.<sup>2</sup>/day     $C_\alpha = 0.002$

Pressure: 0.50 tsf

TEST READINGS

Load No. 12

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.51320	22	10.1333	1.51827
2	0.2000	1.51332	23	12.7333	1.51874
3	0.2333	1.51343	24	16.0000	1.51939
4	0.2667	1.51354	25	20.1000	1.52038
5	0.3000	1.51359	26	25.2667	1.52151
6	0.3667	1.51367	27	31.7667	1.52274
7	0.4333	1.51376	28	39.9500	1.52323
8	0.5167	1.51381	29	50.2667	1.52440
9	0.6167	1.51395	30	63.2500	1.52514
10	0.7500	1.51415	31	79.5833	1.52556
11	0.9167	1.51435	32	100.1500	1.52672
12	1.1167	1.51445	33	126.0500	1.52682
13	1.3833	1.51473	34	158.6500	1.52777
14	1.7167	1.51484	35	199.6833	1.52815
15	2.1167	1.51514	36	251.3500	1.52846
16	2.6500	1.51542	37	316.4000	1.52872
17	3.3000	1.51571	38	398.2833	1.52882
18	4.1167	1.51595	39	501.3667	1.52908
19	5.1500	1.51619	40	631.1333	1.52929
20	6.4500	1.51696	41	794.5167	1.52978
21	8.0833	1.51749			



Void Ratio = 2.159 Compression = 40.0%

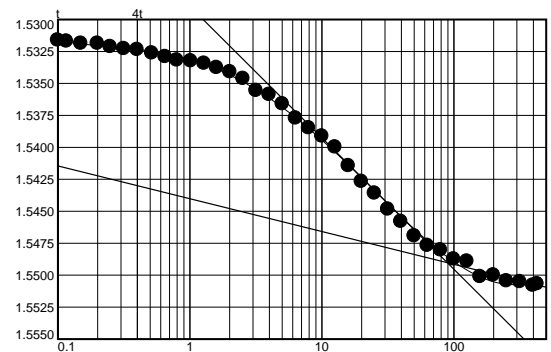
D<sub>0</sub> = 1.5128 D<sub>50</sub> = 1.5199 D<sub>100</sub> = 1.5270 C<sub>v</sub> at 16.42 min. = 0.006 ft.<sup>2</sup>/day C<sub>α</sub> = 0.005

Pressure: 1.00 tsf

TEST READINGS

Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.53105	14	1.7000	1.53377
2	0.2000	1.53163	15	2.1167	1.53412
3	0.2167	1.53172	16	2.6333	1.53464
4	0.2500	1.53188	17	3.2833	1.53558
5	0.3000	1.53187	18	4.1000	1.53589
6	0.3500	1.53214	19	5.1333	1.53662
7	0.4167	1.53230	20	6.4333	1.53773
8	0.5000	1.53237	21	8.0667	1.53850
9	0.6167	1.53264	22	10.1333	1.53914
10	0.7500	1.53293	23	12.7167	1.54000
11	0.9000	1.53320	24	15.9833	1.54145
12	1.1167	1.53326	25	20.0833	1.54269
13	1.3833	1.53345	26	25.2500	1.54361



Pressure: 1.00 tsf

TEST READINGS (continued)

Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
27	31.7500	1.54486	37	316.3833	1.55052
28	39.9500	1.54582	38	398.2667	1.55081
29	50.2500	1.54694	39	429.7667	1.55070
30	63.2333	1.54769			
31	79.5667	1.54804			
32	100.1333	1.54875			
33	126.0333	1.54893			
34	158.6333	1.55013			
35	199.6667	1.55000			
36	251.3333	1.55046			

Void Ratio = 2.010 Compression = 42.8%

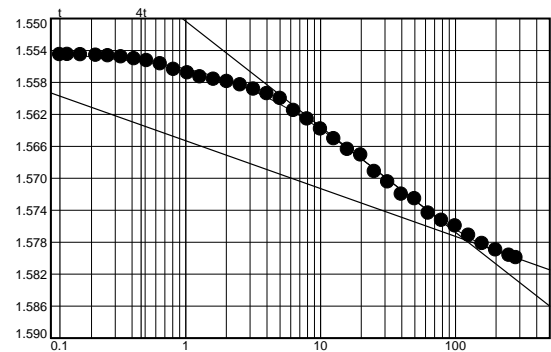
$D_0 = 1.5310$   $D_{50} = 1.5400$   $D_{100} = 1.5490$   $C_v$  at 11.45 min. = 0.008 ft.<sup>2</sup>/day  $C_\alpha = 0.003$

Pressure: 2.00 tsf

TEST READINGS

Load No. 14

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.55390	20	6.4500	1.56155
2	0.2167	1.55456	21	8.0833	1.56263
3	0.2333	1.55455	22	10.1500	1.56387
4	0.2667	1.55458	23	12.7333	1.56509
5	0.3167	1.55463	24	16.0000	1.56643
6	0.3667	1.55472	25	20.1000	1.56712
7	0.4333	1.55483	26	25.2833	1.56919
8	0.5167	1.55508	27	31.7833	1.57051
9	0.6167	1.55531	28	39.9667	1.57204
10	0.7500	1.55572	29	50.2833	1.57259
11	0.9167	1.55641	30	63.2500	1.57441
12	1.1333	1.55685	31	79.6000	1.57531
13	1.3833	1.55735	32	100.1667	1.57599
14	1.7167	1.55766	33	126.0667	1.57716
15	2.1333	1.55793	34	158.6500	1.57821
16	2.6500	1.55835	35	199.7000	1.57901
17	3.3000	1.55889	36	251.3667	1.57967
18	4.1167	1.55946	37	283.1833	1.57998
19	5.1500	1.56005			



Void Ratio = 1.802 Compression = 46.8%

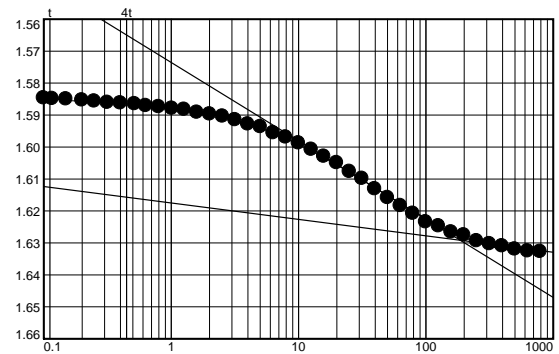
$D_0 = 1.5531$   $D_{50} = 1.5654$   $D_{100} = 1.5777$   $C_v$  at 13.50 min. = 0.006 ft.<sup>2</sup>/day  $C_\alpha = 0.008$

Pressure: 4.00 tsf

TEST READINGS

Load No. 15

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	1.58399	22	10.1500	1.59881
2	0.2167	1.58473	23	12.7333	1.60083
3	0.2333	1.58490	24	16.0000	1.60300
4	0.2667	1.58504	25	20.1000	1.60500
5	0.3167	1.58533	26	25.2667	1.60772
6	0.3667	1.58570	27	31.7833	1.60989
7	0.4333	1.58611	28	39.9667	1.61317
8	0.5167	1.58625	29	50.2833	1.61593
9	0.6333	1.58653	30	63.2500	1.61839
10	0.7500	1.58710	31	79.6000	1.62084
11	0.9167	1.58745	32	100.1667	1.62350
12	1.1333	1.58793	33	126.0667	1.62476
13	1.3833	1.58828	34	158.6667	1.62664
14	1.7167	1.58923	35	199.7000	1.62757
15	2.1333	1.58974	36	251.3667	1.62944
16	2.6500	1.59041	37	316.4000	1.63031
17	3.3000	1.59154	38	398.3000	1.63098
18	4.1333	1.59288	39	501.3833	1.63201
19	5.1500	1.59372	40	631.1500	1.63260
20	6.4500	1.59565	41	790.0667	1.63276
21	8.0833	1.59695			



Void Ratio = 1.427 Compression = 53.9%

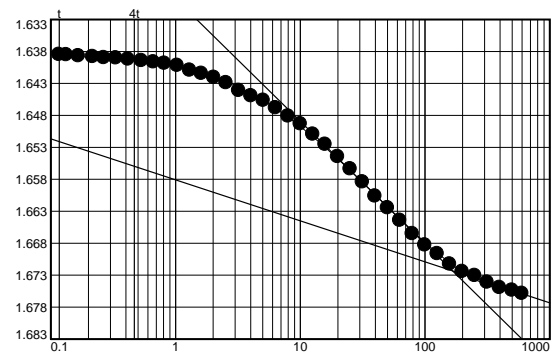
$D_0 = 1.5829$   $D_{50} = 1.6060$   $D_{100} = 1.6292$   $C_v$  at 20.82 min. = 0.003 ft.<sup>2</sup>/day  $C_\alpha = 0.007$

Pressure: 8.00 tsf

TEST READINGS

Load No. 16

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.63791	14	1.7167	1.64149
2	0.2167	1.63850	15	2.1333	1.64209
3	0.2333	1.63854	16	2.6500	1.64292
4	0.2667	1.63873	17	3.3167	1.64414
5	0.3167	1.63885	18	4.1333	1.64498
6	0.3667	1.63900	19	5.1667	1.64568
7	0.4333	1.63907	20	6.4667	1.64687
8	0.5167	1.63924	21	8.1000	1.64816
9	0.6333	1.63947	22	10.1500	1.64937
10	0.7667	1.63967	23	12.7500	1.65099
11	0.9167	1.63988	24	16.0167	1.65258
12	1.1333	1.64021	25	20.1167	1.65450
13	1.4000	1.64098	26	25.2833	1.65641



Pressure: 8.00 tsf

TEST READINGS (continued)

Load No. 16

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
27	31.7833	1.65847	37	316.4167	1.67415
28	39.9833	1.66065	38	398.3167	1.67497
29	50.3000	1.66251	39	501.4000	1.67540
30	63.2667	1.66446	40	602.1667	1.67591
31	79.6167	1.66653			
32	100.1833	1.66832			
33	126.0833	1.66969			
34	158.6667	1.67132			
35	199.7167	1.67247			
36	251.3833	1.67310			

Void Ratio = 1.120 Compression = 59.7%

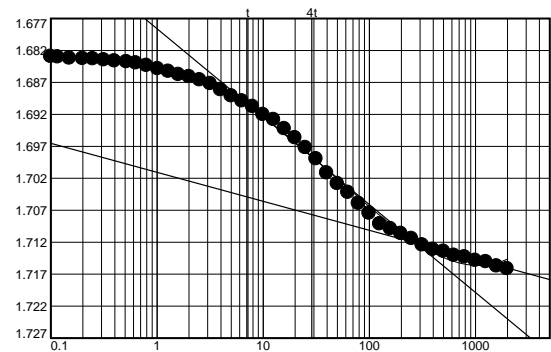
$D_0 = 1.6371$   $D_{50} = 1.6547$   $D_{100} = 1.6723$   $C_v$  at 19.81 min. = 0.003 ft.<sup>2</sup>/day  $C_\alpha = 0.009$

Pressure: 16.00 tsf

TEST READINGS

Load No. 17

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.68241	24	15.9833	1.69426
2	0.2000	1.68298	25	20.0833	1.69569
3	0.2167	1.68305	26	25.2667	1.69724
4	0.2500	1.68324	27	31.7667	1.69899
5	0.3000	1.68330	28	39.9500	1.70122
6	0.3500	1.68336	29	50.2667	1.70286
7	0.4167	1.68350	30	63.2500	1.70425
8	0.5000	1.68367	31	79.5833	1.70595
9	0.6167	1.68381	32	100.1500	1.70752
10	0.7333	1.68399	33	126.0500	1.70916
11	0.9000	1.68440	34	158.6500	1.70991
12	1.1167	1.68490	35	199.6833	1.71069
13	1.3833	1.68529	36	251.3500	1.71147
14	1.7000	1.68581	37	316.4000	1.71248
15	2.1167	1.68615	38	398.2833	1.71316
16	2.6333	1.68666	39	501.3667	1.71346
17	3.2833	1.68722	40	631.1333	1.71410
18	4.1000	1.68820	41	794.5167	1.71434
19	5.1333	1.68916	42	1000.1833	1.71489
20	6.4333	1.68994	43	1259.1167	1.71509
21	8.0833	1.69082	44	1585.1000	1.71578
22	10.1333	1.69205	45	1995.4667	1.71617
23	12.7333	1.69285			



Void Ratio = 0.834 Compression = 65.2%

$D_0 = 1.6831$   $D_{50} = 1.6976$   $D_{100} = 1.7121$   $C_v$  at 24.71 min. = 0.002 ft.<sup>2</sup>/day  $C_\alpha = 0.006$

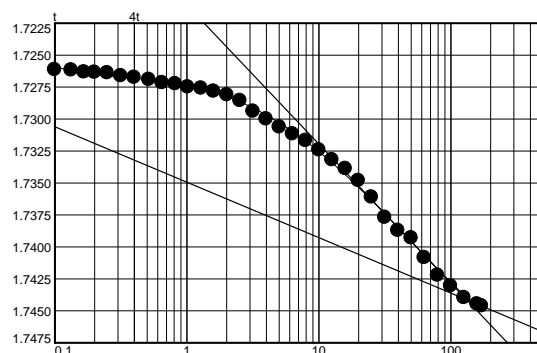


Pressure: 32.00 tsf

TEST READINGS

Load No. 18

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.72564	19	5.1333	1.73063
2	0.2000	1.72615	20	6.4333	1.73117
3	0.2333	1.72618	21	8.0667	1.73169
4	0.2667	1.72634	22	10.1333	1.73243
5	0.3000	1.72636	23	12.7167	1.73320
6	0.3500	1.72640	24	15.9833	1.73389
7	0.4167	1.72663	25	20.0833	1.73482
8	0.5000	1.72675	26	25.2500	1.73613
9	0.6167	1.72692	27	31.7667	1.73771
10	0.7500	1.72718	28	39.9500	1.73872
11	0.9167	1.72725	29	50.2667	1.73932
12	1.1167	1.72750	30	63.2333	1.74086
13	1.3833	1.72760	31	79.5833	1.74223
14	1.7000	1.72784	32	100.1500	1.74306
15	2.1167	1.72812	33	126.0500	1.74398
16	2.6333	1.72857	34	158.6500	1.74448
17	3.2833	1.72941	35	171.8000	1.74463
18	4.1000	1.73000			



Void Ratio = 0.632 Compression = 69.0%

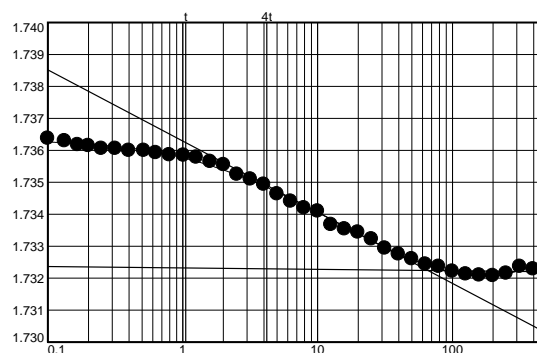
$D_0 = 1.7250$   $D_{50} = 1.7346$   $D_{100} = 1.7441$   $C_v$  at 16.62 min. = 0.002 ft.<sup>2</sup>/day  $C_{\alpha} = 0.006$

Pressure: 16.00 tsf

TEST READINGS

Load No. 19

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.73690	17	3.2833	1.73509
2	0.2000	1.73637	18	4.1000	1.73493
3	0.2333	1.73629	19	5.1333	1.73463
4	0.2667	1.73617	20	6.4333	1.73440
5	0.3000	1.73614	21	8.0667	1.73419
6	0.3500	1.73605	22	10.1333	1.73409
7	0.4167	1.73605	23	12.7167	1.73367
8	0.5000	1.73599	24	15.9833	1.73353
9	0.6167	1.73599	25	20.0833	1.73343
10	0.7333	1.73592	26	25.2500	1.73322
11	0.9000	1.73585	27	31.7667	1.73293
12	1.1167	1.73584	28	39.9500	1.73275
13	1.3667	1.73578	29	50.2667	1.73260
14	1.7000	1.73564	30	63.2500	1.73243
15	2.1167	1.73554	31	79.5833	1.73236
16	2.6333	1.73524	32	100.1500	1.73221



Pressure: 16.00 tsf

TEST READINGS (continued)

Load No. 19

No.	Elapsed Time	Dial Reading
33	126.0500	1.73212
34	158.6500	1.73209
35	199.6833	1.73207
36	251.3500	1.73215
37	316.3833	1.73236
38	398.2667	1.73228

Void Ratio = 0.720 Compression = 67.3%

D<sub>0</sub> = 1.7366 D<sub>50</sub> = 1.7344 D<sub>100</sub> = 1.7322 C<sub>v</sub> at 6.63 min. = 0.004 ft.<sup>2</sup>/day

Pressure: 4.00 tsf

TEST READINGS

Load No. 20

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.72332	16	2.6167	1.72066	31	79.5667	1.71189
2	0.2000	1.72323	17	3.2833	1.72048	32	100.1333	1.71089
3	0.2167	1.72303	18	4.1000	1.71999	33	126.0333	1.71036
4	0.2500	1.72294	19	5.1333	1.71975	34	158.6333	1.70994
5	0.3000	1.72282	20	6.4333	1.71933	35	199.6667	1.70912
6	0.3500	1.72267	21	8.0667	1.71904	36	251.3333	1.70849
7	0.4167	1.72257	22	10.1167	1.71865	37	316.3667	1.70819
8	0.5000	1.72247	23	12.7167	1.71794	38	398.2500	1.70772
9	0.6000	1.72228	24	15.9667	1.71724	39	501.3333	1.70737
10	0.7333	1.72218	25	20.0833	1.71640	40	631.1000	1.70727
11	0.9000	1.72193	26	25.2500	1.71578	41	794.4833	1.70712
12	1.1000	1.72169	27	31.7500	1.71502	42	1000.1667	1.70668
13	1.3667	1.72154	28	39.9333	1.71444	43	1259.1000	1.70663
14	1.7000	1.72120	29	50.2500	1.71403	44	1585.0667	1.70696
15	2.1000	1.72087	30	63.2333	1.71288			

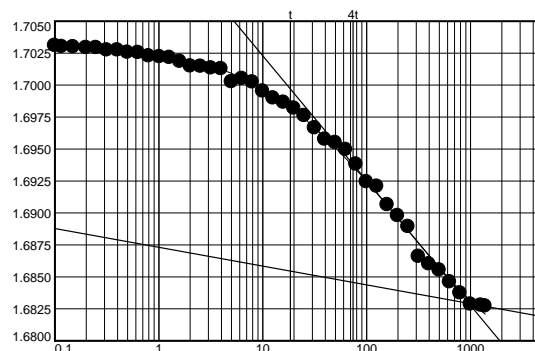
Void Ratio = 0.900 Compression = 63.9%

Pressure: 1.00 tsf

TEST READINGS

Load No. 21

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	1.70343	23	12.7333	1.69898
2	0.2167	1.70308	24	16.0000	1.69863
3	0.2333	1.70300	25	20.1000	1.69818
4	0.2667	1.70298	26	25.2667	1.69759
5	0.3167	1.70292	27	31.7833	1.69664
6	0.3667	1.70291	28	39.9667	1.69575
7	0.4333	1.70272	29	50.2667	1.69548
8	0.5167	1.70272	30	63.2500	1.69495
9	0.6167	1.70255	31	79.6000	1.69379
10	0.7500	1.70253	32	100.1667	1.69242
11	0.9167	1.70227	33	126.0500	1.69207
12	1.1333	1.70220	34	158.6500	1.69062
13	1.3833	1.70215	35	199.7000	1.68978
14	1.7167	1.70184	36	251.3667	1.68892
15	2.1333	1.70147	37	316.4000	1.68658
16	2.6500	1.70146	38	398.2833	1.68600
17	3.3000	1.70132	39	501.3667	1.68551
18	4.1167	1.70126	40	631.1333	1.68459
19	5.1500	1.70024	41	794.5167	1.68372
20	6.4500	1.70050	42	1000.2000	1.68284
21	8.0833	1.70023	43	1259.1333	1.68276
22	10.1500	1.69952	44	1383.2333	1.68270



Void Ratio = 1.072 Compression = 60.6%

$D_0 = 1.7028$   $D_{50} = 1.6929$   $D_{100} = 1.6829$   $C_v$  at 89.88 min. = 0.000 ft.<sup>2</sup>/day

Pressure: 0.25 tsf

TEST READINGS

Load No. 22

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.68187	13	1.3833	1.68101	25	20.1000	1.67874
2	0.2000	1.68106	14	1.7000	1.68095	26	25.2667	1.67842
3	0.2333	1.68115	15	2.1167	1.68080	27	31.7667	1.67772
4	0.2667	1.68176	16	2.6333	1.68068	28	39.9500	1.67687
5	0.3000	1.68004	17	3.2833	1.68054	29	50.2667	1.67607
6	0.3667	1.68046	18	4.1000	1.68041	30	63.2500	1.67565
7	0.4167	1.68113	19	5.1333	1.68018	31	79.5833	1.67522
8	0.5000	1.68118	20	6.4333	1.67999	32	100.1500	1.67465
9	0.6167	1.68115	21	8.0667	1.67982	33	126.0500	1.67355
10	0.7333	1.68115	22	10.1333	1.67965	34	158.6500	1.67230
11	0.9000	1.68099	23	12.7333	1.67946	35	199.6833	1.67101
12	1.1167	1.68100	24	15.9833	1.67920	36	251.3500	1.66933

Pressure: 0.25 tsf

TEST READINGS (continued)

Load No. 22

No.	Elapsed Time	Dial Reading
37	316.4000	1.66810
38	398.2833	1.66668
39	501.3667	1.66465
40	631.1333	1.66343
41	794.5167	1.66208
42	1000.1833	1.66075
43	1259.1167	1.65992
44	1486.4667	1.65871

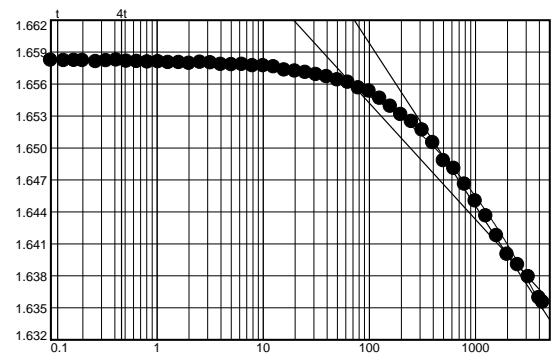
Void Ratio = 1.242    Compression = 57.4%

Pressure: 0.06 tsf

TEST READINGS

Load No. 23

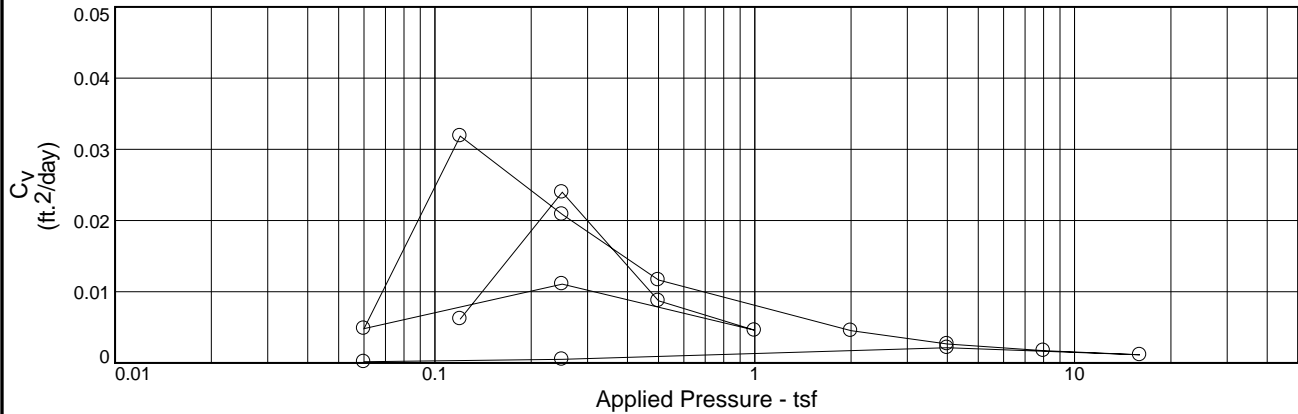
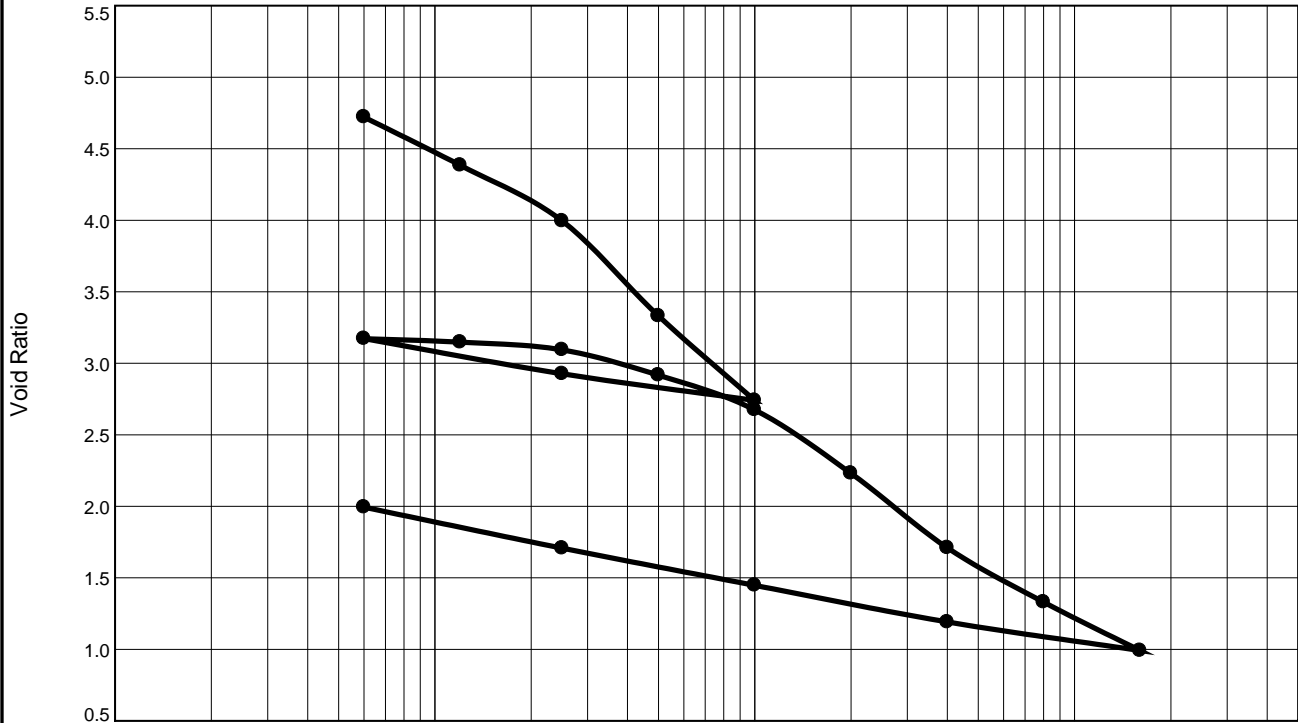
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	1.65816	26	25.2667	1.65707
2	0.2000	1.65822	27	31.7667	1.65686
3	0.2333	1.65818	28	39.9667	1.65666
4	0.2667	1.65819	29	50.2667	1.65637
5	0.3000	1.65818	30	63.2500	1.65613
6	0.3667	1.65808	31	79.5833	1.65561
7	0.4333	1.65817	32	100.1500	1.65531
8	0.5167	1.65823	33	126.0500	1.65464
9	0.6167	1.65812	34	158.6500	1.65389
10	0.7500	1.65809	35	199.6833	1.65311
11	0.9167	1.65804	36	251.3500	1.65247
12	1.1333	1.65806	37	316.4000	1.65166
13	1.3833	1.65799	38	398.2833	1.65047
14	1.7167	1.65800	39	501.3667	1.64877
15	2.1167	1.65791	40	631.1333	1.64806
16	2.6500	1.65801	41	794.5167	1.64657
17	3.3000	1.65796	42	1000.1833	1.64499
18	4.1167	1.65782	43	1259.1167	1.64359
19	5.1500	1.65779	44	1585.0833	1.64174
20	6.4500	1.65781	45	1995.4667	1.64000
21	8.0833	1.65770	46	2512.1000	1.63901
22	10.1500	1.65768	47	3162.5167	1.63789
23	12.7333	1.65759	48	3981.3167	1.63592
24	16.0000	1.65729	49	4320.0833	1.63550
25	20.1000	1.65719			



Void Ratio = 1.407    Compression = 54.3%


D<sub>0</sub> = 1.6591    D<sub>50</sub> = 1.6496    D<sub>100</sub> = 1.6401    C<sub>v</sub> at 451.41 min. = 0.000 ft.<sup>2</sup>/day

# CONSOLIDATION TEST REPORT



Natural								
Saturation	Moisture	Dry Dens. (pcf)	LL	PI	Sp. Gr.	P <sub>c</sub> (tsf)	C <sub>c</sub>	Initial Void Ratio
99.8 %	188.0 %	27.4	145	82	2.55	0.3	1.92	4.804

<b>MATERIAL DESCRIPTION</b>		<b>USCS</b>	<b>AASHTO</b>
W, xso g & dk g ORG CL w/ fw wd		OH	

<b>Project No.</b> 24762 <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE <b>Source of Sample:</b> B-7 <b>Depth:</b> 3 <b>Sample Number:</b> 2B	<b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE <b>Remarks:</b>
	

**Tested By:** BH \_\_\_\_\_ **Checked By:** RR \_\_\_\_\_

Figure

# Dial Reading vs. Time

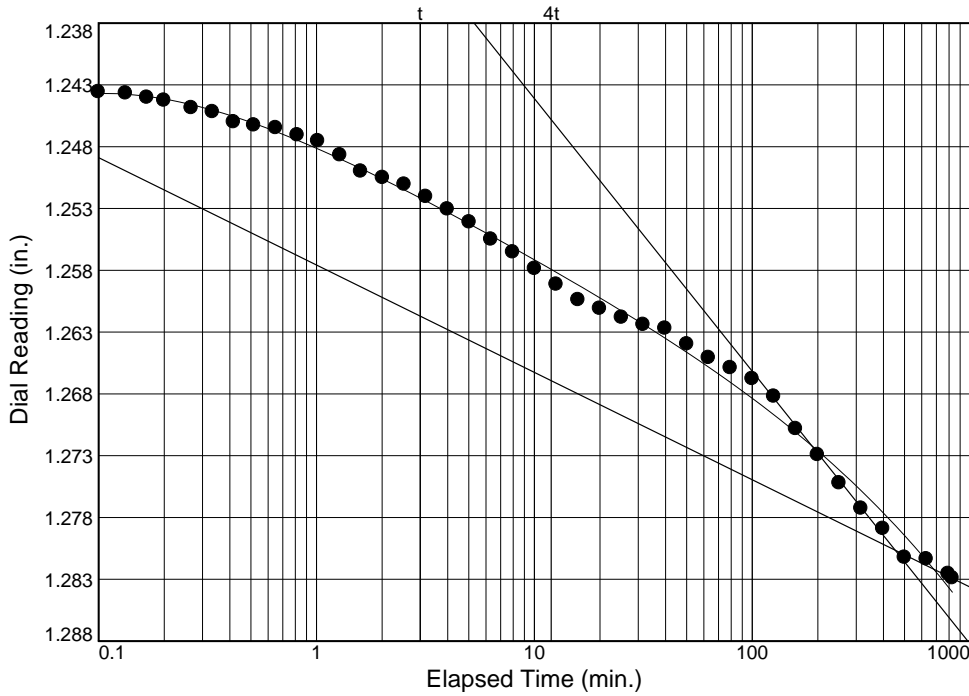
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-7

Depth: 3

Sample Number: 2B



Load No.= 2

Load= 0.12 tsf

$D_0 = 1.2464$

$D_{50} = 1.2635$

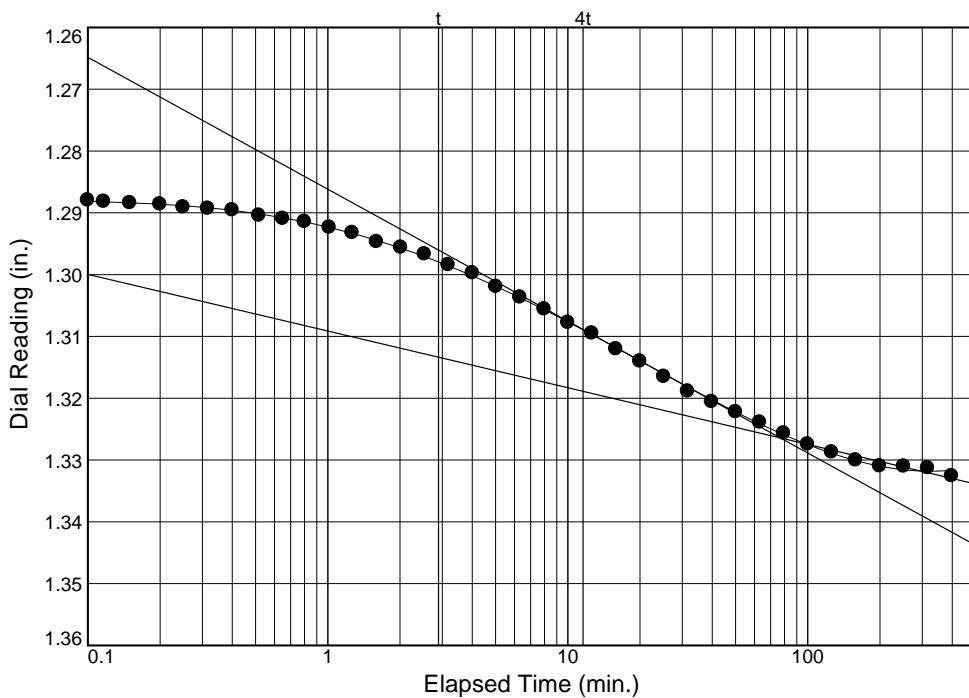
$D_{100} = 1.2807$

$T_{50} = 39.98 \text{ min.}$

$C_v @ T_{50}$

0.006 ft.<sup>2</sup>/day

$C_\alpha = 0.012$



Load No.= 3

Load= 0.25 tsf

$D_0 = 1.2870$

$D_{50} = 1.3067$

$D_{100} = 1.3264$

$T_{50} = 8.97 \text{ min.}$

$C_v @ T_{50}$

0.024 ft.<sup>2</sup>/day

$C_\alpha = 0.012$

# Dial Reading vs. Time

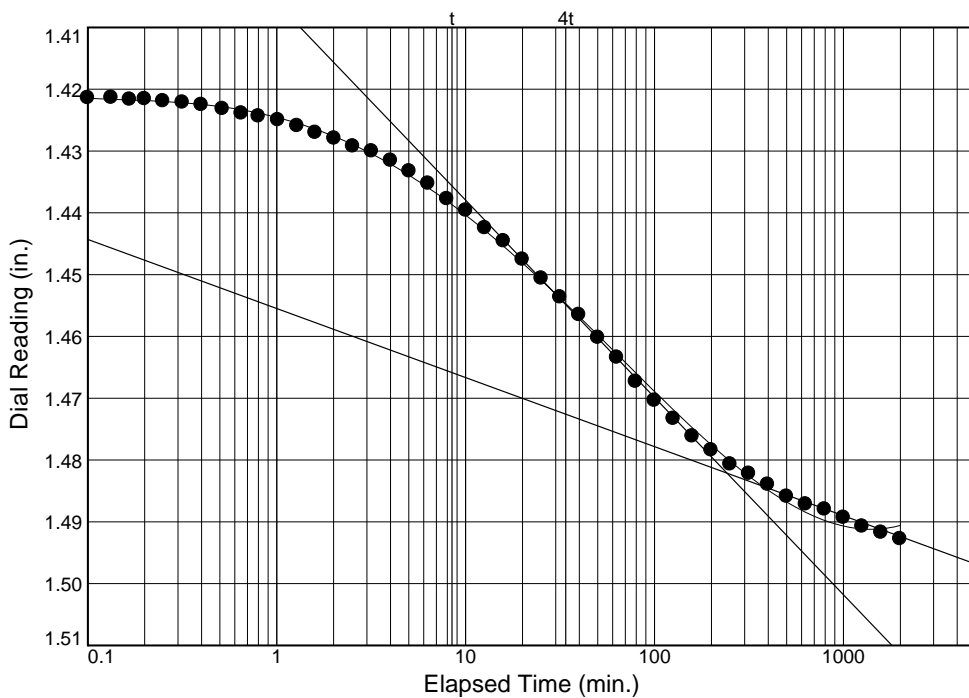
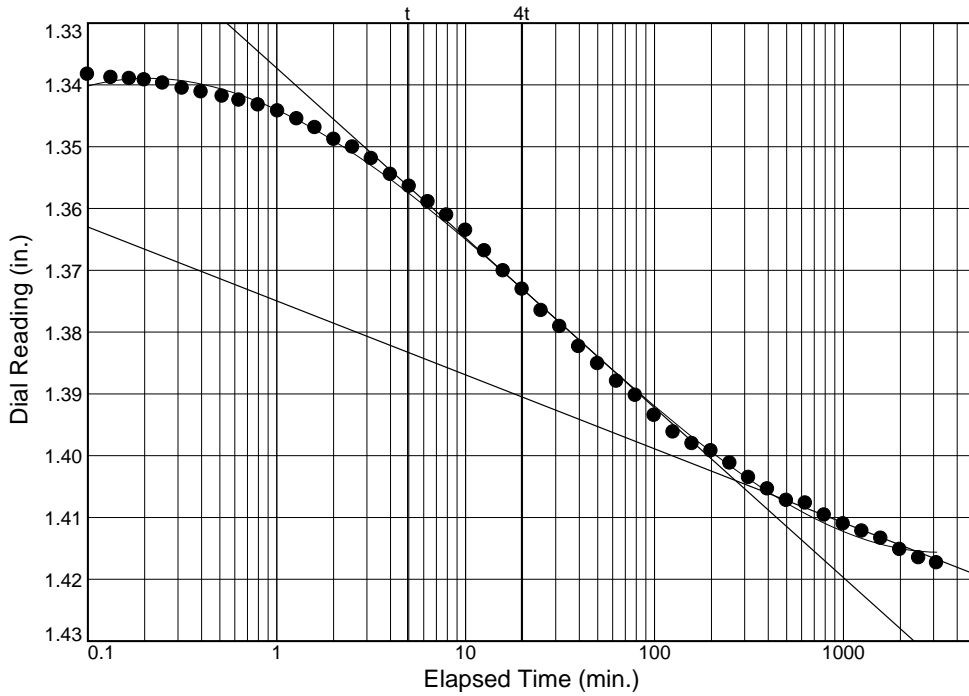
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-7

Depth: 3

Sample Number: 2B



# Dial Reading vs. Time

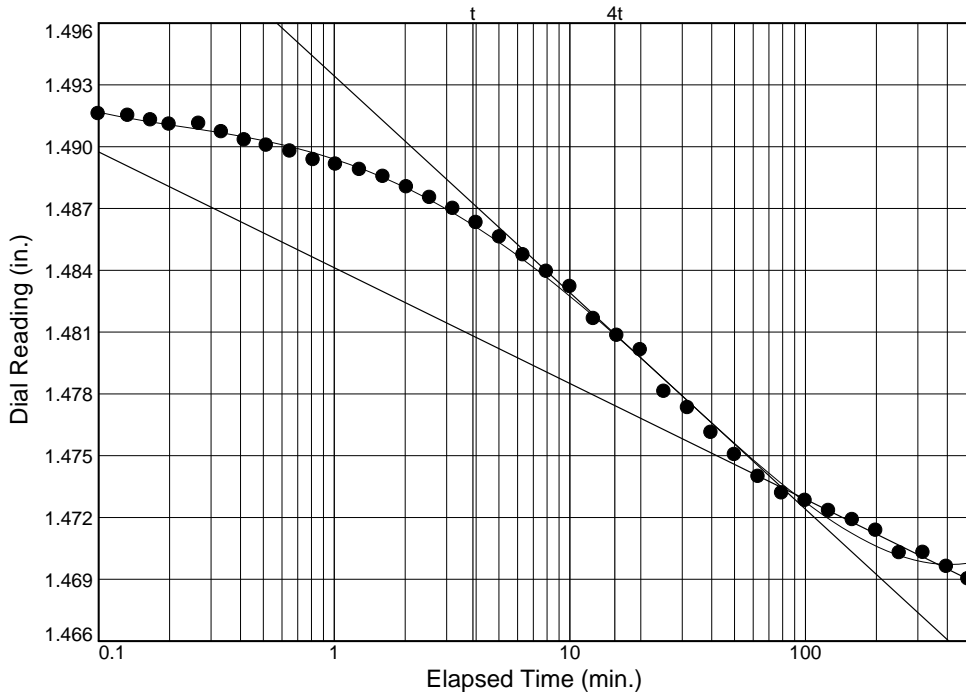
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-7

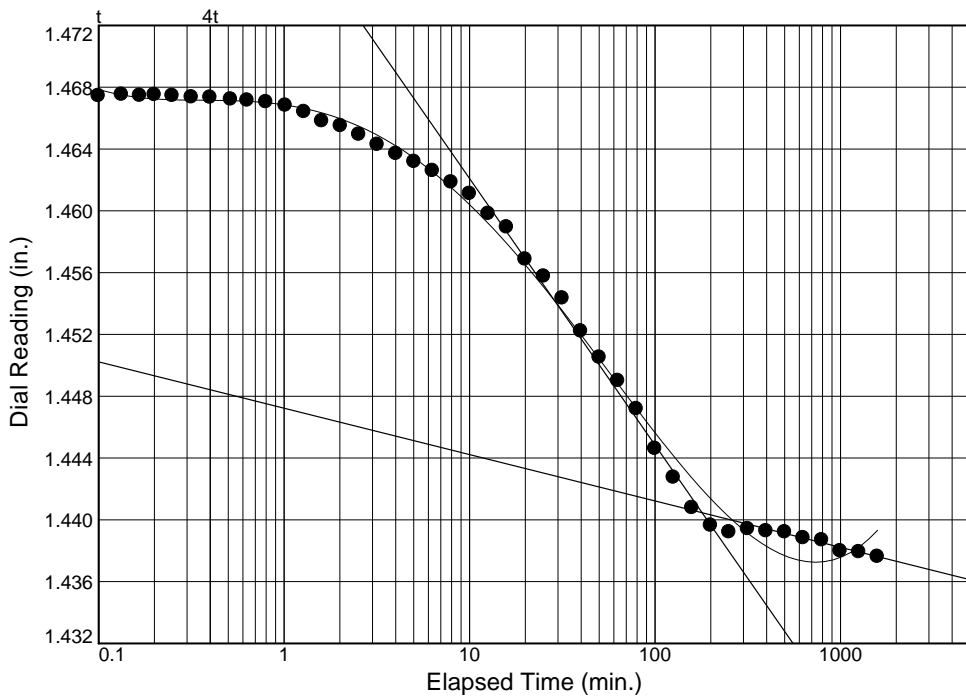
Depth: 3

Sample Number: 2B



Load No.= 6  
 Load= 0.25 tsf  
 $D_0 = 1.4915$   
 $D_{50} = 1.4825$   
 $D_{100} = 1.4734$   
 $T_{50} = 10.67 \text{ min.}$

$C_v @ T_{50}$   
 0.011 ft.<sup>2</sup>/day



Load No.= 7  
 Load= 0.06 tsf  
 $D_0 = 1.4686$   
 $D_{50} = 1.4545$   
 $D_{100} = 1.4405$   
 $T_{50} = 27.33 \text{ min.}$

$C_v @ T_{50}$   
 0.005 ft.<sup>2</sup>/day



# Dial Reading vs. Time

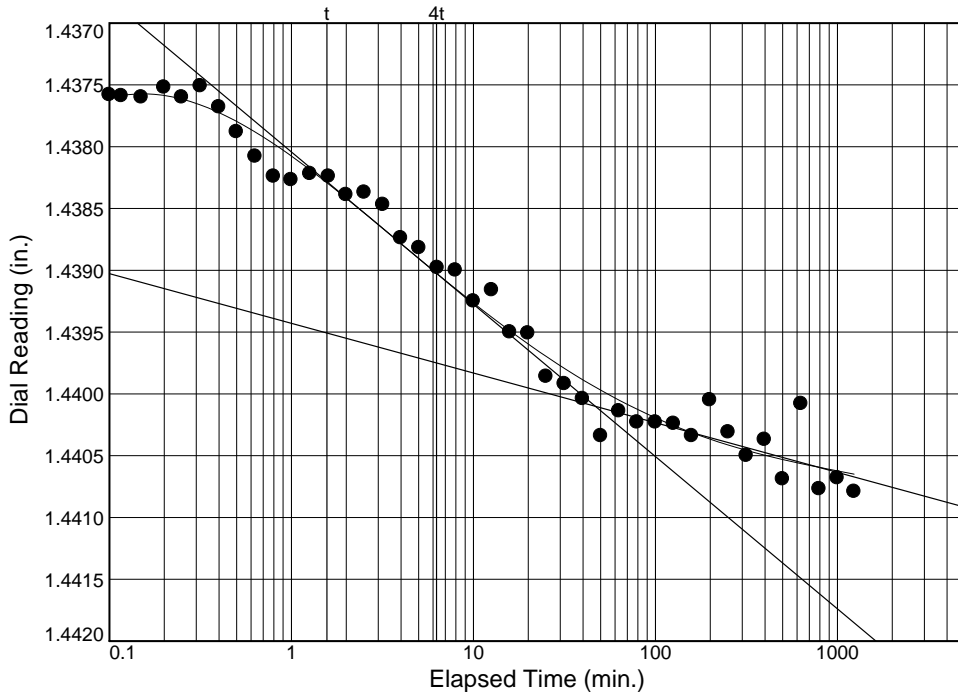
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-7

Depth: 3

Sample Number: 2B



Load No.= 8

Load= 0.12 tsf

$D_0 = 1.4376$

$D_{50} = 1.4388$

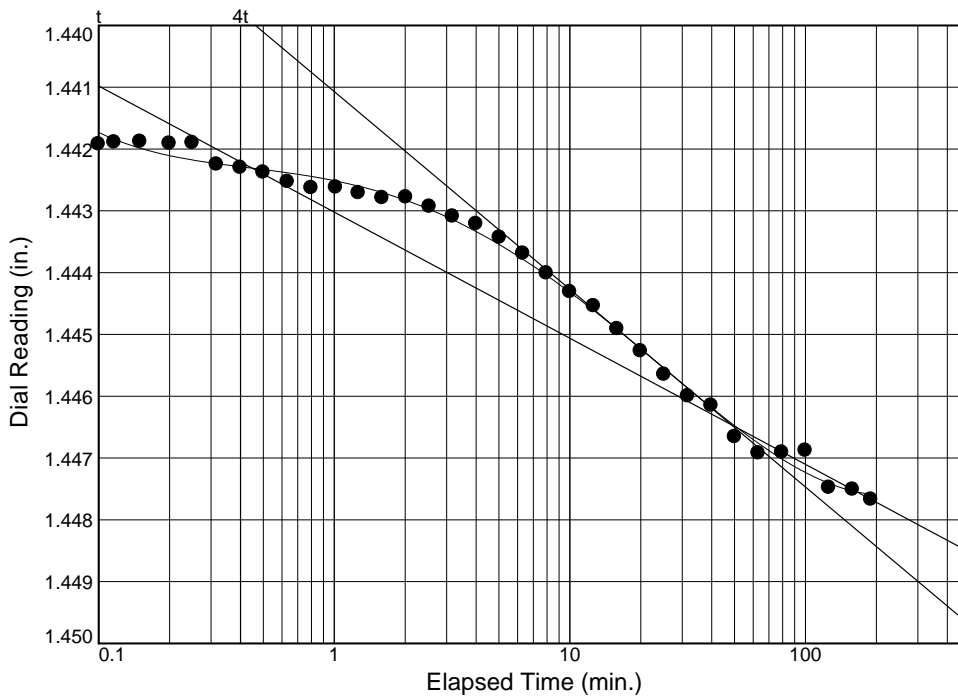
$D_{100} = 1.4401$

$T_{50} = 4.36$  min.

$C_v @ T_{50}$

0.032 ft.<sup>2</sup>/day

$C_\alpha = 0.001$



Load No.= 9

Load= 0.25 tsf

$D_0 = 1.4412$

$D_{50} = 1.4438$

$D_{100} = 1.4465$

$T_{50} = 6.52$  min.

$C_v @ T_{50}$

0.021 ft.<sup>2</sup>/day

$C_\alpha = 0.003$

# Dial Reading vs. Time

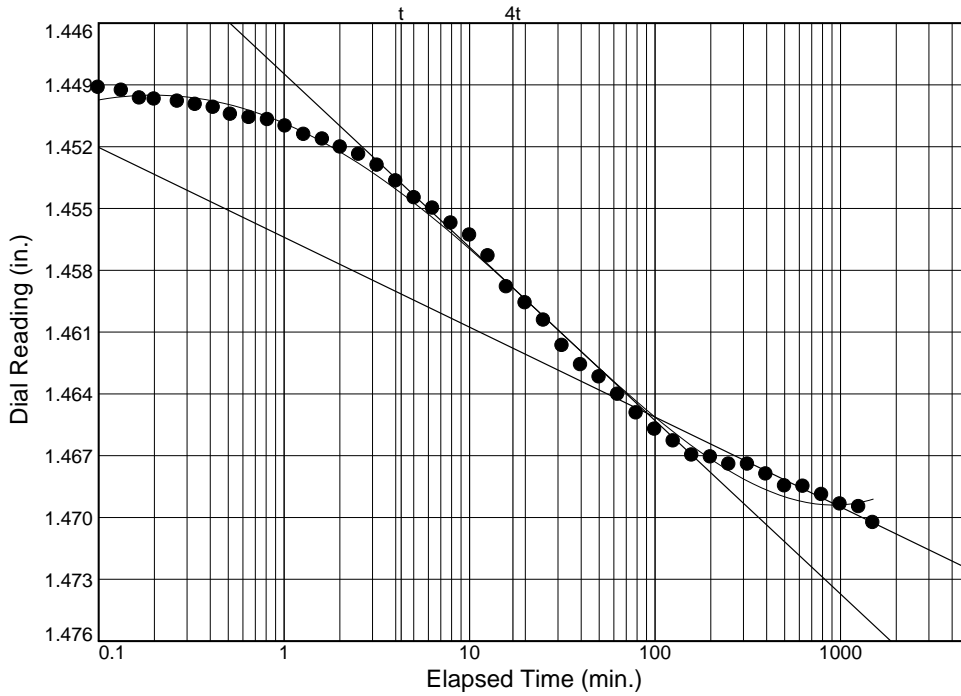
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-7

Depth: 3

Sample Number: 2B



Load No.= 10

Load= 0.50 tsf

$D_0 = 1.4497$

$D_{50} = 1.4573$

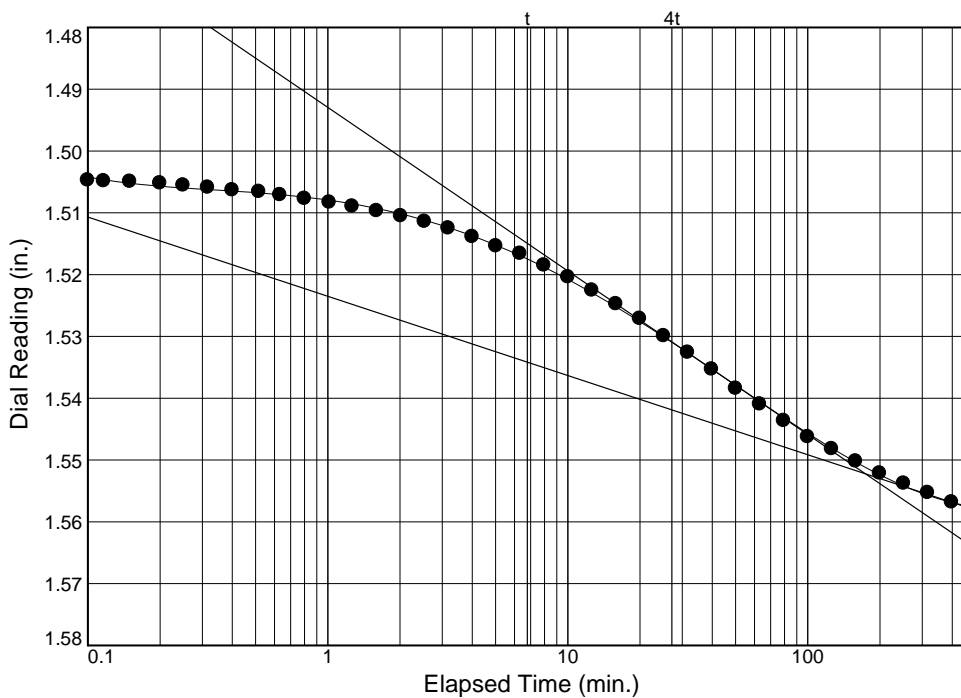
$D_{100} = 1.4649$

$T_{50} = 11.02$  min.

$C_v @ T_{50}$

0.012 ft.<sup>2</sup>/day

$C_\alpha = 0.006$



Load No.= 12

Load= 2.00 tsf

$D_0 = 1.5040$

$D_{50} = 1.5281$

$D_{100} = 1.5522$

$T_{50} = 20.97$  min.

$C_v @ T_{50}$

0.005 ft.<sup>2</sup>/day

$C_\alpha = 0.017$

# Dial Reading vs. Time

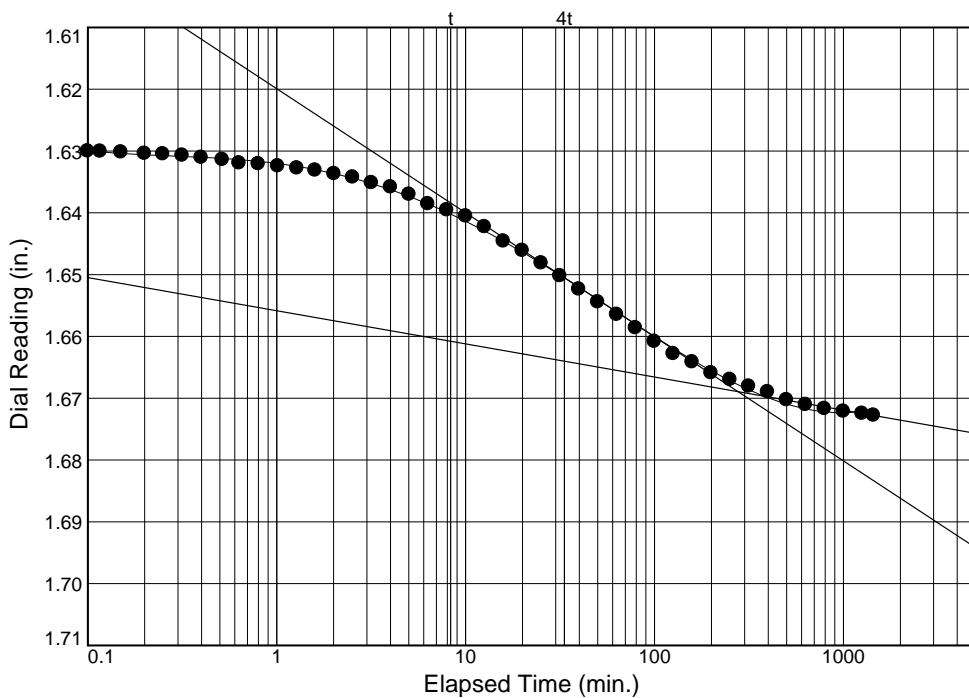
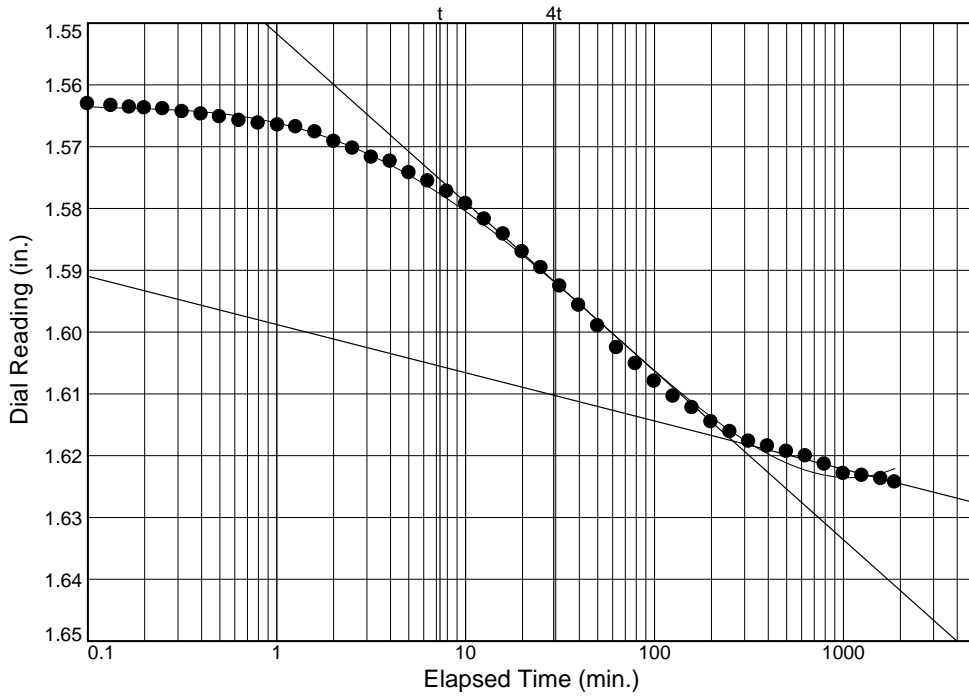
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-7

Depth: 3

Sample Number: 2B



# Dial Reading vs. Time

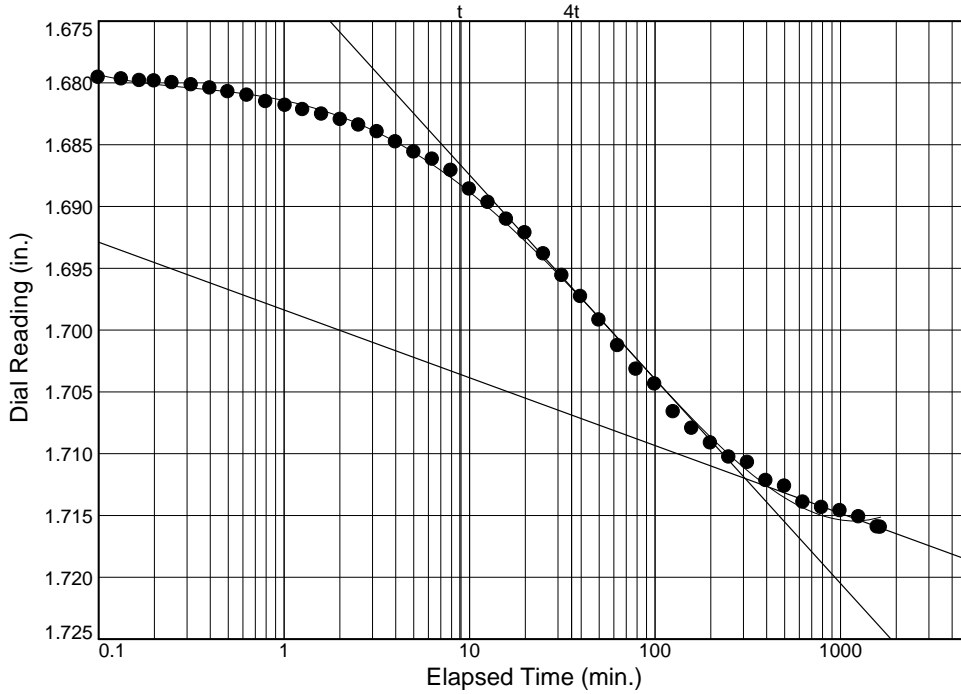
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-7

Depth: 3

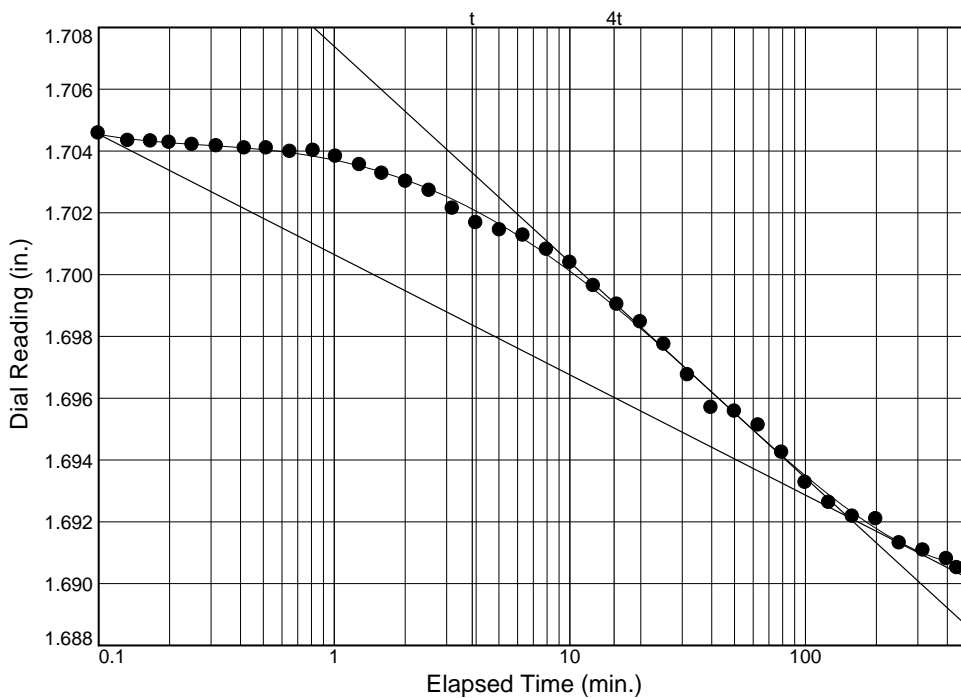
Sample Number: 2B



Load No.= 15  
 Load= 16.00 tsf  
 $D_0 = 1.6798$   
 $D_{50} = 1.6959$   
 $D_{100} = 1.7120$   
 $T_{50} = 32.06$  min.

$C_v @ T_{50}$   
 0.001 ft.<sup>2</sup>/day

$C_\alpha = 0.007$



Load No.= 16  
 Load= 4.00 tsf  
 $D_0 = 1.7053$   
 $D_{50} = 1.6987$   
 $D_{100} = 1.6922$   
 $T_{50} = 17.02$  min.

$C_v @ T_{50}$   
 0.002 ft.<sup>2</sup>/day

# Dial Reading vs. Time

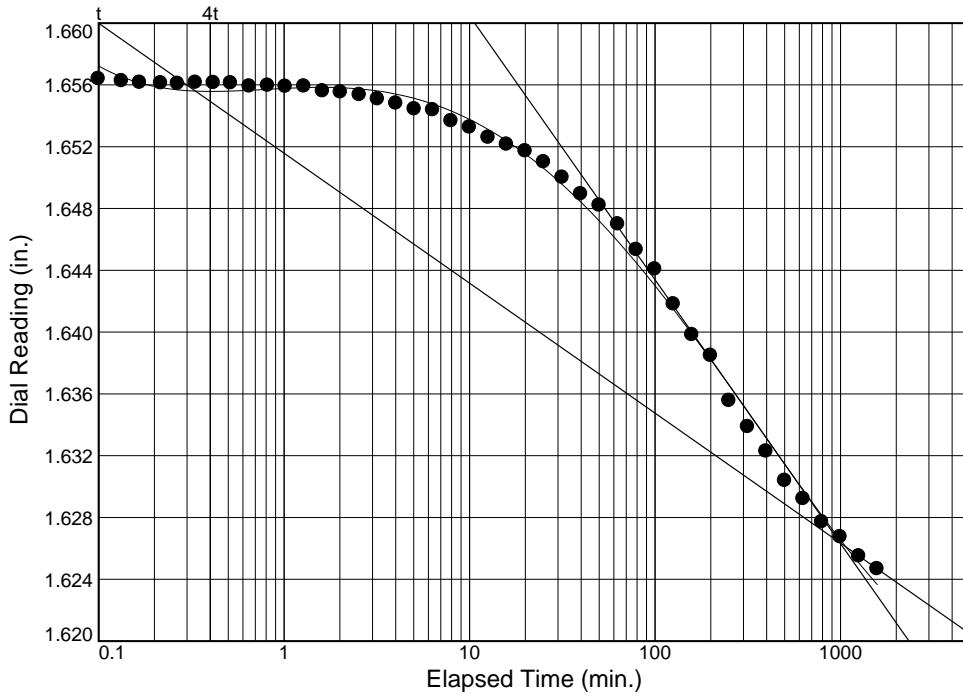
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: B-7

Depth: 3

Sample Number: 2B



Load No.= 18

Load= 0.25 tsf

$D_0 = 1.6589$

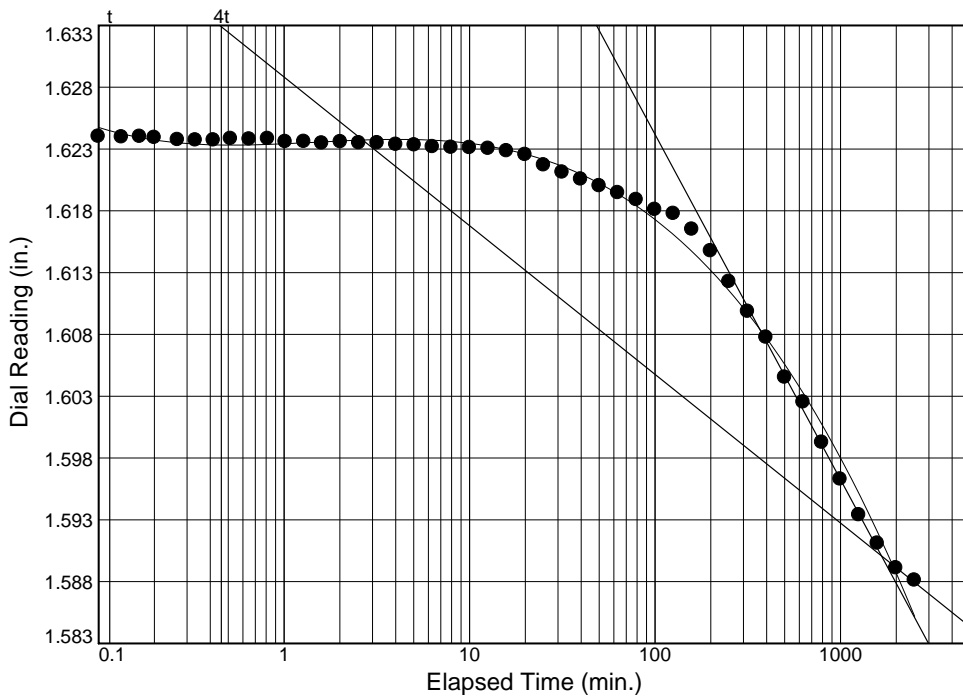
$D_{50} = 1.6426$

$D_{100} = 1.6264$

$T_{50} = 105.98$  min.

$C_v @ T_{50}$

0.001 ft.<sup>2</sup>/day



Load No.= 19

Load= 0.06 tsf

$D_0 = 1.6256$

$D_{50} = 1.6079$

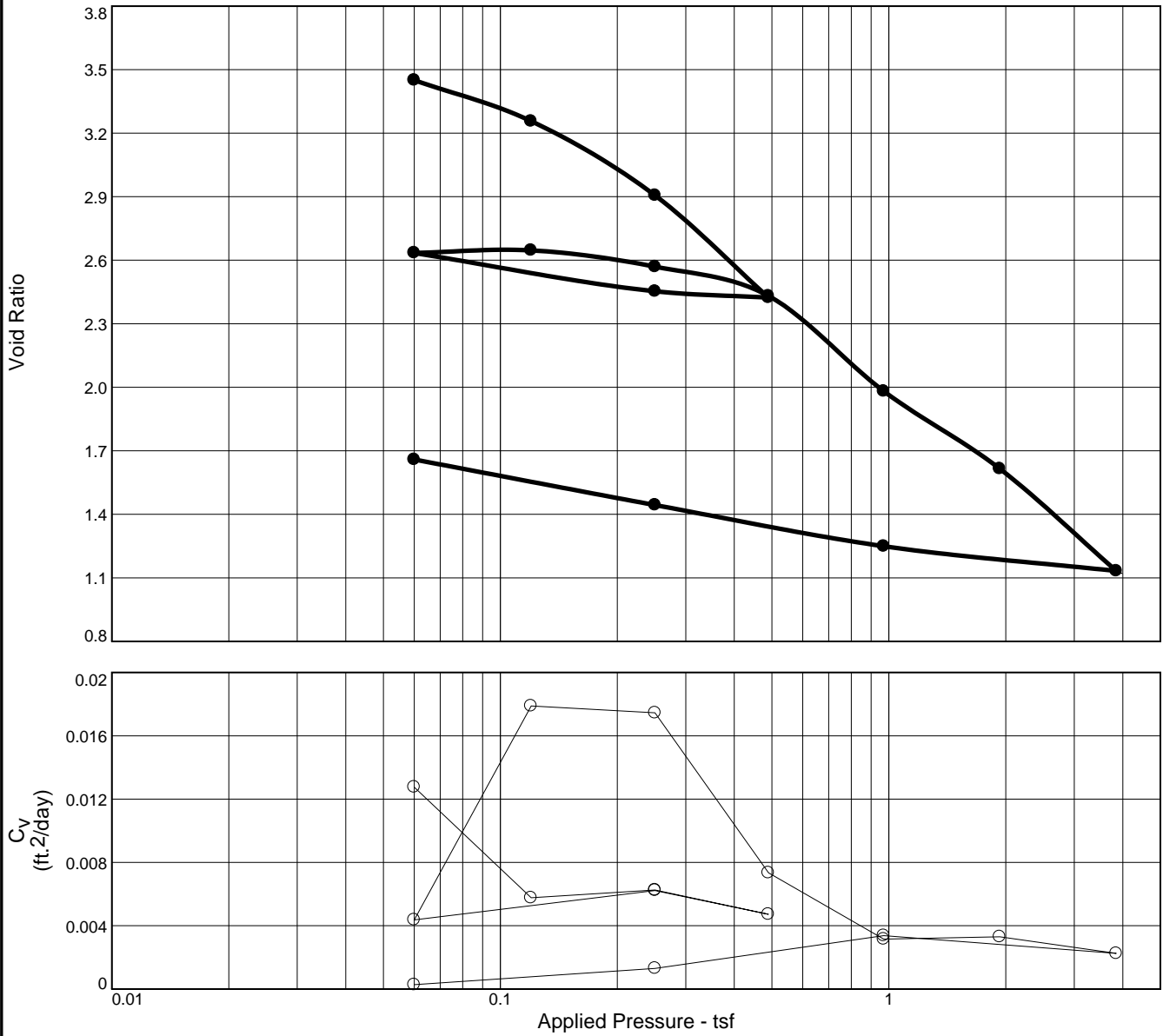
$D_{100} = 1.5901$

$T_{50} = 391.47$  min.

$C_v @ T_{50}$

0.000 ft.<sup>2</sup>/day

# CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	$P_c$ (tsf)	$C_c$	Initial Void Ratio
Saturation	Moisture							
99.0 %	137.5 %	35.2	172	123	2.55	0.1	1.32	3.541

<b>MATERIAL DESCRIPTION</b>							<b>USCS</b>	<b>AASHTO</b>
W, xso g & br ORG CL w/ fw dec wd & rts							OH	

<b>Project No.</b> 24762 <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE <b>Source of Sample:</b> R-2 <b>Depth:</b> 9	<b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL <b>Sample Number:</b> 5B	<b>Remarks:</b>   <div style="text-align: right;"><b>Figure</b></div>
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**Tested By:** BH \_\_\_\_\_ **Checked By:** RR \_\_\_\_\_

# Dial Reading vs. Time

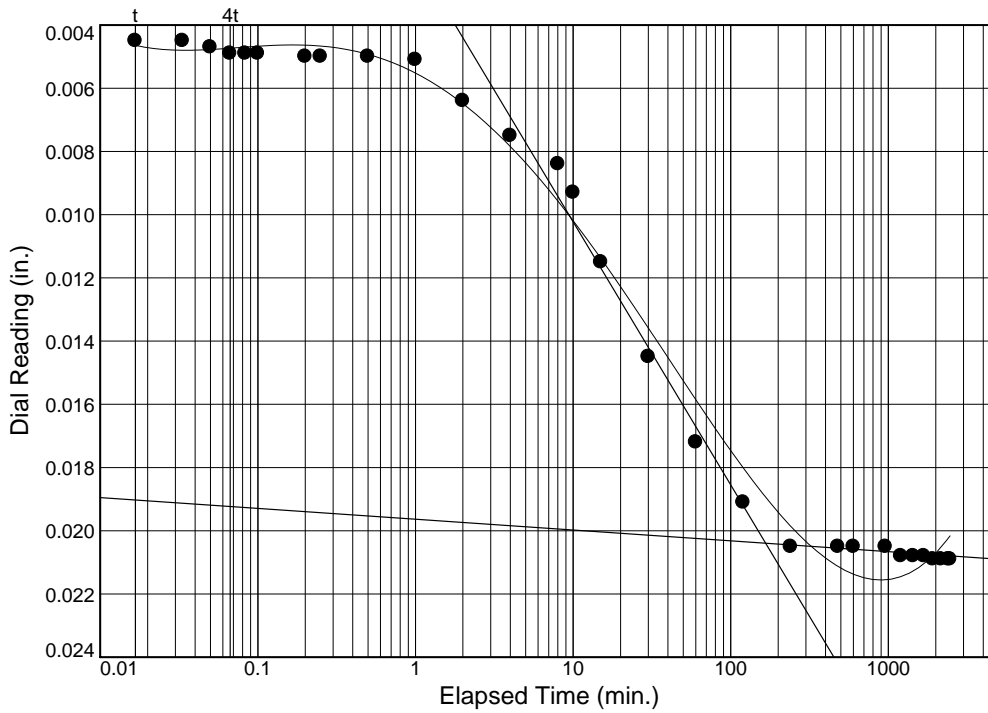
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-2

Depth: 9

Sample Number: 5B



Load No.= 1

Load= 0.06 tsf

$D_0 = 0.0046$

$D_{50} = 0.0125$

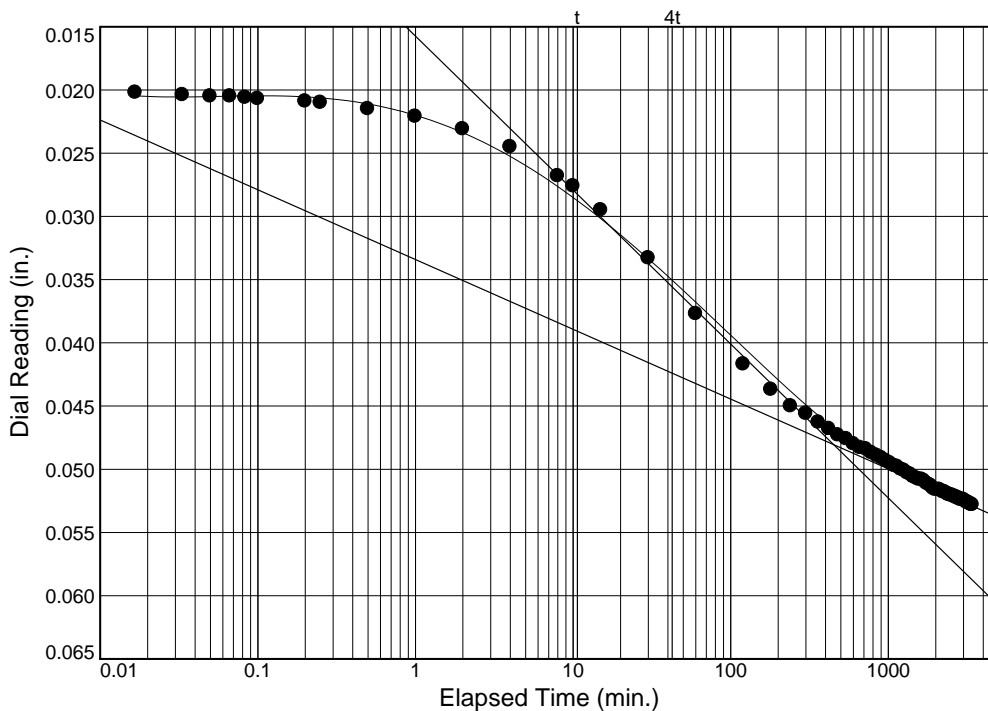
$D_{100} = 0.0204$

$T_{50} = 21.28$  min.

$C_v @ T_{50}$

0.013 ft.<sup>2</sup>/day

$C_\alpha = 0.000$



Load No.= 2

Load= 0.12 tsf

$D_0 = 0.0224$

$D_{50} = 0.0352$

$D_{100} = 0.0480$

$T_{50} = 44.23$  min.

$C_v @ T_{50}$

0.006 ft.<sup>2</sup>/day

$C_\alpha = 0.007$

Figure

# Dial Reading vs. Time

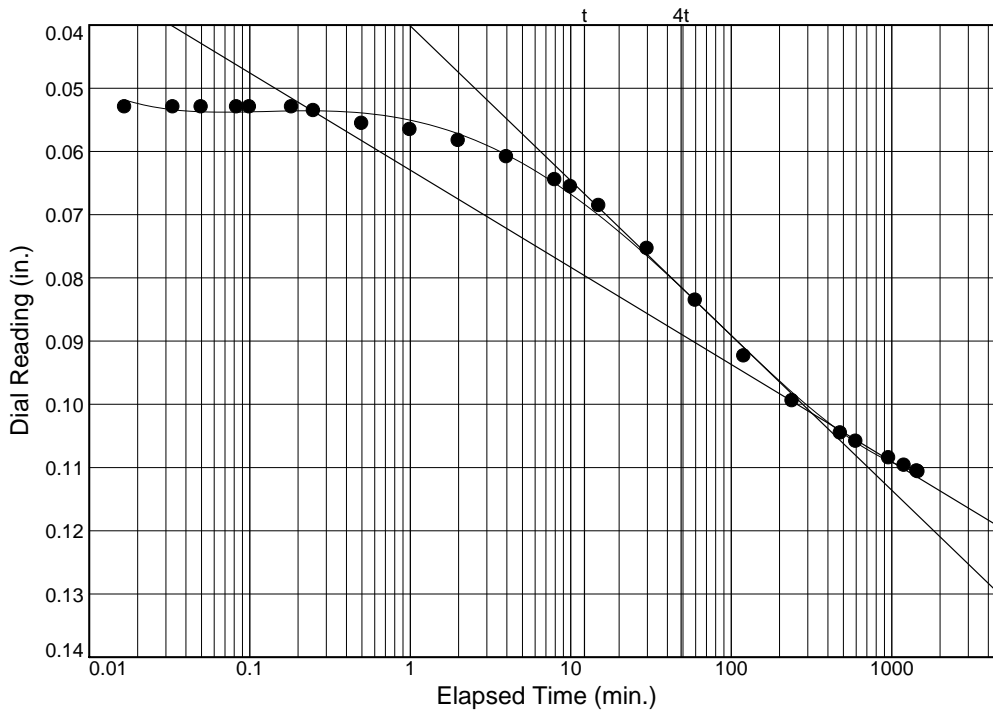
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-2

Depth: 9

Sample Number: 5B



Load No.= 3

Load= 0.25 tsf

$D_0 = 0.0552$

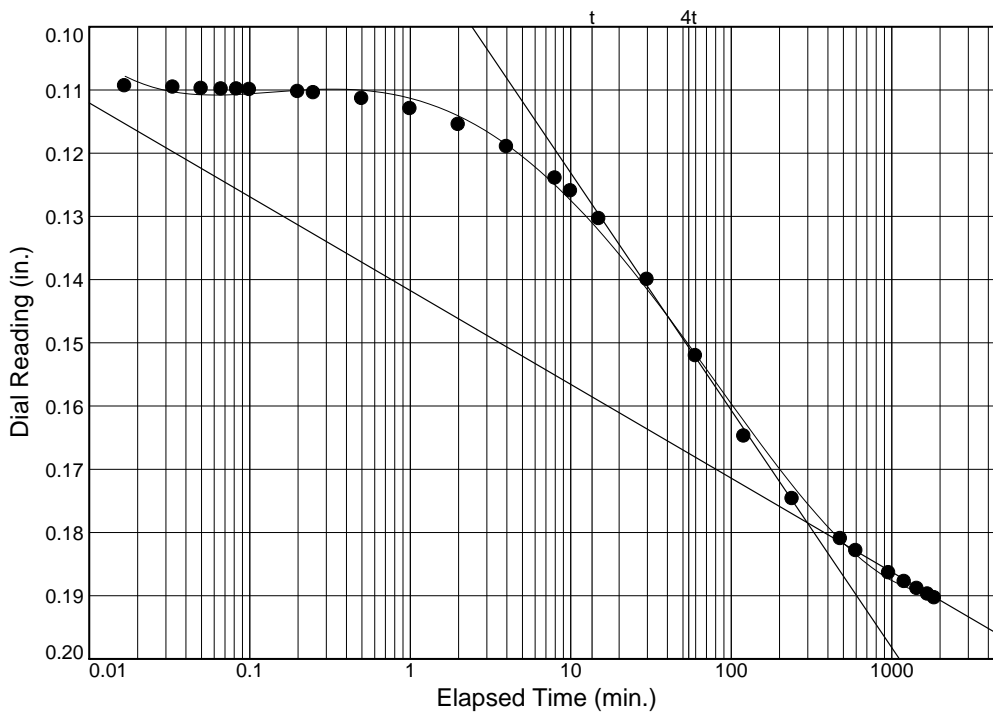
$D_{50} = 0.0783$

$D_{100} = 0.1015$

$T_{50} = 35.77$  min.

$C_v @ T_{50}$   
0.006 ft.<sup>2</sup>/day

$C_\alpha = 0.021$



Load No.= 4

Load= 0.49 tsf

$D_0 = 0.1118$

$D_{50} = 0.1451$

$D_{100} = 0.1784$

$T_{50} = 38.29$  min.

$C_v @ T_{50}$   
0.005 ft.<sup>2</sup>/day

$C_\alpha = 0.020$



# Dial Reading vs. Time

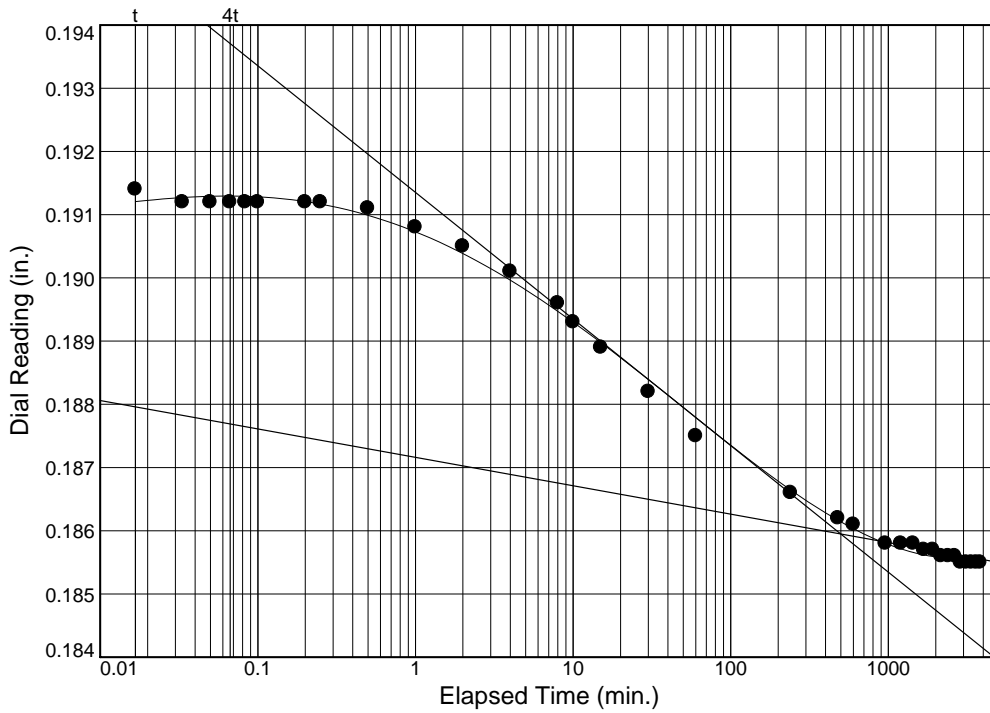
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-2

Depth: 9

Sample Number: 5B



Load No.= 5

Load= 0.25 tsf

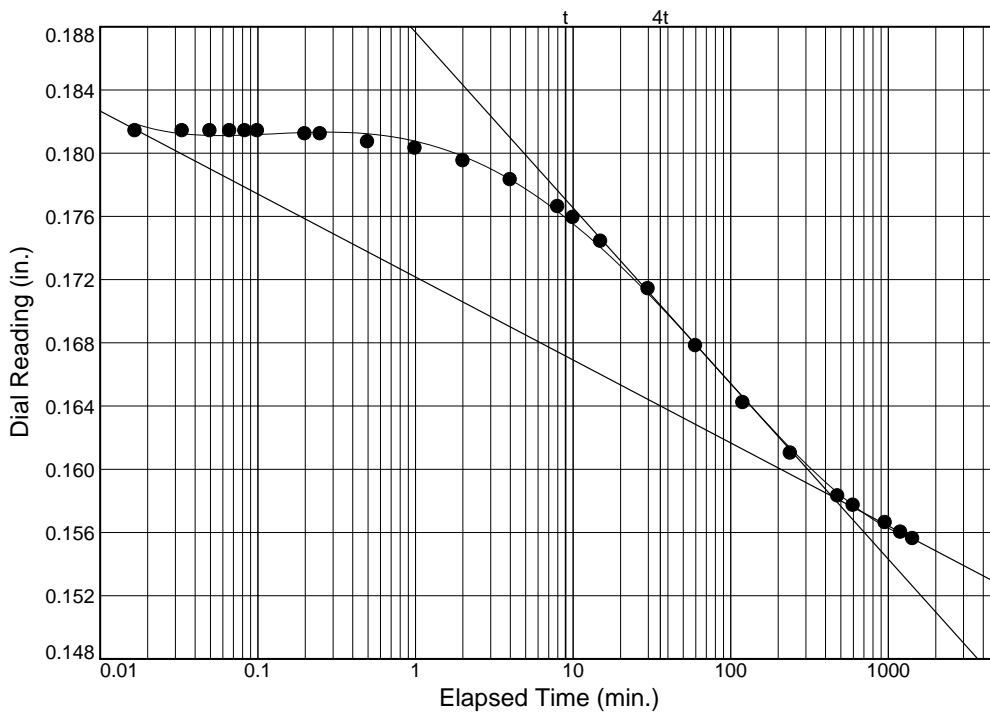
$D_0 = 0.1911$

$D_{50} = 0.1885$

$D_{100} = 0.1859$

$T_{50} = 25.47 \text{ min.}$

$C_v @ T_{50}$   
0.006 ft.<sup>2</sup>/day



Load No.= 6

Load= 0.06 tsf

$D_0 = 0.1815$

$D_{50} = 0.1699$

$D_{100} = 0.1583$

$T_{50} = 38.86 \text{ min.}$

$C_v @ T_{50}$   
0.004 ft.<sup>2</sup>/day

# Dial Reading vs. Time

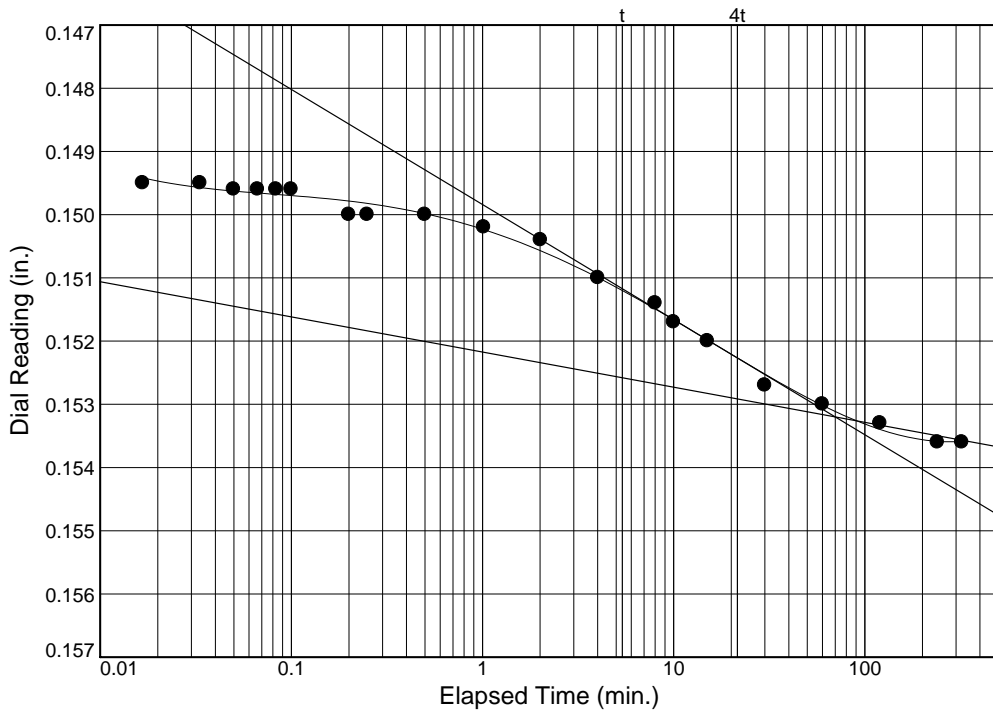
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-2

Depth: 9

Sample Number: 5B



Load No.= 7

Load= 0.12 tsf

$D_0 = 0.1501$

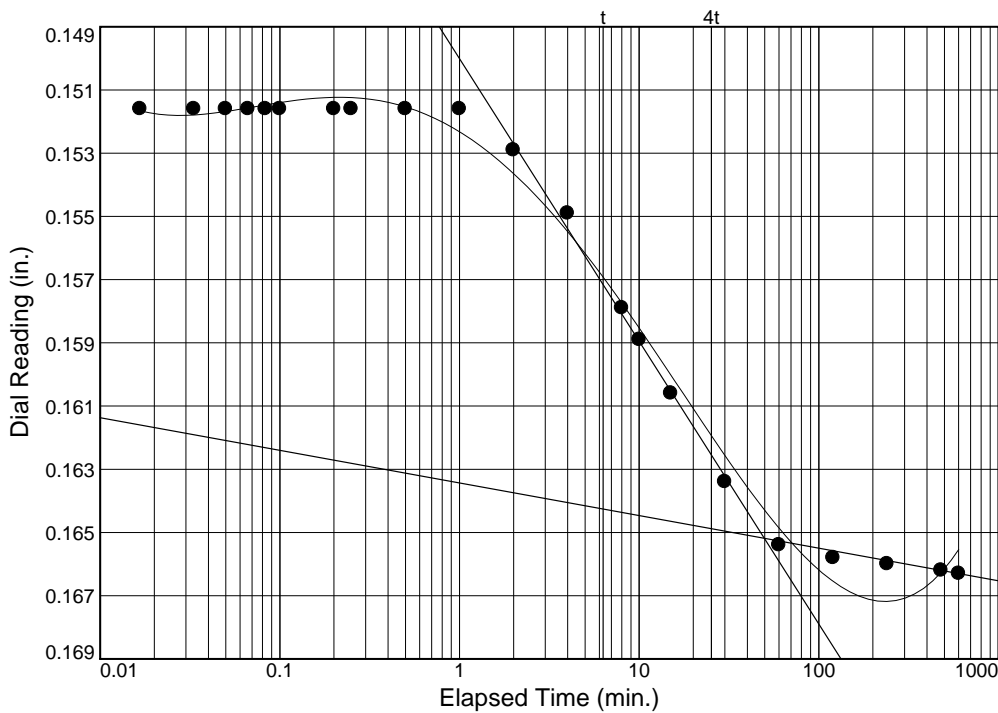
$D_{50} = 0.1517$

$D_{100} = 0.1532$

$T_{50} = 10.06 \text{ min.}$

$C_v @ T_{50}$   
0.018 ft.<sup>2</sup>/day

$C_\alpha = 0.001$



Load No.= 8

Load= 0.25 tsf

$D_0 = 0.1519$

$D_{50} = 0.1585$

$D_{100} = 0.1652$

$T_{50} = 10.05 \text{ min.}$

$C_v @ T_{50}$   
0.017 ft.<sup>2</sup>/day

$C_\alpha = 0.001$

# Dial Reading vs. Time

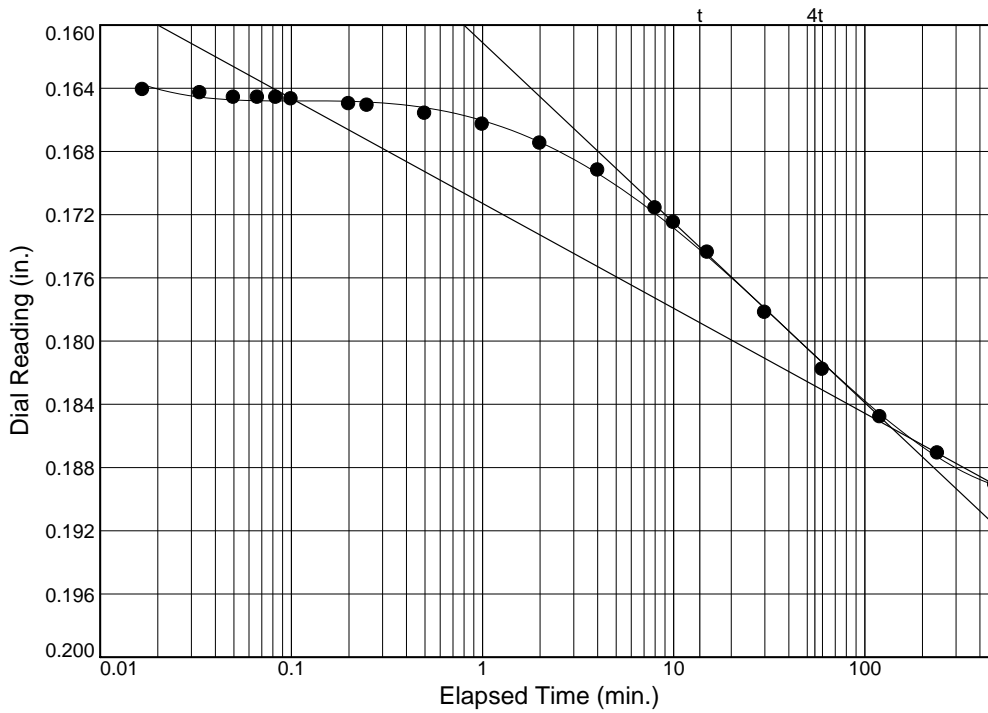
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-2

Depth: 9

Sample Number: 5B



Load No.= 9

Load= 0.49 tsf

$D_0 = 0.1675$

$D_{50} = 0.1765$

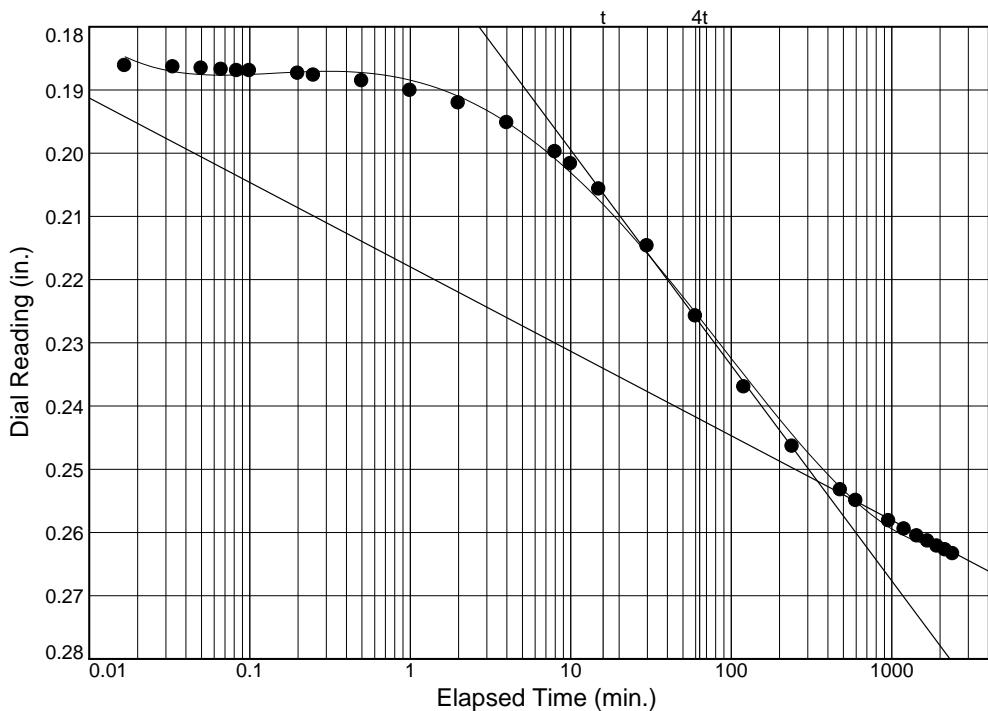
$D_{100} = 0.1855$

$T_{50} = 22.42$  min.

$C_v @ T_{50}$

0.007 ft.<sup>2</sup>/day

$C_\alpha = 0.009$



Load No.= 10

Load= 0.97 tsf

$D_0 = 0.1901$

$D_{50} = 0.2210$

$D_{100} = 0.2519$

$T_{50} = 44.04$  min.

$C_v @ T_{50}$

0.003 ft.<sup>2</sup>/day

$C_\alpha = 0.018$

# Dial Reading vs. Time

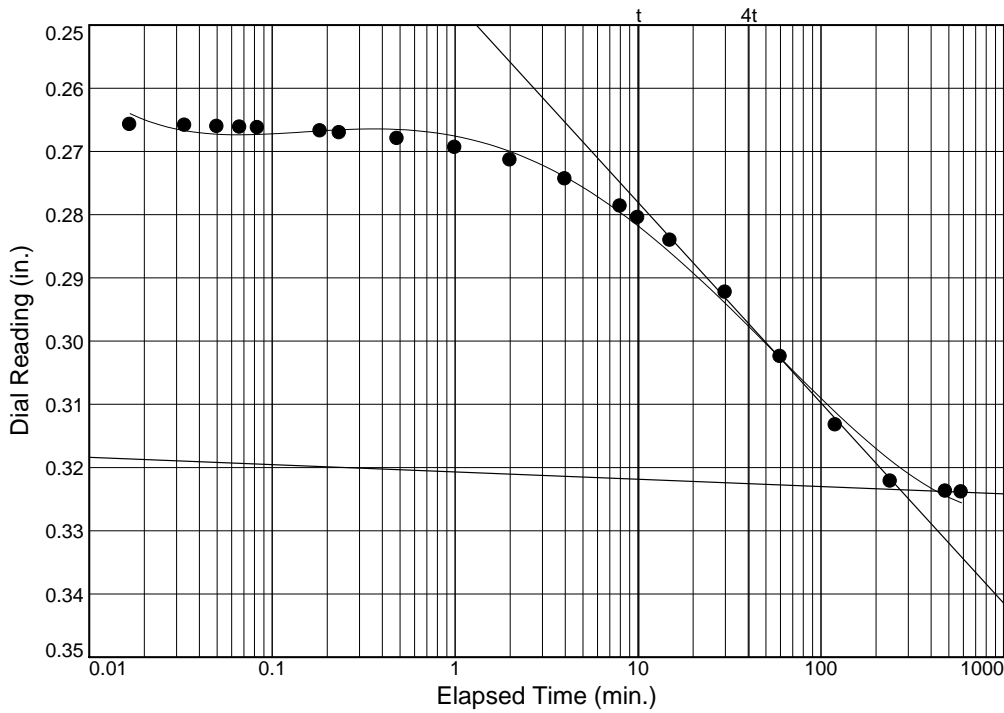
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-2

Depth: 9

Sample Number: 5B



Load No.= 11

Load= 1.93 tsf

$D_0 = 0.2661$

$D_{50} = 0.2948$

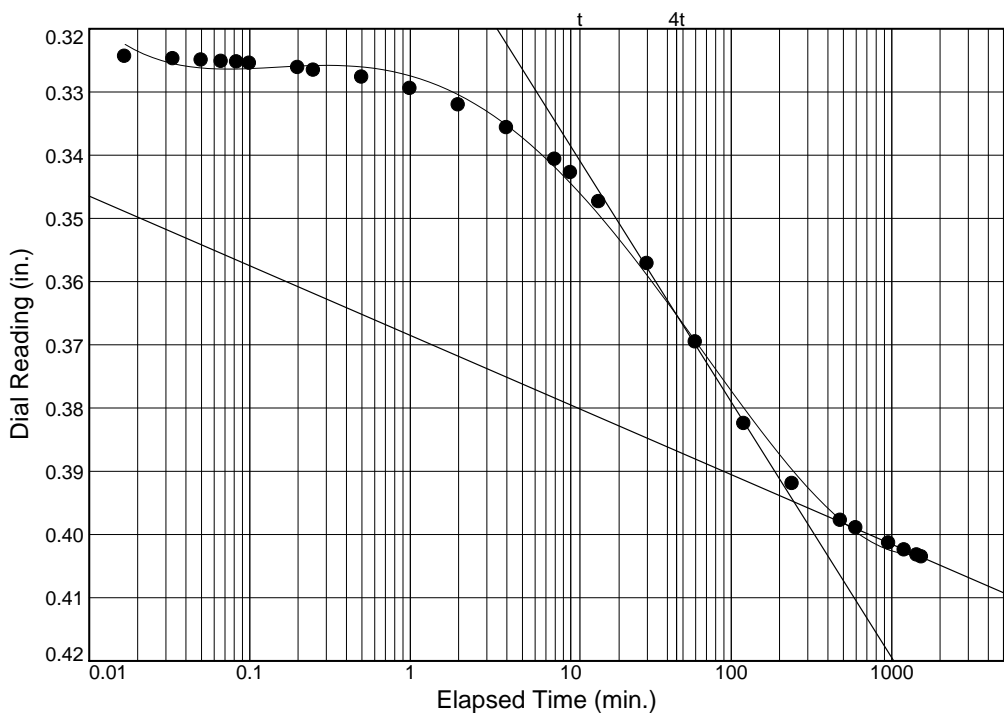
$D_{100} = 0.3235$

$T_{50} = 31.88$  min.

$C_v @ T_{50}$

0.003 ft.<sup>2</sup>/day

$C_\alpha = 0.002$



Load No.= 12

Load= 3.85 tsf

$D_0 = 0.3268$

$D_{50} = 0.3608$

$D_{100} = 0.3948$

$T_{50} = 33.84$  min.

$C_v @ T_{50}$

0.002 ft.<sup>2</sup>/day

$C_\alpha = 0.015$

# Dial Reading vs. Time

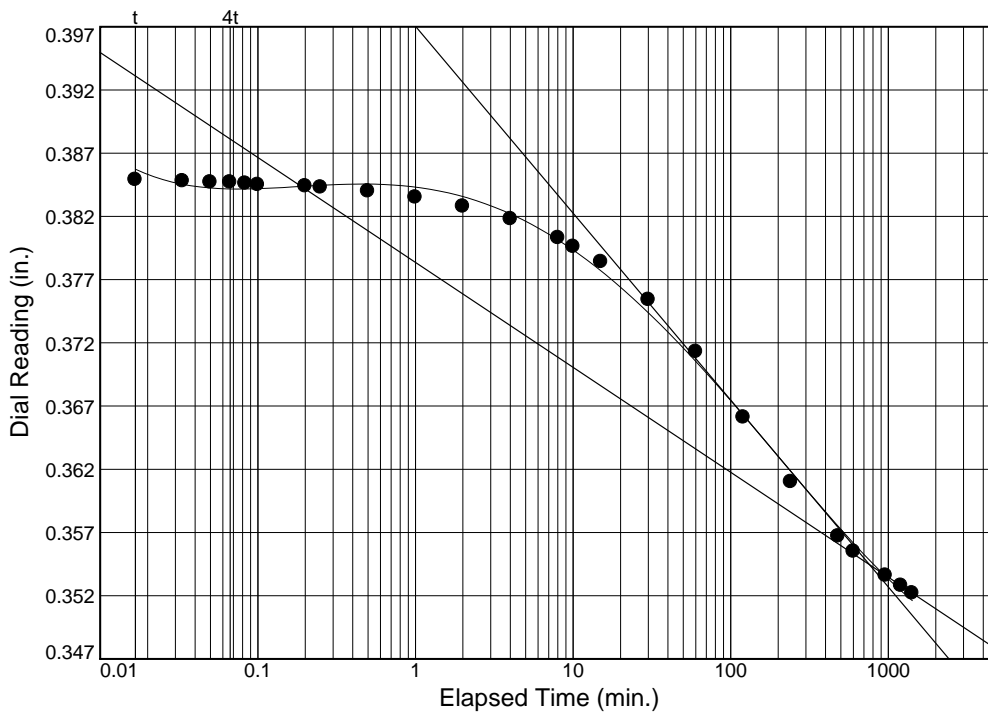
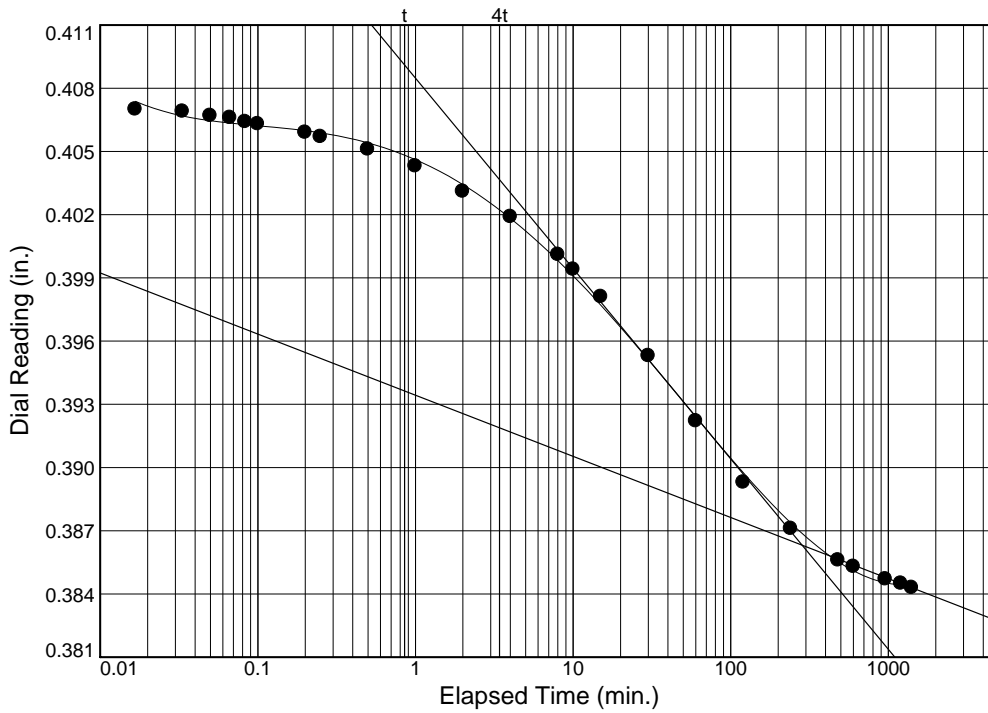
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-2

Depth: 9

Sample Number: 5B



# Dial Reading vs. Time

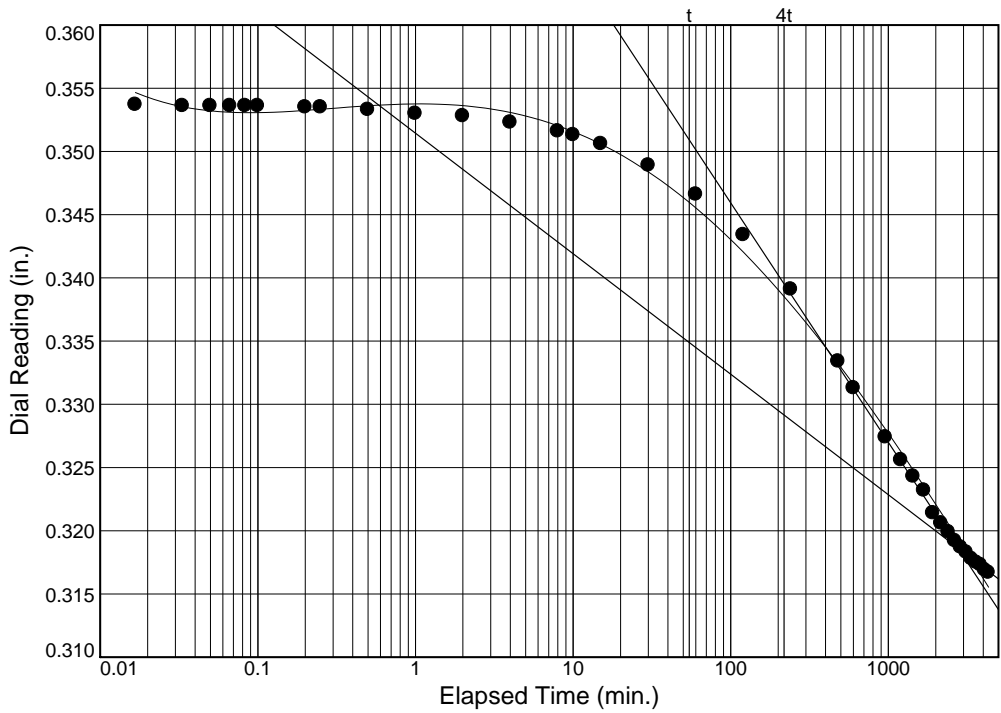
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-2

Depth: 9

Sample Number: 5B



Load No.= 15

Load= 0.06 tsf

$D_0 = 0.3534$

$D_{50} = 0.3360$

$D_{100} = 0.3186$

$T_{50} = 320.38 \text{ min.}$

$C_v @ T_{50}$

0.000 ft.<sup>2</sup>/day

**CONSOLIDATION TEST DATA**

8/29/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST.  
BERNARD PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** R-2

**Depth:** 9

**Sample Number:** 5B

**Material Description:** W, xso g & br ORG CL w/ fw dec wd & rts

**Liquid Limit:** 172

**Plasticity Index:** 123

**USCS:** OH

**Tested by:** BH

**Checked by:** RR

**Test Specimen Data**

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	51.49 g.	Spec. Gr. =	2.55	Wet w+t =	73.77 g.
Dry w+t =	21.68 g.	Est. Ht. Solids =	0.165 in.	Dry w+t =	53.27 g.
Tare Wt. =	0.00 g.	Init. V.R. =	3.541	Tare Wt. =	31.59 g.
Moisture =	137.5 %	Init. Sat. =	99.0 %	Moisture =	94.6 %
UNIT WEIGHT		TEST START		Dry Wt. = 21.68* g.	
Height =	0.749 in.	Height =	0.750 in.		
Diameter =	1.998 in.	Diameter =	2.000 in.		
Weight =	51.49 g.				
Dry Dens. =	35.2 pcf	* Final dry weight used as mineral solids weight			

**End-Of-Load Summary**

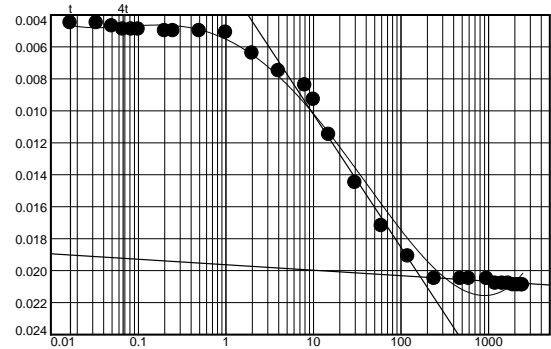
Pressure (tsf)	Final Dial (in.)	Machine Defl. (in.)	Deformation (in.)	C <sub>v</sub> (ft.2/day)	C <sub>α</sub>	Void Ratio	% Strain
start	0.00580		0.00000			3.541	
0.06	0.02240	0.00150	0.01510	0.013	0.000	3.450	2.0 Compr.
0.12	0.05560	0.00280	0.04700	0.006	0.007	3.257	6.3 Compr.
0.25	0.11500	0.00430	0.10490	0.006	0.021	2.906	14.0 Compr.
0.49	0.19660	0.00620	0.18460	0.005	0.020	2.424	24.6 Compr.
0.25	0.18840	0.00290	0.17970	0.006		2.453	24.0 Compr.
0.06	0.15740	0.00180	0.14980	0.004		2.634	20.0 Compr.
0.12	0.15840	0.00480	0.14780	0.018	0.001	2.646	19.7 Compr.
0.25	0.17290	0.00660	0.16050	0.017	0.001	2.570	21.4 Compr.
0.49	0.19800	0.00890	0.18330	0.007	0.009	2.432	24.4 Compr.
0.97	0.27470	0.01130	0.25760	0.003	0.018	1.982	34.3 Compr.
1.93	0.33740	0.01350	0.31810	0.003	0.002	1.615	42.4 Compr.
3.85	0.41910	0.01550	0.39780	0.002	0.015	1.133	53.0 Compr.
0.97	0.39410	0.00980	0.37850	0.003		1.250	50.5 Compr.
0.25	0.35980	0.00760	0.34640	0.001		1.444	46.2 Compr.
0.06	0.32220	0.00550	0.31090	0.000		1.659	41.5 Compr.

**TEST RESULTS SUMMARY**

Compression index ( $C_c$ ), tsf = 1.32    Preconsolidation pressure ( $P_p$ ), tsf = 0.1    Void ratio at  $P_p$  ( $e_m$ ) = 3.292  
 Recompression index ( $C_r$ ) = 0.25

Pressure: 0.06 tsf TEST READINGS Load No. 1

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0058	16	15.0333	0.0130
2	0.0167	0.0060	17	30.0500	0.0160
3	0.0333	0.0060	18	60.0833	0.0187
4	0.0500	0.0062	19	120.1667	0.0206
5	0.0667	0.0064	20	240.3500	0.0220
6	0.0833	0.0064	21	480.6833	0.0220
7	0.1000	0.0064	22	600.8500	0.0220
8	0.2000	0.0065	23	961.3667	0.0220
9	0.2500	0.0065	24	1201.7333	0.0223
10	0.5000	0.0065	25	1442.1167	0.0223
11	1.0000	0.0066	26	1682.5000	0.0223
12	2.0000	0.0079	27	1922.8833	0.0224
13	4.0000	0.0090	28	2163.2667	0.0224
14	8.0167	0.0099	29	2403.6667	0.0224
15	10.0167	0.0108	30	2464.0667	0.0224

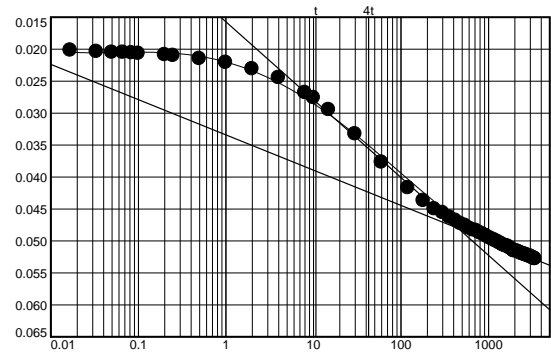


Void Ratio = 3.450    Compression = 2.0%

$D_0$  = 0.0046     $D_{50}$  = 0.0125     $D_{100}$  = 0.0204     $C_v$  at 21.28 min. = 0.013 ft.<sup>2</sup>/day     $C_\alpha$  = 0.000

Pressure: 0.12 tsf TEST READINGS Load No. 2

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0226	17	30.0333	0.0361
2	0.0167	0.0230	18	60.0833	0.0405
3	0.0333	0.0232	19	120.1833	0.0445
4	0.0500	0.0233	20	180.2667	0.0465
5	0.0667	0.0233	21	240.3667	0.0478
6	0.0833	0.0234	22	300.4000	0.0484
7	0.1000	0.0235	23	360.5000	0.0491
8	0.2000	0.0237	24	420.5833	0.0496
9	0.2500	0.0238	25	480.6667	0.0501
10	0.5000	0.0243	26	540.7500	0.0504
11	1.0000	0.0249	27	600.8500	0.0508
12	2.0000	0.0259	28	660.9167	0.0511
13	4.0000	0.0273	29	721.0000	0.0512
14	8.0000	0.0296	30	781.1000	0.0515
15	10.0167	0.0304	31	841.1833	0.0517
16	15.0167	0.0323	32	901.2667	0.0519





Pressure: 0.12 tsf

TEST READINGS (continued)

Load No. 2

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
33	961.3500	0.0521	47	1802.5333	0.0540	61	2703.8000	0.0550
34	1021.4333	0.0523	48	1862.6167	0.0541	62	2763.8833	0.0551
35	1081.5167	0.0525	49	1922.7000	0.0543	63	2823.9833	0.0551
36	1141.6000	0.0526	50	1982.7833	0.0544	64	2884.0667	0.0552
37	1201.6833	0.0528	51	2102.9500	0.0544	65	3004.2167	0.0552
38	1261.7833	0.0529	52	2163.0333	0.0545	66	3064.3167	0.0553
39	1321.8667	0.0531	53	2223.1167	0.0546	67	3124.4000	0.0554
40	1381.9500	0.0532	54	2283.2000	0.0546	68	3184.4833	0.0554
41	1442.0333	0.0534	55	2343.3000	0.0547	69	3244.5667	0.0555
42	1502.1167	0.0535	56	2403.3833	0.0548	70	3304.6500	0.0555
43	1562.2000	0.0536	57	2463.4667	0.0548	71	3364.7333	0.0556
44	1622.2833	0.0536	58	2523.5500	0.0549	72	3424.8167	0.0556
45	1682.3667	0.0537	59	2583.6333	0.0549			
46	1742.4500	0.0539	60	2643.7167	0.0550			

Void Ratio = 3.257 Compression = 6.3%

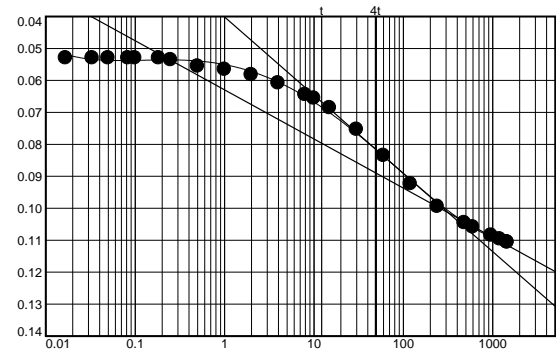
$D_0 = 0.0224$   $D_{50} = 0.0352$   $D_{100} = 0.0480$   $C_v$  at 44.23 min. = 0.006 ft.<sup>2</sup>/day  $C_\alpha = 0.007$

Pressure: 0.25 tsf

TEST READINGS

Load No. 3

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0556	14	10.0000	0.0699
2	0.0167	0.0573	15	15.0167	0.0729
3	0.0333	0.0573	16	30.0333	0.0797
4	0.0500	0.0573	17	60.0833	0.0879
5	0.0833	0.0573	18	120.1833	0.0967
6	0.10	0.0573	19	240.3833	0.1038
7	0.1833	0.0573	20	480.7667	0.1089
8	0.2500	0.0579	21	600.9333	0.1102
9	0.5000	0.0599	22	961.4500	0.1128
10	1.0000	0.0609	23	1201.7667	0.1140
11	2.0000	0.0626	24	1442.1167	0.1149
12	4.0000	0.0652	25	1461.6833	0.1150
13	8.0000	0.0688			



Void Ratio = 2.906 Compression = 14.0%

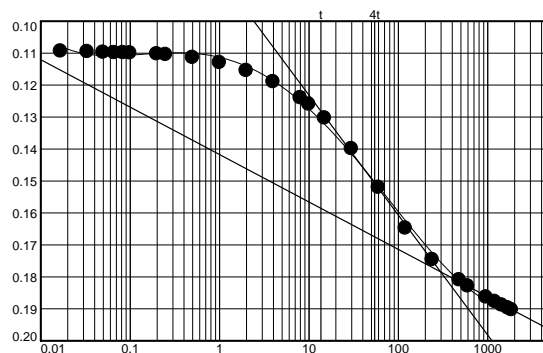
$D_0 = 0.0552$   $D_{50} = 0.0783$   $D_{100} = 0.1015$   $C_v$  at 35.77 min. = 0.006 ft.<sup>2</sup>/day  $C_\alpha = 0.021$

Pressure: 0.49 tsf

TEST READINGS

Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1154	15	10.0167	0.1322
2	0.0167	0.1156	16	15.0167	0.1366
3	0.0333	0.1158	17	30.0500	0.1462
4	0.0500	0.1160	18	60.1000	0.1583
5	0.0667	0.1161	19	120.1833	0.1710
6	0.0833	0.1161	20	240.3833	0.1809
7	0.1000	0.1162	21	480.7667	0.1872
8	0.2000	0.1165	22	600.9667	0.1891
9	0.2500	0.1167	23	961.5333	0.1926
10	0.5000	0.1176	24	1201.9333	0.1940
11	1.0000	0.1192	25	1442.3167	0.1951
12	2.0000	0.1217	26	1682.7000	0.1960
13	4.0000	0.1252	27	1851.9333	0.1966
14	8.0167	0.1302			



Void Ratio = 2.424    Compression = 24.6%

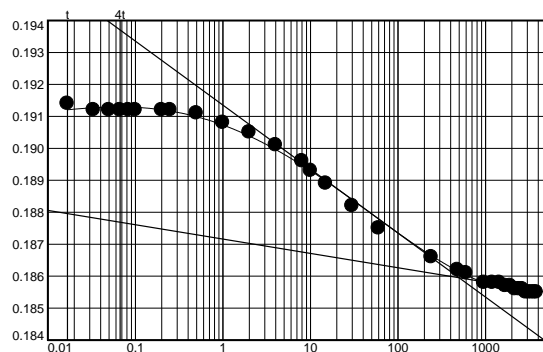
$D_0 = 0.1118$      $D_{50} = 0.1451$      $D_{100} = 0.1784$      $C_v$  at 38.29 min. = 0.005 ft.<sup>2</sup>/day     $C_{\alpha} = 0.020$

Pressure: 0.25 tsf

TEST READINGS

Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1943	18	60.0833	0.1904
2	0.0167	0.1943	19	240.3333	0.1895
3	0.0333	0.1941	20	480.6667	0.1891
4	0.0500	0.1941	21	600.8500	0.1890
5	0.0667	0.1941	22	961.3500	0.1887
6	0.0833	0.1941	23	1201.7000	0.1887
7	0.1000	0.1941	24	1442.0167	0.1887
8	0.2000	0.1941	25	1682.3500	0.1886
9	0.2500	0.1941	26	1922.7000	0.1886
10	0.5000	0.1940	27	2163.0333	0.1885
11	1.0000	0.1937	28	2403.3833	0.1885
12	2.0000	0.1934	29	2643.7000	0.1885
13	4.0000	0.1930	30	2884.0333	0.1884
14	8.0000	0.1925	31	3124.4000	0.1884
15	10.0167	0.1922	32	3364.7167	0.1884
16	15.0167	0.1918	33	3605.0500	0.1884
17	30.0333	0.1911	34	3832.8333	0.1884



Void Ratio = 2.453    Compression = 24.0%

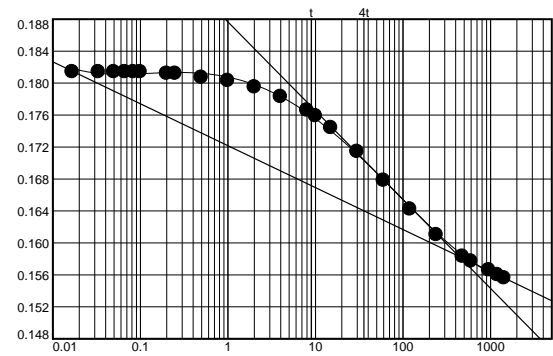
$D_0 = 0.1911$      $D_{50} = 0.1885$      $D_{100} = 0.1859$      $C_v$  at 25.47 min. = 0.006 ft.<sup>2</sup>/day

Pressure: 0.06 tsf

TEST READINGS

Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1839	14	8.0167	0.1784
2	0.0167	0.1832	15	10.0167	0.1777
3	0.0333	0.1832	16	15.0333	0.1762
4	0.0500	0.1832	17	30.0500	0.1732
5	0.0667	0.1832	18	60.0833	0.1696
6	0.0833	0.1832	19	120.1667	0.1660
7	0.1000	0.1832	20	240.3333	0.1628
8	0.2000	0.1830	21	480.6667	0.1601
9	0.2500	0.1830	22	600.8500	0.1595
10	0.5000	0.1825	23	961.3500	0.1584
11	1.0000	0.1821	24	1201.7000	0.1578
12	2.0167	0.1813	25	1432.1500	0.1574
13	4.0167	0.1801			



Void Ratio = 2.634 Compression = 20.0%

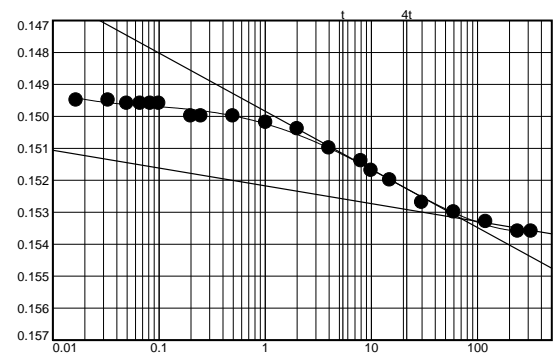
$D_0 = 0.1815$   $D_{50} = 0.1699$   $D_{100} = 0.1583$   $C_v$  at 38.86 min. = 0.004 ft.<sup>2</sup>/day

Pressure: 0.12 tsf

TEST READINGS

Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1536	12	2.0167	0.1552
2	0.0167	0.1543	13	4.0167	0.1558
3	0.0333	0.1543	14	8.0167	0.1562
4	0.0500	0.1544	15	10.0167	0.1565
5	0.0667	0.1544	16	15.0333	0.1568
6	0.0833	0.1544	17	30.0500	0.1575
7	0.1000	0.1544	18	60.0833	0.1578
8	0.2000	0.1548	19	120.1833	0.1581
9	0.2500	0.1548	20	240.3500	0.1584
10	0.5000	0.1548	21	322.3833	0.1584
11	1.0167	0.1550			



Void Ratio = 2.646 Compression = 19.7%

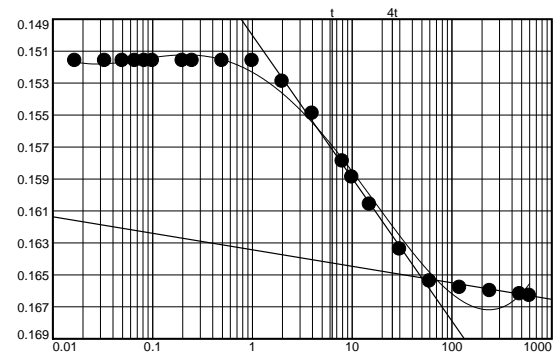
$D_0 = 0.1501$   $D_{50} = 0.1517$   $D_{100} = 0.1532$   $C_v$  at 10.06 min. = 0.018 ft.<sup>2</sup>/day  $C_\alpha = 0.001$

Pressure: 0.25 tsf

TEST READINGS

Load No. 8

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1582	12	2.0000	0.15950
2	0.0167	0.1582	13	4.0000	0.16150
3	0.0333	0.1582	14	8.0167	0.16450
4	0.0500	0.1582	15	10.0167	0.16550
5	0.0667	0.1582	16	15.0333	0.16720
6	0.0833	0.1582	17	30.0500	0.17000
7	0.1000	0.1582	18	60.1000	0.17200
8	0.2000	0.1582	19	120.1833	0.17240
9	0.2500	0.1582	20	240.3667	0.17260
10	0.5000	0.1582	21	480.7333	0.17280
11	1.0000	0.1582	22	600.9167	0.17290



Void Ratio = 2.570 Compression = 21.4%

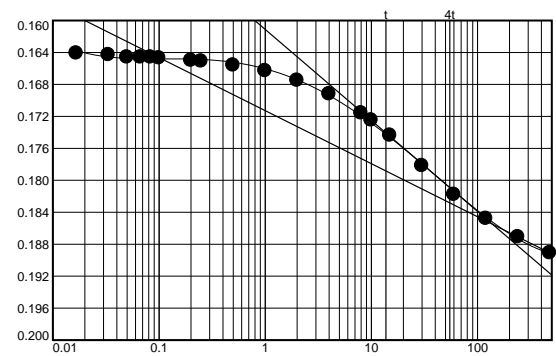
$D_0 = 0.1519$   $D_{50} = 0.1585$   $D_{100} = 0.1652$   $C_v$  at 10.05 min. = 0.017 ft.<sup>2</sup>/day  $C_\alpha = 0.001$

Pressure: 0.49 tsf

TEST READINGS

Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.17290	12	2.0000	0.1764
2	0.0167	0.1730	13	4.0167	0.1781
3	0.0333	0.1732	14	8.0167	0.1805
4	0.0500	0.1735	15	10.0167	0.1814
5	0.0667	0.1735	16	15.0333	0.1833
6	0.0833	0.1735	17	30.0500	0.1871
7	0.1000	0.1736	18	60.1000	0.1907
8	0.2000	0.1739	19	120.2000	0.1937
9	0.2500	0.1740	20	240.4000	0.1960
10	0.5000	0.1745	21	480.8667	0.1980
11	1.0000	0.1752			



Void Ratio = 2.432 Compression = 24.4%

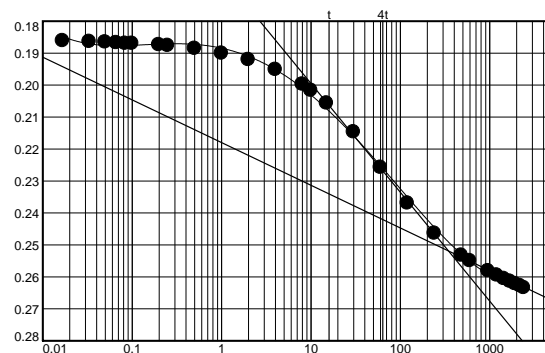
$D_0 = 0.1675$   $D_{50} = 0.1765$   $D_{100} = 0.1855$   $C_v$  at 22.42 min. = 0.007 ft.<sup>2</sup>/day  $C_\alpha = 0.009$

Pressure: 0.97 tsf

TEST READINGS

Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1972	16	15.0333	0.2170
2	0.0167	0.1975	17	30.0500	0.2260
3	0.0333	0.1977	18	60.1000	0.2371
4	0.0500	0.1979	19	120.2000	0.2483
5	0.0667	0.1981	20	240.3667	0.2577
6	0.0833	0.1983	21	480.7500	0.2646
7	0.1000	0.1983	22	600.9500	0.2663
8	0.2000	0.1987	23	961.4667	0.2695
9	0.2500	0.1990	24	1201.8167	0.2708
10	0.5000	0.1999	25	1442.1500	0.2719
11	1.0000	0.2014	26	1682.5500	0.2727
12	2.0000	0.2034	27	1922.9333	0.2735
13	4.0167	0.2065	28	2163.3000	0.2741
14	8.0167	0.2111	29	2403.7000	0.2747
15	10.0167	0.2130			



Void Ratio = 1.982 Compression = 34.3%

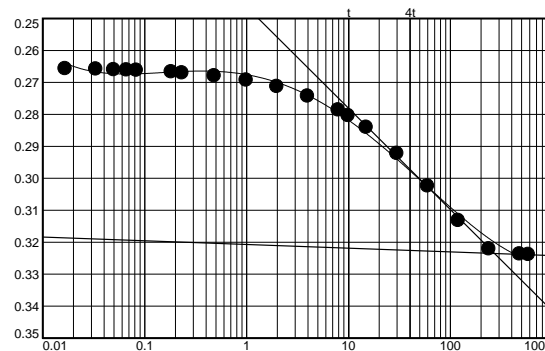
D<sub>0</sub> = 0.1901 D<sub>50</sub> = 0.2210 D<sub>100</sub> = 0.2519 C<sub>v</sub> at 44.04 min. = 0.003 ft.<sup>2</sup>/day C<sub>α</sub> = 0.018

Pressure: 1.93 tsf

TEST READINGS

Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2747	12	4.0000	0.2879
2	0.0167	0.2793	13	8.0000	0.2922
3	0.0333	0.2794	14	10.0000	0.2940
4	0.0500	0.2796	15	15.0167	0.2976
5	0.0667	0.2797	16	30.0333	0.3058
6	0.0833	0.2798	17	60.0833	0.3160
7	0.1833	0.2803	18	120.1667	0.3268
8	0.2333	0.2806	19	240.3667	0.3357
9	0.4833	0.2815	20	480.7333	0.3373
10	1.0000	0.2829	21	586.7667	0.3374
11	2.0000	0.2849			



Void Ratio = 1.615 Compression = 42.4%

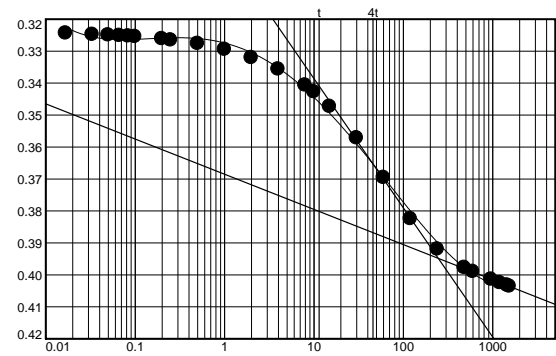
D<sub>0</sub> = 0.2661 D<sub>50</sub> = 0.2948 D<sub>100</sub> = 0.3235 C<sub>v</sub> at 31.88 min. = 0.003 ft.<sup>2</sup>/day C<sub>α</sub> = 0.002

Pressure: 3.85 tsf

TEST READINGS

Load No. 12

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.3372	14	8.0000	0.3562
2	0.0167	0.3399	15	10.0000	0.3583
3	0.0333	0.3403	16	15.0000	0.3629
4	0.0500	0.3405	17	30.0333	0.3727
5	0.0667	0.3407	18	60.0833	0.3851
6	0.0833	0.3408	19	120.1833	0.3980
7	0.1000	0.3410	20	240.3833	0.4075
8	0.2000	0.3417	21	480.7833	0.4133
9	0.2500	0.3421	22	601.0000	0.4145
10	0.5000	0.3432	23	961.6500	0.4169
11	1.0000	0.3450	24	1202.1000	0.4180
12	2.0000	0.3476	25	1442.5500	0.4188
13	4.0000	0.3512	26	1535.9333	0.4191



Void Ratio = 1.133 Compression = 53.0%

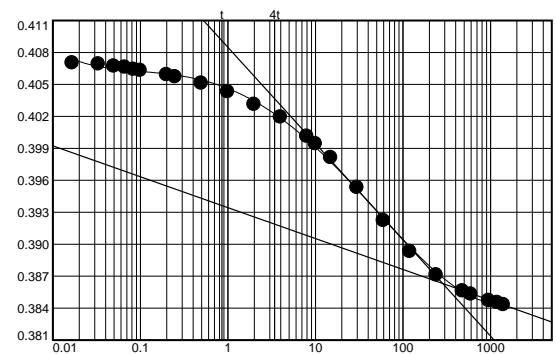
$D_0 = 0.3268$   $D_{50} = 0.3608$   $D_{100} = 0.3948$   $C_v$  at 33.84 min. = 0.002 ft.<sup>2</sup>/day  $C_\alpha = 0.015$

Pressure: 0.97 tsf

TEST READINGS

Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.4182	14	8.0167	0.4099
2	0.0167	0.4168	15	10.0167	0.4092
3	0.0333	0.4167	16	15.0333	0.4079
4	0.0500	0.4165	17	30.0500	0.4051
5	0.0667	0.4164	18	60.1167	0.4020
6	0.0833	0.4162	19	120.2167	0.3991
7	0.1000	0.4161	20	240.4500	0.3969
8	0.2000	0.4157	21	480.8833	0.3954
9	0.2500	0.4155	22	601.1000	0.3951
10	0.5000	0.4149	23	961.7667	0.3945
11	1.0000	0.4141	24	1202.2167	0.3943
12	2.0000	0.4129	25	1409.0667	0.3941
13	4.0167	0.4117			



Void Ratio = 1.250 Compression = 50.5%

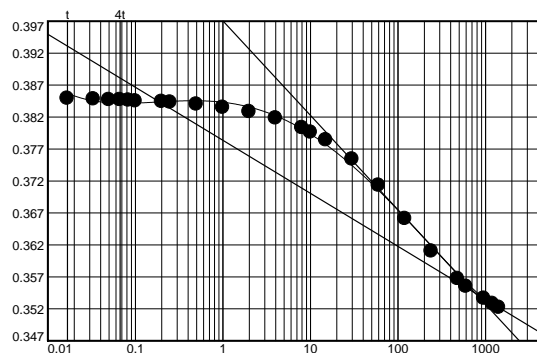
$D_0 = 0.4074$   $D_{50} = 0.3969$   $D_{100} = 0.3863$   $C_v$  at 18.87 min. = 0.003 ft.<sup>2</sup>/day

Pressure: 0.25 tsf

TEST READINGS

Load No. 14

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.3925	14	8.0167	0.3879
2	0.0167	0.3925	15	10.0167	0.3872
3	0.0333	0.3924	16	15.0333	0.3860
4	0.0500	0.3923	17	30.0500	0.3830
5	0.0667	0.3923	18	60.1167	0.3789
6	0.0833	0.3922	19	120.2167	0.3737
7	0.1000	0.3921	20	240.4333	0.3686
8	0.2000	0.3920	21	480.8500	0.3643
9	0.2500	0.3919	22	601.0667	0.3631
10	0.5000	0.3916	23	961.6833	0.3612
11	1.0000	0.3911	24	1202.1000	0.3604
12	2.0000	0.3904	25	1419.8333	0.3598
13	4.0167	0.3894			



Void Ratio = 1.444 Compression = 46.2%

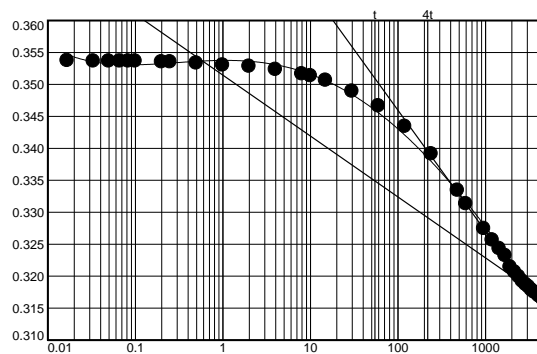
D<sub>0</sub> = 0.3873 D<sub>50</sub> = 0.3709 D<sub>100</sub> = 0.3544 C<sub>v</sub> at 56.70 min. = 0.001 ft.<sup>2</sup>/day

Pressure: 0.06 tsf

TEST READINGS

Load No. 15

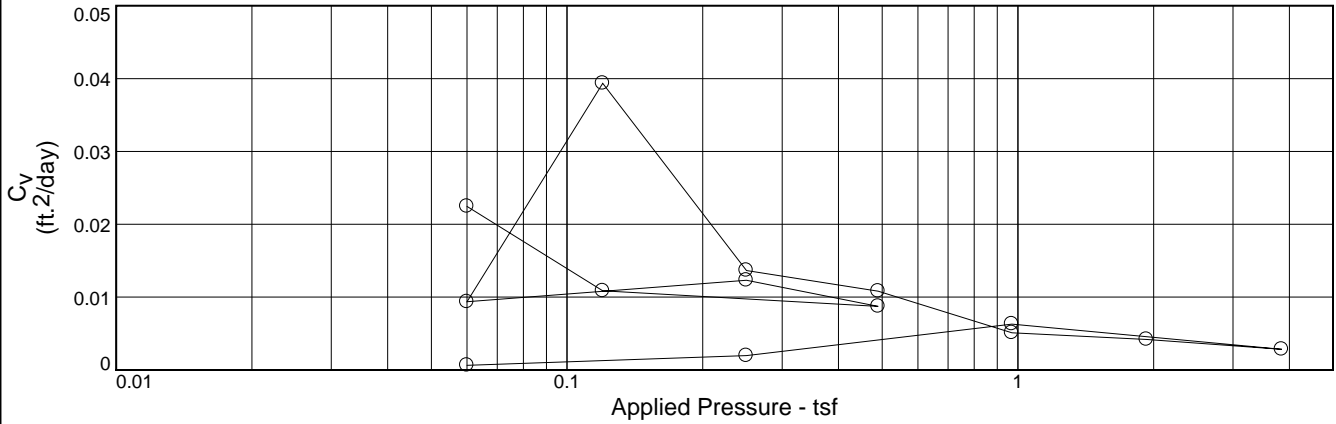
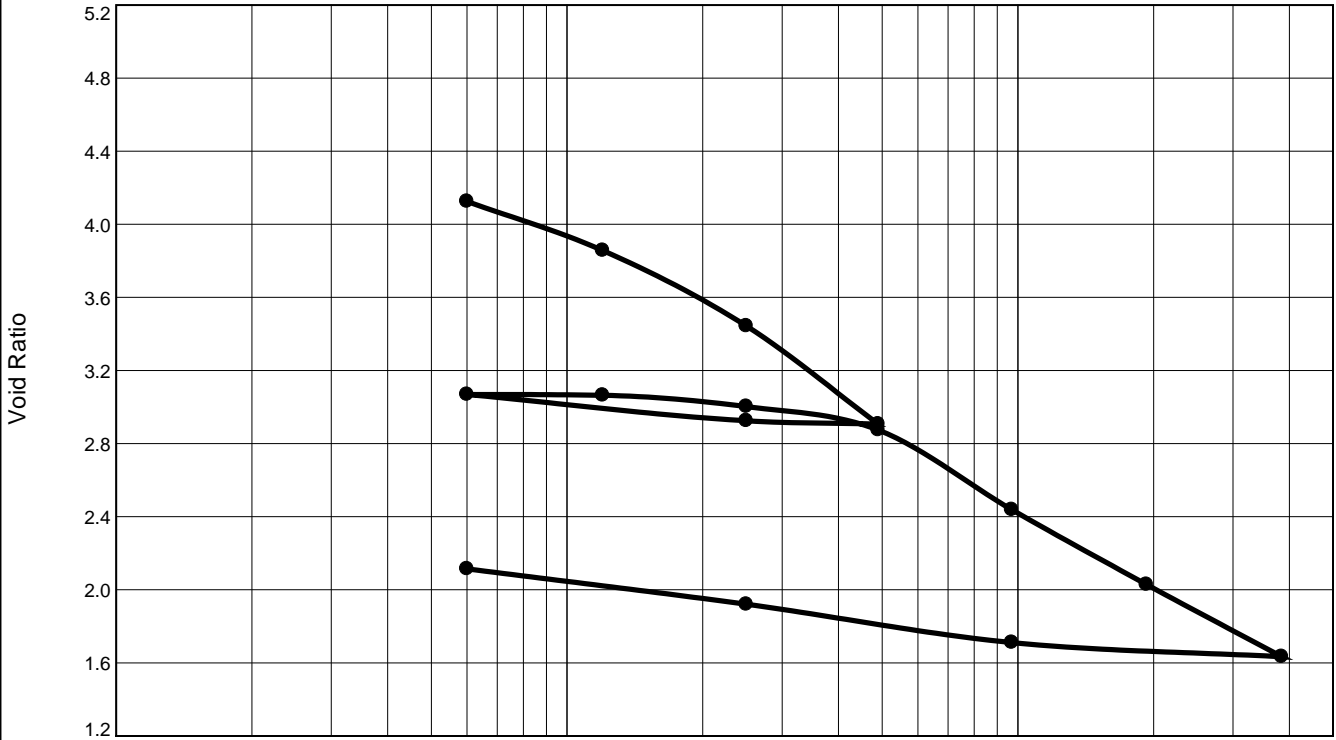
No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.3594	20	240.4167	0.3446
2	0.0167	0.3592	21	480.8333	0.3389
3	0.0333	0.3591	22	601.0167	0.3368
4	0.0500	0.3591	23	961.5167	0.3329
5	0.0667	0.3591	24	1201.8500	0.3311
6	0.0833	0.3591	25	1442.2167	0.3298
7	0.1000	0.3591	26	1682.6000	0.3287
8	0.2000	0.3590	27	1923.0000	0.3269
9	0.2500	0.3590	28	2163.3833	0.3261
10	0.5000	0.3588	29	2403.7667	0.3254
11	1.0000	0.3585	30	2644.1500	0.3247
12	2.0000	0.3583	31	2884.5333	0.3242
13	4.0000	0.3578	32	3124.9167	0.3238
14	8.0000	0.3571	33	3365.3000	0.3233
15	10.0167	0.3568	34	3605.6833	0.3230
16	15.0167	0.3561	35	3846.0667	0.3228
17	30.0500	0.3544	36	4086.4500	0.3224
18	60.1000	0.3521	37	4326.8333	0.3222
19	120.2000	0.3489			



Void Ratio = 1.659 Compression = 41.5%

D<sub>0</sub> = 0.3534 D<sub>50</sub> = 0.3360 D<sub>100</sub> = 0.3186 C<sub>v</sub> at 320.38 min. = 0.000 ft.<sup>2</sup>/day

# CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P <sub>c</sub> (tsf)	C <sub>c</sub>	Initial Void Ratio
Saturation	Moisture							
98.7 %	167.2 %	29.9	174	133	2.55	0.2	1.63	4.321

<b>MATERIAL DESCRIPTION</b>		<b>USCS</b>	<b>AASHTO</b>
W, xso br & g ORG CL w/ fw dec wd & rts		OH	

<b>Project No.</b> 24762 <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE <b>Source of Sample:</b> R-4 <b>Depth:</b> 3 <b>Sample Number:</b> 2B	<b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL	<b>Remarks:</b>
		<b>Figure</b>

Tested By: BH

Checked By: RR



# Dial Reading vs. Time

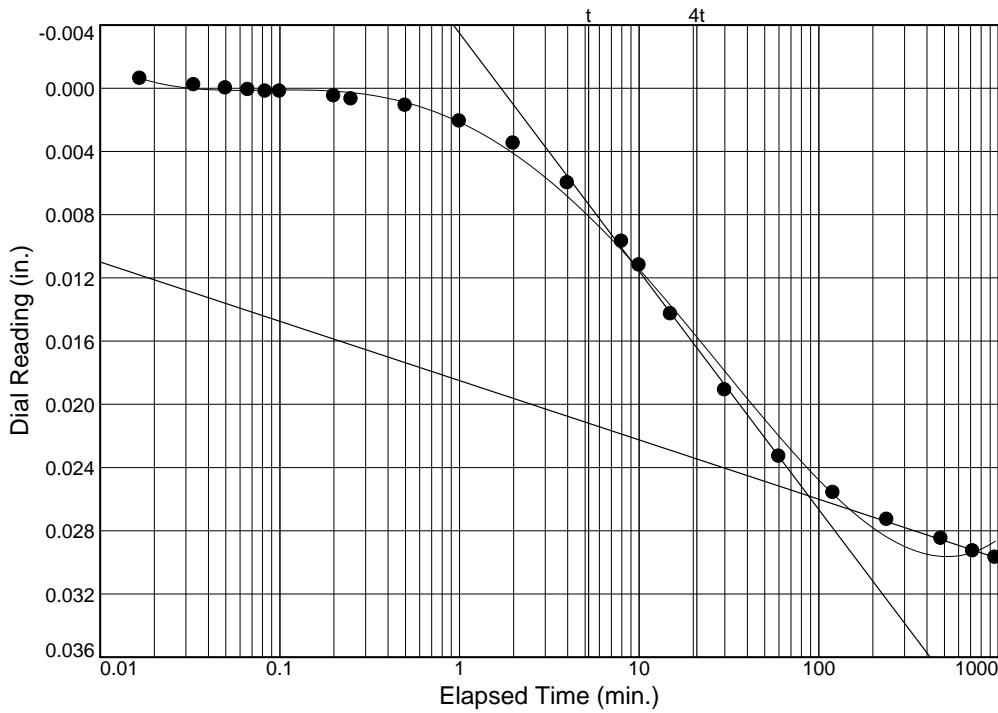
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-4

Depth: 3

Sample Number: 2B



Load No.= 1

Load= 0.06 tsf

$D_0 = 0.0005$

$D_{50} = 0.0131$

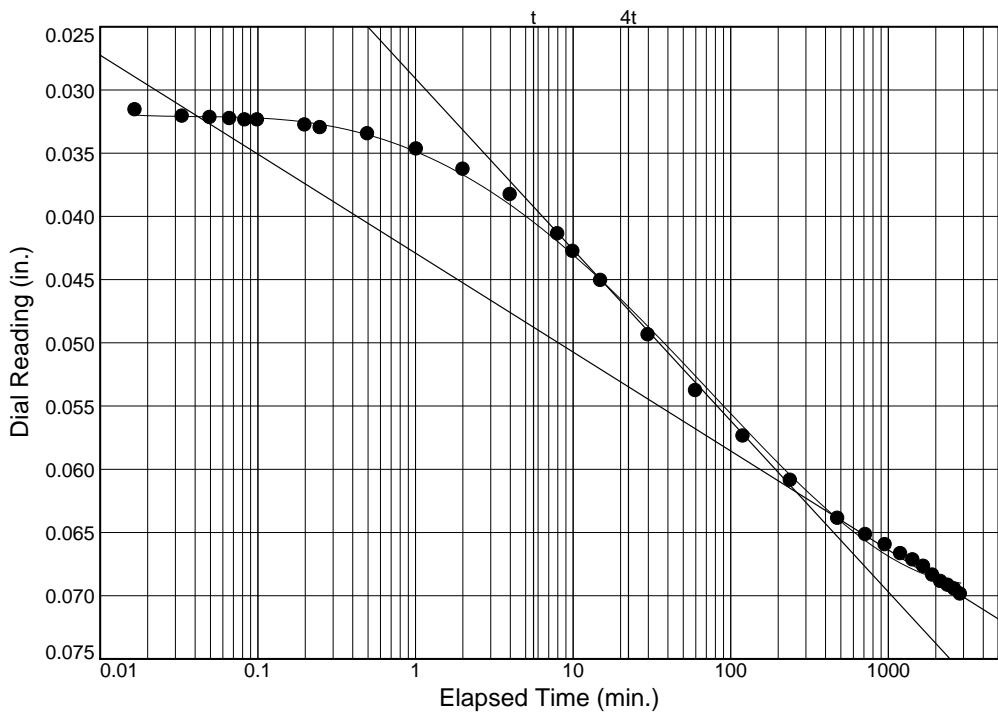
$D_{100} = 0.0258$

$T_{50} = 13.43$  min.

$C_v @ T_{50}$

0.022 ft.<sup>2</sup>/day

$C_\alpha = 0.005$



Load No.= 2

Load= 0.12 tsf

$D_0 = 0.0338$

$D_{50} = 0.0478$

$D_{100} = 0.0618$

$T_{50} = 25.34$  min.

$C_v @ T_{50}$

0.011 ft.<sup>2</sup>/day

$C_\alpha = 0.010$

# Dial Reading vs. Time

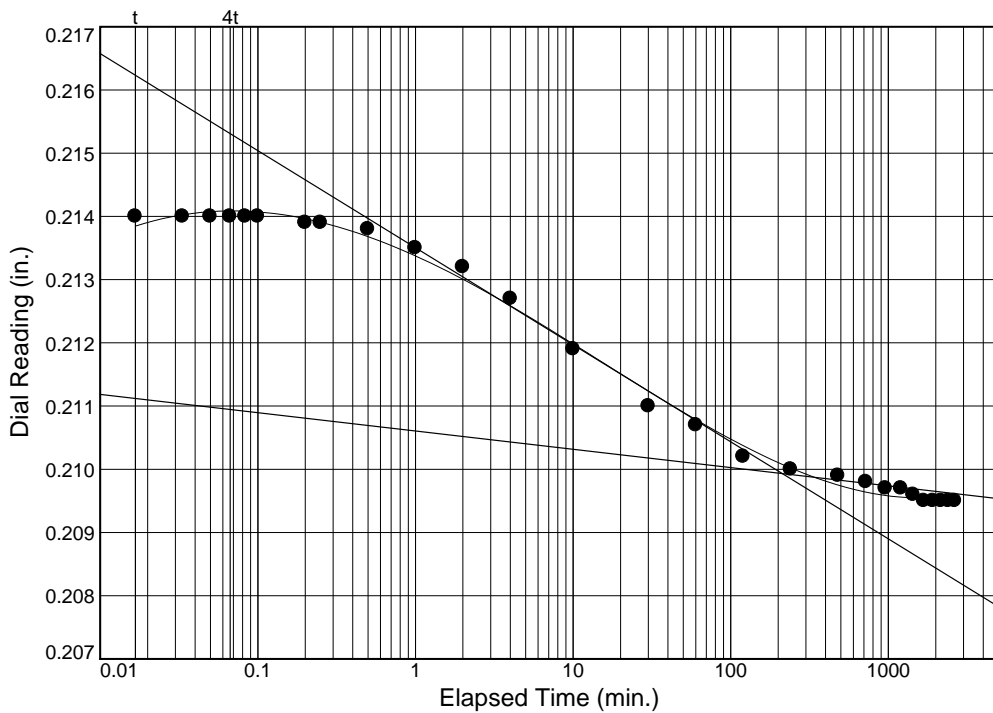
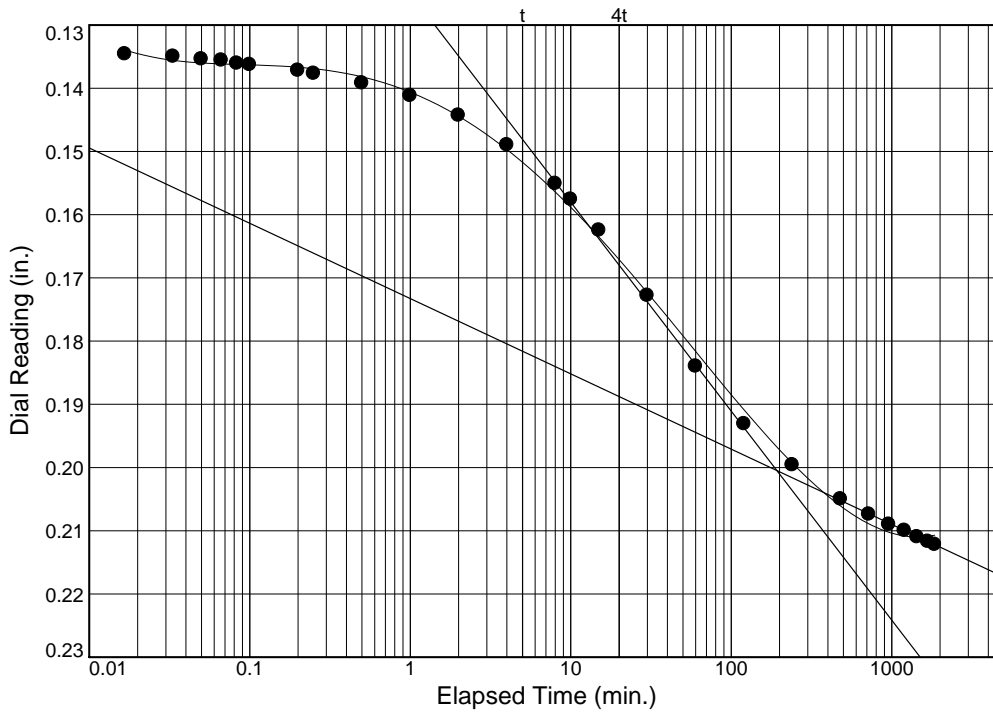
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-4

Depth: 3

Sample Number: 2B



# Dial Reading vs. Time

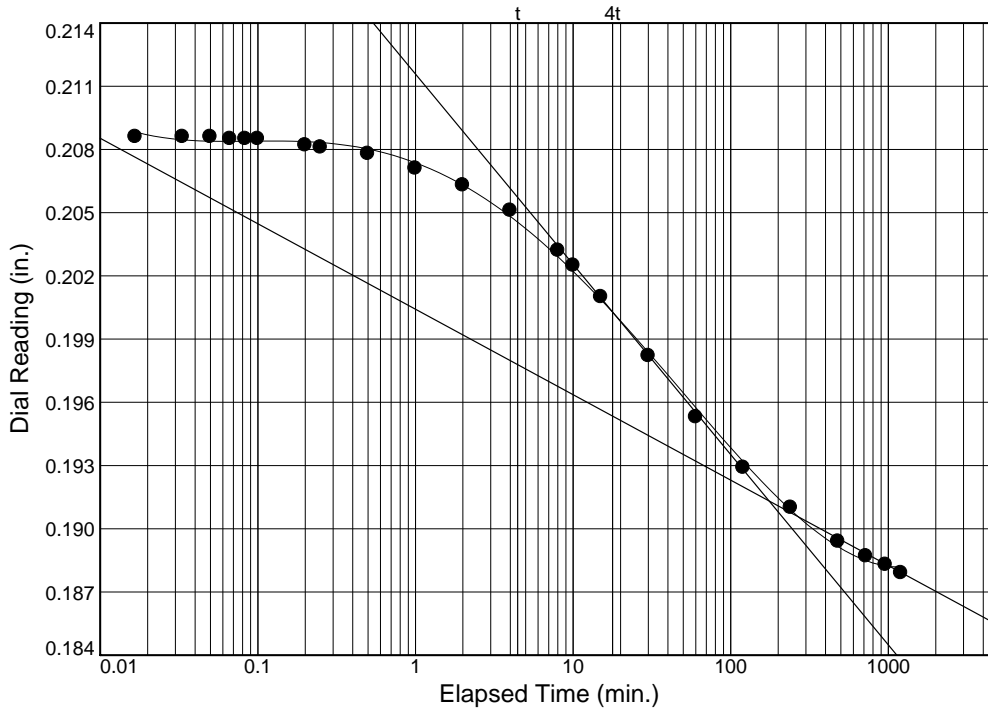
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-4

Depth: 3

Sample Number: 2B



Load No.= 6

Load= 0.06 tsf

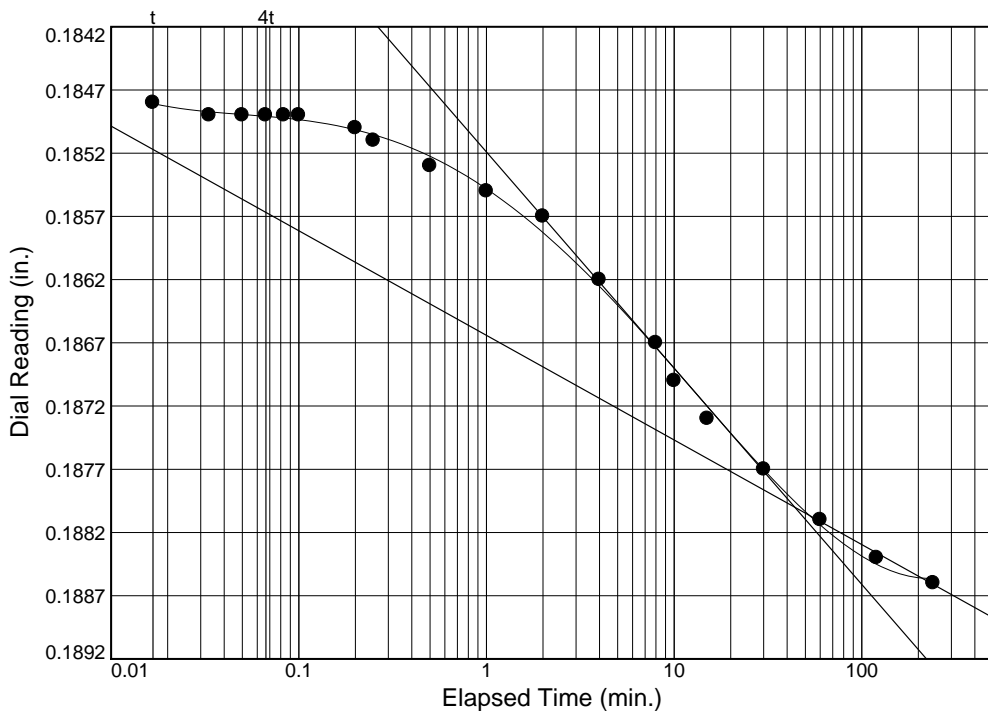
$D_0 = 0.2088$

$D_{50} = 0.2001$

$D_{100} = 0.1913$

$T_{50} = 18.86 \text{ min.}$

$C_v @ T_{50}$   
0.009 ft.<sup>2</sup>/day



Load No.= 7

Load= 0.12 tsf

$D_0 = 0.1847$

$D_{50} = 0.1864$

$D_{100} = 0.1880$

$T_{50} = 4.64 \text{ min.}$

$C_v @ T_{50}$   
0.039 ft.<sup>2</sup>/day

$C_\alpha = 0.001$

Figure

# Dial Reading vs. Time

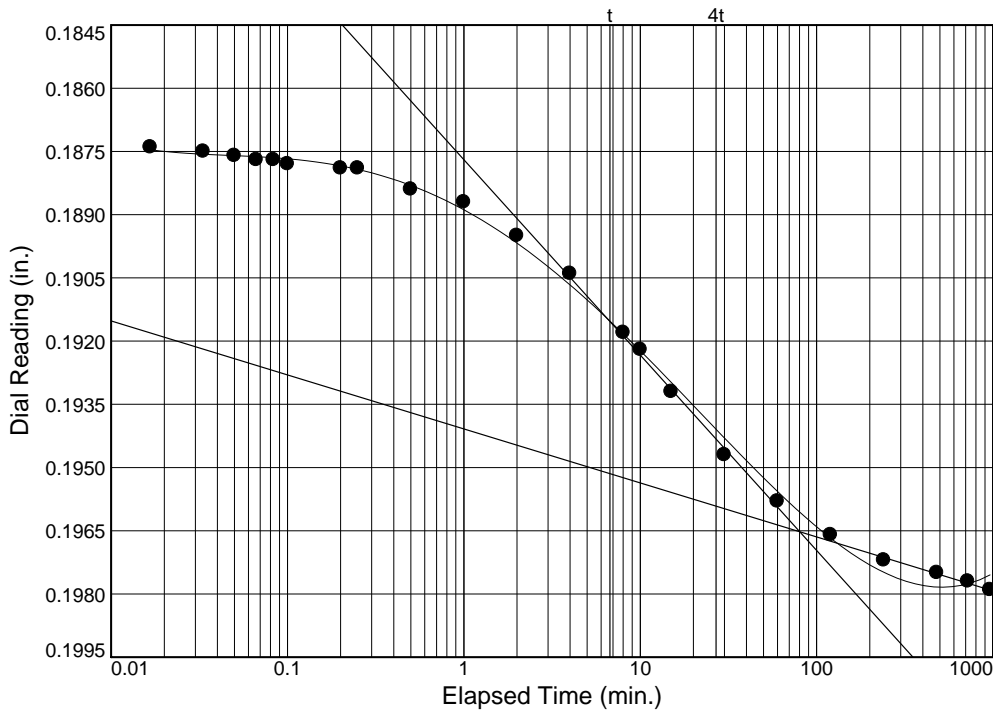
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-4

Depth: 3

Sample Number: 2B



Load No.= 8

Load= 0.25 tsf

$D_0 = 0.1890$

$D_{50} = 0.1927$

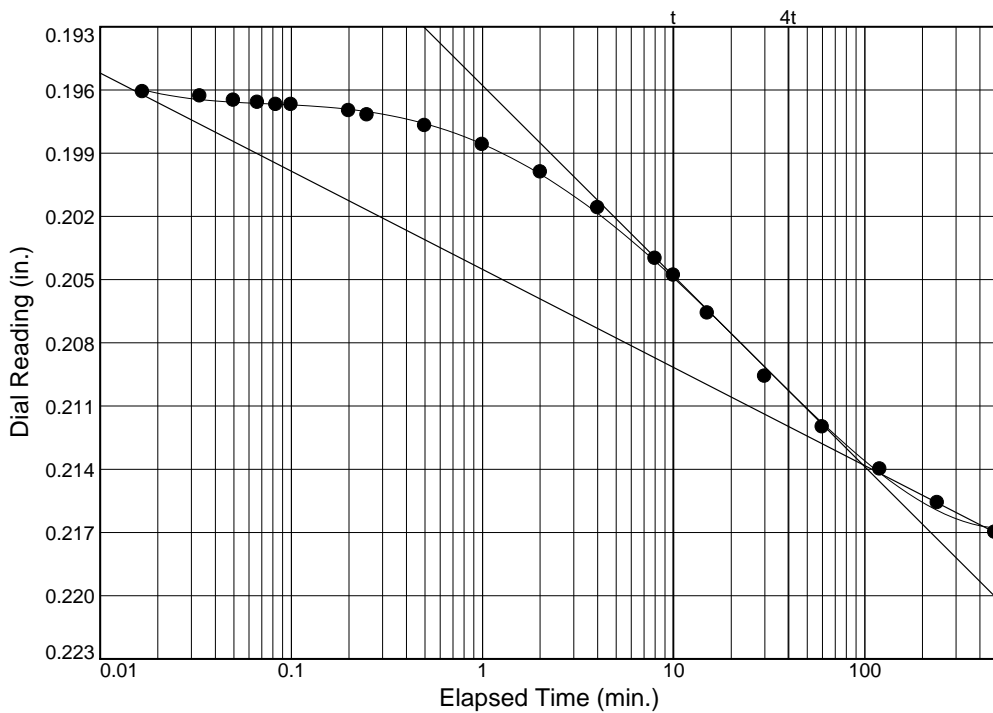
$D_{100} = 0.1965$

$T_{50} = 13.19$  min.

$C_v @ T_{50}$

0.014 ft.<sup>2</sup>/day

$C_\alpha = 0.002$



Load No.= 9

Load= 0.49 tsf

$D_0 = 0.1996$

$D_{50} = 0.2067$

$D_{100} = 0.2138$

$T_{50} = 15.87$  min.

$C_v @ T_{50}$

0.011 ft.<sup>2</sup>/day

$C_\alpha = 0.006$

# Dial Reading vs. Time

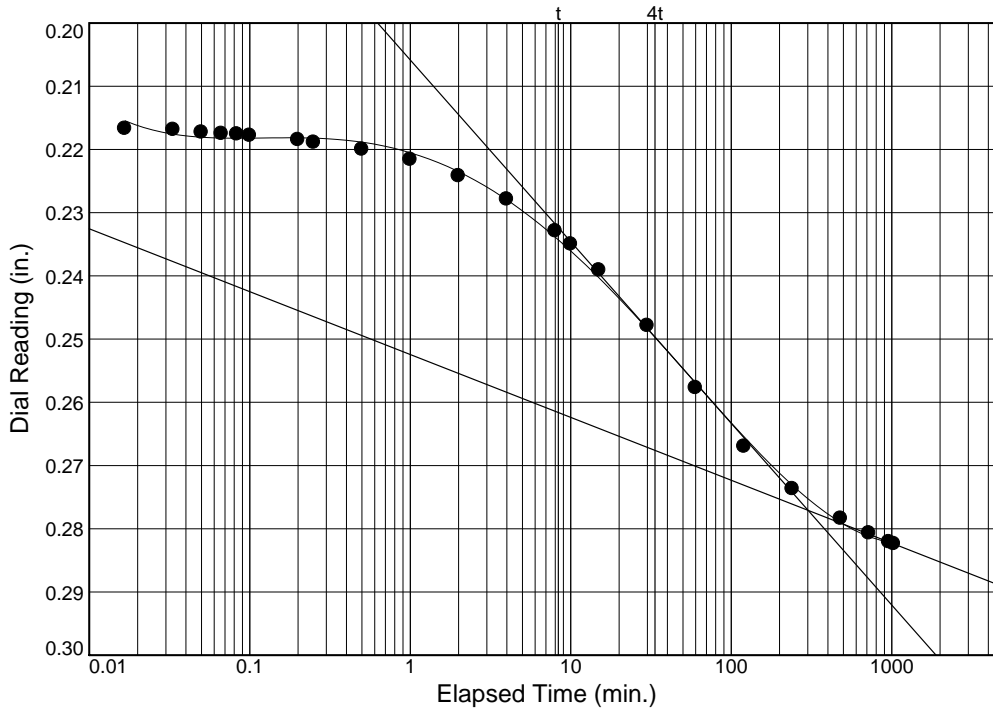
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-4

Depth: 3

Sample Number: 2B



Load No.= 10

Load= 0.97 tsf

$D_0 = 0.2189$

$D_{50} = 0.2480$

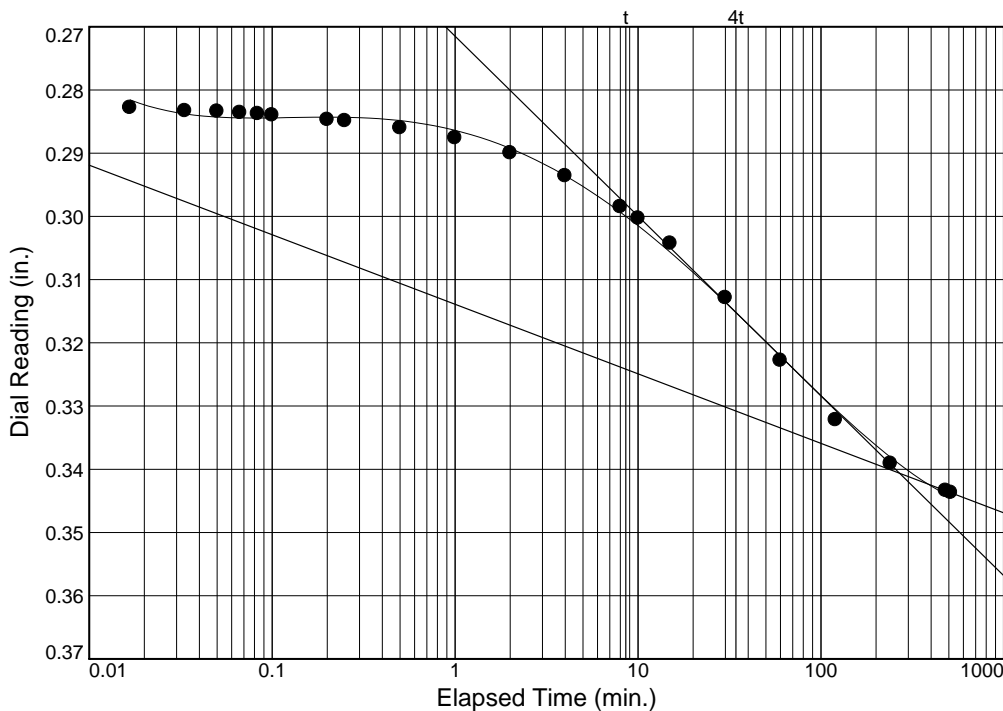
$D_{100} = 0.2771$

$T_{50} = 29.08 \text{ min.}$

$C_v @ T_{50}$

0.005 ft.<sup>2</sup>/day

$C_\alpha = 0.012$



Load No.= 11

Load= 1.93 tsf

$D_0 = 0.2847$

$D_{50} = 0.3127$

$D_{100} = 0.3406$

$T_{50} = 27.74 \text{ min.}$

$C_v @ T_{50}$

0.004 ft.<sup>2</sup>/day

$C_\alpha = 0.014$

# Dial Reading vs. Time

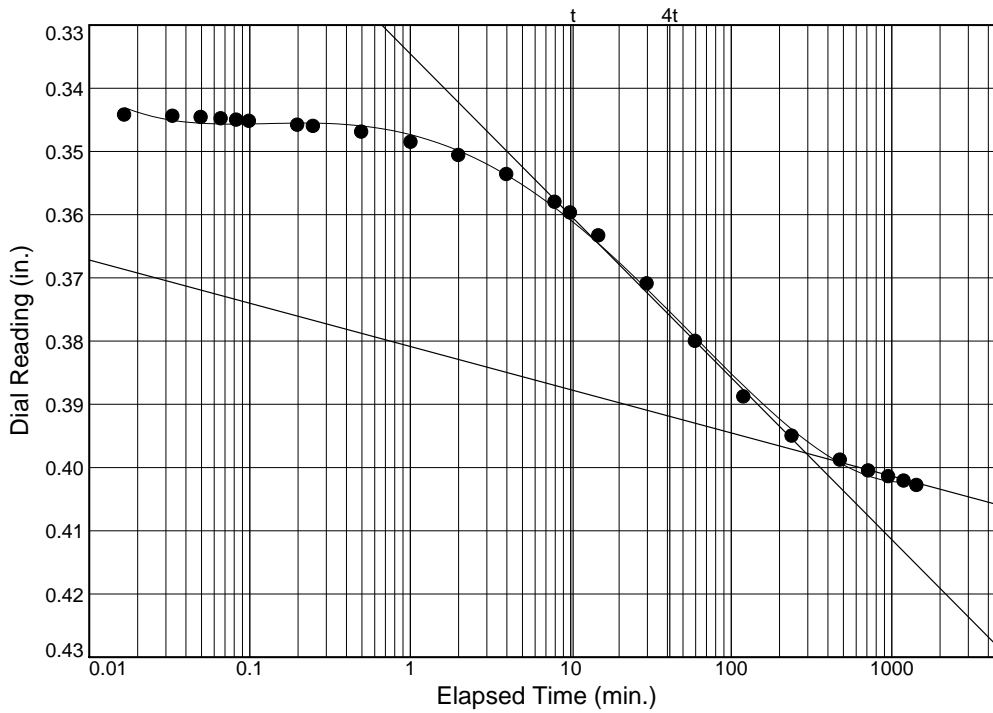
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-4

Depth: 3

Sample Number: 2B



Load No.= 12

Load= 3.85 tsf

$D_0 = 0.3470$

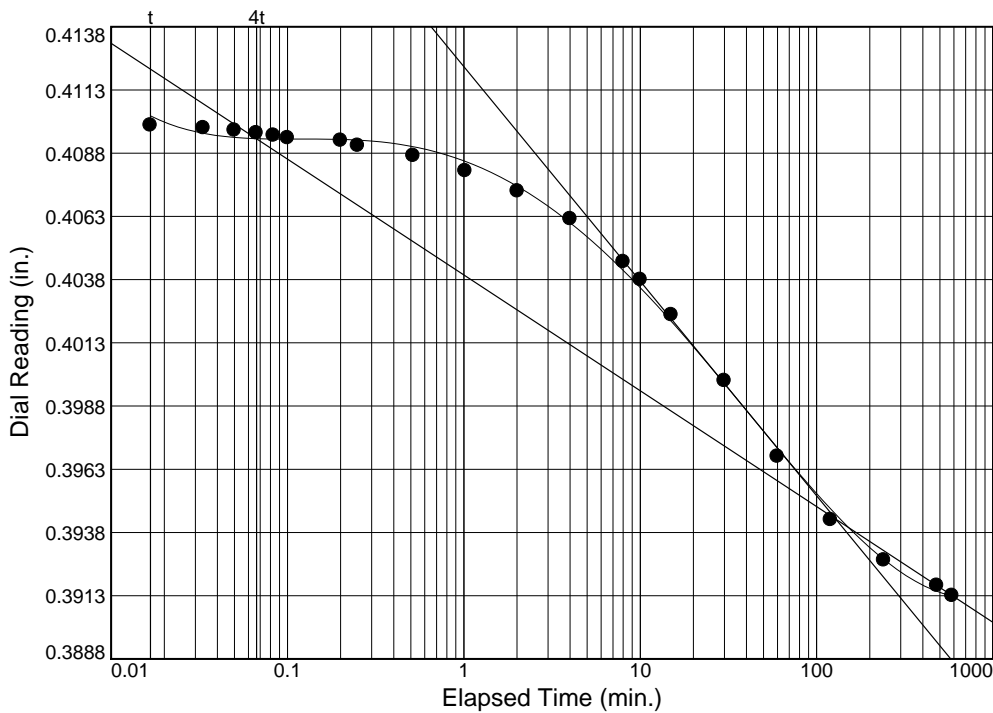
$D_{50} = 0.3724$

$D_{100} = 0.3977$

$T_{50} = 31.49$  min.

$C_v @ T_{50}$   
0.003 ft.<sup>2</sup>/day

$C_\alpha = 0.009$



Load No.= 13

Load= 0.97 tsf

$D_0 = 0.4112$

$D_{50} = 0.4027$

$D_{100} = 0.3943$

$T_{50} = 12.54$  min.

$C_v @ T_{50}$   
0.006 ft.<sup>2</sup>/day

# Dial Reading vs. Time

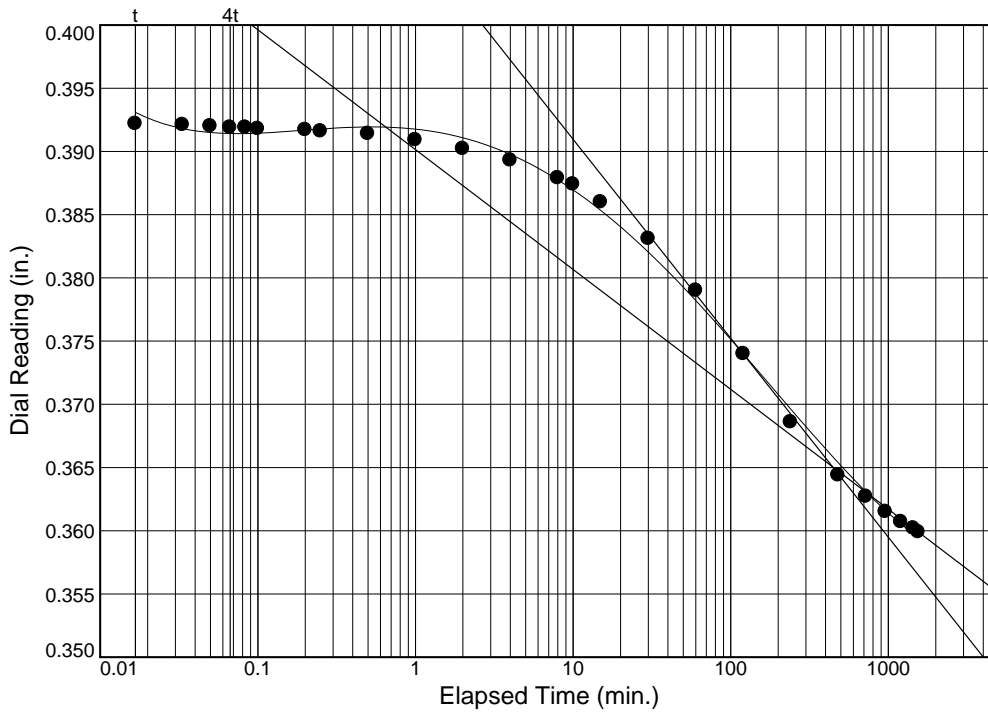
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: R-4

Depth: 3

Sample Number: 2B



Load No.= 14

Load= 0.25 tsf

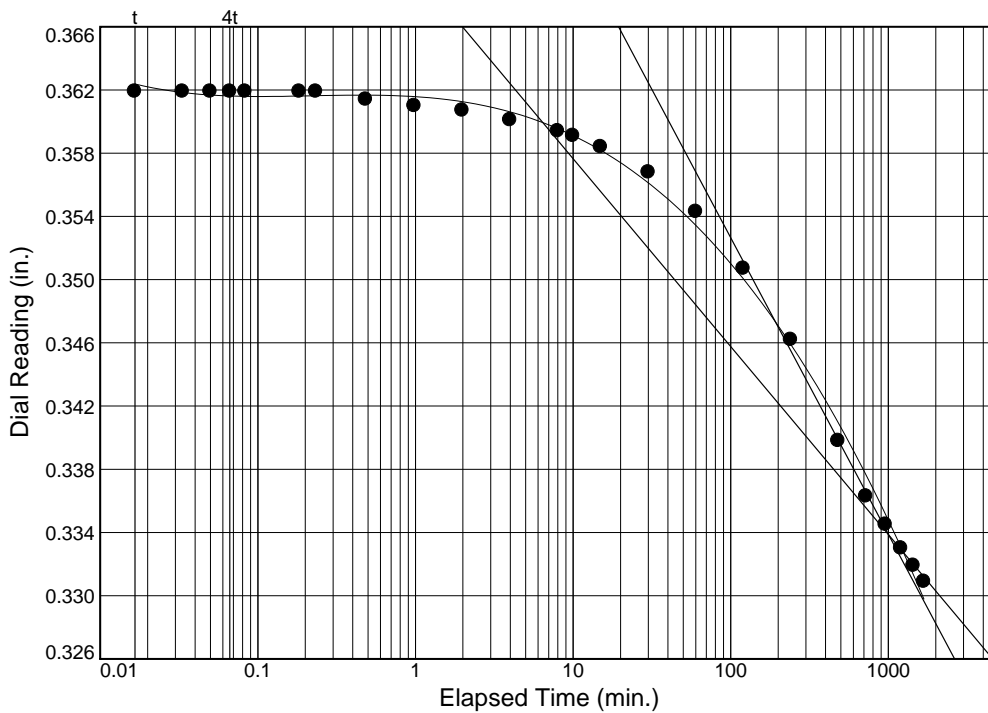
$D_0 = 0.3948$

$D_{50} = 0.3799$

$D_{100} = 0.3651$

$T_{50} = 44.54 \text{ min.}$

$C_v @ T_{50}$   
0.002 ft.<sup>2</sup>/day



Load No.= 15

Load= 0.06 tsf

$D_0 = 0.3631$

$D_{50} = 0.3485$

$D_{100} = 0.3339$

$T_{50} = 158.13 \text{ min.}$

$C_v @ T_{50}$   
0.001 ft.<sup>2</sup>/day

**CONSOLIDATION TEST DATA**

8/29/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST.  
BERNARD PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** R-4

**Depth:** 3

**Sample Number:** 2B

**Material Description:** W, xso br & g ORG CL w/ fw dec wd & rts

**Liquid Limit:** 174

**Plasticity Index:** 133

**USCS:** OH

**Tested by:** BH

**Checked by:** RR

**Test Specimen Data**

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	55.16 g.	Spec. Gr. =	2.55	Wet w+t =	69.46 g.
Dry w+t =	20.64 g.	Est. Ht. Solids =	0.150 in.	Dry w+t =	51.72 g.
Tare Wt. =	0.00 g.	Init. V.R. =	4.321	Tare Wt. =	31.08 g.
Moisture =	167.2 %	Init. Sat. =	98.7 %	Moisture =	85.9 %
UNIT WEIGHT		TEST START		Dry Wt. = 20.64* g.	
Height =	0.797 in.	Height =	0.797 in.		
Diameter =	2.049 in.	Diameter =	2.049 in.		
Weight =	55.16 g.				
Dry Dens. =	29.9 pcf	* Final dry weight used as mineral solids weight			

**End-Of-Load Summary**

Pressure (tsf)	Final Dial (in.)	Machine Defl. (in.)	Deformation (in.)	C <sub>v</sub> (ft.2/day)	C <sub>α</sub>	Void Ratio	% Strain
start	0.00040		0.00000			4.321	
0.06	0.03120	0.00150	0.02930	0.022	0.005	4.125	3.7 Compr.
0.12	0.07270	0.00280	0.06950	0.011	0.010	3.857	8.7 Compr.
0.25	0.13610	0.00430	0.13140		0.016	3.443	16.5 Compr.
0.49	0.21840	0.00620	0.21180	0.009	0.015	2.907	26.6 Compr.
0.25	0.21240	0.00290	0.20910	0.012		2.925	26.2 Compr.
0.06	0.18970	0.00180	0.18750	0.009		3.069	23.5 Compr.
0.12	0.19340	0.00480	0.18820	0.039	0.001	3.064	23.6 Compr.
0.25	0.20450	0.00660	0.19750	0.014	0.002	3.002	24.8 Compr.
0.49	0.22590	0.00890	0.21660	0.011	0.006	2.875	27.2 Compr.
0.97	0.29370	0.01130	0.28200	0.005	0.012	2.438	35.4 Compr.
1.93	0.35720	0.01350	0.34330	0.004	0.014	2.029	43.1 Compr.
3.85	0.41840	0.01550	0.40250	0.003	0.009	1.634	50.5 Compr.
0.97	0.40110	0.00980	0.39090	0.006		1.711	49.0 Compr.
0.25	0.36750	0.00760	0.35950	0.002		1.921	45.1 Compr.
0.06	0.33640	0.00550	0.33050	0.001		2.114	41.5 Compr.

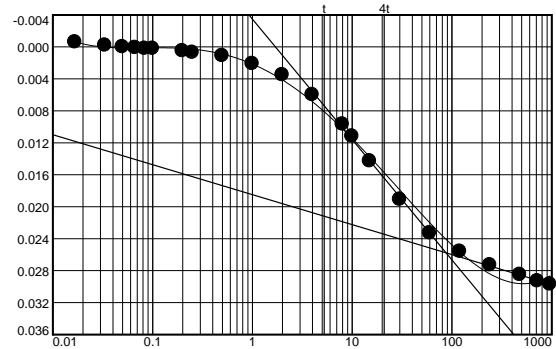


**TEST RESULTS SUMMARY**

Compression index ( $C_c$ ), tsf = 1.63    Preconsolidation pressure ( $P_p$ ), tsf = 0.2    Void ratio at  $P_p$  ( $e_m$ ) = 3.474  
 Recompression index ( $C_r$ ) = 0.22

Pressure: 0.06 tsf TEST READINGS Load No. 1

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0004	13	4.0000	0.0075
2	0.0167	0.0009	14	8.0167	0.0112
3	0.0333	0.0013	15	10.0167	0.0127
4	0.0500	0.0015	16	15.0167	0.0158
5	0.0667	0.0016	17	30.0333	0.0206
6	0.0833	0.0017	18	60.0833	0.0248
7	0.1000	0.0017	19	120.1667	0.0271
8	0.2000	0.0020	20	240.3333	0.0288
9	0.2500	0.0022	21	480.6833	0.0300
10	0.5000	0.0026	22	721.0167	0.0308
11	1.0000	0.0036	23	961.3500	0.0312
12	2.0000	0.0050			

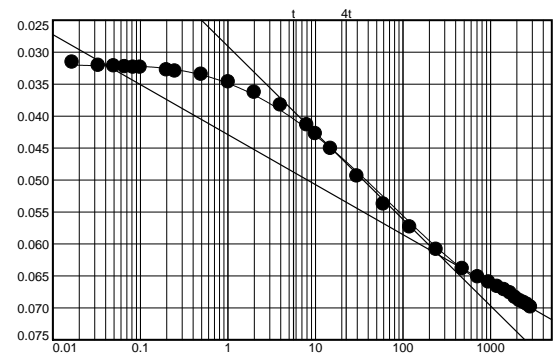


Void Ratio = 4.125    Compression = 3.7%

$D_0$  = 0.0005     $D_{50}$  = 0.0131     $D_{100}$  = 0.0258     $C_v$  at 13.43 min. = 0.022 ft.<sup>2</sup>/day     $C_\alpha$  = 0.005

Pressure: 0.12 tsf TEST READINGS Load No. 2

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0312	17	30.0500	0.0522
2	0.0167	0.0344	18	60.0833	0.0566
3	0.0333	0.0349	19	120.1833	0.0602
4	0.0500	0.0350	20	240.3667	0.0637
5	0.0667	0.0351	21	480.6833	0.0667
6	0.0833	0.0352	22	721.0167	0.0680
7	0.1000	0.0352	23	961.3667	0.0688
8	0.2000	0.0356	24	1201.7000	0.0695
9	0.2500	0.0358	25	1442.0333	0.0700
10	0.5000	0.0363	26	1682.3667	0.0705
11	1.0167	0.0375	27	1922.7000	0.0712
12	2.0167	0.0391	28	2163.0500	0.0717
13	4.0167	0.0411	29	2403.3833	0.0720
14	8.0167	0.0442	30	2643.7333	0.0723
15	10.0167	0.0456	31	2884.0667	0.0727
16	15.0167	0.0479			



Void Ratio = 3.857    Compression = 8.7%

$D_0$  = 0.0338     $D_{50}$  = 0.0478     $D_{100}$  = 0.0618     $C_v$  at 25.34 min. = 0.011 ft.<sup>2</sup>/day     $C_\alpha$  = 0.010

Pressure: 0.25 tsf

TEST READINGS

Load No. 3

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.0727	11	1.0000	0.0833	21	480.7667	0.1152
2	0.0167	0.0783	12	2.0000	0.0857	22	721.1000	0.1296
3	0.0333	0.0785	13	4.0000	0.0894	23	961.4500	0.1329
4	0.0500	0.0787	14	8.0000	0.0944	24	1201.7833	0.1347
5	0.0667	0.0791	15	10.0167	0.0961	25	1442.1167	0.1360
6	0.0833	0.0792	16	15.0167	0.1001	26	1458.3500	0.1361
7	0.1000	0.0793	17	30.0333	0.1024			
8	0.2000	0.0801	18	60.0833	0.1024			
9	0.2500	0.0805	19	120.1833	0.1024			
10	0.5000	0.0817	20	240.3833	0.1025			

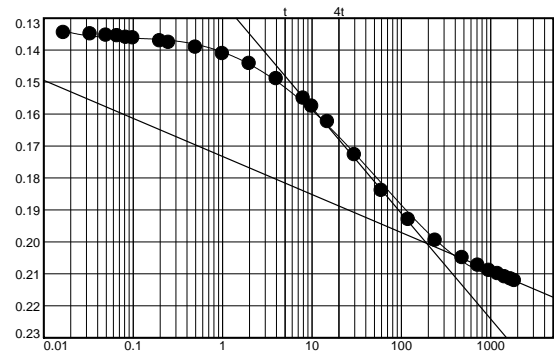
Void Ratio = 3.443    Compression = 16.5%

Pressure: 0.49 tsf

TEST READINGS

Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1357	15	10.0167	0.1638
2	0.0167	0.1408	16	15.0333	0.1687
3	0.0333	0.1412	17	30.0500	0.1790
4	0.0500	0.1416	18	60.1000	0.1902
5	0.0667	0.1418	19	120.2000	0.1993
6	0.0833	0.1423	20	240.4000	0.2058
7	0.1000	0.1425	21	480.7667	0.2112
8	0.2000	0.1434	22	721.1667	0.2136
9	0.2500	0.1439	23	961.5333	0.2152
10	0.5000	0.1454	24	1201.9333	0.2162
11	1.0000	0.1474	25	1442.3167	0.2172
12	2.0000	0.1505	26	1682.7000	0.2179
13	4.0167	0.1552	27	1853.4833	0.2184
14	8.0167	0.1613			



Void Ratio = 2.907    Compression = 26.6%

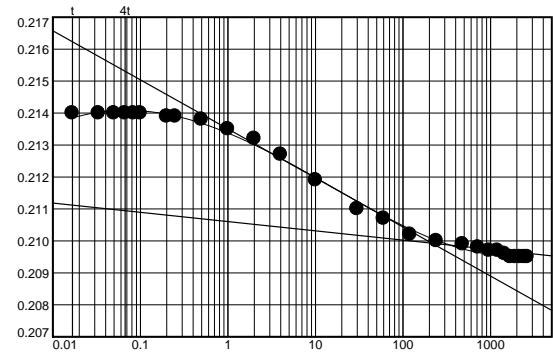
$D_0 = 0.1363$      $D_{50} = 0.1684$      $D_{100} = 0.2005$      $C_v$  at 22.16 min. = 0.009 ft.<sup>2</sup>/day     $C_\alpha = 0.015$

Pressure: 0.25 tsf

TEST READINGS

Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2170	15	30.0500	0.2139
2	0.0167	0.2169	16	60.0833	0.2136
3	0.0333	0.2169	17	120.1667	0.2131
4	0.0500	0.2169	18	240.3333	0.2129
5	0.0667	0.2169	19	480.6833	0.2128
6	0.0833	0.2169	20	721.0167	0.2127
7	0.1000	0.2169	21	961.3500	0.2126
8	0.2000	0.2168	22	1201.7000	0.2126
9	0.2500	0.2168	23	1442.0167	0.2125
10	0.5000	0.2167	24	1682.3667	0.2124
11	1.0000	0.2164	25	1922.7000	0.2124
12	2.0000	0.2161	26	2163.0333	0.2124
13	4.0167	0.2156	27	2403.3833	0.2124
14	10.0167	0.2148	28	2643.7167	0.2124



Void Ratio = 2.925 Compression = 26.2%

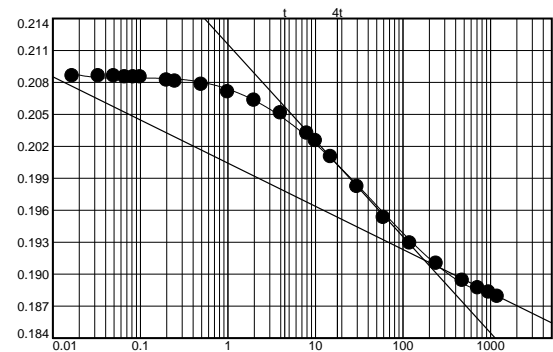
$D_0 = 0.2136$   $D_{50} = 0.2118$   $D_{100} = 0.2099$   $C_v$  at 13.72 min. = 0.012 ft.<sup>2</sup>/day

Pressure: 0.06 tsf

TEST READINGS

Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2124	13	4.0000	0.2069
2	0.0167	0.2104	14	8.0167	0.2050
3	0.0333	0.2104	15	10.0167	0.2043
4	0.0500	0.2104	16	15.0167	0.2028
5	0.0667	0.2103	17	30.0500	0.2000
6	0.0833	0.2103	18	60.0833	0.1971
7	0.1000	0.2103	19	120.1667	0.1947
8	0.2000	0.2100	20	240.3167	0.1928
9	0.2500	0.2099	21	480.6667	0.1912
10	0.5000	0.2096	22	721.0167	0.1905
11	1.0000	0.2089	23	961.3500	0.1901
12	2.0000	0.2081	24	1201.7000	0.1897



Void Ratio = 3.069 Compression = 23.5%

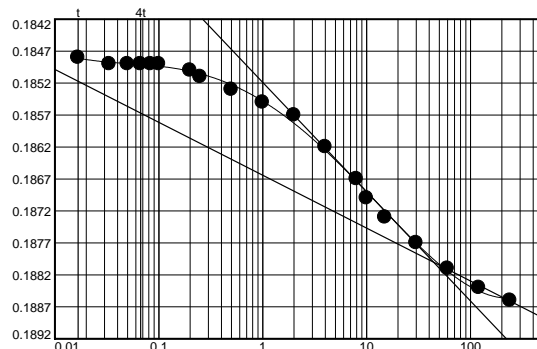
$D_0 = 0.2088$   $D_{50} = 0.2001$   $D_{100} = 0.1913$   $C_v$  at 18.86 min. = 0.009 ft.<sup>2</sup>/day

Pressure: 0.12 tsf

TEST READINGS

Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1897	11	1.0000	0.1903
2	0.0167	0.1896	12	2.0000	0.1905
3	0.0333	0.1897	13	4.0000	0.1910
4	0.0500	0.1897	14	8.0000	0.1915
5	0.0667	0.1897	15	10.0167	0.1918
6	0.0833	0.1897	16	15.0167	0.1921
7	0.1000	0.1897	17	30.04	0.19250
8	0.2000	0.1898	18	60.0833	0.1929
9	0.2500	0.1899	19	120.1667	0.19320
10	0.5000	0.1901	20	240.3333	0.1934



Void Ratio = 3.064 Compression = 23.6%

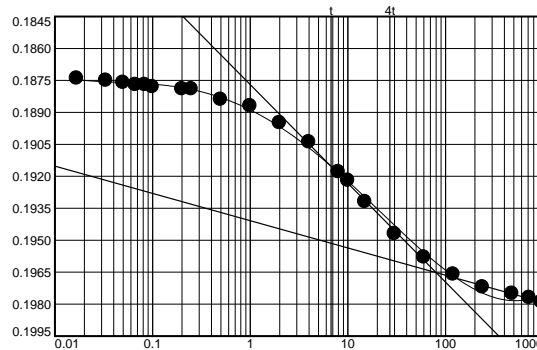
$D_0 = 0.1847$   $D_{50} = 0.1864$   $D_{100} = 0.1880$   $C_v$  at 4.64 min. = 0.039 ft.<sup>2</sup>/day  $C_\alpha = 0.001$

Pressure: 0.25 tsf

TEST READINGS

Load No. 8

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.1938	13	4.0000	0.1970
2	0.0167	0.1940	14	8.0167	0.1984
3	0.0333	0.1941	15	10.0167	0.1988
4	0.0500	0.1942	16	15.0167	0.1998
5	0.0667	0.1943	17	30.0500	0.2013
6	0.0833	0.1943	18	60.0833	0.2024
7	0.1000	0.1944	19	120.1833	0.2032
8	0.2000	0.1945	20	240.3500	0.2038
9	0.2500	0.1945	21	480.7167	0.2041
10	0.5000	0.1950	22	721.1167	0.2043
11	1.0000	0.1953	23	961.4833	0.2045
12	2.0000	0.1961			



Void Ratio = 3.002 Compression = 24.8%

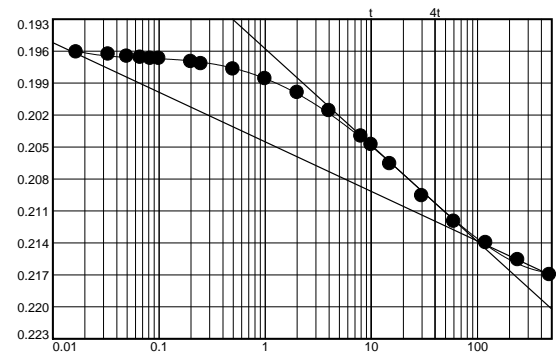
$D_0 = 0.1890$   $D_{50} = 0.1927$   $D_{100} = 0.1965$   $C_v$  at 13.19 min. = 0.014 ft.<sup>2</sup>/day  $C_\alpha = 0.002$

Pressure: 0.49 tsf

TEST READINGS

Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2045	12	2.0167	0.2088
2	0.0167	0.2050	13	4.0167	0.2105
3	0.0333	0.2052	14	8.0167	0.2129
4	0.0500	0.2054	15	10.0167	0.2137
5	0.0667	0.2055	16	15.0333	0.2155
6	0.0833	0.2056	17	30.0500	0.2185
7	0.1000	0.2056	18	60.1000	0.2209
8	0.2000	0.2059	19	120.1667	0.2229
9	0.2500	0.2061	20	240.3500	0.2245
10	0.5000	0.2066	21	480.2667	0.2259
11	1.0000	0.2075			



Void Ratio = 2.875 Compression = 27.2%

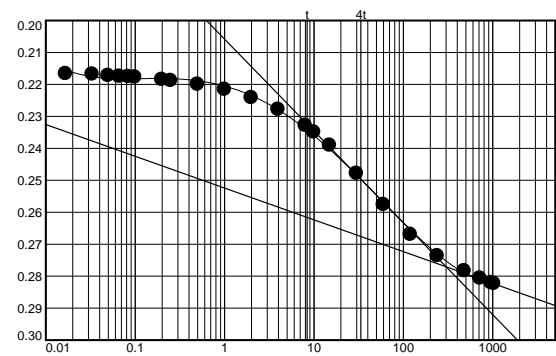
$D_0 = 0.1996$   $D_{50} = 0.2067$   $D_{100} = 0.2138$   $C_v$  at 15.87 min. = 0.011 ft.<sup>2</sup>/day  $C_\alpha = 0.006$

Pressure: 0.97 tsf

TEST READINGS

Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2258	13	4.0000	0.2392
2	0.0167	0.2280	14	8.0167	0.2442
3	0.0333	0.2282	15	10.0167	0.2463
4	0.0500	0.2286	16	15.0167	0.2504
5	0.0667	0.2288	17	30.0500	0.2592
6	0.0833	0.2289	18	60.0833	0.2690
7	0.1000	0.2291	19	120.1833	0.2783
8	0.2000	0.2298	20	240.3833	0.2850
9	0.2500	0.2302	21	480.7667	0.2897
10	0.5000	0.2313	22	721.1333	0.2920
11	1.0000	0.2329	23	961.5333	0.2934
12	2.0000	0.2355	24	1030.7167	0.2937



Void Ratio = 2.438 Compression = 35.4%

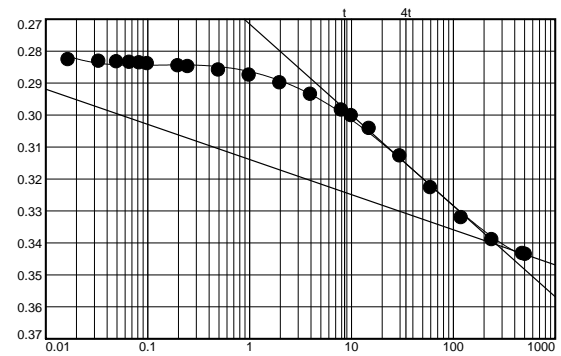
$D_0 = 0.2189$   $D_{50} = 0.2480$   $D_{100} = 0.2771$   $C_v$  at 29.08 min. = 0.005 ft.<sup>2</sup>/day  $C_\alpha = 0.012$

Pressure: 1.93 tsf

TEST READINGS

Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.2944	12	2.0000	0.3035
2	0.0167	0.2963	13	4.0000	0.3071
3	0.0333	0.2968	14	8.0167	0.3120
4	0.0500	0.2969	15	10.0167	0.3138
5	0.0667	0.2971	16	15.0167	0.3178
6	0.0833	0.2973	17	30.0500	0.3264
7	0.1000	0.2975	18	60.1000	0.3363
8	0.2000	0.2982	19	120.2000	0.3457
9	0.2500	0.2984	20	240.3833	0.3526
10	0.5000	0.2995	21	480.8500	0.3569
11	1.0000	0.3011	22	512.0167	0.3572



Void Ratio = 2.029 Compression = 43.1%

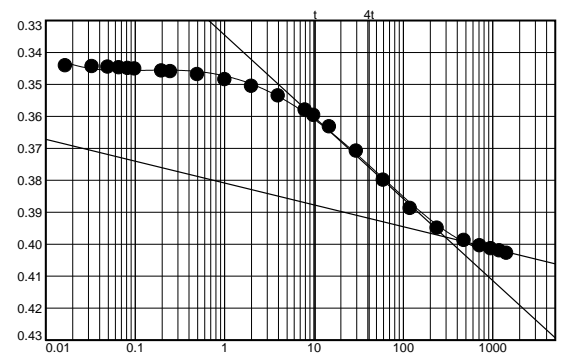
$D_0 = 0.2847$   $D_{50} = 0.3127$   $D_{100} = 0.3406$   $C_v$  at 27.74 min. = 0.004 ft.<sup>2</sup>/day  $C_\alpha = 0.014$

Pressure: 3.85 tsf

TEST READINGS

Load No. 12

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.3576	14	8.0167	0.3736
2	0.0167	0.3598	15	10.0167	0.3753
3	0.0333	0.3600	16	15.0333	0.3789
4	0.0500	0.3602	17	30.0667	0.3865
5	0.0667	0.3604	18	60.1000	0.3956
6	0.0833	0.3606	19	120.2000	0.4044
7	0.1000	0.3608	20	240.3833	0.4106
8	0.2000	0.3614	21	480.7500	0.4144
9	0.2500	0.3616	22	721.1167	0.4161
10	0.5000	0.3625	23	961.4667	0.4170
11	1.0167	0.3641	24	1201.8333	0.4177
12	2.0167	0.3662	25	1442.1500	0.4184
13	4.0167	0.3692			



Void Ratio = 1.634 Compression = 50.5%

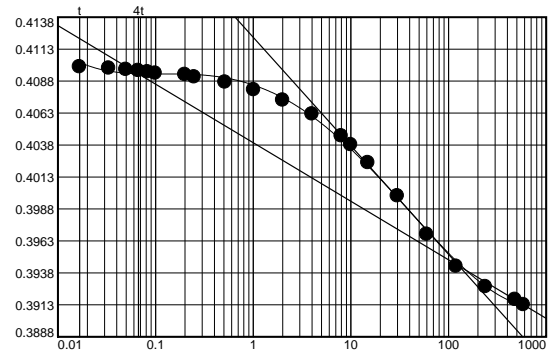
$D_0 = 0.3470$   $D_{50} = 0.3724$   $D_{100} = 0.3977$   $C_v$  at 31.49 min. = 0.003 ft.<sup>2</sup>/day  $C_\alpha = 0.009$

Pressure: 0.97 tsf

TEST READINGS

Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.4184	12	2.0167	0.4171
2	0.0167	0.4197	13	4.0167	0.4160
3	0.0333	0.4196	14	8.0167	0.4143
4	0.0500	0.4195	15	10.0167	0.4136
5	0.0667	0.4194	16	15.0333	0.4122
6	0.0833	0.4193	17	30.0500	0.4096
7	0.1000	0.4192	18	60.1000	0.4066
8	0.2000	0.4191	19	120.1833	0.4041
9	0.2500	0.4189	20	240.3833	0.4025
10	0.5167	0.4185	21	480.7500	0.4015
11	1.0167	0.4179	22	587.8333	0.4011



Void Ratio = 1.711 Compression = 49.0%

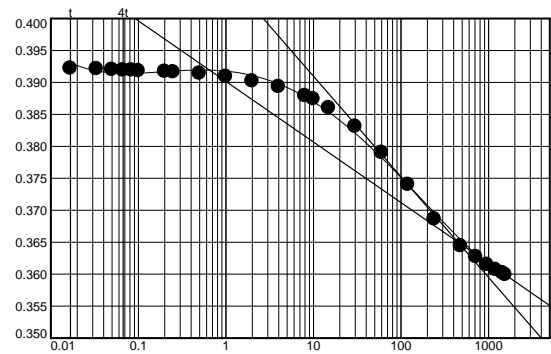
$D_0 = 0.4112$   $D_{50} = 0.4027$   $D_{100} = 0.3943$   $C_v$  at 12.54 min. = 0.006 ft.<sup>2</sup>/day

Pressure: 0.25 tsf

TEST READINGS

Load No. 14

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0000	0.4003	14	8.0000	0.3955
2	0.0167	0.3998	15	10.0000	0.3950
3	0.0333	0.3997	16	15.0000	0.3936
4	0.0500	0.3996	17	30.0333	0.3907
5	0.0667	0.3995	18	60.0833	0.3866
6	0.0833	0.3995	19	120.1833	0.3816
7	0.1000	0.3994	20	240.3833	0.3762
8	0.2000	0.3993	21	480.7833	0.3720
9	0.2500	0.3992	22	721.2167	0.3703
10	0.5000	0.3990	23	961.6500	0.3691
11	1.0000	0.3985	24	1202.1000	0.3683
12	2.0000	0.3978	25	1442.5500	0.3678
13	4.0000	0.3969	26	1551.6000	0.3675



Void Ratio = 1.921 Compression = 45.1%

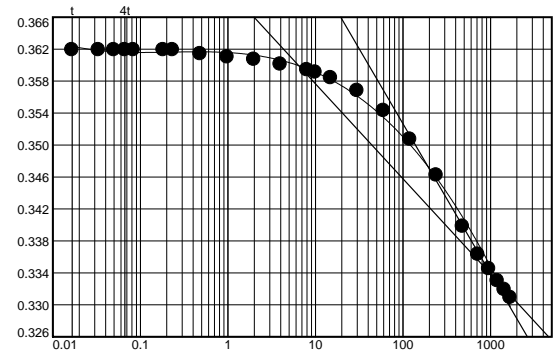
$D_0 = 0.3948$   $D_{50} = 0.3799$   $D_{100} = 0.3651$   $C_v$  at 44.54 min. = 0.002 ft.<sup>2</sup>/day

Pressure: 0.06 tsf

TEST READINGS

Load No. 15

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0167	0.3674	14	10.0167	0.3646
2	0.0333	0.3674	15	15.0167	0.3639
3	0.0500	0.3674	16	30.0500	0.3623
4	0.0667	0.3674	17	60.1000	0.3598
5	0.0833	0.3674	18	120.2167	0.3562
6	0.1000	0.3674	19	240.4333	0.3517
7	0.2000	0.3674	20	480.8667	0.3453
8	0.2500	0.3674	21	721.3167	0.3418
9	0.5000	0.3669	22	961.7500	0.3400
10	1.0000	0.3665	23	1202.2000	0.3385
11	2.0000	0.3662	24	1442.6500	0.3374
12	4.0000	0.3656	25	1683.0667	0.3364
13	8.0167	0.3649			

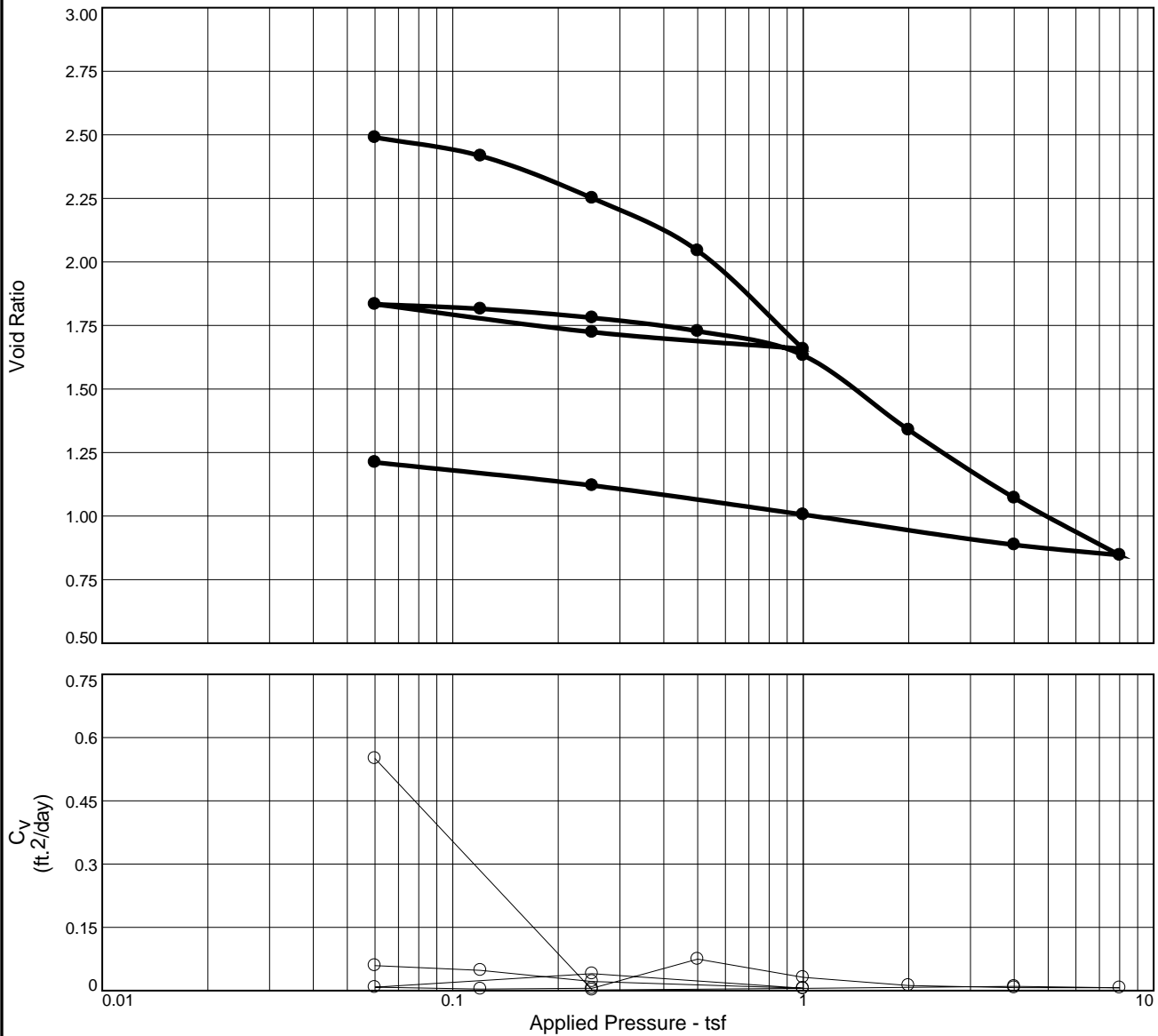


Void Ratio = 2.114    Compression = 41.5%

$D_0 = 0.3631$      $D_{50} = 0.3485$      $D_{100} = 0.3339$      $C_v$  at 158.13 min. = 0.001 ft.<sup>2</sup>/day




# CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P <sub>c</sub> (tsf)	C <sub>c</sub>	Initial Void Ratio
Saturation	Moisture							
99.4 %	91.8 %	49.6	105	78	2.72	0.4	1.05	2.513

<b>MATERIAL DESCRIPTION</b>		<b>USCS</b>	<b>AASHTO</b>
W, xso g FT CL w/ fw om		CH	

<b>Project No.</b> 24762 <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE <b>Source of Sample:</b> T-1 <b>Depth:</b> 19 <b>Sample Number:</b> 10B	<b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE	<b>Remarks:</b>   <div style="text-align: right;">  </div>
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**Tested By:** BH \_\_\_\_\_ **Checked By:** RR \_\_\_\_\_

Figure

# Dial Reading vs. Time

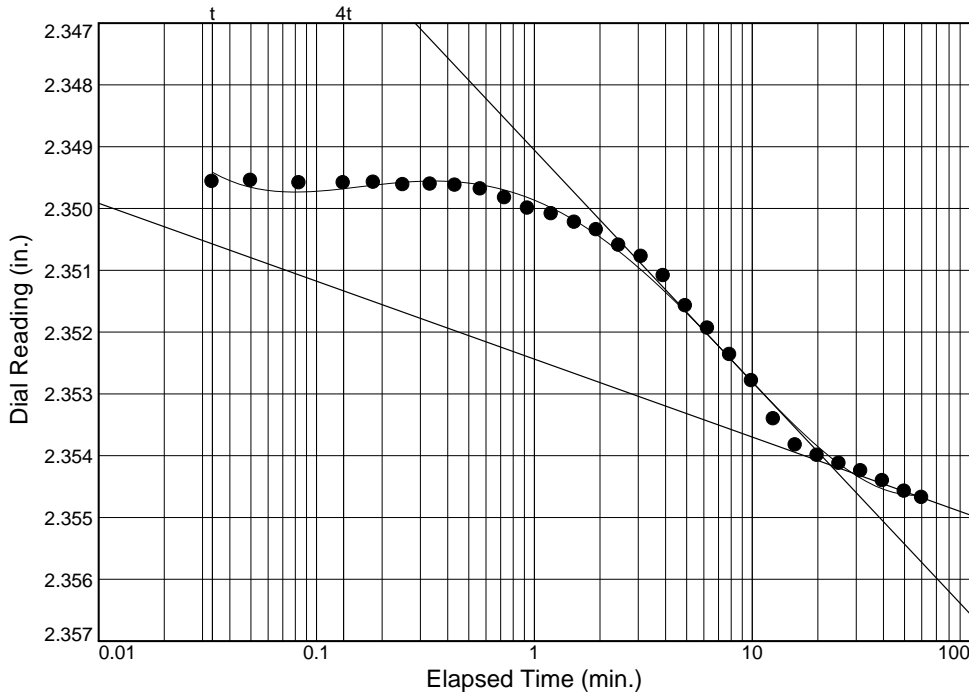
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-1

Depth: 19

Sample Number: 10B



Load No.= 1

Load= 0.06 tsf

$D_0 = 2.3491$

$D_{50} = 2.3516$

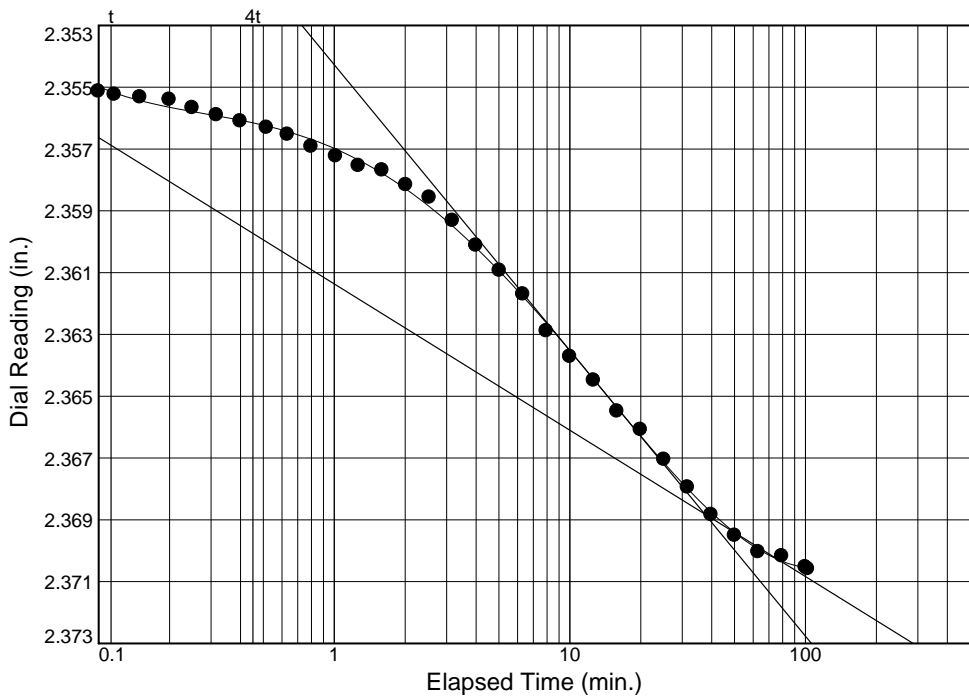
$D_{100} = 2.3541$

$T_{50} = 4.86$  min.

$C_v @ T_{50}$

0.059 ft.<sup>2</sup>/day

$C_\alpha = 0.002$



Load No.= 2

Load= 0.12 tsf

$D_0 = 2.3541$

$D_{50} = 2.3615$

$D_{100} = 2.3688$

$T_{50} = 5.82$  min.

$C_v @ T_{50}$

0.048 ft.<sup>2</sup>/day

$C_\alpha = 0.006$

# Dial Reading vs. Time

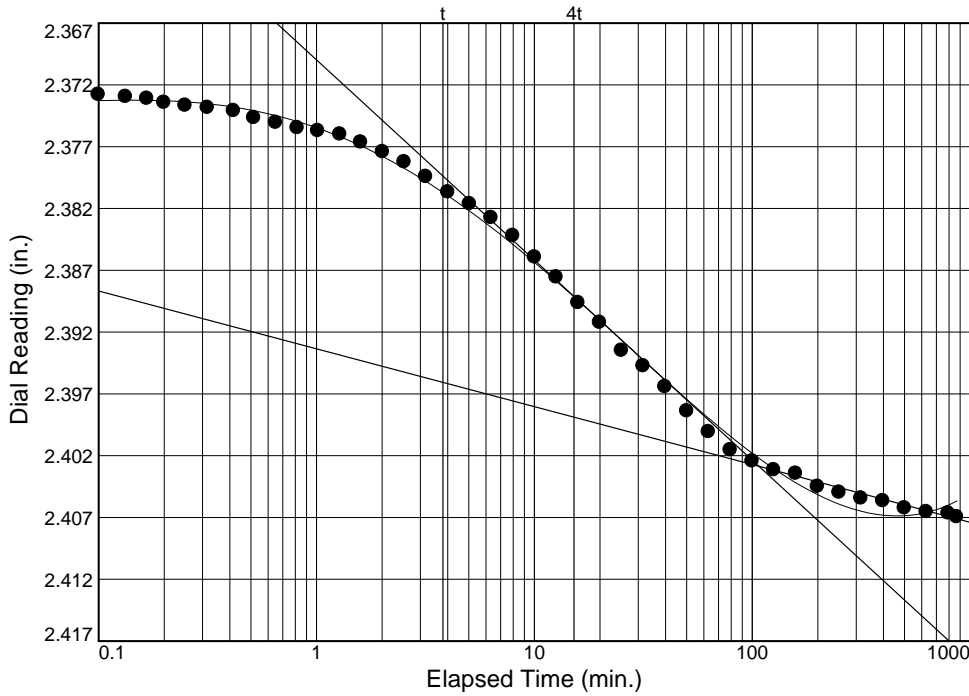
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-1

Depth: 19

Sample Number: 10B



Load No.= 3

Load= 0.25 tsf

$D_0 = 2.3722$

$D_{50} = 2.3876$

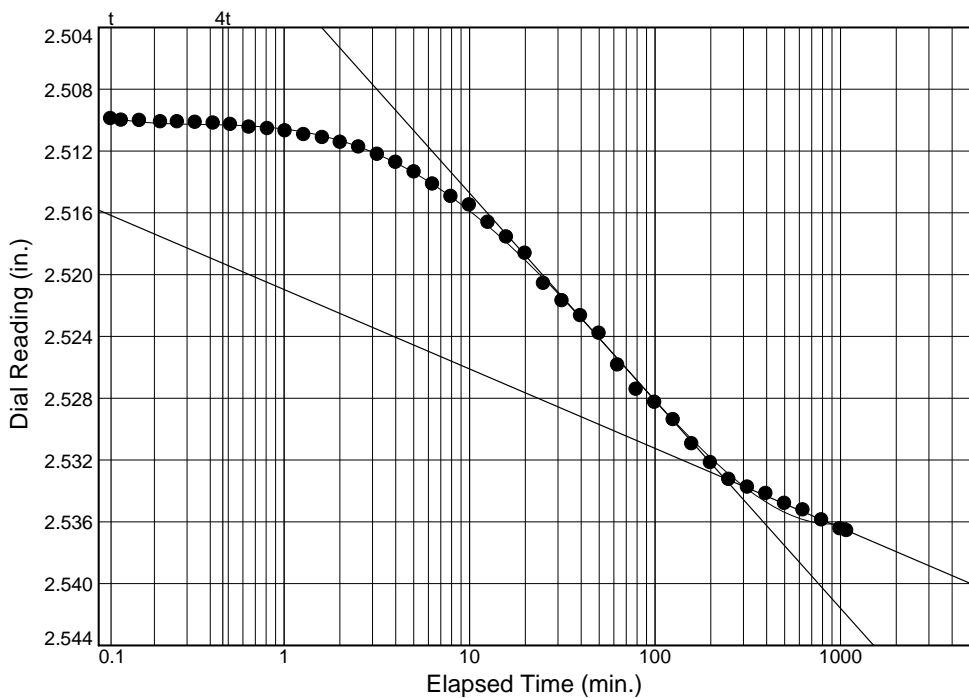
$D_{100} = 2.4029$

$T_{50} = 12.01$  min.

$C_v @ T_{50}$

0.022 ft.<sup>2</sup>/day

$C_\alpha = 0.006$



Load No.= 5

Load= 1.00 tsf

$D_0 = 2.5094$

$D_{50} = 2.5213$

$D_{100} = 2.5332$

$T_{50} = 30.26$  min.

$C_v @ T_{50}$

0.006 ft.<sup>2</sup>/day

$C_\alpha = 0.007$

# Dial Reading vs. Time

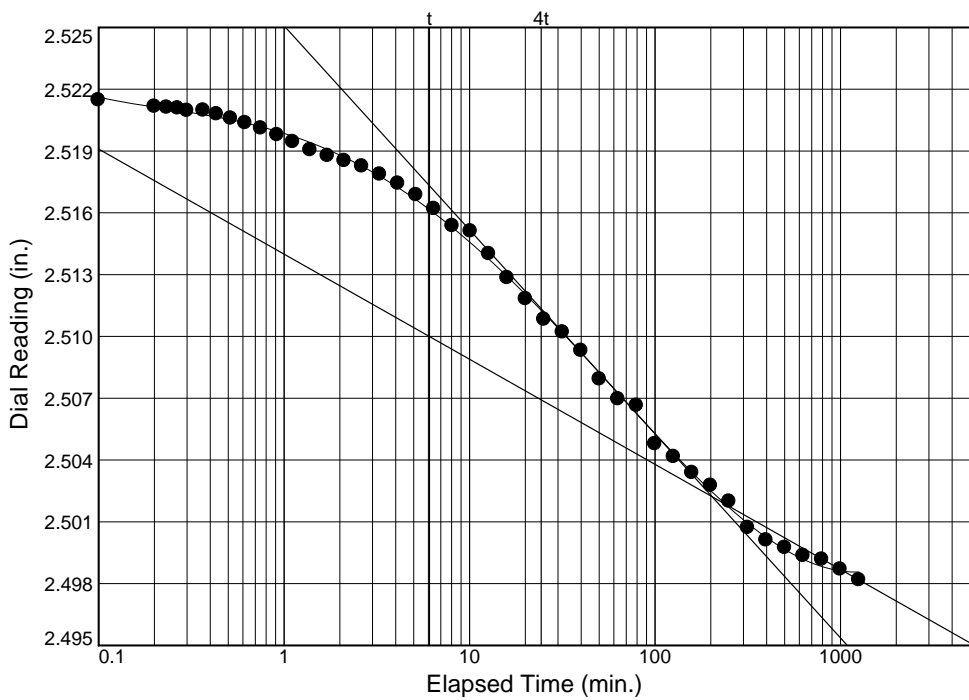
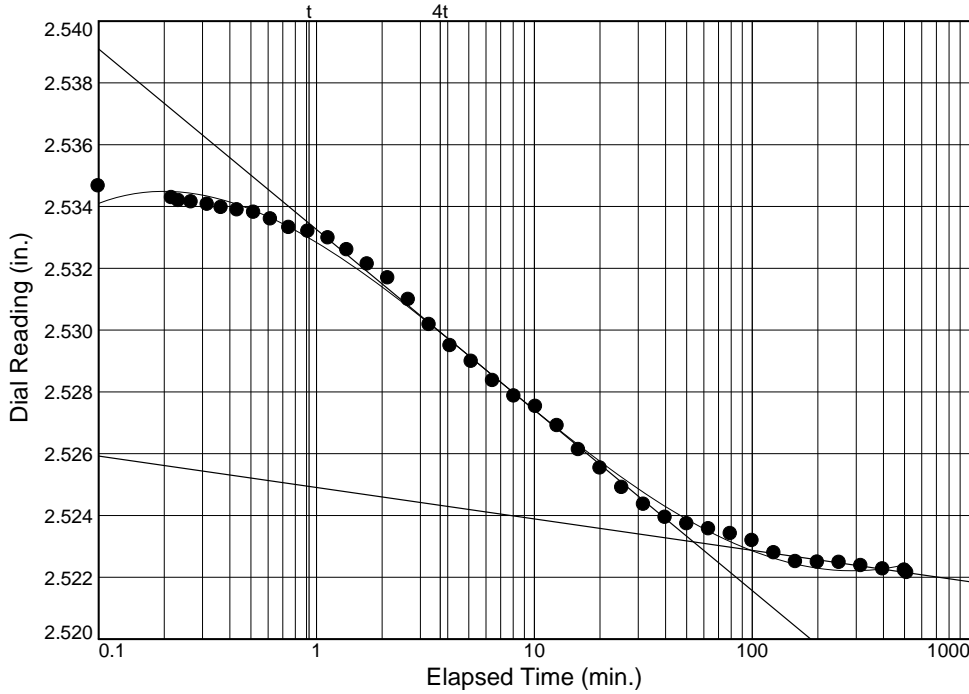
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-1

Depth: 19

Sample Number: 10B



# Dial Reading vs. Time

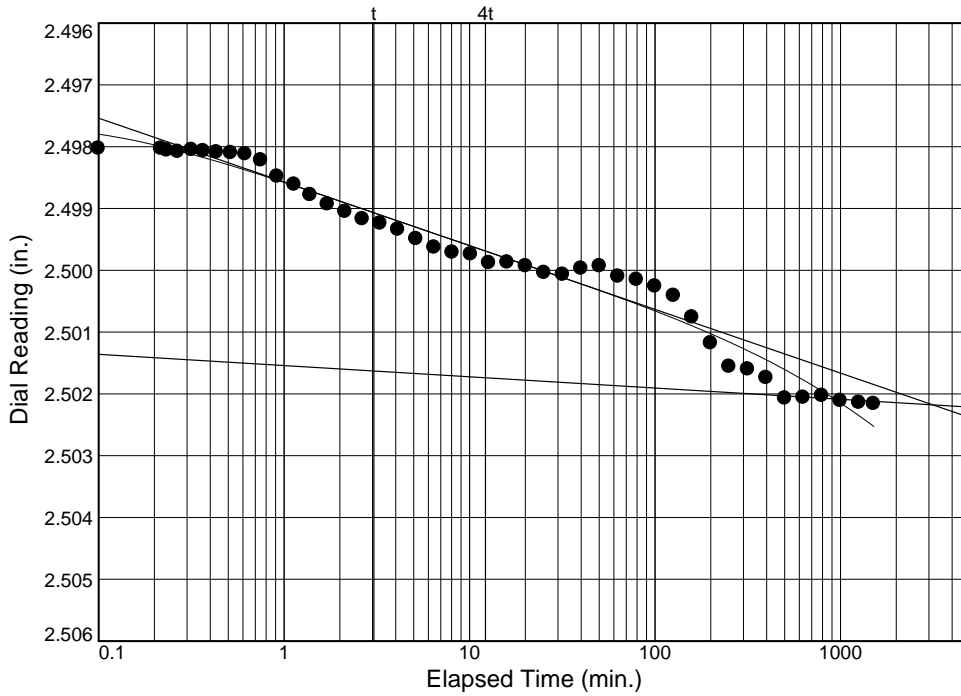
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-1

Depth: 19

Sample Number: 10B



Load No.= 8

Load= 0.12 tsf

$D_0 = 2.4985$

$D_{50} = 2.5003$

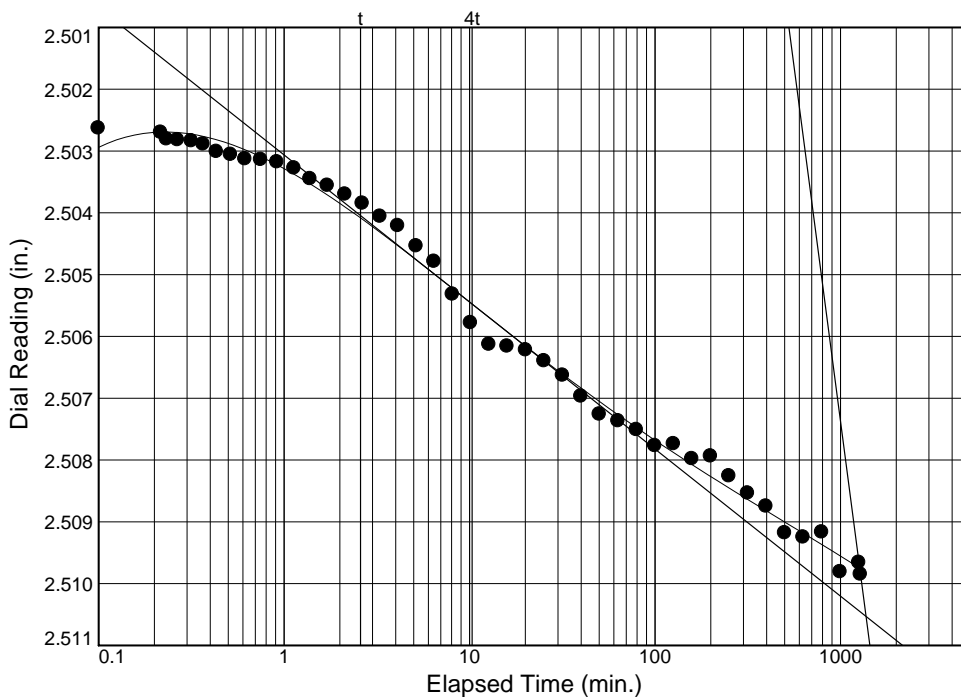
$D_{100} = 2.5022$

$T_{50} = 48.96 \text{ min.}$

$C_v @ T_{50}$

0.004 ft.<sup>2</sup>/day

$C_\alpha = 0.000$



Load No.= 9

Load= 0.25 tsf

$D_0 = 2.5027$

$D_{50} = 2.5066$

$D_{100} = 2.5105$

$T_{50} = 31.62 \text{ min.}$

$C_v @ T_{50}$

0.006 ft.<sup>2</sup>/day

$C_\alpha = 0.030$

# Dial Reading vs. Time

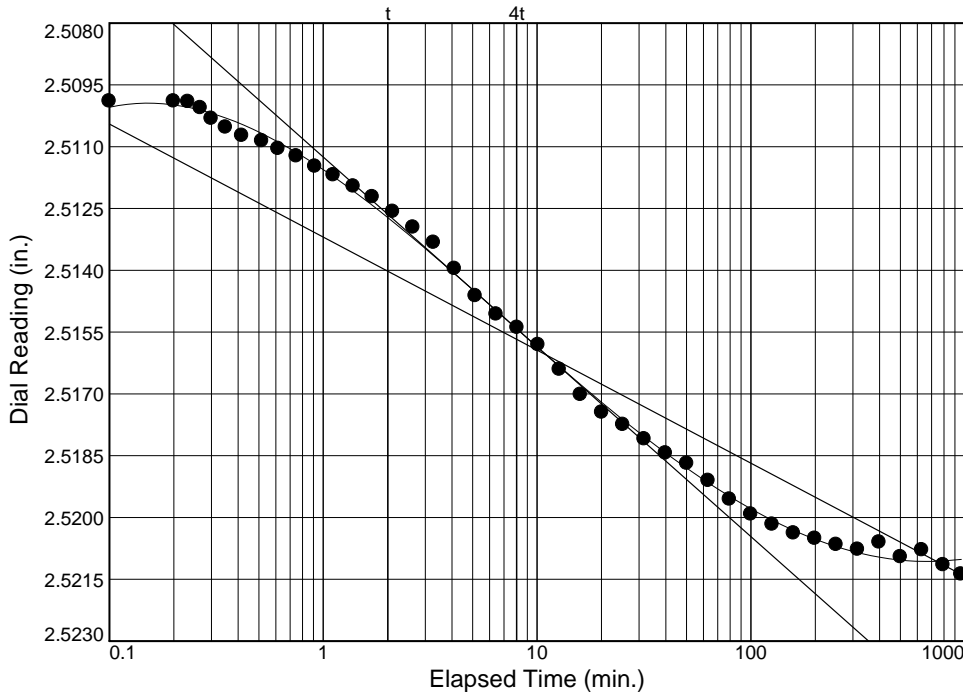
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-1

Depth: 19

Sample Number: 10B



Load No.= 10

Load= 0.50 tsf

$D_0 = 2.5100$

$D_{50} = 2.5130$

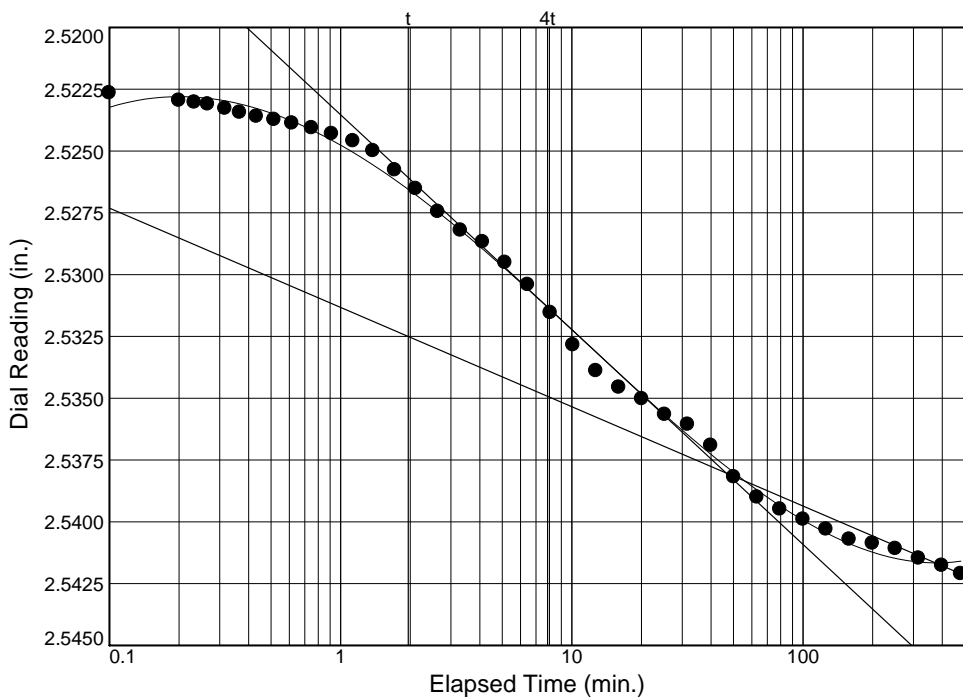
$D_{100} = 2.5161$

$T_{50} = 2.39$  min.

$C_v @ T_{50}$

0.075 ft.<sup>2</sup>/day

$C_\alpha = 0.004$



Load No.= 11

Load= 1.00 tsf

$D_0 = 2.5218$

$D_{50} = 2.5299$

$D_{100} = 2.5380$

$T_{50} = 5.35$  min.

$C_v @ T_{50}$

0.032 ft.<sup>2</sup>/day

$C_\alpha = 0.005$

# Dial Reading vs. Time

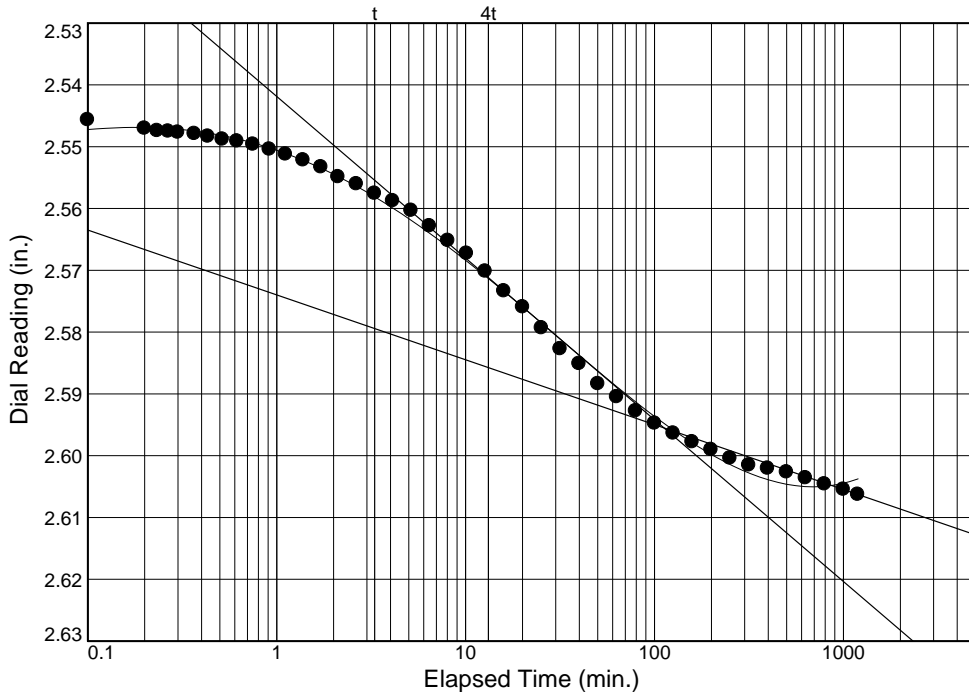
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-1

Depth: 19

Sample Number: 10B



Load No.= 12

Load= 2.00 tsf

$D_0 = 2.5449$

$D_{50} = 2.5702$

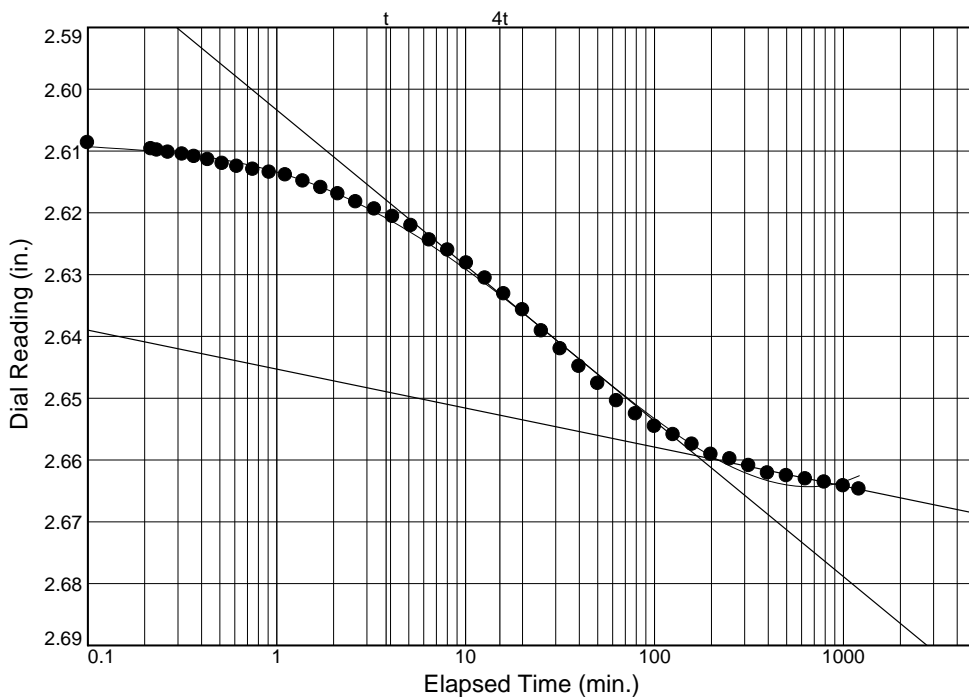
$D_{100} = 2.5955$

$T_{50} = 11.86$  min.

$C_v @ T_{50}$

0.012 ft.<sup>2</sup>/day

$C_\alpha = 0.014$



Load No.= 13

Load= 4.00 tsf

$D_0 = 2.6084$

$D_{50} = 2.6339$

$D_{100} = 2.6593$

$T_{50} = 16.09$  min.

$C_v @ T_{50}$

0.007 ft.<sup>2</sup>/day

$C_\alpha = 0.008$

# Dial Reading vs. Time

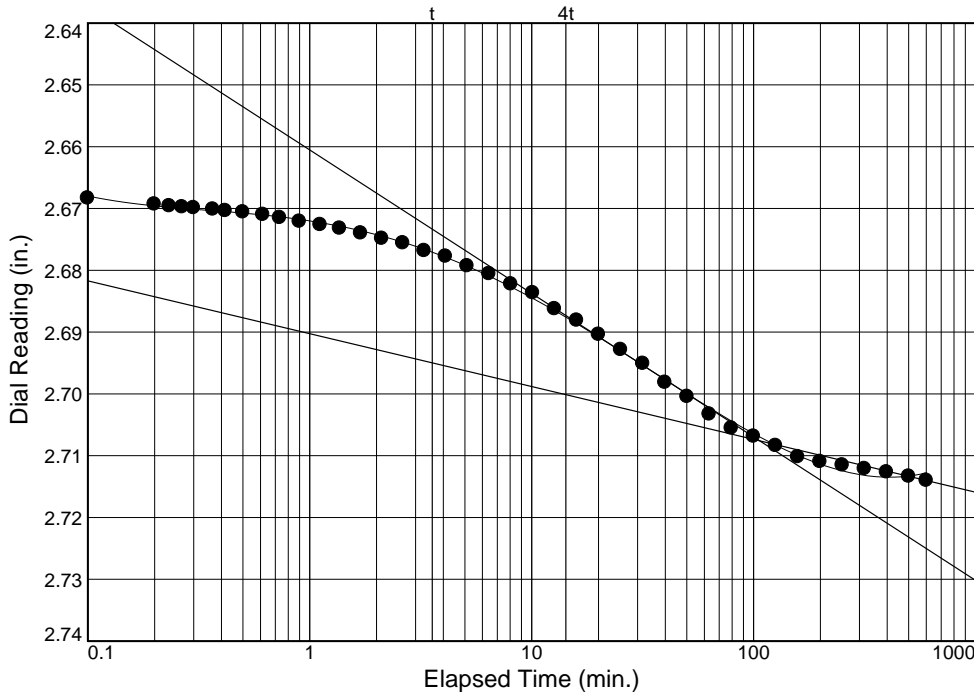
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-1

Depth: 19

Sample Number: 10B



Load No.= 14

Load= 8.00 tsf

$D_0 = 2.6666$

$D_{50} = 2.6871$

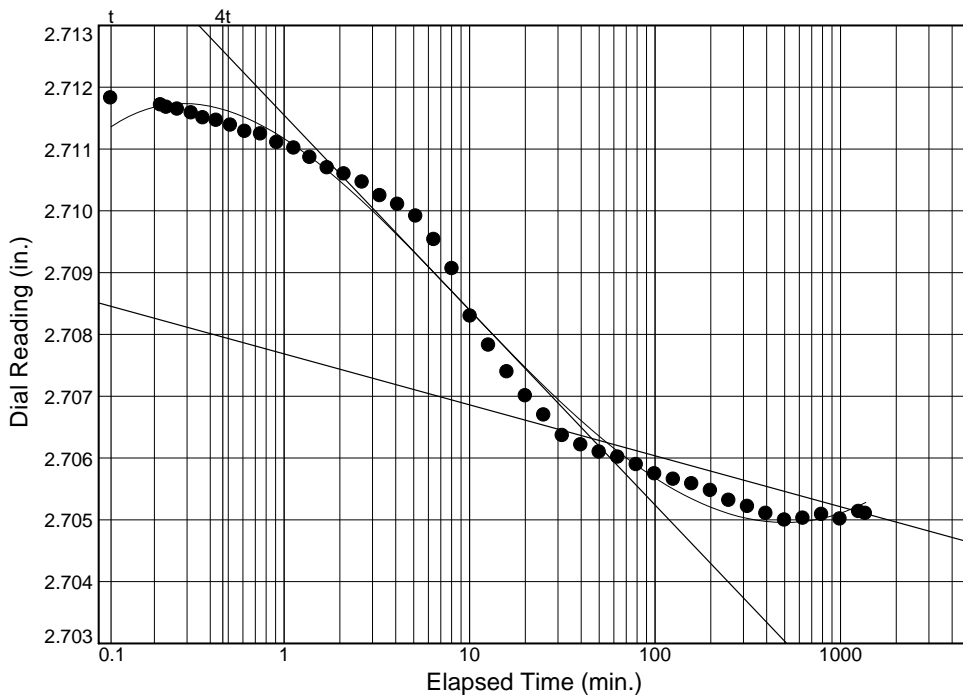
$D_{100} = 2.7076$

$T_{50} = 13.49$  min.

$C_v @ T_{50}$

0.007 ft.<sup>2</sup>/day

$C_\alpha = 0.011$



Load No.= 15

Load= 4.00 tsf

$D_0 = 2.7111$

$D_{50} = 2.7087$

$D_{100} = 2.7063$

$T_{50} = 8.02$  min.

$C_v @ T_{50}$

0.010 ft.<sup>2</sup>/day



# Dial Reading vs. Time

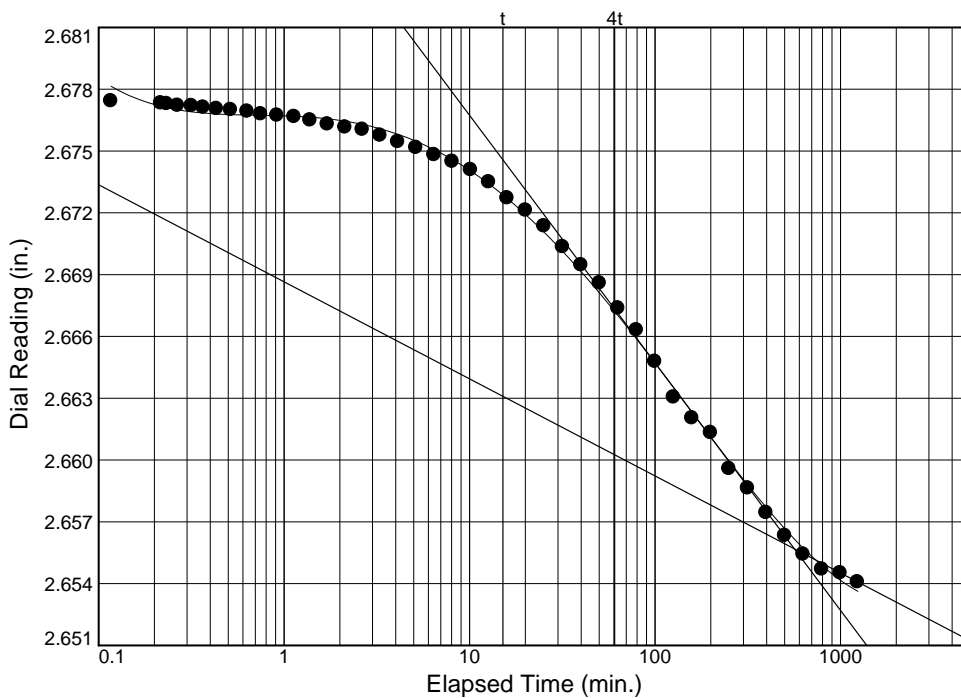
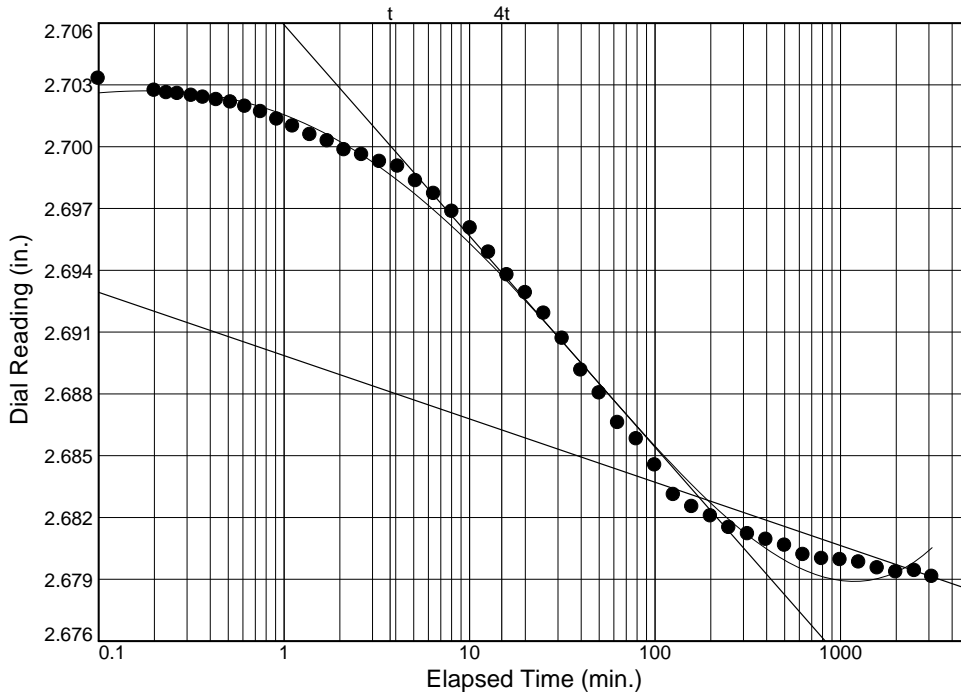
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-1

Depth: 19

Sample Number: 10B



# Dial Reading vs. Time

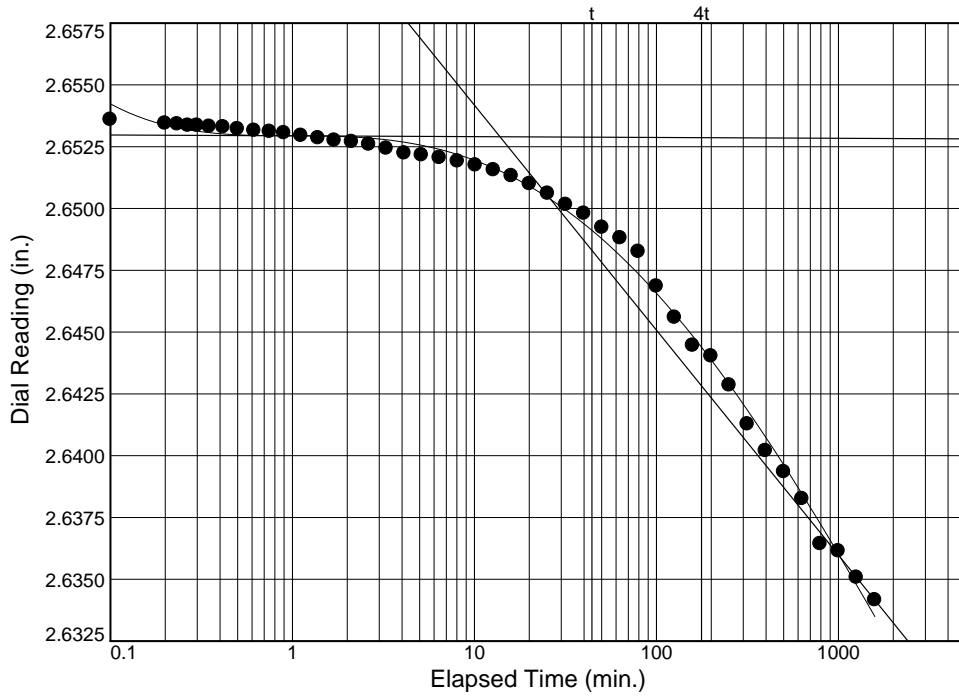
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-1

Depth: 19

Sample Number: 10B



Load No.= 18

Load= 0.06 tsf

$D_0 = 2.6538$

$D_{50} = 2.6534$

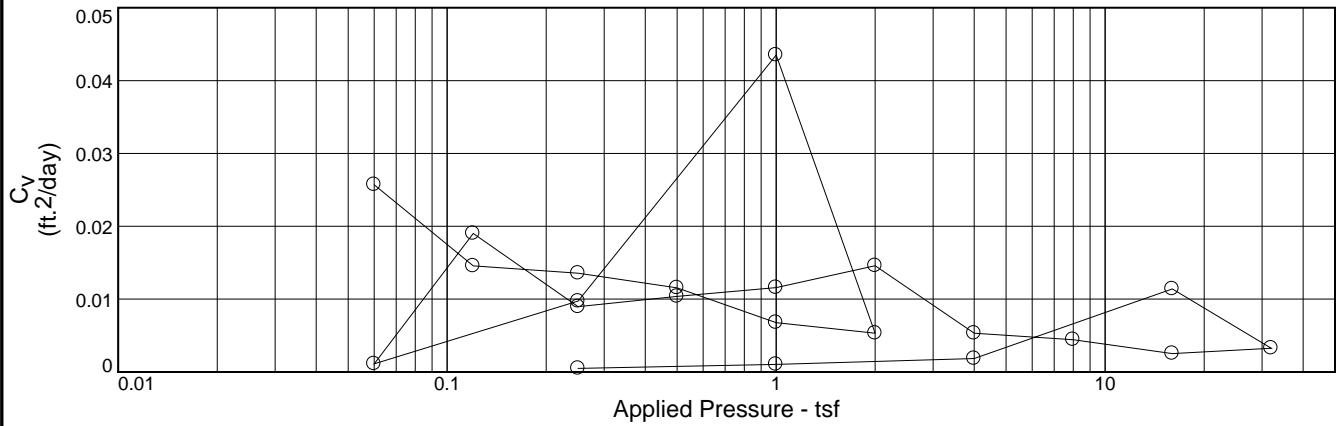
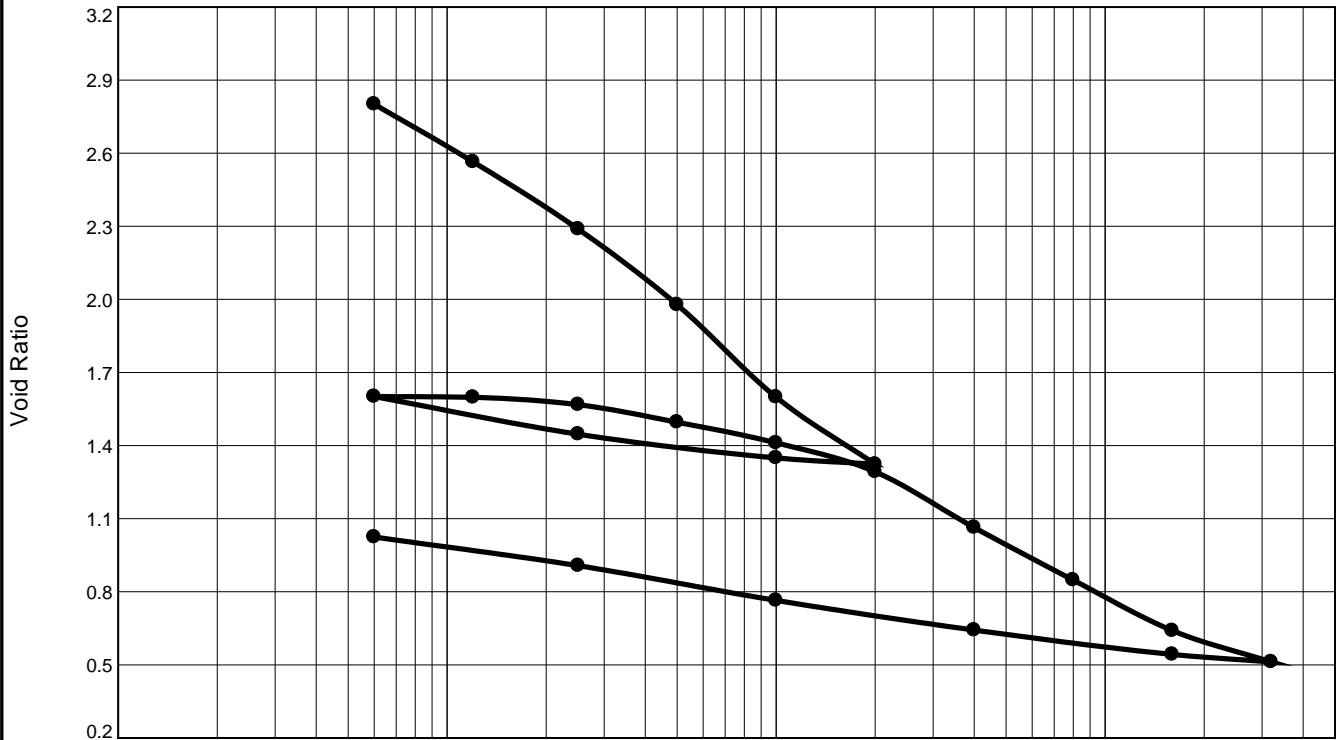
$D_{100} = 2.6529$

$T_{50} = 0.20$  min.

$C_v @ T_{50}$


0.550 ft.<sup>2</sup>/day

# CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	$P_c$ (tsf)	$C_c$	Initial Void Ratio
Saturation	Moisture							
98.7 %	106.1 %	43.3	90	64	2.72	0.1	0.79	2.925

<b>MATERIAL DESCRIPTION</b>							<b>USCS</b>	<b>AASHTO</b>
M, xso br & g FT CL w/ fw om & rts							CH	

<b>Project No.</b> 24762 <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE <b>Source of Sample:</b> T-2	<b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL <b>Depth:</b> 13 <b>Sample Number:</b> 7B		<b>Remarks:</b>   
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**Tested By:** BH \_\_\_\_\_ **Checked By:** RR \_\_\_\_\_

**Figure**

# Dial Reading vs. Time

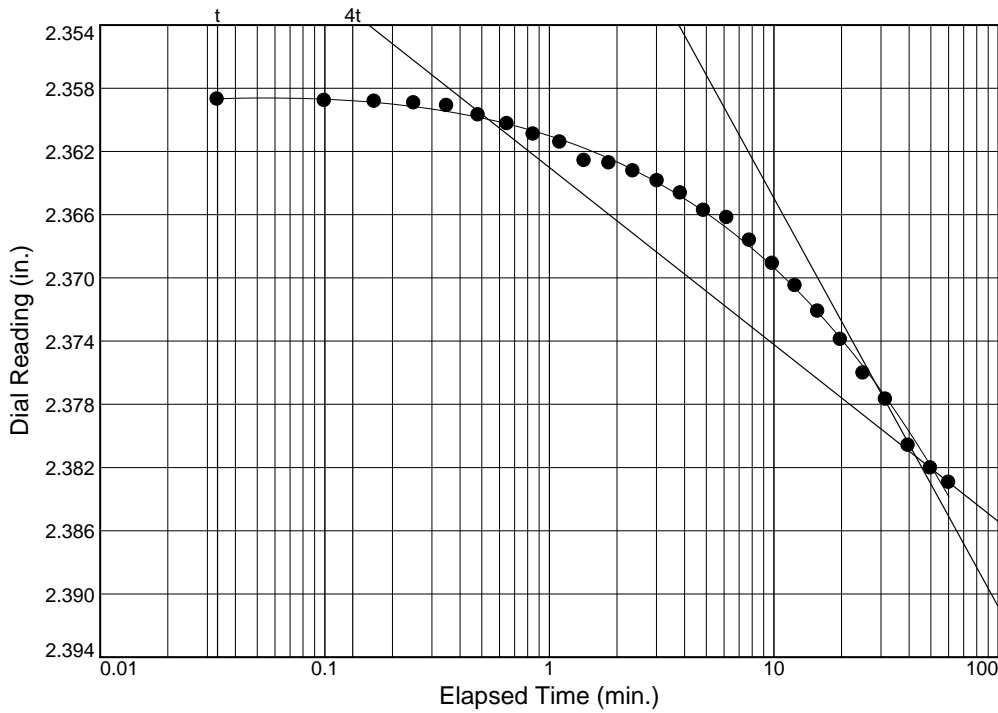
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-2

Depth: 13

Sample Number: 7B



Load No.= 1

Load= 0.06 tsf

$D_0 = 2.3585$

$D_{50} = 2.3699$

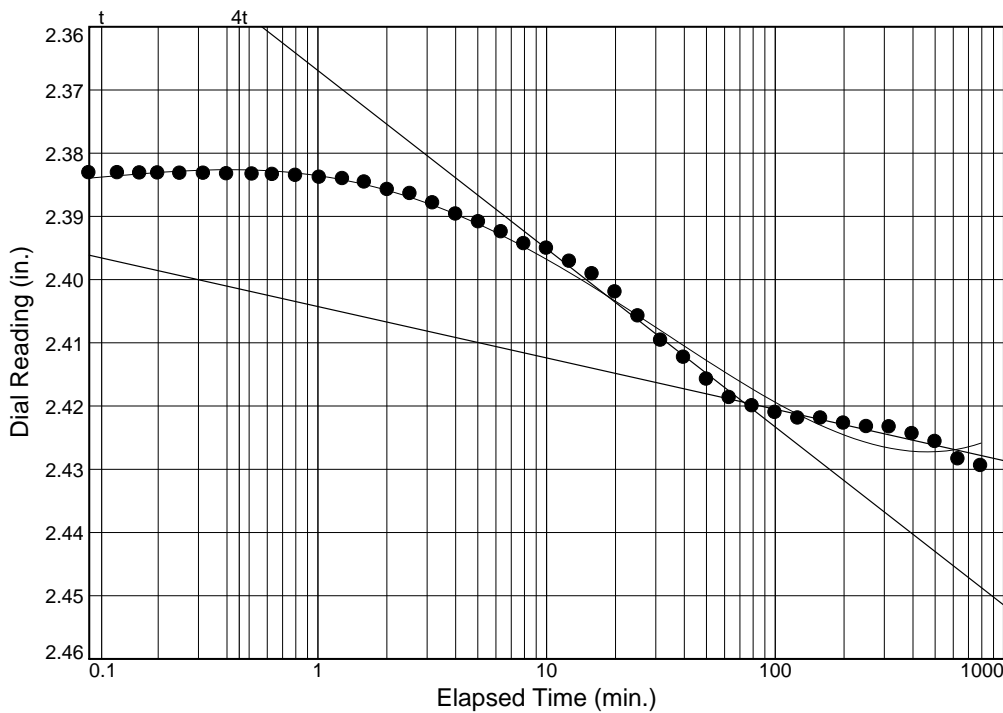
$D_{100} = 2.3813$

$T_{50} = 11.01 \text{ min.}$

$C_v @ T_{50}$

0.026 ft.<sup>2</sup>/day

$C_\alpha = 0.015$



Load No.= 2

Load= 0.12 tsf

$D_0 = 2.3849$

$D_{50} = 2.4022$

$D_{100} = 2.4194$

$T_{50} = 17.66 \text{ min.}$

$C_v @ T_{50}$

0.015 ft.<sup>2</sup>/day

$C_\alpha = 0.011$

Figure

# Dial Reading vs. Time

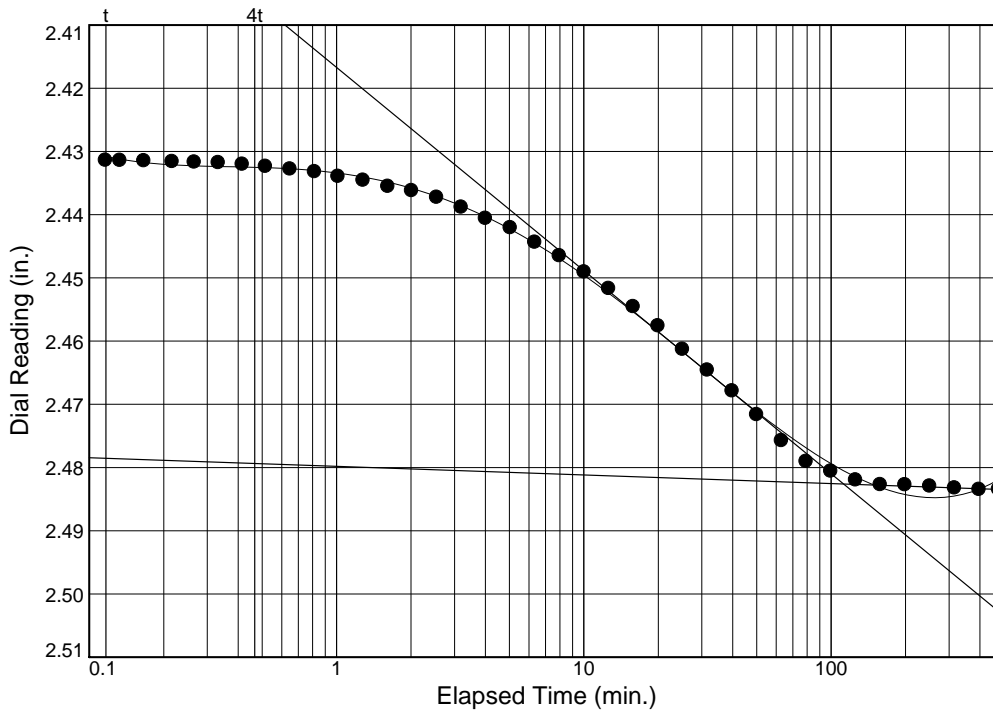
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-2

Depth: 13

Sample Number: 7B



Load No.= 3

Load= 0.25 tsf

$D_0 = 2.4291$

$D_{50} = 2.4558$

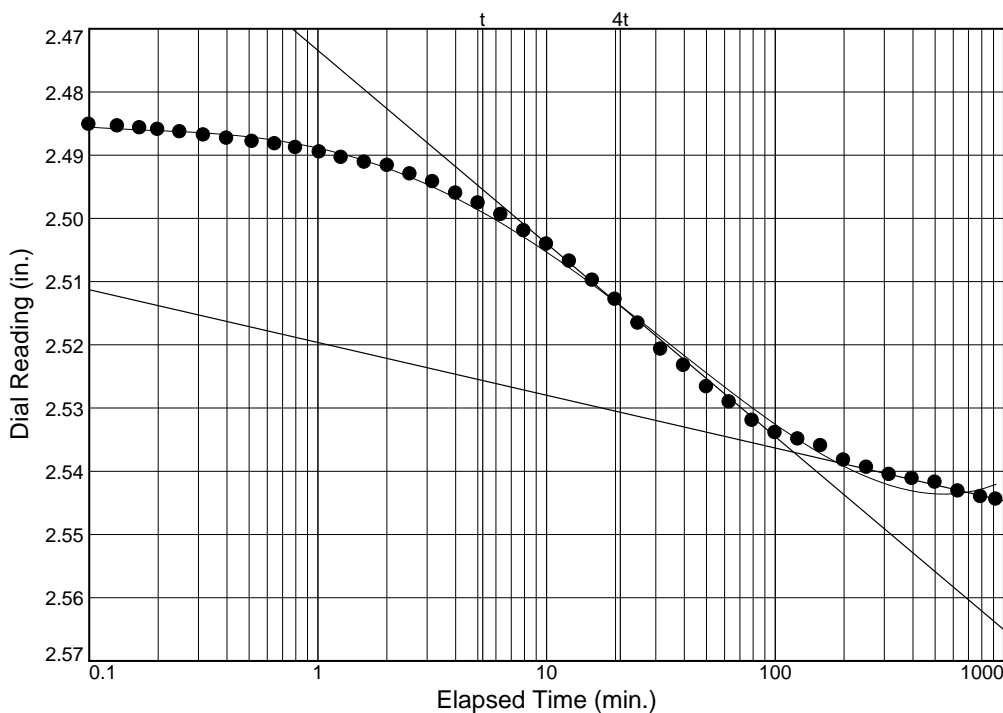
$D_{100} = 2.4826$

$T_{50} = 16.38 \text{ min.}$

$C_v @ T_{50}$

0.014 ft.<sup>2</sup>/day

$C_\alpha = 0.002$



Load No.= 4

Load= 0.50 tsf

$D_0 = 2.4843$

$D_{50} = 2.5107$

$D_{100} = 2.5370$

$T_{50} = 16.11 \text{ min.}$

$C_v @ T_{50}$

0.012 ft.<sup>2</sup>/day

$C_\alpha = 0.011$

# Dial Reading vs. Time

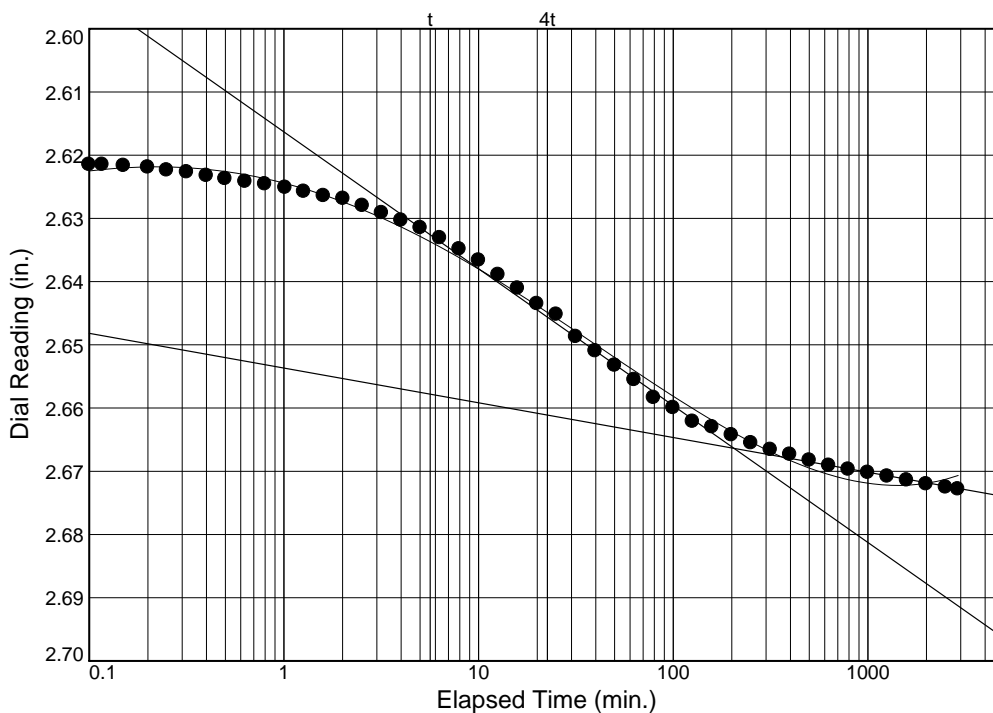
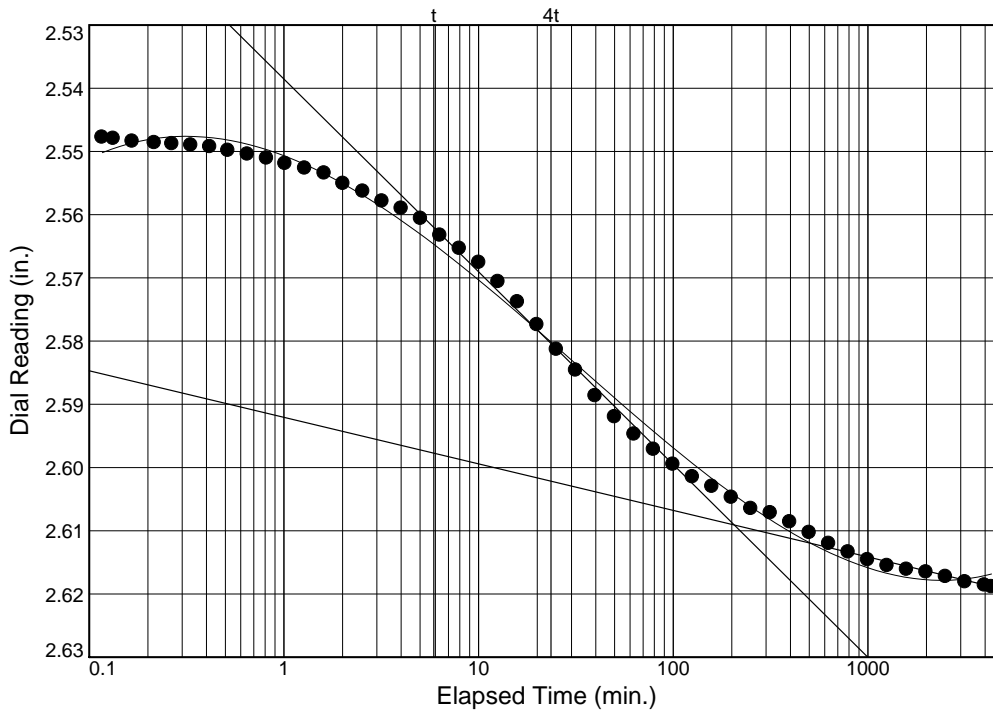
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-2

Depth: 13

Sample Number: 7B



# Dial Reading vs. Time

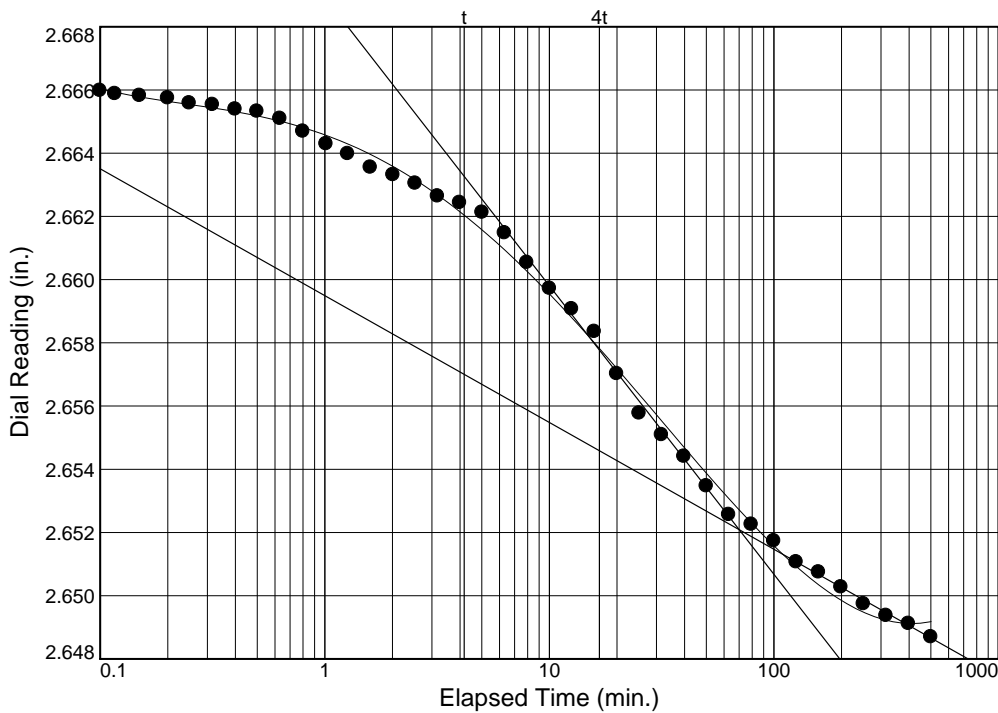
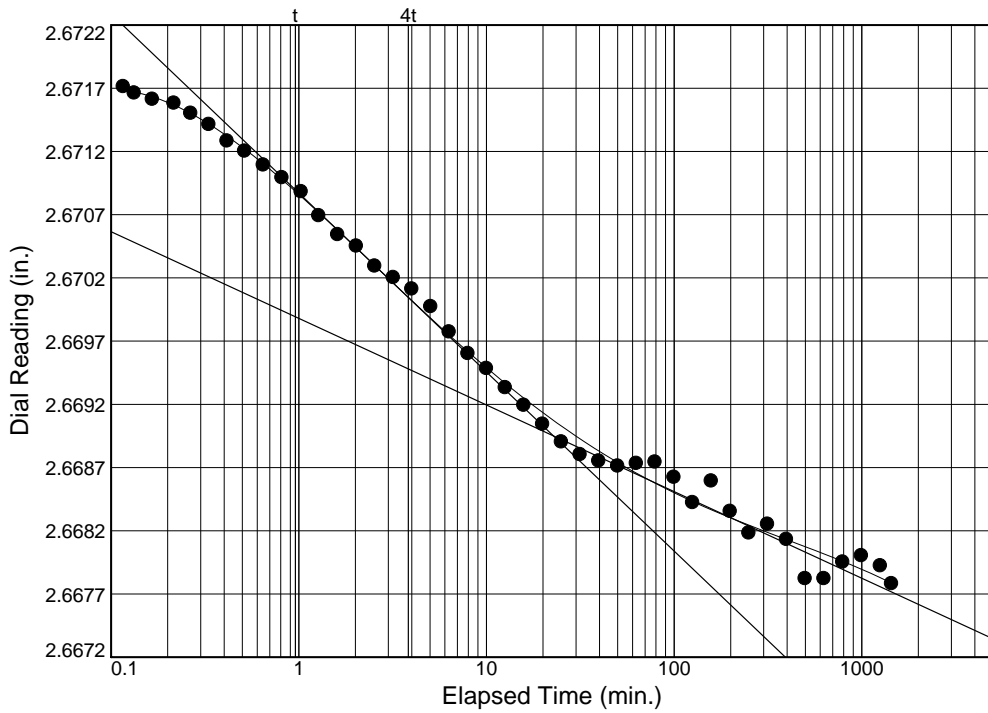
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-2

Depth: 13

Sample Number: 7B



# Dial Reading vs. Time

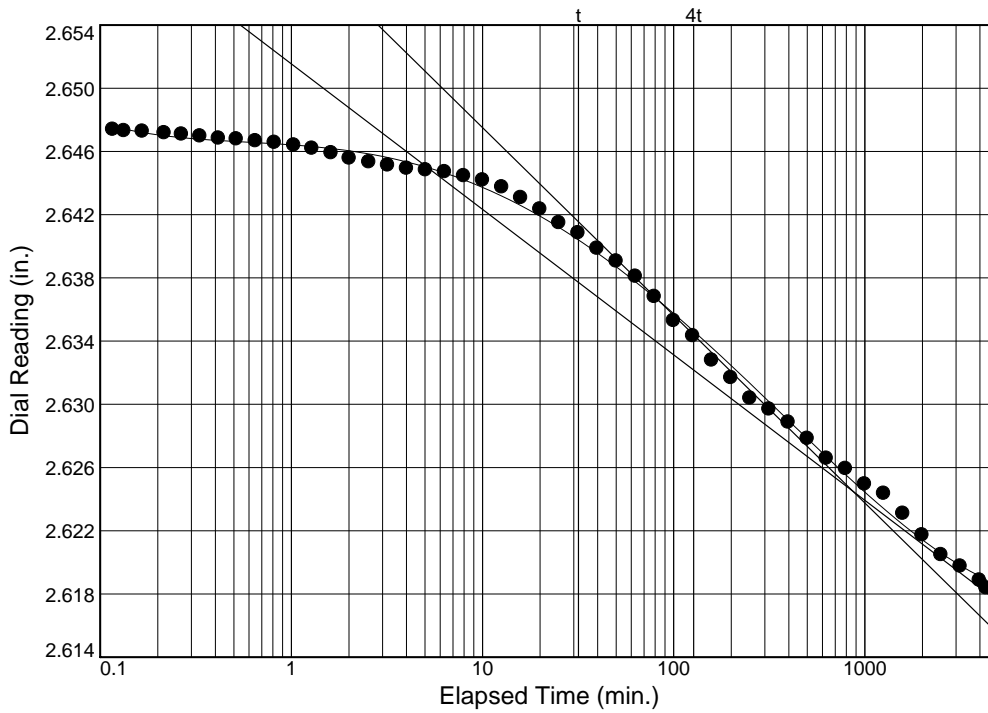
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-2

Depth: 13

Sample Number: 7B



Load No.= 9

Load= 0.06 tsf

$D_0 = 2.6462$

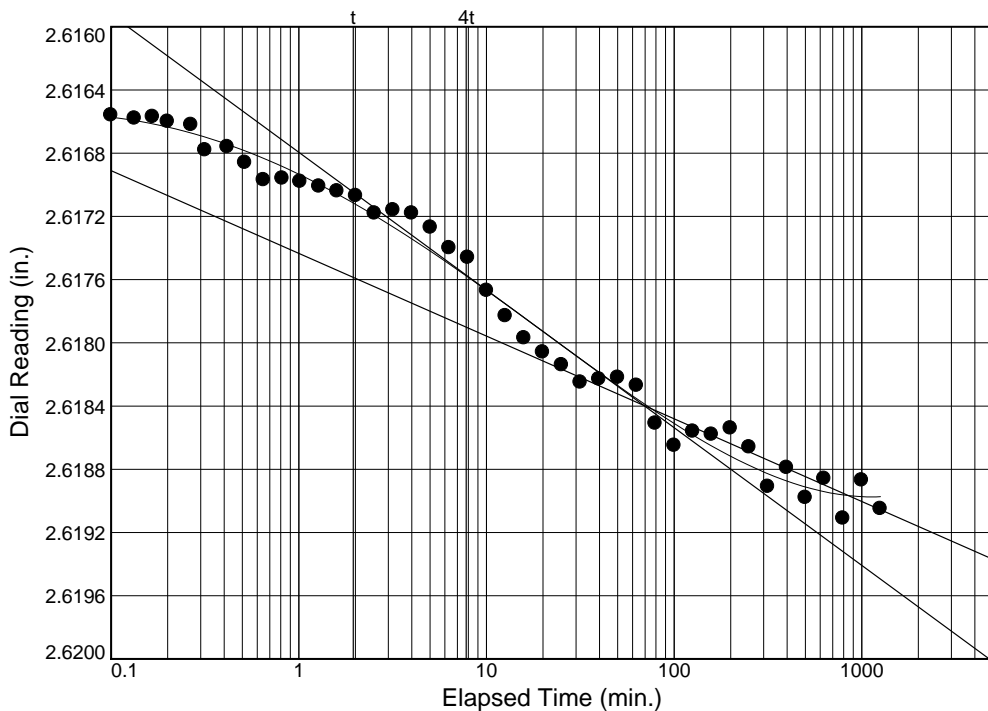
$D_{50} = 2.6353$

$D_{100} = 2.6245$

$T_{50} = 109.31 \text{ min.}$

$C_v @ T_{50}$

0.001 ft.<sup>2</sup>/day



Load No.= 10

Load= 0.12 tsf

$D_0 = 2.6167$

$D_{50} = 2.6175$

$D_{100} = 2.6184$

$T_{50} = 6.76 \text{ min.}$

$C_v @ T_{50}$

0.019 ft.<sup>2</sup>/day

$C_\alpha = 0.001$



# Dial Reading vs. Time

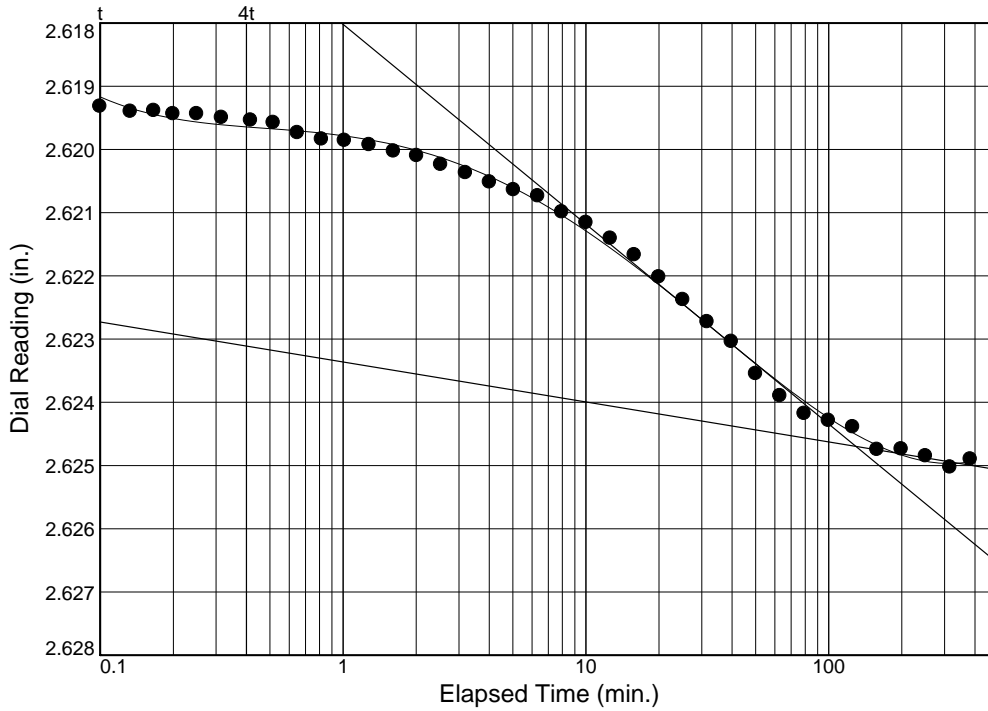
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-2

Depth: 13

Sample Number: 7B



Load No.= 11

Load= 0.25 tsf

$D_0 = 2.6187$

$D_{50} = 2.6217$

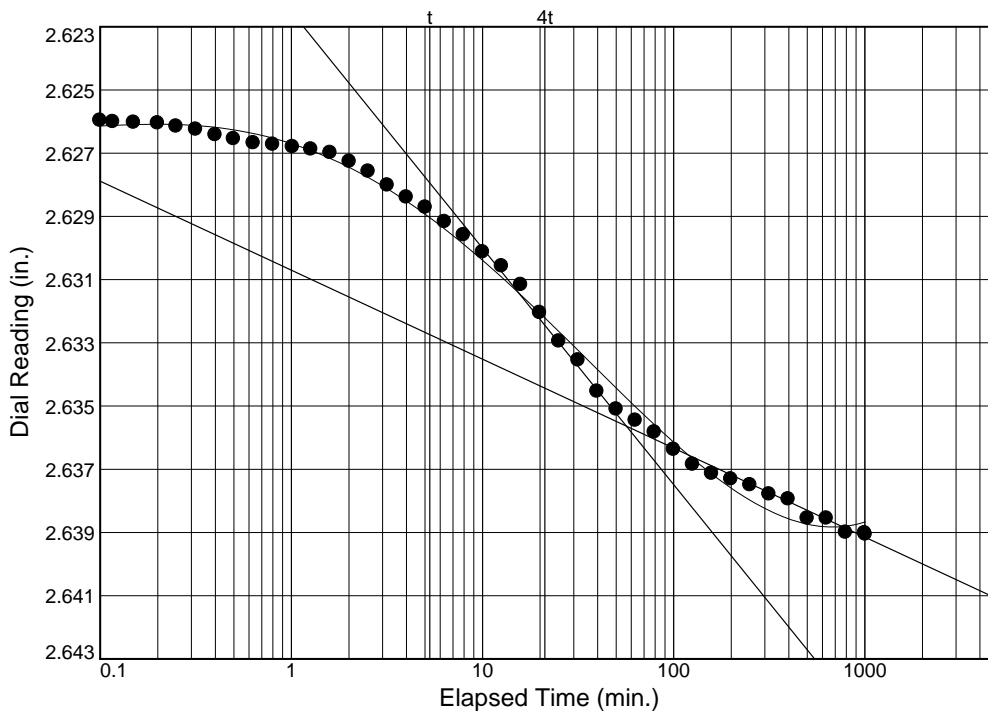
$D_{100} = 2.6247$

$T_{50} = 14.11$  min.

$C_v @ T_{50}$

0.009 ft.<sup>2</sup>/day

$C_\alpha = 0.001$



Load No.= 12

Load= 0.50 tsf

$D_0 = 2.6259$

$D_{50} = 2.6308$

$D_{100} = 2.6356$

$T_{50} = 11.70$  min.

$C_v @ T_{50}$

0.010 ft.<sup>2</sup>/day

$C_\alpha = 0.004$

Figure

# Dial Reading vs. Time

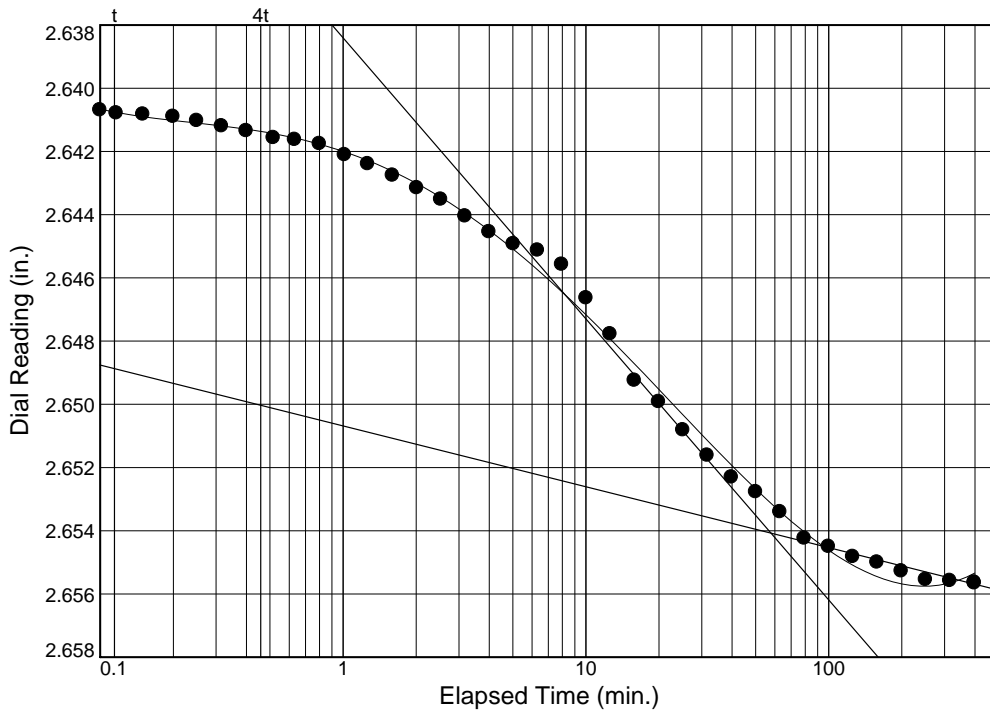
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-2

Depth: 13

Sample Number: 7B



Load No.= 13

Load= 1.00 tsf

$D_0 = 2.6401$

$D_{50} = 2.6471$

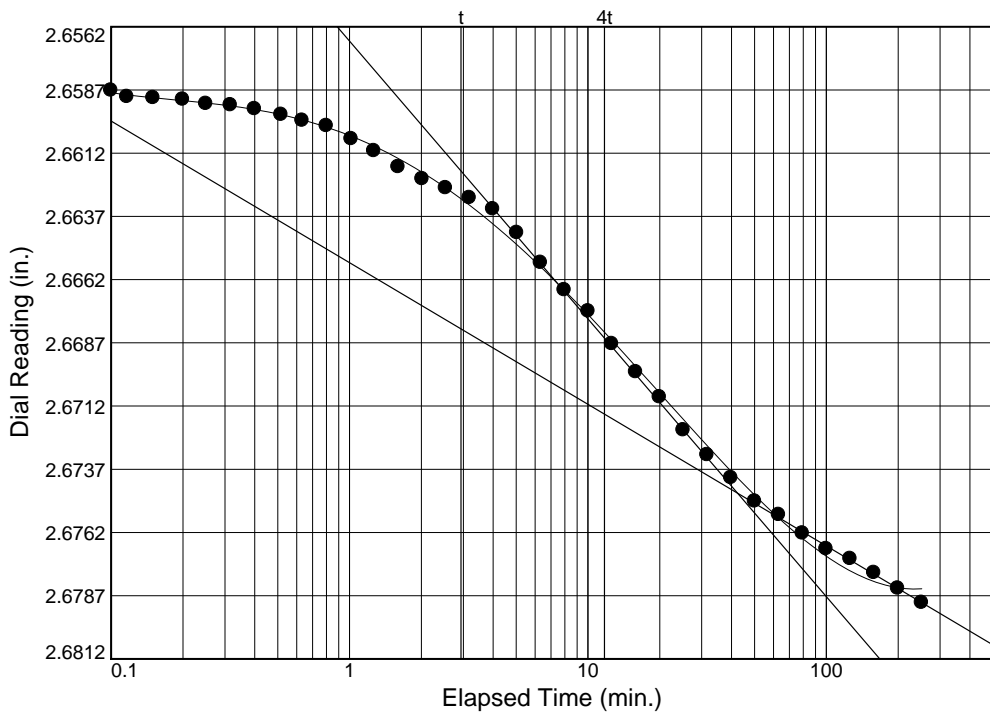
$D_{100} = 2.6541$

$T_{50} = 9.83 \text{ min.}$

$C_v @ T_{50}$

0.012 ft.<sup>2</sup>/day

$C_\alpha = 0.002$



Load No.= 14

Load= 2.00 tsf

$D_0 = 2.6577$

$D_{50} = 2.6662$

$D_{100} = 2.6746$

$T_{50} = 7.15 \text{ min.}$

$C_v @ T_{50}$

0.015 ft.<sup>2</sup>/day

$C_\alpha = 0.007$

Figure

# Dial Reading vs. Time

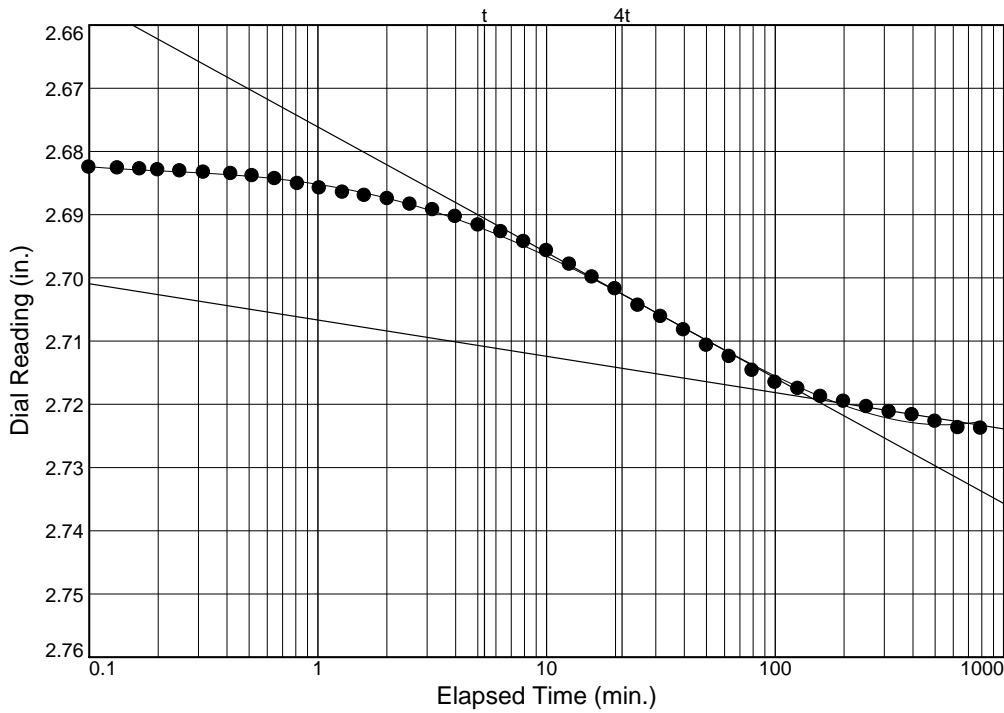
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-2

Depth: 13

Sample Number: 7B



Load No.= 15

Load= 4.00 tsf

$D_0 = 2.6821$

$D_{50} = 2.7006$

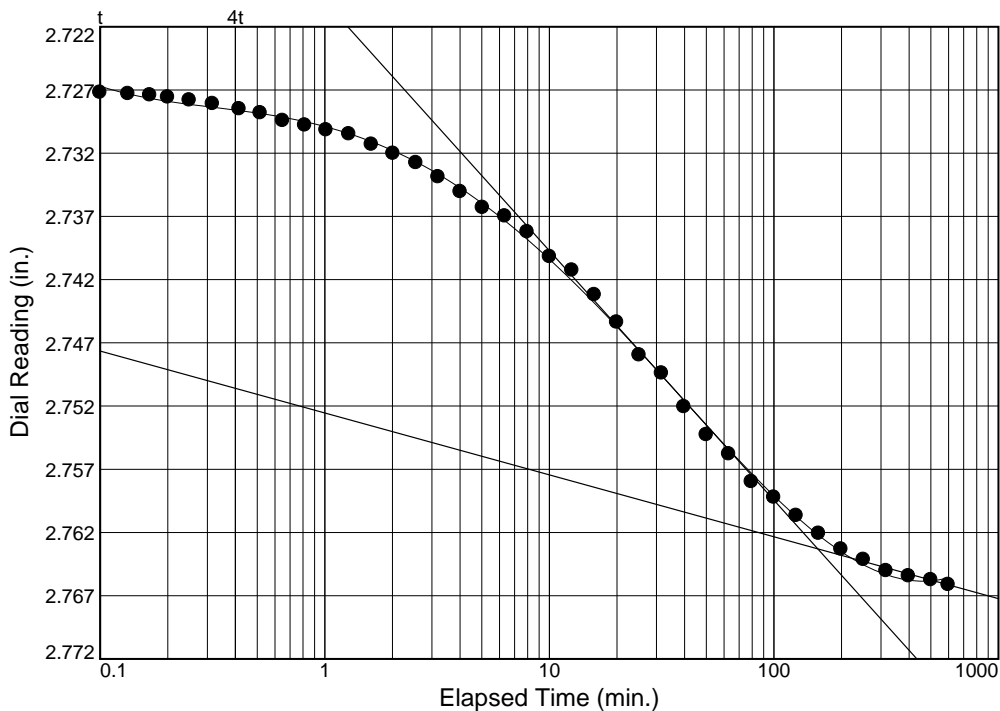
$D_{100} = 2.7191$

$T_{50} = 16.78 \text{ min.}$

$C_v @ T_{50}$

0.005 ft.<sup>2</sup>/day

$C_\alpha = 0.007$



Load No.= 16

Load= 8.00 tsf

$D_0 = 2.7248$

$D_{50} = 2.7441$

$D_{100} = 2.7633$

$T_{50} = 16.24 \text{ min.}$

$C_v @ T_{50}$

0.004 ft.<sup>2</sup>/day

$C_\alpha = 0.006$

# Dial Reading vs. Time

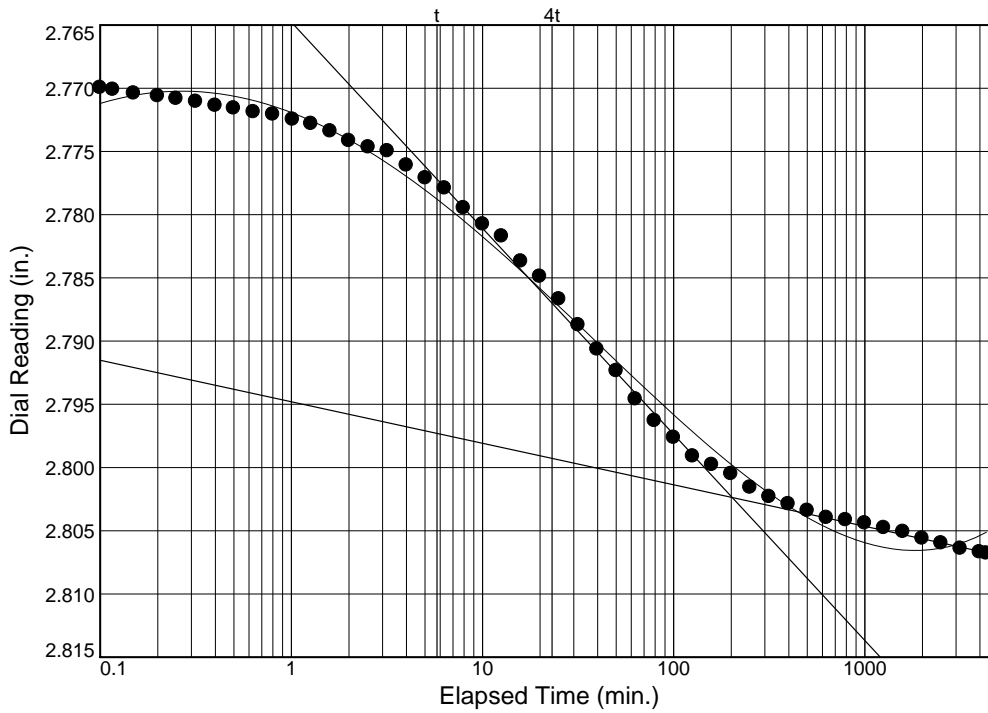
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-2

Depth: 13

Sample Number: 7B



Load No.= 17

Load= 16.00 tsf

$D_0 = 2.7708$

$D_{50} = 2.7866$

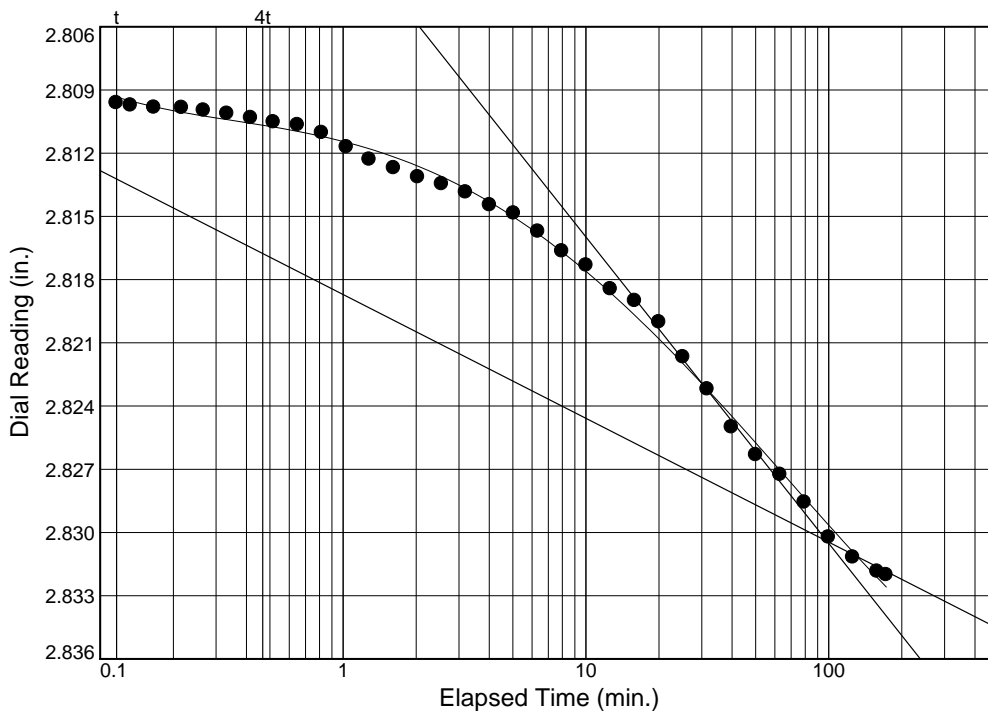
$D_{100} = 2.8024$

$T_{50} = 22.61$  min.

$C_v @ T_{50}$

0.003 ft.<sup>2</sup>/day

$C_\alpha = 0.004$



Load No.= 18

Load= 32.00 tsf

$D_0 = 2.8080$

$D_{50} = 2.8192$

$D_{100} = 2.8304$

$T_{50} = 14.35$  min.

$C_v @ T_{50}$

0.003 ft.<sup>2</sup>/day

$C_\alpha = 0.008$

Figure

# Dial Reading vs. Time

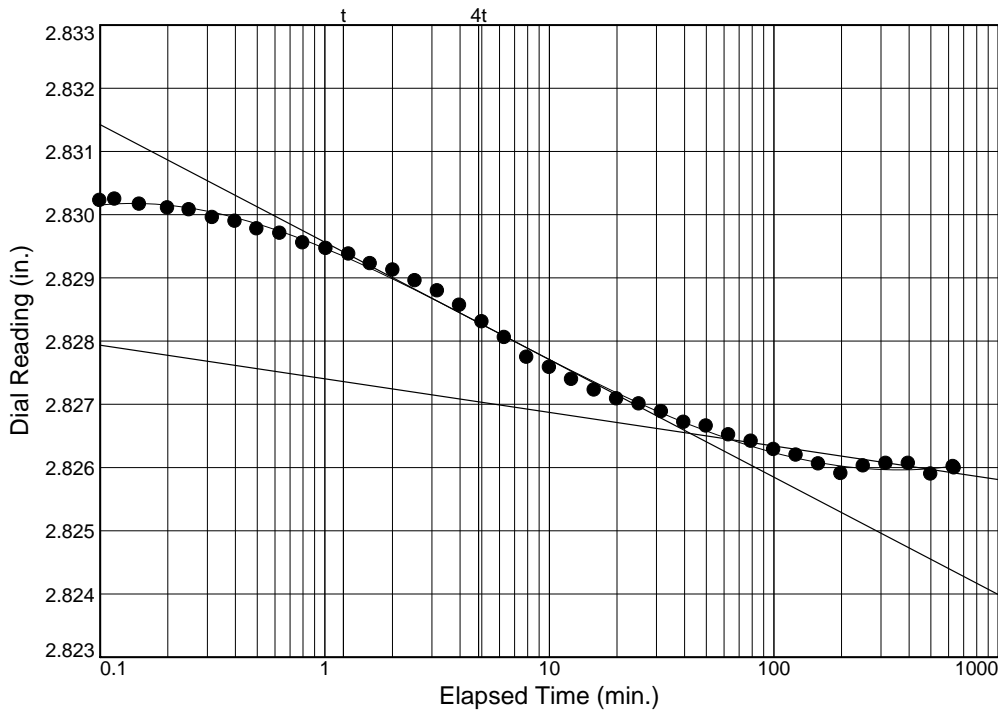
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-2

Depth: 13

Sample Number: 7B



Load No.= 19

Load= 16.00 tsf

$D_0 = 2.8304$

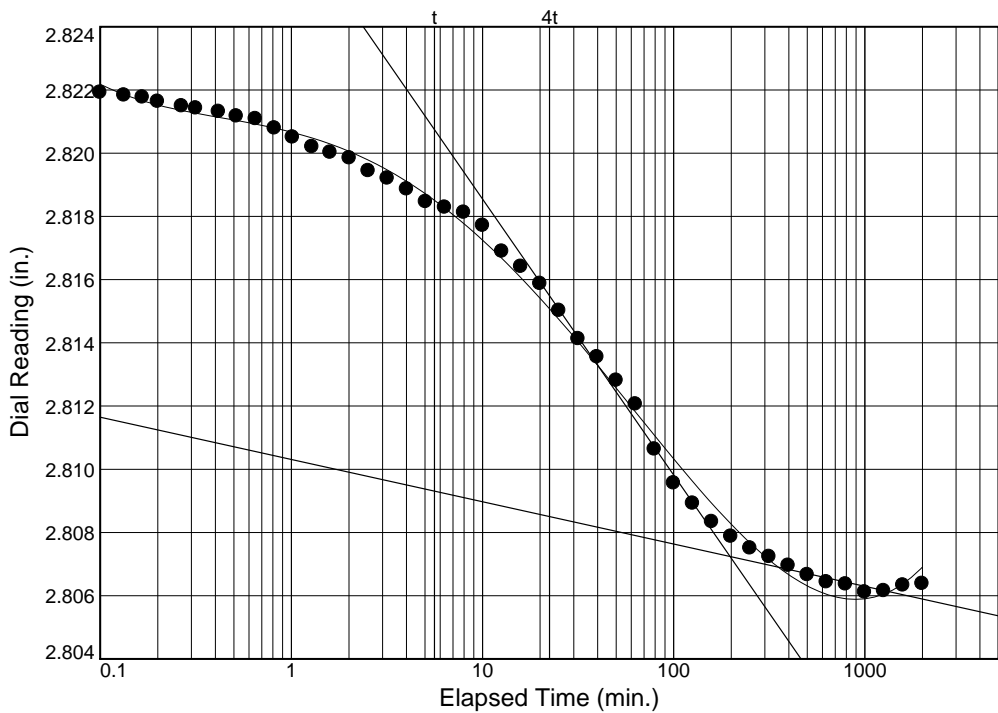
$D_{50} = 2.8285$

$D_{100} = 2.8265$

$T_{50} = 3.90$  min.

$C_v @ T_{50}$

0.011 ft.<sup>2</sup>/day



Load No.= 20

Load= 4.00 tsf

$D_0 = 2.8219$

$D_{50} = 2.8146$

$D_{100} = 2.8072$

$T_{50} = 26.36$  min.

$C_v @ T_{50}$

0.002 ft.<sup>2</sup>/day

# Dial Reading vs. Time

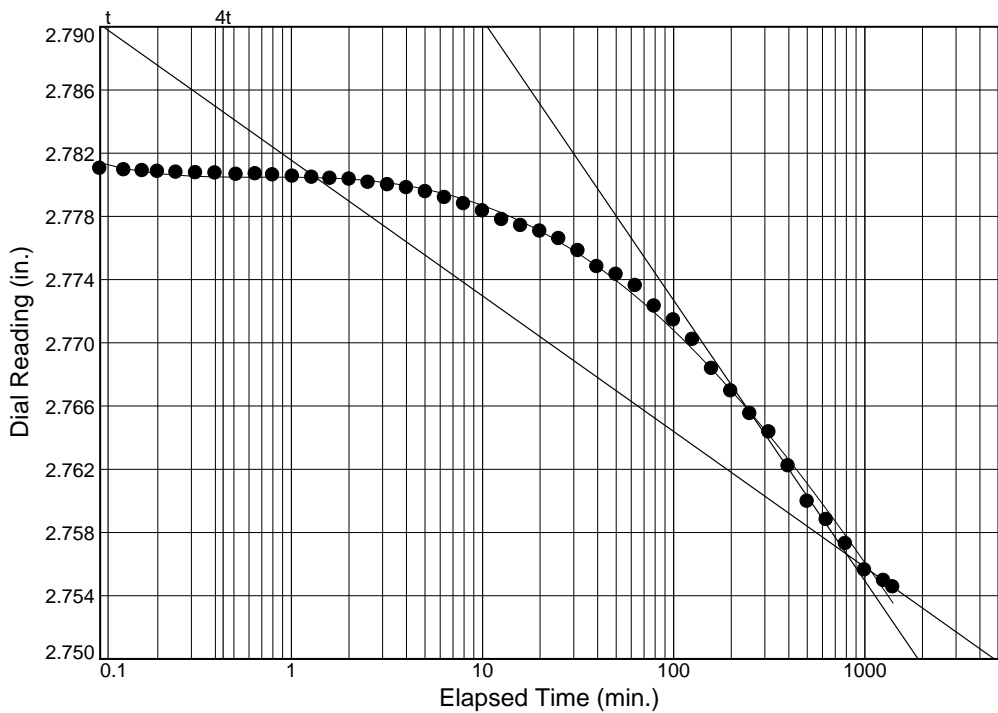
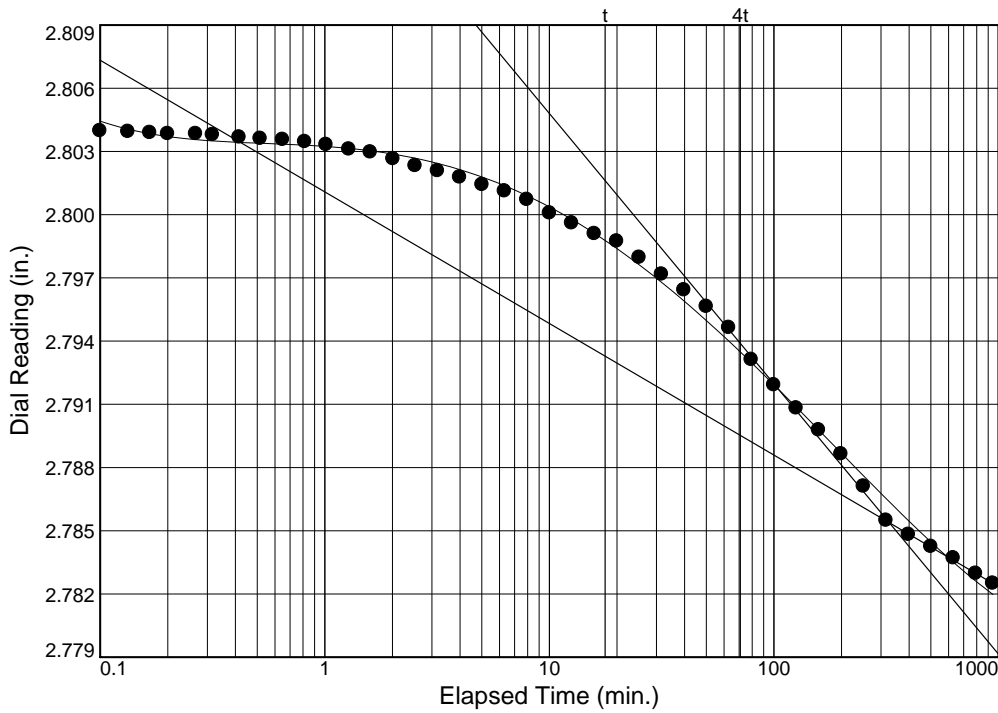
Project No.: 24762

Project: LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY,

Source of Sample: T-2

Depth: 13

Sample Number: 7B



Figure

**CONSOLIDATION TEST DATA**

8/31/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST.  
BERNARD PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** T-2

**Depth:** 13

**Sample Number:** 7B

**Material Description:** M, xso br & g FT CL w/ fw om & rts

**Liquid Limit:** 90

**Plasticity Index:** 64

**USCS:** CH

**Tested by:** BH

**Checked by:** RR

**Test Specimen Data**

NATURAL MOISTURE		VOID RATIO		AFTER TEST	
Wet w+t =	56.39 g.	Spec. Gr. =	2.72	Wet w+t =	65.89 g.
Dry w+t =	27.36 g.	Est. Ht. Solids =	0.196 in.	Dry w+t =	51.97 g.
Tare Wt. =	0.00 g.	Init. V.R. =	2.925	Tare Wt. =	24.61 g.
Moisture =	106.1 %	Init. Sat. =	98.7 %	Moisture =	50.9 %
UNIT WEIGHT		TEST START		Dry Wt. = 27.36* g.	
Height =	0.770 in.	Height =	0.770 in.		
Diameter =	1.996 in.	Diameter =	1.996 in.		
Weight =	56.39 g.				
Dry Dens. =	43.3 pcf	* Final dry weight used as mineral solids weight			

**End-Of-Load Summary**

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	C <sub>v</sub> (ft.2/day)	C <sub>α</sub>	Void Ratio	% Strain
start	2.35867	0.00000			2.925	
0.06	2.38295	0.02428	0.026	0.015	2.801	3.2 Compr.
0.12	2.42947	0.07080	0.015	0.011	2.564	9.2 Compr.
0.25	2.48349	0.12482	0.014	0.002	2.289	16.2 Compr.
0.50	2.54446	0.18579	0.012	0.011	1.978	24.1 Compr.
1.00	2.61888	0.26021	0.007	0.010	1.599	33.8 Compr.
2.00	2.67285	0.31418	0.005	0.007	1.324	40.8 Compr.
1.00	2.66778	0.30911	0.044		1.349	40.1 Compr.
0.25	2.64869	0.29002	0.010		1.447	37.7 Compr.
0.06	2.61837	0.25970	0.001		1.601	33.7 Compr.
0.12	2.61905	0.26038	0.019	0.001	1.598	33.8 Compr.
0.25	2.62490	0.26623	0.009	0.001	1.568	34.6 Compr.
0.50	2.63906	0.28039	0.010	0.004	1.496	36.4 Compr.
1.00	2.65566	0.29699	0.012	0.002	1.411	38.6 Compr.
2.00	2.67897	0.32030	0.015	0.007	1.292	41.6 Compr.
4.00	2.72383	0.36516	0.005	0.007	1.064	47.4 Compr.
8.00	2.76614	0.40747	0.004	0.006	0.848	52.9 Compr.
16.00	2.80678	0.44811	0.003	0.004	0.641	58.2 Compr.

**End-Of-Load Summary (Continued)**

Pressure (tsf)	Final Dial (in.)	Deformation (in.)	$C_v$ (ft. <sup>2</sup> /day)	$C_\alpha$	Void Ratio	% Strain
32.00	2.83201	0.47334	0.003	0.008	0.512	61.5 Compr.
16.00	2.82599	0.46732	0.011		0.543	60.7 Compr.
4.00	2.80638	0.44771	0.002		0.643	58.1 Compr.
1.00	2.78250	0.42383	0.001		0.765	55.0 Compr.
0.25	2.75454	0.39587	0.000		0.907	51.4 Compr.
0.06	2.73150	0.37283			1.025	48.4 Compr.

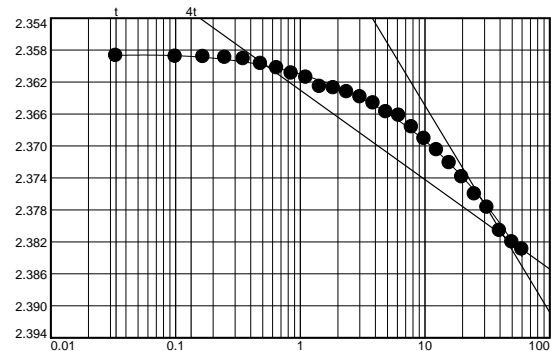
Compression index ( $C_c$ ), tsf = 0.79    Preconsolidation pressure ( $P_p$ ), tsf = 0.1    Void ratio at  $P_p$  ( $e_m$ ) = 2.721  
 Recompression index ( $C_r$ ) = 0.20

Pressure: 0.06 tsf

**TEST READINGS**

Load No. 1

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.35867	15	3.9500	2.36465
2	0.1333	2.35871	16	4.9833	2.36574
3	0.2000	2.35880	17	6.2833	2.36620
4	0.2667	2.35884	18	7.9167	2.36764
5	0.3500	2.35895	19	9.9667	2.36910
6	0.4500	2.35911	20	12.5667	2.37051
7	0.5833	2.35971	21	15.8167	2.37213
8	0.7500	2.36026	22	19.9167	2.37391
9	0.9500	2.36092	23	25.1000	2.37604
10	1.2167	2.36143	24	31.6000	2.37769
11	1.5333	2.36259	25	39.7833	2.38061
12	1.9500	2.36274	26	50.1000	2.38205
13	2.4667	2.36325	27	60.2667	2.38295
14	3.1333	2.36387			



Void Ratio = 2.801    Compression = 3.2%

$D_0$  = 2.3585     $D_{50}$  = 2.3699     $D_{100}$  = 2.3813     $C_v$  at 11.01 min. = 0.026 ft.<sup>2</sup>/day     $C_\alpha$  = 0.015

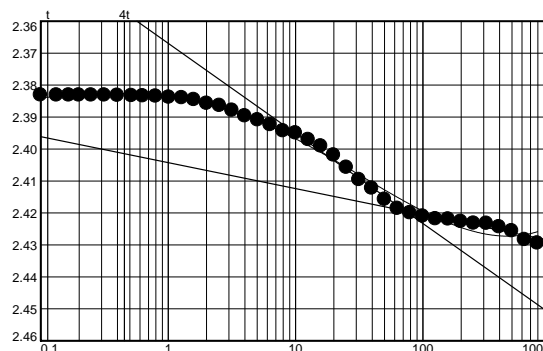


Pressure: 0.12 tsf

TEST READINGS

Load No. 2

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.38304	22	10.1333	2.39507
2	0.2000	2.38315	23	12.7333	2.39715
3	0.2333	2.38316	24	15.9833	2.39915
4	0.2667	2.38318	25	20.1000	2.40199
5	0.3000	2.38319	26	25.2667	2.40580
6	0.3500	2.38322	27	31.7667	2.40965
7	0.4167	2.38322	28	39.9500	2.41234
8	0.5000	2.38330	29	50.2667	2.41581
9	0.6167	2.38334	30	63.2500	2.41869
10	0.7333	2.38342	31	79.5833	2.42003
11	0.9000	2.38355	32	100.1500	2.42105
12	1.1167	2.38387	33	126.0500	2.42194
13	1.3833	2.38406	34	158.6500	2.42196
14	1.7000	2.38462	35	199.6833	2.42275
15	2.1167	2.38581	36	251.3500	2.42329
16	2.6333	2.38645	37	316.3833	2.42334
17	3.2833	2.38793	38	398.2667	2.42442
18	4.1167	2.38967	39	501.3500	2.42566
19	5.1500	2.39092	40	631.1167	2.42842
20	6.4500	2.39249	41	794.5000	2.42947
21	8.0833	2.39438			



Void Ratio = 2.564 Compression = 9.2%

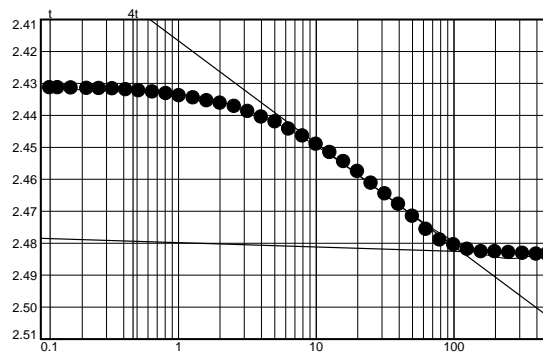
D<sub>0</sub> = 2.3849 D<sub>50</sub> = 2.4022 D<sub>100</sub> = 2.4194 C<sub>v</sub> at 17.66 min. = 0.015 ft.<sup>2</sup>/day C<sub>α</sub> = 0.011

Pressure: 0.25 tsf

TEST READINGS

Load No. 3

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.43126	14	1.7167	2.43556
2	0.2167	2.43145	15	2.1167	2.43626
3	0.2333	2.43146	16	2.6500	2.43731
4	0.2667	2.43154	17	3.3000	2.43888
5	0.3167	2.43166	18	4.1167	2.44063
6	0.3667	2.43173	19	5.1500	2.44212
7	0.4333	2.43182	20	6.4500	2.44441
8	0.5167	2.43208	21	8.0833	2.44654
9	0.6167	2.43241	22	10.1500	2.44911
10	0.7500	2.43282	23	12.7333	2.45173
11	0.9167	2.43327	24	16.0000	2.45458
12	1.1167	2.43399	25	20.1000	2.45762
13	1.3833	2.43462	26	25.2667	2.46135



Pressure: 0.25 tsf

TEST READINGS (continued)

Load No. 3

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
27	31.7667	2.46465	37	316.4000	2.48329
28	39.9667	2.46792	38	398.2833	2.48351
29	50.2667	2.47167	39	477.5167	2.48349
30	63.2500	2.47579			
31	79.5833	2.47908			
32	100.1500	2.48062			
33	126.0500	2.48203			
34	158.6500	2.48275			
35	199.6833	2.48276			
36	251.3500	2.48300			

Void Ratio = 2.289 Compression = 16.2%

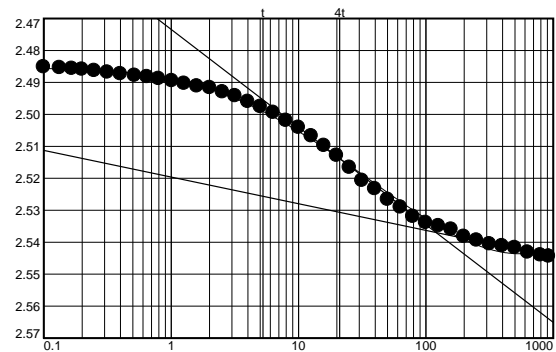
$D_0 = 2.4291$   $D_{50} = 2.4558$   $D_{100} = 2.4826$   $C_v$  at 16.38 min. = 0.014 ft.<sup>2</sup>/day  $C_\alpha = 0.002$

Pressure: 0.50 tsf

TEST READINGS

Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.48392	22	10.1333	2.50411
2	0.2000	2.48517	23	12.7333	2.50681
3	0.2333	2.48541	24	16.0000	2.50983
4	0.2667	2.48573	25	20.1000	2.51286
5	0.3000	2.48598	26	25.2667	2.51662
6	0.3500	2.48635	27	31.7667	2.52075
7	0.4167	2.48686	28	39.9667	2.52332
8	0.5000	2.48736	29	50.2667	2.52669
9	0.6167	2.48788	30	63.2500	2.52909
10	0.7500	2.48826	31	79.5833	2.53199
11	0.9000	2.48885	32	100.1500	2.53393
12	1.1167	2.48954	33	126.0500	2.53496
13	1.3667	2.49040	34	158.6500	2.53602
14	1.7000	2.49117	35	199.6833	2.53828
15	2.1167	2.49167	36	251.3500	2.53940
16	2.6333	2.49301	37	316.3833	2.54057
17	3.2833	2.49425	38	398.2667	2.54118
18	4.1167	2.49607	39	501.3500	2.54178
19	5.1333	2.49762	40	631.1333	2.54317
20	6.4333	2.49943	41	794.5000	2.54406
21	8.0833	2.50200	42	925.4833	2.54446



Void Ratio = 1.978 Compression = 24.1%

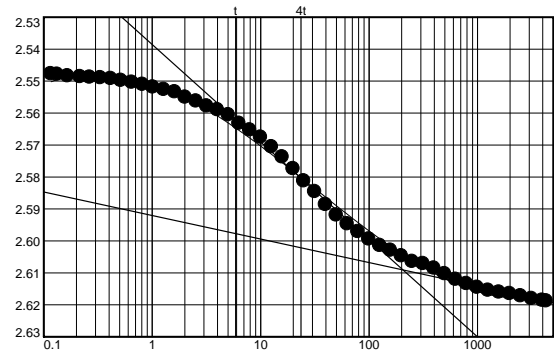
$D_0 = 2.4843$   $D_{50} = 2.5107$   $D_{100} = 2.5370$   $C_v$  at 16.11 min. = 0.012 ft.<sup>2</sup>/day  $C_\alpha = 0.011$

Pressure: 1.00 tsf

TEST READINGS

Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.54663	26	25.2667	2.58133
2	0.2167	2.54779	27	31.7667	2.58463
3	0.2333	2.54797	28	39.9667	2.58870
4	0.2667	2.54842	29	50.2667	2.59202
5	0.3167	2.54865	30	63.2500	2.59475
6	0.3667	2.54883	31	79.5833	2.59716
7	0.4333	2.54903	32	100.1500	2.59952
8	0.5167	2.54928	33	126.0500	2.60150
9	0.6167	2.54989	34	158.6500	2.60303
10	0.7500	2.55045	35	199.7000	2.60474
11	0.9167	2.55109	36	251.3500	2.60653
12	1.1167	2.55194	37	316.4000	2.60720
13	1.3833	2.55268	38	398.2833	2.60863
14	1.7167	2.55347	39	501.3667	2.61034
15	2.1167	2.55509	40	631.1333	2.61207
16	2.6500	2.55632	41	794.5167	2.61340
17	3.3000	2.55790	42	1000.1833	2.61464
18	4.1167	2.55904	43	1259.1167	2.61555
19	5.1500	2.56062	44	1585.0833	2.61613
20	6.4500	2.56330	45	1995.4667	2.61657
21	8.0833	2.56538	46	2512.0833	2.61728
22	10.1500	2.56760	47	3162.4833	2.61812
23	12.7333	2.57064	48	3981.2833	2.61865
24	16.0000	2.57383	49	4320.4833	2.61888
25	20.1000	2.57744			



Void Ratio = 1.599    Compression = 33.8%

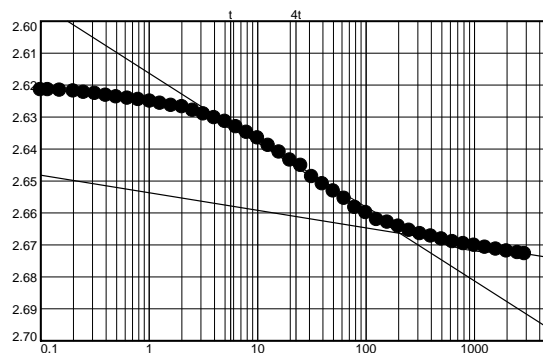
$D_0 = 2.5492$      $D_{50} = 2.5792$      $D_{100} = 2.6091$      $C_v$  at 21.69 min. = 0.007 ft.<sup>2</sup>/day     $C_\alpha = 0.010$

Pressure: 2.00 tsf

TEST READINGS

Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.62063	25	20.0833	2.64352
2	0.2000	2.62149	26	25.2500	2.64522
3	0.2167	2.62149	27	31.7500	2.64873
4	0.2500	2.62166	28	39.9500	2.65100
5	0.3000	2.62193	29	50.2500	2.65325
6	0.3500	2.62238	30	63.2333	2.65553
7	0.4167	2.62270	31	79.5667	2.65836
8	0.5000	2.62325	32	100.1333	2.65998
9	0.6000	2.62374	33	126.0333	2.66214
10	0.7333	2.62418	34	158.6333	2.66299
11	0.9000	2.62458	35	199.6667	2.66428
12	1.1167	2.62513	36	251.3333	2.66554
13	1.3667	2.62576	37	316.3833	2.66660
14	1.7000	2.62642	38	398.2667	2.66735
15	2.1167	2.62688	39	501.3333	2.66827
16	2.6333	2.62799	40	631.1167	2.66910
17	3.2833	2.62914	41	794.4833	2.66971
18	4.1000	2.63030	42	1000.1667	2.67021
19	5.1333	2.63148	43	1259.0833	2.67082
20	6.4333	2.63311	44	1585.0667	2.67142
21	8.0667	2.63488	45	1995.4333	2.67203
22	10.1333	2.63666	46	2512.0667	2.67254
23	12.7167	2.63893	47	2908.4667	2.67285
24	15.9833	2.64106			



Void Ratio = 1.324 Compression = 40.8%

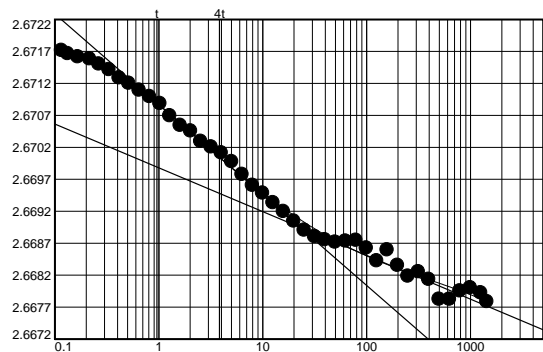
$D_0 = 2.6225$   $D_{50} = 2.6444$   $D_{100} = 2.6664$   $C_v$  at 21.48 min. = 0.005 ft.<sup>2</sup>/day  $C_\alpha = 0.007$

Pressure: 1.00 tsf

TEST READINGS

Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.67192	11	0.9167	2.67099
2	0.2167	2.67171	12	1.1333	2.67088
3	0.2333	2.67166	13	1.3833	2.67069
4	0.2667	2.67161	14	1.7167	2.67054
5	0.3167	2.67158	15	2.1333	2.67045
6	0.3667	2.67150	16	2.6500	2.67029
7	0.4333	2.67141	17	3.3000	2.67020
8	0.5167	2.67128	18	4.1167	2.67011
9	0.6167	2.67120	19	5.1667	2.66997
10	0.7500	2.67109	20	6.4500	2.66977



Pressure: 1.00 tsf

TEST READINGS (continued)

Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
21	8.1000	2.66960	31	79.6000	2.66874	41	794.5000	2.66795
22	10.1500	2.66948	32	100.1667	2.66862	42	1000.1833	2.66800
23	12.7500	2.66933	33	126.0500	2.66842	43	1259.1167	2.66792
24	16.0000	2.66919	34	158.6500	2.66859	44	1445.1167	2.66778
25	20.1000	2.66904	35	199.7000	2.66835			
26	25.2833	2.66890	36	251.3500	2.66818			
27	31.7833	2.66880	37	316.4000	2.66825			
28	39.9667	2.66875	38	398.2833	2.66813			
29	50.2833	2.66871	39	501.3667	2.66782			
30	63.2667	2.66873	40	631.1333	2.66782			

Void Ratio = 1.349    Compression = 40.1%

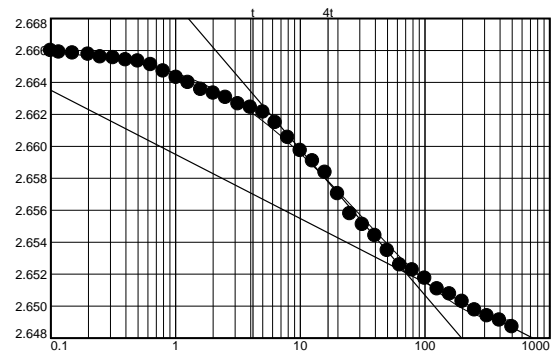
$D_0 = 2.6717$      $D_{50} = 2.6703$      $D_{100} = 2.6690$      $C_v$  at 2.38 min. = 0.044 ft.<sup>2</sup>/day

Pressure: 0.25 tsf

TEST READINGS

Load No. 8

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	2.66649	21	8.0833	2.66054
2	0.2167	2.66598	22	10.1500	2.65972
3	0.2333	2.66588	23	12.7333	2.65907
4	0.2667	2.66582	24	16.0000	2.65835
5	0.3167	2.66574	25	20.1000	2.65702
6	0.3667	2.66558	26	25.2667	2.65577
7	0.4333	2.66553	27	31.7833	2.65509
8	0.5167	2.66539	28	39.9667	2.65440
9	0.6167	2.66532	29	50.2833	2.65347
10	0.7500	2.66509	30	63.2500	2.65256
11	0.9167	2.66469	31	79.6000	2.65225
12	1.1333	2.66429	32	100.1667	2.65173
13	1.3833	2.66398	33	126.0667	2.65106
14	1.7167	2.66355	34	158.6667	2.65074
15	2.1333	2.66331	35	199.7000	2.65027
16	2.6500	2.66304	36	251.3667	2.64974
17	3.3000	2.66264	37	316.4000	2.64937
18	4.1167	2.66243	38	398.2833	2.64911
19	5.1500	2.66212	39	501.3667	2.64869
20	6.4500	2.66147			



Void Ratio = 1.447    Compression = 37.7%

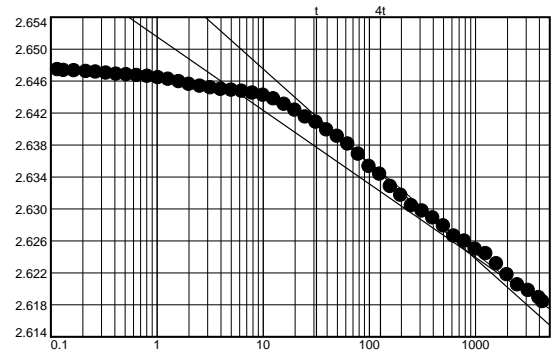
$D_0 = 2.6663$      $D_{50} = 2.6592$      $D_{100} = 2.6521$      $C_v$  at 11.23 min. = 0.010 ft.<sup>2</sup>/day

Pressure: 0.06 tsf

TEST READINGS

Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.64774	26	25.2667	2.64147
2	0.2167	2.64739	27	31.7833	2.64083
3	0.2333	2.64730	28	39.9667	2.63986
4	0.2667	2.64726	29	50.2667	2.63904
5	0.3167	2.64716	30	63.2500	2.63808
6	0.3667	2.64708	31	79.6000	2.63680
7	0.4333	2.64696	32	100.1667	2.63528
8	0.5167	2.64683	33	126.0667	2.63432
9	0.6167	2.64677	34	158.6667	2.63278
10	0.7500	2.64666	35	199.7000	2.63167
11	0.9167	2.64655	36	251.3667	2.63038
12	1.1333	2.64638	37	316.4167	2.62969
13	1.3833	2.64618	38	398.2833	2.62885
14	1.7167	2.64589	39	501.3667	2.62783
15	2.1167	2.64556	40	631.1500	2.62657
16	2.6500	2.64533	41	794.5167	2.62592
17	3.3000	2.64512	42	1000.1833	2.62494
18	4.1167	2.64492	43	1259.1167	2.62435
19	5.1500	2.64482	44	1585.0833	2.62308
20	6.4500	2.64470	45	1995.4667	2.62172
21	8.0833	2.64445	46	2512.0833	2.62047
22	10.1500	2.64418	47	3162.4833	2.61975
23	12.7333	2.64374	48	3981.2833	2.61886
24	16.0000	2.64306	49	4320.3667	2.61837
25	20.1000	2.64233			



Void Ratio = 1.601    Compression = 33.7%

$D_0 = 2.6462$      $D_{50} = 2.6353$      $D_{100} = 2.6245$      $C_v$  at 109.31 min. = 0.001 ft.<sup>2</sup>/day

Pressure: 0.12 tsf

TEST READINGS

Load No. 10

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.61647	23	12.7167	2.61783
2	0.2000	2.61656	24	15.9833	2.61797
3	0.2333	2.61658	25	20.0833	2.61806
4	0.2667	2.61657	26	25.2500	2.61814
5	0.3000	2.61660	27	31.7500	2.61825
6	0.3667	2.61662	28	39.9500	2.61823
7	0.4167	2.61678	29	50.2500	2.61822
8	0.5167	2.61676	30	63.2333	2.61827
9	0.6167	2.61686	31	79.5833	2.61851
10	0.7500	2.61697	32	100.1500	2.61865
11	0.9167	2.61696	33	126.0333	2.61856
12	1.1167	2.61698	34	158.6333	2.61858
13	1.3833	2.61701	35	199.6833	2.61854
14	1.7000	2.61704	36	251.3333	2.61866
15	2.1167	2.61707	37	316.3833	2.61891
16	2.6333	2.61718	38	398.2667	2.61879
17	3.2833	2.61716	39	501.3500	2.61898
18	4.1000	2.61718	40	631.1167	2.61886
19	5.1333	2.61727	41	794.5000	2.61911
20	6.4333	2.61740	42	1000.1667	2.61887
21	8.0667	2.61746	43	1256.6333	2.61905
22	10.1333	2.61767			



Void Ratio = 1.598 Compression = 33.8%

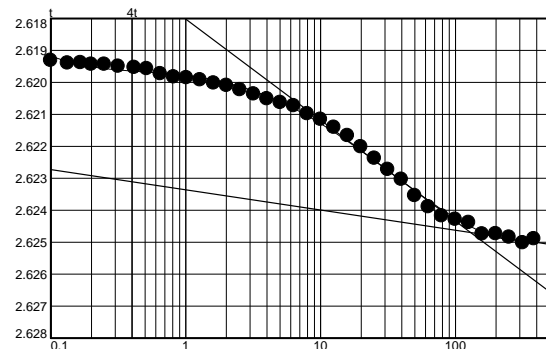
$D_0 = 2.6167$   $D_{50} = 2.6175$   $D_{100} = 2.6184$   $C_v$  at 6.76 min. = 0.019 ft.<sup>2</sup>/day  $C_\alpha = 0.001$

Pressure: 0.25 tsf

TEST READINGS

Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.61923	13	1.3833	2.61993
2	0.2000	2.61932	14	1.7167	2.62003
3	0.2333	2.61940	15	2.1167	2.62010
4	0.2667	2.61939	16	2.6333	2.62024
5	0.3000	2.61944	17	3.3000	2.62037
6	0.3500	2.61944	18	4.1167	2.62052
7	0.4167	2.61950	19	5.1500	2.62064
8	0.5167	2.61954	20	6.4500	2.62074
9	0.6167	2.61958	21	8.0833	2.62099
10	0.7500	2.61974	22	10.1333	2.62116
11	0.9167	2.61984	23	12.7333	2.62141
12	1.1167	2.61986	24	15.9833	2.62167



Pressure: 0.25 tsf

TEST READINGS (continued)

Load No. 11

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
25	20.1000	2.62202	35	199.7000	2.62474
26	25.2667	2.62238	36	251.3500	2.62485
27	31.7667	2.62273	37	316.4000	2.62503
28	39.9667	2.62304	38	383.6500	2.62490
29	50.2667	2.62355			
30	63.2500	2.62390			
31	79.6000	2.62418			
32	100.1667	2.62429			
33	126.0500	2.62439			
34	158.6500	2.62475			

Void Ratio = 1.568 Compression = 34.6%

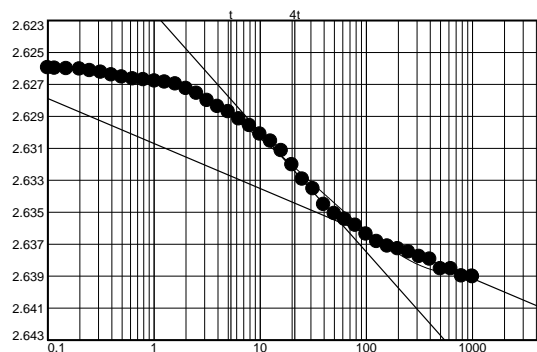
$D_{0} = 2.6187$   $D_{50} = 2.6217$   $D_{100} = 2.6247$   $C_v$  at 14.11 min. = 0.009 ft.<sup>2</sup>/day  $C_{\alpha} = 0.001$

Pressure: 0.50 tsf

TEST READINGS

Load No. 12

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	2.62570	23	12.7333	2.63057
2	0.2167	2.62597	24	16.0000	2.63116
3	0.2333	2.62601	25	20.1000	2.63205
4	0.2667	2.62603	26	25.2667	2.63295
5	0.3167	2.62605	27	31.7833	2.63355
6	0.3667	2.62615	28	39.9667	2.63454
7	0.4333	2.62625	29	50.2833	2.63510
8	0.5167	2.62642	30	63.2500	2.63546
9	0.6167	2.62655	31	79.6000	2.63583
10	0.7500	2.62668	32	100.1667	2.63638
11	0.9167	2.62673	33	126.0667	2.63685
12	1.1333	2.62680	34	158.6667	2.63714
13	1.3833	2.62688	35	199.7000	2.63731
14	1.7167	2.62699	36	251.3667	2.63750
15	2.1333	2.62727	37	316.4000	2.63779
16	2.6500	2.62758	38	398.2833	2.63795
17	3.3000	2.62802	39	501.3667	2.63855
18	4.1167	2.62840	40	631.1333	2.63855
19	5.1500	2.62872	41	794.5000	2.63900
20	6.4500	2.62917	42	1000.1833	2.63902
21	8.0833	2.62959	43	1006.7000	2.63906
22	10.1500	2.63013			



Void Ratio = 1.496 Compression = 36.4%

$D_{0} = 2.6259$   $D_{50} = 2.6308$   $D_{100} = 2.6356$   $C_v$  at 11.70 min. = 0.010 ft.<sup>2</sup>/day  $C_{\alpha} = 0.004$

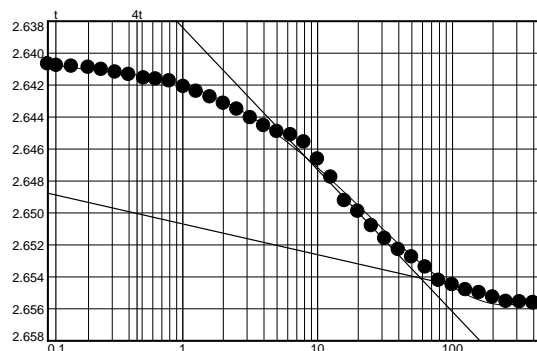


Pressure: 1.00 tsf

TEST READINGS

Load No. 13

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	2.64028	21	8.0833	2.64558
2	0.2167	2.64069	22	10.1500	2.64664
3	0.2333	2.64079	23	12.7333	2.64778
4	0.2667	2.64083	24	16.0000	2.64925
5	0.3167	2.64090	25	20.1000	2.64992
6	0.3667	2.64103	26	25.2667	2.65082
7	0.4333	2.64120	27	31.7833	2.65162
8	0.5167	2.64135	28	39.9667	2.65231
9	0.6333	2.64157	29	50.2833	2.65277
10	0.7500	2.64163	30	63.2500	2.65341
11	0.9167	2.64176	31	79.6000	2.65424
12	1.1333	2.64211	32	100.1667	2.65450
13	1.3833	2.64240	33	126.0500	2.65482
14	1.7167	2.64276	34	158.6500	2.65500
15	2.1333	2.64316	35	199.7000	2.65528
16	2.6500	2.64352	36	251.3667	2.65555
17	3.3000	2.64405	37	316.4000	2.65558
18	4.1167	2.64455	38	398.2833	2.65563
19	5.1500	2.64493	39	399.1667	2.65566
20	6.4500	2.64513			



Void Ratio = 1.411 Compression = 38.6%

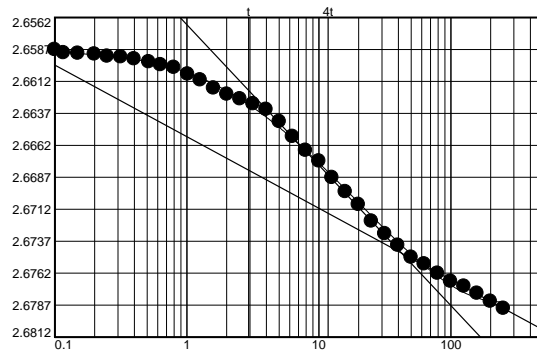
$D_0 = 2.6401$   $D_{50} = 2.6471$   $D_{100} = 2.6541$   $C_v$  at 9.83 min. = 0.012 ft.<sup>2</sup>/day  $C_\alpha = 0.002$

Pressure: 2.00 tsf

TEST READINGS

Load No. 14

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.65768	15	2.1167	2.66222
2	0.2000	2.65872	16	2.6333	2.66258
3	0.2167	2.65897	17	3.2833	2.66297
4	0.2500	2.65901	18	4.1000	2.66341
5	0.3000	2.65908	19	5.1333	2.66435
6	0.3500	2.65924	20	6.4333	2.66553
7	0.4167	2.65930	21	8.0667	2.66661
8	0.5000	2.65945	22	10.1333	2.66745
9	0.6167	2.65968	23	12.7167	2.66874
10	0.7333	2.65991	24	15.9833	2.66985
11	0.9000	2.66012	25	20.0833	2.67084
12	1.1167	2.66064	26	25.2500	2.67215
13	1.3667	2.66111	27	31.7500	2.67313
14	1.7000	2.66174	28	39.9500	2.67404



Pressure: 2.00 tsf

TEST READINGS (continued)

Load No. 14

No.	Elapsed Time	Dial Reading
29	50.2500	2.67497
30	63.2333	2.67550
31	79.5667	2.67623
32	100.1333	2.67685
33	126.0333	2.67724
34	158.6333	2.67779
35	199.6667	2.67841
36	251.3333	2.67897

Void Ratio = 1.292    Compression = 41.6%

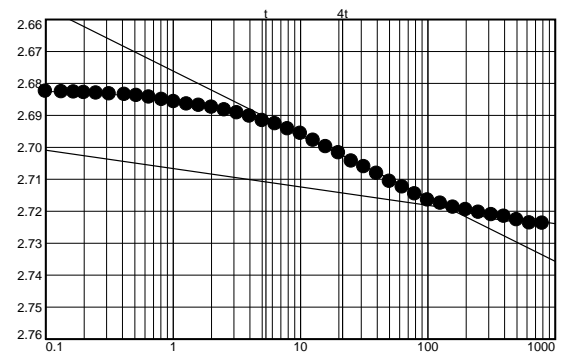
$D_0 = 2.6577$      $D_{50} = 2.6662$      $D_{100} = 2.6746$      $C_v$  at 7.15 min. = 0.015 ft.<sup>2</sup>/day     $C_\alpha = 0.007$

Pressure: 4.00 tsf

TEST READINGS

Load No. 15

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.68183	22	10.1333	2.69574
2	0.2000	2.68252	23	12.7167	2.69790
3	0.2333	2.68267	24	15.9833	2.69990
4	0.2667	2.68281	25	20.1000	2.70178
5	0.3000	2.68295	26	25.2667	2.70437
6	0.3500	2.68314	27	31.7667	2.70617
7	0.4167	2.68335	28	39.9667	2.70826
8	0.5167	2.68353	29	50.2667	2.71072
9	0.6167	2.68388	30	63.2500	2.71248
10	0.7500	2.68436	31	79.5833	2.71468
11	0.9167	2.68513	32	100.1500	2.71656
12	1.1167	2.68581	33	126.0500	2.71755
13	1.3833	2.68651	34	158.6500	2.71882
14	1.7000	2.68699	35	199.6833	2.71955
15	2.1167	2.68753	36	251.3500	2.72041
16	2.6333	2.68840	37	316.3833	2.72120
17	3.2833	2.68926	38	398.2667	2.72170
18	4.1000	2.69034	39	501.3500	2.72273
19	5.1333	2.69169	40	631.1167	2.72376
20	6.4333	2.69273	41	793.7500	2.72383
21	8.0667	2.69430			



Void Ratio = 1.064    Compression = 47.4%

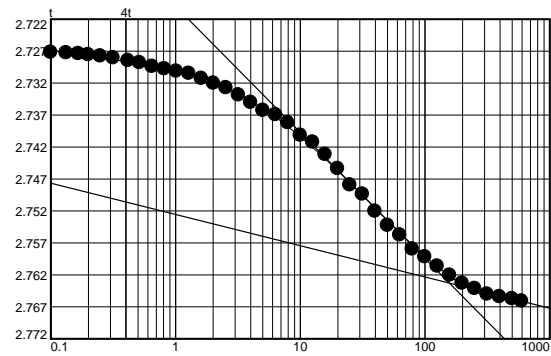
$D_0 = 2.6821$      $D_{50} = 2.7006$      $D_{100} = 2.7191$      $C_v$  at 16.78 min. = 0.005 ft.<sup>2</sup>/day     $C_\alpha = 0.007$

Pressure: 8.00 tsf

TEST READINGS

Load No. 16

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.72655	21	8.0833	2.73823
2	0.2000	2.72721	22	10.1500	2.74020
3	0.2333	2.72730	23	12.7333	2.74127
4	0.2667	2.72742	24	16.0000	2.74321
5	0.3000	2.72758	25	20.1000	2.74539
6	0.3500	2.72781	26	25.2667	2.74797
7	0.4167	2.72810	27	31.7833	2.74941
8	0.5167	2.72852	28	39.9667	2.75206
9	0.6167	2.72883	29	50.2833	2.75428
10	0.7500	2.72943	30	63.2500	2.75581
11	0.9167	2.72979	31	79.6000	2.75799
12	1.1167	2.73018	32	100.1667	2.75923
13	1.3833	2.73050	33	126.0500	2.76068
14	1.7167	2.73132	34	158.6500	2.76208
15	2.1167	2.73204	35	199.7000	2.76334
16	2.6500	2.73278	36	251.3500	2.76416
17	3.3000	2.73389	37	316.4000	2.76504
18	4.1167	2.73506	38	398.2833	2.76545
19	5.1500	2.73632	39	501.3667	2.76576
20	6.4500	2.73698	40	599.4667	2.76614



Void Ratio = 0.848 Compression = 52.9%

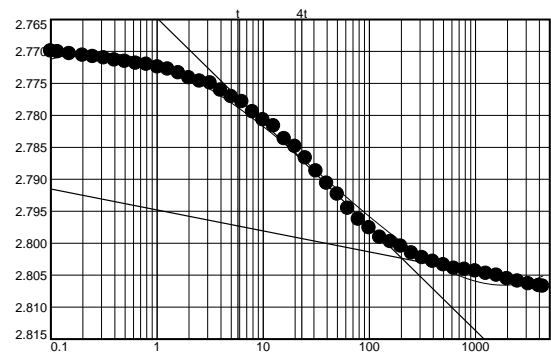
$D_0 = 2.7248$   $D_{50} = 2.7441$   $D_{100} = 2.7633$   $C_v$  at 16.24 min. = 0.004 ft.<sup>2</sup>/day  $C_\alpha = 0.006$

Pressure: 16.00 tsf

TEST READINGS

Load No. 17

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.76944	15	2.1000	2.77416
2	0.2000	2.76997	16	2.6333	2.77467
3	0.2167	2.77011	17	3.2833	2.77497
4	0.2500	2.77040	18	4.1000	2.77610
5	0.3000	2.77062	19	5.1333	2.77712
6	0.3500	2.77083	20	6.4333	2.77791
7	0.4167	2.77106	21	8.0667	2.77948
8	0.5000	2.77138	22	10.1333	2.78075
9	0.6000	2.77159	23	12.7167	2.78170
10	0.7333	2.77188	24	15.9833	2.78369
11	0.9000	2.77207	25	20.0833	2.78490
12	1.1167	2.77247	26	25.2500	2.78668
13	1.3667	2.77280	27	31.7500	2.78874
14	1.7000	2.77340	28	39.9500	2.79066



Pressure: 16.00 tsf

TEST READINGS (continued)

Load No. 17

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
29	50.2500	2.79236	39	501.3500	2.80341	49	4320.0500	2.80678
30	63.2333	2.79459	40	631.1167	2.80397			
31	79.5667	2.79630	41	794.4833	2.80415			
32	100.1500	2.79764	42	1000.1667	2.80440			
33	126.0333	2.79911	43	1259.1000	2.80477			
34	158.6333	2.79979	44	1585.0667	2.80507			
35	199.6667	2.80050	45	1995.4333	2.80561			
36	251.3333	2.80157	46	2512.0667	2.80599			
37	316.3833	2.80231	47	3162.4667	2.80640			
38	398.2667	2.80289	48	3981.2667	2.80669			

Void Ratio = 0.641 Compression = 58.2%

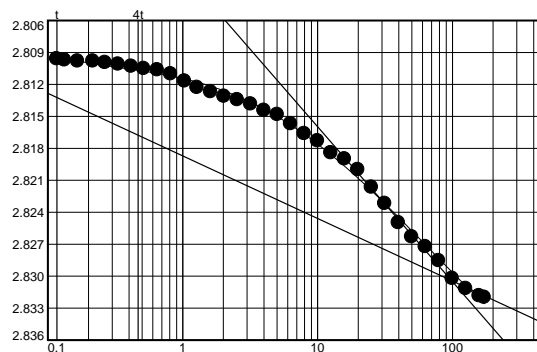
D<sub>0</sub> = 2.7708 D<sub>50</sub> = 2.7866 D<sub>100</sub> = 2.8024 C<sub>v</sub> at 22.61 min. = 0.003 ft.<sup>2</sup>/day C<sub>α</sub> = 0.004

Pressure: 32.00 tsf

TEST READINGS

Load No. 18

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.0833	2.80919	19	5.1333	2.81485
2	0.2000	2.80962	20	6.4333	2.81571
3	0.2167	2.80973	21	8.0667	2.81665
4	0.2500	2.80983	22	10.1333	2.81732
5	0.3000	2.80984	23	12.7167	2.81845
6	0.3500	2.80997	24	15.9833	2.81901
7	0.4167	2.81012	25	20.0833	2.82002
8	0.5000	2.81032	26	25.2500	2.82167
9	0.6000	2.81053	27	31.7500	2.82320
10	0.7333	2.81066	28	39.9500	2.82500
11	0.9000	2.81103	29	50.2500	2.82632
12	1.1167	2.81171	30	63.2333	2.82726
13	1.3667	2.81230	31	79.5667	2.82857
14	1.7000	2.81270	32	100.1500	2.83023
15	2.1167	2.81313	33	126.0333	2.83118
16	2.6333	2.81346	34	158.6333	2.83185
17	3.2833	2.81386	35	172.7500	2.83201
18	4.1000	2.81446			



Void Ratio = 0.512 Compression = 61.5%

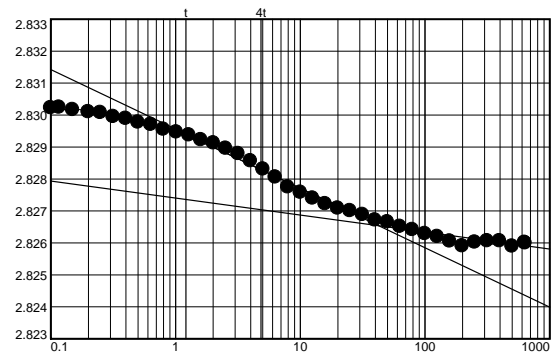
D<sub>0</sub> = 2.8080 D<sub>50</sub> = 2.8192 D<sub>100</sub> = 2.8304 C<sub>v</sub> at 14.35 min. = 0.003 ft.<sup>2</sup>/day C<sub>α</sub> = 0.008

Pressure: 16.00 tsf

TEST READINGS

Load No. 19

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	2.83046	22	10.1500	2.82758
2	0.2167	2.83022	23	12.7333	2.82739
3	0.2333	2.83024	24	16.0000	2.82722
4	0.2667	2.83016	25	20.1000	2.82708
5	0.3167	2.83010	26	25.2667	2.82700
6	0.3667	2.83007	27	31.7833	2.82688
7	0.4333	2.82995	28	39.9667	2.82671
8	0.5167	2.82989	29	50.2833	2.82665
9	0.6167	2.82977	30	63.2667	2.82651
10	0.7500	2.82970	31	79.6000	2.82641
11	0.9167	2.82955	32	100.1667	2.82628
12	1.1333	2.82946	33	126.0667	2.82619
13	1.4000	2.82937	34	158.6667	2.82605
14	1.7167	2.82922	35	199.7000	2.82590
15	2.1333	2.82912	36	251.3667	2.82602
16	2.6500	2.82895	37	316.4000	2.82606
17	3.3000	2.82879	38	398.2833	2.82606
18	4.1167	2.82856	39	501.3667	2.82589
19	5.1500	2.82830	40	631.1333	2.82601
20	6.4500	2.82805	41	637.5167	2.82599
21	8.0833	2.82774			



Void Ratio = 0.543    Compression = 60.7%

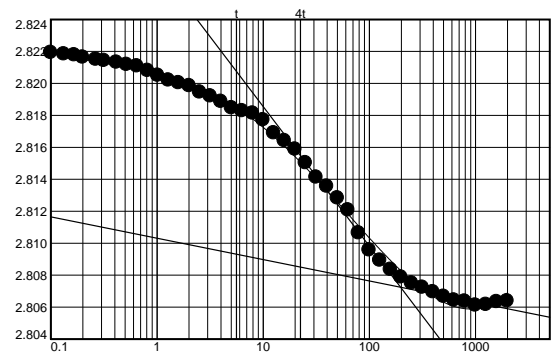
$D_0 = 2.8304$      $D_{50} = 2.8285$      $D_{100} = 2.8265$      $C_v$  at 3.90 min. = 0.011 ft.<sup>2</sup>/day

Pressure: 4.00 tsf

TEST READINGS

Load No. 20

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.82255	14	1.7000	2.82002
2	0.2000	2.82192	15	2.1167	2.81984
3	0.2333	2.82183	16	2.6333	2.81944
4	0.2667	2.82177	17	3.2833	2.81920
5	0.3000	2.82163	18	4.1167	2.81886
6	0.3667	2.82149	19	5.1500	2.81846
7	0.4167	2.82142	20	6.4500	2.81828
8	0.5167	2.82131	21	8.0833	2.81812
9	0.6167	2.82117	22	10.1333	2.81771
10	0.7500	2.82108	23	12.7333	2.81689
11	0.9167	2.82079	24	16.0000	2.81641
12	1.1167	2.82050	25	20.1000	2.81587
13	1.3833	2.82020	26	25.2667	2.81502



Pressure: 4.00 tsf

TEST READINGS (continued)

Load No. 20

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
27	31.7667	2.81412	37	316.4000	2.80723
28	39.9667	2.81355	38	398.2833	2.80695
29	50.2667	2.81281	39	501.3500	2.80666
30	63.2500	2.81206	40	631.1333	2.80643
31	79.5833	2.81063	41	794.5167	2.80636
32	100.1667	2.80956	42	1000.1833	2.80611
33	126.0500	2.80892	43	1259.1167	2.80615
34	158.6500	2.80834	44	1585.0833	2.80633
35	199.6833	2.80787	45	1995.4500	2.80638
36	251.3500	2.80750			

Void Ratio = 0.643    Compression = 58.1%

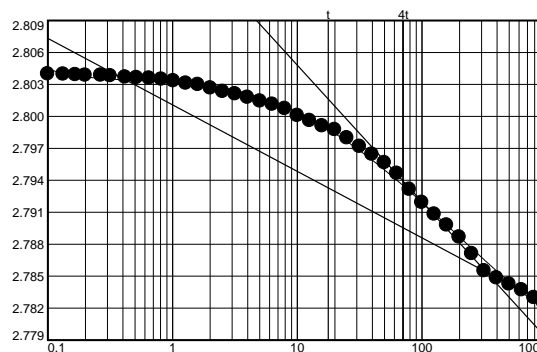
$D_0 = 2.8219$      $D_{50} = 2.8146$      $D_{100} = 2.8072$      $C_v$  at 26.36 min. = 0.002 ft.<sup>2</sup>/day

Pressure: 1.00 tsf

TEST READINGS

Load No. 21

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.80420	22	10.1333	2.80007
2	0.2000	2.80397	23	12.7167	2.79959
3	0.2333	2.80394	24	15.9833	2.79909
4	0.2667	2.80388	25	20.0833	2.79874
5	0.3000	2.80384	26	25.2500	2.79796
6	0.3667	2.80384	27	31.7500	2.79716
7	0.4167	2.80378	28	39.9500	2.79642
8	0.5167	2.80367	29	50.2500	2.79563
9	0.6167	2.80361	30	63.2333	2.79464
10	0.7500	2.80356	31	79.5833	2.79312
11	0.9167	2.80346	32	100.1500	2.79191
12	1.1167	2.80331	33	126.0333	2.79081
13	1.3833	2.80310	34	158.6333	2.78978
14	1.7000	2.80296	35	199.6667	2.78864
15	2.1167	2.80264	36	251.3333	2.78710
16	2.6333	2.80232	37	316.3833	2.78548
17	3.2833	2.80208	38	398.2667	2.78482
18	4.1000	2.80177	39	501.3333	2.78425
19	5.1333	2.80142	40	631.1167	2.78370
20	6.4333	2.80111	41	794.4833	2.78297
21	8.0667	2.80071	42	944.8000	2.78250



Void Ratio = 0.765    Compression = 55.0%

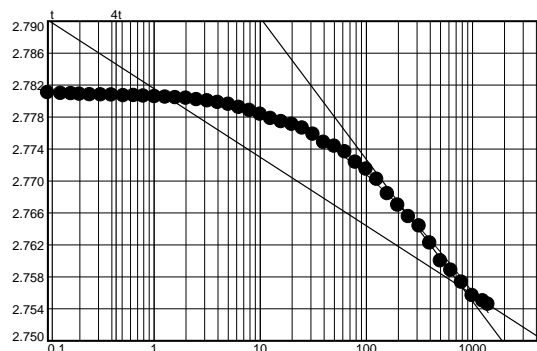
$D_0 = 2.8041$      $D_{50} = 2.7947$      $D_{100} = 2.7854$      $C_v$  at 53.13 min. = 0.001 ft.<sup>2</sup>/day

Pressure: 0.25 tsf

TEST READINGS

Load No. 22

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1167	2.78113	23	12.7500	2.77778
2	0.2167	2.78102	24	16.0167	2.77740
3	0.2500	2.78093	25	20.1167	2.77704
4	0.2833	2.78088	26	25.2833	2.77658
5	0.3167	2.78082	27	31.7833	2.77582
6	0.3667	2.78077	28	39.9833	2.77480
7	0.4333	2.78074	29	50.2833	2.77432
8	0.5167	2.78073	30	63.2667	2.77361
9	0.6333	2.78064	31	79.6167	2.77230
10	0.7667	2.78067	32	100.1833	2.77143
11	0.9167	2.78060	33	126.0667	2.77019
12	1.1333	2.78052	34	158.6667	2.76836
13	1.4000	2.78046	35	199.7167	2.76694
14	1.7167	2.78038	36	251.3833	2.76551
15	2.1333	2.78033	37	316.4167	2.76434
16	2.6500	2.78014	38	398.3000	2.76220
17	3.3167	2.77999	39	501.3833	2.75996
18	4.1333	2.77979	40	631.1667	2.75880
19	5.1667	2.77954	41	794.5333	2.75728
20	6.4667	2.77917	42	1000.2000	2.75561
21	8.1000	2.77878	43	1259.1333	2.75495
22	10.1667	2.77833	44	1405.5333	2.75454



Void Ratio = 0.907 Compression = 51.4%

D<sub>0</sub> = 2.7820 D<sub>50</sub> = 2.7693 D<sub>100</sub> = 2.7566 C<sub>v</sub> at 132.00 min. = 0.000 ft.<sup>2</sup>/day

Pressure: 0.06 tsf

TEST READINGS

Load No. 23

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0.1000	2.75345	13	1.3833	2.75317	25	20.1000	2.75162
2	0.2000	2.75343	14	1.7167	2.75312	26	25.2833	2.75121
3	0.2333	2.75348	15	2.1167	2.75299	27	31.7833	2.75103
4	0.2667	2.75344	16	2.6500	2.75292	28	39.9667	2.75073
5	0.3000	2.75345	17	3.3000	2.75280	29	50.2833	2.75016
6	0.3500	2.75345	18	4.1167	2.75273	30	63.2667	2.74918
7	0.4167	2.75342	19	5.1500	2.75265	31	79.6000	2.74866
8	0.5167	2.75331	20	6.4500	2.75259	32	100.1667	2.74814
9	0.6167	2.75327	21	8.0833	2.75245	33	126.0667	2.74761
10	0.7500	2.75326	22	10.1500	2.75231	34	158.6667	2.74680
11	0.9167	2.75324	23	12.7333	2.75219	35	199.7167	2.74499
12	1.1167	2.75319	24	16.0000	2.75199	36	251.3833	2.74322

No.	Elapsed Time	Dial Reading
37	316.4167	2.74206
38	398.3000	2.74058
39	501.3333	2.73849
40	631.0333	2.73692
41	794.3667	2.73546
42	1000.0333	2.73310
43	1255.3000	2.73150

Void Ratio = 1.025    Compression = 48.4%



APPENDIX VI



**GRAIN SIZE DISTRIBUTION TEST DATA**

7/6/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-4

**Depth:** 15

**Sample Number:** 8B

**Material Description:** Wet, extremely soft tan & gray FAT CLAY w/ trace silt pockets, organic matter & shell fragments

**Liquid Limit:** 84

**Plastic Limit:** 25

**USCS Classification:** CH

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D7928-17 was Performed

**Tested by:** JMP

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 0.28  
Tare Wt. = 0.00  
Minus #200 from wash = 99.4%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
45.51	0.00	0.00	#200	0.28	99.4	0.6

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 99.4

Weight of hydrometer sample = 89.51

Hygroscopic moisture correction:

Moist weight and tare = 143.07

Dry weight and tare = 87.55

Tare weight = 30.11

Hygroscopic moisture = 96.7%

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.72

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
1.25	22.0	42.3	36.6	0.0130	43.2	9.2	0.0354	78.8	21.2
2.00	22.0	41.0	35.3	0.0130	41.9	9.4	0.0283	76.0	24.0
4.00	22.0	39.3	33.6	0.0130	40.2	9.7	0.0203	72.4	27.6
15.00	22.0	36.0	30.3	0.0130	36.9	10.2	0.0108	65.3	34.7
30.00	22.0	32.0	26.3	0.0130	32.9	10.9	0.0079	56.7	43.3
60.00	22.0	31.0	25.3	0.0130	31.9	11.1	0.0056	54.5	45.5
120.00	22.0	30.0	24.3	0.0130	30.9	11.2	0.0040	52.4	47.6
240.00	22.0	29.0	23.3	0.0130	29.9	11.4	0.0028	50.2	49.8
1440.00	22.5	22.0	16.5	0.0130	22.9	12.5	0.0012	35.4	64.6

**Eustis Engineering L.L.C.**

**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
								45.5	53.9	99.4

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
					0.0016	0.0032	0.0087	0.0379	0.0472	0.0561	0.0657



**GRAIN SIZE DISTRIBUTION TEST DATA**

7/8/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-7

**Depth:** 15

**Sample Number:** 8B

**Material Description:** Wet, extremely soft gray & tan FAT CLAY w/ trace silt pockets

**Liquid Limit:** 92

**Plastic Limit:** 24

**USCS Classification:** CH

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D7928-17 was Performed

**Tested by:** BH

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 0.40  
Tare Wt. = 0.00  
Minus #200 from wash = 99.3%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
56.14	0.00	0.00	#200	0.40	99.3	0.7

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 99.25

Hygroscopic moisture correction:

Moist weight and tare = 93.45

Dry weight and tare = 66.27

Tare weight = 30.87

Hygroscopic moisture = 76.8%

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.72

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
1.00	22.0	53.0	47.3	0.0130	53.9	7.5	0.0356	83.0	17.0
2.50	22.0	48.0	42.3	0.0130	48.9	8.3	0.0237	74.3	25.7
4.00	22.0	46.0	40.3	0.0130	46.9	8.6	0.0191	70.8	29.2
15.00	22.0	42.0	36.3	0.0130	42.9	9.3	0.0102	63.7	36.3
30.00	22.0	40.0	34.3	0.0130	40.9	9.6	0.0074	60.2	39.8
60.00	22.0	38.0	32.3	0.0130	38.9	9.9	0.0053	56.7	43.3
120.00	22.0	37.0	31.3	0.0130	37.9	10.1	0.0038	55.0	45.0
240.00	22.0	33.0	27.3	0.0130	33.9	10.7	0.0028	48.0	52.0
1440.00	22.0	28.0	22.3	0.0130	28.9	11.6	0.0012	39.2	60.8

**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
								56.6	42.7	99.3

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
					0.0014	0.0030	0.0072	0.0312	0.0388	0.0487	0.0614





**GRAIN SIZE DISTRIBUTION TEST DATA**

7/8/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-8

**Depth:** 18

**Sample Number:** 10A

**Material Description:** Moist, soft gray FAT CLAY w/ trace silt pockets

**USCS Classification:** CH

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D7928-17 was Performed

**Tested by:** BH

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 0.49  
Tare Wt. = 0.00  
Minus #200 from wash = 99.2%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
60.10	0.00	0.00	#200	0.49	99.2	0.8

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 112.26

Hygroscopic moisture correction:

Moist weight and tare = 154.54

Dry weight and tare = 96.72

Tare weight = 30.12

Hygroscopic moisture = 86.8%

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.72

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
1.00	22.0	58.0	52.3	0.0130	58.9	6.6	0.0336	85.8	14.2
2.00	22.0	55.0	49.3	0.0130	55.9	7.1	0.0246	80.9	19.1
4.00	22.0	53.0	47.3	0.0130	53.9	7.5	0.0178	77.6	22.4
15.00	22.0	50.0	44.3	0.0130	50.9	7.9	0.0095	72.7	27.3
30.00	22.0	45.0	39.3	0.0130	45.9	8.8	0.0070	64.5	35.5
60.00	22.0	42.0	36.3	0.0130	42.9	9.3	0.0051	59.6	40.4
120.00	22.0	39.0	33.3	0.0130	39.9	9.8	0.0037	54.6	45.4
240.00	22.0	38.0	32.3	0.0130	38.9	9.9	0.0027	53.0	47.0
1440.00	22.0	32.0	26.3	0.0130	32.9	10.9	0.0011	43.2	56.8

**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
								49.7	49.5	99.2

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
						0.0021	0.0053	0.0230	0.0321	0.0431	0.0583



**GRAIN SIZE DISTRIBUTION TEST DATA**

7/8/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-9

**Depth:** 12

**Sample Number:** 7A

**Material Description:** Wet, extremely soft gray & tan FAT CLAY w/ few shell fragments, trace silt pockets

**USCS Classification:** CH

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D7928-17 was Performed

**Tested by:** BH

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 1.08  
Tare Wt. = 0.00  
Minus #200 from wash = 98.1%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
56.75	0.00	0.00	#200	1.08	98.1	1.9

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 96.42

Hygroscopic moisture correction:

Moist weight and tare = 92.30

Dry weight and tare = 61.74

Tare weight = 17.99

Hygroscopic moisture = 69.9%

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.72

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

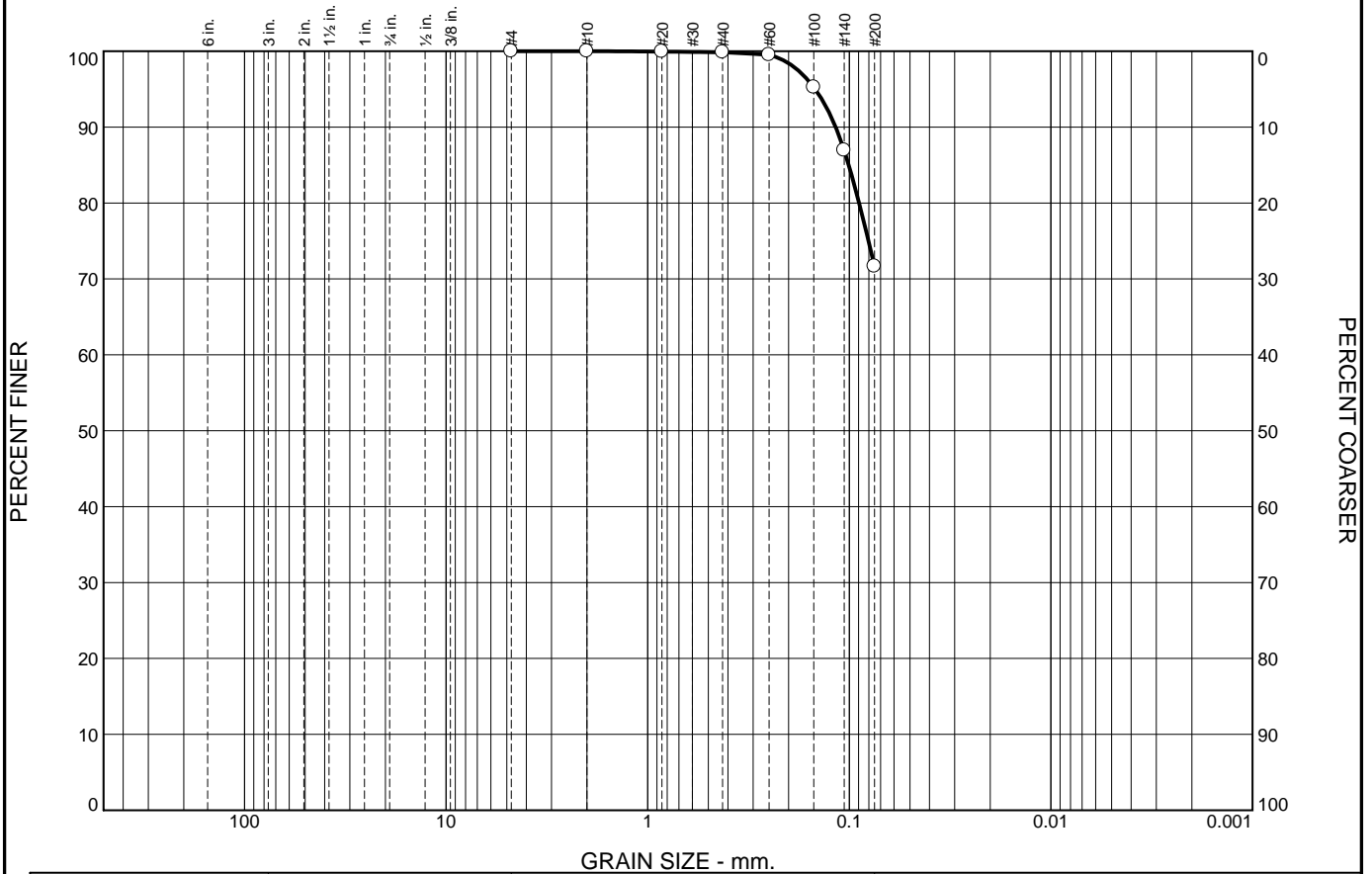
Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
1.00	22.0	48.0	42.3	0.0130	48.9	8.3	0.0375	73.5	26.5
2.00	22.0	45.0	39.3	0.0130	45.9	8.8	0.0273	68.3	31.7
4.00	22.0	42.0	36.3	0.0130	42.9	9.3	0.0198	63.0	37.0
15.00	22.0	38.0	32.3	0.0130	38.9	9.9	0.0106	56.1	43.9
30.00	22.0	36.0	30.3	0.0130	36.9	10.2	0.0076	52.6	47.4
60.00	22.0	34.0	28.3	0.0130	34.9	10.6	0.0055	49.2	50.8
120.00	22.0	31.0	25.3	0.0130	31.9	11.1	0.0040	44.0	56.0
271.00	22.0	28.0	22.3	0.0130	28.9	11.6	0.0027	38.8	61.2
1440.00	22.0	23.0	17.3	0.0130	23.9	12.4	0.0012	30.1	69.9

**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
								62.9	35.2	98.1

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
					0.0029	0.0060	0.0153	0.0469	0.0540	0.0615	0.0696

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.2	28.2	71.6	

LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
		0.1006							

Material Description	USCS	AASHTO
○ Moist, loose gray fine SILT W/ SAND (fine), trace clay pockets & lenses	ML	

<p><b>Project No.</b> 24762      <b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND</p> <p>○ <b>Source of Sample:</b> BA-9      <b>Depth:</b> 19      <b>Sample Number:</b> 10B</p>	<p><b>Remarks:</b></p>
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Figure

**Tested By:** RR      **Checked By:** CD & RR

**GRAIN SIZE DISTRIBUTION TEST DATA**

7/8/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-9

**Depth:** 19

**Sample Number:** 10B

**Material Description:** Moist, loose gray fine SILT W/ SAND (fine), trace clay pockets & lenses

**USCS Classification:** ML

**Tested by:** RR

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 26.78  
Tare Wt. = 0.00  
Minus #200 from wash = 70.7%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
91.35	0.00	0.00	#4	0.00	100.0	0.0
			#10	0.00	100.0	0.0
			#20	0.05	99.9	0.1
			#40	0.14	99.8	0.2
			#60	0.45	99.5	0.5
			#100	4.35	95.2	4.8
			#140	11.93	86.9	13.1
			#200	25.90	71.6	28.4

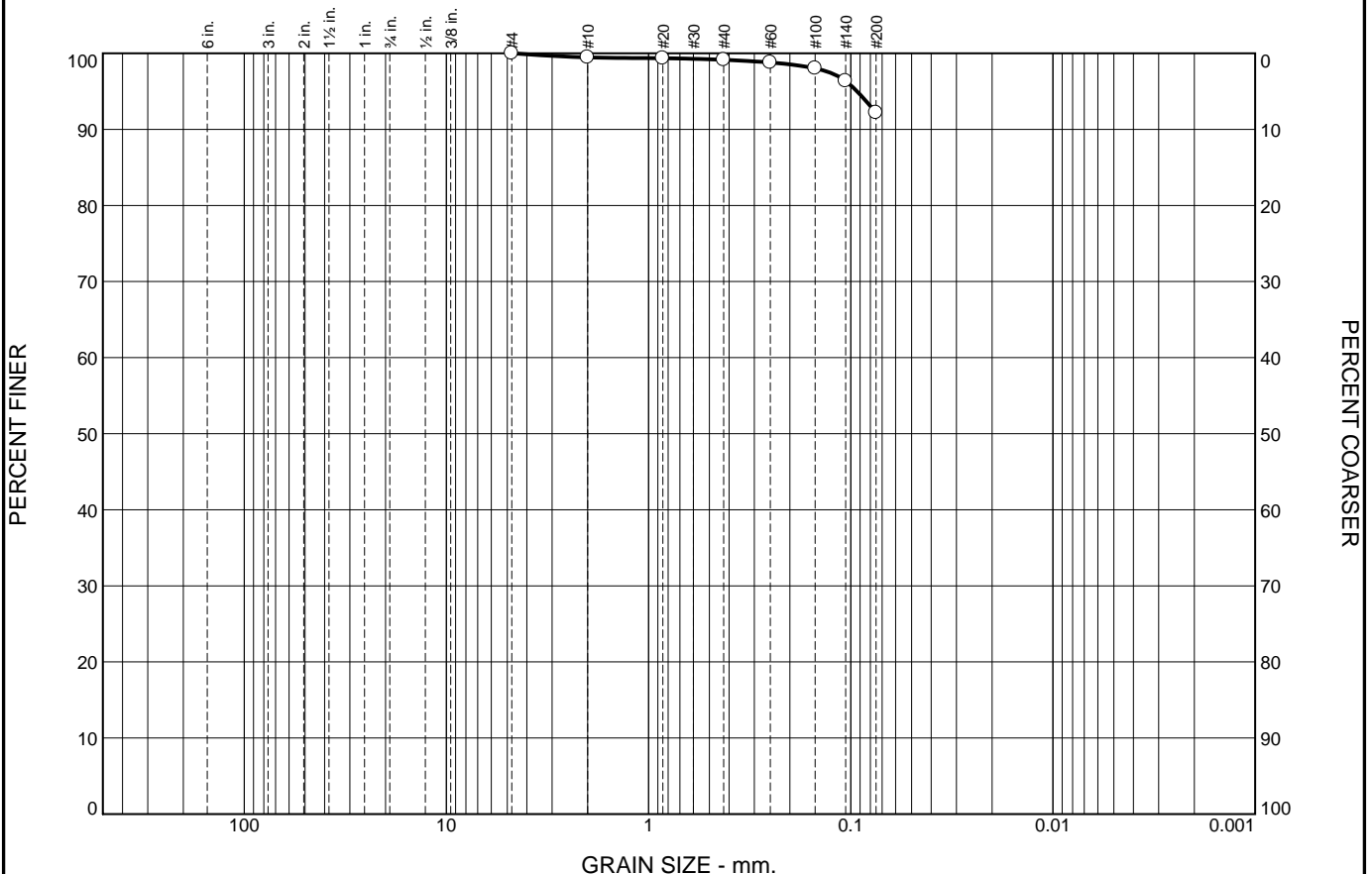
**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.2	28.2	28.4			71.6

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
								0.0894	0.1006	0.1169	0.1477

<b>Fineness Modulus</b>
0.05

# Particle Size Distribution Report



GRAIN SIZE - mm.

%	+3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.5	0.4	6.9	92.2	

×	LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
○	100	26								

Material Description	USCS	AASHTO
○ Wet, extremely soft gray & tan FAT CLAY w/ few organic matter	CH	A-7-6(78)

<b>Project No.</b> 24762 <b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND ○ <b>Source of Sample:</b> BA-10 <b>Depth:</b> 3 <b>Sample Number:</b> 2B	<b>Remarks:</b>   
--	-----------------------------



Figure

**Tested By:** JW      **Checked By:** CD & RR



**GRAIN SIZE DISTRIBUTION TEST DATA**

7/8/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-10

**Depth:** 3

**Sample Number:** 2B

**Material Description:** Wet, extremely soft gray & tan FAT CLAY w/ few organic matter

**Liquid Limit:** 100

**Plastic Limit:** 26

**USCS Classification:** CH

**AASHTO Classification:** A-7-6(78)

**Tested by:** JW

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 3.62

Tare Wt. = 0.00

Minus #200 from wash = 92.2%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
46.26	0.00	0.00	#4	0.00	100.0	0.0
			#10	0.25	99.5	0.5
			#20	0.30	99.4	0.6
			#40	0.40	99.1	0.9
			#60	0.56	98.8	1.2
			#100	0.92	98.0	2.0
			#140	1.69	96.3	3.7
			#200	3.62	92.2	7.8

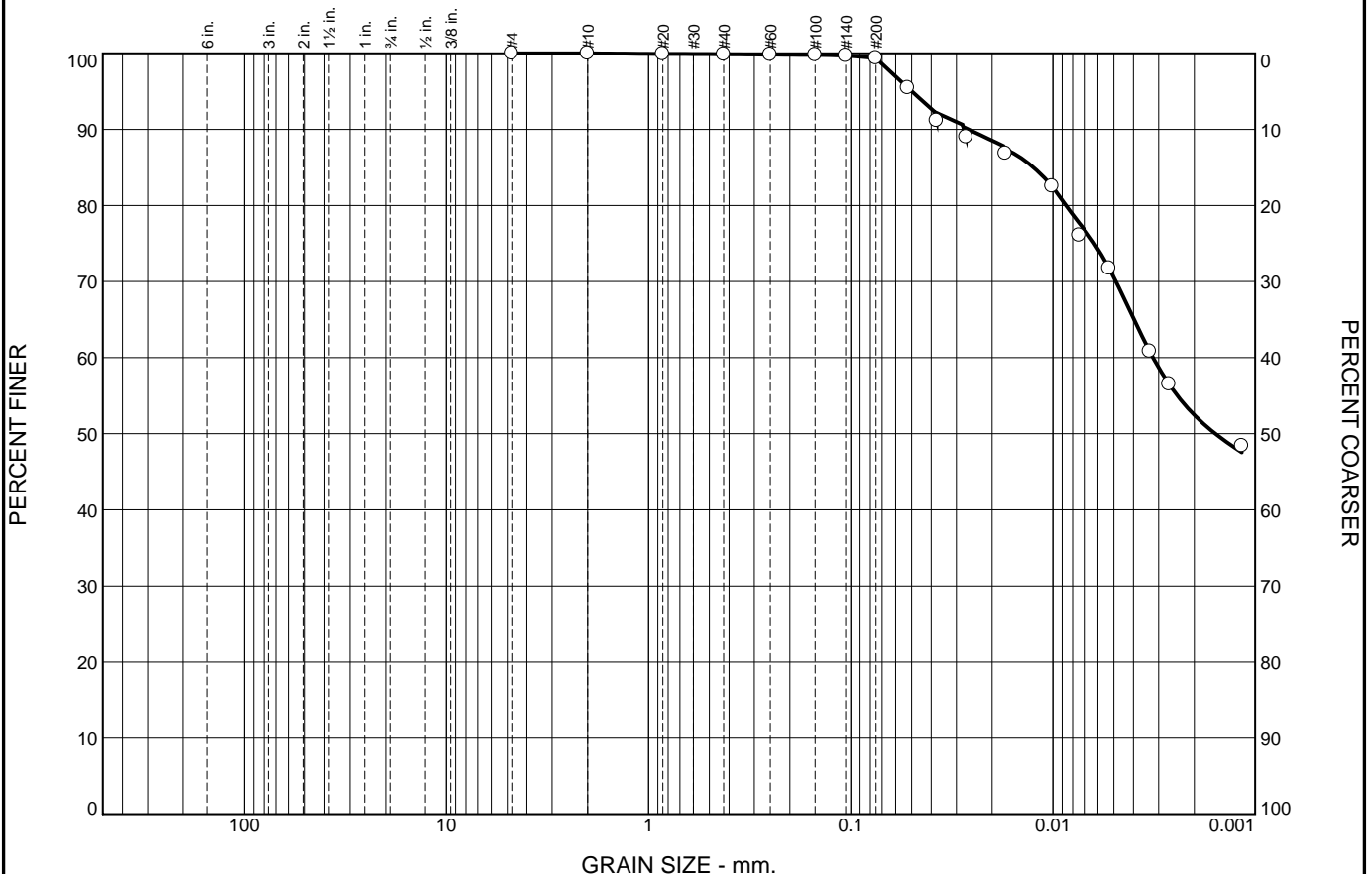
**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.5	0.4	6.9	7.8			92.2

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
											0.0930

<b>Fineness Modulus</b>
0.05

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.1	0.5	28.8	70.6

LL	PL	D85	D60	D50	D30	D15	D10	Cc	Cu
79	25	0.0125	0.0032	0.0016					

Material Description	USCS	AASHTO
Wet, extremely soft gray & tan FAT CLAY w/ trace silt pockets & shell fragments	CH	A-7-6(62)

<b>Project No.</b> 24762 <b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND <b>Source of Sample:</b> BA-10 <b>Depth:</b> 9 <b>Sample Number:</b> 5B	<b>Remarks:</b> Soil Specific Gravity was Estimated ASTM D7928-17 was Performed
--	--



**Figure**

**Tested By:** MR & LB      **Checked By:** CD & RR

**GRAIN SIZE DISTRIBUTION TEST DATA**

7/13/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-10

**Depth:** 9

**Sample Number:** 5B

**Material Description:** Wet, extremely soft gray & tan FAT CLAY w/ trace silt pockets & shell fragments

**Liquid Limit:** 79

**Plastic Limit:** 25

**USCS Classification:** CH

**AASHTO Classification:** A-7-6(62)

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D7928-17 was Performed

**Tested by:** MR & LB

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 0.34  
Tare Wt. = 0.00  
Minus #200 from wash = 99.3%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
45.67	0.00	0.00	#4	0.00	100.0	0.0
			#10	0.00	100.0	0.0
			#20	0.04	99.9	0.1
			#40	0.06	99.9	0.1
			#60	0.08	99.8	0.2
			#100	0.10	99.8	0.2
			#140	0.15	99.7	0.3
			#200	0.29	99.4	0.6

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 45.67

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.72

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
0.50	21.7	50.0	44.3	0.0131	50.9	7.9	0.0522	95.5	4.5
1.00	21.7	48.0	42.3	0.0131	48.9	8.3	0.0376	91.1	8.9
2.00	21.7	47.0	41.3	0.0131	47.9	8.4	0.0269	89.0	11.0
5.00	21.7	46.0	40.3	0.0131	46.9	8.6	0.0172	86.8	13.2
15.00	21.7	44.0	38.3	0.0131	44.9	8.9	0.0101	82.5	17.5
30.00	21.7	41.0	35.3	0.0131	41.9	9.4	0.0073	76.1	23.9

**Eustis Engineering L.L.C.**

**Hydrometer Test Data (continued)**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
60.00	21.7	39.0	33.3	0.0131	39.9	9.8	0.0053	71.7	28.3
165.00	21.4	34.0	28.2	0.0131	34.9	10.6	0.0033	60.8	39.2
265.00	21.4	32.0	26.2	0.0131	32.9	10.9	0.0027	56.5	43.5
1440.00	22.4	28.0	22.4	0.0130	28.9	11.6	0.0012	48.4	51.6

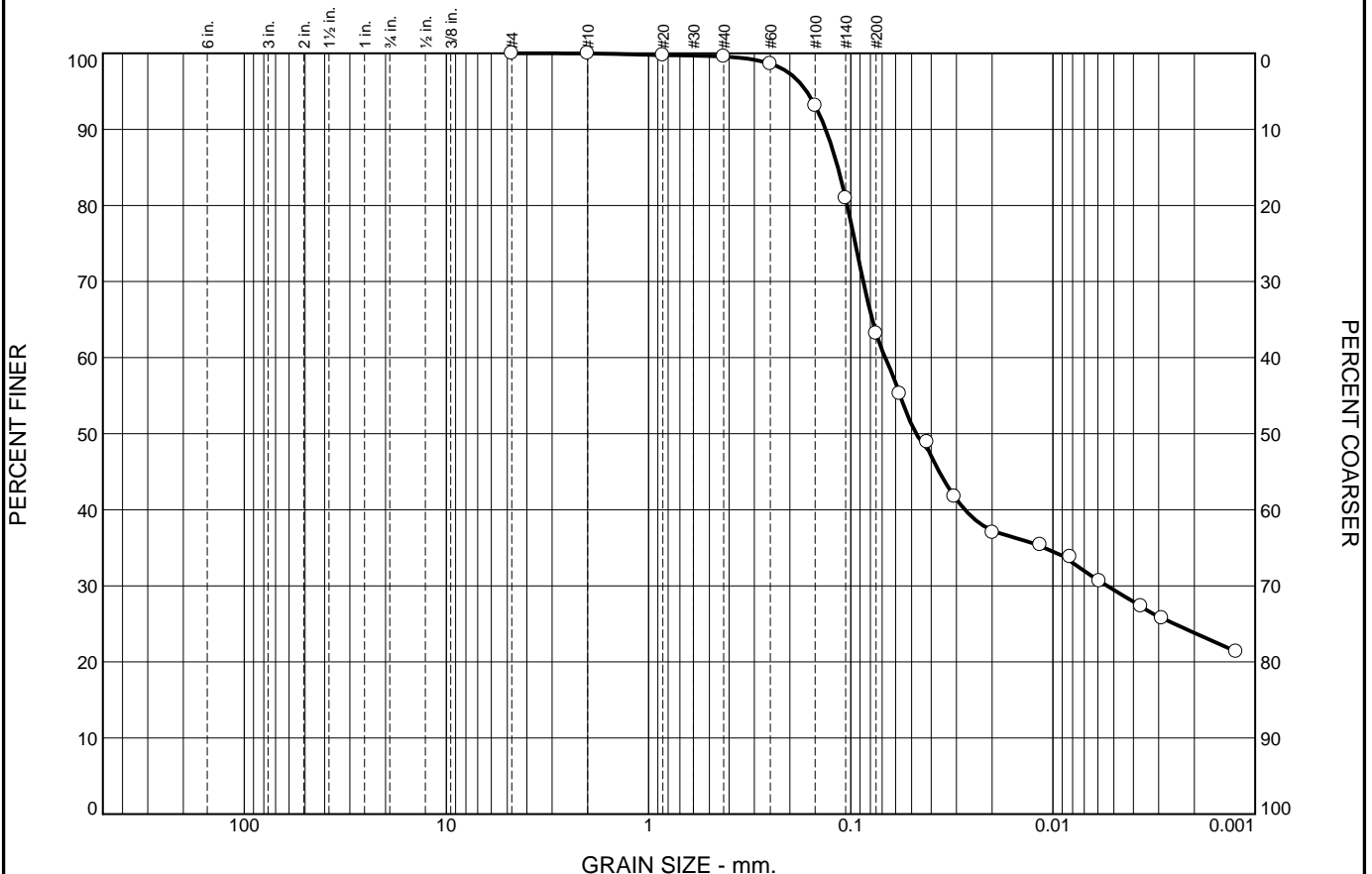
**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.6	28.8	70.6	99.4

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
						0.0016	0.0032	0.0086	0.0125	0.0262	0.0499

<b>Fineness Modulus</b>
0.01

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.4	36.4	33.7	29.5

LL	PL	D85	D60	D50	D30	D15	D10	Cc	Cu
		0.1158	0.0676	0.0475	0.0054				

Material Description	USCS	AASHTO
Wet, extremely soft gray & tan fine SANDY LEAN CLAY w/ trace shell fragments	CL	

<b>Project No.</b> 24762 <b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND <input type="radio"/> <b>Source of Sample:</b> BA-11 <b>Depth:</b> 10 <b>Sample Number:</b> 6A	<b>Remarks:</b> <input type="radio"/> Soil Specific Gravity was Estimated ASTM D7928-17 was Performed
---	--



**Figure**

**Tested By:** MR & LB      **Checked By:** CD & RR

**GRAIN SIZE DISTRIBUTION TEST DATA**

7/13/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-11

**Depth:** 10

**Sample Number:** 6A

**Material Description:** Wet, extremely soft gray & tan fine SANDY LEAN CLAY w/ trace shell fragments

**USCS Classification:** CL

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D7928-17 was Performed

**Tested by:** MR & LB

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 24.76  
Tare Wt. = 0.00  
Minus #200 from wash = 60.2%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
62.21	0.00	0.00	#4	0.00	100.0	0.0
			#10	0.01	100.0	0.0
			#20	0.15	99.8	0.2
			#40	0.27	99.6	0.4
			#60	0.86	98.6	1.4
			#100	4.28	93.1	6.9
			#140	11.85	81.0	19.0
			#200	22.90	63.2	36.8

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 62.21

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.70

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
0.50	21.7	40.5	34.8	0.0132	41.4	9.5	0.0574	55.3	44.7
1.00	21.7	36.5	30.8	0.0132	37.4	10.2	0.0420	48.9	51.1
2.00	21.7	32.0	26.3	0.0132	32.9	10.9	0.0307	41.8	58.2
5.00	21.7	29.0	23.3	0.0132	29.9	11.4	0.0199	37.0	63.0
15.00	21.7	28.0	22.3	0.0132	28.9	11.6	0.0116	35.4	64.6
30.00	21.7	27.0	21.3	0.0132	27.9	11.7	0.0082	33.8	66.2
60.00	21.7	25.0	19.3	0.0132	25.9	12.0	0.0059	30.6	69.4

**Eustis Engineering L.L.C.**

**Hydrometer Test Data (continued)**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
160.00	21.4	23.0	17.2	0.0132	23.9	12.4	0.0037	27.3	72.7
262.00	21.4	22.0	16.2	0.0132	22.9	12.5	0.0029	25.8	74.2
1440.00	22.4	19.0	13.4	0.0131	19.9	13.0	0.0012	21.4	78.6

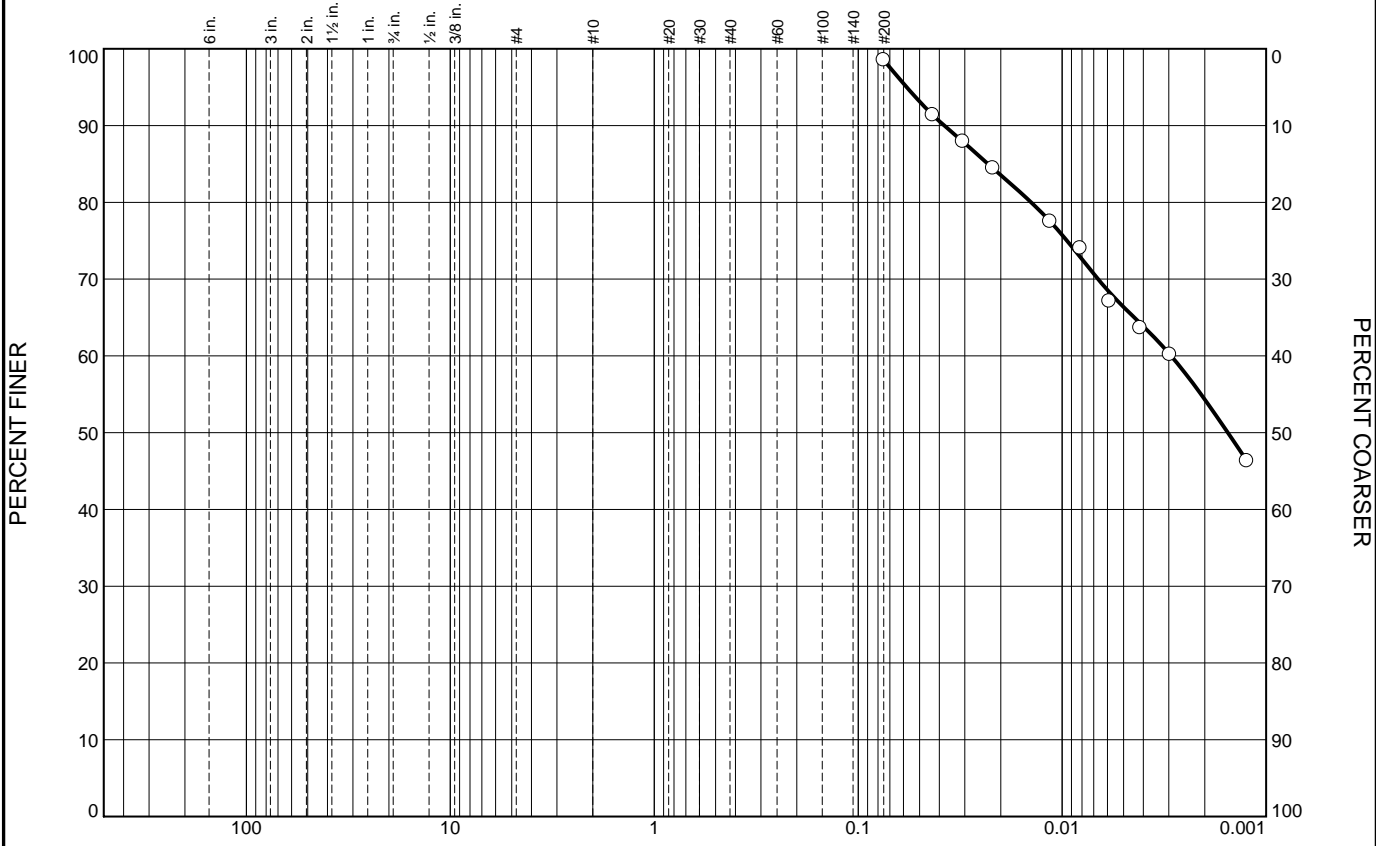
**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.4	36.4	36.8	33.7	29.5	63.2

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
				0.0054	0.0272	0.0475	0.0676	0.1040	0.1158	0.1331	0.1653

<b>Fineness Modulus</b>
0.08

# Particle Size Distribution Report



GRAIN SIZE - mm.

%	+3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○							44.2	54.3

%	LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
○	87	21	0.0231	0.0029	0.0015					

Material Description	USCS	AASHTO
○ Wet, extremely soft gray FAT CLAY w/ trace silt pockets & shell fragments	CH	

<b>Project No.</b> 24762 <b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND ○ <b>Source of Sample:</b> BA-12 <b>Depth:</b> 11 <b>Sample Number:</b> 6B	<b>Remarks:</b> ○ Soil Specific Gravity was Estimated ASTM D7928-17 was Performed
---	--



**Figure**

**Tested By:** BH      **Checked By:** CD & RR



## GRAIN SIZE DISTRIBUTION TEST DATA

7/8/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.

CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-12

**Depth:** 11

**Sample Number:** 6B

**Material Description:** Wet, extremely soft gray FAT CLAY w/ trace silt pockets & shell fragments

**Liquid Limit:** 87

**Plastic Limit:** 21

**USCS Classification:** CH

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D7928-17 was Performed

**Tested by:** BH

**Checked by:** CD & RR

### Sieve Test Data

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 0.42  
Tare Wt. = 0.00  
Minus #200 from wash = 98.5%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
28.39	0.00	0.00	#200	0.42	98.5	1.5

### Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 51.95

Hygroscopic moisture correction:

Moist weight and tare = 90.89

Dry weight and tare = 63.73

Tare weight = 30.99

Hygroscopic moisture = 83.0%

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.72

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
1.00	22.0	32.0	26.3	0.0130	32.9	10.9	0.0431	91.4	8.6
2.00	22.0	31.0	25.3	0.0130	31.9	11.1	0.0307	87.9	12.1
4.00	22.0	30.0	24.3	0.0130	30.9	11.2	0.0218	84.4	15.6
15.00	22.0	28.0	22.3	0.0130	28.9	11.6	0.0114	77.5	22.5
30.00	22.0	27.0	21.3	0.0130	27.9	11.7	0.0082	74.0	26.0
60.00	22.0	25.0	19.3	0.0130	25.9	12.0	0.0058	67.1	32.9
120.00	22.0	24.0	18.3	0.0130	24.9	12.2	0.0042	63.6	36.4
240.00	22.0	23.0	17.3	0.0130	23.9	12.4	0.0030	60.2	39.8
1440.00	22.0	19.0	13.3	0.0130	19.9	13.0	0.0012	46.3	53.7

**Eustis Engineering L.L.C.**

**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
								44.2	54.3	98.5

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
						0.0015	0.0029	0.0142	0.0231	0.0378	0.0579



**GRAIN SIZE DISTRIBUTION TEST DATA**

7/8/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-12

**Depth:** 15

**Sample Number:** 8B

**Material Description:** Wet, extremely soft gray FAT CLAY w/ trace fine sand layers & shell fragments

**Liquid Limit:** 86

**Plastic Limit:** 23

**USCS Classification:** CH

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D7928-17 was Performed

**Tested by:** BH

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 0.16  
Tare Wt. = 0.00  
Minus #200 from wash = 99.6%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
40.49	0.00	0.00	#200	0.16	99.6	0.4

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 99.6

Weight of hydrometer sample = 73.40

Hygroscopic moisture correction:

Moist weight and tare = 117.09

Dry weight and tare = 78.72

Tare weight = 31.50

Hygroscopic moisture = 81.3%

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.72

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

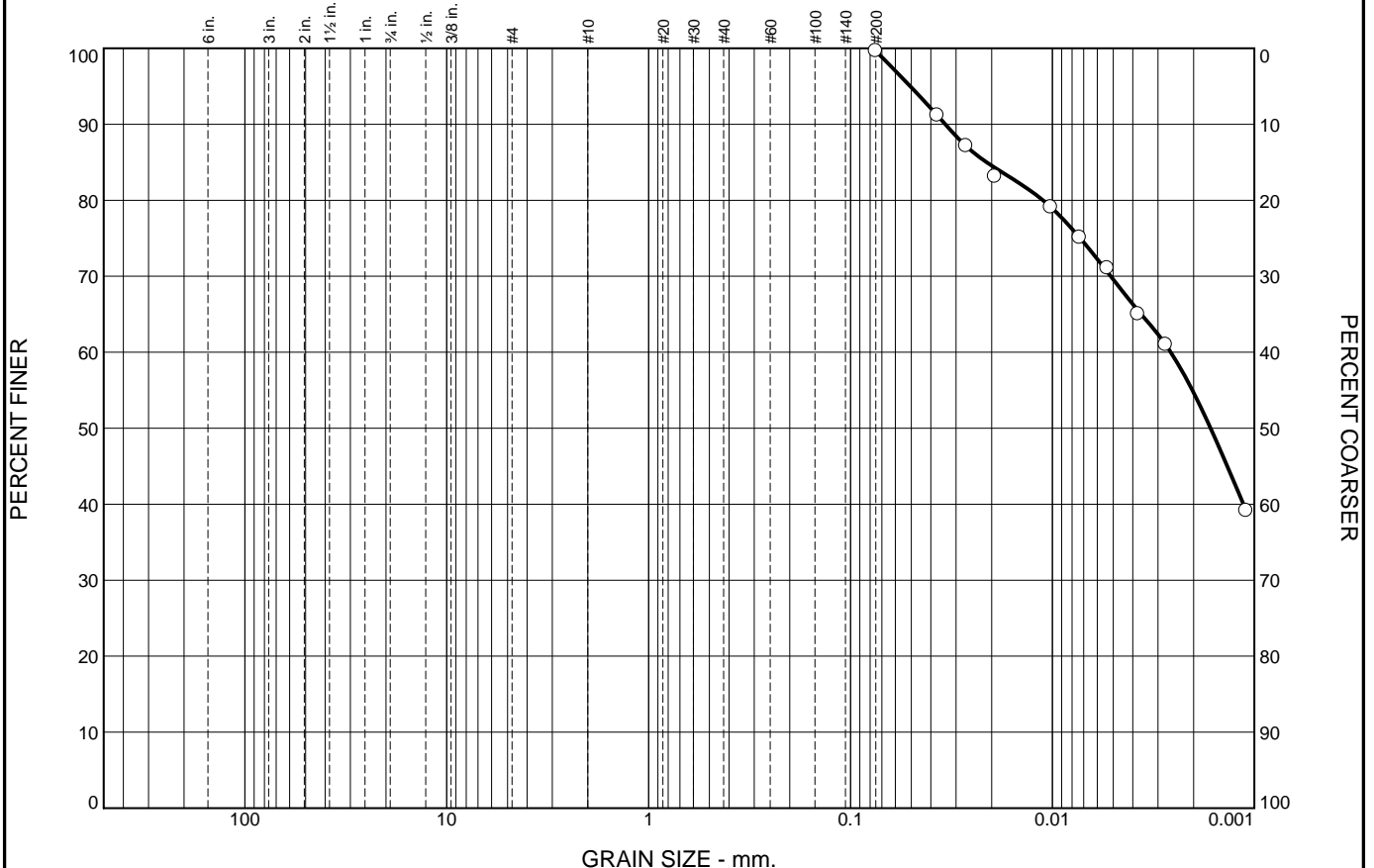
Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
1.00	22.0	43.0	37.3	0.0130	43.9	9.1	0.0393	90.5	9.5
2.00	22.0	42.0	36.3	0.0130	42.9	9.3	0.0281	88.0	12.0
4.00	22.0	39.5	33.8	0.0130	40.4	9.7	0.0203	82.0	18.0
15.00	22.0	36.0	30.3	0.0130	36.9	10.2	0.0108	73.5	26.5
30.00	22.0	33.0	27.3	0.0130	33.9	10.7	0.0078	66.2	33.8
60.00	22.0	28.0	22.3	0.0130	28.9	11.6	0.0057	54.1	45.9
120.00	22.0	26.0	20.3	0.0130	26.9	11.9	0.0041	49.3	50.7
240.00	22.0	24.0	18.3	0.0130	24.9	12.2	0.0029	44.4	55.6
1440.00	22.0	20.0	14.3	0.0130	20.9	12.9	0.0012	34.7	65.3

**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
								59.8	39.8	99.6

D5	D10	D15	D20	D30	D40	D50	D60	D80	D85	D90	D95
					0.0020	0.0043	0.0065	0.0164	0.0240	0.0378	0.0554

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○						30.0	69.6

	LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
○	125	36	0.0212	0.0026	0.0016					

Material Description	USCS	AASHTO
○ Wet, extremely soft gray & brown ORGANIC CLAY w/ trace decayed wood & shell fragments	OH	

<b>Project No.</b> 24762 <b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND ○ <b>Source of Sample:</b> BA-2 <b>Depth:</b> 9 <b>Sample Number:</b> 5B	<b>Remarks:</b> ○ Soil Specific Gravity was Estimated ASTM D7928-17 was Performed
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**Figure**

**Tested By:** BH & JMP      **Checked By:** CD & RR

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/9/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-2

**Depth:** 9

**Sample Number:** 5B

**Material Description:** Wet, extremely soft gray & brown ORGANIC CLAY w/ trace decayed wood & shell fragments

**Liquid Limit:** 125

**Plastic Limit:** 36

**USCS Classification:** OH

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D7928-17 was Performed

**Tested by:** BH & JMP

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 8.72  
Tare Wt. = 0.00  
Minus #200 from wash = 82.4%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
49.56	0.00	0.00	#200	0.18	99.6	0.4

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 99.6

Weight of hydrometer sample = 96.19

Hygroscopic moisture correction:

Moist weight and tare = 110.95

Dry weight and tare = 72.36

Tare weight = 31.37

Hygroscopic moisture = 94.1%

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.65

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
1.00	22.0	51.0	45.3	0.0133	51.9	7.8	0.0371	91.2	8.8
2.00	22.0	49.0	43.3	0.0133	49.9	8.1	0.0268	87.1	12.9
4.00	22.0	47.0	41.3	0.0133	47.9	8.4	0.0193	83.1	16.9
15.00	22.0	45.0	39.3	0.0133	45.9	8.8	0.0102	79.1	20.9
30.00	22.0	43.0	37.3	0.0133	43.9	9.1	0.0073	75.1	24.9
60.00	22.0	41.0	35.3	0.0133	41.9	9.4	0.0053	71.1	28.9
120.00	22.0	38.0	32.3	0.0133	38.9	9.9	0.0038	65.0	35.0
240.00	22.0	36.0	30.3	0.0133	36.9	10.2	0.0028	61.0	39.0
1749.00	22.5	25.0	19.5	0.0132	25.9	12.0	0.0011	39.1	60.9

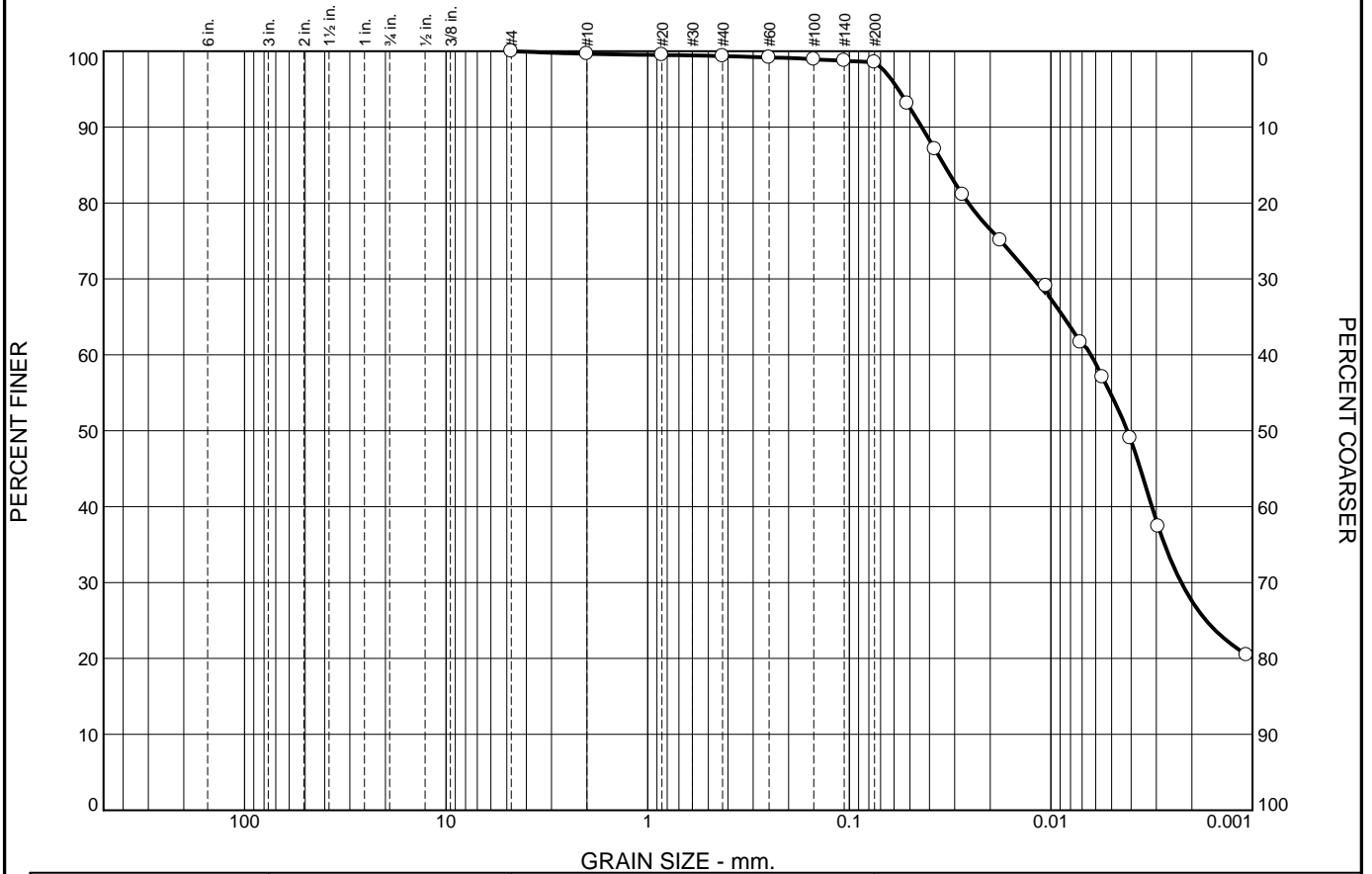
**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
								30.0	69.6	99.6

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
					0.0011	0.0016	0.0026	0.0111	0.0212	0.0340	0.0506



# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.3	0.3	0.9	43.9	54.6

LL	PL	D85	D60	D50	D30	D15	D10	Cc	Cu
		0.0338	0.0063	0.0042	0.0023				

Material Description	USCS	AASHTO
Wet, extremely soft gray & tan ORGANIC CLAY w/ trace clay lenses, silt pockets & organic matter	OH	

<b>Project No.</b> 24762 <b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND <input type="radio"/> <b>Source of Sample:</b> BA-5 <b>Depth:</b> 14 <b>Sample Number:</b> 8A	<b>Remarks:</b> <input type="radio"/> Soil Specific Gravity was Estimated ASTM D422 was Performed
--	--



**Figure**

**Tested By:** MR & LB      **Checked By:** CD & RR

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/9/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-5

**Depth:** 14

**Sample Number:** 8A

**Material Description:** Wet, extremely soft gray & tan ORGANIC CLAY w/ trace clay lenses, silt pockets & organic matter

**USCS Classification:** OH

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D422 was Performed

**Tested by:** MR & LB

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 0.86  
Tare Wt. = 0.00  
Minus #200 from wash = 98.3%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
49.73	0.00	0.00	#4	0.00	100.0	0.0
			#10	0.17	99.7	0.3
			#20	0.25	99.5	0.5
			#40	0.32	99.4	0.6
			#60	0.41	99.2	0.8
			#100	0.54	98.9	1.1
			#140	0.63	98.7	1.3
			#200	0.73	98.5	1.5

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 99.7

Weight of hydrometer sample = 49.73

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.65

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
0.50	22.5	52.0	46.5	0.0132	52.9	7.6	0.0517	93.1	6.9
1.00	22.5	49.0	43.5	0.0132	49.9	8.1	0.0377	87.1	12.9
2.00	22.5	46.0	40.5	0.0132	46.9	8.6	0.0274	81.1	18.9
5.00	22.5	43.0	37.5	0.0132	43.9	9.1	0.0178	75.1	24.9
15.00	22.5	40.0	34.5	0.0132	40.9	9.6	0.0106	69.1	30.9
35.00	22.5	36.3	30.8	0.0132	37.2	10.2	0.0071	61.7	38.3

**Eustis Engineering L.L.C.**

**Hydrometer Test Data (continued)**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
60.00	22.5	34.0	28.5	0.0132	34.9	10.6	0.0056	57.1	42.9
120.00	22.5	30.0	24.5	0.0132	30.9	11.2	0.0040	49.0	51.0
247.00	22.5	24.2	18.7	0.0132	25.1	12.2	0.0029	37.4	62.6
2122.00	21.4	16.0	10.2	0.0134	16.9	13.5	0.0011	20.5	79.5

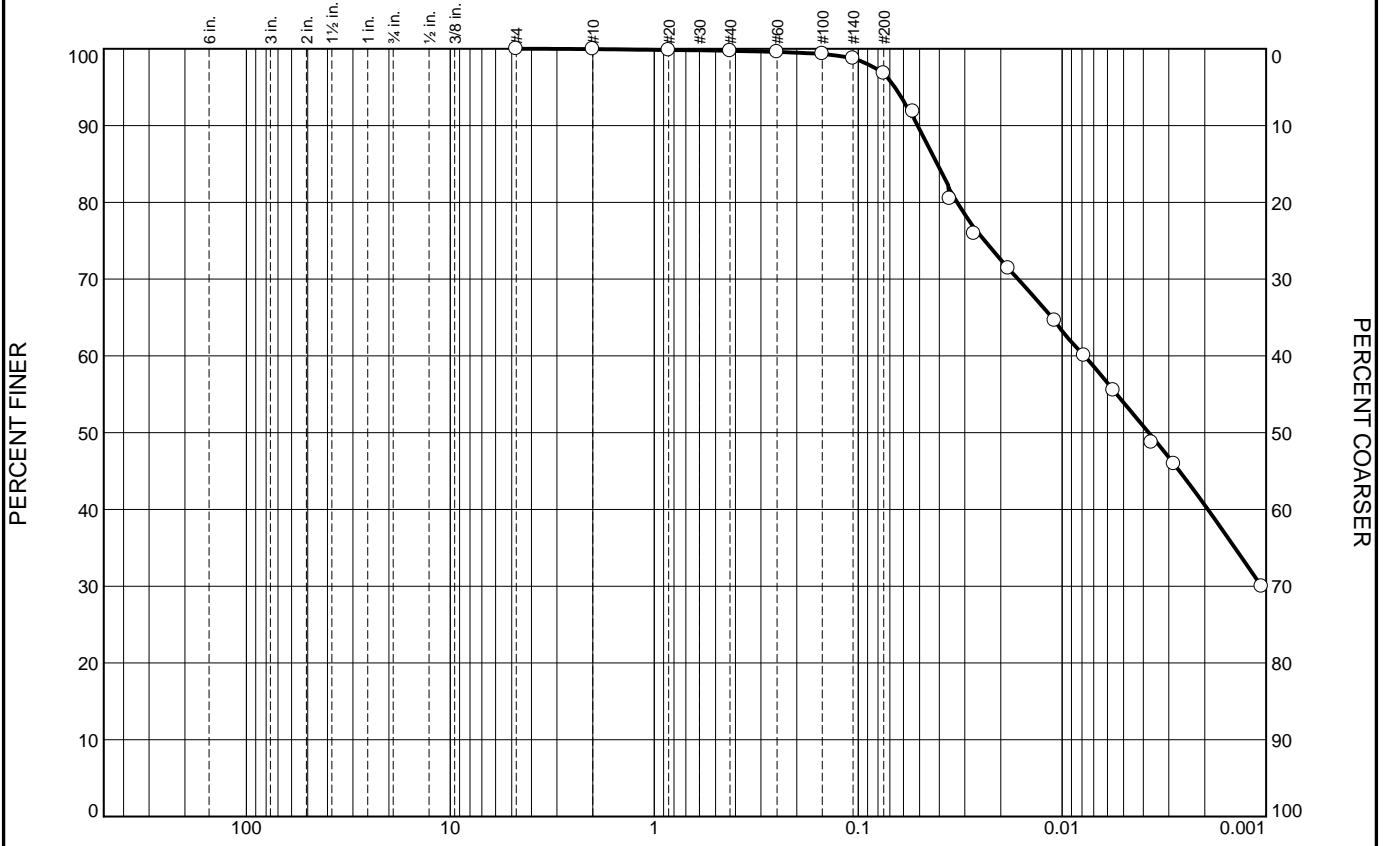
**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.3	0.3	0.9	1.5	43.9	54.6	98.5

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
				0.0023	0.0032	0.0042	0.0063	0.0257	0.0338	0.0437	0.0572

<b>Fineness Modulus</b>
0.03

# Particle Size Distribution Report



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.3	2.9	42.9	53.9

LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
96	25	0.0409	0.0078	0.0038	0.0011				

Material Description	USCS	AASHTO
Wet, extremely soft gray FAT CLAY w/ trace fine sand pockets & shell fragments	CH	A-7-6(80)

<b>Project No.</b> 24762 <b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND <input type="radio"/> <b>Source of Sample:</b> BA-6 <b>Depth:</b> 13 <b>Sample Number:</b> 7B	<b>Remarks:</b> <input type="radio"/> Soil Specific Gravity was Estimated ASTM D422 was Performed
--	--



**Figure**

**Tested By:** MR & LB      **Checked By:** CD & RR

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/9/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-6

**Depth:** 13

**Sample Number:** 7B

**Material Description:** Wet, extremely soft gray FAT CLAY w/ trace fine sand pockets & shell fragments

**Liquid Limit:** 96

**Plastic Limit:** 25

**USCS Classification:** CH

**AASHTO Classification:** A-7-6(80)

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D422 was Performed

**Tested by:** MR & LB

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 1.69  
Tare Wt. = 0.00  
Minus #200 from wash = 96.1%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
43.38	0.00	0.00	#4	0.00	100.0	0.0
			#10	0.02	100.0	0.0
			#20	0.07	99.8	0.2
			#40	0.12	99.7	0.3
			#60	0.18	99.6	0.4
			#100	0.29	99.3	0.7
			#140	0.54	98.8	1.2
			#200	1.39	96.8	3.2

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 43.38

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.72

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
0.50	22.5	46.0	40.5	0.0130	46.9	8.6	0.0538	91.8	8.2
1.25	22.5	41.0	35.5	0.0130	41.9	9.4	0.0356	80.5	19.5
2.25	22.5	39.0	33.5	0.0130	39.9	9.8	0.0270	75.9	24.1
5.00	22.5	37.0	31.5	0.0130	37.9	10.1	0.0184	71.4	28.6
15.00	22.5	34.0	28.5	0.0130	34.9	10.6	0.0109	64.6	35.4
30.00	22.5	32.0	26.5	0.0130	32.9	10.9	0.0078	60.1	39.9

**Eustis Engineering L.L.C.**

**Hydrometer Test Data (continued)**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
60.00	22.5	30.0	24.5	0.0130	30.9	11.2	0.0056	55.5	44.5
150.00	22.5	27.0	21.5	0.0130	27.9	11.7	0.0036	48.7	51.3
250.00	22.4	25.8	20.2	0.0130	26.7	11.9	0.0028	45.9	54.1
2029.00	21.4	19.0	13.2	0.0131	19.9	13.0	0.0011	30.0	70.0

**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.3	2.9	3.2	42.9	53.9	96.8

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
				0.0011	0.0019	0.0038	0.0078	0.0327	0.0409	0.0512	0.0661

<b>Fineness Modulus</b>
0.01

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/9/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-1

**Depth:** 11

**Sample Number:** 6B

**Material Description:** Wet, extremely soft gray FAT CLAY w/ trace shell fragments

**Liquid Limit:** 90

**Plastic Limit:** 24

**USCS Classification:** CH

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D7928-17 was Performed

**Tested by:** JMP

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 0.41  
Tare Wt. = 0.00  
Minus #200 from wash = 98.8%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
35.10	0.00	0.00	#200	0.41	98.8	1.2

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 35.10

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.72

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
1.00	22.0	36.5	30.8	0.0130	37.4	10.2	0.0416	86.5	13.5
2.00	22.0	35.0	29.3	0.0130	35.9	10.4	0.0297	82.3	17.7
4.00	22.0	34.5	28.8	0.0130	35.4	10.5	0.0211	80.9	19.1
15.00	22.0	34.0	28.3	0.0130	34.9	10.6	0.0109	79.5	20.5
30.00	22.0	33.0	27.3	0.0130	33.9	10.7	0.0078	76.7	23.3
60.00	22.0	32.0	26.3	0.0130	32.9	10.9	0.0056	73.9	26.1
120.00	22.0	31.0	25.3	0.0130	31.9	11.1	0.0040	71.1	28.9
240.00	22.0	30.0	24.3	0.0130	30.9	11.2	0.0028	68.3	31.7
1652.00	22.5	25.7	20.2	0.0130	26.6	11.9	0.0011	56.6	43.4

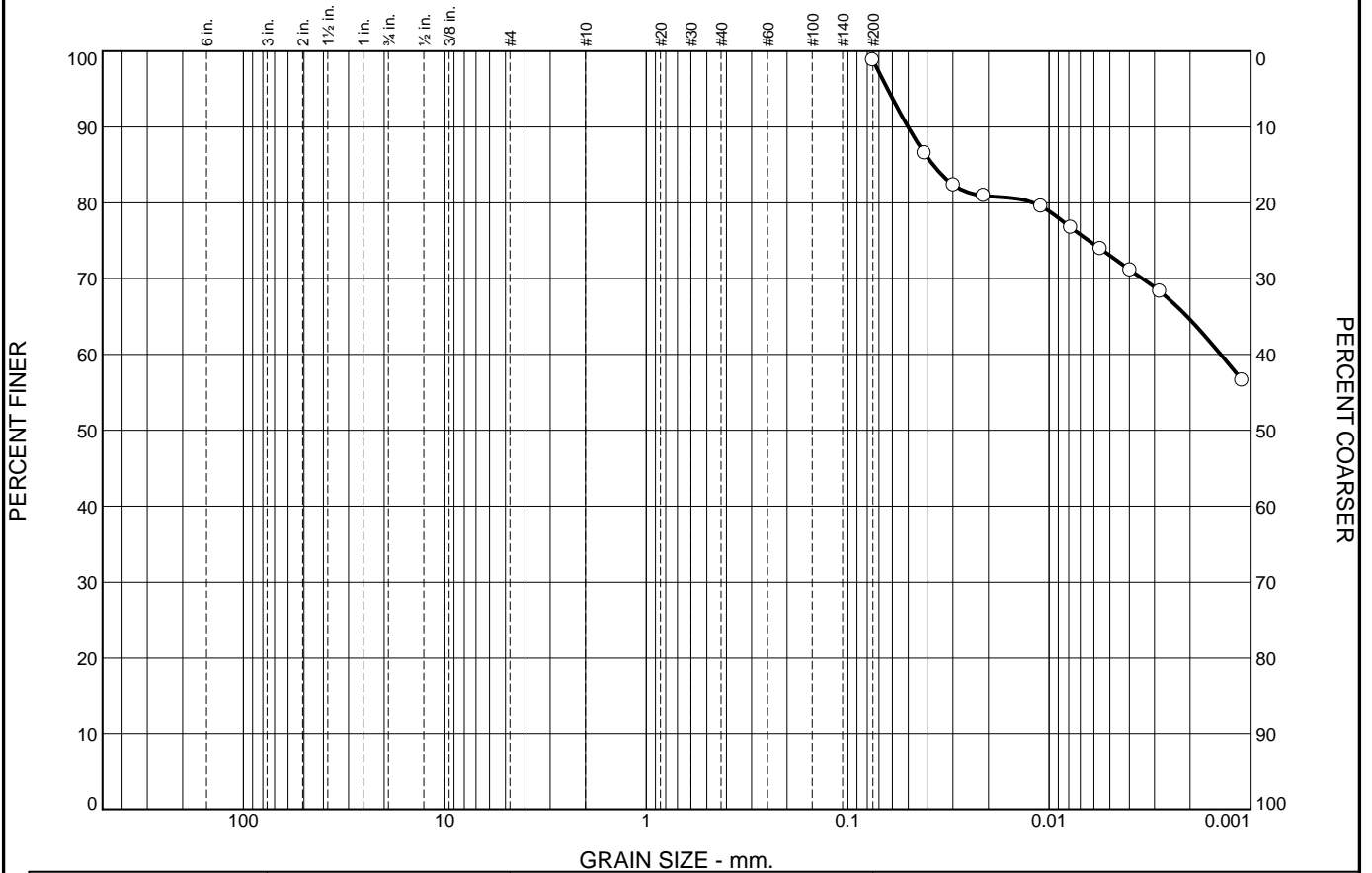
**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
								34.2	64.6	98.8

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
							0.0014	0.0120	0.0377	0.0502	0.0634



# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○						34.2	64.6

LL	PL	D85	D60	D50	D30	D15	D10	Cc	Cu
○	90	24	0.0377	0.0014					

Material Description	USCS	AASHTO
○ Wet, extremely soft gray FAT CLAY w/ trace shell fragments	CH	

<b>Project No.</b> 24762 <b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND ○ <b>Source of Sample:</b> BA-1 <b>Depth:</b> 11 <b>Sample Number:</b> 6B	<b>Remarks:</b> ○ Soil Specific Gravity was Estimated ASTM D7928-17 was Performed
--	--



**Figure**

**Tested By:** JMP      **Checked By:** CD & RR

## GRAIN SIZE DISTRIBUTION TEST DATA

11/9/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-1

**Depth:** 18

**Sample Number:** 10A

**Material Description:** Moist, extremely soft gray FAT CLAY w/ trace silt pockets & shell fragments

**USCS Classification:** CH

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D7928-17 was Performed

**Tested by:** BH

**Checked by:** CD & RR

### Sieve Test Data

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 0.07  
Tare Wt. = 0.00  
Minus #200 from wash = 99.8%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
35.10	0.00	0.00	#200	0.07	99.8	0.2

### Hydrometer Test Data

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 99.8

Weight of hydrometer sample = 35.10

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.72

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

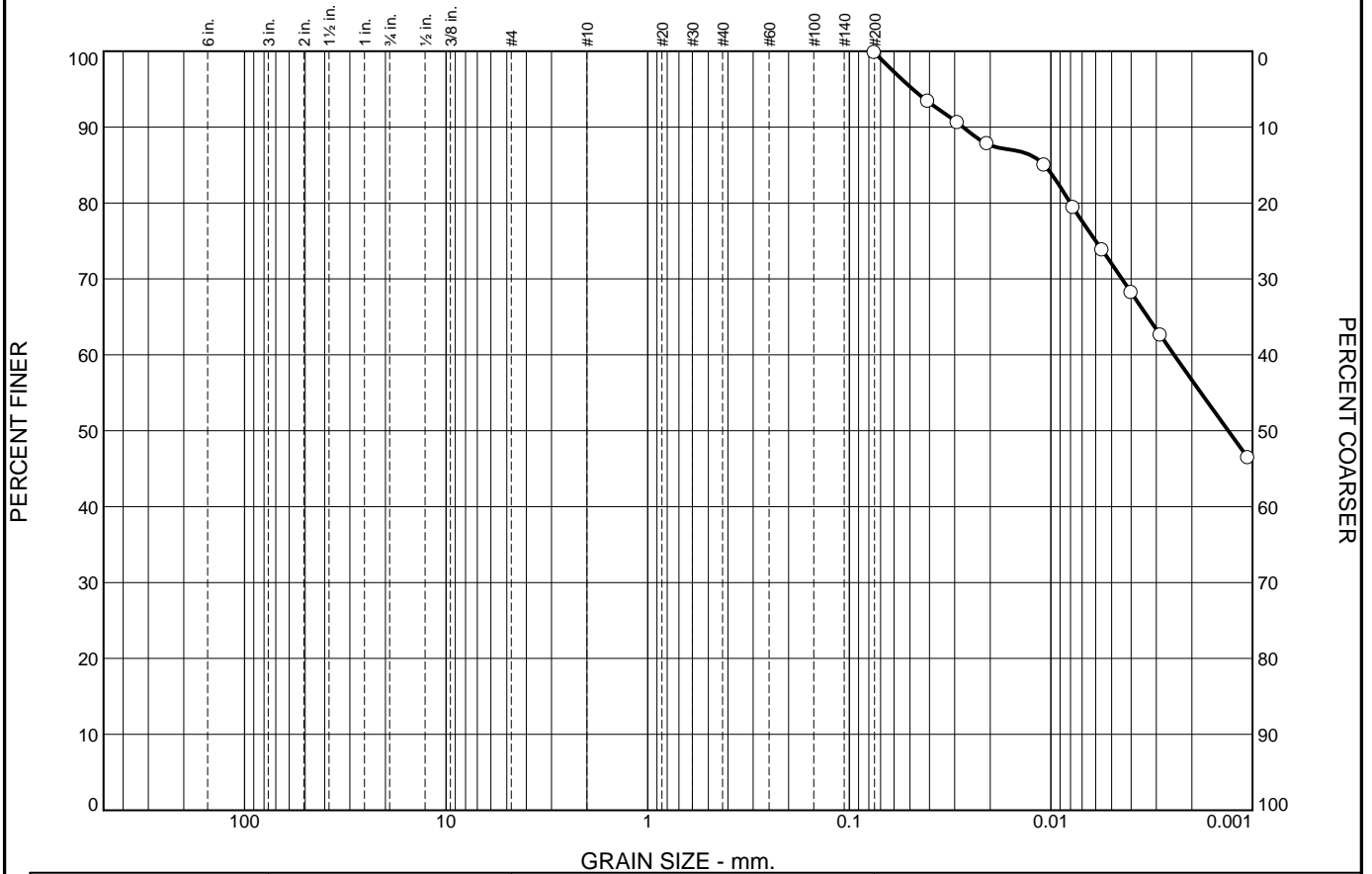
Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
1.00	22.0	39.0	33.3	0.0130	39.9	9.8	0.0407	93.4	6.6
2.00	22.0	38.0	32.3	0.0130	38.9	9.9	0.0290	90.6	9.4
4.00	22.0	37.0	31.3	0.0130	37.9	10.1	0.0207	87.8	12.2
15.00	22.0	36.0	30.3	0.0130	36.9	10.2	0.0108	85.0	15.0
30.00	22.0	34.0	28.3	0.0130	34.9	10.6	0.0077	79.4	20.6
60.00	22.0	32.0	26.3	0.0130	32.9	10.9	0.0056	73.8	26.2
120.00	22.0	30.0	24.3	0.0130	30.9	11.2	0.0040	68.2	31.8
240.00	22.0	28.0	22.3	0.0130	28.9	11.6	0.0029	62.6	37.4
1900.00	22.5	22.1	16.6	0.0130	23.0	12.5	0.0011	46.4	53.6

**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
								43.1	56.7	99.8

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
						0.0013	0.0025	0.0080	0.0108	0.0273	0.0484

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○						43.1	56.7

LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
○		0.0108	0.0025	0.0013					

Material Description	USCS	AASHTO
○ Moist, extremely soft gray FAT CLAY w/ trace silt pockets & shell fragments	CH	

<p><b>Project No.</b> 24762      <b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL  <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION          AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND          ○ <b>Source of Sample:</b> BA-1      <b>Depth:</b> 18      <b>Sample Number:</b> 10A</p>	<p><b>Remarks:</b>          ○ Soil Specific Gravity was          Estimated          ASTM D7928-17 was Performed</p>
<p><b>Figure</b></p>	

**Tested By:** BH      **Checked By:** CD & RR



**GRAIN SIZE DISTRIBUTION TEST DATA**

11/9/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-3

**Depth:** 14

**Sample Number:** 8A

**Material Description:** Moist, extremely soft gray & tan FAT CLAY w/ trace decayed wood & shell fragments

**USCS Classification:** CH

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D7928-17 was Performed

**Tested by:** BH

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 0.58  
Tare Wt. = 0.00  
Minus #200 from wash = 98.5%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
38.32	0.00	0.00	#200	0.58	98.5	1.5

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 71.73

Hygroscopic moisture correction:

Moist weight and tare = 66.96

Dry weight and tare = 50.18

Tare weight = 30.93

Hygroscopic moisture = 87.2%

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.72

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
1.00	22.0	41.0	35.3	0.0130	41.9	9.4	0.0400	90.8	9.2
2.00	22.0	38.5	32.8	0.0130	39.4	9.8	0.0289	84.4	15.6
4.00	22.0	36.0	30.3	0.0130	36.9	10.2	0.0209	78.0	22.0
15.00	22.0	33.0	27.3	0.0130	33.9	10.7	0.0110	70.3	29.7
30.00	22.0	31.0	25.3	0.0130	31.9	11.1	0.0079	65.1	34.9
60.00	22.0	29.0	23.3	0.0130	29.9	11.4	0.0057	60.0	40.0
120.00	22.0	27.0	21.3	0.0130	27.9	11.7	0.0041	54.9	45.1
240.00	22.0	26.0	20.3	0.0130	26.9	11.9	0.0029	52.3	47.7
1635.00	22.5	22.1	16.6	0.0130	23.0	12.5	0.0011	42.6	57.4

**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
								50.2	48.3	98.5

D5	D10	D15	D20	D30	D40	D50	D60	D80	D85	D90	D95
						0.0024	0.0057	0.0221	0.0298	0.0383	0.0533





**GRAIN SIZE DISTRIBUTION TEST DATA**

11/9/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY,  
BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH  
DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND BAYOU JUANITA, ST. BERNARD  
PARISH, LOUISIANA.  
CPRA PROJECT NO. BS-0041

**Project Number:** 24762

**Location:** BA-3

**Depth:** 15

**Sample Number:** 8B

**Material Description:** Moist, extremely soft gray FAT CLAY w/ trace silt pockets

**Liquid Limit:** 85

**Plastic Limit:** 24

**USCS Classification:** CH

**Testing Remarks:** Soil Specific Gravity was Estimated  
ASTM D7925-17 was Performed

**Tested by:** JMP

**Checked by:** CD & RR

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 0.15  
Tare Wt. = 0.00  
Minus #200 from wash = 99.5%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained
31.64	0.00	0.00	#200	0.15	99.5	0.5

**Hydrometer Test Data**

Hydrometer test uses material passing #10

Percent passing #10 based upon complete sample = 100.0

Weight of hydrometer sample = 68.96

Hygroscopic moisture correction:

Moist weight and tare = 83.57

Dry weight and tare = 54.38

Tare weight = 31.03

Hygroscopic moisture = 125.0%

Automatic temperature correction

Composite correction (fluid density and meniscus height) at 20 deg. C = -6.06

Meniscus correction only = 0.9

Specific gravity of solids = 2.72

Hydrometer type = 152H

Hydrometer effective depth equation:  $L = 16.294964 - 0.164 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
1.00	22.0	33.0	27.3	0.0130	33.9	10.7	0.0427	87.9	12.1
2.00	22.0	31.5	25.8	0.0130	32.4	11.0	0.0306	83.0	17.0
4.00	22.0	31.0	25.3	0.0130	31.9	11.1	0.0217	81.4	18.6
15.00	22.0	30.0	24.3	0.0130	30.9	11.2	0.0113	78.2	21.8
30.00	22.0	28.5	22.8	0.0130	29.4	11.5	0.0081	73.4	26.6
60.00	22.0	27.0	21.3	0.0130	27.9	11.7	0.0058	68.6	31.4
120.00	22.0	26.0	20.3	0.0130	26.9	11.9	0.0041	65.4	34.6
240.00	22.0	24.0	18.3	0.0130	24.9	12.2	0.0029	59.0	41.0
1960.00	22.5	19.5	14.0	0.0130	20.4	12.9	0.0011	44.9	55.1

**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
								46.5	53.0	99.5

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
						0.0016	0.0031	0.0139	0.0359	0.0479	0.0610

APPENDIX VII

# SETTLING COLUMN DATA SHEET

**Project ID:** State of Louisiana - Coastal Protection and Restoration Authority, North Delacroix  
 Eustis Engineering Project No. 24762

**Date:** 7/28/22 to 8/24/22

**Analyst:** James Williams  
**Salinity:** 6000 mg/l  
 6 ppt

**Initial Conc:** 152.9 g/L  
**Target Conc:** 150.0 g/L  
**Specific Gravity:** 2.59

Date	Time	Elapsed Time (min)	Surface Water Height in feet	Solids Interface Height in feet	Coarse Material Height in inches	Ports Sampled
7/28/2022	6:20	0	6.32	6.32	NA	1, 2, 3, 4, 5, 6 for concentration check
7/28/2022	6:35	15	6.31	6.32		
7/28/2022	6:50	30	6.31	6.32		
7/28/2022	7:05	45	6.31	6.30		
7/28/2022	7:20	60	6.31	6.30		
7/28/2022	7:50	90	6.31	6.30		
7/28/2022	8:20	120	6.31	6.28		
7/28/2022	8:50	150	6.31	6.21		
7/28/2022	9:20	180	6.31	6.08		
7/28/2022	9:50	210	6.31	6.04		
7/28/2022	10:20	240	6.31	5.96		
7/28/2022	10:50	270	6.31	5.87		
7/28/2022	11:20	300	6.31	5.79		
7/28/2022	11:50	330	6.31	5.71		
7/28/2022	12:20	360	6.31	5.64		
7/28/2022	12:50	390	6.31	5.54		
7/28/2022	13:20	420	6.31	5.47		
7/28/2022	13:50	450	6.31	5.43		
7/28/2022	14:20	480	6.31	5.37		
7/28/2022	14:50	510	6.31	5.31		
7/28/2022	15:20	540	6.31	5.21		
7/28/2022	15:50	570	6.31	5.16		
7/28/2022	16:20	600	6.31	5.08		
7/28/2022	16:50	630	6.31	5		
7/28/2022	17:20	660	6.31	4.96		
7/28/2022	17:50	690	6.31	4.89		
7/28/2022	18:20	720	6.31	4.82		
7/28/2022	18:50	750	6.31	4.74		
7/28/2022	19:20	780	6.31	4.63		
7/28/2022	19:50	810	6.31	4.54		
7/29/2022	6:20	1440	6.31	3.61		
7/29/2022	7:20	1500	6.31	3.59		
7/29/2022	8:20	1560	6.31	3.57		
7/29/2022	9:20	1620	6.31	3.56		
7/29/2022	10:20	1680	6.31	3.55		
7/29/2022	11:20	1740	6.31	3.54		
7/29/2022	12:20	1800	6.31	3.52		
7/29/2022	13:20	1860	6.31	3.5		

# SETTLING COLUMN DATA SHEET

**Project ID:** State of Louisiana - Coastal Protection and Restoration Authority, North Delacroix  
 Eustis Engineering Project No. 24762

**Date:** 7/28/22 to 8/24/22

**Analyst:** James Williams  
**Salinity:** 6000 mg/l  
 6 ppt

**Initial Conc:** 152.9 g/L  
**Target Conc:** 150.0 g/L  
**Specific Gravity:** 2.59

Date	Time	Elapsed Time (min)	Surface Water Height in feet	Solids Interface Height in feet	Coarse Material Height in inches	Ports Sampled
7/29/2022	14:20	1920	6.31	3.49		
7/29/2022	15:20	1980	6.31	3.48		
7/30/2022	7:20	2940	6.31	3.35		
7/30/2022	18:20	3600	6.31	3.29		
7/30/2022	22:00	3820	6.31	3.26		
7/31/2022	10:30	4570	6.3	3.21		
7/31/2022	22:00	5260	6.3	3.15		
8/1/2022	6:30	5770	6.3	3.13		
8/1/2022	13:30	6190	6.3	3.11		
8/1/2022	16:30	6370	6.3	3.09		
8/2/2022	7:00	7240	6.3	3.05		
8/2/2022	16:00	7780	6.3	3.04		
8/2/2022	17:00	7840	6.3	3.03		
8/3/2022	6:00	8620	6.29	3		
8/3/2022	14:00	9100	6.29	2.98		
8/4/2022	7:00	10120	6.29	2.95		
8/4/2022	14:00	10540	6.29	2.94		
8/5/2022	6:20	11520	6.29	2.92		
8/5/2022	19:00	12280	6.29	2.9		
8/7/2022	17:30	15070	6.29	2.83		
8/8/2022	6:40	15860	6.29	2.82		
8/10/2022	12:00	19060	6.29	2.76		
8/17/2022	10:00	29020	6.28	2.63		
8/24/2022	12:00	39220	6.28	2.55		

# Sediment Information and Slurry Calculations

**Project ID:** Eustis Engineering Project No. 24762 - North Delacroix \_\_\_\_\_

**Date:** 30-Jul-22 \_\_\_\_\_

**Analyst:** JMW \_\_\_\_\_

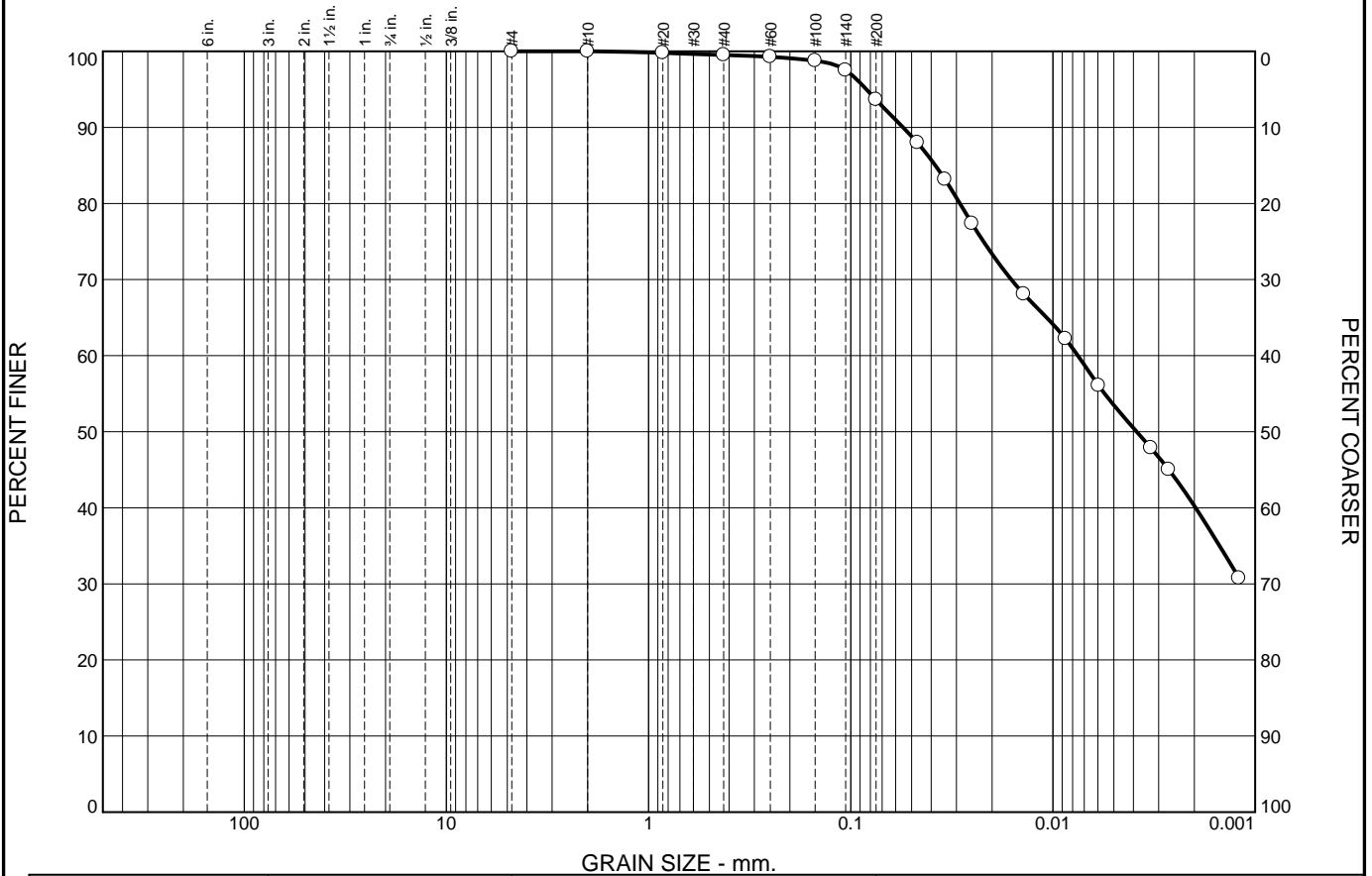
**Salinity:** 6 ppt

**Specific Gravity:** 2.59

Particulates Concentration and Moisture Content of Sediment								
Sediment Sample	Tare (Dish Wt) g	Tare + Wet Wt, g	Tare + Dry Wt, g	Water Wt, g	Salt Wt, g	Dry Particulate Wt, g	Sediment Conc (g/L)	Moisture Content (% by wt)
1	13.18	90.18	24.26	65.92	0.3979	10.6821	152.5	
2	13.13	97.59	25.31	72.28	0.4337	11.7463	152.9	
3	13.15	106.9	26.69	80.21	0.4813	13.0587	153.2	
4	13.26	92.65	24.72	67.93	0.4076	11.0524	153.1	
5	13.01	92.98	24.49	68.49	0.4109	11.0691	152.1	
6	13.15	76.33	22.3	54.03	0.3242	8.8258	153.7	
<b>AVG</b>							152.9	615.36

Elapsed Time in mins	Elapsed Time in hours	Elapsed Time in days	Solids Interface Height in feet, Ht	C, Cons. at Time t in grams/liter	Initial Conc., Co In grams/liter:	152.90	Initial Height, Hi, in feet	6.32	Percent Concentration	Elapsed Time in hours	Time in minutes	Deformation in Feet
0.00	0.00	0.000	6.32	152.90					100.00	0.00	0.00	0.00
15.00	0.25	0.010	6.32	152.90					100.00	0.25	15.00	0.00
30.00	0.50	0.021	6.32	152.90					100.00	0.50	30.00	0.00
45.00	0.75	0.031	6.3	153.39					99.68	0.75	45.00	0.02
60.00	1.00	0.042	6.3	153.39					99.68	1.00	60.00	0.02
90.00	1.50	0.063	6.3	153.39					99.68	1.50	90.00	0.02
120.00	2.00	0.083	6.28	153.87					99.37	2.00	120.00	0.04
150.00	2.50	0.104	6.21	155.61					98.26	2.50	150.00	0.11
180.00	3.00	0.125	6.08	158.94					96.20	3.00	180.00	0.24
210.00	3.50	0.146	6.04	159.99					95.57	3.50	210.00	0.28
240.00	4.00	0.167	5.96	162.14					94.30	4.00	240.00	0.36
270.00	4.50	0.188	5.87	164.62					92.88	4.50	270.00	0.45
300.00	5.00	0.208	5.79	166.90					91.61	5.00	300.00	0.53
330.00	5.50	0.229	5.71	169.23					90.35	5.50	330.00	0.61
360.00	6.00	0.250	5.64	171.33					89.24	6.00	360.00	0.68
390.00	6.50	0.271	5.54	174.43					87.66	6.50	390.00	0.78
420.00	7.00	0.292	5.47	176.66					86.55	7.00	420.00	0.85
450.00	7.50	0.313	5.43	177.96					85.92	7.50	450.00	0.89
480.00	8.00	0.333	5.37	179.95					84.97	8.00	480.00	0.95
510.00	8.50	0.354	5.31	181.98					84.02	8.50	510.00	1.01
540.00	9.00	0.375	5.21	185.48					82.44	9.00	540.00	1.11
570.00	9.50	0.396	5.16	187.27					81.65	9.50	570.00	1.16
600.00	10.00	0.417	5.08	190.22					80.38	10.00	600.00	1.24
630.00	10.50	0.438	5	193.27					79.11	10.50	630.00	1.32
660.00	11.00	0.458	4.96	194.82					78.48	11.00	660.00	1.36
690.00	11.50	0.479	4.89	197.61					77.37	11.50	690.00	1.43
720.00	12.00	0.500	4.82	200.48					76.27	12.00	720.00	1.50
750.00	12.50	0.521	4.74	203.87					75.00	12.50	750.00	1.58
780.00	13.00	0.542	4.63	208.71					73.26	13.00	780.00	1.69
810.00	13.50	0.563	4.54	212.85					71.84	13.50	810.00	1.78
1440.00	24.00	1.000	3.61	267.68					57.12	24.00	1440.00	2.71
1500.00	25.00	1.042	3.59	269.17					56.80	25.00	1500.00	2.73
1560.00	26.00	1.083	3.57	270.68					56.49	26.00	1560.00	2.75
1620.00	27.00	1.125	3.56	271.44					56.33	27.00	1620.00	2.76
1680.00	28.00	1.167	3.55	272.21					56.17	28.00	1680.00	2.77
1740.00	29.00	1.208	3.54	272.97					56.01	29.00	1740.00	2.78
1800.00	30.00	1.250	3.52	274.53					55.70	30.00	1800.00	2.80
1860.00	31.00	1.292	3.5	276.09					55.38	31.00	1860.00	2.82
1920.00	32.00	1.333	3.49	276.88					55.22	32.00	1920.00	2.83
1980.00	33.00	1.375	3.48	277.68					55.06	33.00	1980.00	2.84
2940.00	49.00	2.042	3.35	288.46					53.01	49.00	2940.00	2.97
3600.00	60.00	2.500	3.29	293.72					52.06	60.00	3600.00	3.03
3820.00	63.67	2.653	3.26	296.42					51.58	63.67	3820.00	3.06
4570.00	76.17	3.174	3.21	301.04					50.79	76.17	4570.00	3.11
5260.00	87.67	3.653	3.15	306.77					49.84	87.67	5260.00	3.17
5770.00	96.17	4.007	3.13	308.73					49.53	96.17	5770.00	3.19
6190.00	103.17	4.299	3.11	310.72					49.21	103.17	6190.00	3.21
6370.00	106.17	4.424	3.09	312.73					48.89	106.17	6370.00	3.23
7240.00	120.67	5.028	3.05	316.83					48.26	120.67	7240.00	3.27
7780.00	129.67	5.403	3.04	317.87					48.10	129.67	7780.00	3.28
7840.00	130.67	5.444	3.03	318.92					47.94	130.67	7840.00	3.29
8620.00	143.67	5.986	3	322.11					47.47	143.67	8620.00	3.32
9100.00	151.67	6.319	2.98	324.27					47.15	151.67	9100.00	3.34
10120.00	168.67	7.028	2.95	327.57					46.68	168.67	10120.00	3.37
10540.00	175.67	7.319	2.94	328.68					46.52	175.67	10540.00	3.38
11520.00	192.00	8.000	2.92	330.93					46.20	192.00	11520.00	3.40
12280.00	204.67	8.528	2.9	333.22					45.89	204.67	12280.00	3.42
15070.00	251.17	10.465	2.83	341.46					44.78	251.17	15070.00	3.49
15860.00	264.33	11.014	2.82	342.67					44.62	264.33	15860.00	3.50
19060.00	317.67	13.236	2.76	350.12					43.67	317.67	19060.00	3.56
29020.00	483.67	20.153	2.63	367.43					41.61	483.67	29020.00	3.69
39220.00	653.67	27.236	2.55	378.95					40.35	653.67	39220.00	3.77

# Particle Size Distribution Report



%	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.5	5.9	40.1	53.5

	LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
○	83	20	0.0381	0.0075	0.0039					

Material Description	USCS	AASHTO
○ Moist, Gray FAT CLAY w/ few fine sand	CH	A-7-6(66)

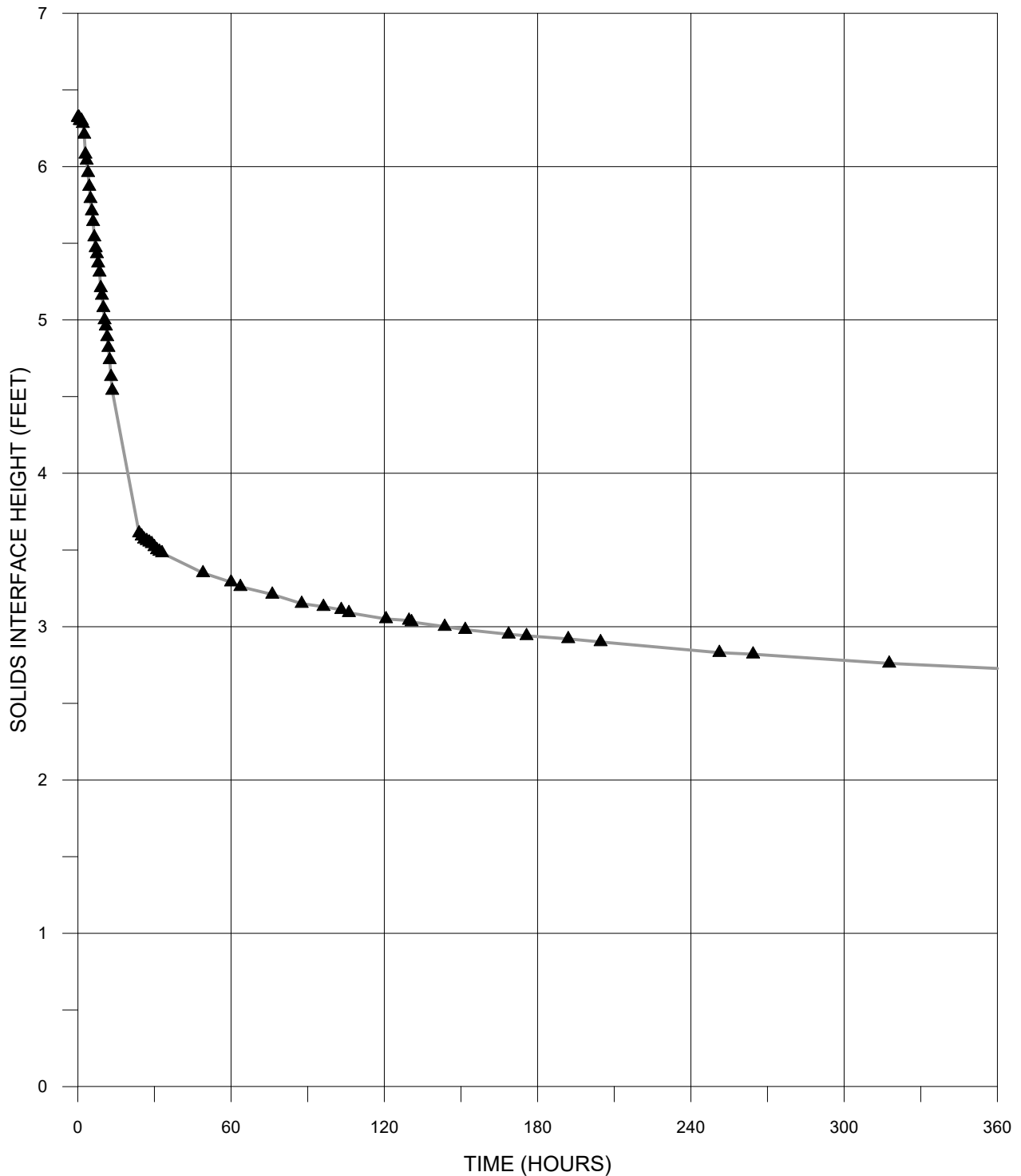
<b>Project No.</b> 24762 <b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL <b>Project:</b> LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT, LAKE AMEDEE AND ○ <b>Location:</b> Settlement Column Sample <b>Sample Number:</b> SC-1	<b>Remarks:</b> ○ Composite Sample Made from Selected BA Borings Soil Specific Gravity was Tested ASTM D422 was Performed Organic Content = 6.0%
---	---



**Figure**


**Tested By:** JP, CD & LB      **Checked By:** CD & RR

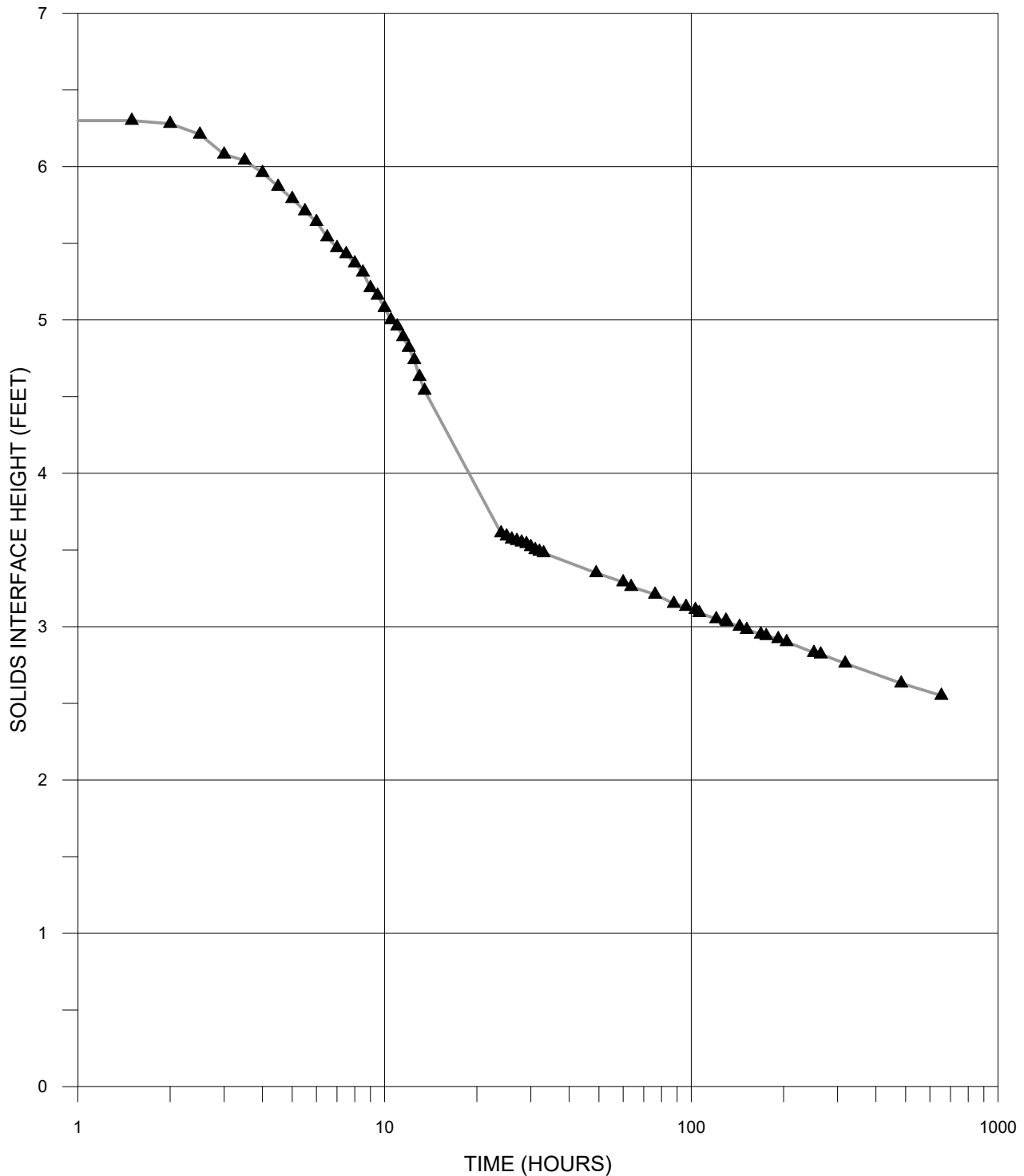




**NOTE:**


- 1) THE SETTLING TEST WAS PERFORMED ON COMPOSITE SAMPLES OBTAINED FROM THE BA BORINGS: BA-3, BA-6, BA-7, BA-9, BA-10, BA-11.
- 2) SAMPLES USED TO FORM THE COMPOSITE CORRESPOND TO AN APPROXIMATE DREDGE CUT DEPTH OF 10 FEET. SAMPLES THAT WERE CLASSIFIED AS HAVING ORGANICS WERE NOT USED IN THE COMPOSITE. THESE SELECTIONS ARE BASED ON CORRESPONDENCE WITH CPRA ON 10-15-2020
- 3) AN INITIAL CONCENTRATION OF 152.9 GRAMS PER LITER WAS USED BASED ON TARGET CONCENTRATION OF 150 GRAMS PER LITER.

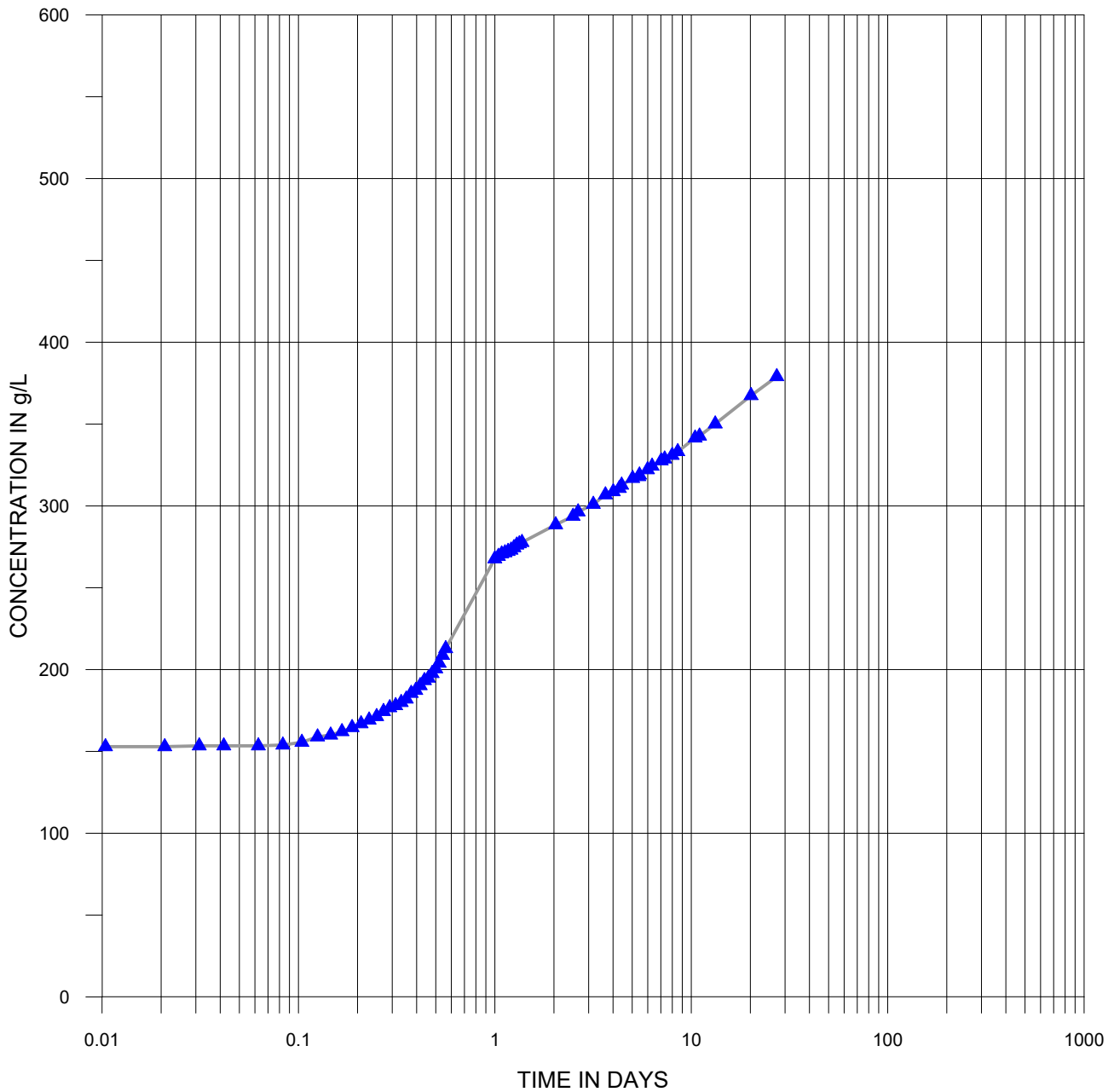
SETTLING COLUMN TEST RESULTS		
STATE OF LOUISIANA		
COASTAL PROTECTION AND RESTORATION AUTHORITY		
NORTH DELACROIX MARSH CREATION PROJECT		
LAKE AMEDEE AND BAYOU JUANITA		
ST. BERNARD PARISH, LOUISIANA		
	DRAWN BY: M.H.	JOB NO.: 24762
	CHECKED BY: J.M.W.	DATE: 6 SEPT 2022
	FILE NAME: 24762 Column Settling Curve.grf	



**NOTE:**


- 1) THE SETTLING TEST WAS PERFORMED ON COMPOSITE SAMPLES OBTAINED FROM THE BA BORINGS: BA-3, BA-6, BA-7, BA-9, BA-10, BA-11.
- 2) SAMPLES USED TO FORM THE COMPOSITE CORRESPOND TO AN APPROXIMATE DREDGE CUT DEPTH OF 10 FEET. SAMPLES THAT WERE CLASSIFIED AS HAVING ORGANICS WERE NOT USED IN THE COMPOSITE. THESE SELECTIONS ARE BASED ON CORRESPONDENCE WITH CPRA ON 10-15-2020
- 3) AN INITIAL CONCENTRATION OF 152.9 GRAMS PER LITER WAS USED BASED ON TARGET CONCENTRATION OF 150 GRAMS PER LITER.

<b>SETTLING COLUMN TEST RESULTS</b>		
<hr/> STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY NORTH DELACROIX MARSH CREATION PROJECT LAKE AMEDEE AND BAYOU JUANITA ST. BERNARD PARISH, LOUISIANA		
	DRAWN BY: M.H. CHECKED BY: J.M.W. FILE NAME: 24762 Column Settling Curve.grf	JOB NO.: 24762 DATE: 6 SEPT 2022



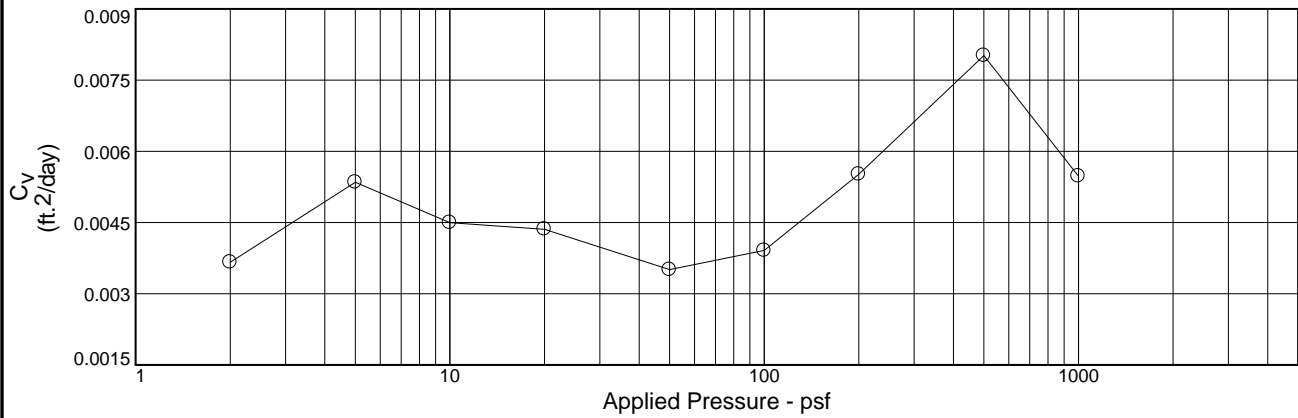
**NOTES:**

- 1) THE SETTLING TEST WAS PERFORMED ON COMPOSITE SAMPLES OBTAINED FROM THE BA BORINGS: BA-3, BA-6, BA-7, BA-9, BA-10, BA-11.
- 2) AN INITIAL CONCENTRATION OF 152.9 GRAMS PER LITER WAS USED BASED ON TARGET CONCENTRATION OF 150 GRAMS PER LITER.
- 3) IN ACCORDANCE WITH CHAPTER 3 OF THE USACE ENGINEERING MANUAL EM 1110-2-5207, THE CONCENTRATIONS FOR VARIOUS INTERFACE HEIGHTS WERE CALCULATED USING EQUATION 3-11,  $C_t = (C_0 H_i) / H_t$ , WHERE  $C_t$  IS THE SLURRY CONCENTRATION AT TIME  $t$ ,  $C_0$  IS THE INITIAL SLURRY CONCENTRATION,  $H_i$  IS THE INITIAL SLURRY HEIGHT, AND  $H_t$  IS THE HEIGHT OF THE INTERFACE AT TIME  $t$ .

<b>SETTLING COLUMN TEST RESULTS</b> <b>INCREASE IN TOTAL SUSPENDED SOLIDS CONCENTRATION OVER TIME</b>		
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY NORTH DELACROIX MARSH CREATION PROJECT LAKE ADEMEE AND BAYOU JUANITA ST. BERNARD PARISH, LOUISIANA		
	DRAWN BY: M.H.	JOB NO.: 24762
	CHECKED BY: J.M.W.	DATE: 6 SEPT 2022
	FILE NAME: 24762 full-scale_ concentration vs log time curve.grf	

APPENDIX VIII

# CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P <sub>c</sub> (psf)	C <sub>c</sub>	Initial Void Ratio
Saturation	Moisture							
106.9 %	149.6 %	35.1	83	20	2.6	5	1.01	3.639

<b>MATERIAL DESCRIPTION</b>		<b>USCS</b>	<b>AASHTO</b>
EE 24762 Dredge Material Composite		CH	

<b>Project No.</b> 24762 <b>Project:</b> COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREATION PROJECT	<b>Client:</b> STATE OF LOUISIANA, OFFICE OF COASTAL	<b>Remarks:</b> Test on dredge material composite sample. Initial concentration based on material consistency
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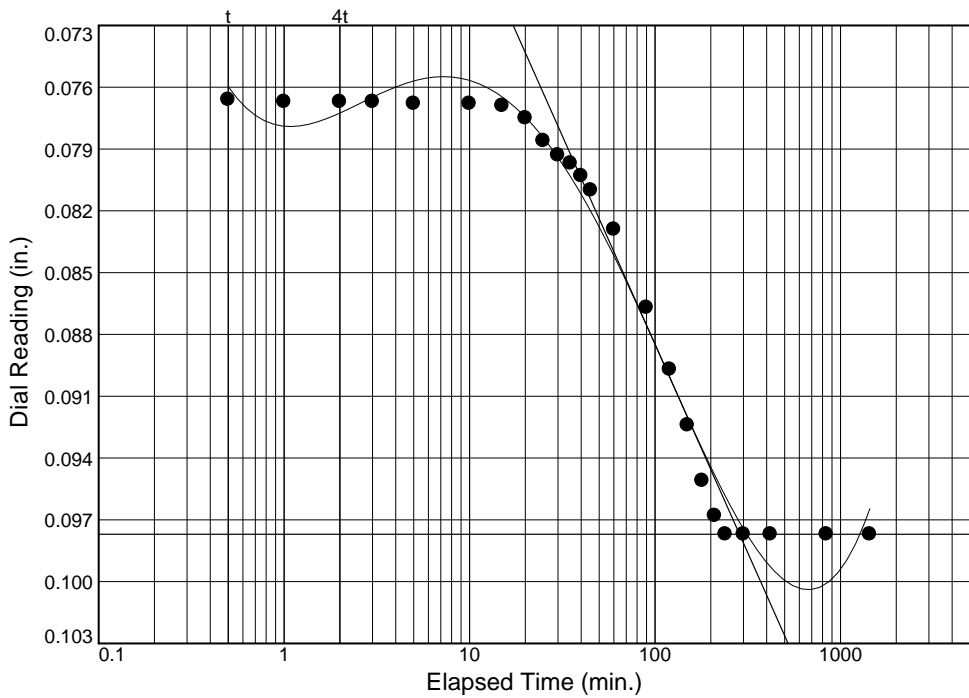
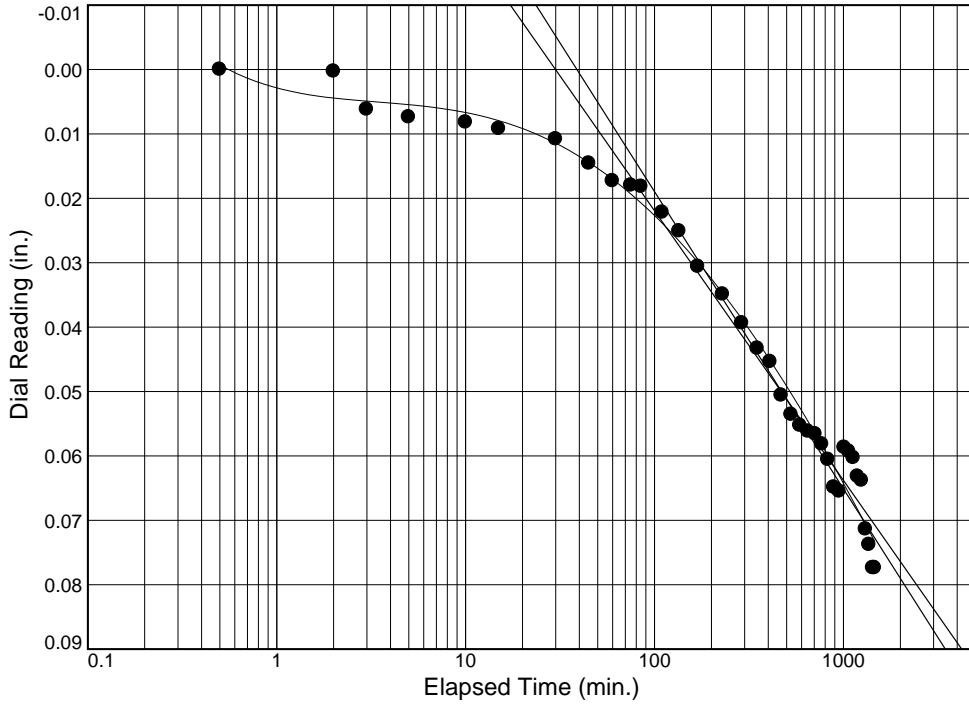
**Figure**

**Tested By:** JMW

# Dial Reading vs. Time

Project No.: 24762

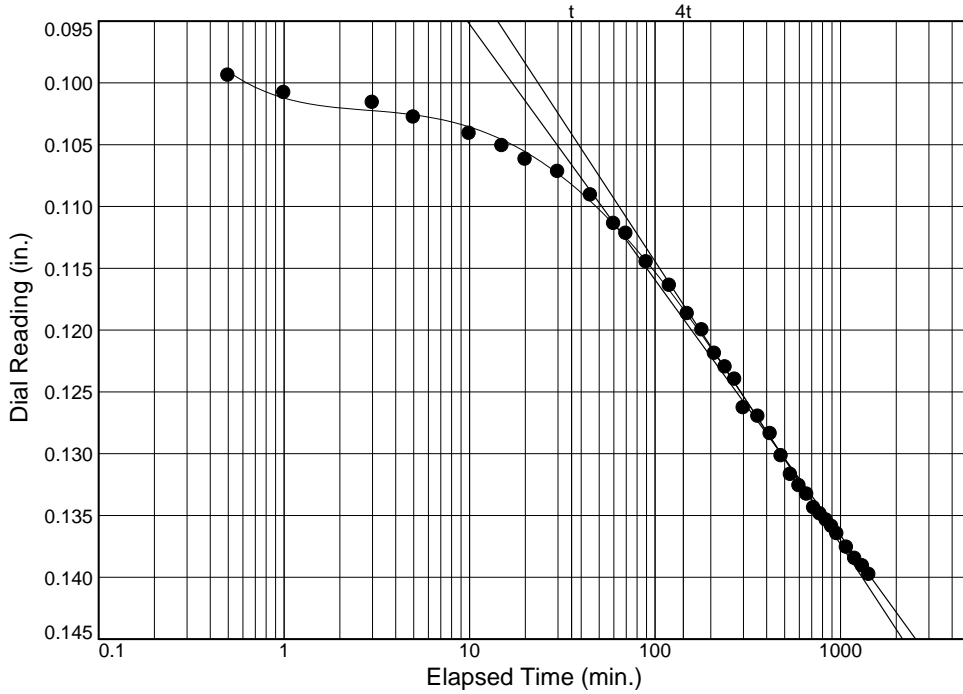
Project: COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH



# Dial Reading vs. Time

Project No.: 24762

Project: COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH



Load No.= 3

Load= 10 psf

$D_0 = 0.0982$

$D_{50} = 0.1140$

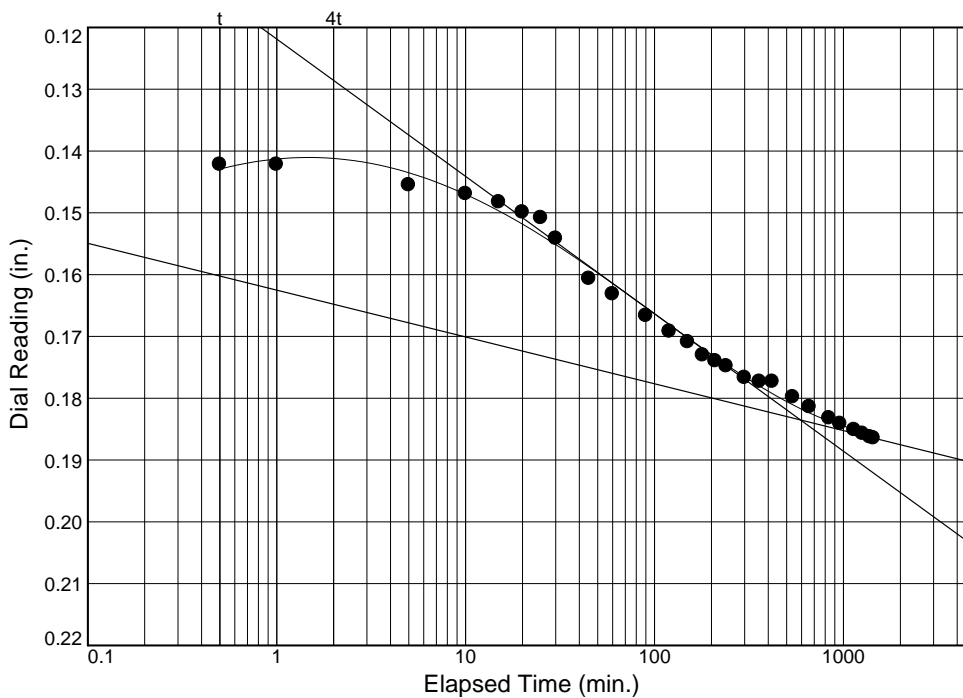
$D_{100} = 0.1299$

$T_{50} = 85.05 \text{ min.}$

$C_v @ T_{50}$

0.004 ft.<sup>2</sup>/day

$C_\alpha = 0.096$



Load No.= 4

Load= 20 psf

$D_0 = 0.1446$

$D_{50} = 0.1641$

$D_{100} = 0.1835$

$T_{50} = 79.16 \text{ min.}$

$C_v @ T_{50}$

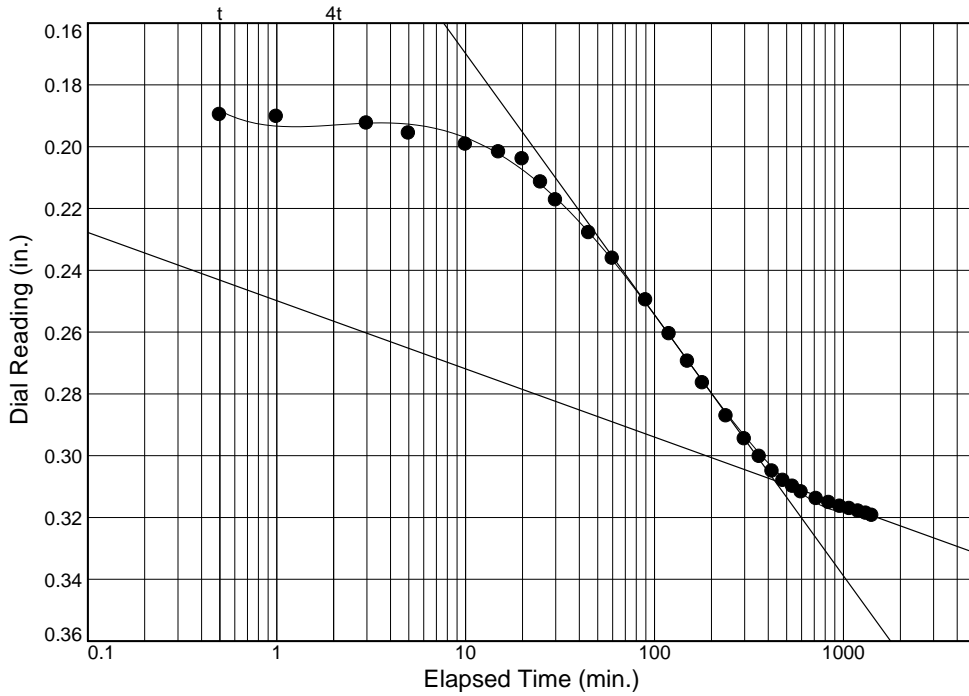
0.004 ft.<sup>2</sup>/day

$C_\alpha = 0.035$

# Dial Reading vs. Time

Project No.: 24762

Project: COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH



Load No.= 5

Load= 50 psf

$D_0 = 0.1837$

$D_{50} = 0.2458$

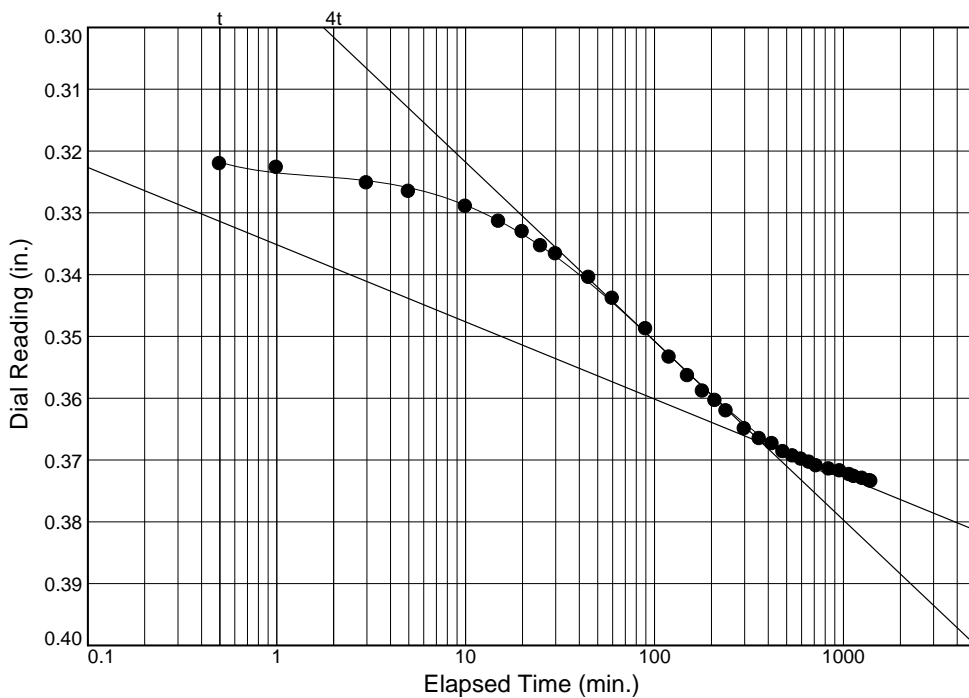
$D_{100} = 0.3080$

$T_{50} = 78.35 \text{ min.}$

$C_v @ T_{50}$

0.004 ft.<sup>2</sup>/day

$C_\alpha = 0.102$



Load No.= 6

Load= 100 psf

$D_0 = 0.3193$

$D_{50} = 0.3433$

$D_{100} = 0.3672$

$T_{50} = 53.77 \text{ min.}$

$C_v @ T_{50}$

0.004 ft.<sup>2</sup>/day

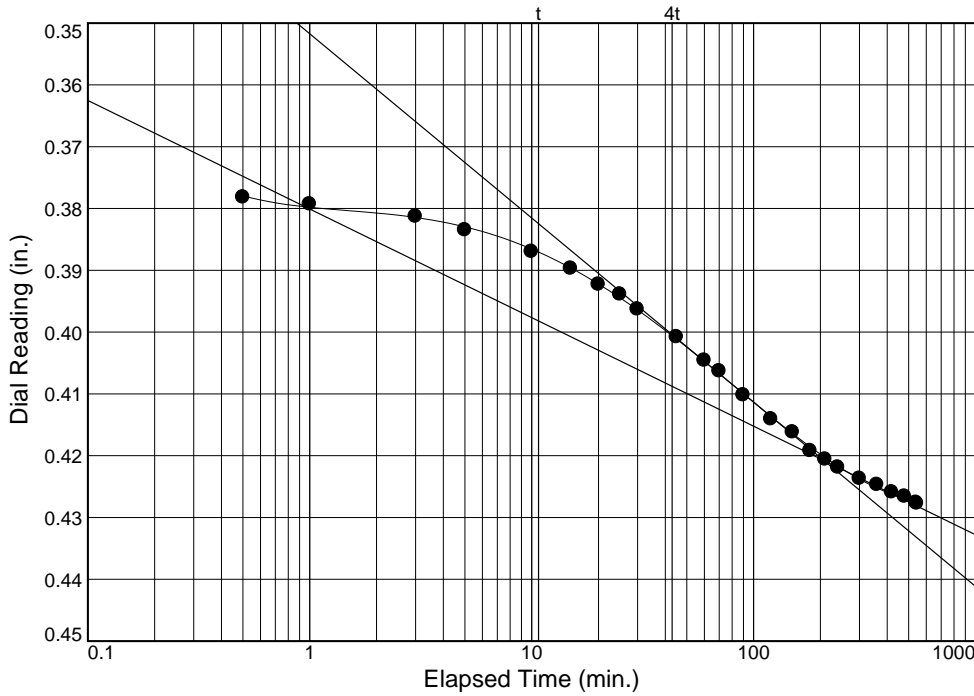
$C_\alpha = 0.058$



# Dial Reading vs. Time

Project No.: 24762

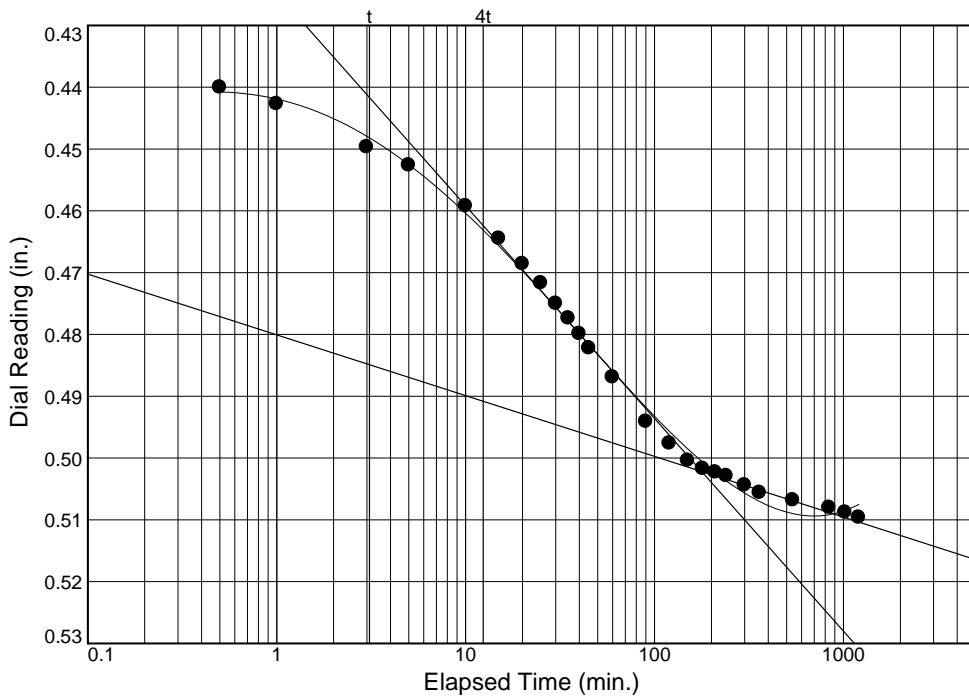
Project: COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH



Load No.= 7  
 Load= 200 psf  
 $D_0 = 0.3735$   
 $D_{50} = 0.3972$   
 $D_{100} = 0.4208$   
 $T_{50} = 32.07$  min.

$C_v @ T_{50}$   
 0.006 ft.<sup>2</sup>/day

$C_\alpha = 0.081$



Load No.= 8  
 Load= 500 psf  
 $D_0 = 0.4332$   
 $D_{50} = 0.4677$   
 $D_{100} = 0.5022$   
 $T_{50} = 17.35$  min.

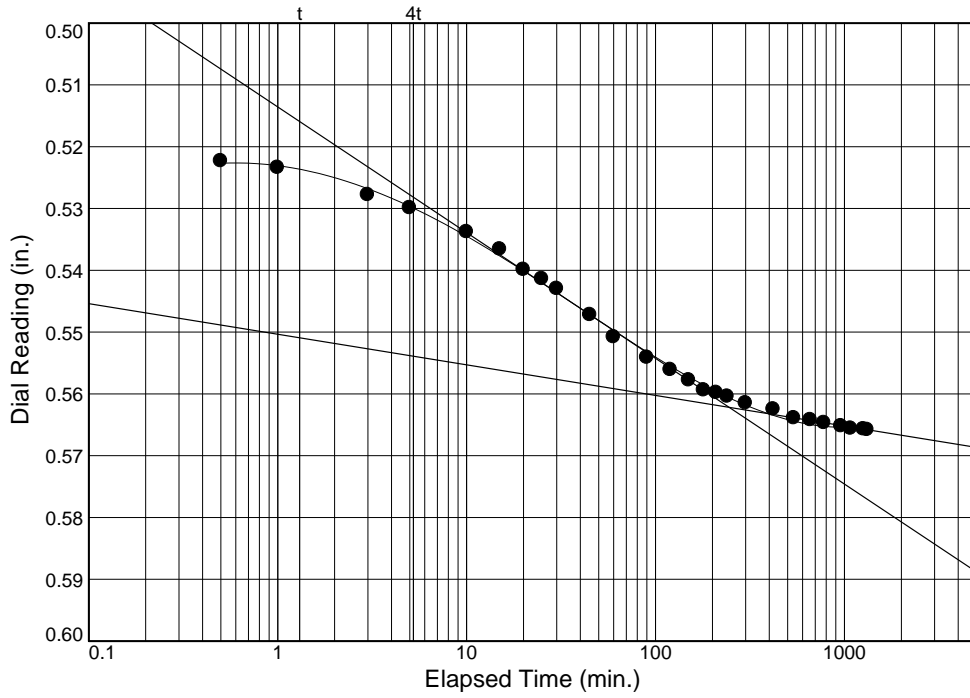
$C_v @ T_{50}$   
 0.008 ft.<sup>2</sup>/day

$C_\alpha = 0.046$

# Dial Reading vs. Time

Project No.: 24762

Project: COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH



Load No.= 9  
Load= 1000 psf  
 $D_0 = 0.5174$   
 $D_{50} = 0.5398$   
 $D_{100} = 0.5622$   
 $T_{50} = 19.22 \text{ min.}$

$C_v @ T_{50}$   
0.005 ft.<sup>2</sup>/day

$C_\alpha = 0.023$

**CONSOLIDATION TEST DATA**

10/4/2022

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL  
**Project:** COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH  
 CREATION PROJECT

**Project Number:** 24762

**Material Description:** EE 24762 Dredge Material Composite

**Liquid Limit:** 83

**Plasticity Index:** 20

**USCS:** CH

**Testing Remarks:** Test on dredge material composite sample. Initial concentration based on material consistency

**Tested by:** JMW

**Test Specimen Data**

<b>NATURAL MOISTURE</b>		<b>VOID RATIO</b>		<b>AFTER TEST</b>	
Wet w+t =	83.26 g.	Spec. Gr. =	2.6	Wet w+t =	199.40 g.
Dry w+t =	51.20 g.	Est. Ht. Solids =	0.216 in.	Dry w+t =	128.46 g.
Tare Wt. =	29.77 g.	Init. V.R. =	3.639	Tare Wt. =	13.05 g.
Moisture =	149.6 %	Init. Sat. =	106.9 %	Moisture =	61.5 %
<b>UNIT WEIGHT</b>		<b>TEST START</b>		<b>Dry Wt. = 115.41* g.</b>	
Height =	1.000 in.	Height =	1.000 in.		
Diameter =	4.000 in.	Diameter =	4.000 in.		
Weight =	288.90 g.				
Dry Dens. =	35.1 pcf	* Final dry weight used as mineral solids weight			

**End-Of-Load Summary**

Pressure (psf)	Final Dial (in.)	Deformation (in.)	C <sub>v</sub> (ft. <sup>2</sup> /day)	C <sub>α</sub>	Void Ratio	% Strain
start	0.00000	0.00000			3.639	
2	0.07741	0.07741	0.004	0.214	3.280	7.7 Compr.
5	0.09770	0.09770	0.005	0.000	3.186	9.8 Compr.
10	0.13980	0.13980	0.004	0.096	2.991	14.0 Compr.
20	0.18644	0.18644	0.004	0.035	2.774	18.6 Compr.
50	0.31940	0.31940	0.004	0.102	2.157	31.9 Compr.
100	0.37350	0.37350	0.004	0.058	1.906	37.4 Compr.
200	0.42770	0.42770	0.006	0.081	1.655	42.8 Compr.
500	0.50960	0.50960	0.008	0.046	1.275	51.0 Compr.
1000	0.56580	0.56580	0.005	0.023	1.014	56.6 Compr.

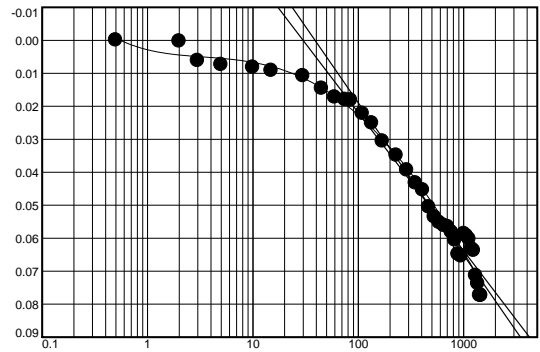
**Compression index (C<sub>c</sub>), psf = 1.01    Preconsolidation pressure (P<sub>p</sub>), psf = 5    Void ratio at P<sub>p</sub> (e<sub>m</sub>) = 3.175**  
**Overburden (σ<sub>vo</sub>), psf = 0**

Pressure: 2 psf

TEST READINGS

Load No. 1

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0	0.00000	20	470	0.05060
2	0.5	0.00000	21	530	0.05360
3	2	0.00030	22	590	0.05530
4	3	0.00620	23	650	0.05620
5	5	0.00740	24	710	0.05660
6	10	0.00820	25	770	0.05820
7	15	0.00920	26	830	0.06060
8	30	0.01080	27	890	0.06490
9	45	0.01460	28	950	0.06550
10	60	0.01730	29	1010	0.05870
11	75	0.01800	30	1070	0.05930
12	85	0.01820	31	1130	0.06030
13	110	0.02220	32	1190	0.06320
14	135	0.02510	33	1250	0.06380
15	170	0.03060	34	1310	0.07140
16	230	0.03490	35	1370	0.07380
17	290	0.03940	36	1430	0.07740
18	350	0.04330	37	1460	0.07740
19	410	0.04540	38	1461	0.07741



Void Ratio = 3.280 Compression = 7.7%

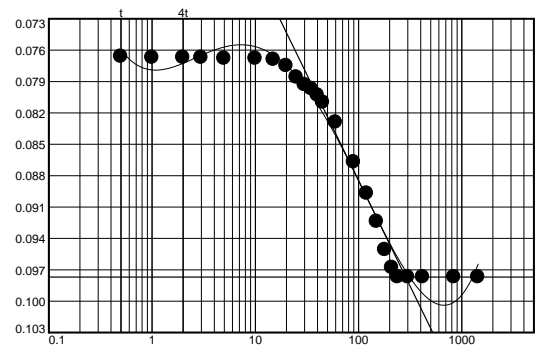
$D_0 = 0.0000$   $D_{50} = 0.0255$   $D_{100} = 0.0510$   $C_v$  at 124.22 min. = 0.004 ft.<sup>2</sup>/day  $C_\alpha = 0.214$

Pressure: 5 psf

TEST READINGS

Load No. 2

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0	0.07741	14	45	0.08100
2	0.5	0.07660	15	60	0.08290
3	1	0.07670	16	90	0.08670
4	2	0.07670	17	120	0.08970
5	3	0.07670	18	150	0.09240
6	5	0.07680	19	180	0.09510
7	10	0.07680	20	210	0.09680
8	15	0.07690	21	240	0.09770
9	20	0.07750	22	300	0.09770
10	25	0.07860	23	420	0.09770
11	30	0.07930	24	840	0.09770
12	35	0.07970	25	1440	0.09770
13	40	0.08030			



Void Ratio = 3.186 Compression = 9.8%

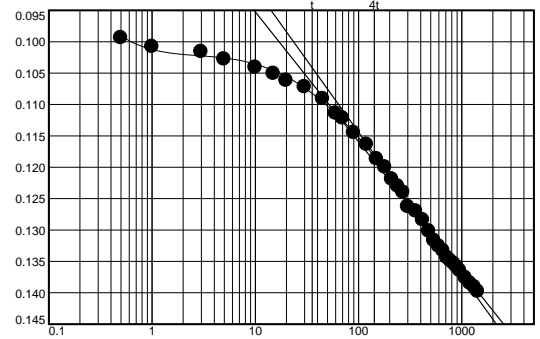
$D_0 = 0.0747$   $D_{50} = 0.0862$   $D_{100} = 0.0977$   $C_v$  at 76.68 min. = 0.005 ft.<sup>2</sup>/day  $C_\alpha = 0.000$

Pressure: 10 psf

TEST READINGS

Load No. 3

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0	0.09770	19	270	0.12400
2	0.5	0.09940	20	300	0.12630
3	1	0.10080	21	360	0.12700
4	3	0.10160	22	420	0.12840
5	5	0.10280	23	480	0.13020
6	10	0.10410	24	540	0.13170
7	15	0.10510	25	600	0.13260
8	20	0.10620	26	660	0.13330
9	30	0.10720	27	720	0.13440
10	45	0.10910	28	780	0.13490
11	60	0.11140	29	840	0.13540
12	70	0.11220	30	900	0.13590
13	90	0.11450	31	960	0.13650
14	120	0.11640	32	1080	0.13760
15	150	0.11870	33	1200	0.13850
16	180	0.12000	34	1320	0.13910
17	210	0.12190	35	1427	0.13980
18	240	0.12300			



Void Ratio = 2.991 Compression = 14.0%

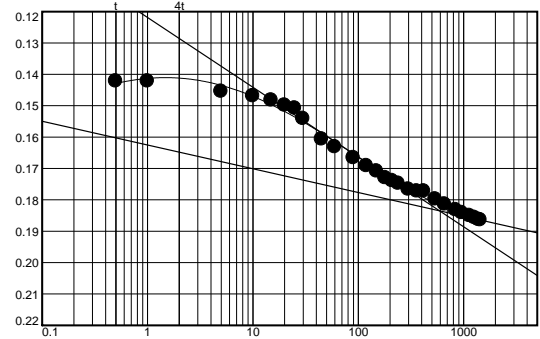
$D_0 = 0.0982$   $D_{50} = 0.1140$   $D_{100} = 0.1299$   $C_v$  at 85.05 min. = 0.004 ft.<sup>2</sup>/day  $C_\alpha = 0.096$

Pressure: 20 psf

TEST READINGS

Load No. 4

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0	0.13980	15	180	0.17302
2	0.5	0.14220	16	210	0.17397
3	1	0.14220	17	240	0.17482
4	5	0.14550	18	300	0.17668
5	10	0.14693	19	360	0.17730
6	15	0.14825	20	420	0.17730
7	20	0.14991	21	540	0.17980
8	25	0.15080	22	660	0.18140
9	30	0.15416	23	840	0.18320
10	45	0.16066	24	960	0.18413
11	60	0.16314	25	1140	0.18510
12	90	0.16665	26	1260	0.18571
13	120	0.16920	27	1380	0.18630
14	150	0.17090	28	1440	0.18644



Void Ratio = 2.774 Compression = 18.6%

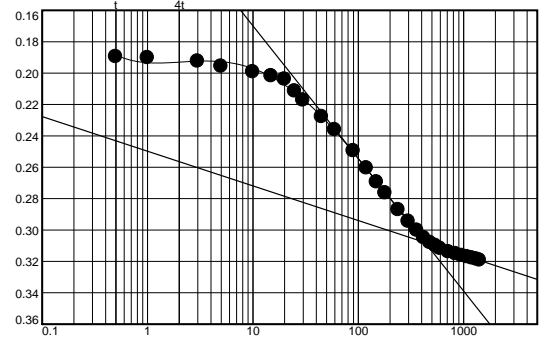
$D_0 = 0.1446$   $D_{50} = 0.1641$   $D_{100} = 0.1835$   $C_v$  at 79.16 min. = 0.004 ft.<sup>2</sup>/day  $C_\alpha = 0.035$

Pressure: 50 psf

TEST READINGS

Load No. 5

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0	0.18644	16	180	0.27650
2	0.5	0.18970	17	240	0.28720
3	1	0.19030	18	300	0.29460
4	3	0.19250	19	360	0.30030
5	5	0.19570	20	420	0.30510
6	10	0.19930	21	480	0.30810
7	15	0.20180	22	540	0.31000
8	20	0.20400	23	600	0.31180
9	25	0.21150	24	720	0.31400
10	30	0.21730	25	840	0.31530
11	45	0.22790	26	960	0.31650
12	60	0.23620	27	1080	0.31720
13	90	0.24970	28	1200	0.31800
14	120	0.26060	29	1320	0.31870
15	150	0.26950	30	1420	0.31940



Void Ratio = 2.157 Compression = 31.9%

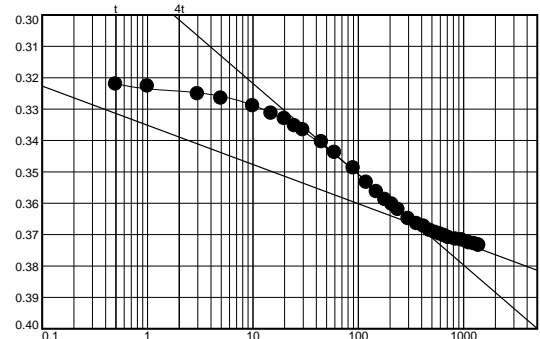
$D_0 = 0.1837$   $D_{50} = 0.2458$   $D_{100} = 0.3080$   $C_v$  at 78.35 min. = 0.004 ft.<sup>2</sup>/day  $C_\alpha = 0.102$

Pressure: 100 psf

TEST READINGS

Load No. 6

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0	0.31940	18	240	0.36210
2	0.5	0.32210	19	300	0.36500
3	1	0.32270	20	360	0.36660
4	3	0.32520	21	420	0.36740
5	5	0.32660	22	480	0.36870
6	10	0.32900	23	540	0.36940
7	15	0.33140	24	600	0.36990
8	20	0.33310	25	660	0.37040
9	25	0.33540	26	720	0.37100
10	30	0.33670	27	840	0.37150
11	45	0.34050	28	960	0.37180
12	60	0.34390	29	1080	0.37240
13	90	0.34880	30	1140	0.37270
14	120	0.35340	31	1260	0.37300
15	150	0.35640	32	1380	0.37340
16	180	0.35890	33	1402	0.37350
17	210	0.36040			



Void Ratio = 1.906 Compression = 37.4%

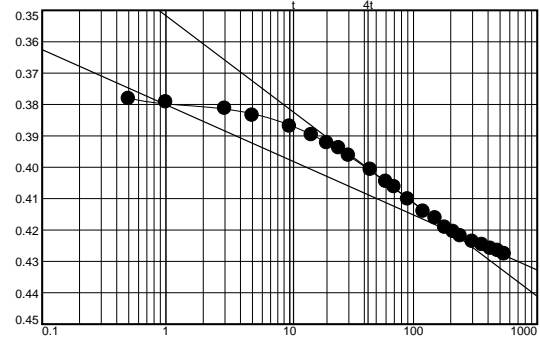
$D_0 = 0.3193$   $D_{50} = 0.3433$   $D_{100} = 0.3672$   $C_v$  at 53.77 min. = 0.004 ft.<sup>2</sup>/day  $C_\alpha = 0.058$

Pressure: 200 psf

TEST READINGS

Load No. 7

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0	0.37350	14	90	0.41020
2	0.5	0.37820	15	120	0.41410
3	1	0.37930	16	150	0.41620
4	3	0.38130	17	180	0.41920
5	5	0.38350	18	210	0.42060
6	10	0.38700	19	240	0.42190
7	15	0.38970	20	300	0.42370
8	20	0.39230	21	360	0.42470
9	25	0.39390	22	420	0.42590
10	30	0.39630	23	480	0.42660
11	45	0.40080	24	540	0.42760
12	60	0.40460	25	544	0.42770
13	70	0.40630			



Void Ratio = 1.655 Compression = 42.8%

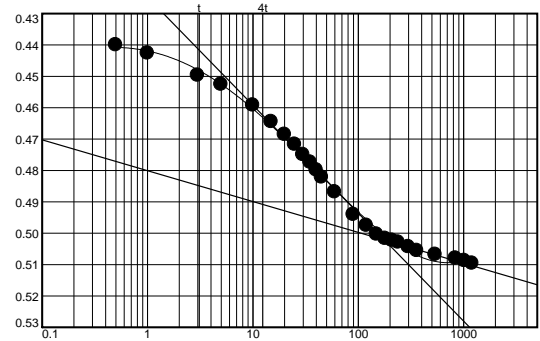
$D_0 = 0.3735$   $D_{50} = 0.3972$   $D_{100} = 0.4208$   $C_v$  at 32.07 min. = 0.006 ft.<sup>2</sup>/day  $C_\alpha = 0.081$

Pressure: 500 psf

TEST READINGS

Load No. 8

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0	0.42770	14	60	0.48690
2	0.5	0.44000	15	90	0.49410
3	1	0.44270	16	120	0.49760
4	3	0.44970	17	150	0.50040
5	5	0.45260	18	180	0.50170
6	10	0.45920	19	210	0.50230
7	15	0.46450	20	240	0.50290
8	20	0.46860	21	300	0.50440
9	25	0.47170	22	360	0.50560
10	30	0.47500	23	540	0.50680
11	35	0.47740	24	840	0.50800
12	40	0.47990	25	1020	0.50880
13	45	0.48220	26	1205	0.50960



Void Ratio = 1.275 Compression = 51.0%

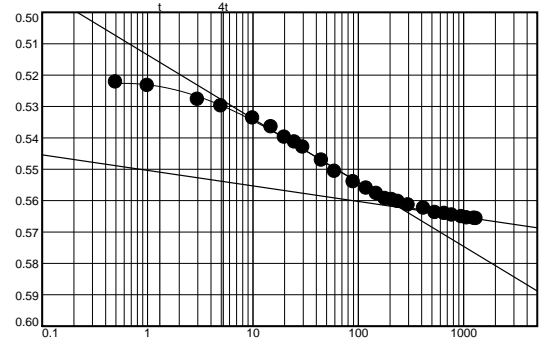
$D_0 = 0.4332$   $D_{50} = 0.4677$   $D_{100} = 0.5022$   $C_v$  at 17.35 min. = 0.008 ft.<sup>2</sup>/day  $C_\alpha = 0.046$

Pressure: 1000 psf

TEST READINGS

Load No. 9

No.	Elapsed Time	Dial Reading	No.	Elapsed Time	Dial Reading
1	0	0.50960	15	150	0.55780
2	0.5	0.52230	16	180	0.55940
3	1	0.52340	17	210	0.55980
4	3	0.52780	18	240	0.56040
5	5	0.52990	19	300	0.56150
6	10	0.53380	20	420	0.56250
7	15	0.53660	21	540	0.56390
8	20	0.53990	22	660	0.56420
9	25	0.54140	23	780	0.56470
10	30	0.54300	24	960	0.56520
11	45	0.54720	25	1080	0.56560
12	60	0.55080	26	1260	0.56570
13	90	0.55410	27	1320	0.56580
14	120	0.55610			

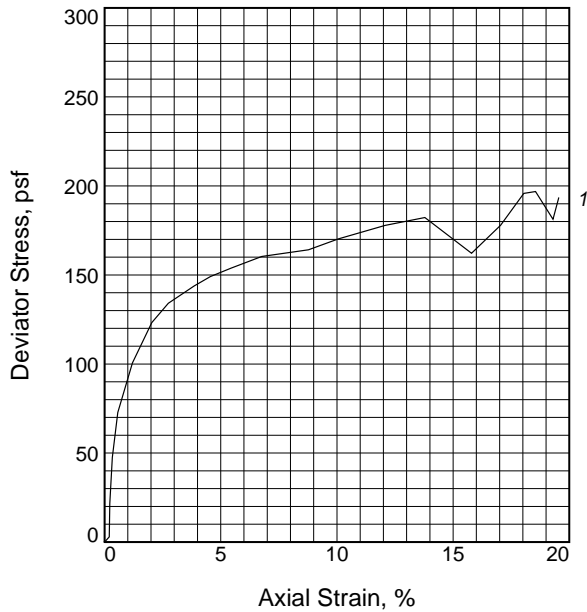
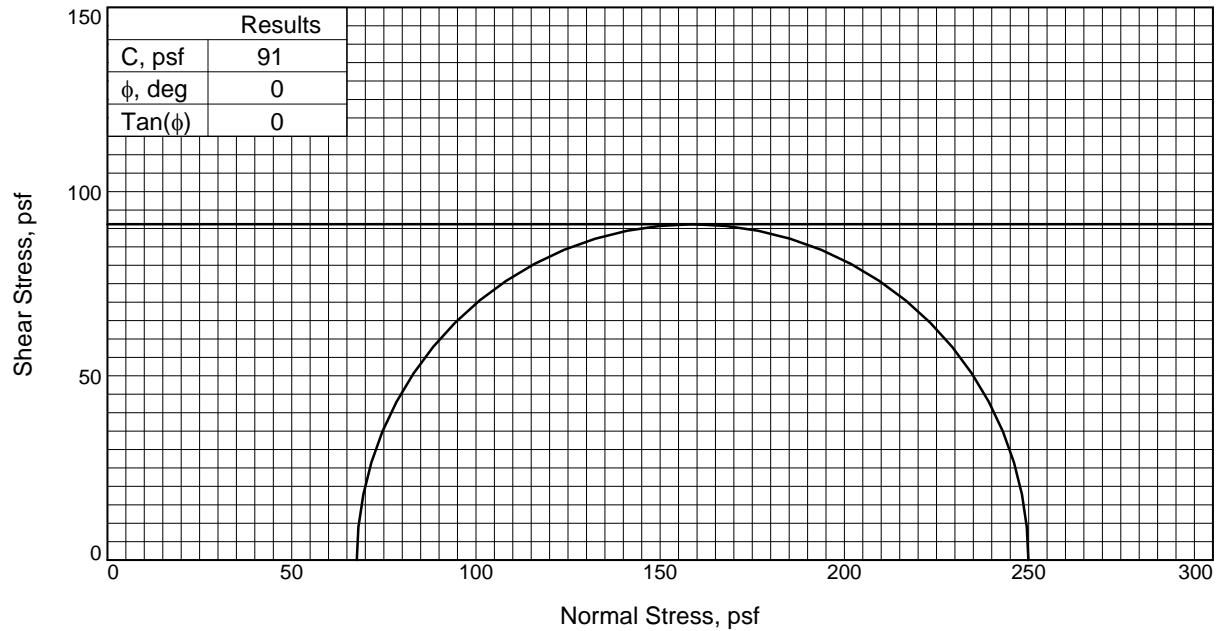


Void Ratio = 1.014    Compression = 56.6%

$D_0 = 0.5174$      $D_{50} = 0.5398$      $D_{100} = 0.5622$      $C_v$  at 19.22 min. = 0.005 ft.<sup>2</sup>/day     $C_\alpha = 0.023$



APPENDIX IX



Sample No.	1	
Initial	Water Content, %	127.4
	Dry Density, pcf	35.9
	Saturation, %	93.6
	Void Ratio	3.6065
	Diameter, in.	1.42
	Height, in.	2.83
At Test	Water Content, %	136.1
	Dry Density, pcf	35.9
	Saturation, %	100.0
	Void Ratio	3.6065
	Diameter, in.	1.42
	Height, in.	2.83
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	0.47	
Fail. Stress, psf	182	
Strain, %	13.8	
Ult. Stress, psf	182	
Strain, %	13.8	
$\sigma_1$ Failure, psf	250	
$\sigma_3$ Failure, psf	68	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vso g & dk g ORG CL w/ fw rts (OH)

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-1      **Depth:** 1

**Sample Number:** 1B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

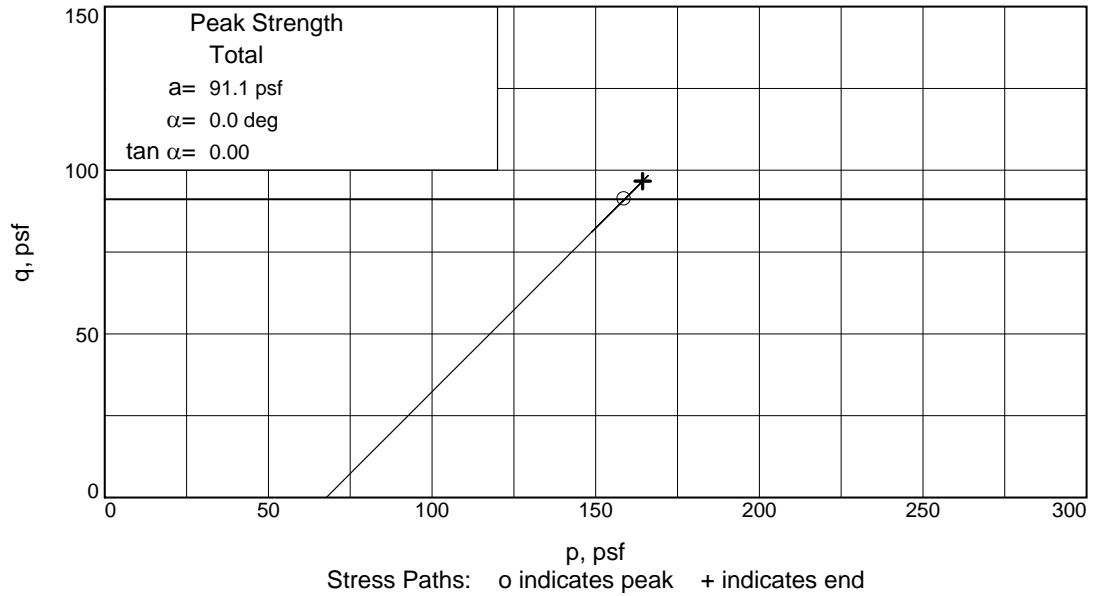
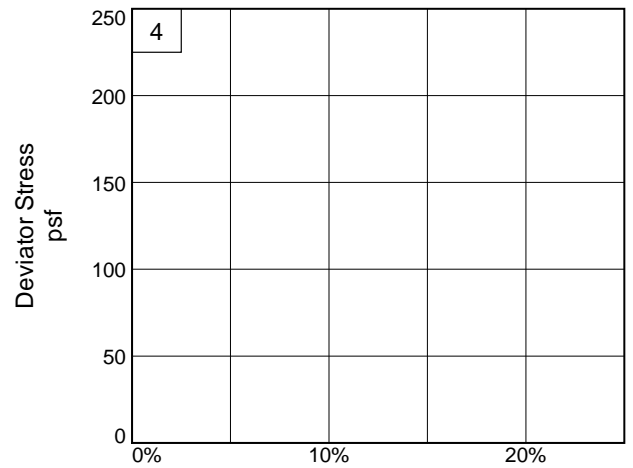
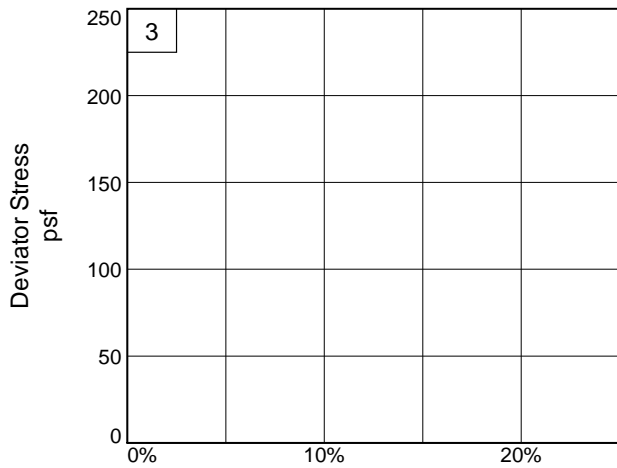
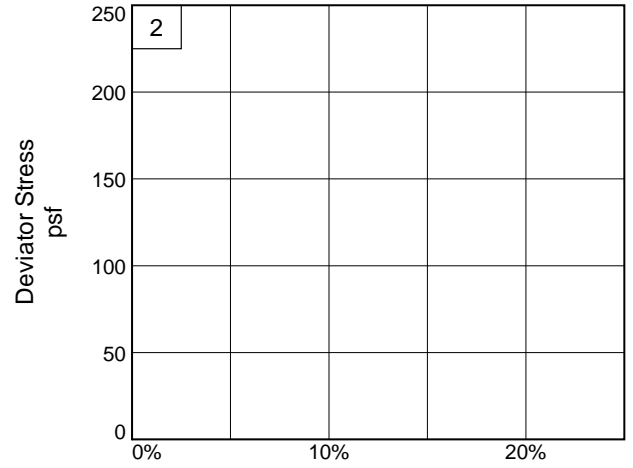
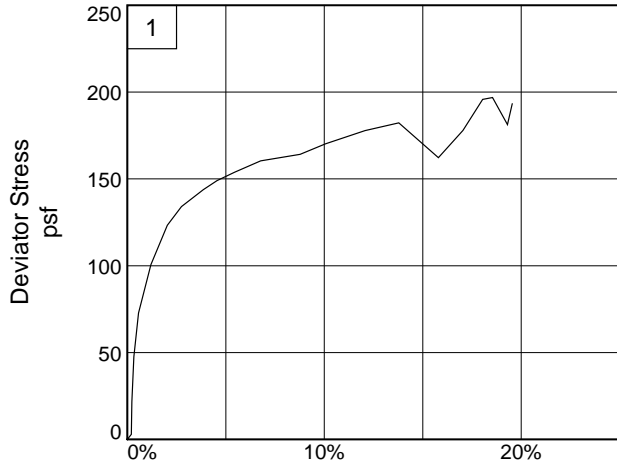


**EUSTIS**  
ENGINEERING  
SINCE 1946

**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



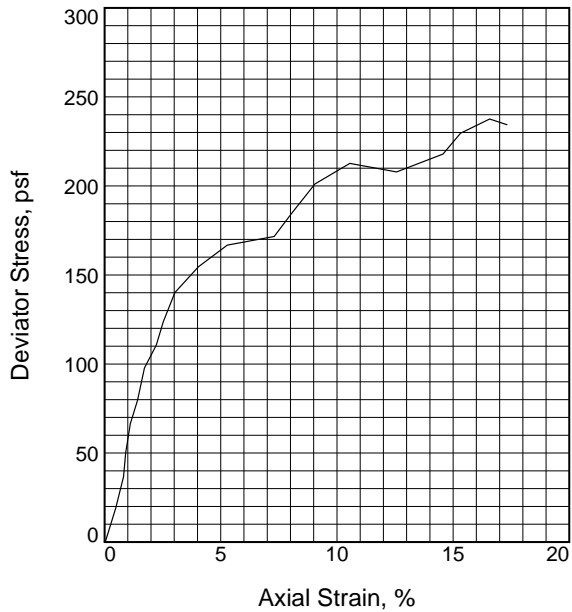
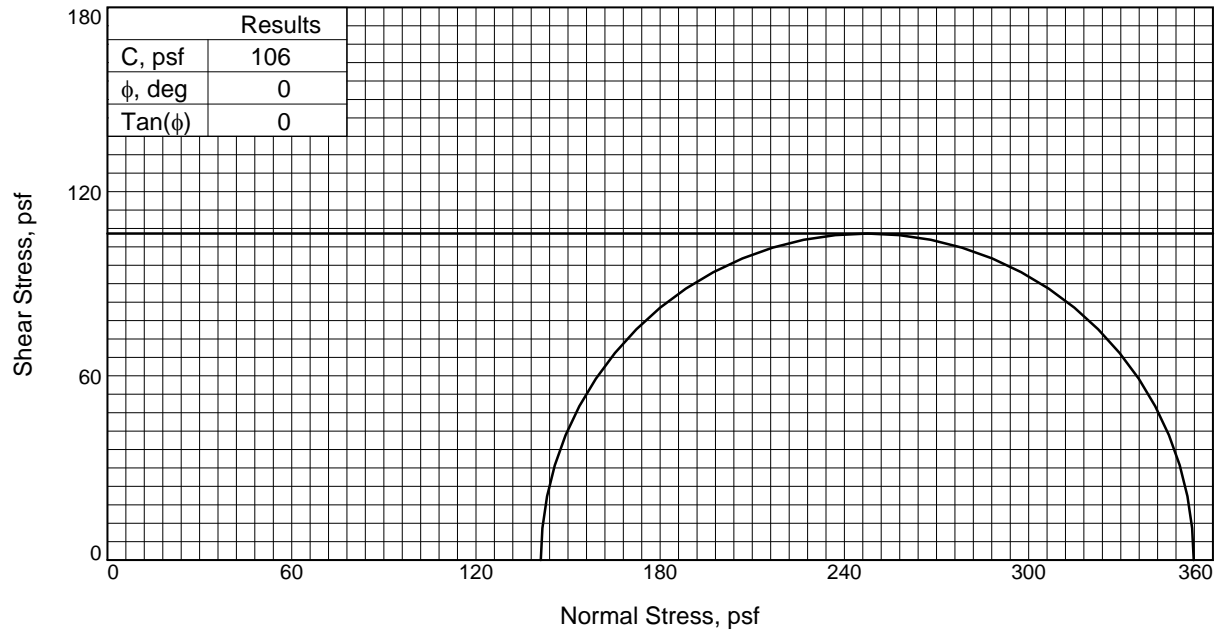
**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-1      **Depth:** 1      **Sample Number:** 1B  
**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	87.0
	Dry Density, pcf	50.1
	Saturation, %	100.0
	Void Ratio	2.3045
	Diameter, in.	1.40
	Height, in.	2.79
At Test	Water Content, %	87.0
	Dry Density, pcf	50.1
	Saturation, %	100.0
	Void Ratio	2.3045
	Diameter, in.	1.40
	Height, in.	2.79
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	0.98	
Fail. Stress, psf	213	
Strain, %	10.6	
Ult. Stress, psf	208	
Strain, %	12.6	
$\sigma_1$ Failure, psf	354	
$\sigma_3$ Failure, psf	141	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso g & dk g ORG CL w/ fw rts (OH)

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-1      **Depth:** 5

**Sample Number:** 3B

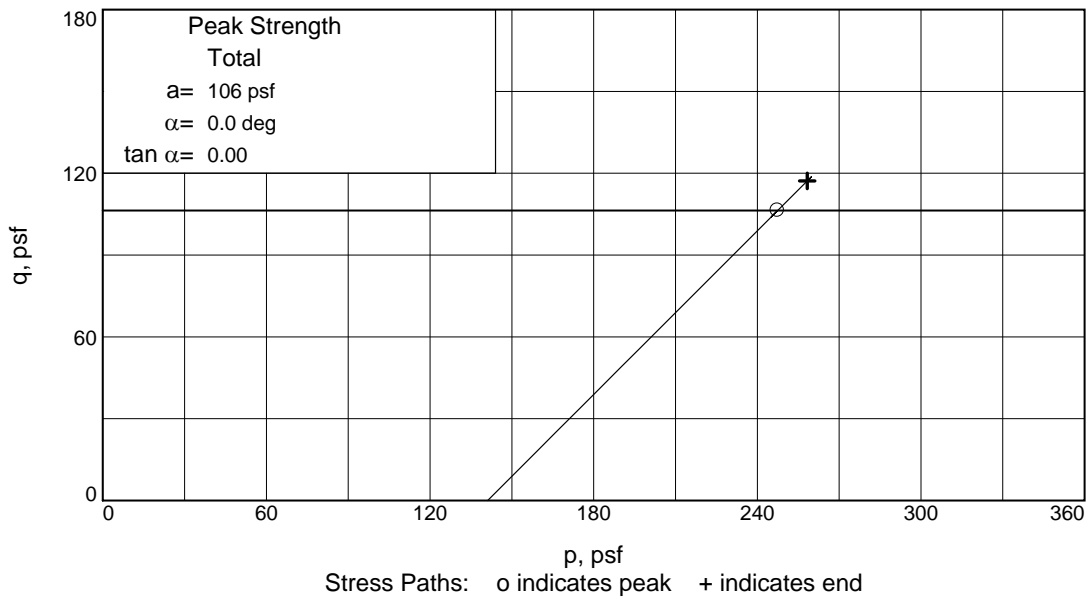
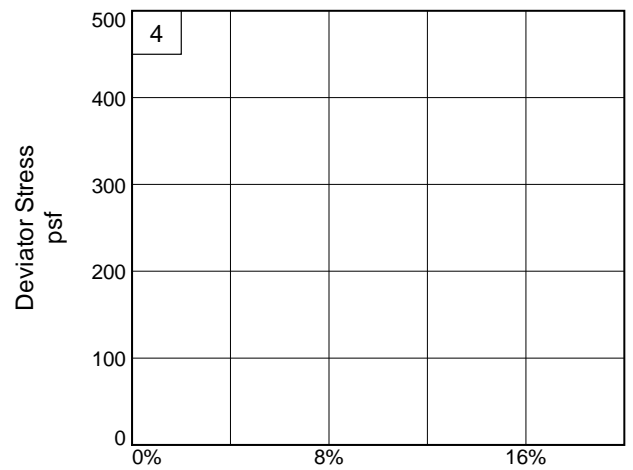
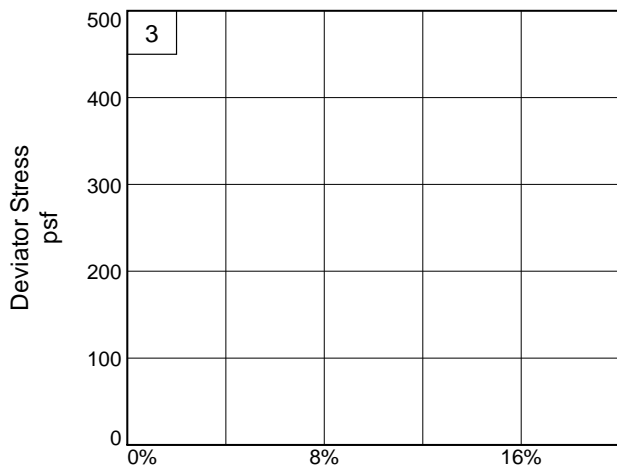
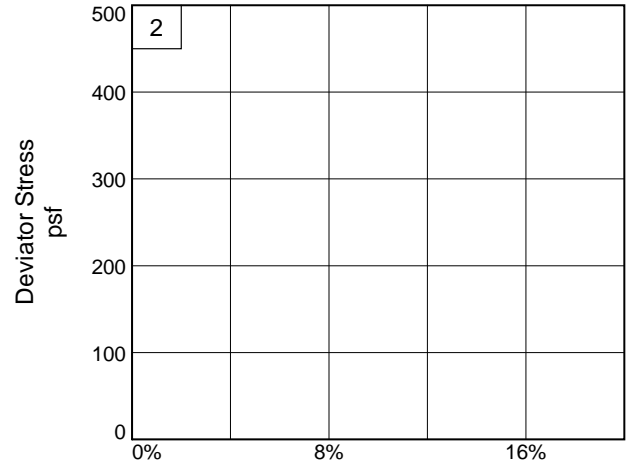
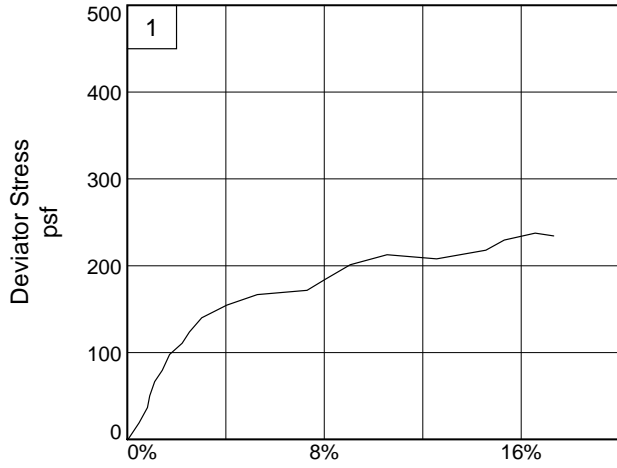
**Proj. No.:** 24762

**Date Sampled:** 6/2/22



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ENGINEERING  
SINCE 1946

**Figure** ASTM D2850



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-1

**Depth:** 5

**Sample Number:** 3B

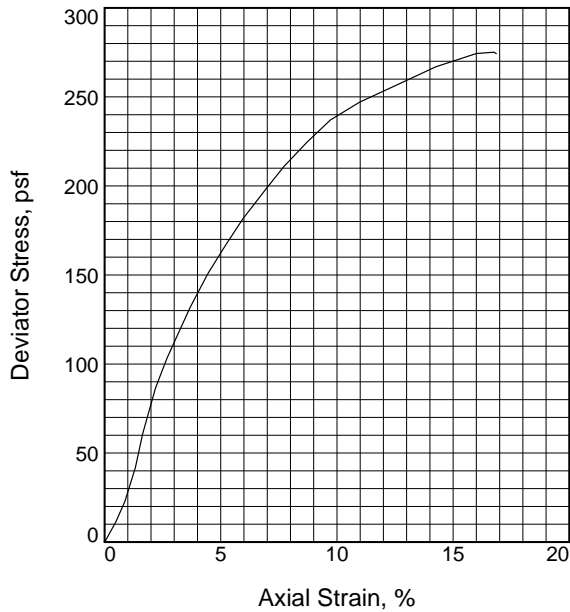
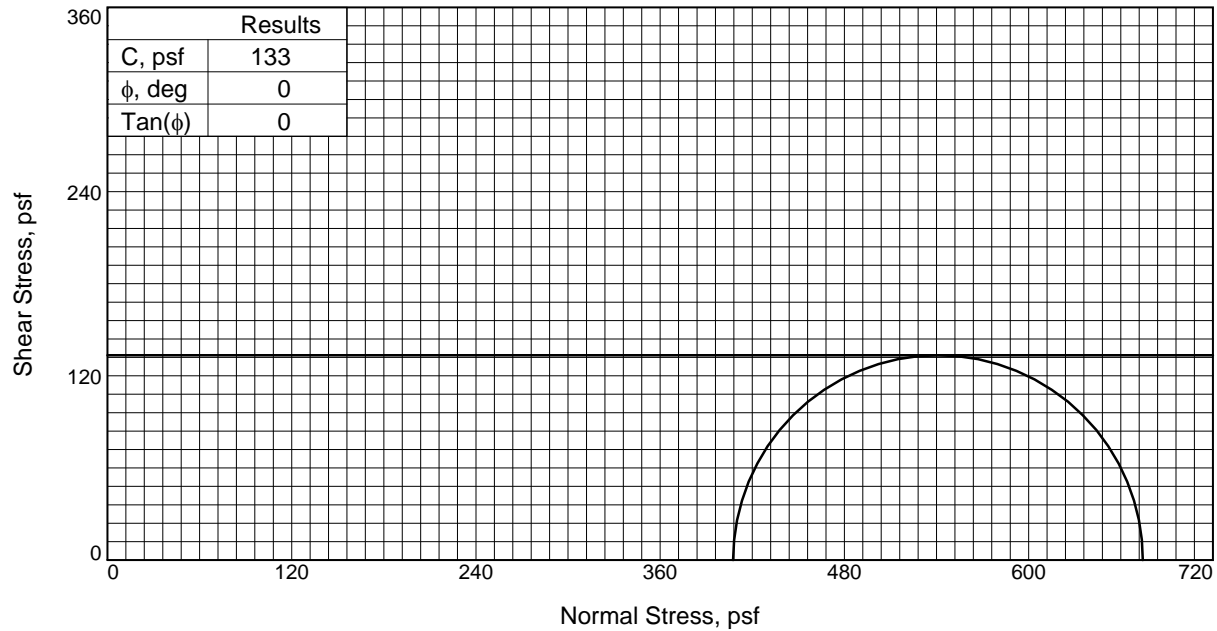
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.		1
Initial	Water Content, %	263.8
	Dry Density, pcf	19.0
	Saturation, %	90.6
	Void Ratio	7.7166
	Diameter, in.	1.42
At Test	Height, in.	2.80
	Water Content, %	291.2
	Dry Density, pcf	19.0
	Saturation, %	100.0
	Void Ratio	7.7166
	Diameter, in.	1.42
	Height, in.	2.80
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	2.83
	Fail. Stress, psf	267
	Strain, %	14.2
	Ult. Stress, psf	267
	Strain, %	14.2
	$\sigma_1$ Failure, psf	674
$\sigma_3$ Failure, psf	408	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, v<sub>so</sub> br ORG CL (OH)

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA  
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH  
**Source of Sample:** B-1      **Depth:** 11  
**Sample Number:** 6B  
**Proj. No.:** 24762      **Date Sampled:** 6/2/22

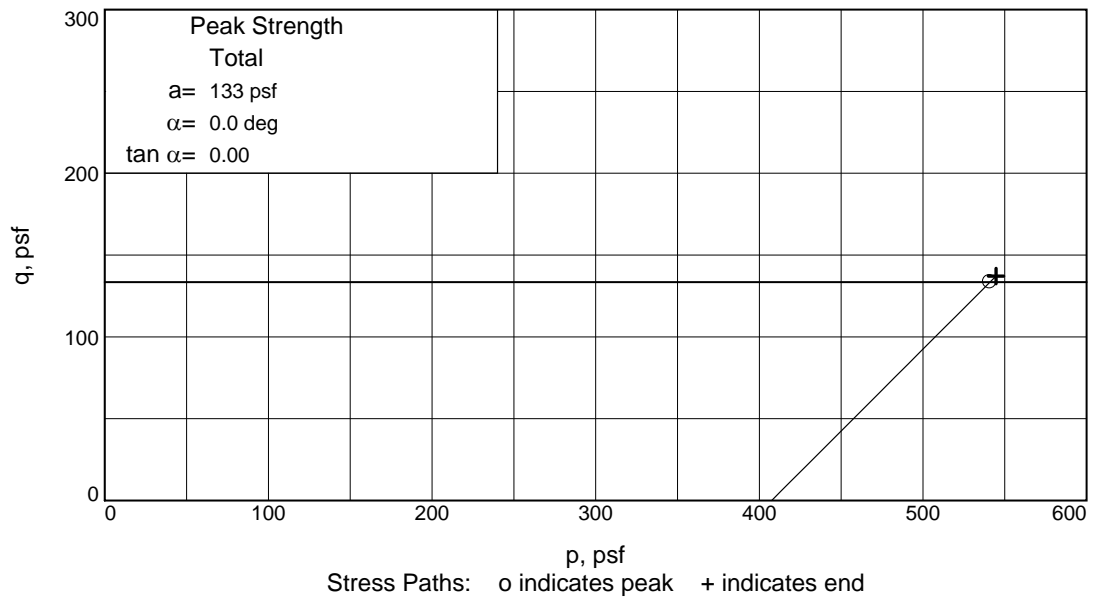
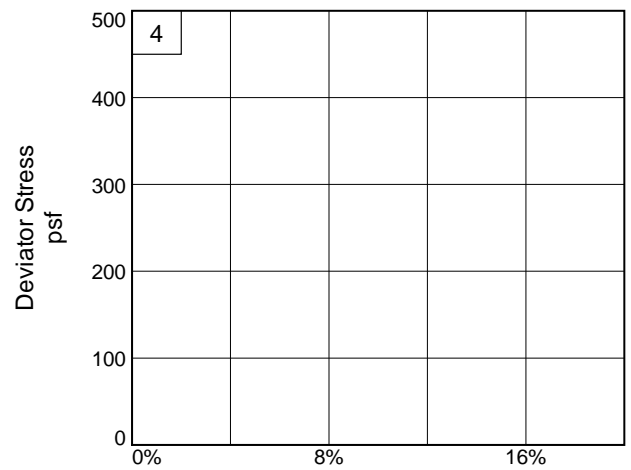
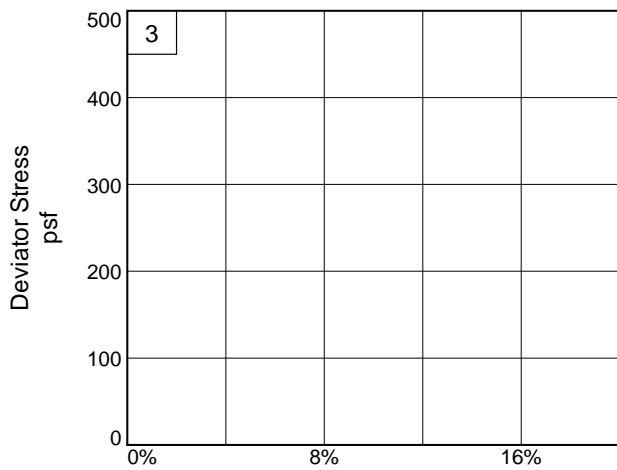
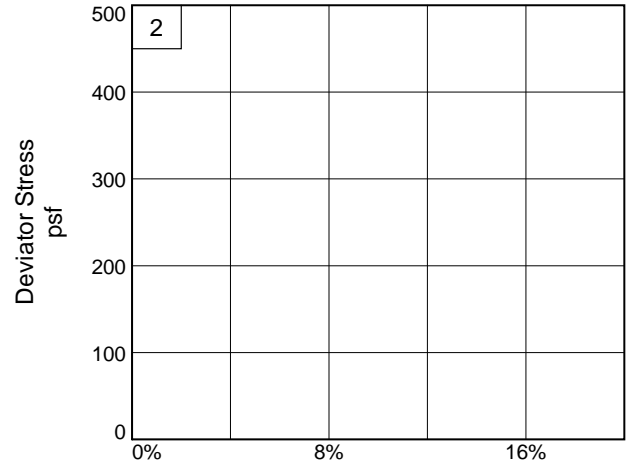
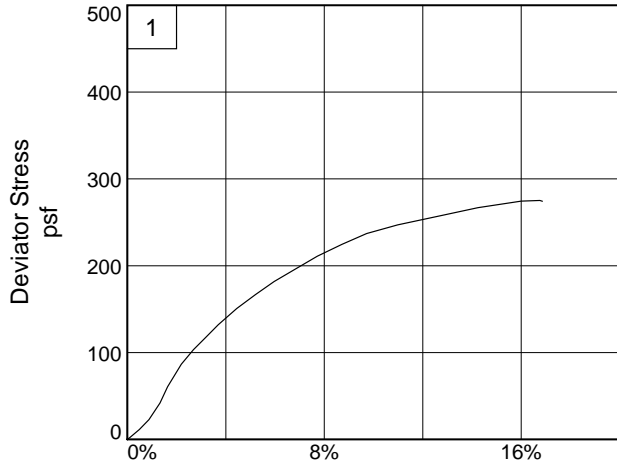


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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

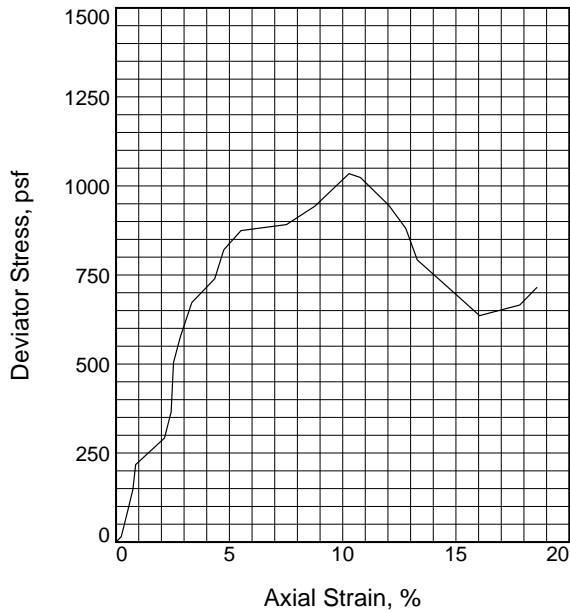
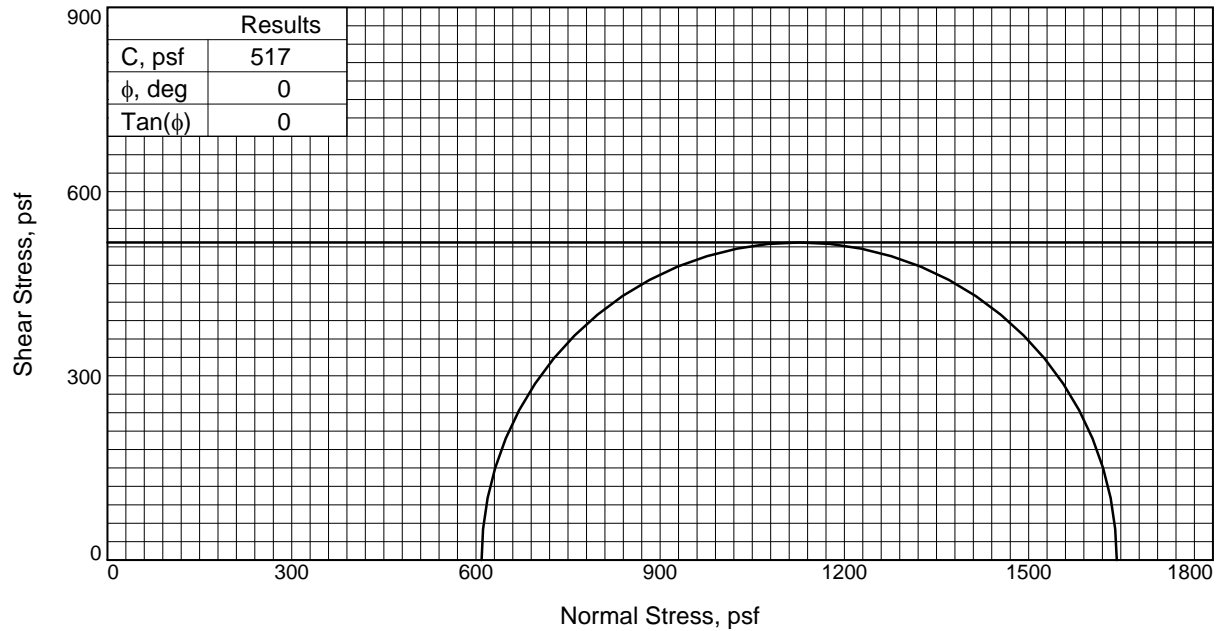
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-1      **Depth:** 11      **Sample Number:** 6B

**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	320.3
	Dry Density, pcf	17.3
	Saturation, %	99.2
	Void Ratio	8.5572
	Diameter, in.	1.39
At Test	Height, in.	2.83
	Water Content, %	322.9
	Dry Density, pcf	17.3
	Saturation, %	100.0
	Void Ratio	8.5572
	Diameter, in.	1.39
	Height, in.	2.83
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	4.23
Fail. Stress, psf	1034	
Strain, %	10.3	
Ult. Stress, psf	707	
Strain, %	14.8	
$\sigma_1$ Failure, psf	1643	
$\sigma_3$ Failure, psf	609	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, mst br ORG CL (OH)

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.150 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-1      **Depth:** 13

**Sample Number:** 7B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22



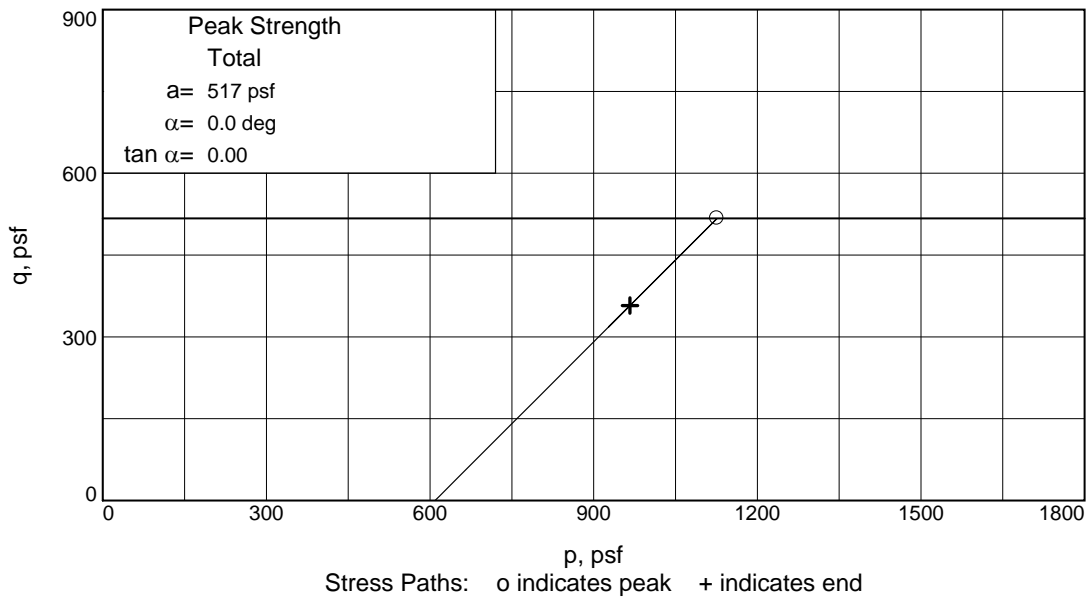
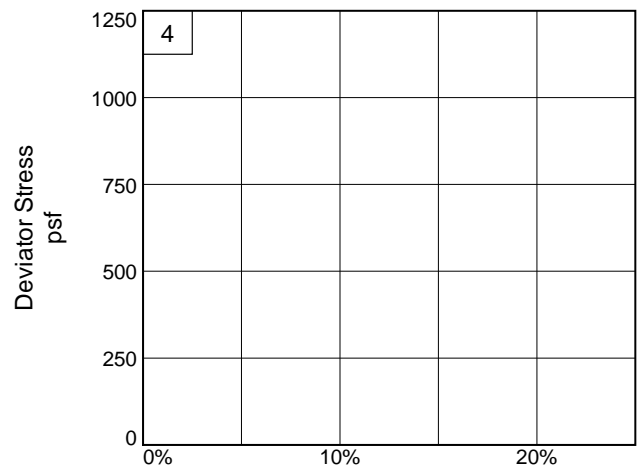
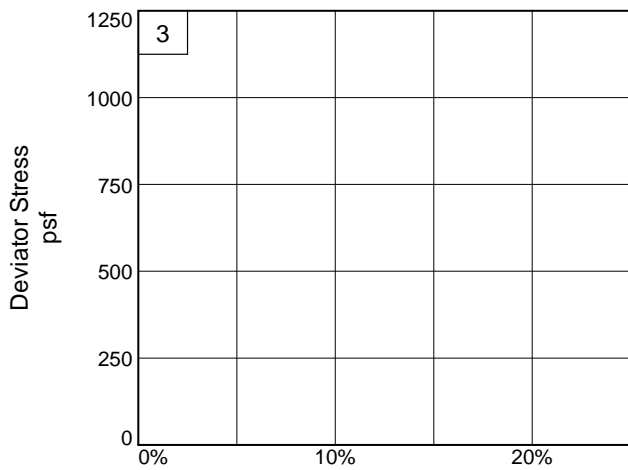
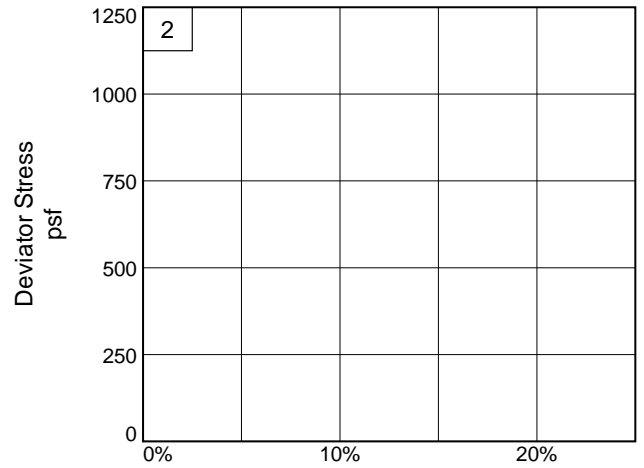
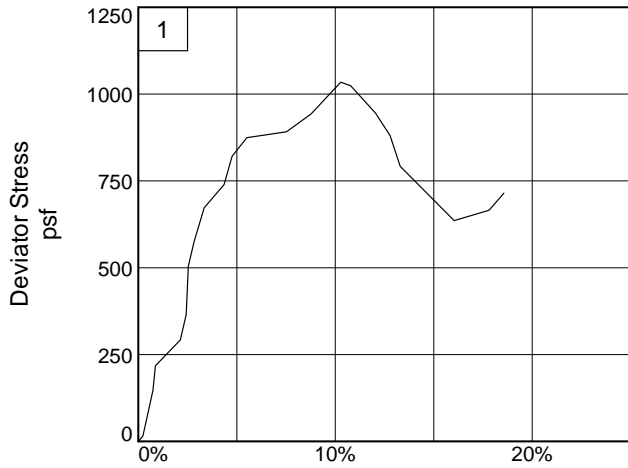
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SINCE 1946

**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR





**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-1

**Depth:** 13

**Sample Number:** 7B

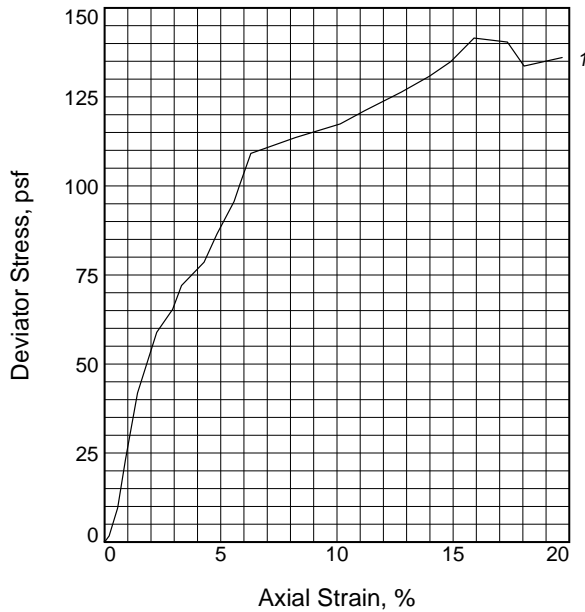
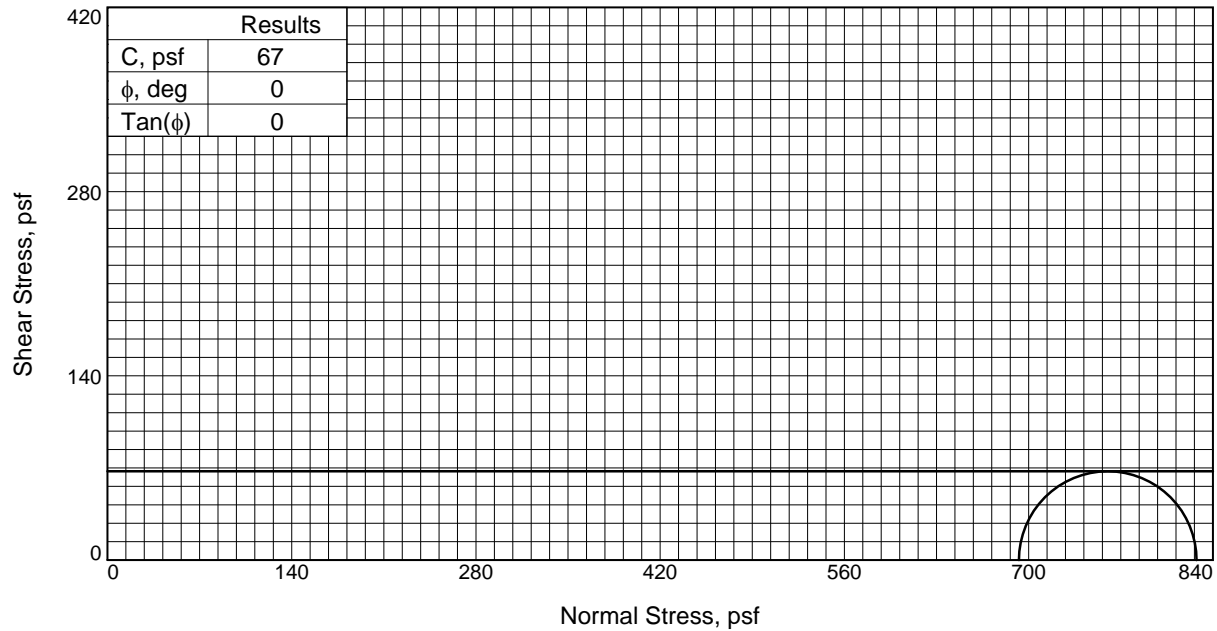
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.		1
Initial	Water Content, %	175.2
	Dry Density, pcf	29.3
	Saturation, %	100.0
	Void Ratio	4.6409
	Diameter, in.	1.40
At Test	Height, in.	2.93
	Water Content, %	175.1
	Dry Density, pcf	29.3
	Saturation, %	100.0
	Void Ratio	4.6409
	Diameter, in.	1.40
	Height, in.	2.93
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	4.81
	Fail. Stress, psf	135
	Strain, %	14.9
	Ult. Stress, psf	135
	Strain, %	14.9
	$\sigma_1$ Failure, psf	828
$\sigma_3$ Failure, psf	693	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso dk g ORG CL (OH)

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = N/A

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-1      **Depth:** 16

**Sample Number:** 9A

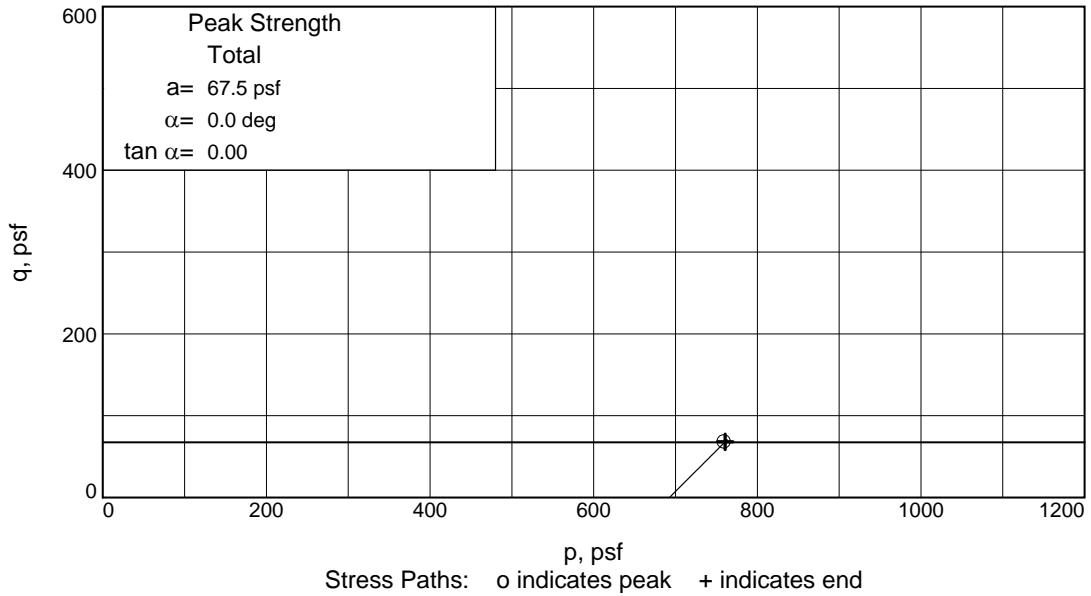
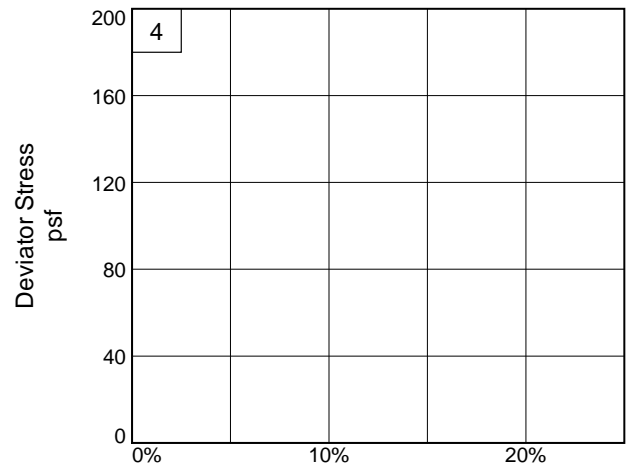
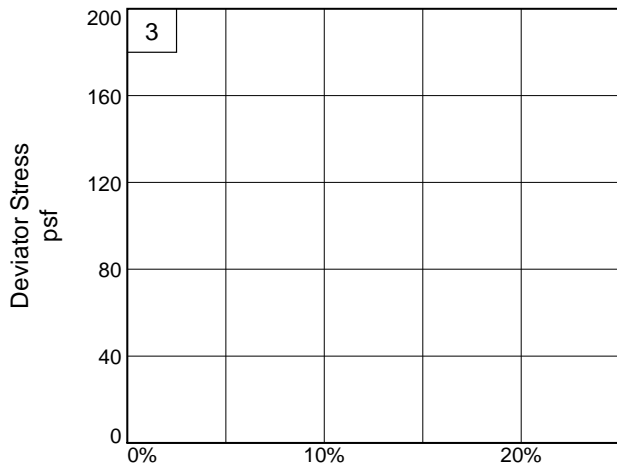
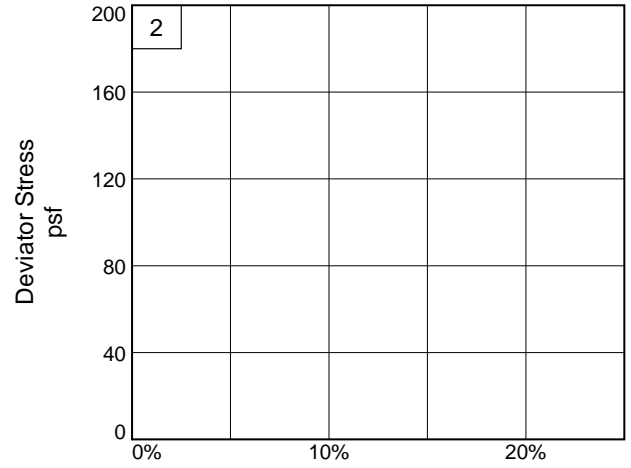
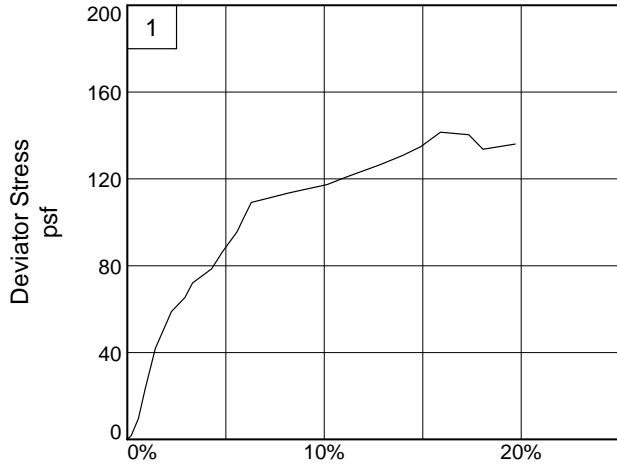
**Proj. No.:** 24762

**Date Sampled:** 6/2/22

**Figure** ASTM D2850



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**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-1

**Depth:** 16

**Sample Number:** 9A

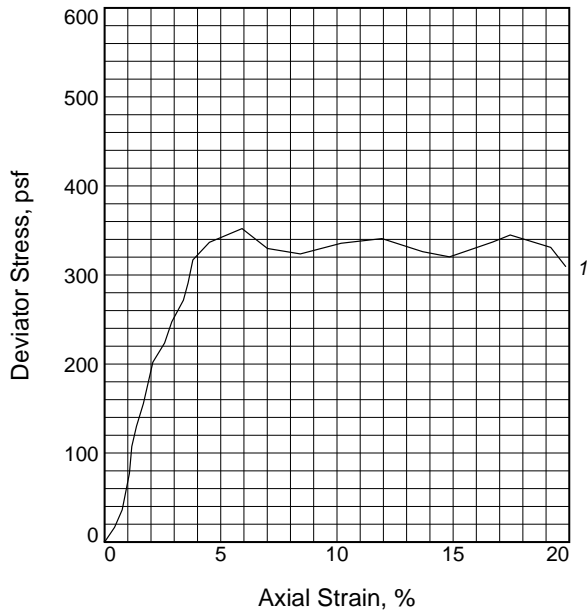
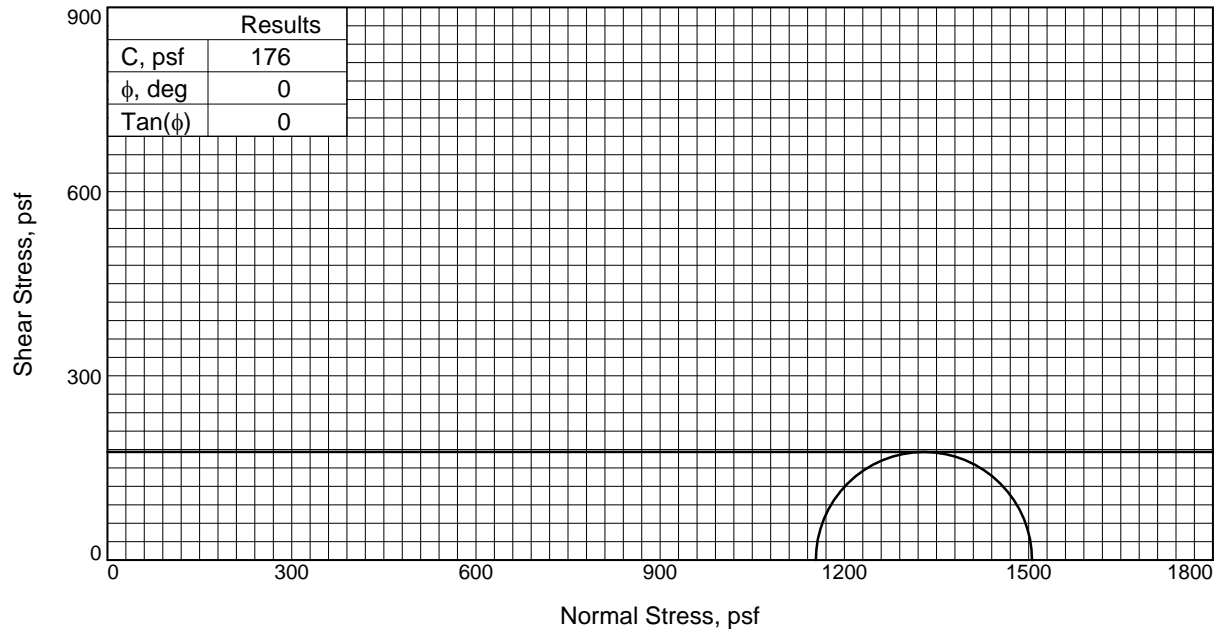
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	84.9
	Dry Density, pcf	51.3
	Saturation, %	99.9
	Void Ratio	2.3115
	Diameter, in.	1.40
At Test	Height, in.	2.91
	Water Content, %	85.0
	Dry Density, pcf	51.3
	Saturation, %	100.0
	Void Ratio	2.3115
	Diameter, in.	1.40
	Height, in.	2.91
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	8.01
Fail. Stress, psf	352	
Strain, %	5.9	
Ult. Stress, psf	320	
Strain, %	14.8	
$\sigma_1$ Failure, psf	1506	
$\sigma_3$ Failure, psf	1153	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vso g FT CL w/ tr si poc (CH)

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-1      **Depth:** 24

**Sample Number:** 11B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

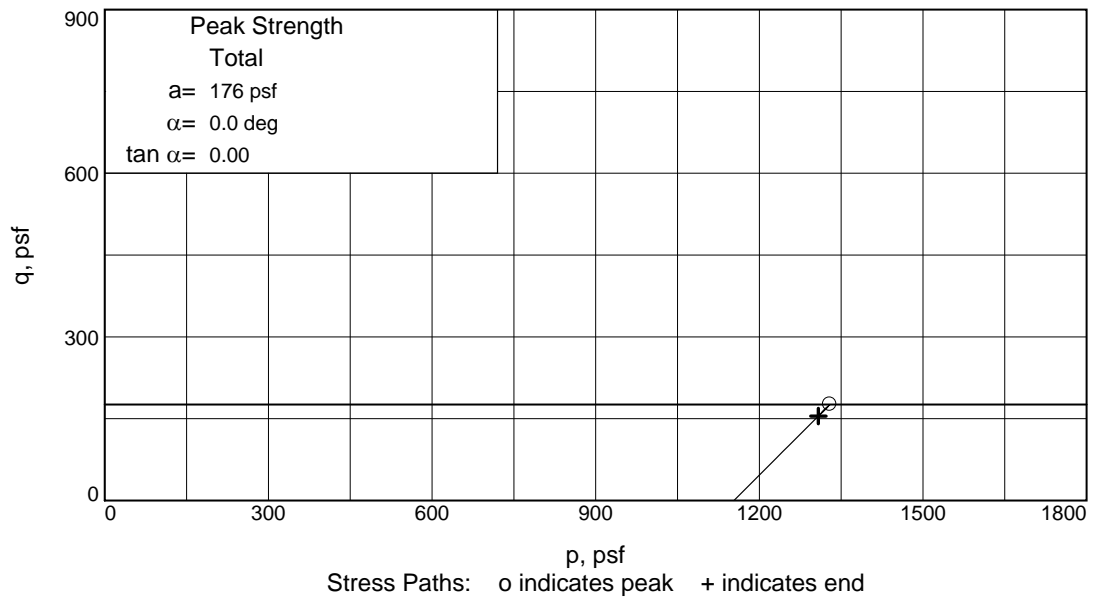
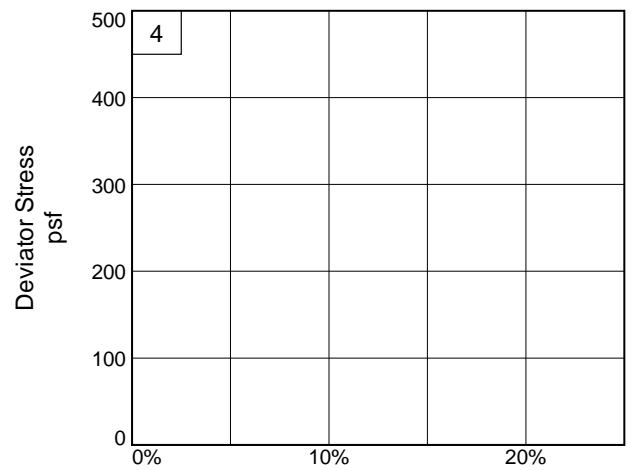
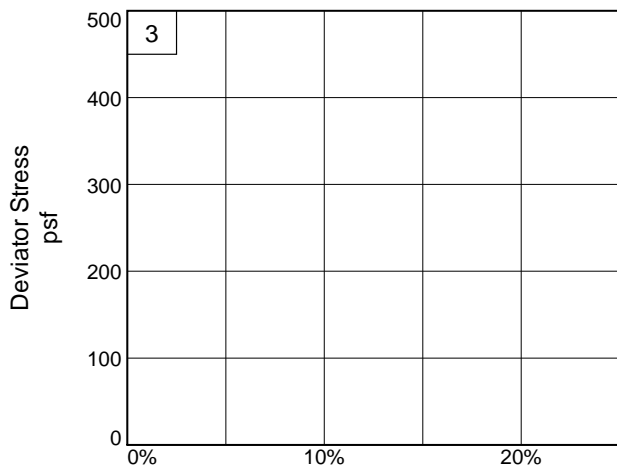
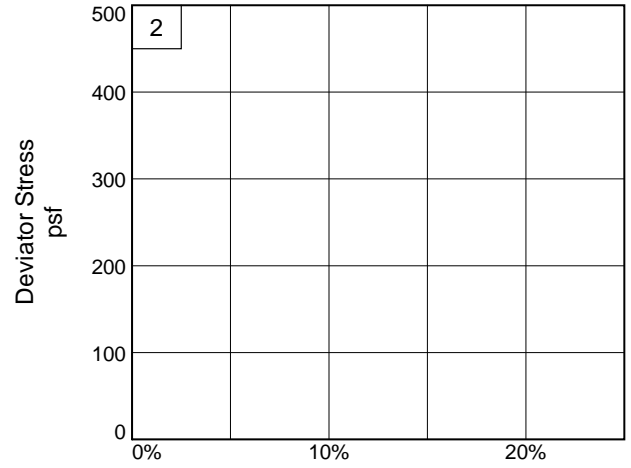
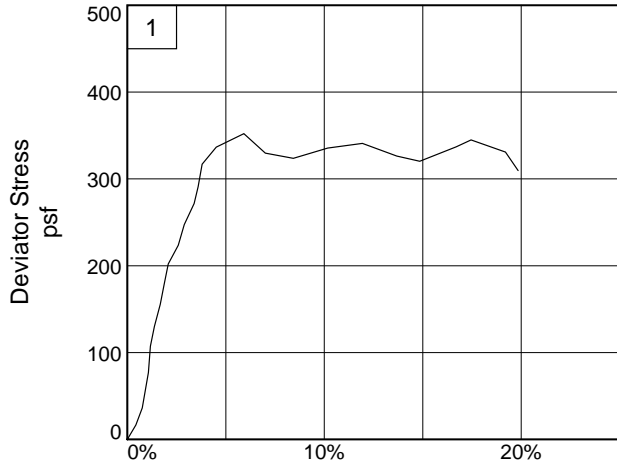


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SINCE 1946

**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

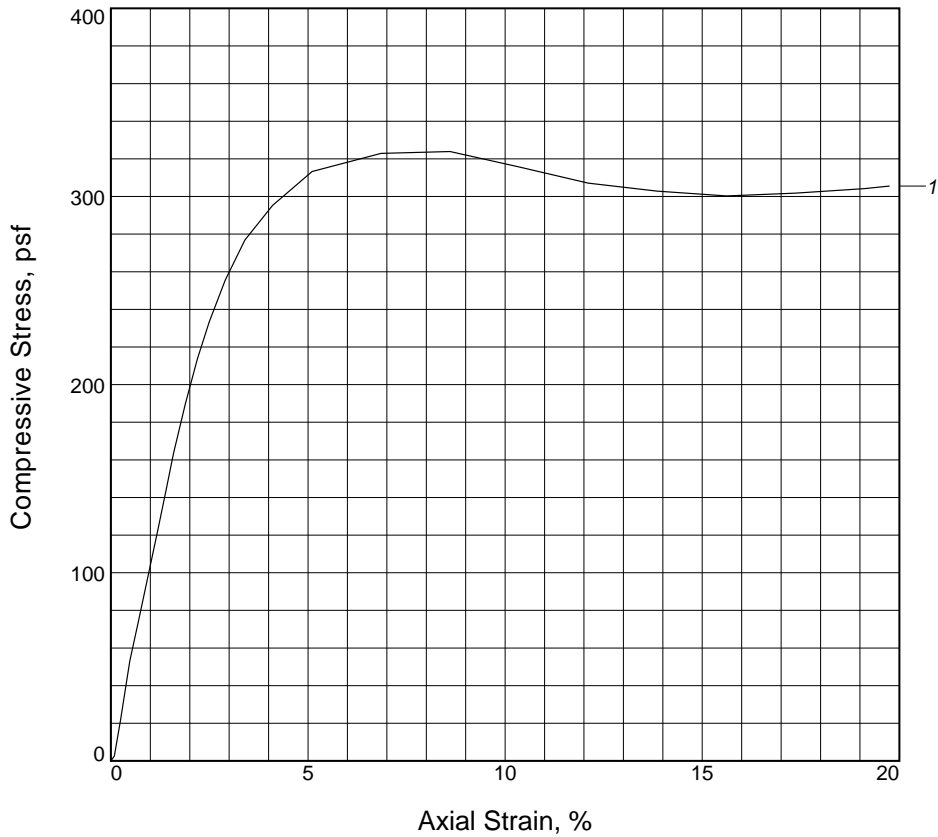
**Source of Sample:** B-1      **Depth:** 24      **Sample Number:** 11B

**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC      **Checked By:** CD & RR

# UNCONFINED COMPRESSION TEST



Sample No.	1		
Unconfined strength, psf	324		
Undrained shear strength, psf	162		
Failure strain, %	8.6		
Strain rate, %/min.	1.00		
Water content, %	72.2		
Wet density, pcf	97.3		
Dry density, pcf	56.5		
Saturation, %	98.0		
Void ratio	2.0050		
Specimen diameter, in.	1.40		
Specimen height, in.	2.89		
Height/diameter ratio	2.06		

**Description:** M, vso g FT CL w/ fw si poc (CH)

**LL =**      **PL =**      **PI =**      **Assumed GS= 2.72**      **Type: UNDISTURBED**

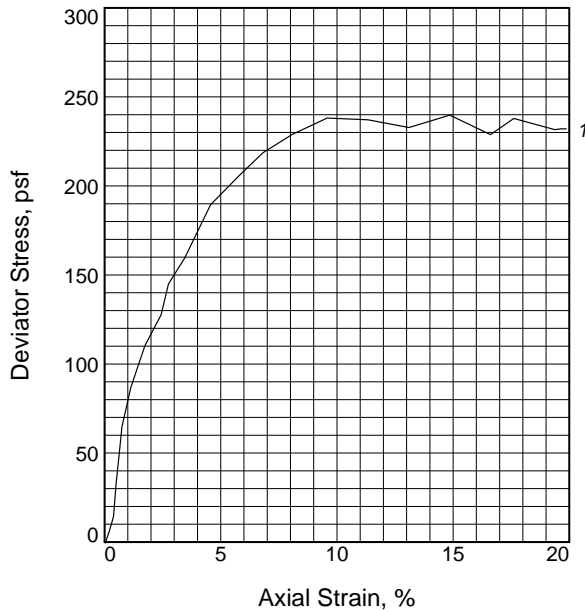
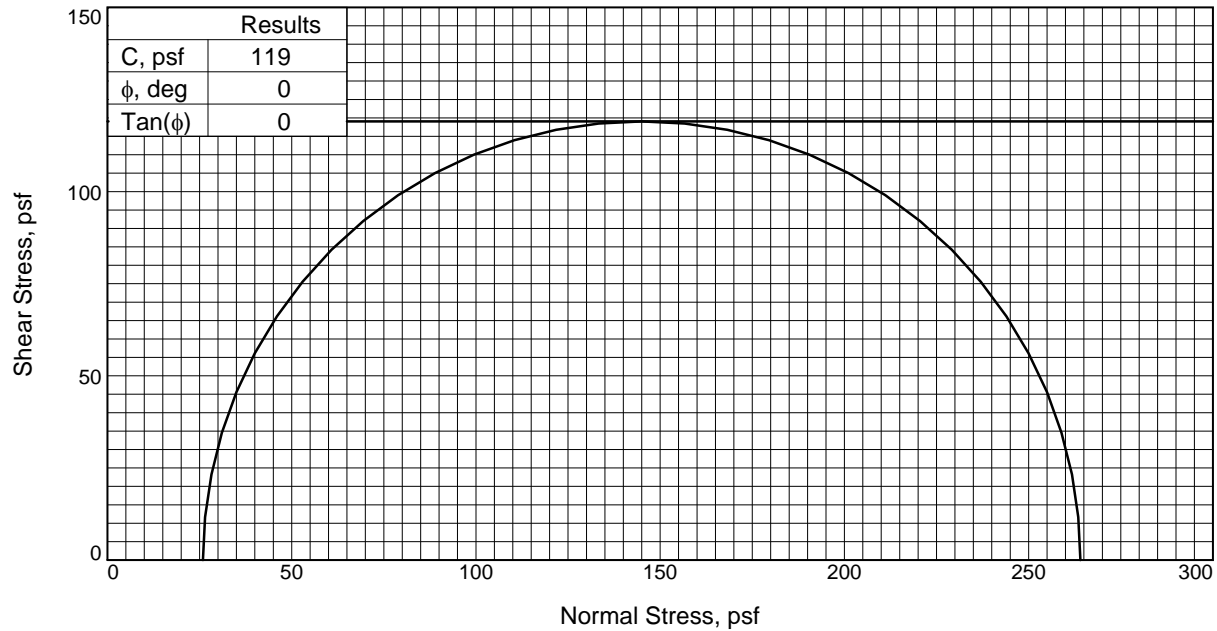
**Project No.:** 24762  
**Date Sampled:** 6/2/22  
**Remarks:**  
 TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA  
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH  
**Source of Sample:** B-1      **Depth:** 29  
**Sample Number:** 12B

**Figure** ASTM D2166



**Tested By:** CC      **Checked By:** CD & RR



Sample No.		1
Initial	Water Content, %	203.4
	Dry Density, pcf	25.7
	Saturation, %	99.4
	Void Ratio	5.4259
	Diameter, in.	1.38
At Test	Height, in.	2.87
	Water Content, %	204.8
	Dry Density, pcf	25.7
	Saturation, %	100.0
	Void Ratio	5.4259
	Diameter, in.	1.38
	Height, in.	2.87
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	0.18
	Fail. Stress, psf	238
	Strain, %	9.6
	Ult. Stress, psf	233
	Strain, %	13.1
	$\sigma_1$ Failure, psf	264
$\sigma_3$ Failure, psf	26	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso dk g ORG CL (OH)

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA  
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH  
**Source of Sample:** B-2      **Depth:** 1  
**Sample Number:** 1B  
**Proj. No.:** 24762      **Date Sampled:** 6/2/22

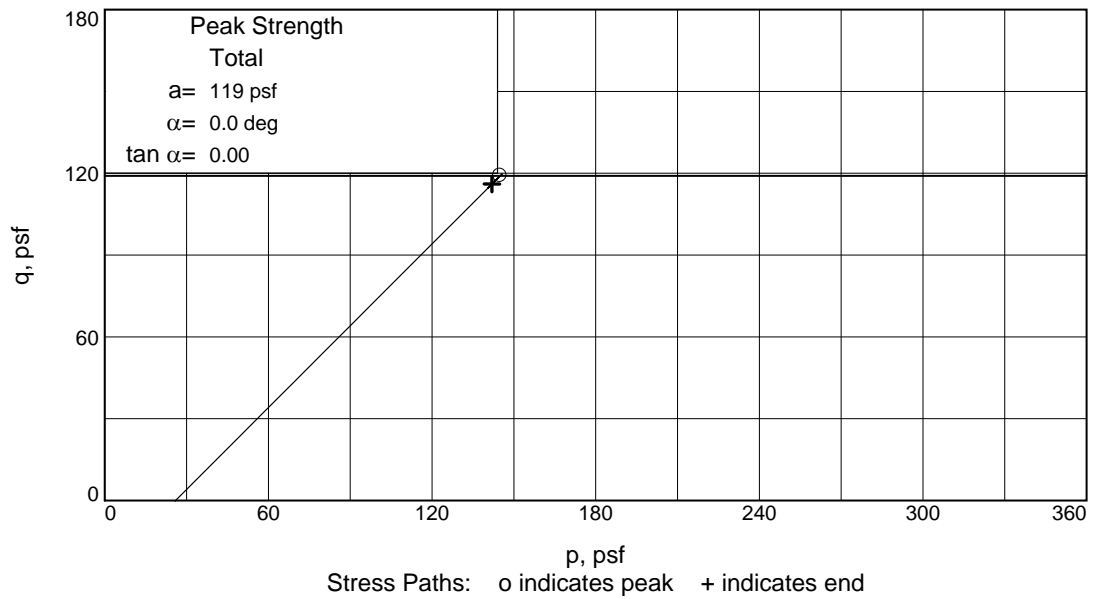
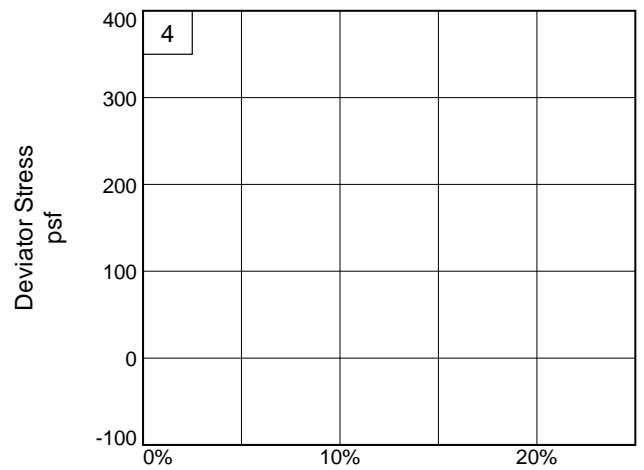
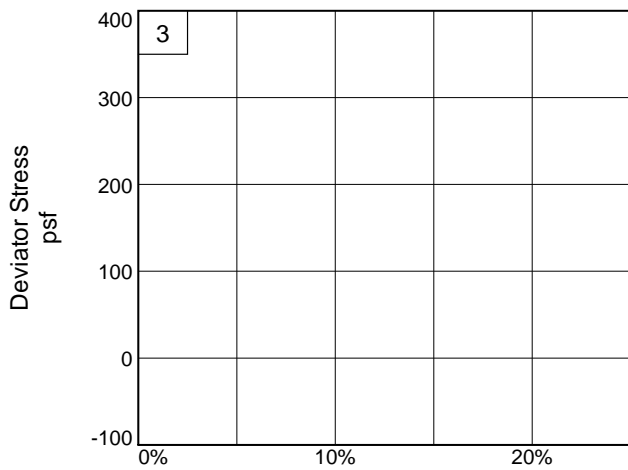
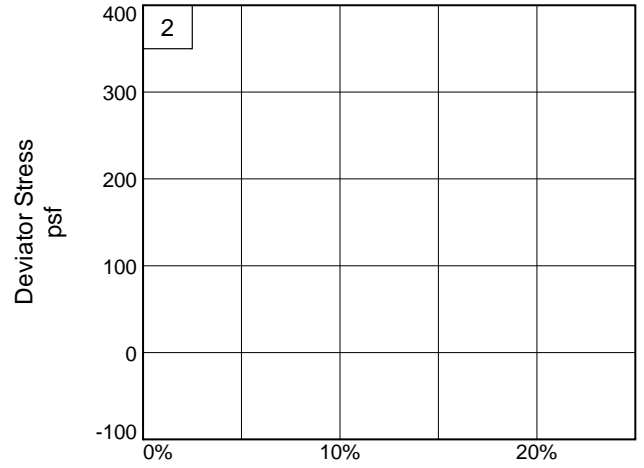
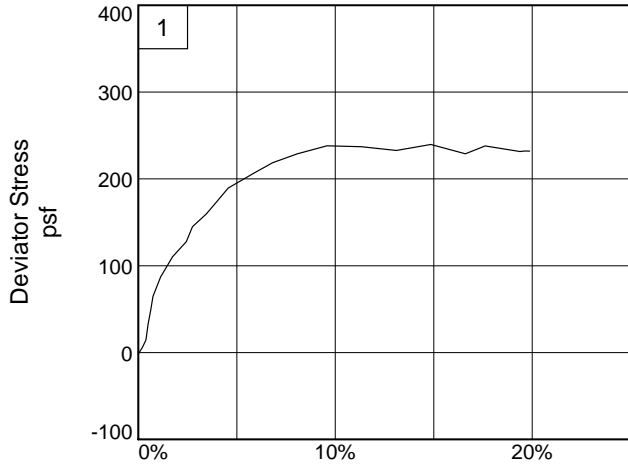


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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

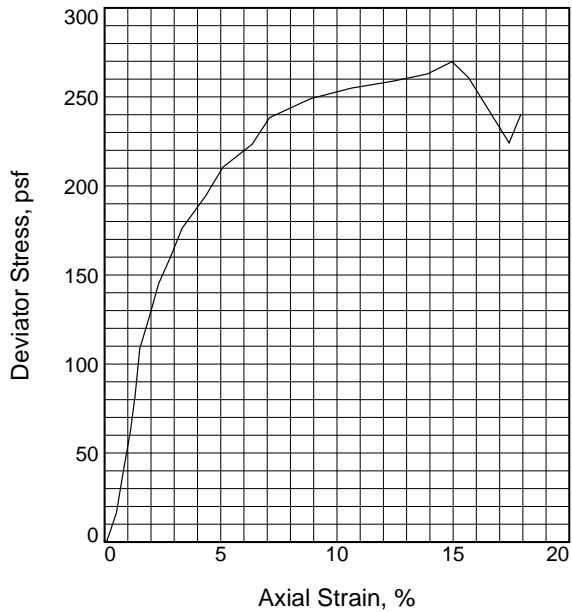
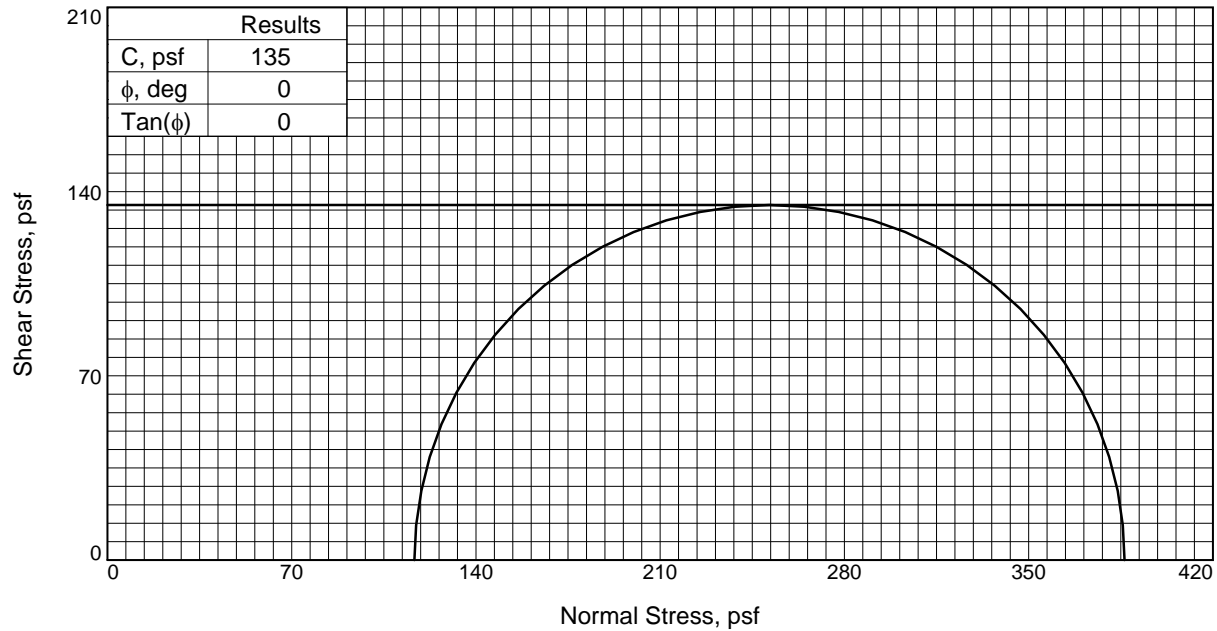
**Source of Sample:** B-2      **Depth:** 1      **Sample Number:** 1B

**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC      **Checked By:** CD & RR





Sample No.	1	
Initial	Water Content, %	175.3
	Dry Density, pcf	28.2
	Saturation, %	95.4
	Void Ratio	4.8731
	Diameter, in.	1.41
	Height, in.	2.88
At Test	Water Content, %	183.9
	Dry Density, pcf	28.2
	Saturation, %	100.0
	Void Ratio	4.8731
	Diameter, in.	1.41
	Height, in.	2.88
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	0.81	
Fail. Stress, psf	270	
Strain, %	15.0	
Ult. Stress, psf	270	
Strain, %	15.0	
$\sigma_1$ Failure, psf	386	
$\sigma_3$ Failure, psf	117	

**Type of Test:**  
Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, v<sub>so</sub> br ORG CL (OH)

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

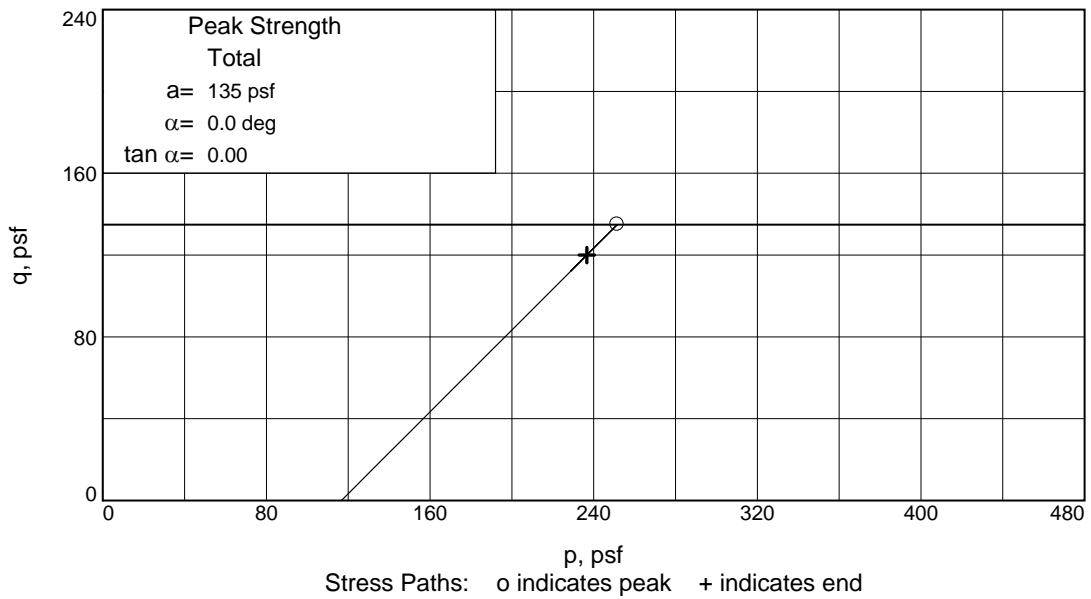
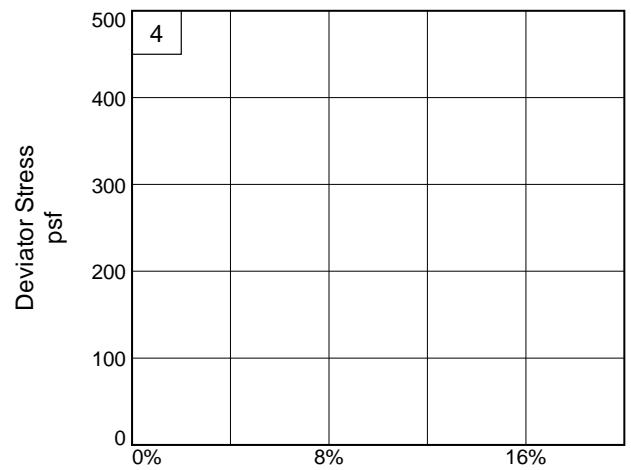
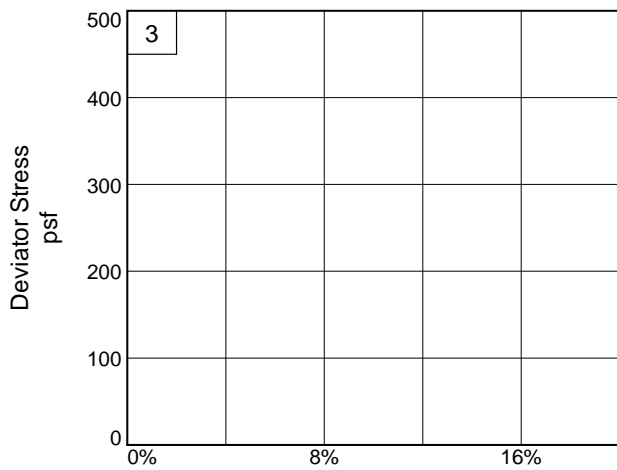
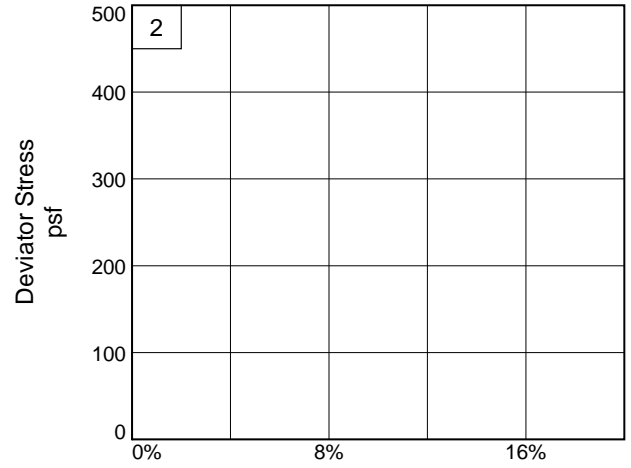
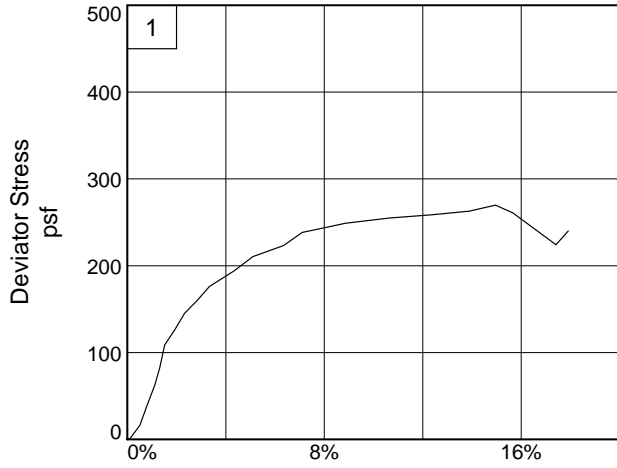
**Source of Sample:** B-2      **Depth:** 5

**Sample Number:** 3B

**Proj. No.:** 24762      **Date Sampled:** 6/2/22

Figure ASTM D2850





**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-2

**Depth:** 5

**Sample Number:** 3B

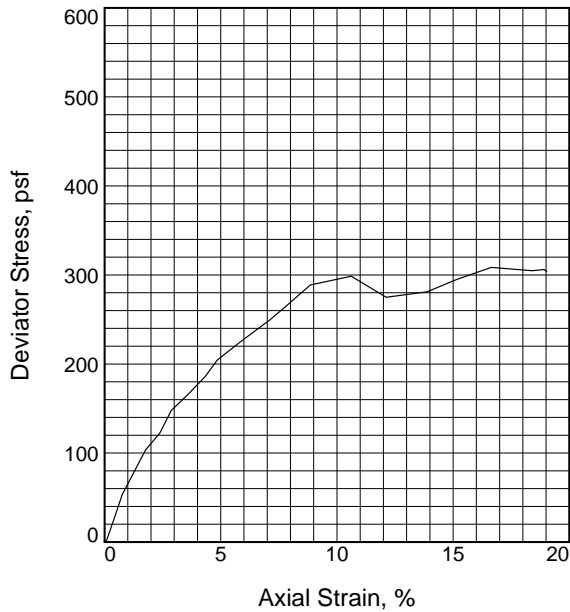
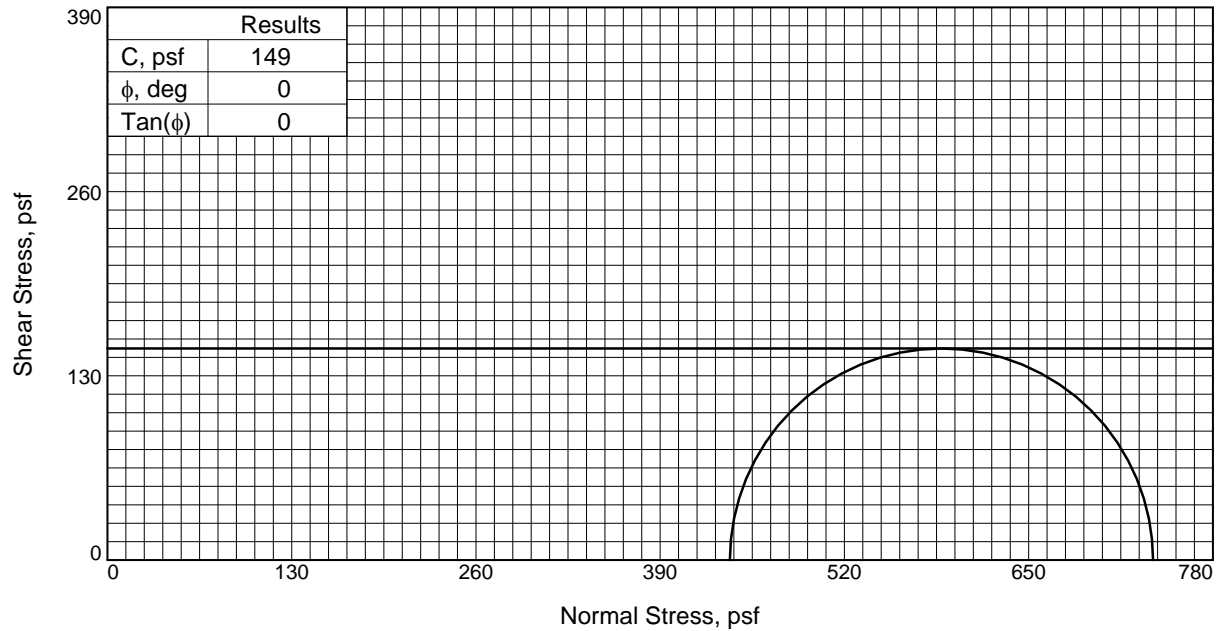
**Project No.:** 24762

**Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	340.1
	Dry Density, pcf	16.0
	Saturation, %	97.3
	Void Ratio	8.5635
	Diameter, in.	1.37
At Test	Height, in.	2.87
	Water Content, %	349.5
	Dry Density, pcf	16.0
	Saturation, %	100.0
	Void Ratio	8.5635
Strain rate, %/min.		1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	3.05
	Fail. Stress, psf	299
	Strain, %	10.6
	Ult. Stress, psf	275
	Strain, %	12.1
	$\sigma_1$ Failure, psf	738
	$\sigma_3$ Failure, psf	439

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vso br PT (PT)

**Assumed Specific Gravity=** 2.45

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-2      **Depth:** 9

**Sample Number:** 5B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

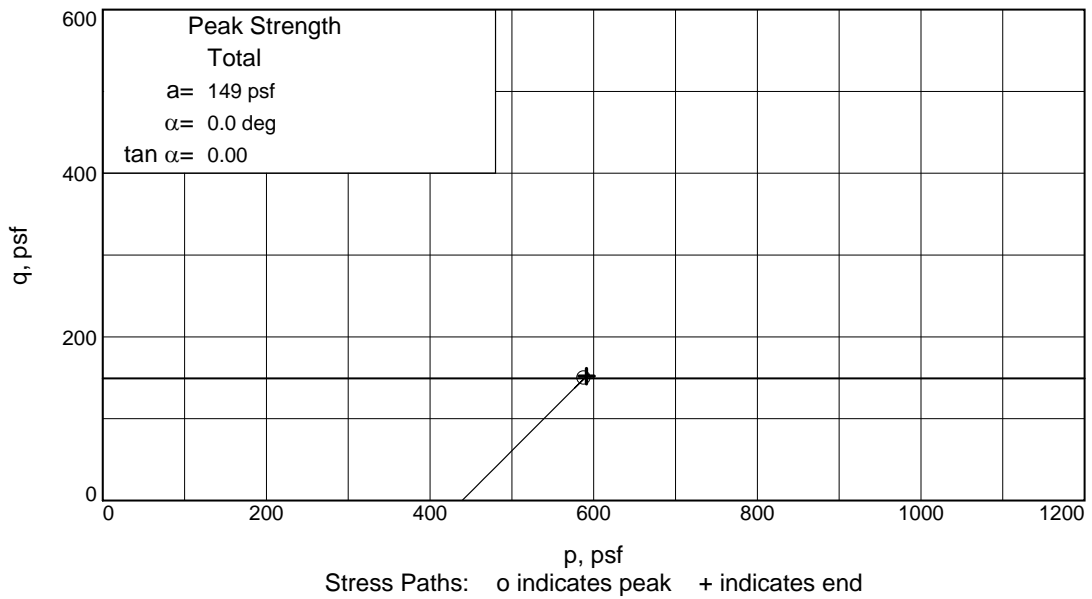
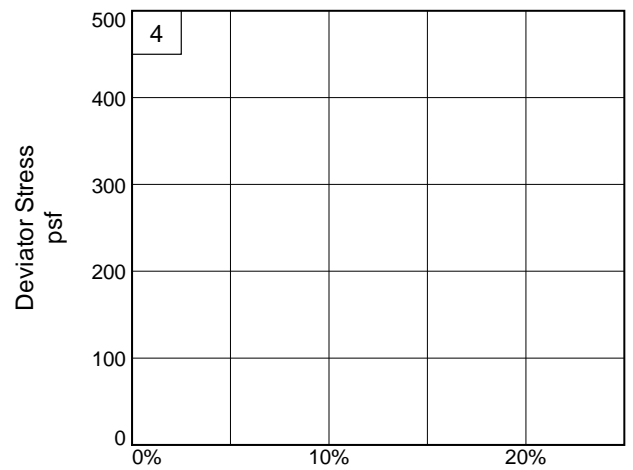
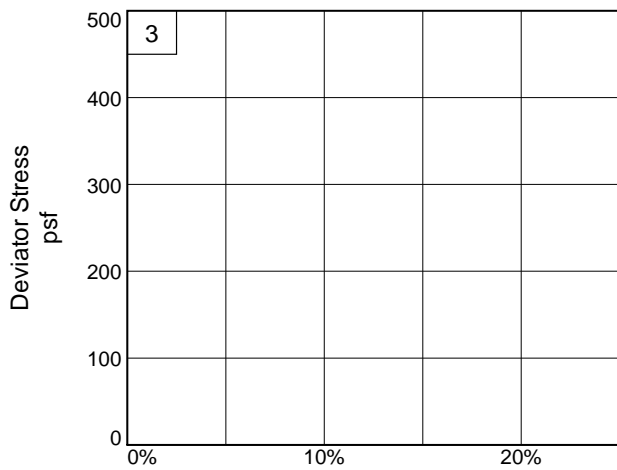
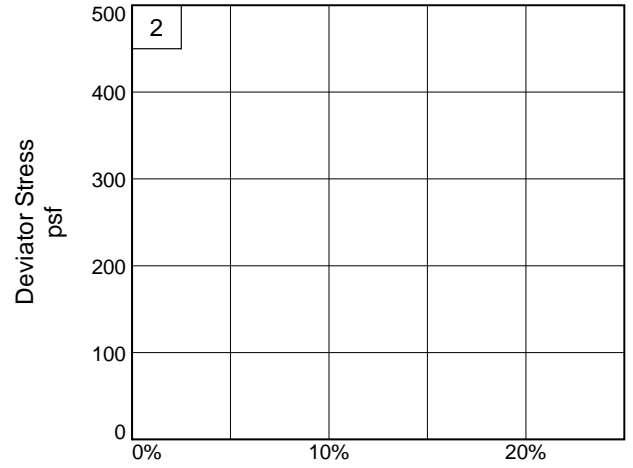
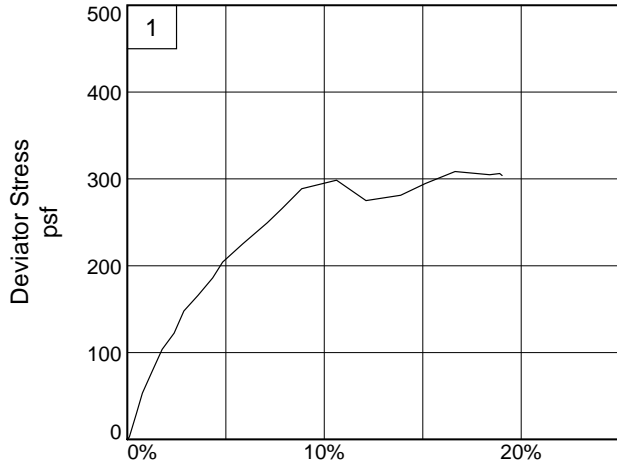


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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-2

**Depth:** 9

**Sample Number:** 5B

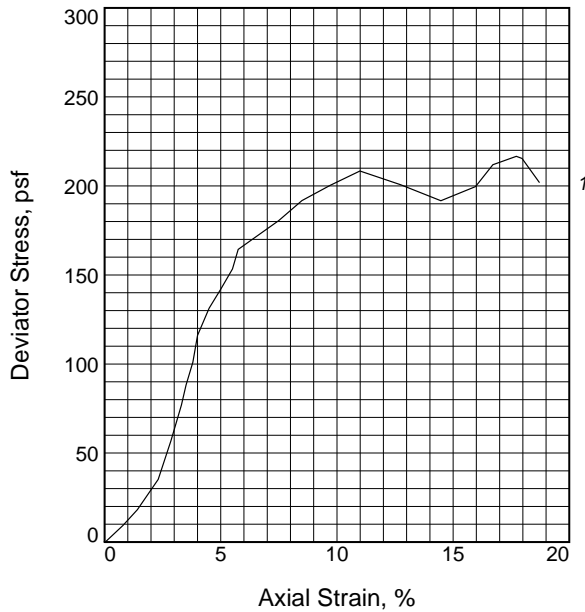
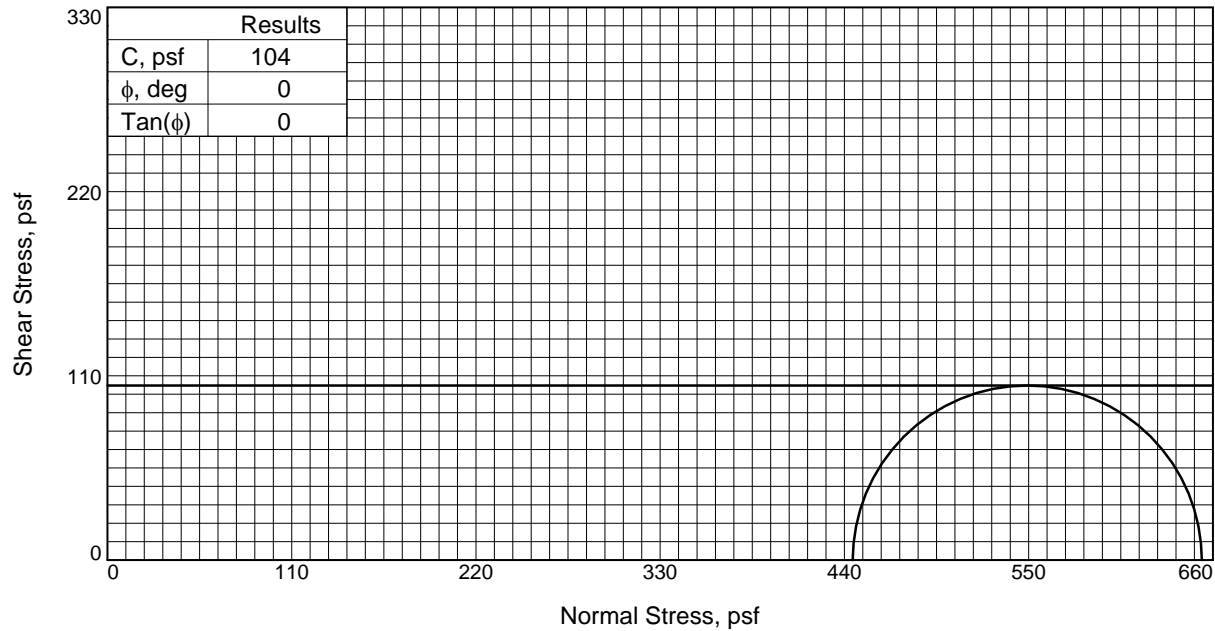
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	125.2
	Dry Density, pcf	38.4
	Saturation, %	99.6
	Void Ratio	3.4192
	Diameter, in.	1.39
	Height, in.	2.90
At Test	Water Content, %	125.7
	Dry Density, pcf	38.4
	Saturation, %	100.0
	Void Ratio	3.4192
	Diameter, in.	1.39
	Height, in.	2.90
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	3.09	
Fail. Stress, psf	208	
Strain, %	11.0	
Ult. Stress, psf	192	
Strain, %	14.5	
$\sigma_1$ Failure, psf	653	
$\sigma_3$ Failure, psf	445	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso g FT CL w/ fw si poc & om (CH)

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-2      **Depth:** 11

**Sample Number:** 6B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

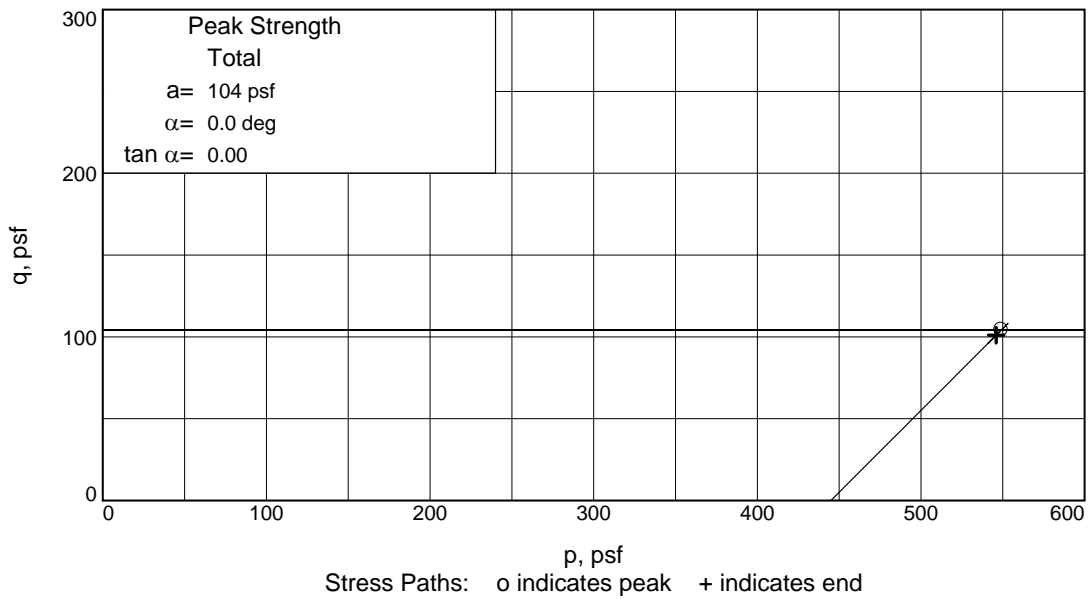
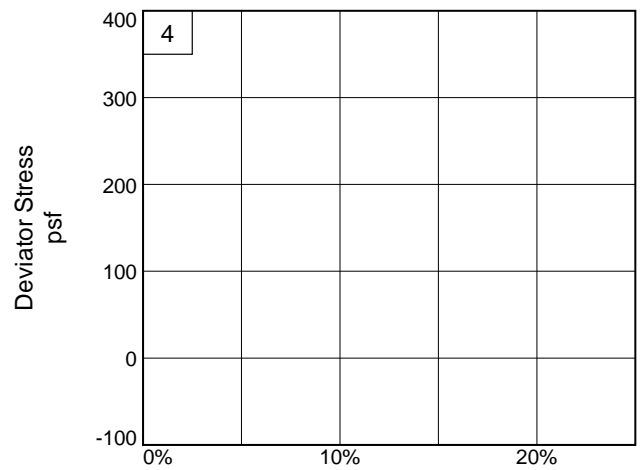
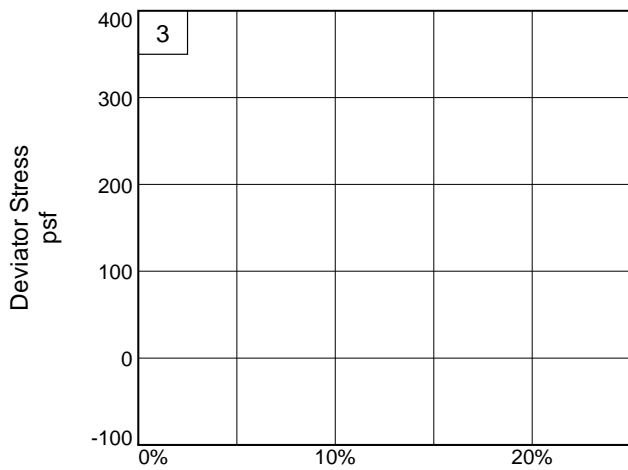
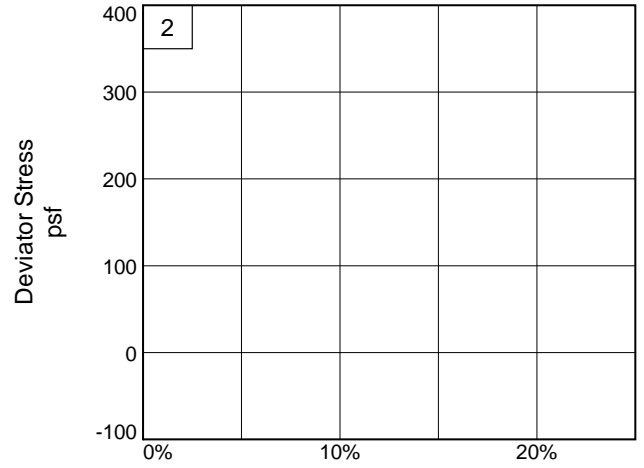
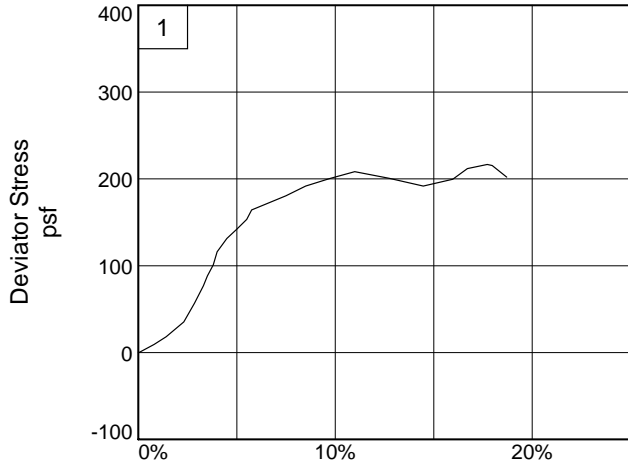


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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-2

**Depth:** 11

**Sample Number:** 6B

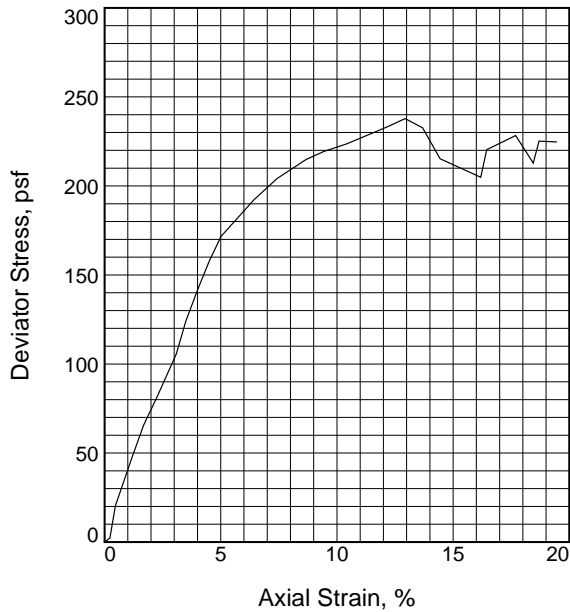
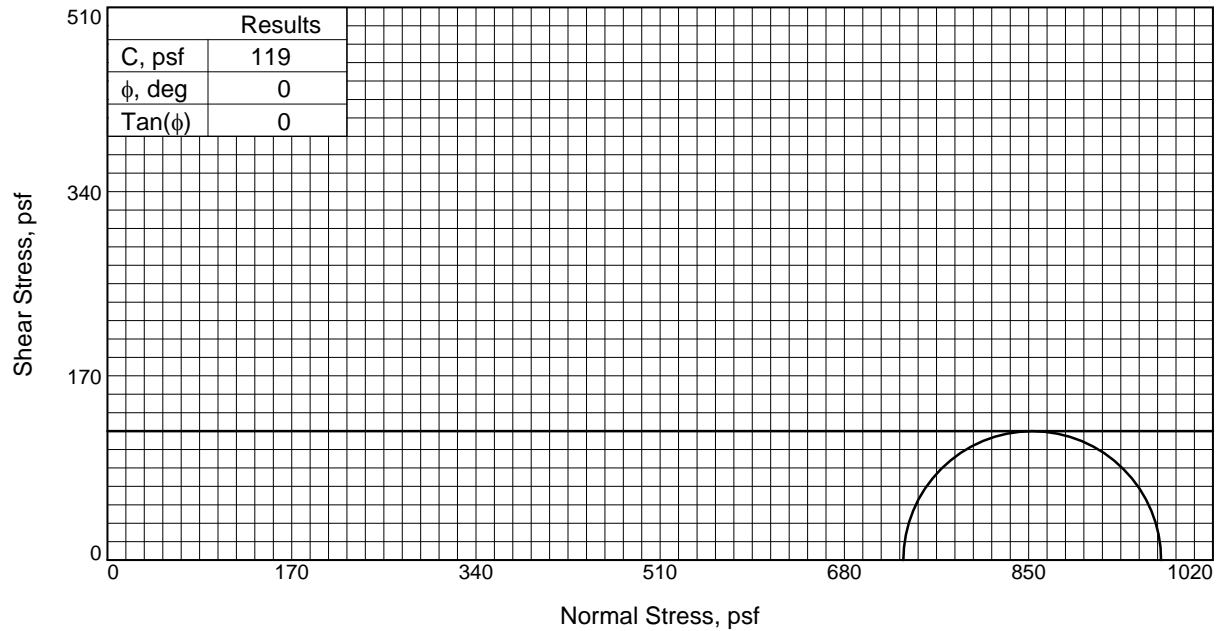
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	91.0
	Dry Density, pcf	48.4
	Saturation, %	98.8
	Void Ratio	2.5078
	Diameter, in.	1.42
At Test	Height, in.	2.92
	Water Content, %	92.2
	Dry Density, pcf	48.4
	Saturation, %	100.0
	Void Ratio	2.5078
Strain rate, %/min. Back Pressure, psi Cell Pressure, psi Fail. Stress, psf Strain, % Ult. Stress, psf Strain, % $\sigma_1$ Failure, psf $\sigma_3$ Failure, psf	Diameter, in.	1.42
	Height, in.	2.92
	1.00	
	0.00	
	5.10	
	238	
	12.9	
	215	
	14.4	
	972	
734		

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso g FT CL w/ tr si poc (CH)

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-2      **Depth:** 15

**Sample Number:** 8B

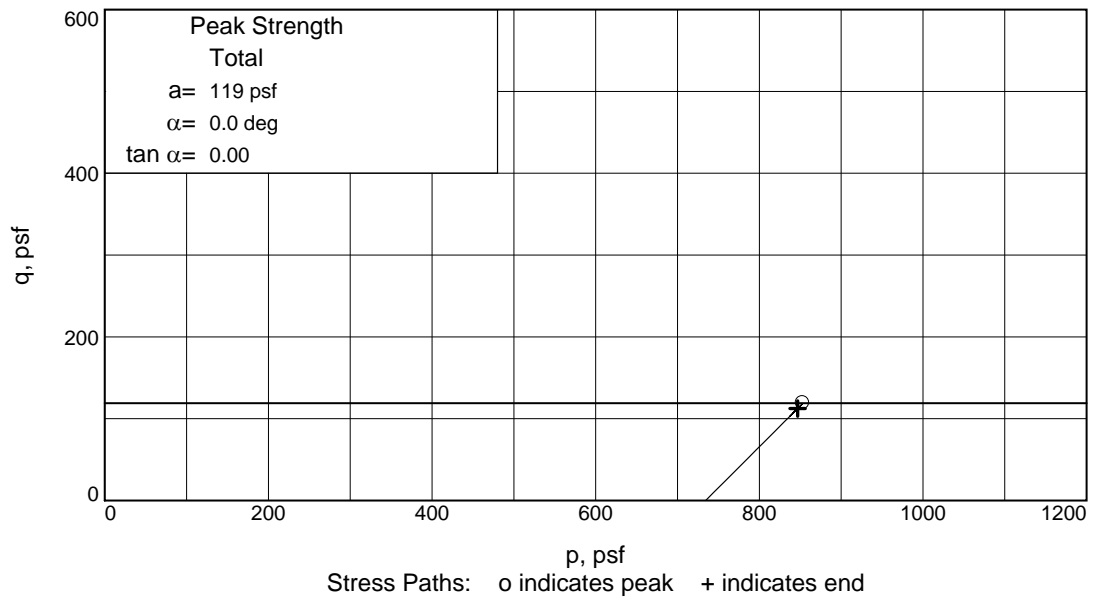
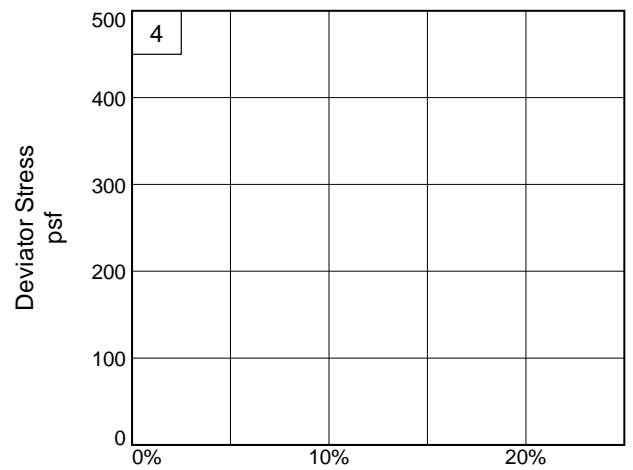
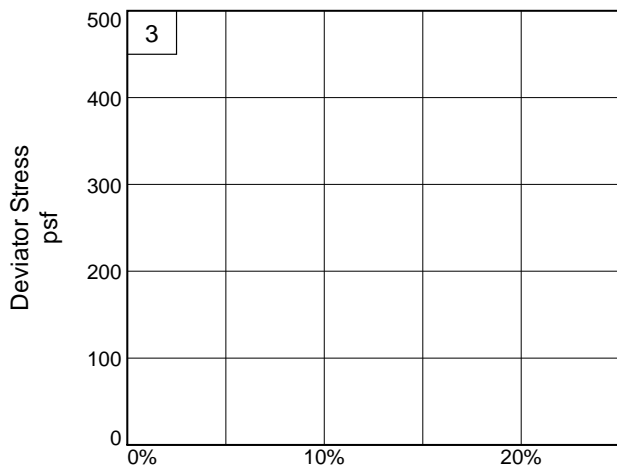
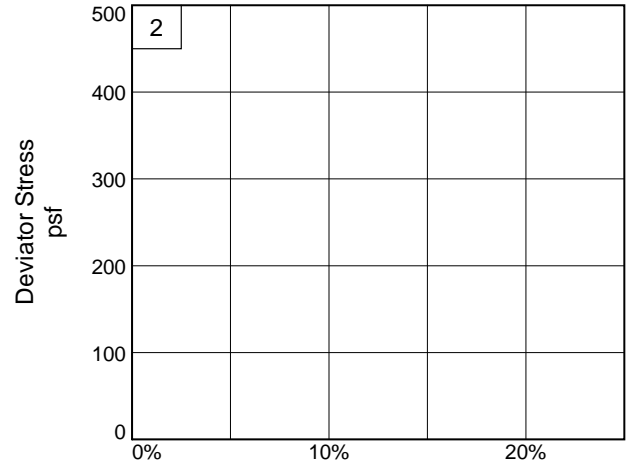
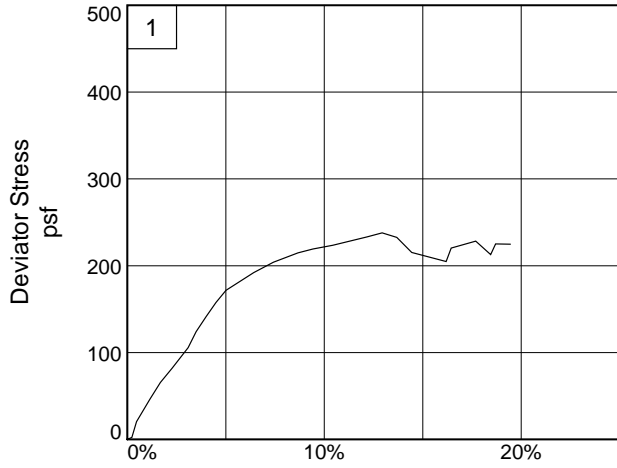
**Proj. No.:** 24762

**Date Sampled:** 6/2/22



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**Figure** ASTM D2850



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-2

**Depth:** 15

**Sample Number:** 8B

**Project No.:** 24762

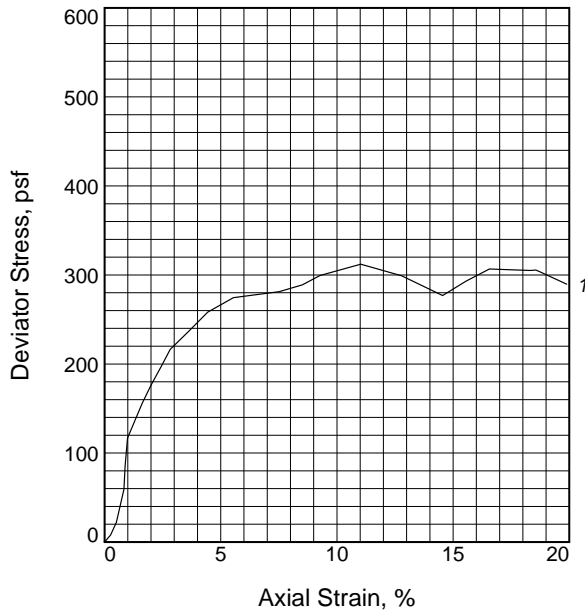
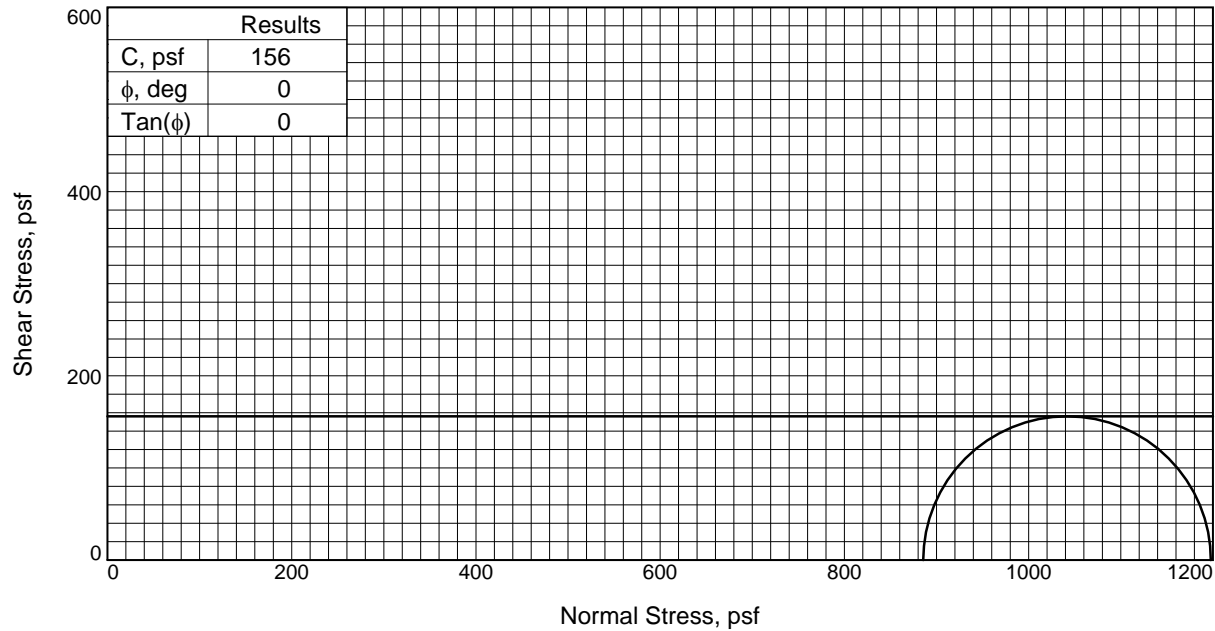
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR





Sample No.	1	
Initial	Water Content, %	85.3
	Dry Density, pcf	50.8
	Saturation, %	99.0
	Void Ratio	2.3426
	Diameter, in.	1.40
	Height, in.	2.91
At Test	Water Content, %	86.1
	Dry Density, pcf	50.8
	Saturation, %	100.0
	Void Ratio	2.3426
	Diameter, in.	1.40
	Height, in.	2.91
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	6.15	
Fail. Stress, psf	312	
Strain, %	11.0	
Ult. Stress, psf	277	
Strain, %	14.5	
$\sigma_1$ Failure, psf	1198	
$\sigma_3$ Failure, psf	886	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, v<sub>so</sub> g FT CL (CH)

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-2      **Depth:** 19

**Sample Number:** 10B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

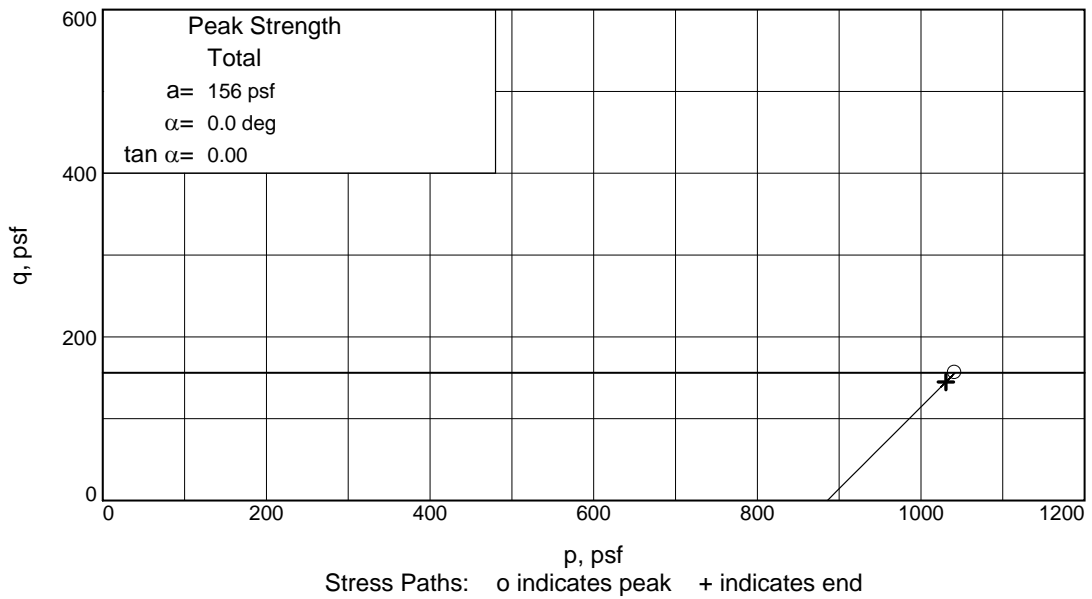
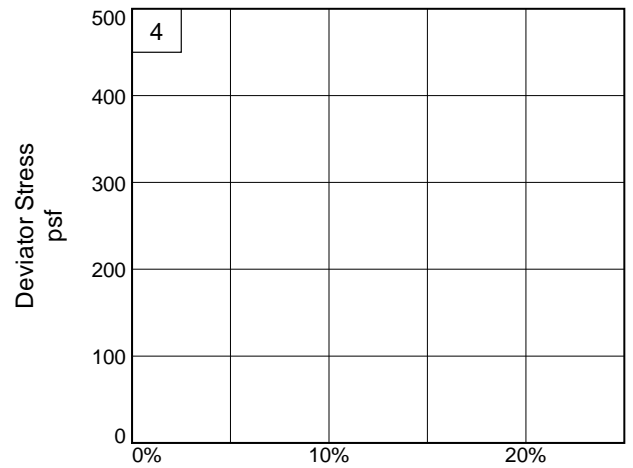
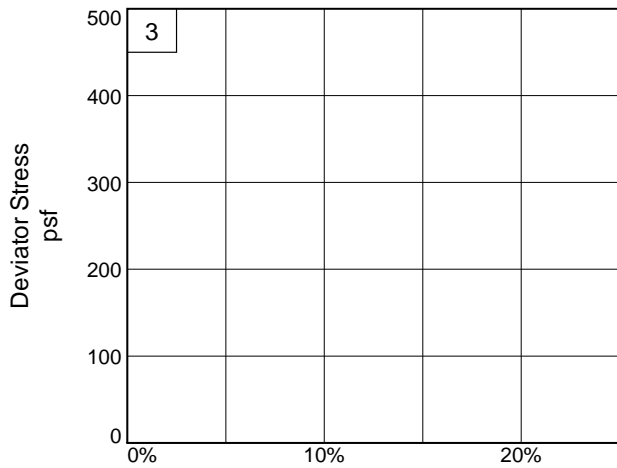
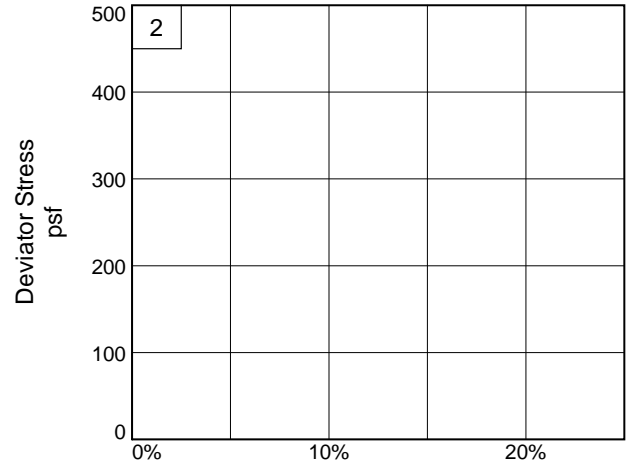
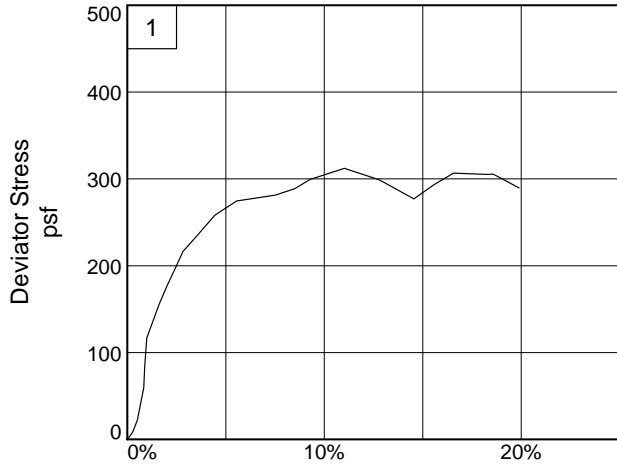


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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

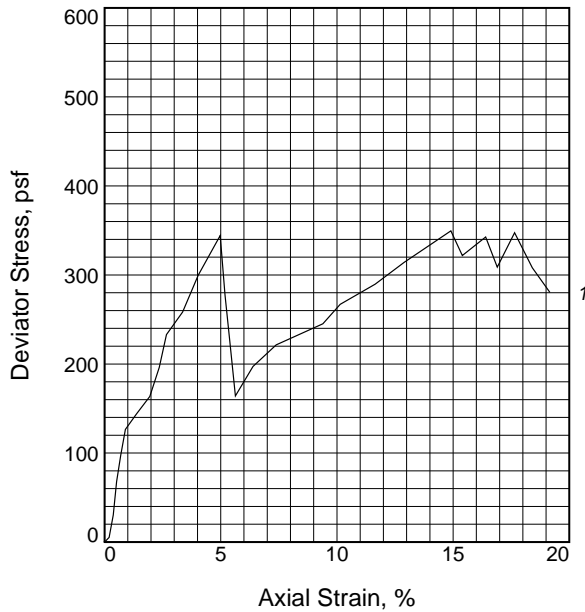
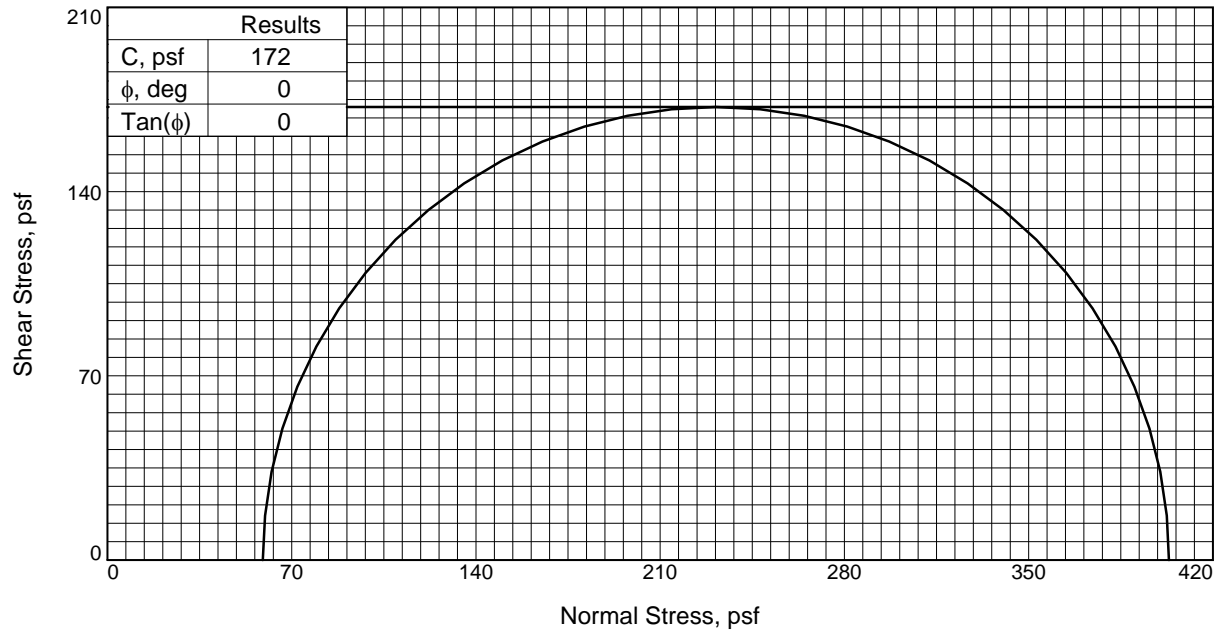
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-2      **Depth:** 19      **Sample Number:** 10B

**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	202.4
	Dry Density, pcf	26.0
	Saturation, %	99.9
	Void Ratio	5.3674
	Diameter, in.	1.39
At Test	Height, in.	2.80
	Water Content, %	202.5
	Dry Density, pcf	26.0
	Saturation, %	100.0
	Void Ratio	5.3674
	Diameter, in.	1.39
	Height, in.	2.80
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	0.41
Fail. Stress, psf	344	
Strain, %	5.0	
Ult. Stress, psf	164	
Strain, %	5.6	
$\sigma_1$ Failure, psf	403	
$\sigma_3$ Failure, psf	59	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vso dk g ORG CL (OH)

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA  
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH  
**Source of Sample:** B-3      **Depth:** 1  
**Sample Number:** 1B  
**Proj. No.:** 24762      **Date Sampled:** 6/2/22

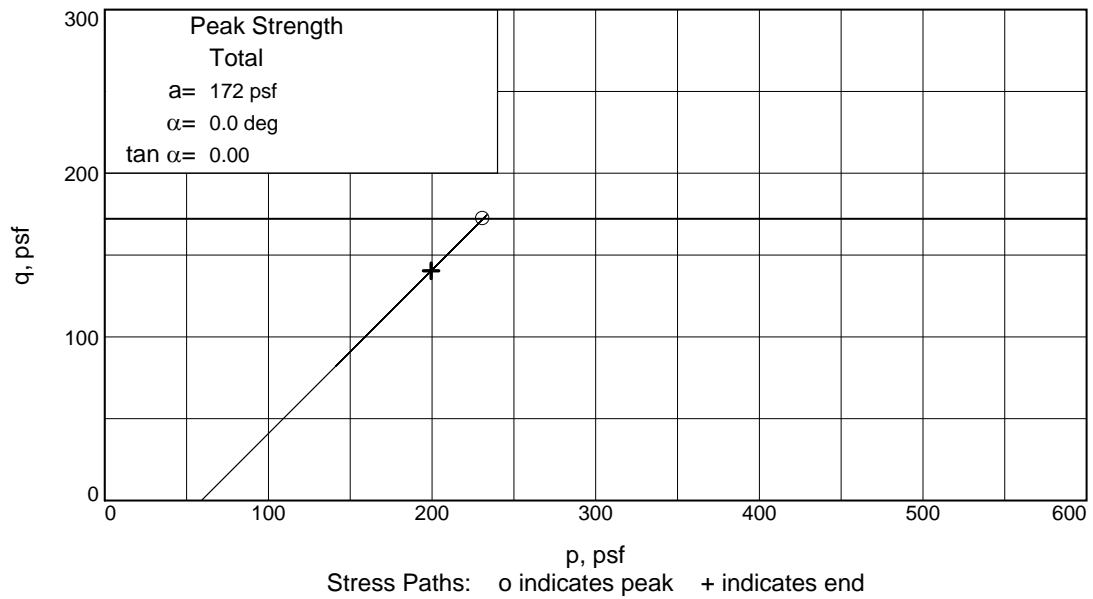
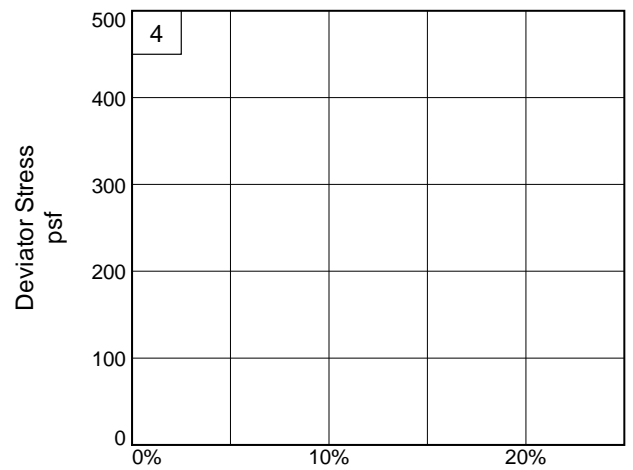
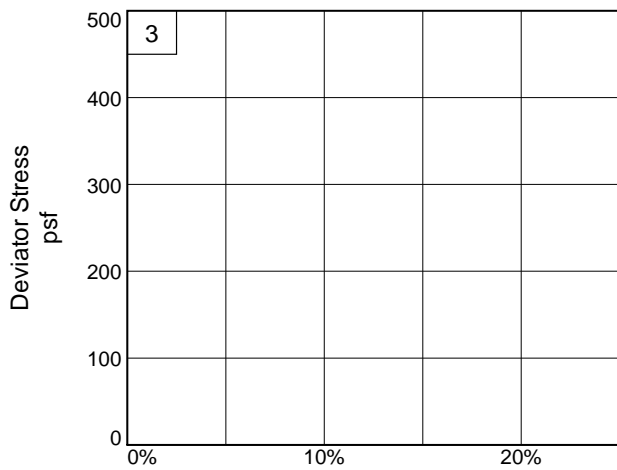
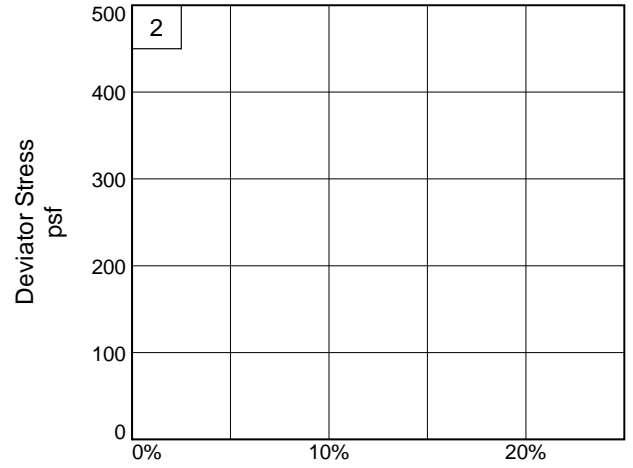
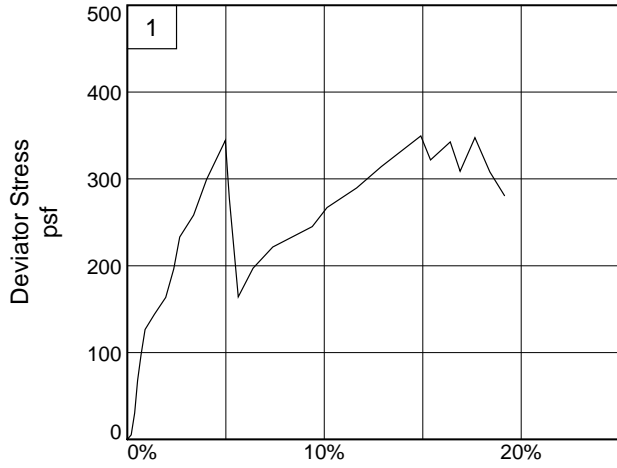


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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-3

**Depth:** 1

**Sample Number:** 1B

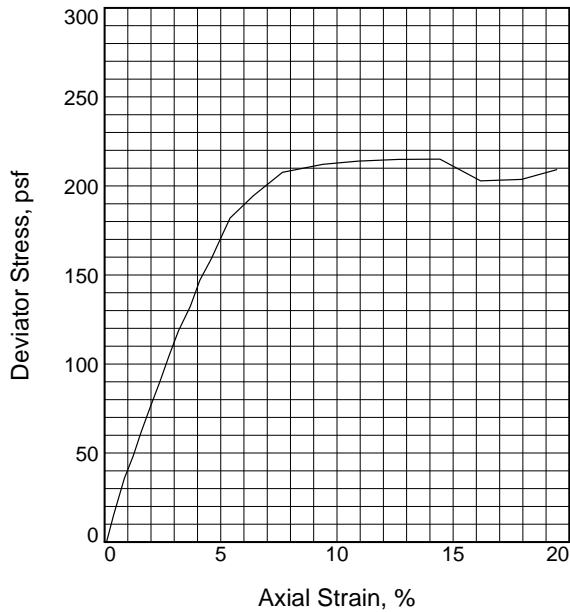
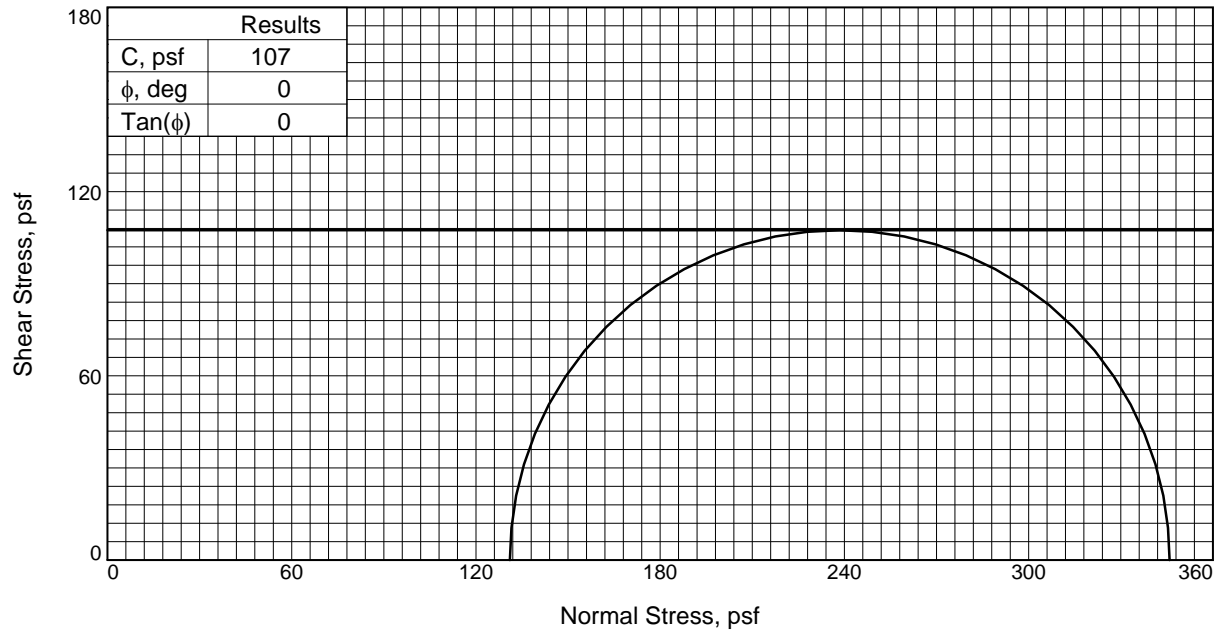
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.		1
Initial	Water Content, %	144.6
	Dry Density, pcf	34.1
	Saturation, %	99.4
	Void Ratio	3.8565
	Diameter, in.	1.38
	Height, in.	2.88
At Test	Water Content, %	145.5
	Dry Density, pcf	34.1
	Saturation, %	100.0
	Void Ratio	3.8565
	Diameter, in.	1.38
	Height, in.	2.88
Strain rate, %/min.		1.00
Back Pressure, psi		0.00
Cell Pressure, psi		0.91
Fail. Stress, psf		215
Strain, %		12.7
Ult. Stress, psf		215
Strain, %		14.4
$\sigma_1$ Failure, psf		346
$\sigma_3$ Failure, psf		131

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso g & br ORG CL w/ tr rts (OH)

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-3      **Depth:** 3

**Sample Number:** 2B

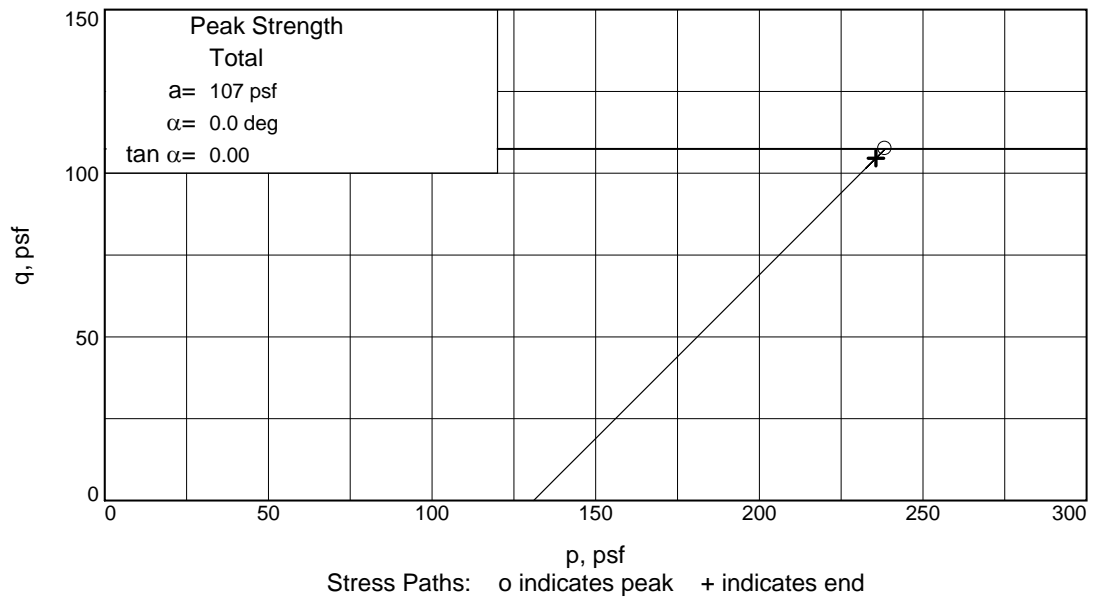
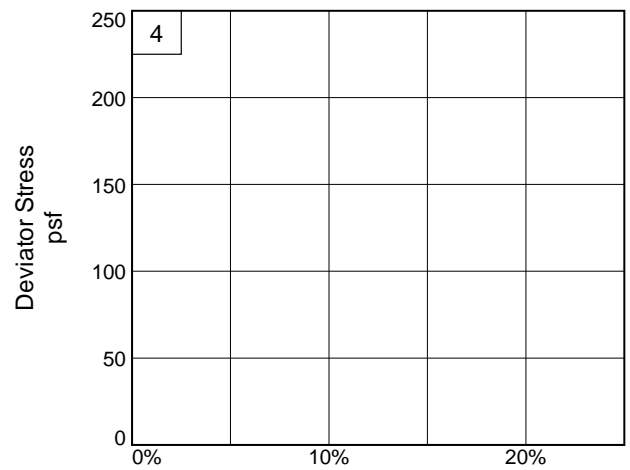
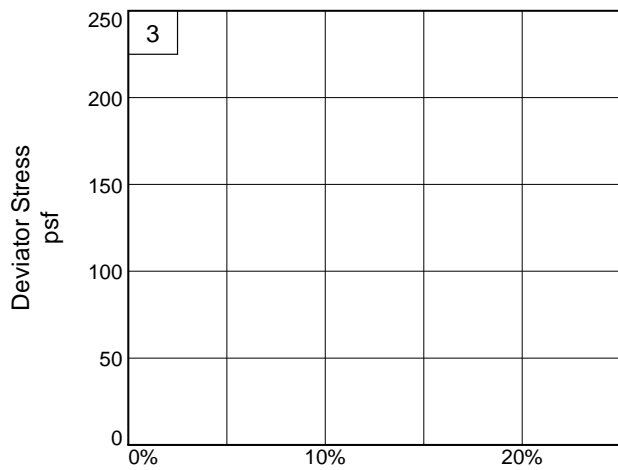
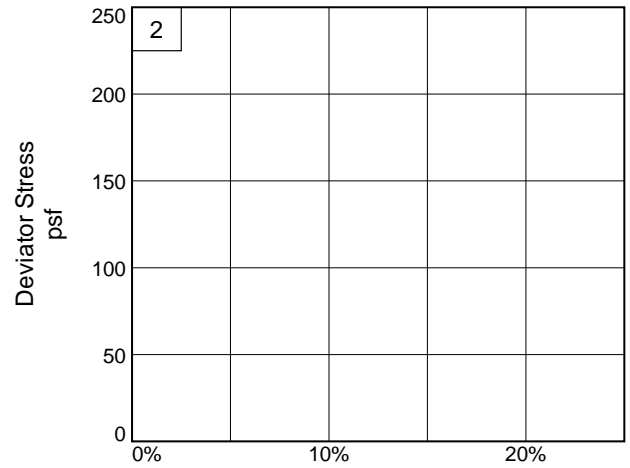
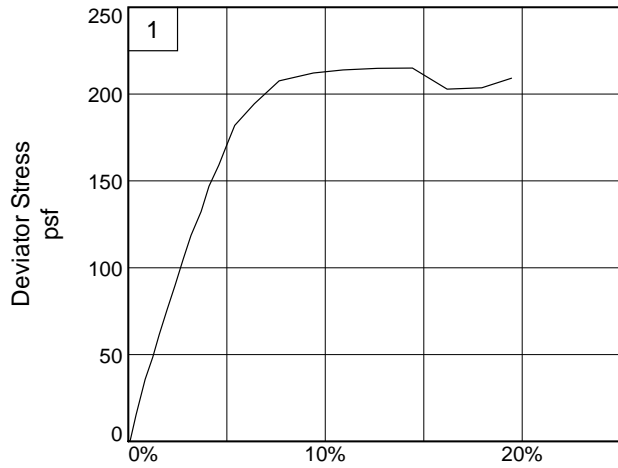
**Proj. No.:** 24762

**Date Sampled:** 6/2/22

**Figure** ASTM D2850



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**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-3

**Depth:** 3

**Sample Number:** 2B

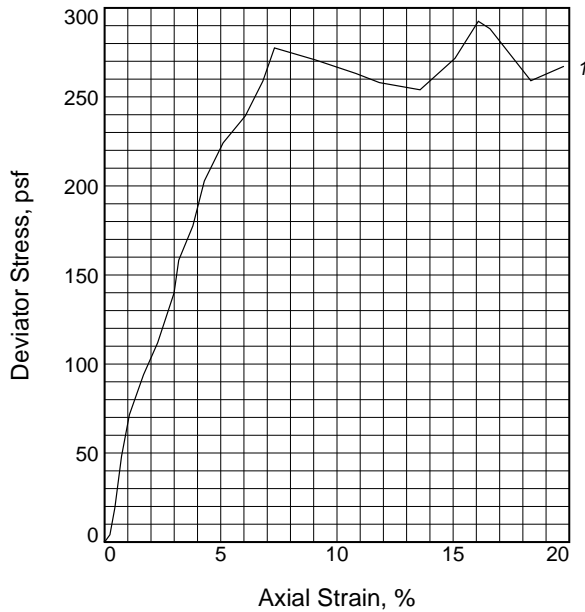
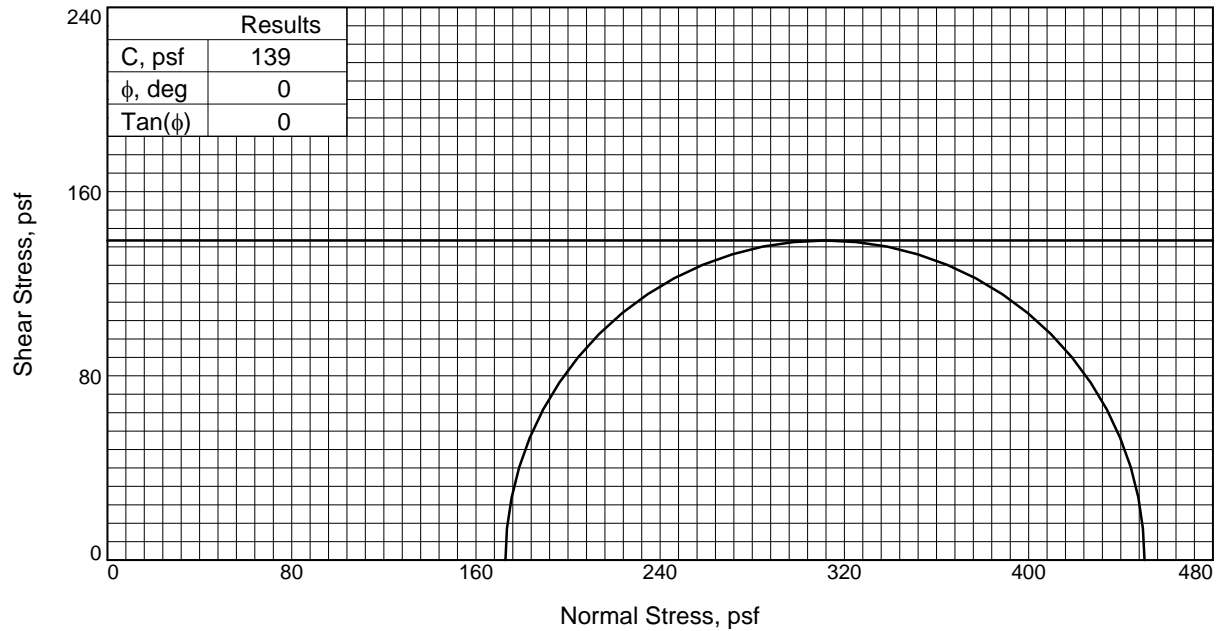
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.		1
Initial	Water Content, %	274.1
	Dry Density, pcf	20.0
	Saturation, %	99.8
	Void Ratio	7.2753
	Diameter, in.	1.36
	Height, in.	2.90
At Test	Water Content, %	274.5
	Dry Density, pcf	20.0
	Saturation, %	100.0
	Void Ratio	7.2753
	Diameter, in.	1.36
	Height, in.	2.90
Strain rate, %/min.		1.00
Back Pressure, psi		0.00
Cell Pressure, psi		1.20
Fail. Stress, psf		278
Strain, %		7.3
Ult. Stress, psf		254
Strain, %		13.6
$\sigma_1$ Failure, psf		450
$\sigma_3$ Failure, psf		173

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vso g & br ORG CL w/ tr rts (OH)

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-3      **Depth:** 5

**Sample Number:** 3B

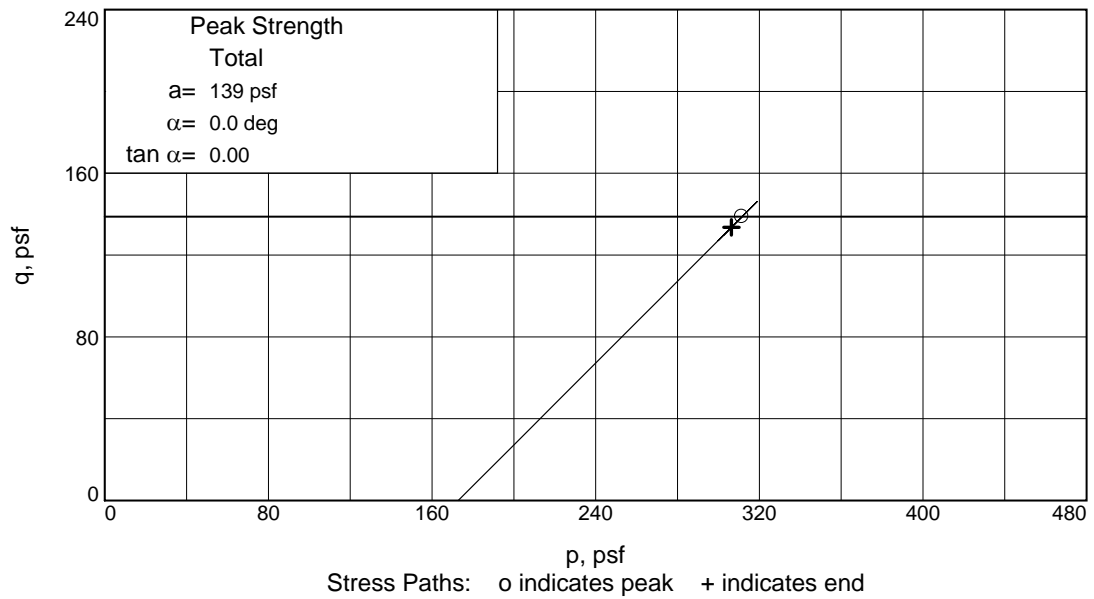
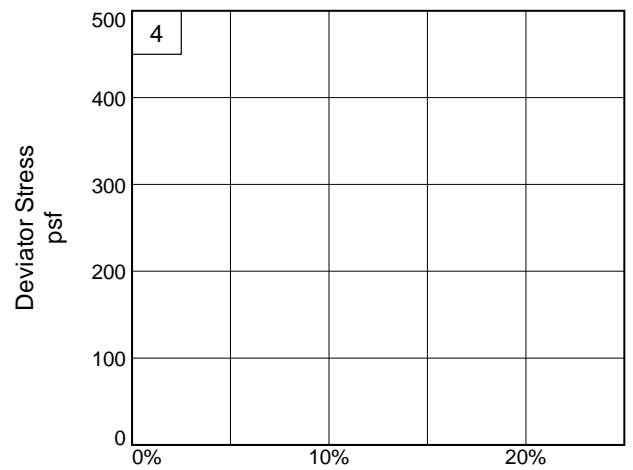
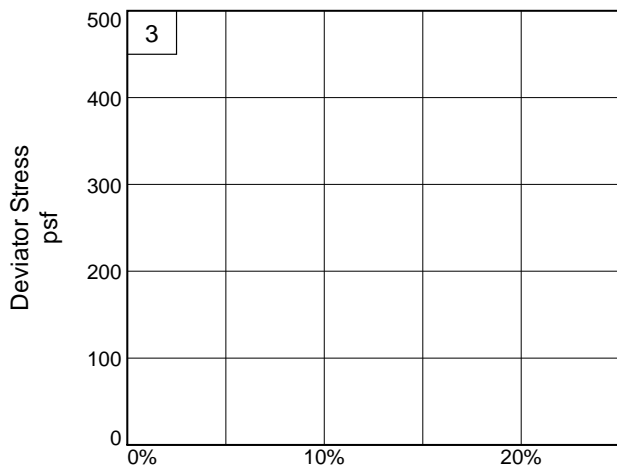
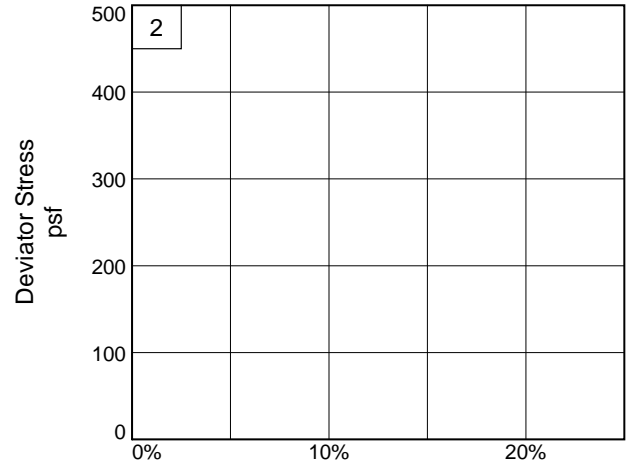
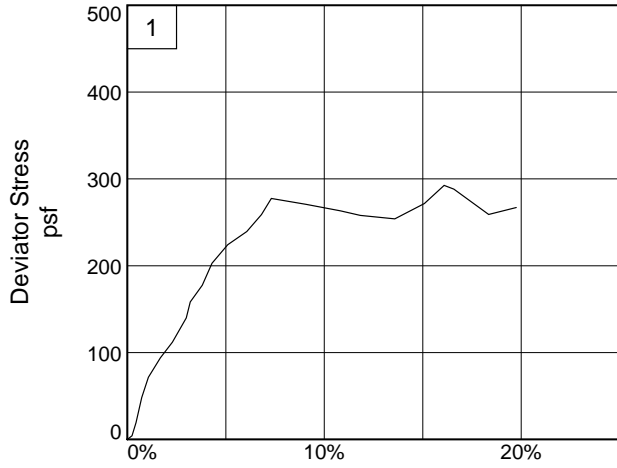
**Proj. No.:** 24762

**Date Sampled:** 6/2/22



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**Figure** ASTM D2850



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-3

**Depth:** 5

**Sample Number:** 3B

**Project No.:** 24762

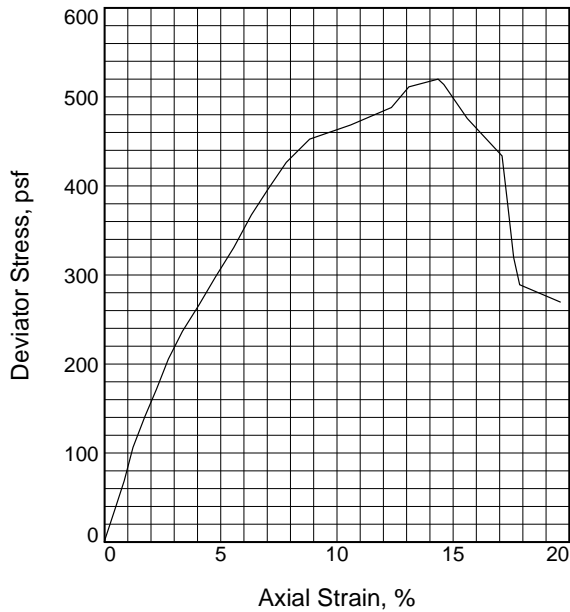
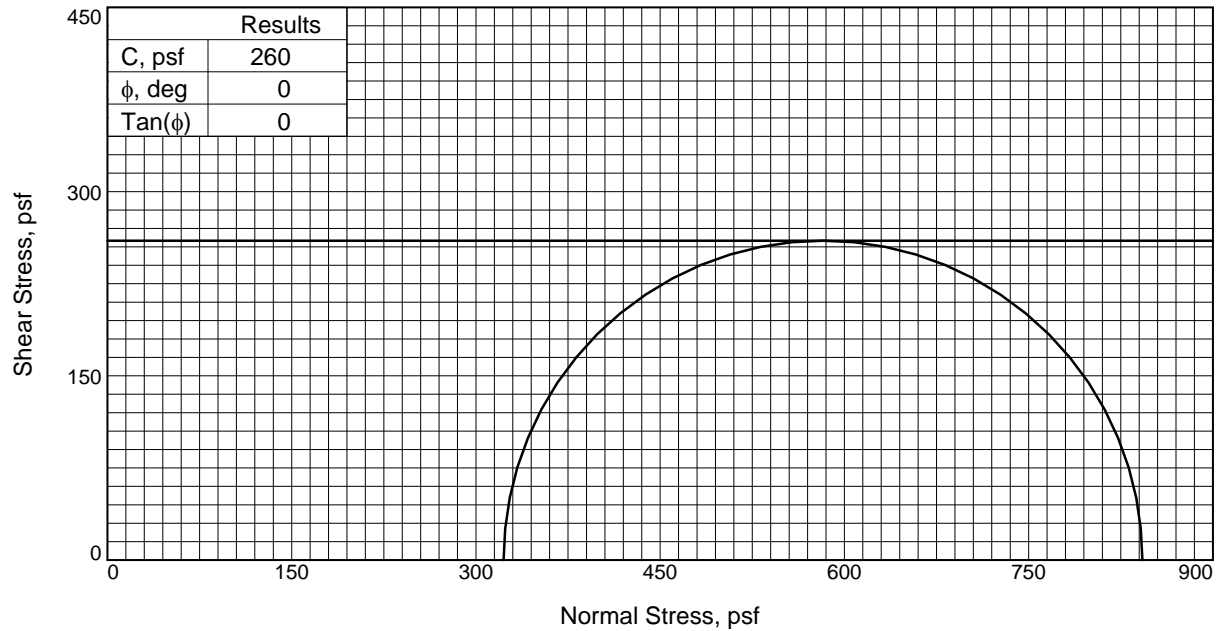
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR





Sample No.	1	
Initial	Water Content, %	565.1
	Dry Density, pcf	10.0
	Saturation, %	97.0
	Void Ratio	14.2707
	Diameter, in.	1.38
	Height, in.	2.91
At Test	Water Content, %	582.5
	Dry Density, pcf	10.0
	Saturation, %	100.0
	Void Ratio	14.2707
	Diameter, in.	1.38
	Height, in.	2.91
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	2.24	
Fail. Stress, psf	520	
Strain, %	14.4	
Ult. Stress, psf	514	
Strain, %	14.6	
$\sigma_1$ Failure, psf	843	
$\sigma_3$ Failure, psf	323	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, so br & g HUM w/ fw rts (PT)

**Assumed Specific Gravity=** 2.45

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-3      **Depth:** 7

**Sample Number:** 4B

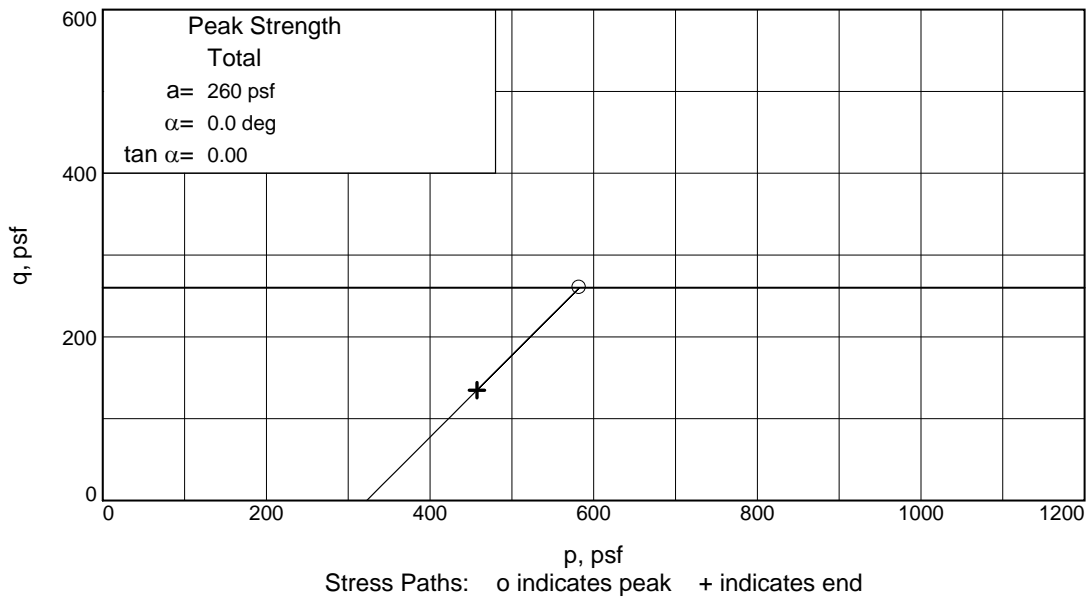
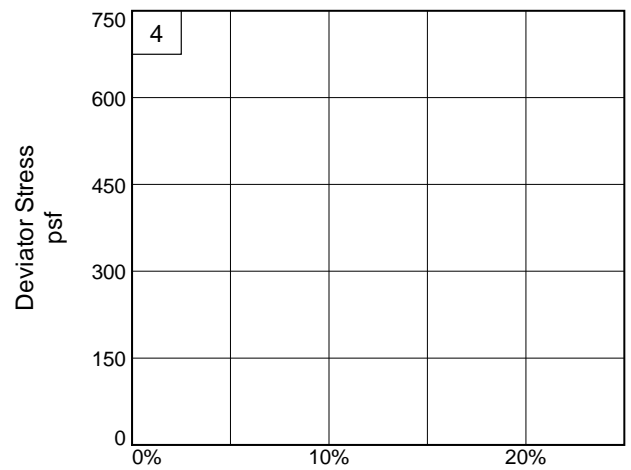
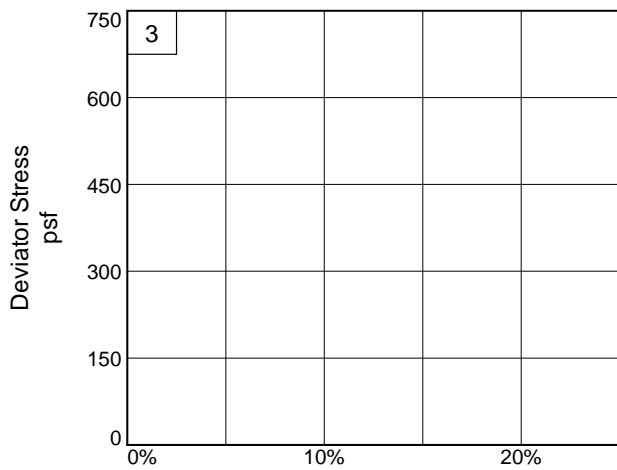
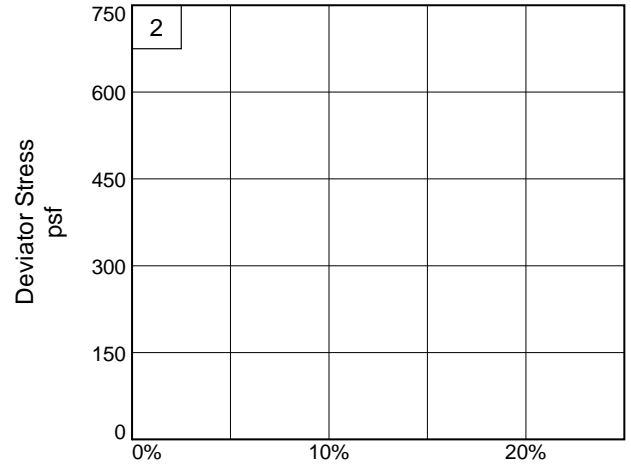
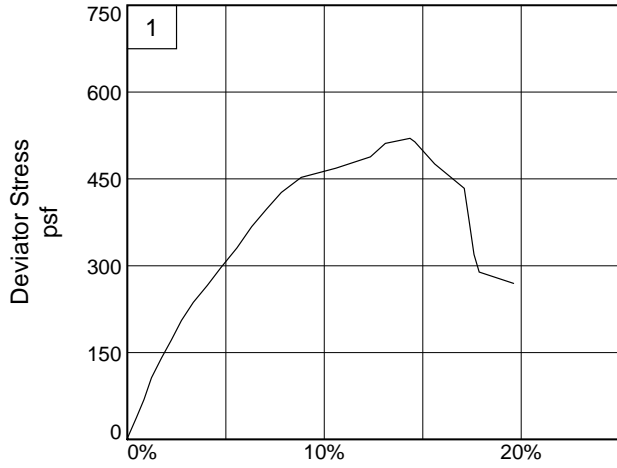
**Proj. No.:** 24762

**Date Sampled:** 6/2/22



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**Figure** ASTM D2850



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-3

**Depth:** 7

**Sample Number:** 4B

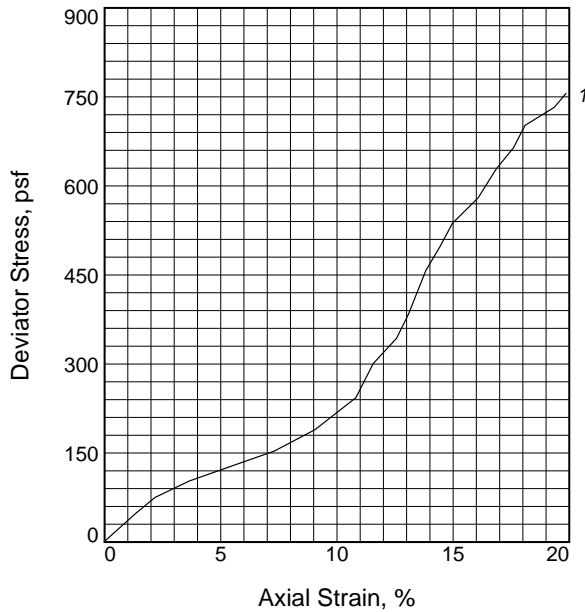
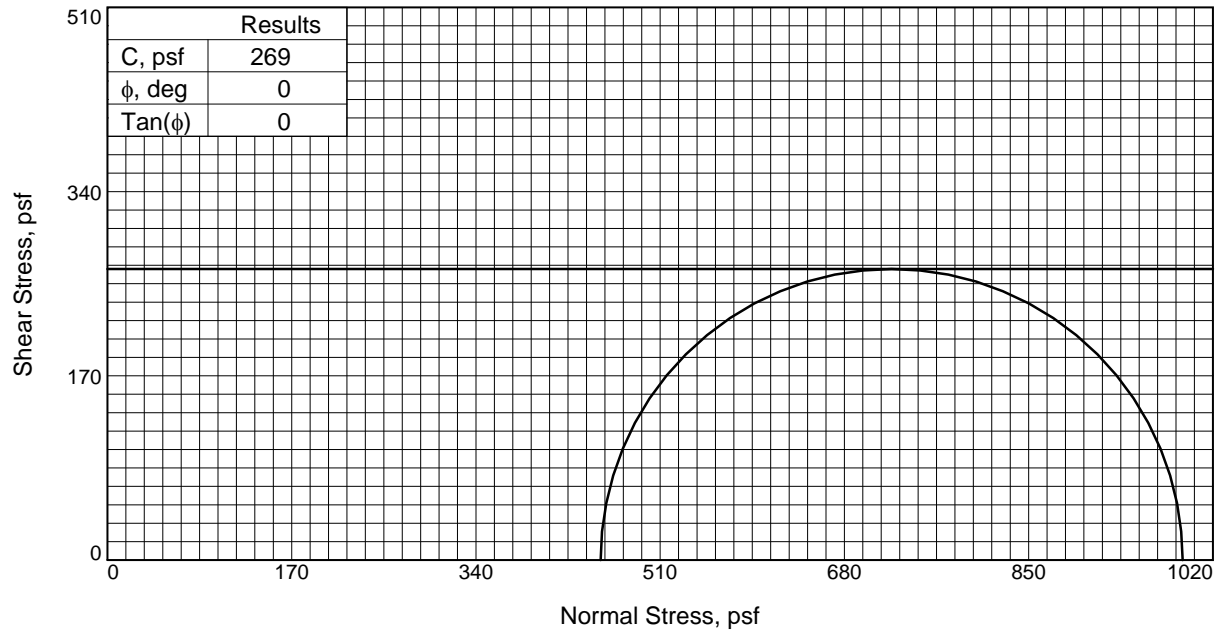
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.		1
Initial	Water Content, %	35.0
	Dry Density, pcf	86.8
	Saturation, %	99.5
	Void Ratio	0.9562
	Diameter, in.	1.41
At Test	Height, in.	2.86
	Water Content, %	35.2
	Dry Density, pcf	86.8
	Saturation, %	100.0
	Void Ratio	0.9562
	Diameter, in.	1.41
	Height, in.	2.86
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	3.16
Fail. Stress, psf		537
	Strain, %	15.0
Ult. Stress, psf		537
	Strain, %	15.0
$\sigma_1$ Failure, psf		992
$\sigma_3$ Failure, psf		455

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, so g FT CL w/ fw rts & om (CH)

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-3      **Depth:** 9

**Sample Number:** 5B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

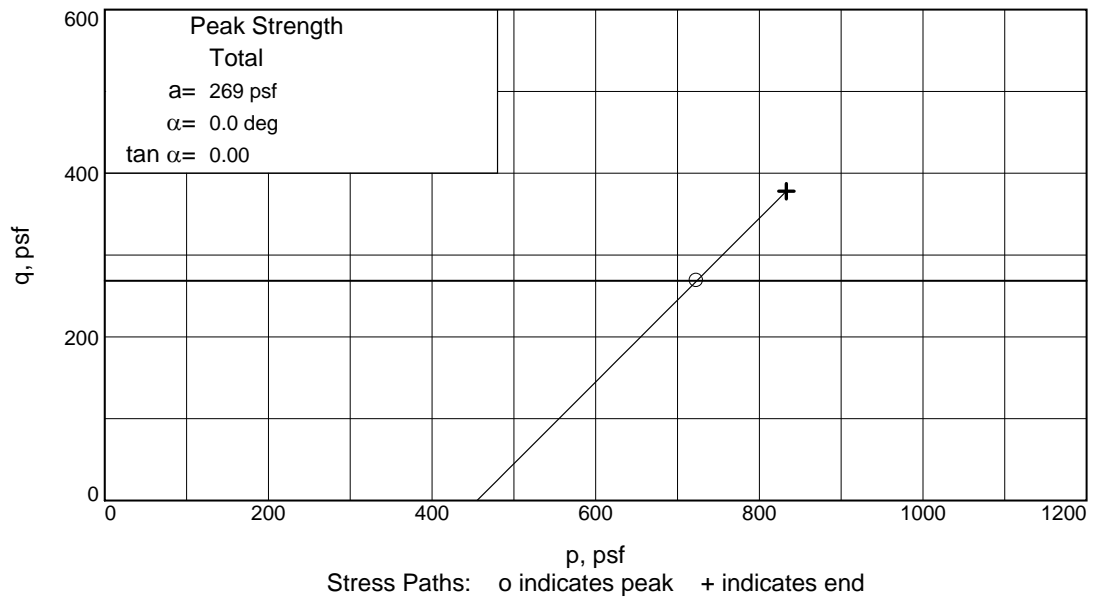
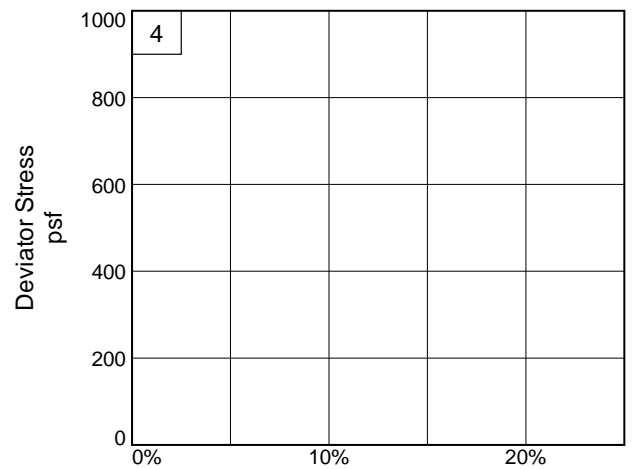
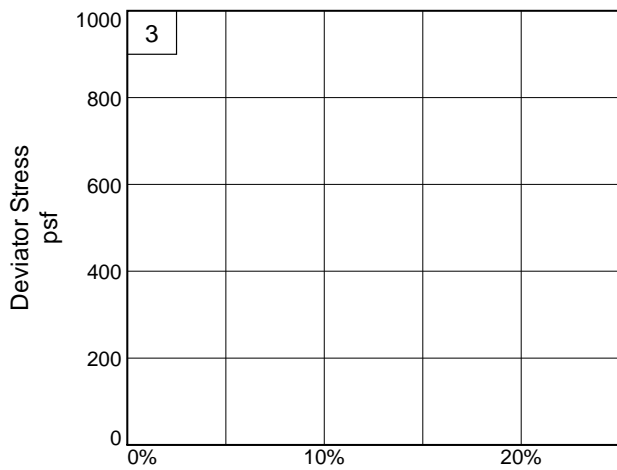
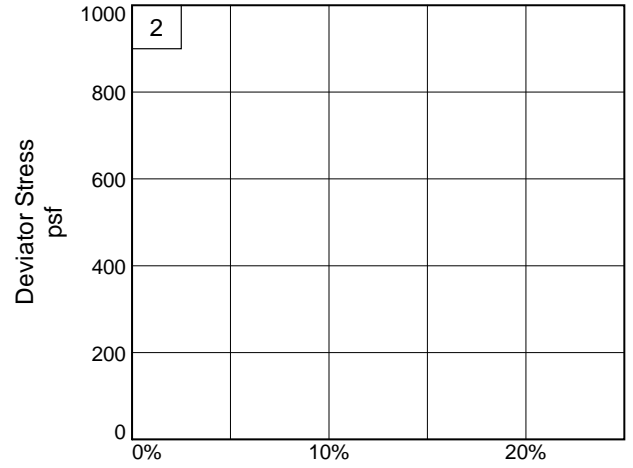
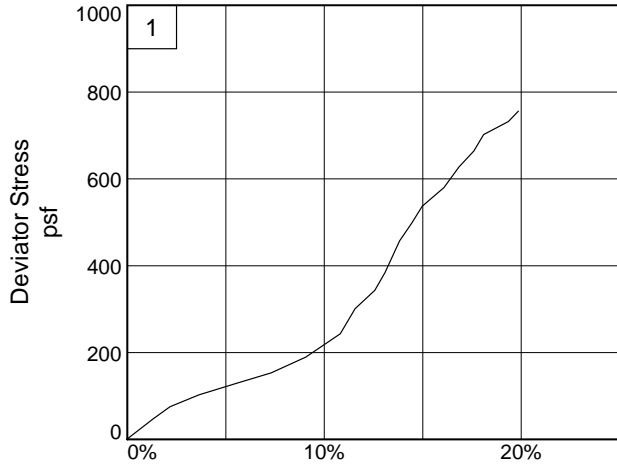


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SINCE 1946

**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-3

**Depth:** 9

**Sample Number:** 5B

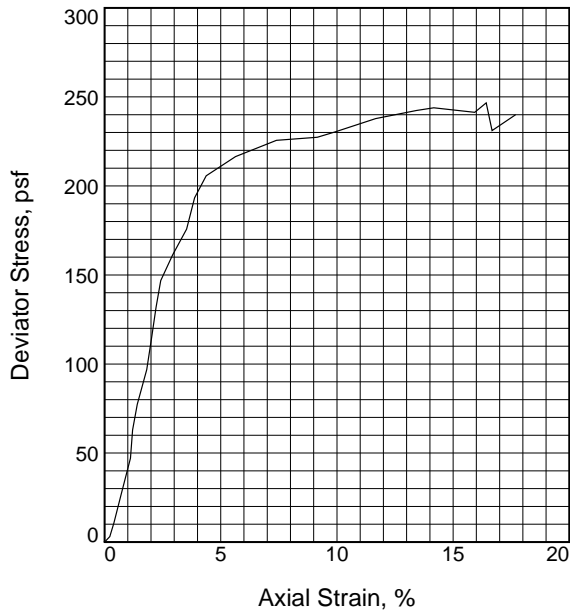
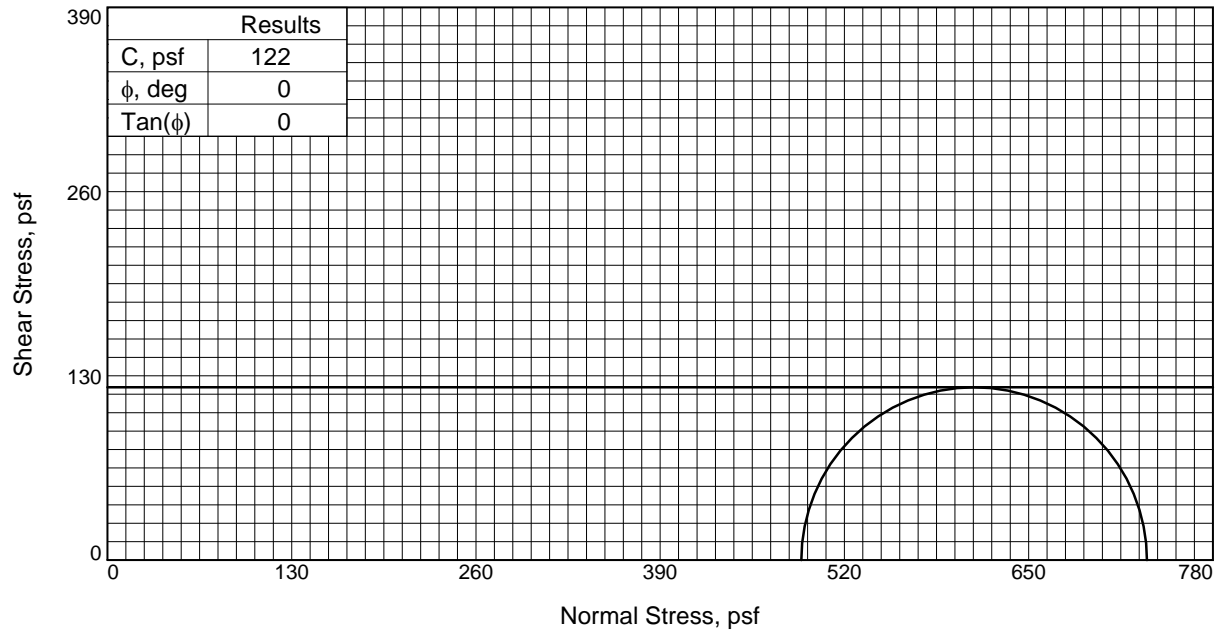
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	86.5
	Dry Density, pcf	50.3
	Saturation, %	98.9
	Void Ratio	2.3787
	Diameter, in.	1.40
	Height, in.	2.89
At Test	Water Content, %	87.5
	Dry Density, pcf	50.3
	Saturation, %	100.0
	Void Ratio	2.3787
	Diameter, in.	1.40
	Height, in.	2.89
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	3.40	
Fail. Stress, psf	244	
Strain, %	14.2	
Ult. Stress, psf	244	
Strain, %	14.2	
$\sigma_1$ Failure, psf	733	
$\sigma_3$ Failure, psf	490	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso g FT CL w/ tr om & si poc (CH)

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-3      **Depth:** 11

**Sample Number:** 6B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

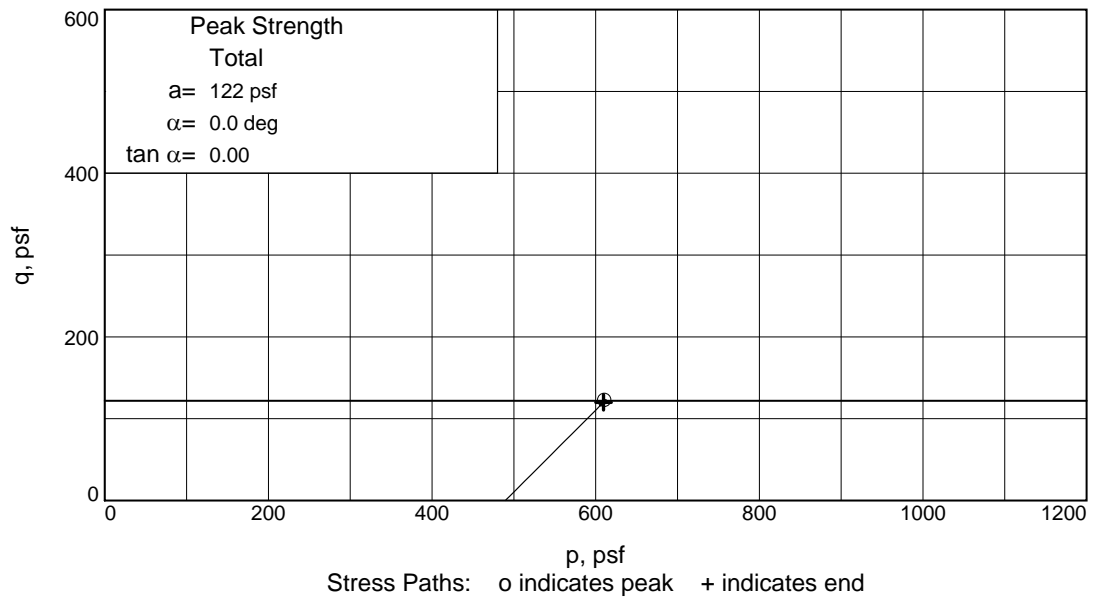
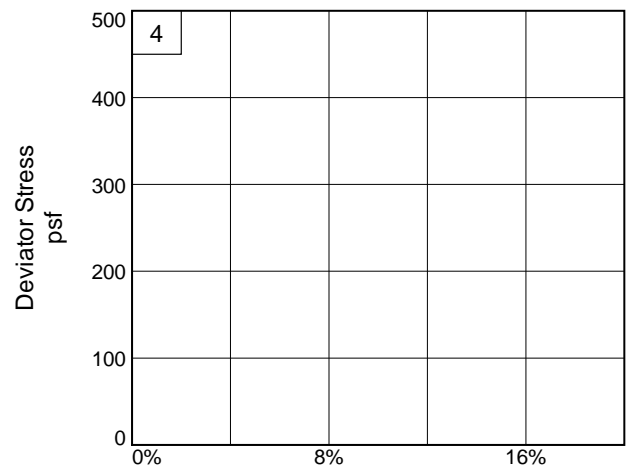
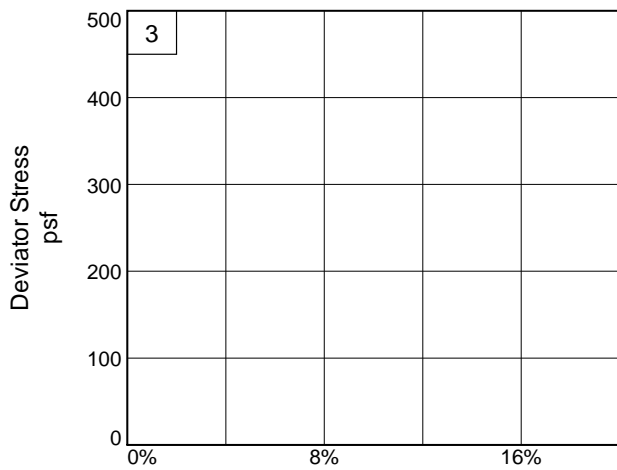
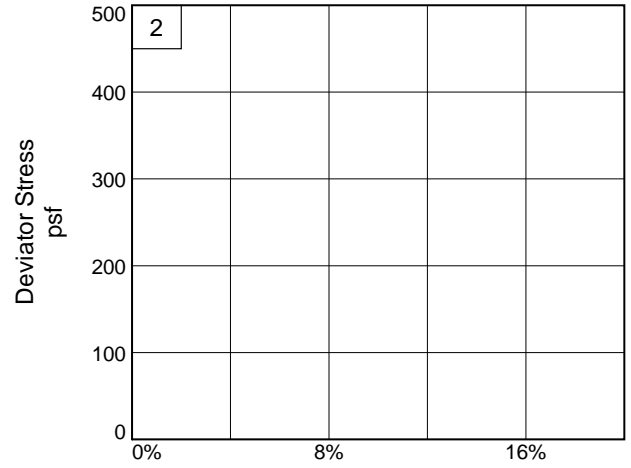
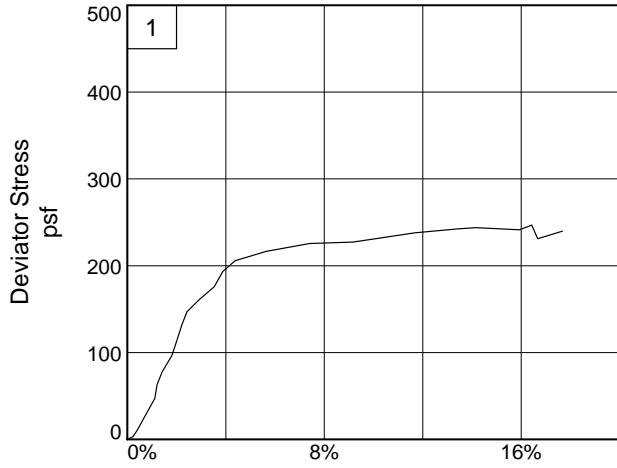


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SINCE 1946

**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-3

**Depth:** 11

**Sample Number:** 6B

**Project No.:** 24762

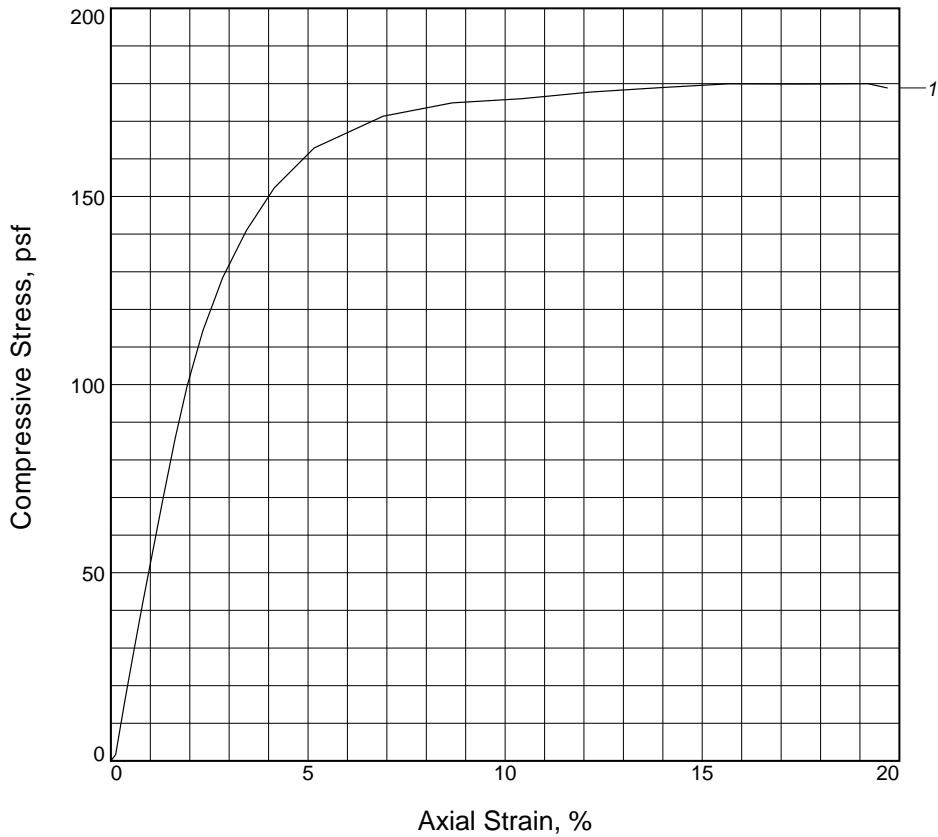
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR

# UNCONFINED COMPRESSION TEST



Sample No.	1		
Unconfined strength, psf	179		
Undrained shear strength, psf	89		
Failure strain, %	13.9		
Strain rate, %/min.	1.00		
Water content, %	93.7		
Wet density, pcf	90.4		
Dry density, pcf	46.7		
Saturation, %	96.6		
Void ratio	2.6365		
Specimen diameter, in.	1.40		
Specimen height, in.	2.90		
Height/diameter ratio	2.06		

**Description:** M, xso g FT CL w/ fw si poc & len, tr om (CH)

**LL =**      **PL =**      **PI =**      **Assumed GS= 2.72**      **Type: UNDISTURBED**

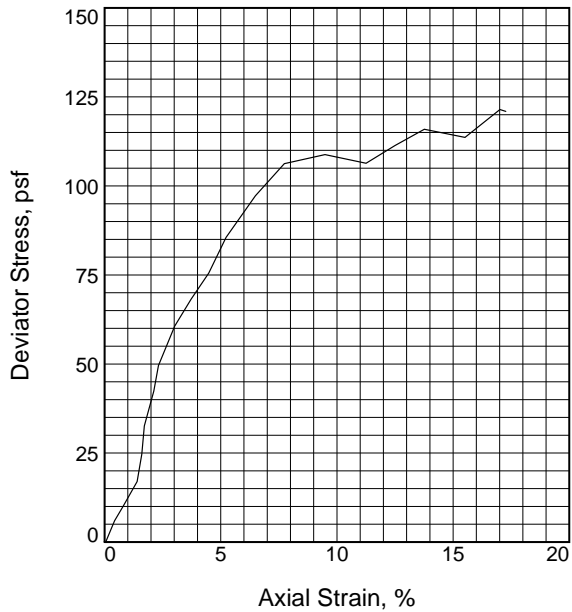
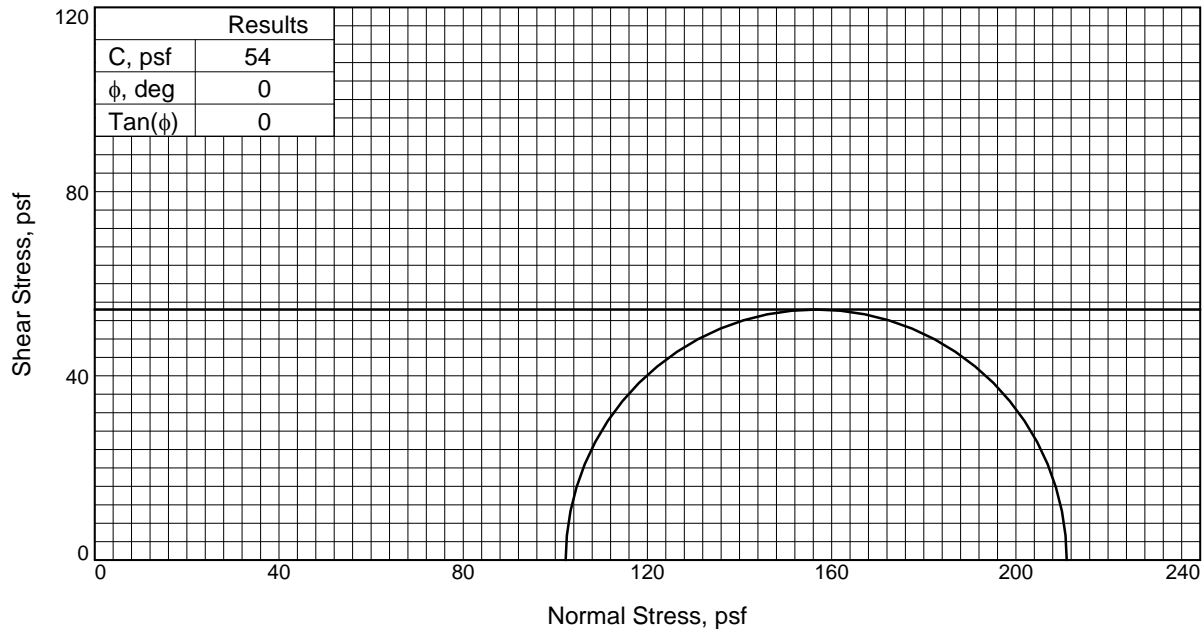
**Project No.:** 24762  
**Date Sampled:** 6/2/22  
**Remarks:**  
 TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA  
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH  
**Source of Sample:** B-3      **Depth:** 19  
**Sample Number:** 10B

**Figure** ASTM D2166



**Tested By:** CC      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	212.5
	Dry Density, pcf	23.6
	Saturation, %	93.2
	Void Ratio	6.2024
	Diameter, in.	1.39
At Test	Height, in.	2.89
	Water Content, %	228.0
	Dry Density, pcf	23.6
	Saturation, %	100.0
	Void Ratio	6.2024
Diameter, in.	1.39	
	Height, in.	2.89
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	0.71	
Fail. Stress, psf	109	
Strain, %	9.5	
Ult. Stress, psf	106	
Strain, %	11.3	
$\sigma_1$ Failure, psf	211	
$\sigma_3$ Failure, psf	102	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso g & t FT CL w/ fw om & rts (CH)

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-4      **Depth:** 1

**Sample Number:** 1B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22



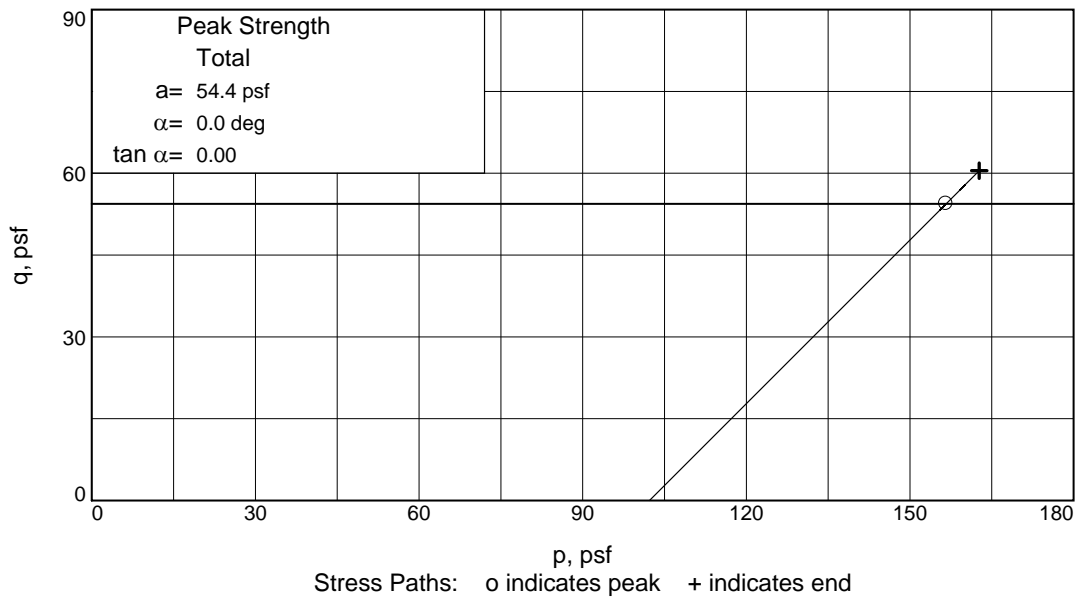
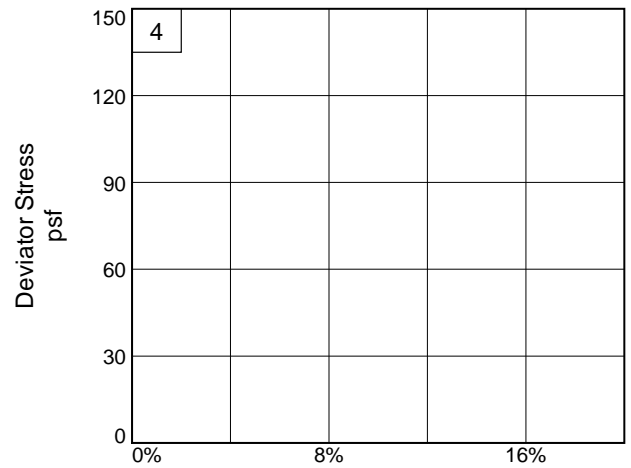
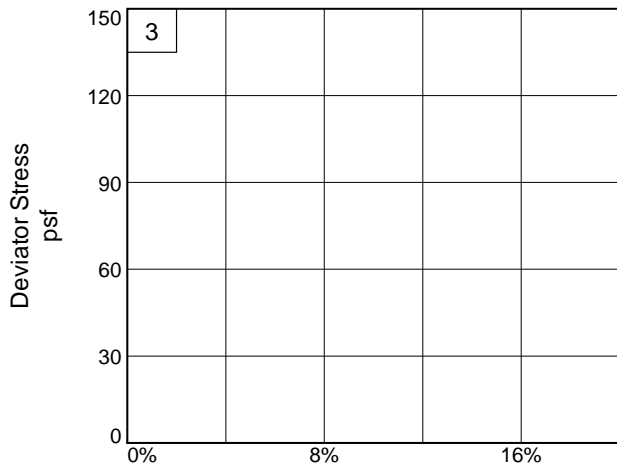
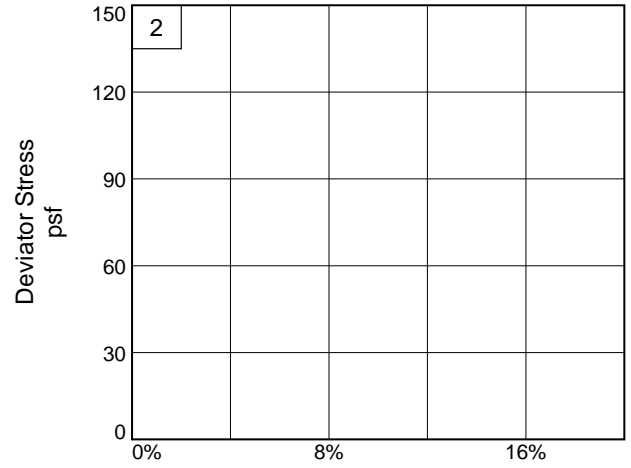
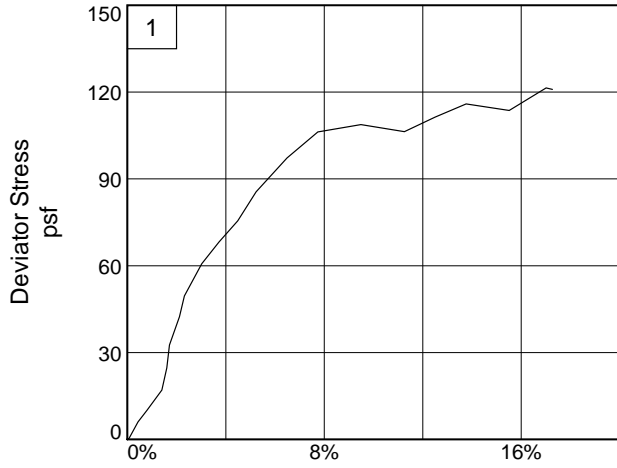
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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR





**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-4

**Depth:** 1

**Sample Number:** 1B

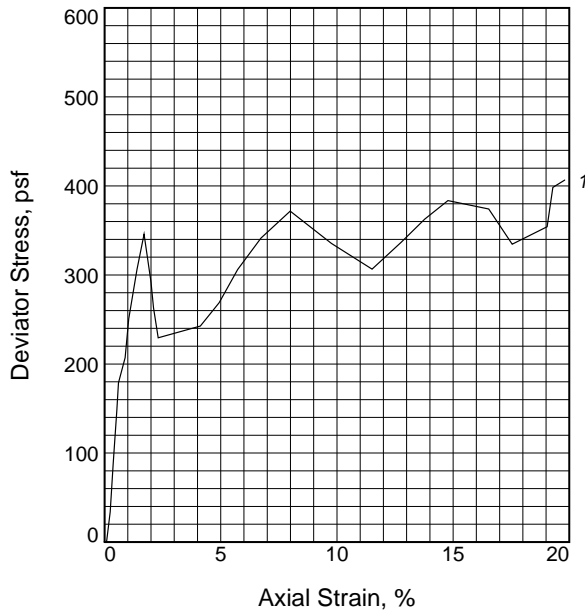
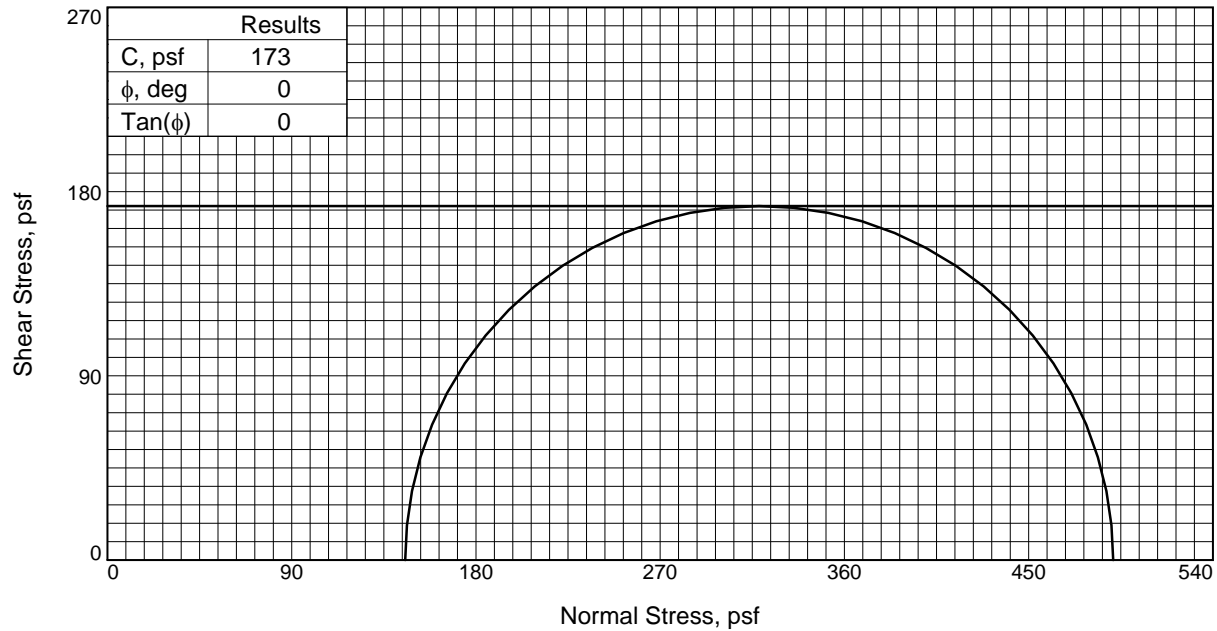
**Project No.:** 24762

**Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	198.1
	Dry Density, pcf	25.2
	Saturation, %	94.1
	Void Ratio	5.5778
	Diameter, in.	1.40
At Test	Height, in.	2.89
	Water Content, %	210.5
	Dry Density, pcf	25.2
	Saturation, %	100.0
	Void Ratio	5.5778
	Diameter, in.	1.40
	Height, in.	2.89
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	1.01
Fail. Stress, psf	346	
Strain, %	1.7	
Ult. Stress, psf	229	
Strain, %	2.3	
$\sigma_1$ Failure, psf	491	
$\sigma_3$ Failure, psf	145	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vso br & g ORG CL w/ fw rts & dec wd (OH)

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-4      **Depth:** 5

**Sample Number:** 3B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

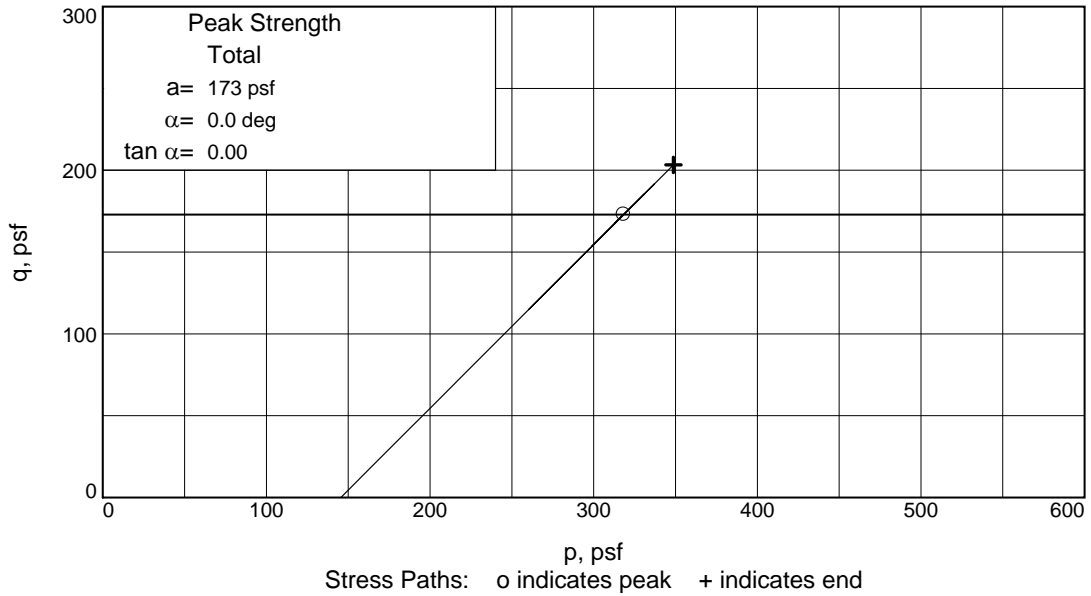
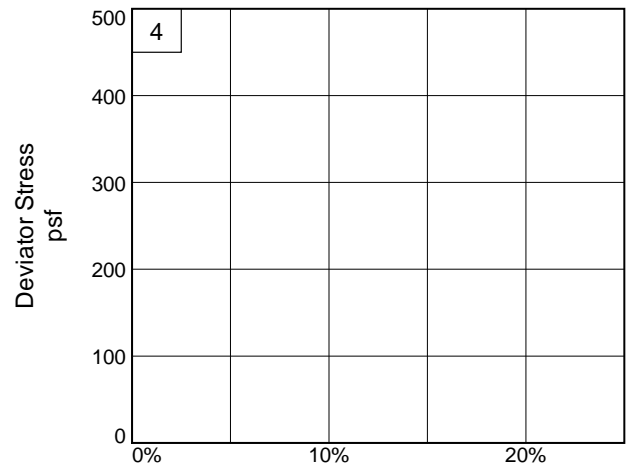
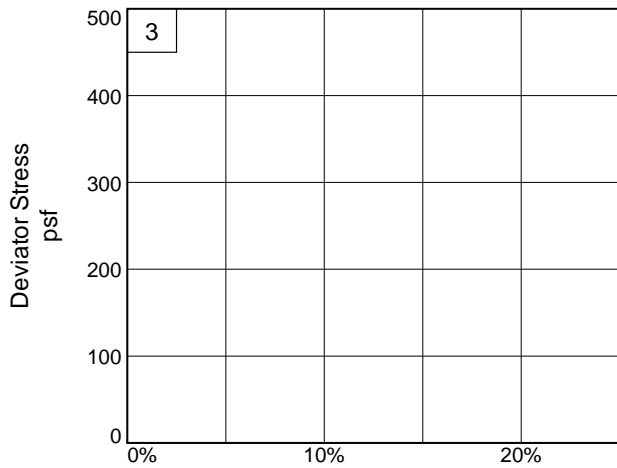
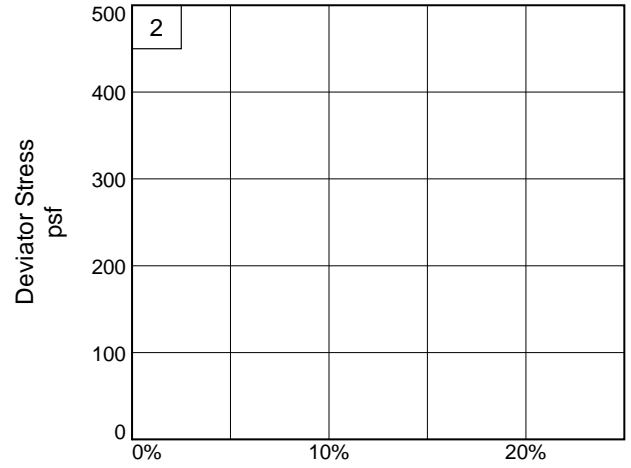
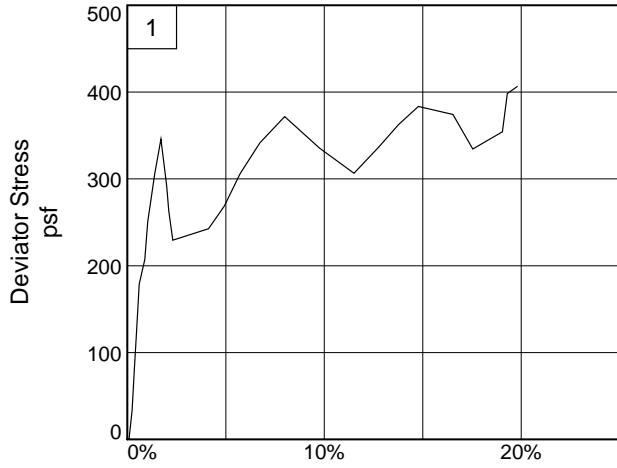


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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-4

**Depth:** 5

**Sample Number:** 3B

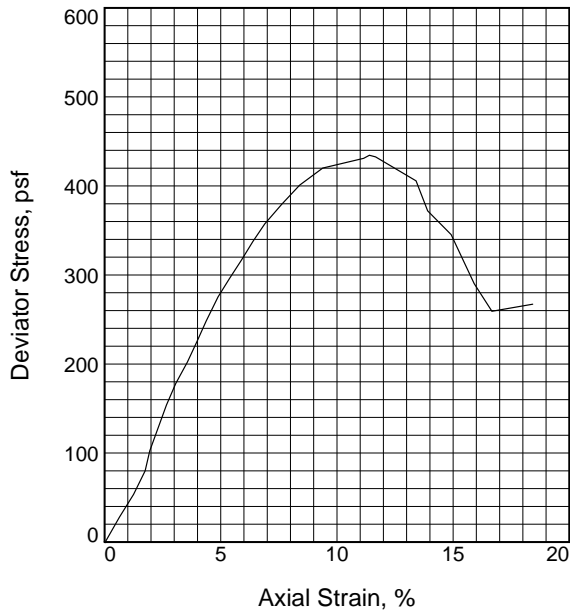
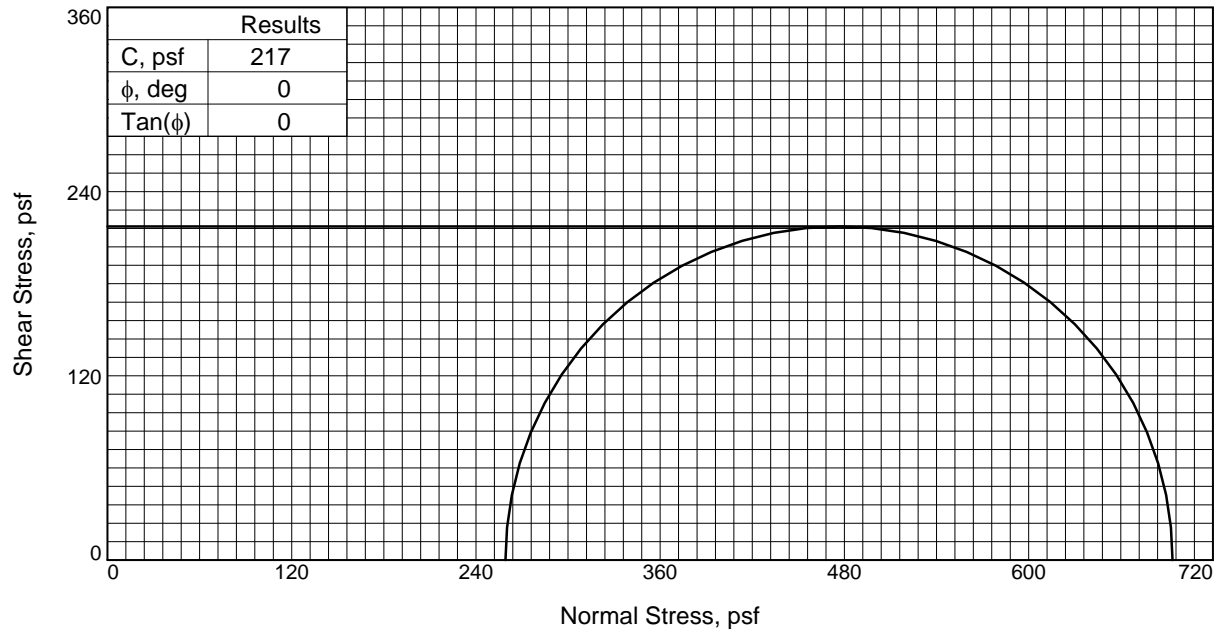
**Project No.:** 24762

**Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	560.1
	Dry Density, pcf	9.7
	Saturation, %	92.6
	Void Ratio	14.8171
	Diameter, in.	1.40
At Test	Height, in.	2.90
	Water Content, %	604.8
	Dry Density, pcf	9.7
	Saturation, %	100.0
	Void Ratio	14.8171
	Diameter, in.	1.40
	Height, in.	2.90
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	1.80
Fail. Stress, psf	435	
Strain, %	11.4	
Ult. Stress, psf	345	
Strain, %	14.9	
$\sigma_1$ Failure, psf	694	
$\sigma_3$ Failure, psf	259	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vso g HUM w/ fw dec wd (PT)

**Assumed Specific Gravity=** 2.45

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-4      **Depth:** 7

**Sample Number:** 4B

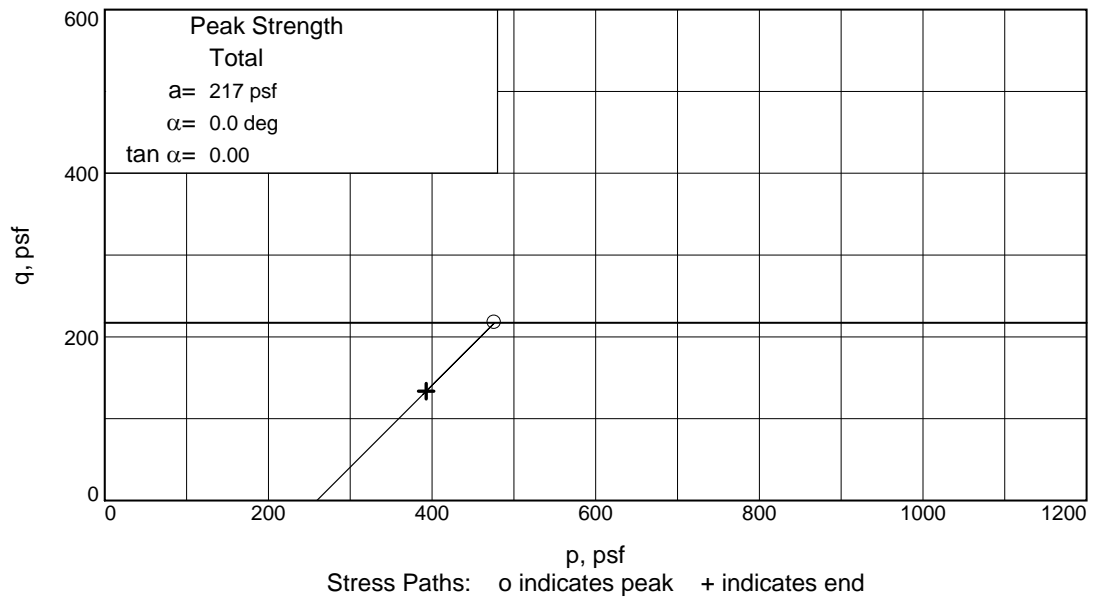
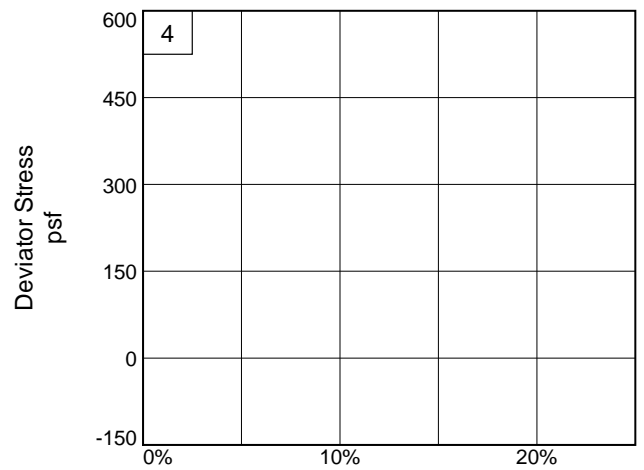
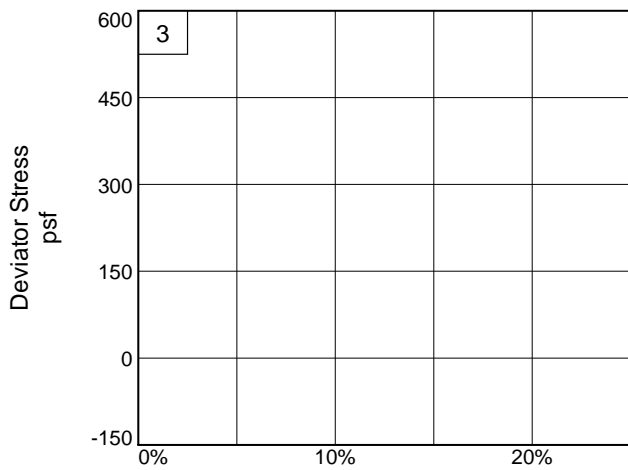
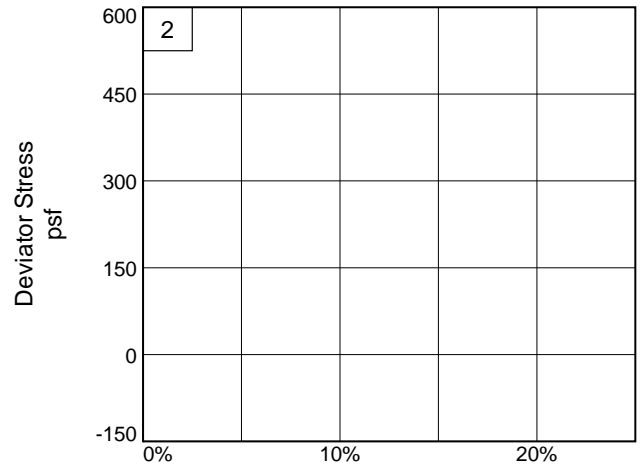
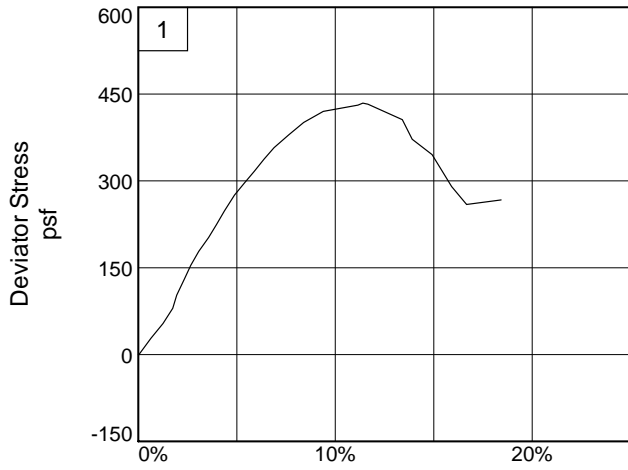
**Proj. No.:** 24762

**Date Sampled:** 6/2/22



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**Figure** ASTM D2850



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-4

**Depth:** 7

**Sample Number:** 4B

**Project No.:** 24762

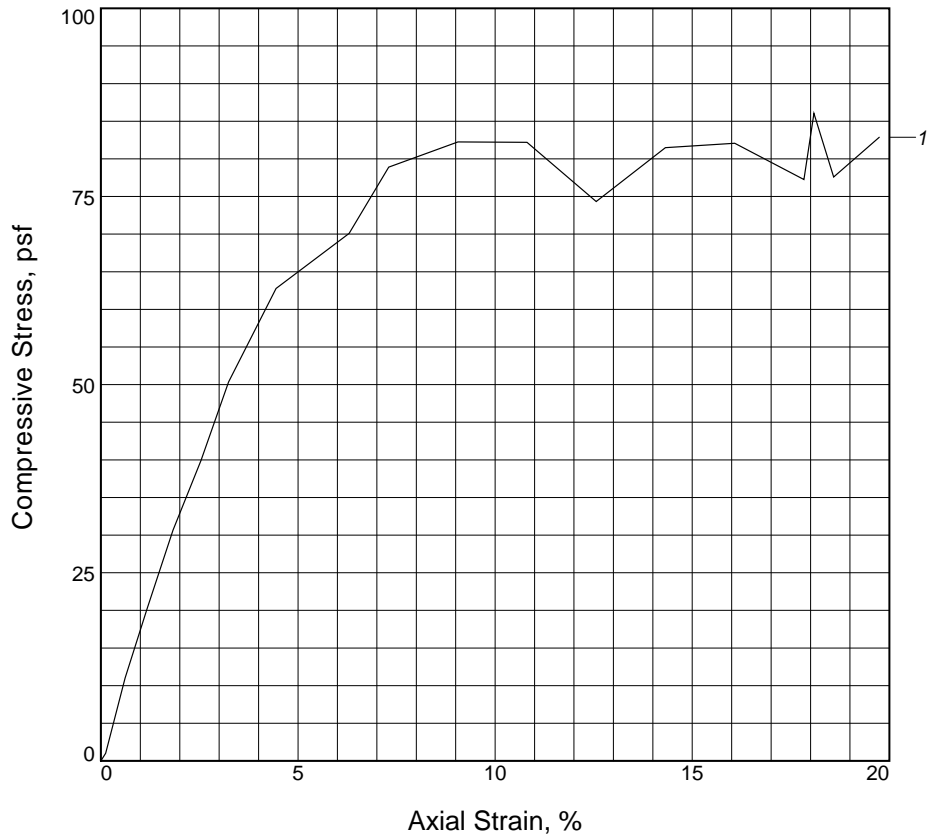
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR

# UNCONFINED COMPRESSION TEST



Sample No.	1		
Unconfined strength, psf	82		
Undrained shear strength, psf	41		
Failure strain, %	9.1		
Strain rate, %/min.	1.00		
Water content, %	70.6		
Wet density, pcf	97.4		
Dry density, pcf	57.1		
Saturation, %	97.3		
Void ratio	1.9734		
Specimen diameter, in.	1.40		
Specimen height, in.	2.89		
Height/diameter ratio	2.07		

**Description:** M, xso g & t FT CL w/ fw om & dec wd

**LL = 104**      **PL = 29**      **PI = 75**      **Assumed GS= 2.72**      **Type: UNDISTURBED**

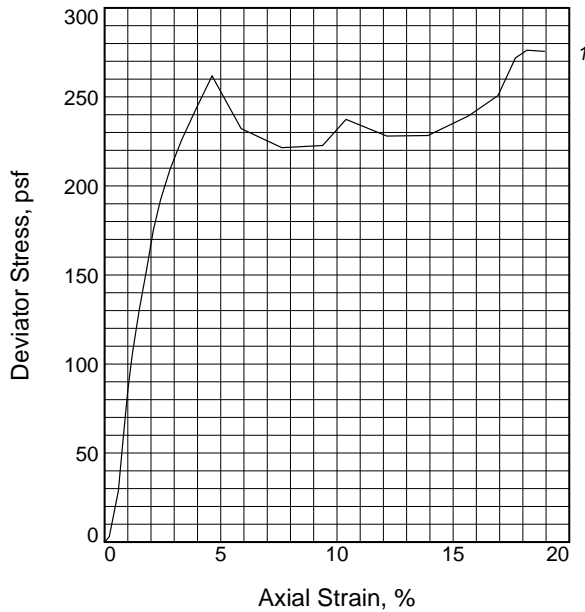
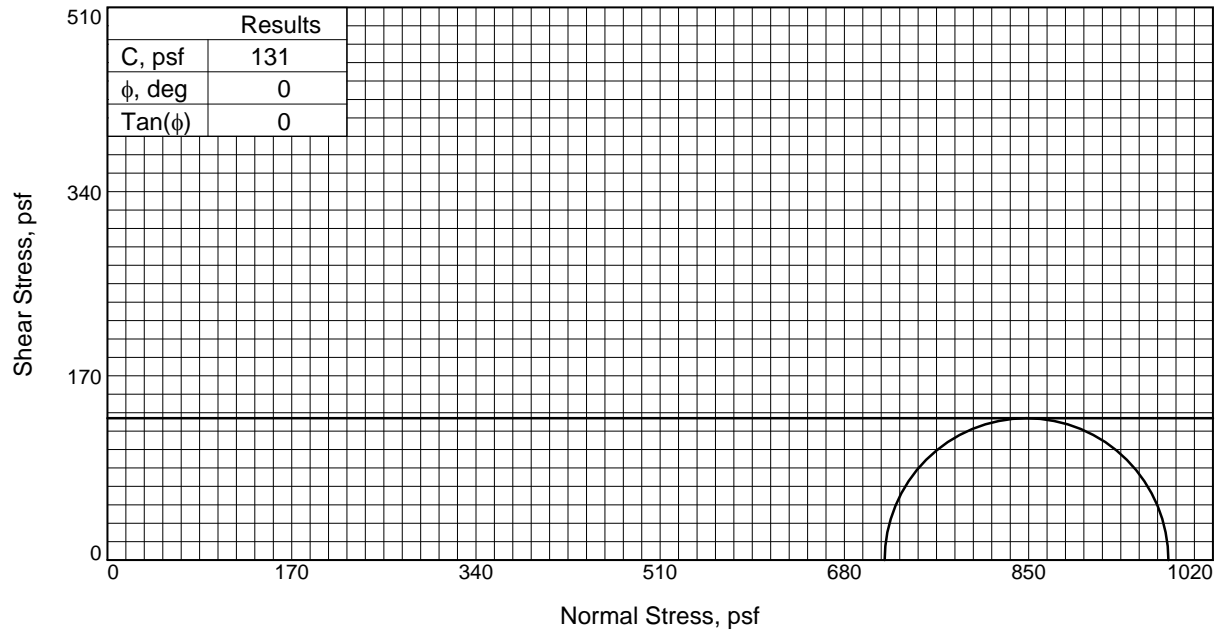
**Project No.:** 24762  
**Date Sampled:** 6/14/22  
**Remarks:**  
 TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA  
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH  
**Source of Sample:** B-4      **Depth:** 11  
**Sample Number:** 6B

Figure ASTM D2166



**Tested By:** CC \_\_\_\_\_ **Checked By:** CD & RR \_\_\_\_\_



Sample No.	1	
Initial	Water Content, %	87.8
	Dry Density, pcf	49.9
	Saturation, %	99.5
	Void Ratio	2.3998
	Diameter, in.	1.39
At Test	Height, in.	2.91
	Water Content, %	88.2
	Dry Density, pcf	49.9
	Saturation, %	100.0
	Void Ratio	2.3998
	Diameter, in.	1.39
	Height, in.	2.91
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	4.98
Fail. Stress, psf	262	
Strain, %	4.6	
Ult. Stress, psf	222	
Strain, %	7.6	
$\sigma_1$ Failure, psf	979	
$\sigma_3$ Failure, psf	717	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vso g FT CL w/ tr si poc & om (CH)

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-4      **Depth:** 15

**Sample Number:** 8B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

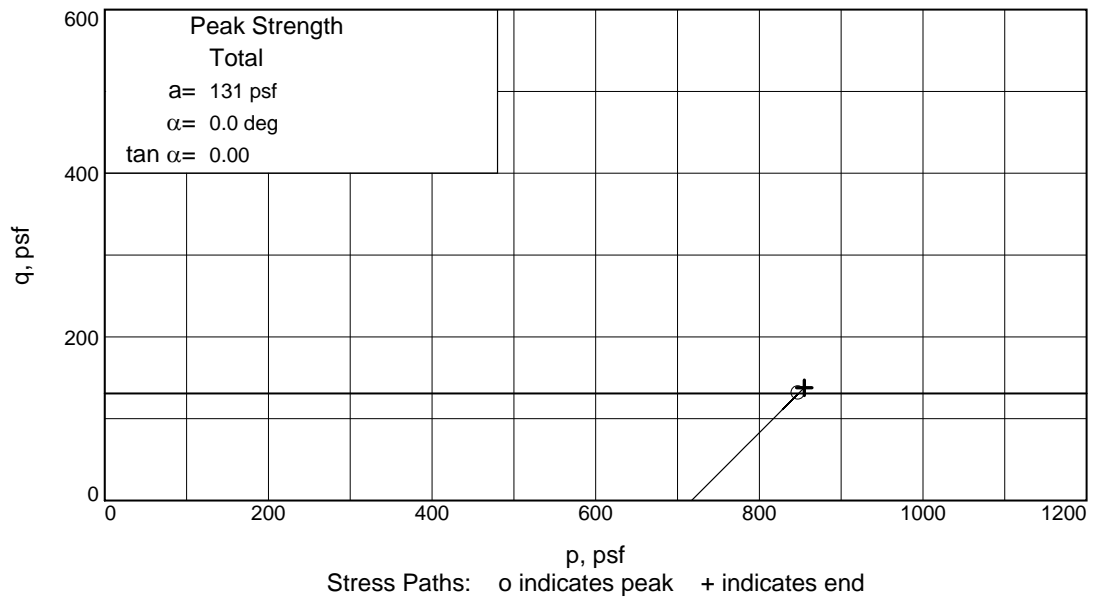
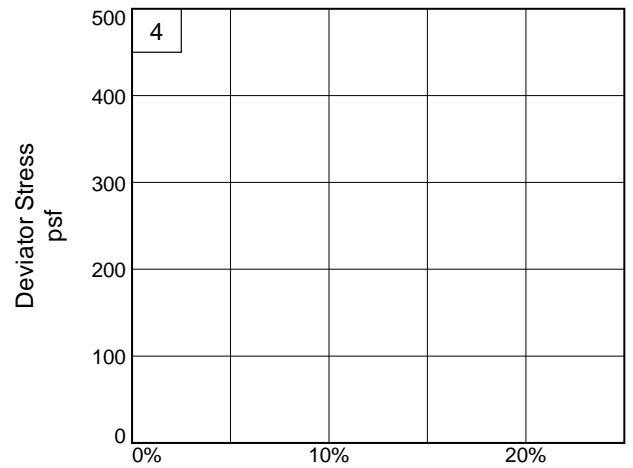
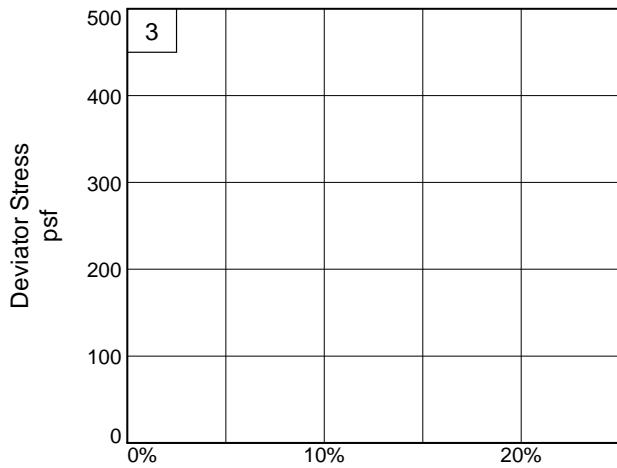
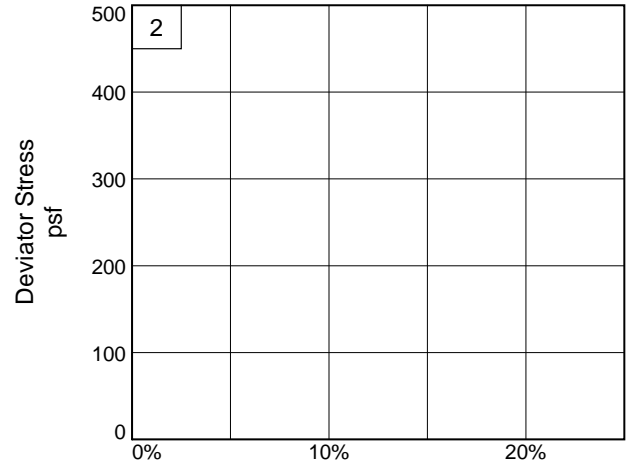
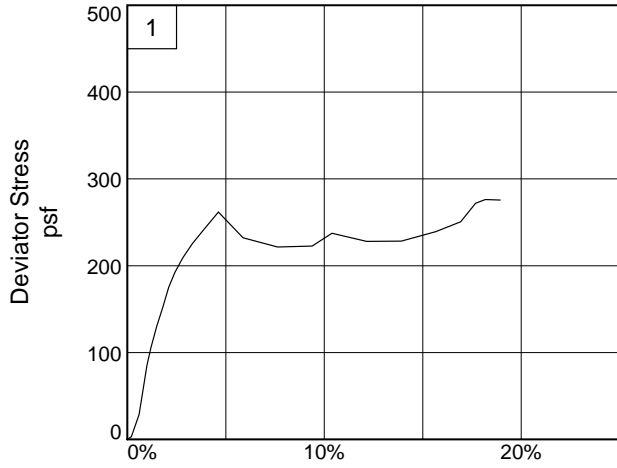


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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-4

**Depth:** 15

**Sample Number:** 8B

**Project No.:** 24762

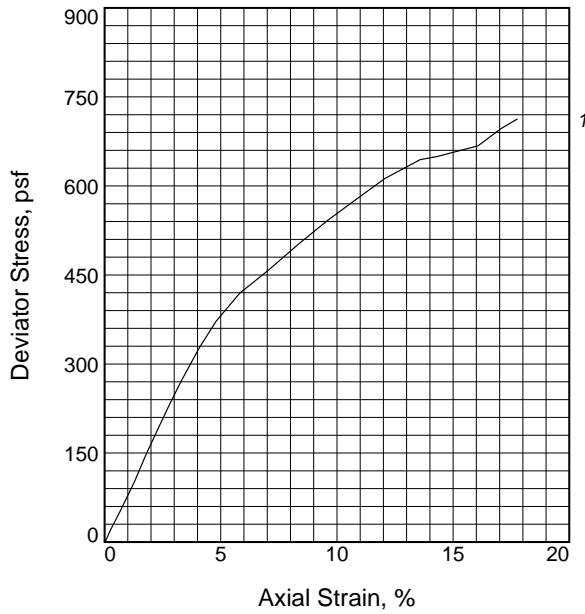
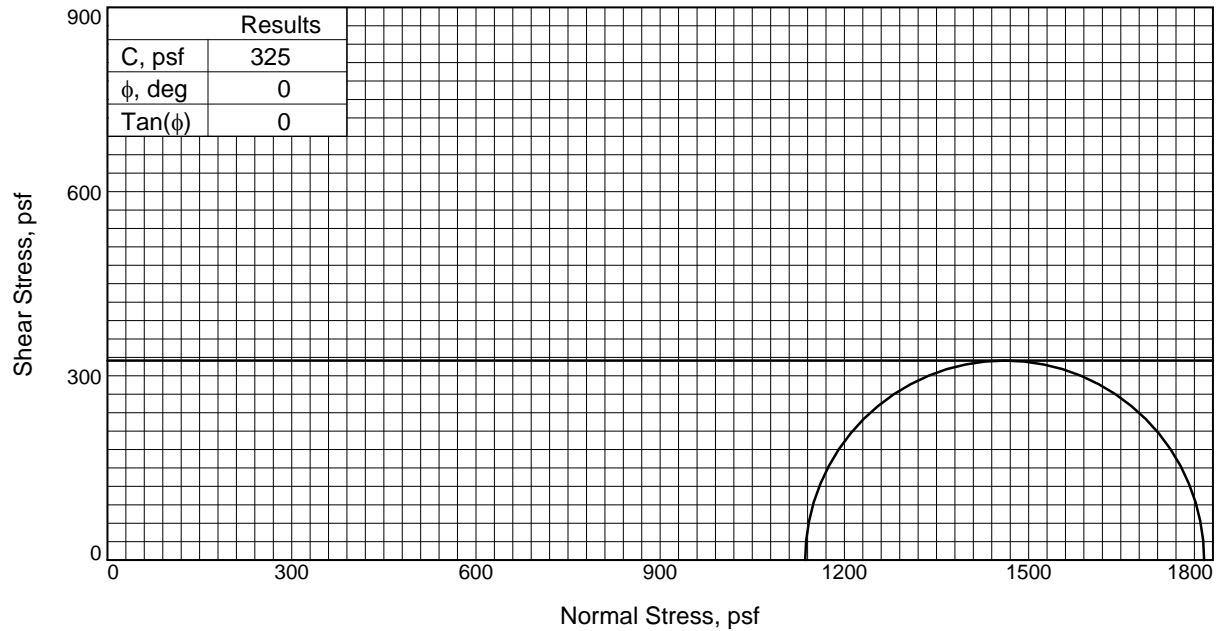
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR





Sample No.		1
Initial	Water Content, %	40.6
	Dry Density, pcf	77.8
	Saturation, %	93.6
	Void Ratio	1.1812
	Diameter, in.	1.41
At Test	Height, in.	2.89
	Water Content, %	43.4
	Dry Density, pcf	77.8
	Saturation, %	100.0
	Void Ratio	1.1812
	Diameter, in.	1.41
	Height, in.	2.89
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	7.89
	Fail. Stress, psf	650
	Strain, %	14.3
	Ult. Stress, psf	650
	Strain, %	14.3
	$\sigma_1$ Failure, psf	1786
$\sigma_3$ Failure, psf	1136	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, so g FT CL w/ tr si poc & lay (CH)

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-4      **Depth:** 24

**Sample Number:** 11B

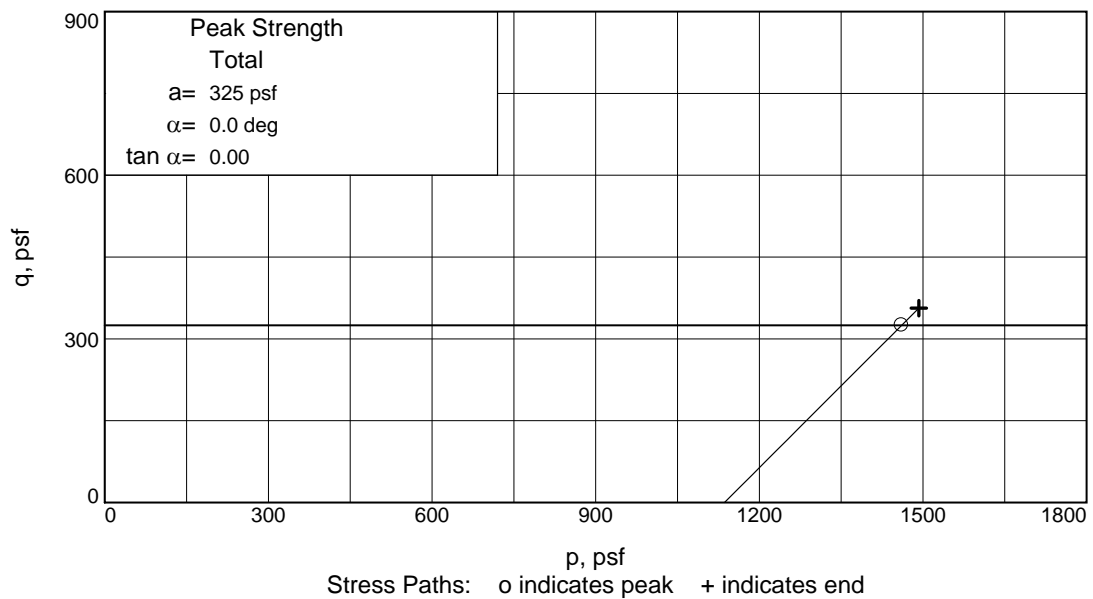
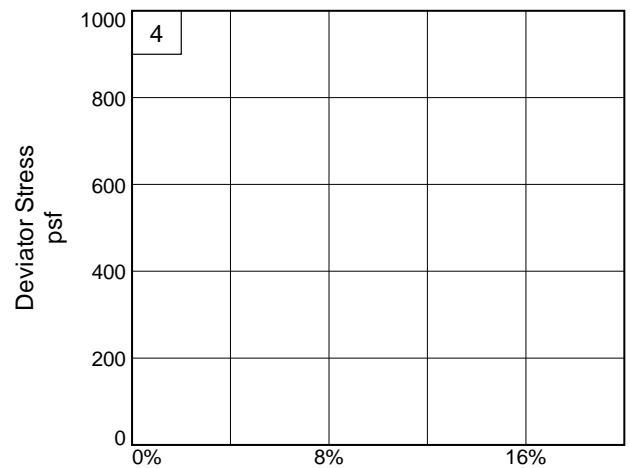
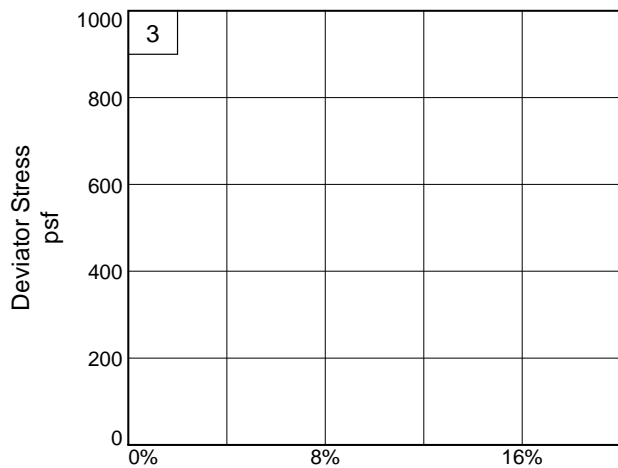
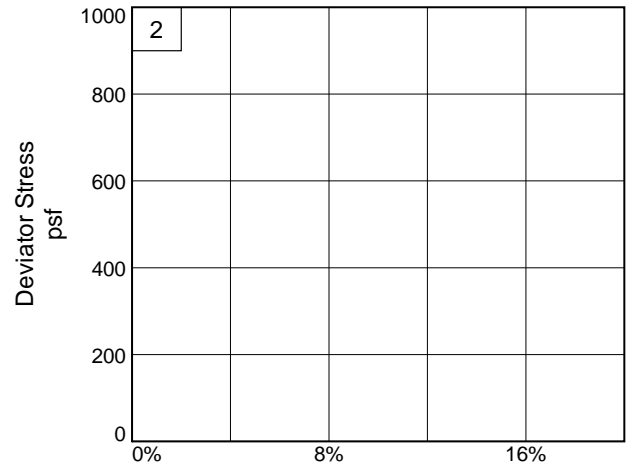
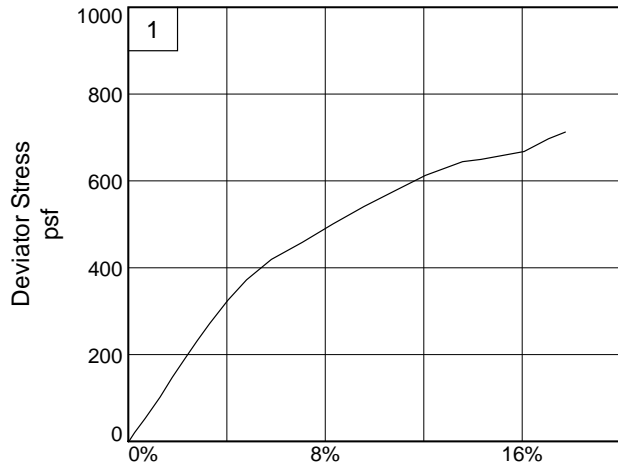
**Proj. No.:** 24762

**Date Sampled:** 6/2/22



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**Figure** ASTM D2850



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

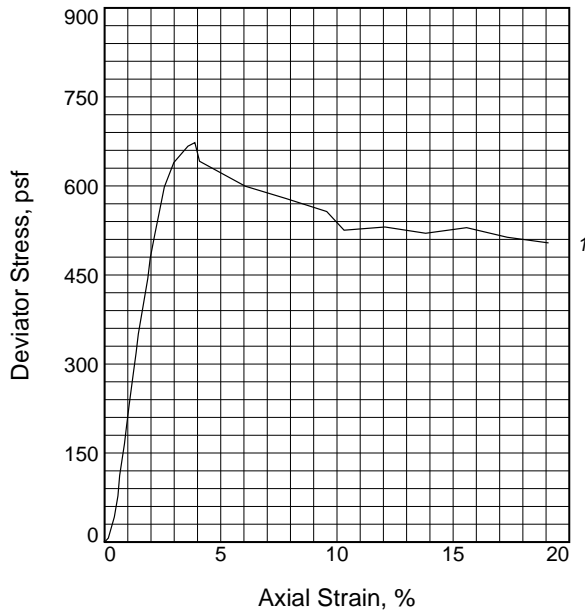
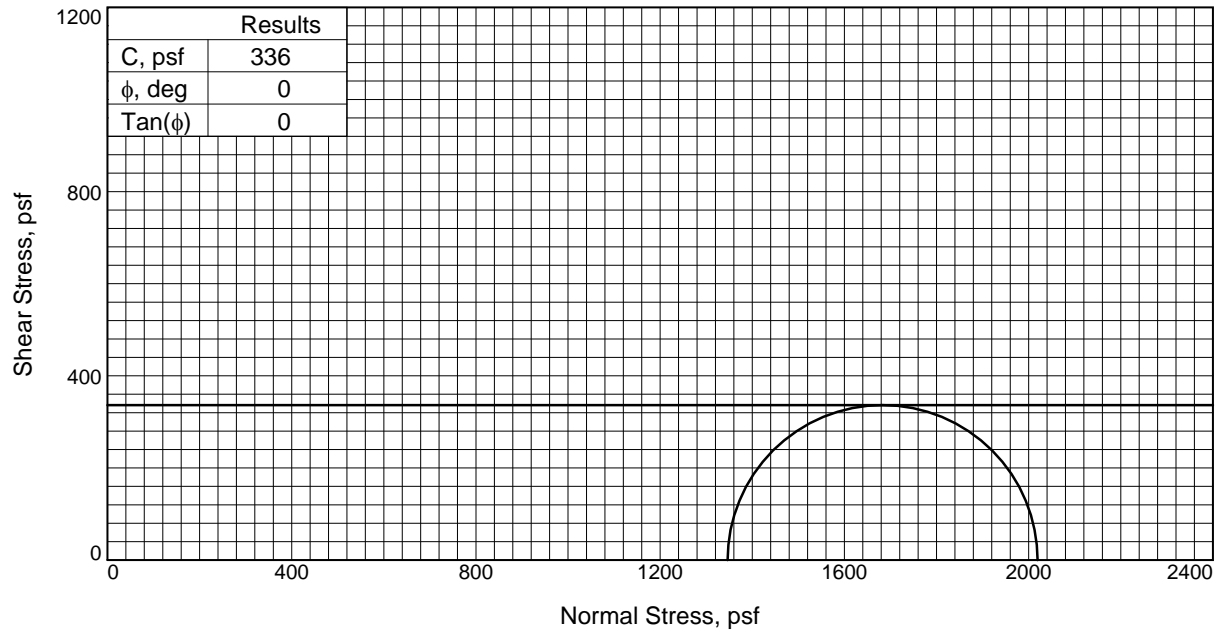
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-4      **Depth:** 24      **Sample Number:** 11B

**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	71.5
	Dry Density, pcf	57.5
	Saturation, %	99.5
	Void Ratio	1.9531
	Diameter, in.	1.40
	Height, in.	2.89
At Test	Water Content, %	71.8
	Dry Density, pcf	57.5
	Saturation, %	100.0
	Void Ratio	1.9531
	Diameter, in.	1.40
	Height, in.	2.89
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	9.35	
Fail. Stress, psf	673	
Strain, %	3.9	
Ult. Stress, psf	520	
Strain, %	13.8	
$\sigma_1$ Failure, psf	2019	
$\sigma_3$ Failure, psf	1346	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, so g FT CL w/ tr si poc & len (CH)

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.200 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-4      **Depth:** 29

**Sample Number:** 12B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

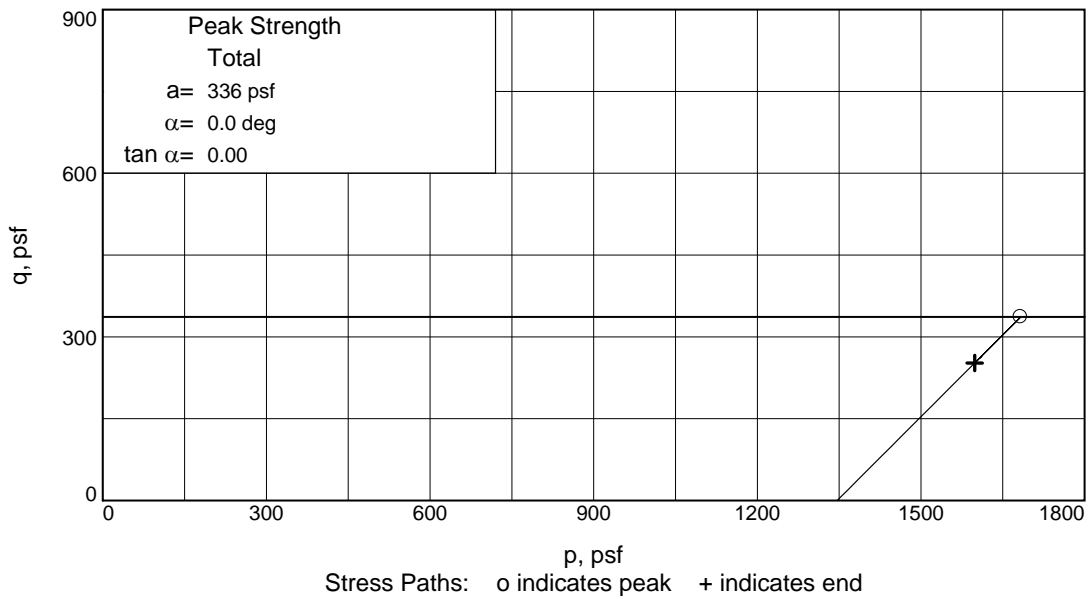
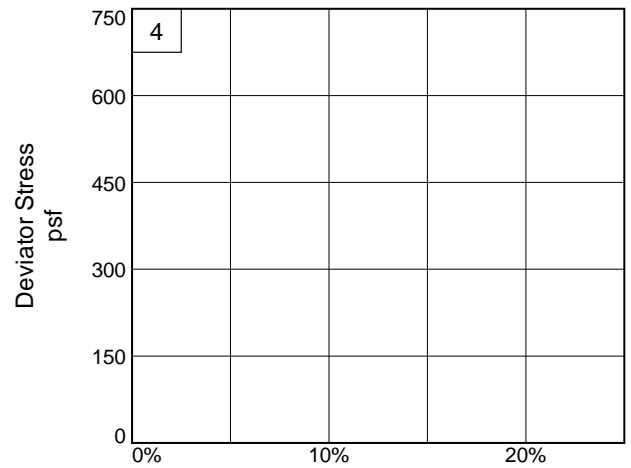
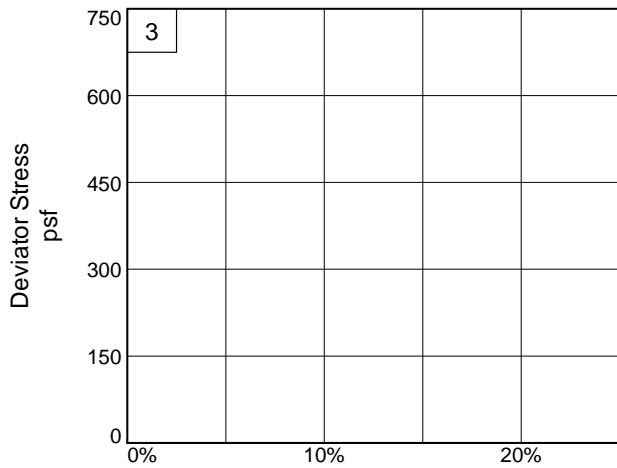
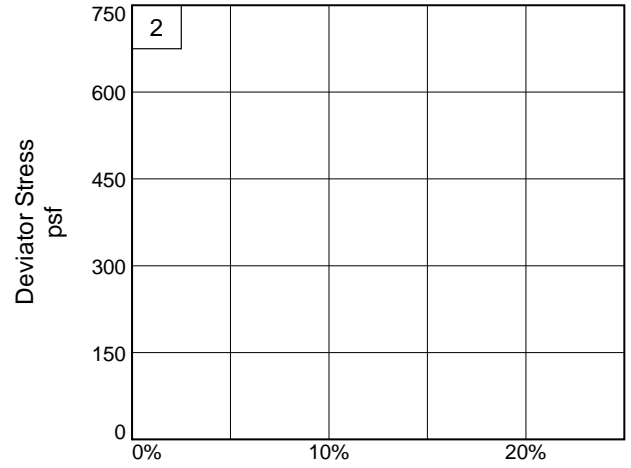
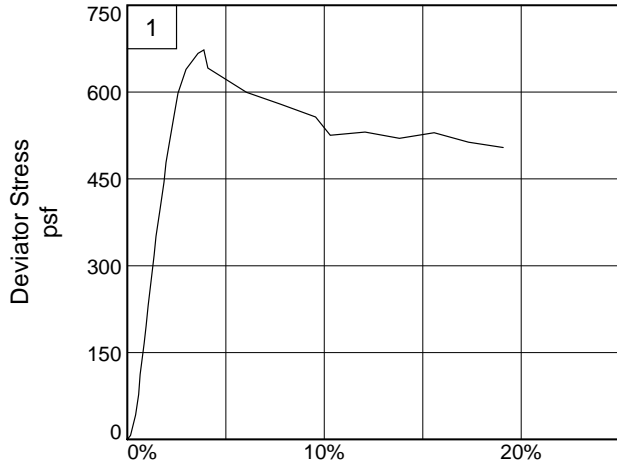


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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-4

**Depth:** 29

**Sample Number:** 12B

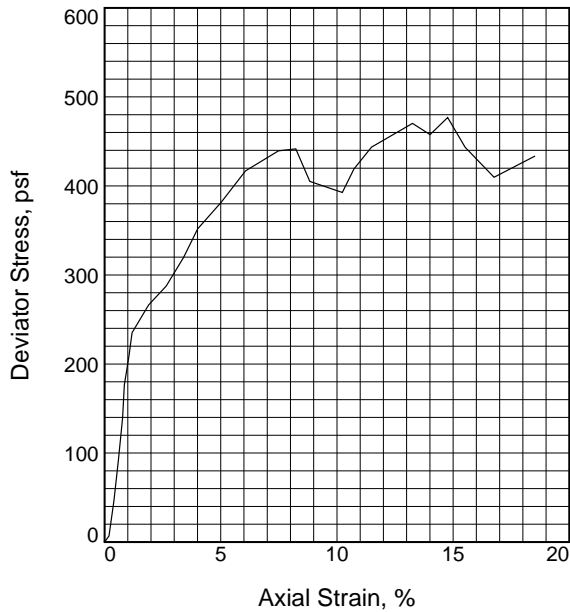
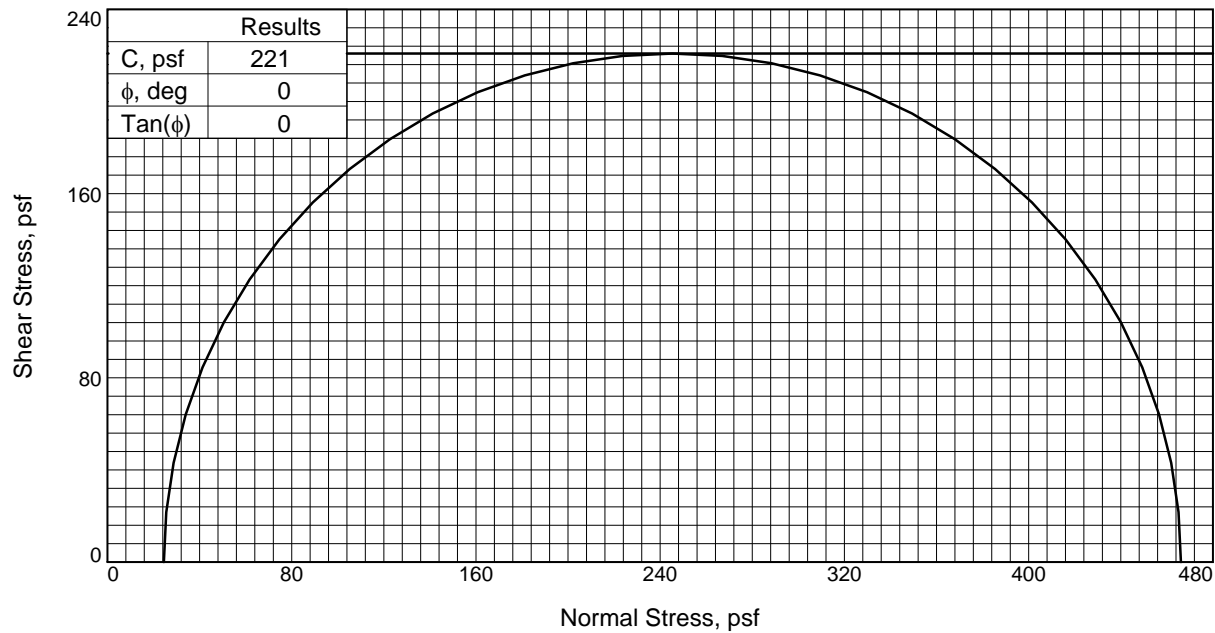
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	140.8
	Dry Density, pcf	34.9
	Saturation, %	99.7
	Void Ratio	3.7410
	Diameter, in.	1.39
At Test	Height, in.	2.91
	Water Content, %	141.2
	Dry Density, pcf	34.9
	Saturation, %	100.0
	Void Ratio	3.7410
Strain rate, %/min.	Diameter, in.	1.39
	Height, in.	2.91
	Back Pressure, psi	0.00
	Cell Pressure, psi	0.17
	Fail. Stress, psf	442
	Strain, %	8.2
	Ult. Stress, psf	393
	Strain, %	10.2
	$\sigma_1$ Failure, psf	466
	$\sigma_3$ Failure, psf	24

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, vso dk g & g ORG CL (OH)

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-5      **Depth:** 3

**Sample Number:** 2B

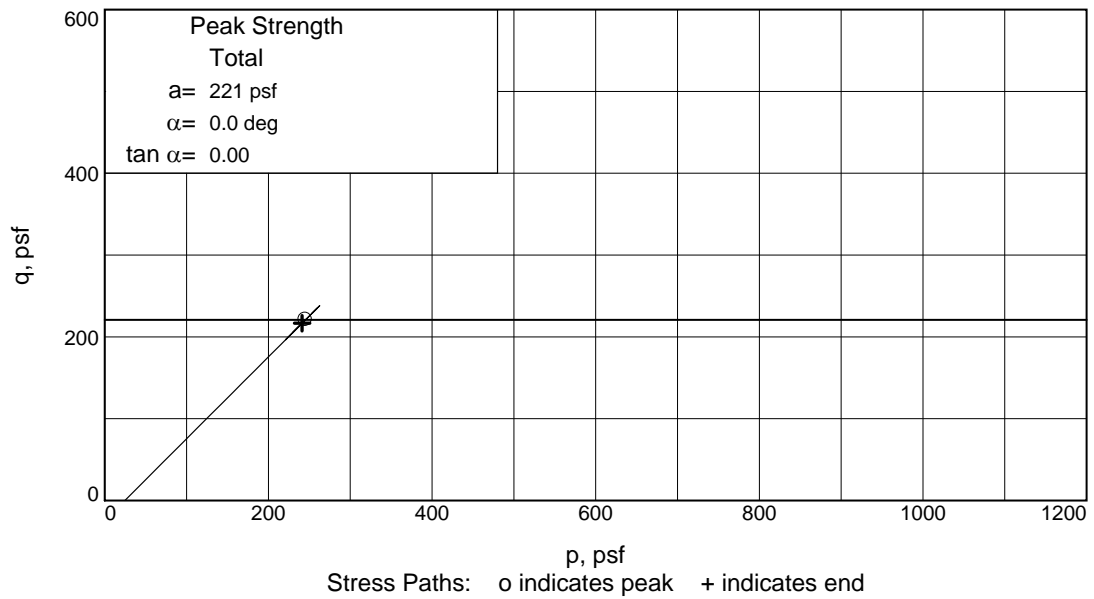
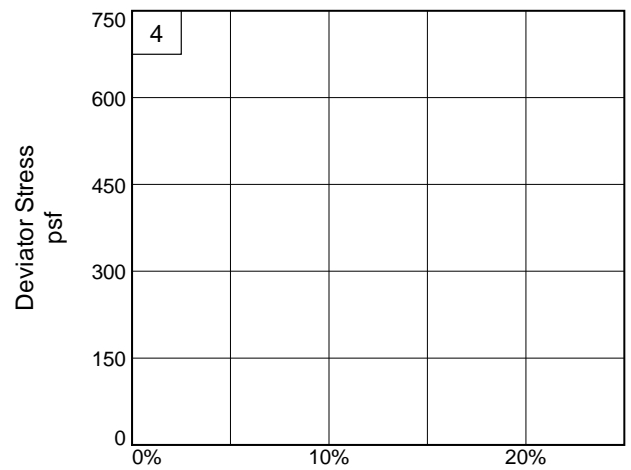
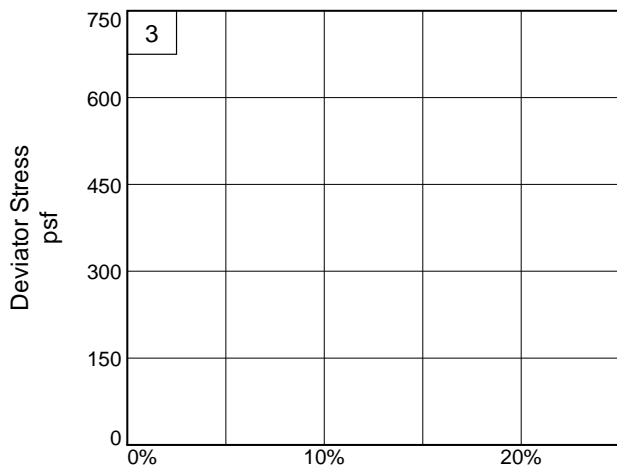
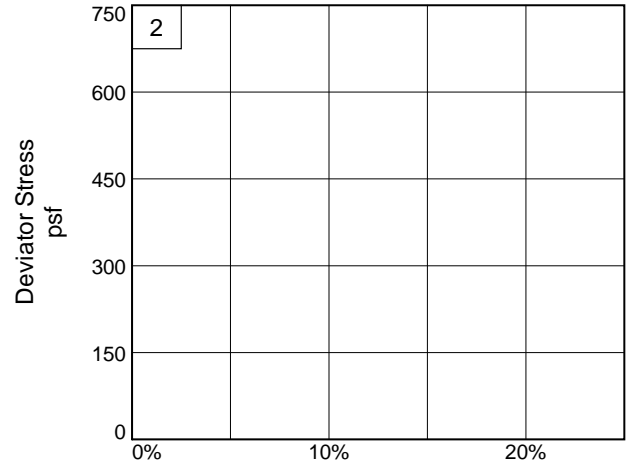
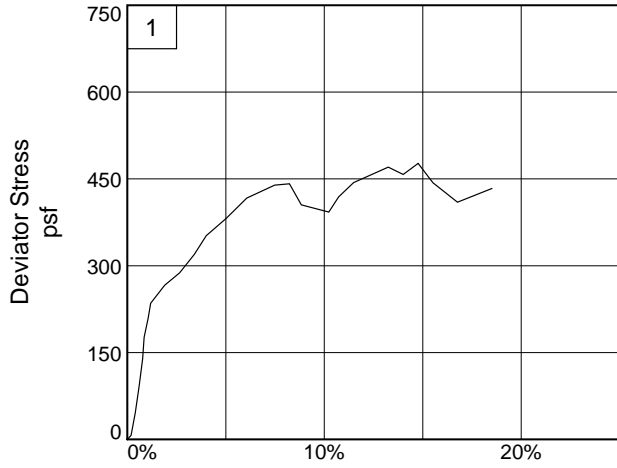
**Proj. No.:** 24762

**Date Sampled:** 6/2/22



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**Figure** ASTM D2850



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-5

**Depth:** 3

**Sample Number:** 2B

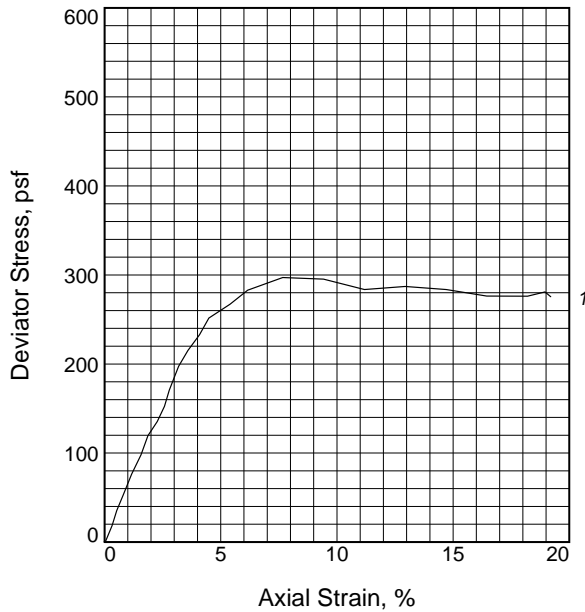
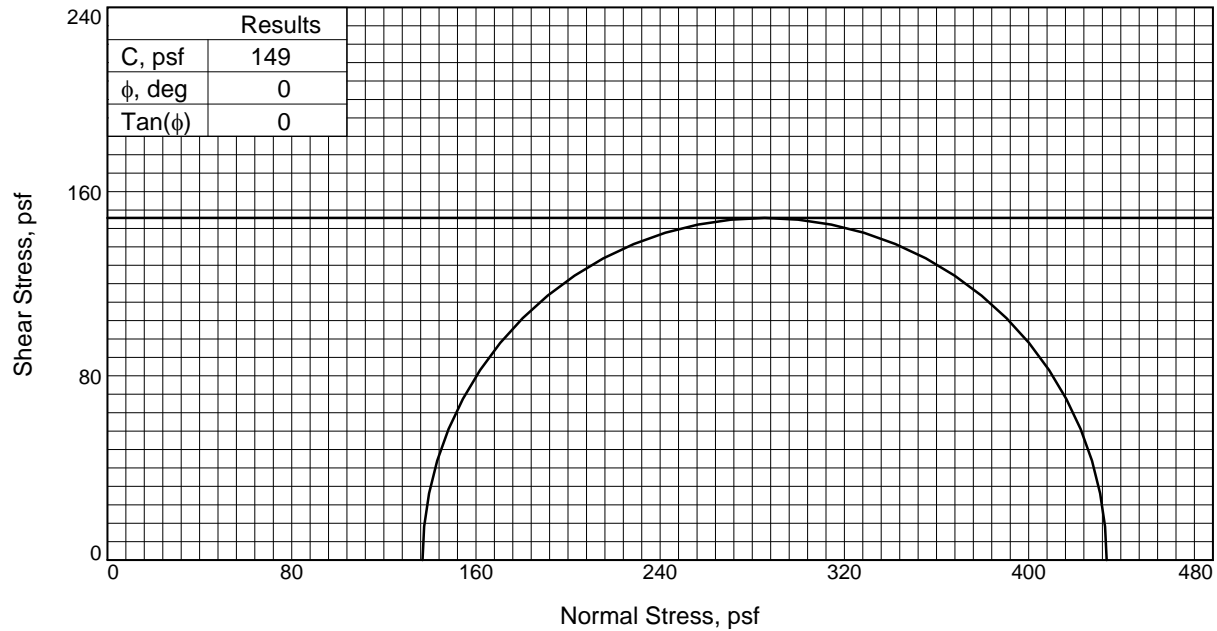
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	257.5
	Dry Density, pcf	21.0
	Saturation, %	99.5
	Void Ratio	6.8596
	Diameter, in.	1.38
At Test	Height, in.	2.90
	Water Content, %	258.9
	Dry Density, pcf	21.0
	Saturation, %	100.0
	Void Ratio	6.8596
Diameter, in.	1.38	
	Height, in.	2.90
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	0.95	
Fail. Stress, psf	297	
Strain, %	7.7	
Ult. Stress, psf	284	
Strain, %	14.7	
$\sigma_1$ Failure, psf	434	
$\sigma_3$ Failure, psf	137	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, vso dk g & g ORG CL w/ fw dec wd (OH)

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-5      **Depth:** 5

**Sample Number:** 3B

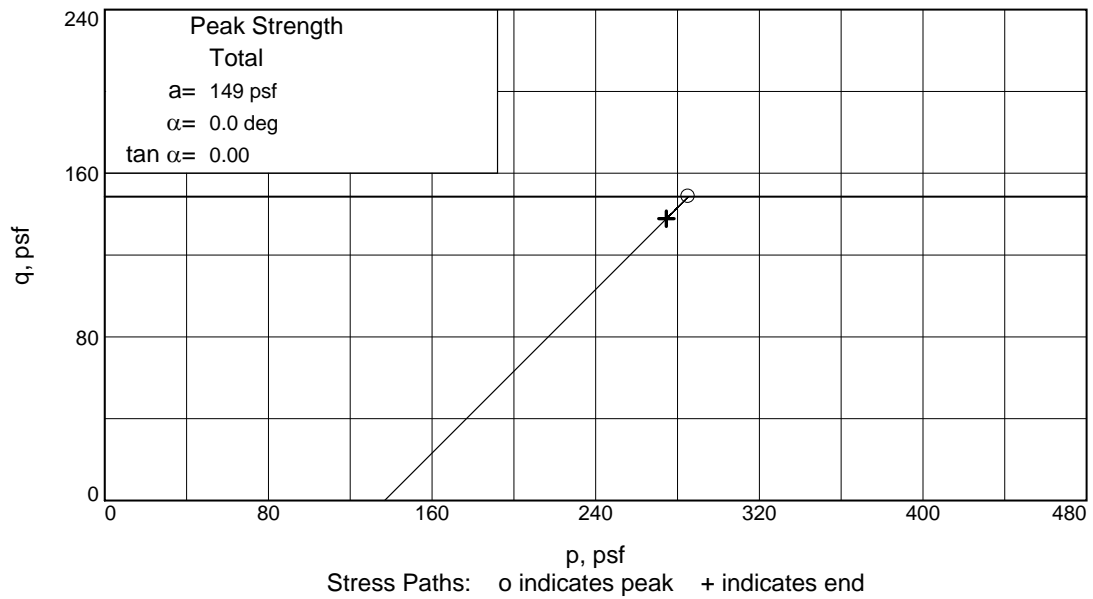
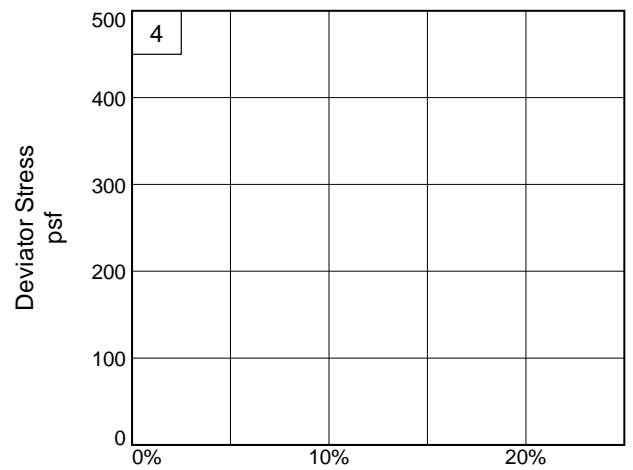
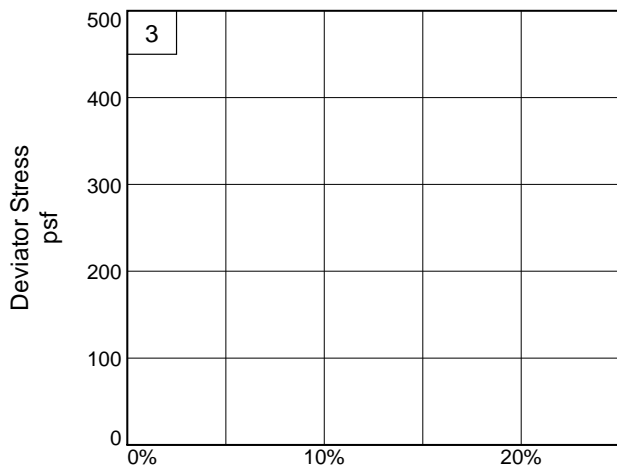
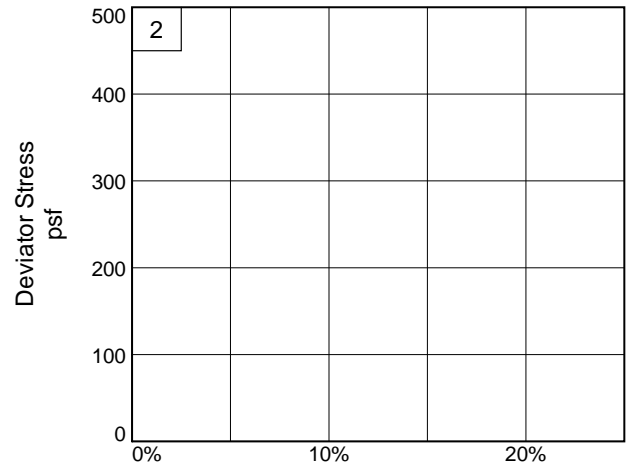
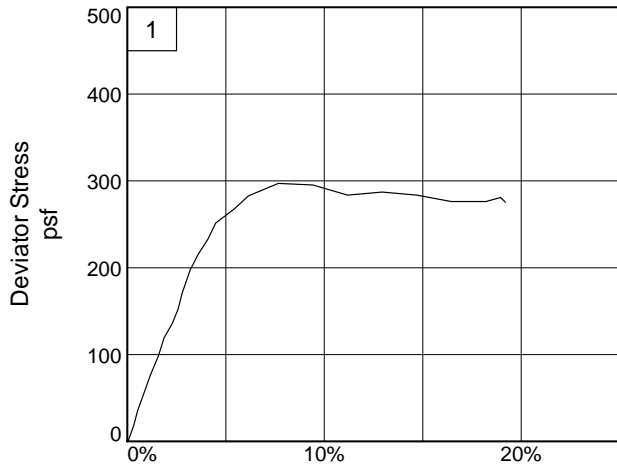
**Proj. No.:** 24762

**Date Sampled:** 6/2/22



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**Figure** ASTM D2850



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-5

**Depth:** 5

**Sample Number:** 3B

**Project No.:** 24762

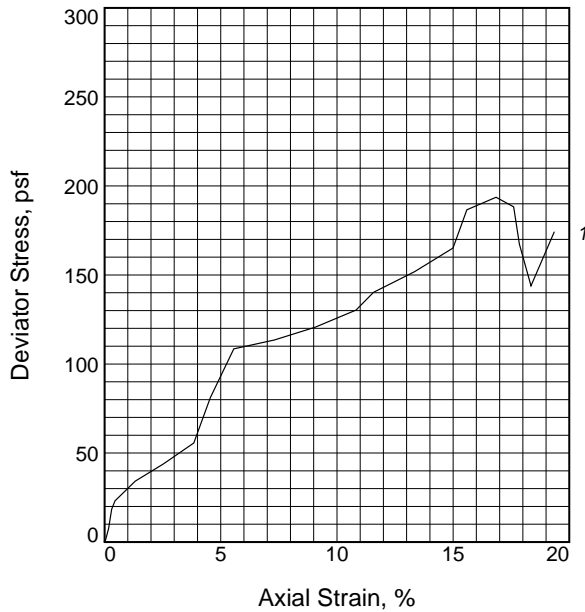
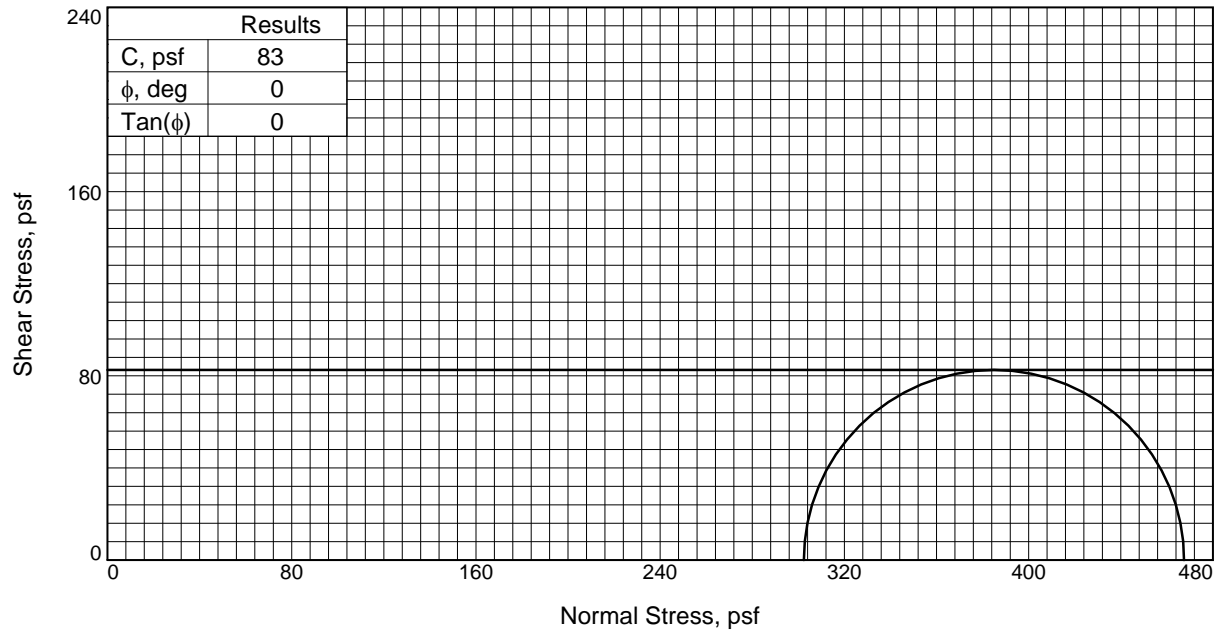
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR





Sample No.	1	
Initial	Water Content, %	306.6
	Dry Density, pcf	17.0
	Saturation, %	93.9
	Void Ratio	7.9995
	Diameter, in.	1.40
At Test	Height, in.	2.90
	Water Content, %	326.5
	Dry Density, pcf	17.0
	Saturation, %	100.0
	Void Ratio	7.9995
	Diameter, in.	1.40
	Height, in.	2.90
	Strain rate, %/min.	0.03
	Back Pressure, psi	0.00
	Cell Pressure, psi	2.10
Fail. Stress, psf	165	
Strain, %	15.0	
Ult. Stress, psf	165	
Strain, %	15.0	
$\sigma_1$ Failure, psf	467	
$\sigma_3$ Failure, psf	302	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso dk g & br HUM w/ fw cl lay, tr dec wd (PT)

**LL=** 299      **PL=** 113      **PI=** 186

**Assumed Specific Gravity=** 2.45

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-5      **Depth:** 9

**Sample Number:** 5B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

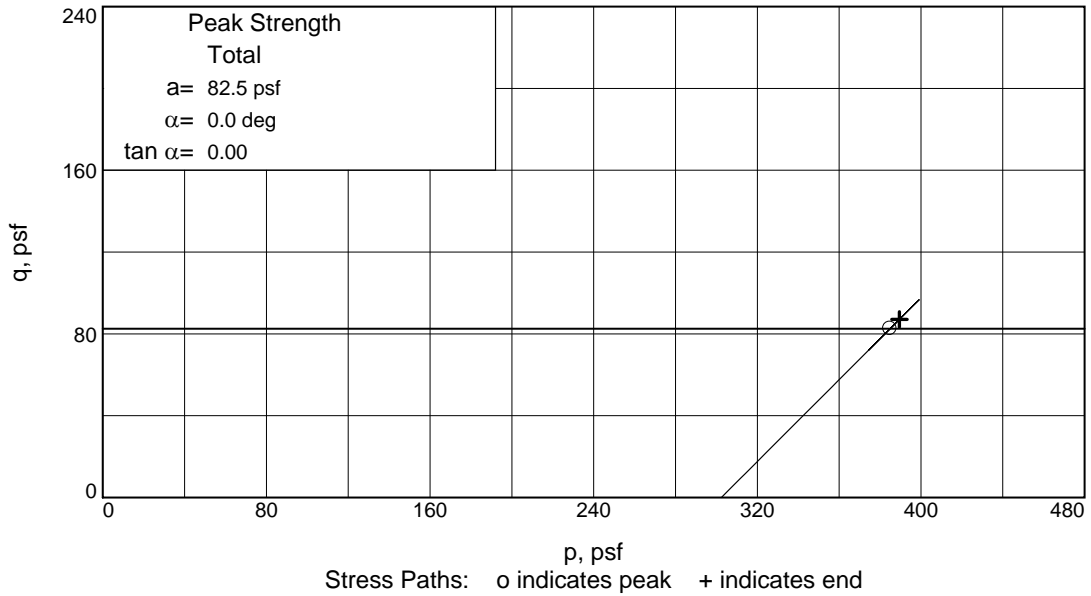
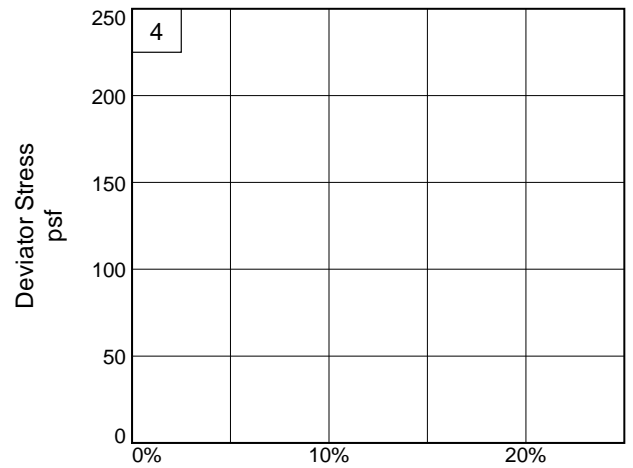
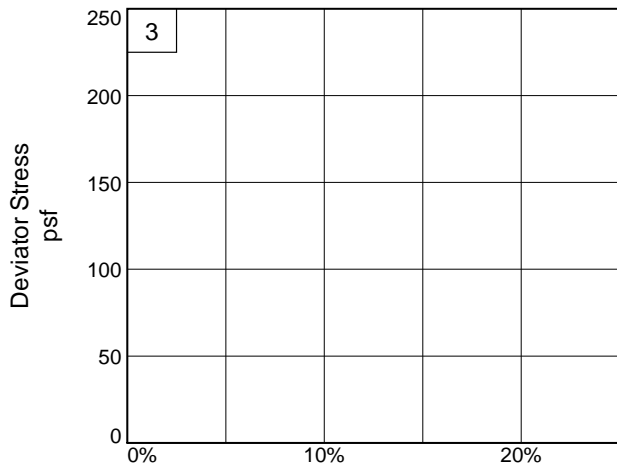
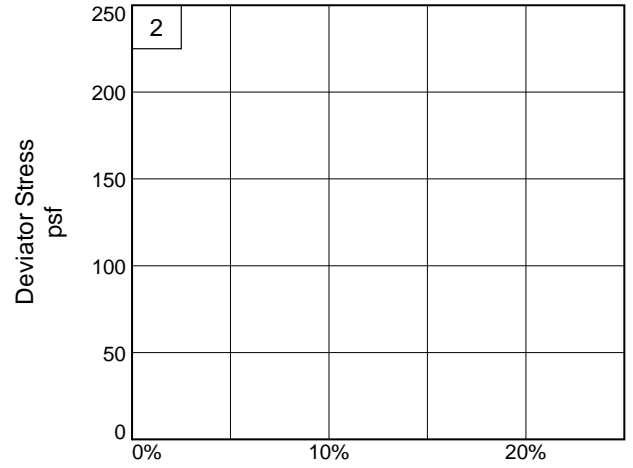
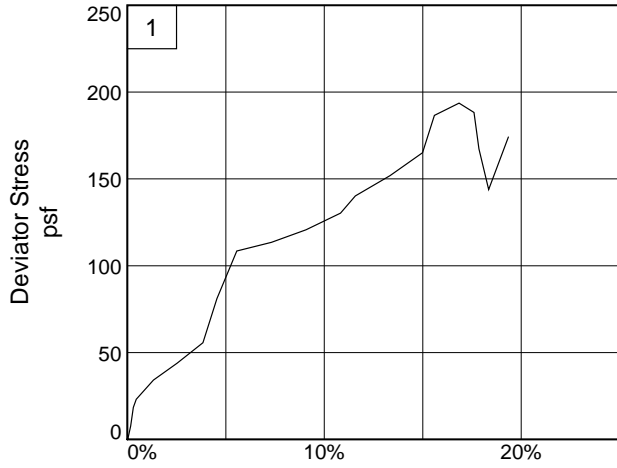


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ENGINEERING  
SINCE 1946

**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-5

**Depth:** 9

**Sample Number:** 5B

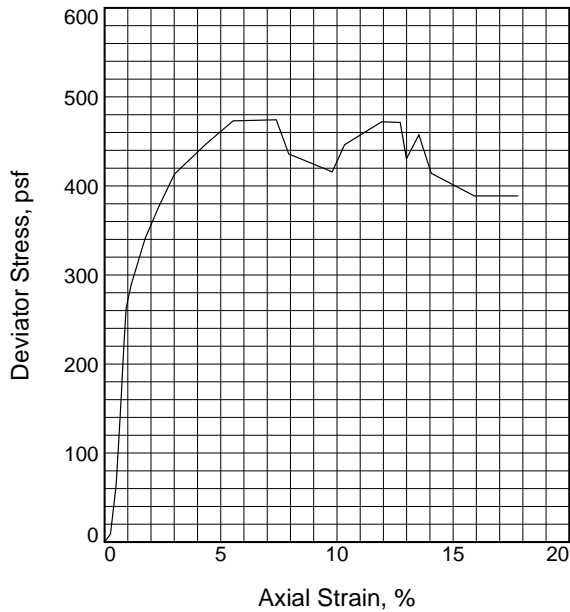
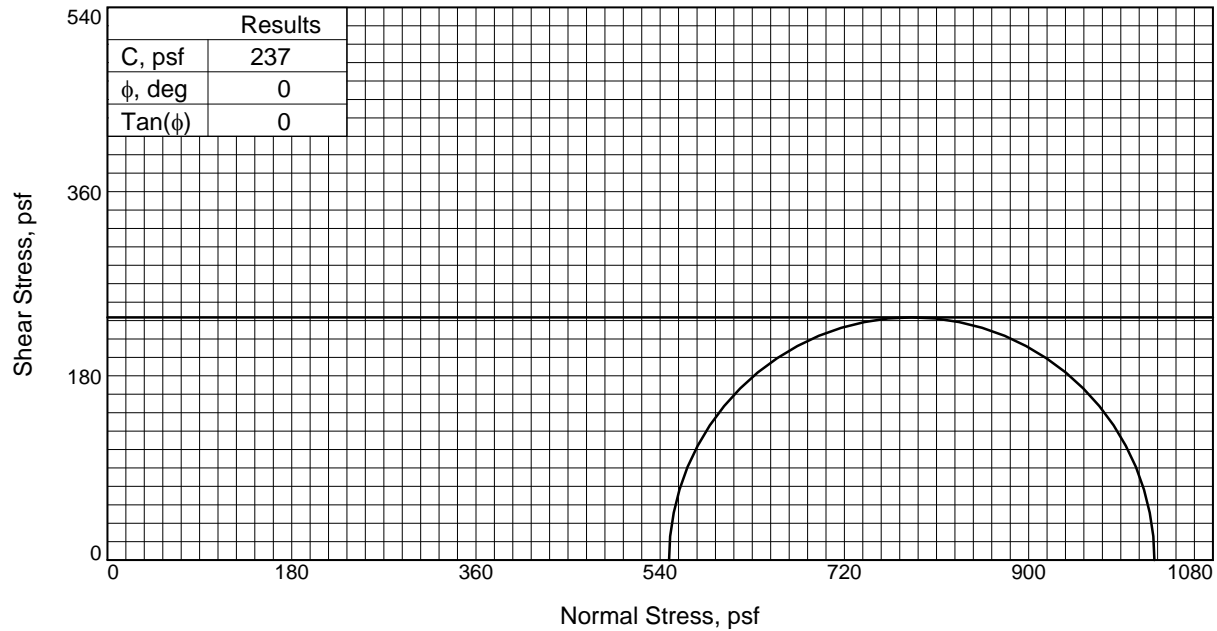
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	44.5
	Dry Density, pcf	72.6
	Saturation, %	90.3
	Void Ratio	1.3399
	Diameter, in.	1.36
At Test	Height, in.	2.71
	Water Content, %	49.3
	Dry Density, pcf	72.6
	Saturation, %	100.0
	Void Ratio	1.3399
Strain rate, %/min.	Diameter, in.	1.36
	Back Pressure, psi	0.00
	Cell Pressure, psi	3.81
	Fail. Stress, psf	474
	Strain, %	7.4
Ult. Stress, psf	Strain, %	9.8
	Strain, %	9.8
$\sigma_1$ Failure, psf	1023	
$\sigma_3$ Failure, psf	549	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vso g FT CL w/ fw si poc & len (CH)

LL= 92      PL= 27      PI= 65

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-5      **Depth:** 13

**Sample Number:** 7B

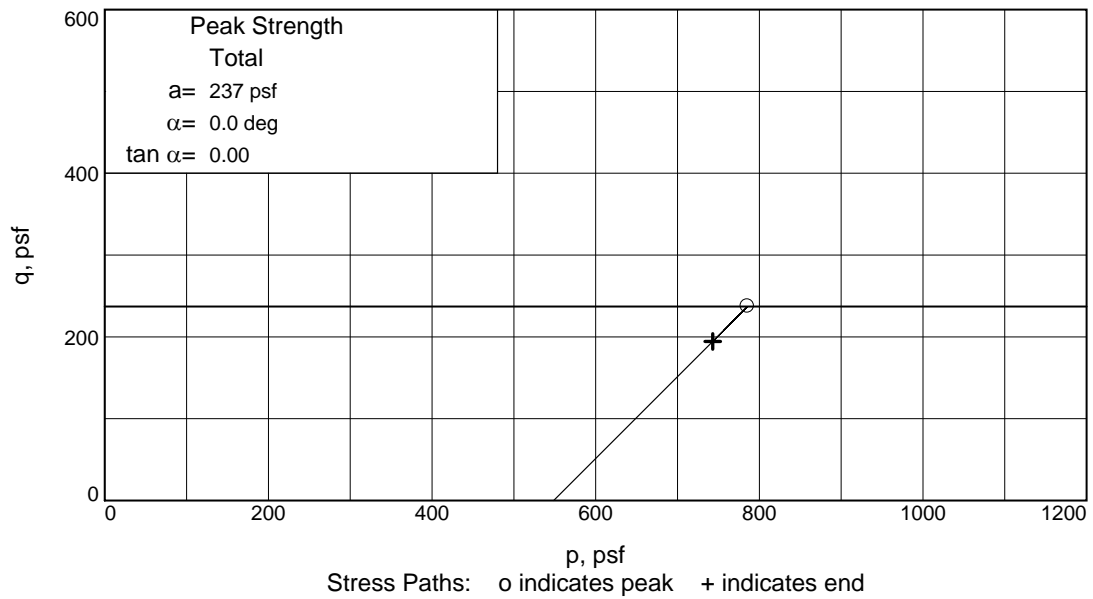
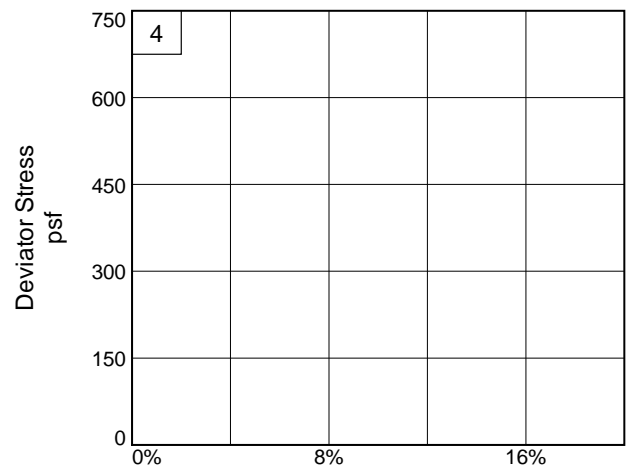
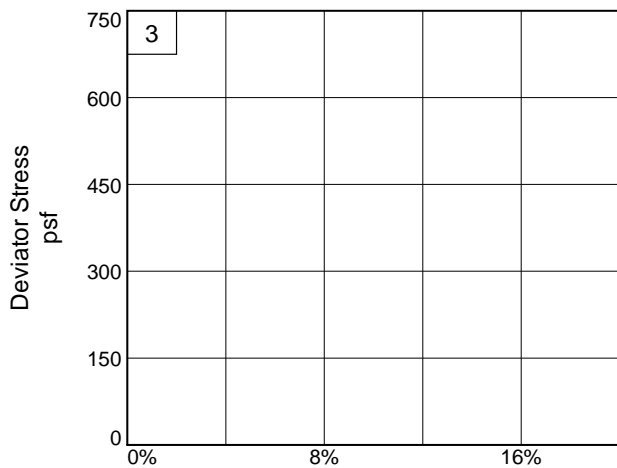
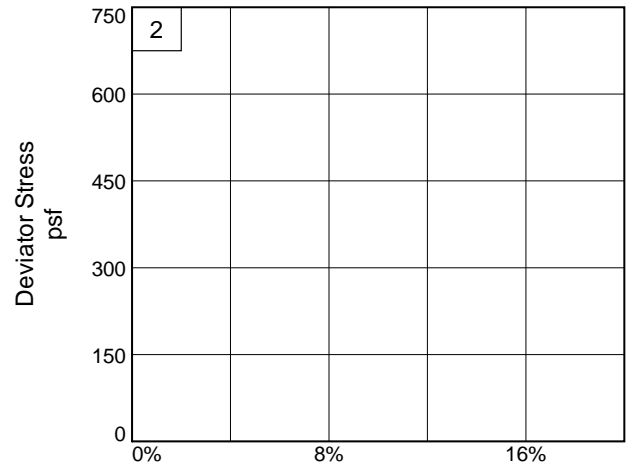
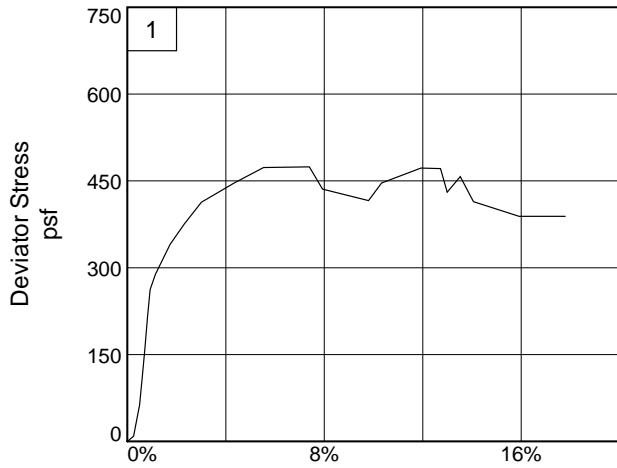
**Proj. No.:** 24762

**Date Sampled:** 6/2/22



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**Figure** ASTM D2850



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-5

**Depth:** 13

**Sample Number:** 7B

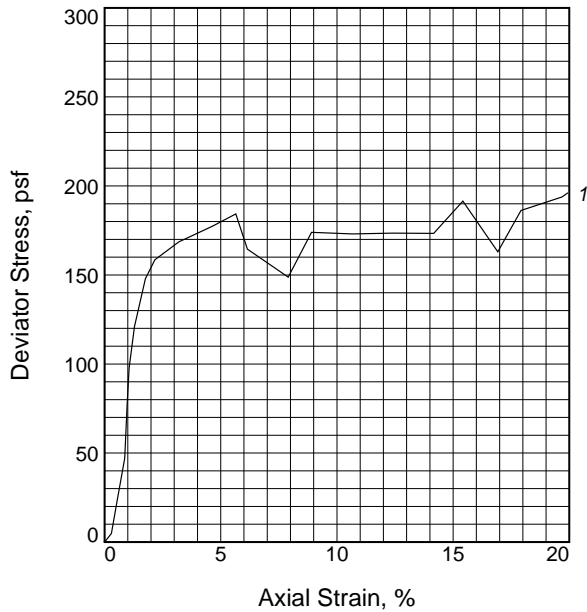
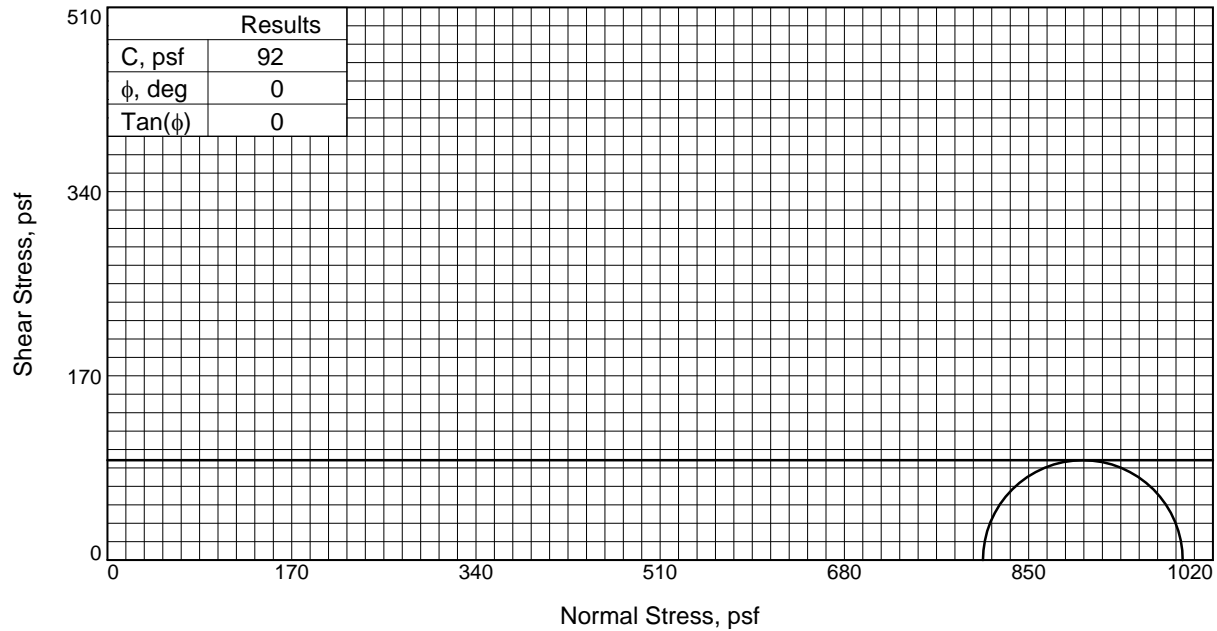
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	56.6
	Dry Density, pcf	65.5
	Saturation, %	96.6
	Void Ratio	1.5942
	Diameter, in.	1.39
At Test	Height, in.	2.90
	Water Content, %	58.6
	Dry Density, pcf	65.5
	Saturation, %	100.0
	Void Ratio	1.5942
	Diameter, in.	1.39
	Height, in.	2.90
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	5.61
Fail. Stress, psf	184	
Strain, %	5.7	
Ult. Stress, psf	149	
Strain, %	7.9	
$\sigma_1$ Failure, psf	992	
$\sigma_3$ Failure, psf	808	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso g FT CL w/ tr si poc & len (CH)

LL= 59      PL= 24      PI= 35

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-5      **Depth:** 17

**Sample Number:** 9B

**Proj. No.:** 24762

**Date Sampled:** 6/14/22

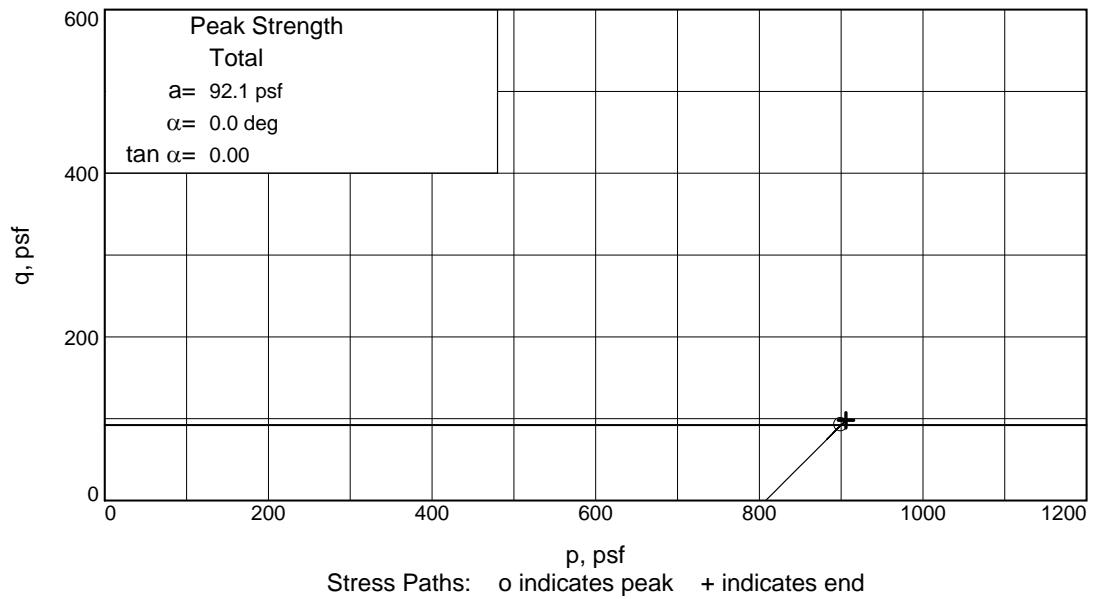
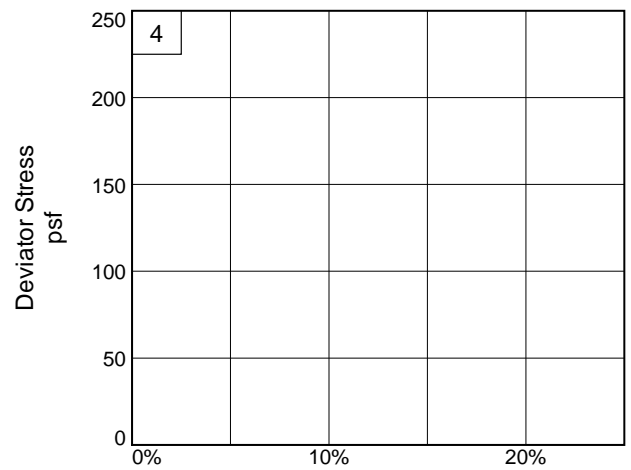
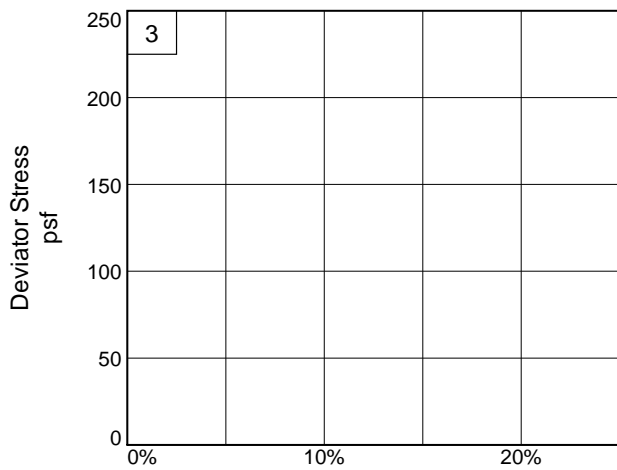
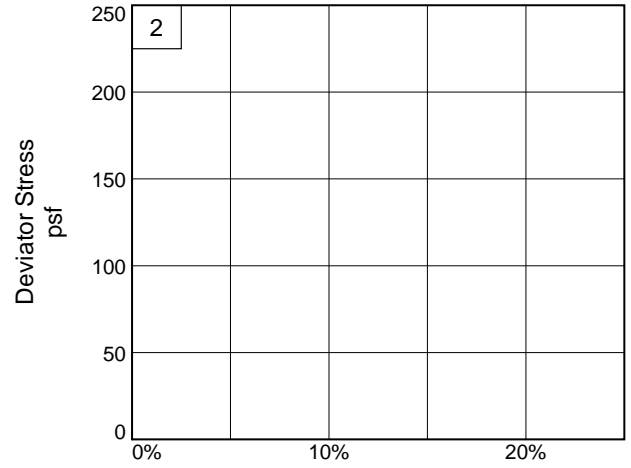
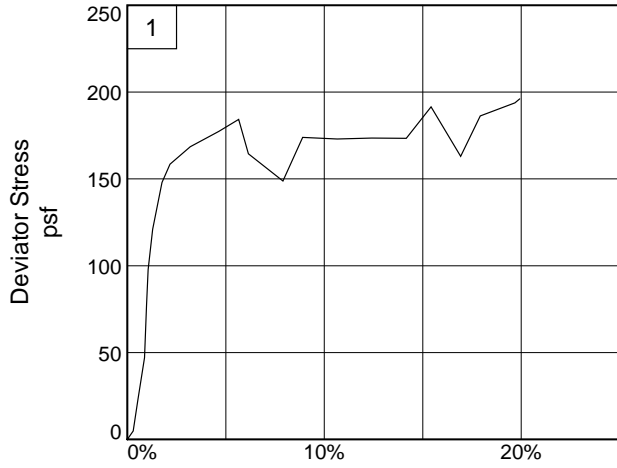


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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-5

**Depth:** 17

**Sample Number:** 9B

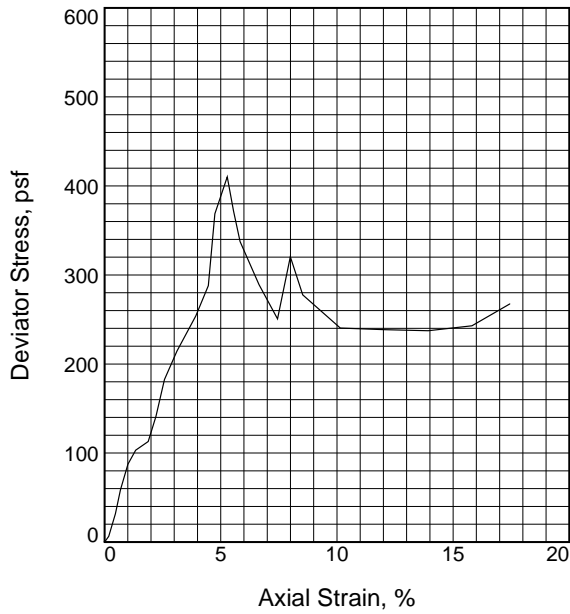
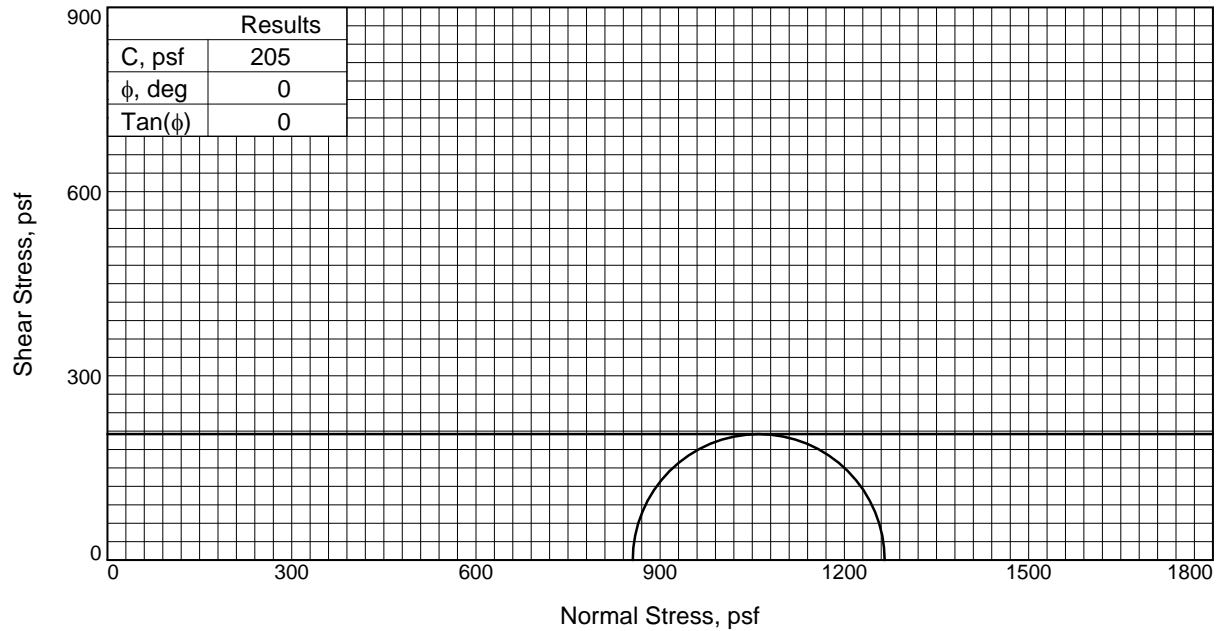
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	45.6
	Dry Density, pcf	71.4
	Saturation, %	90.2
	Void Ratio	1.3770
	Diameter, in.	1.37
At Test	Height, in.	2.72
	Water Content, %	50.6
	Dry Density, pcf	71.4
	Saturation, %	100.0
	Void Ratio	1.3770
Strain rate, %/min.	Diameter, in.	1.37
	Back Pressure, psi	0.00
	Cell Pressure, psi	5.94
	Fail. Stress, psf	410
	Strain, %	5.3
Ult. Stress, psf	Strain, %	13.9
	Strain, %	13.9
$\sigma_1$ Failure, psf	1266	
$\sigma_3$ Failure, psf	855	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vso g FT CL w/ tr si poc & len (CH)

LL= 102      PL= 28      PI= 74

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-5      **Depth:** 19

**Sample Number:** 10B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

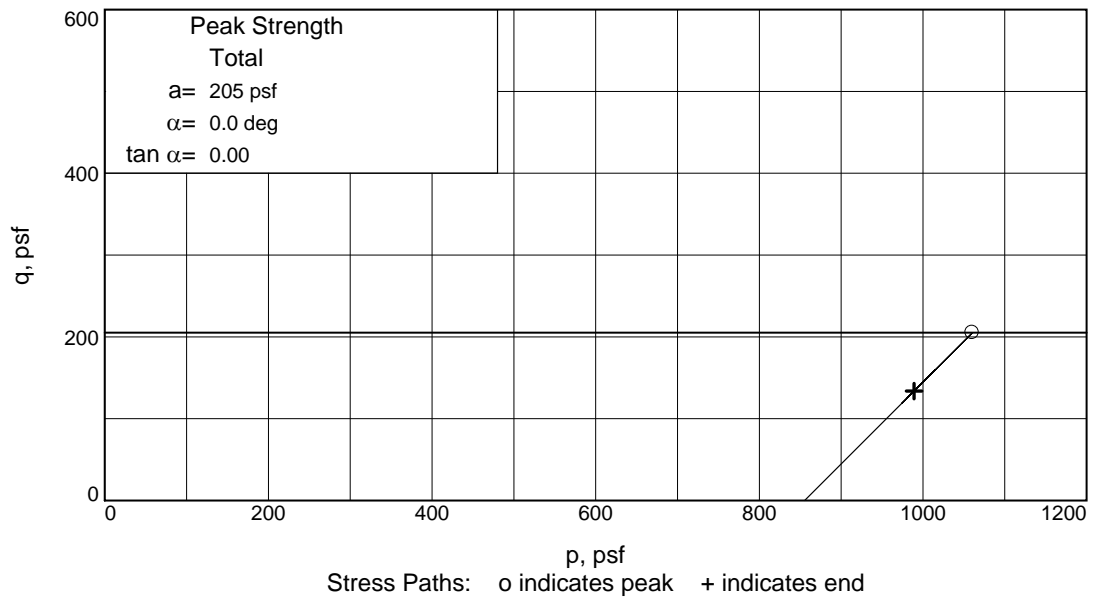
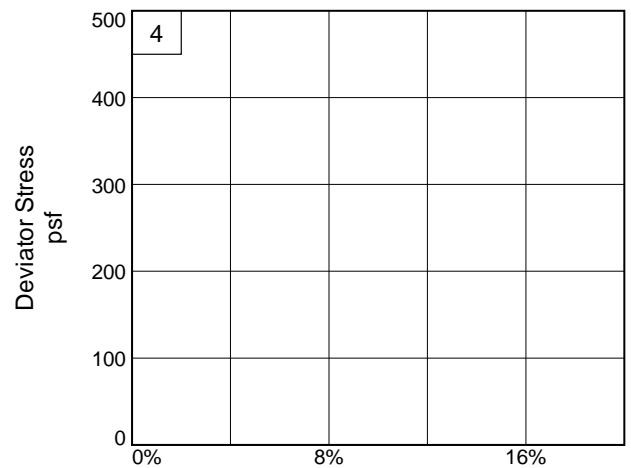
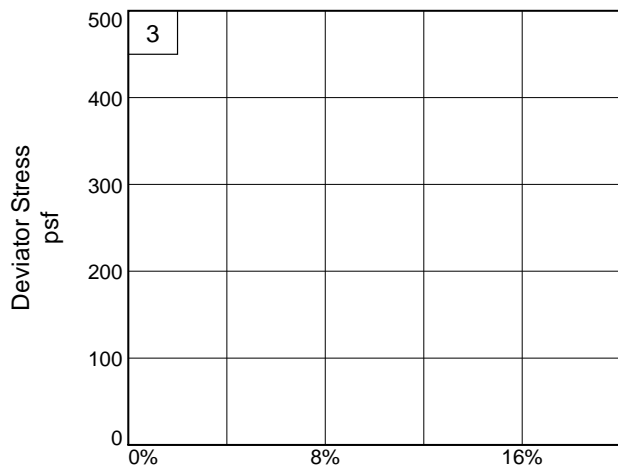
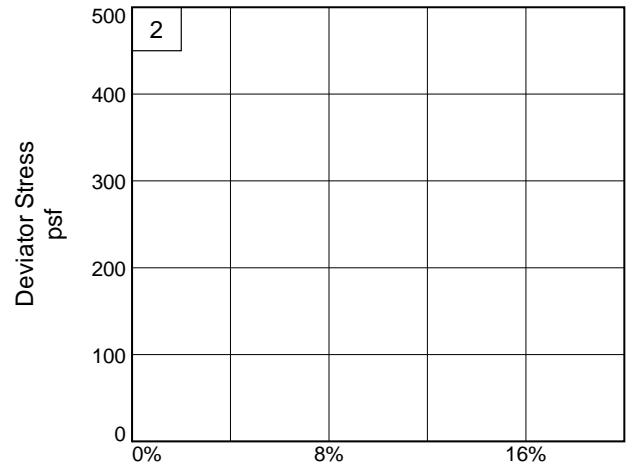
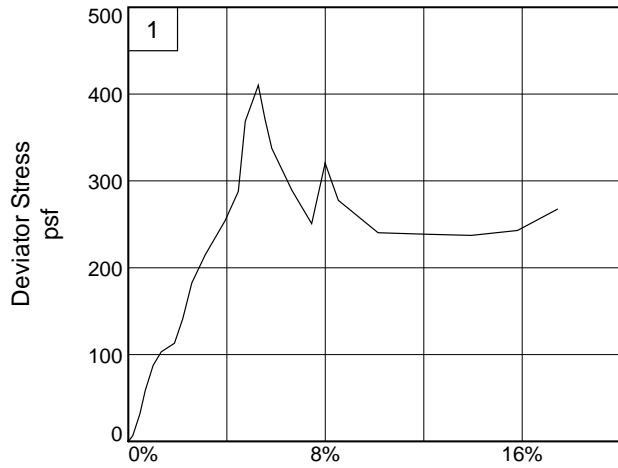


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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

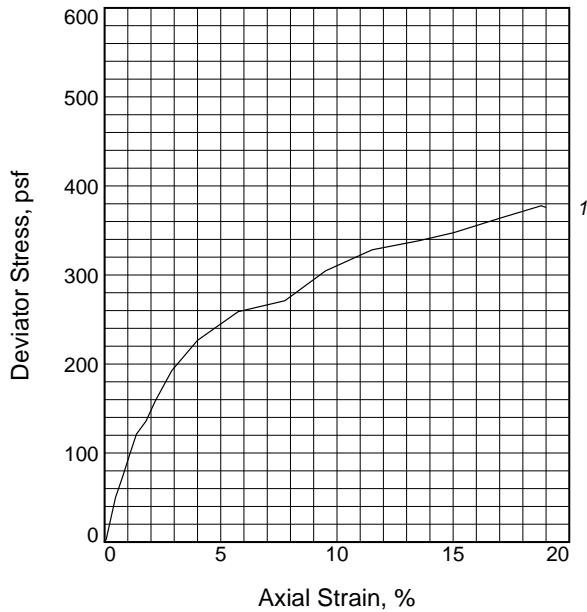
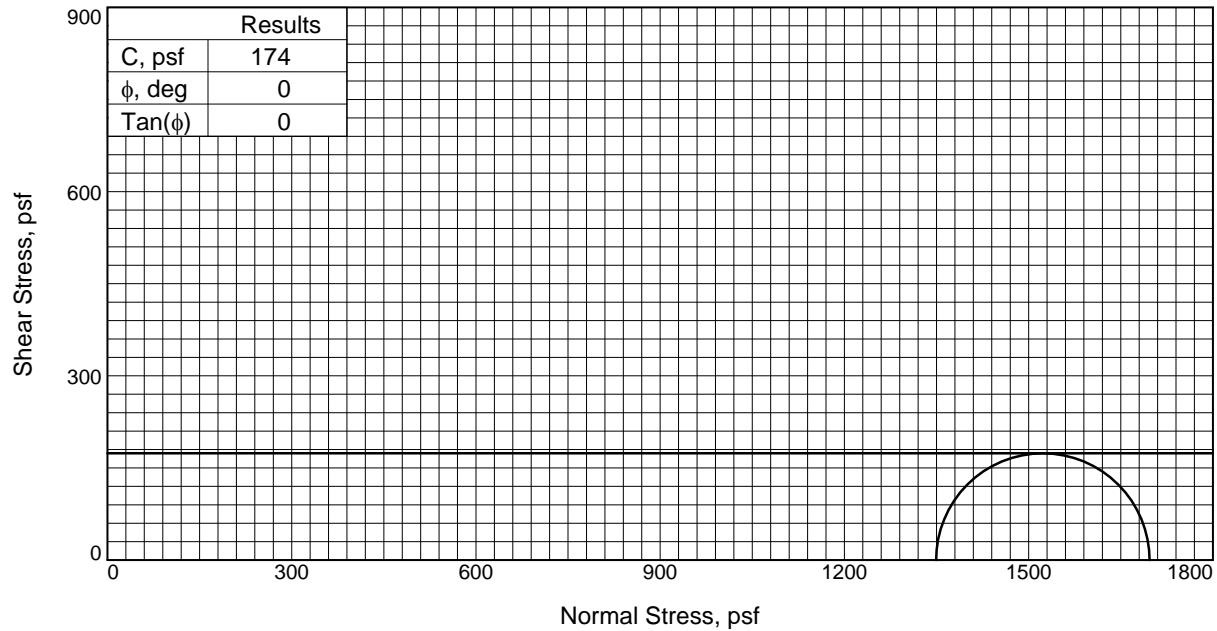
**Source of Sample:** B-5      **Depth:** 19      **Sample Number:** 10B

**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC      **Checked By:** CD & RR





Sample No.		1
Initial	Water Content, %	54.5
	Dry Density, pcf	68.1
	Saturation, %	99.3
	Void Ratio	1.4928
	Diameter, in.	1.41
	Height, in.	2.81
At Test	Water Content, %	54.9
	Dry Density, pcf	68.1
	Saturation, %	100.0
	Void Ratio	1.4928
	Diameter, in.	1.41
	Height, in.	2.81
Strain rate, %/min.	0.03	
Back Pressure, psi	0.00	
Cell Pressure, psi	9.37	
Fail. Stress, psf	348	
Strain, %	15.0	
Ult. Stress, psf	348	
Strain, %	15.0	
$\sigma_1$ Failure, psf	1697	
$\sigma_3$ Failure, psf	1349	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vso g FT CL w/ fw si poc & len (CH)

LL= 57      PL= 22      PI= 35

Assumed Specific Gravity= 2.72

Remarks: TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-5      **Depth:** 28

**Sample Number:** 12A

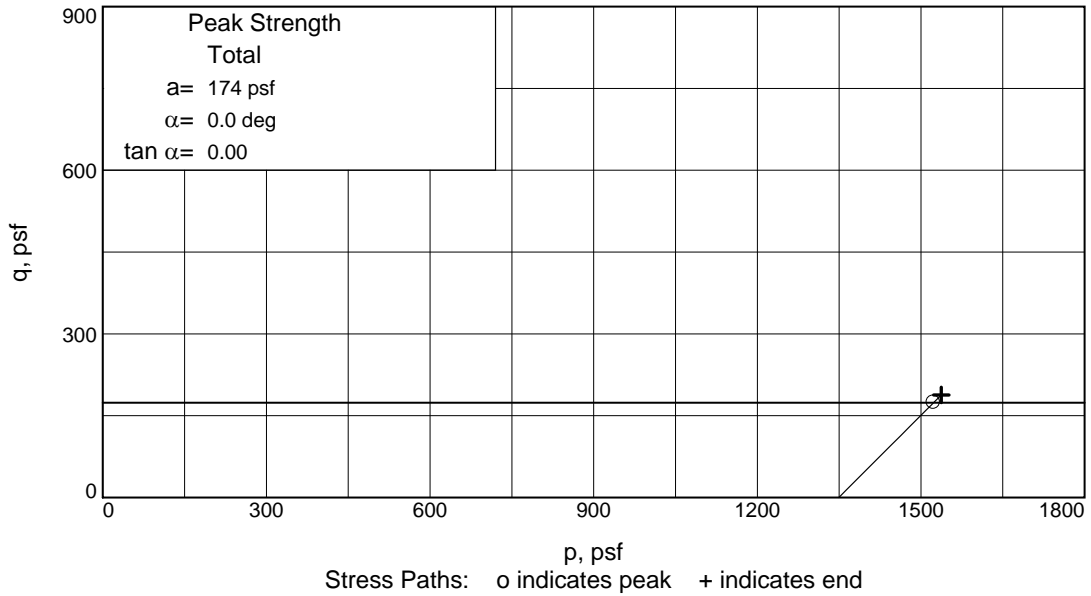
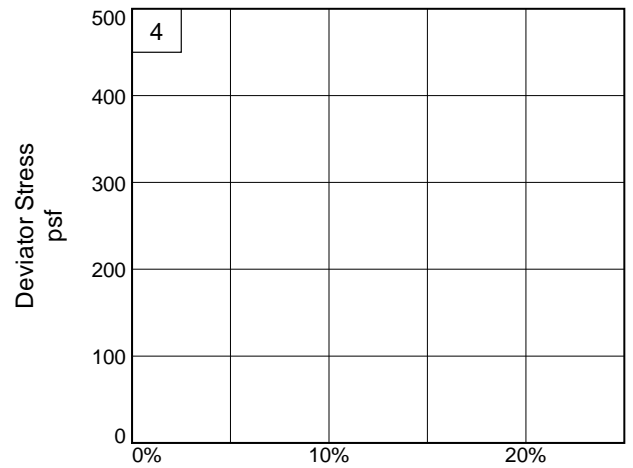
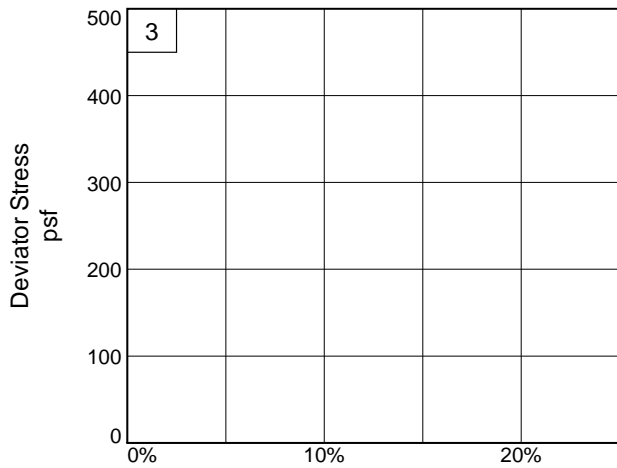
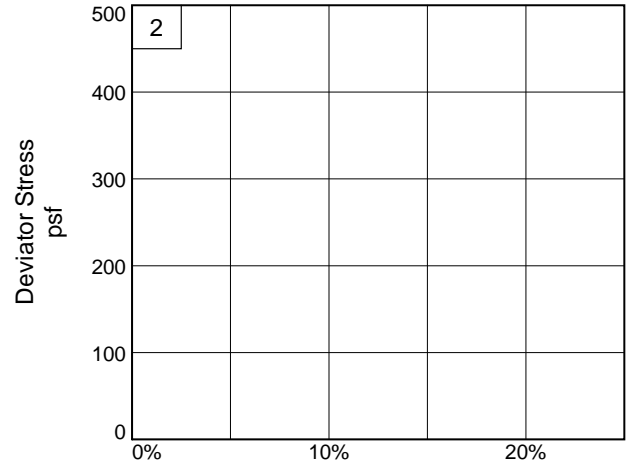
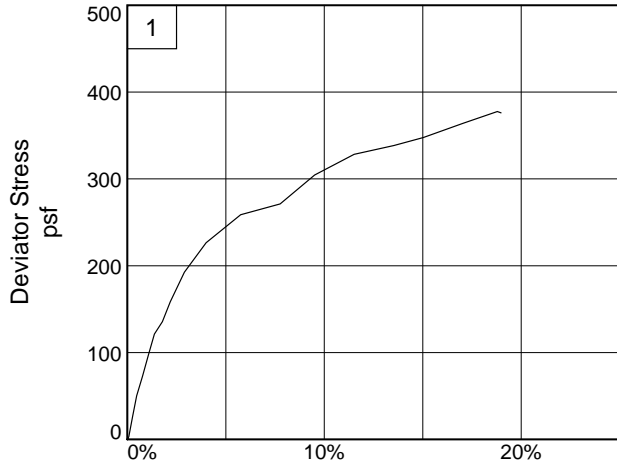
**Proj. No.:** 24762

**Date Sampled:** 6/2/22

Figure ASTM D2850



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**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

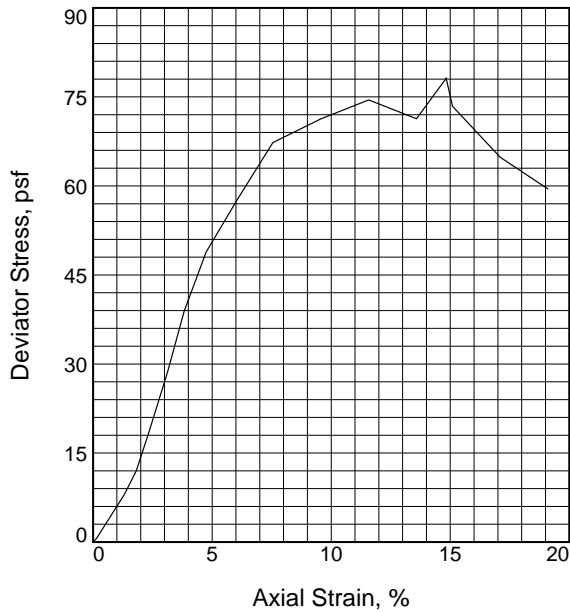
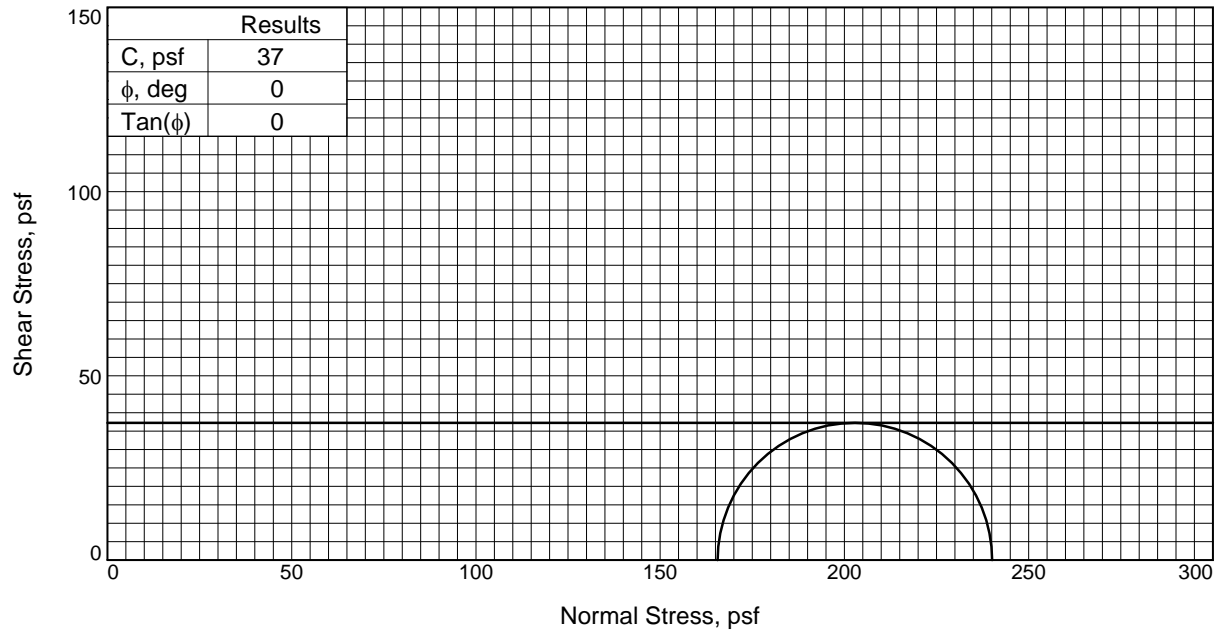
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-5      **Depth:** 28      **Sample Number:** 12A

**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	129.2
	Dry Density, pcf	37.4
	Saturation, %	99.9
	Void Ratio	3.4269
	Diameter, in.	1.40
At Test	Height, in.	2.80
	Water Content, %	129.3
	Dry Density, pcf	37.4
	Saturation, %	100.0
	Void Ratio	3.4269
Strain rate, %/min. Back Pressure, psi Cell Pressure, psi Fail. Stress, psf Strain, % Ult. Stress, psf Strain, % $\sigma_1$ Failure, psf $\sigma_3$ Failure, psf	Diameter, in.	1.40
	Height, in.	2.80
	1.00	
	0.00	
	1.15	
	74	
	11.6	
	71	
	13.6	
	240	
166		

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso dk g & g ORG CL w/ fw rts (OH)

**LL=** 145      **PL=** 40      **PI=** 105

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = N/A

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-6      **Depth:** 3

**Sample Number:** 2B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

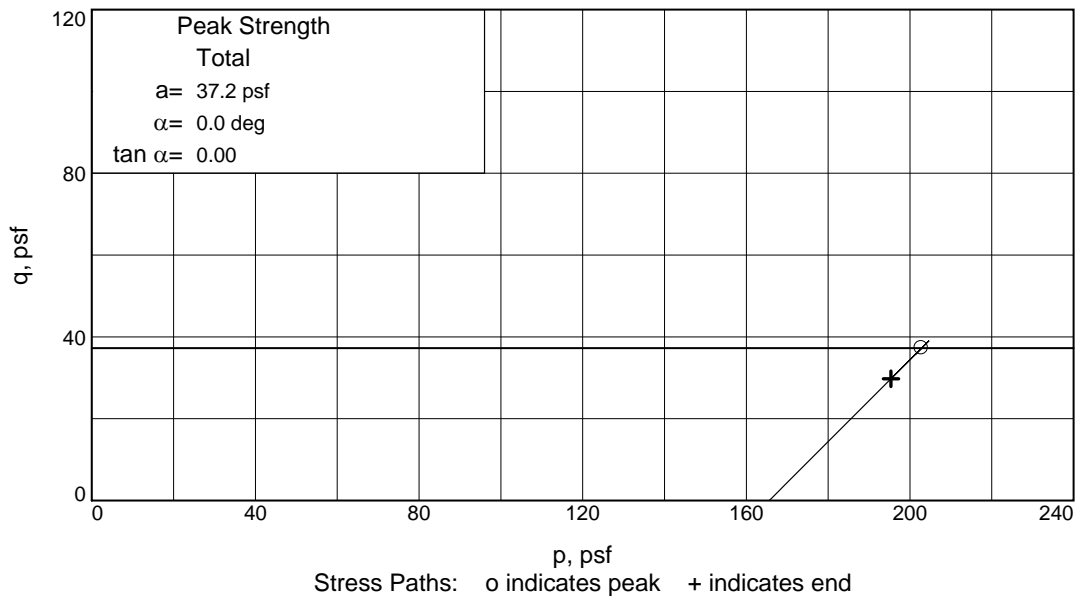
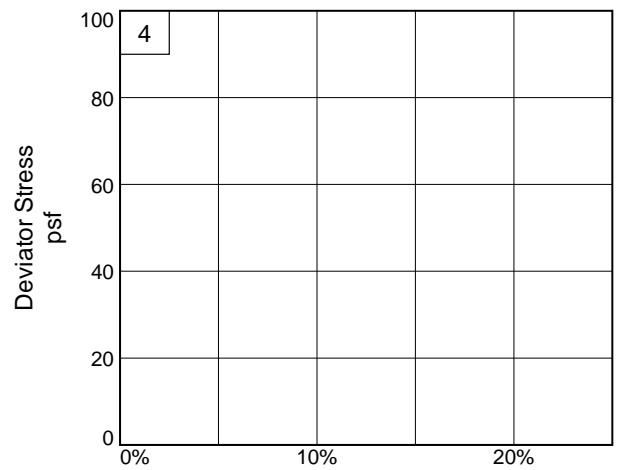
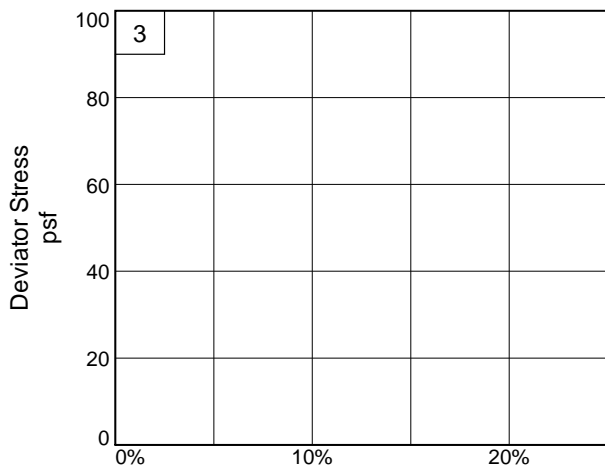
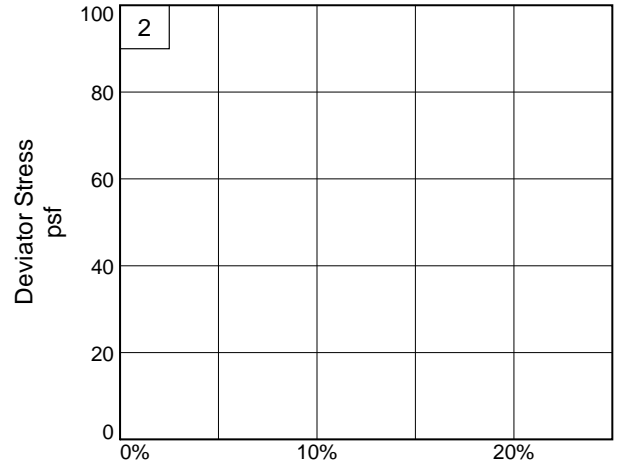
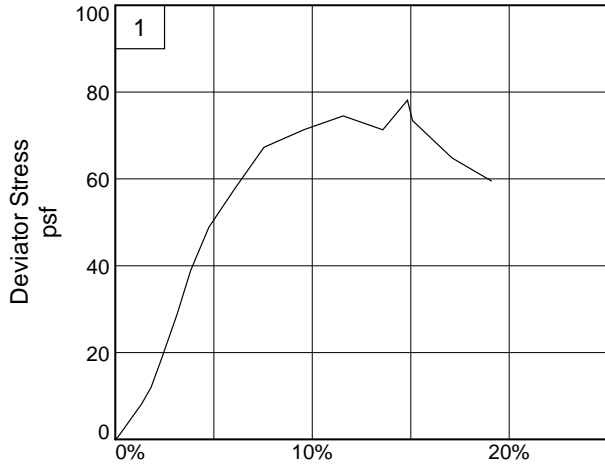


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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-6

**Depth:** 3

**Sample Number:** 2B

**Project No.:** 24762

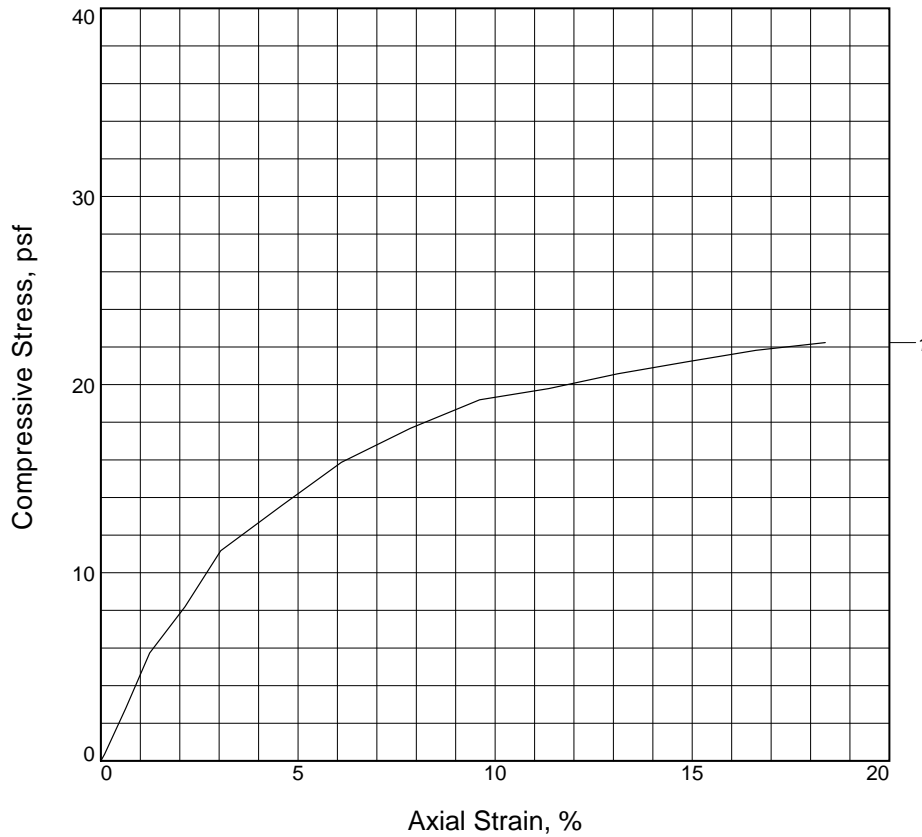
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR

# UNCONFINED COMPRESSION TEST



Sample No.	1		
Unconfined strength, psf	21		
Undrained shear strength, psf	11		
Failure strain, %	14.9		
Strain rate, %/min.	1.00		
Water content, %	150.1		
Wet density, pcf	82.1		
Dry density, pcf	32.8		
Saturation, %	98.5		
Void ratio	4.0401		
Specimen diameter, in.	1.41		
Specimen height, in.	2.89		
Height/diameter ratio	2.05		

**Description:** W, xso g ORG CL w/ fw rts (OH)

**LL = 163**      **PL = 40**      **PI = 123**      **Assumed GS= 2.65**      **Type: UNDISTURBED**

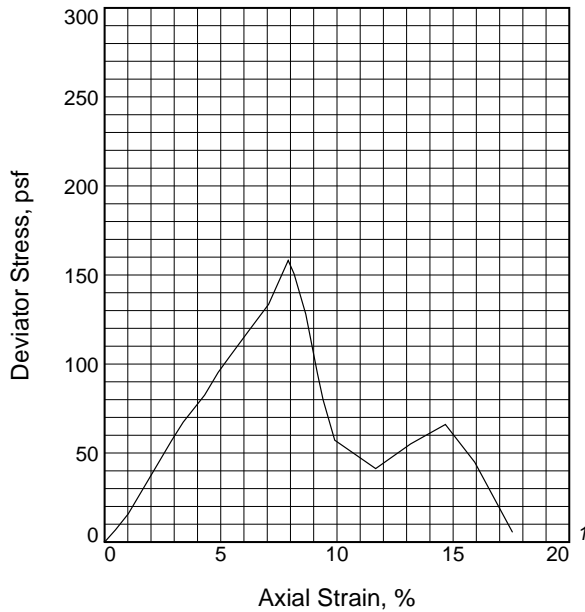
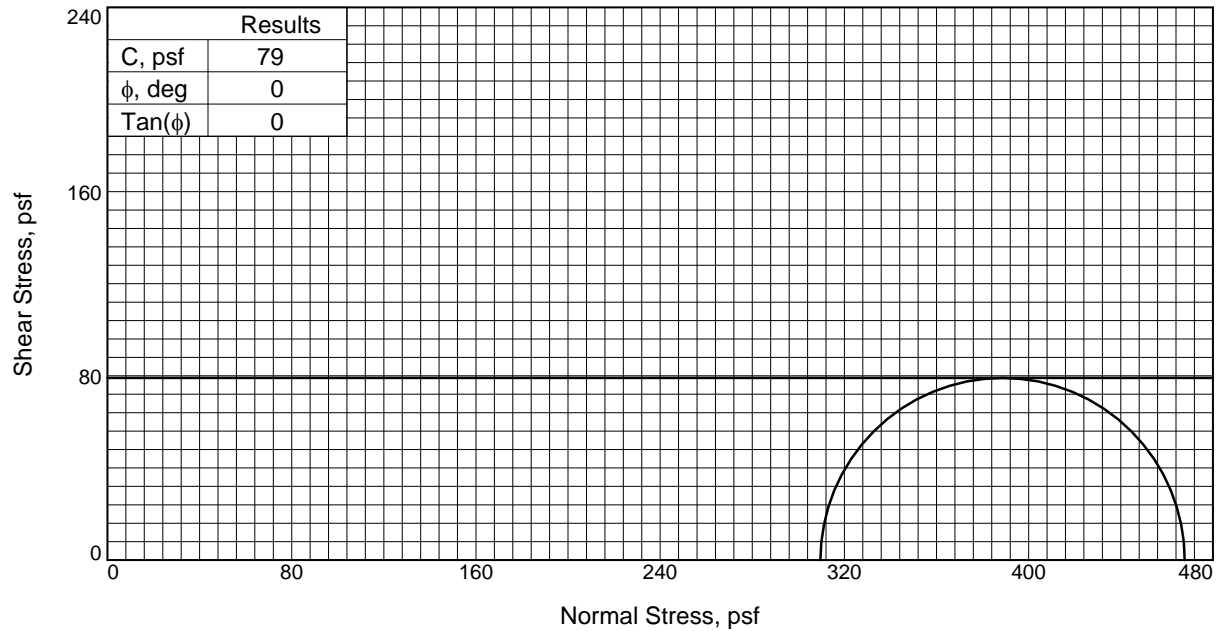
**Project No.:** 24762  
**Date Sampled:** 6/2/22  
**Remarks:**  
 TORVANE = N/A

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA  
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH  
**Source of Sample:** B-6      **Depth:** 5  
**Sample Number:** 3B

Figure ASTM D2166



**Tested By:** CC \_\_\_\_\_ **Checked By:** CD & RR \_\_\_\_\_



Sample No.	1	
Initial	Water Content, %	372.9
	Dry Density, pcf	9.8
	Saturation, %	62.7
	Void Ratio	14.5785
	Diameter, in.	1.37
At Test	Height, in.	2.93
	Water Content, %	595.0
	Dry Density, pcf	9.8
	Saturation, %	100.0
	Void Ratio	14.5785
Diameter, in.	1.37	
	Height, in.	2.93
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	2.15	
Fail. Stress, psf	158	
Strain, %	7.9	
Ult. Stress, psf	41	
Strain, %	11.7	
$\sigma_1$ Failure, psf	468	
$\sigma_3$ Failure, psf	310	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso g & br HUM (PT)

LL= 419      PL= 172      PI= 247

**Assumed Specific Gravity=** 2.45

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-6      **Depth:** 7

**Sample Number:** 4B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

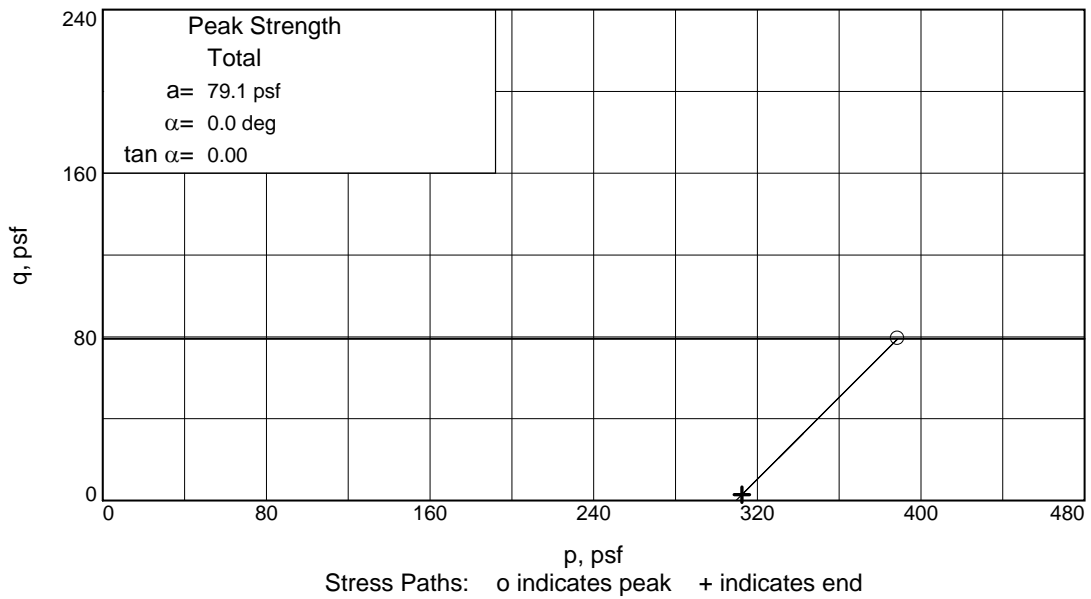
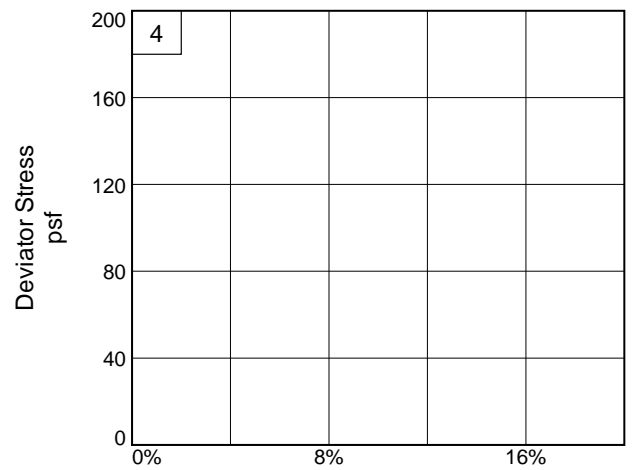
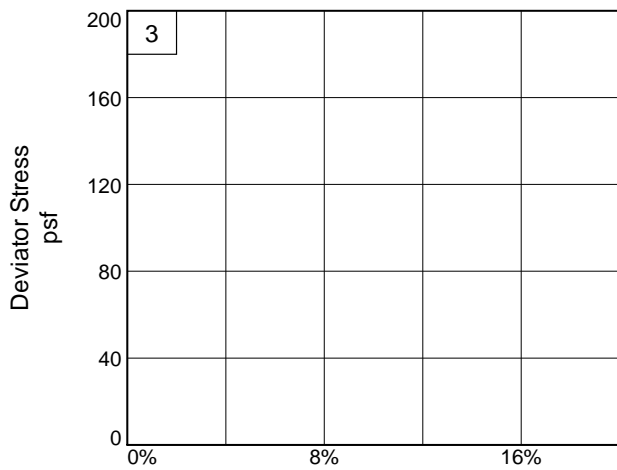
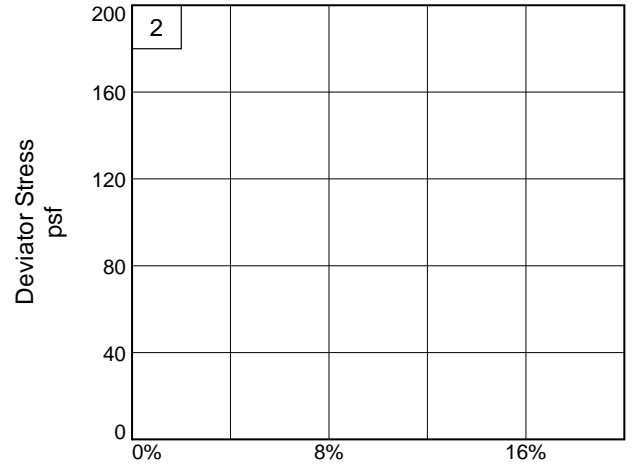
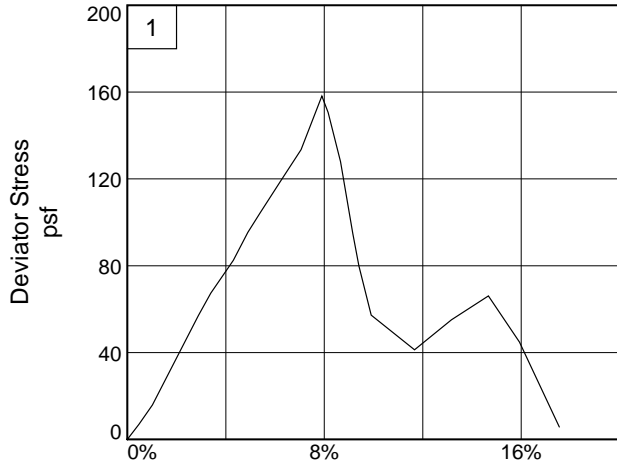


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SINCE 1946

**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

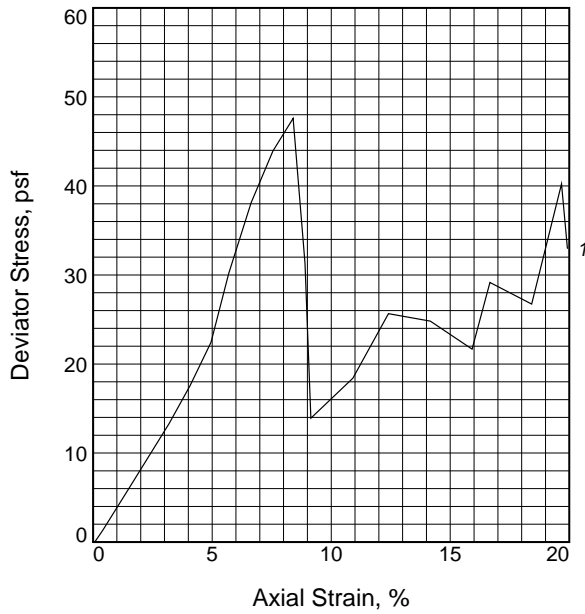
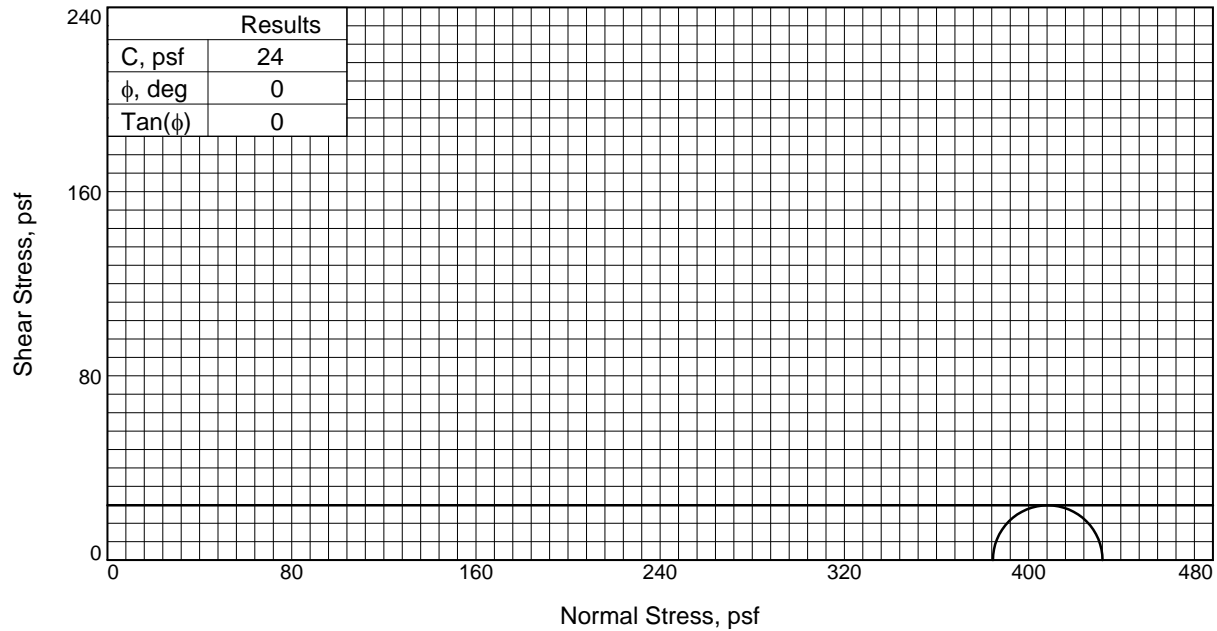
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-6      **Depth:** 7      **Sample Number:** 4B

**Project No.:** 24762      **Figure** \_\_\_\_\_

**Eustis Engineering L.L.C.**

**Tested By:** CC      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	156.7
	Dry Density, pcf	32.1
	Saturation, %	100.0
	Void Ratio	4.1545
	Diameter, in.	1.39
At Test	Height, in.	2.88
	Water Content, %	156.8
	Dry Density, pcf	32.1
	Saturation, %	100.0
	Void Ratio	4.1545
	Diameter, in.	1.39
	Height, in.	2.88
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	2.67
Fail. Stress, psf	48	
Strain, %	8.4	
Ult. Stress, psf	14	
Strain, %	9.1	
$\sigma_1$ Failure, psf	432	
$\sigma_3$ Failure, psf	384	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso g & t ORG CL (OH)

LL= 131      PL= 46      PI= 85

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = N/A

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-6      **Depth:** 11

**Sample Number:** 6B

**Proj. No.:** 24762

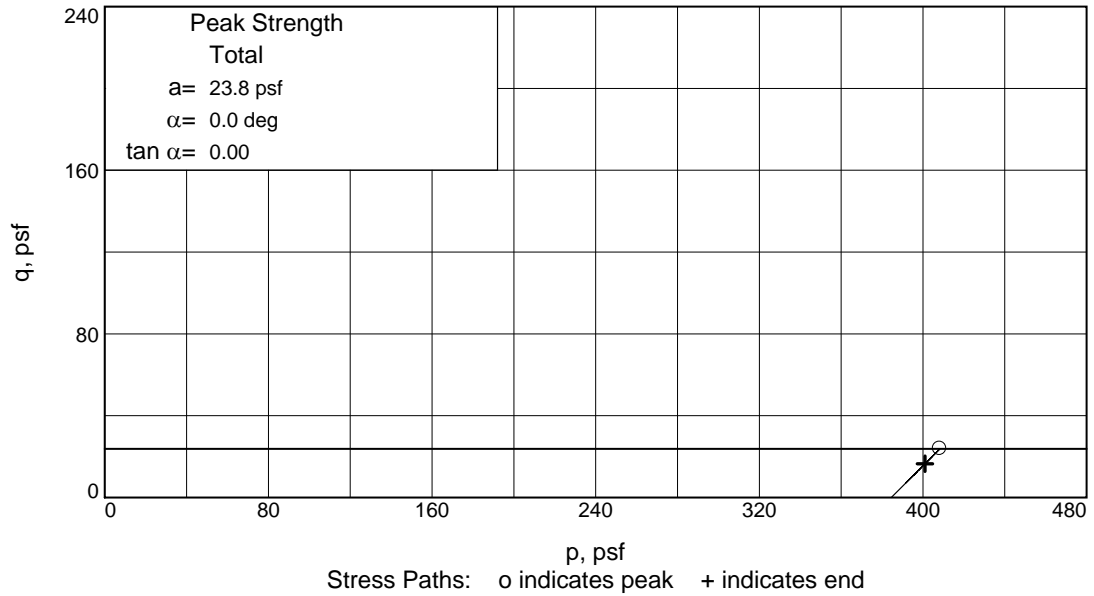
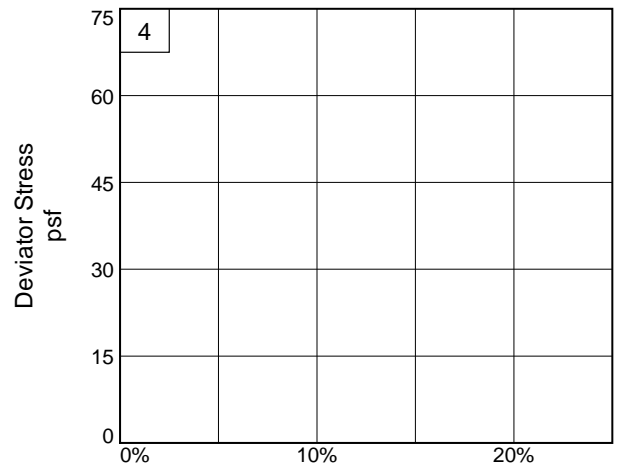
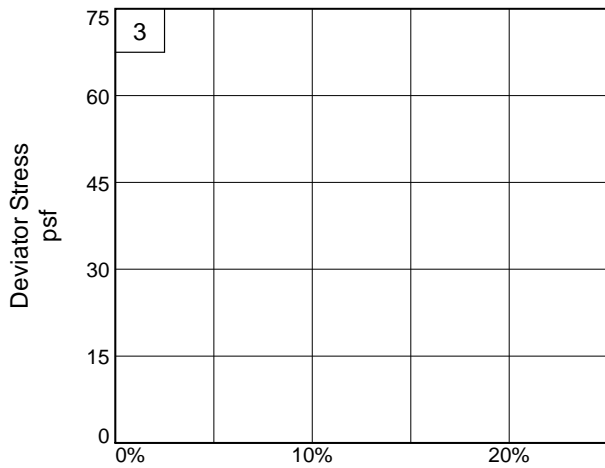
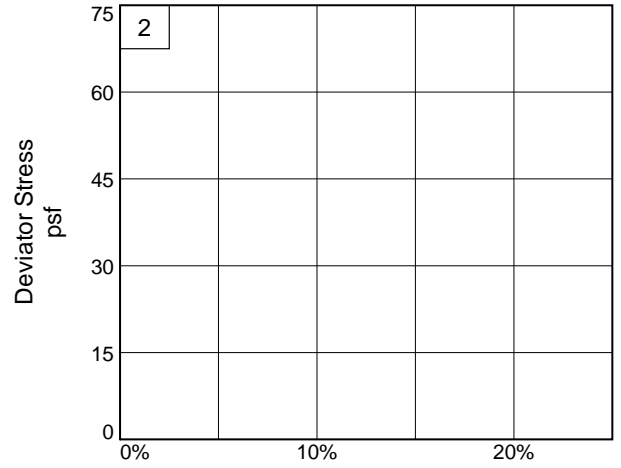
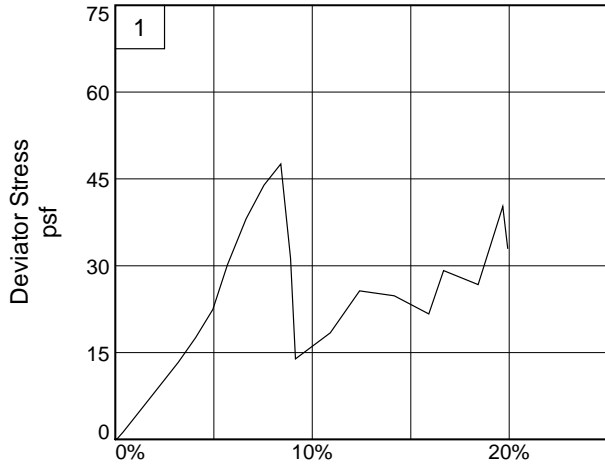
**Date Sampled:** 6/2/22



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**Figure** ASTM D2850





**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-6

**Depth:** 11

**Sample Number:** 6B

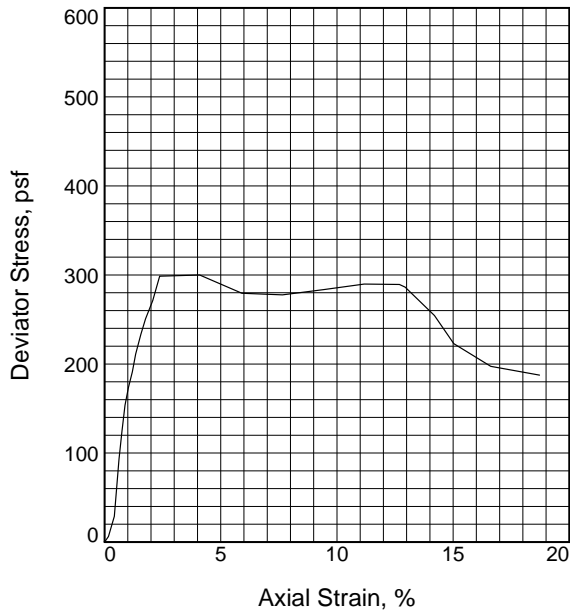
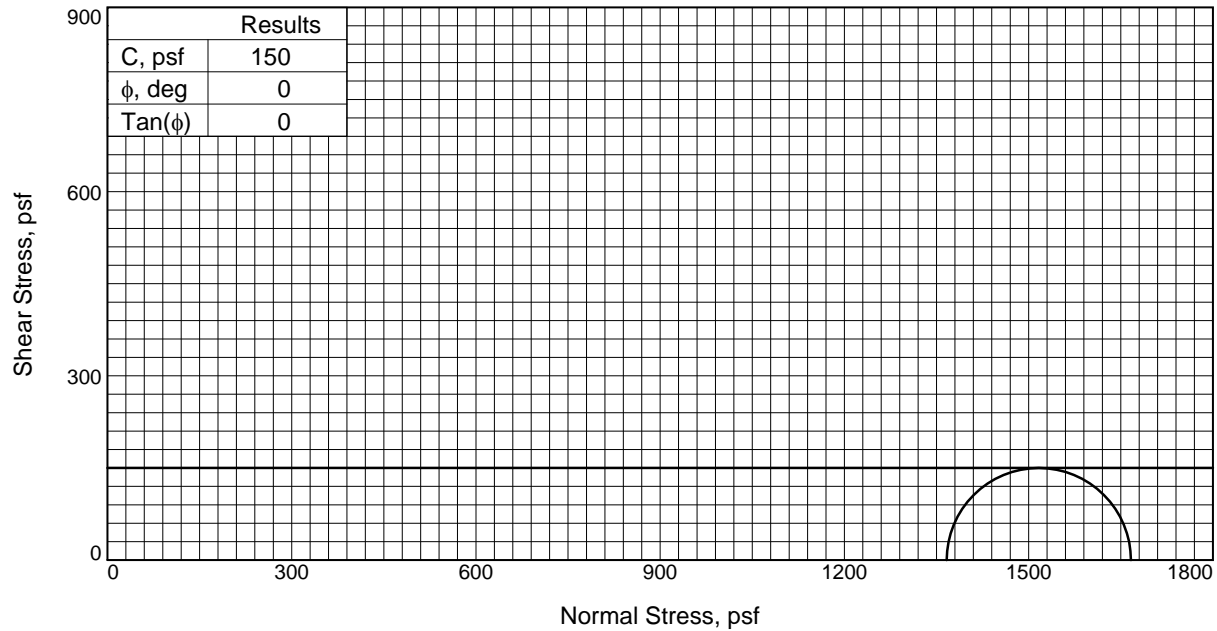
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	108.1
	Dry Density, pcf	42.6
	Saturation, %	98.4
	Void Ratio	2.9872
	Diameter, in.	1.40
At Test	Height, in.	2.92
	Water Content, %	109.8
	Dry Density, pcf	42.6
	Saturation, %	100.0
	Void Ratio	2.9872
Diameter, in.	1.39	
	Height, in.	2.92
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	9.49	
Fail. Stress, psf	300	
Strain, %	4.1	
Ult. Stress, psf	223	
Strain, %	15.0	
$\sigma_1$ Failure, psf	1667	
$\sigma_3$ Failure, psf	1367	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, vso g FT CL w/ tr si poc, om, & sh frag (CH)

LL= 137      PL= 55      PI= 82

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-6      **Depth:** 17

**Sample Number:** 9B

**Proj. No.:** 24762

**Date Sampled:** 6/2/22

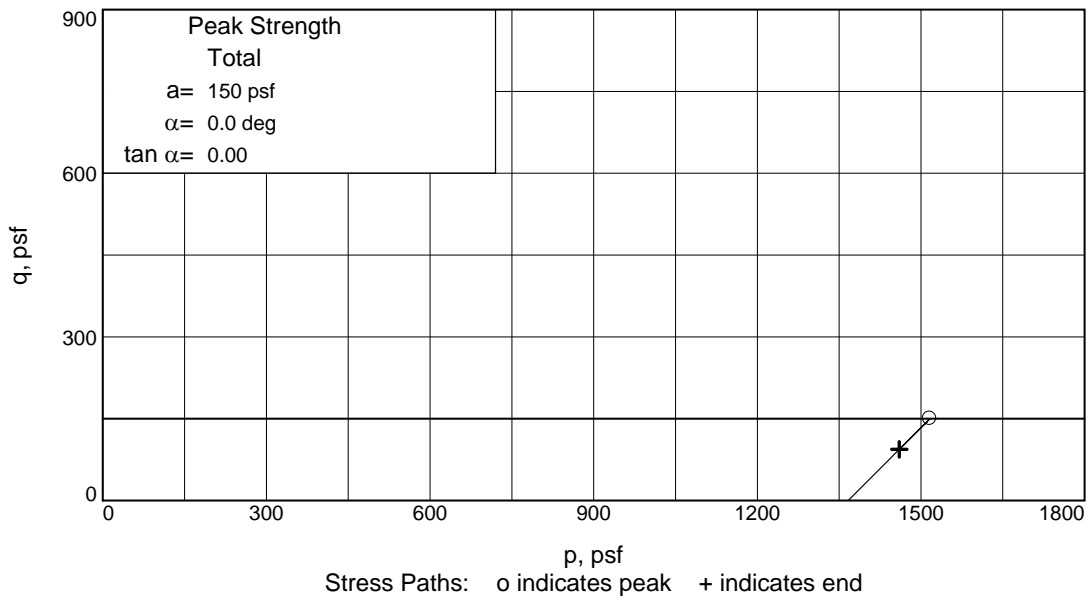
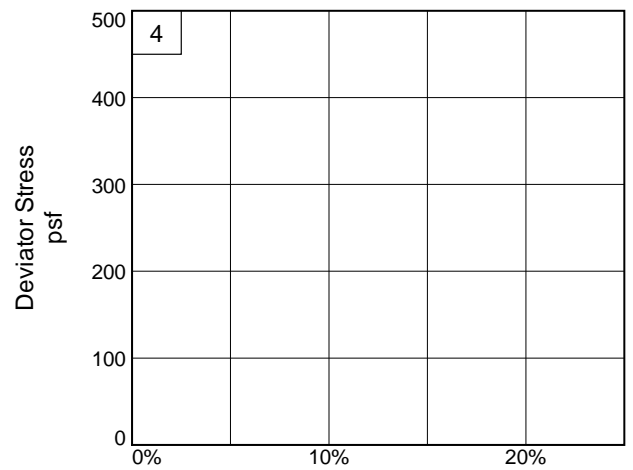
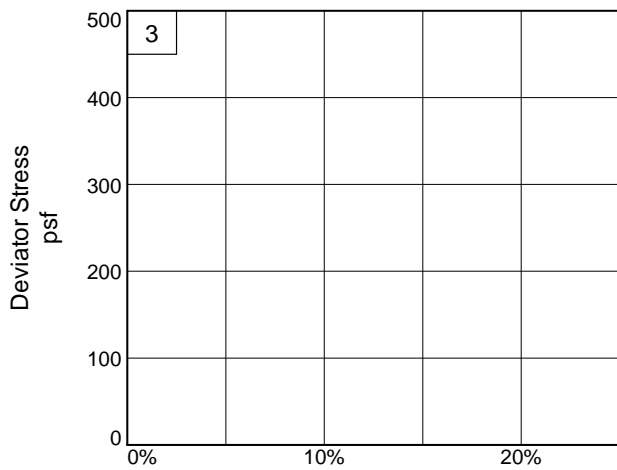
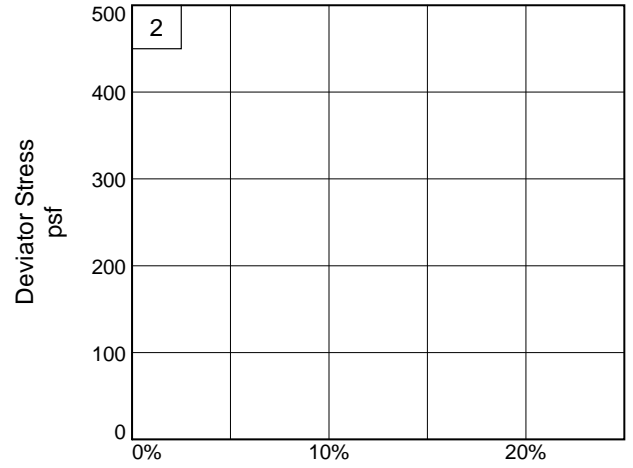
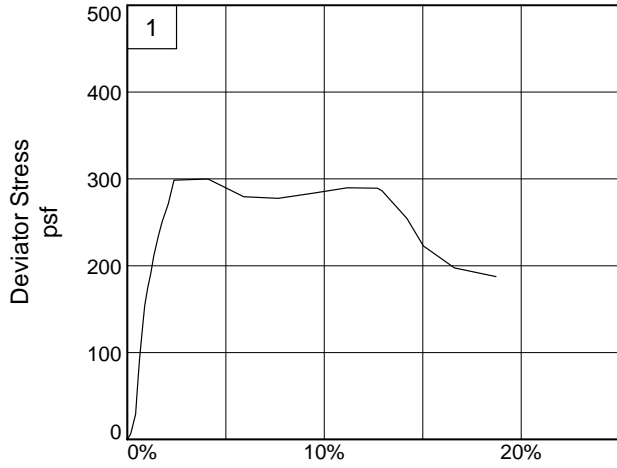


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**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-6

**Depth:** 17

**Sample Number:** 9B

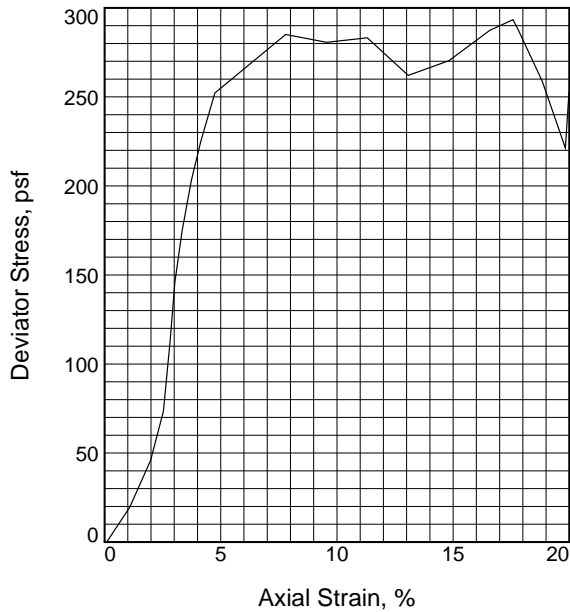
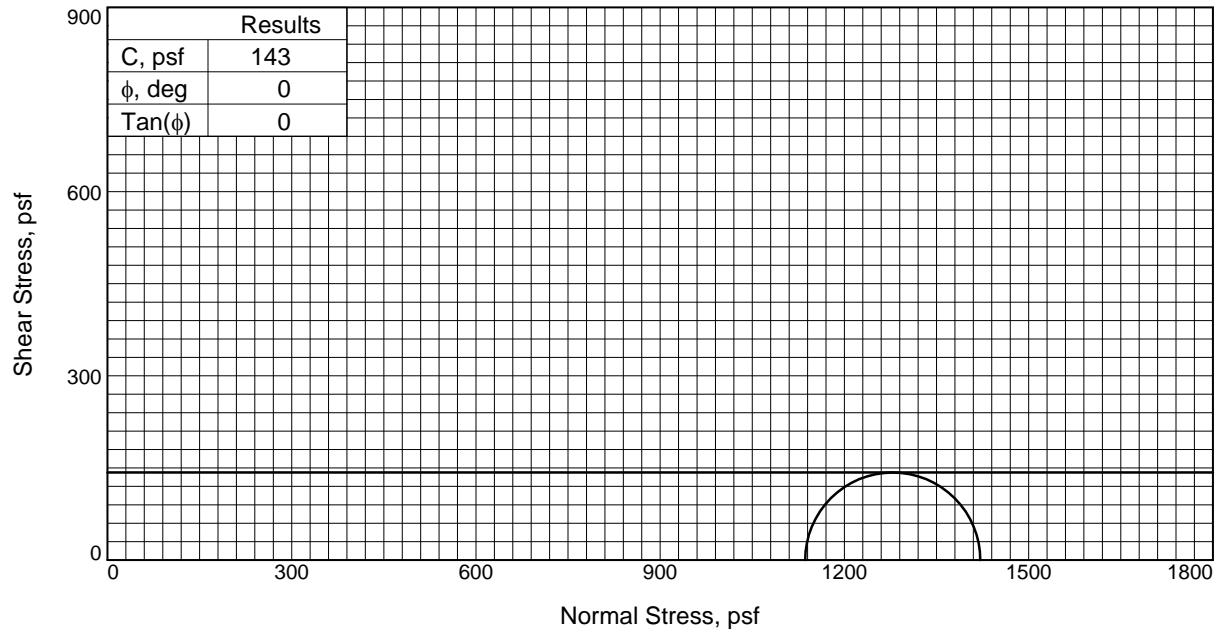
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.		1
Initial	Water Content, %	102.7
	Dry Density, pcf	44.7
	Saturation, %	100.0
	Void Ratio	2.7739
	Diameter, in.	1.40
At Test	Height, in.	2.89
	Water Content, %	102.7
	Dry Density, pcf	44.7
	Saturation, %	100.0
	Void Ratio	2.7739
	Diameter, in.	1.40
	Height, in.	2.89
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	7.89
	Fail. Stress, psf	285
	Strain, %	7.8
	Ult. Stress, psf	262
	Strain, %	13.1
	$\sigma_1$ Failure, psf	1421
$\sigma_3$ Failure, psf	1136	

**Type of Test:**  
Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, so g & t FT CL w/ tr si poc & om (CH)

**LL= 109      PL= 29      PI= 80**

**Assumed Specific Gravity= 2.70**

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

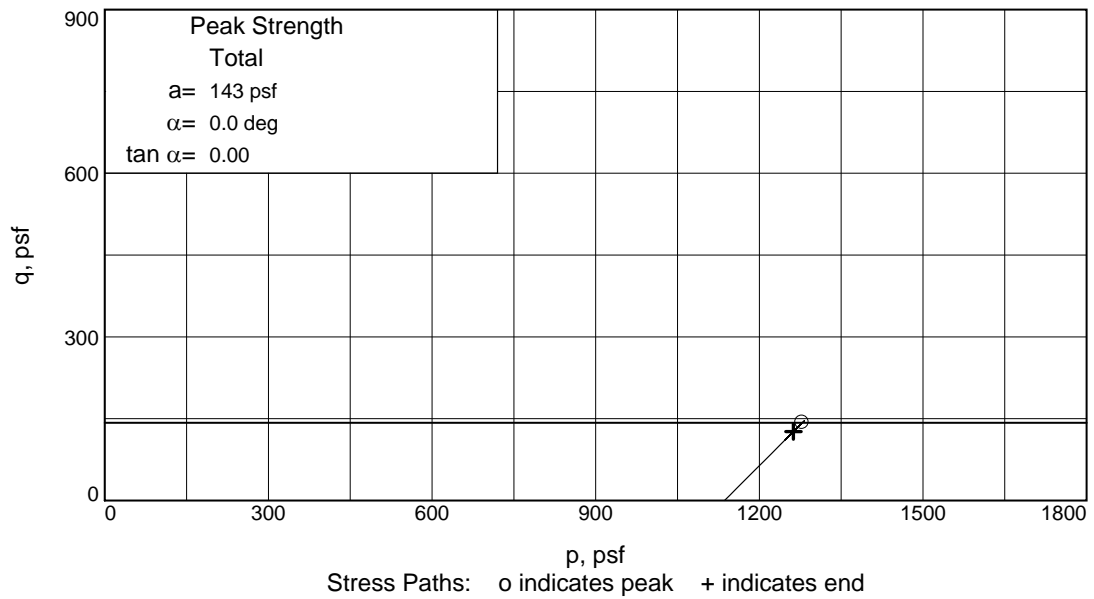
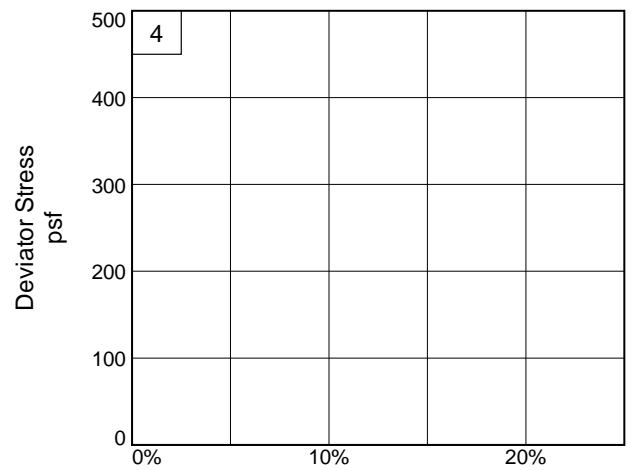
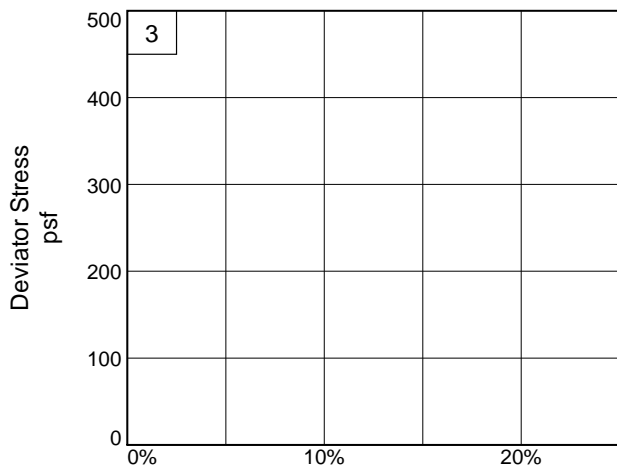
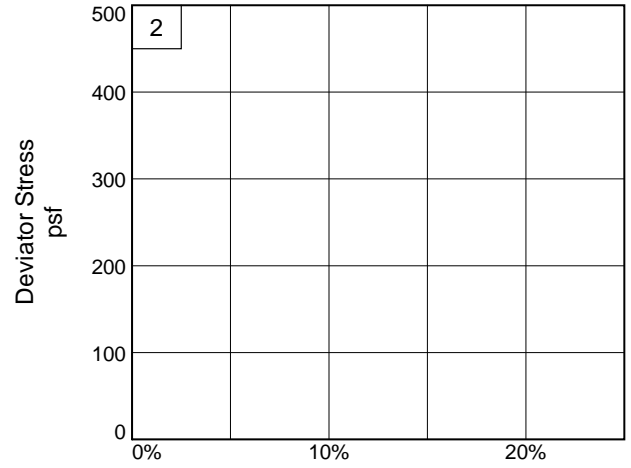
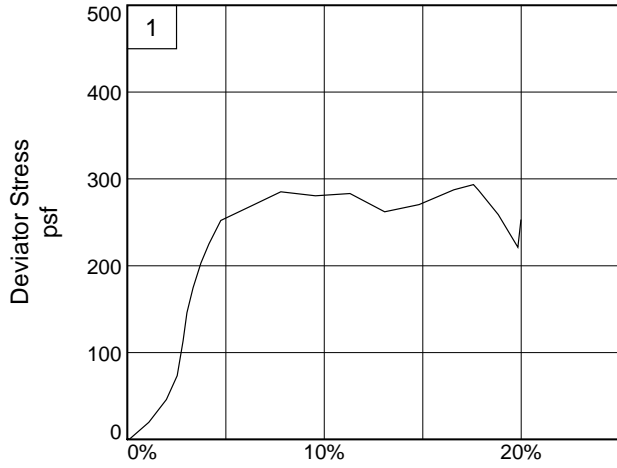
**Source of Sample:** B-6      **Depth:** 24

**Sample Number:** 11B

**Proj. No.:** 24762      **Date Sampled:** 6/2/22

Figure ATM D2850





**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-6

**Depth:** 24

**Sample Number:** 11B

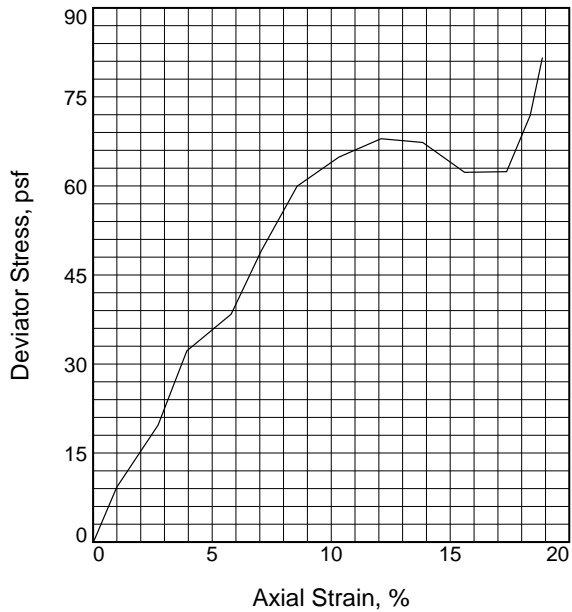
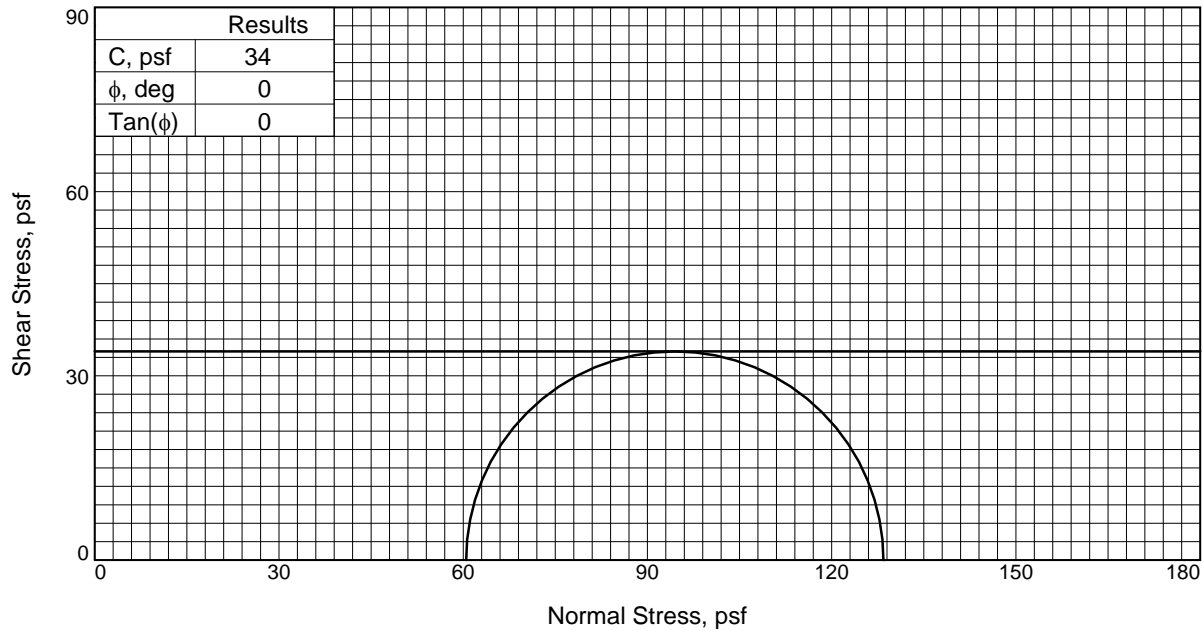
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	154.4
	Dry Density, pcf	32.5
	Saturation, %	99.9
	Void Ratio	4.0973
	Diameter, in.	1.39
	Height, in.	2.90
At Test	Water Content, %	154.6
	Dry Density, pcf	32.5
	Saturation, %	100.0
	Void Ratio	4.0973
	Diameter, in.	1.39
	Height, in.	2.90
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	0.42	
Fail. Stress, psf	68	
Strain, %	12.1	
Ult. Stress, psf	67	
Strain, %	13.8	
$\sigma_1$ Failure, psf	128	
$\sigma_3$ Failure, psf	60	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso g & dk g ORG CL w/ fw wd (OH)

LL= 145      PL= 63      PI= 82

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-7      **Depth:** 3

**Sample Number:** 2B

**Proj. No.:** 24762

**Date Sampled:** 6/6/22

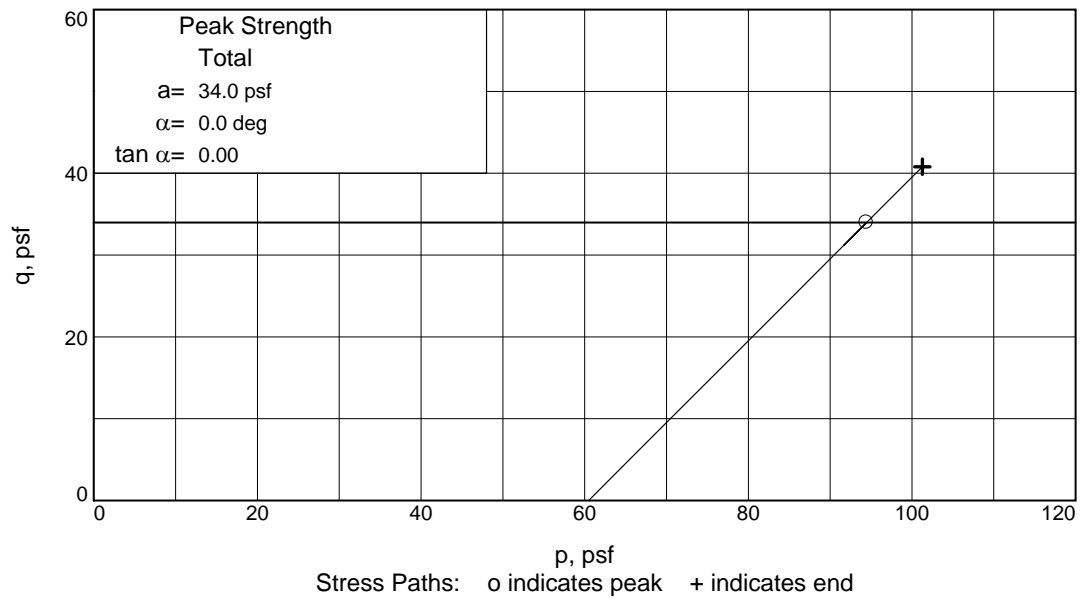
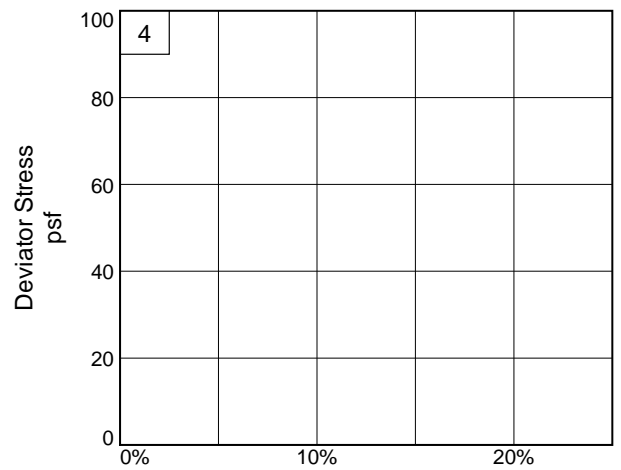
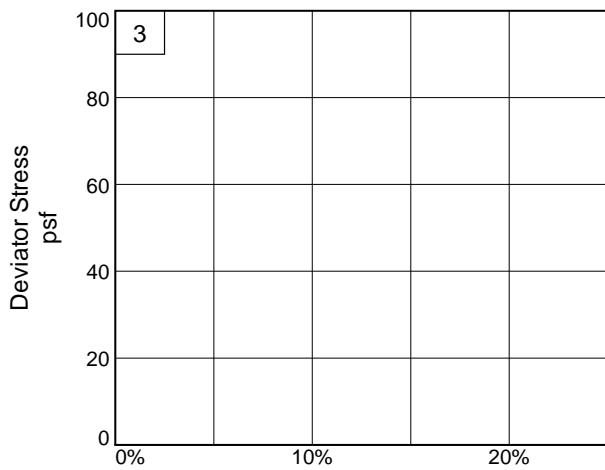
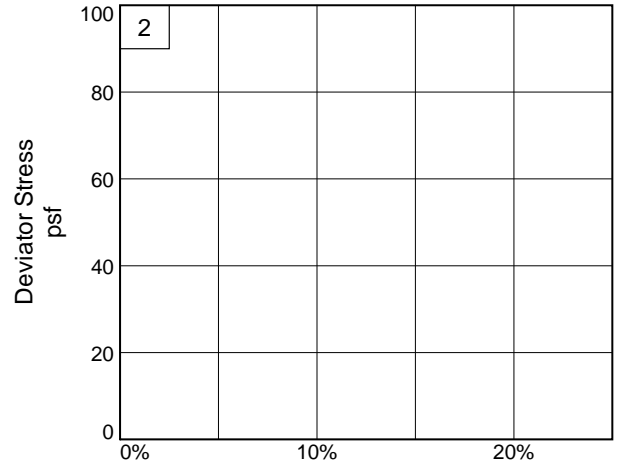
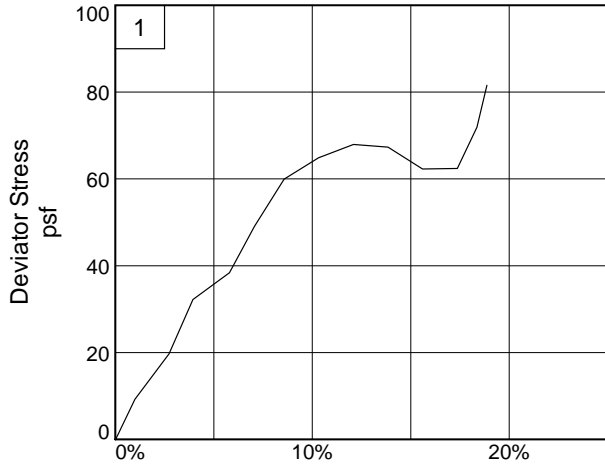


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Figure ASTM D2850

Tested By: JP

Checked By: CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-7

**Depth:** 3

**Sample Number:** 2B

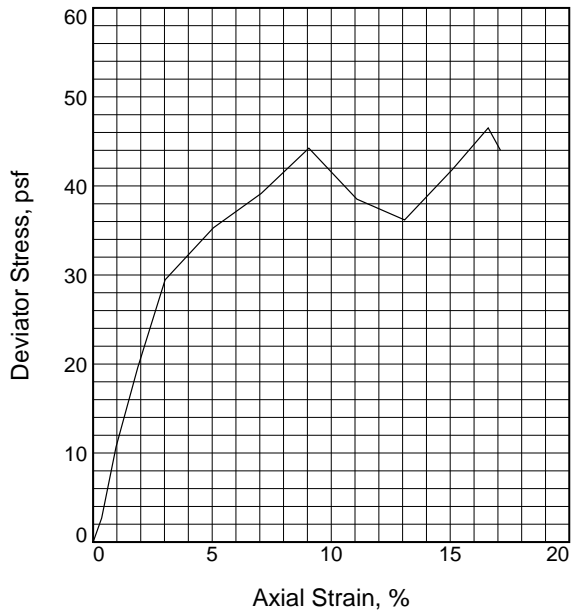
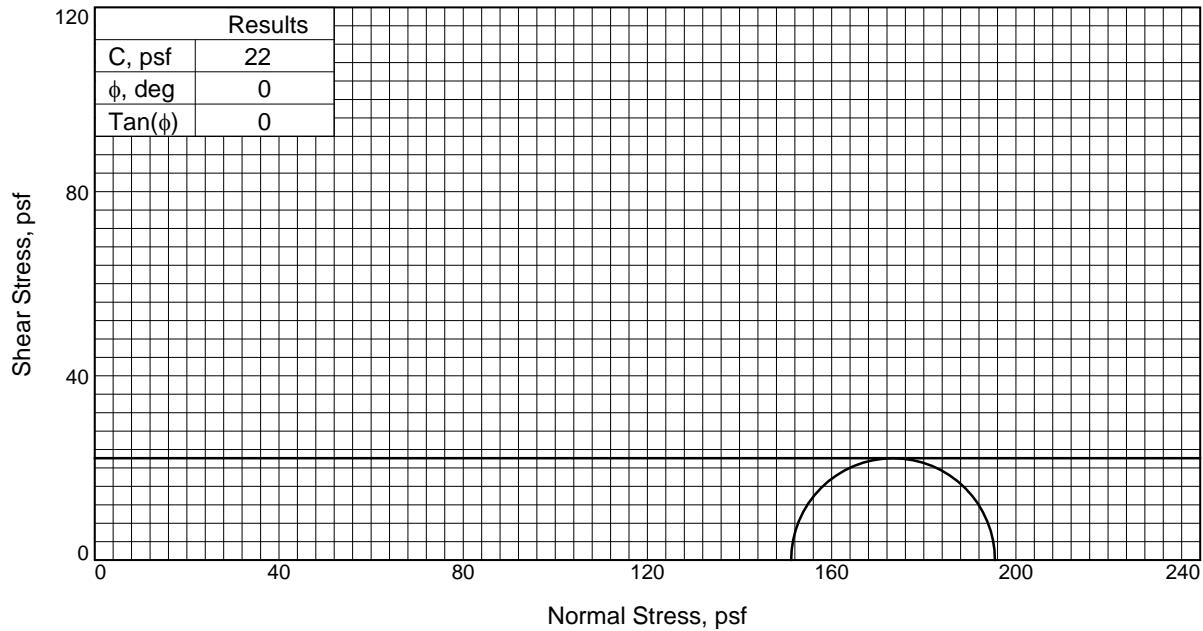
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** JP

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	142.0
	Dry Density, pcf	34.6
	Saturation, %	99.7
	Void Ratio	3.7754
	Diameter, in.	1.37
	Height, in.	2.76
At Test	Water Content, %	142.5
	Dry Density, pcf	34.6
	Saturation, %	100.0
	Void Ratio	3.7754
	Diameter, in.	1.37
	Height, in.	2.76
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	1.05	
Fail. Stress, psf	44	
Strain, %	9.1	
Ult. Stress, psf	36	
Strain, %	13.1	
$\sigma_1$ Failure, psf	195	
$\sigma_3$ Failure, psf	151	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso g & br ORG CL w/ fw wd (OH)

LL= 168      PL= 51      PI= 117

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.020 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-7      **Depth:** 5

**Sample Number:** 3B

**Proj. No.:** 24762

**Date Sampled:** 6/6/22



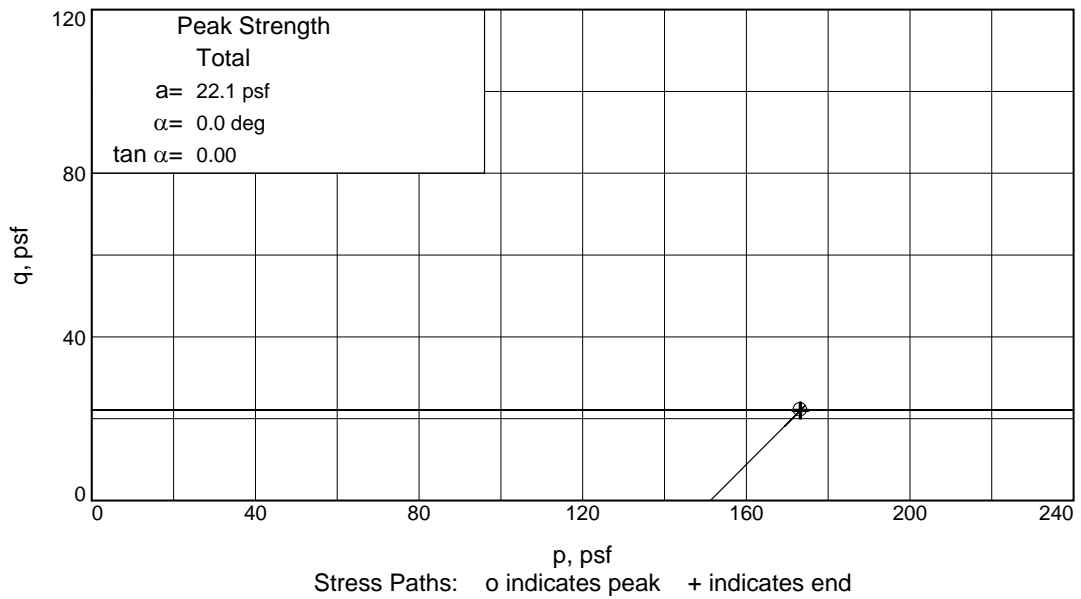
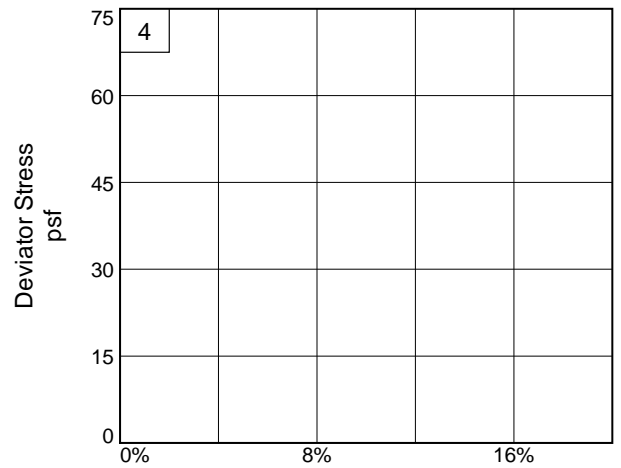
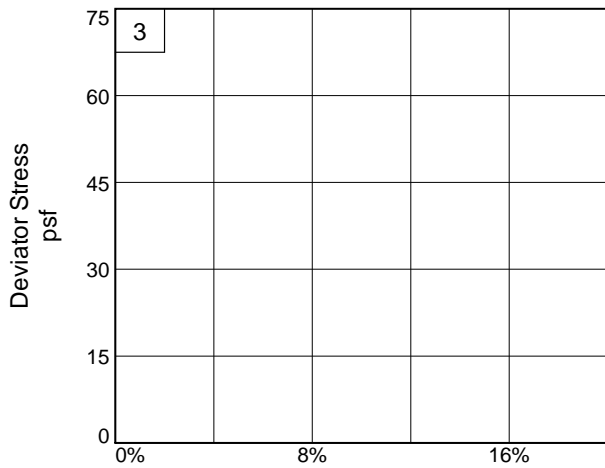
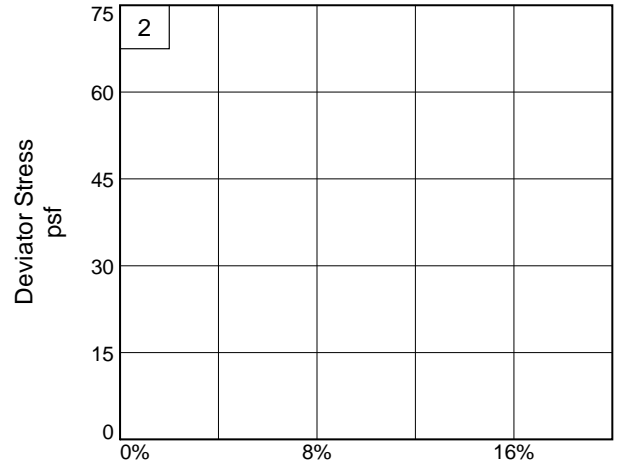
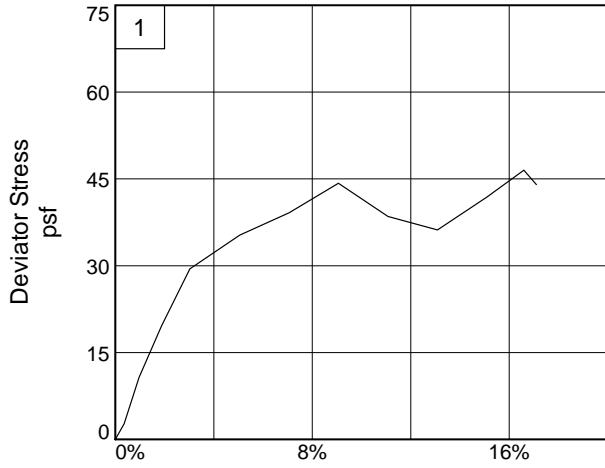
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**Figure** ASTM D2850

**Tested By:** JP

**Checked By:** CD & RR





**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

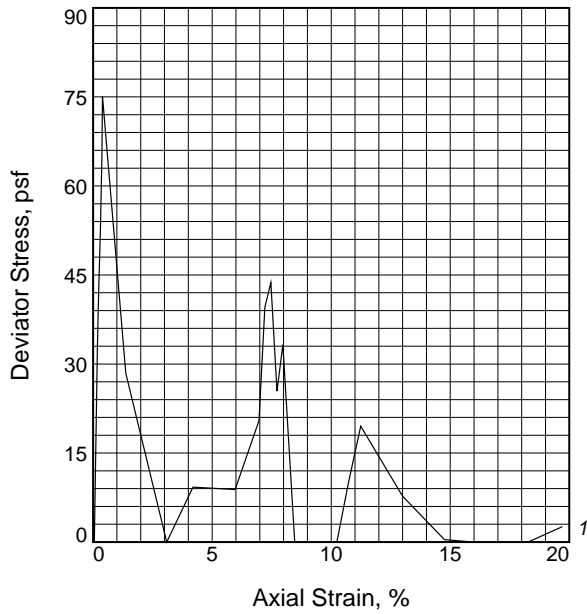
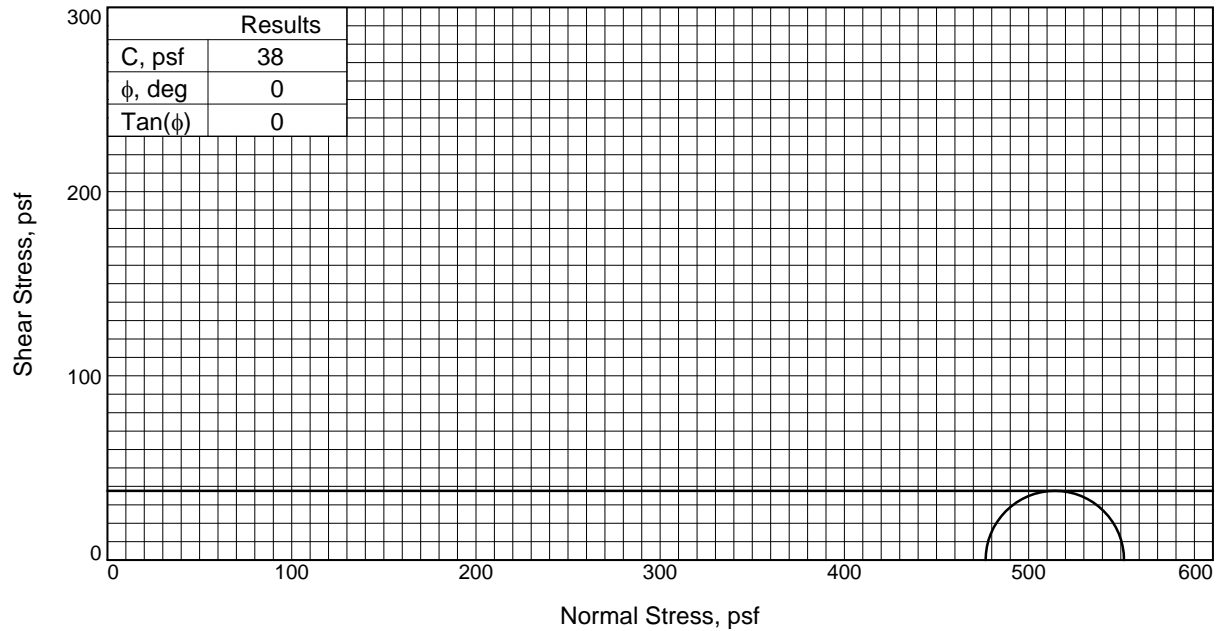
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-7      **Depth:** 5      **Sample Number:** 3B

**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** JP      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	84.4
	Dry Density, pcf	51.0
	Saturation, %	98.6
	Void Ratio	2.3302
	Diameter, in.	1.41
At Test	Height, in.	2.92
	Water Content, %	85.7
	Dry Density, pcf	51.0
	Saturation, %	100.0
	Void Ratio	2.3302
	Diameter, in.	1.41
	Height, in.	2.92
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	3.31
Fail. Stress, psf	75	
Strain, %	0.4	
Ult. Stress, psf	0	
Strain, %	14.8	
$\sigma_1$ Failure, psf	552	
$\sigma_3$ Failure, psf	477	

**Type of Test:**  
Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso g & dk g FT CL w/ fw om & wd (CH)

**LL= 78      PL= 25      PI= 53**

**Assumed Specific Gravity= 2.72**

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

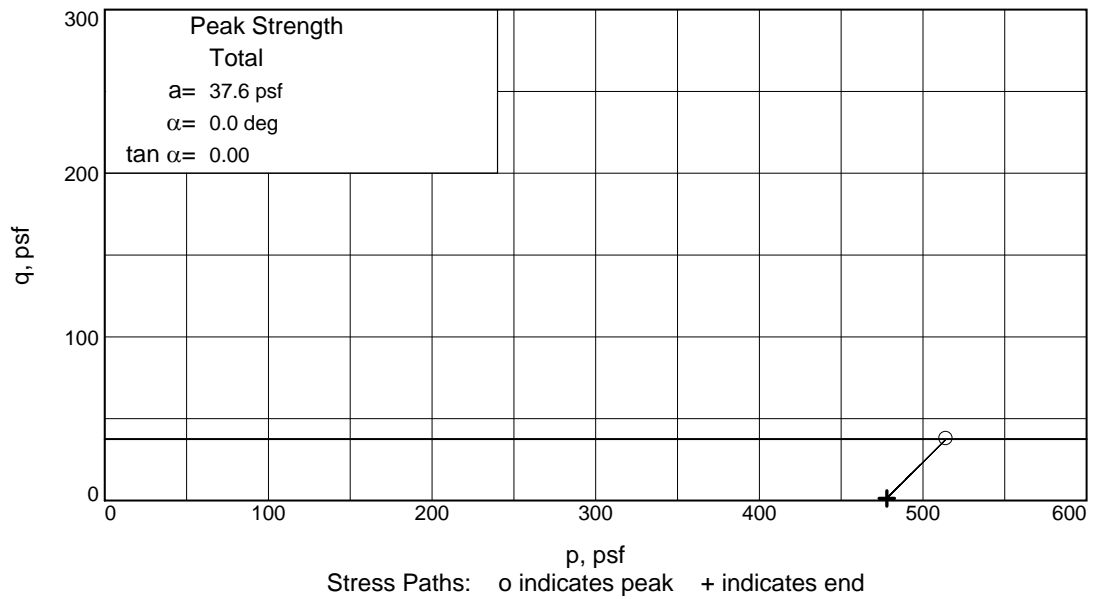
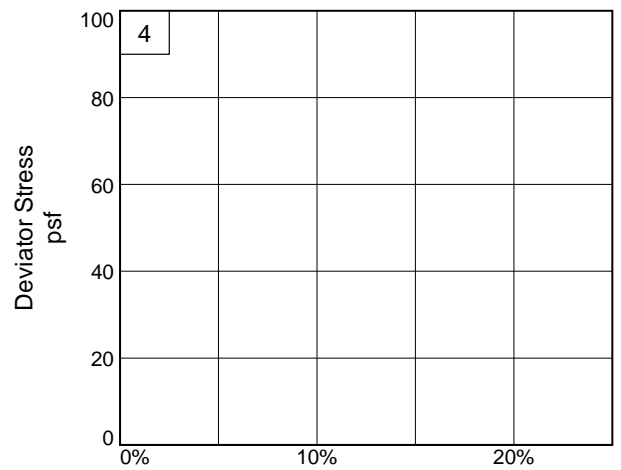
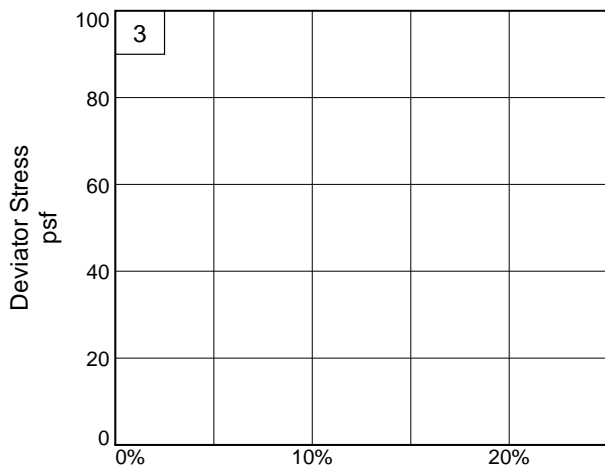
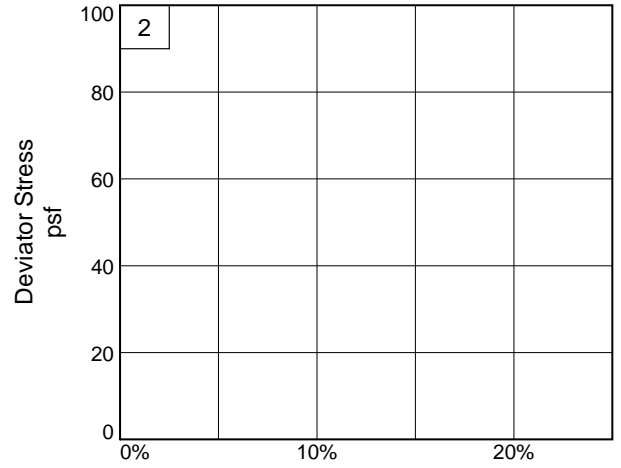
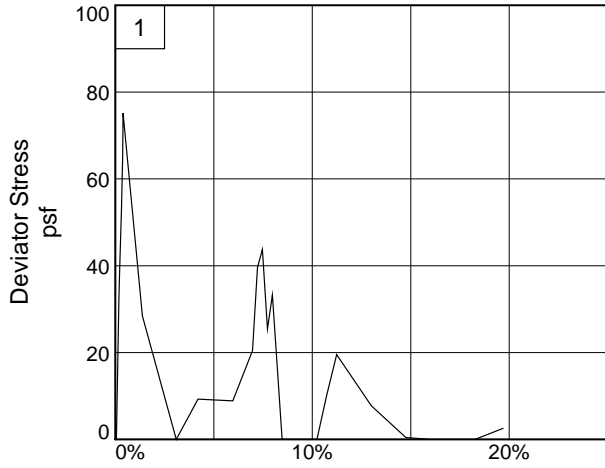
**Source of Sample:** B-7      **Depth:** 9

**Sample Number:** 5B

**Proj. No.:** 24762      **Date Sampled:** 6/6/22

Figure ASTM D2850





**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-7

**Depth:** 9

**Sample Number:** 5B

**Project No.:** 24762

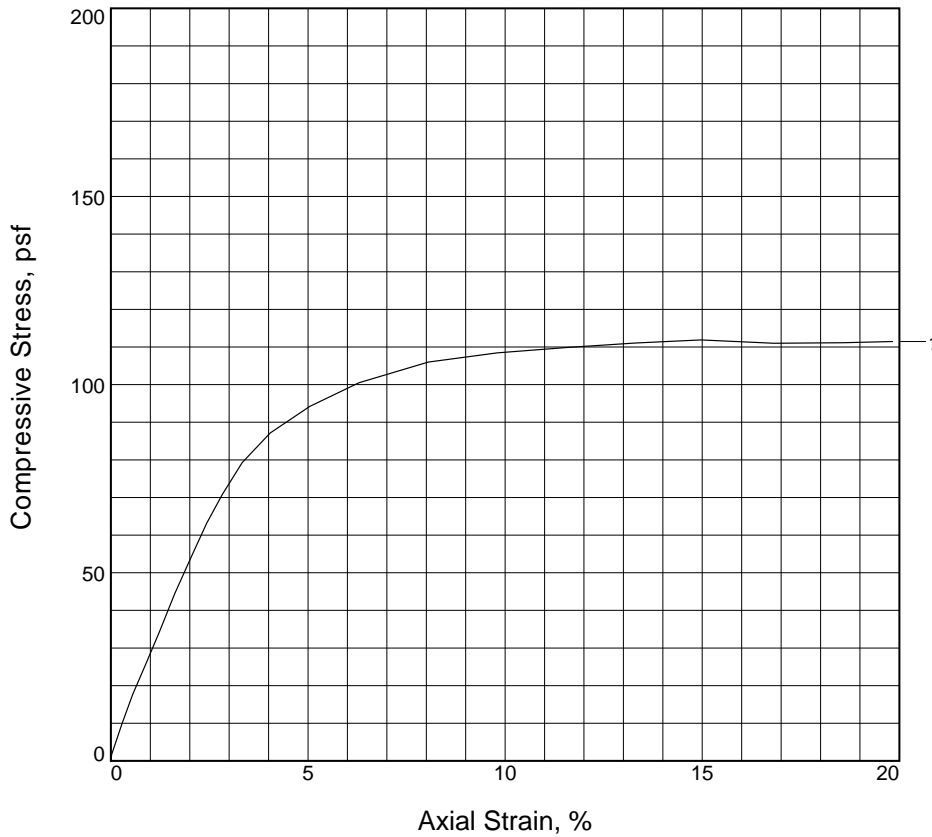
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** JP

**Checked By:** CD & RR

# UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	112			
Undrained shear strength, psf	56			
Failure strain, %	15.0			
Strain rate, %/min.	1.00			
Water content, %	99.5			
Wet density, pcf	90.5			
Dry density, pcf	45.4			
Saturation, %	99.6			
Void ratio	2.6448			
Specimen diameter, in.	1.40			
Specimen height, in.	2.88			
Height/diameter ratio	2.05			

**Description:** M, xso dk g ORG CL w/ fw wd (OH)

<b>LL</b> = 122	<b>PL</b> = 42	<b>PI</b> = 80	<b>Assumed GS</b> = 2.65	<b>Type:</b> UNDISTURBED
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**Project No.:** 24762

**Date Sampled:** 6/6/22

**Remarks:**  
TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

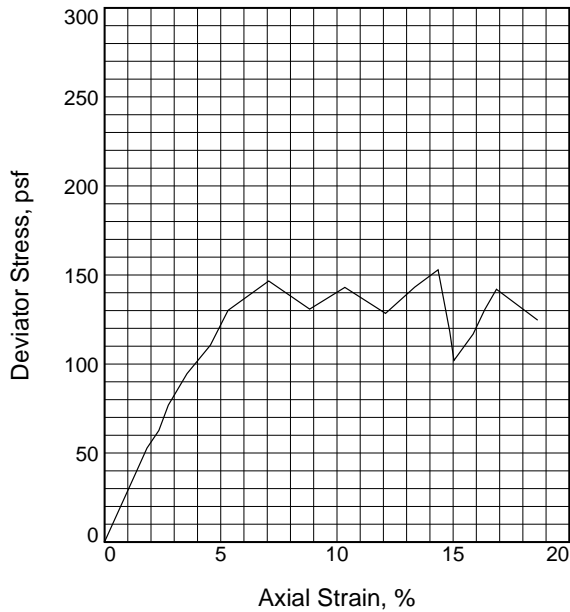
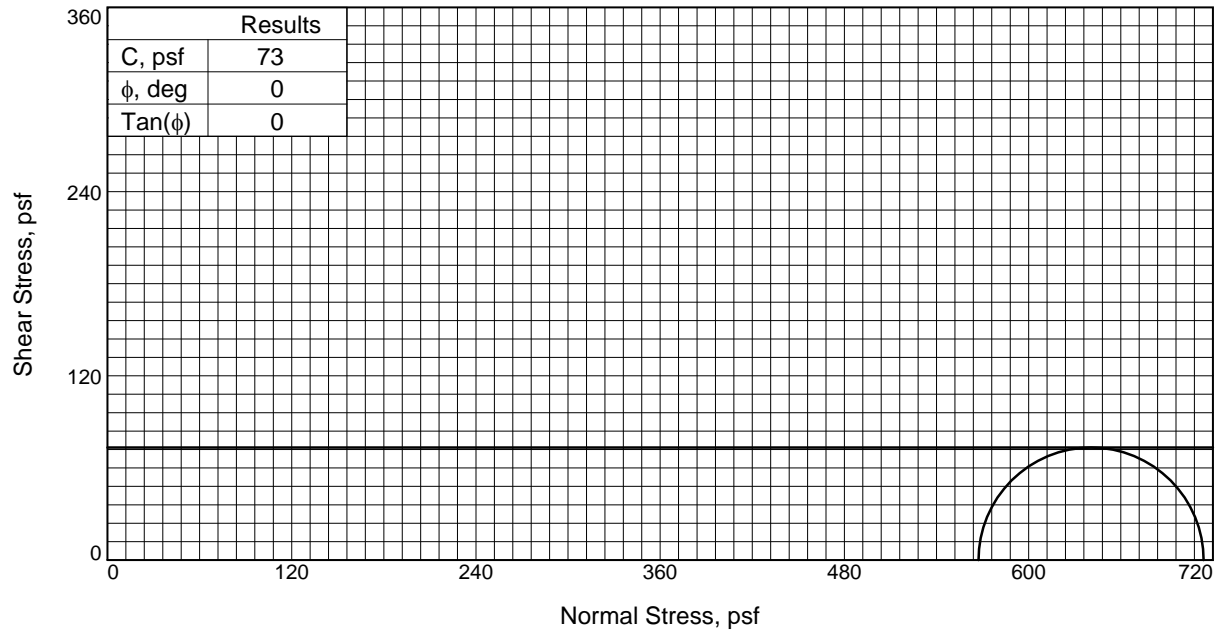
**Source of Sample:** B-7      **Depth:** 11

**Sample Number:** 6B

**Figure** ASTM D2166



**Tested By:** JP      **Checked By:** CD & RR



Sample No.		1
Initial	Water Content, %	93.9
	Dry Density, pcf	47.0
	Saturation, %	98.8
	Void Ratio	2.5196
	Diameter, in.	1.39
At Test	Height, in.	2.91
	Water Content, %	95.1
	Dry Density, pcf	47.0
	Saturation, %	100.0
	Void Ratio	2.5196
Diameter, in.		1.39
	Height, in.	2.91
Strain rate, %/min.		1.00
Back Pressure, psi		0.00
Cell Pressure, psi		3.94
Fail. Stress, psf		147
Strain, %		7.1
Ult. Stress, psf		102
Strain, %		15.0
$\sigma_1$ Failure, psf		714
$\sigma_3$ Failure, psf		567

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso dk g & g ORG CL (OH)

**LL=** 118      **PL=** 35      **PI=** 83

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-7      **Depth:** 13

**Sample Number:** 7B

**Proj. No.:** 24762

**Date Sampled:** 6/6/22

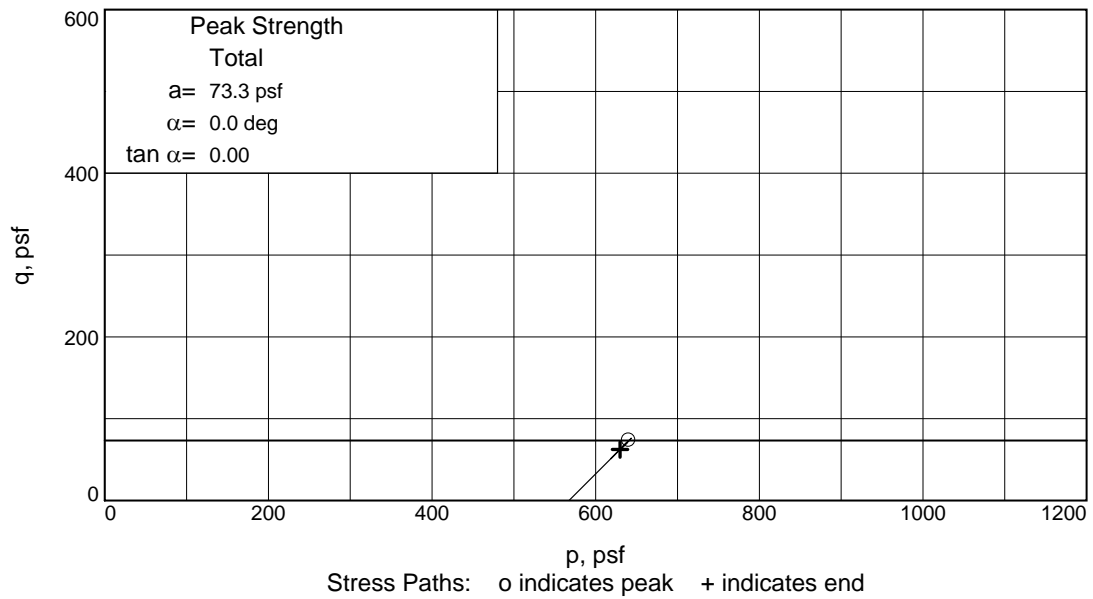
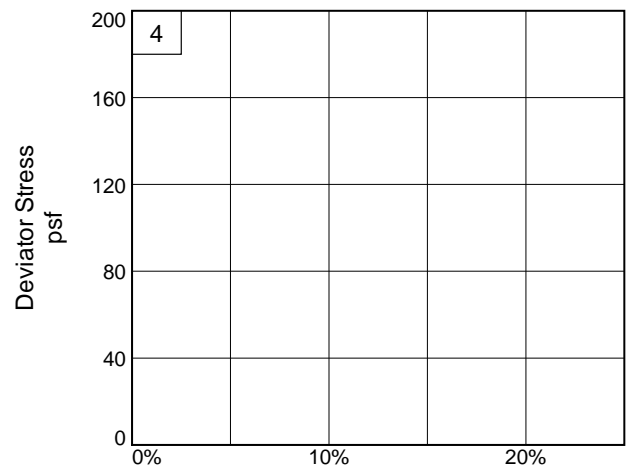
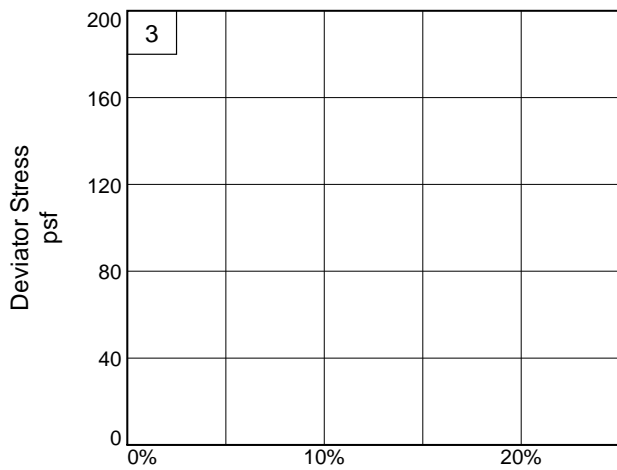
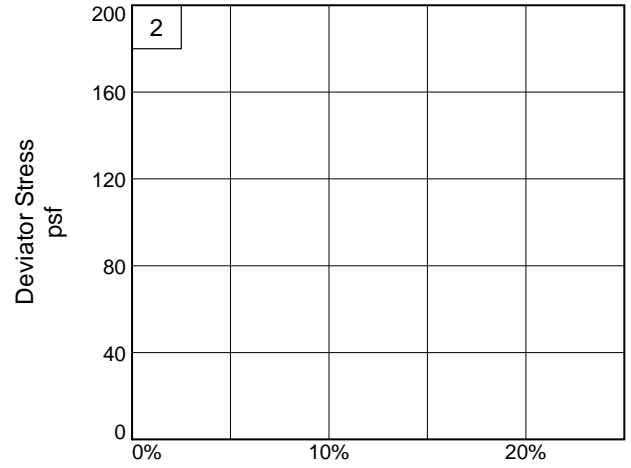
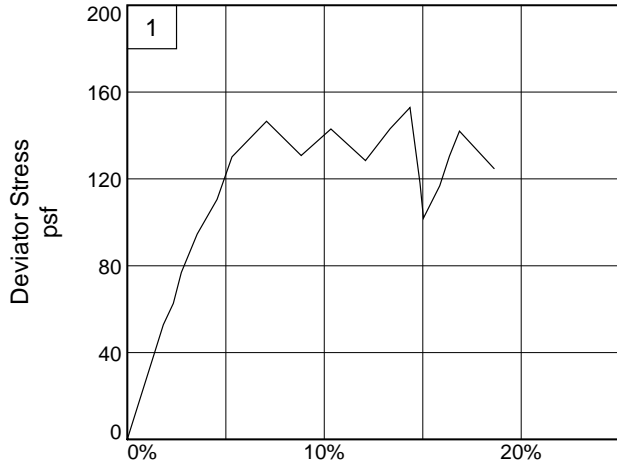


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ENGINEERING  
SINCE 1946

**Figure** ASTM D2850

**Tested By:** JP

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-7

**Depth:** 13

**Sample Number:** 7B

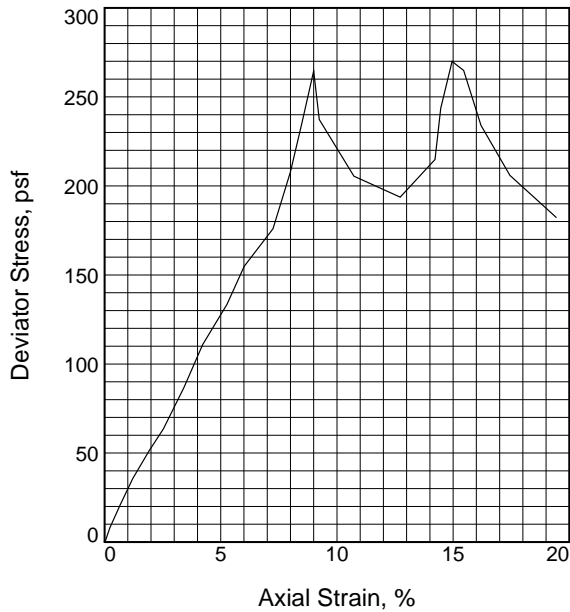
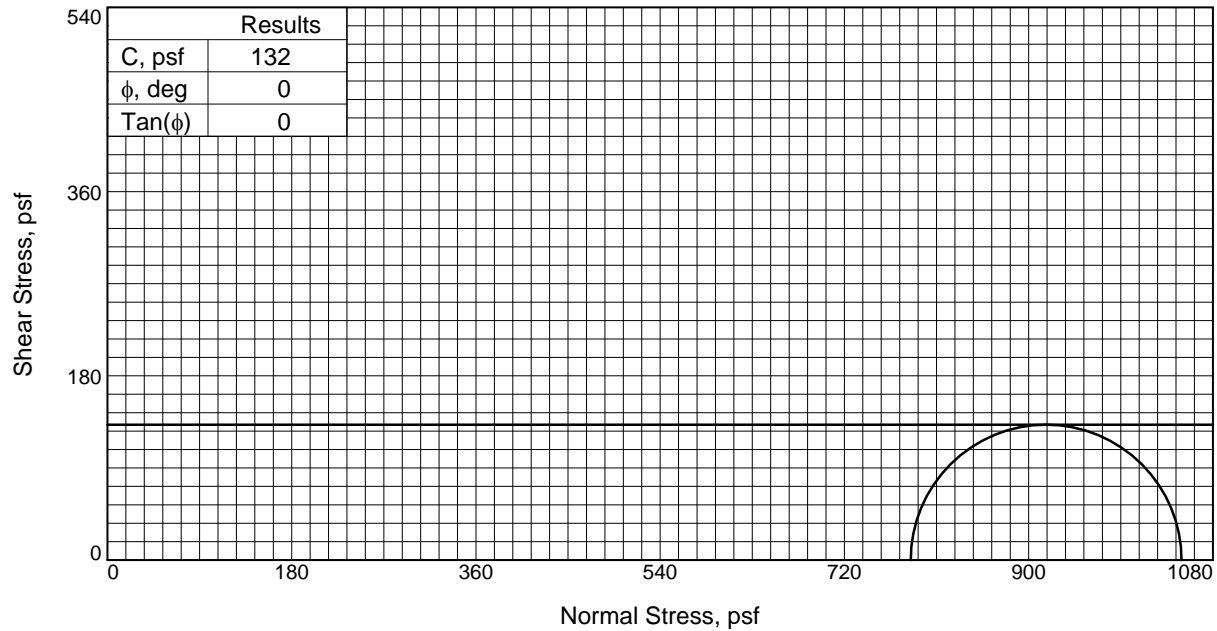
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** JP

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	158.1
	Dry Density, pcf	31.9
	Saturation, %	99.9
	Void Ratio	4.1922
	Diameter, in.	1.43
	Height, in.	2.77
At Test	Water Content, %	158.2
	Dry Density, pcf	31.9
	Saturation, %	100.0
	Void Ratio	4.1922
	Diameter, in.	1.43
	Height, in.	2.77
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	5.45	
Fail. Stress, psf	265	
Strain, %	9.0	
Ult. Stress, psf	194	
Strain, %	12.7	
$\sigma_1$ Failure, psf	1049	
$\sigma_3$ Failure, psf	785	

**Type of Test:**  
Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vso br & g ORG CL w/ tr wd & sh frag (OH)

**LL= 198      PL= 51      PI= 147**

**Assumed Specific Gravity= 2.65**

**Remarks:** TORVANE = 0.150 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

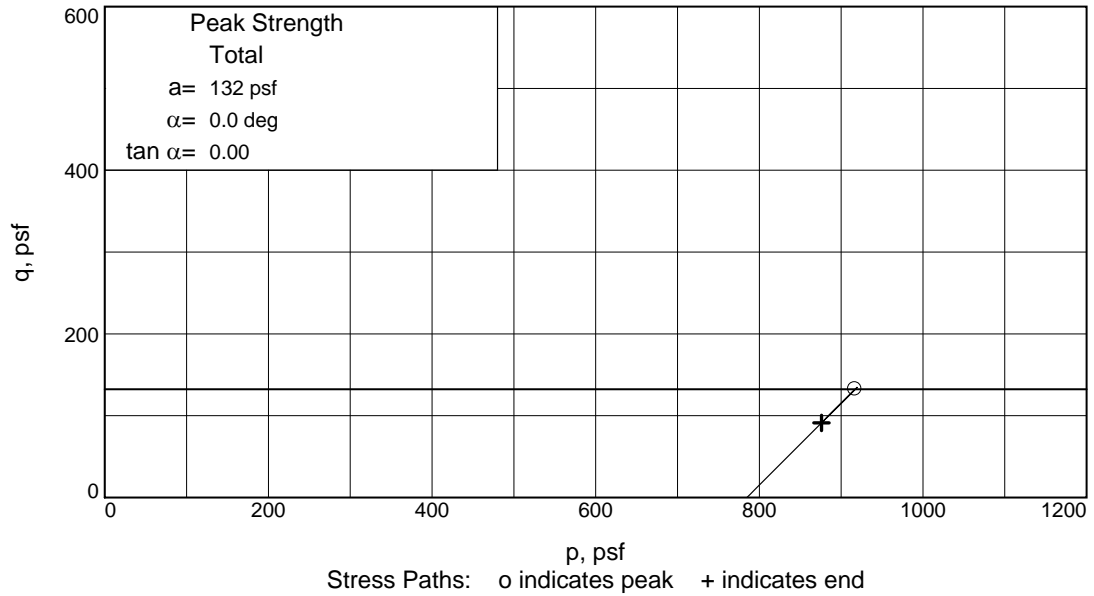
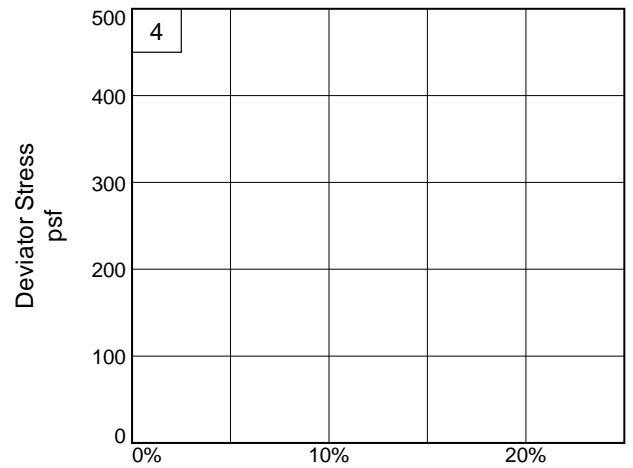
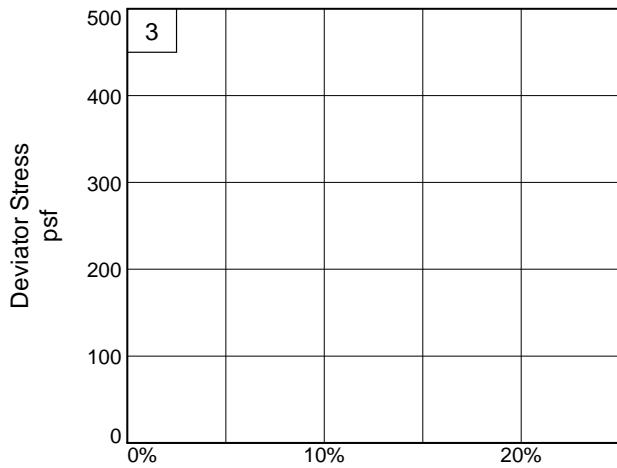
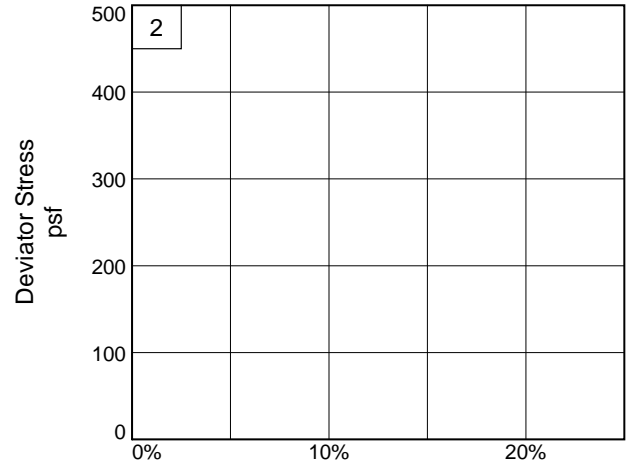
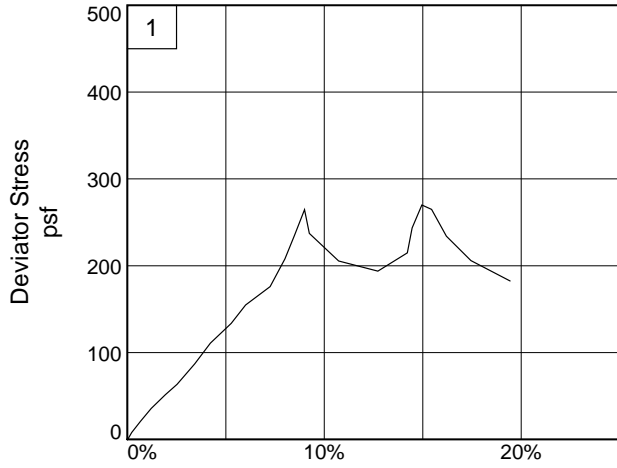
**Source of Sample:** B-7      **Depth:** 17

**Sample Number:** 9B

**Proj. No.:** 24762      **Date Sampled:** 6/6/22

Figure ASTM D2850





**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-7

**Depth:** 17

**Sample Number:** 9B

**Project No.:** 24762

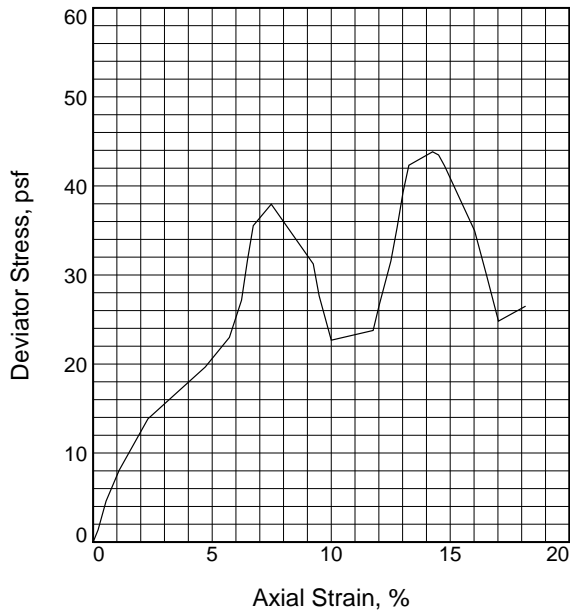
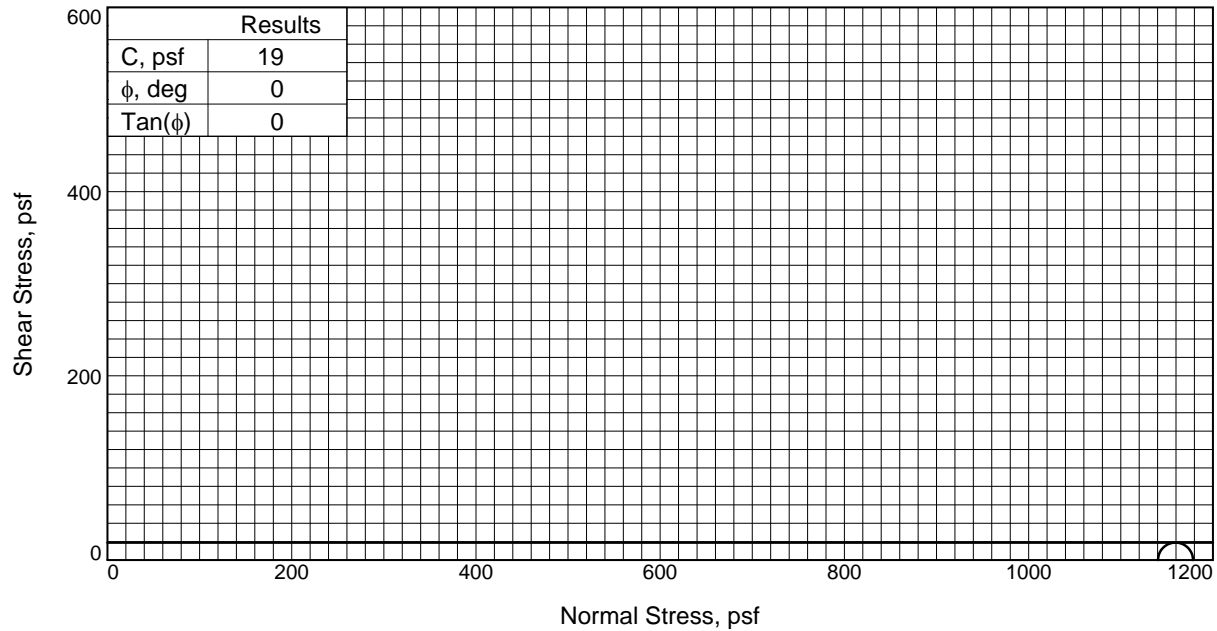
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** JP

**Checked By:** CD & RR





Sample No.		1
Initial	Water Content, %	128.3
	Dry Density, pcf	37.6
	Saturation, %	99.9
	Void Ratio	3.4032
	Diameter, in.	1.38
	Height, in.	2.91
At Test	Water Content, %	128.4
	Dry Density, pcf	37.6
	Saturation, %	100.0
	Void Ratio	3.4032
	Diameter, in.	1.38
	Height, in.	2.91
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	7.92	
Fail. Stress, psf	38	
Strain, %	7.5	
Ult. Stress, psf	23	
Strain, %	10.0	
$\sigma_1$ Failure, psf	1178	
$\sigma_3$ Failure, psf	1140	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso br & g ORG CL w/ tr wd & sh frag (OH)

**LL=** 147      **PL=** 38      **PI=** 109

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** B-7      **Depth:** 23

**Sample Number:** 11A

**Proj. No.:** 24762

**Date Sampled:** 6/6/22

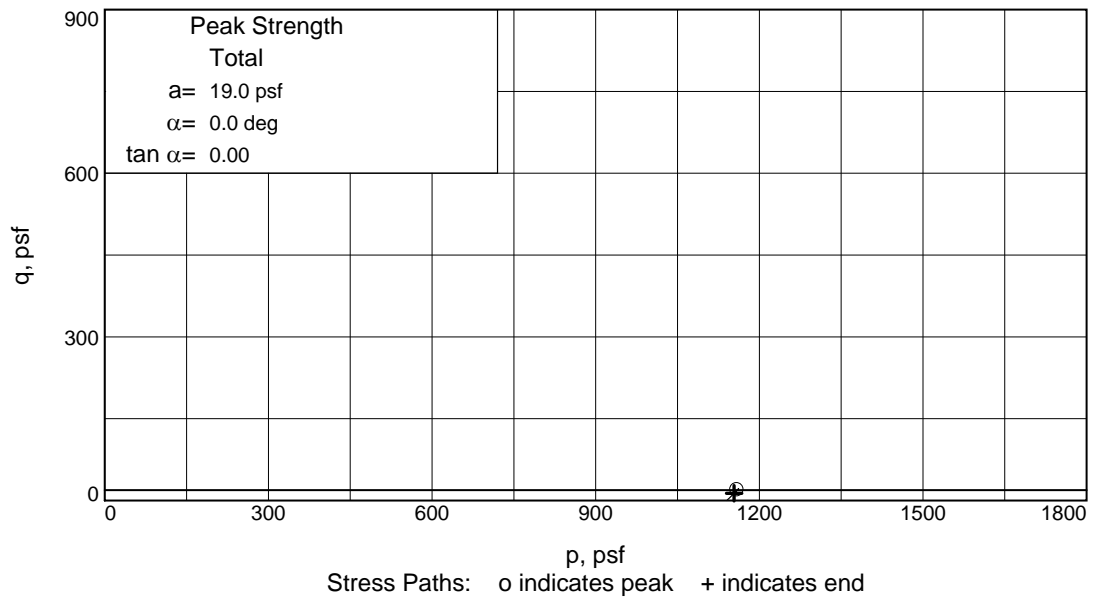
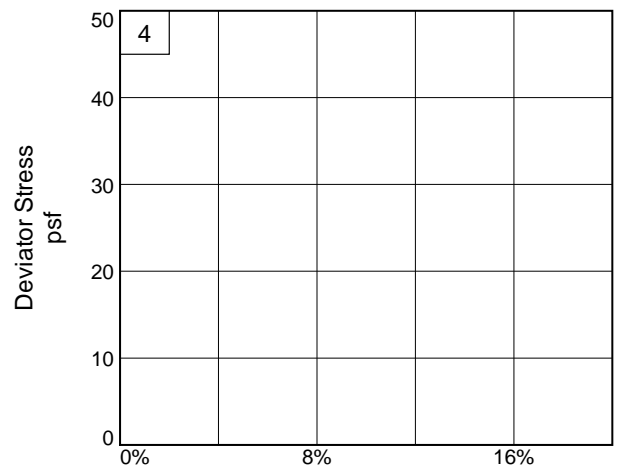
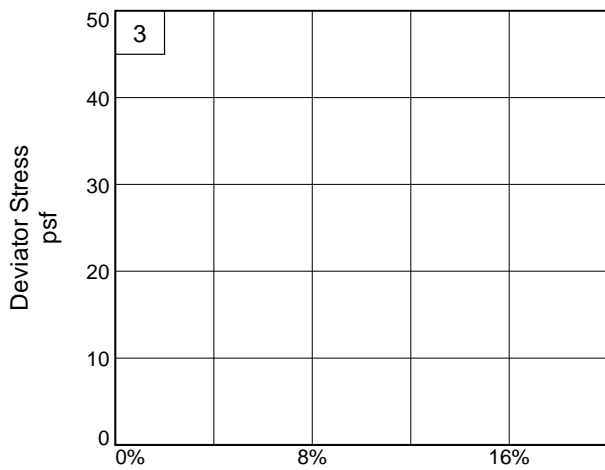
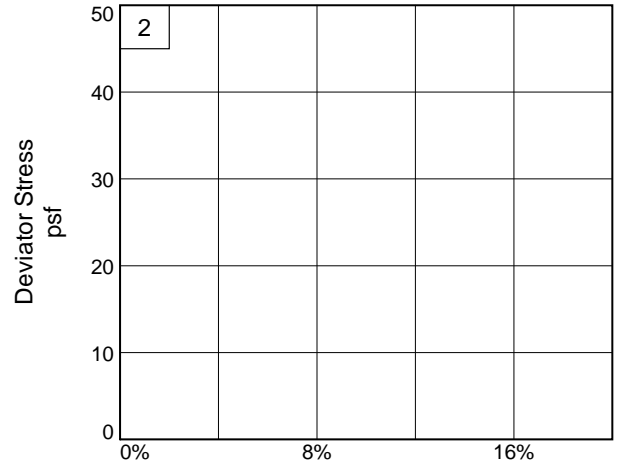
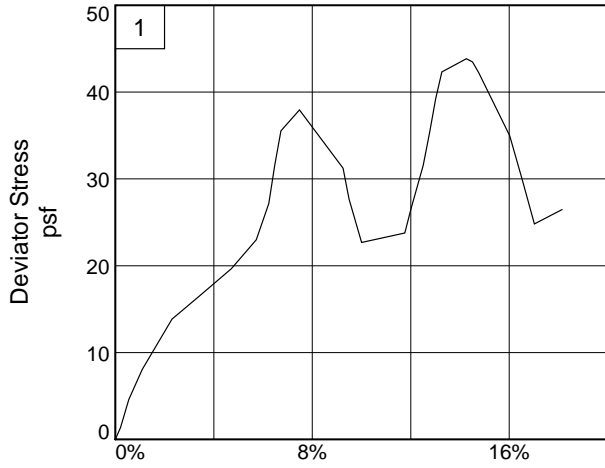


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SINCE 1946

**Figure** ASTM D2850

**Tested By:** JP

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

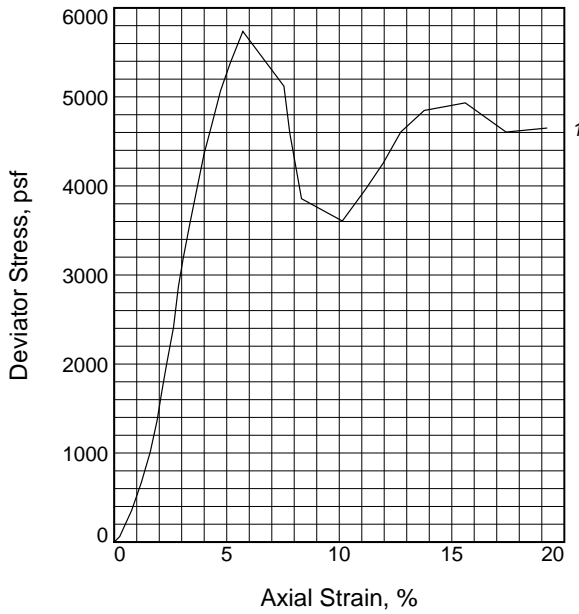
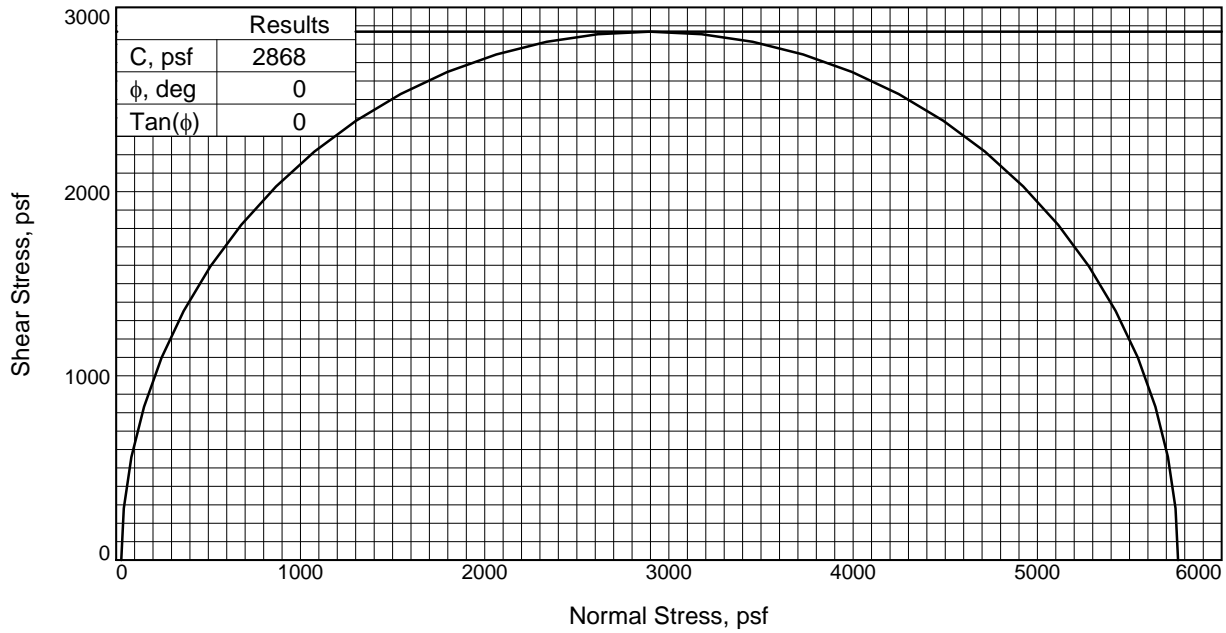
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** B-7      **Depth:** 23      **Sample Number:** 11A

**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** JP      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	19.4
	Dry Density, pcf	97.3
	Saturation, %	71.4
	Void Ratio	0.7331
	Diameter, in.	1.38
At Test	Height, in.	2.79
	Water Content, %	27.2
	Dry Density, pcf	97.3
	Saturation, %	100.0
	Void Ratio	0.7331
Strain rate, %/min.	Diameter, in.	1.38
	Back Pressure, psi	0.00
	Cell Pressure, psi	0.19
	Fail. Stress, psf	5736
	Strain, %	5.7
Ult. Stress, psf	Ult. Stress, psf	3606
	Strain, %	10.1
$\sigma_1$ Failure, psf	5764	
$\sigma_3$ Failure, psf	27	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vst g & t LN CL (CL)

**Assumed Specific Gravity=** 2.70

**Remarks:** TORVANE = 0.750 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** L-1      **Depth:** 1

**Sample Number:** 1B

**Proj. No.:** 24762

**Date Sampled:** 7/25/22

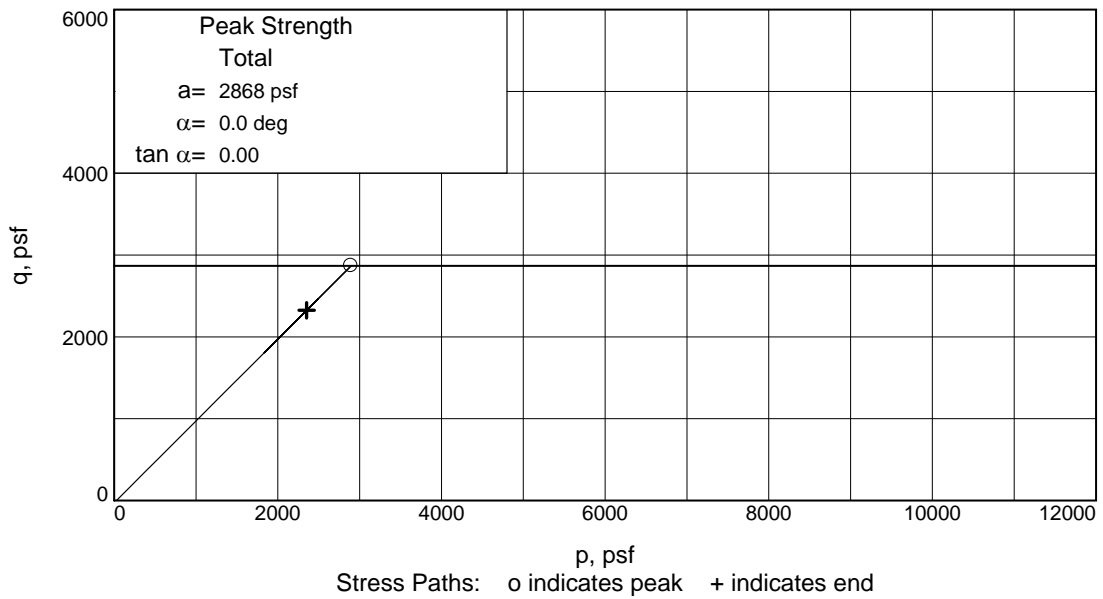
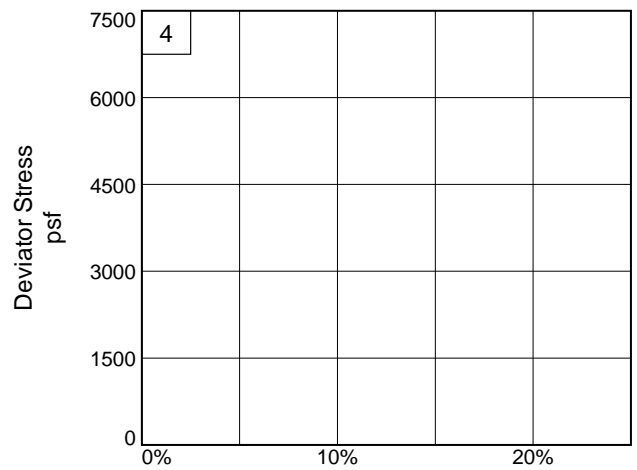
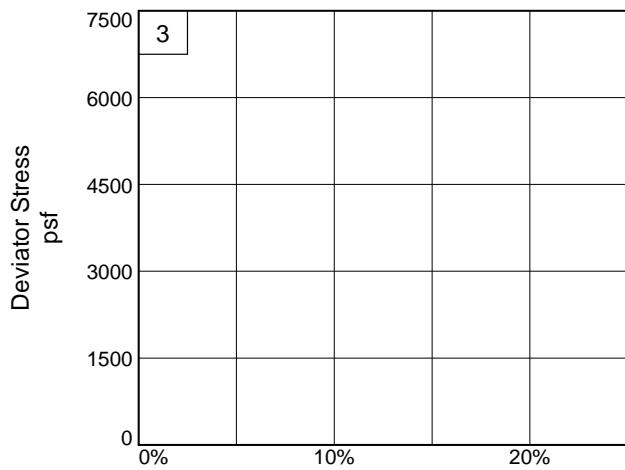
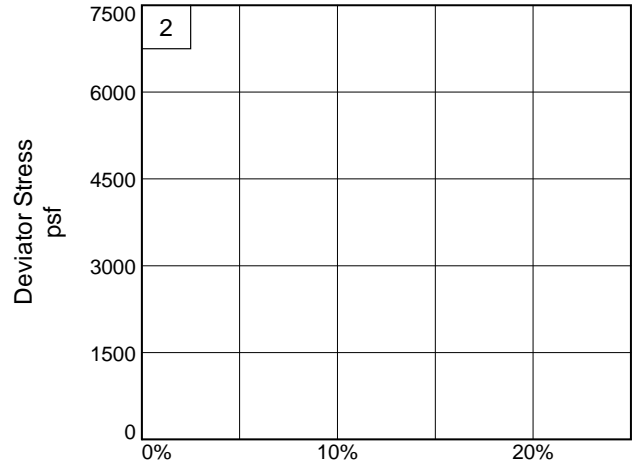
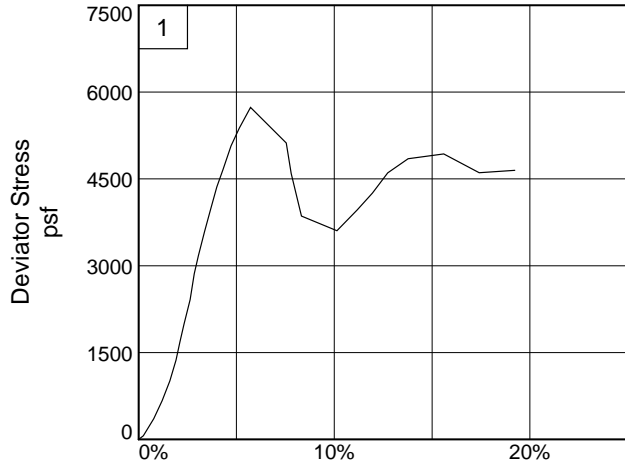


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Figure ASTM D2850

Tested By: AD

Checked By: CD



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** L-1

**Depth:** 1

**Sample Number:** 1B

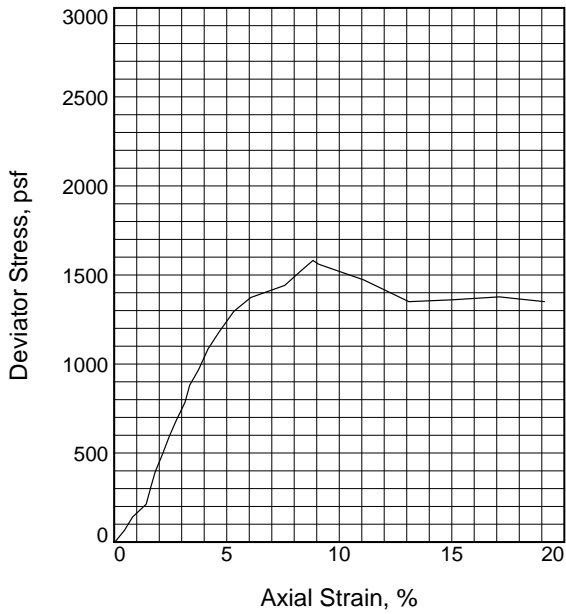
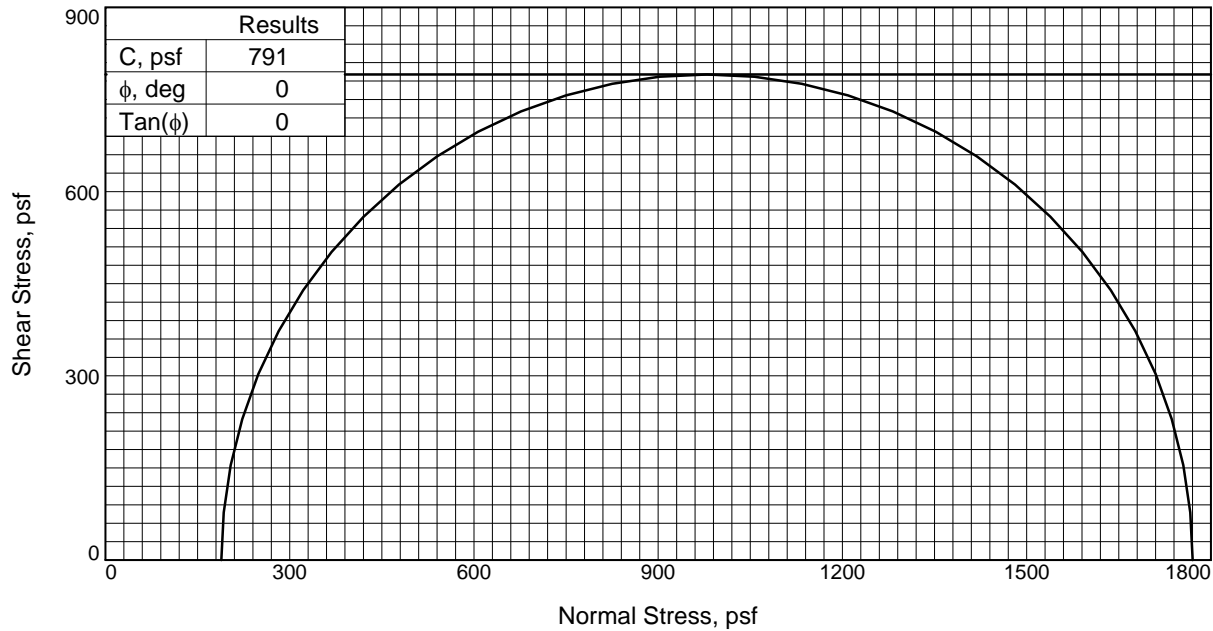
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** AD

**Checked By:** CD



Sample No.	1	
Initial	Water Content, %	28.5
	Dry Density, pcf	94.1
	Saturation, %	97.3
	Void Ratio	0.7913
	Diameter, in.	1.37
At Test	Height, in.	2.77
	Water Content, %	29.3
	Dry Density, pcf	94.1
	Saturation, %	100.0
	Void Ratio	0.7913
1	Diameter, in.	1.37
	Height, in.	2.77
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	1.31
	Fail. Stress, psf	1582
	Strain, %	8.8
	Ult. Stress, psf	1361
	Strain, %	15.0
	$\sigma_1$ Failure, psf	1770
$\sigma_3$ Failure, psf	189	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, mst br & g LN CL (CL)

**Assumed Specific Gravity=** 2.70

**Remarks:** TORVANE = 0.500 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** L-1      **Depth:** 5

**Sample Number:** 3B

**Proj. No.:** 24762

**Date Sampled:** 7/25/22

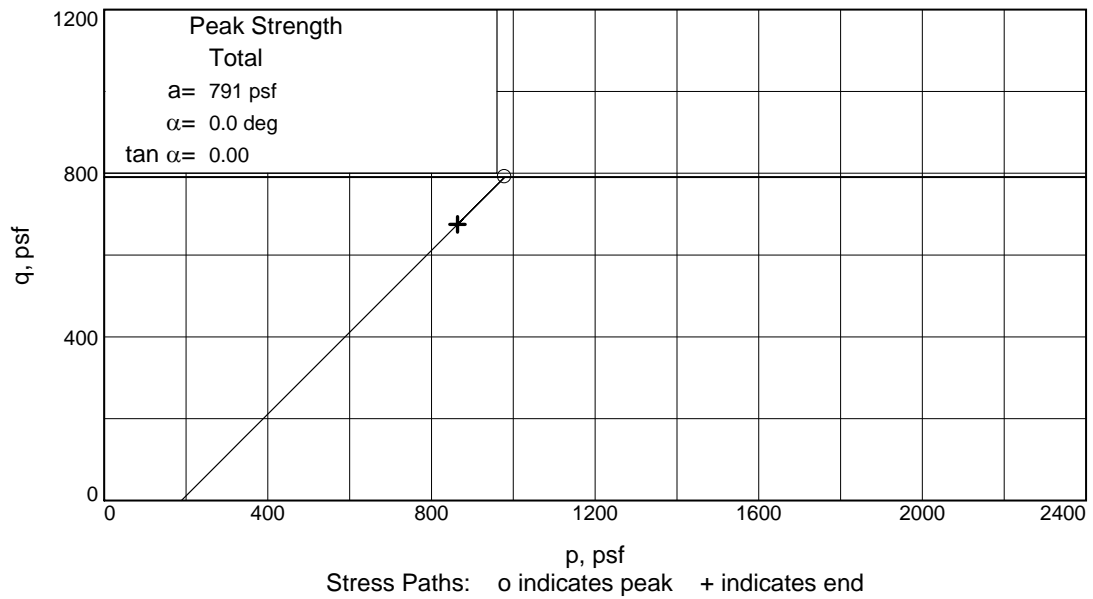
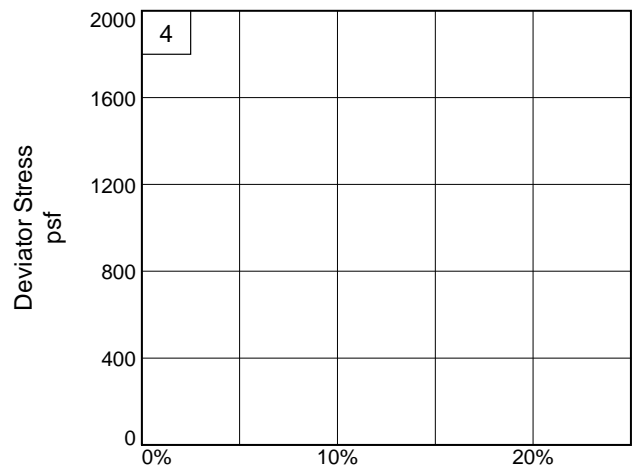
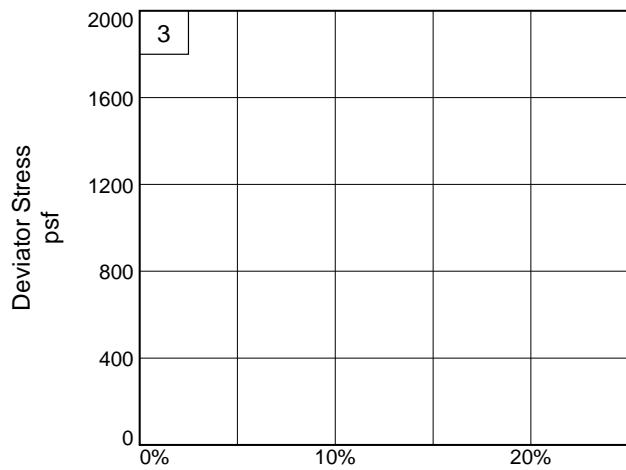
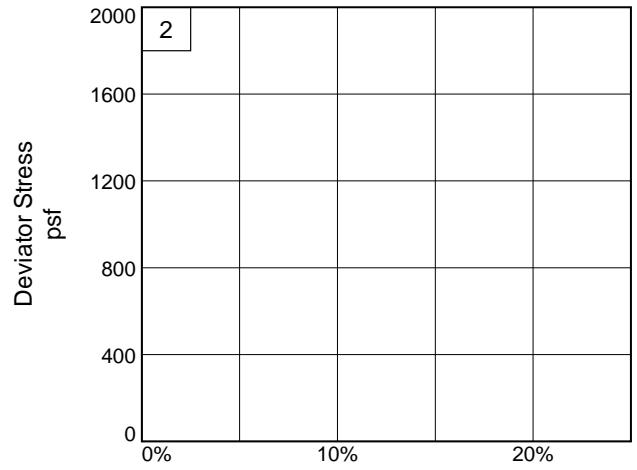
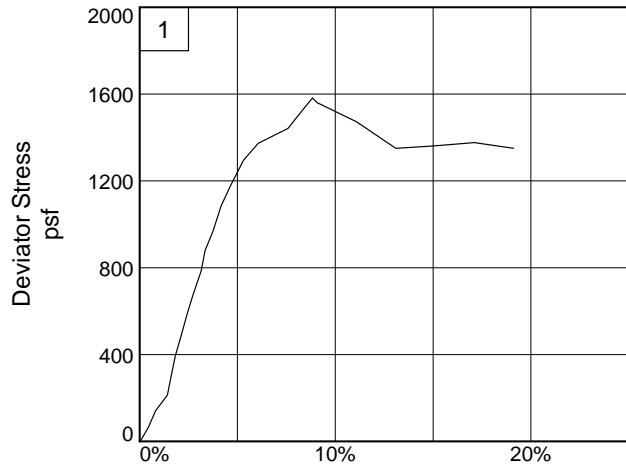


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Figure ASTM D2850

Tested By: AD

Checked By: CD



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** L-1

**Depth:** 5

**Sample Number:** 3B

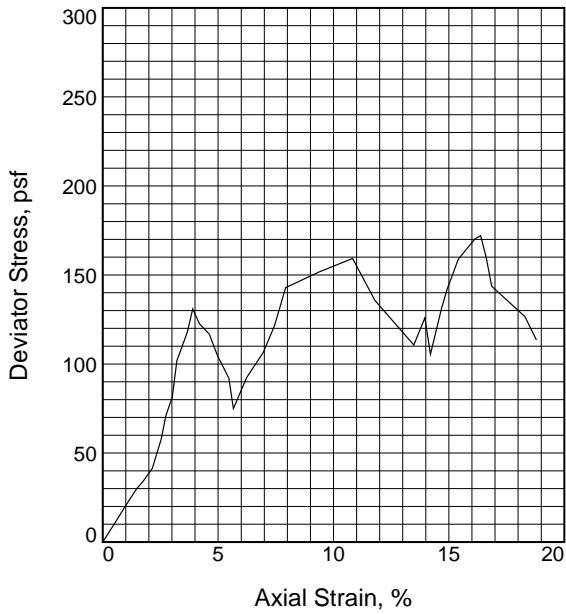
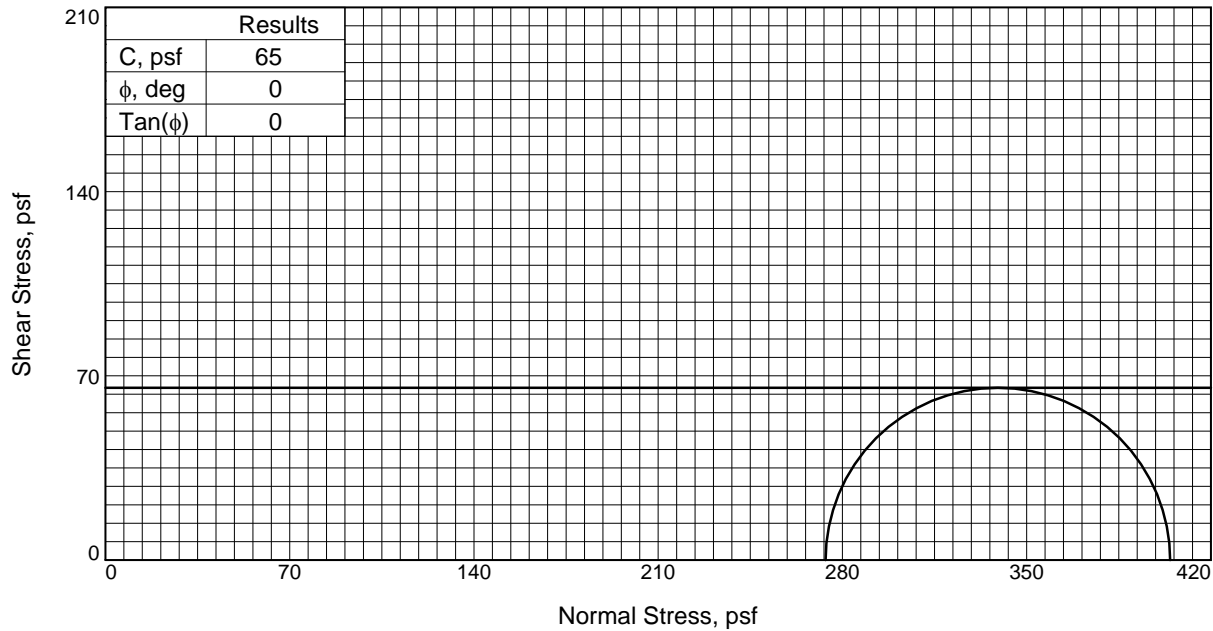
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** AD

**Checked By:** CD



Sample No.	1	
Initial	Water Content, %	49.0
	Dry Density, pcf	71.5
	Saturation, %	96.9
	Void Ratio	1.3743
	Diameter, in.	1.38
At Test	Height, in.	2.77
	Water Content, %	50.5
	Dry Density, pcf	71.5
	Saturation, %	100.0
	Void Ratio	1.3743
Strain rate, %/min. Back Pressure, psi Cell Pressure, psi Fail. Stress, psf Strain, % Ult. Stress, psf Strain, % $\sigma_1$ Failure, psf $\sigma_3$ Failure, psf	Diameter, in.	1.38
	Height, in.	2.77
	1.00	
	0.00	
	1.90	
	131	
	3.9	
	75	
	5.7	
	405	
274		

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso g & br FT CL w/ tr si poc & rts (CH)

**LL= 81      PL= 21      PI= 60**

**Assumed Specific Gravity= 2.72**

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** L-1      **Depth:** 8

**Sample Number:** 5A

**Proj. No.:** 24762

**Date Sampled:** 7/25/22

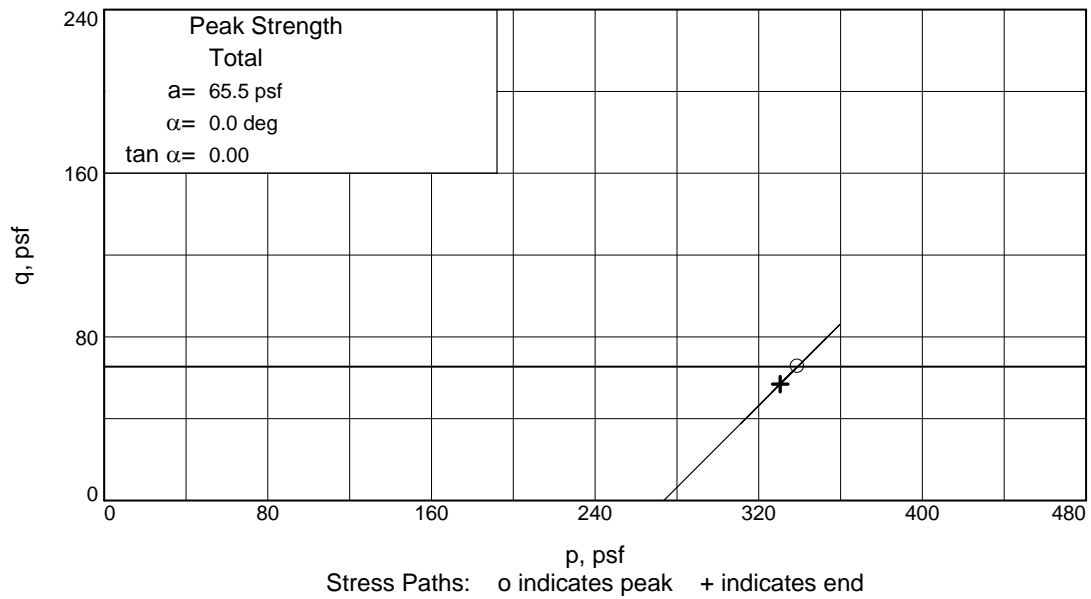
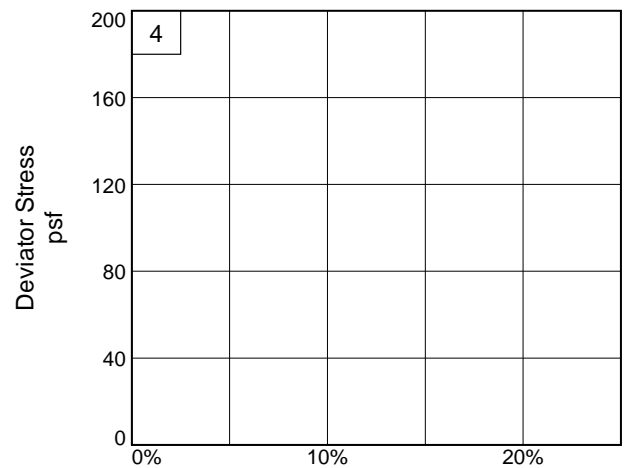
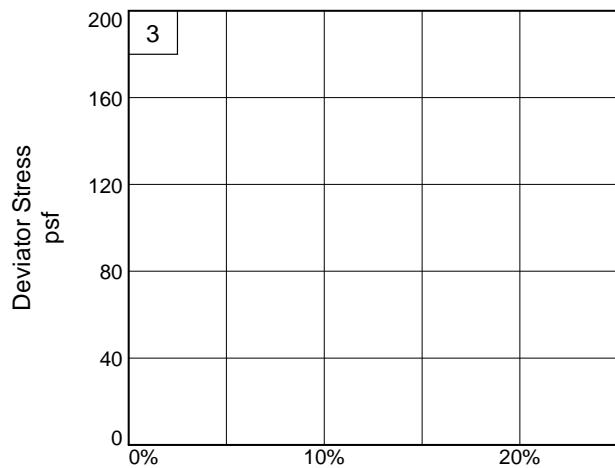
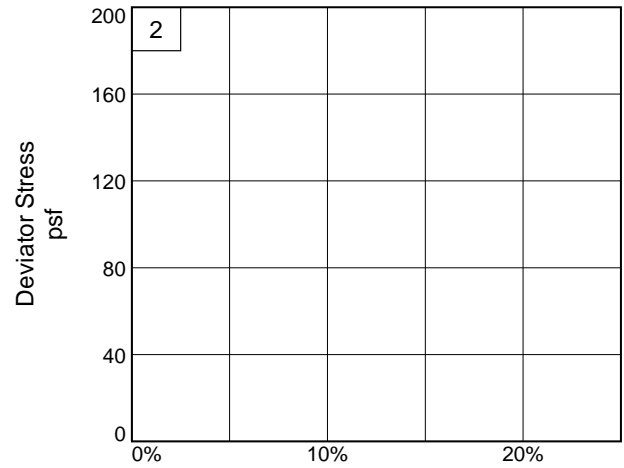
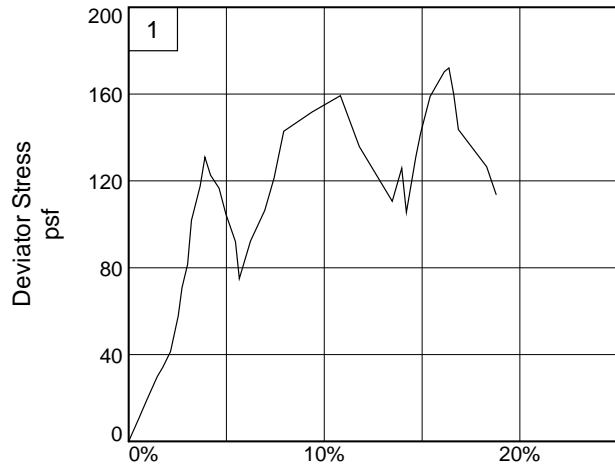


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Figure ASTM D2850

Tested By: AD

Checked By: CD



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** L-1

**Depth:** 8

**Sample Number:** 5A

**Project No.:** 24762

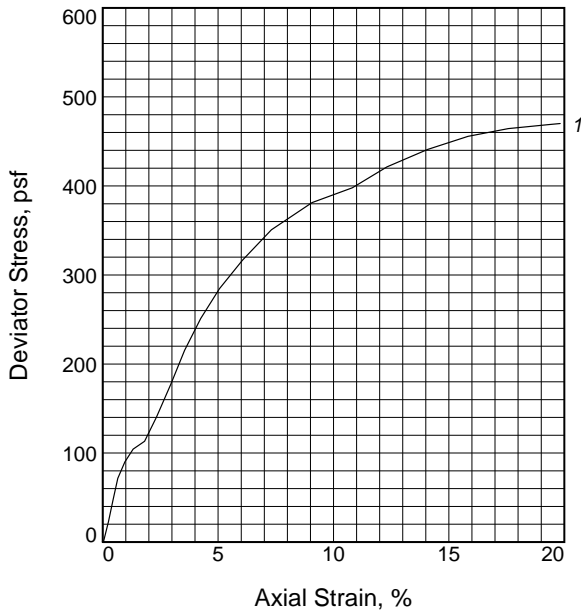
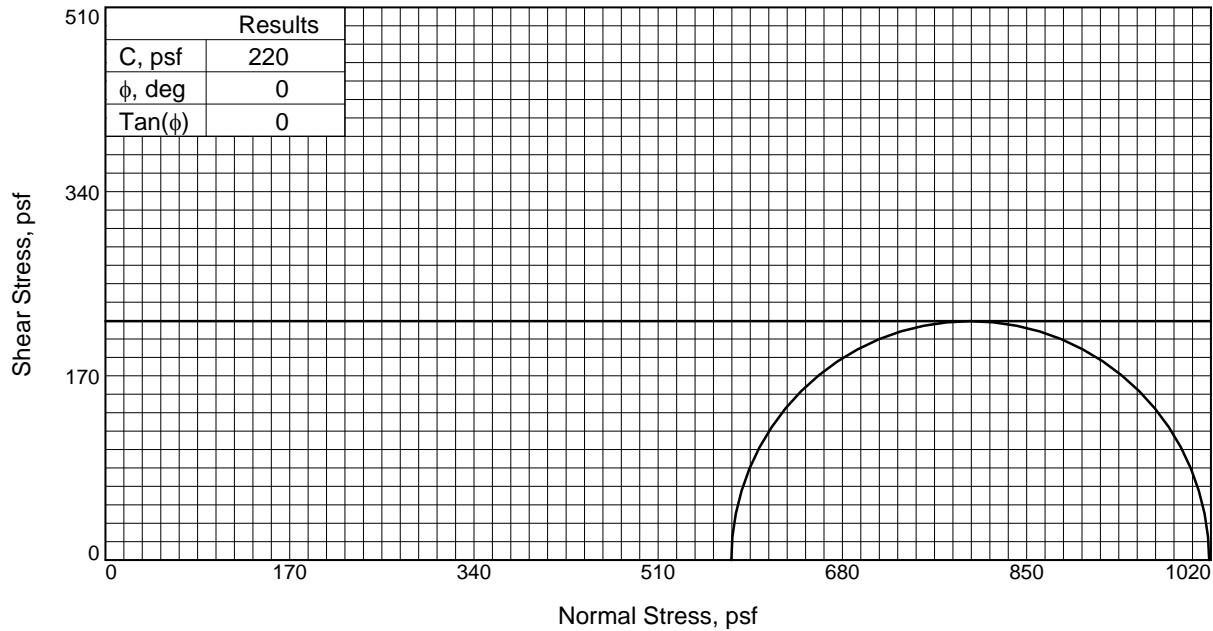
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** AD

**Checked By:** CD





Sample No.	1	
Initial	Water Content, %	33.2
	Dry Density, pcf	88.8
	Saturation, %	100.0
	Void Ratio	0.8977
	Diameter, in.	1.38
At Test	Height, in.	2.88
	Water Content, %	33.2
	Dry Density, pcf	88.8
	Saturation, %	100.0
	Void Ratio	0.8977
	Diameter, in.	1.38
	Height, in.	2.88
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	4.01
	Fail. Stress, psf	441
	Strain, %	14.1
	Ult. Stress, psf	441
	Strain, %	14.1
	$\sigma_1$ Failure, psf	1018
$\sigma_3$ Failure, psf	577	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, vso g LN CL (CL)

**LL=** 30

**PL=** 19

**PI=** 11

**Assumed Specific Gravity=** 2.70

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** L-1      **Depth:** 12

**Sample Number:** 7A

**Proj. No.:** 24762

**Date Sampled:** 7/25/22

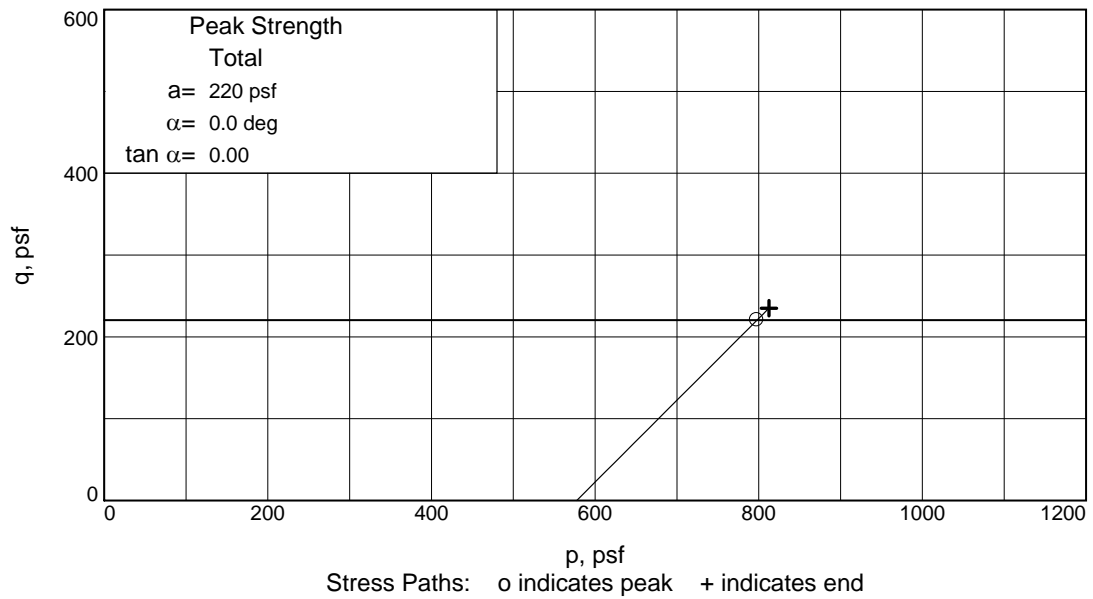
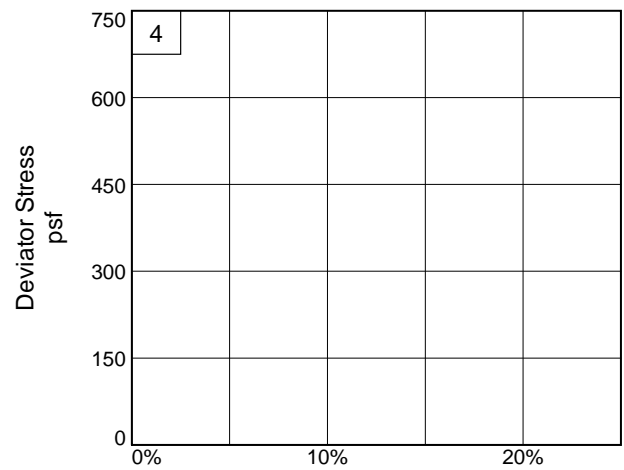
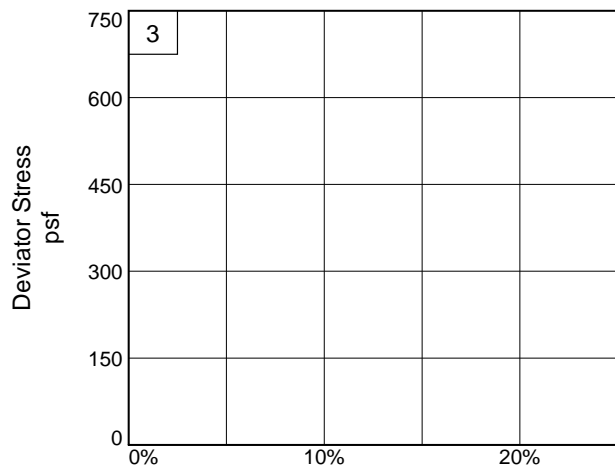
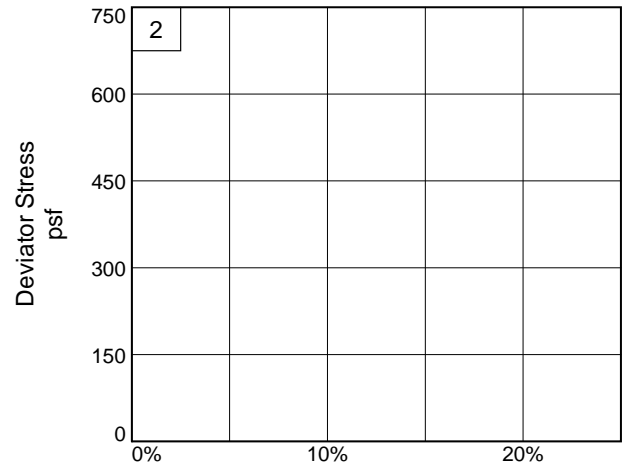
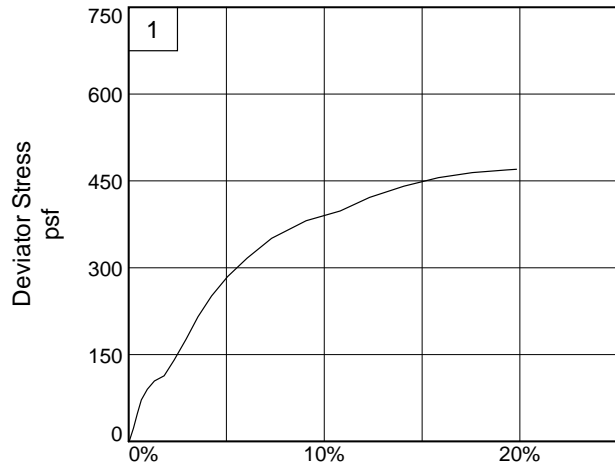


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SINCE 1946

**Figure** ASTM D2850

**Tested By:** AD

**Checked By:** CD



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** L-1

**Depth:** 12

**Sample Number:** 7A

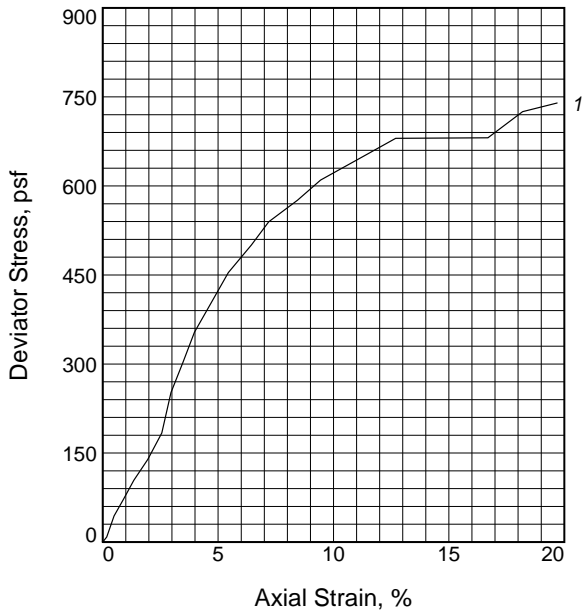
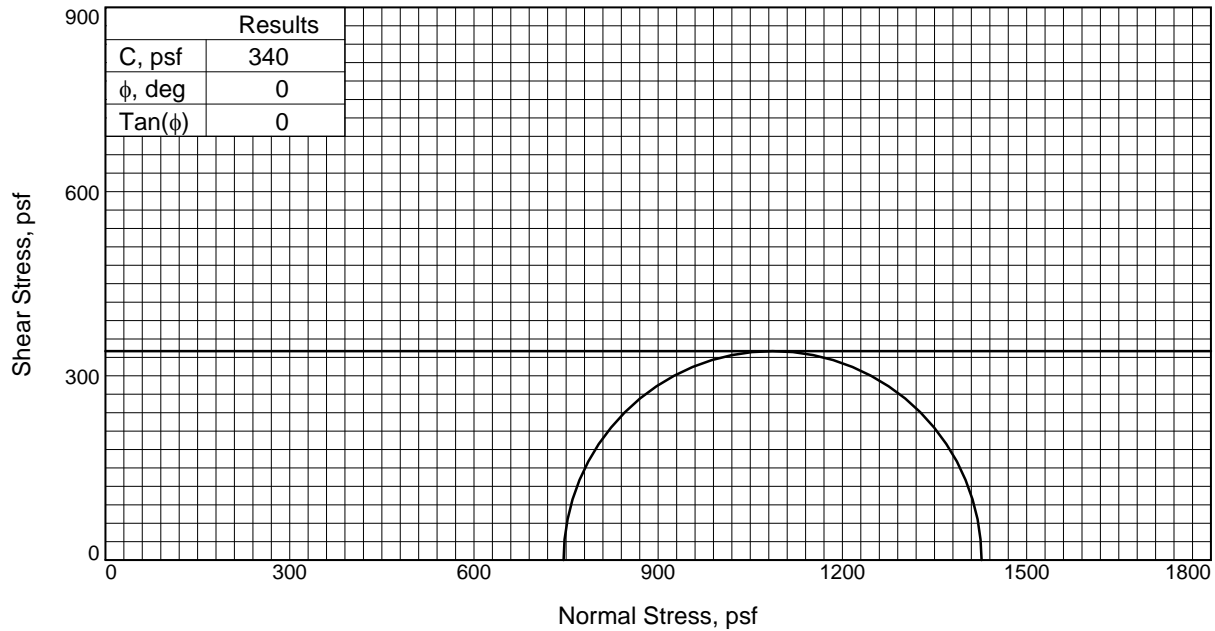
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** AD

**Checked By:** CD



Sample No.	1	
Initial	Water Content, %	40.3
	Dry Density, pcf	79.1
	Saturation, %	96.1
	Void Ratio	1.1318
	Diameter, in.	1.42
	Height, in.	2.83
At Test	Water Content, %	41.9
	Dry Density, pcf	79.1
	Saturation, %	100.0
	Void Ratio	1.1318
	Diameter, in.	1.42
	Height, in.	2.83
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	5.18	
Fail. Stress, psf	681	
Strain, %	14.7	
Ult. Stress, psf	681	
Strain, %	14.7	
$\sigma_1$ Failure, psf	1427	
$\sigma_3$ Failure, psf	746	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, so g LN CL (CL)

LL= 46

PL= 20

PI= 26

**Assumed Specific Gravity=** 2.70

**Remarks:** TORVANE = 0.500 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** L-1      **Depth:** 16

**Sample Number:** 9A

**Proj. No.:** 24762

**Date Sampled:** 7/25/22

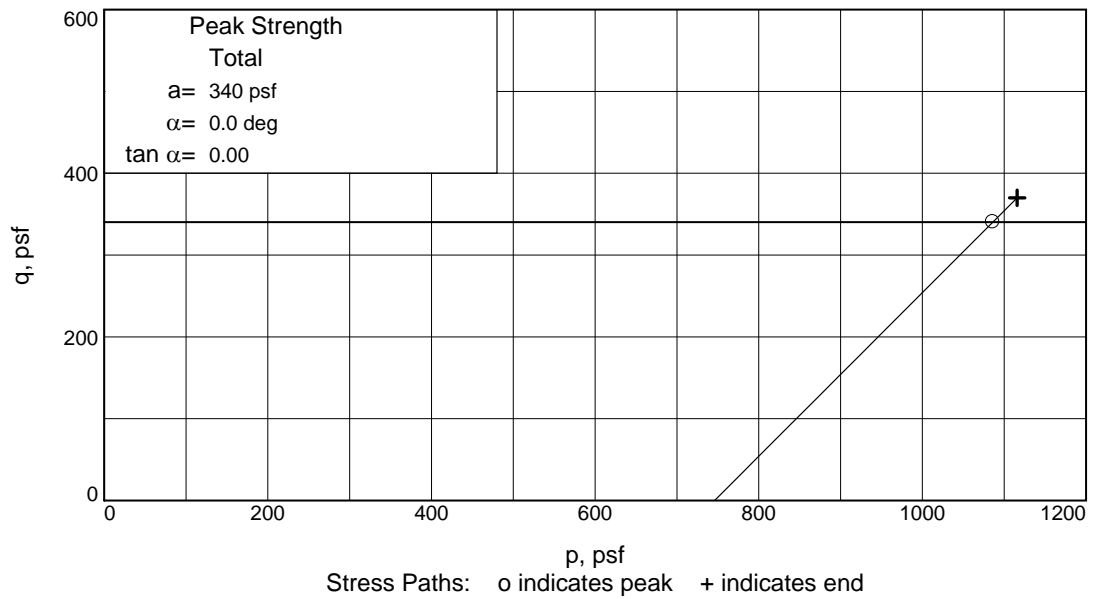
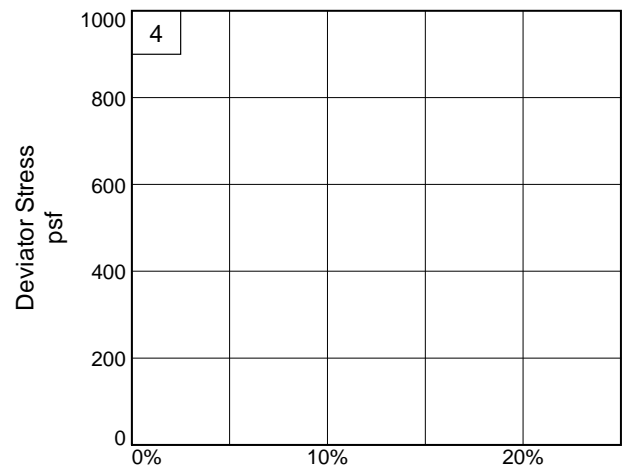
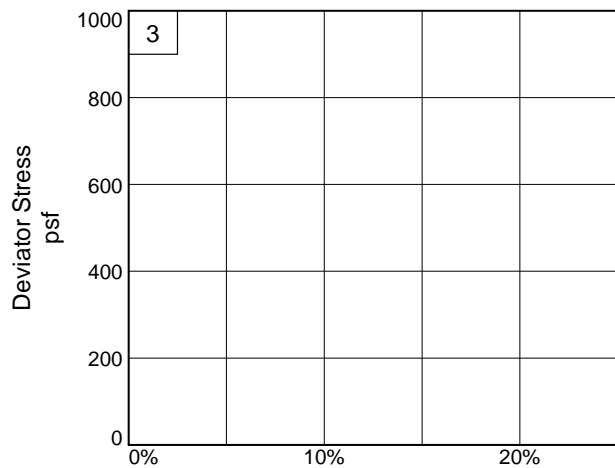
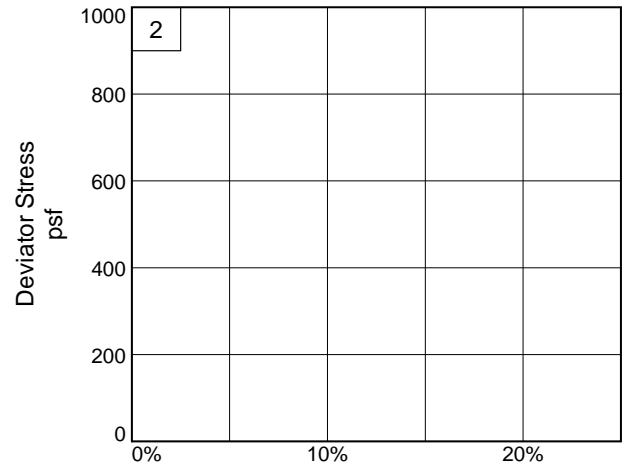
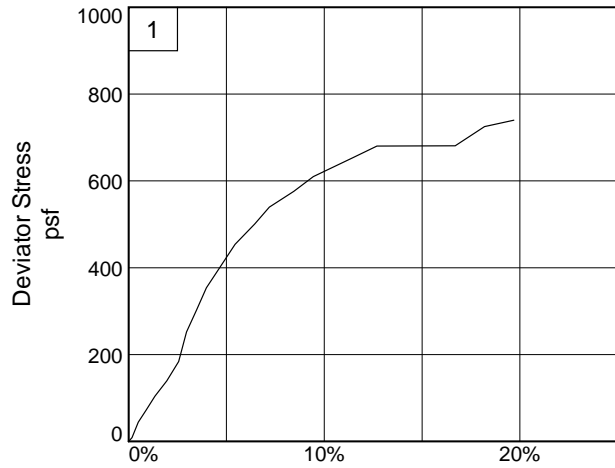


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Figure ASTM D2850

Tested By: AD

Checked By: CD



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** L-1

**Depth:** 16

**Sample Number:** 9A

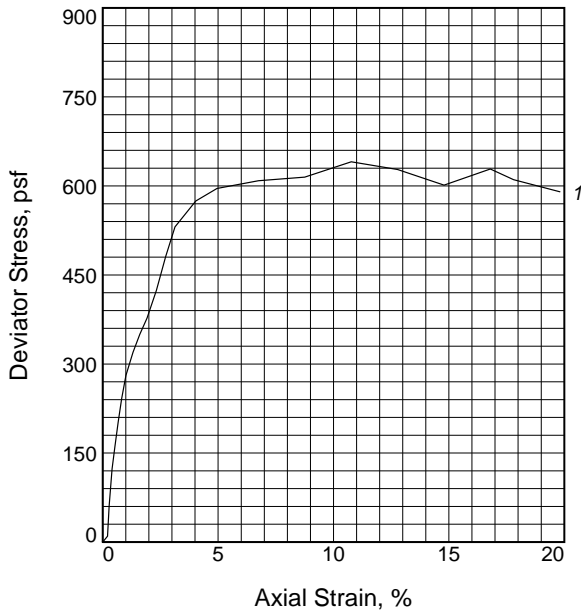
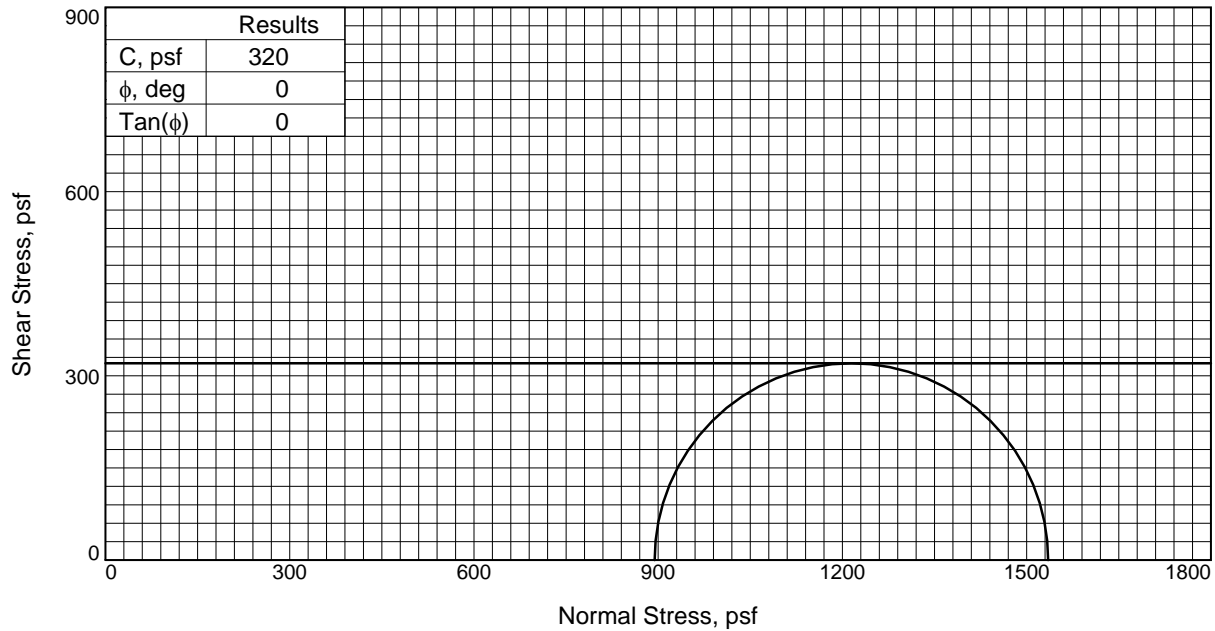
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** AD

**Checked By:** CD



Sample No.		1
Initial	Water Content, %	56.6
	Dry Density, pcf	66.8
	Saturation, %	99.8
	Void Ratio	1.5411
	Diameter, in.	1.41
At Test	Height, in.	2.83
	Water Content, %	56.7
	Dry Density, pcf	66.8
	Saturation, %	100.0
	Void Ratio	1.5411
	Diameter, in.	1.41
	Height, in.	2.83
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	6.21
	Fail. Stress, psf	641
	Strain, %	10.8
	Ult. Stress, psf	601
	Strain, %	14.8
	$\sigma_1$ Failure, psf	1535
$\sigma_3$ Failure, psf	894	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, st g FT CL (CH)

LL= 74

PL= 25

PI= 49

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.150 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** L-1

**Depth:** 18

**Sample Number:** 10A

**Proj. No.:** 24762

**Date Sampled:** 7/25/22

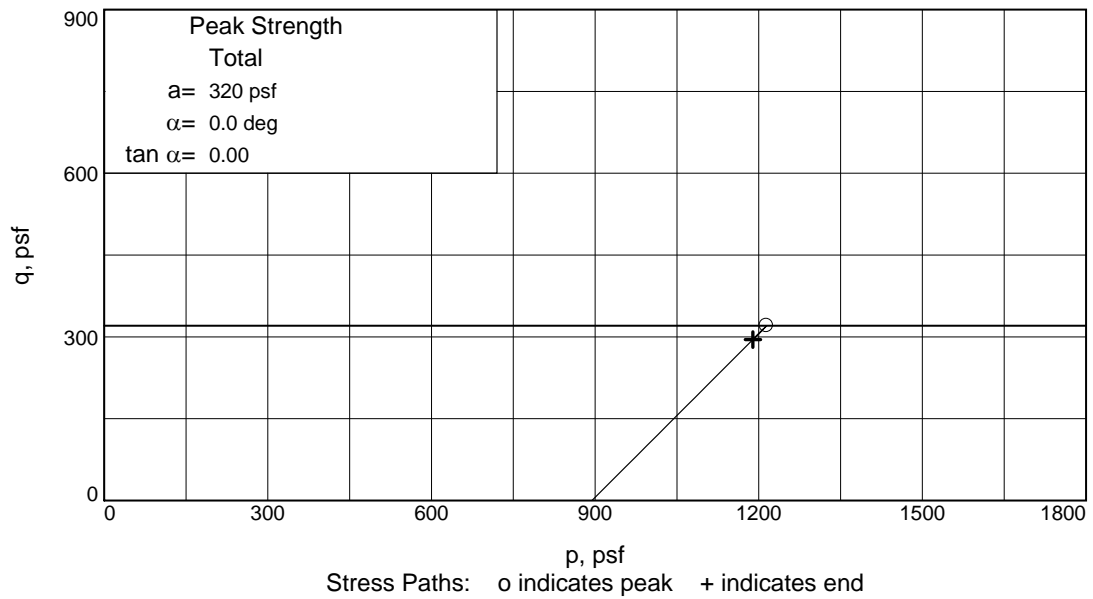
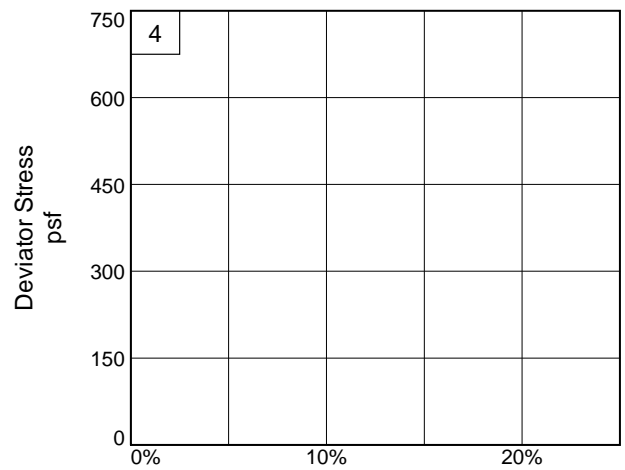
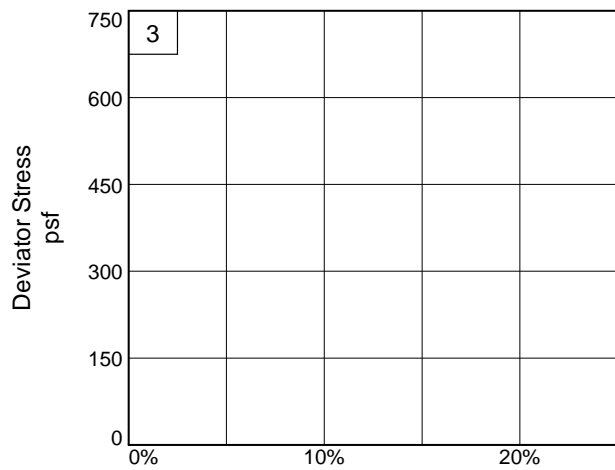
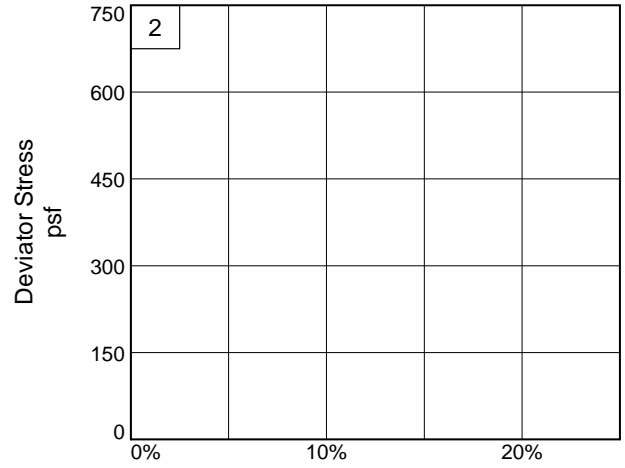
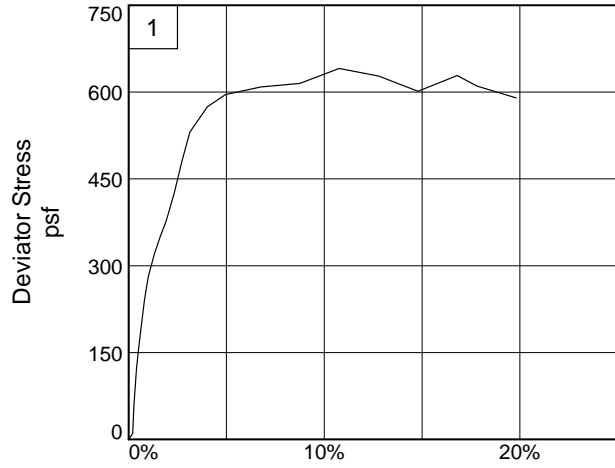


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Figure ASTM D2850

Tested By: AD

Checked By: CD



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** L-1

**Depth:** 18

**Sample Number:** 10A

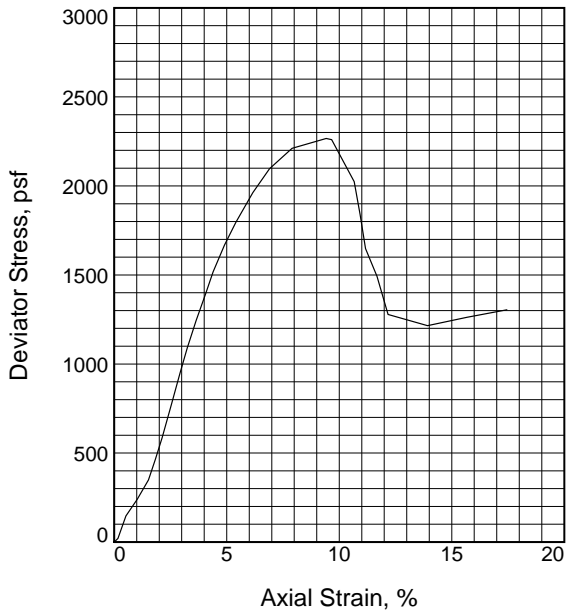
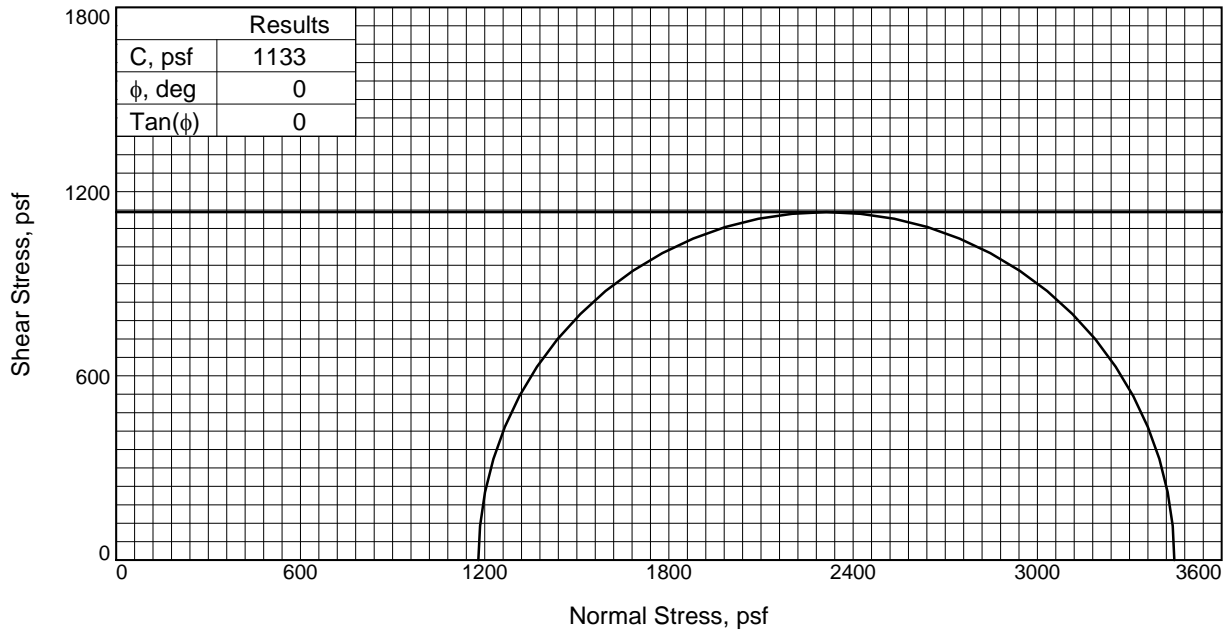
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** AD

**Checked By:** CD



Sample No.	1	
Initial	Water Content, %	264.7
	Dry Density, pcf	19.3
	Saturation, %	92.7
	Void Ratio	7.5671
	Diameter, in.	1.39
At Test	Height, in.	2.85
	Water Content, %	285.6
	Dry Density, pcf	19.3
	Saturation, %	100.0
	Void Ratio	7.5671
Strain rate, %/min.	Diameter, in.	1.39
	Height, in.	2.85
	Back Pressure, psi	0.00
	Cell Pressure, psi	8.19
	Fail. Stress, psf	2267
Strain, %	Strain, %	9.4
	Ult. Stress, psf	1216
Strain, %	Strain, %	13.9
	$\sigma_1$ Failure, psf	3446
$\sigma_3$ Failure, psf	1179	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, st dk br HUM w/ tr dec wd (PT)

**LL=** 346      **PL=** 77      **PI=** 269

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.500 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** L-1      **Depth:** 24

**Sample Number:** 11A

**Proj. No.:** 24762

**Date Sampled:** 7/25/22

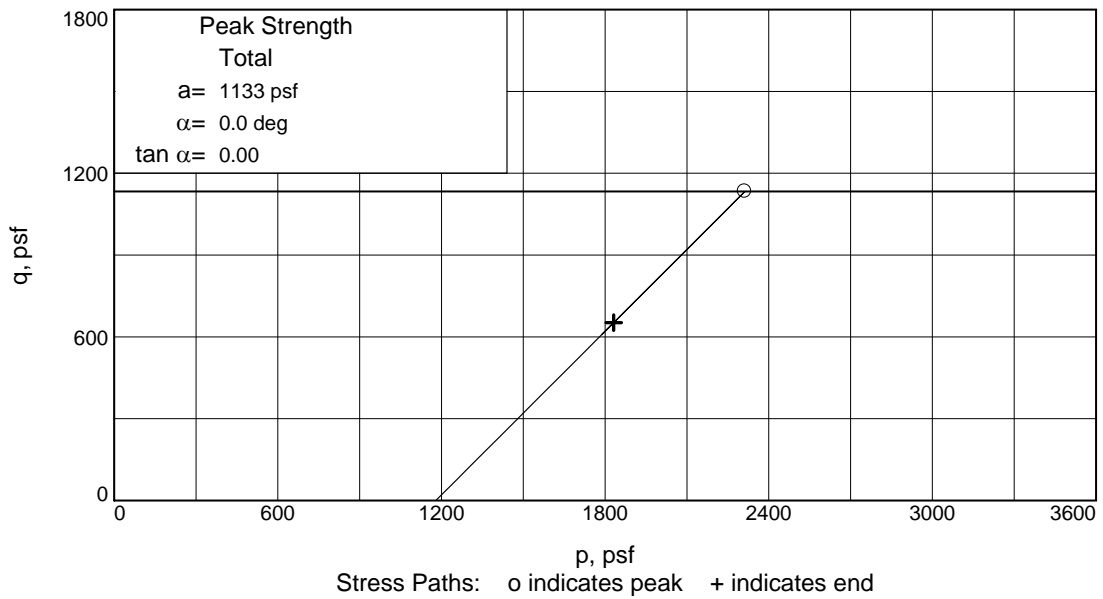
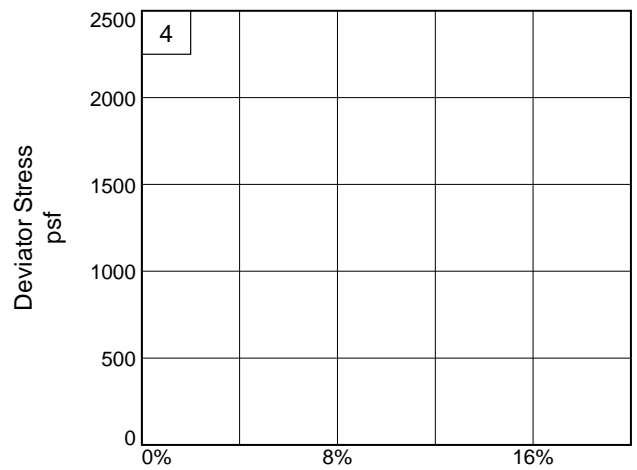
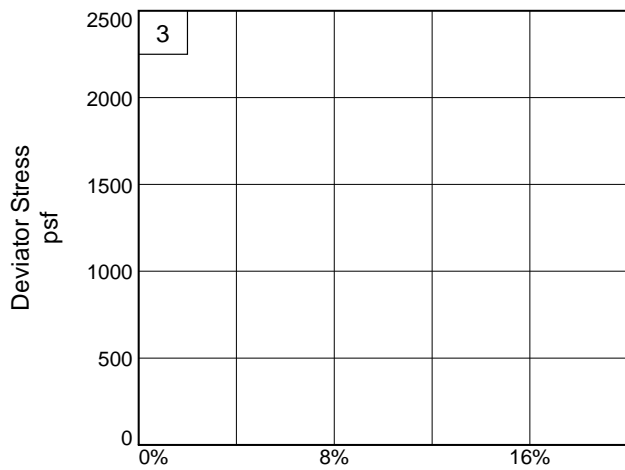
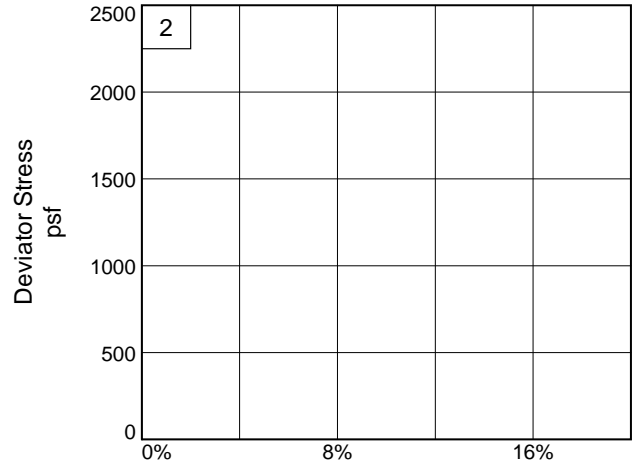
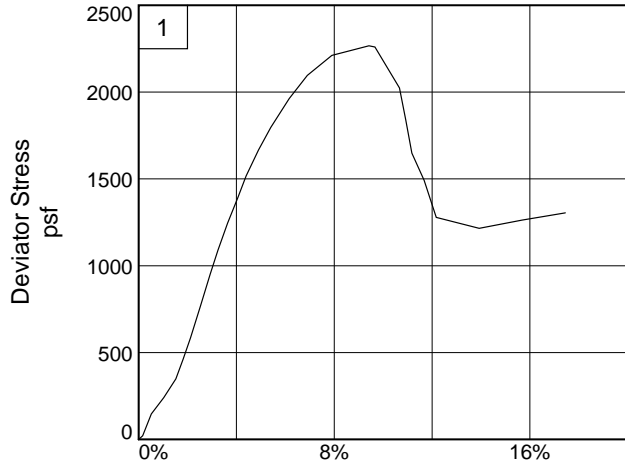


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ENGINEERING  
SINCE 1946

**Figure** ASTM D2850

**Tested By:** AD

**Checked By:** CD



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** L-1

**Depth:** 24

**Sample Number:** 11A

**Project No.:** 24762

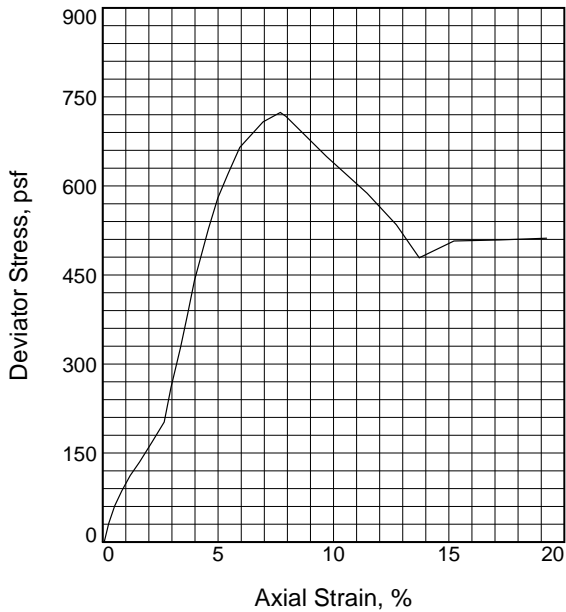
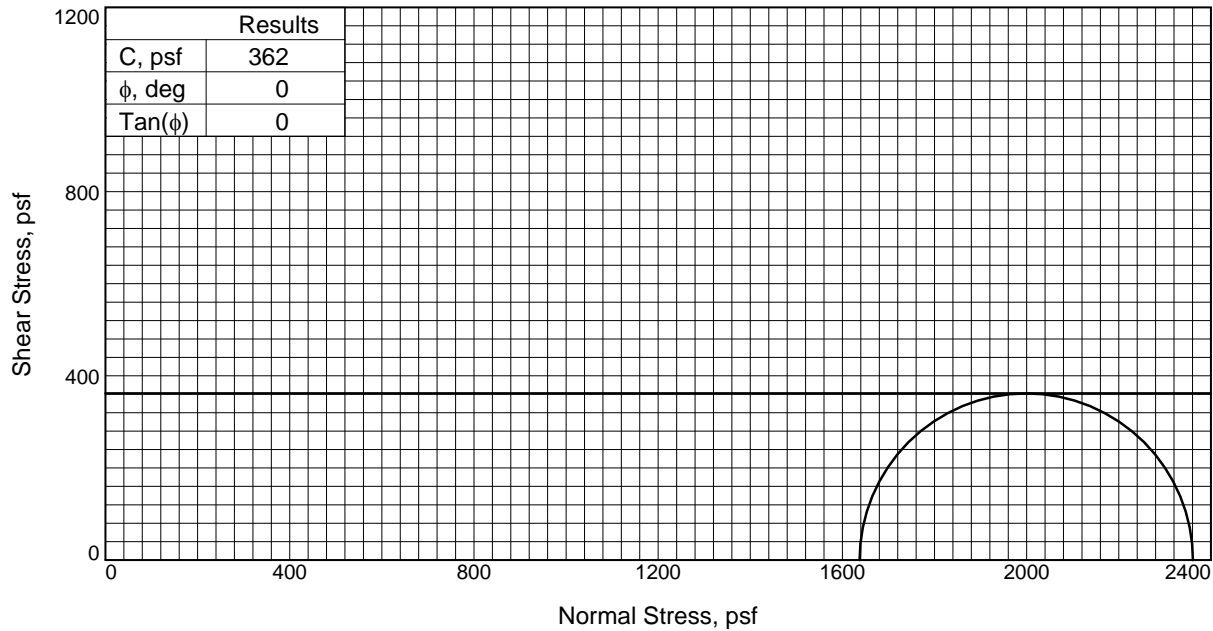
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** AD

**Checked By:** CD





Sample No.	1	
Initial	Water Content, %	66.7
	Dry Density, pcf	60.3
	Saturation, %	100.0
	Void Ratio	1.8145
	Diameter, in.	1.39
At Test	Height, in.	2.81
	Water Content, %	66.7
	Dry Density, pcf	60.3
	Saturation, %	100.0
	Void Ratio	1.8145
	Diameter, in.	1.39
	Height, in.	2.81
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	11.37
	Fail. Stress, psf	724
	Strain, %	7.7
	Ult. Stress, psf	479
	Strain, %	13.7
	$\sigma_1$ Failure, psf	2361
$\sigma_3$ Failure, psf	1637	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, so g FT CL w/ tr si poc (CH)

**LL=** 83

**PL=** 25

**PI=** 58

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.500 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** L-1

**Depth:** 35

**Sample Number:** 13B

**Proj. No.:** 24762

**Date Sampled:** 7/25/22

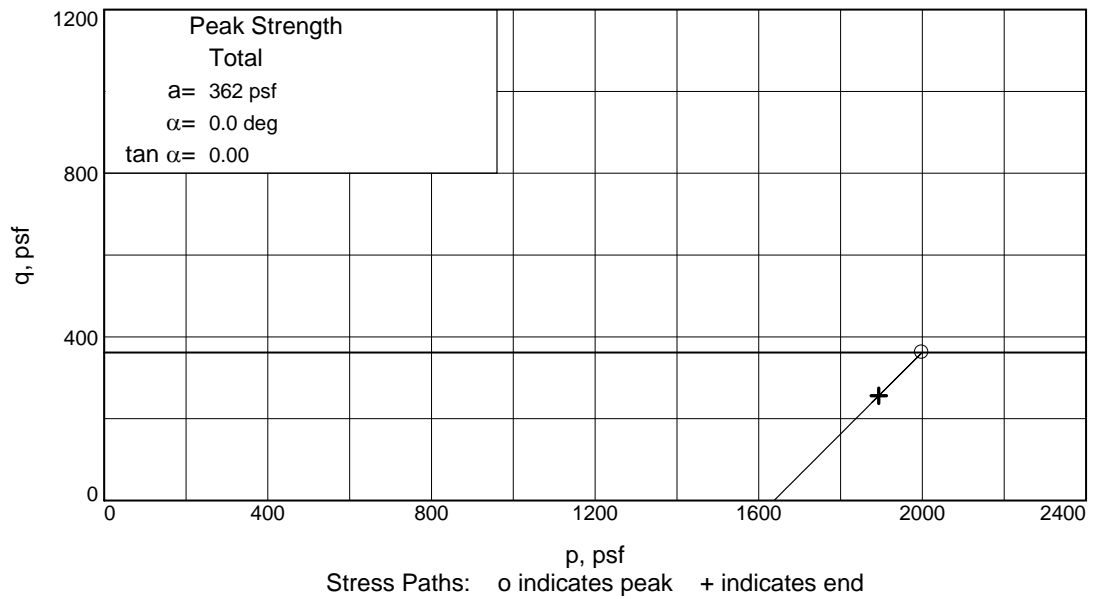
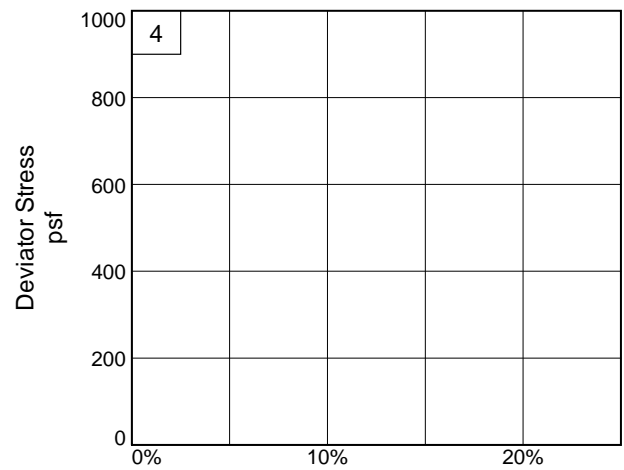
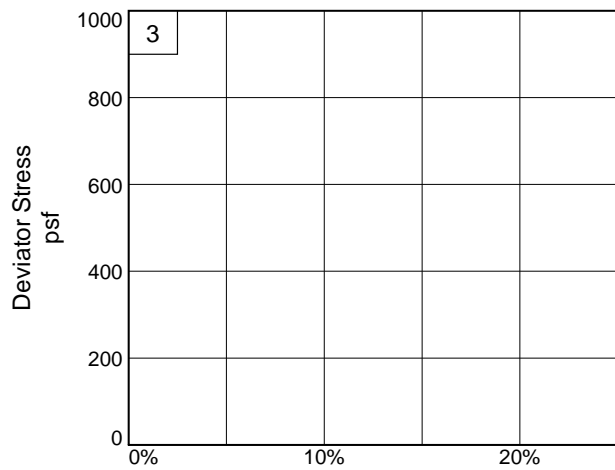
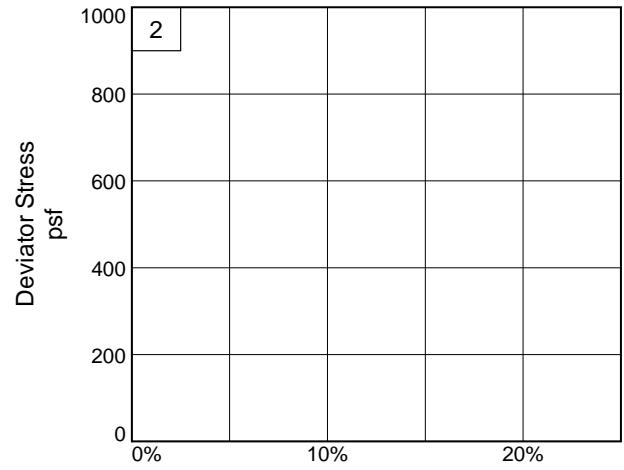
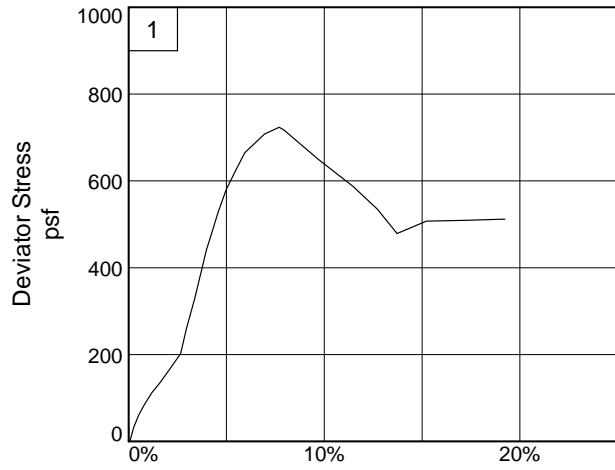


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SINCE 1946

Figure ASTM D2850

Tested By: AD

Checked By: CD



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** L-1

**Depth:** 35

**Sample Number:** 13B

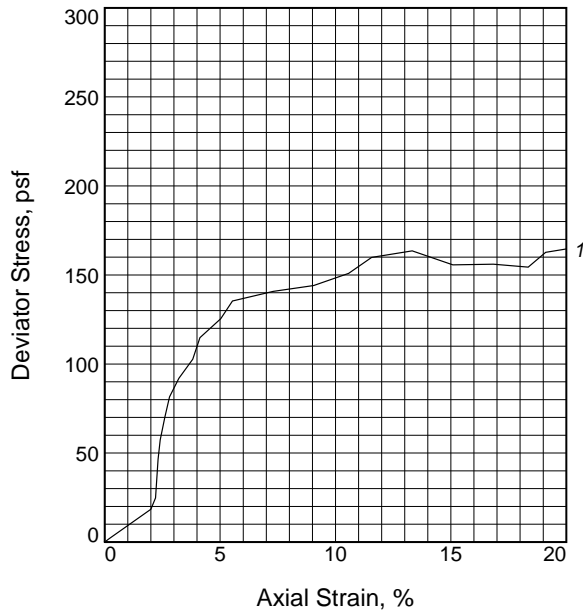
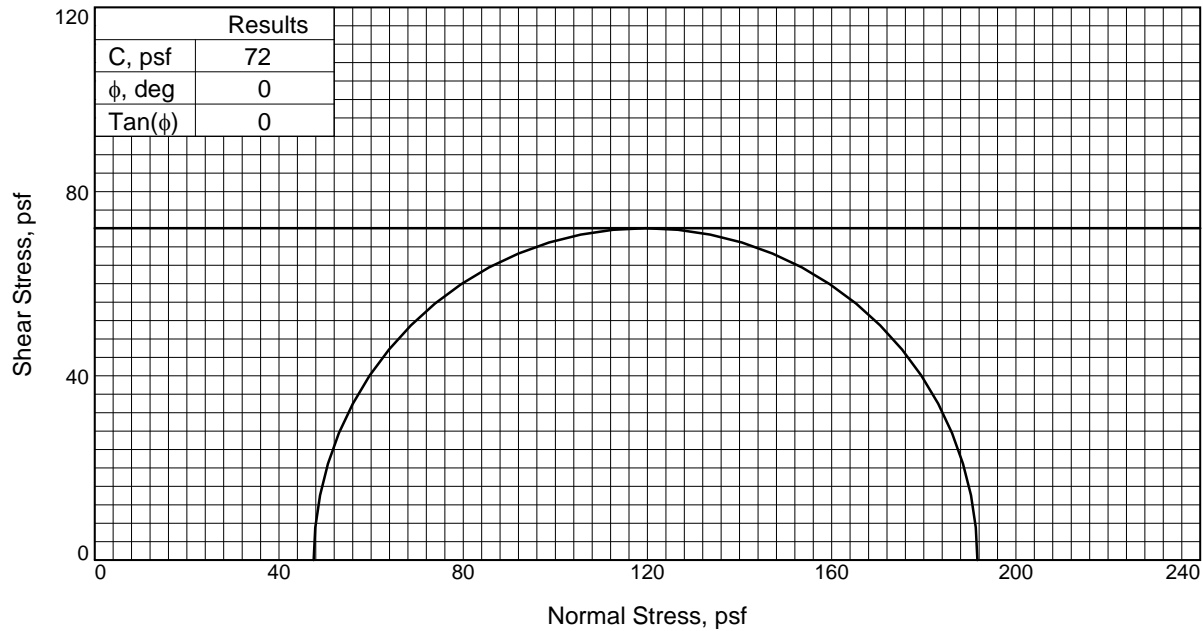
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** AD

**Checked By:** CD



Sample No.	1	
Initial	Water Content, %	131.8
	Dry Density, pcf	35.1
	Saturation, %	94.0
	Void Ratio	3.7140
	Diameter, in.	1.42
At Test	Height, in.	2.89
	Water Content, %	140.2
	Dry Density, pcf	35.1
	Saturation, %	100.0
	Void Ratio	3.7140
Diameter, in.	1.42	
	Height, in.	2.89
Strain rate, %/min.	1.03	
Back Pressure, psi	0.00	
Cell Pressure, psi	0.33	
Fail. Stress, psf	144	
Ult. Stress, psf	156	
$\sigma_1$ Failure, psf	192	
$\sigma_3$ Failure, psf	48	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso br & g ORG CL w/ fw rts

**LL=** 138      **PL=** 30      **PI=** 108

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.400 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** R-2      **Depth:** 1

**Sample Number:** 1B

**Proj. No.:** 24762

**Date Sampled:** 6/7/2022

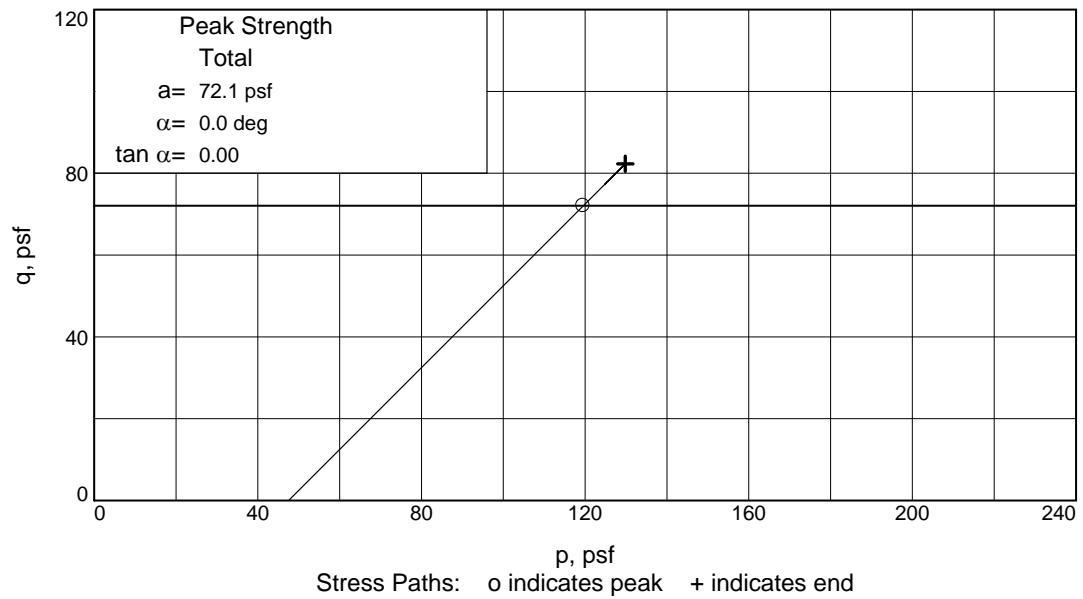
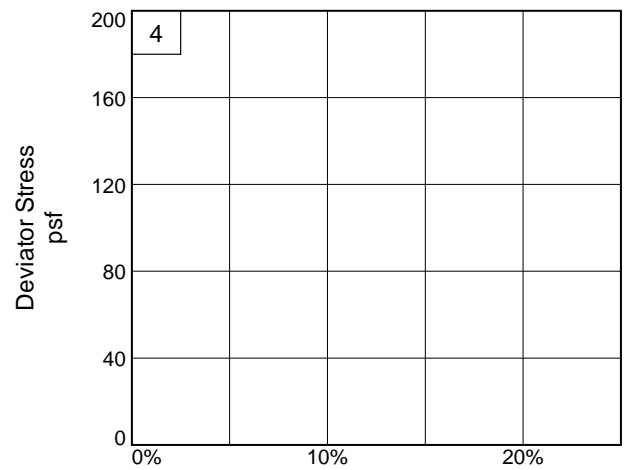
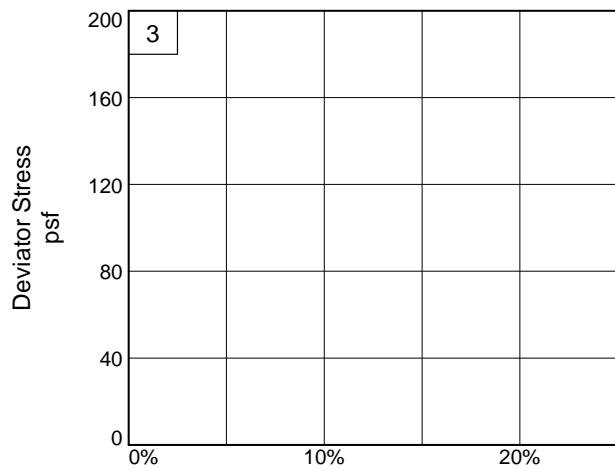
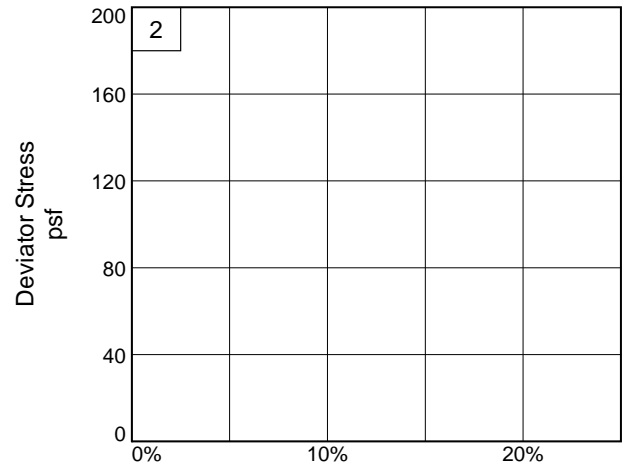
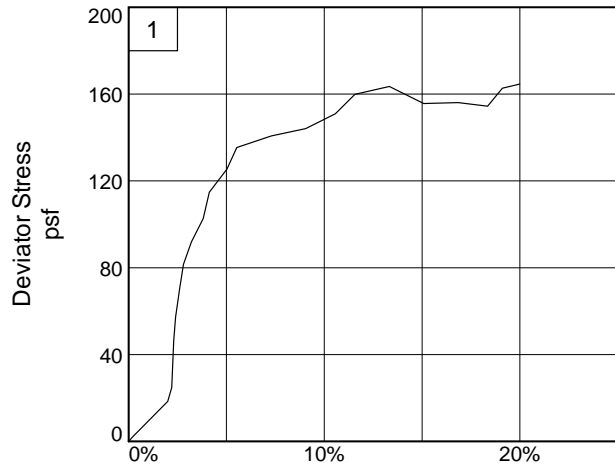


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Figure ASTM D2850

Tested By: BH

Checked By: CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** R-2

**Depth:** 1

**Sample Number:** 1B

**Project No.:** 24762

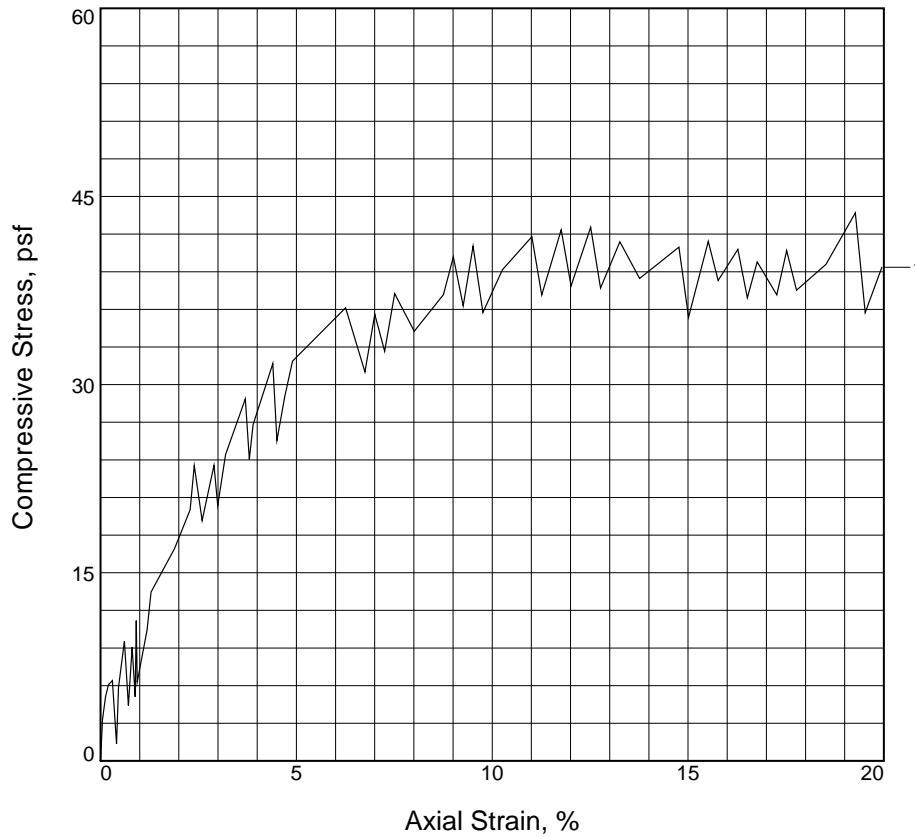
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR

# UNCONFINED COMPRESSION TEST



Sample No.	1		
Unconfined strength, psf	43		
Undrained shear strength, psf	21		
Failure strain, %	12.5		
Strain rate, %/min.	1.03		
Water content, %	100.5		
Wet density, pcf	90.8		
Dry density, pcf	45.3		
Saturation, %	100.4		
Void ratio	2.6533		
Specimen diameter, in.	1.42		
Specimen height, in.	2.89		
Height/diameter ratio	2.04		

**Description:** W, xso dk g & br ORG CL w/ fw dec wd & rts

<b>LL = 91</b>	<b>PL = 23</b>	<b>PI = 68</b>	<b>Assumed GS= 2.65</b>	<b>Type: UNDISTURBED</b>
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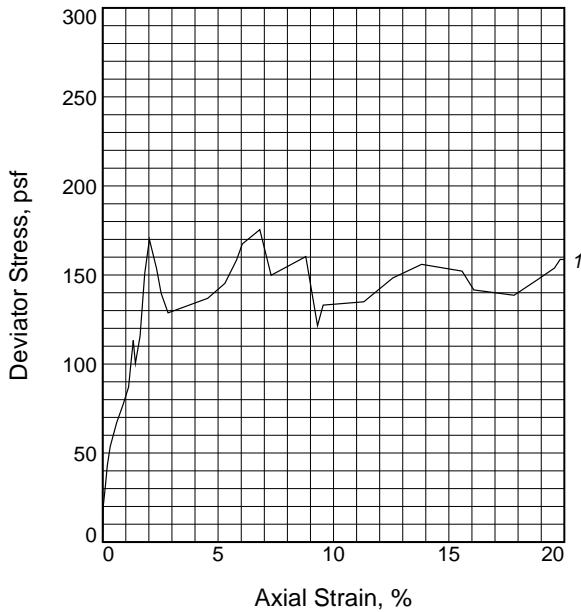
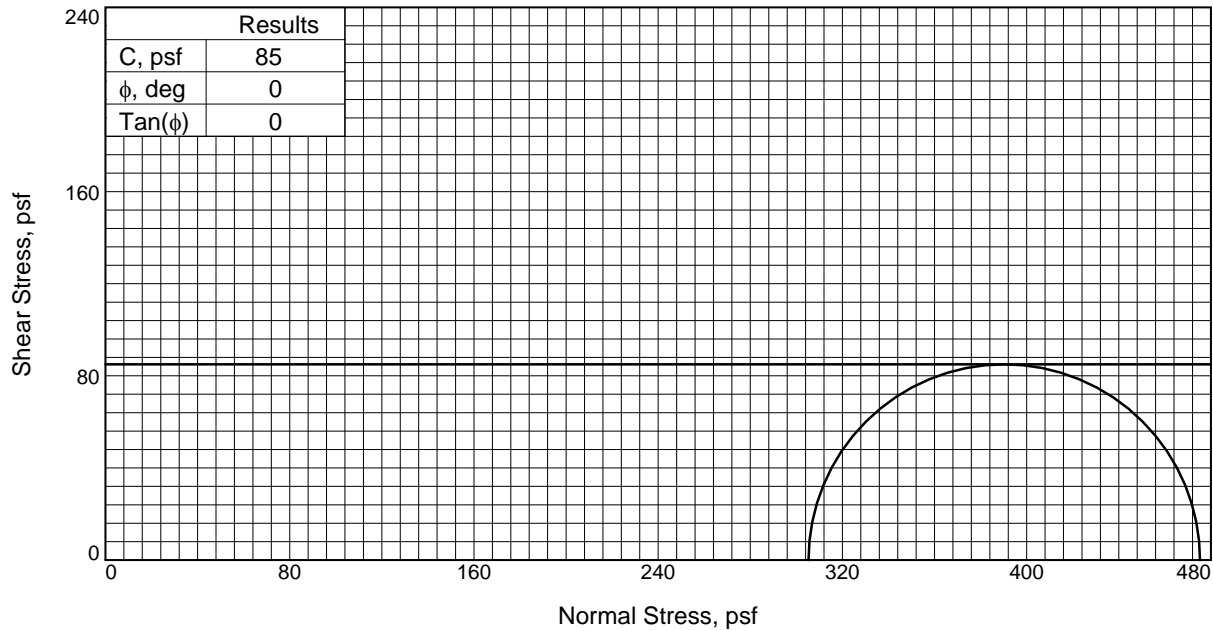
**Project No.:** 24762  
**Date Sampled:** 6/7/2022  
**Remarks:**  
 TORVANE = 0.500 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA  
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH  
**Source of Sample:** R-2      **Depth:** 5  
**Sample Number:** 3B

**Figure** ASTM D2166



**Tested By:** BH      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	98.2
	Dry Density, pcf	46.0
	Saturation, %	100.3
	Void Ratio	2.5943
	Diameter, in.	1.42
At Test	Height, in.	2.90
	Water Content, %	97.9
	Dry Density, pcf	46.0
	Saturation, %	100.0
	Void Ratio	2.5943
	Diameter, in.	1.42
	Height, in.	2.90
Strain rate, %/min.	1.03	
Back Pressure, psi	0.00	
Cell Pressure, psi	2.12	
Fail. Stress, psf	170	
Ult. Stress, psf	156	
$\sigma_1$ Failure, psf	475	
$\sigma_3$ Failure, psf	305	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, vso g & br ORG CL w/ fw dec wd & rts

**LL=** 101      **PL=** 25      **PI=** 76

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** R-2      **Depth:** 7

**Sample Number:** 4B

**Proj. No.:** 24762

**Date Sampled:** 6/7/2022

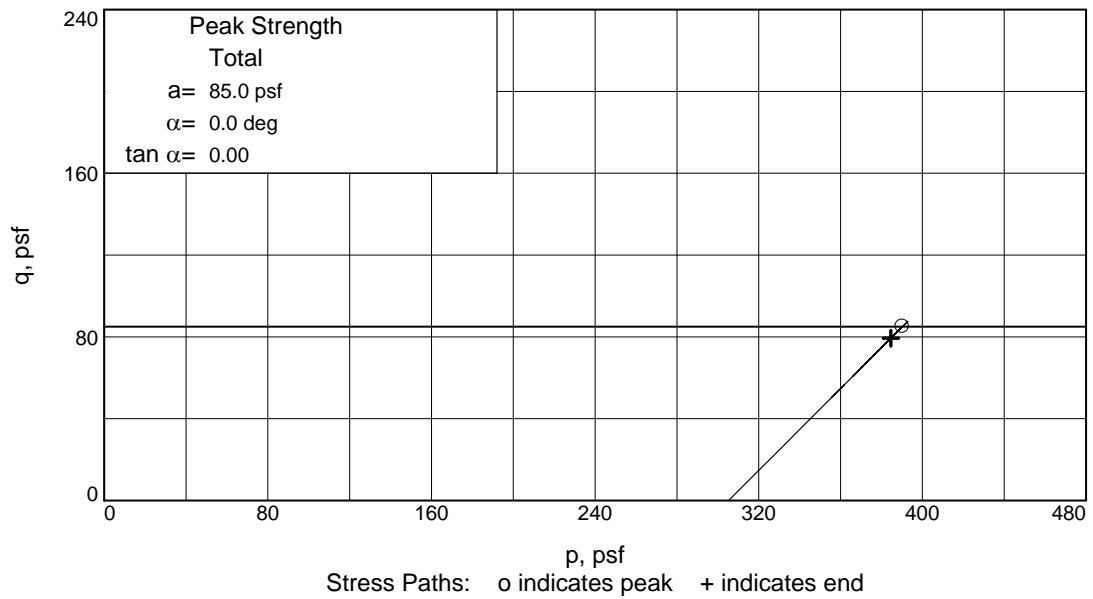
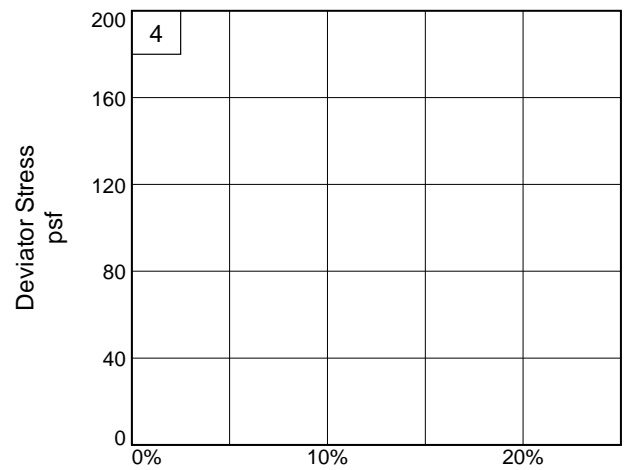
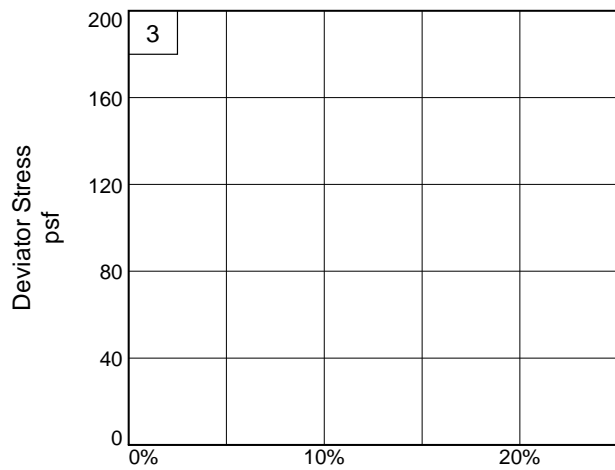
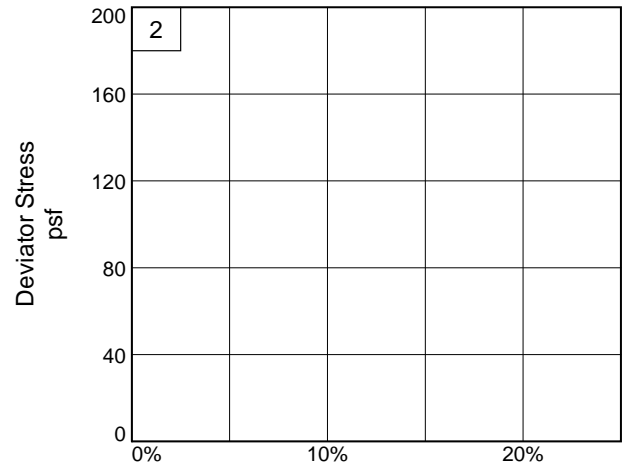
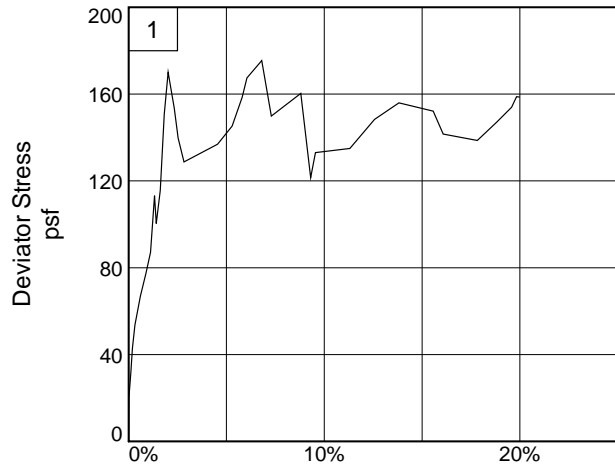


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ENGINEERING  
SINCE 1946

Figure ASTM D2850

Tested By: BH

Checked By: CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** R-2

**Depth:** 7

**Sample Number:** 4B

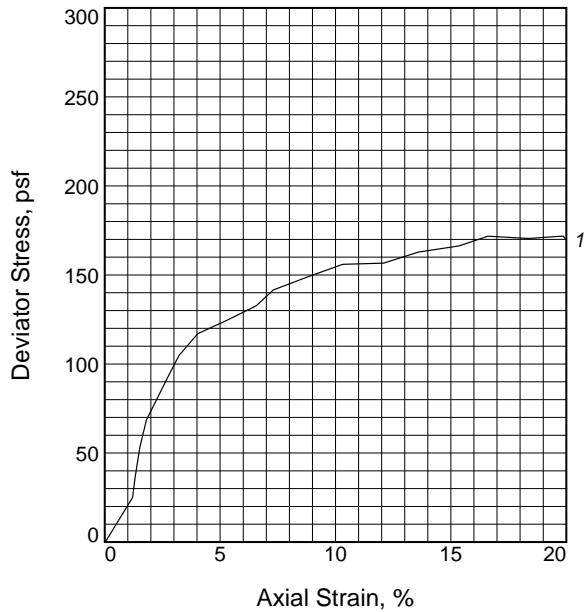
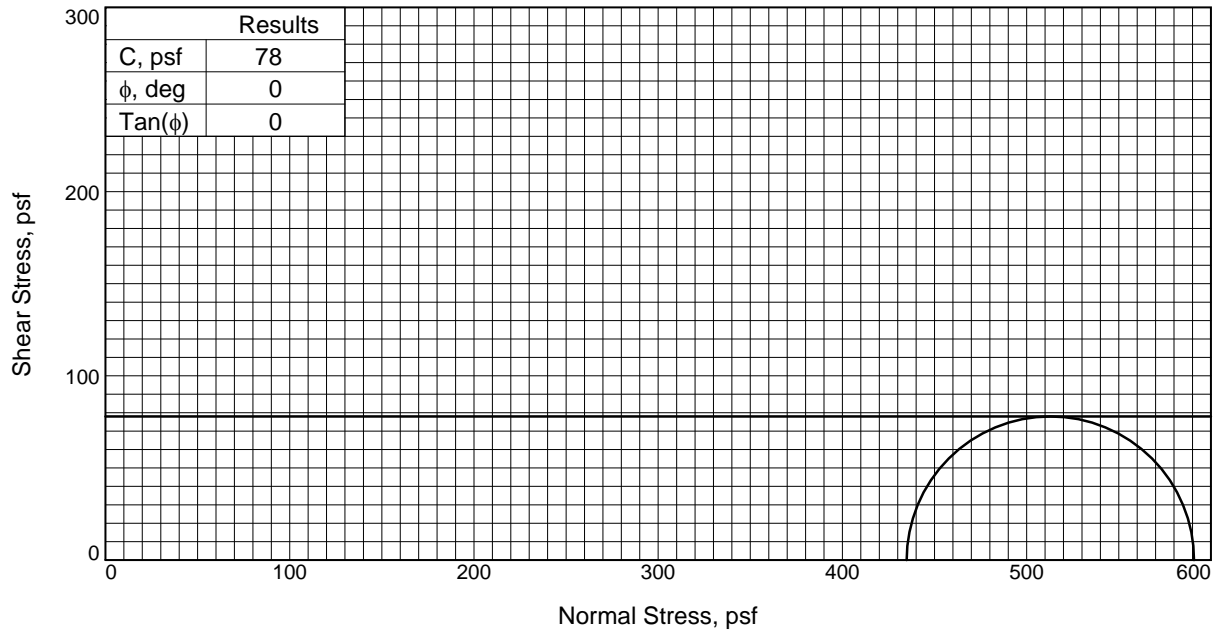
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	127.1
	Dry Density, pcf	36.3
	Saturation, %	94.7
	Void Ratio	3.5563
	Diameter, in.	1.41
At Test	Height, in.	2.92
	Water Content, %	134.2
	Dry Density, pcf	36.3
	Saturation, %	100.0
	Void Ratio	3.5563
Diameter, in.	1.41	
	Height, in.	2.92
Strain rate, %/min.	1.03	
Back Pressure, psi	0.00	
Cell Pressure, psi	3.02	
Fail. Stress, psf	156	
Ult. Stress, psf	166	
$\sigma_1$ Failure, psf	591	
$\sigma_3$ Failure, psf	435	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, vso g & br ORG CL w/ fw dec wd & rts

**LL=** 172      **PL=** 49      **PI=** 123

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = N/A

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** R-2      **Depth:** 9

**Sample Number:** 5B

**Proj. No.:** 24762

**Date Sampled:** 6/7/2022



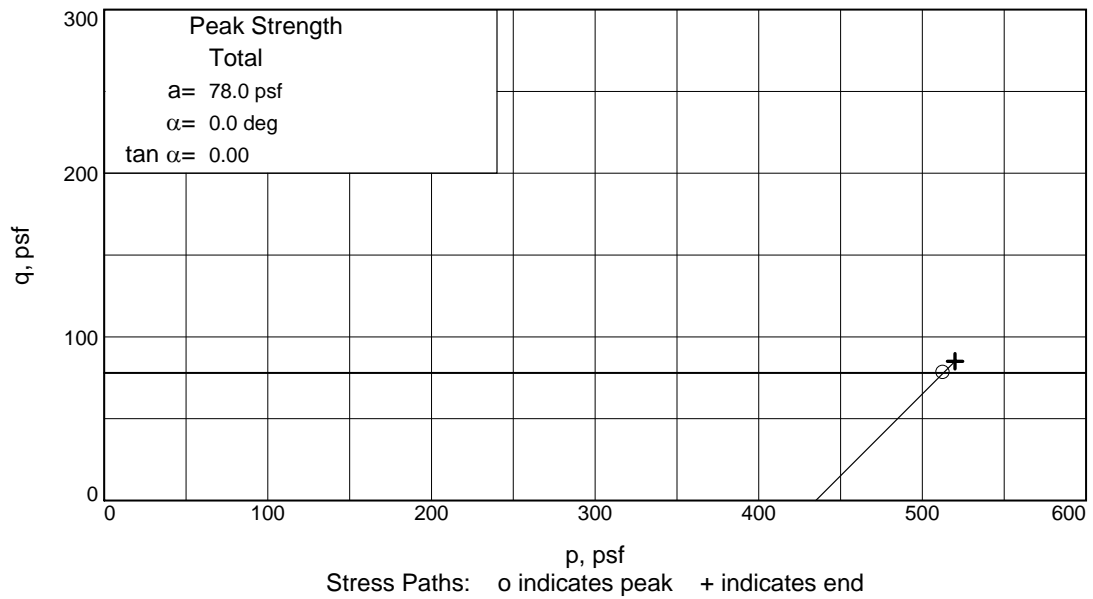
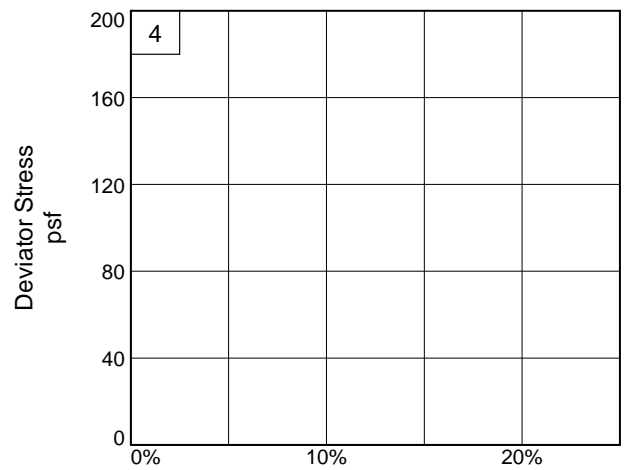
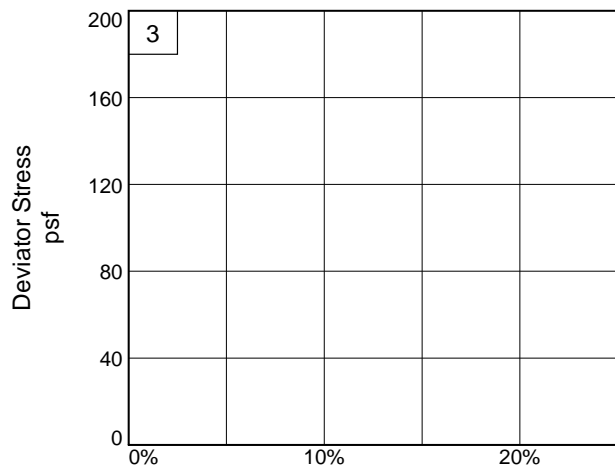
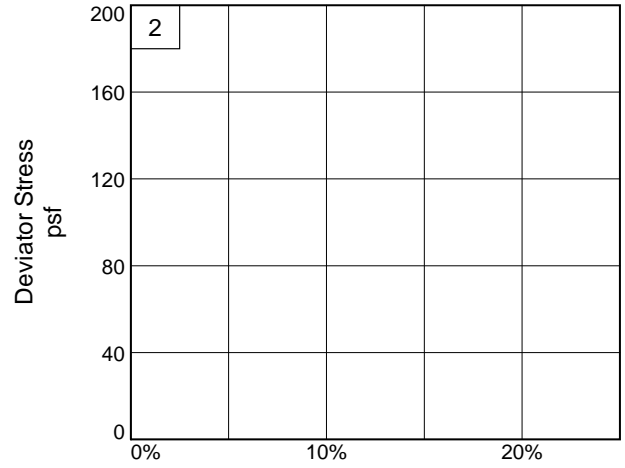
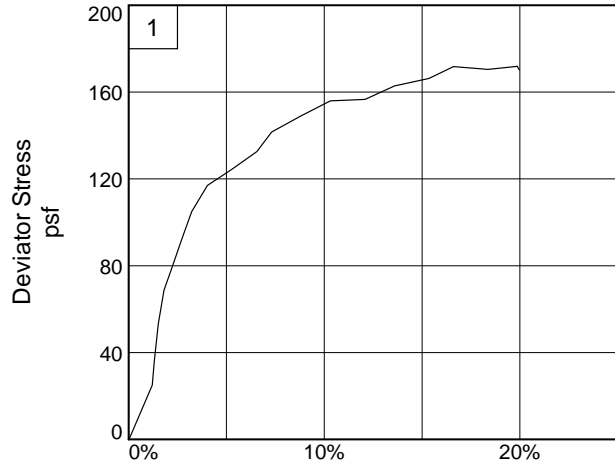
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**Figure** ASTM D2850

**Tested By:** BH

**Checked By:** CD & RR





**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** R-2

**Depth:** 9

**Sample Number:** 5B

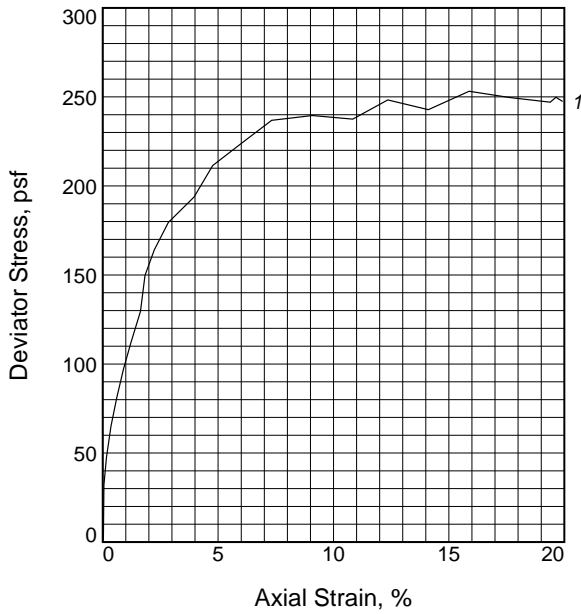
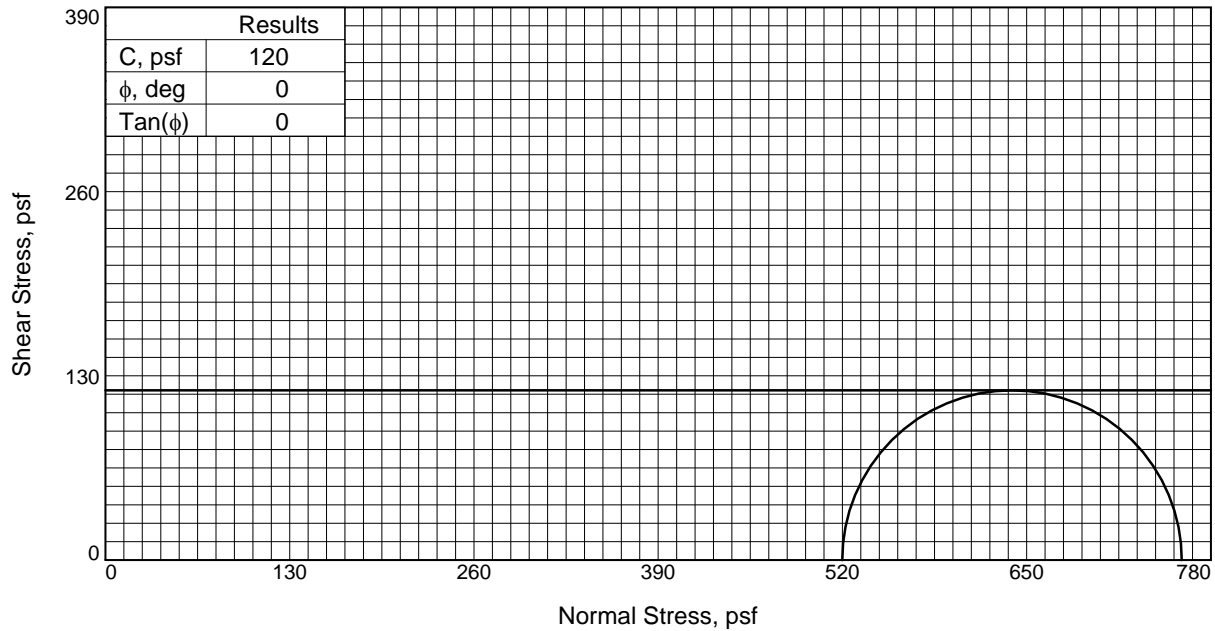
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	206.9
	Dry Density, pcf	24.8
	Saturation, %	96.8
	Void Ratio	5.6637
	Diameter, in.	1.40
At Test	Height, in.	2.89
	Water Content, %	213.7
	Dry Density, pcf	24.8
	Saturation, %	100.0
	Void Ratio	5.6637
Diameter, in.	1.40	
Height, in.	2.89	
Strain rate, %/min.	1.03	
Back Pressure, psi	0.00	
Cell Pressure, psi	3.61	
Fail. Stress, psf	240	
Ult. Stress, psf	243	
$\sigma_1$ Failure, psf	759	
$\sigma_3$ Failure, psf	520	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso g & br ORG CL w/ fw dec wd & rts

**LL=** 233      **PL=** 59      **PI=** 174

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** R-2      **Depth:** 11

**Sample Number:** 6B

**Proj. No.:** 24762

**Date Sampled:** 6/7/2022

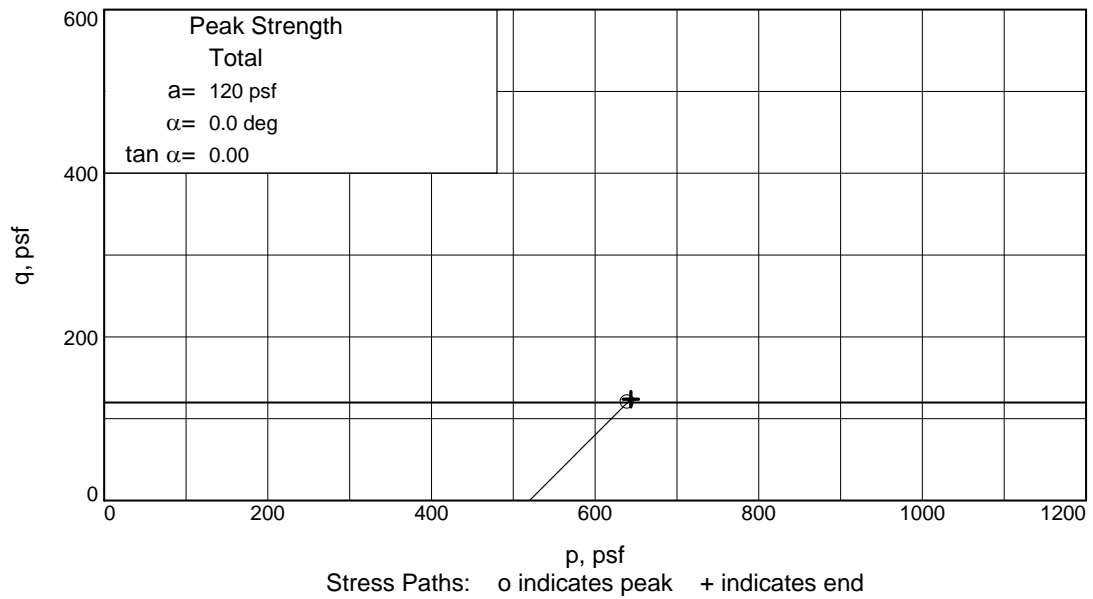
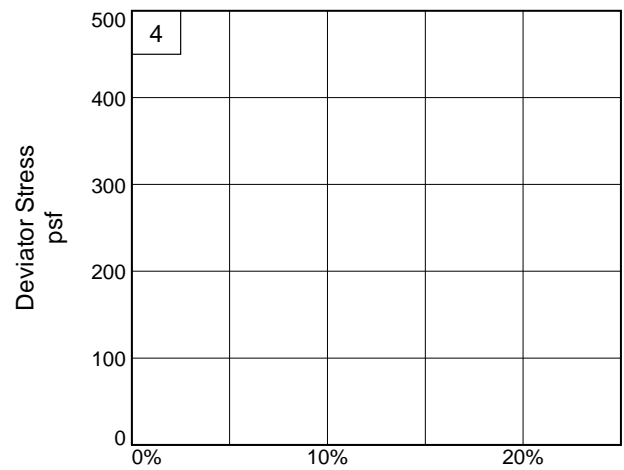
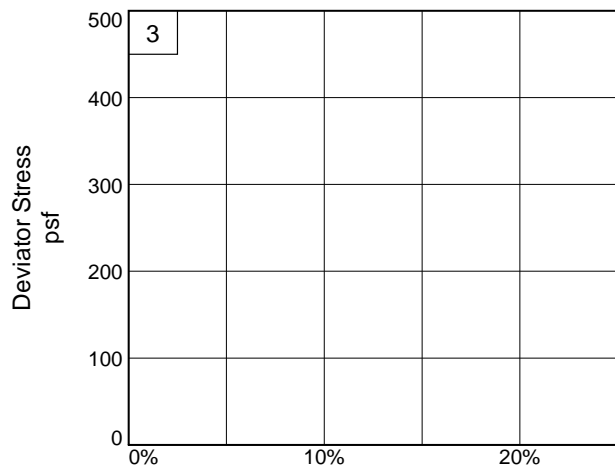
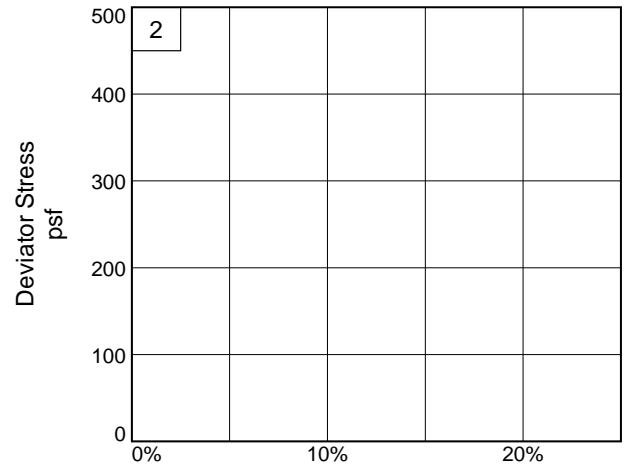
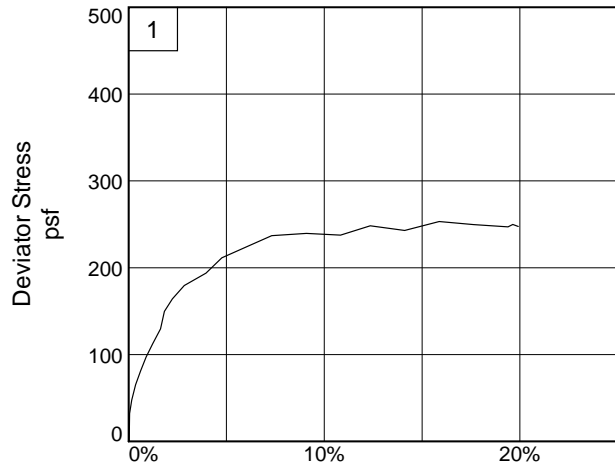


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**Figure** ASTM D2850

**Tested By:** BH

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** R-2

**Depth:** 11

**Sample Number:** 6B

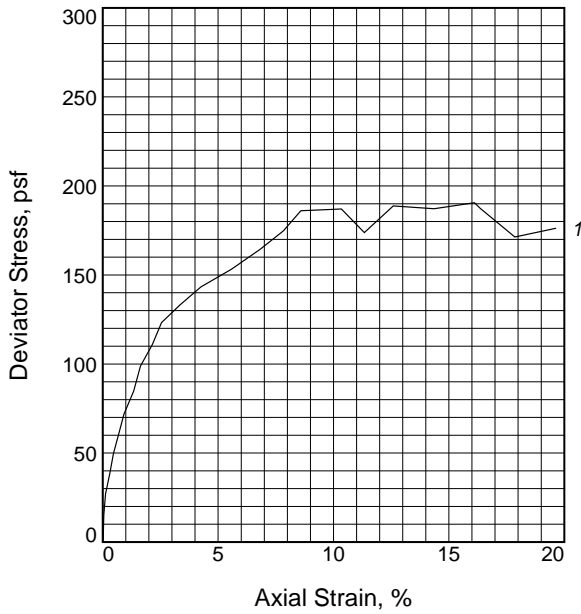
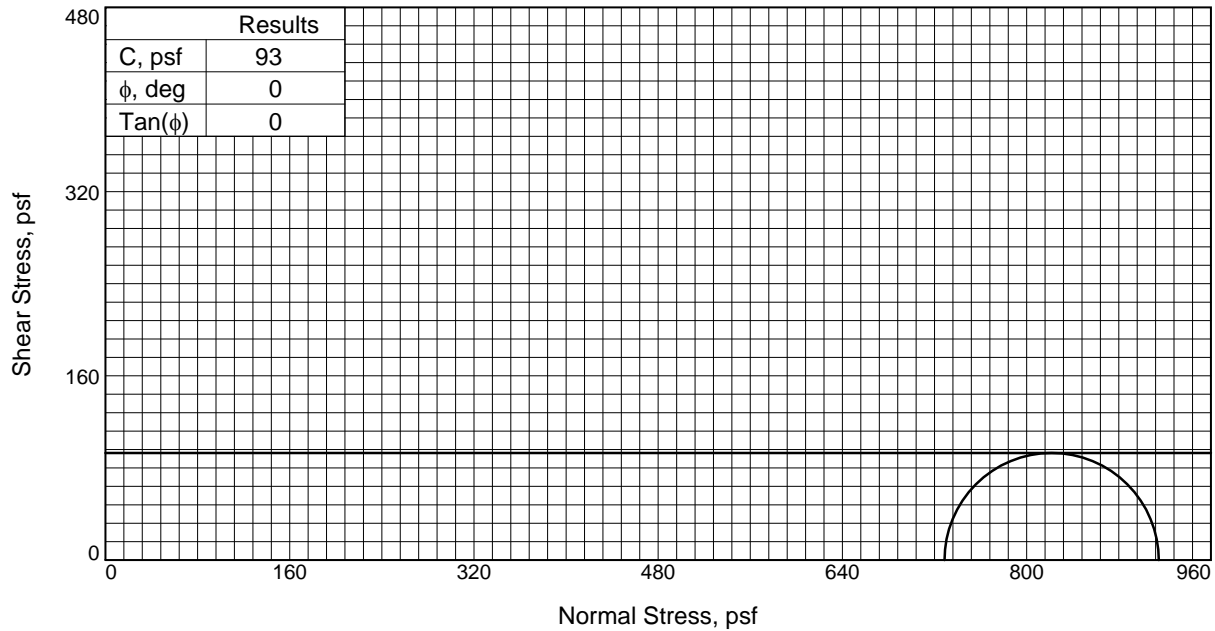
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	176.1
	Dry Density, pcf	28.5
	Saturation, %	97.3
	Void Ratio	4.7949
	Diameter, in.	1.39
	Height, in.	2.88
At Test	Water Content, %	180.9
	Dry Density, pcf	28.5
	Saturation, %	100.0
	Void Ratio	4.7949
	Diameter, in.	1.39
	Height, in.	2.88
Strain rate, %/min.	1.03	
Back Pressure, psi	0.00	
Cell Pressure, psi	5.06	
Fail. Stress, psf	186	
Ult. Stress, psf	187	
$\sigma_1$ Failure, psf	915	
$\sigma_3$ Failure, psf	729	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso g & br ORG CL w/ fw dec wd & rts

**LL= 227      PL= 36      PI= 191**

**Assumed Specific Gravity= 2.65**

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** R-2      **Depth:** 15

**Sample Number:** 8B

**Proj. No.:** 24762

**Date Sampled:** 6/7/2022

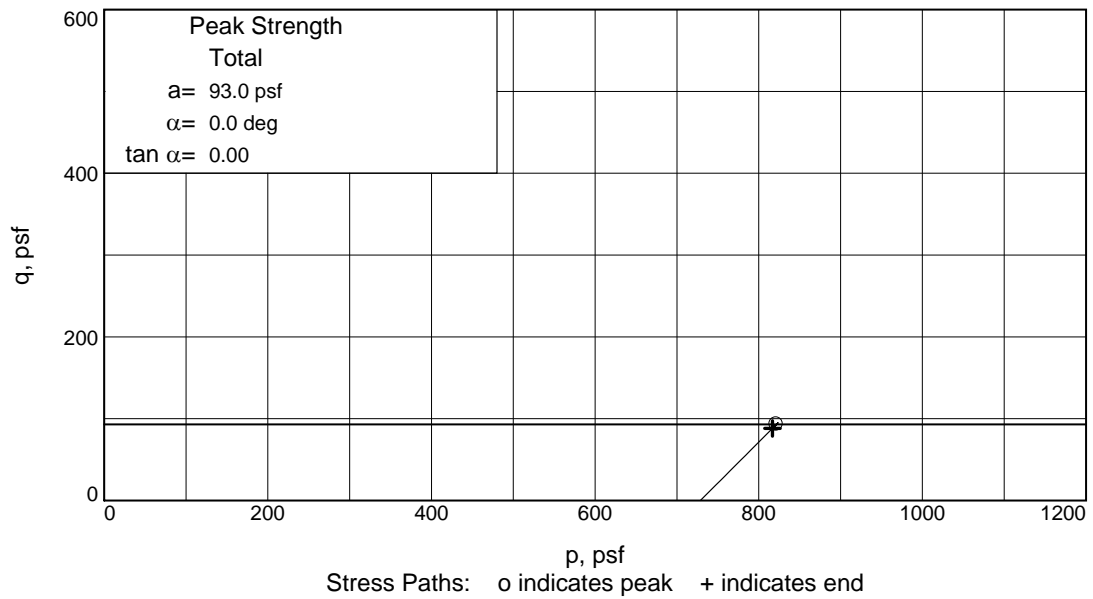
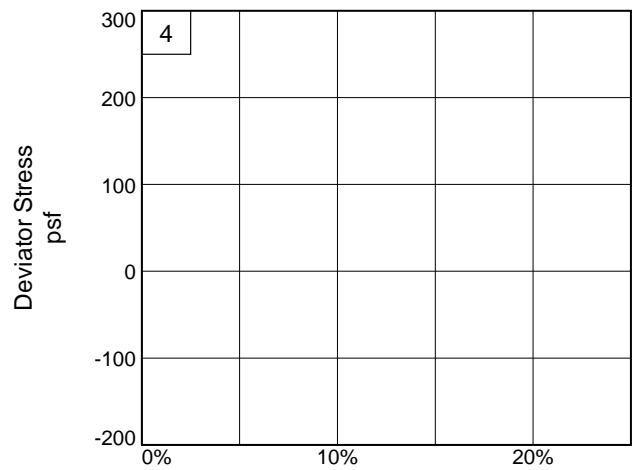
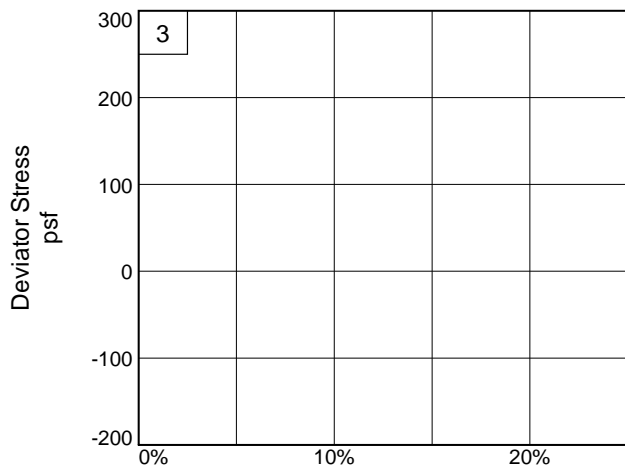
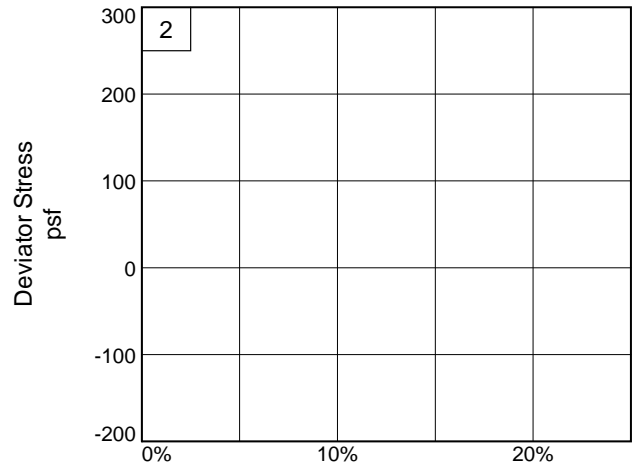
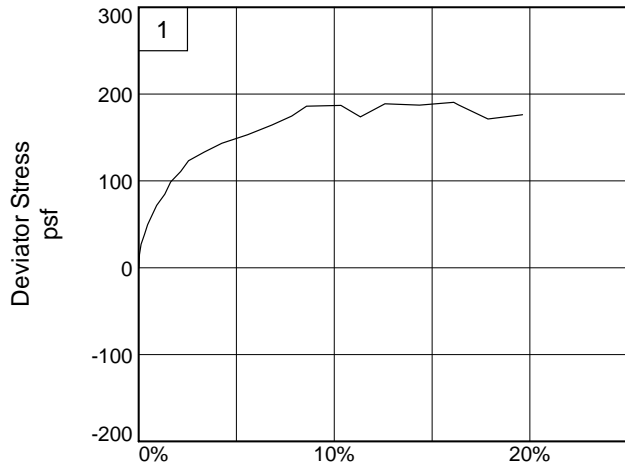


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**Figure** ASTM D2850

**Tested By:** BH

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** R-2

**Depth:** 15

**Sample Number:** 8B

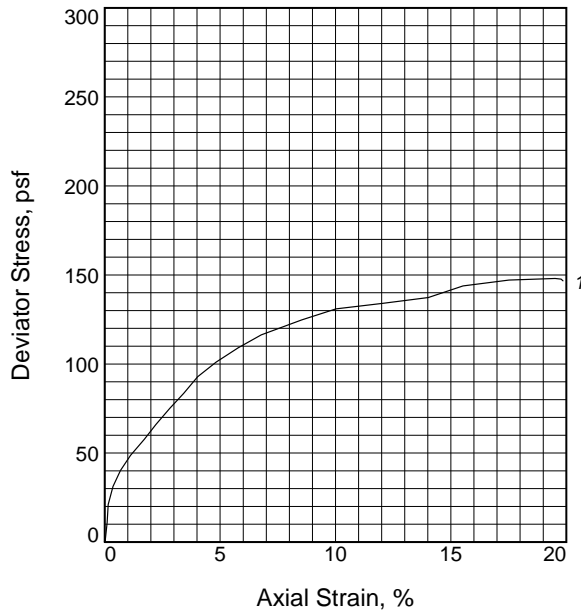
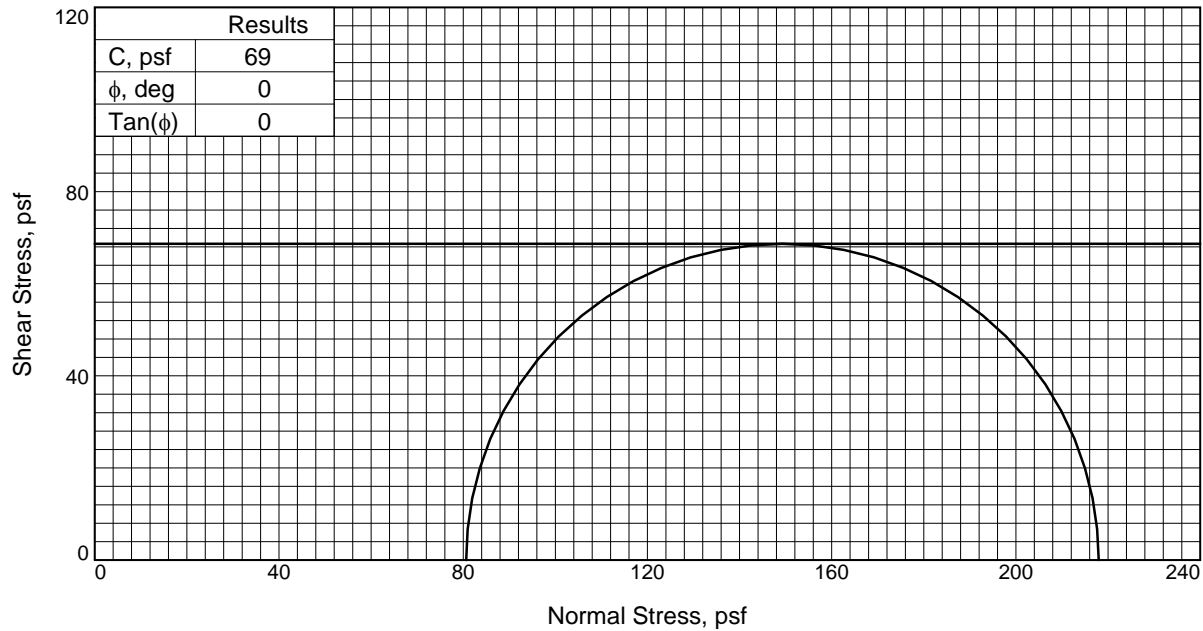
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	105.3
	Dry Density, pcf	44.0
	Saturation, %	100.3
	Void Ratio	2.8549
	Diameter, in.	1.42
At Test	Height, in.	2.83
	Water Content, %	105.0
	Dry Density, pcf	44.0
	Saturation, %	100.0
	Void Ratio	2.8549
	Diameter, in.	1.42
	Height, in.	2.83
	Strain rate, %/min.	1.03
	Back Pressure, psi	0.00
	Cell Pressure, psi	0.56
Fail. Stress, psf	137	
Ult. Stress, psf	137	
$\sigma_1$ Failure, psf	218	
$\sigma_3$ Failure, psf	81	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso g FT CL w/ fw si poc & om

**LL=** 123      **PL=** 33      **PI=** 90

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** R-2      **Depth:** 24

**Sample Number:** 11B

**Proj. No.:** 24762

**Date Sampled:** 6/7/2022

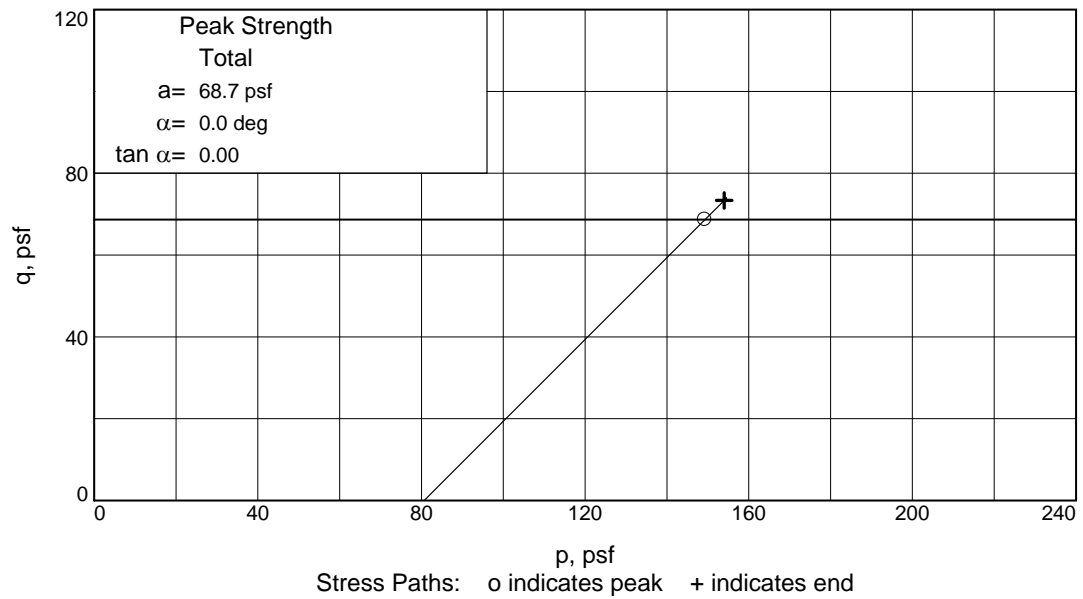
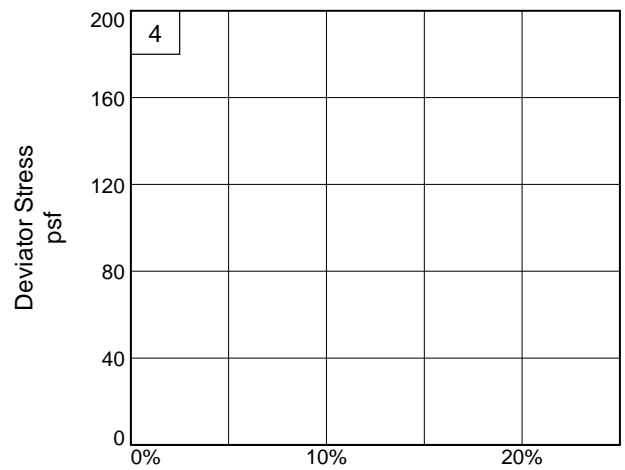
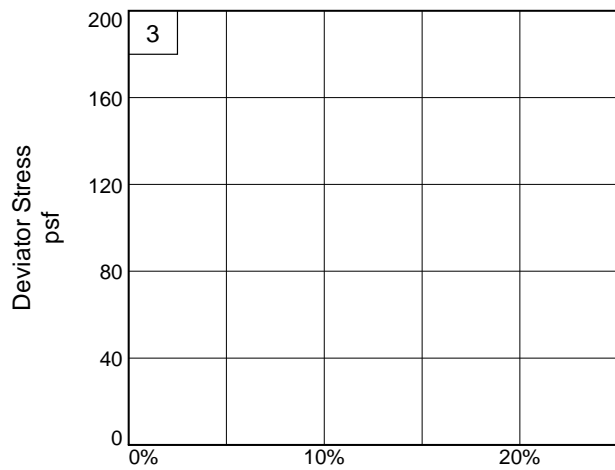
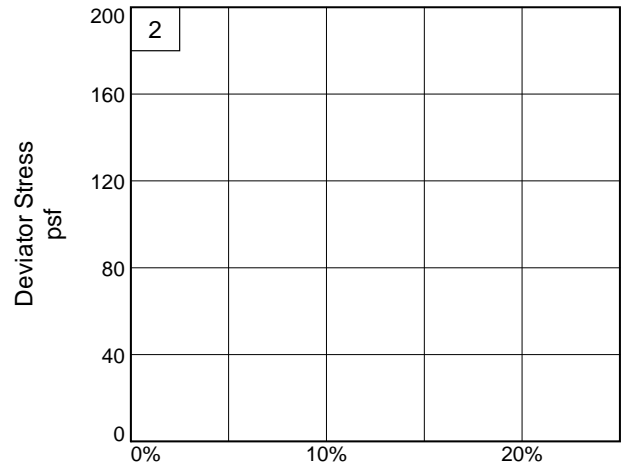
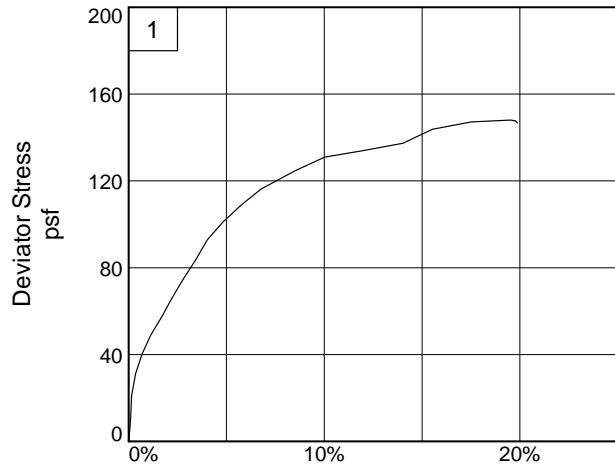


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**Figure** ASTM D2850

**Tested By:** BH

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** R-2

**Depth:** 24

**Sample Number:** 11B

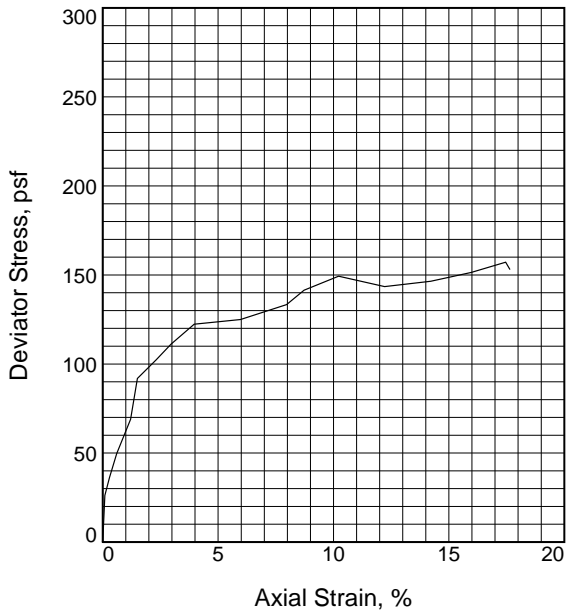
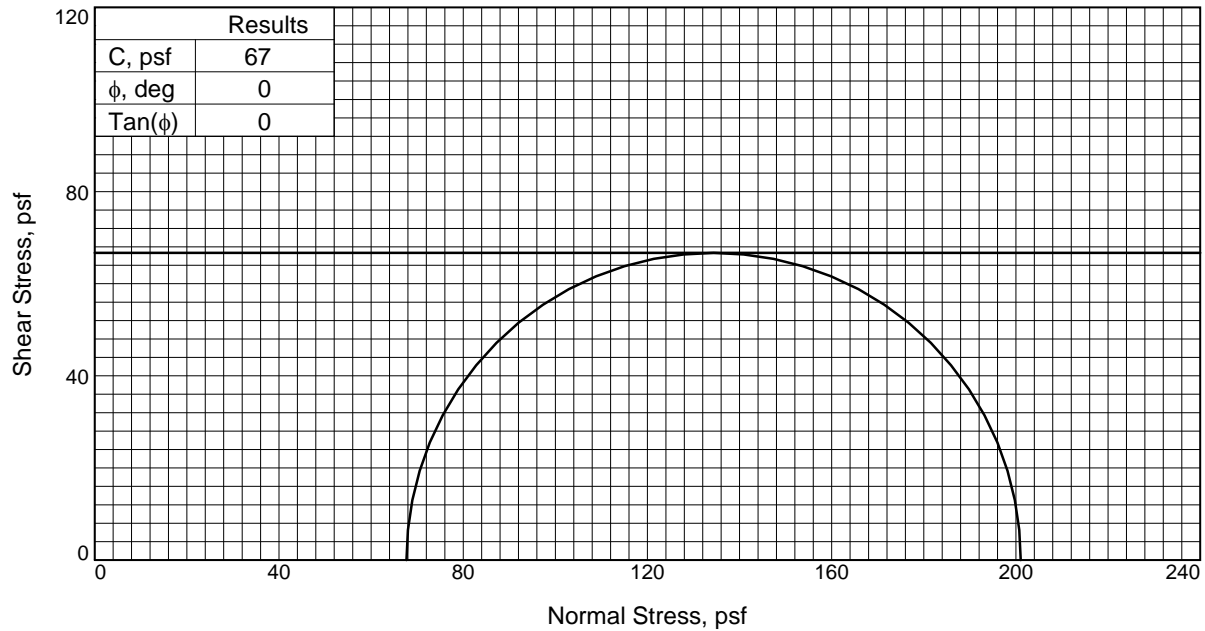
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	152.9
	Dry Density, pcf	32.8
	Saturation, %	100.2
	Void Ratio	4.0449
	Diameter, in.	1.40
At Test	Height, in.	2.77
	Water Content, %	152.6
	Dry Density, pcf	32.8
	Saturation, %	100.0
	Void Ratio	4.0449
Diameter, in.	1.40	
Height, in.	2.77	
Strain rate, %/min.	1.03	
Back Pressure, psi	0.00	
Cell Pressure, psi	0.47	
Fail. Stress, psf	133	
Ult. Stress, psf	146	
$\sigma_1$ Failure, psf	201	
$\sigma_3$ Failure, psf	68	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso br & g ORG CL w/ fw dec wd & rts

**LL=** 174      **PL=** 41      **PI=** 133

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** R-4      **Depth:** 3

**Sample Number:** 2B

**Proj. No.:** 24762

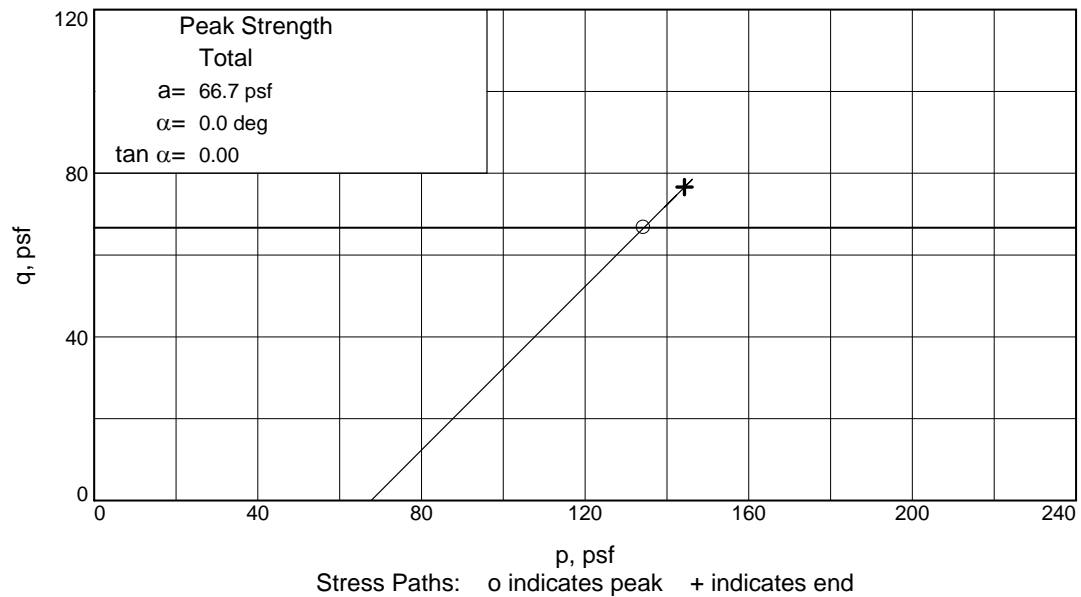
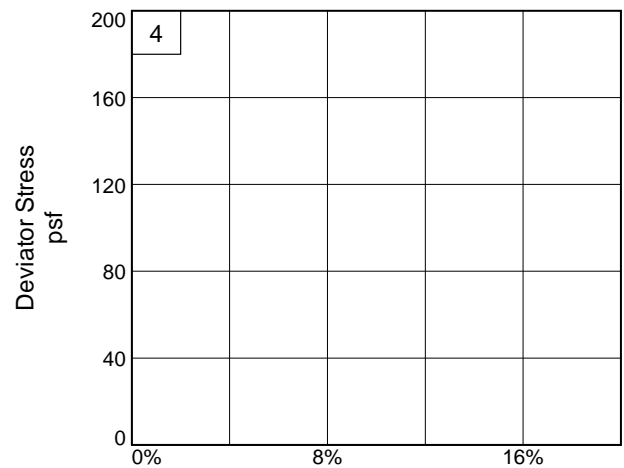
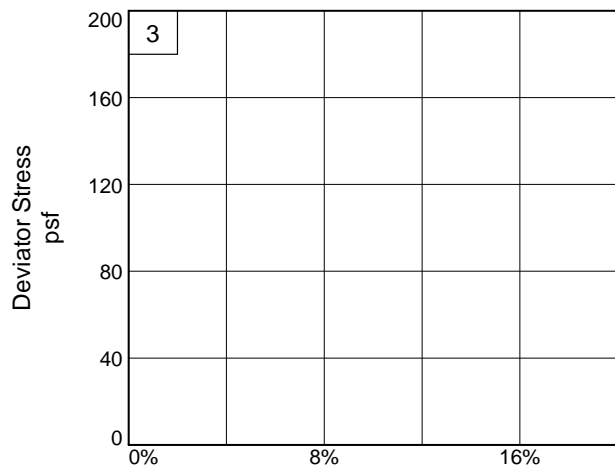
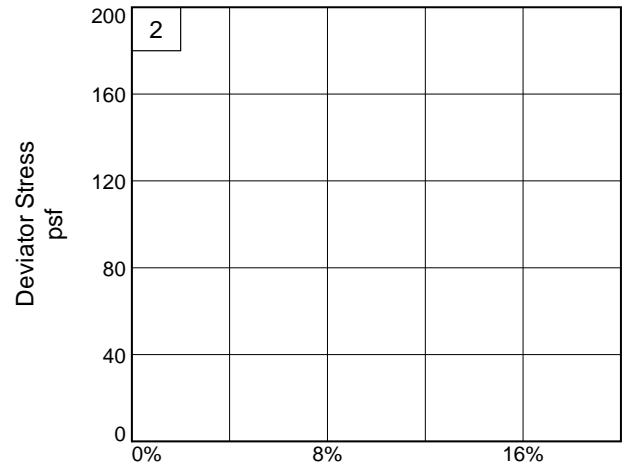
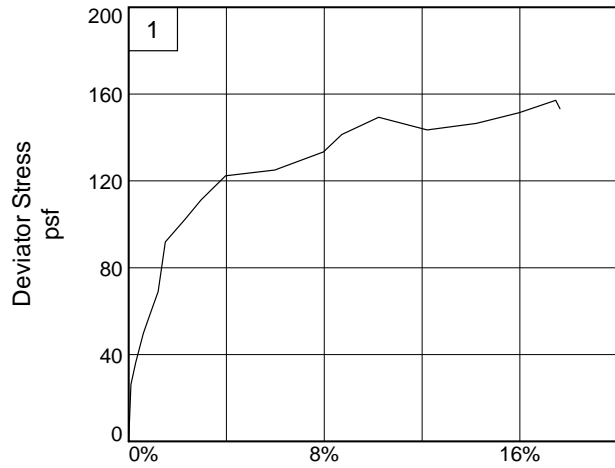
**Date Sampled:** 6/7/2022

Figure ASTM D2850



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**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** R-4

**Depth:** 3

**Sample Number:** 2B

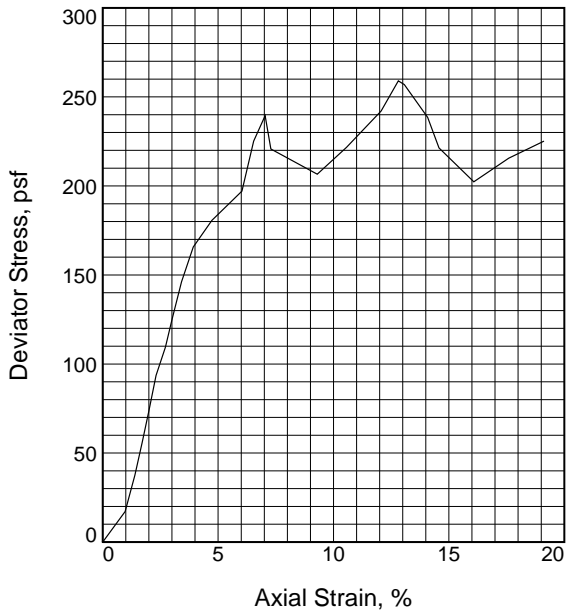
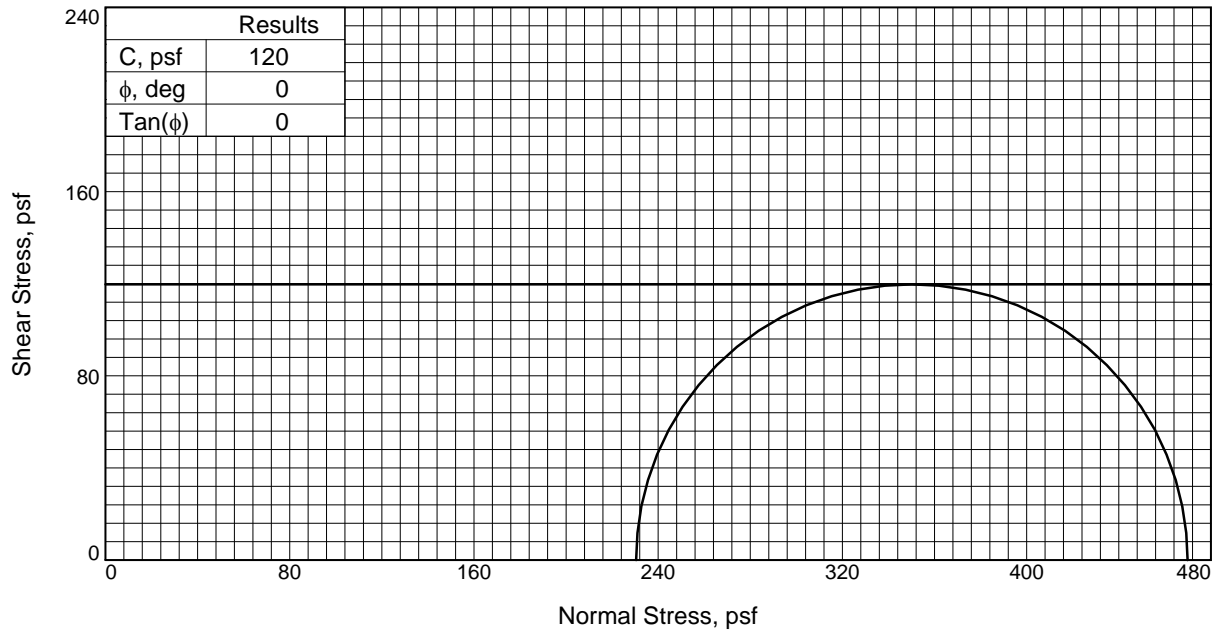
**Project No.:** 24762

**Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	459.2
	Dry Density, pcf	11.9
	Saturation, %	95.3
	Void Ratio	11.8124
	Diameter, in.	1.39
At Test	Height, in.	2.79
	Water Content, %	482.1
	Dry Density, pcf	11.9
	Saturation, %	100.0
	Void Ratio	11.8124
Diameter, in.	1.39	
Height, in.	2.79	
Strain rate, %/min.	1.03	
Back Pressure, psi	0.00	
Cell Pressure, psi	1.60	
Fail. Stress, psf	239	
Ult. Stress, psf	221	
$\sigma_1$ Failure, psf	470	
$\sigma_3$ Failure, psf	230	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso bl HUM w/ fw dec wd & rts

LL= 529      PL= 131      PI= 398

**Assumed Specific Gravity=** 2.45

**Remarks:** TORVANE = 0.400 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** R-4      **Depth:** 5

**Sample Number:** 3B

**Proj. No.:** 24762

**Date Sampled:** 6/7/2022

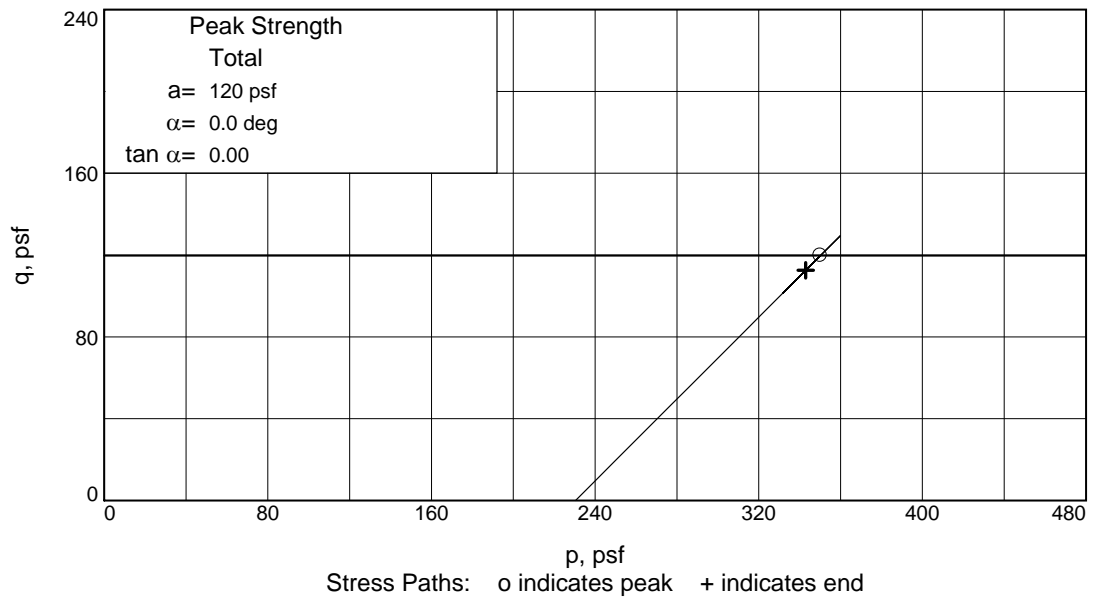
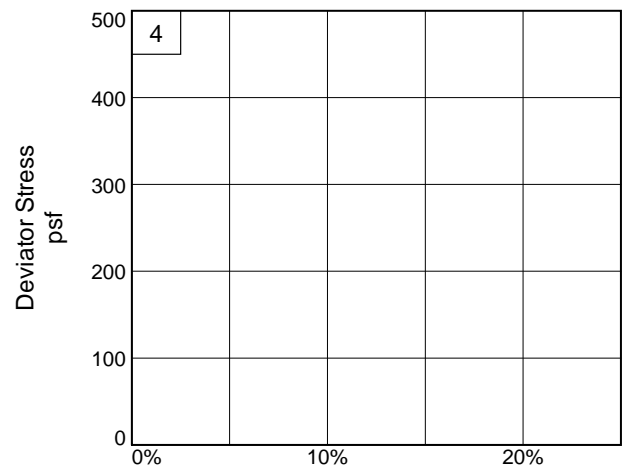
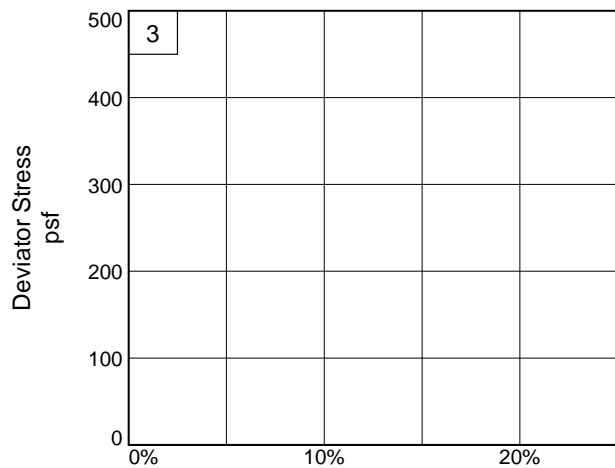
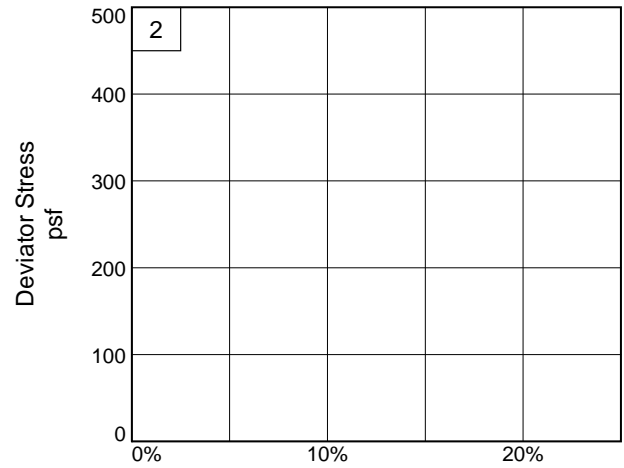
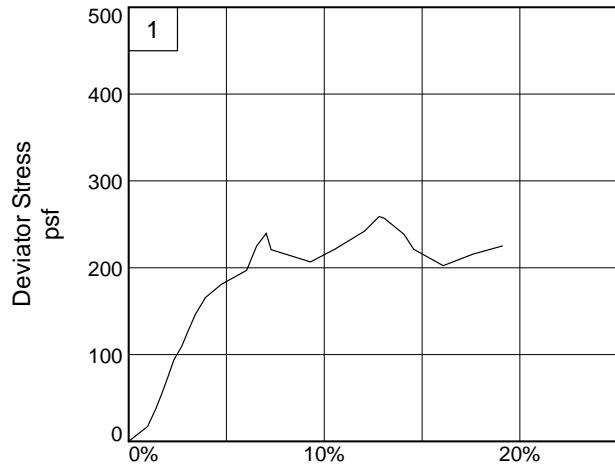


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ENGINEERING  
SINCE 1946

Figure ASTM D2850

Tested By: BH

Checked By: CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** R-4

**Depth:** 5

**Sample Number:** 3B

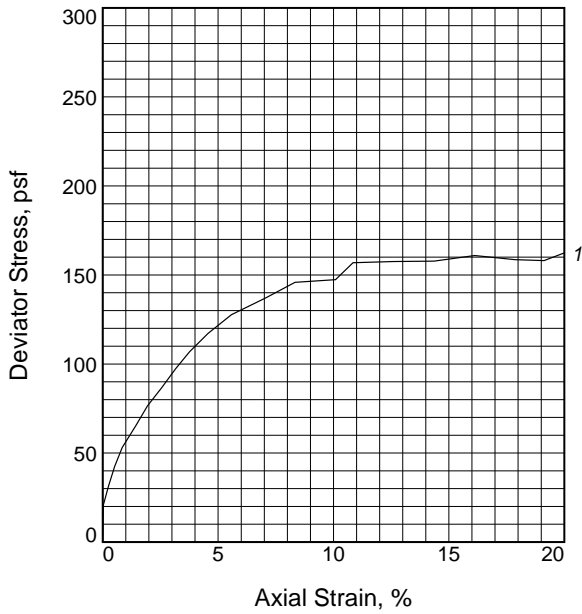
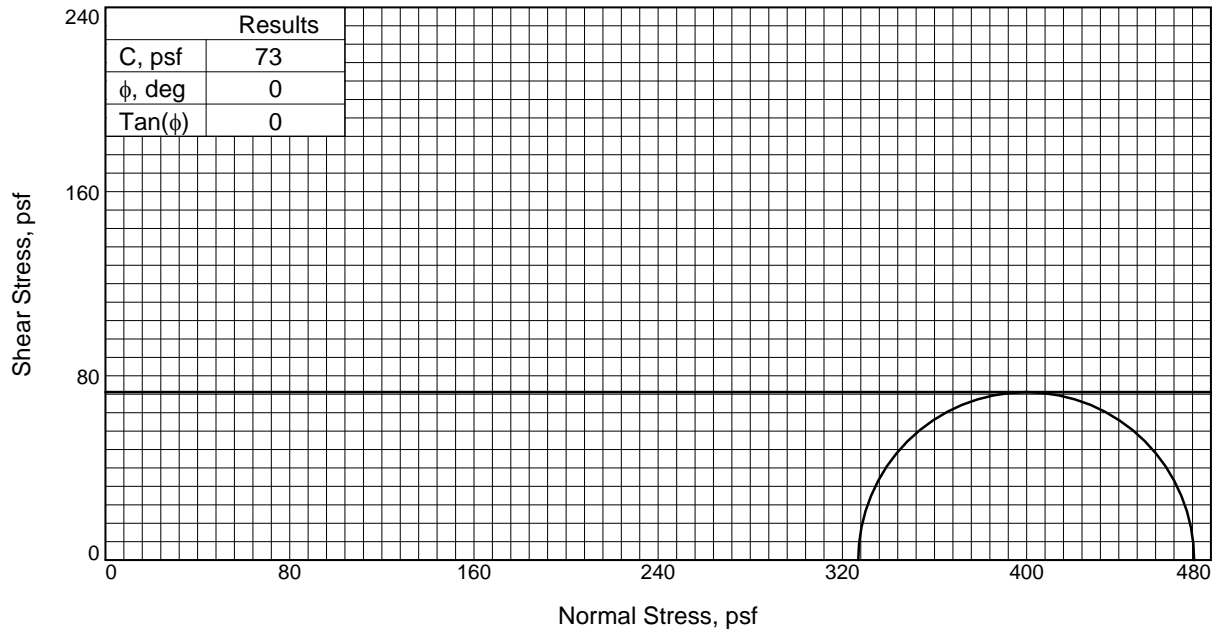
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	475.8
	Dry Density, pcf	11.3
	Saturation, %	92.6
	Void Ratio	12.5882
	Diameter, in.	1.40
At Test	Height, in.	2.92
	Water Content, %	513.8
	Dry Density, pcf	11.3
	Saturation, %	100.0
	Void Ratio	12.5882
Diameter, in.	1.40	
Height, in.	2.92	
Strain rate, %/min.	1.03	
Back Pressure, psi	0.00	
Cell Pressure, psi	2.27	
Fail. Stress, psf	146	
Ult. Stress, psf	158	
$\sigma_1$ Failure, psf	473	
$\sigma_3$ Failure, psf	327	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso dk g & br HUM w/ fw dec wd & rts

**LL= 448      PL= 118      PI= 330**

**Assumed Specific Gravity= 2.45**

**Remarks:** TORVANE = 0.400 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** R-4      **Depth:** 9

**Sample Number:** 5B

**Proj. No.:** 24762

**Date Sampled:** 6/7/2022

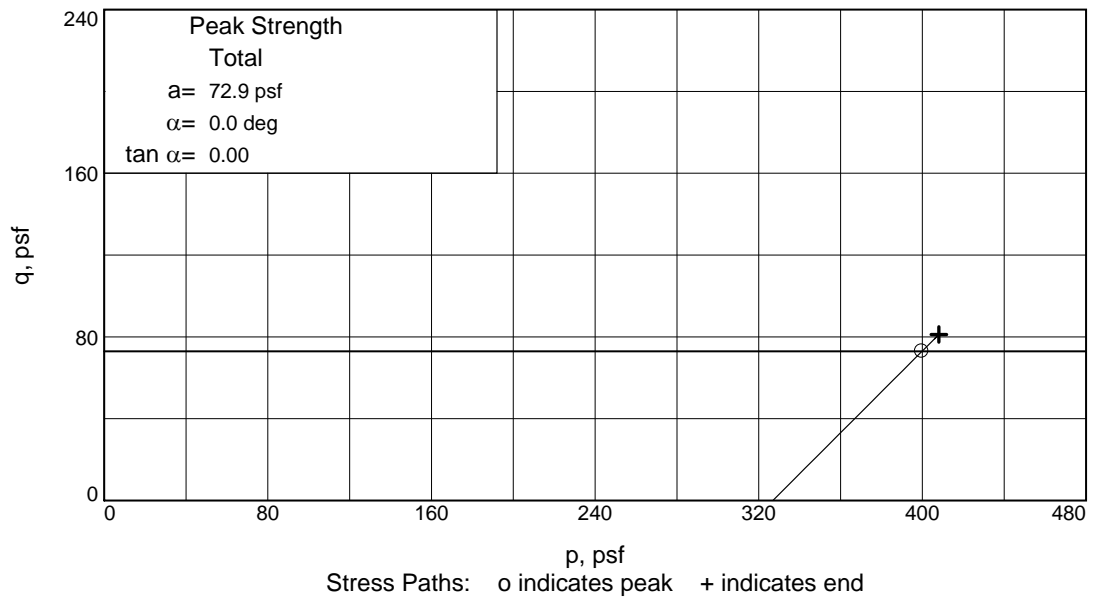
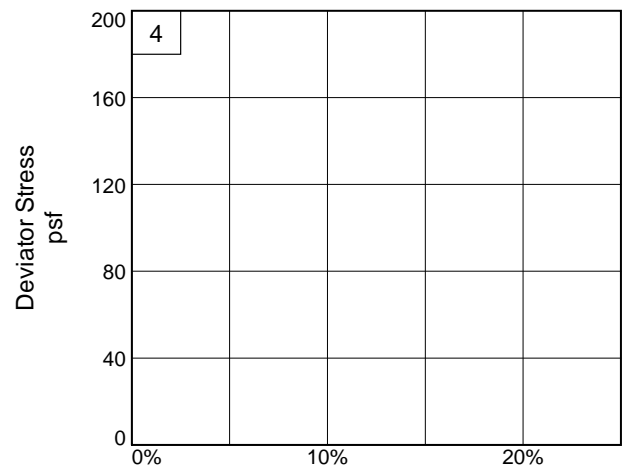
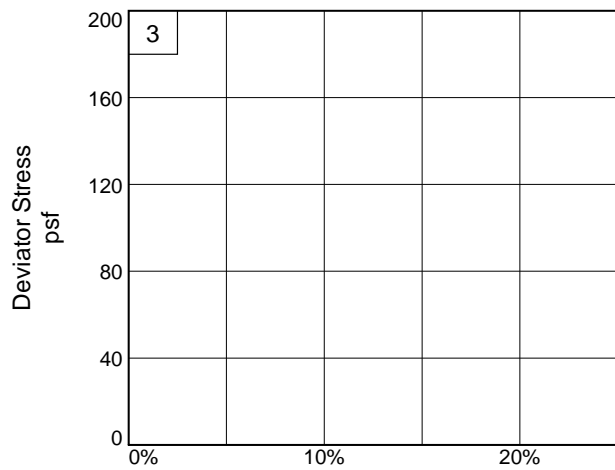
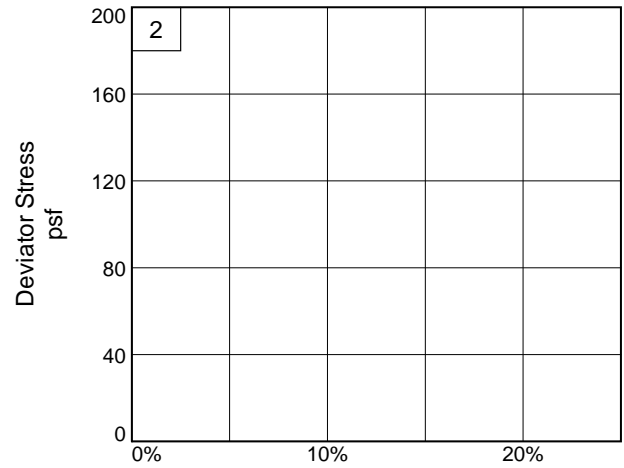
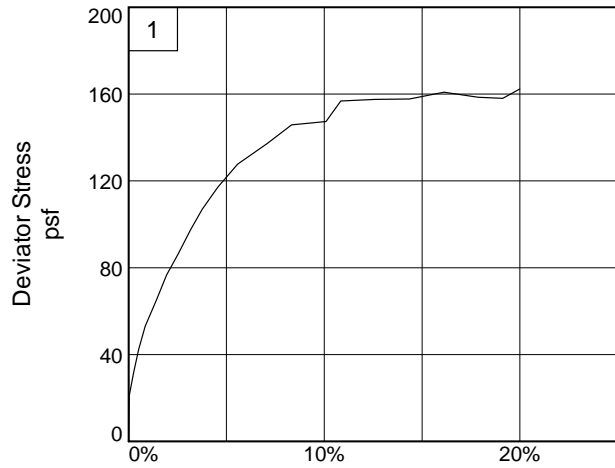
**Figure** ASTM D2850



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**Tested By:** BH

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** R-4

**Depth:** 9

**Sample Number:** 5B

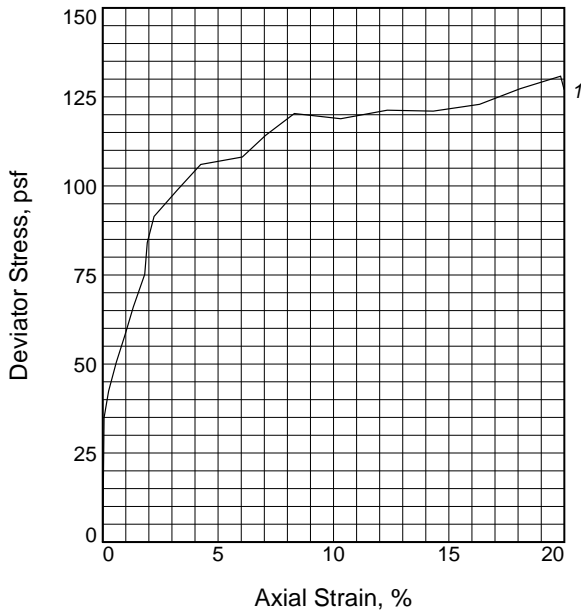
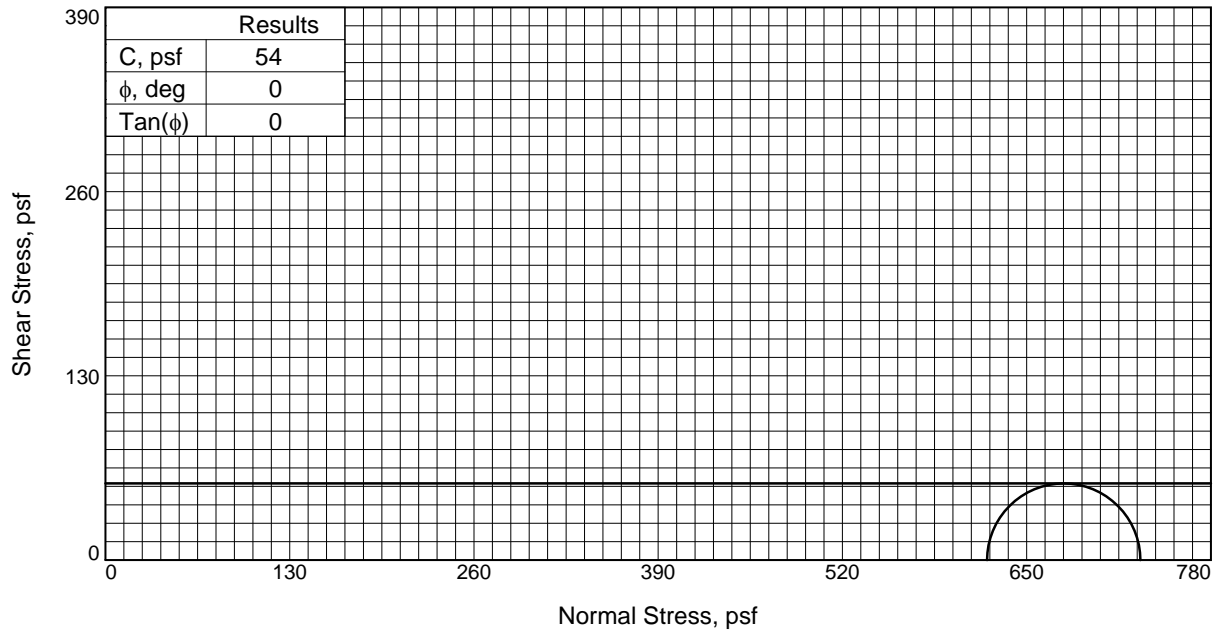
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	169.2
	Dry Density, pcf	30.2
	Saturation, %	100.0
	Void Ratio	4.4832
	Diameter, in.	1.44
At Test	Height, in.	2.80
	Water Content, %	169.2
	Dry Density, pcf	30.2
	Saturation, %	100.0
	Void Ratio	4.4832
Diameter, in.	1.44	
Height, in.	2.80	
Strain rate, %/min.	1.03	
Back Pressure, psi	0.00	
Cell Pressure, psi	4.32	
Fail. Stress, psf	108	
Ult. Stress, psf	121	
$\sigma_1$ Failure, psf	730	
$\sigma_3$ Failure, psf	622	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso br & g ORG CL w/ tr dec wd

**LL=** 145      **PL=** 39      **PI=** 106

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** R-4      **Depth:** 13

**Sample Number:** 7B

**Proj. No.:** 24762

**Date Sampled:** 6/7/2022

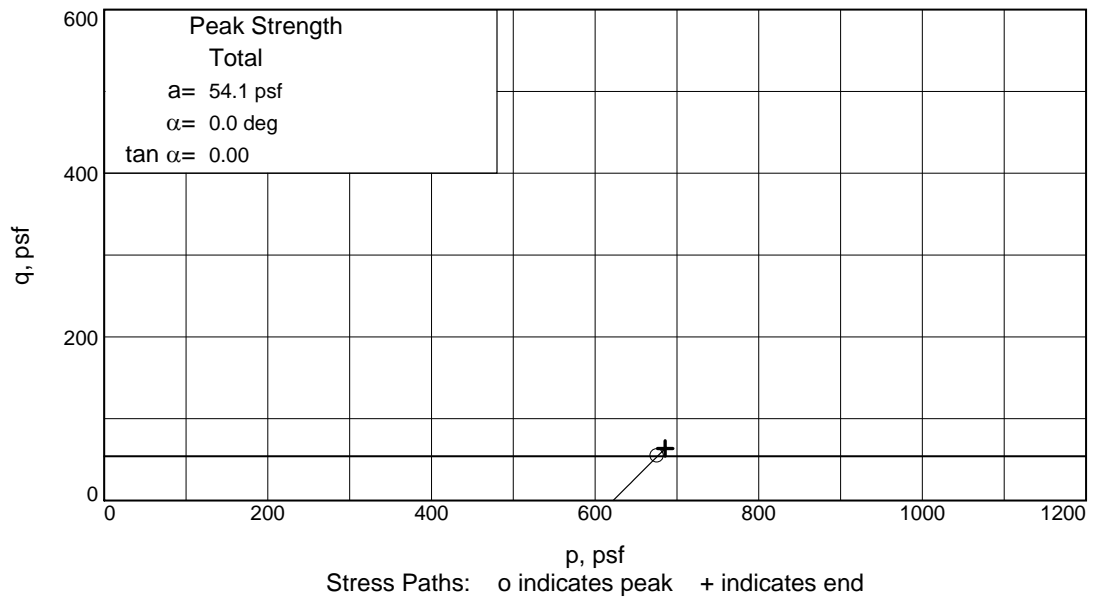
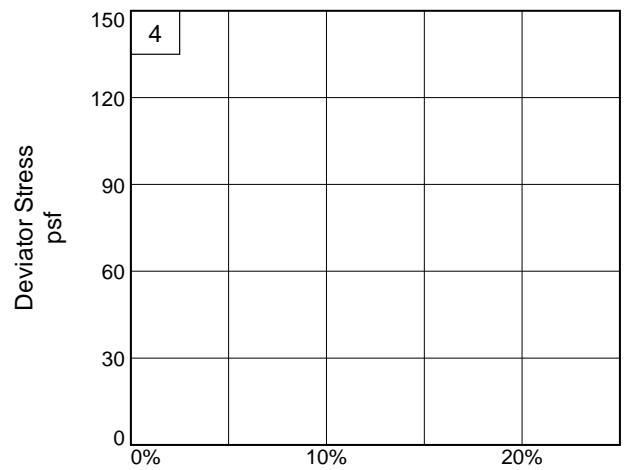
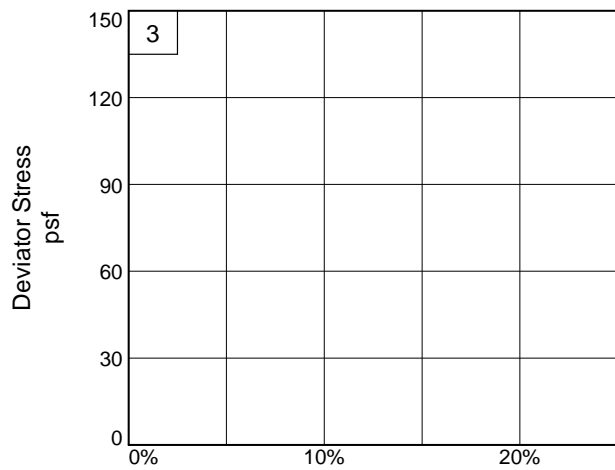
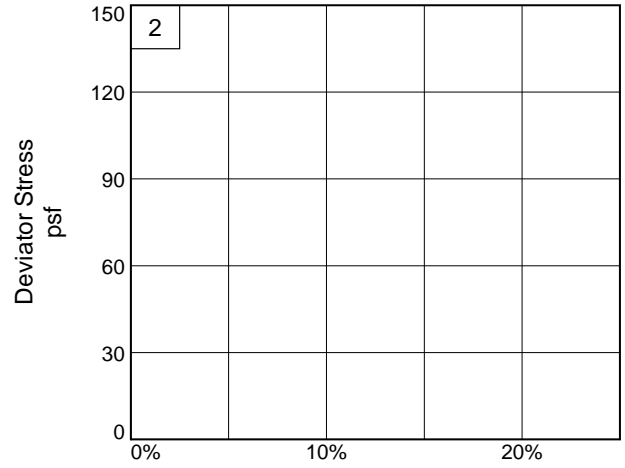
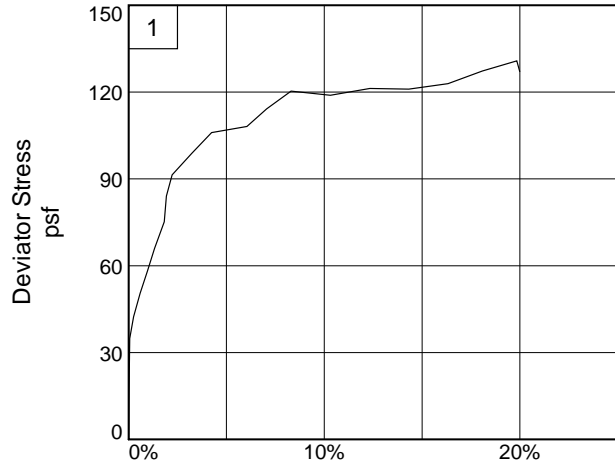
**Figure** ASTM D2850



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**Tested By:** BH

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** R-4

**Depth:** 13

**Sample Number:** 7B

**Project No.:** 24762

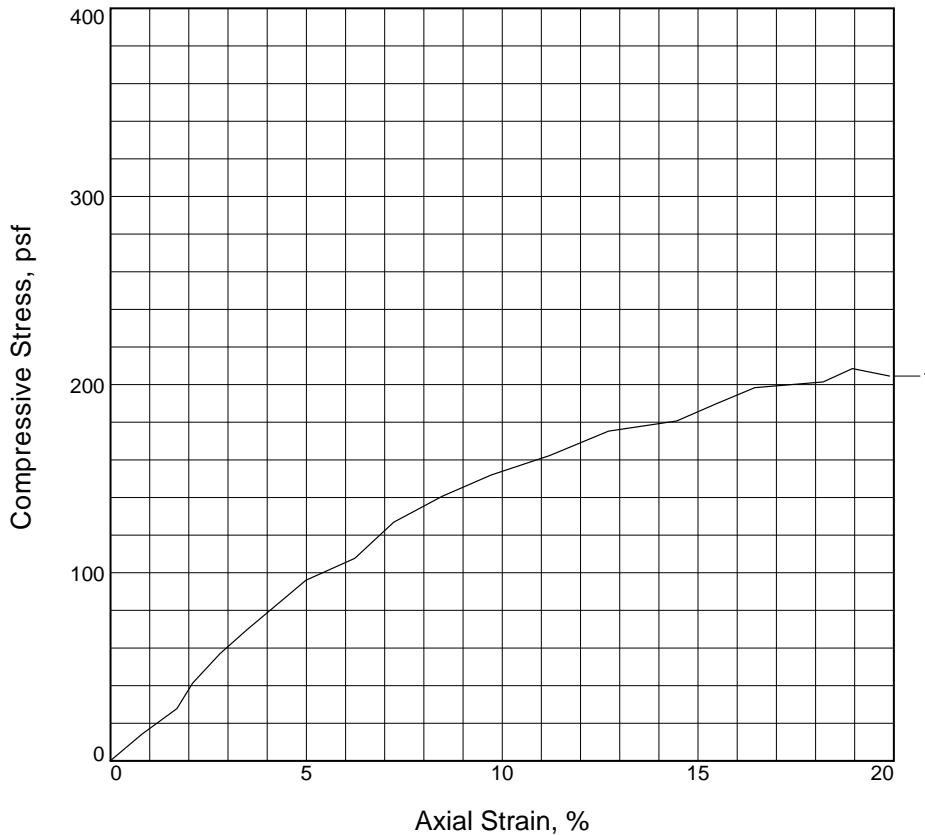
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR

# UNCONFINED COMPRESSION TEST



Sample No.	1		
Unconfined strength, psf	181		
Undrained shear strength, psf	90		
Failure strain, %	14.5		
Strain rate, %/min.	1.03		
Water content, %	43.1		
Wet density, pcf	111.6		
Dry density, pcf	78.0		
Saturation, %	100.1		
Void ratio	1.1613		
Specimen diameter, in.	1.42		
Specimen height, in.	2.92		
Height/diameter ratio	2.06		

**Description:** W, xso g LN CL W/ SA (fi)

**LL = 41**      **PL = 22**      **PI = 19**      **Assumed GS= 2.70**      **Type: UNDISTURBED**

**Project No.:** 24762  
**Date Sampled:** 6/7/2022  
**Remarks:**  
 TORVANE = 0.100 TSF

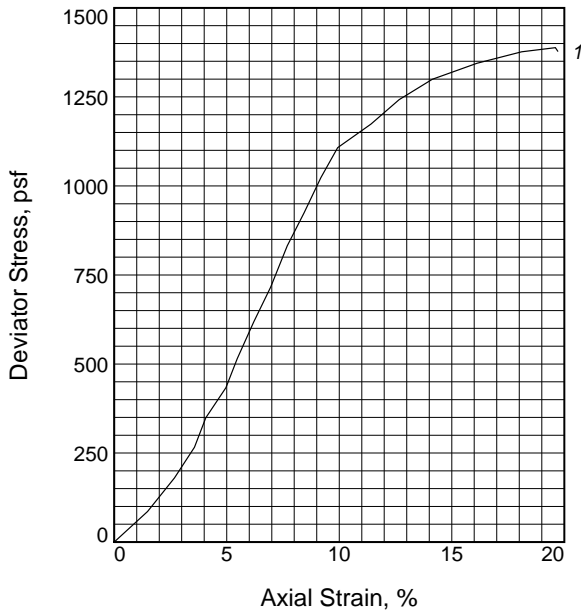
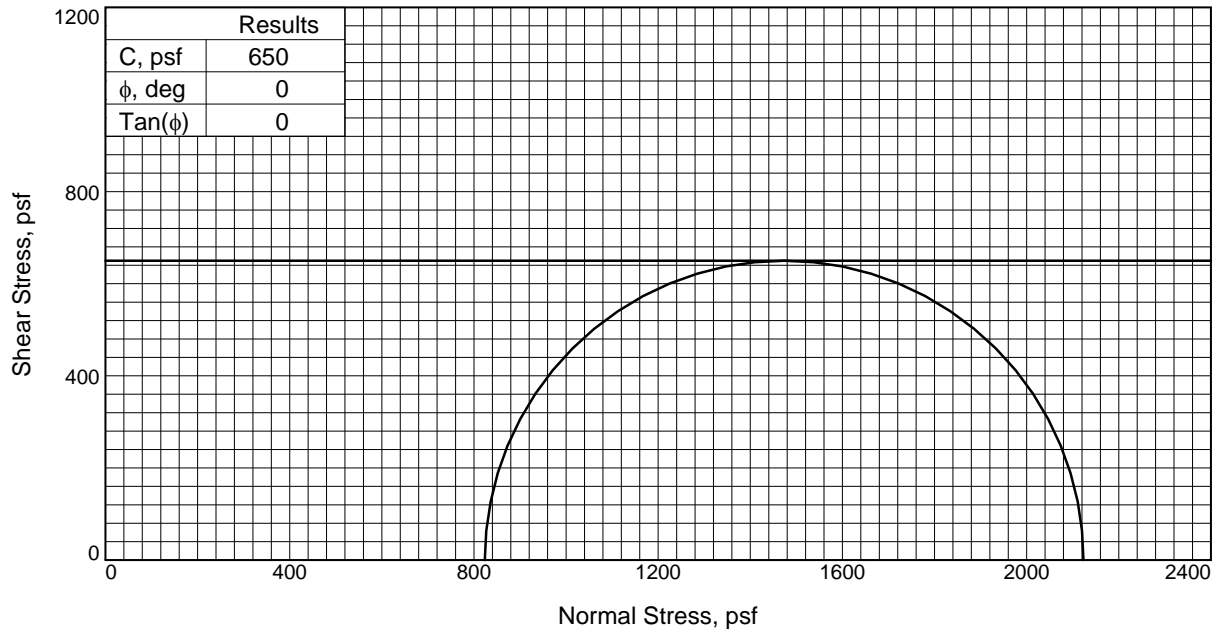
**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA  
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH  
**Source of Sample:** R-4      **Depth:** 15  
**Sample Number:** 8B

**Figure** ASTM D2166



**Tested By:** BH \_\_\_\_\_ **Checked By:** CD & RR \_\_\_\_\_





Sample No.		1
Initial	Water Content, %	33.2
	Dry Density, pcf	88.6
	Saturation, %	100.3
	Void Ratio	0.8822
	Diameter, in.	1.41
At Test	Height, in.	2.82
	Water Content, %	33.0
	Dry Density, pcf	88.6
	Saturation, %	100.0
	Void Ratio	0.8822
Diameter, in.		1.41
Height, in.		2.82
Strain rate, %/min.		1.03
Back Pressure, psi		0.00
Cell Pressure, psi		5.72
Fail. Stress, psf		1300
Ult. Stress, psf		1300
$\sigma_1$ Failure, psf		2123
$\sigma_3$ Failure, psf		824

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, mc g SI w/ fw cl

LL= NP

PI= NP

**Assumed Specific Gravity=** 2.67

**Remarks:** TORVANE = N/A

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** R-4      **Depth:** 17

**Sample Number:** 9B

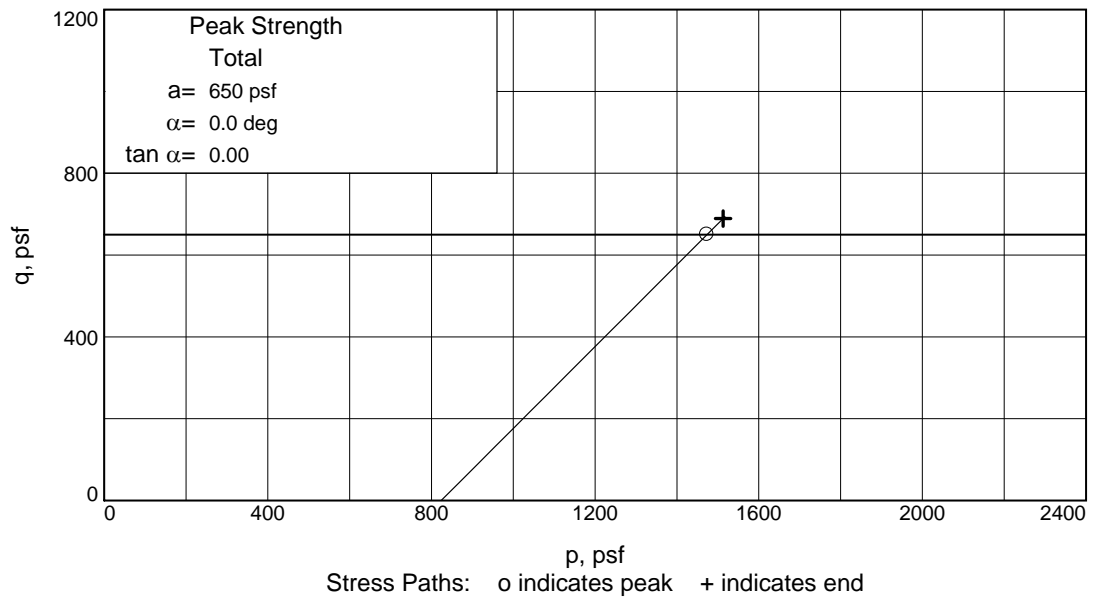
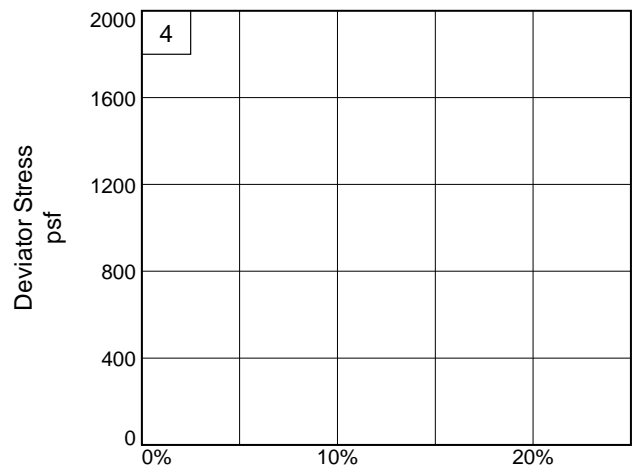
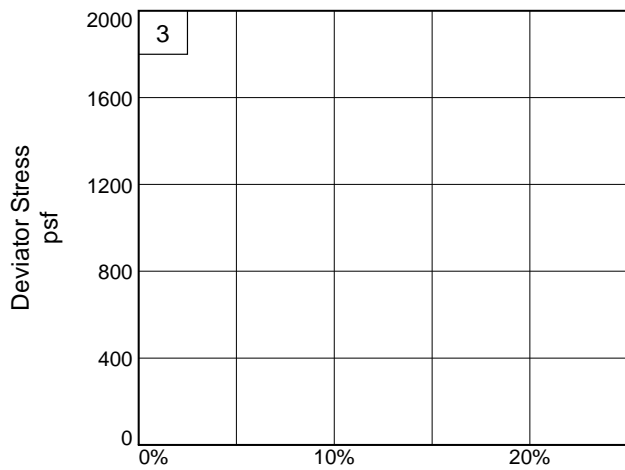
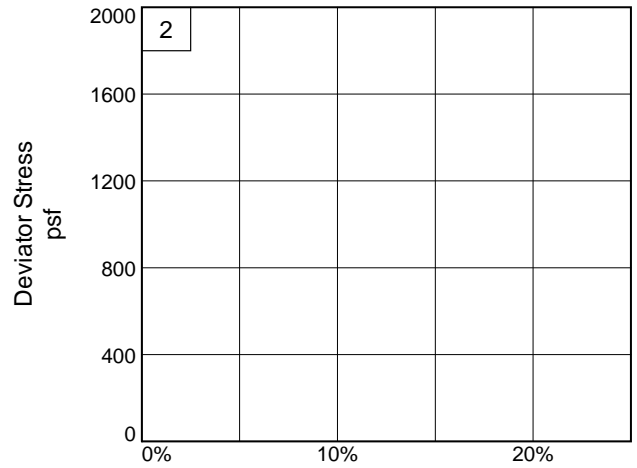
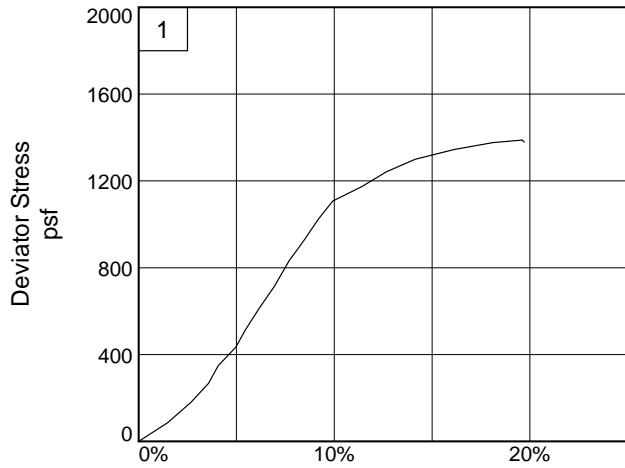
**Proj. No.:** 24762

**Date Sampled:** 6/7/2022



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Figure ASTM D2850



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** R-4

**Depth:** 17

**Sample Number:** 9B

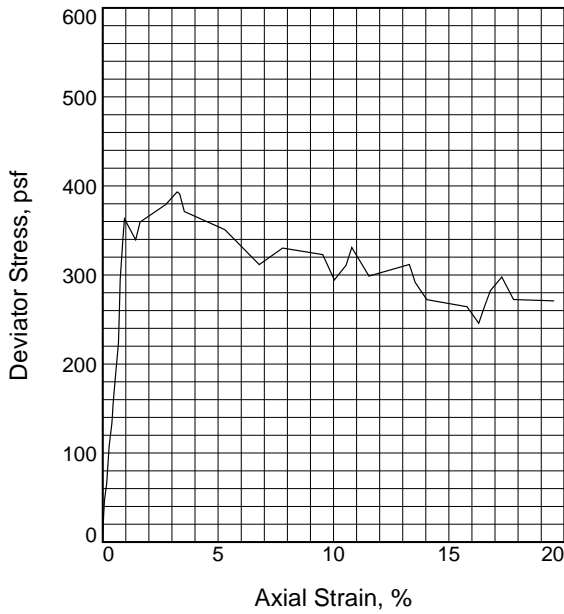
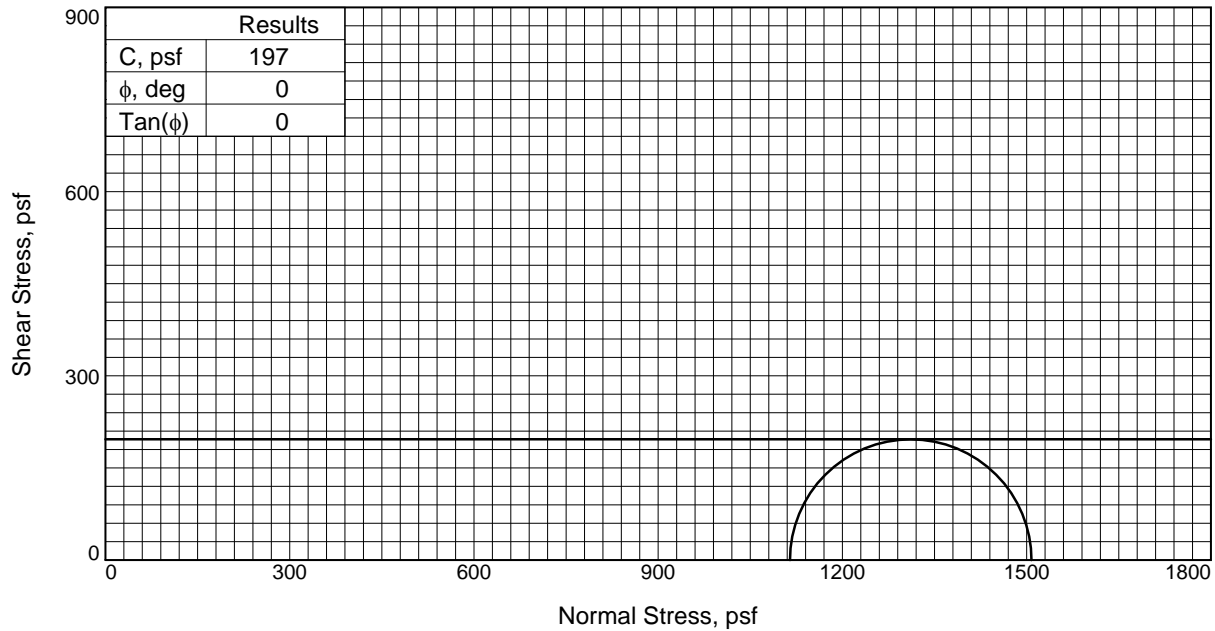
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	103.8
	Dry Density, pcf	44.5
	Saturation, %	100.2
	Void Ratio	2.8163
	Diameter, in.	1.40
At Test	Height, in.	2.88
	Water Content, %	103.5
	Dry Density, pcf	44.5
	Saturation, %	100.0
	Void Ratio	2.8163
Diameter, in.	1.40	
Height, in.	2.88	
Strain rate, %/min.	1.03	
Back Pressure, psi	0.00	
Cell Pressure, psi	7.74	
Fail. Stress, psf	393	
Ult. Stress, psf	272	
$\sigma_1$ Failure, psf	1508	
$\sigma_3$ Failure, psf	1115	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, vso g & br FT CL w/ fw om

**LL=** 112

**PL=** 30

**PI=** 82

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** R-4

**Depth:** 23

**Sample Number:** 11A

**Proj. No.:** 24762

**Date Sampled:** 6/7/2022

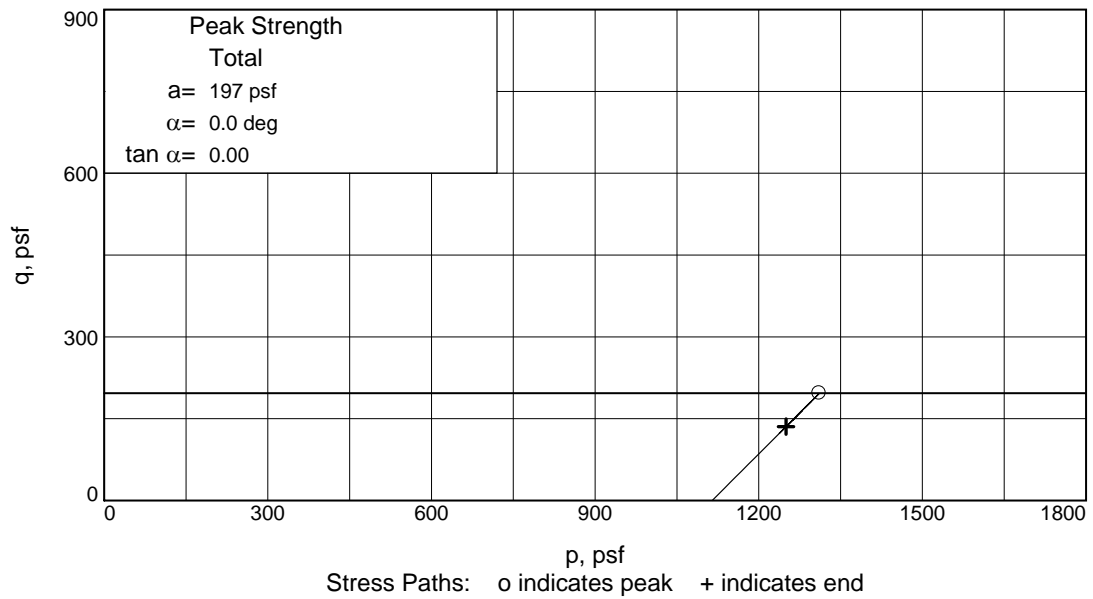
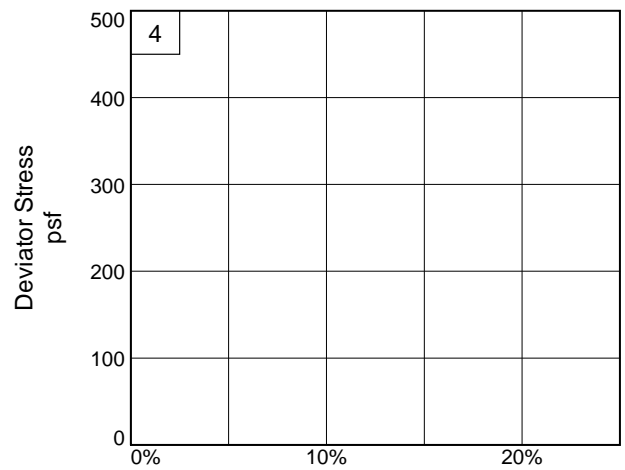
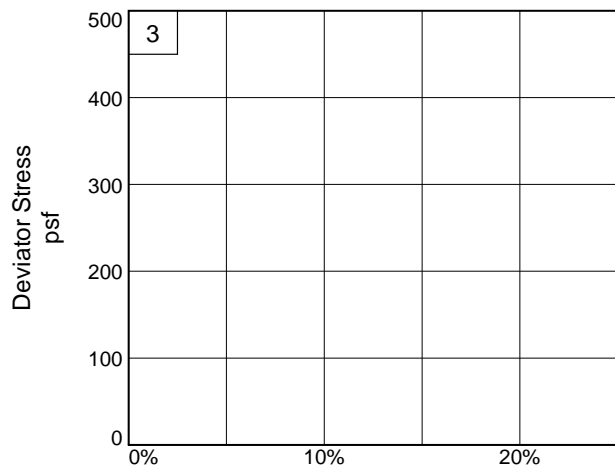
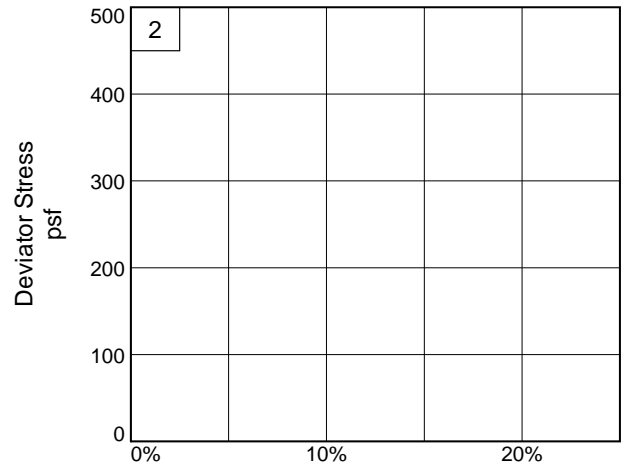
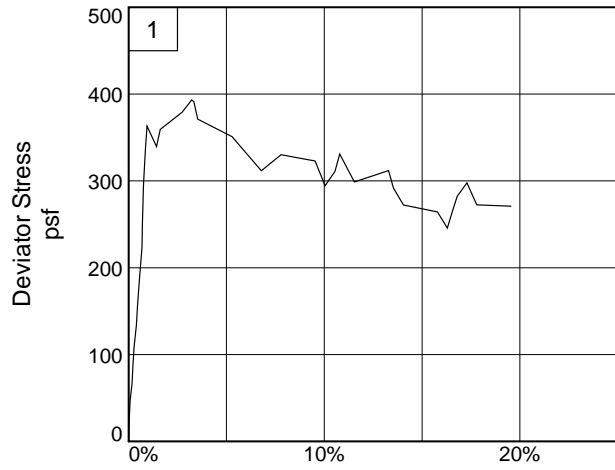
**Figure** ASTM D2850



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**Tested By:** BH

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** R-4

**Depth:** 23

**Sample Number:** 11A

**Project No.:** 24762

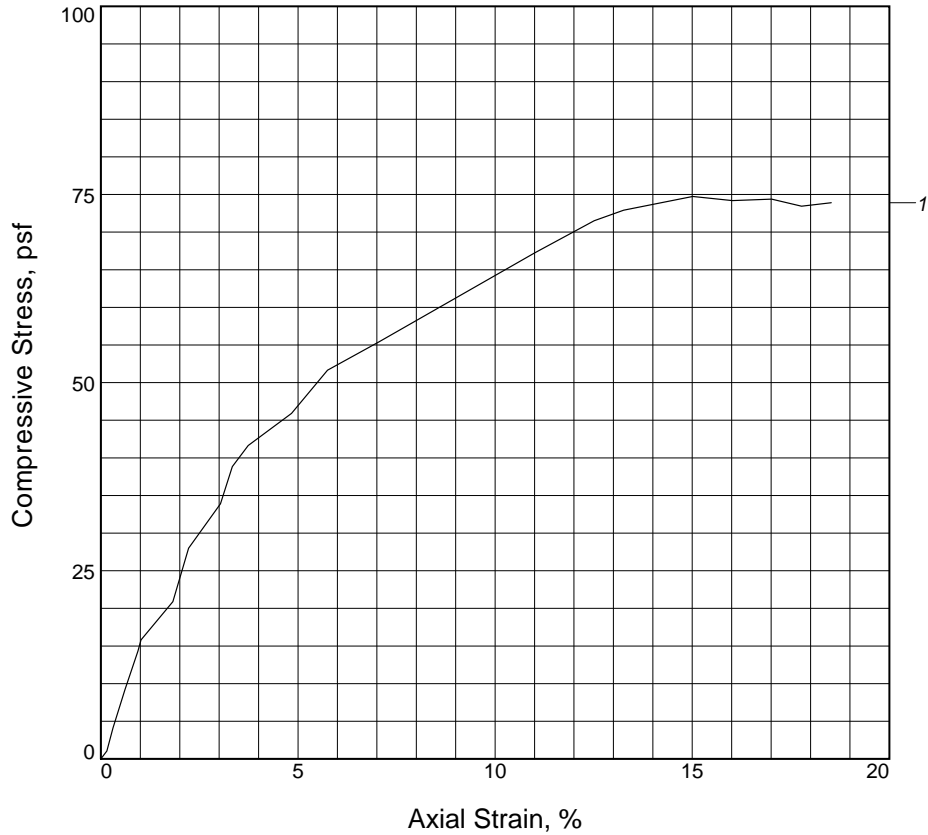
**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR

# UNCONFINED COMPRESSION TEST



Sample No.	1		
Unconfined strength, psf	75		
Undrained shear strength, psf	37		
Failure strain, %	15.0		
Strain rate, %/min.	1.00		
Water content, %	180.7		
Wet density, pcf	80.2		
Dry density, pcf	28.6		
Saturation, %	100.0		
Void ratio	4.7866		
Specimen diameter, in.	1.38		
Specimen height, in.	2.85		
Height/diameter ratio	2.07		

**Description:** M, xso g & br ORG CL w/ fw rts (OH)

**LL = 179**      **PL = 38**      **PI = 141**      **Assumed GS= 2.65**      **Type: UNDISTURBED**

**Project No.:** 24762

**Date Sampled:** 6/7/22

**Remarks:**  
TORVANE = 0.040 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

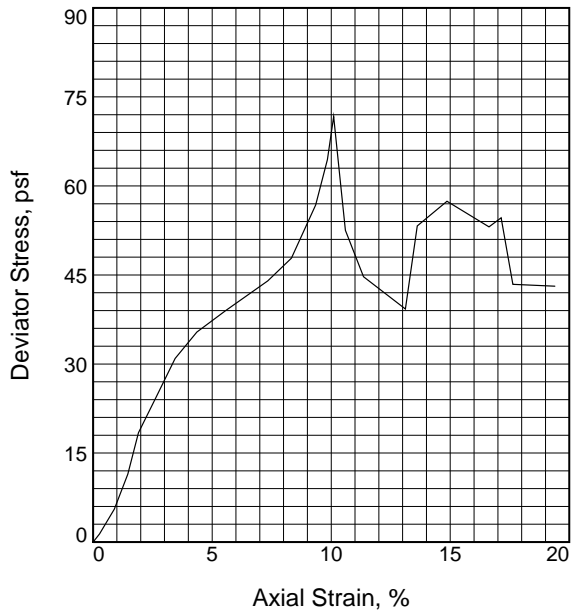
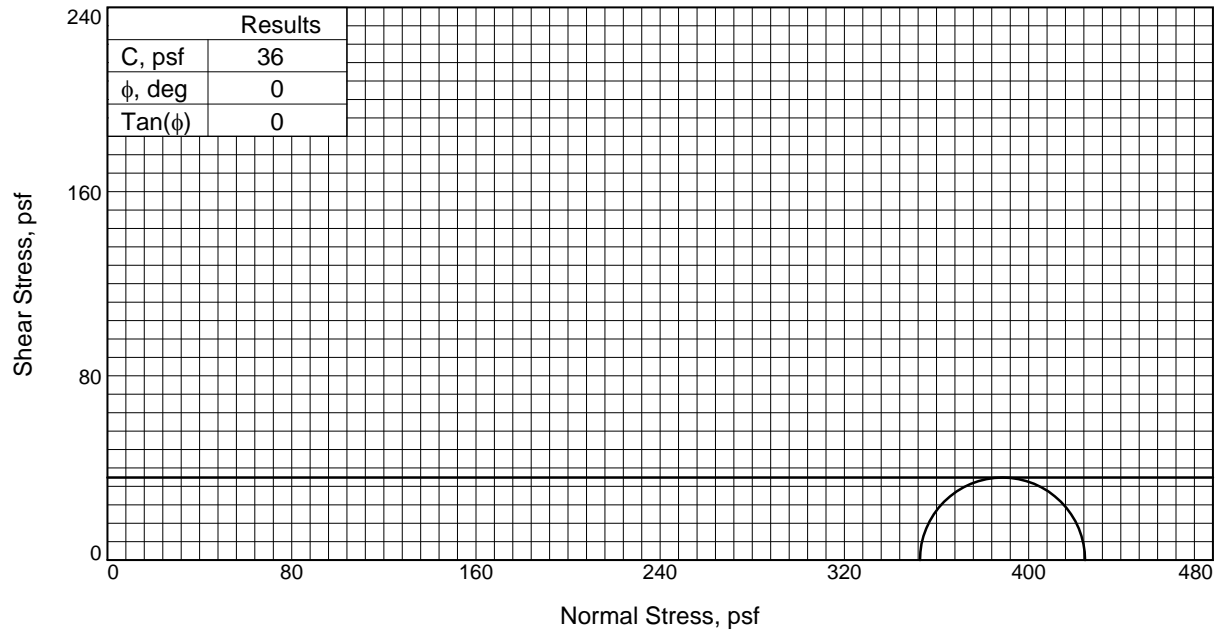
**Source of Sample:** T-1      **Depth:** 5

**Sample Number:** 3B

**Figure** ASTM D2166



**Tested By:** BH \_\_\_\_\_ **Checked By:** CD & RR \_\_\_\_\_



Sample No.	1	
Initial	Water Content, %	236.5
	Dry Density, pcf	22.0
	Saturation, %	97.2
	Void Ratio	5.9578
	Diameter, in.	1.39
At Test	Height, in.	2.87
	Water Content, %	243.2
	Dry Density, pcf	22.0
	Saturation, %	100.0
	Void Ratio	5.9578
Strain rate, %/min.	Diameter, in.	1.39
	Back Pressure, psi	0.00
	Cell Pressure, psi	2.45
	Fail. Stress, psf	72
	Strain, %	10.1
Ult. Stress, psf	Strain, %	13.1
	Strain, %	13.1
$\sigma_1$ Failure, psf		424
$\sigma_3$ Failure, psf		353

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso dk g & g HUM w/ fw rts (PT)

LL= 209      PL= 60      PI= 149

**Assumed Specific Gravity=** 2.45

**Remarks:** TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** T-1      **Depth:** 7

**Sample Number:** 4B

**Proj. No.:** 24762

**Date Sampled:** 6/7/22

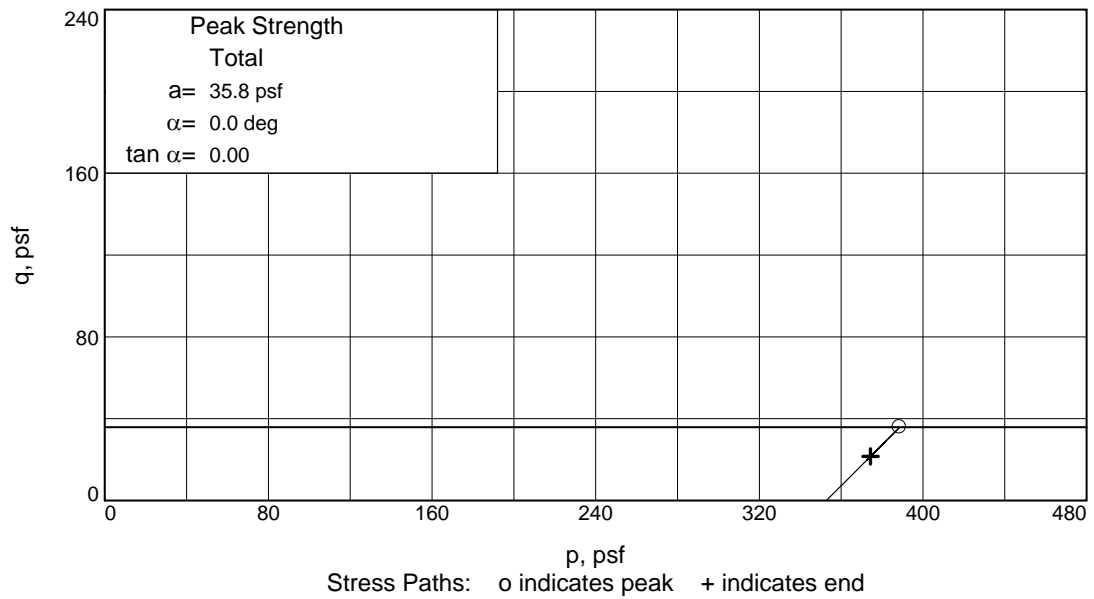
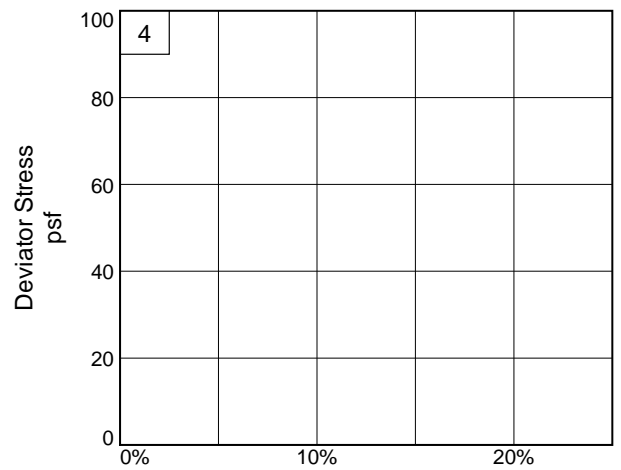
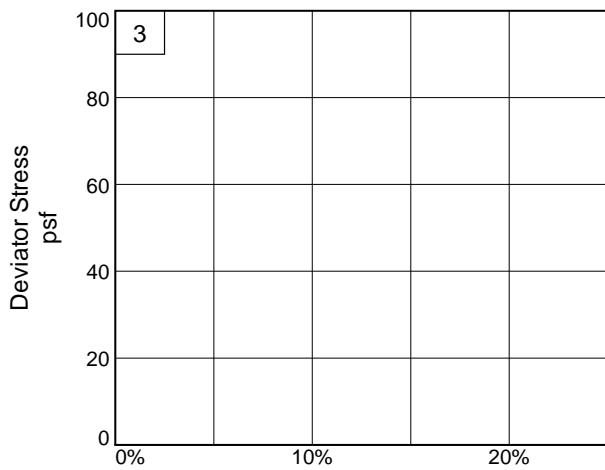
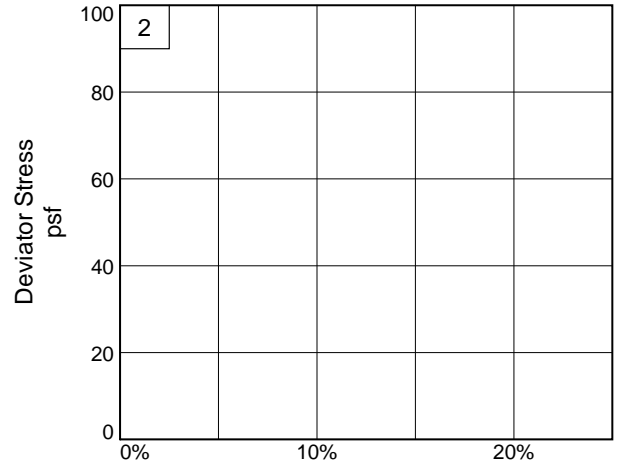
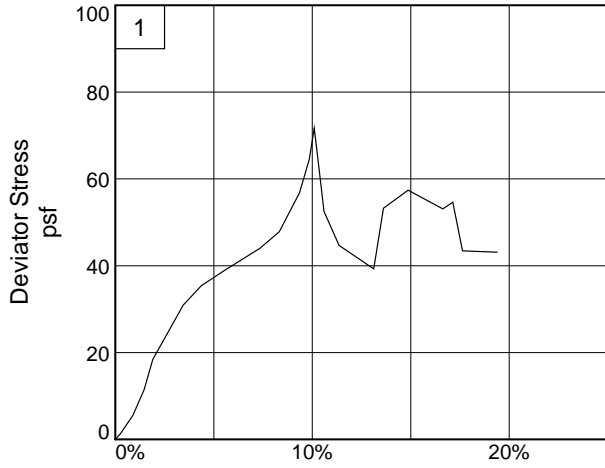


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**Figure** ASTM D2850

**Tested By:** BH

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** T-1

**Depth:** 7

**Sample Number:** 4B

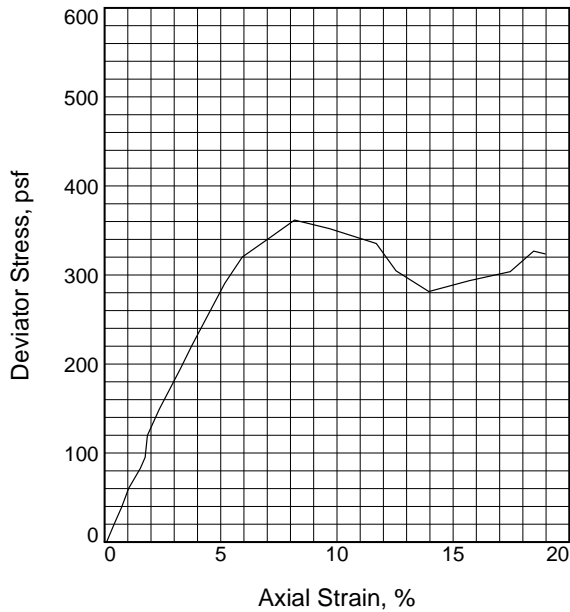
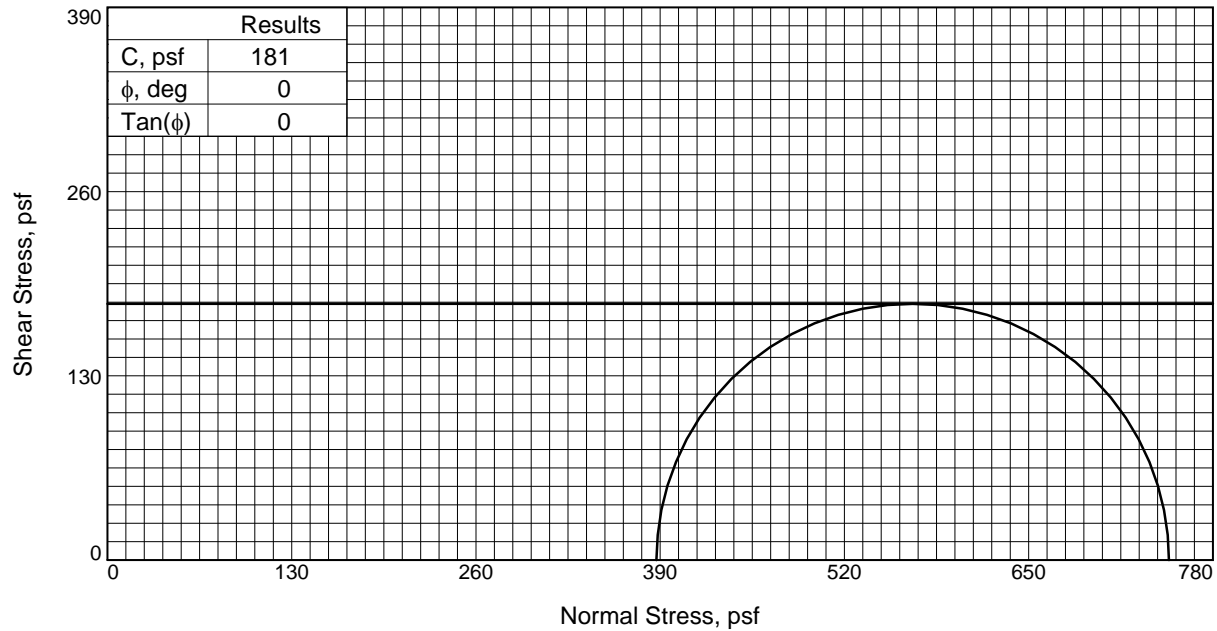
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	266.4
	Dry Density, pcf	19.6
	Saturation, %	94.7
	Void Ratio	7.4559
	Diameter, in.	1.38
At Test	Height, in.	2.93
	Water Content, %	281.4
	Dry Density, pcf	19.6
	Saturation, %	100.0
	Void Ratio	7.4559
Diameter, in.	1.38	
	Height, in.	2.93
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	2.69	
Fail. Stress, psf	362	
Strain, %	8.2	
Ult. Stress, psf	281	
Strain, %	14.0	
$\sigma_1$ Failure, psf	749	
$\sigma_3$ Failure, psf	387	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, vso dk br ORG CL w/ fw rts & dec wd (OH)

**LL=** 254      **PL=** 116      **PI=** 138

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** T-1      **Depth:** 11

**Sample Number:** 6B

**Proj. No.:** 24762

**Date Sampled:** 6/7/22



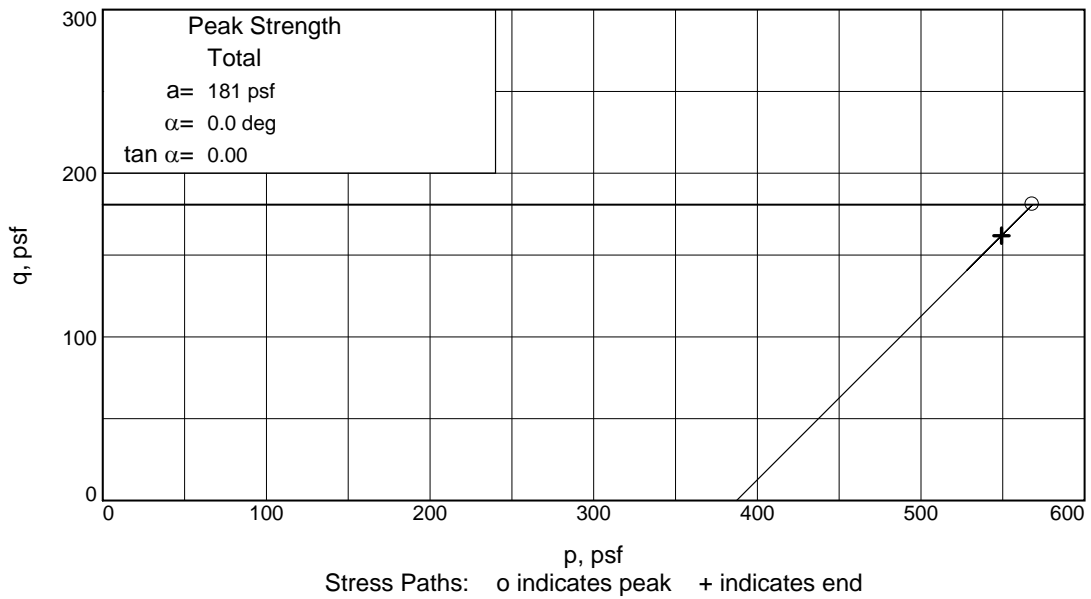
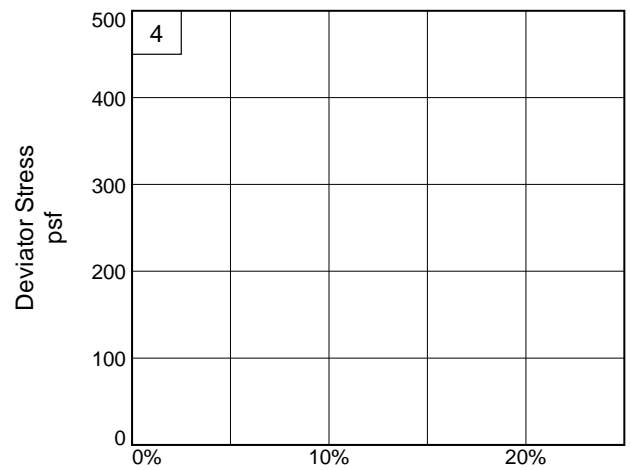
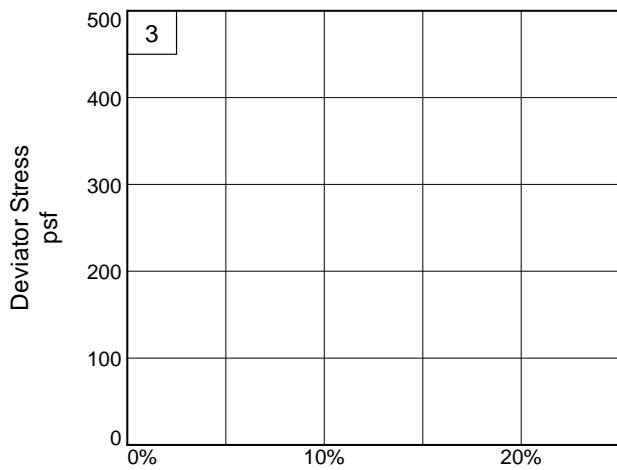
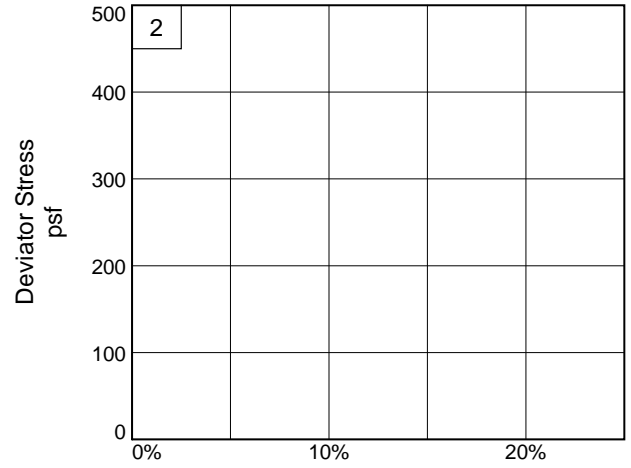
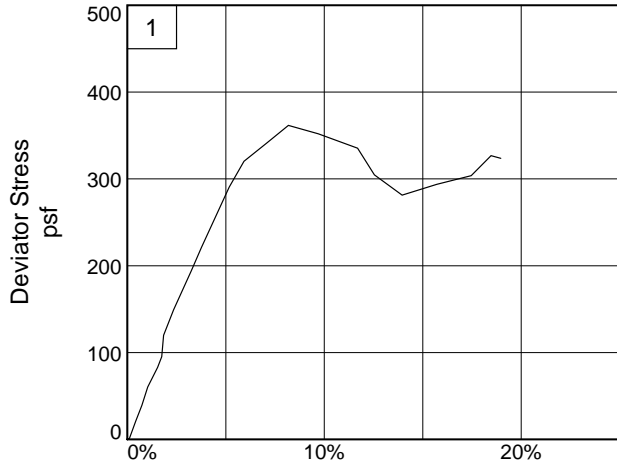
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ENGINEERING  
SINCE 1946

**Figure** ASTM D2850

**Tested By:** BH

**Checked By:** CD & RR





**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** T-1

**Depth:** 11

**Sample Number:** 6B

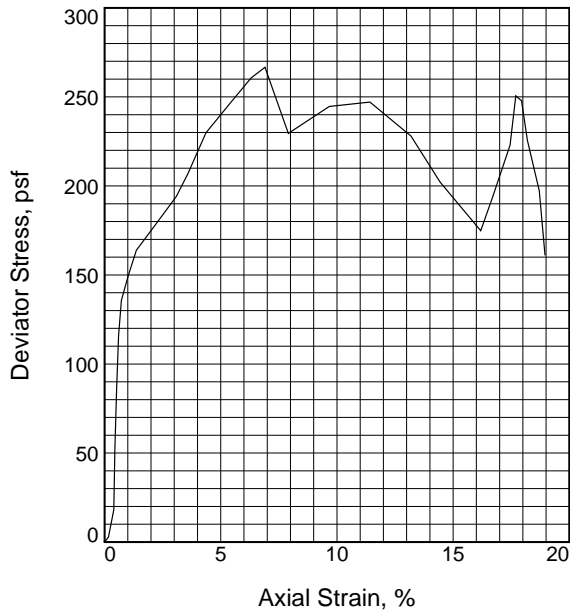
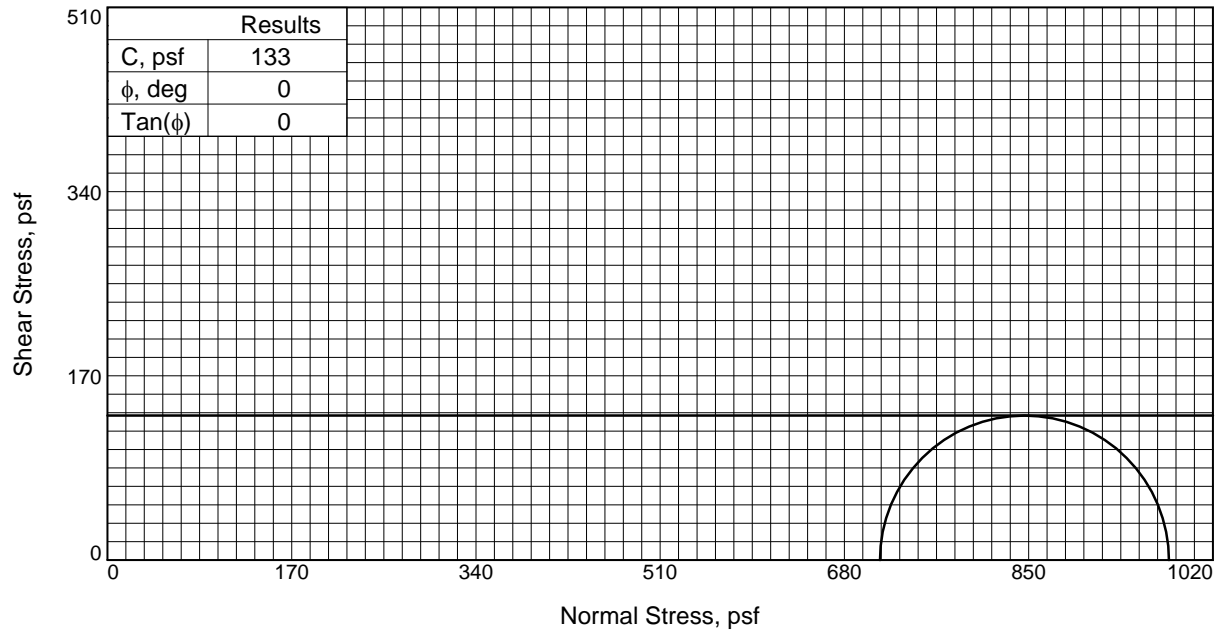
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	151.4
	Dry Density, pcf	32.9
	Saturation, %	99.6
	Void Ratio	4.0312
	Diameter, in.	1.39
At Test	Height, in.	2.89
	Water Content, %	152.1
	Dry Density, pcf	32.9
	Saturation, %	100.0
	Void Ratio	4.0312
Diameter, in.	1.39	
	Height, in.	2.89
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	4.95	
Fail. Stress, psf	267	
Strain, %	6.9	
Ult. Stress, psf	202	
Strain, %	14.4	
$\sigma_1$ Failure, psf	979	
$\sigma_3$ Failure, psf	713	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, vso br ORG CL (OH)

LL= 184      PL= 41      PI= 143

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** T-1      **Depth:** 15

**Sample Number:** 8B

**Proj. No.:** 24762

**Date Sampled:** 6/7/22

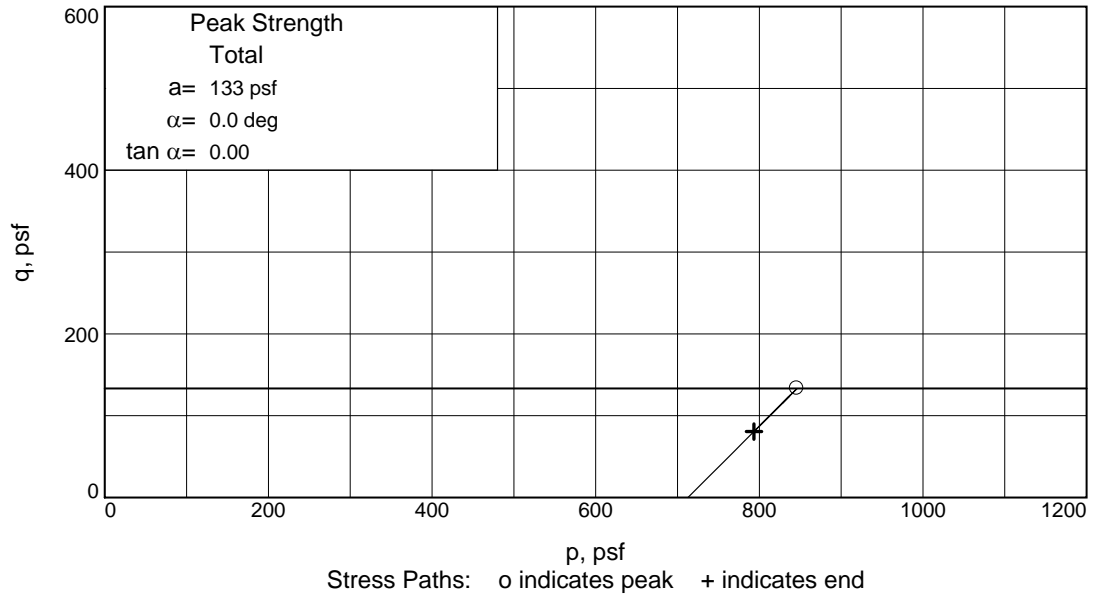
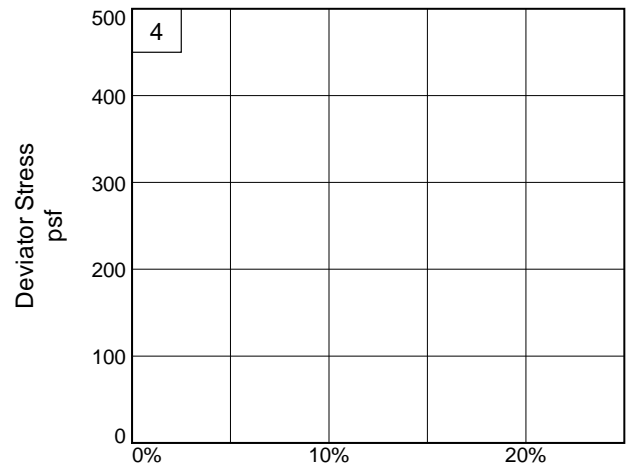
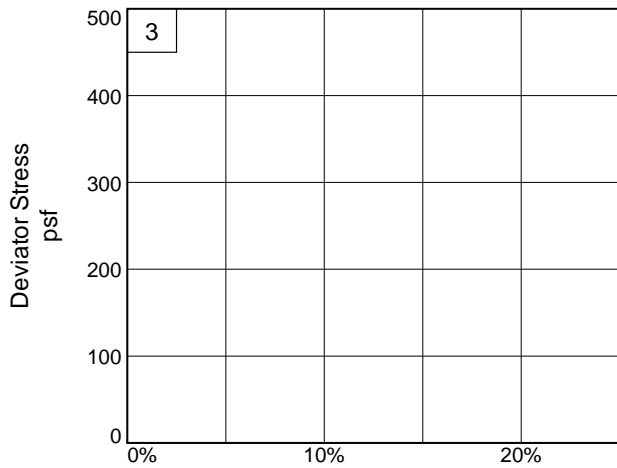
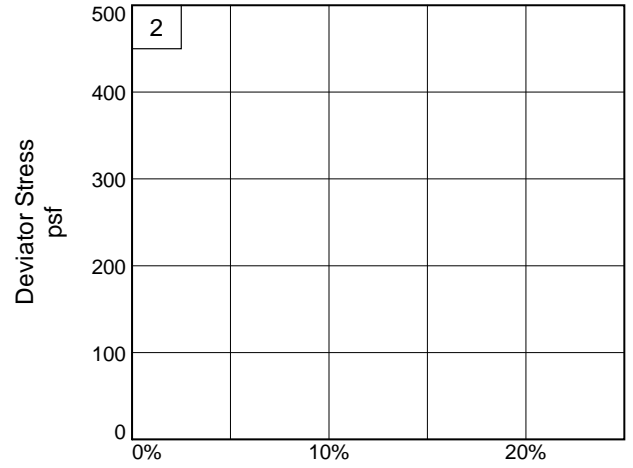
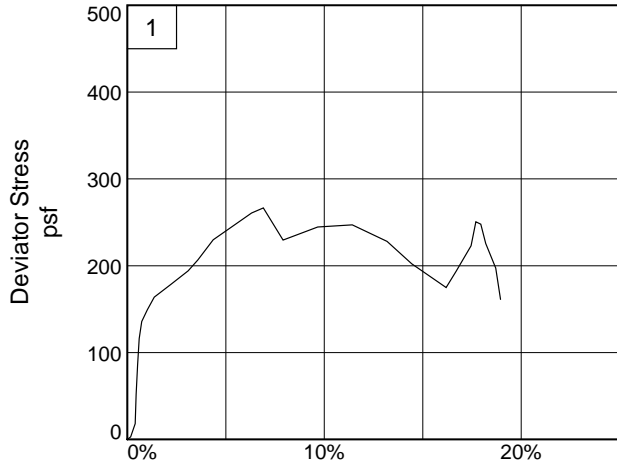


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SINCE 1946

**Figure** ASTM D2850

**Tested By:** CC

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

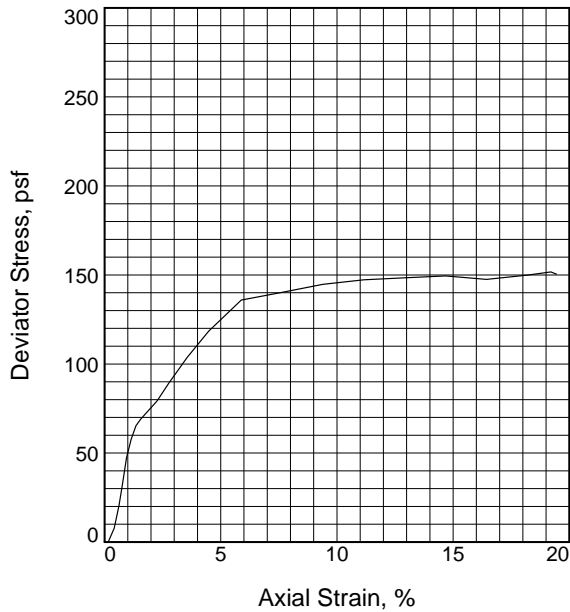
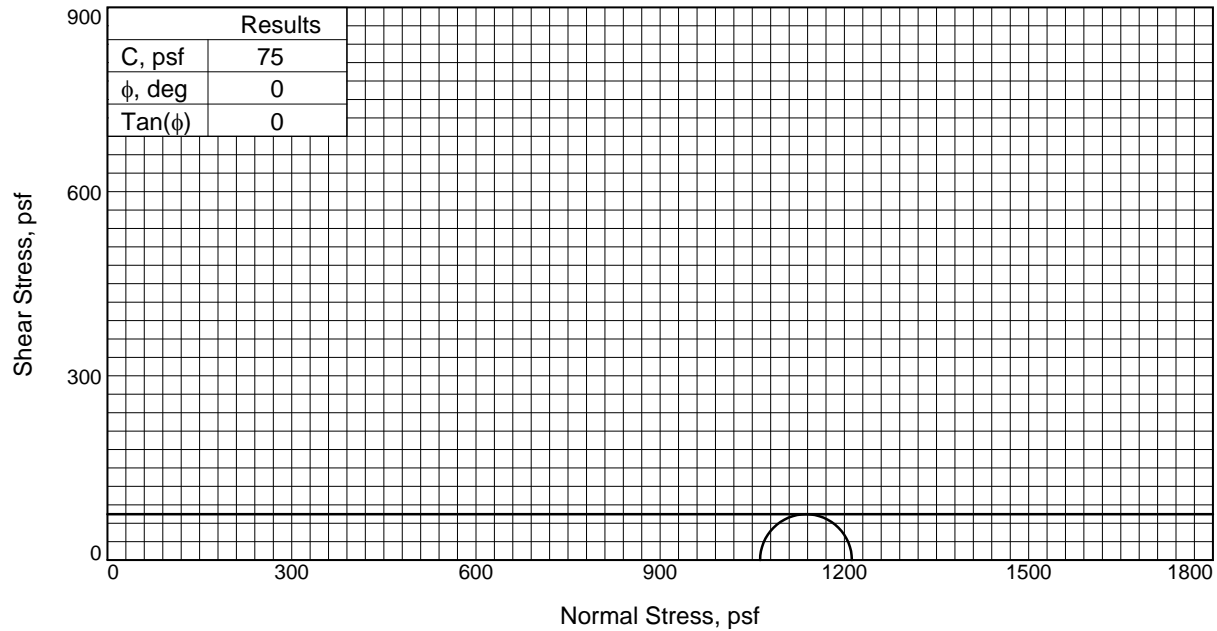
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** T-1      **Depth:** 15      **Sample Number:** 8B

**Project No.:** 24762      **Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** CC      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	89.9
	Dry Density, pcf	49.1
	Saturation, %	99.3
	Void Ratio	2.4609
	Diameter, in.	1.40
At Test	Height, in.	2.88
	Water Content, %	90.5
	Dry Density, pcf	49.1
	Saturation, %	100.0
	Void Ratio	2.4609
	Diameter, in.	1.40
	Height, in.	2.88
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	7.38
Fail. Stress, psf	149	
Strain, %	14.7	
Ult. Stress, psf	149	
Strain, %	14.7	
$\sigma_1$ Failure, psf	1212	
$\sigma_3$ Failure, psf	1063	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso g FT CL w/ fw om (CH)

LL= 105

PL= 27

PI= 78

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** T-1

**Depth:** 19

**Sample Number:** 10B

**Proj. No.:** 24762

**Date Sampled:** 6/7/22

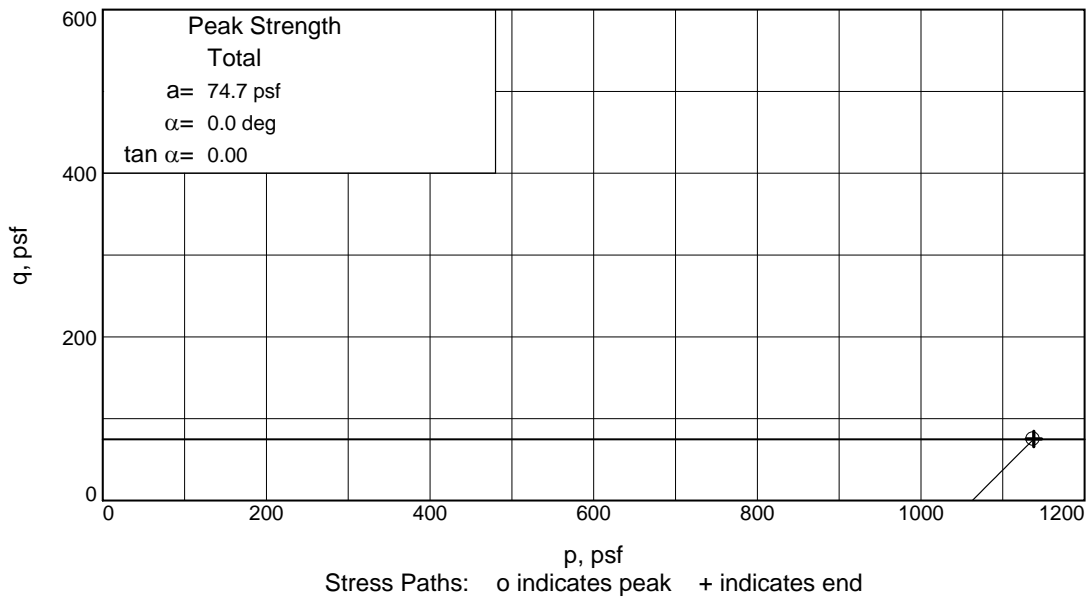
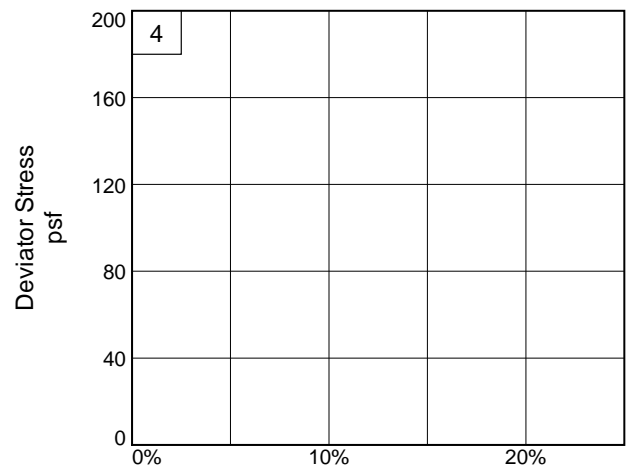
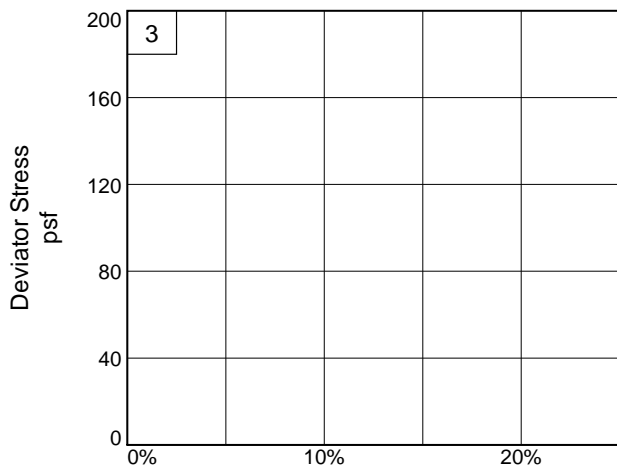
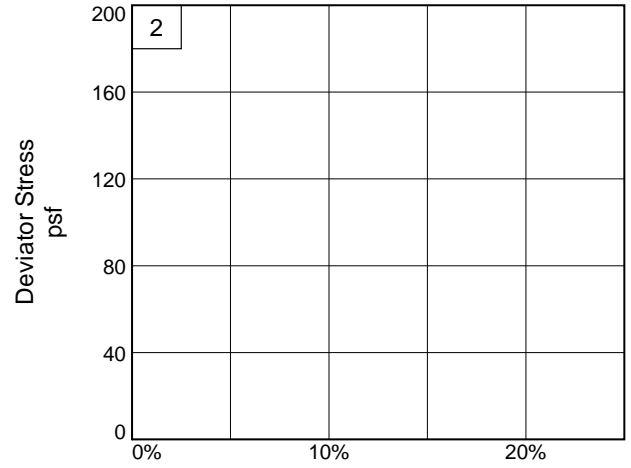
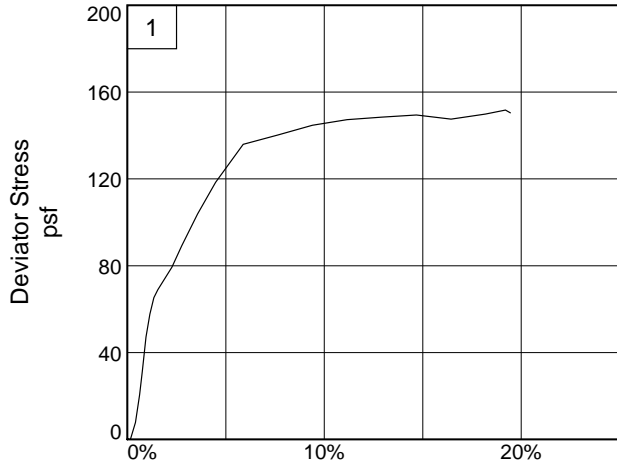


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SINCE 1946

**Figure** ASTM D2850

**Tested By:** BH

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

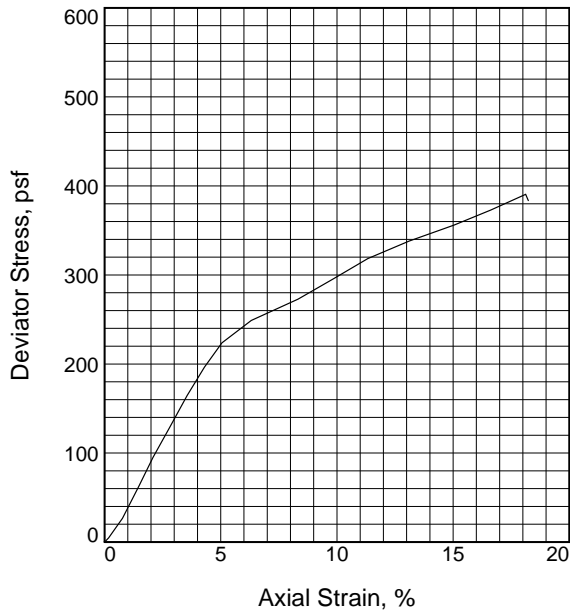
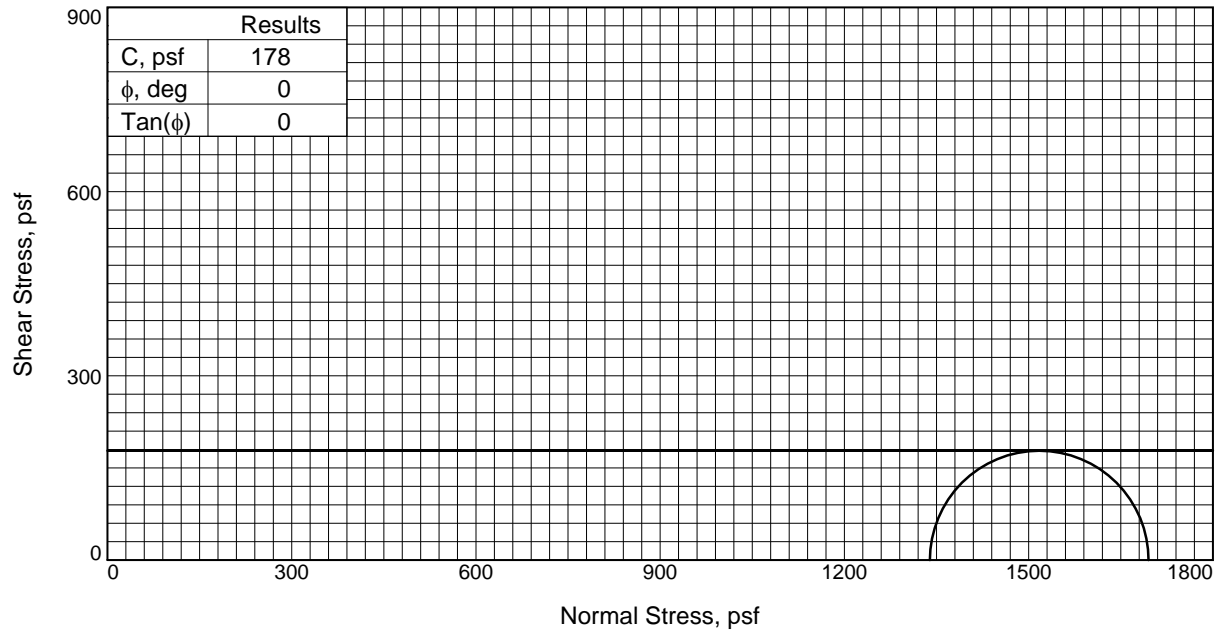
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** T-1      **Depth:** 19      **Sample Number:** 10B

**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	36.9
	Dry Density, pcf	82.1
	Saturation, %	94.4
	Void Ratio	1.0539
	Diameter, in.	1.42
At Test	Height, in.	2.83
	Water Content, %	39.0
	Dry Density, pcf	82.1
	Saturation, %	100.0
	Void Ratio	1.0539
Diameter, in.	1.42	
	Height, in.	2.83
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	9.30	
Fail. Stress, psf	356	
Strain, %	15.0	
Ult. Stress, psf	356	
Strain, %	15.0	
$\sigma_1$ Failure, psf	1695	
$\sigma_3$ Failure, psf	1339	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, v<sub>so</sub> g LN CL W/ SA (fi) (CL)

LL= NP

PI= NP

Assumed Specific Gravity= 2.70

Remarks: TORVANE = N/A

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** T-1      **Depth:** 24

**Sample Number:** 11B

**Proj. No.:** 24762

**Date Sampled:** 6/7/22

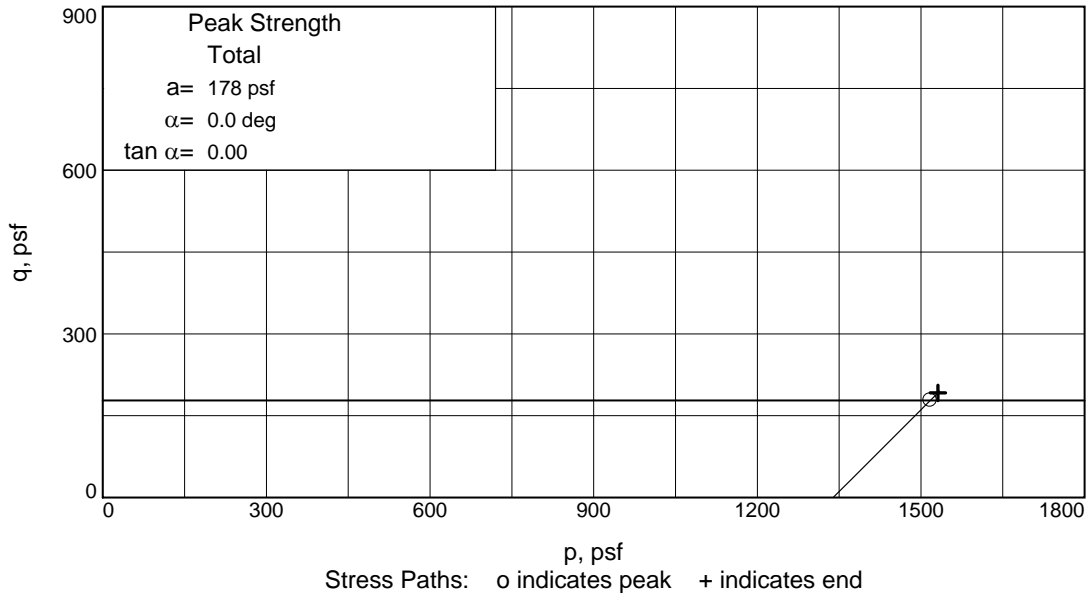
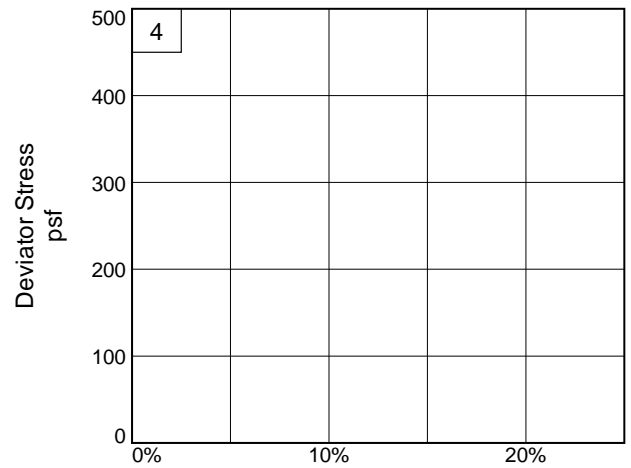
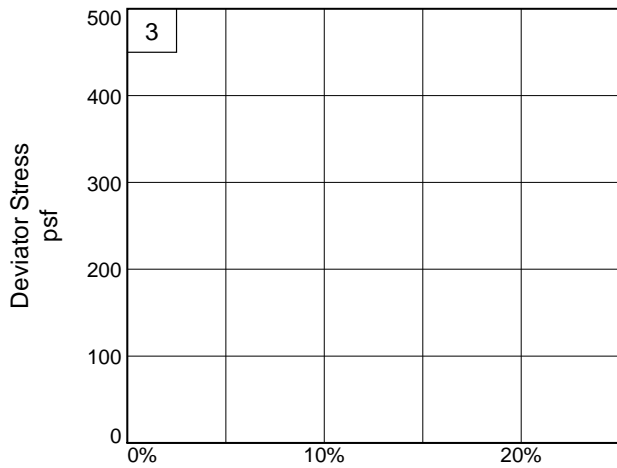
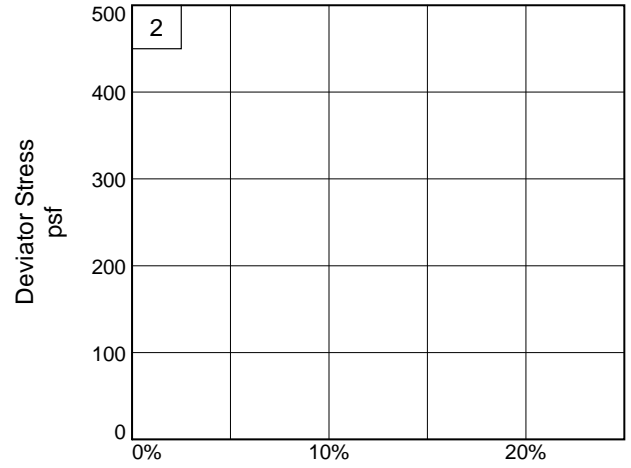
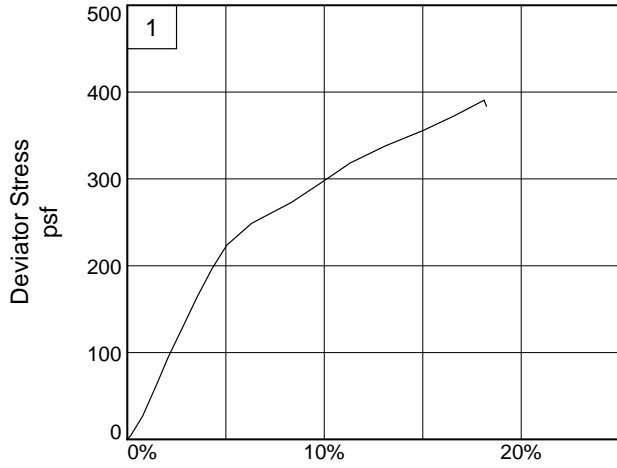


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Figure ASTM D2850

Tested By: BH

Checked By: CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

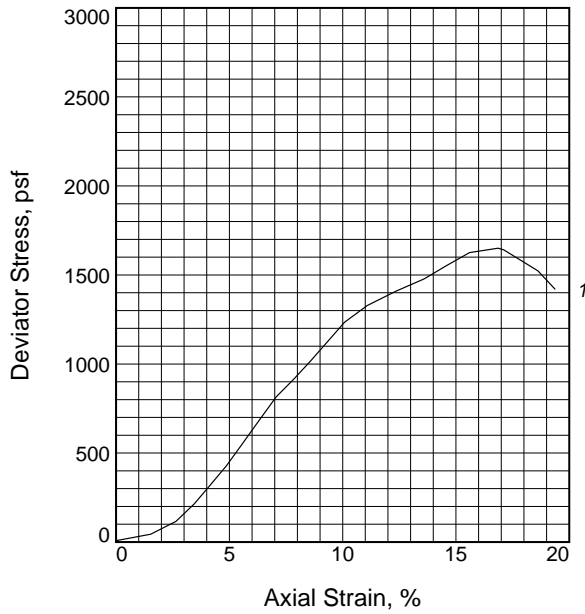
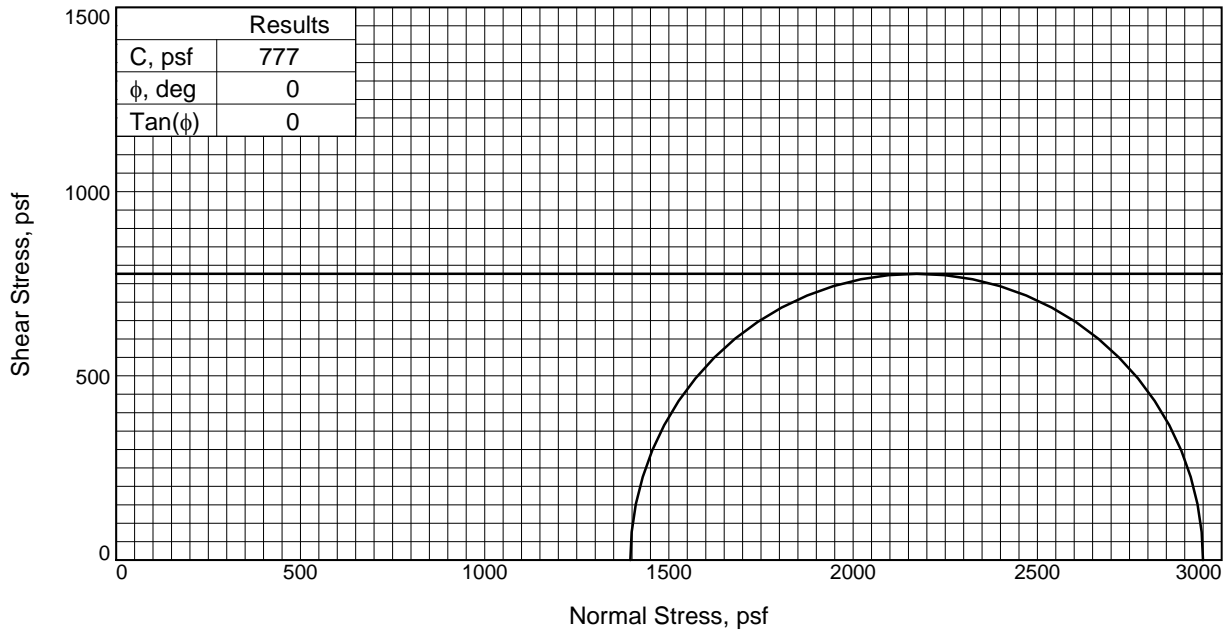
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** T-1      **Depth:** 24      **Sample Number:** 11B

**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	31.4
	Dry Density, pcf	90.8
	Saturation, %	98.9
	Void Ratio	0.8566
	Diameter, in.	1.41
At Test	Height, in.	2.84
	Water Content, %	31.7
	Dry Density, pcf	90.8
	Saturation, %	100.0
	Void Ratio	0.8566
Strain rate, %/min.	Diameter, in.	1.41
	Height, in.	2.84
	Back Pressure, psi	0.00
	Cell Pressure, psi	9.69
	Fail. Stress, psf	1554
Strain, %	Strain, %	14.6
	Ult. Stress, psf	1554
Strain, %	Strain, %	14.6
	$\sigma_1$ Failure, psf	2950
$\sigma_3$ Failure, psf	1395	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, mst g LN CL (CL)

LL= NP

PI= NP

Assumed Specific Gravity= 2.70

Remarks: TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** T-1      **Depth:** 29

**Sample Number:** 12B

**Proj. No.:** 24762

**Date Sampled:** 6/7/22



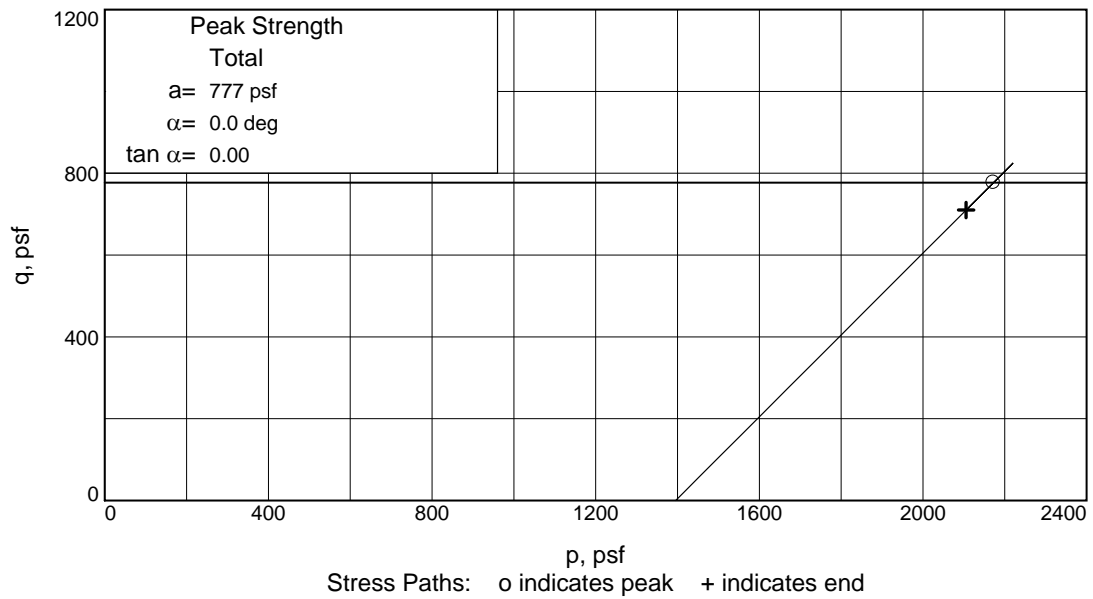
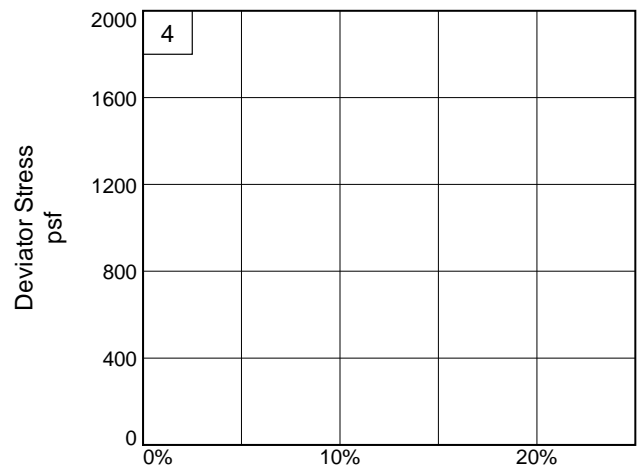
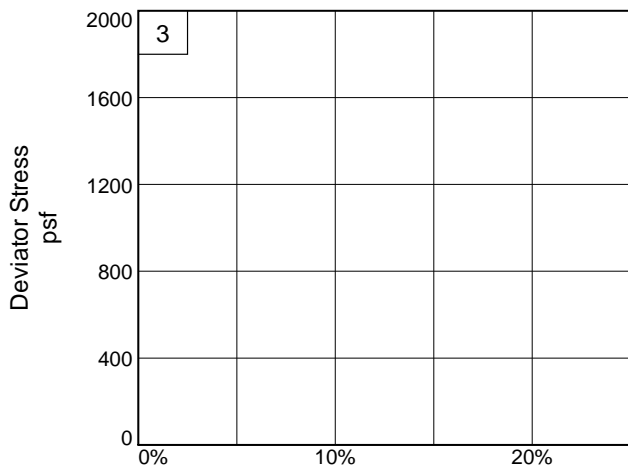
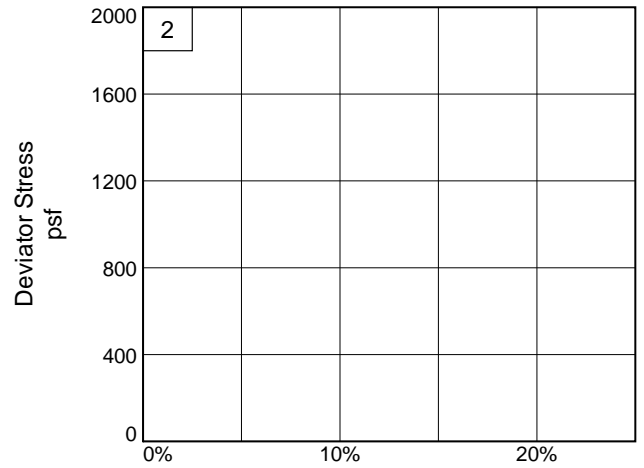
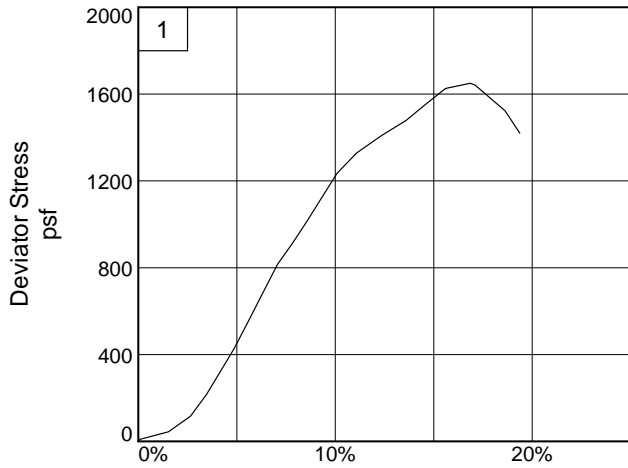
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Figure ASTM D2850

Tested By: BH

Checked By: CD & RR





**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

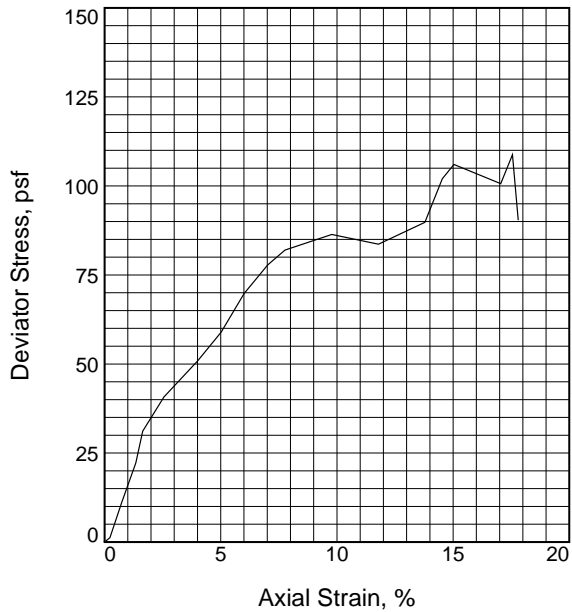
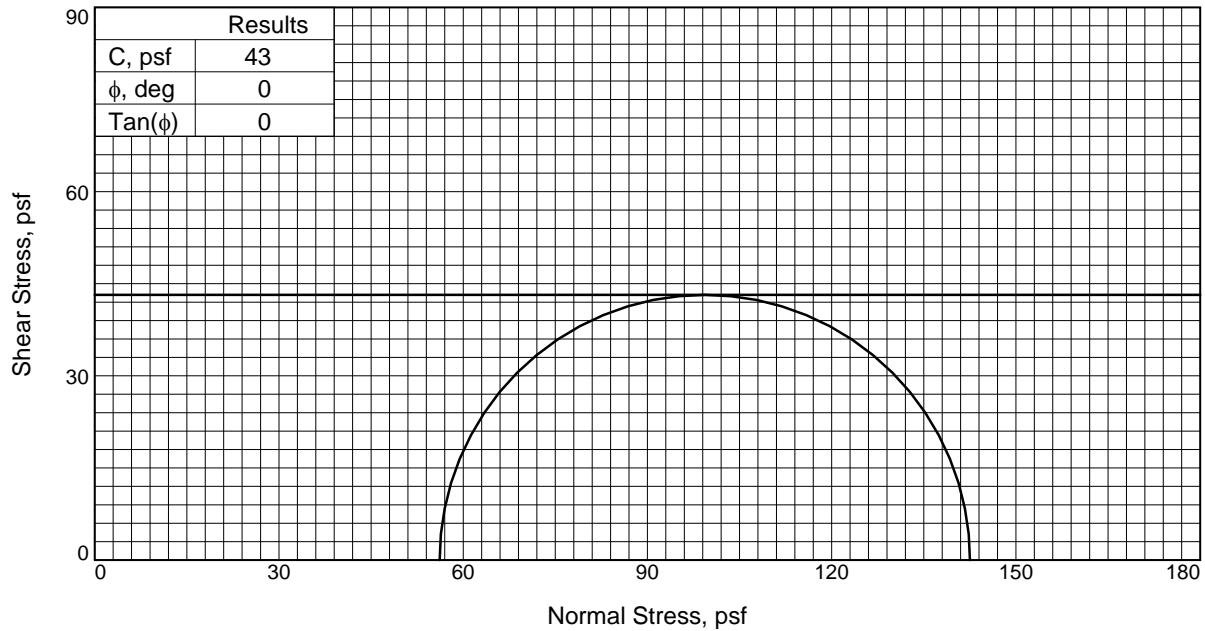
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** T-1      **Depth:** 29      **Sample Number:** 12B

**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	140.1
	Dry Density, pcf	34.9
	Saturation, %	99.4
	Void Ratio	3.7365
	Diameter, in.	1.40
	Height, in.	2.82
At Test	Water Content, %	141.0
	Dry Density, pcf	34.9
	Saturation, %	100.0
	Void Ratio	3.7365
	Diameter, in.	1.40
	Height, in.	2.82
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	0.39	
Fail. Stress, psf	86	
Strain, %	9.8	
Ult. Stress, psf	84	
Strain, %	11.8	
$\sigma_1$ Failure, psf	143	
$\sigma_3$ Failure, psf	56	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso g & br ORG CL w/ fw rts (OH)

LL= 154      PL= 35      PI= 119

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.040 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** T-2      **Depth:** 3

**Sample Number:** 2B

**Proj. No.:** 24762

**Date Sampled:** 6/7/22

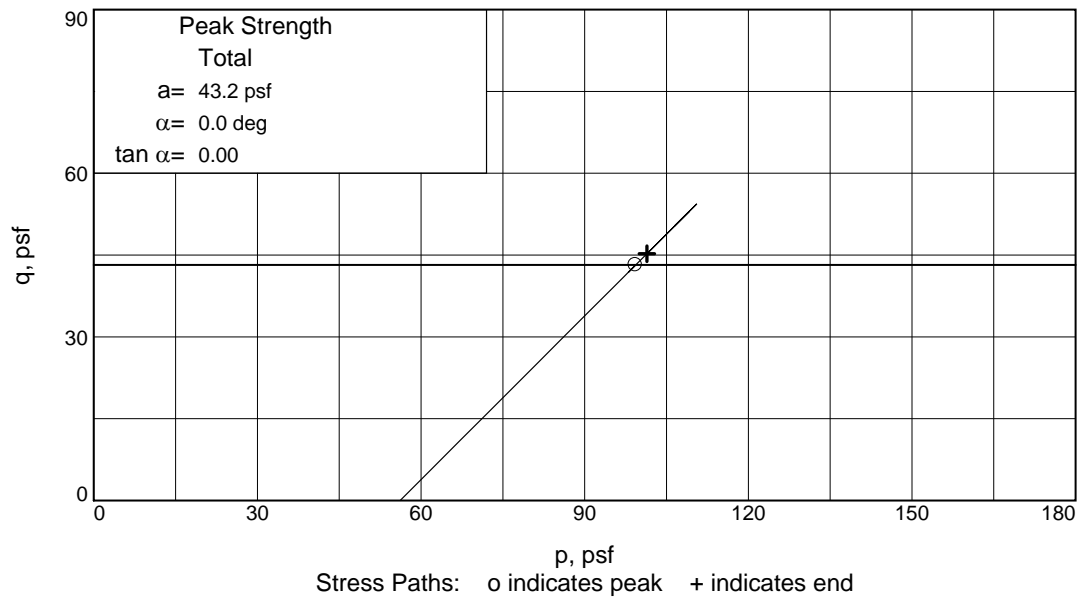
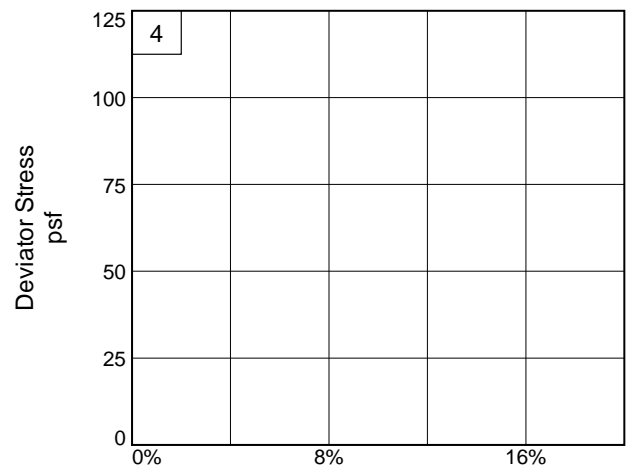
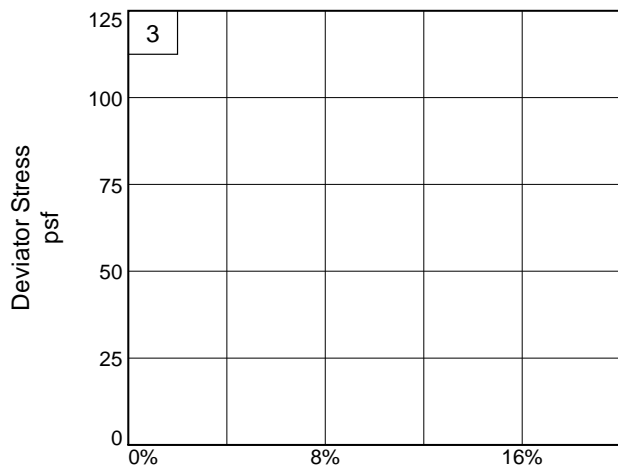
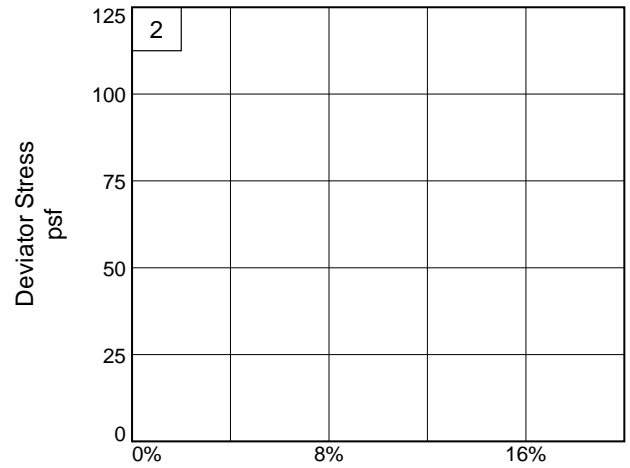
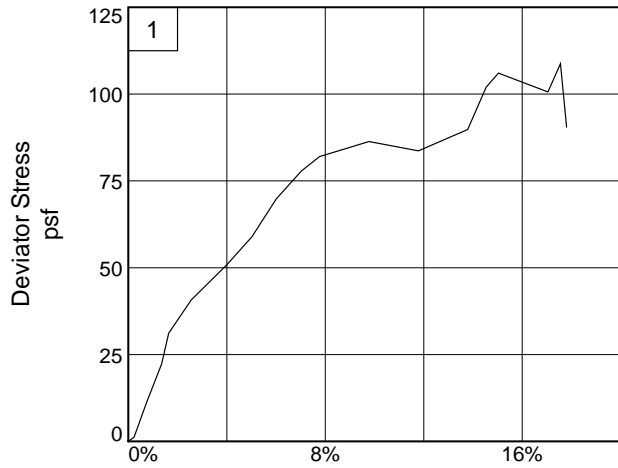


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Figure ASTM D2850

Tested By: BH

Checked By: CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** T-2

**Depth:** 3

**Sample Number:** 2B

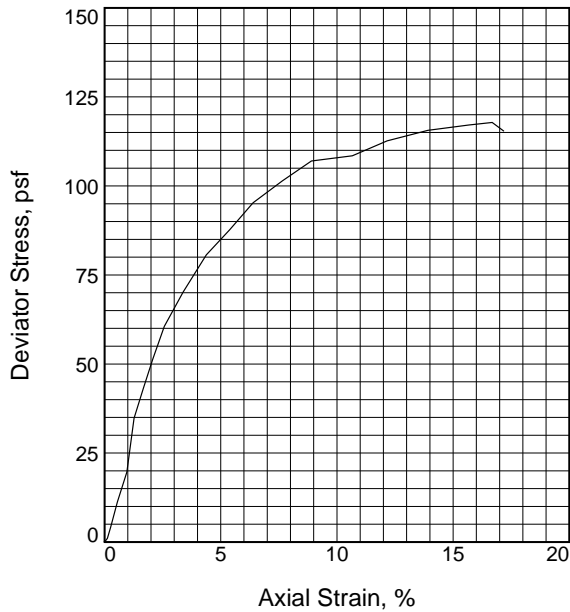
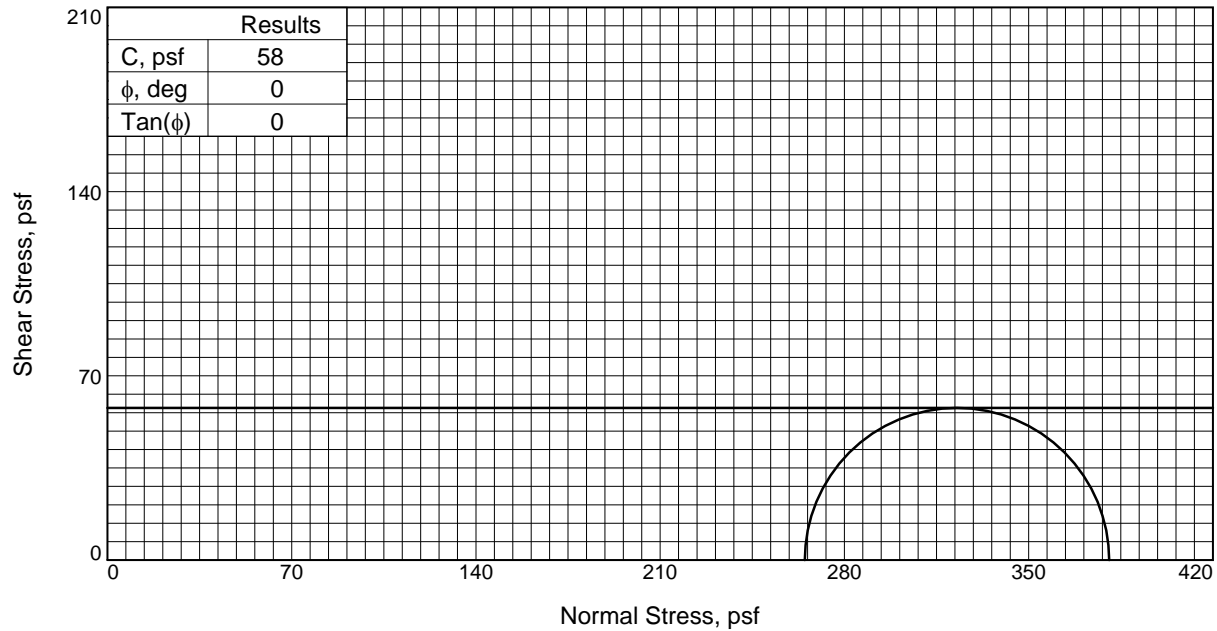
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	183.0
	Dry Density, pcf	27.3
	Saturation, %	95.8
	Void Ratio	5.0603
	Diameter, in.	1.41
	Height, in.	2.88
At Test	Water Content, %	191.0
	Dry Density, pcf	27.3
	Saturation, %	100.0
	Void Ratio	5.0603
	Diameter, in.	1.41
	Height, in.	2.88
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	1.84	
Fail. Stress, psf	116	
Strain, %	13.9	
Ult. Stress, psf	116	
Strain, %	13.9	
$\sigma_1$ Failure, psf	381	
$\sigma_3$ Failure, psf	265	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso g & br ORG CL w/ tr rts (OH)

LL= 176      PL= 38      PI= 138

**Assumed Specific Gravity=** 2.65

**Remarks:** TORVANE = 0.040 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** T-2      **Depth:** 5

**Sample Number:** 3B

**Proj. No.:** 24762

**Date Sampled:** 6/7/22

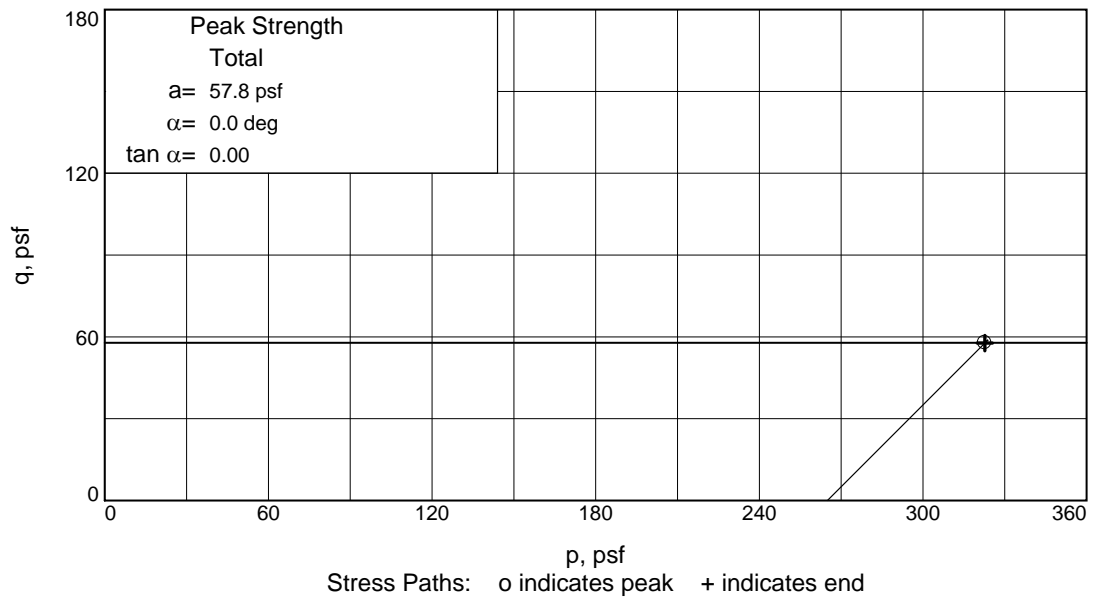
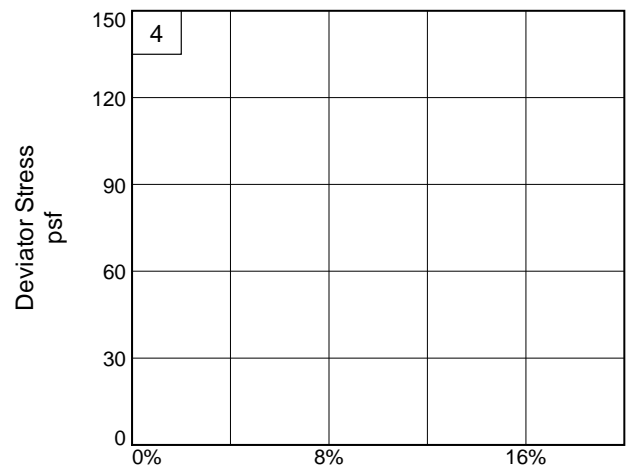
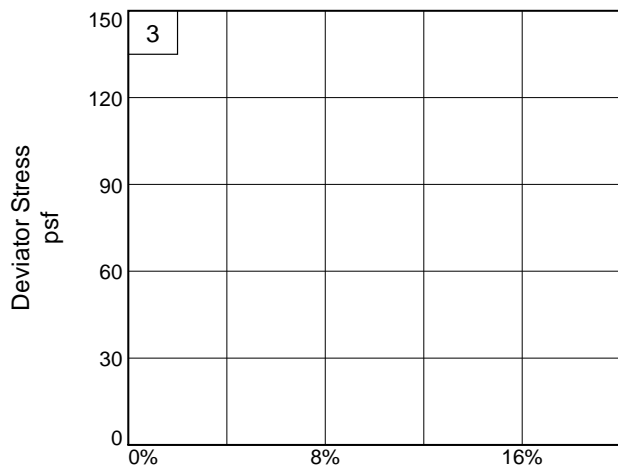
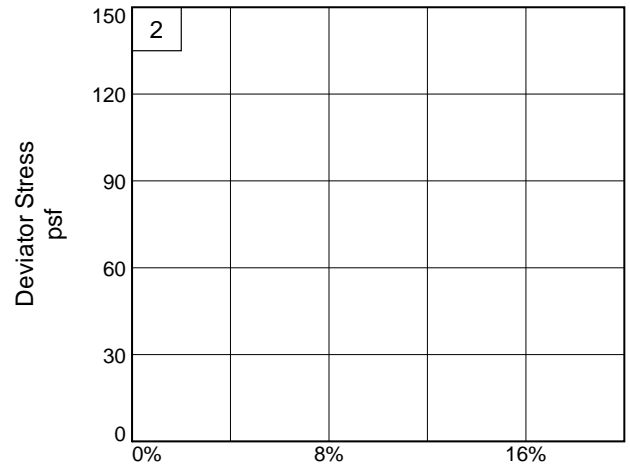
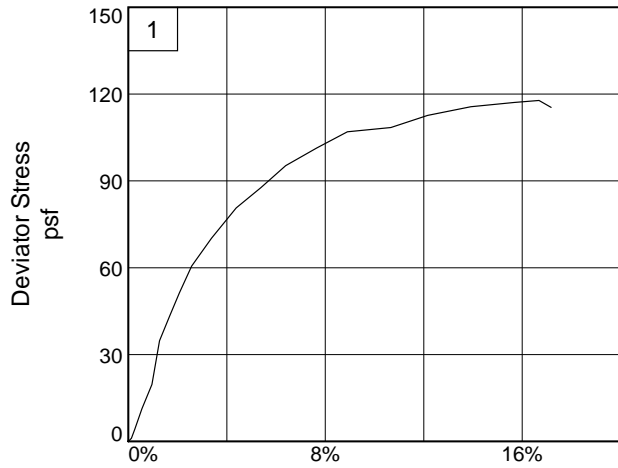


**EUSTIS**  
ENGINEERING  
SINCE 1946

**Figure** ASTM D2850

**Tested By:** BH

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** T-2

**Depth:** 5

**Sample Number:** 3B

**Project No.:** 24762

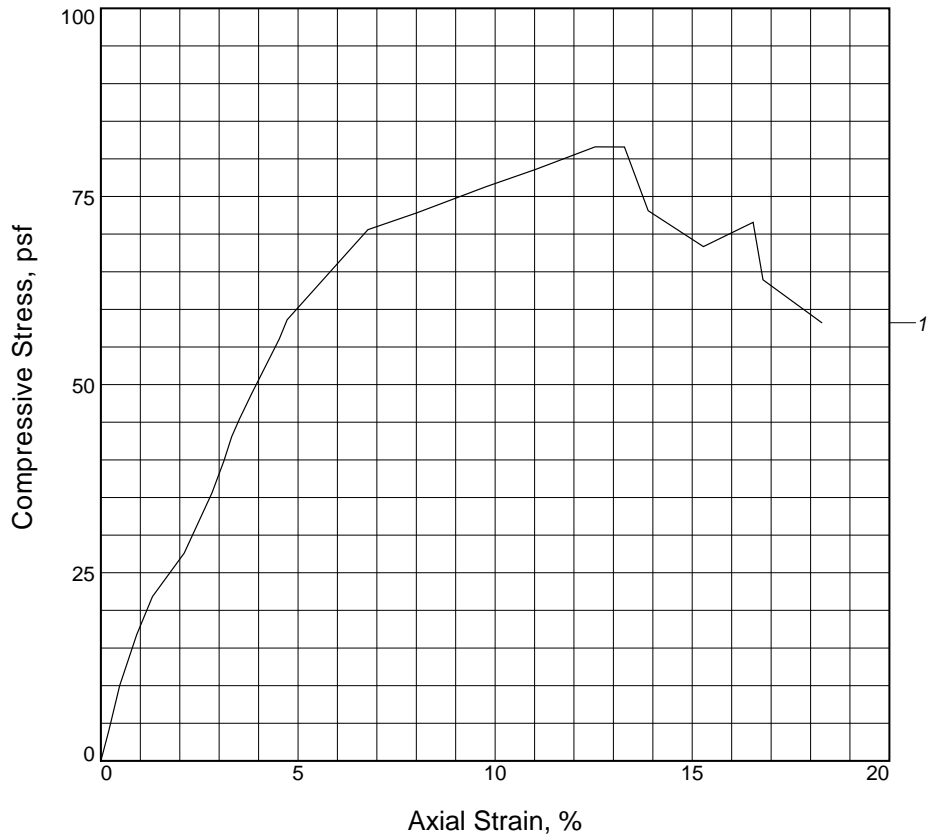
**Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR

# UNCONFINED COMPRESSION TEST



Sample No.	1		
Unconfined strength, psf	82		
Undrained shear strength, psf	41		
Failure strain, %	12.5		
Strain rate, %/min.	1.00		
Water content, %	254.2		
Wet density, pcf	74.6		
Dry density, pcf	21.1		
Saturation, %	99.5		
Void ratio	6.2577		
Specimen diameter, in.	1.38		
Specimen height, in.	2.87		
Height/diameter ratio	2.08		

**Description:** W, xso br & g HUM w/ fw rts (PT)

<b>LL =</b>	<b>PL =</b>	<b>PI =</b>	<b>Assumed GS= 2.45</b>	<b>Type: UNDISTURBED</b>
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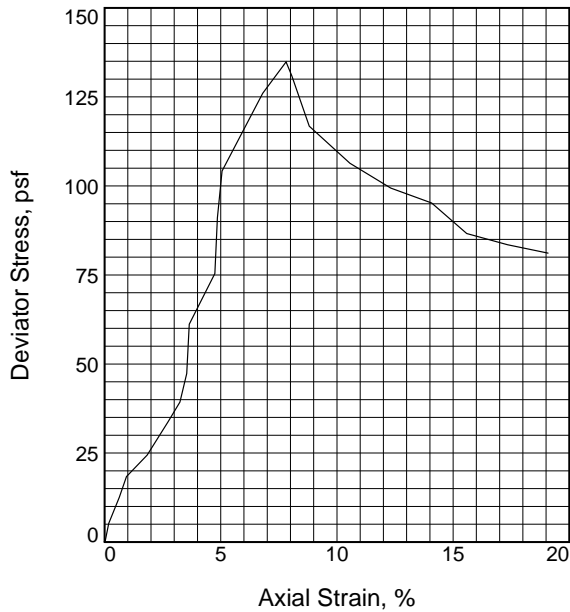
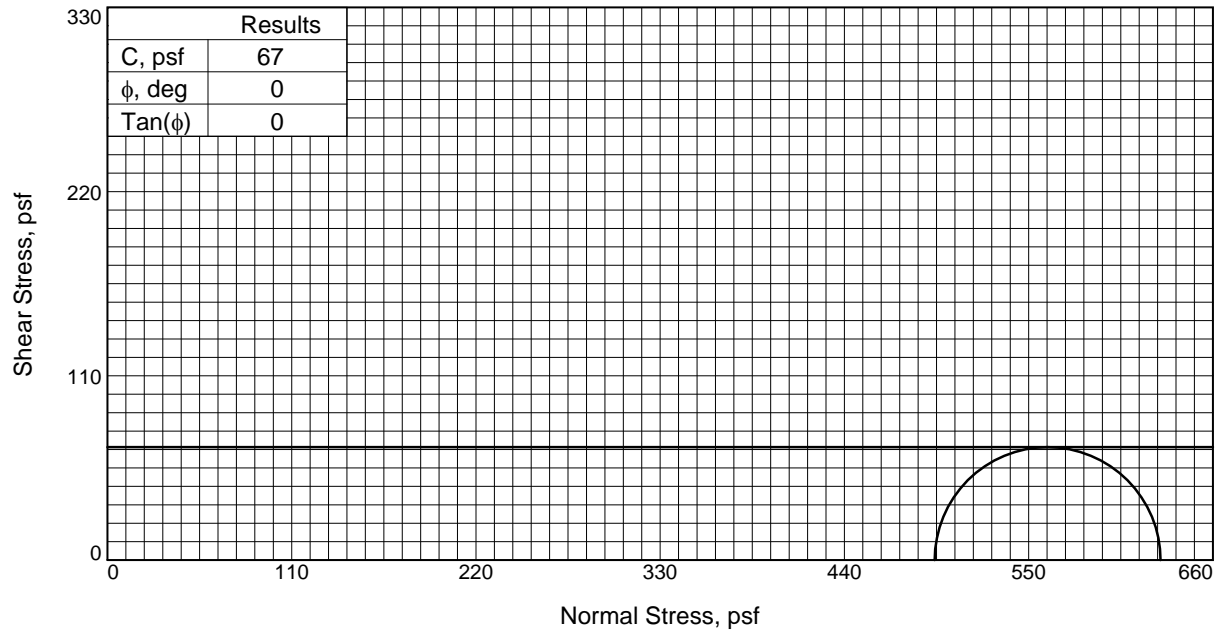
**Project No.:** 24762  
**Date Sampled:** 6/7/22  
**Remarks:**  
 TORVANE = 0.100 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA  
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH  
**Source of Sample:** T-2      **Depth:** 7  
**Sample Number:** 4B

**Figure** ASTM D2166



**Tested By:** BH \_\_\_\_\_ **Checked By:** CD & RR \_\_\_\_\_



Sample No.	1	
Initial	Water Content, %	160.8
	Dry Density, pcf	30.0
	Saturation, %	96.3
	Void Ratio	4.0911
	Diameter, in.	1.41
	Height, in.	2.89
At Test	Water Content, %	160.8
	Dry Density, pcf	30.0
	Saturation, %	96.3
	Void Ratio	4.0911
	Diameter, in.	1.41
	Height, in.	2.89
Strain rate, %/min.	1.00	
Back Pressure, psi	0.00	
Cell Pressure, psi	3.43	
Fail. Stress, psf	135	
Strain, %	7.8	
Ult. Stress, psf	95	
Strain, %	14.1	
$\sigma_1$ Failure, psf	629	
$\sigma_3$ Failure, psf	494	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso g & br HUM w/ tr rts (PT)

LL= 200      PL= 52      PI= 148

**Assumed Specific Gravity=** 2.45

**Remarks:** TORVANE = 0.040 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** T-2      **Depth:** 9

**Sample Number:** 5B

**Proj. No.:** 24762

**Date Sampled:** 6/7/22

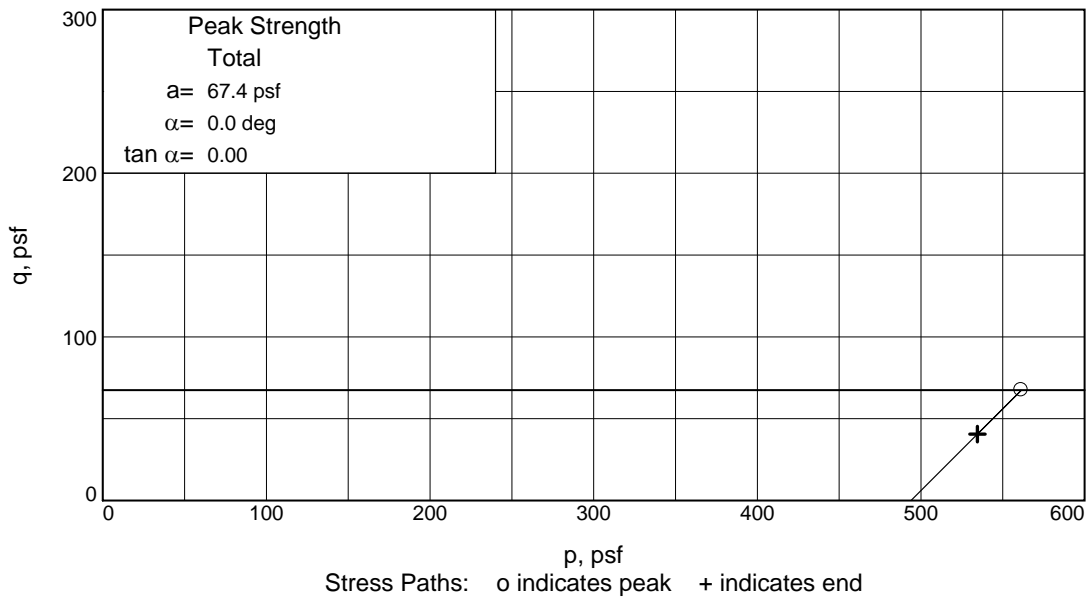
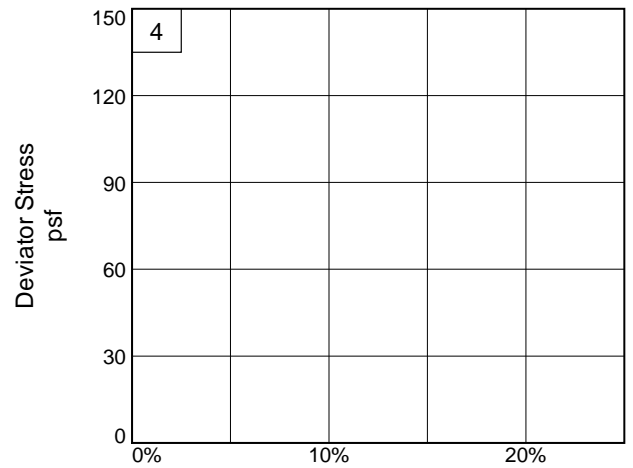
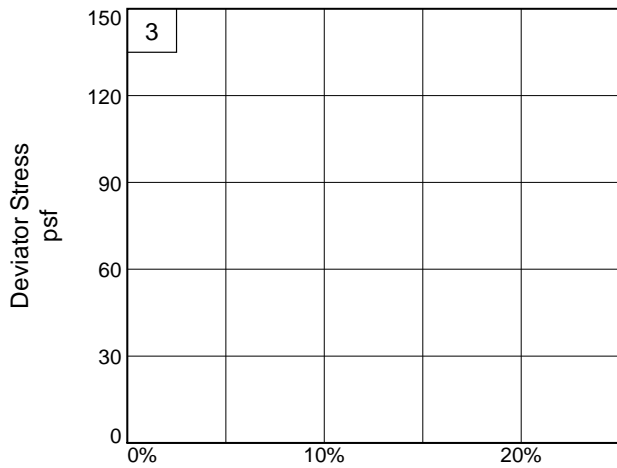
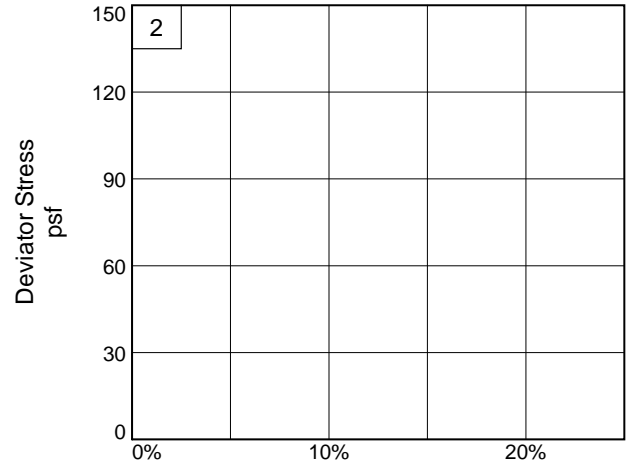
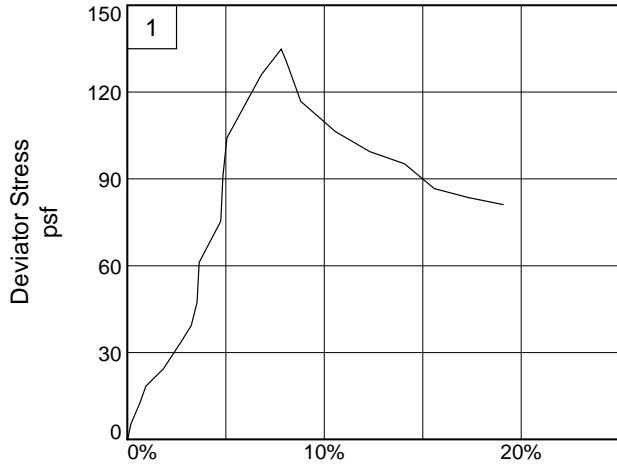


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**Figure** ASTM D2850

**Tested By:** BH

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

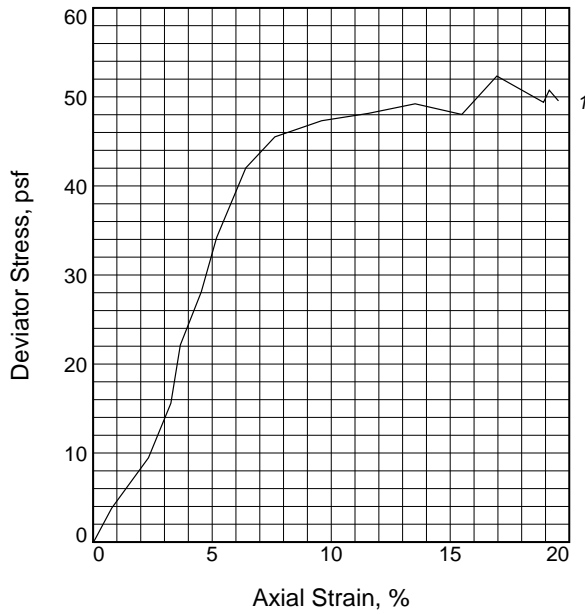
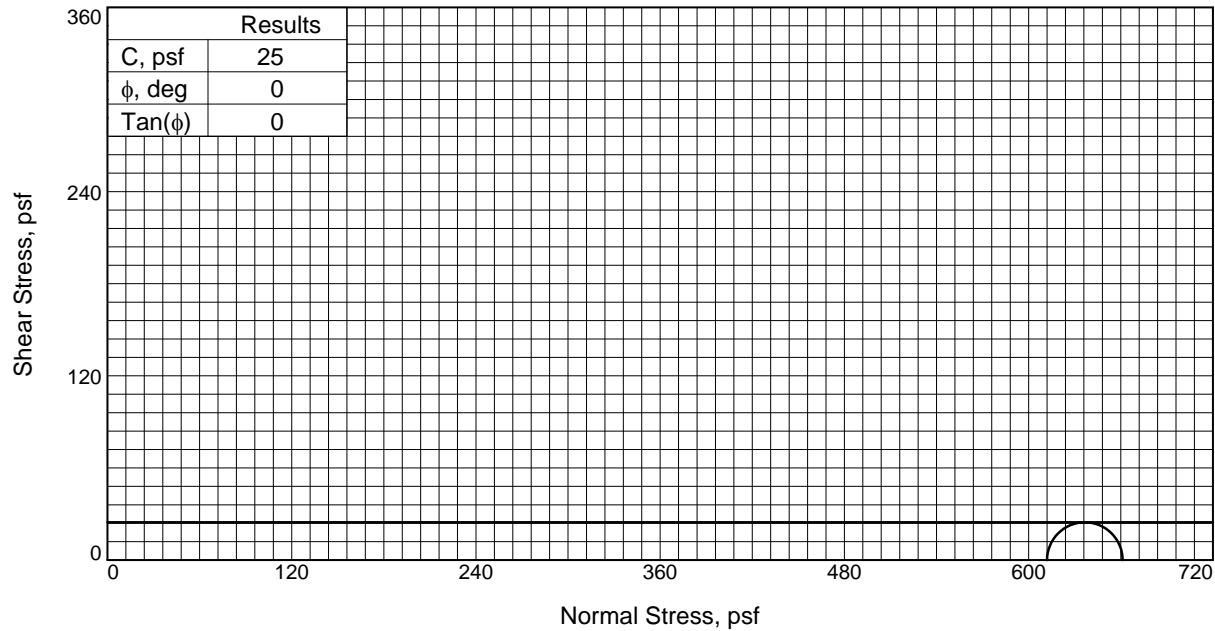
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** T-2      **Depth:** 9      **Sample Number:** 5B  
**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH      **Checked By:** CD & RR





Sample No.		1
Initial	Water Content, %	89.8
	Dry Density, pcf	49.3
	Saturation, %	99.9
	Void Ratio	2.4448
	Diameter, in.	1.42
At Test	Height, in.	2.85
	Water Content, %	89.9
	Dry Density, pcf	49.3
	Saturation, %	100.0
	Void Ratio	2.4448
Diameter, in.		1.42
Height, in.		2.85
Strain rate, %/min.		1.00
Back Pressure, psi		0.00
Cell Pressure, psi		4.25
Fail. Stress, psf		49
Strain, %		13.5
Ult. Stress, psf		49
Strain, %		13.5
$\sigma_1$ Failure, psf		661
$\sigma_3$ Failure, psf		612

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** M, xso br & g FT CL w/ fw om & rts (CH)

LL= 90      PL= 26      PI= 64

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = N/A

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** T-2      **Depth:** 13

**Sample Number:** 7B

**Proj. No.:** 24762

**Date Sampled:** 6/7/22

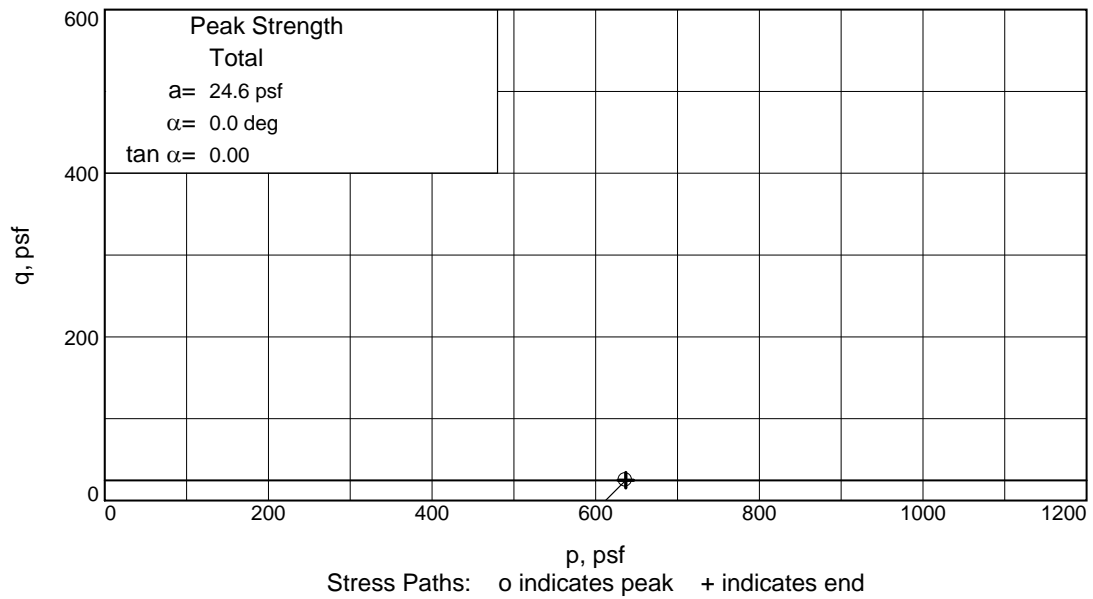
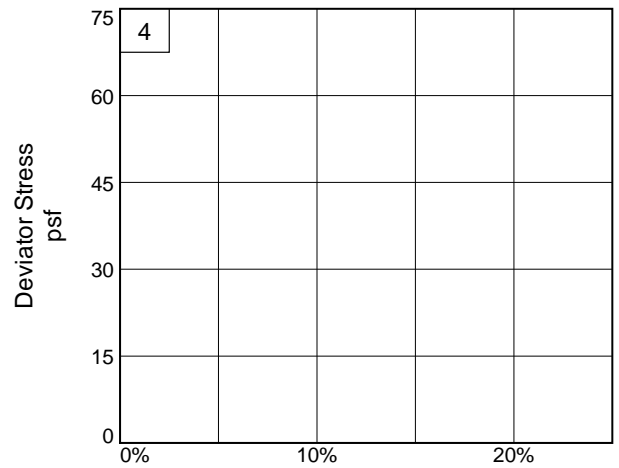
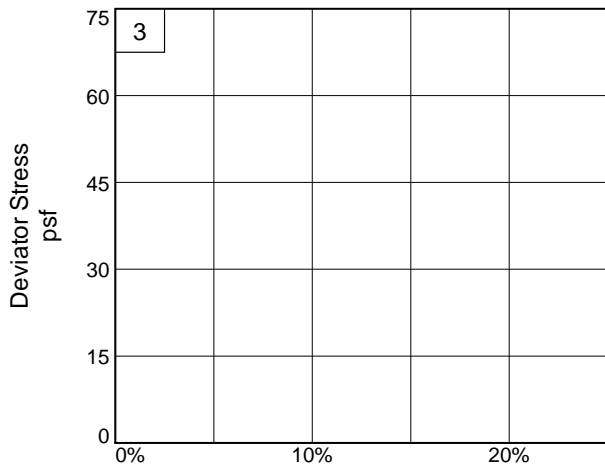
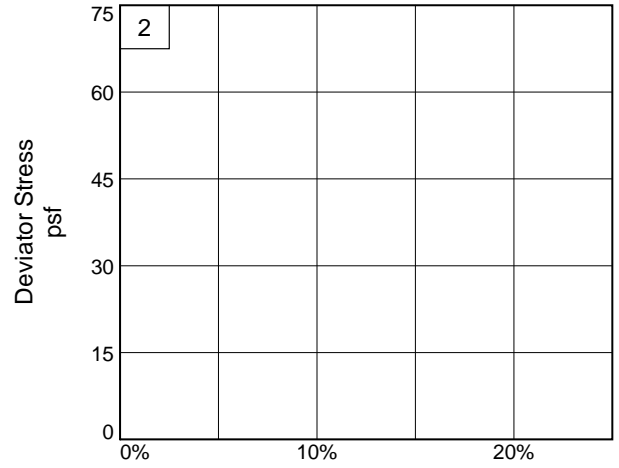
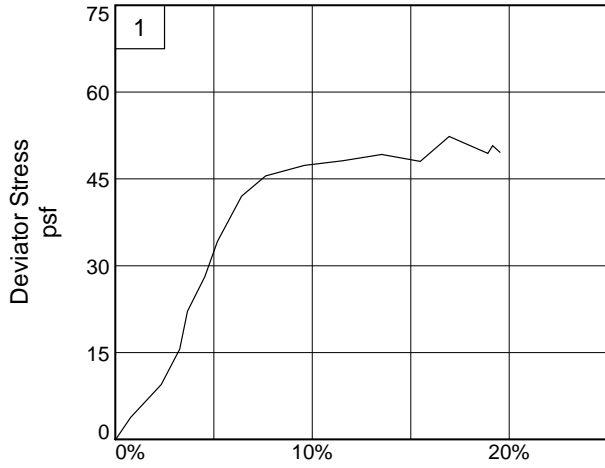
**Figure** ASTM D2850



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SINCE 1946

**Tested By:** BH

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** T-2

**Depth:** 13

**Sample Number:** 7B

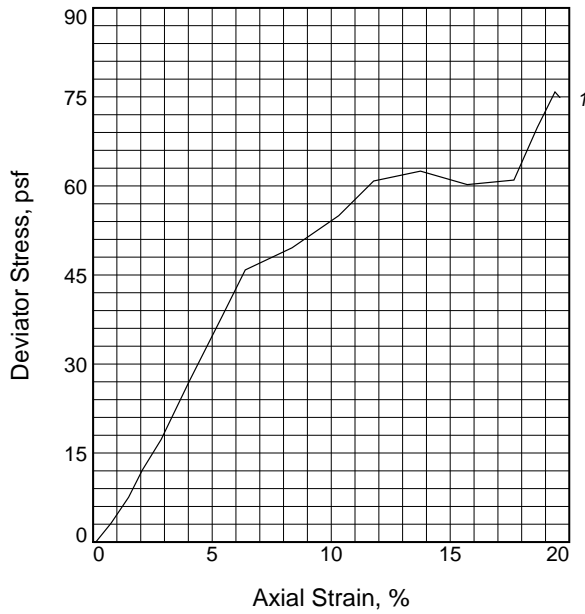
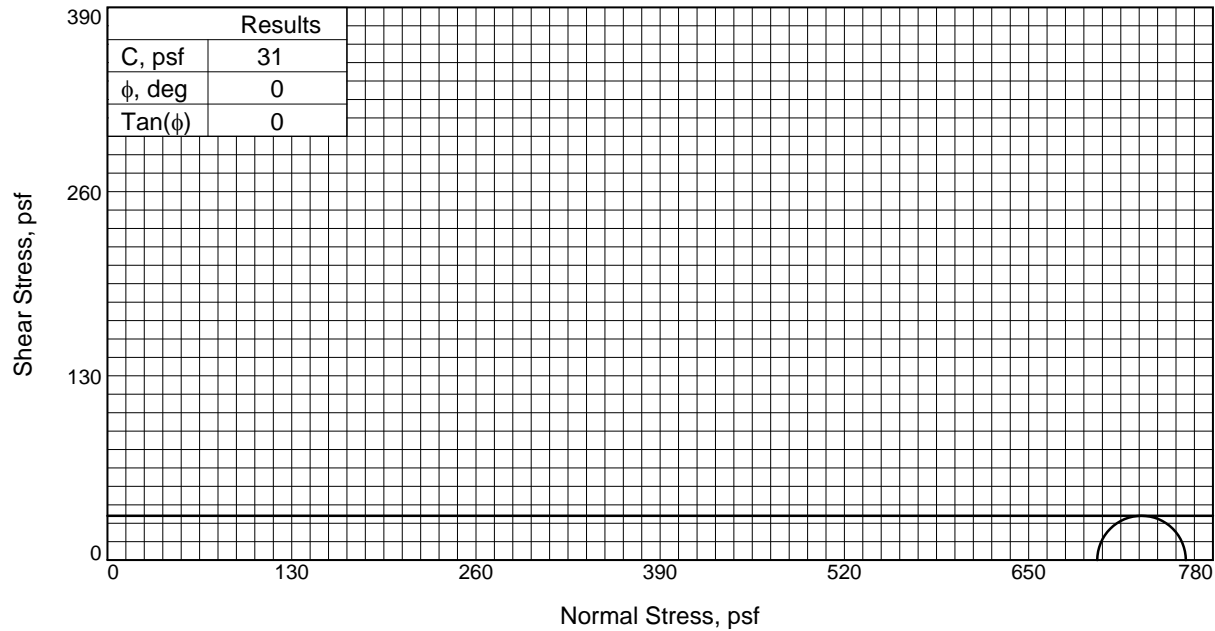
**Project No.:** 24762

**Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH

**Checked By:** CD & RR



Sample No.		1
Initial	Water Content, %	84.3
	Dry Density, pcf	51.5
	Saturation, %	99.8
	Void Ratio	2.2977
	Diameter, in.	1.42
At Test	Height, in.	2.90
	Water Content, %	84.5
	Dry Density, pcf	51.5
	Saturation, %	100.0
	Void Ratio	2.2977
	Diameter, in.	1.42
	Height, in.	2.90
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	4.85
	Fail. Stress, psf	62
	Strain, %	13.8
	Ult. Stress, psf	62
	Strain, %	13.8
	$\sigma_1$ Failure, psf	761
$\sigma_3$ Failure, psf	698	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, xso g FT CL w/ fw om & rts (CH)

LL= 91      PL= 25      PI= 66

**Assumed Specific Gravity=** 2.72

**Remarks:** TORVANE = N/A

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** T-2      **Depth:** 17

**Sample Number:** 9B

**Proj. No.:** 24762

**Date Sampled:** 6/7/22

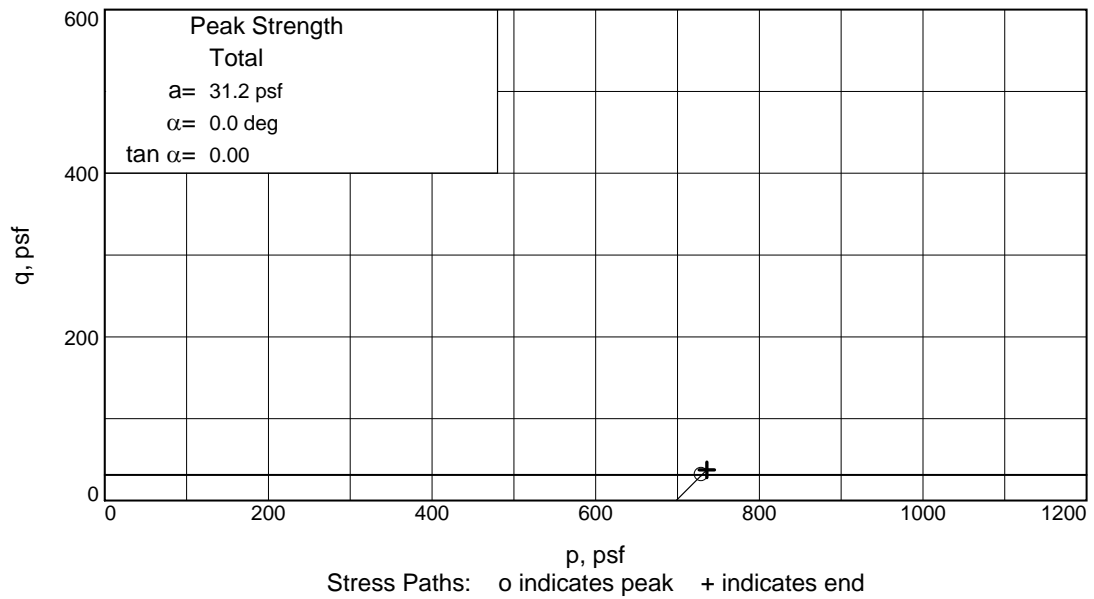
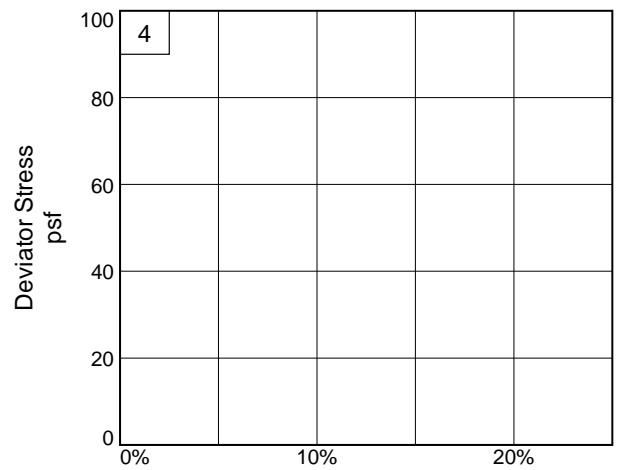
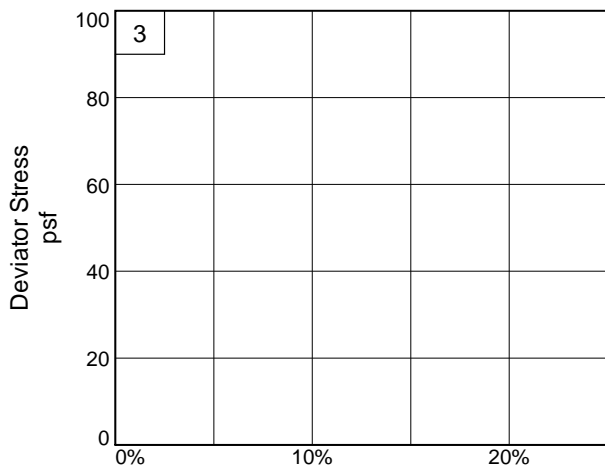
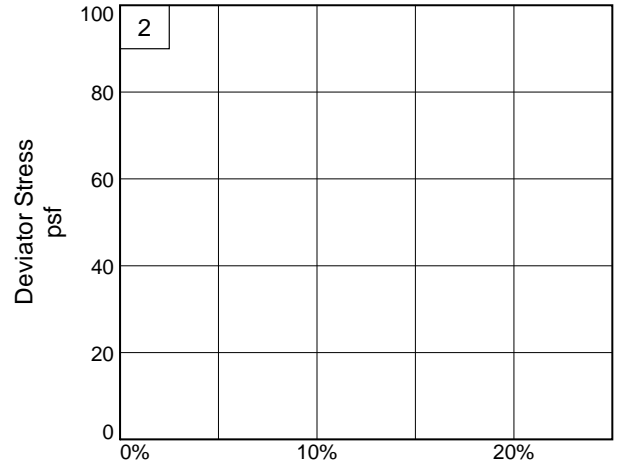
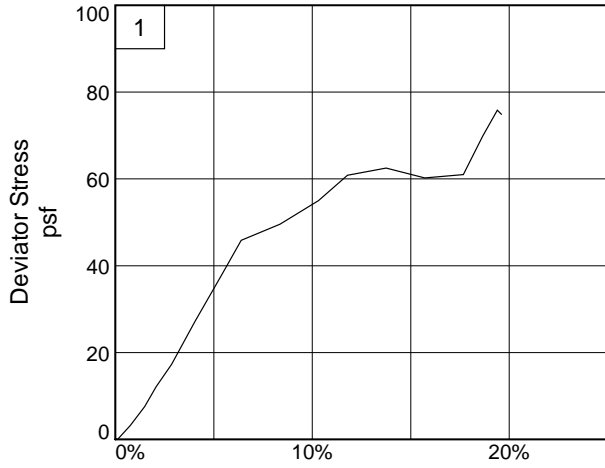


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SINCE 1946

**Figure** ASTM D2850

**Tested By:** BH

**Checked By:** CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

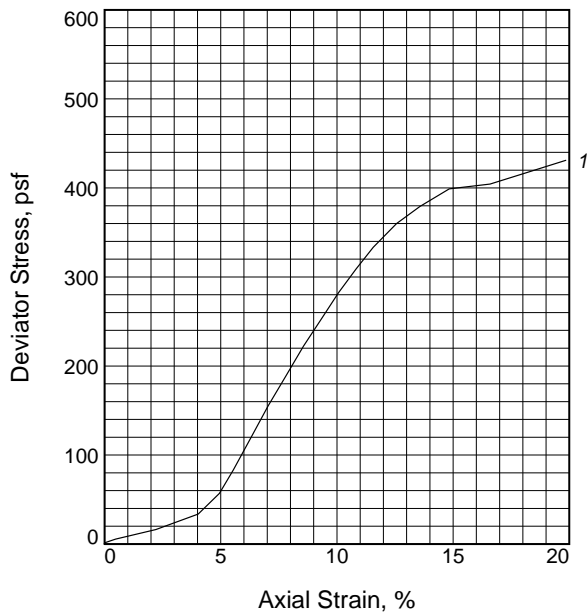
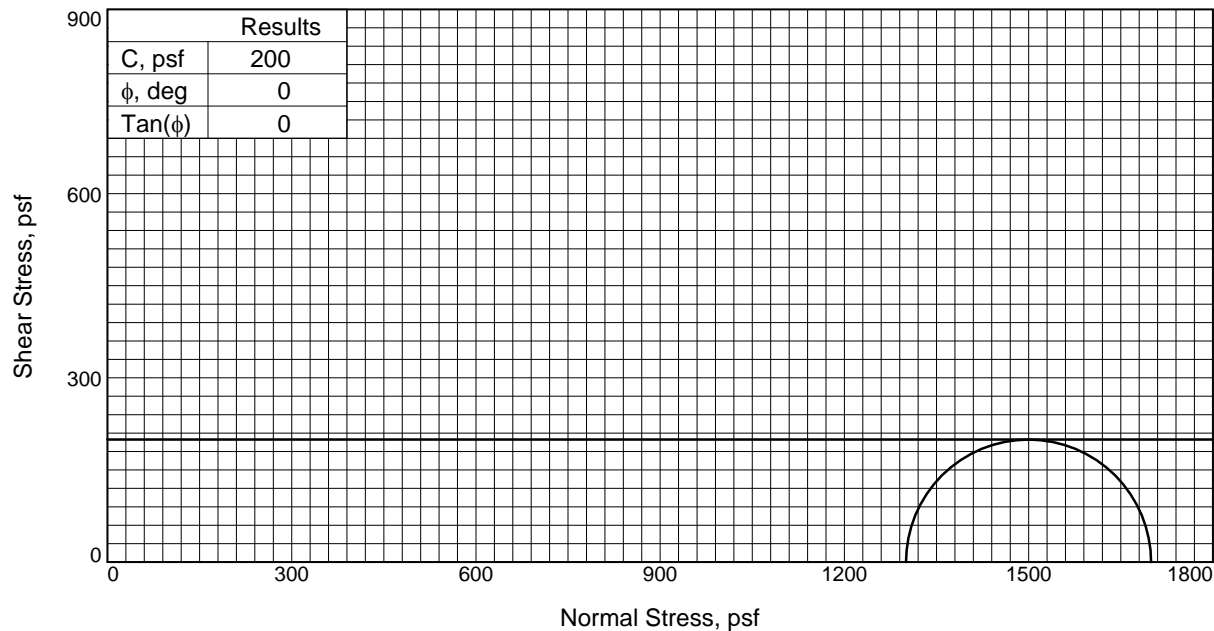
**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** T-2      **Depth:** 17      **Sample Number:** 9B

**Project No.:** 24762      **Figure** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH      **Checked By:** CD & RR



Sample No.	1	
Initial	Water Content, %	37.9
	Dry Density, pcf	83.2
	Saturation, %	99.9
	Void Ratio	1.0253
	Diameter, in.	1.42
At Test	Height, in.	2.88
	Water Content, %	38.0
	Dry Density, pcf	83.2
	Saturation, %	100.0
	Void Ratio	1.0253
	Diameter, in.	1.42
	Height, in.	2.88
	Strain rate, %/min.	1.00
	Back Pressure, psi	0.00
	Cell Pressure, psi	9.03
Fail. Stress, psf	399	
Strain, %	14.8	
Ult. Stress, psf	399	
Strain, %	14.8	
$\sigma_1$ Failure, psf	1699	
$\sigma_3$ Failure, psf	1300	

**Type of Test:**

Unconsolidated Undrained

**Sample Type:** UNDISTURBED

**Description:** W, v<sub>so</sub> g LN CL W/ SA (fi) (CL)

LL= NP

PI= NP

Assumed Specific Gravity= 2.70

Remarks: TORVANE = 0.050 TSF

**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH

**Source of Sample:** T-2      **Depth:** 24

**Sample Number:** 11B

**Proj. No.:** 24762

**Date Sampled:** 6/7/22

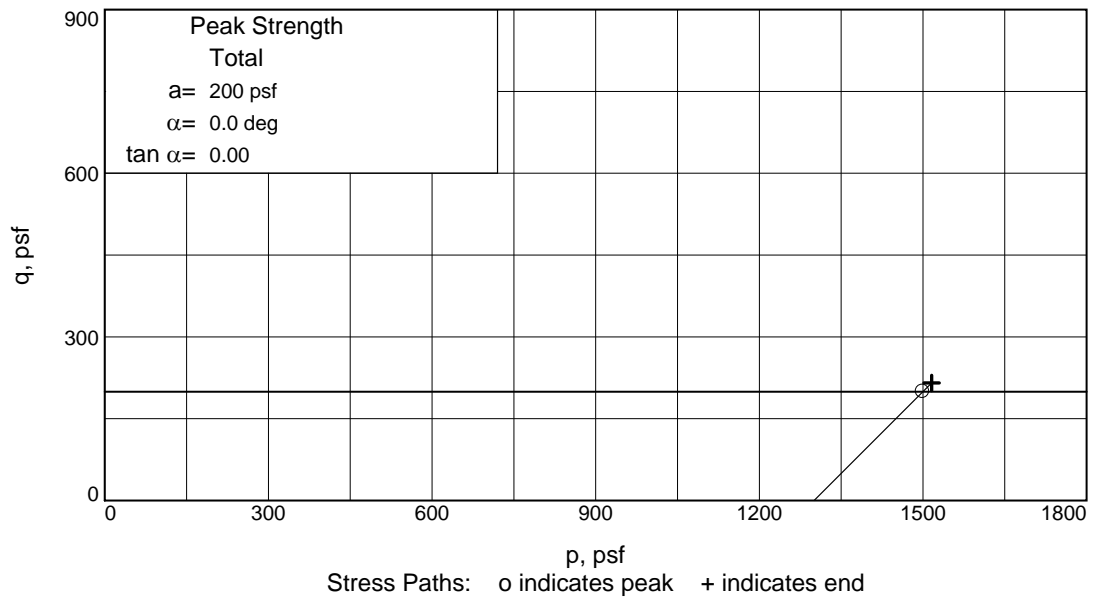
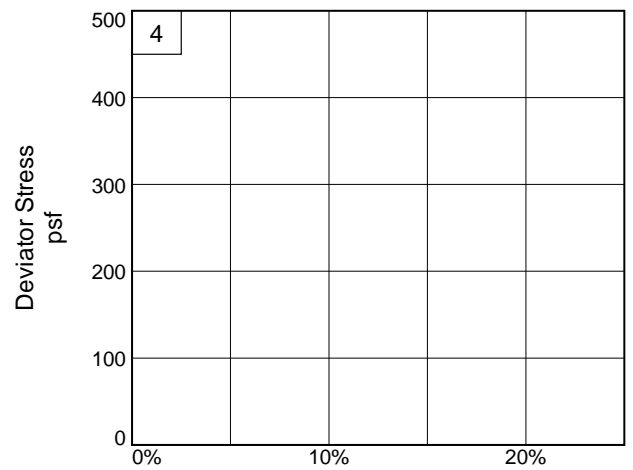
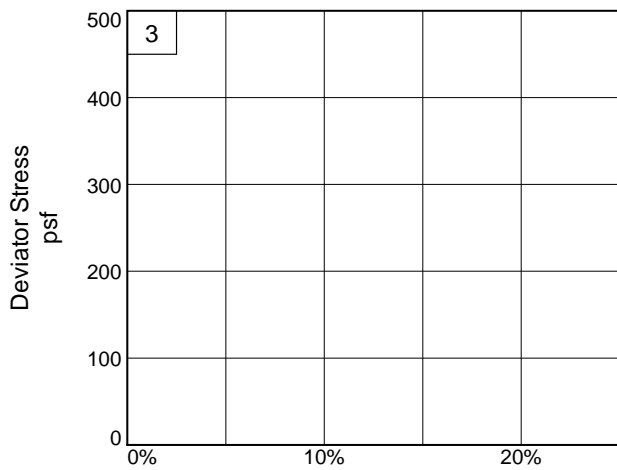
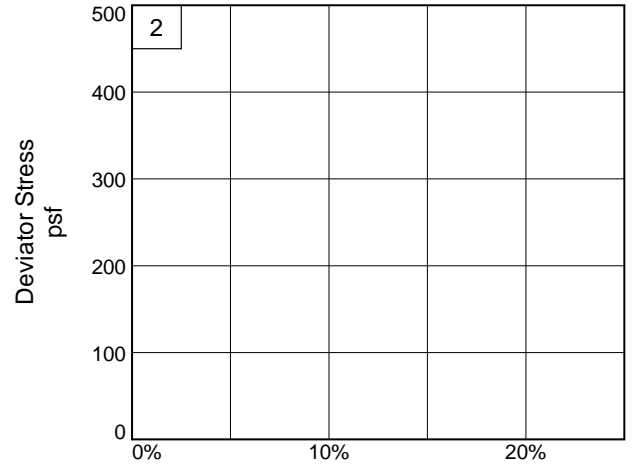
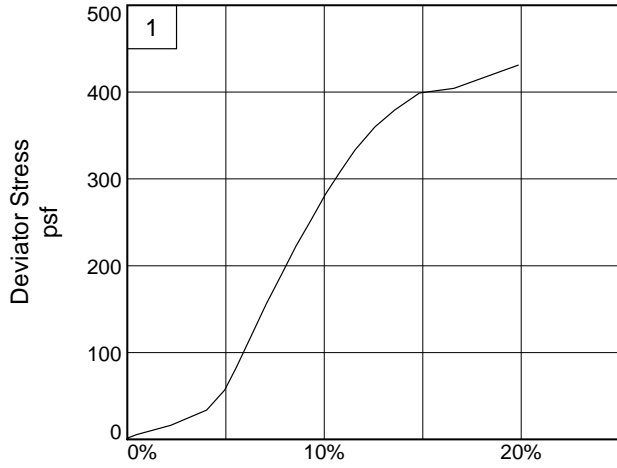


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SINCE 1946

Figure ASTM D2850

Tested By: BH

Checked By: CD & RR



**Client:** STATE OF LOUISIANA, OFFICE OF COASTAL PROTECTION AND RESTORATION AUTHORITY, BATON ROUGE, LOUISIANA

**Project:** LOUISIANA, STATE OF - COASTAL PROTECTION AND RESTORATION AUTHORITY, NORTH DELACROIX MARSH CREEK

**Source of Sample:** T-2      **Depth:** 24      **Sample Number:** 11B

**Project No.:** 24762      **Figure:** ASTM D2850

**Eustis Engineering L.L.C.**

**Tested By:** BH      **Checked By:** CD & RR

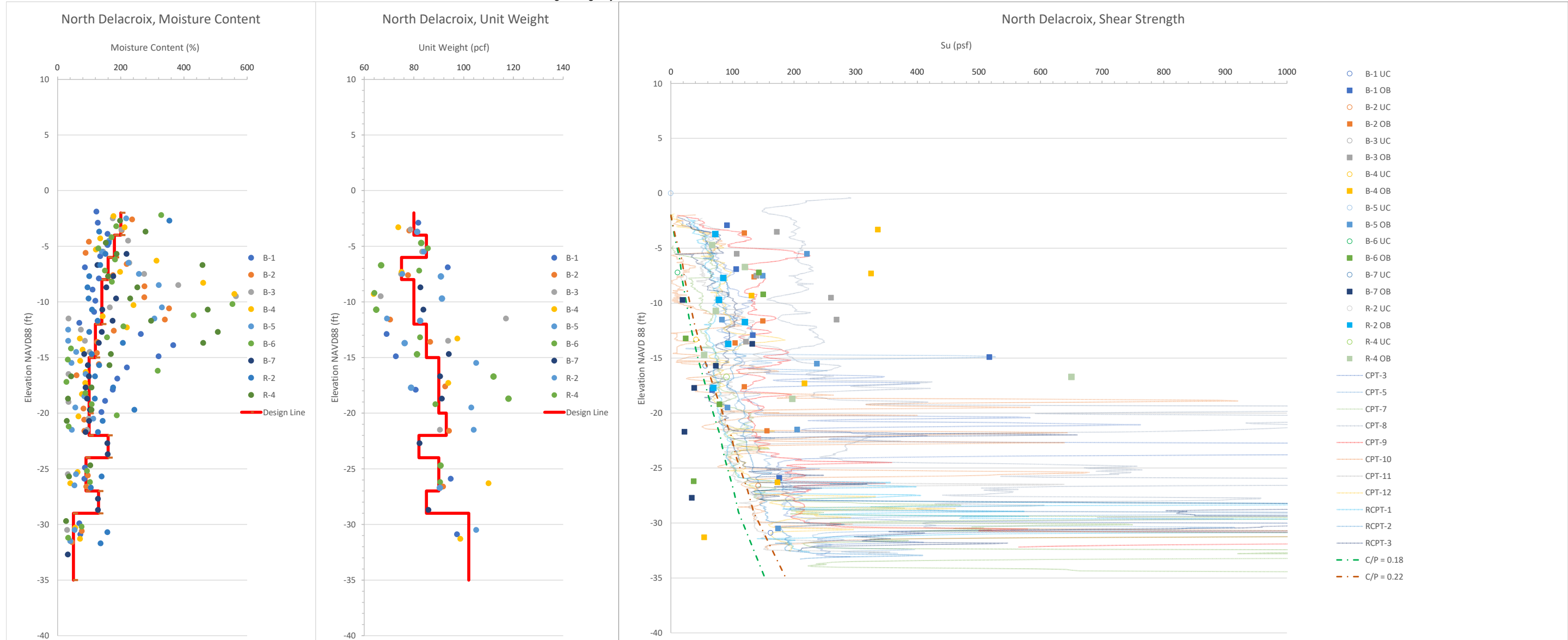
## APPENDIX X



State of Louisiana  
Coastal Protection and Restoration Authority  
North Delacroix Marsh Creation Project  
Lake Amedee Borrow Area  
Eustis Engineering Project No. 24762

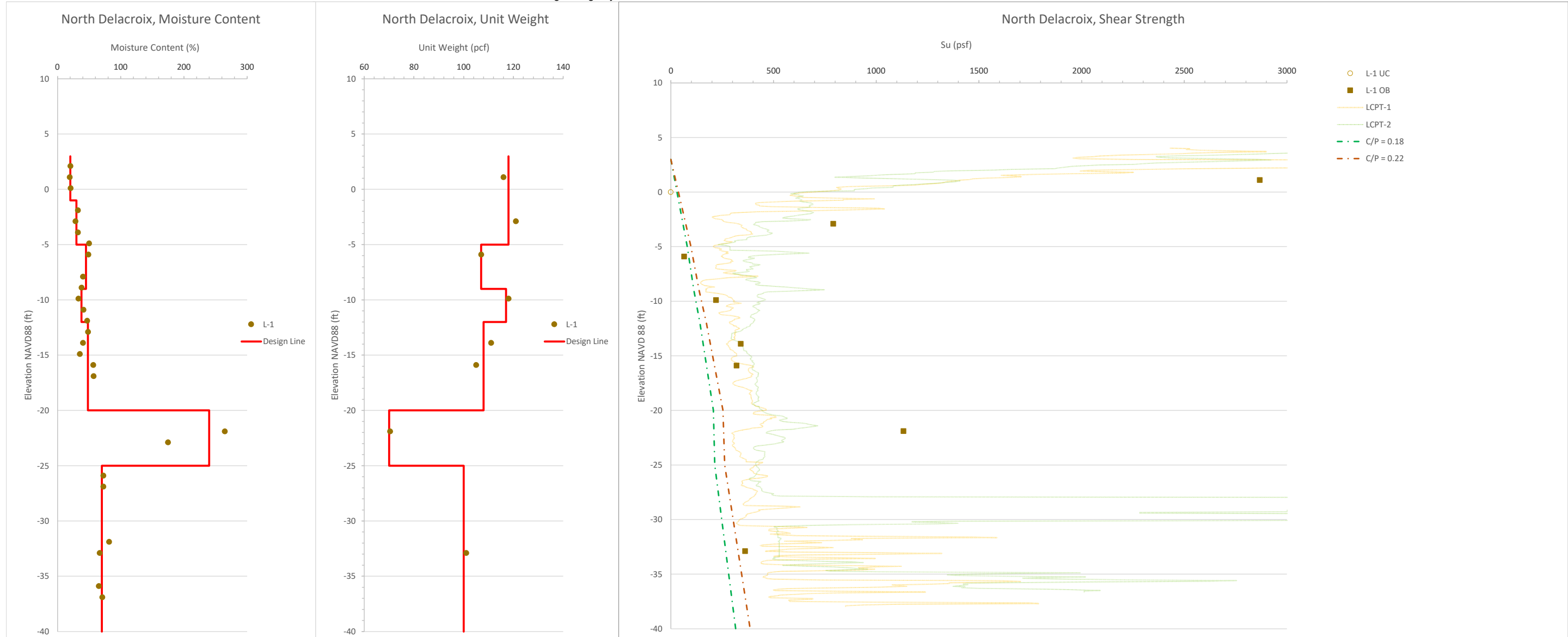








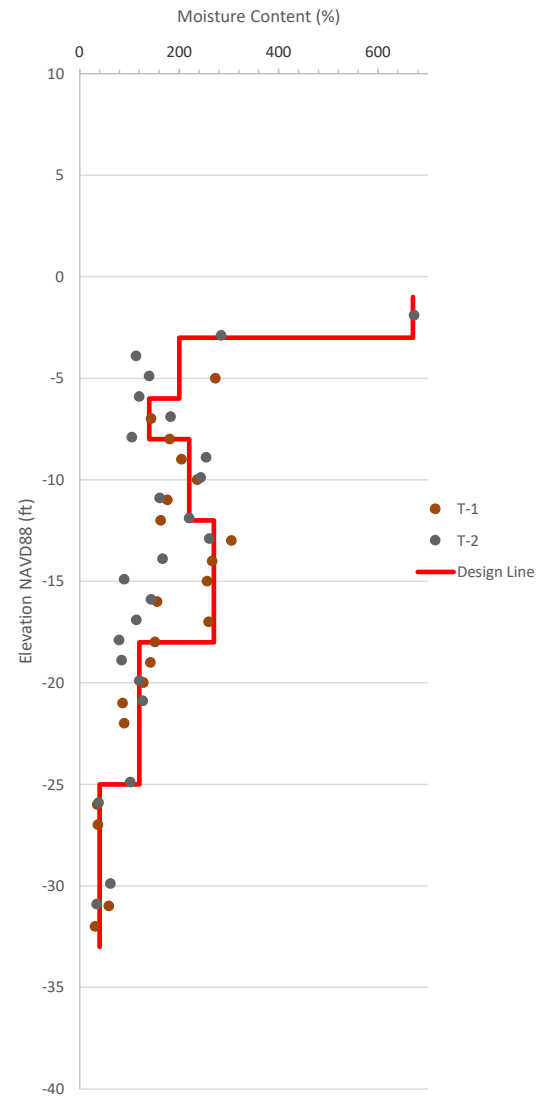
State of Louisiana  
Coastal Protection and Restoration Authority  
North Delacroix Marsh Creation Project  
Levee Area  
Eustis Engineering Project No. 24762



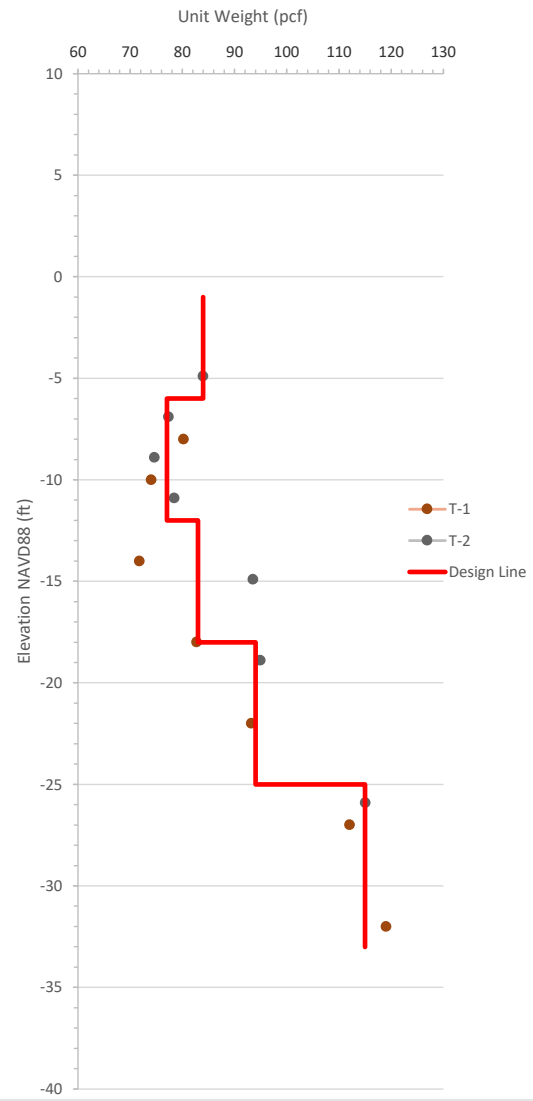


State of Louisiana  
Coastal Protection and Restoration Authority  
North Delacroix Marsh Creation Project  
Earthen Terraces Area  
Eustis Engineering Project No. 24762

North Delacroix, Moisture Content



North Delacroix, Unit Weight



North Delacroix, Shear Strength

