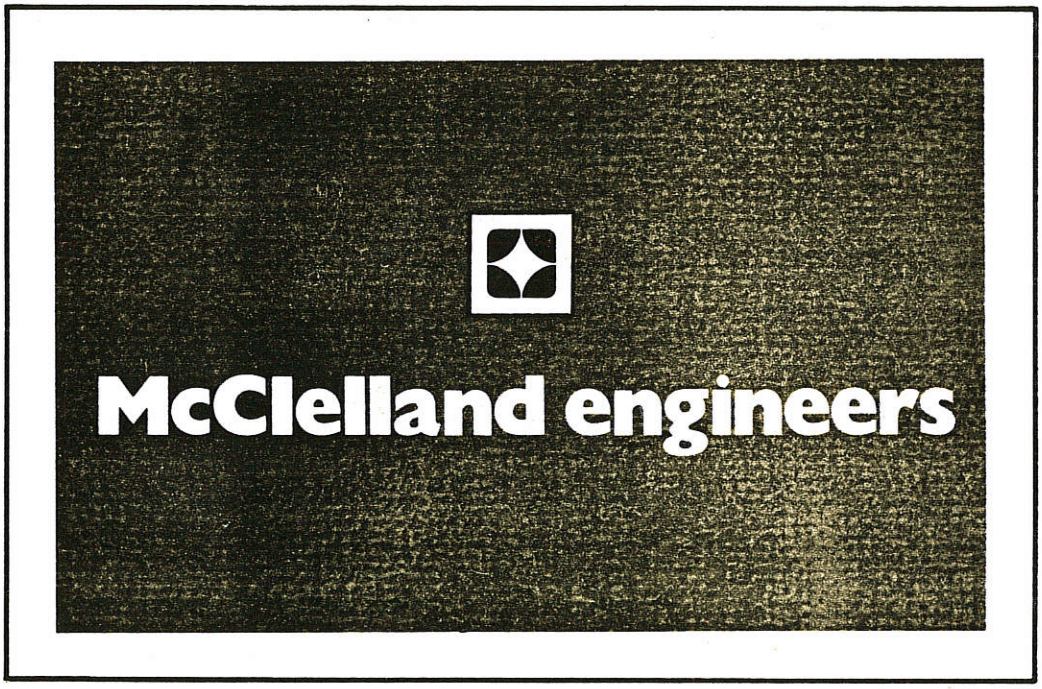
VOLUME IIA
GEOTECHNICAL DATA REPORT
VIBRACORE LOGS
ISLES DERNIERES STABILIZATION PROJECT
STATE PROJECT NO. 750-55-01
TERREBONNE PARISH, LOUISIANA

REPORT TO

J. WAYNE PLAISANCE, INC./T. BAKER SMITH & SON, INC.
HOUMA, LOUISIANA



VOLUME IIa
GEOTECHNICAL DATA REPORT
VIBRACORE LOGS
ISLES DERNIERES STABILIZATION PROJECT
STATE PROJECT NO. 750-55-01
TERREBONNE PARISH, LOUISIANA

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R e p o r t

t o

J. WAYNE PLAISANCE, INC./T. BAKER SMITH & SON, INC.

Houma, Louisiana

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b y

M c C L E L L A N D E N G I N E E R S, I N C.
Geoscience Consultants
Westlake, Louisiana

December 1987

McClelland engineers

Report No. 1087-1328
Volume IIa
December 23, 1987

J. WAYNE PLAISANCE, INC./T. BAKER SMITH & SON, INC.
550 South Van
Houma, Louisiana 70361

Attention: Mr. Marc Rogers, P.E., Project Manager

Geotechnical Data Report
Vibracore Logs
Isles Dernieres Stabilization Project
State Project No. 750-55-01
Terrebonne Parish, Louisiana

Mr. Rogers, we are pleased to submit Volume IIa, of a three-volume report, for the geotechnical services performed for the proposed Isles Dernieres Beach Stabilization Project. This work was authorized in writing by Mr. Rogers on April 7, 1987, and our services were performed in general accordance with the signed agreement dated February 16, 1987. During the project, minor changes to the scope of work and method of data presentation were made in order to address the concerns of the design professionals involved with this project and as a result of the encountered soil conditions.

Volume II, submitted under separate cover, describes the laboratory testing procedures and explains our method of data presentation for the proposed borrow areas. Volume IIa presents the log of borings for the vibracores that were obtained by Ocean Surveys, Inc. The data shown on the logs are based on our laboratory activities. Volumes IIb and IIc contain the laboratory data for the borrow areas, and they will be submitted separately. Volume I contains information from the three islands; Volume III is our Geotechnical Interpretive Report. These documents will also be submitted as separate documents. At various times during this project, we provided preliminary findings to the design team members. The information in the above referenced reports supersedes and replaces all previous data.

Mr. Rogers, we appreciate the opportunity to be of service to you and the design team on this initial phase of this very important study. We look forward to working with you on later phases of the study. After you receive this report, we will call you to answer your questions.

Sincerely,
McCLELLAND ENGINEERS, INC.

Andrew L. Shafer
Project Engineer

David E. Lourie, P.E.
Division Manager

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Copies Submitted: (6)

CONTENTS

EXECUTIVE SUMMARY

A reconnaissance study was conducted as part of a comprehensive study for the proposed beach stabilization project for Isles Dernieres. McClelland Engineers performed field and laboratory studies on the three-island segments. A field investigation program was performed by Ocean Surveys, Inc., in the proposed borrow source areas north of Isles Dernieres. They used vibracoring methods to explore seafloor conditions to about 20-ft penetration. The samples obtained from the vibracoring were submitted to McClelland for laboratory testing.

The results of our involvement in this study are presented in three volumes. Volume IIa, the Geotechnical Data Report - Vibracore Logs, is presented here. Volume II, submitted under separate cover, contains a complete description of our laboratory procedures and method of data presentation. It also includes an overall plan of the proposed borrow areas showing the vibracore locations. Laboratory data from the borrow area soils are presented in Volumes IIb and IIc. Volume I contains information from the islands. Volume III, the Geotechnical Interpretive Report, also presented under separate cover, provides geotechnical recommendations for preliminary design of the beach restoration program.

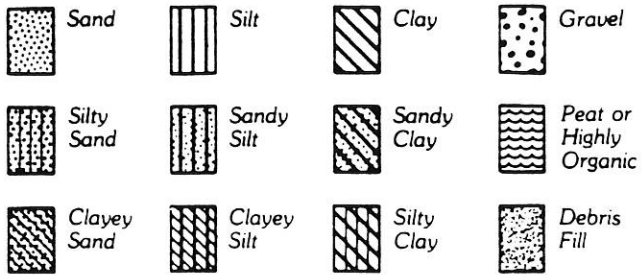
The purpose of this study was to develop site-specific preliminary geotechnical information in the proposed borrow areas north of the islands and on the island segments. It should be recognized that while significant portions of the design concepts can be finalized using the information presented here, optimization of design alternatives requires additional study. To accomplish the purpose of this study, 256 vibracores were obtained and delivered to a dock in Cocodrie, Louisiana. They were then transported in the cores to our laboratory. Each core was logged in on arrival using the sample designation assigned to it by Ocean Surveys, Inc., and it was stored in a temperature controlled environment. At the time of extrusion, each core was measured and then it was split longitudinally and the soil materials were visually classified. Classifications included color, soil type, and consistency. Furthermore, we noted the presence and location of inclusions such as shells, wood, etc. Jar samples of representative material types were obtained from each core. At various times during the project, unused portions of the cores were packaged and given to the Louisiana Geological Survey and Louisiana State University.

Laboratory testing was performed on selected samples to evaluate pertinent engineering properties. Soil testing consisted of mechanical grain size analysis, hydrometer analysis, liquid and plastic limit tests, water contents, remolded miniature vane tests, standard Proctor density tests, and maximum-minimum density determinations.

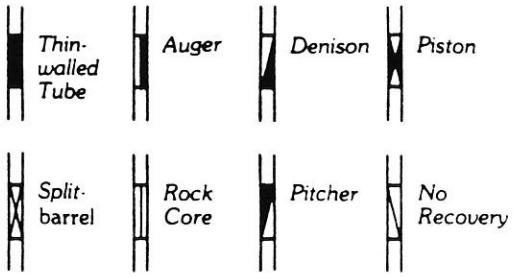
This data report presents the vibracore logs which include portions of the laboratory data. Also included is a key to the terms used on the logs.

TERMS AND SYMBOLS USED ON BORING LOGS

SOIL TYPES

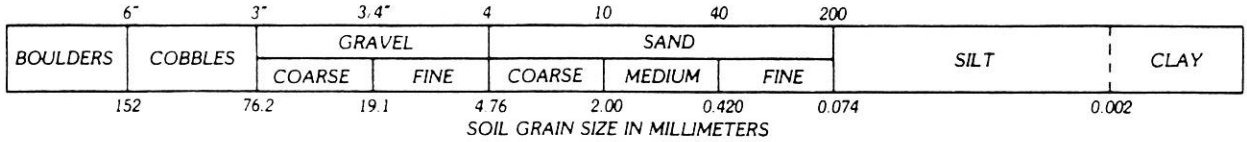


SAMPLER TYPES



SOIL GRAIN SIZE

U.S. STANDARD SIEVE



SOIL GRAIN SIZE IN MILLIMETERS

STRENGTH OF COHESIVE SOILS [1]

Consistency	Undrained Shear Strength, Kips Per Sq Ft
Very Soft	less than 0.25
Soft	0.25 to 0.50
Firm	0.50 to 1.00
Stiff	1.00 to 2.00
Very Stiff	2.00 to 4.00
Hard	greater than 4.00

DENSITY OF GRANULAR SOILS [2,3]

Descriptive Term	*Relative Density, %
Very Loose	less than 15
Loose	15 to 35
Medium Dense	35 to 65
Dense	65 to 85
Very Dense	greater than 85

*Estimated from sampler driving record

SPLIT-BARREL SAMPLER DRIVING RECORD

Blows Per Foot	Description
25	25 blows drove sampler 12 inches, after initial 6 inches of seating.
50/7"	50 blows drove sampler 7 inches, after initial 6 inches of seating.
Ref/3"	50 blows drove sampler 3 inches during initial 6-inch seating interval.

Note : To avoid damage to sampling tools, driving is limited to 50 blows during or after seating interval.

SOIL STRUCTURE [1]

Slickensided	Having planes of weakness that appear slick and glossy. The degree of slickensidedness depends upon the spacing of slickensides and the ease of breaking along these planes.
Fissured	Containing shrinkage or relief cracks, often filled with fine sand or silt; usually more or less vertical.
Pocket	Inclusion of material of different texture that is smaller than the diameter of the sample.
Parting	Inclusion less than 1/8 inch thick extending through the sample.
Seam	Inclusion 1/8 inch to 3 inches thick extending through the sample.
Layer	Inclusion greater than 3 inches thick extending through the sample.
Laminated	Soil sample composed of alternating partings or seams of different soil type.
Interlayered	Soil sample composed of alternating layers of different soil type.
Intermixed	Soil sample composed of pockets of different soil type and layered or laminated structure is not evident.
Calcareous	Having appreciable quantities of carbonate.

REFERENCES :

(1) ASTM D 2488
(2) ASCE Manual 56 (1976)
(3) ASTM D 2049

Information on each boring log is a compilation of subsurface conditions and soil or rock classifications obtained from the field as well as from laboratory testing of samples. Strata have been interpreted by commonly accepted procedures. The stratum lines on the logs may be transitional and approximate in nature. Water level measurements refer only to those observed at the times and places indicated, and may vary with time, geologic condition or construction activity.

LOG OF BORING NO. 1

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Olive gray silty fine sand with shell fragments						
5	■			- slightly clayey with clay pockets below 4.5'						9*
	■									24*
10	■			Very soft to soft olive gray clay with sand seams, partings, and pockets and shell fragments						
15	■									
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 2

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Very soft to soft olive gray clay with sand seams and shell fragments		73				50**
5	■			Olive gray silty fine sand slightly clayey with shell fragments and clay pockets						51**
10	■			Very soft to soft olive gray clay slightly silty and sandy with shell fragments and sand seams		0.06	54		51	24
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 15'

McCLELLAND ENGINEERS

LOG OF BORING NO. 4

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with shell fragments and clay pockets						45**
5				Olive gray sandy silt, slightly clayey with organics - with sand layer below 5'		41				66**
				Very soft to soft olive gray silty clay with shell fragments and sand seams, partings, and pockets		56				45**
10										
15				Very soft to soft olive gray clay with shell fragments and sand partings, seams, and pockets						
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 5

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Dark gray silty fine sand with shell fragments and clay pockets						14*
				- light brown below 3' to 3.5'					7*	
5				- olive gray, gray below 3.5'						
				- with clay seams below 7.5'						24*
10										35*
				Olive gray clayey silt with shell fragments, and sand seams, partings and pockets						96**
15						79				
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 6

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Olive gray fine sand with shell fragments						12*
	■									11*
	■									10*
5				- silty below 5'						
	■									20*
	■									22*
10				Olive gray clayey silt with sand pockets and shell fragments						96**
	■			Very soft to soft olive gray silty clay with sand seams and shell fragments		48				
	■				0.08	49		49	22	
15						77				
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 7

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with shell fragments - silty below 3'						8*
										27*
5										
										24*
10				Soft to very soft olive gray silty clay with shell fragments, and sand seams, partings, and pockets						
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 8

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive gray silty fine sand with shell fragments						16*
5	■			Very soft to soft olive gray silty clay with shell fragments, silt seams, and sand seams, partings, and pockets		51				
10	■									
15	■					69				
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 9

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Olive gray silty fine sand slightly clayey with shell fragments						47**
5						75				35*
										56**
10				Very soft to soft olive gray silty clay slightly sandy with shell fragments, and sand seams, partings, and pockets						
15						79				
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ▮ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 10

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Olive gray silty fine sand						27*
	■									38*
5	■			Very soft to soft olive gray silty clay with shell fragments, and sand pockets, seams, and partings		77				
10	■			Olive gray silty fine sand with shell fragments and clay pockets						27*
15	■			Very soft to soft olive gray silty clay with shell fragments, and sand seams, pockets, and partings - with sand layer 13.7' to 14'						
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 11

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive gray silty fine sand with shell fragments		29				15* 30*
5	■			Very soft to soft olive gray silty clay with shell fragments, and sand seams, partings, and pockets						
10	■					73				
15	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 12

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with shell fragments						22*
5				Olive gray sandy silt, slightly clayey with shell fragments						63**
10				Very soft to soft olive gray silty clay with shell fragments, and sand seams, pockets, and partings	0.06	55 65		37	19	
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ▮ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 15'

McCLELLAND ENGINEERS

LOG OF BORING NO. 13

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)		Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
				Olive gray clayey silt with sand pockets and shell fragments						82**
5				Olive gray silty fine sand with shell fragments						27*
10				Very soft to soft olive gray clay with sand layers and shell fragments - slightly sandy to 10'		52				
15				- with sand layer 14.5' to 15'	0.07	81 59		73	50	
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 14-A

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive gray silty fine sand with shell fragments						
5	■			- with silty clay layer 1.2' to 1.7'						48*
				Very soft to soft olive gray clay with sand seams and pockets						
10	■			Olive gray sand with shell fragments		57				10*
	■			- silty to 13.7'						
	■			- clay layer at 13.7'						44*
15	■			- clayey below 14'		58				
	■			Very soft to soft olive gray clay with shell fragments, and sand pockets, seams, and partings						
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 14-B

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with shell fragments - silty to 3' and below 7'		33				49** 34* 10* 11* 22*
5										
10				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets - with sand layer 11' to 11.5' - with silt seams and pockets below 13'		53				77**
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 16

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand, slightly clayey						57**
				Olive gray sandy silt, slightly clayey						66**
				Olive gray silty fine sand with shell fragments						21*
5				Very soft to soft olive gray clay with shell fragments and sand and silt seams - with sand layer 12.2' to 12.7'		49				
10										
15						69				
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 17

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray clayey silt with shell fragments				32	5	
5				Very soft to soft olive gray clay with shell fragments and sand seams, partings, and pockets		46				
10										
15						79				
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 18

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive gray clayey sand with shell fragments						13*
	■			Olive gray silty fine sand with shell fragments						20*
5	■					24				38*
	■									29*
10	■			Very soft to soft olive gray clay with shell fragments and sand seams, partings, and pockets		64				
15	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 19

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with shell fragments - with sandy clay layer 1' to 2'						18* 45* 53**
5										
10				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 20

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Dark and olive gray sandy silt, clayey						59**
										72**
5				Olive gray silty fine sand with shell fragments						56**
10				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
15						80				
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 21

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
5	■			Olive gray clayey silt to silty clay slightly sandy with shell fragments, mica, and organics				36	13	82** 80**
10	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		43				
15	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 22

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand, slightly clayey						14* 45**
5				Olive gray sandy silt, slightly clayey with shell fragments and clay pockets						68**
10										64**
15				Very soft to soft olive gray clay with shell fragments, and sand seams and pockets		77				
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 23

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)		Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
				Olive gray silty fine sand with shell fragments						25* 38*
5				Olive gray sandy silt - with sand layer 6' to 7' - clayey below 7'						67** 32* 83**
10				Very soft to soft olive gray clay with shell fragments, silt pockets, and sand seams and partings		71				
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ▮ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 24

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)		Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
				Very soft olive gray clay slightly sandy - with silty fine sand layer 1' to 1.5' - silty below 2.5'						14*
5				Olive gray silty fine sand						19*
				Very soft to soft olive gray clay with shell fragments and sand seams - with silty sand layer 11' to 12' and below 16.7'		68				50*
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 25

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with shell fragments - with clay seams below 1.5'						23*
5										44*
				Very soft to soft olive gray clay with shell fragments and sand seams						
10										
15					0.06	51		68	41	
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 26

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Very soft to soft olive gray clay with shell fragments - silty to 1' - slightly sandy below 1'		38				
5	■			Very soft to soft olive gray clay with sand seams, pockets, and partings		50				
10	■									
15	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 27

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with shell fragments - with sandy clay layer to 0.5'						33*
5				Very soft to soft olive gray clay with shell fragments, and sand seams and pockets		52				
10						79				
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 28

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive gray silty fine sand, slightly clayey with shell fragments						41**
	■									40**
	■									33*
5										
	■									44*
	■			Very soft to soft olive gray clay with shell fragments, and sand seams and pockets						
10	■					66				
	■									
15	■				0.08	74		76	46	
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 29

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand, slightly clay with shell fragments						34**
5				Olive gray sandy silt, slightly clayey with shell fragments						68**
10				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 30

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive gray sandy silt, slightly clayey with shell fragments		32				61**
5	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10	■									
15	■			- with silty fine sand layer 14' to 15.5'						49**
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 31

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Very soft to soft olive gray clay, slightly silty with shell fragments, and sand seams, pockets, and partings - with sand layer to 2'						20*
	■									6*
5	■									
10	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets - with sandy silt layer 9' to 10'						55*
15	■							49	30	
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 34

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Olive gray silty fine sand with shell fragments - with clay layer to 1'						19*
5										33*
10				Very soft to soft olive gray clay with shell fragments, and sand seams, pockets, and partings		54				
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 35

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with shell fragments						23*
										30*
5				- clayey below 6'						21*
										53**
10				Very soft to soft olive gray clay with shell fragments, and sand seams and layers	0.04	59		65	41	
						73				
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 36

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with shell fragments						16*
										16*
5				- clayey silt layer 6' to 8'						24*
						51				
10				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 41

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray clayey sand						18*
										26**
				- silty below 2'						30*
5										50**
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets	0.05	62		57	37	
10						71				
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 42

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)		Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
5				Olive gray clayey sand with shell fragments						16* 35** 22*
10				Very soft to soft olive gray clay with shell fragments, and sand layers, seams, partings and pockets		66				
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 43-A

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Olive gray clayey silt with shell fragments, sand seams, and clay pockets		66				
5										59**
10	■									
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 10'

McCLELLAND ENGINEERS

LOG OF BORING NO. 43-B

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Olive gray silty fine sand with silt pockets						20*
5	■									23*
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 44

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand, slightly clayey with shell fragments						13* 43** 41* 27*
5										
10				Very soft to soft olive gray clay with shell fragments and sand seams.		69		54	33	
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 45

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Olive gray silty fine sand with shell fragments - clayey to 2'						11*
										39**
										35*
5	■									49**
	■			Very soft to soft olive gray clay with shell fragments, and sand seams and partings						
10	■									
	■					80				
15	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 46

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand, slightly clayey with shell fragments						15* 15* 36*
5										
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10										
15					0.06	49		47	28	
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 49

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive silty fine sand, with clay pockets and shell fragments						7* 16*
5				Olive gray sandy silt with clay pockets						73**
10				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
15						59				
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 50

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with shell fragments						14*
5										14*
				Very soft to soft olive gray clay with shell fragments and sand seams						
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 52

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand slightly clayey with shell fragments						40** 30*
5				Olive gray sandy silt with shell fragments						71**
10				Very soft to soft olive gray silty clay with shell fragments, and sand pockets and seams	0.04	49 58		41	25	
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 53

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams and pockets,						12*
5				- with silty fine sand layer 1' to 1.5'						
10						57				
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 54

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive gray silty fine sand, clayey with shell fragments						46**
						43				
				Very soft to soft olive gray clay with shell, fragments, and sand seams, partings, and pockets	0.04	54		54	29	
5										
						79				
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 55

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray clayey sand with shell fragments						28**
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets	0.04	78		68	42	
10						68				
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 56

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Dark gray silty fine sand slightly clayey with shell fragments						44**
						61				
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10				- with sand layer 12' to 12.5'		73				
15					0.06	92		81	53	
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 57

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray clayey sand with shell fragments						16*
5				Olive gray sandy silt, slightly clayey with mica and shell fragments						72**
								22	NP	61**
10				Olive and dark gray clay with shell fragments, and sand seams, partings, and pockets						
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 15'

McCLELLAND ENGINEERS

LOG OF BORING NO. 58

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive and dark gray silty fine sand, slightly clayey, with shell fragments						47**
5				Very soft to soft olive gray clay with shell fragments and sand seams						
10	■									
15	■					76				
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 15'

McCLELLAND ENGINEERS

LOG OF BORING NO. 60

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive and dark gray silty fine sand, slightly clayey, with shell fragments						52**
5				Very soft to soft olive gray clay with shell fragments, and sand seams and pockets		61				
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 61

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive gray silty fine sand, with shell fragments and clay partings						12*
	■									7*
5	■			Olive gray sandy silt with clay and shell fragments						67**
				Very soft to soft olive gray clay with shell fragments, and sand seams and pockets						
10	■					66				
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 13'

McCLELLAND ENGINEERS

LOG OF BORING NO. 62

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand - silt layer below 1'						26** 52**
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		52				
10						82				
15					0.04	76		74	42	
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 63

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Dark gray fine sand with shell fragments - sandy silt layer below 3'						10* 74**
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 64

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand, slightly clayey with shell fragments						40**
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 65

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)		Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
				Olive gray silty fine sand with clay pockets and shell fragments						37**
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						32**
5						65				
10						78				
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 66

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Dark and olive gray fine sand with shell fragments, - silty 1' to 2' - clayey silt layer below 2'						5* 47** 77**
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 67

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay, with shell fragments, and sand seams, partings, and pockets						43**
5										
10						63				
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 15.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 68

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with shell fragments and clay pockets						9* 11*
				Olive gray sandy silt with clay pockets						65**
5										
				Very soft to soft olive gray clay with sand seams, partings, and pockets			58			
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 69

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Very soft to soft olive gray clay with shell fragments						49**
	■			- with sand layer 1' to 1.5'	0.03	61		23	7	
	■			- silty 1.5' to 2.5'						
5				- with sand seams, partings, and pockets below 2.5'						
	■									
	■									
10						86				
	■									
	■									
15										
	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 71

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						38**
5				- with silty fine sand layer to 1'						
10						87				
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 72

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive and dark gray sandy clay with shell fragments	0.03	54		40	21	
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		60				
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ▮ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 73

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with shell fragments - sandy silt layer below 2.5'						8*
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		58				
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 74

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		61				
10						69				
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 75

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets	0.05	44		38	16	32**
5	■			- with clayey sand layer to 1'						
10	■									
15	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 76

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		65				
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 77

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		65				
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 78

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets - silty fine sand layer to 1.5'						40**
5						78				
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ▮ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 79

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Dark gray silty fine sand, slightly clayey with shell fragments						30** 45**
5	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets - with sand layer 7.5' to 8'		70				
10	■									
15	■									
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 80

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)		Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
				Olive gray fine sand with shell fragments - clayey below 2.0						6* 3*
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10					0.09	65		76	44	
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 81

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Dark gray silty fine sand, slightly clayey, with shell fragments						33**
	■									53**
5	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		80				
10	■									
	■									
15	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 82

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray gray clay with shell fragments, and sand seams, partings, and pockets						56**
5				- with silty fine sand to 1.5'			86			
10										
15					0.07	81		92	60	
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 83

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand, slightly clayey with shell fragments						35**
5				Very soft to soft olive gray clay with sand seams, partings, and pockets						
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 15.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 84

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with shell fragments						4*
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets. - sandy to 3'						
10						92				
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 85

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Very soft olive gray clay with shell fragments, and sand seams, partings, and pockets - silty fine sand layer 0.5' to 3.0'						61**
5	■									
	■									
10	■									
	■									
15	■					80				
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 86

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets - slightly sandy to 4.5'		57				
5						79				
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 87

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Dark gray silty fine sand, slightly clayey with shell fragments						36**
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						70**
				- with clayey silt layer 2' to 3'				62	40	
10				- with sand layer 13.5' to 14.0'						
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 88

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft.)	Undrained Shear Strength (Kips / Ft.^{2})	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft.^{2})	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with shell fragments						48**
				Olive gray sandy silt, clayey, with shell fragments						64**
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10						66				
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 89

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand, slightly clayey, with shell fragments						38**
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		62				
10										
						74				
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 90

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with shell fragments and clay pockets						40**
										38**
5				Very soft and soft olive gray clay with sand seams, partings, and pockets						
10										
				- with silty fine sand layer 16' to 17'						
15										8*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 91

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)		Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with shell fragments						49**
5				Very soft to soft olive gray clay with shell fragments, and sand seams, pockets and partings		82				
10										
15					0.05	66		70	46	
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 92

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with shell fragments						
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5				- slightly silty to 5'	0.04	80	70	42		
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 15'

McCLELLAND ENGINEERS

LOG OF BORING NO. 93

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand, slightly clayey with organics						57**
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		64				
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 94

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Dark gray silty fine sand with shell fragments - with sandy silt layer 1' to 2'						43** 69** 15*
5				Very soft to soft olive gray clay with sand seams, partings, and pockets						
10										
15						67				
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 95

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		70				
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 96

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand, slightly clayey with shell fragments						43**
5				Very soft to soft olive gray clay with sand seams, partings, and pockets		71				
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 97

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with sand seams, partings, and pockets						
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 15'

McCLELLAND ENGINEERS

LOG OF BORING NO. 98

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive and dark gray silty fine sand with shell fragments						50**
5				Very soft to soft olive gray clay with sand seams, partings, and pockets.						
10					0.04	58		56	34	
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 99-A

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Very soft to soft olive gray clay with shell fragments, and sand seams partings, and pockets	55					13*
	■			- silty fine sand layer to 0.7'						74**
5	■			- with clayey silt layer						
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 7.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 99-B

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray sandy silt, slightly clayey with shell fragments						
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets - with organic pockets 5' to 6' - with sand layer 9' to 9.5'						
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 13.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 100

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Dark gray silty fine sand with shell fragments						60**
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		63				
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 101

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		89				
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 102

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5					0.03	76		85	56	
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 103

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with sand seams, partings, and pockets		48				
5				- with silt pockets 3.5' to 6'						
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 104

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
						60				
					0.05	56		68	40	
				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						

5
10
15
20
25
30
35
40

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 105

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		54				
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 106

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets - shell layer to 0.3'		72				
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 107

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		70				
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 108

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5	■			- with sand layer 9.0' to 9.5'	0.03	68		66	41	
10	■									
15	■									
20	■									
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 109

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		86				
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 110

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings and pockets		68				
5				- slightly silty to 4'						
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 111

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5	■					70				
10	■									
15	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 112

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5				- with sand layer 7.5' to 8.0'						
						74				
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 113

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
				- with wood at 1.5'						
				- with sand layer 13.5' to 14.0'		86				
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ▮ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 15.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 114

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15					0.03	62		62	36	
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 115-A

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Very soft to soft olive gray clay with sand partings						
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 3'

McCLELLAND ENGINEERS

LOG OF BORING NO. 115-B

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		70				

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 116

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets	0.03	72		69	44	
5										
10										
15										
20						76				
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 117

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15				- with sand layer 17' to 17.5'		47				
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 118

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5						88				
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 119

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		89				
5										
10	■									
15	■				0.10	67		83	53	
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 120

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
				- with wood partings at 14.0'						
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 121

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets	0.03	77		63	41	
5										
10				- with sand layer 13.5' to 14'						
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 122

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		74				
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 123A

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 123B

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments and sand seams, partings, and pockets						
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 124

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments and sand seams, partings, and pockets						
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 125

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		77				
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 126

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15					0.09	72		84	54	
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 127

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft dark gray clay with shell fragments, and sand seams, partings, and pockets						
5				- olive gray below 1.5'						
10										
15					0.08	74		93	63	
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 128

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		67				
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 129

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 130

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5								75	51	
10						76				
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 131

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 132

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5	■					68				
10	■									
15	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 133

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16.5

McCLELLAND ENGINEERS

LOG OF BORING NO. 134

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets	0.03	74		64	38	
						76				

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 135

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft.)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 136

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
						72				
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 137

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15					0.09	61		76	49	
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 138

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 139

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		96				
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 140

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		77				
				Dark gray silty fine sand with clay pockets and shell fragments						

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 141

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft dark gray clay with shell fragments, and sand seams, partings, and pockets - olive gray below 2'				97	64	
5										
10										
15					0.07	77				
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 142

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15				Olive gray clayey silt with shell fragments						94**
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 143

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		58				
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 144

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5				- with wood fragments at 6'		57				
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 145

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		67				
5										
10										
15				Olive gray sandy silt, slightly clayey with shell fragments						
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 146

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings and pockets						
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 147

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5	■					75				
10	■									
15	■			Olive gray sandy silt, slightly clayey, with shell fragments - with clay layers 13' to 13.5', 15.5' to 16', 16.5' to 17', and 17.5' to 18'						
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 148

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10	■				0.04	87		101	62	
15	■									
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 149

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 15.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 150

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets	0.04	69		66	41	
5										
10						68				
15										
				Olive gray sandy silt, clayey, with shell fragments						
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 151

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		79				
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 152

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		74				
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ▮ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 153

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10				- with sand layer 13.5' to 14'		55				
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ▮ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 154

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10					0.06	72		70	45	
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 155

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets.						
5	■									
10	■									
15	■					67				
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 156

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments and sand seams						
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 157

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15						59				
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 158

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 159

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ▮ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 160

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets	0.02	77		57	33	
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 161

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		55				
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 163

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with wood						
				Olive gray fine sand with shell fragments						12*
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		73				
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAN ENGINEERS

LOG OF BORING NO. 164

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments and sand seams						
5				Olive gray sandy silt with clay pockets						74**
10				Olive gray silty sand with clay pockets						6*
15				Very soft to soft olive gray clay with sand seams, partings, and pockets and shell fragments	0.06	59		66	43	
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 165

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		62				
5										
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 166

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments and sand seams						
				Olive gray fine sand with shell fragments						6*
5				Olive gray sandy silt with clay pockets						78**
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 167

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Very soft to soft olive gray clay with sand seams						
	■			Olive gray silty sand with shell fragments						14*
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10	■									
15	■									
20	■									
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 168

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty clay with shell fragments and sand seams	0.02	65		39	19	
5				Olive gray silty fine sands with clay pockets and shell fragments						9*
										34**
10										13*
										2*
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 169

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		48				
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 170

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Olive gray fine sand with shell fragments						1*
				- clay layer at 4'						
5										
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 171

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive gray silty fine sand with clay pockets and shell fragments						22**
5	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets	0.03	58		69	43	
10	■									
	■			Olive gray and dark gray clayey silt with sand pockets and mica						3*
15	■									75**
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 172

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive gray silty fine sand, slightly clayey, with organics		55				57**
										4*
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		52				
10	■									
15	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 173

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5	■									
10	■									
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 10'

McCLELLAND ENGINEERS

LOG OF BORING NO. 174

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with clay pockets						7*
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		55				
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 175-A

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 10'

McCLELLAND ENGINEERS

LOG OF BORING NO. 175-B

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray and dark gray sandy silt with clay pockets						4*
5										67**
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 176

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with clay pockets and organics						3* 60**
5				Very soft to soft olive gray clay with sand seams, partings, and pockets						
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 177

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Very soft to soft olive gray clay with shell fragments and sand seams - with sand layer to 1'	0.03	73		63	42	2*
5	■			Olive gray fine sand with shell fragments						7* 5*
10	■			Very soft to soft olive gray clay with shell fragments and sand seams, partings, and pockets						
15	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 178

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets - with sand layer to 1'						3*
5						59				
10					0.05	67		66	35	
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 179

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray and dark gray silty fine sand with clay pockets and shell fragments						1*
5										4*
										56**
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 180

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)		Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets - with a sand layer 4' to 5'						4*
20				Olive gray silty fine sand, slightly clayey with shell fragments						60**

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 181

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive gray and dark gray silty fine sand, slightly clayey, with shell fragments						42**
	■			Olive gray clayey silt with sand pockets						
5	■									73**
	■			Olive gray fine sand with shell fragments						
	■									7*
10				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
	■									
15	■									
	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 182

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with clay seams and pockets						8*
5										2*
										2*
10				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
15					0.09	67		90	55	
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 183

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray and dark gray silty fine sand with clay pockets						2*
5										4*
										44**
10										1*
15										0*
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 184

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Dark gray silty fine sand with clay pockets						32**
5										
10										
15										0*
										0*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 185

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets - with fine sand layer to 1'						9*
5					0.04	95		85	57	
10										
15						49				
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 186

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray sandy silt with clay pockets and mica						
5										72**
10										3*
										2*
15				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 187

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5				- with sand layer at 7' to 8'						5*
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 15'

McCLELLAND ENGINEERS

LOG OF BORING NO. 162

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray clayey silt with sand seams, partings, and pockets		53				86**
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 189

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with clay pockets						5*
5										3*
10										2*
15										4*
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 190

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)		Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
				Olive gray fine sand with shell fragments						1*
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10					0.04	74		75	49	
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 191

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand, clayey with shell fragments						58**
										9*
5										3*
										1*
10										2*
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 14.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 192

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray sandy silt with clay pockets and organics						78**
5				Olive gray silty fine sand with clay seams and shell fragments						35**
10										1*
										1*
15				Very soft to soft olive gray clay with sand seams and shell fragments						
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ▮ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5

McCLELLAND ENGINEERS

LOG OF BORING NO. 193

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5				Olive gray silty fine sand						6*
				- clay layer 6' to 7'						
10										2*
										1*
15				Very soft to soft olive gray clay with sand seams and shell fragments						
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 194

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive gray silty fine sand, slightly clayey, with shell fragments						32**
5	■			Very soft to soft olive gray clay - with shell layer at 7'	0.04	91		82	51	
10	■			Olive gray fine sand with shell fragments						4*
15	■			Olive gray sandy silt, slightly clayey, with shell fragments and mica						67**
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 195

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with shell fragments						1* 2*
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ▮ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 196

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Dark gray silty fine sand with clay pockets and organics						50**
										4*
5										5*
10										2*
15										13*
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 197

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with clay pockets and shell fragments					4*	
5				Very soft to soft olive gray clay with organic seams and sand pockets						
				Olive gray silty fine sand with shell fragments and sand seams						1*
10										12*
15				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 198

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)		Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
0	■			Olive gray and dark gray silt with clay pockets and shell fragments						
5	■									98**
10	■			- shell layer at 12'						
15	■			Very soft to soft olive gray silty clay with sand seams and shell fragments	0.05	36		32	16	
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 199

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray sandy silt with clay pockets and shell fragments						69**
5				Olive gray fine sand with shell fragments						1*
10										1*
										9*
15										5*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 200

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)		Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
	■			Very soft to soft olive gray clay with shell fragments						
5	■			Olive gray fine sand with shell fragments						2*
	■									1*
10	■			- with clay pockets below 11.5'						11*
15	■									5*
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 201

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with shell fragments - clay layer to 1'						3*
5										1*
10										2*
15										12*
				Very soft to soft olive gray silty clay with sand pockets and shell fragments						64**
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 202

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray sandy clay with shell fragments						
5										
				Olive gray fine sand with shell fragments and sand pockets						1*
10										
15				Very soft to soft dark gray silty clay with sand pockets						74**
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 203

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray clayey silt with mica						83**
5				Olive gray silty fine sand with mica						35** 48*
10				Olive gray fine sand with shell fragments						11* 11*
15										4* 2*
20										5*
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 204

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with clay pockets and shell fragments						5*
5										0*
										1*
10				- silty below 10'						22**
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 205

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments						
5	■									
10	■			Olive gray fine sand with shell fragments						3*
	■									1*
15	■			Very soft to soft olive gray and dark gray clay with sand pockets						60**
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 206

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with shell fragments - clay layer to 1.5'	0.05	215		113	78	3*
5										1*
10										2*
15										4*
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 207

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5	■									
	■			Olive gray fine sand with shell fragments and clay pockets						8*
10	■									9*
	■									7*
15	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 208

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Very soft to soft olive gray clay with organics and shell fragments						
5	■			Olive gray fine sand with clay pockets						3*
										1*
	■									2*
10										
	■									2*
				- clayey at 14'						45**
15	■									
										7*
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 209

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings and pockets						
5	■			Olive gray fine sand with shell fragments						2*
10	■									1*
15	■									6*
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 210

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments and sand pockets						
5										
				Olive gray silty fine sand with mica						
10										47**
				Very soft to soft olive gray silty clay with sand pockets						
15					0.11	69		75	44	61**
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 211

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray clayey silt with mica						
5										98**
										96**
				Olive gray fine sand with shell fragments and clay pockets						
10										14*
15										3*
										1*
20										6*
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 212

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Olive gray clayey silt with mica						
5				- with sand seams below 6.5'						93**
10										
15				Olive gray fine sand with clay seams and shell fragments						2*
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 213

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand, slightly clayey with mica						44*
5										2*
				Very soft to soft olive gray sandy clay with sand pockets						67**
10				Olive gray and dark gray silty fine sand with clay pockets and shell fragments - with silty clay layer at 13.5'						47** 70**
15				Olive gray fine sand with shell fragments						5*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 214

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray, and dark gray sandy clay with silt pockets and shell fragments						
5										
10										61**
15					0.08	62		64	40	
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 215

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray clayey sand, slightly silty with shell fragments and sandy silt to 1.5'						68**
										32**
5										
10										41*
15				- with dark gray fine sand below 17'						4*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 216

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments and sand seams and pockets						
5				Olive gray and dark gray fine sand with clay pockets and shell fragments						35**
10										12*
										46**
15										16*
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 217

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets				55	30	
5										
				- with sand layer 9' to 10'						
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 218

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand - with clay layer to 1'						2*
5										6*
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10										
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 219

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray clayey fine sand with shell fragments						
5										6*
										53**
10										51**
										2*
										4*
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 220

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray clayey silt with mica						98**
5										
10				Olive gray and dark gray silty fine sand with shell fragments and clay pockets						51**
										10*
15										10*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 221

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments and sand seams						
5	■									
				Olive gray silty fine sand with shell fragments and clay pockets						30*
10	■									2*
15	■									2*
20	■									
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 222

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray clayey silt, slightly sandy with mica						87**
5				Olive gray silty fine sand with clay pockets						13*
										6*
10										45**
										9*
15										1*
				Very soft to soft olive gray sandy clay with shell fragments						68**
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 223

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
				Olive gray and dark gray fine sand with clay pockets						25**
10				- with clay layer 10' to 11'	0.05	45		51	33	
										1*
15										3*
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 224

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand						
				- clayey to 2'						55**
				with shell fragments						23**
5										2*
										4*
10				- clay pockets below 10'						41**
										1*
15										4*
										66**
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 226

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with shell fragments and clay pockets						
										11*
5										5*
										65**
10										2*
										45**
15										36**
										3*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ▮ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 227

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with sand seams						
				Olive gray fine sand with shell fragments						14*
5										3*
				Very soft olive gray silty clay with sand pockets						68**
10										
				Olive gray and dark gray silty fine sand with shell fragments						37**
										1*
15										14*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 228

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
				Olive gray silty fine sand with shell fragments and clay pockets						7*
10										1*
										2*
15										51**
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 229

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with organics and shell fragments						52**
										53**
5				Olive gray fine sand with shell fragments						9*
										3*
10										5*
										2*
15										2*
										10*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 230

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)		Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		65				
5				Olive gray fine sand with shell fragments and clay pockets						14*
10										8*
										1*
15										1*
										4*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 231

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets	0.06	67		71	48	
5										
10				Olive gray fine sand with shell fragments and clay pockets						1*
										2*
15										10*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 232

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		60				
5										
10				Olive gray fine sand with shell fragments						1* 5*
15				Very soft to soft olive gray silty clay with sand pockets						75*
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 233

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand with organics and mica						49**
5				Very soft to soft olive gray clay with organics and sandy silt seams and pockets	0.02	64		48	27	56**
10				Olive gray silty fine to fine sand with clay pockets and shell fragments						6*
										28**
15										2*
										0*
20										3*
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 234

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		52				
10				Olive gray fine sand with shell fragments						2*
15				- clay layer 14' to 15'						5*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 235

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10					0.04	75		80	55	
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 236

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		59				
5										
				Olive gray fine sand with shell fragments and clay pockets						2*
10										6*
										1*
15										
										12*
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 237

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray silty clay with shell fragments, sand pockets, and organics		66				
5					0.03	79		69	46	65**
10						49				
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 239A

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)		Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5	■				0.05	41		37	21	
				Olive gray fine sand with shell fragments and clay pockets						2*
10	■									1*
15	■									2*
20	■									
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 239B

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)		Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		59				
5										
10				Olive gray and dark gray fine sand with shell fragments and clay pockets						2*
15										8*
20										8*
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 240

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		51				
5										
10										
				Olive gray fine sand with shell fragments and clay pockets						6*
15										7*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 19'

McCLELLAND ENGINEERS

LOG OF BORING NO. 241

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5						47				
10				Olive gray fine sand with clay pockets and shell fragments						6*
15										1*
										3*
20										36**
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. 242

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Olive gray fine sand with shell fragments and clay pockets - clay layer to 1'		55				
5	■									4*
	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10	■									4*
15	■									
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 243A

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray sandy silt						75*
5										
				Olive gray fine sand with shell fragments and clay pockets						19*
10										
										2*
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. 243B

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets	0.03	89		77	50	
5	■									
	■			Olive gray fine sand with shell fragments and clay seams						2*
										2*
10	■									
	■									3*
	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
15	■									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. 244

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		43				
5	■			Olive gray fine sand with shell fragments and clay pockets						2*
10	■									1*
	■									13*
15	■									4*
	■			Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		60				
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 245

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine to fine sand with shell fragments - clay layer to 1'						49**
5										1*
										1*
10				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
15				Olive gray silty fine sand, slightly clayey						36**
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 246

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments and sand seams, partings, and pockets						
5				- sand layer 7' to 8.5'						10*
10						45				
15				- sand layer 12.5' to 14'						7*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 247

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets - sand layer to 1'						7*
5				Olive gray fine to silty fine sand with clay pockets and shell fragments						32**
10										48**
										3*
15										2*
										12*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 248

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with shell fragments and clay seams - sandy silt layer to 1.5'	0.01	56		35	17	
5										7*
										8*
10										
										6*
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

LOG OF BORING NO. 249

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Olive gray silty fine sand with shell fragments and clay pockets		49				
5										53**
										48*
10				Olive gray sandy silt with clay pockets and shell fragments						64**
15						54				
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ▮ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

PLATE

LOG OF BORING NO. 250

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0	■			Olive gray clayey sand, slightly silty, with shell fragments						
5	■									47**
	■			Olive gray and dark gray silty fine to fine sand with clay pockets and shell fragments						46**
10	■									4*
										1*
15	■					50				
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

LOG OF BORING NO. 251

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets - sand layer 2' to 3'						11*
5										
10										
15						56				
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

PLATE

LOG OF BORING NO. 252

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10	■				0.05	71		72	48	
15	■ **									
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 16'

McCLELLAND ENGINEERS

PLATE

LOG OF BORING NO. 253

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine sand, slightly clayey with shell fragments						47**
5				Olive gray sandy silt, slightly clayey, with shell fragments						76**
10				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		48				
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

PLATE

LOG OF BORING NO. 254

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
5										
10				Olive gray silty fine sand, slightly clayey, with shell fragments						56**
15				Very soft to soft olive gray clay with shell fragments and sand seams, partings, and pockets						
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 16.5'

McCLELLAND ENGINEERS

PLATE

LOG OF BORING NO. 255

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Olive gray silty fine sand with clay pockets						59**
5										64**
10				Very soft to soft olive gray clay with sand seams, partings, and pockets and shell fragments						
15										
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

PLATE

LOG OF BORING NO. 256

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with shell fragments and clay pockets						8*
5				Very soft to soft olive gray clay with sand seams, partings, and pockets and shell fragments						
10						45				
15								61	41	
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18'

McCLELLAND ENGINEERS

PLATE

LOG OF BORING NO. 257

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand with shell fragments and clay pockets						
5	■									34**
10	■									4*
15	■									7*
	■									3*
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. "A"

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray and dark gray silty fine sand with clay pockets and shell fragments						58**
5				- sandy silt below 6.5'						75**
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. "B"

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray fine sand						1*
				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		50				
5										
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. "C"

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)		Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987						
				Dark gray fine sand with shell fragments						5*
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
10				- with sand layer 11.5' to 13'						1*
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS

LOG OF BORING NO. "D"

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft^2)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft^2)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray clayey silt with mica						92**
5				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets		52				
10										
15										
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 18.5'

McCLELLAND ENGINEERS

LOG OF BORING NO. "E"

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
0				Very soft to soft olive gray clay with shell fragments, and sand seams, partings, and pockets						
				- sand layer 2' to 3.5'						3*
5				- fine sand 5' to 6'						46**
						55				
10				Olive gray fine sand with clay pockets						2*
15				Very soft to soft olive gray clay with shell fragments and sand seams						
20										
25										
30										
35										
40										

Notes:
1) Depth is referenced to penetration below seafloor.
2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc.
3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.

KEY

■ Jar Sample

* Mechanical Grain Size Analysis

** Hydrometer Analysis

COMPLETION DEPTH: 17'

McCLELLAND ENGINEERS

LOG OF BORING NO. "F"

JOB NO. 1087-1328

Isles Derniers Stabilization Project
State Project 750-55-01

FIELD DATA				MATERIAL DESCRIPTION	LABORATORY DATA					
Depth (Feet)	Samples	Penetration Resistance (Blows / Ft)	Undrained Shear Strength (Kips / Ft²)	LOCATION: See Ocean Surveys, Inc. Drawing dated October 2, 1987	Undrained Shear Strength (Kips / Ft²)	Moisture Content (%)	Unit Dry Weight (Lbs / Cu Ft)	ATTERBERG LIMITS: Liquid Limit (%)	ATTERBERG LIMITS: Plasticity Index (%)	Passing No. 200 Sieve (%)
				Olive gray silty fine to fine sand with shell fragments and clay pockets						39**
5				- clay layer 6' to 8'		71				
										8*
10										
										2*
15										
										11*
20										
25										
30				Notes: 1) Depth is referenced to penetration below seafloor. 2) Cores were obtained using vibracoring methods by Ocean Surveys, Inc. 3) Undrained shear strengths were obtained by miniature vane tests performed on remolded samples.						
35										
40										

KEY

- ■ Jar Sample
- * Mechanical Grain Size Analysis
- ** Hydrometer Analysis

COMPLETION DEPTH: 20'

McCLELLAND ENGINEERS