VOLUME Ic

GEOTECHNICAL DATA REPORT

WEST ISLAND

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

McClelland engineers

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GEOTECHNICAL DATA REPORT
WEST ISLAND
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

* * *

by

McCLELLAND ENGINEERS, INC.
Geoscience Consultants
Westlake, Louisiana

December 1987

McClelland engineers

Report No. 1087-1328
Volume Ic
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
West Island
Isles Dernieres Stabilization Project
State Project No. 750-55-01
Terrebonne Parish, Louisiana

Mr. Rogers, we are pleased to submit Volume Ic, 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 I, submitted under separate cover, discusses our field investigation procedures, describes the laboratory testing procedures, and explains our method of data presentation for the three island segments. Volume Ic presents the field and laboratory data for the West Island Segment. Volumes Ia and Ib contain the field and laboratory data for the East and Middle Island Segments, respectively, and they will be submitted separately. Volume II contains information from the proposed borrow areas; 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

ALS/DEL/me(R14.26)
Copies Submitted: (6)

916 Sampson, Suite E, Westlake, Louisiana 70669, (318) 439-1731

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EXECUTIVE SUMMARY

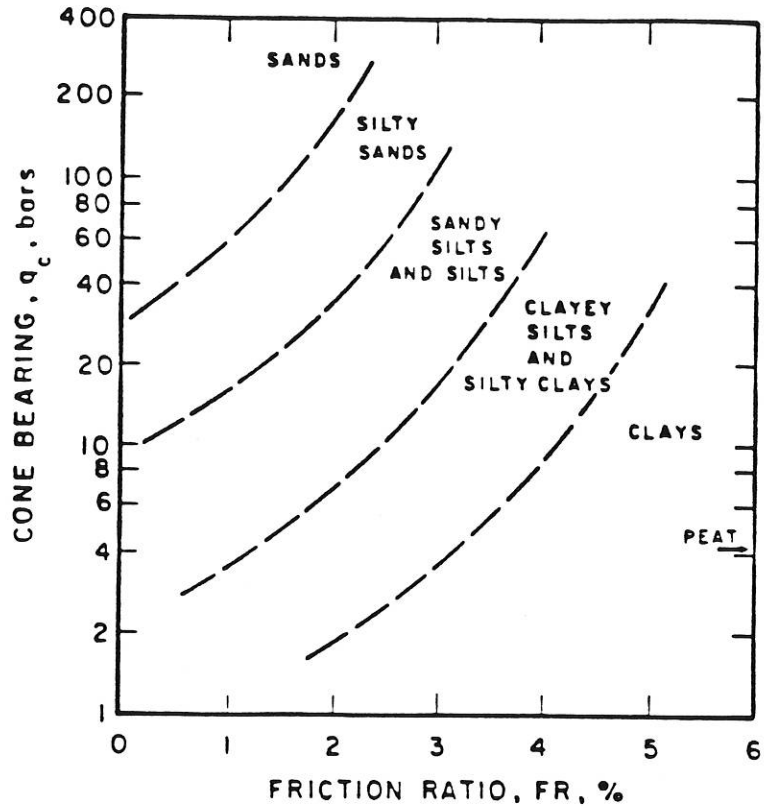
A reconnaissance study was performed to explore the subsurface conditions for the three-island segments of Isles Dernieres. This effort was undertaken as part of a comprehensive study for the proposed beach stabilization project for these islands. The results of our study are presented in three volumes. Volume Ic, the Geotechnical Data Report - West Island is presented here. Volume I, submitted under separate cover, contains a complete description of the field and laboratory procedures. It also includes an overall plan of the islands showing the cone locations. Volume II contains information from the proposed borrow areas. 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 on the island segments and in the proposed borrow areas north of the islands. 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, a total of 180 cone penetrometer soundings were performed, with 47 occurring on the West Island. The soundings ranged in depth from 10 to 22 ft and were located about 1500 ft on center along the West Island. At most locations along the rangeline, three soundings were conducted. In general, one was performed along the south side of the island, one near the middle of the island, and one on the north side of the island. The cone penetrometer data were reduced using our in-house computer program that is based on well-established cone penetrometer correlations.

At each cone location, bag samples of the surficial soils were obtained to determine their engineering properties and to aid in soil classification. Soil testing consisted of mechanical grain size analysis, liquid and plastic limit tests, water contents, and remolded miniature vane tests.

This data report presents the cone penetrometer traces, cone penetrometer data interpretation, and laboratory test results.

INTERPRETATION OF CONE PENETROMETER DATA



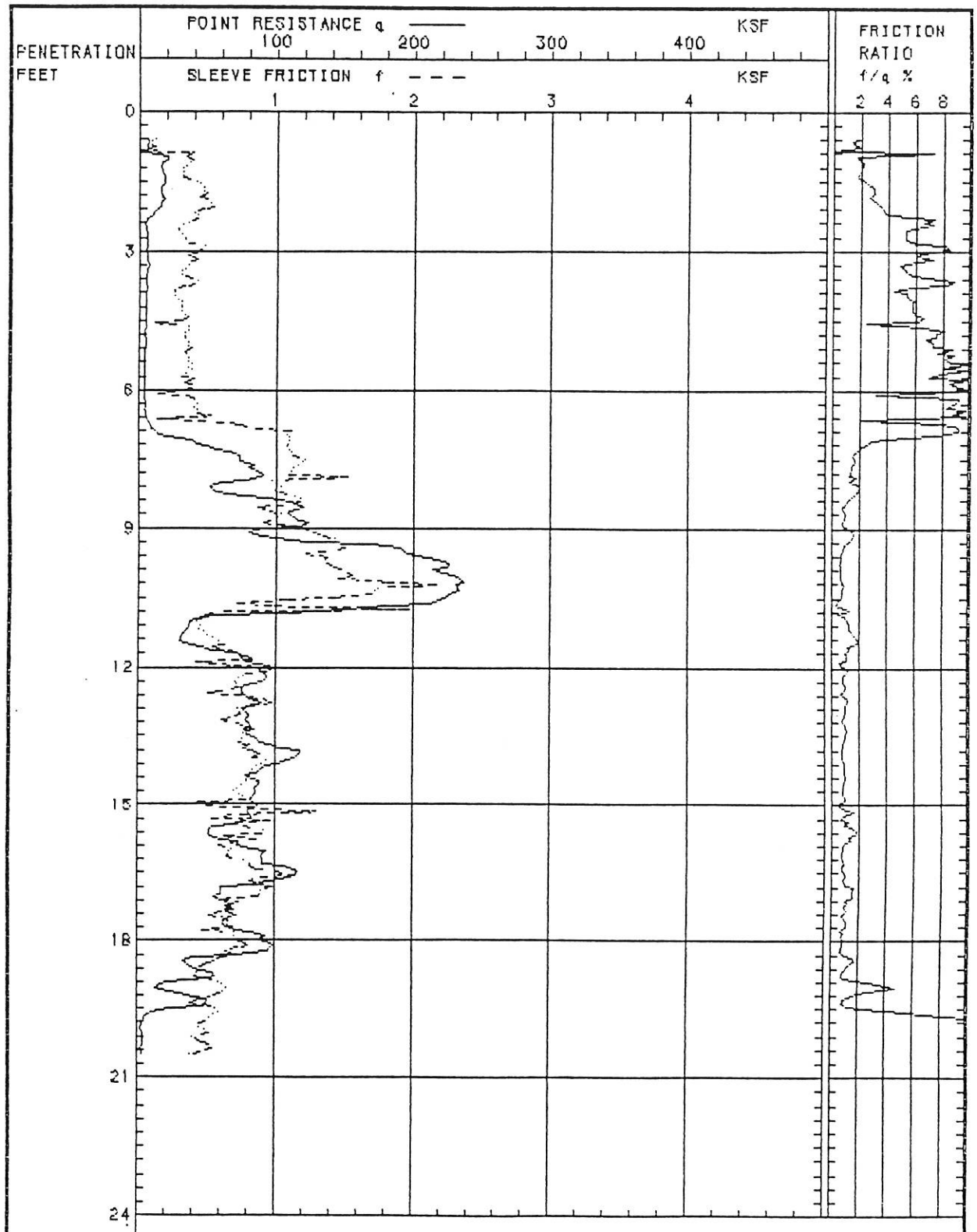
Notes:

1) Cone penetrometer testing is a proven and widely accepted site investigation method that requires skill and judgement in the interpretation of the test results to provide a geotechnical characterization of the investigated soils and a development of their engineering properties.

2) Soil descriptions are based on correlations of tip resistance, q_c; and the friction ratio, FR, which is the ratio of the unit sleeve friction, f_s to q_c.

3) Correlations used for interpretation include: 1) Robertson, P.K., and Campanella, R.G., and 2) Schmertmann, J.H.

4) 1 bar is about 1 tsf.



RESULT OF CONE PENETRATION TEST

46M

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

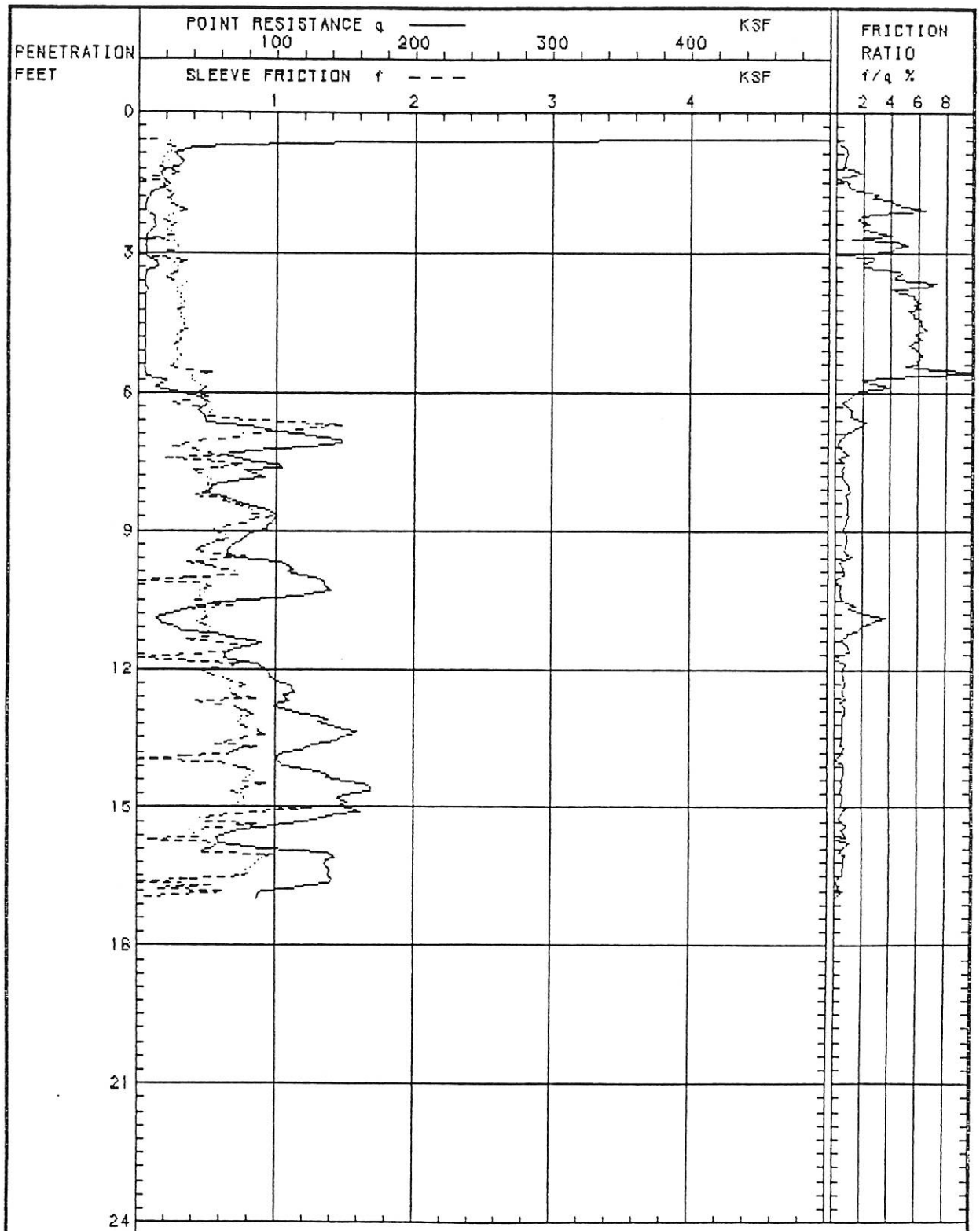
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 1605.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 46M
CONE NO. : 001
DATE : 05/09/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	6.63	.10	1.56	SENSITIVE FINE GRAINED	OL-CH	.02	1	.490	13.5			
.80	5.89	.06	.98	SENSITIVE FINE GRAINED	OL-CH	.02	1	.435	13.5			
1.00	20.63	.37	1.80	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	4	1.525	13.5			
1.20	16.21	.24	1.50	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	3	1.197	13.5			
1.40	18.17	.32	1.77	CLAYEY SILT TO SILTY CLAY	MH-CL	.06	4	1.342	13.5			
1.60	17.07	.51	2.96	SILTY CLAY TO CLAY	CL-CH	.06	5	1.260	13.5			
1.80	16.70	.47	2.80	SILTY CLAY TO CLAY	CL-CH	.07	5	1.232	13.5			
2.00	15.96	.38	2.37	SILTY CLAY TO CLAY	CL-CH	.08	5	1.177	13.5			
2.20	10.81	.42	3.86	CLAY	CH	.09	5	.794	13.5			
2.40	4.91	.26	5.33	CLAY	CH	.10	2	.357	13.5			
2.60	5.65	.30	5.34	CLAY	CH	.10	2	.411	13.5			
2.80	6.14	.34	5.61	CLAY	CH	.11	2	.447	13.5			
3.00	5.89	.43	7.27	ORGANIC MATERIAL	OL-OH	.09	2	.430	13.5			
3.20	6.14	.40	6.58	ORGANIC MATERIAL	OL-OH	.10	2	.448	13.5			
3.40	6.14	.33	5.32	CLAY	CH	.14	2	.445	13.5			
3.60	4.91	.38	7.75	ORGANIC MATERIAL	OL-OH	.11	2	.356	13.5			
3.80	5.89	.30	5.04	CLAY	CH	.15	2	.425	13.5			
4.00	4.91	.27	5.54	CLAY	CH	.16	2	.352	13.5			
4.20	5.40	.28	5.27	CLAY	CH	.17	2	.388	13.5			
4.40	5.40	.34	6.38	ORGANIC MATERIAL	OL-OH	.13	2	.390	13.5			
4.60	5.16	.24	4.58	CLAY	CH	.18	2	.368	13.5			
4.80	4.42	.27	6.20	ORGANIC MATERIAL	OL-OH	.14	2	317	13.5			
5.00	4.91	.35	7.15	ORGANIC MATERIAL	OL-OH	.15	2	.353	13.5			
5.20	4.18	.27	6.57	ORGANIC MATERIAL	OL-OH	.16	2	.298	13.5			
5.40	4.05	.38	9.27	ORGANIC MATERIAL	OL-OH	.16	1	.288	13.5			
5.60	4.17	.32	7.74	ORGANIC MATERIAL	OL-OH	.17	1	.277	13.5			
5.80	4.05	.33	8.09	ORGANIC MATERIAL	OL-OH	.17	1	.287	13.5			
6.00	3.93	.37	9.42	ORGANIC MATERIAL	OL-OH	.18	1	.278	13.5			
6.20	4.42	.34	7.66	ORGANIC MATERIAL	OL-OH	.19	2	.314	13.5			
6.40	4.67	.42	8.93	ORGANIC MATERIAL	OL-OH	.19	2	.332	13.5			
6.60	5.89	.33	5.64	CLAY	CH	.26	2	.417	13.5			
6.80	8.84	.80	9.00	ORGANIC MATERIAL	OL-OH	.20	4	.639	13.5			
7.00	17.41	1.09	6.24	CLAY	CH	.28	8	1.269	13.5			
7.20	45.40	1.09	2.40	SANDY SILT TO CLAYEY SILT	ML-MH	.36	8	3.336	13.5	62	37	.25
7.40	69.71	1.11	1.59	SANDY SILT TO CLAYEY SILT	ML-MH	.37	13	5.136	13.5	73	38	.50+
7.60	78.78	.76	.96	SILTY SAND TO SANDY SILT	SM-ML	.42	12			74	38	.50+
7.80	88.63	1.11	1.25	SILTY SAND TO SANDY SILT	SM-ML	.43	14			78	39	.50+
8.00	69.36	1.02	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.40	13	5.109	13.5	71	38	.50+
8.20	55.00	1.03	1.88	SANDY SILT TO CLAYEY SILT	ML-MH	.41	10	4.044	13.5	64	37	.31
8.40	101.83	1.18	1.16	SILTY SAND TO SANDY SILT	SM-ML	.46	16			81	39	.50+
8.60	115.25	.96	.83	SAND TO SILTY SAND	SM-SP	.52	13			83	41	.50+
8.80	114.73	.97	.85	SAND TO SILTY SAND	SM-SP	.53	13			83	40	.50+
9.00	104.80	1.20	1.14	SILTY SAND TO SANDY SILT	SM-ML	.49	16			81	39	.50+
9.20	94.43	1.40	1.48	SILTY SAND TO SANDY SILT	SM-ML	.51	15			77	39	.50+
9.40	180.37	1.47	.81	SAND TO SILTY SAND	SM-SP	.56	21			99	42	.50+

9.60	203.01	1.30	.64	SAND TO SILTY SAND	SM-SP	.58	24			100+	42	.50+
9.80	225.47	1.71	.76	SAND TO SILTY SAND	SM-SP	.59	26			100+	42	.50+
10.00	225.65	1.54	.68	SAND	SW-SP	.65	21			100+	44	.50+
10.20	233.85	1.99	.85	SAND TO SILTY SAND	SM-SP	.61	28			100+	42	.50+
10.40	230.42	1.61	.70	SAND	SW-SP	.68	22			100+	44	.50+
10.60	216.42	2.73	1.26	SAND TO SILTY SAND	SM-SP	.64	25			100+	42	.50+
10.80	130.26	1.27	.98	SAND TO SILTY SAND	SM-SP	.65	15			83	40	.50+
11.00	39.94	.44	1.09	SANDY SILT TO CLAYEY SILT	ML-MH	.55	7	2.918	13.5	49	35	.17
11.20	35.38	.60	1.69	SANDY SILT TO CLAYEY SILT	ML-MH	.56	6	2.579	13.5	45	34	.15
11.40	30.70	.36	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.57	5	2.232	13.5	41	34	.14
11.60	49.06	.65	1.33	SANDY SILT TO CLAYEY SILT	ML-MH	.58	9	3.591	13.5	55	36	.19
11.80	75.63	.65	.86	SILTY SAND TO SANDY SILT	SM-ML	.65	12			65	37	.31
12.00	91.92	.23	.25	SAND TO SILTY SAND	SM-SP	.72	11			68	39	.44
12.20	93.33	.74	.79	SILTY SAND TO SANDY SILT	SM-ML	.67	14			70	38	.50+
12.40	79.52	.73	.91	SILTY SAND TO SANDY SILT	SM-ML	.68	12			65	37	.32
12.60	77.58	.61	.79	SILTY SAND TO SANDY SILT	SM-ML	.69	12			64	37	.30
12.80	89.42	.94	1.05	SILTY SAND TO SANDY SILT	SM-ML	.70	14			68	38	.42
13.00	79.73	.79	.99	SILTY SAND TO SANDY SILT	SM-ML	.71	12			64	37	.30
13.20	79.68	.66	.83	SILTY SAND TO SANDY SILT	SM-ML	.73	12			64	37	.29
13.40	78.52	.80	1.02	SILTY SAND TO SANDY SILT	SM-ML	.74	12			64	37	.23
13.60	87.66	.51	.58	SAND TO SILTY SAND	SM-SP	.82	10			65	38	.30
13.80	111.10	.86	.77	SAND TO SILTY SAND	SM-SP	.83	13			72	39	.50+
14.00	111.67	.96	.86	SAND TO SILTY SAND	SM-SP	.84	13			71	39	.50+
14.20	91.58	.59	.64	SAND TO SILTY SAND	SM-SP	.85	10			65	39	.31
14.40	80.81	.69	.86	SILTY SAND TO SANDY SILT	SM-ML	.79	12			63	37	.26
14.60	86.98	.78	.89	SILTY SAND TO SANDY SILT	SM-ML	.80	13			65	37	.30
14.80	85.49	.78	.91	SILTY SAND TO SANDY SILT	SM-ML	.81	13			64	37	.29
15.00	86.42	.14	.17	SAND TO SILTY SAND	SM-SP	.90	10			62	38	.25
15.20	81.00	.64	.79	SILTY SAND TO SANDY SILT	SM-ML	.84	12			62	37	.25
15.40	74.70	.80	1.08	SILTY SAND TO SANDY SILT	SM-ML	.85	11			60	36	.22
15.60	51.82	.85	1.64	SANDY SILT TO CLAYEY SILT	ML-MH	.78	9	3.780	13.5	48	35	.17
15.80	67.15	.99	1.47	SANDY SILT TO CLAYEY SILT	ML-MH	.79	12	4.915	13.5	58	36	.20
16.00	88.72	.76	.85	SILTY SAND TO SANDY SILT	SM-ML	.88	14			63	37	.28
16.20	90.59	.76	.84	SILTY SAND TO SANDY SILT	SM-ML	.89	14			64	37	.28
16.40	110.20	.84	.77	SAND TO SILTY SAND	SM-SP	.98	13			67	39	.39
16.60	110.03	1.07	.97	SILTY SAND TO SANDY SILT	SM-ML	.91	17			69	38	.46
16.80	74.75	.89	1.19	SILTY SAND TO SANDY SILT	SM-ML	.92	11			57	36	.20
17.00	58.77	.77	1.32	SANDY SILT TO CLAYEY SILT	ML-MH	.85	11	4.290	13.5	50	35	.17
17.20	67.26	.70	1.03	SILTY SAND TO SANDY SILT	SM-ML	.95	10			52	35	.19
17.40	68.67	.75	1.09	SILTY SAND TO SANDY SILT	SM-ML	.96	10			53	35	.18
17.60	62.62	.67	1.06	SILTY SAND TO SANDY SILT	SM-ML	.97	9			49	35	.17
17.80	76.98	.47	.61	SILTY SAND TO SANDY SILT	SM-ML	.98	12			57	36	.20
18.00	91.35	.84	.92	SILTY SAND TO SANDY SILT	SM-ML	.99	14			62	37	.25
18.20	96.30	.69	.72	SAND TO SILTY SAND	SM-SP	1.09	11			61	38	.24
18.40	37.44	.71	1.91	SANDY SILT TO CLAYEY SILT	ML-MH	.92	7	2.705	13.5	33	33	.12
18.60	41.91	.46	1.10	SANDY SILT TO CLAYEY SILT	ML-MH	.93	8	3.036	13.5	37	32	.14
18.80	55.31	.40	.72	SILTY SAND TO SANDY SILT	SM-ML	1.03	8			43	34	.16
19.00	15.90	.63	3.99	CLAY	CH	.76	7	1.121	13.5			
19.20	36.21	.57	1.58	SANDY SILT TO CLAYEY SILT	ML-MH	.96	6	2.611	13.5	31	32	.13
19.40	49.26	.52	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	.97	9	3.577	13.5	41	34	.15
19.60	9.61	.44	4.54	CLAY	CH	.78	4	.654	13.5			
19.80	3.82	.47	12.41	ORGANIC MATERIAL	OL-OH	.59	1	.239	13.5			
20.00	3.17	.42	13.12	ORGANIC MATERIAL	OL-OH	.60	1	.190	13.5			
20.20	3.93	.45	11.55	ORGANIC MATERIAL	OL-OH	.61	1	.246	13.5			
20.40	3.19	.49	15.50	ORGANIC MATERIAL	OL-OH	.61	1	.191	13.5			



RESULT OF CONE PENETRATION TEST

46S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

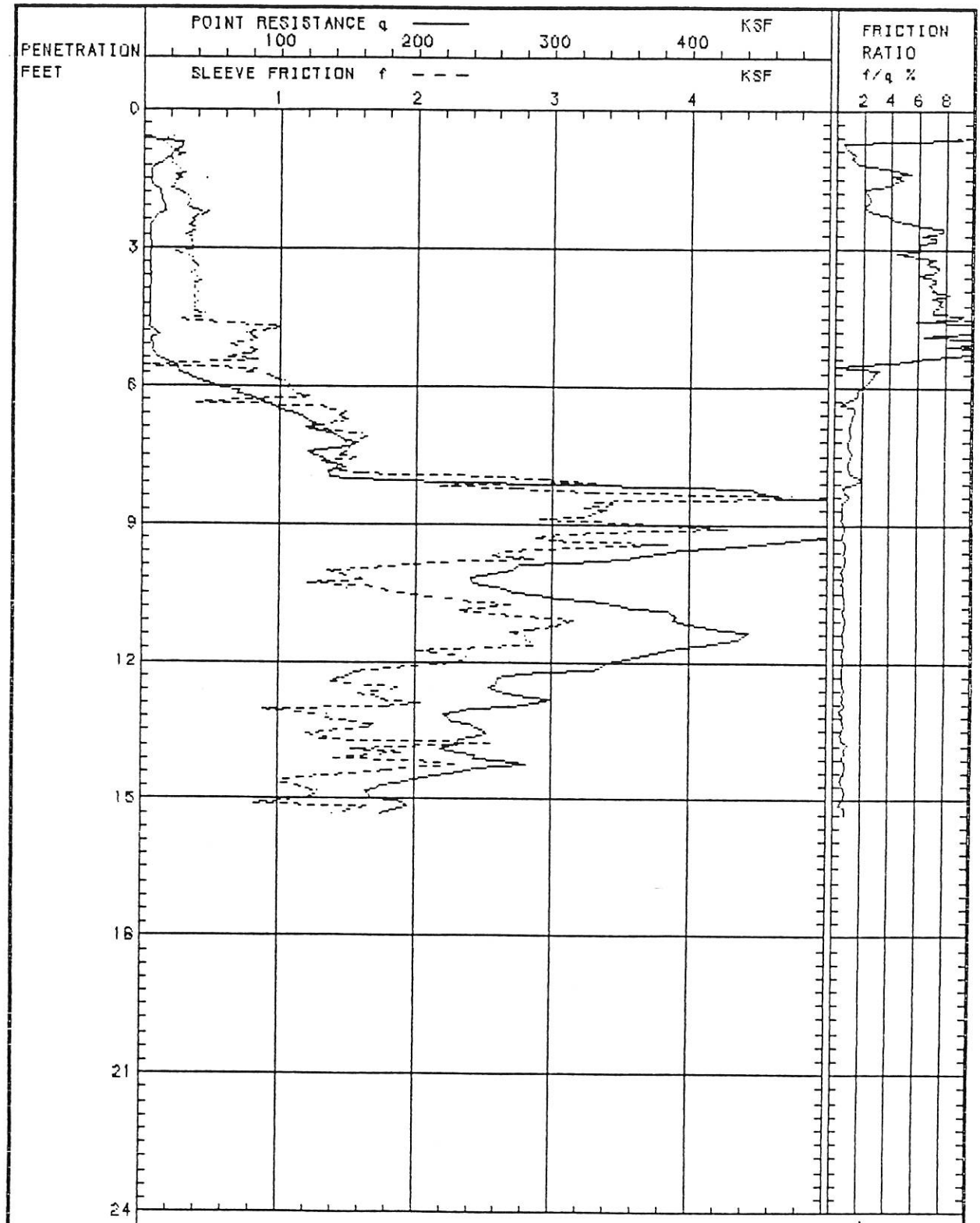
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 1605.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 46S
CONE NO. : 001
DATE : 05/09/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	353.73	.16	.04	SAND	SW-SP	.04	33			100+	44	.50+
.80	35.91	.23	.63	SANDY SILT TO CLAYEY SILT	ML-MH	.04	6	2.657	13.5	74	39	.50+
1.00	31.61	.21	.68	SANDY SILT TO CLAYEY SILT	ML-MH	.05	6	2.337	13.5	70	38	.50+
1.20	25.34	.20	.81	SANDY SILT TO CLAYEY SILT	ML-MH	.06	4	1.873	13.5	65	37	.50+
1.40	19.08	.08	.43	SENSITIVE FINE GRAINED	OL-CH	.04	4	1.336	13.5			
1.60	19.68	.18	.94	CLAYEY SILT TO SILTY CLAY	MH-CL	.07	4	1.453	13.5			
1.80	8.12	.24	2.90	CLAY	CH	.07	3	.596	13.5			
2.00	5.41	.27	5.00	CLAY	CH	.08	2	.395	13.5			
2.20	10.33	.25	2.38	SILTY CLAY TO CLAY	CL-CH	.09	3	.758	13.5			
2.40	12.05	.22	1.83	SILTY CLAY TO CLAY	CL-CH	.10	3	.886	13.5			
2.60	7.63	.25	3.24	CLAY	CH	.10	3	.557	13.5			
2.80	5.66	.27	4.79	CLAY	CH	.11	2	.411	13.5			
3.00	6.15	.13	2.11	CLAY	CH	.12	2	.447	13.5			
3.20	13.53	.33	2.46	SILTY CLAY TO CLAY	CL-CH	.13	4	.993	13.5			
3.40	6.15	.28	4.63	CLAY	CH	.14	2	.446	13.5			
3.60	4.92	.28	5.76	ORGANIC MATERIAL	OL-OH	.11	2	.356	13.5			
3.80	6.52	.29	4.45	CLAY	CH	.15	3	.472	13.5			
4.00	5.41	.32	5.92	CLAY	CH	.16	2	.389	13.5			
4.20	5.41	.31	5.70	CLAY	CH	.17	2	.388	13.5			
4.40	5.41	.32	5.92	CLAY	CH	.18	2	.388	13.5			
4.60	5.41	.34	6.36	ORGANIC MATERIAL	OL-OH	.14	2	.391	13.5			
4.80	4.92	.30	6.02	ORGANIC MATERIAL	OL-OH	.14	2	.354	13.5			
5.00	4.92	.27	5.54	CLAY	CH	.20	2	.350	13.5			
5.20	4.92	.31	6.28	ORGANIC MATERIAL	OL-OH	.16	2	.353	13.5			
5.40	4.55	.28	6.24	ORGANIC MATERIAL	OL-OH	.16	2	.325	13.5			
5.60	5.65	.46	8.20	ORGANIC MATERIAL	OL-OH	.17	2	.406	13.5			
5.80	17.25	.27	1.56	CLAYEY SILT TO SILTY CLAY	MH-CL	.26	4	1.258	13.5			
6.00	31.80	.45	1.43	SANDY SILT TO CLAYEY SILT	ML-MH	.30	6	2.333	13.5	56	36	.19
6.20	50.41	.12	.25	SILTY SAND TO SANDY SILT	SM-ML	.34	8			65	37	.35
6.40	44.51	.53	1.19	SANDY SILT TO CLAYEY SILT	ML-MH	.32	8	3.273	13.5	63	37	.29
6.60	48.95	.38	.77	SILTY SAND TO SANDY SILT	SM-ML	.36	7			64	37	.29
6.80	93.79	1.18	1.26	SILTY SAND TO SANDY SILT	SM-ML	.37	14			83	40	.50+
7.00	139.64	.61	.44	SAND TO SILTY SAND	SM-SP	.42	16			95	42	.50+
7.20	111.69	.32	.29	SAND TO SILTY SAND	SM-SP	.43	13			86	41	.50+
7.40	67.21	.42	.62	SILTY SAND TO SANDY SILT	SM-ML	.41	10			70	38	.50+
7.60	102.79	.53	.51	SAND TO SILTY SAND	SM-SP	.46	12			82	40	.50+
7.80	88.07	.55	.62	SILTY SAND TO SANDY SILT	SM-ML	.43	14			78	39	.50+
8.00	57.11	.51	.89	SILTY SAND TO SANDY SILT	SM-ML	.44	9			64	37	.30
8.20	52.46	.55	1.04	SANDY SILT TO CLAYEY SILT	ML-MH	.41	10	3.855	13.5	63	37	.28
8.40	73.49	.75	1.02	SILTY SAND TO SANDY SILT	SM-ML	.46	11			70	38	.50+
8.60	96.88	.82	.85	SILTY SAND TO SANDY SILT	SM-ML	.47	15			80	39	.50+
8.80	97.66	.80	.81	SILTY SAND TO SANDY SILT	SM-ML	.48	15			79	39	.50+
9.00	89.95	.57	.64	SILTY SAND TO SANDY SILT	SM-ML	.49	14			76	39	.50+
9.20	76.26	.69	.90	SILTY SAND TO SANDY SILT	SM-ML	.51	12			70	38	.50+
9.40	66.42	.45	.68	SILTY SAND TO SANDY SILT	SM-ML	.52	10			65	37	.33

9.60	74.87	.68	.91	SILTY SAND TO SANDY SILT	SM-ML	.53	11			68	38	.46
9.80	110.41	.81	.74	SAND TO SILTY SAND	SM-SP	.59	13			80	40	.50+
10.00	122.61	.48	.39	SAND TO SILTY SAND	SM-SP	.60	14			82	40	.50+
10.20	135.40	.40	.29	SAND TO SILTY SAND	SM-SP	.61	16			85	41	.50+
10.40	124.32	.67	.54	SAND TO SILTY SAND	SM-SP	.62	14			82	40	.50+
10.60	55.59	.62	1.12	SANDY SILT TO CLAYEY SILT	ML-MH	.53	10	4.079	13.5	61	37	.23
10.80	23.71	.39	1.65	CLAYEY SILT TO SILTY CLAY	MH-CL	.49	5	1.720	13.5			
11.00	17.08	.47	2.75	SILTY CLAY TO CLAY	CL-CH	.44	5	1.232	13.5			
11.20	43.82	.40	.91	SANDY SILT TO CLAYEY SILT	ML-MH	.56	8	3.205	13.5	52	35	.17
11.40	82.52	.61	.74	SILTY SAND TO SANDY SILT	SM-ML	.63	13			68	39	.42
11.60	67.95	.70	1.03	SILTY SAND TO SANDY SILT	SM-ML	.64	10			62	37	.25
11.80	68.89	.18	.26	SILTY SAND TO SANDY SILT	SM-ML	.65	10			63	37	.25
12.00	92.21	.52	.56	SAND TO SILTY SAND	SM-SP	.72	11			69	39	.44
12.20	97.62	.64	.65	SAND TO SILTY SAND	SM-SP	.73	11			70	39	.50+
12.40	111.41	.73	.66	SAND TO SILTY SAND	SM-SP	.74	13			74	40	.50+
12.60	106.85	.72	.67	SAND TO SILTY SAND	SM-SP	.76	12			72	39	.50+
12.80	99.75	.85	.85	SILTY SAND TO SANDY SILT	SM-ML	.70	15			72	38	.50+
13.00	125.10	.85	.68	SAND TO SILTY SAND	SM-SP	.78	14			77	40	.50+
13.20	135.93	.76	.56	SAND TO SILTY SAND	SM-SP	.79	16			80	40	.50+
13.40	157.47	.90	.57	SAND TO SILTY SAND	SM-SP	.80	18			84	41	.50+
13.60	137.42	.72	.52	SAND TO SILTY SAND	SM-SP	.82	16			80	40	.50+
13.80	113.02	.70	.62	SAND TO SILTY SAND	SM-SP	.83	13			72	39	.50+
14.00	102.30	.17	.17	SAND TO SILTY SAND	SM-SP	.84	12			68	39	.44
14.20	123.07	.80	.65	SAND TO SILTY SAND	SM-SP	.85	14			75	40	.50+
14.40	143.99	.86	.60	SAND TO SILTY SAND	SM-SP	.86	17			80	40	.50+
14.60	169.47	.45	.26	SAND	SW-SP	.95	16			83	43	.50+
14.80	145.86	.73	.50	SAND TO SILTY SAND	SM-SP	.89	17			80	40	.50+
15.00	150.07	.98	.65	SAND TO SILTY SAND	SM-SP	.90	17			81	40	.50+
15.20	140.56	.52	.37	SAND TO SILTY SAND	SM-SP	.91	16			78	40	.50+
15.40	99.08	.86	.87	SILTY SAND TO SANDY SILT	SM-ML	.85	15			67	37	.39
15.60	61.83	.44	.70	SILTY SAND TO SANDY SILT	SM-ML	.86	9			52	35	.19
15.80	64.32	.60	.93	SILTY SAND TO SANDY SILT	SM-ML	.87	10			53	35	.18
16.00	138.44	.58	.42	SAND TO SILTY SAND	SM-SP	.96	16			76	40	.50+
16.20	136.40	.71	.52	SAND TO SILTY SAND	SM-SP	.97	16			75	40	.50+
16.40	139.10	.78	.56	SAND TO SILTY SAND	SM-SP	.98	16			75	40	.50+
16.60	140.23	.30	.22	SAND TO SILTY SAND	SM-SP	1.00	16			75	40	.50+
16.80	101.35	.39	.38	SAND TO SILTY SAND	SM-SP	1.01	12			64	39	.30



RESULT OF CONE PENETRATION TEST

47N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

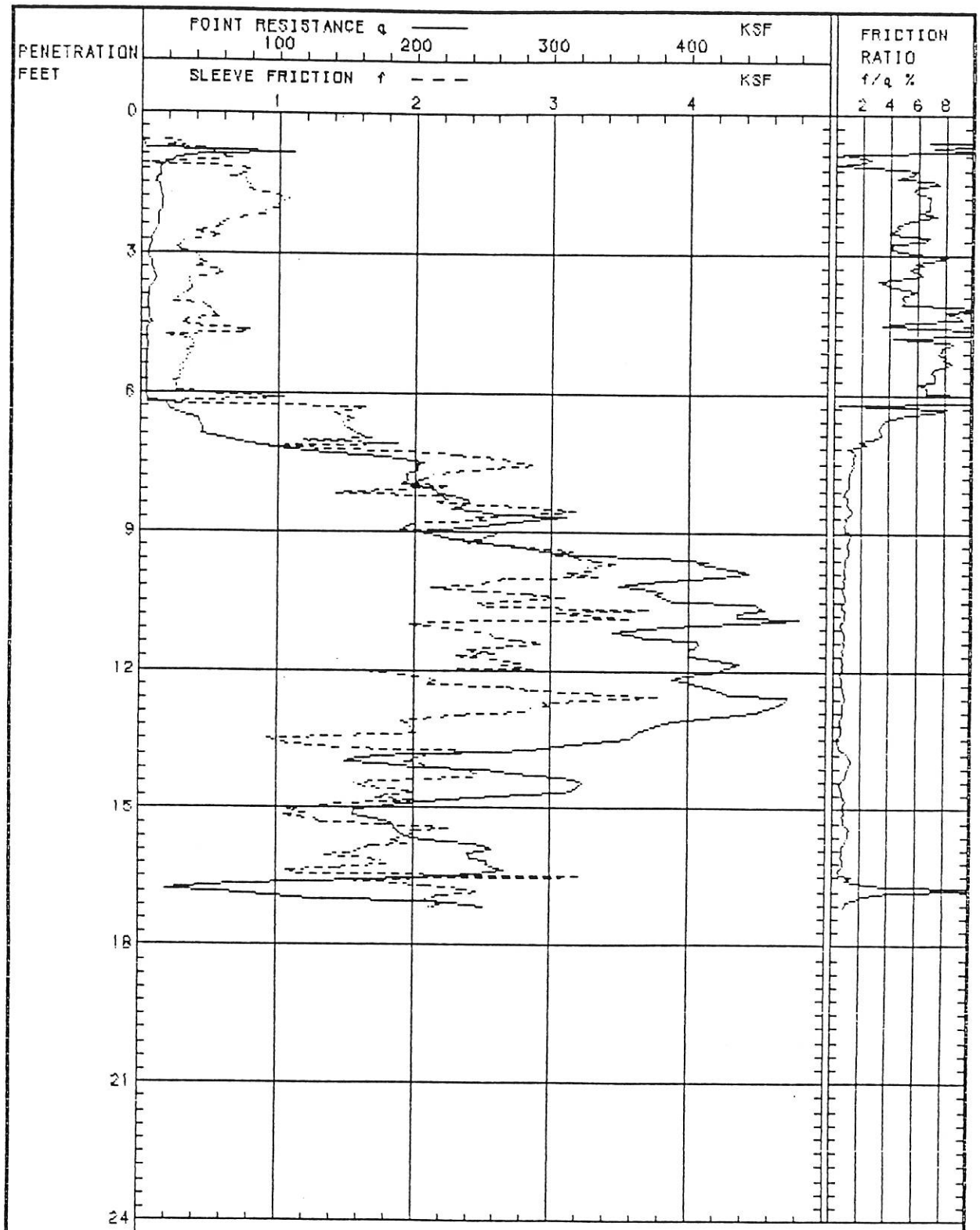
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 47N
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	2.21	.24	10.84	ORGANIC MATERIAL	OL-OH	.02	1	.163	13.5			
.80	28.04	.18	.66	SANDY SILT TO CLAYEY SILT	ML-MH	.04	5	2.074	13.5	68	38	.50+
1.00	20.17	.25	1.25	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	4	1.491	13.5			
1.20	11.32	.24	2.09	SILTY CLAY TO CLAY	CL-CH	.05	3	.835	13.5			
1.40	5.72	.26	4.49	CLAY	CH	.06	2	.419	13.5			
1.60	5.66	.23	4.08	CLAY	CH	.06	2	.414	13.5			
1.80	12.79	.27	2.10	SILTY CLAY TO CLAY	CL-CH	.07	4	.942	13.5			
2.00	14.27	.34	2.39	SILTY CLAY TO CLAY	CL-CH	.08	4	1.051	13.5			
2.20	16.48	.44	2.65	SILTY CLAY TO CLAY	CL-CH	.09	5	1.214	13.5			
2.40	7.87	.37	4.68	CLAY	CH	.10	3	.576	13.5			
2.60	4.92	.38	7.74	ORGANIC MATERIAL	OL-OH	.08	2	.359	13.5			
2.80	4.92	.36	7.23	ORGANIC MATERIAL	OL-OH	.08	2	.358	13.5			
3.00	5.90	.36	6.04	CLAY	CH	.12	2	.428	13.5			
3.20	5.17	.34	6.66	ORGANIC MATERIAL	OL-OH	.10	2	.376	13.5			
3.40	5.41	.40	7.47	ORGANIC MATERIAL	OL-OH	.10	2	.393	13.5			
3.60	5.66	.38	6.72	ORGANIC MATERIAL	OL-OH	.11	2	.411	13.5			
3.80	5.53	.39	7.10	ORGANIC MATERIAL	OL-OH	.11	2	.402	13.5			
4.00	5.16	.39	7.60	ORGANIC MATERIAL	OL-OH	.12	2	.374	13.5			
4.20	5.17	.39	7.60	ORGANIC MATERIAL	OL-OH	.13	2	.373	13.5			
4.40	5.17	.42	8.06	ORGANIC MATERIAL	OL-OH	.13	2	.373	13.5			
4.60	4.92	.45	9.17	ORGANIC MATERIAL	OL-OH	.14	2	.354	13.5			
4.80	8.35	.85	10.14	ORGANIC MATERIAL	OL-OH	.14	4	.608	13.5			
5.00	6.15	.61	9.93	ORGANIC MATERIAL	OL-OH	.15	2	.445	13.5			
5.20	7.13	.78	11.00	ORGANIC MATERIAL	OL-OH	.16	3	.517	13.5			
5.40	13.27	.74	5.55	CLAY	CH	.22	6	.967	13.5			
5.60	25.58	.19	.74	SANDY SILT TO CLAYEY SILT	ML-MH	.28	4	1.874	13.5	51	35	.17
5.80	35.15	.93	2.66	CLAYEY SILT TO SILTY CLAY	MH-CL	.29	8	2.584	13.5			
6.00	54.33	1.19	2.19	SANDY SILT TO CLAYEY SILT	ML-MH	.30	10	4.002	13.5	69	39	.50+
6.20	73.57	1.25	1.71	SANDY SILT TO CLAYEY SILT	ML-MH	.31	14	5.427	13.5	78	39	.50+
6.40	93.32	.63	.68	SAND TO SILTY SAND	SM-SP	.38	11			82	40	.50+
6.60	111.88	1.46	1.30	SILTY SAND TO SANDY SILT	SM-ML	.36	17			90	41	.50+
6.80	125.42	1.39	1.10	SILTY SAND TO SANDY SILT	SM-ML	.37	20			94	41	.50+
7.00	133.76	1.55	1.16	SILTY SAND TO SANDY SILT	SM-ML	.38	21			96	41	.50+
7.20	153.20	1.50	.98	SAND TO SILTY SAND	SM-SP	.43	18			99	42	.50+
7.40	131.21	1.52	1.16	SILTY SAND TO SANDY SILT	SM-ML	.41	20			93	41	.50+
7.60	132.80	1.44	1.08	SAND TO SILTY SAND	SM-SP	.46	15			91	41	.50+
7.80	142.36	1.51	1.06	SAND TO SILTY SAND	SM-SP	.47	17			93	42	.50+
8.00	143.32	2.77	1.93	SILTY SAND TO SANDY SILT	SM-ML	.44	22			95	41	.50+
8.20	418.09	.94	.23	SAND	SW-SP	.53	40			100+	44	.50+
8.40	464.07	4.75	1.02	SAND	SW-SP	.55	44			100+	44	.50+
8.60	618.50	3.73	.60	GRAVELLY SAND TO SAND	SW-GW	.56	49			100+	45	.50+
8.80	551.40	3.07	.56	SAND	SW-SP	.57	52			100+	44	.50+
9.00	560.12	3.70	.66	SAND	SW-SP	.58	53			100+	44	.50+
9.20	516.32	3.36	.65	SAND	SW-SP	.60	49			100+	44	.50+
9.40	462.84	3.44	.74	SAND	SW-SP	.61	44			100+	44	.50+

9.60	387.37	2.75	.71	SAND	SW-SP	.62	37	100+	44	.50+
9.80	332.84	2.55	.77	SAND	SW-SP	.64	31	100+	44	.50+
10.00	272.30	1.50	.55	SAND	SW-SP	.65	26	100+	44	.50+
10.20	240.56	1.60	.67	SAND	SW-SP	.66	23	100+	44	.50+
10.40	256.91	1.70	.66	SAND	SW-SP	.68	24	100+	44	.50+
10.60	296.51	2.13	.72	SAND	SW-SP	.69	28	100+	44	.50+
10.80	352.39	2.37	.67	SAND	SW-SP	.70	33	100+	44	.50+
11.00	388.97	2.64	.68	SAND	SW-SP	.71	37	100+	44	.50+
11.20	402.75	2.98	.74	SAND	SW-SP	.73	38	100+	44	.50+
11.40	441.06	2.73	.62	SAND	SW-SP	.74	42	100+	44	.50+
11.60	416.82	3.08	.74	SAND	SW-SP	.75	39	100+	44	.50+
11.80	374.47	2.13	.57	SAND	SW-SP	.77	35	100+	44	.50+
12.00	344.18	2.31	.67	SAND	SW-SP	.78	32	100+	44	.50+
12.20	311.23	1.41	.45	SAND	SW-SP	.79	29	100+	44	.50+
12.40	259.78	1.47	.57	SAND	SW-SP	.81	24	100+	44	.50+
12.60	257.28	1.05	.41	SAND	SW-SP	.82	24	100+	44	.50+
12.80	291.32	1.72	.59	SAND	SW-SP	.83	27	100+	44	.50+
13.00	256.33	.98	.38	SAND	SW-SP	.84	24	100+	44	.50+
13.20	222.63	.90	.40	SAND	SW-SP	.86	21	95	44	.50+
13.40	242.48	1.39	.57	SAND	SW-SP	.87	23	98	44	.50+
13.60	247.66	1.24	.50	SAND	SW-SP	.88	23	99	44	.50+
13.80	229.52	2.22	.97	SAND TO SILTY SAND	SM-SP	.83	27	98	42	.50+
14.00	238.33	.93	.39	SAND	SW-SP	.91	22	96	44	.50+
14.20	271.47	2.07	.76	SAND	SW-SP	.92	26	100+	44	.50+
14.40	232.59	1.68	.72	SAND	SW-SP	.94	22	94	44	.50+
14.60	193.58	1.03	.53	SAND TO SILTY SAND	SM-SP	.88	23	89	41	.50+
14.80	168.82	1.25	.74	SAND TO SILTY SAND	SM-SP	.89	20	84	41	.50+
15.00	177.63	1.30	.73	SAND TO SILTY SAND	SM-SP	.90	21	86	41	.50+
15.20	190.49	1.59	.83	SAND TO SILTY SAND	SM-SP	.91	22	88	41	.50+



RESULT OF CONE PENETRATION TEST

47M

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

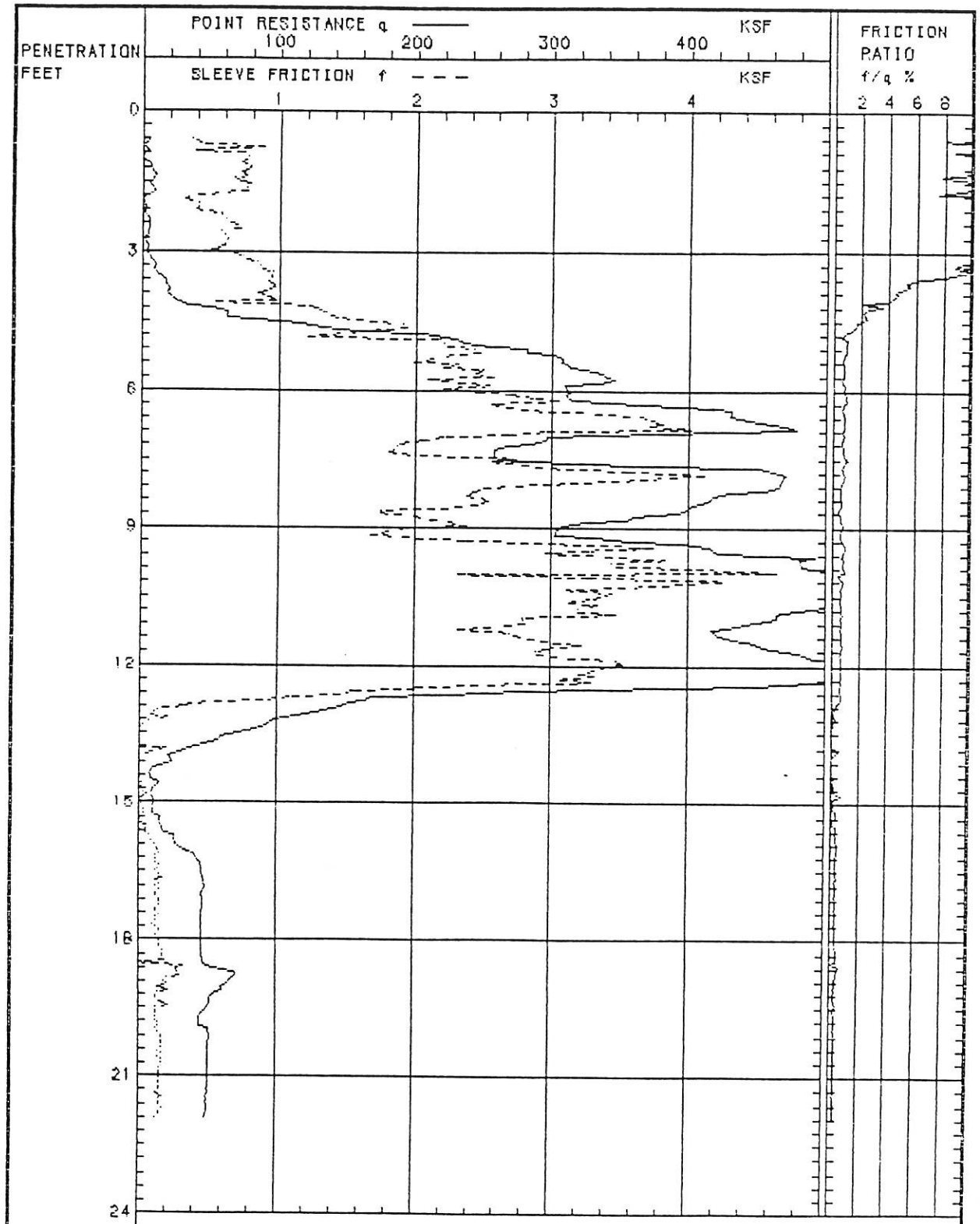
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 1605.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 47M
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UNB. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	2.21	.24	10.79	ORGANIC MATERIAL	OL-OH	.02	1	.163	13.5			
.80	57.04	.49	.85	SILTY SAND TO SANDY SILT	SM-ML	.04	9			92	41	.50+
1.00	24.11	.40	1.66	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	5	1.782	13.5			
1.20	14.39	.59	4.07	CLAY	CH	.05	6	1.062	13.5			
1.40	12.55	.70	5.58	CLAY	CH	.06	6	.925	13.5			
1.60	13.53	.81	5.95	CLAY	CH	.06	6	.997	13.5			
1.80	15.00	1.02	6.81	CLAY	CH	.07	7	1.105	13.5			
2.00	14.76	.97	6.60	CLAY	CH	.08	7	1.087	13.5			
2.20	12.30	.50	4.06	CLAY	CH	.09	5	.904	13.5			
2.40	12.79	.60	4.72	CLAY	CH	.10	6	.940	13.5			
2.60	9.35	.49	5.21	CLAY	CH	.10	4	.685	13.5			
2.80	7.13	.30	4.14	CLAY	CH	.11	3	.520	13.5			
3.00	5.17	.36	6.88	ORGANIC MATERIAL	OL-OH	.09	2	.376	13.5			
3.20	7.38	.42	5.70	CLAY	CH	.13	3	.537	13.5			
3.40	9.35	.58	6.20	CLAY	CH	.14	4	.682	13.5			
3.60	10.34	.26	2.52	CLAY	CH	.14	4	.755	13.5			
3.80	6.40	.34	5.24	CLAY	CH	.15	3	.462	13.5			
4.00	5.17	.19	3.66	CLAY	CH	.16	2	.371	13.5			
4.20	5.65	.49	8.65	ORGANIC MATERIAL	OL-OH	.13	2	.409	13.5			
4.40	6.27	.40	6.35	CLAY	CH	.18	3	.452	13.5			
4.60	4.93	.60	12.11	ORGANIC MATERIAL	OL-OH	.14	2	.355	13.5			
4.80	4.43	.27	6.15	ORGANIC MATERIAL	OL-OH	.14	2	.317	13.5			
5.00	4.92	.38	7.75	ORGANIC MATERIAL	OL-OH	.15	2	.353	13.5			
5.20	4.43	.29	6.47	ORGANIC MATERIAL	OL-OH	.16	2	.316	13.5			
5.40	3.94	.30	7.56	ORGANIC MATERIAL	OL-OH	.16	1	.280	13.5			
5.60	3.94	.29	7.25	ORGANIC MATERIAL	OL-OH	.17	1	.279	13.5			
5.80	3.94	.25	6.33	ORGANIC MATERIAL	OL-OH	.17	1	.279	13.5			
6.00	3.94	.40	10.27	ORGANIC MATERIAL	OL-OH	.18	1	.278	13.5			
6.20	11.75	.12	1.04	SENSITIVE FINE GRAINED	OL-CH	.19	2	.856	13.5			
6.40	24.08	1.47	6.11	CLAY	CH	.26	11	1.765	13.5			
6.60	42.30	1.51	3.58	SILTY CLAY TO CLAY	CL-CH	.26	13	3.114	13.5			
6.80	45.14	1.52	3.37	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	10	3.321	13.5			
7.00	62.20	1.44	2.32	SANDY SILT TO CLAYEY SILT	ML-MH	.35	11	4.582	13.5	70	38	.50+
7.20	104.24	.95	.91	SILTY SAND TO SANDY SILT	SM-ML	.40	16			85	40	.50+
7.40	176.71	2.48	1.40	SILTY SAND TO SANDY SILT	SM-ML	.41	28			100+	42	.50+
7.60	201.44	2.71	1.35	SAND TO SILTY SAND	SM-SP	.46	24			100+	42	.50+
7.80	194.37	2.18	1.12	SAND TO SILTY SAND	SM-SP	.47	23			100+	42	.50+
8.00	196.46	2.28	1.16	SAND TO SILTY SAND	SM-SP	.48	23			100+	42	.50+
8.20	222.05	1.63	.73	SAND TO SILTY SAND	SM-SP	.49	26			100+	42	.50+
8.40	238.36	2.19	.92	SAND TO SILTY SAND	SM-SP	.50	28			100+	42	.50+
8.60	252.63	2.87	1.14	SAND TO SILTY SAND	SM-SP	.52	30			100+	42	.50+
8.80	272.93	2.11	.77	SAND	SW-SP	.57	26			100+	42	.50+
9.00	213.25	1.54	.72	SAND TO SILTY SAND	SM-SP	.54	25			100+	42	.50+
9.20	236.26	2.31	.98	SAND TO SILTY SAND	SM-SP	.55	28			100+	42	.50+
9.40	285.94	3.00	1.05	SAND TO SILTY SAND	SM-SP	.56	34			100+	42	.50+

9.60	395.01	3.23	.82	SAND	SW-SP	.62	37			100+	44	.50+
9.80	430.76	3.29	.76	SAND	SW-SP	.64	41			100+	44	.50+
10.00	410.43	3.45	.84	SAND	SW-SP	.65	39			100+	44	.50+
10.20	356.47	2.15	.60	SAND	SW-SP	.66	34			100+	44	.50+
10.40	378.50	2.18	.57	SAND	SW-SP	.68	36			100+	44	.50+
10.60	448.98	2.77	.62	SAND	SW-SP	.69	43			100+	44	.50+
10.80	434.63	4.18	.96	SAND	SW-SP	.70	41			100+	44	.50+
11.00	424.95	3.40	.80	SAND	SW-SP	.71	40			100+	44	.50+
11.20	350.84	2.28	.65	SAND	SW-SP	.73	33			100+	44	.50+
11.40	406.08	2.73	.67	SAND	SW-SP	.74	38			100+	44	.50+
11.60	399.69	2.37	.59	SAND	SW-SP	.75	38			100+	44	.50+
11.80	427.83	2.66	.62	SAND	SW-SP	.77	40			100+	44	.50+
12.00	423.30	2.14	.51	SAND	SW-SP	.78	40			100+	44	.50+
12.20	392.79	1.50	.38	SAND	SW-SP	.79	37			100+	44	.50+
12.40	417.82	2.76	.66	SAND	SW-SP	.81	40			100+	44	.50+
12.60	470.68	3.57	.76	SAND	SW-SP	.82	45			100+	44	.50+
12.80	458.54	2.87	.63	SAND	SW-SP	.83	43			100+	44	.50+
13.00	416.57	3.24	.78	SAND	SW-SP	.84	39			100+	44	.50+
13.20	377.94	1.96	.52	SAND	SW-SP	.86	36			100+	44	.50+
13.40	361.11	1.07	.30	SAND	SW-SP	.87	34			100+	44	.50+
13.60	316.95	1.14	.36	SAND	SW-SP	.88	30			100+	44	.50+
13.80	231.39	2.35	1.01	SAND TO SILTY SAND	SM-SP	.83	27			98	42	.50+
14.00	162.81	1.99	1.22	SAND TO SILTY SAND	SM-SP	.81	19			84	41	.50+
14.20	261.01	2.43	.93	SAND TO SILTY SAND	SM-SP	.85	31			100+	42	.50+
14.40	319.95	1.79	.56	SAND	SW-SP	.94	30			100+	44	.50+
14.60	313.70	1.91	.61	SAND	SW-SP	.95	30			100+	44	.50+
14.80	234.84	1.87	.80	SAND TO SILTY SAND	SM-SP	.89	28			96	42	.50+
15.00	165.47	1.00	.61	SAND TO SILTY SAND	SM-SP	.90	19			83	41	.50+
15.20	163.40	1.17	.72	SAND TO SILTY SAND	SM-SP	.91	17			83	40	.50+
15.40	185.69	2.02	1.09	SAND TO SILTY SAND	SM-SP	.92	22			86	41	.50+
15.60	195.20	1.96	1.00	SAND TO SILTY SAND	SM-SP	.94	23			88	41	.50+
15.80	245.85	1.97	.80	SAND	SW-SP	1.03	23			94	44	.50+
16.00	239.93	1.47	.61	SAND	SW-SP	1.04	22			93	44	.50+
16.20	253.11	1.79	.71	SAND	SW-SP	1.05	24			94	44	.50+
16.40	256.43	1.60	.62	SAND	SW-SP	1.07	24			95	44	.50+
16.60	120.92	1.64	1.35	SILTY SAND TO SANDY SILT	SM-ML	.91	19			72	39	.50+
16.80	38.27	2.31	6.04	CLAY	CH	.67	18	2.785	13.5			
17.00	168.42	2.12	1.26	SAND TO SILTY SAND	SM-SP	1.02	20			81	40	.50+



RESULT OF CONE PENETRATION TEST

47S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

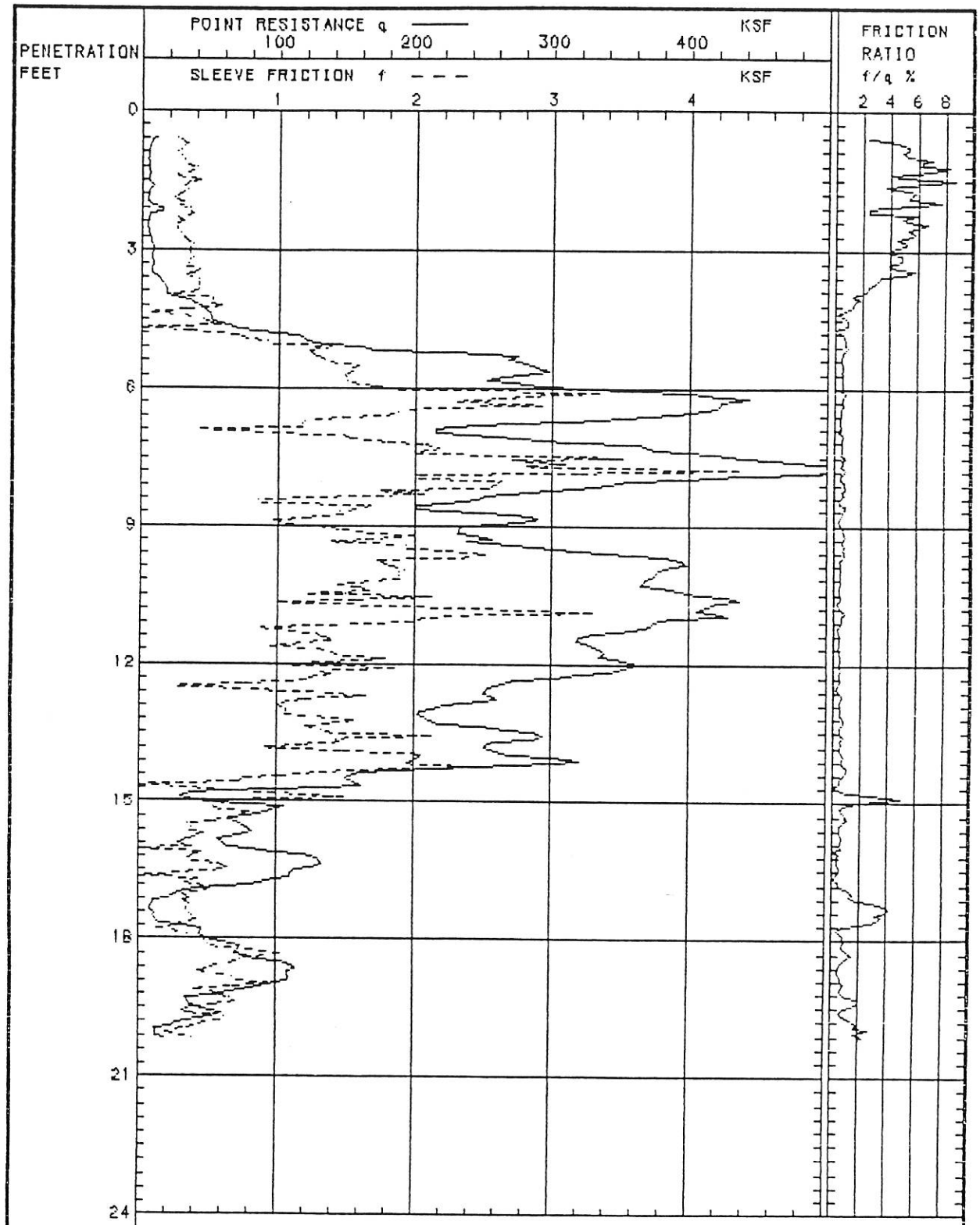
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 47S
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	4.43	.37	8.39	ORGANIC MATERIAL	OL-OH	.02	2	.327	13.5			
.80	3.20	.64	19.93	ORGANIC MATERIAL	OL-OH	.02	1	.235	13.5			
1.00	.49	.77	155.67	ORGANIC MATERIAL	OL-OH	.03	1	.034	13.5			
1.20	6.15	.79	12.80	ORGANIC MATERIAL	OL-OH	.04	2	.453	13.5			
1.40	8.61	.53	6.12	CLAY	CH	.06	4	.634	13.5			
1.60	6.21	.69	11.18	ORGANIC MATERIAL	OL-OH	.05	2	.456	13.5			
1.80	3.94	.44	11.29	ORGANIC MATERIAL	OL-OH	.05	1	.288	13.5			
2.00	1.97	.41	20.74	ORGANIC MATERIAL	OL-OH	.06	1	.141	13.5			
2.20	2.46	.57	23.32	ORGANIC MATERIAL	OL-OH	.07	1	.177	13.5			
2.40	4.92	.66	13.49	ORGANIC MATERIAL	OL-OH	.07	2	.359	13.5			
2.60	3.94	.56	14.35	ORGANIC MATERIAL	OL-OH	.08	1	.286	13.5			
2.80	2.21	.60	27.34	ORGANIC MATERIAL	OL-OH	.08	1	.158	13.5			
3.00	3.44	.58	16.97	ORGANIC MATERIAL	OL-OH	.09	1	.248	13.5			
3.20	7.37	.53	7.14	ORGANIC MATERIAL	OL-OH	.10	3	.539	13.5			
3.40	9.59	.93	9.73	ORGANIC MATERIAL	OL-OH	.10	4	.703	13.5			
3.60	16.23	.93	5.76	CLAY	CH	.14	7	1.191	13.5			
3.80	19.67	.74	3.74	CLAY	CH	.15	9	1.446	13.5			
4.00	22.99	.97	4.23	CLAY	CH	.16	11	1.691	13.5			
4.20	42.26	1.25	2.96	CLAYEY SILT TO SILTY CLAY	MH-CL	.19	10	3.116	13.5			
4.40	61.74	1.43	2.32	SANDY SILT TO CLAYEY SILT	ML-MH	.22	11	4.557	13.5	77	39	.50+
4.60	123.92	1.92	1.55	SILTY SAND TO SANDY SILT	SM-ML	.25	19			100+	42	.50+
4.80	212.71	1.67	.79	SAND TO SILTY SAND	SM-SP	.29	25			100+	42	.50+
5.00	245.16	2.22	.90	SAND TO SILTY SAND	SM-SP	.30	29			100+	42	.50+
5.20	291.16	2.37	.81	SAND	SW-SP	.34	27			100+	44	.50+
5.40	307.94	2.19	.71	SAND	SW-SP	.35	29			100+	44	.50+
5.60	329.79	2.47	.75	SAND	SW-SP	.36	31			100+	44	.50+
5.80	340.71	2.15	.63	SAND	SW-SP	.38	32			100+	44	.50+
6.00	311.75	2.31	.74	SAND	SW-SP	.39	29			100+	44	.50+
6.20	313.60	2.96	.94	SAND	SW-SP	.40	30			100+	44	.50+
6.40	424.73	2.79	.66	SAND	SW-SP	.42	40			100+	44	.50+
6.60	436.53	7.01	1.61	SAND TO SILTY SAND	SM-SP	.40	52			100+	42	.50+
6.80	473.81	3.96	.84	SAND	SW-SP	.44	45			100+	44	.50+
7.00	315.02	2.44	.77	SAND	SW-SP	.45	30			100+	44	.50+
7.20	277.05	1.73	.63	SAND	SW-SP	.47	26			100+	44	.50+
7.40	258.08	1.97	.76	SAND	SW-SP	.48	24			100+	44	.50+
7.60	321.02	2.67	.83	SAND	SW-SP	.49	30			100+	44	.50+
7.80	465.44	3.83	.82	SAND	SW-SP	.51	44			100+	44	.50+
8.00	466.97	2.63	.56	SAND	SW-SP	.52	44			100+	44	.50+
8.20	443.02	2.26	.51	SAND	SW-SP	.53	42			100+	44	.50+
8.40	415.17	2.50	.60	SAND	SW-SP	.55	39			100+	44	.50+
8.60	378.49	2.05	.52	SAND	SW-SP	.56	38			100+	44	.50+
8.80	357.42	2.05	.57	SAND	SW-SP	.57	34			100+	44	.50+
9.00	307.11	2.38	.78	SAND	SW-SP	.59	29			100+	44	.50+
9.20	315.88	1.85	.59	SAND	SW-SP	.60	30			100+	44	.50+
9.40	403.98	3.49	.86	SAND	SW-SP	.61	38			100+	44	.50+

9.60	456.28	4.91	1.08	SAND	SW-SP	.62	43			100+	44	.50+
9.80	482.09	3.36	.70	SAND	SW-SP	.64	46			100+	44	.50+
10.00	517.99	3.50	.68	SAND	SW-SP	.65	49			100+	44	.50+
10.20	545.81	3.27	.60	SAND	SW-SP	.66	52			100+	44	.50+
10.40	531.52	2.69	.51	GRAVELLY SAND TO SAND	SW-GW	.68	42			100+	46	.50+
10.60	530.91	3.30	.62	SAND	SW-SP	.69	50			100+	44	.50+
10.80	480.30	3.20	.67	SAND	SW-SP	.70	46			100+	44	.50+
11.00	460.99	6.81	1.48	SAND TO SILTY SAND	SM-SP	.66	55			100+	42	.50+
11.20	422.92	2.45	.58	SAND	SW-SP	.73	40			100+	44	.50+
11.40	427.64	2.78	.65	SAND	SW-SP	.74	40			100+	44	.50+
11.60	454.95	3.14	.69	SAND	SW-SP	.75	43			100+	44	.50+
11.80	487.71	3.01	.62	SAND	SW-SP	.77	46			100+	44	.50+
12.00	525.22	3.40	.65	SAND	SW-SP	.78	50			100+	44	.50+
12.20	520.54	3.32	.64	SAND	SW-SP	.79	49			100+	44	.50+
12.40	470.19	2.89	.61	SAND	SW-SP	.81	45			100+	44	.50+
12.60	252.87	1.44	.57	SAND	SW-SP	.82	24			100+	44	.50+
12.80	158.75	.70	.44	SAND TO SILTY SAND	SM-SP	.77	19			95	41	.50+
13.00	131.40	.12	.09	SAND TO SILTY SAND	SM-SP	.78	15			79	40	.50+
13.20	100.57	.07	.07	SAND TO SILTY SAND	SM-SP	.79	12			69	39	.47
13.40	83.73	.00	.01	SAND TO SILTY SAND	SM-SP	.80	10			64	39	.28
13.60	58.56	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.75	9			54	36	.19
13.80	39.40	.10	.25	SILTY SAND TO SANDY SILT	SM-ML	.76	6			41	34	.15
14.00	22.00	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.79	4	1.578	13.5	23	31	.12
14.20	15.61	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.43	3	1.125	13.5			
14.40	8.11	.01	.07	SENSITIVE FINE GRAINED	OL-CH	.43	1	.569	13.5			
14.60	13.80	.02	.11	SENSITIVE FINE GRAINED	OL-CH	.44	3	.989	13.5			
14.80	9.11	.04	.43	SENSITIVE FINE GRAINED	OL-CH	.44	2	.642	13.5			
15.00	11.33	.02	.14	SENSITIVE FINE GRAINED	OL-CH	.45	2	.806	13.5			
15.20	10.08	.03	.34	SENSITIVE FINE GRAINED	OL-CH	.46	2	.713	13.5			
15.40	15.25	.01	.06	SENSITIVE FINE GRAINED	OL-CH	.46	3	1.095	13.5			
15.60	17.45	.05	.28	SENSITIVE FINE GRAINED	OL-CH	.47	4	1.258	13.5			
15.80	26.07	.08	.32	SANDY SILT TO CLAYEY SILT	ML-MH	.79	4	1.873	13.5	26	32	.12
16.00	31.94	.10	.31	SANDY SILT TO CLAYEY SILT	ML-MH	.80	6	2.307	13.5	32	33	.13
16.20	41.92	.14	.32	SILTY SAND TO SANDY SILT	SM-ML	.89	6			39	33	.14
16.40	45.50	.14	.31	SILTY SAND TO SANDY SILT	SM-ML	.90	7			41	34	.15
16.60	46.48	.16	.35	SILTY SAND TO SANDY SILT	SM-ML	.91	7			41	34	.15
16.80	47.96	.14	.29	SILTY SAND TO SANDY SILT	SM-ML	.92	7			42	34	.15
17.00	45.99	.13	.28	SILTY SAND TO SANDY SILT	SM-ML	.93	7			40	34	.15
17.20	46.99	.15	.32	SILTY SAND TO SANDY SILT	SM-ML	.95	7			41	34	.15
17.40	46.00	.14	.30	SILTY SAND TO SANDY SILT	SM-ML	.96	7			40	34	.15
17.60	46.24	.12	.25	SILTY SAND TO SANDY SILT	SM-ML	.97	7			40	34	.15
17.80	46.00	.15	.33	SILTY SAND TO SANDY SILT	SM-ML	.98	7			39	34	.14
18.00	45.99	.14	.30	SILTY SAND TO SANDY SILT	SM-ML	.99	7			39	34	.14
18.20	45.75	.16	.36	SILTY SAND TO SANDY SILT	SM-ML	1.00	7			38	33	.14
18.40	46.23	.19	.40	SILTY SAND TO SANDY SILT	SM-ML	1.01	7			38	33	.14
18.60	54.94	.30	.54	SILTY SAND TO SANDY SILT	SM-ML	1.02	8			43	34	.16
18.80	69.76	.27	.39	SILTY SAND TO SANDY SILT	SM-ML	1.03	11			51	35	.18
19.00	62.78	.18	.28	SILTY SAND TO SANDY SILT	SM-ML	1.04	10			47	35	.17
19.20	54.91	.13	.25	SILTY SAND TO SANDY SILT	SM-ML	1.06	8			43	34	.15
19.40	51.41	.18	.36	SILTY SAND TO SANDY SILT	SM-ML	1.07	8			41	33	.15
19.60	47.51	.13	.27	SILTY SAND TO SANDY SILT	SM-ML	1.08	7			39	33	.14
19.80	44.77	.14	.31	SILTY SAND TO SANDY SILT	SM-ML	1.09	7			35	33	.14
20.00	51.16	.13	.26	SILTY SAND TO SANDY SILT	SM-ML	1.10	8			40	34	.15
20.20	51.41	.17	.33	SILTY SAND TO SANDY SILT	SM-ML	1.11	8			40	34	.15
20.40	51.16	.16	.31	SILTY SAND TO SANDY SILT	SM-ML	1.12	8			39	34	.15
20.60	51.16	.16	.31	SILTY SAND TO SANDY SILT	SM-ML	1.13	8			39	34	.15
20.80	50.92	.16	.31	SILTY SAND TO SANDY SILT	SM-ML	1.14	8			39	33	.14
21.00	50.67	.15	.29	SILTY SAND TO SANDY SILT	SM-ML	1.16	8			38	33	.14
21.20	50.67	.15	.29	SILTY SAND TO SANDY SILT	SM-ML	1.17	8			38	33	.14
21.40	50.19	.15	.29	SILTY SAND TO SANDY SILT	SM-ML	1.18	8			37	33	.14

21.60	49.92	.15	.30	SILTY SAND TO SANDY SILT	SM-ML	1.19	7	37	33	.14
21.80	49.94	.15	.30	SILTY SAND TO SANDY SILT	SM-ML	1.20	7	36	33	.14



RESULT OF CONE PENETRATION TEST

48N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

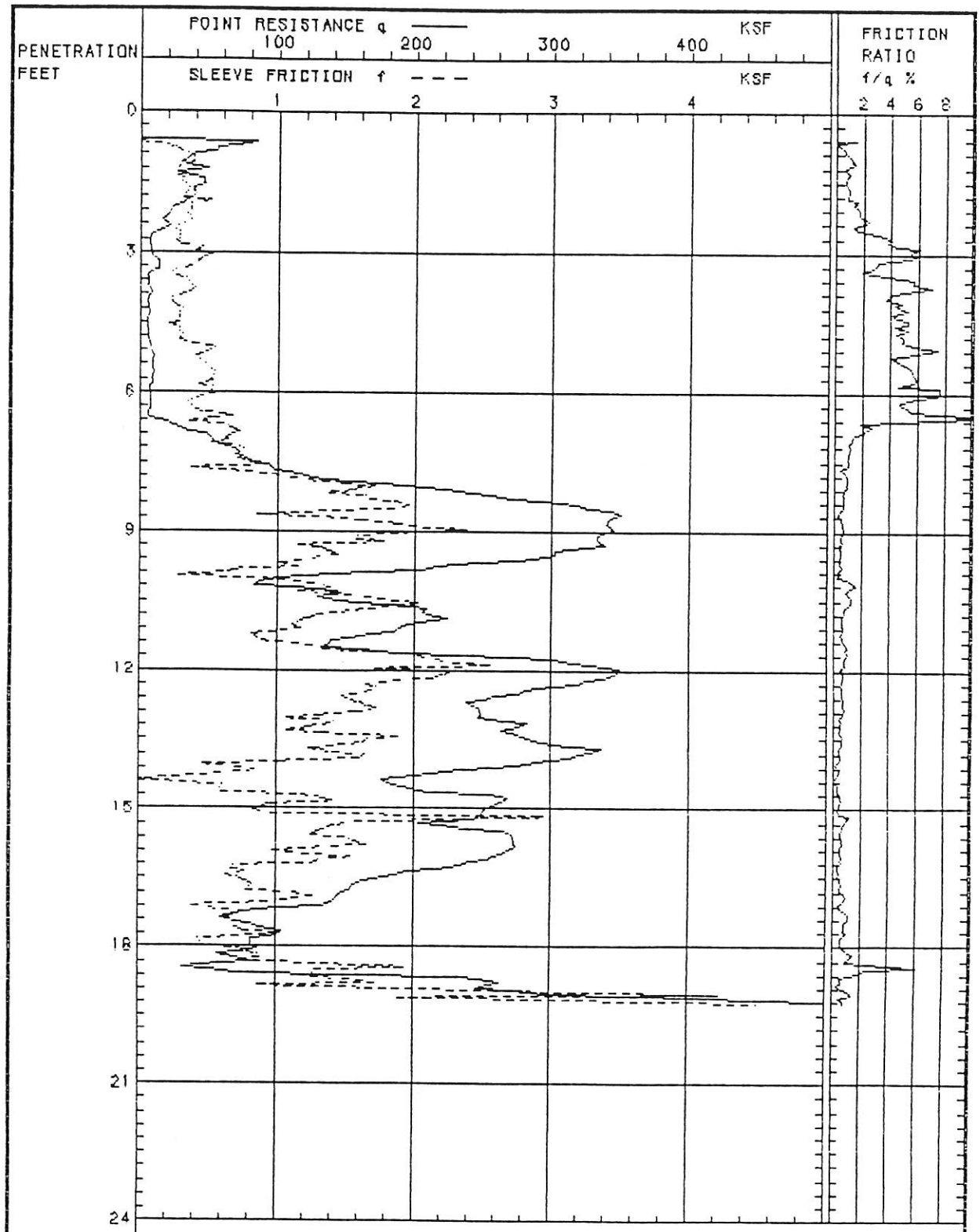
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 1605.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 48N
CONE NO. : 001
DATE : 05/09/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	9.35	.27	2.90	CLAY	CH	.02	4	.691	13.5			
.80	5.66	.30	5.23	CLAY	CH	.03	2	.417	13.5			
1.00	4.92	.30	6.02	ORGANIC MATERIAL	OL-OH	.03	2	.362	13.5			
1.20	5.17	.37	7.12	ORGANIC MATERIAL	OL-OH	.04	2	.380	13.5			
1.40	5.90	.26	4.41	CLAY	CH	.06	2	.433	13.5			
1.60	6.88	.33	4.82	CLAY	CH	.06	3	.505	13.5			
1.80	5.17	.29	5.52	CLAY	CH	.07	2	.377	13.5			
2.00	5.65	.29	5.09	CLAY	CH	.08	2	.413	13.5			
2.20	10.59	.37	3.48	CLAY	CH	.09	5	.778	13.5			
2.40	4.68	.28	6.09	ORGANIC MATERIAL	OL-OH	.07	2	.341	13.5			
2.60	4.92	.27	5.51	CLAY	CH	.10	2	.357	13.5			
2.80	6.89	.33	4.79	CLAY	CH	.11	3	.502	13.5			
3.00	8.85	.35	4.00	CLAY	CH	.12	4	.647	13.5			
3.20	7.63	.37	4.80	CLAY	CH	.13	3	.555	13.5			
3.40	7.38	.34	4.62	CLAY	CH	.14	3	.537	13.5			
3.60	11.55	.37	3.21	CLAY	CH	.14	5	.845	13.5			
3.80	17.71	.35	1.98	CLAYEY SILT TO SILTY CLAY	MH-CL	.17	4	1.299	13.5			
4.00	23.59	.38	1.59	CLAYEY SILT TO SILTY CLAY	MH-CL	.18	5	1.734	13.5			
4.20	41.31	.55	1.32	SANDY SILT TO CLAYEY SILT	ML-MH	.21	7	3.044	13.5	65	37	.50+
4.40	50.30	.17	.33	SILTY SAND TO SANDY SILT	SM-ML	.24	8			69	35	.50+
4.60	57.77	.52	.90	SILTY SAND TO SANDY SILT	SM-ML	.25	9			73	38	.50+
4.80	99.53	.59	.60	SAND TO SILTY SAND	SM-SP	.29	11			90	41	.50+
5.00	126.87	.94	.74	SAND TO SILTY SAND	SM-SP	.30	15			100+	42	.50+
5.20	196.58	1.89	.96	SAND TO SILTY SAND	SM-SP	.31	23			100+	42	.50+
5.40	271.39	1.38	.51	SAND	SW-SP	.35	25			100+	44	.50+
5.60	292.67	1.54	.53	SAND	SW-SP	.36	28			100+	44	.50+
5.80	258.07	1.45	.56	SAND	SW-SP	.38	24			100+	44	.50+
6.00	324.39	3.54	1.09	SAND TO SILTY SAND	SM-SP	.36	38			100+	42	.50+
6.20	432.19	2.61	.60	SAND	SW-SP	.40	41			100+	44	.50+
6.40	420.36	2.25	.53	SAND	SW-SP	.42	40			100+	44	.50+
6.60	370.59	3.75	1.01	SAND	SW-SP	.43	35			100+	44	.50+
6.80	248.51	1.19	.48	SAND	SW-SP	.44	23			100+	44	.50+
7.00	227.15	.97	.43	SAND	SW-SP	.45	21			100+	44	.50+
7.20	337.20	1.90	.56	SAND	SW-SP	.47	32			100+	44	.50+
7.40	396.28	1.99	.50	SAND	SW-SP	.49	37			100+	44	.50+
7.60	475.28	2.90	.61	SAND	SW-SP	.49	45			100+	44	.50+
7.80	512.29	3.78	.74	SAND	SW-SP	.51	49			100+	44	.50+
8.00	376.07	2.48	.66	SAND	SW-SP	.52	36			100+	44	.50+
8.20	307.81	2.15	.70	SAND	SW-SP	.53	29			100+	44	.50+
8.40	248.70	1.24	.50	SAND	SW-SP	.55	23			100+	44	.50+
8.60	200.96	1.63	.81	SAND TO SILTY SAND	SM-SP	.52	24			100+	42	.50+
8.80	281.03	1.28	.45	SAND	SW-SP	.57	26			100+	44	.50+
9.00	248.59	1.10	.44	SAND	SW-SP	.59	23			100+	44	.50+
9.20	237.49	1.96	.83	SAND TO SILTY SAND	SM-SP	.55	29			100+	42	.50+
9.40	253.87	1.53	.60	SAND	SW-SP	.61	24			100+	44	.50+

9.60	337.68	2.37	.70	SAND	SW-SP	.62	32			100+	44	.50+
9.80	396.22	.83	.21	SAND	SW-SP	.64	37			100+	44	.50+
10.00	377.33	1.91	.51	SAND	SW-SP	.65	36			100+	44	.50+
10.20	367.98	1.78	.48	SAND	SW-SP	.66	35			100+	44	.50+
10.40	385.21	1.61	.42	SAND	SW-SP	.68	36			100+	44	.50+
10.60	431.35	2.22	.52	SAND	SW-SP	.69	41			100+	44	.50+
10.80	409.23	2.22	.54	SAND	SW-SP	.70	39			100+	44	.50+
11.00	407.65	2.18	.53	SAND	SW-SP	.71	39			100+	44	.50+
11.20	369.72	1.17	.32	SAND	SW-SP	.73	35			100+	44	.50+
11.40	324.77	1.47	.45	SAND	SW-SP	.74	31			100+	44	.50+
11.60	326.96	1.07	.33	SAND	SW-SP	.75	31			100+	44	.50+
11.80	336.52	1.43	.42	SAND	SW-SP	.77	32			100+	44	.50+
12.00	360.29	.91	.25	SAND	SW-SP	.78	34			100+	44	.50+
12.20	331.52	1.36	.41	SAND	SW-SP	.79	31			100+	44	.50+
12.40	268.67	2.16	.80	SAND	SW-SP	.81	25			100+	44	.50+
12.60	251.52	1.08	.43	SAND	SW-SP	.82	24			100+	44	.50+
12.80	255.66	.67	.26	SAND	SW-SP	.83	24			100+	44	.50+
13.00	209.16	1.01	.48	SAND	SW-SP	.84	20			93	44	.50+
13.20	209.40	1.43	.69	SAND TO SILTY SAND	SM-SP	.79	25			95	42	.50+
13.40	257.71	1.25	.49	SAND	SW-SP	.87	24			100+	44	.50+
13.60	290.07	1.79	.62	SAND	SW-SP	.88	27			100+	44	.50+
13.80	251.64	.91	.36	SAND	SW-SP	.90	24			99	44	.50+
14.00	284.27	2.05	.72	SAND	SW-SP	.91	27			100+	44	.50+
14.20	273.74	1.88	.69	SAND	SW-SP	.92	26			100+	44	.50+
14.40	157.26	.92	.59	SAND TO SILTY SAND	SM-SP	.86	18			83	40	.50+
14.60	159.20	.20	.13	SAND	SW-SP	.95	15			81	42	.50+
14.80	50.18	.88	1.76	SANDY SILT TO CLAYEY SILT	ML-MH	.74	9	3.662	13.5	49	35	.17
15.00	46.85	.99	2.12	SANDY SILT TO CLAYEY SILT	ML-MH	.75	8	3.415	13.5	46	35	.16
15.20	97.10	.74	.76	SAND TO SILTY SAND	SM-SP	.91	11			65	38	.32
15.40	67.84	.62	.91	SILTY SAND TO SANDY SILT	SM-ML	.85	10			56	36	.20
15.60	80.75	.37	.46	SILTY SAND TO SANDY SILT	SM-ML	.86	12			61	37	.24
15.80	62.33	.55	.88	SILTY SAND TO SANDY SILT	SM-ML	.87	9			52	35	.18
16.00	72.61	.20	.28	SILTY SAND TO SANDY SILT	SM-ML	.88	11			58	36	.20
16.20	124.58	.53	.42	SAND TO SILTY SAND	SM-SP	.97	14			72	39	.50+
16.40	130.21	.61	.47	SAND TO SILTY SAND	SM-SP	.98	15			73	39	.50+
16.60	110.19	.22	.20	SAND TO SILTY SAND	SM-SP	1.00	13			67	39	.38
16.80	84.94	.39	.46	SAND TO SILTY SAND	SM-SP	1.01	10			60	38	.22
17.00	27.82	.38	1.38	SANDY SILT TO CLAYEY SILT	ML-MH	.85	5	1.998	13.5	26	32	.12
17.20	10.60	.35	3.33	CLAY	CH	.69	5	.734	13.5			
17.40	10.29	.33	3.21	CLAY	CH	.70	4	.711	13.5			
17.60	14.11	.34	2.41	SILTY CLAY TO CLAY	CL-CH	.70	4	.993	13.5			
17.80	45.99	.12	.27	SILTY SAND TO SANDY SILT	SM-ML	.98	7			39	34	.14
18.00	52.08	.41	.79	SILTY SAND TO SANDY SILT	SM-ML	.99	8			43	34	.15
18.20	73.70	.66	.89	SILTY SAND TO SANDY SILT	SM-ML	1.00	11			54	36	.19
18.40	80.95	.82	1.01	SILTY SAND TO SANDY SILT	SM-ML	1.01	12			58	36	.21
18.60	112.61	.34	.30	SAND TO SILTY SAND	SM-SP	1.12	13			65	39	.32
18.80	109.08	.64	.58	SAND TO SILTY SAND	SM-SP	1.13	13			64	38	.30
19.00	94.14	.70	.74	SILTY SAND TO SANDY SILT	SM-ML	1.04	15			62	37	.25
19.20	61.01	.52	.85	SILTY SAND TO SANDY SILT	SM-ML	1.06	9			46	34	.14
19.40	36.50	.17	.47	SANDY SILT TO CLAYEY SILT	ML-MH	.97	6	2.632	13.5	31	32	.13
19.60	56.19	.38	.68	SILTY SAND TO SANDY SILT	SM-ML	1.08	8			43	34	.15
19.80	31.37	.55	1.76	CLAYEY SILT TO SILTY CLAY	MH-CL	.89	7	2.258	13.5			
20.00	12.05	.33	2.75	CLAY	CH	.80	5	.833	13.5			



RESULT OF CONE PENETRATION TEST

48M

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

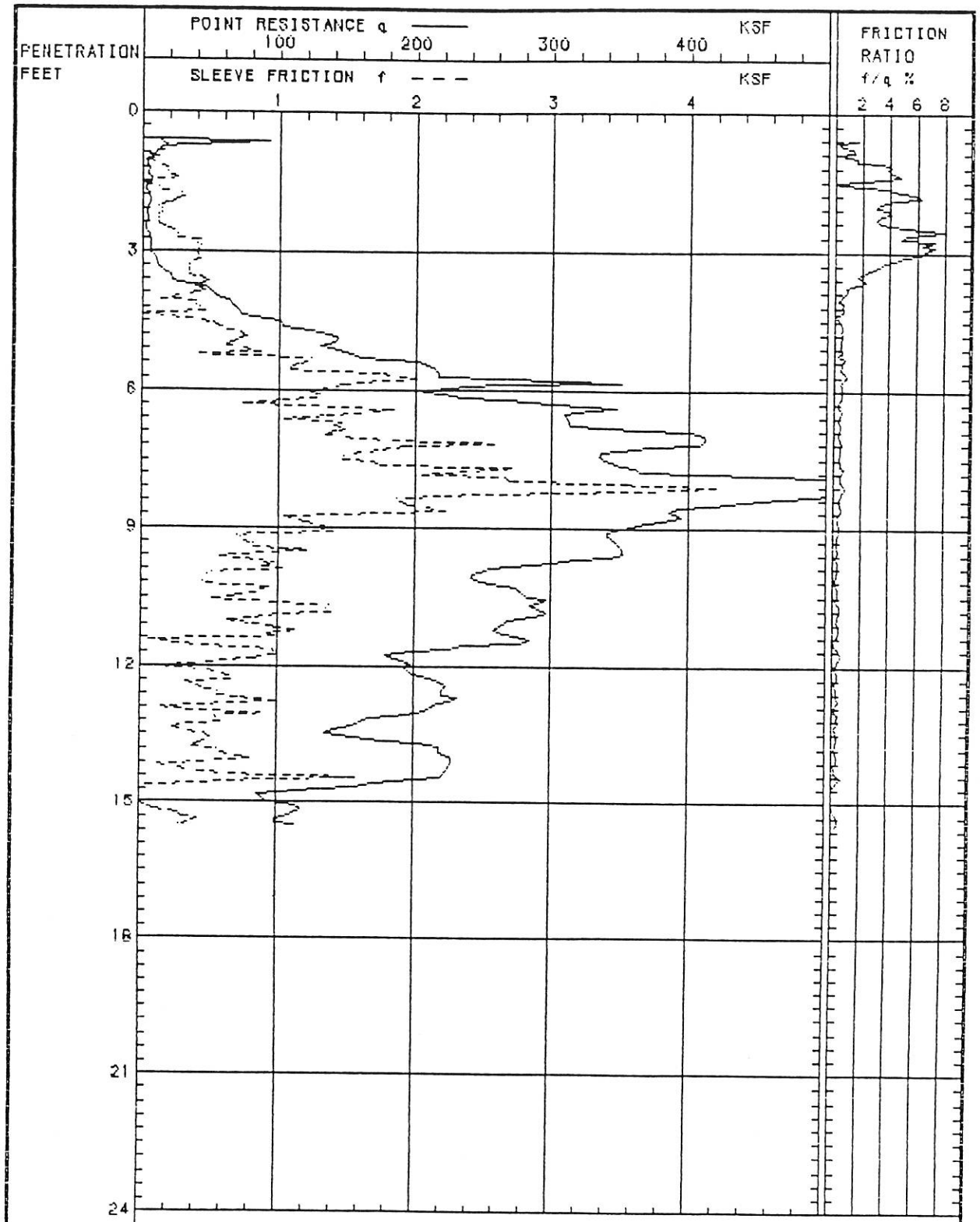
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : -1870206
BORING NO. : 48M
CONE NO. : 001
DATE : 05/09/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	46.48	.11	.23	SILTY SAND TO SANDY SILT	SM-ML	.03	7			83	40	.50+
.80	55.59	.28	.50	SILTY SAND TO SANDY SILT	SM-ML	.04	8			90	41	.50+
1.00	33.94	.38	1.13	SANDY SILT TO CLAYEY SILT	ML-MH	.05	6	2.511	13.5	71	39	.50+
1.20	44.64	.24	.53	SILTY SAND TO SANDY SILT	SM-ML	.07	7			78	39	.50+
1.40	41.56	.30	.72	SANDY SILT TO CLAYEY SILT	ML-MH	.07	7	3.073	13.5	75	39	.50+
1.60	42.56	.34	.79	SANDY SILT TO CLAYEY SILT	ML-MH	.08	8	3.147	13.5	75	39	.50+
1.80	38.87	.38	.96	SANDY SILT TO CLAYEY SILT	ML-MH	.09	7	2.872	13.5	72	38	.50+
2.00	27.06	.28	1.03	SANDY SILT TO CLAYEY SILT	ML-MH	.10	5	1.997	13.5	64	37	.50+
2.20	20.79	.35	1.70	CLAYEY SILT TO SILTY CLAY	MH-CL	.10	4	1.532	13.5			
2.40	20.53	.30	1.46	CLAYEY SILT TO SILTY CLAY	MH-CL	.11	4	1.513	13.5			
2.60	10.09	.26	2.57	CLAY	CH	.10	4	.740	13.5			
2.80	6.89	.30	4.36	CLAY	CH	.11	3	.502	13.5			
3.00	8.11	.46	5.66	CLAY	CH	.12	3	.592	13.5			
3.20	13.77	.41	2.98	CLAY	CH	.13	6	1.011	13.5			
3.40	11.33	.25	2.19	SILTY CLAY TO CLAY	CL-CH	.14	3	.829	13.5			
3.60	6.15	.30	4.83	CLAY	CH	.14	2	.445	13.5			
3.80	7.62	.36	4.74	CLAY	CH	.15	3	.553	13.5			
4.00	5.66	.24	4.16	CLAY	CH	.16	2	.407	13.5			
4.20	5.90	.29	5.00	CLAY	CH	.17	2	.425	13.5			
4.40	5.91	.28	4.81	CLAY	CH	.18	2	.424	13.5			
4.60	5.16	.25	4.78	CLAY	CH	.18	2	.369	13.5			
4.80	6.15	.30	4.82	CLAY	CH	.19	2	.441	13.5			
5.00	7.01	.48	6.84	ORGANIC MATERIAL	OL-OH	.15	3	.508	13.5			
5.20	9.59	.37	3.82	CLAY	CH	.21	4	.695	13.5			
5.40	9.35	.49	5.19	CLAY	CH	.22	4	.676	13.5			
5.60	9.59	.54	5.63	CLAY	CH	.22	4	.694	13.5			
5.80	9.22	.45	4.89	CLAY	CH	.23	4	.666	13.5			
6.00	7.13	.53	7.50	ORGANIC MATERIAL	OL-OH	.18	3	.515	13.5			
6.20	7.75	.38	4.89	CLAY	CH	.25	3	.556	13.5			
6.40	6.89	.44	6.38	CLAY	CH	.26	3	.492	13.5			
6.60	13.47	.44	3.28	CLAY	CH	.26	6	.978	13.5			
6.80	32.19	.69	2.14	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	7	2.362	13.5			
7.00	51.89	.60	1.15	SANDY SILT TO CLAYEY SILT	ML-MH	.35	9	3.818	13.5	65	37	.35
7.20	66.14	.57	.86	SILTY SAND TO SANDY SILT	SM-ML	.40	10			70	38	.50+
7.40	73.94	.74	1.00	SILTY SAND TO SANDY SILT	SM-ML	.41	11			73	38	.50+
7.60	94.68	.90	.95	SILTY SAND TO SANDY SILT	SM-ML	.42	15			81	39	.50+
7.80	120.35	1.03	.85	SAND TO SILTY SAND	SM-SP	.47	14			87	41	.50+
8.00	183.40	1.60	.87	SAND TO SILTY SAND	SM-SP	.48	21			100+	42	.50+
8.20	248.22	1.45	.58	SAND	SW-SP	.53	23			100+	44	.50+
8.40	305.59	1.91	.62	SAND	SW-SP	.55	29			100+	44	.50+
8.60	346.77	.59	.17	SAND	SW-SP	.56	33			100+	44	.50+
8.80	340.30	1.89	.56	SAND	SW-SP	.57	32			100+	44	.50+
9.00	342.41	2.18	.64	SAND	SW-SP	.58	32			100+	44	.50+
9.20	333.41	1.73	.52	SAND	SW-SP	.60	31			100+	44	.50+
9.40	314.26	1.35	.43	SAND	SW-SP	.61	30			100+	44	.50+

9.60	286.21	2.21	.77	SAND	SW-SP	.62	27			100+	44	.50+
9.80	211.61	.92	.44	SAND	SW-SP	.64	20			100+	43	.50+
10.00	109.59	.14	.13	SAND TO SILTY SAND	SM-SP	.60	13			79	40	.50+
10.20	97.93	1.19	1.21	SILTY SAND TO SANDY SILT	SM-ML	.56	15			76	39	.50+
10.40	138.24	.91	.66	SAND TO SILTY SAND	SM-SP	.62	16			85	41	.50+
10.60	178.53	1.79	1.00	SAND TO SILTY SAND	SM-SP	.64	21			95	42	.50+
10.80	210.72	1.00	.48	SAND	SW-SP	.70	20			99	44	.50+
11.00	199.97	1.13	.56	SAND TO SILTY SAND	SM-SP	.65	23			98	42	.50+
11.20	177.23	.99	.56	SAND TO SILTY SAND	SM-SP	.67	21			93	42	.50+
11.40	138.98	.91	.66	SAND TO SILTY SAND	SM-SP	.69	16			84	41	.50+
11.60	174.90	1.75	1.00	SAND TO SILTY SAND	SM-SP	.70	20			91	41	.50+
11.80	308.08	2.26	.73	SAND	SW-SP	.77	29			100+	44	.50+
12.00	349.52	1.99	.57	SAND	SW-SP	.78	33			100+	44	.50+
12.20	331.69	2.03	.61	SAND	SW-SP	.79	31			100+	44	.50+
12.40	290.66	1.69	.58	SAND	SW-SP	.81	27			100+	44	.50+
12.60	254.89	1.75	.69	SAND	SW-SP	.82	24			100+	44	.50+
12.80	245.19	1.70	.69	SAND	SW-SP	.83	23			100+	44	.50+
13.00	248.19	1.42	.57	SAND	SW-SP	.84	23			100+	44	.50+
13.20	279.48	1.16	.41	SAND	SW-SP	.86	26			100+	44	.50+
13.40	274.61	1.75	.64	SAND	SW-SP	.87	26			100+	44	.50+
13.60	302.32	1.25	.41	SAND	SW-SP	.88	28			100+	44	.50+
13.80	324.88	1.54	.47	SAND	SW-SP	.90	31			100+	44	.50+
14.00	286.09	2.67	.93	SAND	SW-SP	.91	27			100+	44	.50+
14.20	224.06	1.28	.57	SAND	SW-SP	.92	21			93	44	.50+
14.40	179.21	.51	.28	SAND	SW-SP	.94	17			85	43	.50+
14.60	204.02	.61	.30	SAND	SW-SP	.95	19			89	43	.50+
14.80	267.87	1.37	.51	SAND	SW-SP	.96	25			100+	44	.50+
15.00	252.65	.60	.24	SAND	SW-SP	.97	24			97	44	.50+
15.20	246.27	2.41	.98	SAND TO SILTY SAND	SM-SP	.91	29			98	42	.50+
15.40	228.62	1.70	.74	SAND TO SILTY SAND	SM-SP	.92	27			94	42	.50+
15.60	271.42	1.33	.49	SAND	SW-SP	1.01	26			99	44	.50+
15.80	273.49	1.28	.47	SAND	SW-SP	1.03	26			99	44	.50+
16.00	260.91	1.40	.54	SAND	SW-SP	1.04	24			96	44	.50+
16.20	237.93	1.00	.42	SAND	SW-SP	1.05	22			92	44	.50+
16.40	191.46	1.07	.56	SAND TO SILTY SAND	SM-SP	.98	22			86	41	.50+
16.60	160.45	.80	.50	SAND TO SILTY SAND	SM-SP	1.00	19			80	40	.50+
16.80	151.20	.91	.60	SAND TO SILTY SAND	SM-SP	1.01	18			78	40	.50+
17.00	142.19	1.02	.72	SAND TO SILTY SAND	SM-SP	1.02	17			75	40	.50+
17.20	88.87	.64	.72	SILTY SAND TO SANDY SILT	SM-ML	.95	14			62	37	.25
17.40	65.42	.64	.98	SILTY SAND TO SANDY SILT	SM-ML	.96	10			51	33	.18
17.60	95.95	.73	.76	SILTY SAND TO SANDY SILT	SM-ML	.97	15			64	37	.28
17.80	89.47	.44	.49	SAND TO SILTY SAND	SM-SP	1.07	10			60	38	.22
18.00	84.06	.52	.62	SILTY SAND TO SANDY SILT	SM-ML	.99	13			60	36	.22
18.20	63.85	.89	1.40	SANDY SILT TO CLAYEY SILT	ML-MH	.91	12	4.662	13.5	51	35	.18
18.40	46.63	1.31	2.81	CLAYEY SILT TO SILTY CLAY	MH-CL	.83	11	3.392	13.5			
18.60	149.80	1.11	.74	SAND TO SILTY SAND	SM-SP	1.12	17			75	40	.50+
18.80	258.75	1.31	.51	SAND	SW-SP	1.22	24			91	43	.50+
19.00	284.47	3.14	1.10	SAND TO SILTY SAND	SM-SP	1.14	34			97	42	.50+
19.20	499.33	3.83	.77	SAND	SW-SP	1.25	47			100+	44	.50+



RESULT OF CONE PENETRATION TEST

48S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

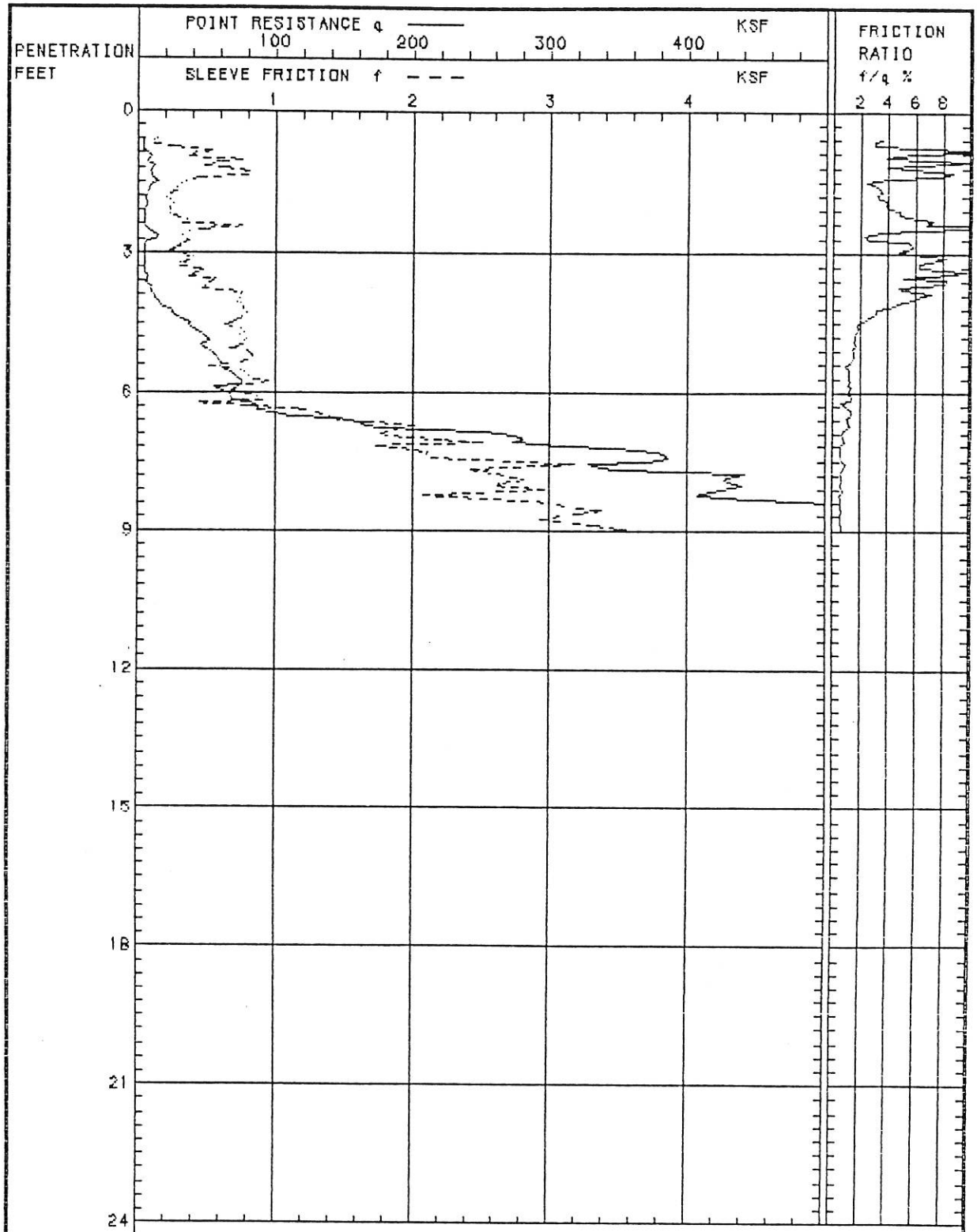
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 48S
CONE NO. : 001
DATE : 05/09/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	47.71	.09	.18	SILTY SAND TO SANDY SILT	SM-ML	.03	7			84	40	.50+
.80	13.04	.17	1.33	SENSITIVE FINE GRAINED	OL-CH	.02	3	.964	13.5			
1.00	5.17	.08	1.57	SENSITIVE FINE GRAINED	OL-CH	.03	1	.381	13.5			
1.20	4.18	.16	3.94	CLAY	CH	.05	2	.306	13.5			
1.40	5.66	.24	4.16	CLAY	CH	.06	2	.415	13.5			
1.60	4.43	.07	1.55	SENSITIVE FINE GRAINED	OL-CH	.05	1	.325	13.5			
1.80	4.92	.30	6.01	ORGANIC MATERIAL	OL-OH	.05	2	.360	13.5			
2.00	4.92	.08	1.67	SENSITIVE FINE GRAINED	OL-CH	.06	1	.360	13.5			
2.20	3.44	.13	3.75	CLAY	CH	.09	1	.249	13.5			
2.40	3.20	.12	3.68	CLAY	CH	.10	1	.230	13.5			
2.60	3.93	.25	6.30	ORGANIC MATERIAL	OL-OH	.08	1	.286	13.5			
2.80	6.15	.42	6.76	ORGANIC MATERIAL	OL-OH	.08	2	.449	13.5			
3.00	6.40	.49	7.64	ORGANIC MATERIAL	OL-OH	.09	3	.467	13.5			
3.20	10.08	.40	4.01	CLAY	CH	.13	4	.737	13.5			
3.40	14.26	.22	1.54	CLAYEY SILT TO SILTY CLAY	MH-CL	.15	3	1.045	13.5			
3.60	21.77	.45	2.07	CLAYEY SILT TO SILTY CLAY	MH-CL	.16	5	1.600	13.5			
3.80	48.20	.39	.81	SILTY SAND TO SANDY SILT	SM-ML	.21	7			70	38	.50+
4.00	58.27	.29	.49	SILTY SAND TO SANDY SILT	SM-ML	.22	9			75	39	.50+
4.20	66.90	.41	.61	SILTY SAND TO SANDY SILT	SM-ML	.23	10			79	39	.50+
4.40	77.21	.00	.00	SAND TO SILTY SAND	SM-SP	.26	9			82	40	.50+
4.60	102.32	.55	.53	SAND TO SILTY SAND	SM-SP	.28	12			92	42	.50+
4.80	136.23	.74	.54	SAND TO SILTY SAND	SM-SP	.29	16			100+	42	.50+
5.00	135.57	.71	.52	SAND TO SILTY SAND	SM-SP	.30	16			100+	42	.50+
5.20	150.88	.96	.64	SAND TO SILTY SAND	SM-SP	.31	18			100+	42	.50+
5.40	203.90	1.31	.64	SAND TO SILTY SAND	SM-SP	.32	24			100+	42	.50+
5.60	215.83	1.59	.74	SAND TO SILTY SAND	SM-SP	.34	25			100+	42	.50+
5.80	305.63	1.62	.53	SAND	SW-SP	.38	29			100+	44	.50+
6.00	214.36	1.25	.58	SAND	SW-SP	.39	20			100+	44	.50+
6.20	249.52	1.48	.59	SAND	SW-SP	.40	23			100+	44	.50+
6.40	337.43	1.42	.42	SAND	SW-SP	.42	32			100+	44	.50+
6.60	310.40	1.19	.38	SAND	SW-SP	.43	29			100+	44	.50+
6.80	338.69	1.45	.43	SAND	SW-SP	.44	32			100+	44	.50+
7.00	411.01	1.47	.36	SAND	SW-SP	.45	39			100+	44	.50+
7.20	390.04	3.02	.78	SAND	SW-SP	.47	37			100+	44	.50+
7.40	335.14	1.52	.45	SAND	SW-SP	.48	32			100+	44	.50+
7.60	346.28	1.71	.49	SAND	SW-SP	.49	33			100+	44	.50+
7.80	408.06	2.22	.54	SAND	SW-SP	.51	39			100+	44	.50+
8.00	538.14	3.13	.58	SAND	SW-SP	.52	51			100+	44	.50+
8.20	513.43	3.30	.64	SAND	SW-SP	.53	49			100+	44	.50+
8.40	453.96	1.97	.43	SAND	SW-SP	.55	43			100+	44	.50+
8.60	389.17	1.76	.45	SAND	SW-SP	.56	37			100+	44	.50+
8.80	388.22	1.09	.28	SAND	SW-SP	.57	37			100+	44	.50+
9.00	355.47	1.31	.37	SAND	SW-SP	.58	34			100+	44	.50+
9.20	342.37	1.17	.34	SAND	SW-SP	.60	32			100+	44	.50+
9.40	349.26	.82	.23	SAND	SW-SP	.61	33			100+	44	.50+

9.60	347.86	.74	.21	SAND	SW-SP	.62	33	100+	44	.50+
9.80	286.28	.93	.33	SAND	SW-SP	.64	27	100+	44	.50+
10.00	245.27	.23	.09	SAND	SW-SP	.65	23	100+	44	.50+
10.20	252.19	.41	.16	SAND	SW-SP	.66	24	100+	44	.50+
10.40	276.94	.86	.31	SAND	SW-SP	.68	26	100+	44	.50+
10.60	293.24	.73	.25	SAND	SW-SP	.69	28	100+	44	.50+
10.80	293.51	1.39	.47	SAND	SW-SP	.70	28	100+	44	.50+
11.00	273.46	.66	.24	SAND	SW-SP	.71	26	100+	44	.50+
11.20	259.27	.98	.38	SAND	SW-SP	.73	24	100+	44	.50+
11.40	279.08	.53	.19	SAND	SW-SP	.74	26	100+	44	.50+
11.60	231.04	.71	.31	SAND	SW-SP	.75	22	100+	44	.50+
11.80	182.58	1.39	.76	SAND TO SILTY SAND	SM-SP	.71	21	92	42	.50+
12.00	195.23	.45	.23	SAND	SW-SP	.78	18	93	44	.50+
12.20	201.88	.63	.31	SAND	SW-SP	.79	19	93	44	.50+
12.40	221.33	1.08	.49	SAND	SW-SP	.81	21	97	44	.50+
12.60	220.51	.50	.23	SAND	SW-SP	.82	21	95	44	.50+
12.80	222.69	.62	.28	SAND	SW-SP	.83	21	96	44	.50+
13.00	205.55	.70	.34	SAND	SW-SP	.84	19	92	44	.50+
13.20	164.86	.58	.35	SAND TO SILTY SAND	SM-SP	.79	19	86	41	.50+
13.40	142.89	.11	.08	SAND TO SILTY SAND	SM-SP	.80	17	81	40	.50+
13.60	166.71	.45	.27	SAND	SW-SP	.88	15	84	43	.50+
13.80	218.42	.44	.20	SAND	SW-SP	.90	20	93	44	.50+
14.00	227.01	.74	.32	SAND	SW-SP	.91	21	94	44	.50+
14.20	226.43	.21	.09	SAND	SW-SP	.92	21	94	44	.50+
14.40	221.27	1.29	.58	SAND	SW-SP	.94	21	92	44	.50+
14.60	164.45	.72	.44	SAND TO SILTY SAND	SM-SP	.99	19	84	41	.50+
14.80	94.38	.00	.00	SAND TO SILTY SAND	SM-SP	.89	11	65	39	.31
15.00	99.95	.00	.00	SAND TO SILTY SAND	SM-SP	.90	11	66	39	.35
15.20	115.18	.17	.15	SAND TO SILTY SAND	SM-SP	.91	13	70	39	.50+
15.40	99.37	.40	.40	SAND TO SILTY SAND	SM-SP	.92	11	66	39	.33



RESULT OF CONE PENETRATION TEST

49N

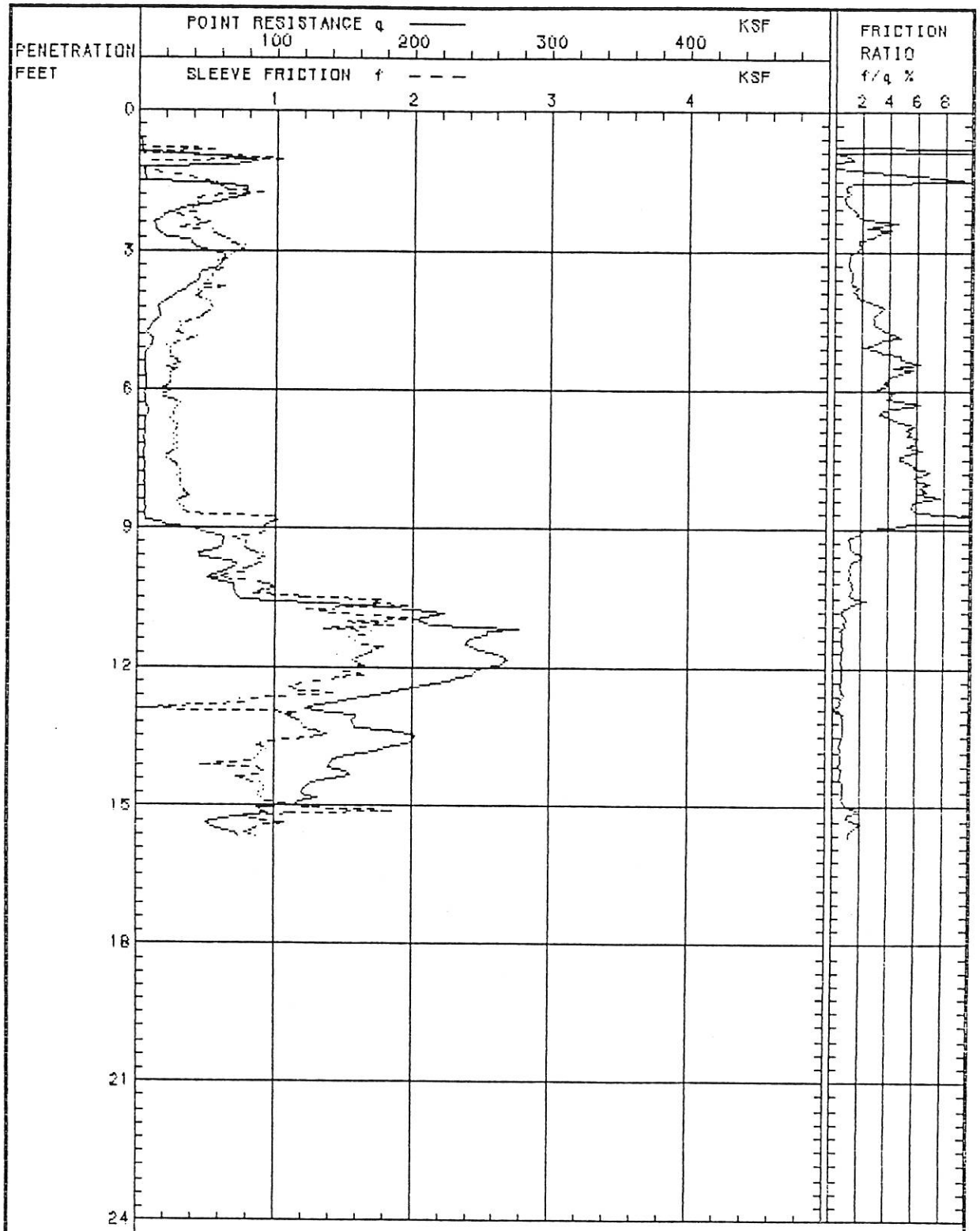
JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 498 N
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	3.94	.13	3.27	CLAY	CH	.02	1	.290	13.5			
.80	4.43	.41	9.34	ORGANIC MATERIAL	OL-OH	.02	2	.326	13.5			
1.00	8.61	.57	6.61	CLAY	CH	.04	4	.635	13.5			
1.20	11.81	.28	2.40	SILTY CLAY TO CLAY	CL-CH	.05	3	.871	13.5			
1.40	10.82	.48	4.47	CLAY	CH	.06	5	.797	13.5			
1.60	9.59	.29	3.07	CLAY	CH	.06	4	.706	13.5			
1.80	6.89	.22	3.24	CLAY	CH	.07	3	.505	13.5			
2.00	6.40	.25	3.88	CLAY	CH	.08	3	.468	13.5			
2.20	4.92	.25	5.05	CLAY	CH	.09	2	.358	13.5			
2.40	4.92	.54	11.08	ORGANIC MATERIAL	OL-OH	.07	2	.359	13.5			
2.60	12.54	.35	2.81	SILTY CLAY TO CLAY	CL-CH	.10	4	.921	13.5			
2.80	6.15	.34	5.60	CLAY	CH	.11	2	.447	13.5			
3.00	4.92	.28	5.78	ORGANIC MATERIAL	OL-OH	.09	2	.358	13.5			
3.20	5.17	.34	6.67	ORGANIC MATERIAL	OL-OH	.10	2	.376	13.5			
3.40	4.92	.38	7.74	ORGANIC MATERIAL	OL-OH	.10	2	.357	13.5			
3.60	6.64	.49	7.31	ORGANIC MATERIAL	OL-OH	.11	3	.484	13.5			
3.80	9.96	.54	5.44	CLAY	CH	.15	4	.726	13.5			
4.00	14.26	.74	5.16	CLAY	CH	.16	6	1.044	13.5			
4.20	21.38	.77	3.60	CLAY	CH	.17	10	1.572	13.5			
4.40	30.00	.81	2.70	CLAYEY SILT TO SILTY CLAY	MH-CL	.20	7	2.208	13.5			
4.60	39.10	.75	1.92	SANDY SILT TO CLAYEY SILT	ML-MH	.23	7	2.879	13.5	64	37	.37
4.80	49.68	.67	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.24	9	3.662	13.5	69	38	.50+
5.00	47.46	.76	1.61	SANDY SILT TO CLAYEY SILT	ML-MH	.25	9	3.497	13.5	68	38	.50+
5.20	57.06	.84	1.47	SANDY SILT TO CLAYEY SILT	ML-MH	.26	10	4.207	13.5	72	38	.50+
5.40	61.01	.76	1.25	SANDY SILT TO CLAYEY SILT	ML-MH	.27	11	4.499	13.5	74	38	.50+
5.60	70.09	.81	1.16	SILTY SAND TO SANDY SILT	SM-ML	.31	11			76	39	.50+
5.80	76.00	1.00	1.32	SILTY SAND TO SANDY SILT	SM-ML	.32	12			78	39	.50+
6.00	64.54	.80	1.25	SILTY SAND TO SANDY SILT	SM-ML	.33	10			72	38	.50+
6.20	74.72	.59	.79	SILTY SAND TO SANDY SILT	SM-ML	.34	11			76	39	.50+
6.40	93.23	.83	.89	SILTY SAND TO SANDY SILT	SM-ML	.35	14			83	40	.50+
6.60	152.67	1.54	1.01	SAND TO SILTY SAND	SM-SP	.40	18			100+	42	.50+
6.80	212.41	2.04	.96	SAND TO SILTY SAND	SM-SP	.41	25			100+	42	.50+
7.00	280.15	2.07	.74	SAND	SW-SP	.45	26			100+	44	.50+
7.20	328.24	2.60	.79	SAND	SW-SP	.47	31			100+	44	.50+
7.40	384.30	2.13	.56	SAND	SW-SP	.48	36			100+	44	.50+
7.60	332.74	2.40	.72	SAND	SW-SP	.49	31			100+	44	.50+
7.80	435.31	2.32	.53	SAND	SW-SP	.51	41			100+	44	.50+
8.00	436.40	2.61	.60	SAND	SW-SP	.52	41			100+	44	.50+
8.20	408.82	2.30	.56	SAND	SW-SP	.53	39			100+	44	.50+
8.40	499.61	3.07	.61	SAND	SW-SP	.55	47			100+	44	.50+
8.60	549.85	3.75	.68	SAND	SW-SP	.56	52			100+	44	.50+
8.80	523.17	3.16	.60	SAND	SW-SP	.57	50			100+	44	.50+
9.00	523.69	3.57	.68	SAND	SW-SP	.58	50			100+	44	.50+



RESULT OF CONE PENETRATION TEST

49M

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

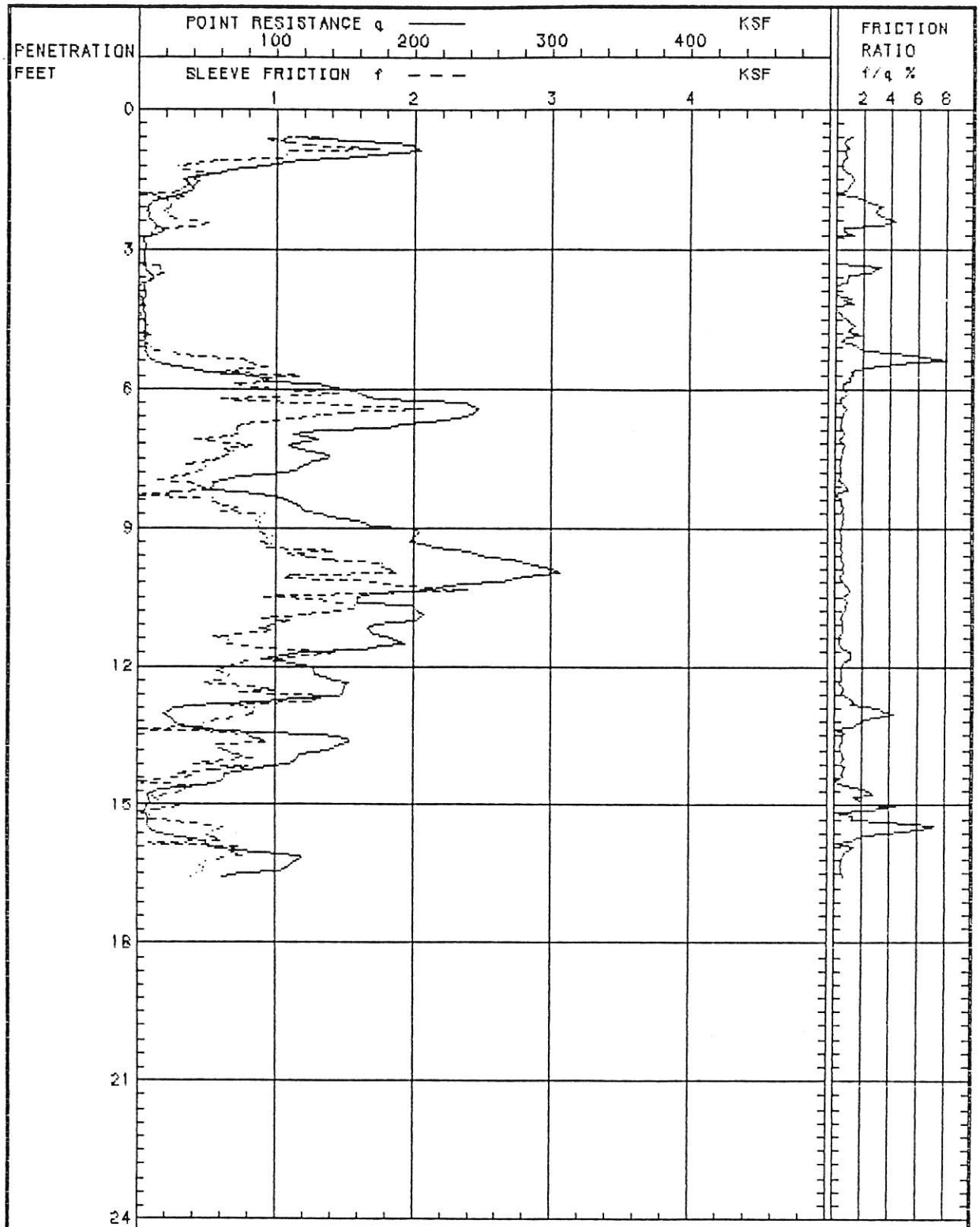
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 49M
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	1.48	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.02	0	.109	13.5			
.80	2.71	.28	10.19	ORGANIC MATERIAL	OL-OH	.02	1	.199	13.5			
1.00	68.86	.83	1.21	SILTY SAND TO SANDY SILT	SM-ML	.05	10			100+	42	.50+
1.20	36.68	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.07	5			72	38	.50+
1.40	4.67	.13	2.79	CLAY	CH	.06	2	.342	13.5			
1.60	60.23	.28	.46	SILTY SAND TO SANDY SILT	SM-ML	.09	9			87	40	.50+
1.80	77.48	.52	.67	SILTY SAND TO SANDY SILT	SM-ML	.10	12			99	42	.50+
2.00	47.99	.40	.82	SILTY SAND TO SANDY SILT	SM-ML	.11	7			76	39	.50+
2.20	21.90	.23	1.06	CLAYEY SILT TO SILTY CLAY	MH-CL	.10	5	1.615	13.5			
2.40	11.68	.30	2.60	SILTY CLAY TO CLAY	CL-CH	.10	3	.858	13.5			
2.60	15.00	.54	3.60	CLAY	CH	.10	7	1.103	13.5			
2.80	38.12	.69	1.81	SANDY SILT TO CLAYEY SILT	ML-MH	.14	7	2.814	13.5	69	38	.50+
3.00	52.86	.73	1.38	SANDY SILT TO CLAYEY SILT	ML-MH	.15	10	3.904	13.5	76	39	.50+
3.20	61.25	.63	1.03	SILTY SAND TO SANDY SILT	SM-ML	.18	9			79	39	.50+
3.40	50.69	.59	1.16	SANDY SILT TO CLAYEY SILT	ML-MH	.17	9	3.742	13.5	74	38	.50+
3.60	43.78	.55	1.26	SANDY SILT TO CLAYEY SILT	ML-MH	.18	8	3.230	13.5	69	38	.50+
3.80	34.99	.47	1.34	SANDY SILT TO CLAYEY SILT	ML-MH	.19	6	2.578	13.5	64	37	.39
4.00	23.38	.27	1.14	CLAYEY SILT TO SILTY CLAY	MH-CL	.18	5	1.719	13.5			
4.20	15.07	.54	3.61	CLAY	CH	.17	7	1.104	13.5			
4.40	16.48	.47	2.86	SILTY CLAY TO CLAY	CL-CH	.18	5	1.209	13.5			
4.60	10.09	.30	2.98	CLAY	CH	.18	4	.734	13.5			
4.80	7.62	.31	4.06	CLAY	CH	.19	3	.550	13.5			
5.00	9.84	.28	2.89	CLAY	CH	.20	4	.714	13.5			
5.20	5.66	.24	4.17	CLAY	CH	.21	2	.404	13.5			
5.40	4.92	.30	6.03	ORGANIC MATERIAL	OL-OH	.16	2	.352	13.5			
5.60	4.92	.26	5.28	CLAY	CH	.22	2	.348	13.5			
5.80	6.15	.24	3.83	CLAY	CH	.23	2	.438	13.5			
6.00	5.66	.21	3.75	CLAY	CH	.24	2	.401	13.5			
6.20	4.92	.21	4.30	CLAY	CH	.25	2	.346	13.5			
6.40	6.88	.21	3.10	CLAY	CH	.26	3	.491	13.5			
6.60	6.03	.24	4.02	CLAY	CH	.26	2	.427	13.5			
6.80	5.16	.28	5.51	CLAY	CH	.27	2	.362	13.5			
7.00	4.80	.26	5.44	CLAY	CH	.28	2	.335	13.5			
7.20	4.92	.27	5.55	CLAY	CH	.29	2	.343	13.5			
7.40	4.43	.24	5.35	ORGANIC MATERIAL	OL-OH	.22	2	.312	13.5			
7.60	4.67	.26	5.57	ORGANIC MATERIAL	OL-OH	.23	2	.329	13.5			
7.80	4.67	.31	6.61	ORGANIC MATERIAL	OL-OH	.23	2	.329	13.5			
8.00	4.68	.31	6.60	ORGANIC MATERIAL	OL-OH	.24	2	.329	13.5			
8.20	5.16	.33	6.44	ORGANIC MATERIAL	OL-OH	.25	2	.364	13.5			
8.40	4.92	.22	4.56	CLAY	CH	.34	2	.340	13.5			
8.60	5.66	.33	5.87	CLAY	CH	.34	2	.394	13.5			
8.80	5.90	1.01	17.05	ORGANIC MATERIAL	OL-OH	.26	2	.417	13.5			
9.00	30.88	.92	2.97	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	7	2.257	13.5			
9.20	61.22	.77	1.25	SANDY SILT TO CLAYEY SILT	ML-MH	.46	11	4.501	13.5	65	37	.33
9.40	61.25	.83	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.47	11	4.502	13.5	65	37	.32

9.60	45.01	.92	2.04	SANDY SILT TO CLAYEY SILT	ML-MH	.48	8	3.298	13.5	57	36	.19
9.80	71.34	.87	1.22	SILTY SAND TO SANDY SILT	SM-ML	.54	11			67	37	.37
10.00	58.22	.85	1.46	SANDY SILT TO CLAYEY SILT	ML-MH	.50	11	4.275	13.5	63	37	.26
10.20	65.48	.79	1.21	SILTY SAND TO SANDY SILT	SM-ML	.56	10			64	37	.29
10.40	70.96	.89	1.25	SILTY SAND TO SANDY SILT	SM-ML	.57	11			65	37	.33
10.60	102.15	1.75	1.72	SILTY SAND TO SANDY SILT	SM-ML	.58	16			77	39	.50+
10.80	212.34	1.87	.88	SAND TO SILTY SAND	SM-SP	.65	25			100+	42	.50+
11.00	204.36	1.63	.80	SAND TO SILTY SAND	SM-SP	.66	24			99	42	.50+
11.20	266.57	1.53	.57	SAND	SW-SP	.73	25			100+	44	.50+
11.40	244.06	1.63	.67	SAND	SW-SP	.74	23			100+	44	.50+
11.60	246.42	1.71	.70	SAND	SW-SP	.75	23			100+	44	.50+
11.80	267.33	1.61	.60	SAND	SW-SP	.77	25			100+	44	.50+
12.00	257.39	1.60	.62	SAND	SW-SP	.78	24			100+	44	.50+
12.20	238.68	1.56	.65	SAND	SW-SP	.79	22			100+	44	.50+
12.40	209.70	1.20	.57	SAND	SW-SP	.81	20			95	44	.50+
12.60	174.30	1.31	.75	SAND TO SILTY SAND	SM-SP	.76	20			89	41	.50+
12.80	137.37	.79	.57	SAND TO SILTY SAND	SM-SP	.77	16			81	40	.50+
13.00	149.99	.81	.54	SAND TO SILTY SAND	SM-SP	.78	17			83	41	.50+
13.20	156.67	1.19	.76	SAND TO SILTY SAND	SM-SP	.79	18			84	41	.50+
13.40	190.70	1.34	.70	SAND TO SILTY SAND	SM-SP	.80	22			91	41	.50+
13.60	199.01	2.23	1.12	SAND TO SILTY SAND	SM-SP	.82	23			92	42	.50+
13.80	175.90	.93	.53	SAND TO SILTY SAND	SM-SP	.83	21			87	41	.50+
14.00	142.99	.76	.53	SAND TO SILTY SAND	SM-SP	.84	17			80	40	.50+
14.20	145.73	.90	.62	SAND TO SILTY SAND	SM-SP	.85	17			81	40	.50+
14.40	141.60	.77	.54	SAND TO SILTY SAND	SM-SP	.86	16			80	40	.50+
14.60	122.27	.93	.76	SAND TO SILTY SAND	SM-SP	.88	14			74	39	.50+
14.80	127.56	.90	.70	SAND TO SILTY SAND	SM-SP	.89	15			75	40	.50+
15.00	101.88	1.22	1.20	SILTY SAND TO SANDY SILT	SM-ML	.82	16			69	38	.45
15.20	84.88	1.08	1.27	SILTY SAND TO SANDY SILT	SM-ML	.84	13			63	37	.27
15.40	53.39	.67	1.26	SANDY SILT TO CLAYEY SILT	ML-MH	.77	10	3.898	13.5	59	35	.17
15.60	72.52	.83	1.14	SILTY SAND TO SANDY SILT	SM-ML	.86	11			58	36	.21



RESULT OF CONE PENETRATION TEST

49S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

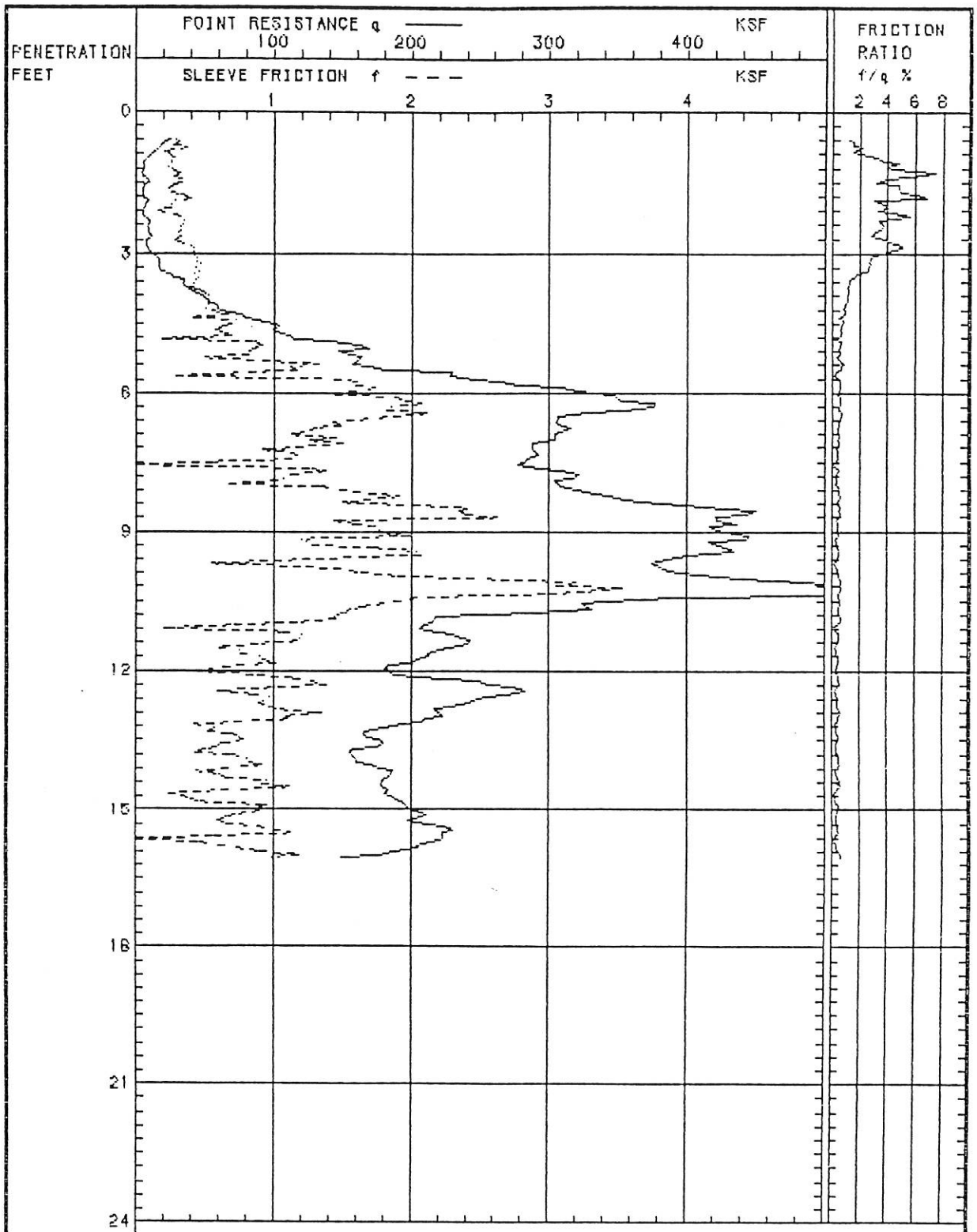
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : ~~43M~~ S
CONE NO. : '001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	122.00	1.12	.92	SAND TO SILTY SAND	SM-SP	.04	14			100+	42	.50+
.80	199.72	1.26	.63	SAND TO SILTY SAND	SM-SP	.05	23			100+	42	.50+
1.00	159.27	.46	.29	SAND TO SILTY SAND	SM-SP	.06	19			100+	42	.50+
1.20	96.18	.33	.34	SAND TO SILTY SAND	SM-SP	.07	11			100+	42	.50+
1.40	50.92	.35	.69	SILTY SAND TO SANDY SILT	SM-ML	.08	8			81	39	.50+
1.60	36.52	.43	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.08	6	2.700	13.5	71	38	.50+
1.80	33.71	.15	.43	SANDY SILT TO CLAYEY SILT	ML-MH	.09	6	2.490	13.5	69	38	.50+
2.00	9.59	.22	2.32	CLAY	CH	.09	4	.705	13.5			
2.20	6.89	.19	2.73	CLAY	CH	.09	3	.504	13.5			
2.40	10.57	.44	4.18	CLAY	CH	.10	5	.776	13.5			
2.60	18.20	.10	.57	SENSITIVE FINE GRAINED	OL-CH	.08	4	1.343	13.5			
2.80	3.44	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.09	0	.249	13.5			
3.00	4.43	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.09	1	.321	13.5			
3.20	4.43	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.10	1	.321	13.5			
3.40	5.16	.12	2.31	CLAY	CH	.14	2	.372	13.5			
3.60	10.82	.09	.85	SENSITIVE FINE GRAINED	OL-CH	.11	2	.793	13.5			
3.80	4.18	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.11	1	.301	13.5			
4.00	4.43	.02	.51	SENSITIVE FINE GRAINED	OL-CH	.12	1	.319	13.5			
4.20	3.69	.02	.61	SENSITIVE FINE GRAINED	OL-CH	.13	0	.264	13.5			
4.40	4.92	.02	.40	SENSITIVE FINE GRAINED	OL-CH	.13	1	.355	13.5			
4.60	4.92	.06	1.13	SENSITIVE FINE GRAINED	OL-CH	.14	1	.354	13.5			
4.80	5.04	.04	.86	SENSITIVE FINE GRAINED	OL-CH	.14	1	.363	13.5			
5.00	4.67	.04	.92	SENSITIVE FINE GRAINED	OL-CH	.15	1	.335	13.5			
5.20	5.78	.20	3.40	CLAY	CH	.21	2	.413	13.5			
5.40	12.04	.80	6.66	CLAY	CH	.22	5	.876	13.5			
5.60	43.73	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.31	6			63	37	.29
5.80	90.02	1.03	1.14	SILTY SAND TO SANDY SILT	SM-ML	.32	14			84	40	.50+
6.00	149.73	1.00	.67	SAND TO SILTY SAND	SM-SP	.36	17			100+	42	.50+
6.20	170.67	1.27	.75	SAND TO SILTY SAND	SM-SP	.37	20			100+	42	.50+
6.40	244.72	1.85	.76	SAND	SW-SP	.42	23			100+	44	.50+
6.60	237.65	2.33	.98	SAND TO SILTY SAND	SM-SP	.40	28			100+	42	.50+
6.80	186.74	.75	.40	SAND	SW-SP	.44	17			100+	44	.50+
7.00	117.16	.69	.59	SAND TO SILTY SAND	SM-SP	.42	14			88	41	.50+
7.20	112.06	.68	.60	SAND TO SILTY SAND	SM-SP	.43	13			86	41	.50+
7.40	132.01	.68	.51	SAND TO SILTY SAND	SM-SP	.44	15			92	41	.50+
7.60	124.73	.51	.41	SAND TO SILTY SAND	SM-SP	.46	14			89	41	.50+
7.80	105.14	.22	.21	SAND TO SILTY SAND	SM-SP	.47	12			82	40	.50+
8.00	59.21	.46	.78	SILTY SAND TO SANDY SILT	SM-ML	.44	9			65	37	.33
8.20	63.08	.22	.35	SILTY SAND TO SANDY SILT	SM-ML	.45	10			66	37	.38
8.40	107.08	.41	.38	SAND TO SILTY SAND	SM-SP	.50	12			81	40	.50+
8.60	119.77	.66	.55	SAND TO SILTY SAND	SM-SP	.52	14			85	41	.50+
8.80	148.43	.88	.59	SAND TO SILTY SAND	SM-SP	.53	17			92	41	.50+
9.00	184.04	.98	.53	SAND TO SILTY SAND	SM-SP	.54	22			100+	42	.50+
9.20	200.60	.83	.41	SAND	SW-SP	.60	19			100+	44	.50+
9.40	211.10	.93	.44	SAND	SW-SP	.61	20			100+	44	.50+

9.60	249.09	1.17	.47	SAND	SW-SP	.62	23			100+	44	.50+
9.80	287.95	1.68	.58	SAND	SW-SP	.64	27			100+	44	.50+
10.00	298.35	1.68	.56	SAND	SW-SP	.65	28			100+	44	.50+
10.20	250.35	1.73	.69	SAND	SW-SP	.66	23			100+	44	.50+
10.40	193.91	2.45	1.26	SAND TO SILTY SAND	SM-SP	.62	23			99	42	.50+
10.60	159.88	1.72	1.08	SAND TO SILTY SAND	SM-SP	.64	19			90	41	.50+
10.80	203.27	1.63	.80	SAND TO SILTY SAND	SM-SP	.65	24			100+	42	.50+
11.00	203.19	1.14	.56	SAND	SW-SP	.71	19			97	44	.50+
11.20	167.85	1.10	.65	SAND TO SILTY SAND	SM-SP	.67	20			91	41	.50+
11.40	183.68	.57	.31	SAND	SW-SP	.74	17			91	44	.50+
11.60	170.81	1.14	.67	SAND TO SILTY SAND	SM-SP	.70	20			90	41	.50+
11.80	98.51	1.15	1.17	SILTY SAND TO SANDY SILT	SM-ML	.65	15			73	38	.50+
12.00	122.66	.68	.56	SAND TO SILTY SAND	SM-SP	.72	14			79	40	.50+
12.20	131.78	.66	.50	SAND TO SILTY SAND	SM-SP	.73	15			81	40	.50+
12.40	152.04	.65	.43	SAND TO SILTY SAND	SM-SP	.74	18			85	41	.50+
12.60	148.10	1.05	.71	SAND TO SILTY SAND	SM-SP	.76	17			84	41	.50+
12.80	75.45	1.15	1.53	SILTY SAND TO SANDY SILT	SM-ML	.70	12			63	37	.27
13.00	21.68	.81	3.74	CLAY	CH	.52	10	1.568	13.5			
13.20	27.04	.29	1.07	SANDY SILT TO CLAYEY SILT	ML-MH	.66	5	1.954	13.5	32	33	.13
13.40	65.53	.33	.51	SILTY SAND TO SANDY SILT	SM-ML	.74	10			59	36	.21
13.60	153.23	3.08	2.01	SILTY SAND TO SANDY SILT	SM-ML	.75	24			85	40	.50+
13.80	140.24	.62	.44	SAND TO SILTY SAND	SM-SP	.83	16			80	40	.50+
14.00	115.74	.18	.16	SAND TO SILTY SAND	SM-SP	.84	13			73	39	.50+
14.20	88.58	.39	.44	SAND TO SILTY SAND	SM-SP	.85	10			64	38	.29
14.40	63.22	.21	.33	SILTY SAND TO SANDY SILT	SM-ML	.79	10			55	36	.19
14.60	33.05	.38	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	.73	6	2.394	13.5	36	33	.14
14.80	7.87	.17	2.22	CLAY	CH	.59	3	.539	13.5			
15.00	8.14	.25	3.02	CLAY	CH	.60	3	.559	13.5			
15.20	6.64	.02	.33	SENSITIVE FINE GRAINED	OL-CH	.46	1	.458	13.5			
15.40	7.39	.31	4.25	CLAY	CH	.62	3	.502	13.5			
15.60	16.59	.53	3.20	SILTY CLAY TO CLAY	CL-CH	.62	5	1.183	13.5			
15.80	49.17	.64	1.29	SANDY SILT TO CLAYEY SILT	ML-MH	.79	9	3.584	13.5	46	35	.16
16.00	80.70	.69	.85	SILTY SAND TO SANDY SILT	SM-ML	.88	12			61	37	.23
16.20	116.90	.25	.21	SAND TO SILTY SAND	SM-SP	.97	13			69	39	.48
16.40	106.07	.48	.45	SAND TO SILTY SAND	SM-SP	.99	12			66	39	.35



RESULT OF CONE PENETRATION TEST

50N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

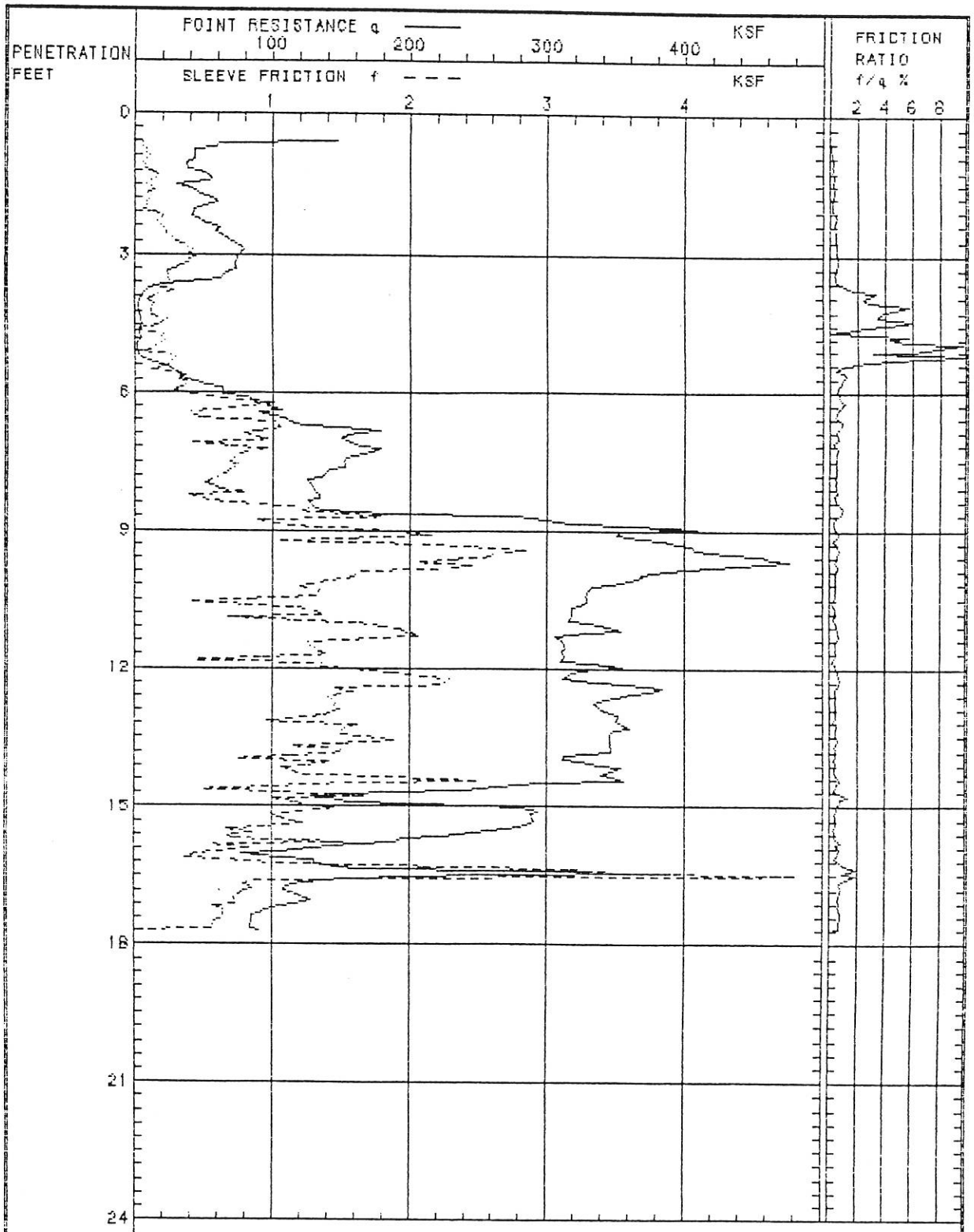
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 8 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 50N
CONE NO. : 001
DATE : 05/09/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	23.12	.31	1.34	CLAYEY SILT TO SILTY CLAY	MH-CL	.03	5	1.711	13.5			
.80	15.99	.29	1.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.04	3	1.182	13.5			
1.00	7.87	.27	3.45	CLAY	CH	.04	3	.580	13.5			
1.20	5.90	.25	4.21	CLAY	CH	.05	2	.434	13.5			
1.40	6.64	.31	4.60	CLAY	CH	.06	3	.488	13.5			
1.60	5.41	.24	4.38	CLAY	CH	.06	2	.396	13.5			
1.80	5.66	.37	6.47	ORGANIC MATERIAL	OL-OH	.05	2	.415	13.5			
2.00	6.64	.26	3.92	CLAY	CH	.08	3	.486	13.5			
2.20	5.66	.30	5.38	CLAY	CH	.09	2	.412	13.5			
2.40	9.10	.33	3.62	CLAY	CH	.10	4	.667	13.5			
2.60	10.57	.32	3.01	CLAY	CH	.10	5	.775	13.5			
2.80	7.62	.35	4.63	CLAY	CH	.11	3	.556	13.5			
3.00	12.05	.36	3.03	CLAY	CH	.12	5	.883	13.5			
3.20	16.97	.46	2.71	SILTY CLAY TO CLAY	CL-CH	.13	5	1.248	13.5			
3.40	21.14	.44	2.09	CLAYEY SILT TO SILTY CLAY	MH-CL	.15	5	1.555	13.5			
3.60	34.56	.46	1.32	SANDY SILT TO CLAYEY SILT	ML-MH	.18	6	2.547	13.5	64	37	.43
3.80	41.80	.49	1.16	SANDY SILT TO CLAYEY SILT	ML-MH	.19	8	3.082	13.5	68	38	.50+
4.00	53.36	.62	1.16	SANDY SILT TO CLAYEY SILT	ML-MH	.20	10	3.938	13.5	73	38	.50+
4.20	60.38	.55	.91	SILTY SAND TO SANDY SILT	SM-ML	.23	9			75	39	.50+
4.40	84.10	.57	.68	SILTY SAND TO SANDY SILT	SM-ML	.24	13			86	40	.50+
4.60	101.48	.66	.65	SAND TO SILTY SAND	SM-SP	.28	12			92	41	.50+
4.80	113.13	.45	.39	SAND TO SILTY SAND	SM-SP	.29	13			96	42	.50+
5.00	166.00	.95	.57	SAND TO SILTY SAND	SM-SP	.30	19			100+	42	.50+
5.20	159.54	.91	.57	SAND TO SILTY SAND	SM-SP	.31	19			100+	42	.50+
5.40	163.22	.86	.53	SAND TO SILTY SAND	SM-SP	.32	19			100+	42	.50+
5.60	229.00	1.27	.56	SAND	SW-SP	.36	21			100+	44	.50+
5.80	270.75	1.60	.59	SAND	SW-SP	.38	25			100+	44	.50+
6.00	333.18	1.50	.45	SAND	SW-SP	.39	31			100+	44	.50+
6.20	363.93	2.01	.55	SAND	SW-SP	.40	34			100+	44	.50+
6.40	340.78	1.97	.58	SAND	SW-SP	.42	32			100+	44	.50+
6.60	305.25	1.67	.55	SAND	SW-SP	.43	29			100+	44	.50+
6.80	312.16	1.50	.48	SAND	SW-SP	.44	29			100+	44	.50+
7.00	303.65	1.27	.42	SAND	SW-SP	.45	29			100+	44	.50+
7.20	288.27	.87	.30	SAND	SW-SP	.47	27			100+	44	.50+
7.40	288.07	2.84	.99	SAND TO SILTY SAND	SM-SP	.44	34			100+	42	.50+
7.60	284.87	1.23	.43	SAND	SW-SP	.49	27			100+	44	.50+
7.80	319.04	.96	.30	SAND	SW-SP	.51	30			100+	44	.50+
8.00	306.96	1.20	.39	SAND	SW-SP	.52	29			100+	44	.50+
8.20	338.14	1.78	.53	SAND	SW-SP	.53	32			100+	44	.50+
8.40	381.56	1.72	.45	SAND	SW-SP	.55	36			100+	44	.50+
8.60	446.47	2.37	.53	SAND	SW-SP	.56	42			100+	44	.50+
8.80	428.62	1.50	.35	SAND	SW-SP	.57	41			100+	44	.50+
9.00	424.26	1.78	.42	SAND	SW-SP	.58	40			100+	44	.50+
9.20	429.39	4.64	1.08	SAND	SW-SP	.60	41			100+	44	.50+
9.40	431.14	1.89	.44	SAND	SW-SP	.61	41			100+	44	.50+

9.60	386.51	.92	.24	SAND	SW-SP	.62	37	100+	44	.50+
9.80	383.54	1.45	.38	SAND	SW-SP	.64	36	100+	44	.50+
10.00	431.06	4.47	1.04	SAND	SW-SP	.65	41	100+	44	.50+
10.20	533.76	3.45	.65	SAND	SW-SP	.66	51	100+	44	.50+
10.40	485.69	2.99	.62	SAND	SW-SP	.68	46	100+	44	.50+
10.60	325.51	1.74	.54	SAND	SW-SP	.69	31	100+	44	.50+
10.80	254.90	1.56	.61	SAND	SW-SP	.70	24	100+	44	.50+
11.00	212.80	.68	.32	SAND	SW-SP	.71	20	99	44	.50+
11.20	224.47	1.15	.51	SAND	SW-SP	.73	21	100+	44	.50+
11.40	242.04	.84	.35	SAND	SW-SP	.74	23	100+	44	.50+
11.60	216.28	.72	.33	SAND	SW-SP	.75	20	98	44	.50+
11.80	202.46	.97	.48	SAND	SW-SP	.77	19	94	44	.50+
12.00	182.60	.64	.35	SAND	SW-SP	.78	17	90	43	.50+
12.20	236.65	1.21	.51	SAND	SW-SP	.79	22	100+	44	.50+
12.40	278.10	.69	.25	SAND	SW-SP	.81	26	100+	44	.50+
12.60	249.99	1.53	.61	SAND	SW-SP	.82	23	100+	44	.50+
12.80	223.33	1.01	.45	SAND	SW-SP	.83	21	96	44	.50+
13.00	217.30	1.10	.51	SAND	SW-SP	.84	20	95	44	.50+
13.20	187.69	.45	.24	SAND	SW-SP	.86	17	89	43	.50+
13.40	166.50	.72	.43	SAND TO SILTY SAND	SM-SP	.80	19	86	41	.50+
13.60	177.89	.62	.35	SAND	SW-SP	.88	17	86	43	.50+
13.80	156.23	.64	.41	SAND TO SILTY SAND	SM-SP	.83	18	83	41	.50+
14.00	165.67	.87	.53	SAND TO SILTY SAND	SM-SP	.84	19	85	41	.50+
14.20	186.34	.49	.27	SAND	SW-SP	.92	17	87	43	.50+
14.40	179.07	.94	.52	SAND TO SILTY SAND	SM-SP	.86	21	87	41	.50+
14.60	182.78	.42	.23	SAND	SW-SP	.95	17	85	43	.50+
14.80	190.83	.50	.26	SAND	SW-SP	.96	18	86	43	.50+
15.00	201.15	.89	.44	SAND	SW-SP	.97	19	88	43	.50+
15.20	203.03	.58	.29	SAND	SW-SP	.97	19	88	43	.50+
15.40	227.21	1.04	.46	SAND	SW-SP	1.00	21	92	44	.50+
15.60	222.54	.23	.10	SAND	SW-SP	1.01	21	91	43	.50+
15.80	204.88	.67	.33	SAND	SW-SP	1.03	19	87	43	.50+
16.00	164.15	1.09	.66	SAND TO SILTY SAND	SM-SP	.96	19	82	40	.50+



RESULT OF CONE PENETRATION TEST

50M

JOB NUMBER: 01870206
CONE NUMBER: 001
LOCATION: ISLE DERNIERES

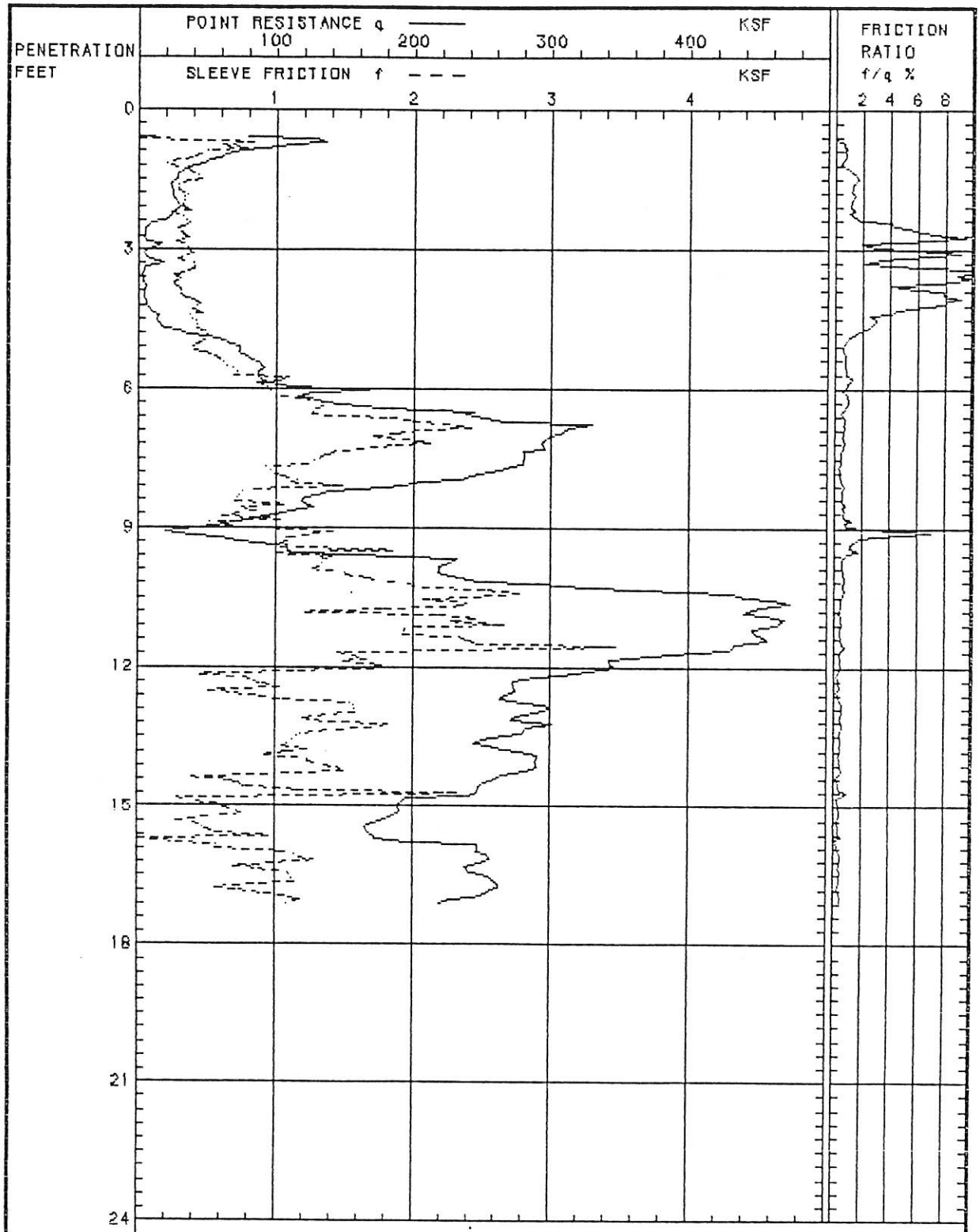
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/9/87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 50M
CONE NO. : 001
DATE : 05/09/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	104.30	.05	.05	SAND TO SILTY SAND	SM-SP	.04	12			100+	42	.50+
.80	43.54	.08	.19	SILTY SAND TO SANDY SILT	SM-ML	.04	6			79	39	.50+
1.00	40.59	.13	.31	SILTY SAND TO SANDY SILT	SM-ML	.05	6			76	39	.50+
1.20	42.55	.10	.23	SILTY SAND TO SANDY SILT	SM-ML	.07	6			76	39	.50+
1.40	54.61	.09	.17	SILTY SAND TO SANDY SILT	SM-ML	.08	8			84	40	.50+
1.60	40.39	.17	.43	SILTY SAND TO SANDY SILT	SM-ML	.09	6			73	38	.50+
1.80	55.09	.06	.11	SILTY SAND TO SANDY SILT	SM-ML	.10	8			82	40	.50+
2.00	46.74	.12	.26	SILTY SAND TO SANDY SILT	SM-ML	.11	7			76	39	.50+
2.20	42.98	.13	.29	SILTY SAND TO SANDY SILT	SM-ML	.12	6			72	38	.50+
2.40	59.77	.11	.18	SILTY SAND TO SANDY SILT	SM-ML	.13	9			82	40	.50+
2.60	64.01	.26	.40	SILTY SAND TO SANDY SILT	SM-ML	.14	10			84	40	.50+
2.80	76.00	.43	.56	SILTY SAND TO SANDY SILT	SM-ML	.15	12			90	41	.50+
3.00	76.01	.43	.57	SILTY SAND TO SANDY SILT	SM-ML	.17	12			89	41	.50+
3.20	72.56	.28	.39	SILTY SAND TO SANDY SILT	SM-ML	.18	11			86	40	.50+
3.40	65.80	.26	.39	SILTY SAND TO SANDY SILT	SM-ML	.19	10			81	39	.50+
3.60	35.98	.16	.46	SANDY SILT TO CLAYEY SILT	ML-MH	.18	6	2.652	13.5	65	37	.49
3.80	7.26	.17	2.35	CLAY	CH	.15	3	.527	13.5			
4.00	2.95	.12	3.99	CLAY	CH	.16	1	.207	13.5			
4.20	3.07	.12	3.81	CLAY	CH	.17	1	.215	13.5			
4.40	3.94	.22	5.69	ORGANIC MATERIAL	OL-OH	.13	1	.282	13.5			
4.60	3.69	.07	1.97	SENSITIVE FINE GRAINED	OL-CH	.14	0	.263	13.5			
4.80	4.18	.20	4.85	CLAY	CH	.19	2	.296	13.5			
5.00	1.97	.11	5.46	ORGANIC MATERIAL	OL-OH	.15	1	.135	13.5			
5.20	3.44	.28	8.02	ORGANIC MATERIAL	OL-OH	.16	1	.243	13.5			
5.40	21.39	.19	.89	SANDY SILT TO CLAYEY SILT	ML-MH	.27	4	1.564	13.5	48	35	.16
5.60	31.47	.34	1.07	SANDY SILT TO CLAYEY SILT	ML-MH	.28	6	2.311	13.5	57	36	.20
5.80	48.19	.26	.54	SILTY SAND TO SANDY SILT	SM-ML	.32	7			65	37	.35
6.00	63.83	.39	.61	SILTY SAND TO SANDY SILT	SM-ML	.33	10			72	38	.50+
6.20	90.96	.87	.96	SILTY SAND TO SANDY SILT	SM-ML	.34	14			83	40	.50+
6.40	98.46	.58	.59	SAND TO SILTY SAND	SM-SP	.38	11			84	41	.50+
6.60	110.43	.76	.68	SAND TO SILTY SAND	SM-SP	.40	13			87	41	.50+
6.80	164.42	.98	.60	SAND TO SILTY SAND	SM-SP	.41	19			100+	42	.50+
7.00	151.09	.74	.49	SAND TO SILTY SAND	SM-SP	.42	18			99	42	.50+
7.20	171.37	.95	.55	SAND TO SILTY SAND	SM-SP	.43	20			100+	42	.50+
7.40	159.82	.67	.42	SAND TO SILTY SAND	SM-SP	.44	19			100+	42	.50+
7.60	152.84	.72	.47	SAND TO SILTY SAND	SM-SP	.46	18			97	42	.50+
7.80	137.51	.62	.45	SAND TO SILTY SAND	SM-SP	.47	16			92	41	.50+
8.00	127.71	.63	.49	SAND TO SILTY SAND	SM-SP	.48	15			88	41	.50+
8.20	133.18	.24	.18	SAND TO SILTY SAND	SM-SP	.49	15			89	41	.50+
8.40	127.46	.65	.51	SAND TO SILTY SAND	SM-SP	.50	15			87	41	.50+
8.60	160.32	1.36	.85	SAND TO SILTY SAND	SM-SP	.52	19			96	42	.50+
8.80	308.08	1.69	.55	SAND	SW-SP	.57	29			100+	44	.50+
9.00	382.09	2.20	.58	SAND	SW-SP	.59	36			100+	44	.50+
9.20	375.60	1.68	.45	SAND	SW-SP	.60	35			100+	44	.50+
9.40	406.32	2.62	.65	SAND	SW-SP	.61	38			100+	44	.50+

9.60	458.93	2.49	.54	SAND	SW-SP	.62	43	100+	44	.50+
9.80	420.74	2.17	.52	SAND	SW-SP	.64	40	100+	44	.50+
10.00	368.21	1.60	.43	SAND	SW-SP	.65	35	100+	44	.50+
10.20	339.79	1.28	.38	SAND	SW-SP	.66	32	100+	44	.50+
10.40	328.62	1.15	.35	SAND	SW-SP	.68	31	100+	44	.50+
10.60	326.44	.61	.19	SAND	SW-SP	.69	31	100+	44	.50+
10.80	317.91	1.31	.41	SAND	SW-SP	.70	30	100+	44	.50+
11.00	322.59	1.24	.38	SAND	SW-SP	.71	30	100+	44	.50+
11.20	341.84	1.97	.58	SAND	SW-SP	.73	32	100+	44	.50+
11.40	309.53	1.47	.47	SAND	SW-SP	.74	29	100+	44	.50+
11.60	311.66	1.32	.42	SAND	SW-SP	.75	29	100+	44	.50+
11.80	310.93	.22	.07	SAND	SW-SP	.77	29	100+	44	.50+
12.00	345.02	1.36	.39	SAND	SW-SP	.78	33	100+	44	.50+
12.20	313.02	2.18	.70	SAND	SW-SP	.79	29	100+	44	.50+
12.40	370.68	1.85	.50	SAND	SW-SP	.81	35	100+	44	.50+
12.60	356.02	1.46	.41	SAND	SW-SP	.82	34	100+	44	.50+
12.80	335.04	1.41	.42	SAND	SW-SP	.83	32	100+	44	.50+
13.00	348.23	1.41	.40	SAND	SW-SP	.84	33	100+	44	.50+
13.20	351.93	1.06	.30	SAND	SW-SP	.86	33	100+	44	.50+
13.40	347.09	1.44	.42	SAND	SW-SP	.87	33	100+	44	.50+
13.60	345.83	1.71	.49	SAND	SW-SP	.88	33	100+	44	.50+
13.80	346.20	1.52	.44	SAND	SW-SP	.90	33	100+	44	.50+
14.00	317.66	1.37	.43	SAND	SW-SP	.91	30	100+	44	.50+
14.20	350.09	1.11	.32	SAND	SW-SP	.92	33	100+	44	.50+
14.40	351.40	2.16	.62	SAND	SW-SP	.94	33	100+	44	.50+
14.60	251.88	.25	.10	SAND	SW-SP	.95	24	97	44	.50+
14.80	135.26	1.55	1.14	SILTY SAND TO SANDY SILT	SM-ML	.81	21	80	39	.50+
15.00	265.05	1.37	.52	SAND	SW-SP	.97	25	99	44	.50+
15.20	288.38	1.03	.36	SAND	SW-SP	.99	27	100+	44	.50+
15.40	283.93	.96	.34	SAND	SW-SP	1.00	27	100+	44	.50+
15.60	235.29	.67	.29	SAND	SW-SP	1.01	22	93	44	.50+
15.80	175.22	1.06	.61	SAND TO SILTY SAND	SM-SP	.95	20	84	41	.50+
16.00	92.33	.91	.99	SILTY SAND TO SANDY SILT	SM-ML	.88	14	64	37	.30
16.20	130.63	.86	.66	SAND TO SILTY SAND	SM-SP	.97	15	73	39	.50+
16.40	273.74	3.34	1.22	SAND TO SILTY SAND	SM-SP	.98	32	100+	42	.50+
16.60	139.10	1.28	.92	SAND TO SILTY SAND	SM-SP	1.00	16	75	40	.50+
16.80	108.72	1.08	.99	SILTY SAND TO SANDY SILT	SM-ML	.92	17	68	38	.43
17.00	125.87	.50	.40	SAND TO SILTY SAND	SM-SP	1.02	15	71	39	.50+
17.20	100.49	.67	.67	SAND TO SILTY SAND	SM-SP	1.03	12	64	38	.28
17.40	85.60	.63	.74	SILTY SAND TO SANDY SILT	SM-ML	.96	13	61	37	.23
17.60	84.37	.92	1.09	SILTY SAND TO SANDY SILT	SM-ML	.97	13	60	37	.23



RESULT OF CONE PENETRATION TEST

50S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

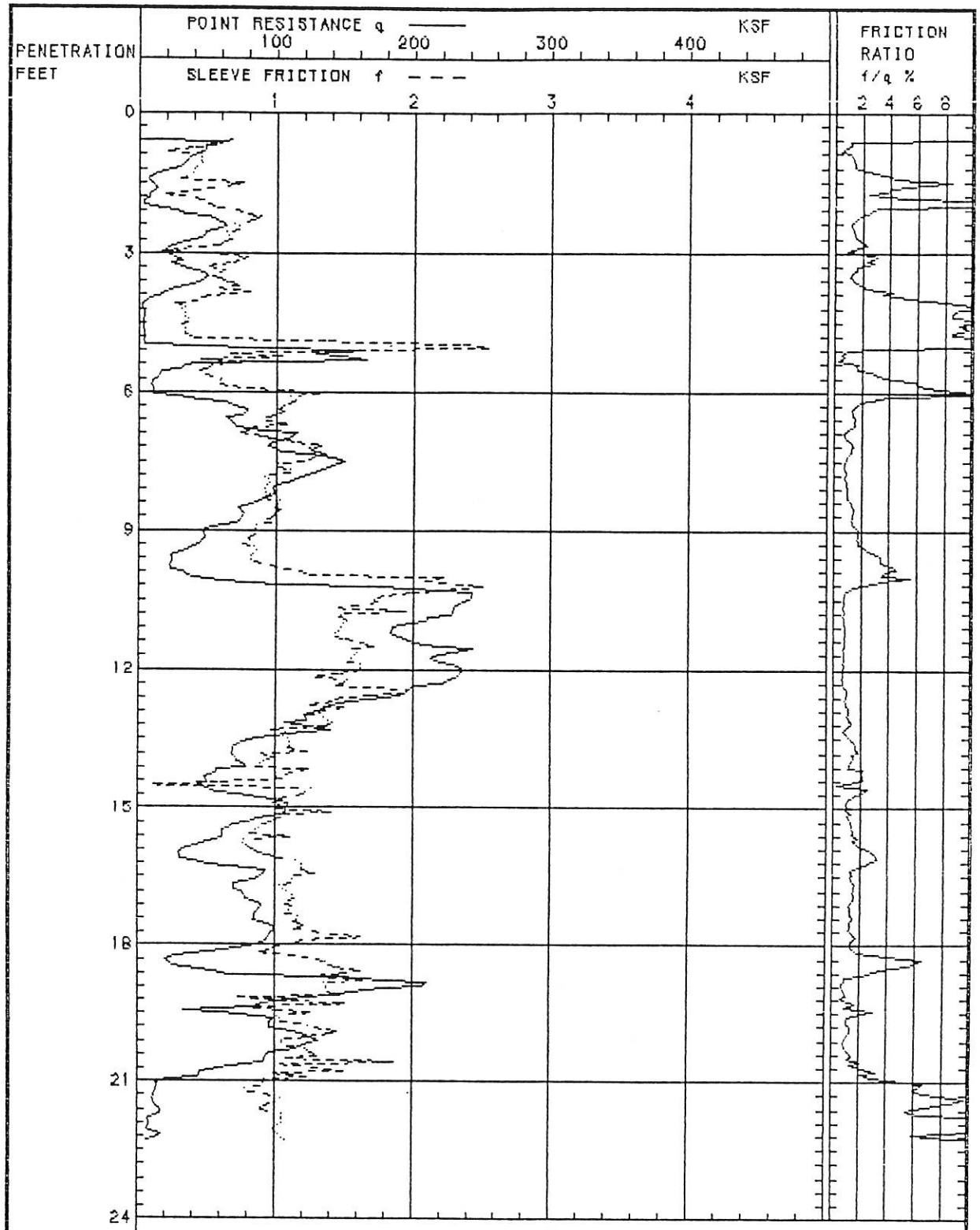
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 9MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 50S
CONE NO. : 001
DATE : 05/09/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	104.04	.06	.06	SAND TO SILTY SAND	SM-SP	.04	12			100+	42	.50+
.80	101.59	.70	.69	SAND TO SILTY SAND	SM-SP	.05	12			100+	42	.50+
1.00	61.99	.42	.69	SILTY SAND TO SANDY SILT	SM-ML	.05	9			94	41	.50+
1.20	45.02	.25	.55	SILTY SAND TO SANDY SILT	SM-ML	.07	7			78	39	.50+
1.40	29.52	.31	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	.07	5	2.181	13.5	67	37	.50+
1.60	24.48	.33	1.36	CLAYEY SILT TO SILTY CLAY	MH-CL	.07	5	1.808	13.5			
1.80	25.09	.33	1.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.08	6	1.852	13.5			
2.00	28.78	.29	1.00	SANDY SILT TO CLAYEY SILT	ML-MH	.10	5	2.124	13.5	65	37	.50+
2.20	26.69	.26	.99	SANDY SILT TO CLAYEY SILT	ML-MH	.11	5	1.969	13.5	63	37	.50+
2.40	14.53	.37	2.53	SILTY CLAY TO CLAY	CL-CH	.10	4	1.069	13.5			
2.60	5.17	.30	5.86	ORGANIC MATERIAL	OL-OH	.08	2	.377	13.5			
2.80	4.92	.32	6.60	ORGANIC MATERIAL	OL-OH	.08	2	.358	13.5			
3.00	8.38	.31	3.70	CLAY	CH	.12	4	.612	13.5			
3.20	7.38	.31	4.24	CLAY	CH	.13	3	.537	13.5			
3.40	5.17	.41	7.86	ORGANIC MATERIAL	OL-OH	.10	2	.375	13.5			
3.60	3.07	.26	8.50	ORGANIC MATERIAL	OL-OH	.11	1	.220	13.5			
3.80	5.91	.29	4.83	CLAY	CH	.15	2	.426	13.5			
4.00	3.94	.32	8.17	ORGANIC MATERIAL	OL-OH	.12	1	.283	13.5			
4.20	6.02	.42	6.94	ORGANIC MATERIAL	OL-OH	.13	2	.437	13.5			
4.40	13.03	.42	3.24	CLAY	CH	.18	6	.952	13.5			
4.60	15.00	.42	2.79	SILTY CLAY TO CLAY	CL-CH	.18	4	1.097	13.5			
4.80	32.94	.49	1.49	SANDY SILT TO CLAYEY SILT	ML-MH	.24	6	2.422	13.5	60	37	.24
5.00	64.67	.62	.97	SILTY SAND TO SANDY SILT	SM-ML	.27	10			75	39	.50+
5.20	73.05	.46	.63	SILTY SAND TO SANDY SILT	SM-ML	.29	11			79	39	.50+
5.40	85.09	.61	.71	SILTY SAND TO SANDY SILT	SM-ML	.30	13			83	40	.50+
5.60	89.43	.68	.76	SILTY SAND TO SANDY SILT	SM-ML	.31	14			84	40	.50+
5.80	88.78	1.06	1.20	SILTY SAND TO SANDY SILT	SM-ML	.32	14			83	40	.50+
6.00	139.23	.97	.70	SAND TO SILTY SAND	SM-SP	.36	16			100+	42	.50+
6.20	120.89	.88	.72	SAND TO SILTY SAND	SM-SP	.37	14			92	42	.50+
6.40	169.15	1.32	.78	SAND TO SILTY SAND	SM-SP	.38	20			100+	42	.50+
6.60	244.86	1.60	.65	SAND	SW-SP	.43	23			100+	44	.50+
6.80	321.68	2.79	.87	SAND	SW-SP	.44	30			100+	44	.50+
7.00	302.83	1.76	.58	SAND	SW-SP	.45	29			100+	44	.50+
7.20	293.68	1.98	.67	SAND	SW-SP	.47	28			100+	44	.50+
7.40	280.03	1.47	.52	SAND	SW-SP	.48	26			100+	44	.50+
7.60	279.67	1.26	.45	SAND	SW-SP	.49	26			100+	44	.50+
7.80	255.40	.72	.28	SAND	SW-SP	.51	24			100+	44	.50+
8.00	220.56	1.13	.51	SAND	SW-SP	.52	21			100+	44	.50+
8.20	149.93	.89	.59	SAND TO SILTY SAND	SM-SP	.49	17			94	42	.50+
8.40	119.74	.76	.64	SAND TO SILTY SAND	SM-SP	.50	14			85	41	.50+
8.60	119.64	.80	.67	SAND TO SILTY SAND	SM-SP	.52	14			84	41	.50+
8.80	86.53	.59	.68	SILTY SAND TO SANDY SILT	SM-ML	.48	13			75	39	.50+
9.00	49.78	.56	1.13	SANDY SILT TO CLAYEY SILT	ML-MH	.45	9	3.654	13.5	61	37	.23
9.20	49.19	1.16	2.37	SANDY SILT TO CLAYEY SILT	ML-MH	.46	9	3.610	13.5	60	37	.22
9.40	97.76	1.09	1.12	SILTY SAND TO SANDY SILT	SM-ML	.52	15			78	39	.50+

9.60	153.19	1.20	.78	SAND TO SILTY SAND	SM-SP	.58	18	91	41	.50+
9.80	223.03	1.28	.57	SAND	SW-SP	.64	21	100+	44	.50+
10.00	220.11	1.51	.69	SAND TO SILTY SAND	SM-SP	.60	26	100+	42	.50+
10.20	268.29	1.89	.70	SAND	SW-SP	.66	25	100+	44	.50+
10.40	397.23	2.66	.67	SAND	SW-SP	.68	38	100+	44	.50+
10.60	467.00	2.23	.48	SAND	SW-SP	.69	44	100+	44	.50+
10.80	442.66	2.26	.51	SAND	SW-SP	.70	42	100+	44	.50+
11.00	468.34	2.37	.51	SAND	SW-SP	.71	44	100+	44	.50+
11.20	445.20	1.75	.39	SAND	SW-SP	.73	42	100+	44	.50+
11.40	455.26	2.43	.53	SAND	SW-SP	.74	43	100+	44	.50+
11.60	430.95	5.20	1.21	SAND	SW-SP	.75	41	100+	44	.50+
11.80	357.78	1.62	.45	SAND	SW-SP	.77	34	100+	44	.50+
12.00	345.54	1.79	.52	SAND	SW-SP	.78	33	100+	44	.50+
12.20	298.63	.55	.18	SAND	SW-SP	.79	28	100+	44	.50+
12.40	272.64	.77	.28	SAND	SW-SP	.81	26	100+	44	.50+
12.60	267.79	.26	.10	SAND	SW-SP	.82	25	100+	44	.50+
12.80	287.05	1.44	.50	SAND	SW-SP	.83	27	100+	44	.50+
13.00	285.03	1.49	.52	SAND	SW-SP	.84	27	100+	44	.50+
13.20	286.26	1.55	.54	SAND	SW-SP	.86	27	100+	44	.50+
13.40	280.41	1.28	.46	SAND	SW-SP	.87	26	100+	44	.50+
13.60	247.38	1.05	.42	SAND	SW-SP	.88	23	99	44	.50+
13.80	271.67	1.04	.38	SAND	SW-SP	.90	26	100+	44	.50+
14.00	289.27	1.16	.40	SAND	SW-SP	.91	27	100+	44	.50+
14.20	286.15	1.48	.52	SAND	SW-SP	.92	27	100+	44	.50+
14.40	259.79	.48	.19	SAND	SW-SP	.94	24	99	44	.50+
14.60	247.69	1.17	.47	SAND	SW-SP	.95	23	97	44	.50+
14.80	218.67	.35	.16	SAND	SW-SP	.96	20	91	44	.50+
15.00	189.89	.61	.32	SAND	SW-SP	.97	18	86	43	.50+
15.20	186.26	.46	.25	SAND	SW-SP	.99	17	85	43	.50+
15.40	168.31	.43	.25	SAND	SW-SP	1.00	16	82	43	.50+
15.60	170.64	.76	.44	SAND TO SILTY SAND	SM-SP	.94	20	83	41	.50+
15.80	221.27	1.38	.63	SAND	SW-SP	1.03	21	90	43	.50+
16.00	250.06	1.08	.43	SAND	SW-SP	1.04	23	94	44	.50+
16.20	252.70	2.12	.84	SAND	SW-SP	1.05	24	94	44	.50+
16.40	240.17	1.00	.41	SAND	SW-SP	1.07	23	92	44	.50+
16.60	257.99	.93	.36	SAND	SW-SP	1.08	24	95	44	.50+
16.80	259.55	.66	.25	SAND	SW-SP	1.09	24	94	44	.50+
17.00	236.83	1.14	.48	SAND	SW-SP	1.10	22	91	43	.50+



RESULT OF CONE PENETRATION TEST

51N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

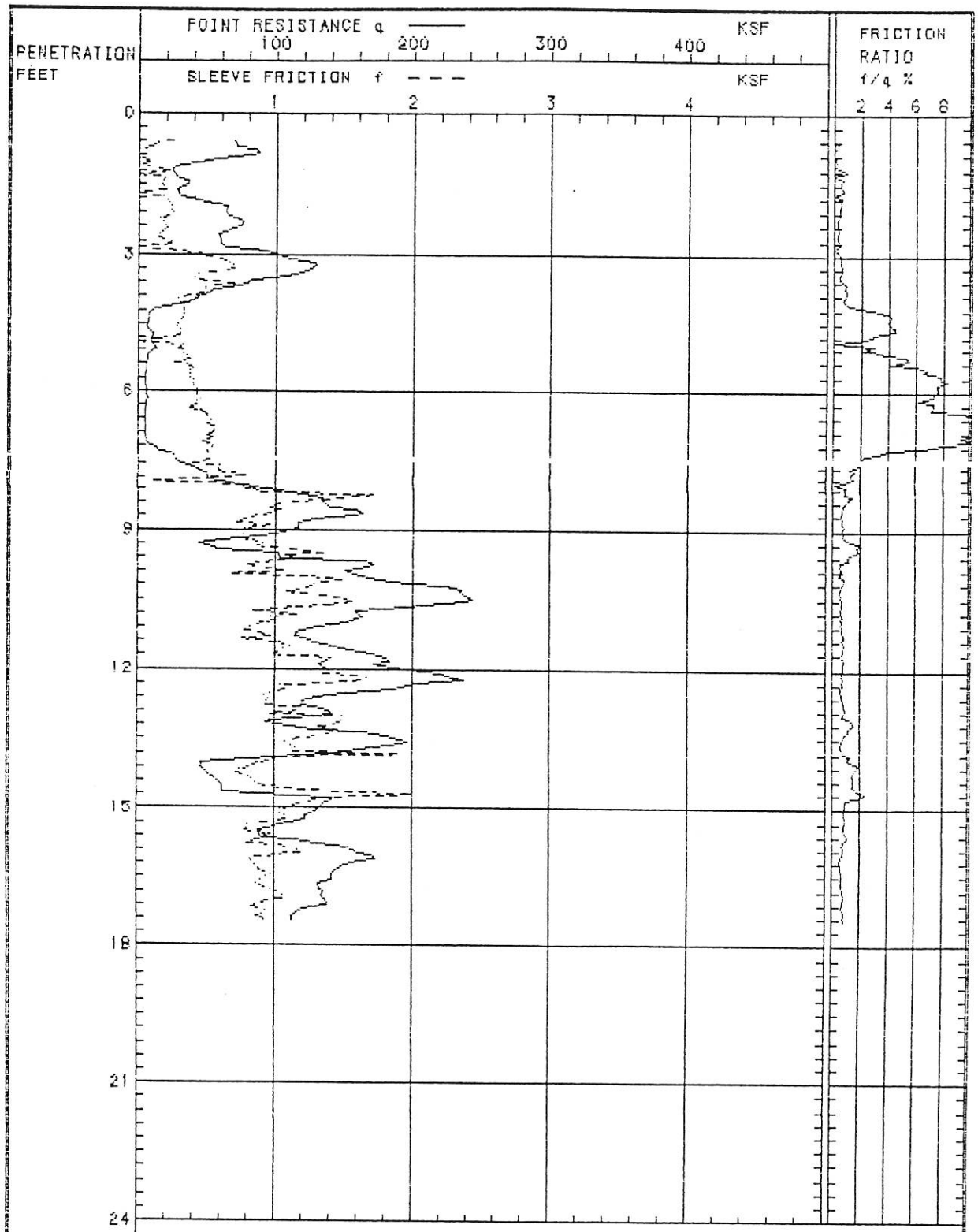
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : D06510187020
BORING NO. : 51N
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	32.96	.66	1.99	CLAYEY SILT TO SILTY CLAY	MH-CL	.03	7	2.439	13.5			
.80	47.96	.14	.29	SILTY SAND TO SANDY SILT	SM-ML	.04	7			83	40	.50+
1.00	36.16	.45	1.26	SANDY SILT TO CLAYEY SILT	ML-MH	.05	6	2.675	13.5	73	38	.50+
1.20	27.31	.41	1.51	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	6	2.019	13.5			
1.40	7.75	.47	6.12	CLAY	CH	.06	3	.570	13.5			
1.60	12.05	.62	5.13	CLAY	CH	.06	5	.888	13.5			
1.80	7.87	.30	3.78	CLAY	CH	.07	3	.578	13.5			
2.00	10.56	.54	5.10	CLAY	CH	.08	5	.776	13.5			
2.20	42.28	.99	2.35	CLAYEY SILT TO SILTY CLAY	MH-CL	.10	10	3.125	13.5			
2.40	63.21	.71	1.13	SILTY SAND TO SANDY SILT	SM-ML	.13	10			94	40	.50+
2.60	48.21	.45	.93	SANDY SILT TO CLAYEY SILT	ML-MH	.13	9	3.562	13.5	75	39	.50+
2.80	29.65	.61	2.07	CLAYEY SILT TO SILTY CLAY	MH-CL	.13	7	2.187	13.5			
3.00	20.35	.49	2.42	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	4	1.497	13.5			
3.20	27.69	.88	3.17	SILTY CLAY TO CLAY	CL-CH	.13	8	2.042	13.5			
3.40	44.26	.61	1.37	SANDY SILT TO CLAYEY SILT	ML-MH	.17	8	3.266	13.5	70	39	.50+
3.60	46.25	.76	1.65	SANDY SILT TO CLAYEY SILT	ML-MH	.18	8	3.413	13.5	71	39	.50+
3.80	23.02	.79	3.43	SILTY CLAY TO CLAY	CL-CH	.15	7	1.694	13.5			
4.00	6.89	.44	6.42	CLAY	CH	.16	3	.499	13.5			
4.20	3.20	.32	10.06	ORGANIC MATERIAL	OL-OH	.13	1	.227	13.5			
4.40	3.69	.35	9.37	ORGANIC MATERIAL	OL-OH	.13	1	.264	13.5			
4.60	3.44	.32	9.33	ORGANIC MATERIAL	OL-OH	.14	1	.245	13.5			
4.80	3.94	.37	9.39	ORGANIC MATERIAL	OL-OH	.14	1	.281	13.5			
5.00	43.88	2.45	5.57	CLAY	CH	.20	21	3.235	13.5			
5.20	138.17	1.52	1.10	SAND TO SILTY SAND	SM-SP	.31	16			100+	42	.50+
5.40	38.15	.64	1.68	SANDY SILT TO CLAYEY SILT	ML-MH	.27	7	2.806	13.5	62	37	.27
5.60	15.99	.46	2.90	SILTY CLAY TO CLAY	CL-CH	.22	5	1.168	13.5			
5.80	9.96	.59	5.92	CLAY	CH	.23	4	.721	13.5			
6.00	11.07	.77	6.94	CLAY	CH	.24	5	.802	13.5			
6.20	53.78	1.14	2.12	SANDY SILT TO CLAYEY SILT	ML-MH	.31	10	3.961	13.5	68	38	.50+
6.40	79.45	1.04	1.31	SILTY SAND TO SANDY SILT	SM-ML	.35	12			78	39	.50+
6.60	65.35	1.03	1.58	SANDY SILT TO CLAYEY SILT	ML-MH	.33	12	4.816	13.5	73	38	.50+
6.80	81.56	.76	.93	SILTY SAND TO SANDY SILT	SM-ML	.37	13			78	39	.50+
7.00	109.96	1.00	.91	SAND TO SILTY SAND	SM-SP	.42	13			86	41	.50+
7.20	96.74	1.06	1.10	SILTY SAND TO SANDY SILT	SM-ML	.40	15			83	40	.50+
7.40	132.97	1.32	.99	SAND TO SILTY SAND	SM-SP	.44	15			92	41	.50+
7.60	141.58	1.07	.75	SAND TO SILTY SAND	SM-SP	.46	16			94	42	.50+
7.80	122.78	1.01	.82	SAND TO SILTY SAND	SM-SP	.47	14			87	41	.50+
8.00	104.33	.96	.92	SILTY SAND TO SANDY SILT	SM-ML	.44	16			83	40	.50+
8.20	98.94	.95	.96	SILTY SAND TO SANDY SILT	SM-ML	.45	15			81	39	.50+
8.40	85.88	.81	.95	SILTY SAND TO SANDY SILT	SM-ML	.46	13			75	39	.50+
8.60	75.99	1.02	1.34	SILTY SAND TO SANDY SILT	SM-ML	.47	12			71	39	.50+
8.80	73.32	.68	.92	SILTY SAND TO SANDY SILT	SM-ML	.49	11			69	38	.50+
9.00	48.40	.91	1.87	SANDY SILT TO CLAYEY SILT	ML-MH	.45	9	3.552	13.5	63	37	.22
9.20	47.00	.80	1.71	SANDY SILT TO CLAYEY SILT	ML-MH	.46	9	3.447	13.5	59	36	.21
9.40	37.91	.71	1.87	SANDY SILT TO CLAYEY SILT	ML-MH	.47	7	2.773	13.5	51	35	.17

9.60	24.04	.85	3.52	SILTY CLAY TO CLAY	CL-CH	.38	7	1.752	13.5			
9.80	22.87	1.08	4.70	CLAY	CH	.39	10	1.665	13.5			
10.00	37.73	1.95	5.18	CLAY	CH	.40	18	2.765	13.5			
10.20	137.95	2.41	1.74	SILTY SAND TO SANDY SILT	SM-ML	.56	22			89	40	.50+
10.40	242.28	1.91	.79	SAND	SW-SP	.68	23			100+	44	.50+
10.60	233.96	1.68	.72	SAND	SW-SP	.69	22			100+	44	.50+
10.80	228.51	1.47	.64	SAND	SW-SP	.70	21			100+	44	.50+
11.00	204.24	1.48	.72	SAND TO SILTY SAND	SM-SP	.66	24			99	42	.50+
11.20	184.23	1.45	.79	SAND TO SILTY SAND	SM-SP	.67	22			94	42	.50+
11.40	197.71	1.57	.79	SAND TO SILTY SAND	SM-SP	.68	23			97	42	.50+
11.60	236.49	1.61	.68	SAND	SW-SP	.75	22			100+	44	.50+
11.80	216.26	1.59	.73	SAND TO SILTY SAND	SM-SP	.71	25			100+	42	.50+
12.00	235.88	1.60	.68	SAND	SW-SP	.78	22			100+	44	.50+
12.20	228.67	1.35	.59	SAND	SW-SP	.79	21			99	44	.50+
12.40	199.39	1.56	.78	SAND TO SILTY SAND	SM-SP	.74	23			95	42	.50+
12.60	179.75	1.57	.87	SAND TO SILTY SAND	SM-SP	.76	21			90	41	.50+
12.80	139.73	1.38	.99	SAND TO SILTY SAND	SM-SP	.77	16			81	40	.50+
13.00	121.38	1.29	1.07	SILTY SAND TO SANDY SILT	SM-ML	.71	19			79	39	.50+
13.20	115.32	1.30	1.13	SILTY SAND TO SANDY SILT	SM-ML	.73	18			76	39	.50+
13.40	110.41	1.07	.97	SILTY SAND TO SANDY SILT	SM-ML	.74	17			74	38	.50+
13.60	73.59	1.19	1.61	SANDY SILT TO CLAYEY SILT	ML-MH	.68	14	5.401	13.5	63	37	.27
13.80	68.93	.97	1.41	SANDY SILT TO CLAYEY SILT	ML-MH	.69	13	5.055	13.5	61	37	.24
14.00	74.23	.90	1.22	SILTY SAND TO SANDY SILT	SM-ML	.77	11			61	37	.24
14.20	57.32	1.35	2.36	SANDY SILT TO CLAYEY SILT	ML-MH	.71	10	4.193	13.5	55	36	.19
14.40	50.41	1.09	2.16	SANDY SILT TO CLAYEY SILT	ML-MH	.72	9	3.681	13.5	50	35	.17
14.60	53.37	1.21	2.27	SANDY SILT TO CLAYEY SILT	ML-MH	.73	10	3.899	13.5	51	35	.18
14.80	93.36	.83	.88	SILTY SAND TO SANDY SILT	SM-ML	.81	14			66	37	.35
15.00	108.11	1.01	.93	SILTY SAND TO SANDY SILT	SM-ML	.82	17			71	38	.50+
15.20	96.35	1.03	1.07	SILTY SAND TO SANDY SILT	SM-ML	.84	15			67	37	.37
15.40	67.93	.90	1.32	SILTY SAND TO SANDY SILT	SM-ML	.85	10			56	36	.20
15.60	61.62	1.05	1.70	SANDY SILT TO CLAYEY SILT	ML-MH	.78	11	4.506	13.5	55	36	.19
15.80	45.06	.88	1.95	SANDY SILT TO CLAYEY SILT	ML-MH	.79	8	3.280	13.5	44	34	.15
16.00	30.62	.92	2.99	CLAYEY SILT TO SILTY CLAY	MH-CL	.72	7	2.215	13.5			
16.20	46.36	1.17	2.53	CLAYEY SILT TO SILTY CLAY	MH-CL	.73	11	3.380	13.5			
16.40	93.00	1.18	1.27	SILTY SAND TO SANDY SILT	SM-ML	.90	14			64	37	.29
16.60	77.91	1.14	1.47	SILTY SAND TO SANDY SILT	SM-ML	.91	12			59	36	.21
16.80	73.23	1.55	2.12	SANDY SILT TO CLAYEY SILT	ML-MH	.84	14	5.362	13.5	59	36	.21
17.00	81.59	1.12	1.38	SILTY SAND TO SANDY SILT	SM-ML	.93	13			60	36	.22
17.20	89.08	1.12	1.25	SILTY SAND TO SANDY SILT	SM-ML	.95	14			62	37	.23
17.40	84.86	1.14	1.35	SILTY SAND TO SANDY SILT	SM-ML	.96	13			61	37	.23
17.60	99.36	1.18	1.19	SILTY SAND TO SANDY SILT	SM-ML	.97	15			65	37	.30
17.80	95.45	1.36	1.42	SILTY SAND TO SANDY SILT	SM-ML	.98	15			63	37	.27
18.00	84.70	1.09	1.29	SILTY SAND TO SANDY SILT	SM-ML	.99	13			60	36	.22
18.20	39.92	.71	1.79	SANDY SILT TO CLAYEY SILT	ML-MH	.91	7	2.890	13.5	36	33	.14
18.40	23.83	1.37	5.76	CLAY	CH	.74	11	1.710	13.5			
18.60	60.84	2.07	3.40	CLAYEY SILT TO SILTY CLAY	MH-CL	.84	14	4.445	13.5			
18.80	194.98	1.34	.69	SAND TO SILTY SAND	SM-SP	1.13	23			84	41	.50+
19.00	167.84	1.49	.89	SAND TO SILTY SAND	SM-SP	1.14	20			79	40	.50+
19.20	112.25	1.56	1.39	SILTY SAND TO SANDY SILT	SM-ML	1.06	17			66	37	.36
19.40	59.76	.73	1.22	SANDY SILT TO CLAYEY SILT	ML-MH	.97	11	4.355	13.5	47	35	.17
19.60	93.28	.80	.86	SILTY SAND TO SANDY SILT	SM-ML	1.08	14			61	37	.23
19.80	95.93	1.22	1.27	SILTY SAND TO SANDY SILT	SM-ML	1.09	15			61	37	.24
20.00	121.90	2.01	1.65	SILTY SAND TO SANDY SILT	SM-ML	1.10	19			68	38	.42
20.20	121.61	1.08	.89	SAND TO SILTY SAND	SM-SP	1.21	14			66	37	.34
20.40	95.24	1.28	1.34	SILTY SAND TO SANDY SILT	SM-ML	1.12	15			61	37	.23
20.60	85.55	1.47	1.72	SILTY SAND TO SANDY SILT	SM-ML	1.13	13			56	36	.20
20.80	46.14	1.44	3.12	CLAYEY SILT TO SILTY CLAY	MH-CL	.94	11	3.348	13.5			
21.00	18.08	.94	5.20	CLAY	CH	.84	9	1.277	13.5			
21.20	12.81	.83	6.51	CLAY	CH	.85	6	.896	13.5			
21.40	11.30	1.03	9.11	CLAY	CH	.86	5	.774	13.5			

21.60	15.71	.92	5.88	CLAY	CH	.86	7	1.100	13.5
21.80	8.39	1.14	13.52	ORGANIC MATERIAL	OL-OH	.65	4	.573	13.5
22.00	7.90	1.07	13.58	ORGANIC MATERIAL	OL-OH	.66	3	.536	13.5
22.20	15.09	1.04	6.90	CLAY	CH	.89	7	1.052	13.5



RESULT OF CONE PENETRATION TEST

51M

JOB NUMBER: 01870206
CONE NUMBER: 001
LOCATION: ISLE DERNIERES

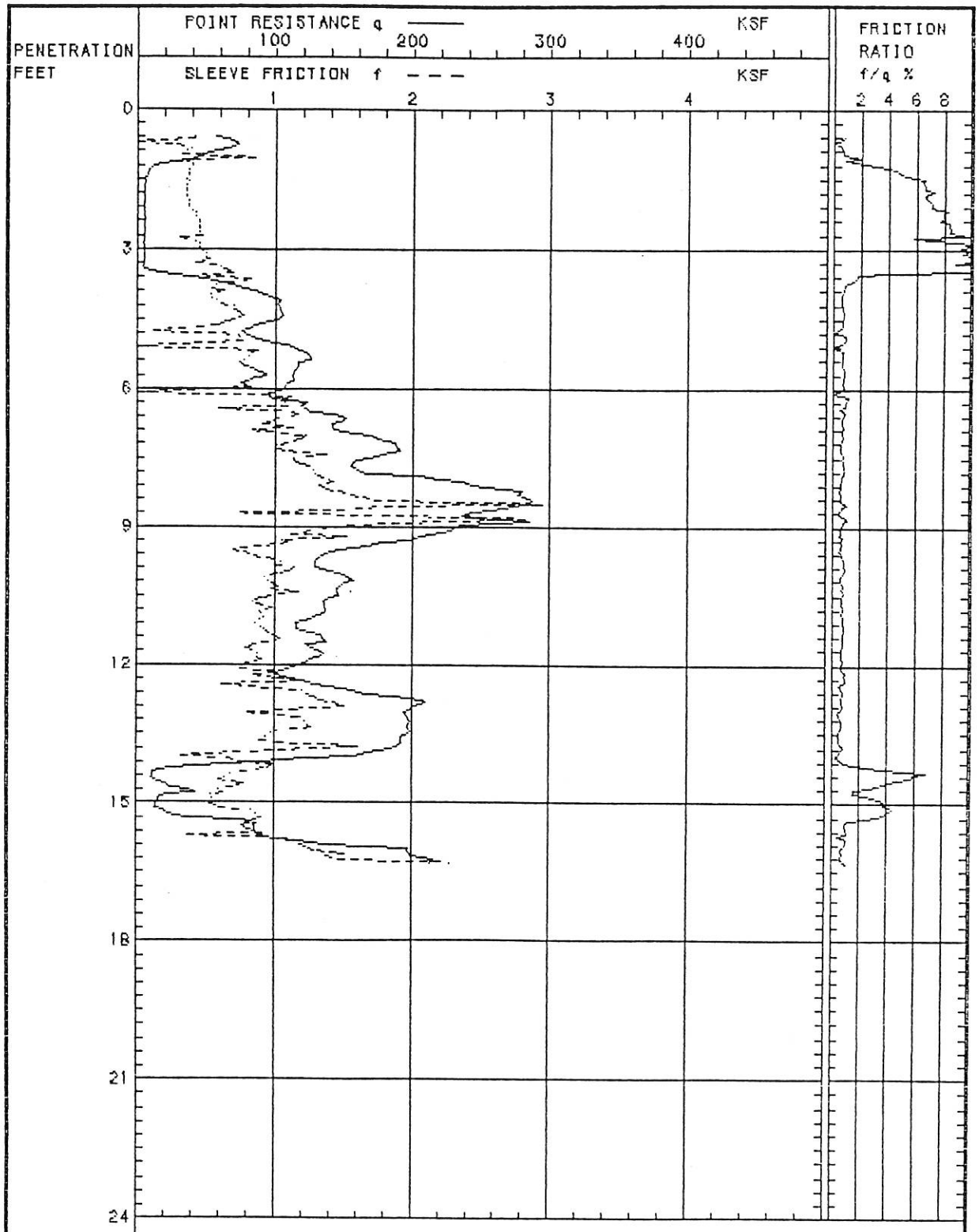
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/9/87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 51M
CONE NO. : 001
DATE : 05/09/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	69.73	.21	.30	SILTY SAND TO SANDY SILT	SM-ML	.03	11			100+	42	.50+
.80	86.33	.00	.00	SAND TO SILTY SAND	SM-SP	.05	10			100+	42	.50+
1.00	51.17	.02	.04	SILTY SAND TO SANDY SILT	SM-ML	.05	9			84	40	.50+
1.20	24.35	.18	.74	SANDY SILT TO CLAYEY SILT	ML-MH	.06	4	1.799	13.5	64	37	.50+
1.40	32.22	.28	.88	SANDY SILT TO CLAYEY SILT	ML-MH	.07	6	2.381	13.5	69	38	.50+
1.60	29.77	.18	.62	SANDY SILT TO CLAYEY SILT	ML-MH	.08	5	2.199	13.5	67	37	.50+
1.80	37.13	.19	.51	SANDY SILT TO CLAYEY SILT	ML-MH	.09	7	2.743	13.5	71	38	.50+
2.00	64.20	.24	.37	SILTY SAND TO SANDY SILT	SM-ML	.11	10			88	40	.50+
2.20	68.12	.19	.27	SILTY SAND TO SANDY SILT	SM-ML	.12	10			89	41	.50+
2.40	71.34	.20	.28	SILTY SAND TO SANDY SILT	SM-ML	.13	11			90	41	.50+
2.60	58.29	.17	.28	SILTY SAND TO SANDY SILT	SM-ML	.14	9			80	39	.50+
2.80	61.24	.12	.20	SILTY SAND TO SANDY SILT	SM-ML	.15	9			81	39	.50+
3.00	102.31	.47	.46	SAND TO SILTY SAND	SM-SP	.18	12			100+	42	.50+
3.20	128.39	.67	.53	SAND TO SILTY SAND	SM-SP	.19	15			100+	42	.50+
3.40	116.60	.51	.44	SAND TO SILTY SAND	SM-SP	.20	13			100+	42	.50+
3.60	81.42	.57	.70	SILTY SAND TO SANDY SILT	SM-ML	.20	13			89	40	.50+
3.80	53.63	.48	.89	SILTY SAND TO SANDY SILT	SM-ML	.21	8			73	38	.50+
4.00	38.64	.30	.77	SANDY SILT TO CLAYEY SILT	ML-MH	.20	7	2.847	13.5	65	37	.48
4.20	11.08	.33	2.98	CLAY	CH	.17	5	.808	13.5			
4.40	7.87	.32	4.07	CLAY	CH	.18	3	.570	13.5			
4.60	6.64	.29	4.39	CLAY	CH	.18	3	.478	13.5			
4.80	10.09	.30	2.93	CLAY	CH	.19	4	.733	13.5			
5.00	12.29	.21	1.71	SILTY CLAY TO CLAY	CL-CH	.20	3	.896	13.5			
5.20	7.88	.34	4.35	CLAY	CH	.21	3	.568	13.5			
5.40	6.15	.31	5.00	CLAY	CH	.22	2	.440	13.5			
5.60	5.42	.38	7.03	ORGANIC MATERIAL	OL-OH	.17	2	.389	13.5			
5.80	5.16	.38	7.40	ORGANIC MATERIAL	OL-OH	.17	2	.370	13.5			
6.00	5.78	.42	7.29	ORGANIC MATERIAL	OL-OH	.18	2	.415	13.5			
6.20	6.65	.44	6.63	ORGANIC MATERIAL	OL-OH	.19	3	.479	13.5			
6.40	5.17	.42	8.06	ORGANIC MATERIAL	OL-OH	.19	2	.369	13.5			
6.60	4.92	.51	10.43	ORGANIC MATERIAL	OL-OH	.20	2	.350	13.5			
6.80	5.16	.46	8.82	ORGANIC MATERIAL	OL-OH	.20	2	.367	13.5			
7.00	5.41	.55	10.11	ORGANIC MATERIAL	OL-OH	.21	2	.385	13.5			
7.20	10.80	.54	4.97	CLAY	CH	.29	5	.778	13.5			
7.40	24.82	.55	2.21	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	5	1.814	13.5			
7.60	39.32	.58	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.38	7	2.894	13.5	58	36	.20
7.80	50.43	.68	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.39	9	3.706	13.5	63	37	.28
8.00	80.72	.60	.75	SILTY SAND TO SANDY SILT	SM-ML	.44	12			74	39	.50+
8.20	115.55	1.26	1.09	SILTY SAND TO SANDY SILT	SM-ML	.45	18			86	40	.50+
8.40	134.89	1.58	1.17	SILTY SAND TO SANDY SILT	SM-ML	.46	21			91	41	.50+
8.60	161.32	1.01	.62	SAND TO SILTY SAND	SM-SP	.52	19			96	42	.50+
8.80	123.06	.82	.67	SAND TO SILTY SAND	SM-SP	.53	14			85	41	.50+
9.00	114.17	.76	.67	SAND TO SILTY SAND	SM-SP	.54	13			82	40	.50+
9.20	67.98	.79	1.17	SILTY SAND TO SANDY SILT	SM-ML	.51	10			66	37	.37
9.40	54.32	.88	1.63	SANDY SILT TO CLAYEY SILT	ML-MH	.47	10	3.989	13.5	62	37	.25

9.60	103.18	1.22	1.18	SILTY SAND TO SANDY SILT	SM-ML	.53	16			73	39	.50+
9.80	166.71	.87	.52	SAND TO SILTY SAND	SM-SP	.59	19			94	42	.50+
10.00	159.96	1.22	.76	SAND TO SILTY SAND	SM-SP	.60	19			92	41	.50+
10.20	210.10	1.33	.63	SAND TO SILTY SAND	SM-SP	.61	25			100+	42	.50+
10.40	236.65	1.35	.57	SAND	SW-SP	.68	22			100+	44	.50+
10.60	223.81	1.49	.66	SAND	SW-SP	.69	21			100+	44	.50+
10.80	159.98	.87	.55	SAND TO SILTY SAND	SM-SP	.65	19			90	41	.50+
11.00	154.24	.95	.62	SAND TO SILTY SAND	SM-SP	.66	18			88	41	.50+
11.20	117.61	.84	.71	SAND TO SILTY SAND	SM-SP	.67	14			79	40	.50+
11.40	124.83	.97	.78	SAND TO SILTY SAND	SM-SP	.68	14			80	40	.50+
11.60	154.83	1.02	.66	SAND TO SILTY SAND	SM-SP	.70	18			87	41	.50+
11.80	182.23	1.37	.75	SAND TO SILTY SAND	SM-SP	.71	21			92	42	.50+
12.00	190.76	1.25	.65	SAND TO SILTY SAND	SM-SP	.72	22			94	42	.50+
12.20	233.35	1.56	.67	SAND	SW-SP	.79	22			100+	44	.50+
12.40	192.21	1.06	.55	SAND TO SILTY SAND	SM-SP	.74	23			93	42	.50+
12.60	132.34	.89	.68	SAND TO SILTY SAND	SM-SP	.76	15			80	40	.50+
12.80	124.08	1.09	.88	SAND TO SILTY SAND	SM-SP	.77	14			78	40	.50+
13.00	135.65	.62	.46	SAND TO SILTY SAND	SM-SP	.78	16			80	40	.50+
13.20	102.24	1.28	1.25	SILTY SAND TO SANDY SILT	SM-ML	.73	16			72	39	.50+
13.40	172.51	1.36	.79	SAND TO SILTY SAND	SM-SP	.80	20			87	41	.50+
13.60	190.88	1.09	.57	SAND TO SILTY SAND	SM-SP	.82	22			90	41	.50+
13.80	146.72	1.51	1.03	SAND TO SILTY SAND	SM-SP	.83	17			81	40	.50+
14.00	54.50	.64	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.70	10	3.986	13.5	53	36	.18
14.20	49.91	.74	1.49	SANDY SILT TO CLAYEY SILT	ML-MH	.71	9	3.644	13.5	50	35	.17
14.40	58.03	1.15	1.99	SANDY SILT TO CLAYEY SILT	ML-MH	.72	11	4.245	13.5	55	36	.19
14.60	61.98	1.28	2.07	SANDY SILT TO CLAYEY SILT	ML-MH	.73	11	4.537	13.5	57	36	.20
14.80	140.42	1.22	.87	SAND TO SILTY SAND	SM-SP	.89	16			79	40	.50+
15.00	132.66	1.03	.78	SAND TO SILTY SAND	SM-SP	.90	15			76	40	.50+
15.20	122.49	1.08	.89	SAND TO SILTY SAND	SM-SP	.91	14			73	39	.50+
15.40	100.07	.81	.81	SAND TO SILTY SAND	SM-SP	.92	11			66	39	.34
15.60	90.38	.89	.98	SILTY SAND TO SANDY SILT	SM-ML	.86	14			64	37	.30
15.80	137.20	1.00	.73	SAND TO SILTY SAND	SM-SP	.95	15			76	40	.50+
16.00	165.65	.82	.49	SAND TO SILTY SAND	SM-SP	.96	19			82	40	.50+
16.20	156.82	.91	.58	SAND TO SILTY SAND	SM-SP	.97	18			80	40	.50+
16.40	143.55	.96	.67	SAND TO SILTY SAND	SM-SP	.98	17			77	40	.50+
16.60	137.01	.90	.66	SAND TO SILTY SAND	SM-SP	1.00	16			75	40	.50+
16.80	134.26	1.03	.76	SAND TO SILTY SAND	SM-SP	1.01	16			73	39	.50+
17.00	136.99	1.31	.96	SAND TO SILTY SAND	SM-SP	1.02	16			74	40	.50+
17.20	123.23	.92	.74	SAND TO SILTY SAND	SM-SP	1.03	14			70	39	.50+
17.40	112.91	.90	.79	SAND TO SILTY SAND	SM-SP	1.04	13			67	39	.37



RESULT OF CONE PENETRATION TEST

51S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

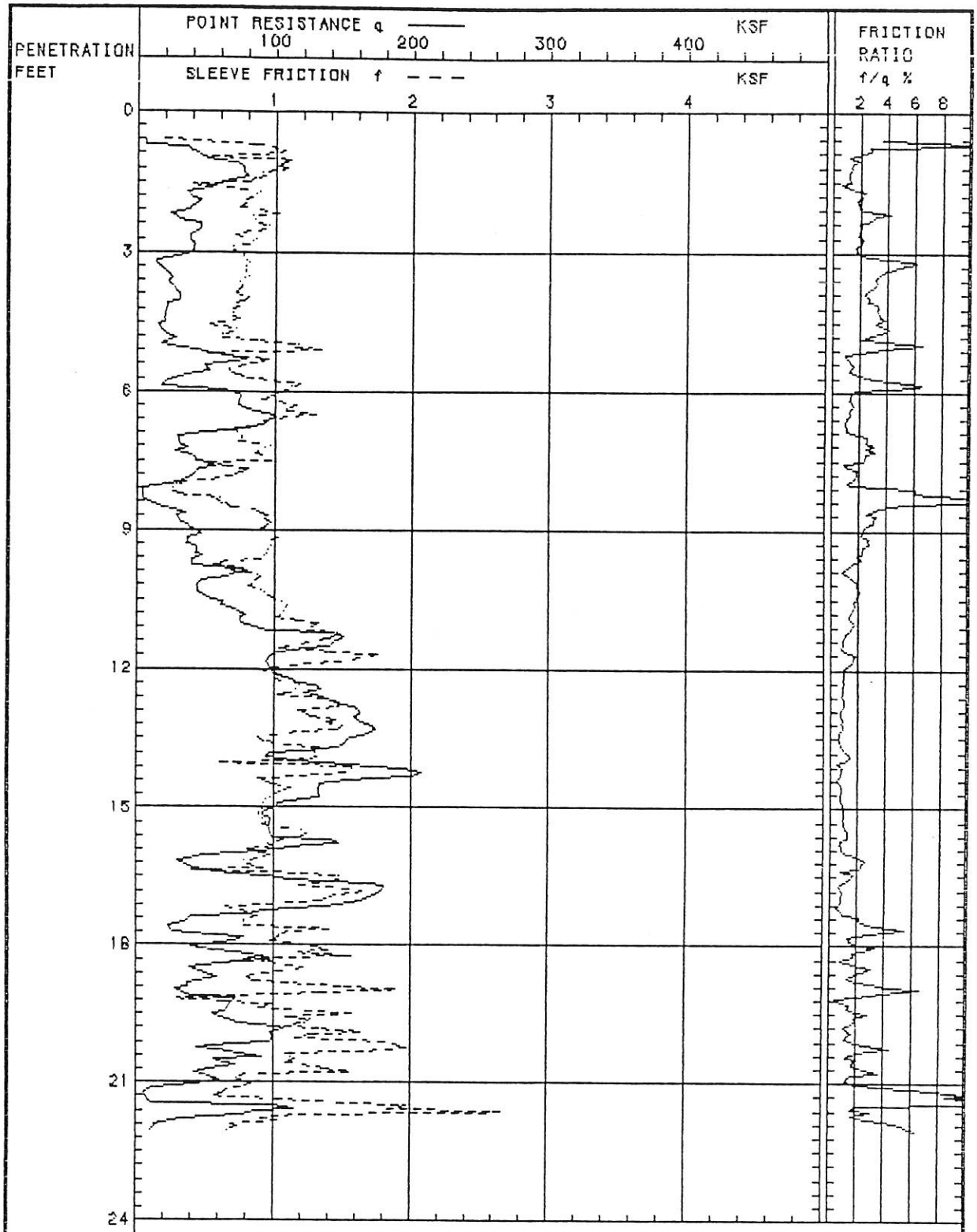
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 51S
CONE NO. : 001
DATE : 05/09/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	61.00	.42	.68	SILTY SAND TO SANDY SILT	SM-ML	.03	9			98	42	.50+
.80	70.35	.30	.42	SILTY SAND TO SANDY SILT	SM-ML	.04	11			100+	42	.50+
1.00	45.38	.59	1.29	SANDY SILT TO CLAYEY SILT	ML-MH	.05	8	3.358	13.5	79	39	.50+
1.20	15.50	.40	2.59	SILTY CLAY TO CLAY	CL-CH	.05	4	1.145	13.5			
1.40	7.63	.38	4.99	CLAY	CH	.06	3	.561	13.5			
1.60	5.66	.37	6.51	ORGANIC MATERIAL	OL-OH	.05	2	.416	13.5			
1.80	5.16	.38	7.38	ORGANIC MATERIAL	OL-OH	.05	2	.379	13.5			
2.00	5.41	.37	6.92	ORGANIC MATERIAL	OL-OH	.06	2	.396	13.5			
2.20	5.16	.42	8.06	ORGANIC MATERIAL	OL-OH	.07	2	.378	13.5			
2.40	5.66	.45	8.00	ORGANIC MATERIAL	OL-OH	.07	2	.414	13.5			
2.60	5.41	.45	8.37	ORGANIC MATERIAL	OL-OH	.08	2	.395	13.5			
2.80	5.17	.37	7.14	ORGANIC MATERIAL	OL-OH	.08	2	.376	13.5			
3.00	4.92	.46	9.45	ORGANIC MATERIAL	OL-OH	.09	2	.358	13.5			
3.20	4.92	.51	10.44	ORGANIC MATERIAL	OL-OH	.10	2	.357	13.5			
3.40	4.92	.62	12.57	ORGANIC MATERIAL	OL-OH	.10	2	.357	13.5			
3.60	38.81	.65	1.68	SANDY SILT TO CLAYEY SILT	ML-MH	.18	7	2.862	13.5	66	37	.50+
3.80	73.40	.59	.80	SILTY SAND TO SANDY SILT	SM-ML	.21	11			84	40	.50+
4.00	96.65	.53	.55	SAND TO SILTY SAND	SM-SP	.24	11			93	42	.50+
4.20	102.20	.65	.64	SAND TO SILTY SAND	SM-SP	.25	12			94	42	.50+
4.40	105.52	.77	.73	SAND TO SILTY SAND	SM-SP	.26	12			94	42	.50+
4.60	91.04	.62	.68	SILTY SAND TO SANDY SILT	SM-ML	.25	14			89	41	.50+
4.80	78.08	.27	.35	SAND TO SILTY SAND	SM-SP	.29	9			81	40	.50+
5.00	100.30	.92	.92	SILTY SAND TO SANDY SILT	SM-ML	.27	15			91	41	.50+
5.20	120.14	.62	.52	SAND TO SILTY SAND	SM-SP	.31	14			96	42	.50+
5.40	121.91	.79	.65	SAND TO SILTY SAND	SM-SP	.32	14			96	42	.50+
5.60	114.88	.86	.75	SAND TO SILTY SAND	SM-SP	.34	13			92	42	.50+
5.80	113.33	.71	.63	SAND TO SILTY SAND	SM-SP	.35	13			91	41	.50+
6.00	105.77	.86	.81	SAND TO SILTY SAND	SM-SP	.36	12			88	41	.50+
6.20	96.91	1.30	1.34	SILTY SAND TO SANDY SILT	SM-ML	.34	15			85	40	.50+
6.40	119.96	.87	.73	SAND TO SILTY SAND	SM-SP	.38	14			91	41	.50+
6.60	147.79	.82	.56	SAND TO SILTY SAND	SM-SP	.40	17			100+	42	.50+
6.80	141.67	.97	.68	SAND TO SILTY SAND	SM-SP	.41	16			97	42	.50+
7.00	163.75	1.14	.70	SAND TO SILTY SAND	SM-SP	.42	19			100+	42	.50+
7.20	187.92	1.05	.56	SAND TO SILTY SAND	SM-SP	.43	22			100+	42	.50+
7.40	185.03	1.24	.67	SAND TO SILTY SAND	SM-SP	.44	22			100+	42	.50+
7.60	157.43	1.17	.74	SAND TO SILTY SAND	SM-SP	.46	18			99	42	.50+
7.80	163.17	1.29	.79	SAND TO SILTY SAND	SM-SP	.47	19			100+	42	.50+
8.00	227.91	1.41	.62	SAND	SW-SP	.52	21			100+	44	.50+
8.20	272.69	2.18	.80	SAND	SW-SP	.53	26			100+	44	.50+
8.40	284.06	1.70	.60	SAND	SW-SP	.55	27			100+	44	.50+
8.60	266.49	1.43	.54	SAND	SW-SP	.56	25			100+	44	.50+
8.80	248.27	1.87	.75	SAND	SW-SP	.57	23			100+	44	.50+
9.00	234.31	1.49	.64	SAND	SW-SP	.58	22			100+	44	.50+
9.20	210.10	1.29	.62	SAND TO SILTY SAND	SM-SP	.55	25			100+	42	.50+
9.40	173.73	.98	.56	SAND TO SILTY SAND	SM-SP	.56	20			97	42	.50+

9.60	137.66	.81	.59	SAND TO SILTY SAND	SM-SP	.58	16			87	41	.50+
9.80	129.38	1.07	.82	SAND TO SILTY SAND	SM-SP	.59	15			84	41	.50+
10.00	143.11	1.06	.74	SAND TO SILTY SAND	SM-SP	.60	17			87	41	.50+
10.20	153.90	.88	.57	SAND TO SILTY SAND	SM-SP	.61	18			90	41	.50+
10.40	145.36	1.08	.74	SAND TO SILTY SAND	SM-SP	.62	17			87	41	.50+
10.60	137.78	.80	.58	SAND TO SILTY SAND	SM-SP	.64	16			85	41	.50+
10.80	136.51	.94	.69	SAND TO SILTY SAND	SM-SP	.65	16			84	41	.50+
11.00	127.42	.93	.73	SAND TO SILTY SAND	SM-SP	.66	15			82	40	.50+
11.20	115.97	.92	.79	SAND TO SILTY SAND	SM-SP	.67	13			78	40	.50+
11.40	134.29	.76	.57	SAND TO SILTY SAND	SM-SP	.68	16			83	40	.50+
11.60	124.55	.93	.74	SAND TO SILTY SAND	SM-SP	.70	14			80	40	.50+
11.80	134.08	.88	.65	SAND TO SILTY SAND	SM-SP	.71	16			82	40	.50+
12.00	120.33	1.04	.87	SAND TO SILTY SAND	SM-SP	.72	14			78	40	.50+
12.20	100.85	.93	.93	SILTY SAND TO SANDY SILT	SM-ML	.67	16			73	38	.50+
12.40	124.63	1.14	.91	SAND TO SILTY SAND	SM-SP	.74	14			79	40	.50+
12.60	161.40	.93	.58	SAND TO SILTY SAND	SM-SP	.76	19			86	41	.50+
12.80	209.04	1.52	.73	SAND TO SILTY SAND	SM-SP	.77	25			96	42	.50+
13.00	196.69	.99	.50	SAND	SW-SP	.84	18			91	43	.50+
13.20	197.99	1.21	.61	SAND TO SILTY SAND	SM-SP	.79	23			93	42	.50+
13.40	197.99	1.15	.58	SAND TO SILTY SAND	SM-SP	.80	23			92	42	.50+
13.60	192.10	.88	.46	SAND	SW-SP	.88	18			89	43	.50+
13.80	186.48	1.40	.75	SAND TO SILTY SAND	SM-SP	.83	22			89	41	.50+
14.00	141.05	.43	.31	SAND TO SILTY SAND	SM-SP	.84	16			80	40	.50+
14.20	45.67	.97	2.11	SANDY SILT TO CLAYEY SILT	ML-MH	.71	8	3.330	13.5	47	35	.16
14.40	11.57	.67	5.76	CLAY	CH	.58	5	.814	13.5			
14.60	23.08	.75	3.24	SILTY CLAY TO CLAY	CL-CH	.58	7	1.666	13.5			
14.80	32.94	.59	1.79	SANDY SILT TO CLAYEY SILT	ML-MH	.74	6	2.385	13.5	35	33	.14
15.00	14.52	.58	3.96	CLAY	CH	.60	6	1.031	13.5			
15.20	21.37	.85	3.99	CLAY	CH	.61	10	1.538	13.5			
15.40	82.27	1.10	1.33	SILTY SAND TO SANDY SILT	SM-ML	.85	13			62	37	.25
15.60	86.51	.89	1.03	SILTY SAND TO SANDY SILT	SM-ML	.86	13			63	37	.27
15.80	108.28	1.13	1.04	SILTY SAND TO SANDY SILT	SM-ML	.87	17			70	38	.49
16.00	197.65	1.28	.65	SAND TO SILTY SAND	SM-SP	.96	23			88	41	.50+
16.20	207.89	1.42	.68	SAND TO SILTY SAND	SM-SP	.97	24			89	41	.50+



RESULT OF CONE PENETRATION TEST

52N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

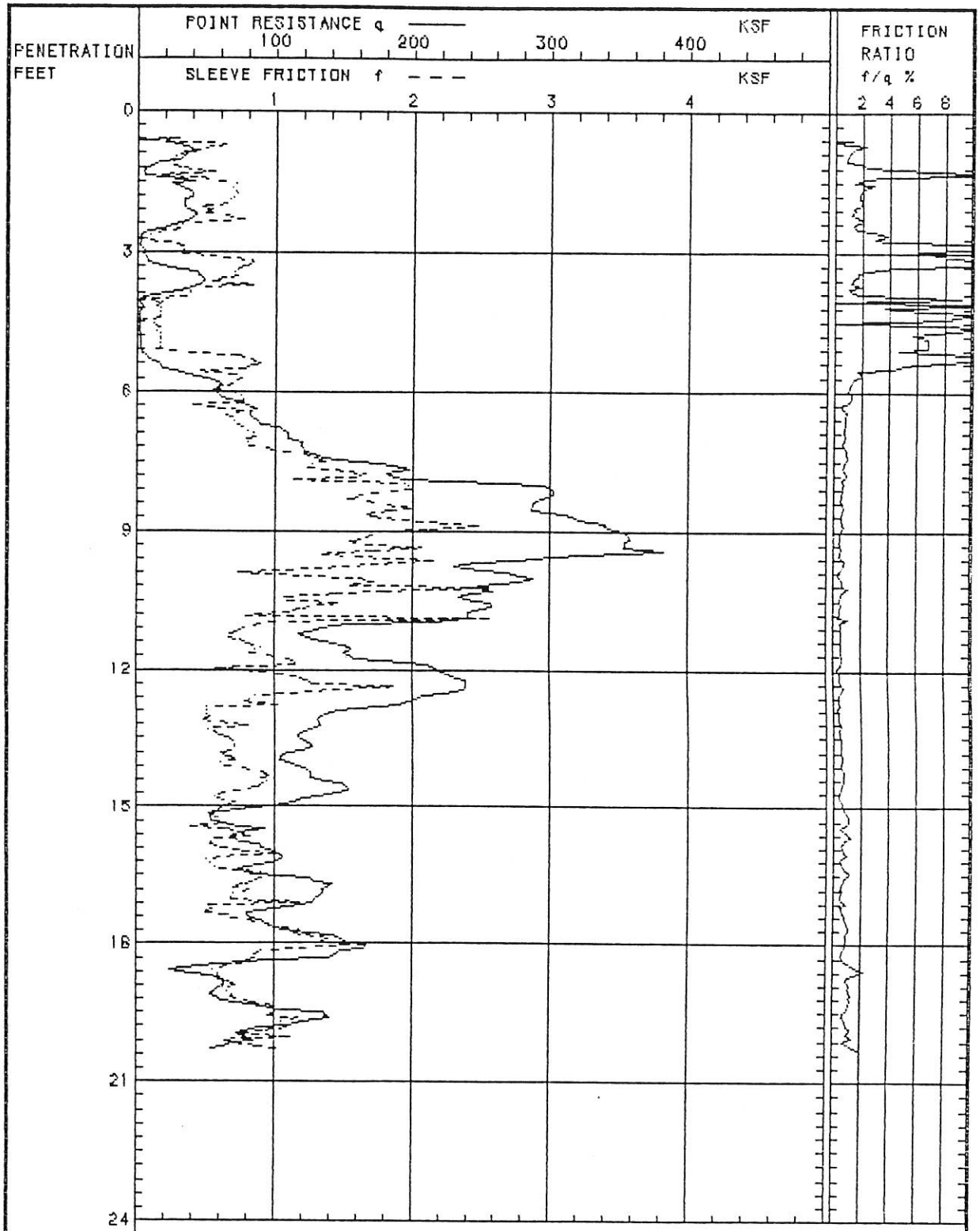
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 52N
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	5.58	.30	5.31	CLAY	CH	.02	2	.412	13.5			
.80	37.85	1.11	2.93	CLAYEY SILT TO SILTY CLAY	MH-CL	.04	9	2.801	13.5			
1.00	51.92	.83	1.59	SANDY SILT TO CLAYEY SILT	ML-MH	.05	9	3.843	13.5	86	40	.50+
1.20	76.80	.99	1.29	SILTY SAND TO SANDY SILT	SM-ML	.07	12			100+	42	.50+
1.40	77.41	.89	1.15	SILTY SAND TO SANDY SILT	SM-ML	.08	12			100+	42	.50+
1.60	56.06	.11	.19	SILTY SAND TO SANDY SILT	SM-ML	.09	8			84	40	.50+
1.80	38.94	.73	1.88	SANDY SILT TO CLAYEY SILT	ML-MH	.09	7	2.878	13.5	72	38	.50+
2.00	41.01	.51	1.25	SANDY SILT TO CLAYEY SILT	ML-MH	.10	7	3.031	13.5	73	38	.50+
2.20	25.72	.78	3.04	SILTY CLAY TO CLAY	CL-CH	.09	8	1.899	13.5			
2.40	46.10	.71	1.54	SANDY SILT TO CLAYEY SILT	ML-MH	.12	8	3.406	13.5	74	38	.50+
2.60	40.90	.89	2.19	SANDY SILT TO CLAYEY SILT	ML-MH	.13	7	3.020	13.5	71	38	.50+
2.80	40.27	.82	2.04	SANDY SILT TO CLAYEY SILT	ML-MH	.14	7	2.973	13.5	70	38	.50+
3.00	38.35	.73	1.90	SANDY SILT TO CLAYEY SILT	ML-MH	.15	7	2.830	13.5	68	38	.50+
3.20	13.71	.77	5.64	CLAY	CH	.13	6	1.006	13.5			
3.40	20.62	.79	3.83	CLAY	CH	.14	9	1.517	13.5			
3.60	24.15	.82	3.39	SILTY CLAY TO CLAY	CL-CH	.14	7	1.778	13.5			
3.80	27.90	.74	2.65	CLAYEY SILT TO SILTY CLAY	MH-CL	.17	6	2.054	13.5			
4.00	30.58	.60	1.96	CLAYEY SILT TO SILTY CLAY	MH-CL	.19	7	2.252	13.5			
4.20	21.54	.73	3.38	SILTY CLAY TO CLAY	CL-CH	.17	6	1.583	13.5			
4.40	19.66	.47	2.38	CLAYEY SILT TO SILTY CLAY	MH-CL	.20	4	1.441	13.5			
4.60	16.13	.74	4.58	CLAY	CH	.18	7	1.181	13.5			
4.80	24.97	.43	1.73	CLAYEY SILT TO SILTY CLAY	MH-CL	.22	5	1.934	13.5			
5.00	24.28	1.00	4.10	CLAY	CH	.20	11	1.784	13.5			
5.20	60.38	.59	.97	SILTY SAND TO SANDY SILT	SM-ML	.29	9			72	39	.50+
5.40	55.12	1.10	2.00	SANDY SILT TO CLAYEY SILT	ML-MH	.27	10	4.063	13.5	71	38	.50+
5.60	44.47	.69	1.56	SANDY SILT TO CLAYEY SILT	ML-MH	.28	8	3.273	13.5	65	37	.36
5.80	20.52	1.09	5.31	CLAY	CH	.23	9	1.503	13.5			
6.00	68.14	1.06	1.55	SANDY SILT TO CLAYEY SILT	ML-MH	.30	13	5.025	13.5	75	39	.50+
6.20	74.01	.96	1.30	SILTY SAND TO SANDY SILT	SM-ML	.34	11			76	39	.50+
6.40	83.08	1.10	1.33	SILTY SAND TO SANDY SILT	SM-ML	.35	13			80	39	.50+
6.60	98.07	1.00	1.02	SILTY SAND TO SANDY SILT	SM-ML	.36	15			85	40	.50+
6.80	74.94	.85	1.14	SILTY SAND TO SANDY SILT	SM-ML	.37	11			75	39	.50+
7.00	29.72	.76	2.55	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	7	2.178	13.5			
7.20	34.19	.74	2.16	CLAYEY SILT TO SILTY CLAY	MH-CL	.32	8	2.508	13.5			
7.40	38.24	1.01	2.63	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	9	2.808	13.5			
7.60	54.82	.13	.24	SILTY SAND TO SANDY SILT	SM-ML	.42	8			64	37	.30
7.80	41.08	.61	1.49	SANDY SILT TO CLAYEY SILT	ML-MH	.39	7	3.014	13.5	59	36	.20
8.00	26.74	.32	1.21	SANDY SILT TO CLAYEY SILT	ML-MH	.40	5	1.951	13.5	46	34	.15
8.20	4.37	.29	6.58	ORGANIC MATERIAL	OL-OH	.25	2	.305	13.5			
8.40	8.45	.61	7.20	CLAY	CH	.34	4	.601	13.5			
8.60	30.77	.64	2.09	CLAYEY SILT TO SILTY CLAY	MH-CL	.39	7	2.250	13.5			
8.80	30.87	.97	3.15	SILTY CLAY TO CLAY	CL-CH	.35	9	2.261	13.5			
9.00	41.22	.94	2.28	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	9	3.023	13.5			
9.20	36.95	1.01	2.74	CLAYEY SILT TO SILTY CLAY	MH-CL	.41	8	2.706	13.5			
9.40	42.95	.97	2.25	SANDY SILT TO CLAYEY SILT	ML-MH	.47	8	3.146	13.5	55	36	.19

9.60	43.73	.86	1.98	SANDY SILT TO CLAYEY SILT	ML-MH	.48	8	3.204	13.5	56	36	.19
9.80	55.59	.67	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	.49	10	4.081	13.5	62	37	.25
10.00	67.23	.66	.99	SILTY SAND TO SANDY SILT	SM-ML	.55	10			65	37	.31
10.20	43.81	.88	2.02	SANDY SILT TO CLAYEY SILT	ML-MH	.51	8	3.207	13.5	54	36	.18
10.40	47.04	.94	1.99	SANDY SILT TO CLAYEY SILT	ML-MH	.52	9	3.446	13.5	56	36	.19
10.60	62.01	1.08	1.73	SANDY SILT TO CLAYEY SILT	ML-MH	.53	11	4.554	13.5	63	37	.27
10.80	76.40	1.04	1.37	SILTY SAND TO SANDY SILT	SM-ML	.59	12			67	37	.37
11.00	75.59	1.25	1.65	SANDY SILT TO CLAYEY SILT	ML-MH	.55	14	5.559	13.5	68	38	.43
11.20	118.04	1.35	1.14	SILTY SAND TO SANDY SILT	SM-ML	.62	18			81	39	.50+
11.40	146.13	1.17	.80	SAND TO SILTY SAND	SM-SP	.63	17			85	41	.50+
11.60	113.96	1.34	1.18	SILTY SAND TO SANDY SILT	SM-ML	.64	18			79	39	.50+
11.80	95.26	1.56	1.64	SILTY SAND TO SANDY SILT	SM-ML	.65	15			72	38	.50+
12.00	97.54	1.01	1.04	SILTY SAND TO SANDY SILT	SM-ML	.66	15			72	39	.50+
12.20	110.37	1.12	1.01	SILTY SAND TO SANDY SILT	SM-ML	.67	17			76	39	.50+
12.40	132.46	1.21	.91	SAND TO SILTY SAND	SM-SP	.74	15			81	40	.50+
12.60	134.41	1.27	.94	SAND TO SILTY SAND	SM-SP	.76	16			81	40	.50+
12.80	153.25	1.47	.96	SAND TO SILTY SAND	SM-SP	.77	18			84	41	.50+
13.00	160.68	1.06	.66	SAND TO SILTY SAND	SM-SP	.78	19			85	41	.50+
13.20	167.84	1.44	.86	SAND TO SILTY SAND	SM-SP	.79	20			87	41	.50+
13.40	168.22	.88	.53	SAND TO SILTY SAND	SM-SP	.80	20			86	41	.50+
13.60	151.51	1.04	.69	SAND TO SILTY SAND	SM-SP	.82	18			83	40	.50+
13.80	109.80	1.53	1.39	SILTY SAND TO SANDY SILT	SM-ML	.76	17			73	38	.50+
14.00	125.76	.79	.63	SAND TO SILTY SAND	SM-SP	.84	15			76	40	.50+
14.20	201.26	1.55	.77	SAND TO SILTY SAND	SM-SP	.85	24			91	41	.50+
14.40	156.95	.97	.62	SAND TO SILTY SAND	SM-SP	.86	18			83	40	.50+
14.60	132.77	1.05	.79	SAND TO SILTY SAND	SM-SP	.88	15			77	40	.50+
14.80	128.01	.96	.75	SAND TO SILTY SAND	SM-SP	.89	15			75	40	.50+
15.00	100.16	.91	.91	SILTY SAND TO SANDY SILT	SM-ML	.82	15			68	38	.42
15.20	94.57	.95	1.01	SILTY SAND TO SANDY SILT	SM-ML	.84	15			66	37	.35
15.40	96.58	1.01	1.05	SILTY SAND TO SANDY SILT	SM-ML	.85	15			67	37	.36
15.60	98.75	1.20	1.21	SILTY SAND TO SANDY SILT	SM-ML	.86	15			67	37	.37
15.80	136.51	.93	.68	SAND TO SILTY SAND	SM-SP	.95	16			76	40	.50+
16.00	61.70	.97	1.41	SANDY SILT TO CLAYEY SILT	ML-MH	.80	11	4.511	13.5	54	36	.19
16.20	33.42	.82	2.45	CLAYEY SILT TO SILTY CLAY	MH-CL	.73	8	2.421	13.5			
16.40	59.47	.80	1.34	SANDY SILT TO CLAYEY SILT	ML-MH	.82	11	4.345	13.5	52	35	.18
16.60	139.55	1.52	1.09	SAND TO SILTY SAND	SM-SP	1.00	16			75	40	.50+
16.80	179.33	1.53	.85	SAND TO SILTY SAND	SM-SP	1.01	21			83	41	.50+
17.00	164.80	1.37	.83	SAND TO SILTY SAND	SM-SP	1.02	19			81	40	.50+
17.20	115.33	.71	.61	SAND TO SILTY SAND	SM-SP	1.03	13			68	39	.40
17.40	39.71	.79	1.99	SANDY SILT TO CLAYEY SILT	ML-MH	.87	7	2.877	13.5	37	33	.14
17.60	24.61	.87	3.53	SILTY CLAY TO CLAY	CL-CH	.70	7	1.771	13.5			
17.80	66.42	1.05	1.57	SANDY SILT TO CLAYEY SILT	ML-MH	.89	12	4.854	13.5	54	36	.19
18.00	46.02	1.22	2.66	CLAYEY SILT TO SILTY CLAY	MH-CL	.81	11	3.349	13.5			
18.20	81.54	1.37	1.68	SANDY SILT TO CLAYEY SILT	ML-MH	.91	15	5.972	13.5	61	37	.23
18.40	63.21	.71	1.12	SILTY SAND TO SANDY SILT	SM-ML	1.01	10			48	35	.17
18.60	49.83	.92	1.85	SANDY SILT TO CLAYEY SILT	ML-MH	.93	9	3.622	13.5	43	34	.15
18.80	41.84	1.00	2.39	CLAYEY SILT TO SILTY CLAY	MH-CL	.85	10	3.037	13.5			
19.00	31.46	1.64	5.22	CLAY	CH	.76	15	2.274	13.5			
19.20	71.49	.47	.65	SILTY SAND TO SANDY SILT	SM-ML	1.06	11			51	35	.18
19.40	66.03	.84	1.27	SILTY SAND TO SANDY SILT	SM-ML	1.07	10			48	35	.17
19.60	63.74	1.19	1.87	SANDY SILT TO CLAYEY SILT	ML-MH	.98	12	4.649	13.5	49	35	.17
19.80	105.24	1.22	1.16	SILTY SAND TO SANDY SILT	SM-ML	1.09	16			64	37	.29
20.00	98.75	1.29	1.30	SILTY SAND TO SANDY SILT	SM-ML	1.10	15			62	37	.25
20.20	58.39	1.93	3.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.91	13	4.238	13.5			
20.40	83.23	1.27	1.53	SILTY SAND TO SANDY SILT	SM-ML	1.12	13			55	36	.20
20.60	68.67	1.30	1.89	SANDY SILT TO CLAYEY SILT	ML-MH	1.03	13	5.011	13.5	50	35	.19
20.80	46.12	.99	2.15	SANDY SILT TO CLAYEY SILT	ML-MH	1.04	8	3.339	13.5	38	33	.14
21.00	52.21	.79	1.51	SANDY SILT TO CLAYEY SILT	ML-MH	1.05	10	3.790	13.5	41	34	.15
21.20	7.56	.61	8.13	ORGANIC MATERIAL	OL-OH	.64	3	.513	13.5			
21.40	9.68	1.24	12.79	ORGANIC MATERIAL	OL-OH	.64	4	.669	13.5			

21.60	102.11	2.24	2.19	SANDY SILT TO CLAYEY SILT	ML-MH	1.08	19	7.484	13.5	63	37	.27
21.80	29.73	.97	3.26	SILTY CLAY TO CLAY	CL-CH	.87	9	2.137	13.5			
22.00	12.18	.71	5.82	CLAY	CH	.88	5	.837	13.5			



RESULT OF CONE PENETRATION TEST

52M

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

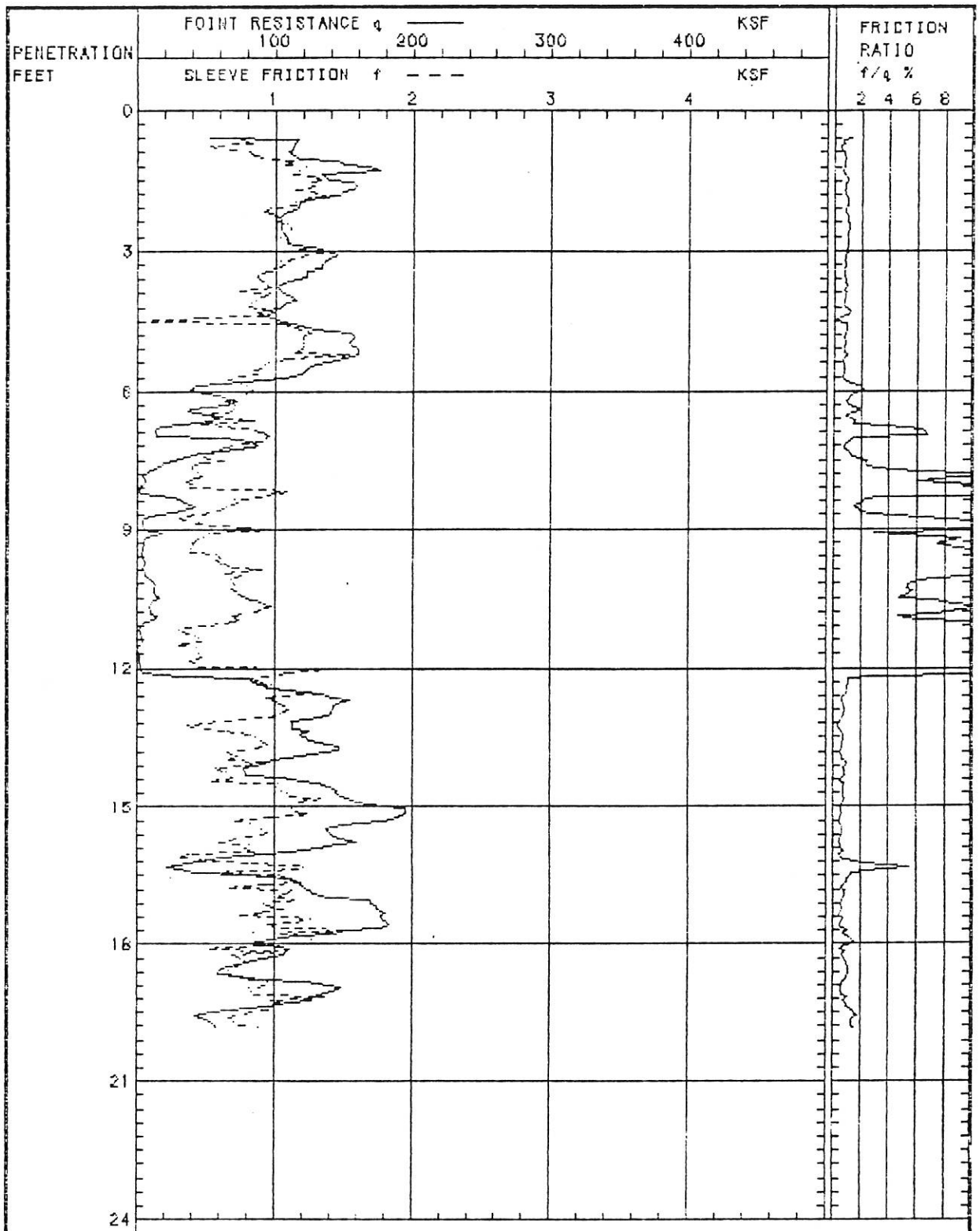
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 52M
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	22.75	.73	3.19	SILTY CLAY TO CLAY	CL-CH	.02	7	1.684	13.5			
.80	38.37	.23	.57	SANDY SILT TO CLAYEY SILT	ML-MH	.04	7	2.839	13.5	75	39	.50+
1.00	31.98	.27	.83	SANDY SILT TO CLAYEY SILT	ML-MH	.05	6	2.365	13.5	70	38	.50+
1.20	9.23	.34	3.64	CLAY	CH	.05	4	.680	13.5			
1.40	12.78	.10	.80	SENSITIVE FINE GRAINED	OL-CH	.04	3	.944	13.5			
1.60	28.77	.71	2.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.07	6	2.126	13.5			
1.80	40.09	.72	1.79	SANDY SILT TO CLAYEY SILT	ML-MH	.09	7	2.963	13.5	73	38	.50+
2.00	34.44	.52	1.51	SANDY SILT TO CLAYEY SILT	ML-MH	.10	6	2.543	13.5	68	38	.50+
2.20	42.55	.67	1.58	SANDY SILT TO CLAYEY SILT	ML-MH	.11	8	3.144	13.5	73	39	.50+
2.40	29.03	.44	1.52	SANDY SILT TO CLAYEY SILT	ML-MH	.12	5	2.142	13.5	64	37	.50+
2.60	4.93	.15	3.14	CLAY	CH	.10	2	.357	13.5			
2.80	2.21	.19	8.53	ORGANIC MATERIAL	OL-OH	.08	1	.158	13.5			
3.00	4.92	.42	8.48	ORGANIC MATERIAL	OL-OH	.09	2	.358	13.5			
3.20	7.63	.83	10.92	ORGANIC MATERIAL	OL-OH	.10	3	.558	13.5			
3.40	37.11	.72	1.93	SANDY SILT TO CLAYEY SILT	ML-MH	.17	7	2.737	13.5	66	37	.50+
3.60	47.96	.33	.69	SILTY SAND TO SANDY SILT	SM-ML	.20	7			71	38	.50+
3.80	35.94	.40	1.11	SANDY SILT TO CLAYEY SILT	ML-MH	.19	6	2.648	13.5	64	37	.43
4.00	2.71	.18	6.67	ORGANIC MATERIAL	OL-OH	.12	1	.192	13.5			
4.20	3.94	.15	3.94	CLAY	CH	.17	1	.279	13.5			
4.40	1.97	.17	8.49	ORGANIC MATERIAL	OL-OH	.13	1	.136	13.5			
4.60	1.48	.14	9.63	ORGANIC MATERIAL	OL-OH	.14	1	.099	13.5			
4.80	2.71	.17	6.14	ORGANIC MATERIAL	OL-OH	.14	1	.190	13.5			
5.00	2.46	.09	3.84	ORGANIC MATERIAL	OL-OH	.15	1	.171	13.5			
5.20	5.15	.55	10.75	ORGANIC MATERIAL	OL-OH	.16	2	.370	13.5			
5.40	15.73	.87	5.53	CLAY	CH	.22	7	1.150	13.5			
5.60	32.31	.74	2.28	CLAYEY SILT TO SILTY CLAY	MH-CL	.25	7	2.375	13.5			
5.80	58.27	.71	1.21	SANDY SILT TO CLAYEY SILT	ML-MH	.29	11	4.295	13.5	71	33	.50+
6.00	57.18	.71	1.24	SANDY SILT TO CLAYEY SILT	ML-MH	.30	10	4.213	13.5	70	38	.50+
6.20	69.08	.77	1.11	SILTY SAND TO SANDY SILT	SM-ML	.34	11			74	38	.50+
6.40	84.51	.20	.24	SAND TO SILTY SAND	SM-SP	.38	10			79	40	.50+
6.60	85.33	.70	.82	SILTY SAND TO SANDY SILT	SM-ML	.36	13			80	39	.50+
6.80	105.02	.94	.89	SAND TO SILTY SAND	SM-SP	.41	12			85	41	.50+
7.00	109.33	.84	.77	SAND TO SILTY SAND	SM-SP	.42	13			86	41	.50+
7.20	119.10	.54	.45	SAND TO SILTY SAND	SM-SP	.43	14			88	41	.50+
7.40	131.07	1.16	.88	SAND TO SILTY SAND	SM-SP	.44	15			91	41	.50+
7.60	184.75	1.27	.69	SAND TO SILTY SAND	SM-SP	.46	22			100+	42	.50+
7.80	184.19	1.53	.83	SAND TO SILTY SAND	SM-SP	.47	22			100+	42	.50+
8.00	279.25	1.96	.70	SAND	SW-SP	.52	26			100+	43	.50+
8.20	302.54	1.55	.51	SAND	SW-SP	.53	28			100+	44	.50+
8.40	288.48	1.77	.61	SAND	SW-SP	.55	27			100+	44	.50+
8.60	297.97	1.48	.50	SAND	SW-SP	.56	28			100+	44	.50+
8.80	330.21	2.00	.61	SAND	SW-SP	.57	31			100+	44	.50+
9.00	350.33	1.89	.54	SAND	SW-SP	.58	33			100+	45	.50+
9.20	356.19	1.71	.48	SAND	SW-SP	.60	34			100+	45	.50+
9.40	367.53	2.20	.60	SAND	SW-SP	.61	35			100+	44	.50+

9.60	288.93	1.95	.67	SAND	SW-SP	.62	27			100+	44	.50+
9.80	239.93	1.34	.56	SAND	SW-SP	.64	22			100+	44	.50+
10.00	282.79	1.39	.49	SAND	SW-SP	.65	27			100+	44	.50+
10.20	247.93	2.05	.82	SAND TO SILTY SAND	SM-SP	.61	29			100+	42	.50+
10.40	238.41	1.05	.44	SAND	SW-SP	.68	22			100+	44	.50+
10.60	257.52	1.36	.53	SAND	SW-SP	.69	24			100+	44	.50+
10.80	240.06	1.33	.55	SAND	SW-SP	.70	22			100+	44	.50+
11.00	186.20	.97	.52	SAND TO SILTY SAND	SM-SP	.66	22			95	42	.50+
11.20	122.31	.71	.58	SAND TO SILTY SAND	SM-SP	.67	14			80	40	.50+
11.40	135.89	.78	.57	SAND TO SILTY SAND	SM-SP	.68	16			83	41	.50+
11.60	153.04	.76	.49	SAND TO SILTY SAND	SM-SP	.70	18			86	41	.50+
11.80	176.53	1.12	.64	SAND TO SILTY SAND	SM-SP	.71	21			91	41	.50+
12.00	218.17	.03	.01	SAND	SW-SP	.78	20			97	44	.50+
12.20	236.08	1.26	.53	SAND	SW-SP	.79	22			100+	44	.50+
12.40	238.22	1.43	.60	SAND	SW-SP	.81	22			100+	44	.50+
12.60	205.18	.84	.41	SAND	SW-SP	.82	19			93	44	.50+
12.80	183.39	.54	.29	SAND	SW-SP	.83	17			88	43	.50+
13.00	135.43	.32	.24	SAND TO SILTY SAND	SM-SP	.78	16			80	40	.50+
13.20	132.56	.71	.53	SAND TO SILTY SAND	SM-SP	.79	15			79	40	.50+
13.40	119.71	.34	.28	SAND TO SILTY SAND	SM-SP	.80	14			75	40	.50+
13.60	124.32	.68	.54	SAND TO SILTY SAND	SM-SP	.82	14			76	40	.50+
13.80	115.72	.67	.58	SAND TO SILTY SAND	SM-SP	.83	13			73	39	.50+
14.00	106.81	.64	.60	SAND TO SILTY SAND	SM-SP	.84	12			70	39	.50+
14.20	124.17	.48	.39	SAND TO SILTY SAND	SM-SP	.85	14			75	40	.50+
14.40	131.00	.93	.71	SAND TO SILTY SAND	SM-SP	.86	15			77	40	.50+
14.60	153.47	.81	.52	SAND TO SILTY SAND	SM-SP	.88	18			82	40	.50+
14.80	126.44	.60	.47	SAND TO SILTY SAND	SM-SP	.89	15			74	40	.50+
15.00	91.91	.27	.29	SAND TO SILTY SAND	SM-SP	.90	11			64	39	.29
15.20	53.21	.43	.80	SILTY SAND TO SANDY SILT	SM-ML	.84	8			47	35	.17
15.40	68.74	.51	.74	SILTY SAND TO SANDY SILT	SM-ML	.85	10			56	36	.20
15.60	71.40	.83	1.16	SILTY SAND TO SANDY SILT	SM-ML	.86	11			58	36	.20
15.80	81.73	.54	.66	SILTY SAND TO SANDY SILT	SM-ML	.87	13			61	37	.24
16.00	101.30	.89	.88	SILTY SAND TO SANDY SILT	SM-ML	.88	16			67	37	.38
16.20	101.43	.20	.19	SAND TO SILTY SAND	SM-SP	.97	12			65	39	.22
16.40	76.92	.75	.97	SILTY SAND TO SANDY SILT	SM-ML	.90	12			59	36	.21
16.60	126.63	.88	.69	SAND TO SILTY SAND	SM-SP	1.00	15			72	39	.50+
16.80	136.55	.81	.59	SAND TO SILTY SAND	SM-SP	1.01	16			74	40	.50+
17.00	130.13	.69	.53	SAND TO SILTY SAND	SM-SP	1.02	15			72	39	.50+
17.20	109.94	.54	.49	SAND TO SILTY SAND	SM-SP	1.03	13			66	39	.35
17.40	81.62	.68	.83	SILTY SAND TO SANDY SILT	SM-ML	.96	13			60	36	.22
17.60	96.82	1.00	1.03	SILTY SAND TO SANDY SILT	SM-ML	.97	15			64	37	.29
17.80	133.21	1.22	.92	SAND TO SILTY SAND	SM-SP	1.07	15			72	39	.50+
18.00	160.20	1.45	.90	SAND TO SILTY SAND	SM-SP	1.08	19			79	40	.50+
18.20	146.78	.90	.61	SAND TO SILTY SAND	SM-SP	1.09	17			75	40	.50+
18.40	79.21	.79	.99	SILTY SAND TO SANDY SILT	SM-ML	1.01	12			57	36	.20
18.60	31.89	.57	1.79	CLAYEY SILT TO SILTY CLAY	MH-CL	.84	7	2.301	13.5			
18.80	63.83	.62	.98	SILTY SAND TO SANDY SILT	SM-ML	1.03	10			49	35	.17
19.00	58.71	.58	.99	SILTY SAND TO SANDY SILT	SM-ML	1.04	9			45	34	.16
19.20	59.90	.74	1.23	SANDY SILT TO CLAYEY SILT	ML-MH	.96	11	4.366	13.5	48	35	.17
19.40	97.49	1.01	1.04	SILTY SAND TO SANDY SILT	SM-ML	1.07	15			62	37	.25
19.60	138.92	1.06	.76	SAND TO SILTY SAND	SM-SP	1.18	16			71	39	.50+
19.80	100.41	1.08	1.07	SILTY SAND TO SANDY SILT	SM-ML	1.09	16			62	37	.26
20.00	75.54	.72	.95	SILTY SAND TO SANDY SILT	SM-ML	1.10	12			52	35	.18
20.20	66.27	.72	1.09	SILTY SAND TO SANDY SILT	SM-ML	1.11	10			47	35	.17



RESULT OF CONE PENETRATION TEST

52S

JOB NUMBER: 0187-0208
CONE NUMBER: 001
LOCATION: ISLE DENIERES

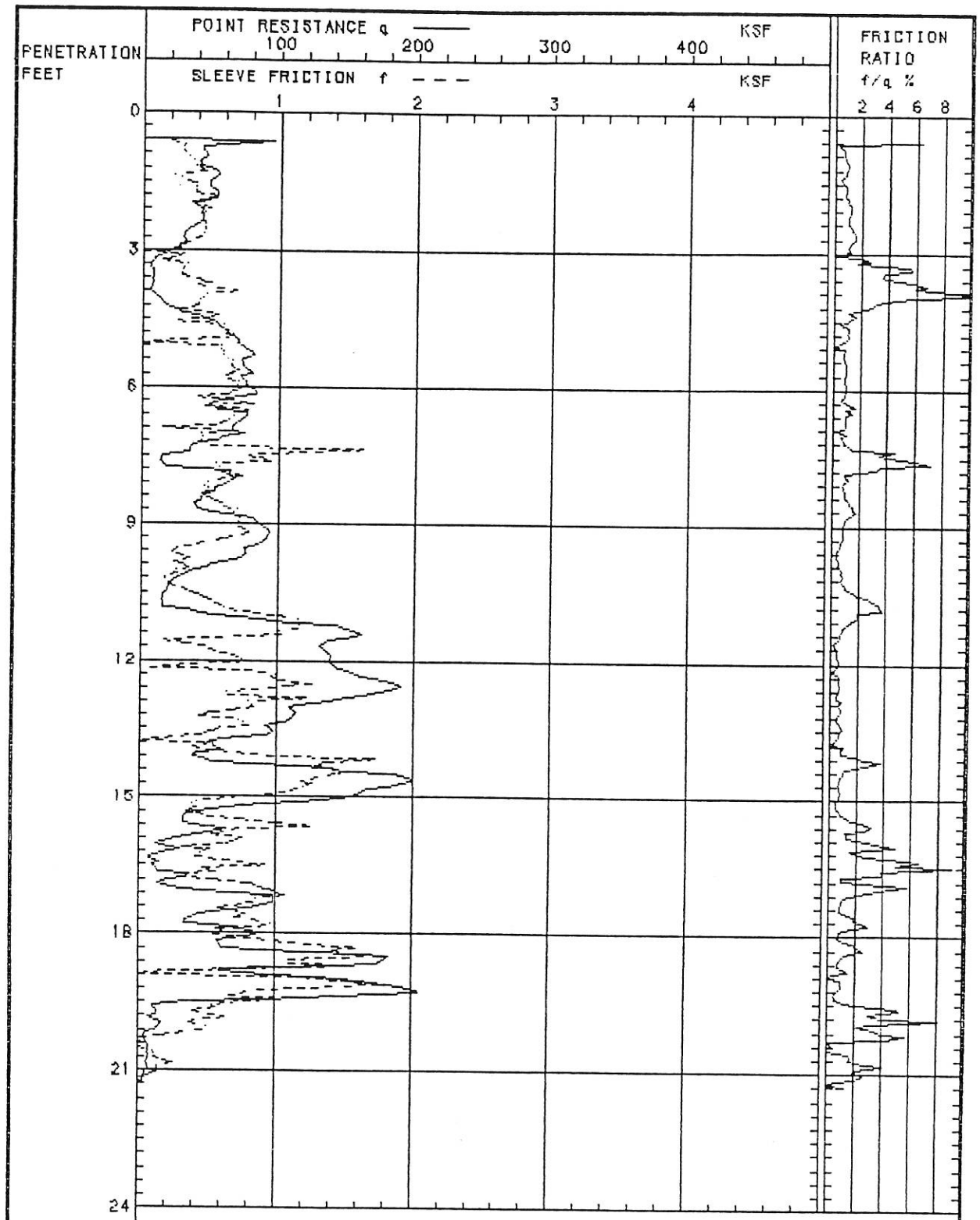
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 JUN 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 52S
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	84.85	.77	.91	SILTY SAND TO SANDY SILT	SM-ML	.03	13			100+	42	.50+
.80	113.21	.39	.35	SAND TO SILTY SAND	SM-SP	.05	13			100+	42	.50+
1.00	115.91	.87	.75	SAND TO SILTY SAND	SM-SP	.06	13			100+	42	.50+
1.20	159.38	1.14	.72	SAND TO SILTY SAND	SM-SP	.07	19			100+	42	.50+
1.40	134.91	1.32	.98	SAND TO SILTY SAND	SM-SP	.08	16			100+	42	.50+
1.60	158.15	1.27	.81	SAND TO SILTY SAND	SM-SP	.10	18			100+	42	.50+
1.80	147.58	1.21	.82	SAND TO SILTY SAND	SM-SP	.11	17			100+	42	.50+
2.00	117.45	1.10	.94	SAND TO SILTY SAND	SM-SP	.12	14			100+	42	.50+
2.20	108.48	1.14	1.05	SILTY SAND TO SANDY SILT	SM-ML	.12	17			100+	42	.50+
2.40	104.17	1.07	1.03	SILTY SAND TO SANDY SILT	SM-ML	.13	16			100+	42	.50+
2.60	105.27	1.09	1.04	SILTY SAND TO SANDY SILT	SM-ML	.14	16			100+	42	.50+
2.80	108.23	1.09	1.01	SILTY SAND TO SANDY SILT	SM-ML	.15	17			100+	42	.50+
3.00	137.24	1.26	.92	SAND TO SILTY SAND	SM-SP	.18	16			100+	42	.50+
3.20	138.24	1.12	.81	SAND TO SILTY SAND	SM-SP	.19	16			100+	42	.50+
3.40	127.93	1.00	.78	SAND TO SILTY SAND	SM-SP	.20	15			100+	42	.50+
3.60	116.13	.85	.73	SAND TO SILTY SAND	SM-SP	.22	13			100+	42	.50+
3.80	103.30	.87	.84	SAND TO SILTY SAND	SM-SP	.23	12			97	42	.50+
4.00	113.87	.73	.64	SAND TO SILTY SAND	SM-SP	.24	13			100+	42	.50+
4.20	103.74	.94	.91	SILTY SAND TO SANDY SILT	SM-ML	.23	16			97	42	.50+
4.40	95.54	.32	.34	SAND TO SILTY SAND	SM-SP	.26	11			90	41	.50+
4.60	117.91	.85	.72	SAND TO SILTY SAND	SM-SP	.28	14			99	42	.50+
4.80	156.67	1.23	.78	SAND TO SILTY SAND	SM-SP	.29	18			100+	42	.50+
5.00	155.38	1.16	.75	SAND TO SILTY SAND	SM-SP	.30	18			100+	42	.50+
5.20	160.37	1.46	.91	SAND TO SILTY SAND	SM-SP	.31	19			100+	42	.50+
5.40	133.59	.89	.67	SAND TO SILTY SAND	SM-SP	.32	15			100+	42	.50+
5.60	120.59	.87	.72	SAND TO SILTY SAND	SM-SP	.34	14			95	42	.50+
5.80	76.62	.54	.71	SILTY SAND TO SANDY SILT	SM-ML	.32	12			79	39	.50+
6.00	44.04	.79	1.80	SANDY SILT TO CLAYEY SILT	ML-MH	.30	8	3.240	13.5	64	37	.31
6.20	69.34	.67	.96	SILTY SAND TO SANDY SILT	SM-ML	.34	11			74	38	.50+
6.40	38.26	.72	1.88	SANDY SILT TO CLAYEY SILT	ML-MH	.32	7	2.810	13.5	60	36	.22
6.60	57.85	.70	1.21	SANDY SILT TO CLAYEY SILT	ML-MH	.33	11	4.260	13.5	69	38	.50+
6.80	15.27	.48	3.17	CLAY	CH	.27	7	1.111	13.5			
7.00	38.62	.95	2.45	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	9	2.837	13.5			
7.20	85.38	.66	.78	SILTY SAND TO SANDY SILT	SM-ML	.40	13			78	39	.50+
7.40	41.37	.56	1.34	SANDY SILT TO CLAYEY SILT	ML-MH	.37	7	3.037	13.5	60	36	.21
7.60	18.47	.44	2.36	SILTY CLAY TO CLAY	CL-CH	.30	5	1.345	13.5			
7.80	5.68	.36	6.31	ORGANIC MATERIAL	OL-OH	.23	2	.403	13.5			
8.00	5.42	.38	7.07	ORGANIC MATERIAL	OL-OH	.24	2	.383	13.5			
8.20	2.21	1.04	47.04	ORGANIC MATERIAL	OL-OH	.25	1	.146	13.5			
8.40	33.30	.78	2.34	CLAYEY SILT TO SILTY CLAY	MH-CL	.38	7	2.439	13.5			
8.60	32.79	.58	1.77	SANDY SILT TO CLAYEY SILT	ML-MH	.43	6	2.397	13.5	49	35	.16
8.80	4.68	.34	7.25	ORGANIC MATERIAL	OL-OH	.26	2	.327	13.5			
9.00	4.92	.84	17.13	ORGANIC MATERIAL	OL-OH	.27	2	.344	13.5			
9.20	5.92	.31	5.21	CLAY	CH	.37	2	.411	13.5			
9.40	4.93	.28	5.62	CLAY	CH	.38	2	.337	13.5			
9.60	3.81	.56	14.70	ORGANIC MATERIAL	OL-OH	.29	1	.261	13.5			
9.80	5.18	.56	10.83	ORGANIC MATERIAL	OL-OH	.29	2	.362	13.5			
10.00	6.15	.70	11.38	ORGANIC MATERIAL	OL-OH	.30	2	.433	13.5			
10.20	12.78	.70	5.47	CLAY	CH	.41	6	.917	13.5			

10.60	11.20	.89	7.93	CLAY	CH	.42	5	.798	13.5			
10.80	10.08	.81	8.08	ORGANIC MATERIAL	OL-OH	.32	4	.723	13.5			
11.00	9.64	.72	7.48	CLAY	CH	.44	4	.681	13.5			
11.20	2.33	.34	14.56	ORGANIC MATERIAL	OL-OH	.34	1	.148	13.5			
11.40	3.93	.47	11.91	ORGANIC MATERIAL	OL-OH	.34	1	.266	13.5			
11.60	.25	.43	172.30	ORGANIC MATERIAL	OL-OH	.35	1	-.007	13.5			
11.80	1.48	.43	29.30	ORGANIC MATERIAL	OL-OH	.35	1	.083	13.5			
12.00	2.70	.89	32.98	ORGANIC MATERIAL	OL-OH	.36	1	.173	13.5			
12.20	56.14	.90	1.60	SANDY SILT TO CLAYEY SILT	ML-MH	.61	10	4.114	13.5	58	36	.20
12.40	94.14	.96	1.02	SILTY SAND TO SANDY SILT	SM-ML	.68	15			70	38	.50+
12.60	138.16	.92	.66	SAND TO SILTY SAND	SM-SP	.76	16			81	40	.50+
12.80	143.54	.93	.65	SAND TO SILTY SAND	SM-SP	.77	17			82	40	.50+
13.00	139.74	1.03	.73	SAND TO SILTY SAND	SM-SP	.78	16			81	40	.50+
13.20	112.40	.44	.39	SAND TO SILTY SAND	SM-SP	.79	13			73	39	.50+
13.40	121.94	.68	.56	SAND TO SILTY SAND	SM-SP	.80	14			76	40	.50+
13.60	132.19	.93	.70	SAND TO SILTY SAND	SM-SP	.82	15			78	40	.50+
13.80	142.02	.45	.32	SAND TO SILTY SAND	SM-SP	.83	17			81	40	.50+
14.00	97.68	.80	.82	SILTY SAND TO SANDY SILT	SM-ML	.77	15			69	38	.46
14.20	78.09	.61	.78	SILTY SAND TO SANDY SILT	SM-ML	.78	12			62	37	.25
14.40	112.76	.63	.56	SAND TO SILTY SAND	SM-SP	.86	13			71	39	.50+
14.60	142.59	2.08	1.46	SILTY SAND TO SANDY SILT	SM-ML	.80	22			81	39	.50+
14.80	151.46	1.26	.83	SAND TO SILTY SAND	SM-SP	.89	18			81	40	.50+
15.00	187.25	1.14	.61	SAND TO SILTY SAND	SM-SP	.90	22			87	41	.50+
15.20	192.41	.85	.44	SAND	SW-SP	.99	18			86	43	.50+
15.40	151.73	.88	.58	SAND TO SILTY SAND	SM-SP	.92	18			80	40	.50+
15.60	141.47	.87	.62	SAND TO SILTY SAND	SM-SP	.94	16			78	40	.50+
15.80	153.52	.65	.42	SAND TO SILTY SAND	SM-SP	.95	18			80	40	.50+
16.00	102.52	.63	.61	SAND TO SILTY SAND	SM-SP	.96	12			66	39	.33
16.20	45.94	.63	1.38	SANDY SILT TO CLAYEY SILT	ML-MH	.81	8	3.343	13.5	44	34	.15
16.40	37.51	.72	1.93	SANDY SILT TO CLAYEY SILT	ML-MH	.82	7	2.718	13.5	37	33	.14
16.60	113.05	1.16	1.02	SILTY SAND TO SANDY SILT	SM-ML	.91	18			70	38	.50+
16.80	123.68	.59	.48	SAND TO SILTY SAND	SM-SP	1.01	14			71	39	.50+
17.00	154.58	1.09	.70	SAND TO SILTY SAND	SM-SP	1.02	18			79	40	.50+
17.20	174.14	1.01	.58	SAND TO SILTY SAND	SM-SP	1.03	20			82	40	.50+
17.40	178.31	.87	.49	SAND TO SILTY SAND	SM-SP	1.04	21			83	40	.50+
17.60	180.87	1.00	.55	SAND TO SILTY SAND	SM-SP	1.06	21			83	40	.50+
17.80	130.50	1.67	1.28	SILTY SAND TO SANDY SILT	SM-ML	.98	20			73	38	.50+
18.00	88.85	1.50	1.68	SILTY SAND TO SANDY SILT	SM-ML	.99	14			61	37	.24
18.20	107.89	.65	.61	SAND TO SILTY SAND	SM-SP	1.09	12			64	38	.30
18.40	80.06	.77	.97	SILTY SAND TO SANDY SILT	SM-ML	1.01	12			57	36	.20
18.60	59.91	.47	.79	SILTY SAND TO SANDY SILT	SM-ML	1.02	9			46	35	.16
18.80	106.53	.88	.83	SAND TO SILTY SAND	SM-SP	1.13	12			63	38	.28
19.00	146.19	1.57	1.07	SAND TO SILTY SAND	SM-SP	1.14	17			73	39	.50+
19.20	127.88	.99	.78	SAND TO SILTY SAND	SM-SP	1.15	15			68	39	.44
19.40	81.56	.96	1.18	SILTY SAND TO SANDY SILT	SM-ML	1.07	13			56	36	.20
19.60	44.50	.78	1.74	SANDY SILT TO CLAYEY SILT	ML-MH	.98	8	3.223	13.5	38	33	.14
19.80	57.08	.81	1.42	SANDY SILT TO CLAYEY SILT	ML-MH	.99	10	4.155	13.5	45	34	.16



RESULT OF CONE PENETRATION TEST

53N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

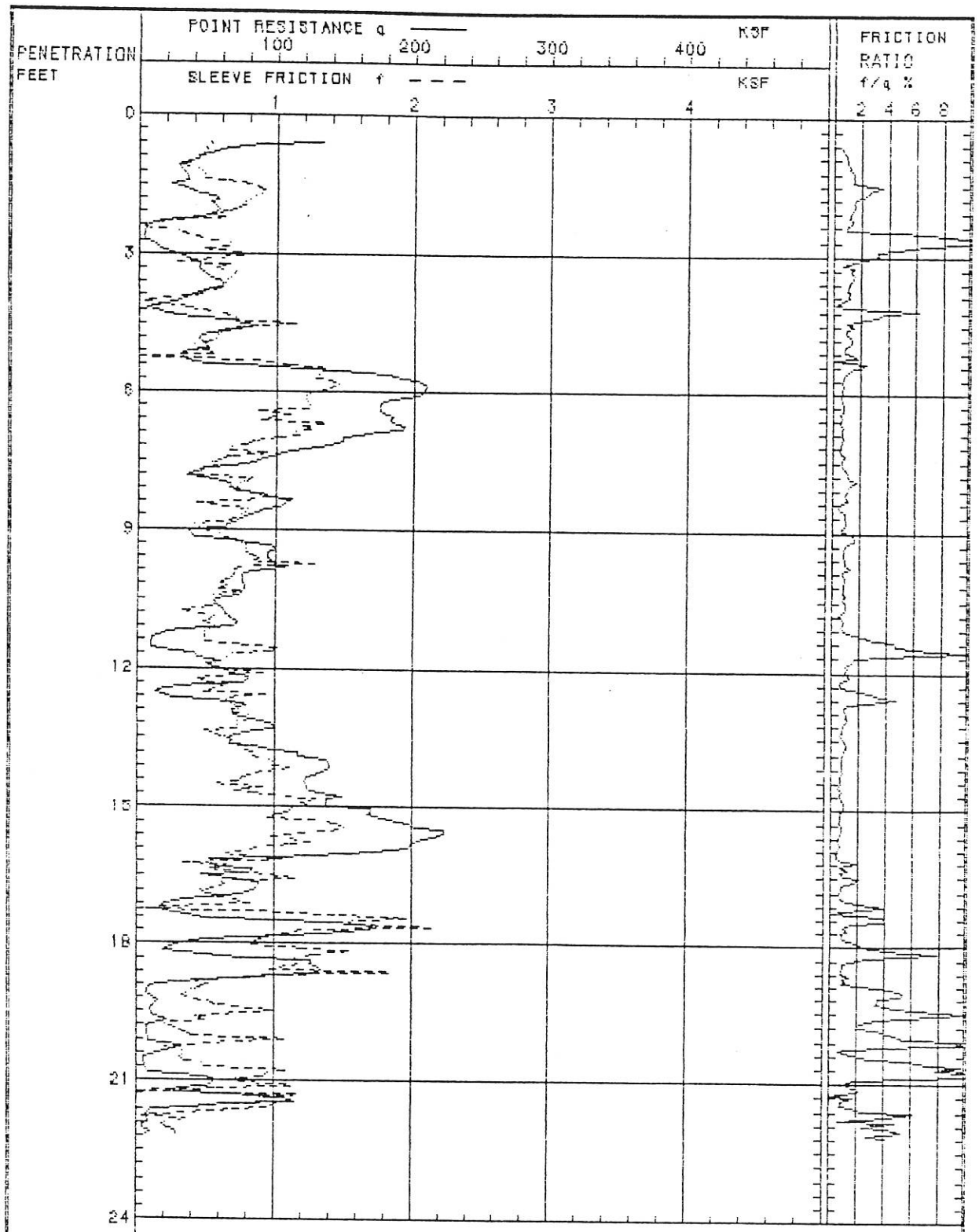
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 53N
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	48.94	.19	.40	SILTY SAND TO SANDY SILT	SM-ML	.03	7			85	40	.50+
.80	43.54	.15	.34	SILTY SAND TO SANDY SILT	SM-ML	.04	6			79	39	.50+
1.00	44.40	.33	.75	SANDY SILT TO CLAYEY SILT	ML-MH	.05	8	3.285	13.5	79	39	.50+
1.20	45.01	.40	.88	SANDY SILT TO CLAYEY SILT	ML-MH	.06	8	3.329	13.5	78	39	.50+
1.40	54.36	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.08	8			84	40	.50+
1.60	48.27	.34	.70	SILTY SAND TO SANDY SILT	SM-ML	.09	7			78	39	.50+
1.80	54.11	.19	.36	SILTY SAND TO SANDY SILT	SM-ML	.10	8			81	39	.50+
2.00	37.94	.55	1.46	SANDY SILT TO CLAYEY SILT	ML-MH	.10	7	2.803	13.5	71	38	.50+
2.20	43.04	.44	1.03	SANDY SILT TO CLAYEY SILT	ML-MH	.11	9	3.180	13.5	73	39	.50+
2.40	41.82	.45	1.08	SANDY SILT TO CLAYEY SILT	ML-MH	.12	8	3.087	13.5	72	38	.50+
2.60	31.49	.46	1.45	SANDY SILT TO CLAYEY SILT	ML-MH	.13	6	2.323	13.5	65	37	.50+
2.80	30.93	.36	1.16	SANDY SILT TO CLAYEY SILT	ML-MH	.14	5	2.281	13.5	64	37	.50+
3.00	21.41	.14	.64	SANDY SILT TO CLAYEY SILT	ML-MH	.15	4	1.575	13.5	56	36	.21
3.20	8.61	.19	2.18	CLAY	CH	.13	4	.628	13.5			
3.40	6.64	.28	4.27	CLAY	CH	.14	3	.491	13.5			
3.60	7.13	.36	4.99	CLAY	CH	.14	3	.518	13.5			
3.80	6.64	.45	6.74	ORGANIC MATERIAL	OL-OH	.11	3	.484	13.5			
4.00	10.08	.17	1.72	SENSITIVE FINE GRAINED	OL-CH	.12	2	.737	13.5			
4.20	15.86	.41	2.59	SILTY CLAY TO CLAY	CL-CH	.17	5	1.162	13.5			
4.40	35.14	.51	1.45	SANDY SILT TO CLAYEY SILT	ML-MH	.22	6	2.586	13.5	62	37	.30
4.60	53.86	.34	.64	SILTY SAND TO SANDY SILT	SM-ML	.25	8			71	39	.50+
4.80	61.49	.64	1.04	SILTY SAND TO SANDY SILT	SM-ML	.26	9			74	39	.50+
5.00	69.86	.03	.04	SAND TO SILTY SAND	SM-SP	.30	8			76	40	.50+
5.20	77.96	.59	.75	SILTY SAND TO SANDY SILT	SM-ML	.29	12			81	39	.50+
5.40	73.80	.64	.87	SILTY SAND TO SANDY SILT	SM-ML	.30	11			78	39	.50+
5.60	75.74	.40	.53	SILTY SAND TO SANDY SILT	SM-ML	.31	12			79	39	.50+
5.80	72.98	.70	.96	SILTY SAND TO SANDY SILT	SM-ML	.32	11			77	39	.50+
6.00	78.45	.71	.90	SILTY SAND TO SANDY SILT	SM-ML	.33	12			79	39	.50+
6.20	77.17	.55	.71	SILTY SAND TO SANDY SILT	SM-ML	.34	12			79	39	.50+
6.40	51.15	.81	1.58	SANDY SILT TO CLAYEY SILT	ML-MH	.32	9	3.765	13.5	66	37	.41
6.60	76.99	.69	.89	SILTY SAND TO SANDY SILT	SM-ML	.36	12			74	39	.50+
6.80	69.38	.57	.82	SILTY SAND TO SANDY SILT	SM-ML	.37	11			72	39	.50+
7.00	70.79	.54	.76	SILTY SAND TO SANDY SILT	SM-ML	.38	11			72	39	.50+
7.20	48.52	.47	.96	SANDY SILT TO CLAYEY SILT	ML-MH	.36	9	3.568	13.5	63	37	.29
7.40	35.18	.46	1.30	SANDY SILT TO CLAYEY SILT	ML-MH	.37	6	2.578	13.5	55	36	.18
7.60	13.90	.91	6.51	CLAY	CH	.30	6	1.007	13.5			
7.80	41.06	.61	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.39	7	3.013	13.5	59	35	.20
8.00	66.39	.77	1.16	SILTY SAND TO SANDY SILT	SM-ML	.44	10			68	39	.47
8.20	55.74	.49	.87	SILTY SAND TO SANDY SILT	SM-ML	.45	8			67	37	.28
8.40	45.53	.47	1.03	SANDY SILT TO CLAYEY SILT	ML-MH	.42	9	3.342	13.5	60	36	.22
8.60	39.35	.62	1.57	SANDY SILT TO CLAYEY SILT	ML-MH	.43	7	2.883	13.5	55	36	.13
8.80	62.59	.68	1.09	SILTY SAND TO SANDY SILT	SM-ML	.48	9			65	37	.32
9.00	85.84	.99	1.15	SILTY SAND TO SANDY SILT	SM-ML	.49	13			74	39	.50+
9.20	93.72	.79	.84	SILTY SAND TO SANDY SILT	SM-ML	.51	14			77	39	.50+
9.40	89.81	.78	.87	SILTY SAND TO SANDY SILT	SM-ML	.52	14			75	39	.50+

9.60	75.63	.27	.36	SILTY SAND TO SANDY SILT	SM-ML	.53	12			69	38	.47
9.80	67.24	.31	.45	SILTY SAND TO SANDY SILT	SM-ML	.54	10			65	37	.32
10.00	44.20	.33	.75	SANDY SILT TO CLAYEY SILT	ML-MH	.50	8	3.237	13.5	55	36	.19
10.20	26.59	.17	.66	SANDY SILT TO CLAYEY SILT	ML-MH	.51	5	1.932	13.5	40	34	.14
10.40	20.18	.10	.50	SANDY SILT TO CLAYEY SILT	ML-MH	.52	3	1.456	13.5	29	32	.12
10.60	15.99	.28	1.73	CLAYEY SILT TO SILTY CLAY	MH-CL	.48	3	1.149	13.5			
10.80	15.98	.59	3.67	CLAY	CH	.43	7	1.152	13.5			
11.00	49.11	.92	1.87	SANDY SILT TO CLAYEY SILT	ML-MH	.55	9	3.597	13.5	56	36	.19
11.20	125.66	1.45	1.15	SILTY SAND TO SANDY SILT	SM-ML	.62	20			83	40	.50+
11.40	158.85	1.03	.65	SAND TO SILTY SAND	SM-SP	.69	19			88	41	.50+
11.60	135.43	.25	.18	SAND TO SILTY SAND	SM-SP	.70	16			82	40	.50+
11.80	136.12	.62	.46	SAND TO SILTY SAND	SM-SP	.71	16			82	40	.50+
12.00	138.85	.74	.53	SAND TO SILTY SAND	SM-SP	.72	16			83	40	.50+
12.20	148.63	.30	.20	SAND TO SILTY SAND	SM-SP	.73	17			84	41	.50+
12.40	170.31	.99	.58	SAND TO SILTY SAND	SM-SP	.74	20			89	41	.50+
12.60	187.26	.90	.48	SAND TO SILTY SAND	SM-SP	.76	22			92	41	.50+
12.80	157.90	1.07	.68	SAND TO SILTY SAND	SM-SP	.77	18			85	41	.50+
13.00	112.72	.88	.78	SAND TO SILTY SAND	SM-SP	.78	13			73	39	.50+
13.20	113.04	.53	.47	SAND TO SILTY SAND	SM-SP	.79	13			73	39	.50+
13.40	98.76	.91	.92	SILTY SAND TO SANDY SILT	SM-ML	.74	15			70	39	.50+
13.60	95.48	.23	.24	SAND TO SILTY SAND	SM-SP	.82	11			67	39	.38
13.80	52.75	.12	.22	SILTY SAND TO SANDY SILT	SM-ML	.76	8			50	35	.17
14.00	52.11	.51	.98	SANDY SILT TO CLAYEY SILT	ML-MH	.70	9	3.808	13.5	51	35	.18
14.20	49.55	1.32	2.66	CLAYEY SILT TO SILTY CLAY	MH-CL	.64	11	3.623	13.5			
14.40	143.29	1.45	1.01	SAND TO SILTY SAND	SM-SP	.86	17			80	40	.50+
14.60	198.95	3.26	1.64	SILTY SAND TO SANDY SILT	SM-ML	.80	31			92	41	.50+
14.80	175.30	1.18	.68	SAND TO SILTY SAND	SM-SP	.89	20			85	41	.50+
15.00	151.61	1.53	1.01	SAND TO SILTY SAND	SM-SP	.90	18			81	40	.50+
15.20	78.02	.43	.55	SILTY SAND TO SANDY SILT	SM-ML	.84	12			61	37	.23
15.40	34.47	.45	1.31	SANDY SILT TO CLAYEY SILT	ML-MH	.77	6	2.496	13.5	36	33	.14
15.60	40.65	.94	2.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.70	9	2.957	13.5			
15.80	47.09	.58	1.24	SANDY SILT TO CLAYEY SILT	ML-MH	.79	9	3.430	13.5	45	34	.16
16.00	15.06	.66	4.36	CLAY	CH	.64	7	1.068	13.5			
16.20	23.78	.49	2.05	CLAYEY SILT TO SILTY CLAY	MH-CL	.73	5	1.707	13.5			
16.40	11.23	.60	5.37	CLAY	CH	.66	5	.783	13.5			
16.60	13.26	.66	5.00	CLAY	CH	.66	6	.933	13.5			
16.80	28.19	.50	1.78	CLAYEY SILT TO SILTY CLAY	MH-CL	.76	6	2.032	13.5			
17.00	27.80	.91	3.29	SILTY CLAY TO CLAY	CL-CH	.68	8	2.009	13.5			
17.20	98.39	1.01	1.03	SILTY SAND TO SANDY SILT	SM-ML	.95	15			65	37	.31
17.40	86.47	.43	.49	SAND TO SILTY SAND	SM-SP	1.04	10			59	38	.22
17.60	41.69	.53	1.26	SANDY SILT TO CLAYEY SILT	ML-MH	.88	7	3.023	13.5	39	34	.11
17.80	43.45	.73	1.67	SANDY SILT TO CLAYEY SILT	ML-MH	.89	8	3.152	13.5	40	34	.15
18.00	87.58	.61	.69	SILTY SAND TO SANDY SILT	SM-ML	.99	13			61	37	.23
18.20	58.39	1.15	1.97	SANDY SILT TO CLAYEY SILT	ML-MH	.91	11	4.258	13.5	48	35	.17
18.40	123.73	1.58	1.28	SILTY SAND TO SANDY SILT	SM-ML	1.01	19			70	38	.50+
18.60	177.04	1.24	.70	SAND TO SILTY SAND	SM-SP	1.12	21			81	40	.50+
18.80	59.66	1.55	2.59	SANDY SILT TO CLAYEY SILT	ML-MH	.94	11	4.349	13.5	49	35	.17
19.00	145.91	1.31	.90	SAND TO SILTY SAND	SM-SP	1.14	17			73	39	.50+
19.20	197.59	1.15	.58	SAND TO SILTY SAND	SM-SP	1.15	23			84	41	.50+
19.40	120.08	.69	.57	SAND TO SILTY SAND	SM-SP	1.16	14			66	39	.36
19.60	10.82	.55	5.12	CLAY	CH	.78	5	.744	13.5			
19.80	10.65	.50	4.72	CLAY	CH	.79	5	.731	13.5			
20.00	16.28	.44	2.69	SILTY CLAY TO CLAY	CL-CH	.80	5	1.146	13.5			
20.20	4.95	.17	3.47	CLAY	CH	.81	2	.307	13.5			
20.40	6.86	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.61	1	.463	13.5			
20.60	7.14	.14	1.95	SENSITIVE FINE GRAINED	OL-CH	.62	1	.483	13.5			
20.80	6.65	.22	3.33	CLAY	CH	.83	3	.431	13.5			
21.00	6.43	.14	2.20	CLAY	CH	.84	3	.414	13.5			
21.20	3.44	.03	.78	SENSITIVE FINE GRAINED	OL-CH	.64	0	.208	13.5			



RESULT OF CONE PENETRATION TEST

53M

JOB NUMBER: 01870206
CONE NUMBER: 001
LOCATION: ISLE DERNIERES

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/10/87

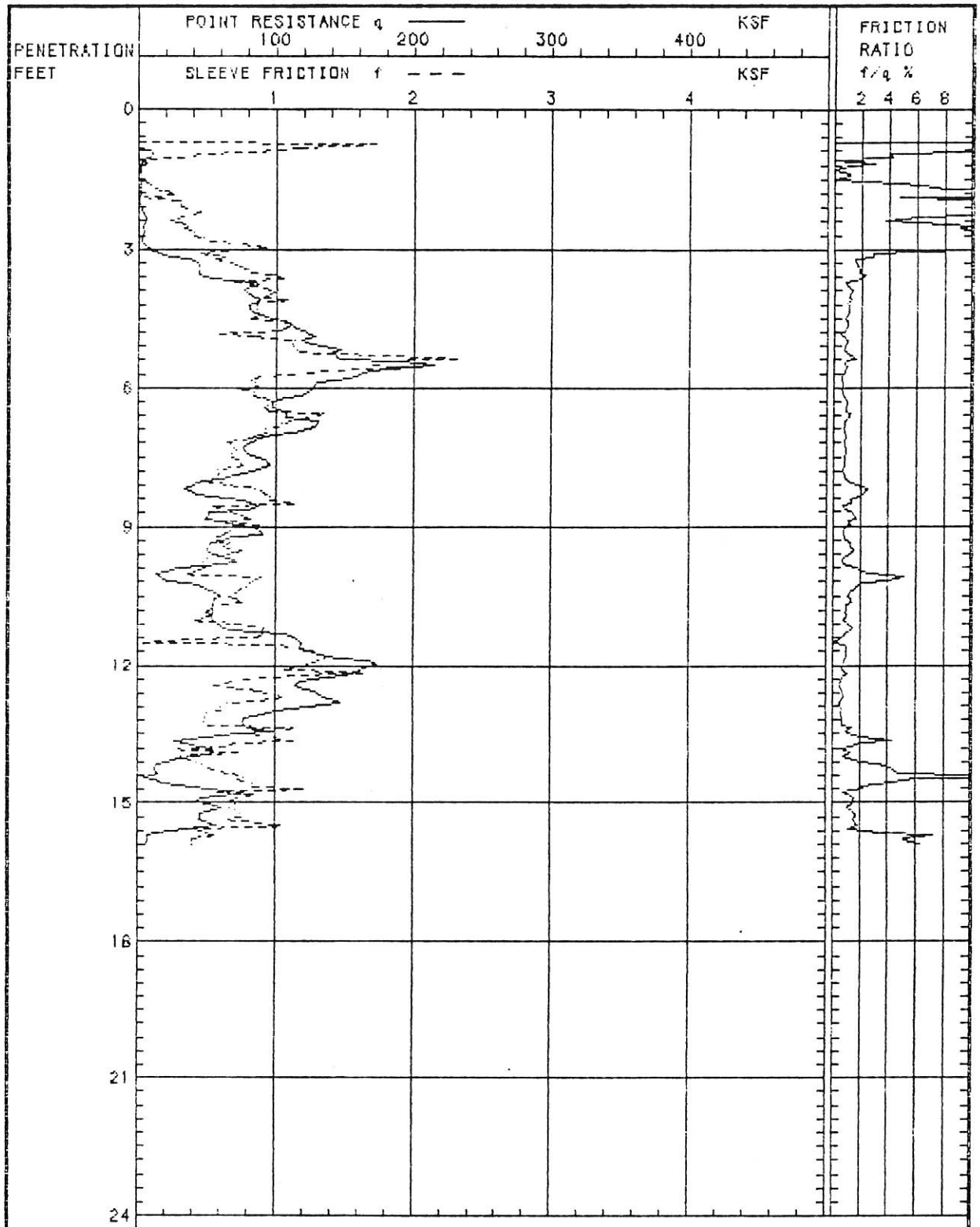
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 53M
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	112.16	.52	.47	SAND TO SILTY SAND	SM-SP	.04	13			100+	42	.50+
.80	55.84	.48	.86	SILTY SAND TO SANDY SILT	SM-ML	.04	8			91	41	.50+
1.00	37.27	.37	.99	SANDY SILT TO CLAYEY SILT	ML-MH	.05	7	2.757	13.5	74	33	.50+
1.20	31.08	.43	1.40	SANDY SILT TO CLAYEY SILT	ML-MH	.06	5	2.298	13.5	69	38	.50+
1.40	35.66	.24	.66	SANDY SILT TO CLAYEY SILT	ML-MH	.07	6	2.637	13.5	71	38	.50+
1.60	33.45	.85	2.54	CLAYEY SILT TO SILTY CLAY	MH-CL	.07	8	2.472	13.5			
1.80	56.32	.82	1.46	SANDY SILT TO CLAYEY SILT	ML-MH	.09	10	4.165	13.5	94	40	.50+
2.00	56.20	1.46	2.60	SANDY SILT TO CLAYEY SILT	ML-MH	.10	10	4.156	13.5	83	40	.50+
2.20	48.83	.62	1.28	SANDY SILT TO CLAYEY SILT	ML-MH	.11	9	3.609	13.5	77	39	.50+
2.40	6.15	.06	.92	SENSITIVE FINE GRAINED	OL-CH	.07	1	.459	13.5			
2.60	3.69	.15	4.19	CLAY	CH	.10	1	.266	13.5			
2.80	12.04	.62	5.14	CLAY	CH	.11	5	.884	13.5			
3.00	27.78	.75	2.69	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	6	2.048	13.5			
3.20	44.15	.34	.78	SANDY SILT TO CLAYEY SILT	ML-MH	.16	8	3.259	13.5	71	38	.50+
3.40	47.71	.70	1.46	SANDY SILT TO CLAYEY SILT	ML-MH	.17	9	3.522	13.5	72	38	.50+
3.60	59.52	.52	.88	SILTY SAND TO SANDY SILT	SM-ML	.20	9			77	39	.50+
3.80	48.60	.51	1.05	SANDY SILT TO CLAYEY SILT	ML-MH	.19	9	3.586	13.5	71	38	.50+
4.00	30.03	.13	.45	SANDY SILT TO CLAYEY SILT	ML-MH	.20	5	2.209	13.5	61	37	.25
4.20	9.33	.43	4.60	CLAY	CH	.17	4	.678	13.5			
4.40	54.52	.69	1.26	SANDY SILT TO CLAYEY SILT	ML-MH	.22	10	4.022	13.5	73	38	.50+
4.60	78.51	.26	.33	SAND TO SILTY SAND	SM-SP	.29	9			82	40	.50+
4.80	44.13	.54	1.23	SANDY SILT TO CLAYEY SILT	ML-MH	.24	8	3.251	13.5	65	37	.49
5.00	49.68	.42	.84	SILTY SAND TO SANDY SILT	SM-ML	.27	7			68	38	.50+
5.20	31.35	.62	1.97	CLAYEY SILT TO SILTY CLAY	MH-CL	.23	7	2.305	13.5			
5.40	61.89	1.07	1.73	SANDY SILT TO CLAYEY SILT	ML-MH	.27	11	4.565	13.5	74	38	.50+
5.60	162.93	2.47	1.52	SILTY SAND TO SANDY SILT	SM-ML	.31	26			100+	42	.50+
5.80	205.36	1.42	.69	SAND TO SILTY SAND	SM-SP	.35	24			100+	42	.50+
6.00	207.36	1.22	.59	SAND	SM-SP	.39	19			100+	44	.50+
6.20	181.37	1.19	.66	SAND TO SILTY SAND	SM-SP	.37	21			100+	42	.50+
6.40	175.17	.96	.55	SAND TO SILTY SAND	SM-SP	.38	20			100+	42	.50+
6.60	183.75	1.34	.73	SAND TO SILTY SAND	SM-SP	.40	22			100+	42	.50+
6.80	193.09	1.22	.63	SAND TO SILTY SAND	SM-SP	.41	23			100+	42	.50+
7.00	155.27	1.01	.65	SAND TO SILTY SAND	SM-SP	.42	18			100+	42	.50+
7.20	134.59	.72	.54	SAND TO SILTY SAND	SM-SP	.43	16			93	42	.50+
7.40	101.14	.80	.79	SAND TO SILTY SAND	SM-SP	.44	12			82	40	.50+
7.60	76.84	.52	.68	SILTY SAND TO SANDY SILT	SM-ML	.42	12			74	39	.50+
7.80	38.65	.63	1.62	SANDY SILT TO CLAYEY SILT	ML-MH	.39	7	2.834	13.5	56	36	.19
8.00	63.92	.51	.79	SILTY SAND TO SANDY SILT	SM-ML	.44	10			67	37	.41
8.20	81.35	.84	1.04	SILTY SAND TO SANDY SILT	SM-ML	.45	12			74	39	.50+
8.40	109.24	.43	.39	SAND TO SILTY SAND	SM-SP	.50	13			82	40	.50+
8.60	89.26	.48	.54	SAND TO SILTY SAND	SM-SP	.52	10			75	40	.50+
8.80	72.58	.67	.92	SILTY SAND TO SANDY SILT	SM-ML	.48	11			69	39	.50+
9.00	50.35	.30	.60	SILTY SAND TO SANDY SILT	SM-ML	.49	8			60	36	.21
9.20	53.94	.67	1.24	SANDY SILT TO CLAYEY SILT	ML-MH	.46	10	3.961	13.5	62	37	.23
9.40	97.87	.80	.81	SILTY SAND TO SANDY SILT	SM-ML	.52	15			78	39	.50+

9.60	94.51	.86	.91	SILTY SAND TO SANDY SILT	SM-ML	.53	15			76	38	.50+
9.80	103.01	1.02	.99	SILTY SAND TO SANDY SILT	SM-ML	.54	16			79	39	.50+
10.00	76.51	.66	.86	SILTY SAND TO SANDY SILT	SM-ML	.55	12			68	38	.43
10.20	76.98	.63	.82	SILTY SAND TO SANDY SILT	SM-ML	.56	12			68	38	.43
10.40	75.04	.65	.87	SILTY SAND TO SANDY SILT	SM-ML	.57	11			67	37	.38
10.60	56.32	.56	.99	SILTY SAND TO SANDY SILT	SM-ML	.58	8			60	36	.21
10.80	63.20	.25	.39	SILTY SAND TO SANDY SILT	SM-ML	.59	10			62	37	.24
11.00	70.94	.50	.70	SILTY SAND TO SANDY SILT	SM-ML	.60	11			64	37	.30
11.20	27.64	.48	1.75	CLAYEY SILT TO SILTY CLAY	MH-CL	.50	6	2.010	13.5			
11.40	10.70	.54	5.03	CLAY	CH	.46	5	.759	13.5			
11.60	18.07	.94	5.21	CLAY	CH	.46	8	1.304	13.5			
11.80	51.51	.41	.80	SILTY SAND TO SANDY SILT	SM-ML	.65	8			53	36	.18
12.00	58.31	.65	1.11	SILTY SAND TO SANDY SILT	SM-ML	.66	9			58	36	.20
12.20	81.17	.54	.66	SILTY SAND TO SANDY SILT	SM-ML	.67	12			66	37	.35
12.40	33.69	.50	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.62	6	2.450	13.5	42	34	.15
12.60	22.57	.63	2.78	SILTY CLAY TO CLAY	CL-CH	.50	7	1.635	13.5			
12.80	78.20	.99	1.26	SILTY SAND TO SANDY SILT	SM-ML	.70	12			64	37	.29
13.00	69.54	.79	1.13	SILTY SAND TO SANDY SILT	SM-ML	.71	11			61	37	.23
13.20	94.11	1.04	1.11	SILTY SAND TO SANDY SILT	SM-ML	.73	15			69	38	.46
13.40	79.58	.59	.74	SILTY SAND TO SANDY SILT	SM-ML	.74	12			64	37	.28
13.60	67.15	.69	1.03	SILTY SAND TO SANDY SILT	SM-ML	.75	10			60	36	.21
13.80	107.29	.81	.76	SAND TO SILTY SAND	SM-SP	.83	12			70	39	.50+
14.00	137.48	.97	.71	SAND TO SILTY SAND	SM-SP	.84	16			79	40	.50+
14.20	138.04	.91	.66	SAND TO SILTY SAND	SM-SP	.85	16			79	40	.50+
14.40	122.94	.69	.56	SAND TO SILTY SAND	SM-SP	.86	14			74	40	.50+
14.60	124.69	.82	.65	SAND TO SILTY SAND	SM-SP	.88	14			74	40	.50+
14.80	143.89	1.06	.74	SAND TO SILTY SAND	SM-SP	.89	17			80	40	.50+
15.00	153.37	1.21	.79	SAND TO SILTY SAND	SM-SP	.90	18			81	40	.50+
15.20	173.53	1.08	.62	SAND TO SILTY SAND	SM-SP	.91	20			85	41	.50+
15.40	200.41	1.47	.74	SAND TO SILTY SAND	SM-SP	.92	23			88	41	.50+
15.60	219.98	1.00	.46	SAND	SW-SP	1.01	21			90	43	.50+
15.80	200.36	1.17	.59	SAND TO SILTY SAND	SM-SP	.95	23			88	41	.50+
16.00	163.07	.62	.38	SAND TO SILTY SAND	SM-SP	.96	19			82	40	.50+
16.20	53.60	.97	1.81	SANDY SILT TO CLAYEY SILT	ML-MH	.81	10	3.910	13.5	48	35	.17
16.40	83.17	.27	.33	SAND TO SILTY SAND	SM-SP	.98	9			60	38	.22
16.60	77.84	.71	.92	SILTY SAND TO SANDY SILT	SM-ML	.91	12			59	35	.21
16.80	85.63	.51	.60	SILTY SAND TO SANDY SILT	SM-ML	.92	13			62	37	.24
17.00	42.98	.64	1.50	SANDY SILT TO CLAYEY SILT	ML-MH	.85	8	3.121	13.5	41	34	.15
17.20	17.00	.21	1.25	CLAYEY SILT TO SILTY CLAY	MH-CL	.77	4	1.202	13.5			
17.40	43.38	1.05	2.41	CLAYEY SILT TO SILTY CLAY	MH-CL	.78	10	3.155	13.5			
17.60	169.84	1.82	1.07	SAND TO SILTY SAND	SM-SP	1.06	20			81	40	.50+
17.80	122.59	.76	.62	SAND TO SILTY SAND	SM-SP	1.07	14			69	37	.46
18.00	31.32	.81	2.57	CLAYEY SILT TO SILTY CLAY	MH-CL	.81	7	2.260	13.5			
18.20	33.56	1.50	4.46	CLAY	CH	.73	16	2.432	13.5			
18.40	126.56	1.04	.82	SAND TO SILTY SAND	SM-SP	1.10	15			69	39	.47
18.60	131.92	1.39	1.06	SAND TO SILTY SAND	SM-SP	1.12	15			79	39	.50+
18.80	59.34	.62	1.05	SILTY SAND TO SANDY SILT	SM-ML	1.03	9			45	34	.16
19.00	9.15	.44	4.80	CLAY	CH	.76	4	.621	13.5			
19.20	10.90	.37	3.40	CLAY	CH	.77	5	.751	13.5			
19.40	11.36	.58	5.13	CLAY	CH	.78	5	.784	13.5			
19.60	11.67	.57	4.90	CLAY	CH	.78	5	.806	13.5			
19.80	8.91	.22	2.49	CLAY	CH	.79	4	.601	13.5			
20.00	7.38	.37	4.95	CLAY	CH	.80	3	.487	13.5			
20.20	20.31	.33	1.64	CLAYEY SILT TO SILTY CLAY	MH-CL	.91	4	1.437	13.5			
20.40	16.51	.30	1.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.92	3	1.155	13.5			
20.60	4.92	.41	8.40	ORGANIC MATERIAL	OL-OH	.62	2	.319	13.5			
20.80	8.09	1.03	12.68	ORGANIC MATERIAL	OL-OH	.62	3	.553	13.5			
21.00	56.08	.73	1.31	SANDY SILT TO CLAYEY SILT	ML-MH	1.05	10	4.076	13.5	43	34	.16
21.20	28.07	1.43	5.11	CLAY	CH	.85	13	2.016	13.5			
21.40	111.29	.89	.80	SAND TO SILTY SAND	SM-SP	1.28	17			82	38	.26

21.60	25.54	.82	3.20	SILTY CLAY TO CLAY	CL-CH	.86	8	1.828	13.5



RESULT OF CONE PENETRATION TEST

53S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

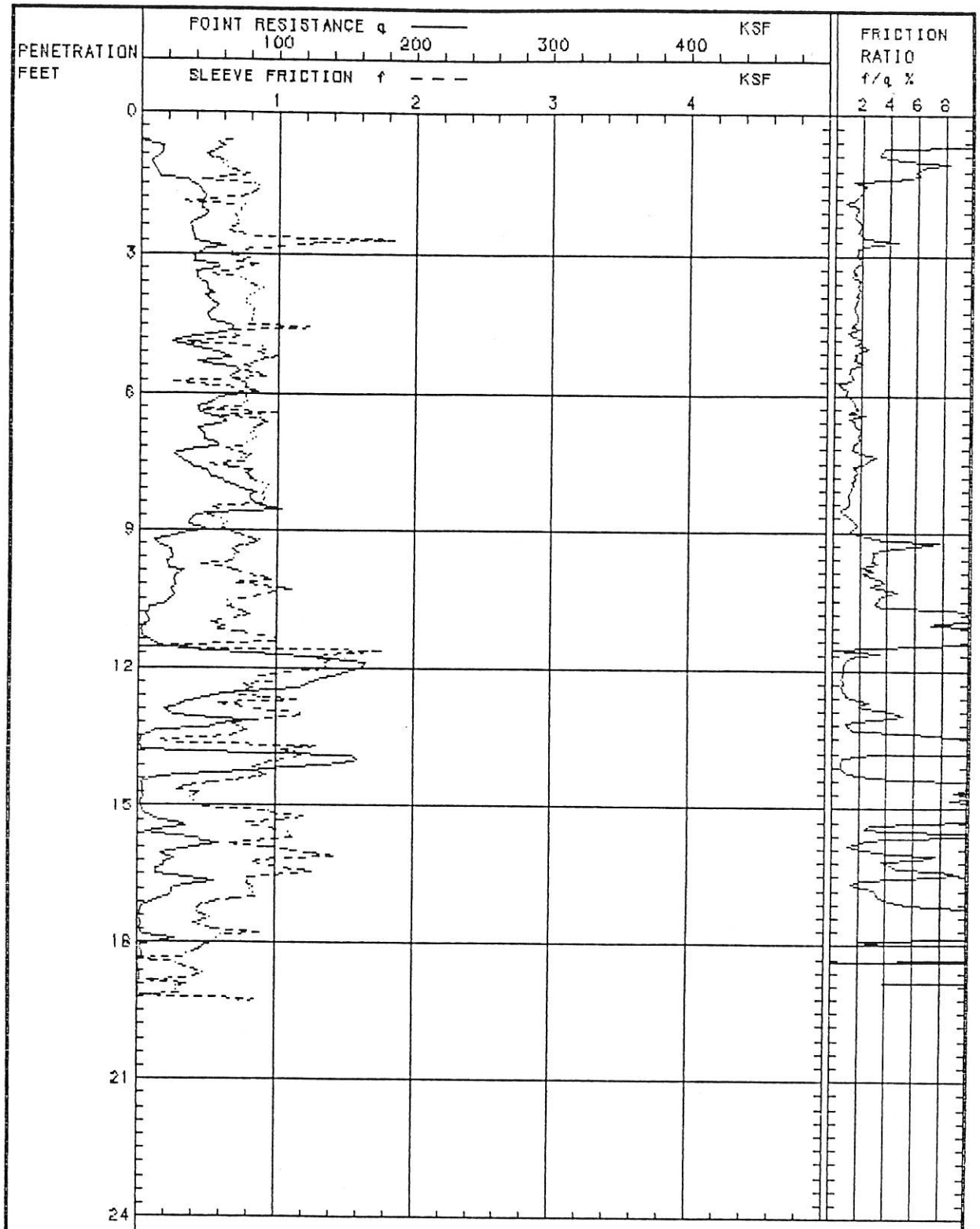
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE:

MCCLELLAND ENGINEERS, INC. ** PROGRAM 1605.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 010206
BORING NO. : 53S
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	.49	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.02	0	.035	13.5			
.80	.49	1.45	294.23	ORGANIC MATERIAL	OL-OH	.02	1	.035	13.5			
1.00	9.59	.39	4.11	CLAY	CH	.04	4	.708	13.5			
1.20	2.21	.05	2.10	ORGANIC MATERIAL	OL-OH	.04	1	.161	13.5			
1.40	1.97	.02	1.14	ORGANIC MATERIAL	OL-OH	.04	1	.143	13.5			
1.60	1.72	.07	4.12	ORGANIC MATERIAL	OL-OH	.05	1	.124	13.5			
1.80	1.48	.23	15.43	ORGANIC MATERIAL	OL-OH	.05	1	.105	13.5			
2.00	1.23	.31	25.30	ORGANIC MATERIAL	OL-OH	.06	1	.087	13.5			
2.20	3.44	.45	13.14	ORGANIC MATERIAL	OL-OH	.07	1	.250	13.5			
2.40	5.66	.25	4.42	CLAY	CH	.10	2	.412	13.5			
2.60	3.81	.39	10.35	ORGANIC MATERIAL	OL-OH	.08	1	.277	13.5			
2.80	2.46	.50	20.35	ORGANIC MATERIAL	OL-OH	.08	1	.176	13.5			
3.00	9.34	.79	8.46	ORGANIC MATERIAL	OL-OH	.09	4	.685	13.5			
3.20	29.98	.60	2.00	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	7	2.210	13.5			
3.40	44.03	.79	1.80	SANDY SILT TO CLAYEY SILT	ML-MH	.17	8	3.249	13.5	70	38	.50+
3.60	49.17	1.02	2.07	SANDY SILT TO CLAYEY SILT	ML-MH	.18	9	3.629	13.5	72	38	.50+
3.80	83.16	.96	1.15	SILTY SAND TO SANDY SILT	SM-ML	.21	13			89	40	.50+
4.00	83.06	.92	1.11	SILTY SAND TO SANDY SILT	SM-ML	.22	13			88	40	.50+
4.20	82.66	.96	1.16	SILTY SAND TO SANDY SILT	SM-ML	.23	13			87	40	.50+
4.40	86.94	.88	1.02	SILTY SAND TO SANDY SILT	SM-ML	.24	13			88	40	.50+
4.60	109.19	1.08	.98	SILTY SAND TO SANDY SILT	SM-ML	.25	17			97	42	.50+
4.80	122.23	.81	.66	SAND TO SILTY SAND	SM-SP	.29	14			99	42	.50+
5.00	122.04	.76	.63	SAND TO SILTY SAND	SM-SP	.30	14			98	42	.50+
5.20	144.65	1.16	.80	SAND TO SILTY SAND	SM-SP	.31	17			100+	42	.50+
5.40	168.32	2.01	1.19	SAND TO SILTY SAND	SM-SP	.32	20			100+	42	.50+
5.60	183.85	1.64	.89	SAND TO SILTY SAND	SM-SP	.34	22			100+	42	.50+
5.80	151.94	.89	.59	SAND TO SILTY SAND	SM-SP	.35	18			100+	42	.50+
6.00	126.93	.87	.68	SAND TO SILTY SAND	SM-SP	.36	15			95	42	.50+
6.20	113.19	.84	.74	SAND TO SILTY SAND	SM-SP	.37	13			89	41	.50+
6.40	97.65	.91	.93	SILTY SAND TO SANDY SILT	SM-ML	.35	15			85	40	.50+
6.60	107.49	1.29	1.20	SILTY SAND TO SANDY SILT	SM-ML	.36	17			88	40	.50+
6.80	129.14	1.05	.81	SAND TO SILTY SAND	SM-SP	.41	15			93	42	.50+
7.00	105.60	.90	.85	SAND TO SILTY SAND	SM-SP	.42	12			84	41	.50+
7.20	81.68	.57	.70	SILTY SAND TO SANDY SILT	SM-ML	.40	13			77	39	.50+
7.40	78.58	.67	.85	SILTY SAND TO SANDY SILT	SM-ML	.41	12			75	39	.50+
7.60	93.20	.74	.80	SILTY SAND TO SANDY SILT	SM-ML	.42	14			80	39	.50+
7.80	83.19	.64	.77	SILTY SAND TO SANDY SILT	SM-ML	.43	13			76	39	.50+
8.00	54.20	.53	.98	SILTY SAND TO SANDY SILT	SM-ML	.44	8			63	37	.27
8.20	36.62	.87	2.39	CLAYEY SILT TO SILTY CLAY	MH-CL	.37	8	2.685	13.5			
8.40	65.04	.96	1.47	SANDY SILT TO CLAYEY SILT	ML-MH	.42	12	4.786	13.5	68	38	.49
8.60	83.92	.62	.73	SILTY SAND TO SANDY SILT	SM-ML	.47	13			74	38	.50+
8.80	50.68	.67	1.33	SANDY SILT TO CLAYEY SILT	ML-MH	.44	9	3.722	13.5	62	37	.24
9.00	78.14	.80	1.02	SILTY SAND TO SANDY SILT	SM-ML	.49	12			71	38	.50+
9.20	80.33	.64	.79	SILTY SAND TO SANDY SILT	SM-ML	.51	12			71	38	.50+

9.40	52.89	.65	1.23	SANDY SILT TO CLAYEY SILT	ML-MH	.47	10	3.883	13.5	62	37	.24
9.60	56.50	.85	1.50	SANDY SILT TO CLAYEY SILT	ML-MH	.48	10	4.150	13.5	63	37	.26
9.80	60.43	.56	.92	SILTY SAND TO SANDY SILT	SM-ML	.54	9			62	37	.25
10.00	17.64	.40	2.26	SILTY CLAY TO CLAY	CL-CH	.40	5	1.277	13.5			
10.20	29.39	.84	2.84	CLAYEY SILT TO SILTY CLAY	MH-CL	.46	7	2.143	13.5			
10.40	53.56	.72	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.52	10	3.929	13.5	60	37	.22
10.60	55.41	.67	1.21	SANDY SILT TO CLAYEY SILT	ML-MH	.53	10	4.065	13.5	61	37	.23
10.80	55.10	.53	.96	SILTY SAND TO SANDY SILT	SM-ML	.59	8			58	36	.20
11.00	54.85	.87	1.59	SANDY SILT TO CLAYEY SILT	ML-MH	.55	10	4.022	13.5	60	36	.22
11.20	65.89	.91	1.39	SANDY SILT TO CLAYEY SILT	ML-MH	.56	12	4.839	13.5	64	37	.29
11.40	113.48	.69	.61	SAND TO SILTY SAND	SM-SP	.68	13			77	40	.50+
11.60	118.31	.89	.75	SAND TO SILTY SAND	SM-SP	.70	14			78	40	.50+
11.80	139.10	1.34	.96	SAND TO SILTY SAND	SM-SP	.71	16			83	41	.50+
12.00	171.49	1.18	.69	SAND TO SILTY SAND	SM-SP	.72	20			90	41	.50+
12.20	153.29	1.40	.91	SAND TO SILTY SAND	SM-SP	.73	18			85	41	.50+
12.40	116.38	.61	.52	SAND TO SILTY SAND	SM-SP	.74	13			76	40	.50+
12.60	130.83	.93	.71	SAND TO SILTY SAND	SM-SP	.76	15			80	40	.50+
12.80	146.57	1.61	1.10	SAND TO SILTY SAND	SM-SP	.77	17			83	41	.50+
13.00	98.20	.32	.32	SAND TO SILTY SAND	SM-SP	.78	11			69	39	.45
13.20	77.24	.46	.59	SILTY SAND TO SANDY SILT	SM-ML	.73	12			63	37	.27
13.40	88.38	1.07	1.21	SILTY SAND TO SANDY SILT	SM-ML	.74	14			67	37	.37
13.60	38.86	1.06	2.74	CLAYEY SILT TO SILTY CLAY	MH-CL	.61	9	2.833	13.5			
13.80	50.32	.48	.95	SANDY SILT TO CLAYEY SILT	ML-MH	.69	9	3.676	13.5	51	35	.17
14.00	36.78	.33	.91	SANDY SILT TO CLAYEY SILT	ML-MH	.70	7	2.672	13.5	41	34	.15
14.20	13.42	.54	4.06	CLAY	CH	.57	6	.952	13.5			
14.40	9.94	.38	3.82	CLAY	CH	.58	4	.694	13.5			
14.60	30.27	.84	2.79	CLAYEY SILT TO SILTY CLAY	MH-CL	.66	7	2.193	13.5			
14.80	75.81	.64	.84	SILTY SAND TO SANDY SILT	SM-ML	.81	12			61	37	.23
15.00	47.93	.86	1.80	SANDY SILT TO CLAYEY SILT	ML-MH	.75	9	3.495	13.5	47	35	.16
15.20	51.27	.74	1.43	SANDY SILT TO CLAYEY SILT	ML-MH	.76	9	3.742	13.5	49	35	.17
15.40	49.10	1.01	2.06	SANDY SILT TO CLAYEY SILT	ML-MH	.77	9	3.580	13.5	47	35	.16
15.60	25.59	.66	2.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.70	6	1.843	13.5			
15.80	7.87	.45	5.69	CLAY	CH	.63	3	.536	13.5			



RESULT OF CONE PENETRATION TEST

54N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

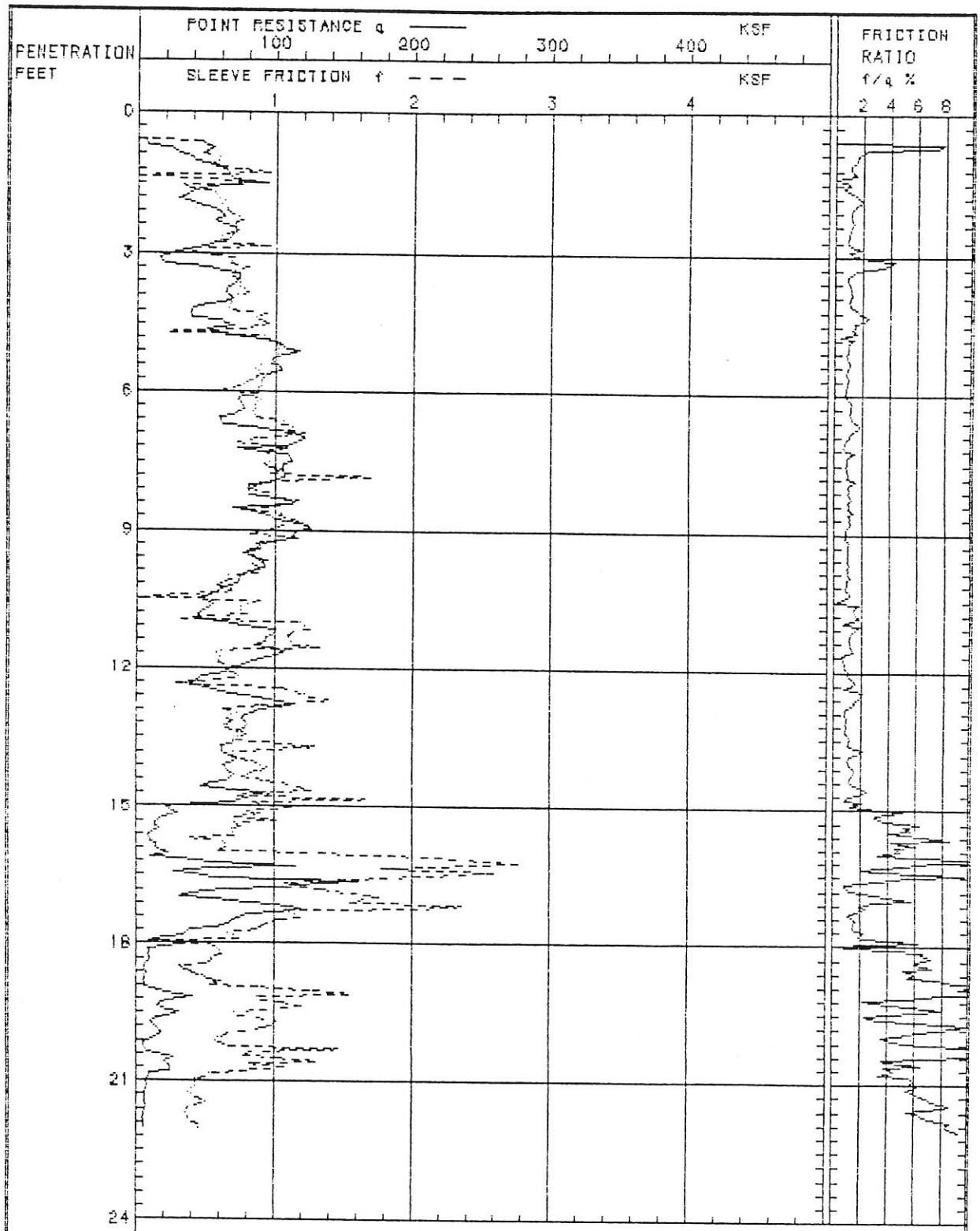
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 54N
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	1.72	.61	35.49	ORGANIC MATERIAL	OL-OH	.02	1	.126	13.5			
.80	16.23	.28	1.74	CLAYEY SILT TO SILTY CLAY	MH-CL	.04	3	1.200	13.5			
1.00	9.23	.58	6.30	CLAY	CH	.04	4	.680	13.5			
1.20	10.82	.62	5.70	CLAY	CH	.05	5	.798	13.5			
1.40	24.34	.43	1.75	CLAYEY SILT TO SILTY CLAY	MH-CL	.06	5	1.798	13.5			
1.60	41.57	.85	2.04	SANDY SILT TO CLAYEY SILT	ML-MH	.08	7	3.073	13.5	74	38	.50+
1.80	46.24	.57	1.23	SANDY SILT TO CLAYEY SILT	ML-MH	.09	8	3.419	13.5	77	39	.50+
2.00	44.52	.63	1.41	SANDY SILT TO CLAYEY SILT	ML-MH	.10	8	3.290	13.5	75	39	.50+
2.20	46.98	.69	1.47	SANDY SILT TO CLAYEY SILT	ML-MH	.11	9	3.472	13.5	76	39	.50+
2.40	36.77	.69	1.89	SANDY SILT TO CLAYEY SILT	ML-MH	.12	7	2.715	13.5	69	38	.50+
2.60	38.12	.77	2.02	SANDY SILT TO CLAYEY SILT	ML-MH	.13	7	2.814	13.5	69	38	.50+
2.80	53.59	.53	.98	SILTY SAND TO SANDY SILT	SM-ML	.15	8			77	39	.50+
3.00	41.15	.67	1.63	SANDY SILT TO CLAYEY SILT	ML-MH	.15	7	3.037	13.5	69	38	.50+
3.20	47.44	.42	.89	SANDY SILT TO CLAYEY SILT	ML-MH	.16	9	3.502	13.5	73	38	.50+
3.40	40.65	.76	1.86	SANDY SILT TO CLAYEY SILT	ML-MH	.17	7	2.998	13.5	68	38	.50+
3.60	45.49	.74	1.63	SANDY SILT TO CLAYEY SILT	ML-MH	.18	8	3.356	13.5	70	38	.50+
3.80	50.90	.92	1.81	SANDY SILT TO CLAYEY SILT	ML-MH	.19	9	3.757	13.5	73	38	.50+
4.00	51.52	.78	1.51	SANDY SILT TO CLAYEY SILT	ML-MH	.20	9	3.802	13.5	72	38	.50+
4.20	52.77	.82	1.56	SANDY SILT TO CLAYEY SILT	ML-MH	.21	10	3.893	13.5	73	38	.50+
4.40	50.54	.81	1.60	SANDY SILT TO CLAYEY SILT	ML-MH	.22	9	3.728	13.5	71	38	.50+
4.60	66.91	.95	1.42	SANDY SILT TO CLAYEY SILT	ML-MH	.23	12	4.939	13.5	79	39	.50+
4.80	33.74	.62	1.83	SANDY SILT TO CLAYEY SILT	ML-MH	.24	6	2.481	13.5	61	37	.25
5.00	41.65	.86	2.06	SANDY SILT TO CLAYEY SILT	ML-MH	.25	7	3.067	13.5	65	37	.37
5.20	64.19	1.07	1.66	SANDY SILT TO CLAYEY SILT	ML-MH	.26	12	4.735	13.5	76	39	.50+
5.40	62.12	.84	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.27	11	4.581	13.5	74	39	.50+
5.60	67.41	.86	1.28	SILTY SAND TO SANDY SILT	SM-ML	.31	10			75	39	.50+
5.80	76.37	.37	.49	SILTY SAND TO SANDY SILT	SM-ML	.32	12			78	39	.50+
6.00	76.09	.75	.98	SILTY SAND TO SANDY SILT	SM-ML	.33	12			78	39	.50+
6.20	52.40	.68	1.30	SANDY SILT TO CLAYEY SILT	ML-MH	.31	10	3.858	13.5	67	37	.43
6.40	43.35	.91	2.10	SANDY SILT TO CLAYEY SILT	ML-MH	.32	8	3.187	13.5	63	37	.27
6.60	60.99	.90	1.47	SANDY SILT TO CLAYEY SILT	ML-MH	.33	11	4.493	13.5	70	39	.50+
6.80	43.22	.88	2.03	SANDY SILT TO CLAYEY SILT	ML-MH	.34	8	3.176	13.5	62	37	.25
7.00	46.98	.83	1.76	SANDY SILT TO CLAYEY SILT	ML-MH	.35	9	3.454	13.5	63	37	.28
7.20	49.63	.72	1.44	SANDY SILT TO CLAYEY SILT	ML-MH	.36	9	3.650	13.5	64	37	.30
7.40	27.53	.80	2.90	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	6	2.014	13.5			
7.60	38.10	.26	.68	SANDY SILT TO CLAYEY SILT	ML-MH	.39	7	2.794	13.5	57	36	.13
7.80	51.15	.81	1.59	SANDY SILT TO CLAYEY SILT	ML-MH	.39	9	3.760	13.5	64	37	.29
8.00	65.39	.92	1.40	SANDY SILT TO CLAYEY SILT	ML-MH	.40	12	4.814	13.5	69	38	.50+
8.20	82.80	.90	1.09	SILTY SAND TO SANDY SILT	SM-ML	.45	13			75	39	.50+
8.40	82.86	.91	1.09	SILTY SAND TO SANDY SILT	SM-ML	.46	13			74	38	.50+
8.60	78.05	.37	.47	SILTY SAND TO SANDY SILT	SM-ML	.47	12			72	38	.50+
8.80	37.41	.63	1.67	SANDY SILT TO CLAYEY SILT	ML-MH	.44	7	2.738	13.5	53	35	.18
9.00	47.23	.36	.77	SILTY SAND TO SANDY SILT	SM-ML	.49	7			59	36	.20
9.20	16.05	.83	5.20	CLAY	CH	.37	7	1.162	13.5			
9.40	19.87	.70	3.53	CLAY	CH	.38	9	1.444	13.5			

9.60	24.35	.69	2.83	SILTY CLAY TO CLAY	CL-CH	.38	7	1.775	13.5			
9.80	21.33	.62	2.93	SILTY CLAY TO CLAY	CL-CH	.39	6	1.551	13.5			
10.00	27.82	.86	3.08	SILTY CLAY TO CLAY	CL-CH	.40	8	2.031	13.5			
10.20	26.62	.56	2.10	CLAYEY SILT TO SILTY CLAY	MH-CL	.46	6	1.938	13.5			
10.40	25.39	.86	3.37	SILTY CLAY TO CLAY	CL-CH	.42	8	1.850	13.5			
10.60	19.94	.70	3.49	CLAY	CH	.42	9	1.446	13.5			
10.80	6.17	.70	11.42	ORGANIC MATERIAL	OL-OH	.32	2	.433	13.5			
11.00	7.63	.56	7.39	ORGANIC MATERIAL	OL-OH	.33	3	.541	13.5			
11.20	2.21	.66	29.73	ORGANIC MATERIAL	OL-OH	.34	1	.139	13.5			
11.40	7.83	.95	12.15	ORGANIC MATERIAL	OL-OH	.34	3	.555	13.5			
11.60	35.65	.76	2.12	CLAYEY SILT TO SILTY CLAY	MH-CL	.52	8	2.602	13.5			
11.80	138.46	1.33	.96	SAND TO SILTY SAND	SM-SP	.71	16			83	40	.50+
12.00	162.36	1.35	.83	SAND TO SILTY SAND	SM-SP	.72	19			88	41	.50+
12.20	137.81	.90	.65	SAND TO SILTY SAND	SM-SP	.73	16			82	40	.50+
12.40	120.09	.80	.67	SAND TO SILTY SAND	SM-SP	.74	14			77	40	.50+
12.60	55.47	.77	1.39	SANDY SILT TO CLAYEY SILT	ML-MH	.63	10	4.062	13.5	57	36	.20
12.80	30.99	.54	1.74	CLAYEY SILT TO SILTY CLAY	MH-CL	.58	7	2.253	13.5			
13.00	24.44	1.09	4.48	CLAY	CH	.52	11	1.772	13.5			
13.20	70.07	.73	1.04	SILTY SAND TO SANDY SILT	SM-ML	.73	11			61	37	.23
13.40	11.12	.76	6.81	CLAY	CH	.54	5	.784	13.5			
13.60	1.23	.23	18.25	ORGANIC MATERIAL	OL-OH	.41	1	.061	13.5			
13.80	19.34	1.09	5.62	CLAY	CH	.55	9	1.392	13.5			
14.00	158.43	1.02	.64	SAND TO SILTY SAND	SM-SP	.84	18			83	41	.50+
14.20	94.99	.86	.91	SILTY SAND TO SANDY SILT	SM-ML	.78	15			69	38	.41
14.40	11.20	.78	6.98	CLAY	CH	.58	5	.787	13.5			
14.60	3.32	.38	11.49	ORGANIC MATERIAL	OL-OH	.44	1	.214	13.5			
14.80	4.18	.40	9.49	ORGANIC MATERIAL	OL-OH	.44	2	.276	13.5			
15.00	1.95	.44	22.71	ORGANIC MATERIAL	OL-OH	.45	1	.111	13.5			
15.20	6.82	1.09	15.91	ORGANIC MATERIAL	OL-OH	.46	3	.471	13.5			
15.40	31.66	.82	2.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.69	7	2.294	13.5			
15.60	15.65	1.10	7.03	CLAY	CH	.62	7	1.113	13.5			
15.80	52.73	.75	1.43	SANDY SILT TO CLAYEY SILT	ML-MH	.79	10	3.847	13.5	47	35	.17
16.00	21.26	1.08	5.10	CLAY	CH	.64	10	1.527	13.5			
16.20	23.45	1.13	4.82	CLAY	CH	.65	11	1.689	13.5			
16.40	13.59	1.00	7.35	CLAY	CH	.66	6	.953	13.5			
16.60	45.75	.80	1.75	SANDY SILT TO CLAYEY SILT	ML-MH	.83	8	3.327	13.5	43	34	.15
16.80	26.35	.83	3.16	SILTY CLAY TO CLAY	CL-CH	.67	8	1.902	13.5			
17.00	19.51	.78	4.01	CLAY	CH	.68	9	1.395	13.5			
17.20	4.72	.46	9.81	ORGANIC MATERIAL	OL-OH	.52	2	.311	13.5			
17.40	1.24	.49	39.69	ORGANIC MATERIAL	OL-OH	.52	1	.053	13.5			
17.60	1.98	.45	22.94	ORGANIC MATERIAL	OL-OH	.53	1	.108	13.5			
17.80	3.18	.76	23.77	ORGANIC MATERIAL	OL-OH	.53	1	.196	13.5			
18.00	8.51	.39	4.58	CLAY	CH	.72	4	.577	13.5			
18.20	2.94	.38	13.07	ORGANIC MATERIAL	OL-OH	.55	1	.177	13.5			
18.40	1.00	.14	14.05	ORGANIC MATERIAL	OL-OH	.55	1	.033	13.5			
18.60	1.22	.42	34.23	ORGANIC MATERIAL	OL-OH	.56	1	.049	13.5			
18.80	1.72	.22	12.95	ORGANIC MATERIAL	OL-OH	.56	1	.085	13.5			
19.00	.48	.29	60.32	ORGANIC MATERIAL	OL-OH	.57	1	-.007	13.5			
19.20	.00	.43	999.00	ORGANIC MATERIAL	OL-OH	.58	1	-.043	13.5			



RESULT OF CONE PENETRATION TEST

54M

JOB NUMBER: 01870208
CONE NUMBER: 001
LOCATION: ISLE DERNIERES

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/10/87

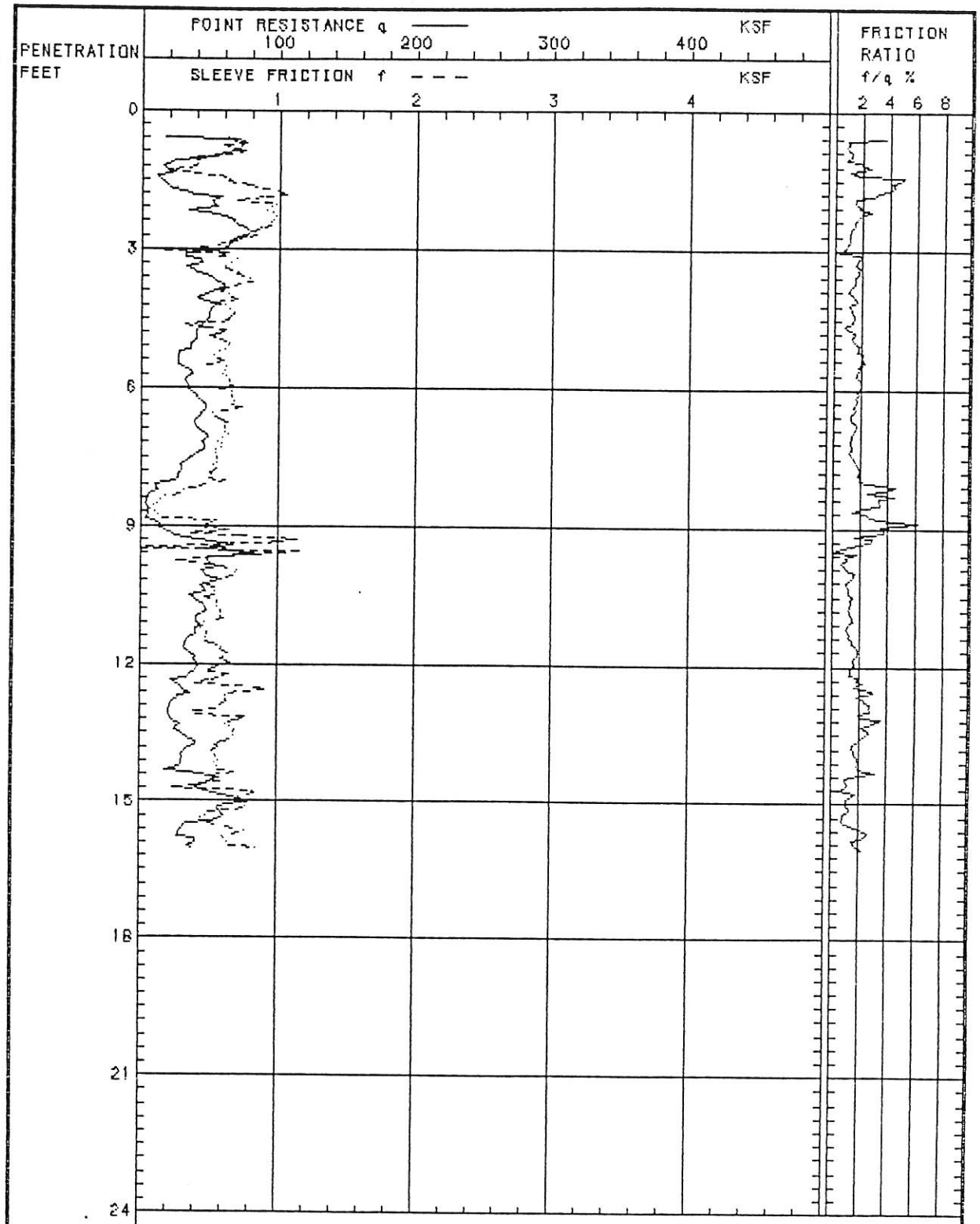
MCCLELLAND ENGINEERS, INC. ** PROGRAM 1605.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 54M
CONE NO. : 001
DATE : 05/10/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	5.90	.23	3.90	CLAY	CH	.02	2	.435	13.5			
.80	25.33	.53	2.09	CLAYEY SILT TO SILTY CLAY	MH-CL	.04	6	1.874	13.5			
1.00	40.34	.58	1.43	SANDY SILT TO CLAYEY SILT	ML-MH	.05	7	2.984	13.5	76	39	.50+
1.20	60.26	.59	.98	SILTY SAND TO SANDY SILT	SM-ML	.07	9			91	41	.50+
1.40	67.52	.63	.93	SILTY SAND TO SANDY SILT	SM-ML	.08	10			95	41	.50+
1.60	53.88	.35	.65	SILTY SAND TO SANDY SILT	SM-ML	.09	8			82	40	.50+
1.80	33.09	.70	2.12	CLAYEY SILT TO SILTY CLAY	MH-CL	.08	7	2.445	13.5			
2.00	48.93	.62	1.27	SANDY SILT TO CLAYEY SILT	ML-MH	.10	9	3.617	13.5	78	39	.50+
2.20	62.23	.72	1.16	SILTY SAND TO SANDY SILT	SM-ML	.12	9			85	40	.50+
2.40	65.30	.71	1.09	SILTY SAND TO SANDY SILT	SM-ML	.13	10			86	40	.50+
2.60	69.12	.64	.93	SILTY SAND TO SANDY SILT	SM-ML	.14	11			87	40	.50+
2.80	53.14	.54	1.03	SANDY SILT TO CLAYEY SILT	ML-MH	.14	10	3.926	13.5	77	39	.50+
3.00	24.86	.40	1.59	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	5	1.831	13.5			
3.20	18.44	.68	3.67	CLAY	CH	.13	8	1.357	13.5			
3.40	67.37	.71	1.05	SILTY SAND TO SANDY SILT	SM-ML	.19	10			83	40	.50+
3.60	71.82	.76	1.06	SILTY SAND TO SANDY SILT	SM-ML	.20	11			84	40	.50+
3.80	64.08	.81	1.27	SILTY SAND TO SANDY SILT	SM-ML	.21	10			79	39	.50+
4.00	65.69	.58	.88	SILTY SAND TO SANDY SILT	SM-ML	.22	10			79	39	.50+
4.20	40.16	.74	1.85	SANDY SILT TO CLAYEY SILT	ML-MH	.21	7	2.959	13.5	66	37	.49
4.40	50.11	.87	1.73	SANDY SILT TO CLAYEY SILT	ML-MH	.22	9	3.696	13.5	71	39	.50+
4.60	60.20	.83	1.38	SANDY SILT TO CLAYEY SILT	ML-MH	.23	11	4.442	13.5	75	39	.50+
4.80	79.61	.92	1.16	SILTY SAND TO SANDY SILT	SM-ML	.26	12			83	40	.50+
5.00	106.50	1.04	.97	SILTY SAND TO SANDY SILT	SM-ML	.27	17			94	41	.50+
5.20	104.69	1.03	.99	SILTY SAND TO SANDY SILT	SM-ML	.29	16			92	41	.50+
5.40	100.84	.93	.92	SILTY SAND TO SANDY SILT	SM-ML	.30	16			90	41	.50+
5.60	99.41	.83	.83	SILTY SAND TO SANDY SILT	SM-ML	.31	15			88	40	.50+
5.80	90.27	.80	.89	SILTY SAND TO SANDY SILT	SM-ML	.32	14			84	40	.50+
6.00	87.32	.46	.53	SAND TO SILTY SAND	SM-SP	.36	10			81	40	.50+
6.20	73.84	.80	1.08	SILTY SAND TO SANDY SILT	SM-ML	.34	11			76	39	.50+
6.40	75.78	.85	1.12	SILTY SAND TO SANDY SILT	SM-ML	.35	12			76	39	.50+
6.60	59.95	.97	1.61	SANDY SILT TO CLAYEY SILT	ML-MH	.33	11	4.416	13.5	70	38	.50+
6.80	91.42	1.11	1.22	SILTY SAND TO SANDY SILT	SM-ML	.37	14			82	40	.50+
7.00	121.75	1.01	.83	SAND TO SILTY SAND	SM-SP	.42	14			90	41	.50+
7.20	90.70	1.15	1.27	SILTY SAND TO SANDY SILT	SM-ML	.40	14			80	39	.50+
7.40	110.43	.83	.75	SAND TO SILTY SAND	SM-SP	.44	13			85	41	.50+
7.60	105.52	1.00	.95	SILTY SAND TO SANDY SILT	SM-ML	.42	16			84	40	.50+
7.80	106.75	1.33	1.25	SILTY SAND TO SANDY SILT	SM-ML	.43	17			84	40	.50+
8.00	88.50	.74	.83	SILTY SAND TO SANDY SILT	SM-ML	.44	14			78	39	.50+
8.20	80.95	.88	1.08	SILTY SAND TO SANDY SILT	SM-ML	.45	12			74	39	.50+
8.40	112.40	1.25	1.11	SILTY SAND TO SANDY SILT	SM-ML	.46	17			85	40	.50+
8.60	84.80	1.05	1.24	SILTY SAND TO SANDY SILT	SM-ML	.47	13			73	39	.50+
8.80	108.86	1.15	1.06	SILTY SAND TO SANDY SILT	SM-ML	.48	17			83	40	.50+
9.00	120.96	.91	.75	SAND TO SILTY SAND	SM-SP	.54	14			81	41	.50+
9.20	108.02	.97	.90	SAND TO SILTY SAND	SM-SP	.55	12			80	40	.50+
9.40	89.29	.91	1.02	SILTY SAND TO SANDY SILT	SM-ML	.52	14			75	39	.50+

9.60	84.52	.88	1.04	SILTY SAND TO SANDY SILT	SM-ML	.53	13			72	38	.50+
9.80	92.23	.86	.93	SILTY SAND TO SANDY SILT	SM-ML	.54	14			75	39	.50+
10.00	76.57	.77	1.00	SILTY SAND TO SANDY SILT	SM-ML	.55	12			68	38	.45
10.20	70.13	.60	.85	SILTY SAND TO SANDY SILT	SM-ML	.56	11			66	37	.33
10.40	56.37	.69	1.22	SANDY SILT TO CLAYEY SILT	ML-MH	.52	10	4.137	13.5	61	37	.24
10.60	52.72	.80	1.51	SANDY SILT TO CLAYEY SILT	ML-MH	.53	10	3.866	13.5	60	36	.21
10.80	46.27	.78	1.68	SANDY SILT TO CLAYEY SILT	ML-MH	.54	8	3.388	13.5	54	36	.18
11.00	55.35	.47	.85	SILTY SAND TO SANDY SILT	SM-ML	.60	8			58	36	.20
11.20	100.36	1.22	1.22	SILTY SAND TO SANDY SILT	SM-ML	.62	16			75	39	.50+
11.40	93.96	.87	.93	SILTY SAND TO SANDY SILT	SM-ML	.63	15			72	38	.50+
11.60	101.55	.77	.76	SAND TO SILTY SAND	SM-SP	.70	12			72	39	.50+
11.80	90.12	.92	1.02	SILTY SAND TO SANDY SILT	SM-ML	.65	14			79	38	.50+
12.00	71.38	.62	.87	SILTY SAND TO SANDY SILT	SM-ML	.66	11			63	37	.27
12.20	47.13	.62	1.31	SANDY SILT TO CLAYEY SILT	ML-MH	.61	9	3.446	13.5	52	35	.19
12.40	44.30	.50	1.12	SANDY SILT TO CLAYEY SILT	ML-MH	.62	8	3.235	13.5	49	35	.17
12.60	77.78	1.23	1.58	SILTY SAND TO SANDY SILT	SM-ML	.69	12			64	37	.30
12.80	111.92	1.03	.92	SAND TO SILTY SAND	SM-SP	.77	13			74	39	.50+
13.00	82.07	.73	.89	SILTY SAND TO SANDY SILT	SM-ML	.71	13			65	37	.32
13.20	79.18	.64	.80	SILTY SAND TO SANDY SILT	SM-ML	.73	12			64	37	.29
13.40	73.33	.68	.93	SILTY SAND TO SANDY SILT	SM-ML	.74	11			62	37	.24
13.60	69.61	.71	1.01	SILTY SAND TO SANDY SILT	SM-ML	.75	11			60	37	.22
13.80	61.73	.86	1.39	SANDY SILT TO CLAYEY SILT	ML-MH	.69	11	4.522	13.5	58	36	.21
14.00	72.08	.79	1.09	SILTY SAND TO SANDY SILT	SM-ML	.77	11			61	37	.23
14.20	65.04	.34	.52	SILTY SAND TO SANDY SILT	SM-ML	.78	10			57	36	.20
14.40	67.54	.81	1.20	SILTY SAND TO SANDY SILT	SM-ML	.79	10			58	36	.20
14.60	58.41	.92	1.58	SANDY SILT TO CLAYEY SILT	ML-MH	.73	11	4.272	13.5	55	36	.19
14.80	82.98	.76	.92	SILTY SAND TO SANDY SILT	SM-ML	.81	13			63	37	.27
15.00	25.66	1.06	4.14	CLAY	CH	.60	12	1.856	13.5			
15.20	24.97	.81	3.23	SILTY CLAY TO CLAY	CL-CH	.61	7	1.805	13.5			
15.40	13.53	.73	5.42	CLAY	CH	.62	6	.957	13.5			
15.60	9.62	.67	6.92	CLAY	CH	.62	4	.666	13.5			
15.80	12.25	.71	5.78	CLAY	CH	.63	5	.861	13.5			
16.00	20.60	.70	3.40	SILTY CLAY TO CLAY	CL-CH	.64	6	1.479	13.5			
16.20	42.91	2.59	6.04	CLAY	CH	.65	20	3.130	13.5			
16.40	41.16	1.84	4.47	CLAY	CH	.66	19	3.001	13.5			
16.60	107.19	1.36	1.26	SILTY SAND TO SANDY SILT	SM-ML	.91	17			68	38	.42
16.80	85.14	1.37	1.60	SILTY SAND TO SANDY SILT	SM-ML	.92	13			61	37	.24
17.00	42.92	.95	2.22	SANDY SILT TO CLAYEY SILT	ML-MH	.85	8	3.116	13.5	41	34	.15
17.20	109.21	1.92	1.76	SILTY SAND TO SANDY SILT	SM-ML	.95	17			68	38	.41
17.40	77.57	1.16	1.49	SILTY SAND TO SANDY SILT	SM-ML	.96	12			59	36	.21
17.60	62.34	.91	1.46	SANDY SILT TO CLAYEY SILT	ML-MH	.88	11	4.552	13.5	51	35	.18
17.80	35.44	.77	2.17	CLAYEY SILT TO SILTY CLAY	MH-CL	.80	8	2.566	13.5			
18.00	27.17	.58	2.13	CLAYEY SILT TO SILTY CLAY	MH-CL	.81	6	1.952	13.5			
18.20	8.99	.62	6.90	CLAY	CH	.73	4	.612	13.5			
18.40	8.15	.52	6.44	CLAY	CH	.74	3	.549	13.5			
18.60	6.62	.38	5.72	CLAY	CH	.74	3	.435	13.5			
18.80	5.66	.57	10.08	ORGANIC MATERIAL	OL-OH	.56	2	.378	13.5			
19.00	10.93	1.24	11.35	CLAY	CH	.76	5	.753	13.5			
19.20	32.24	.83	2.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.86	7	2.324	13.5			
19.40	18.89	.58	3.06	SILTY CLAY TO CLAY	CL-CH	.78	6	1.342	13.5			
19.60	18.93	.82	4.33	CLAY	CH	.78	9	1.344	13.5			
19.80	13.62	.95	6.96	CLAY	CH	.79	6	.950	13.5			
20.00	16.31	.64	3.95	CLAY	CH	.80	7	1.149	13.5			
20.20	5.17	.63	12.19	ORGANIC MATERIAL	OL-OH	.61	2	.338	13.5			
20.40	14.55	.81	5.57	CLAY	CH	.82	6	1.018	13.5			
20.60	21.12	1.25	5.91	CLAY	CH	.82	10	1.504	13.5			
20.80	16.95	.55	3.25	SILTY CLAY TO CLAY	CL-CH	.83	5	1.174	13.5			
21.00	7.14	.43	5.98	CLAY	CH	.84	3	.467	13.5			
21.20	6.41	.36	5.56	CLAY	CH	.85	3	.412	13.5			
21.40	5.90	.46	7.84	ORGANIC MATERIAL	OL-OH	.64	2	.390	13.5			

21.60	6.41	.28	4.33	CLAY	CH	.86	3	.411	13.5
21.80	4.68	.37	8.00	ORGANIC MATERIAL	OL-OH	.65	2	.298	13.5
22.00	5.17	.45	8.76	ORGANIC MATERIAL	OL-OH	.66	2	.334	13.5



RESULT OF CONE PENETRATION TEST

55N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

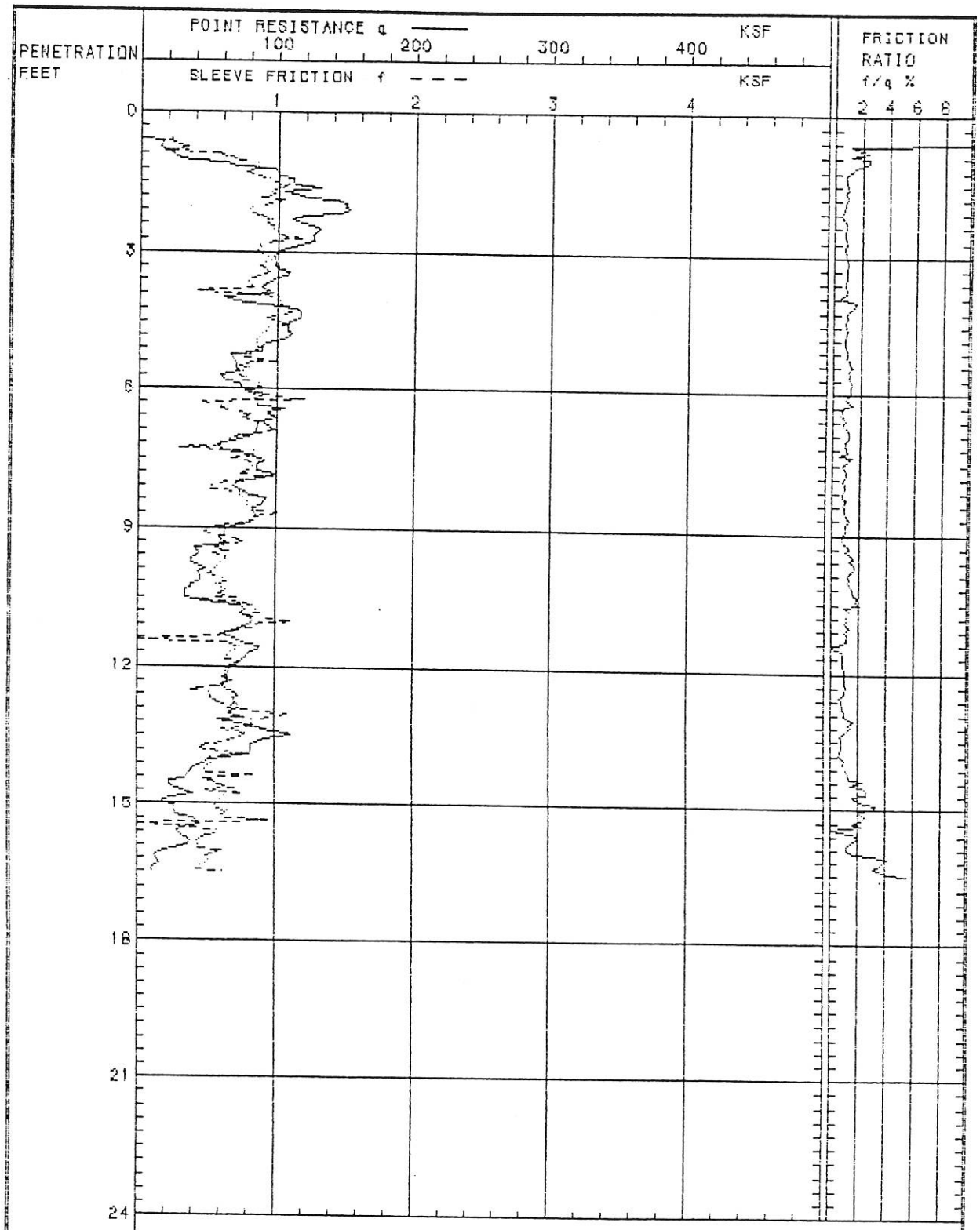
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 57N
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	6.39	.24	3.71	CLAY	CH	.02	3	.472	13.5			
.80	27.06	.63	2.33	CLAYEY SILT TO SILTY CLAY	MH-CL	.04	6	2.002	13.5			
1.00	36.65	.72	1.97	SANDY SILT TO CLAYEY SILT	ML-MH	.05	7	2.711	13.5	73	38	.50+
1.20	22.26	.55	2.48	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	5	1.645	13.5			
1.40	36.15	.30	.84	SANDY SILT TO CLAYEY SILT	ML-MH	.07	6	2.673	13.5	72	38	.50+
1.60	24.63	.07	.28	SANDY SILT TO CLAYEY SILT	ML-MH	.08	4	1.819	13.5	63	37	.50+
1.80	10.07	.50	5.01	CLAY	CH	.07	4	.741	13.5			
2.00	31.77	.28	.89	SANDY SILT TO CLAYEY SILT	ML-MH	.10	6	2.346	13.5	67	37	.50+
2.20	29.32	.63	2.14	CLAYEY SILT TO SILTY CLAY	MH-CL	.10	7	2.164	13.5			
2.40	57.29	.45	.78	SILTY SAND TO SANDY SILT	SM-ML	.13	9			80	39	.50+
2.60	22.17	.66	2.99	SILTY CLAY TO CLAY	CL-CH	.10	7	1.635	13.5			
2.80	21.39	.80	3.73	CLAY	CH	.11	10	1.577	13.5			
3.00	20.41	.40	1.98	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	4	1.502	13.5			
3.20	15.37	.20	1.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	3	1.128	13.5			
3.40	51.24	.38	.75	SILTY SAND TO SANDY SILT	SM-ML	.19	8			73	38	.50+
3.60	32.41	.49	1.52	SANDY SILT TO CLAYEY SILT	ML-MH	.18	6	2.388	13.5	63	37	.35
3.80	28.66	.79	2.77	CLAYEY SILT TO SILTY CLAY	MH-CL	.17	6	2.110	13.5			
4.00	34.19	.96	2.81	CLAYEY SILT TO SILTY CLAY	MH-CL	.18	8	2.519	13.5			
4.20	47.71	.95	1.98	SANDY SILT TO CLAYEY SILT	ML-MH	.21	9	3.518	13.5	70	38	.50+
4.40	42.00	.87	2.08	SANDY SILT TO CLAYEY SILT	ML-MH	.22	8	3.095	13.5	66	37	.50+
4.60	37.41	.52	1.38	SANDY SILT TO CLAYEY SILT	ML-MH	.23	7	2.754	13.5	63	37	.33
4.80	20.90	.78	3.72	CLAY	CH	.19	10	1.534	13.5			
5.00	36.89	.90	2.43	CLAYEY SILT TO SILTY CLAY	MH-CL	.22	8	2.716	13.5			
5.20	31.13	.85	2.72	CLAYEY SILT TO SILTY CLAY	MH-CL	.23	7	2.289	13.5			
5.40	31.47	.88	2.81	CLAYEY SILT TO SILTY CLAY	MH-CL	.24	7	2.313	13.5			
5.60	32.25	.93	2.88	CLAYEY SILT TO SILTY CLAY	MH-CL	.25	7	2.371	13.5			
5.80	33.20	.84	2.53	CLAYEY SILT TO SILTY CLAY	MH-CL	.26	7	2.440	13.5			
6.00	27.80	.10	.35	SANDY SILT TO CLAYEY SILT	ML-MH	.30	5	2.037	13.5	52	35	.17
6.20	23.37	.75	3.21	SILTY CLAY TO CLAY	CL-CH	.25	7	1.713	13.5			
6.40	29.79	.81	2.72	CLAYEY SILT TO SILTY CLAY	MH-CL	.29	7	2.185	13.5			
6.60	18.03	.78	4.35	CLAY	CH	.26	8	1.316	13.5			
6.80	22.87	.78	3.42	SILTY CLAY TO CLAY	CL-CH	.27	7	1.674	13.5			
7.00	29.76	.67	2.26	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	7	2.181	13.5			
7.20	23.88	.88	3.71	SILTY CLAY TO CLAY	CL-CH	.29	7	1.748	13.5			
7.40	29.50	.74	2.52	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	7	2.161	13.5			
7.60	26.93	.84	3.13	SILTY CLAY TO CLAY	CL-CH	.30	8	1.972	13.5			
7.80	28.89	.67	2.31	CLAYEY SILT TO SILTY CLAY	MH-CL	.35	6	2.114	13.5			
8.00	33.10	.89	2.70	CLAYEY SILT TO SILTY CLAY	MH-CL	.36	7	2.425	13.5			
8.20	37.85	.91	2.42	CLAYEY SILT TO SILTY CLAY	MH-CL	.37	9	2.776	13.5			
8.40	44.74	.96	2.14	SANDY SILT TO CLAYEY SILT	ML-MH	.42	8	3.283	13.5	60	36	.21
8.60	35.18	.83	2.35	CLAYEY SILT TO SILTY CLAY	MH-CL	.39	8	2.577	13.5			
8.80	25.37	.58	2.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	6	1.850	13.5			
9.00	11.83	.73	6.18	CLAY	CH	.36	5	.850	13.5			
9.20	10.33	.72	7.01	CLAY	CH	.37	4	.738	13.5			
9.40	11.20	.72	6.47	CLAY	CH	.38	5	.802	13.5			

9.60	11.07	1.00	9.07	CLAY	CH	.39	5	.791	13.5
9.80	24.83	.94	3.80	CLAY	CH	.39	11	1.810	13.5
10.00	11.58	.84	7.29	CLAY	CH	.40	5	.828	13.5
10.20	12.55	.72	5.70	CLAY	CH	.41	6	.899	13.5
10.40	11.73	.81	6.88	CLAY	CH	.42	5	.838	13.5
10.60	14.04	.77	5.51	CLAY	CH	.42	6	1.009	13.5
10.80	10.09	.72	7.13	CLAY	CH	.43	4	.715	13.5
11.00	9.85	.72	7.27	CLAY	CH	.44	4	.697	13.5
11.20	4.94	.41	8.24	ORGANIC MATERIAL	OL-OH	.34	2	.341	13.5
11.40	3.92	.60	15.28	ORGANIC MATERIAL	OL-OH	.34	1	.265	13.5
11.60	9.51	.70	7.40	CLAY	CH	.46	4	.670	13.5
11.80	20.91	.94	4.51	CLAY	CH	.47	10	1.514	13.5
12.00	11.58	.97	8.36	CLAY	CH	.48	5	.822	13.5
12.20	5.91	.58	9.78	ORGANIC MATERIAL	OL-OH	.37	2	.411	13.5
12.40	6.65	.81	12.20	ORGANIC MATERIAL	OL-OH	.37	3	.465	13.5
12.60	7.37	.43	5.82	CLAY	CH	.50	3	.509	13.5
12.80	5.41	.54	9.94	ORGANIC MATERIAL	OL-OH	.38	2	.372	13.5
13.00	6.14	.65	10.64	ORGANIC MATERIAL	OL-OH	.39	2	.426	13.5
13.20	6.27	.72	11.52	ORGANIC MATERIAL	OL-OH	.40	3	.435	13.5
13.40	8.79	.74	8.46	ORGANIC MATERIAL	OL-OH	.40	4	.621	13.5
13.60	4.47	.45	10.17	ORGANIC MATERIAL	OL-OH	.41	2	.301	13.5
13.80	4.95	.47	9.40	ORGANIC MATERIAL	OL-OH	.41	2	.336	13.5
14.00	3.19	.42	13.12	ORGANIC MATERIAL	OL-OH	.42	1	.205	13.5
14.20	3.18	.54	16.89	ORGANIC MATERIAL	OL-OH	.43	1	.204	13.5
14.40	3.45	.64	18.67	ORGANIC MATERIAL	OL-OH	.43	1	.224	13.5
14.60	4.92	.59	11.91	ORGANIC MATERIAL	OL-OH	.44	2	.332	13.5
14.80	3.69	.55	14.91	ORGANIC MATERIAL	OL-OH	.44	1	.241	13.5
15.00	2.71	.42	15.44	ORGANIC MATERIAL	OL-OH	.45	1	.167	13.5
15.20	2.95	.47	15.78	ORGANIC MATERIAL	OL-OH	.46	1	.185	13.5
15.40	4.67	.61	13.15	ORGANIC MATERIAL	OL-OH	.46	2	.312	13.5
15.60	5.93	.57	9.59	ORGANIC MATERIAL	OL-OH	.47	2	.404	13.5



RESULT OF CONE PENETRATION TEST

57M

JOB NUMBER: 01870206
CONE NUMBER: 001
LOCATION: ISLE DERNIERES

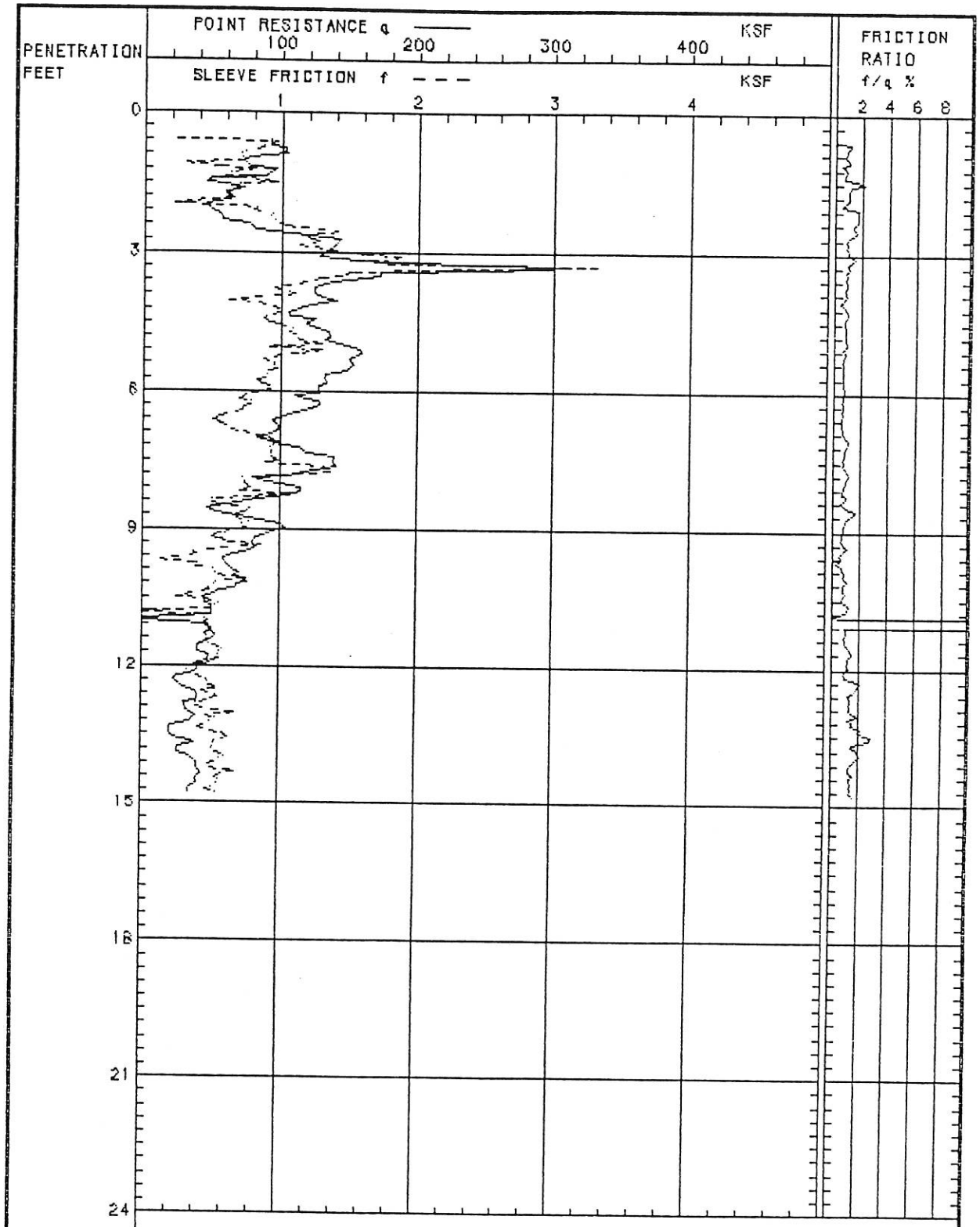
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/11/87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 57M
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	9.59	.22	2.25	SILTY CLAY TO CLAY	CL-CH	.02	3	.709	13.5			
.80	16.48	.40	2.41	SILTY CLAY TO CLAY	CL-CH	.03	5	1.218	13.5			
1.00	31.23	.68	2.16	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	7	2.310	13.5			
1.20	83.61	.89	1.07	SILTY SAND TO SANDY SILT	SM-ML	.07	13			100+	42	.50+
1.40	105.76	.83	.78	SAND TO SILTY SAND	SM-SP	.08	12			100+	42	.50+
1.60	121.74	.59	.49	SAND TO SILTY SAND	SM-SP	.10	14			100+	42	.50+
1.80	117.19	.93	.79	SAND TO SILTY SAND	SM-SP	.11	14			100+	42	.50+
2.00	149.30	.88	.59	SAND TO SILTY SAND	SM-SP	.12	17			100+	42	.50+
2.20	132.98	.82	.62	SAND TO SILTY SAND	SM-SP	.13	15			100+	42	.50+
2.40	121.34	.95	.78	SAND TO SILTY SAND	SM-SP	.14	14			100+	42	.50+
2.60	127.42	1.94	1.52	SILTY SAND TO SANDY SILT	SM-ML	.14	20			100+	42	.50+
2.80	122.02	.93	.76	SAND TO SILTY SAND	SM-SP	.17	14			100+	42	.50+
3.00	101.10	2.36	2.34	SANDY SILT TO CLAYEY SILT	ML-MH	.15	19	7.478	13.5	100+	42	.50+
3.20	98.38	.96	.98	SILTY SAND TO SANDY SILT	SM-ML	.18	15			100+	42	.50+
3.40	105.88	.95	.89	SAND TO SILTY SAND	SM-SP	.20	12			100+	42	.50+
3.60	97.78	.80	.82	SILTY SAND TO SANDY SILT	SM-ML	.20	15			97	42	.50+
3.80	90.44	.30	.33	SAND TO SILTY SAND	SM-SP	.23	10			91	41	.50+
4.00	65.22	.63	.97	SILTY SAND TO SANDY SILT	SM-ML	.22	10			79	39	.50+
4.20	108.69	1.06	.98	SILTY SAND TO SANDY SILT	SM-ML	.23	17			99	42	.50+
4.40	116.59	1.00	.86	SAND TO SILTY SAND	SM-SP	.26	13			99	42	.50+
4.60	107.55	.95	.88	SAND TO SILTY SAND	SM-SP	.28	12			94	42	.50+
4.80	108.98	.89	.81	SAND TO SILTY SAND	SM-SP	.29	13			94	42	.50+
5.00	90.78	.67	.73	SILTY SAND TO SANDY SILT	SM-ML	.27	14			87	40	.50+
5.20	77.81	.88	1.13	SILTY SAND TO SANDY SILT	SM-ML	.29	12			81	39	.50+
5.40	69.36	.91	1.32	SILTY SAND TO SANDY SILT	SM-ML	.30	11			76	39	.50+
5.60	71.32	.82	1.15	SILTY SAND TO SANDY SILT	SM-ML	.31	11			77	39	.50+
5.80	61.55	.77	1.25	SANDY SILT TO CLAYEY SILT	ML-MH	.29	11	4.537	13.5	73	38	.50+
6.00	75.50	.86	1.14	SILTY SAND TO SANDY SILT	SM-ML	.33	12			77	39	.50+
6.20	86.73	.68	.78	SILTY SAND TO SANDY SILT	SM-ML	.34	13			82	39	.50+
6.40	96.08	.59	.61	SAND TO SILTY SAND	SM-SP	.38	11			83	40	.50+
6.60	96.88	.84	.87	SILTY SAND TO SANDY SILT	SM-ML	.36	15			84	40	.50+
6.80	85.97	.94	1.10	SILTY SAND TO SANDY SILT	SM-ML	.37	13			80	39	.50+
7.00	83.88	.92	1.10	SILTY SAND TO SANDY SILT	SM-ML	.38	13			79	39	.50+
7.20	59.73	.51	.86	SILTY SAND TO SANDY SILT	SM-ML	.40	9			67	37	.42
7.40	70.74	.84	1.18	SILTY SAND TO SANDY SILT	SM-ML	.41	11			71	38	.50+
7.60	88.95	.59	.66	SILTY SAND TO SANDY SILT	SM-ML	.42	14			79	39	.50+
7.80	92.90	.78	.84	SILTY SAND TO SANDY SILT	SM-ML	.43	14			80	39	.50+
8.00	77.04	.66	.86	SILTY SAND TO SANDY SILT	SM-ML	.44	12			73	38	.50+
8.20	75.42	.69	.92	SILTY SAND TO SANDY SILT	SM-ML	.45	12			72	38	.50+
8.40	92.50	.92	.99	SILTY SAND TO SANDY SILT	SM-ML	.46	14			78	39	.50+
8.60	83.26	.88	1.06	SILTY SAND TO SANDY SILT	SM-ML	.47	13			74	38	.50+
8.80	84.87	.84	.99	SILTY SAND TO SANDY SILT	SM-ML	.48	13			74	38	.50+
9.00	66.31	.64	.97	SILTY SAND TO SANDY SILT	SM-ML	.49	10			66	37	.36
9.20	60.28	.75	1.25	SANDY SILT TO CLAYEY SILT	ML-MH	.46	11	4.431	13.5	65	37	.32
9.40	53.17	.79	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.47	10	3.903	13.5	62	37	.24

9.60	43.06	.59	1.37	SANDY SILT TO CLAYEY SILT	ML-MH	.48	8	3.154	13.5	55	36	.19
9.80	42.02	.31	.73	SANDY SILT TO CLAYEY SILT	ML-MH	.49	8	3.076	13.5	54	36	.18
10.00	43.77	.55	1.26	SANDY SILT TO CLAYEY SILT	ML-MH	.50	8	3.206	13.5	55	36	.19
10.20	41.61	.61	1.46	SANDY SILT TO CLAYEY SILT	ML-MH	.51	7	3.044	13.5	52	35	.18
10.40	34.44	.66	1.92	SANDY SILT TO CLAYEY SILT	ML-MH	.52	6	2.512	13.5	46	35	.16
10.60	49.56	.58	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.53	9	3.632	13.5	58	36	.20
10.80	76.77	.87	1.14	SILTY SAND TO SANDY SILT	SM-ML	.59	12			67	37	.38
11.00	82.63	1.03	1.24	SILTY SAND TO SANDY SILT	SM-ML	.60	13			69	38	.46
11.20	72.59	.65	.90	SILTY SAND TO SANDY SILT	SM-ML	.62	11			65	37	.31
11.40	69.68	.18	.26	SILTY SAND TO SANDY SILT	SM-ML	.63	11			63	37	.27
11.60	88.56	.51	.57	SAND TO SILTY SAND	SM-SP	.70	10			68	39	.42
11.80	78.36	.65	.82	SILTY SAND TO SANDY SILT	SM-ML	.65	12			66	37	.34
12.00	68.91	.66	.96	SILTY SAND TO SANDY SILT	SM-ML	.66	11			62	37	.25
12.20	65.06	.65	1.00	SILTY SAND TO SANDY SILT	SM-ML	.67	10			61	37	.22
12.40	63.24	.64	1.01	SILTY SAND TO SANDY SILT	SM-ML	.68	10			60	36	.21
12.60	72.29	.34	.47	SILTY SAND TO SANDY SILT	SM-ML	.69	11			63	37	.26
12.80	71.87	.69	.96	SILTY SAND TO SANDY SILT	SM-ML	.70	11			62	37	.25
13.00	66.90	.97	1.44	SANDY SILT TO CLAYEY SILT	ML-MH	.65	12	4.908	13.5	62	37	.24
13.20	66.14	1.03	1.55	SANDY SILT TO CLAYEY SILT	ML-MH	.66	12	4.850	13.5	61	37	.23
13.40	99.44	.70	.71	SAND TO SILTY SAND	SM-SP	.80	11			69	39	.44
13.60	90.08	.85	.94	SILTY SAND TO SANDY SILT	SM-ML	.75	14			67	37	.38
13.80	82.95	.54	.66	SILTY SAND TO SANDY SILT	SM-ML	.76	13			64	37	.30
14.00	58.91	.62	1.05	SILTY SAND TO SANDY SILT	SM-ML	.77	9			53	36	.18
14.20	41.99	.51	1.21	SANDY SILT TO CLAYEY SILT	ML-MH	.71	8	3.058	13.5	44	34	.13
14.40	36.17	.67	1.85	SANDY SILT TO CLAYEY SILT	ML-MH	.72	6	2.626	13.5	40	34	.14
14.60	25.41	.57	2.26	CLAYEY SILT TO SILTY CLAY	MH-CL	.66	6	1.833	13.5			
14.80	36.99	.69	1.88	SANDY SILT TO CLAYEY SILT	ML-MH	.74	7	2.685	13.5	40	34	.14
15.00	23.26	.36	1.54	CLAYEY SILT TO SILTY CLAY	MH-CL	.67	5	1.673	13.5			
15.20	27.11	.61	2.25	CLAYEY SILT TO SILTY CLAY	MH-CL	.68	6	1.957	13.5			
15.40	43.74	.49	1.11	SANDY SILT TO CLAYEY SILT	ML-MH	.77	8	3.183	13.5	43	34	.15
15.60	29.37	.56	1.91	CLAYEY SILT TO SILTY CLAY	MH-CL	.70	7	2.124	13.5			
15.80	38.11	.44	1.16	SANDY SILT TO CLAYEY SILT	ML-MH	.79	7	2.764	13.5	39	34	.14
16.00	23.69	.35	1.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.72	5	1.702	13.5			
16.20	13.26	.49	3.71	CLAY	CH	.65	6	.934	13.5			
16.40	11.84	.46	3.90	CLAY	CH	.66	5	.829	13.5			



RESULT OF CONE PENETRATION TEST

57S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

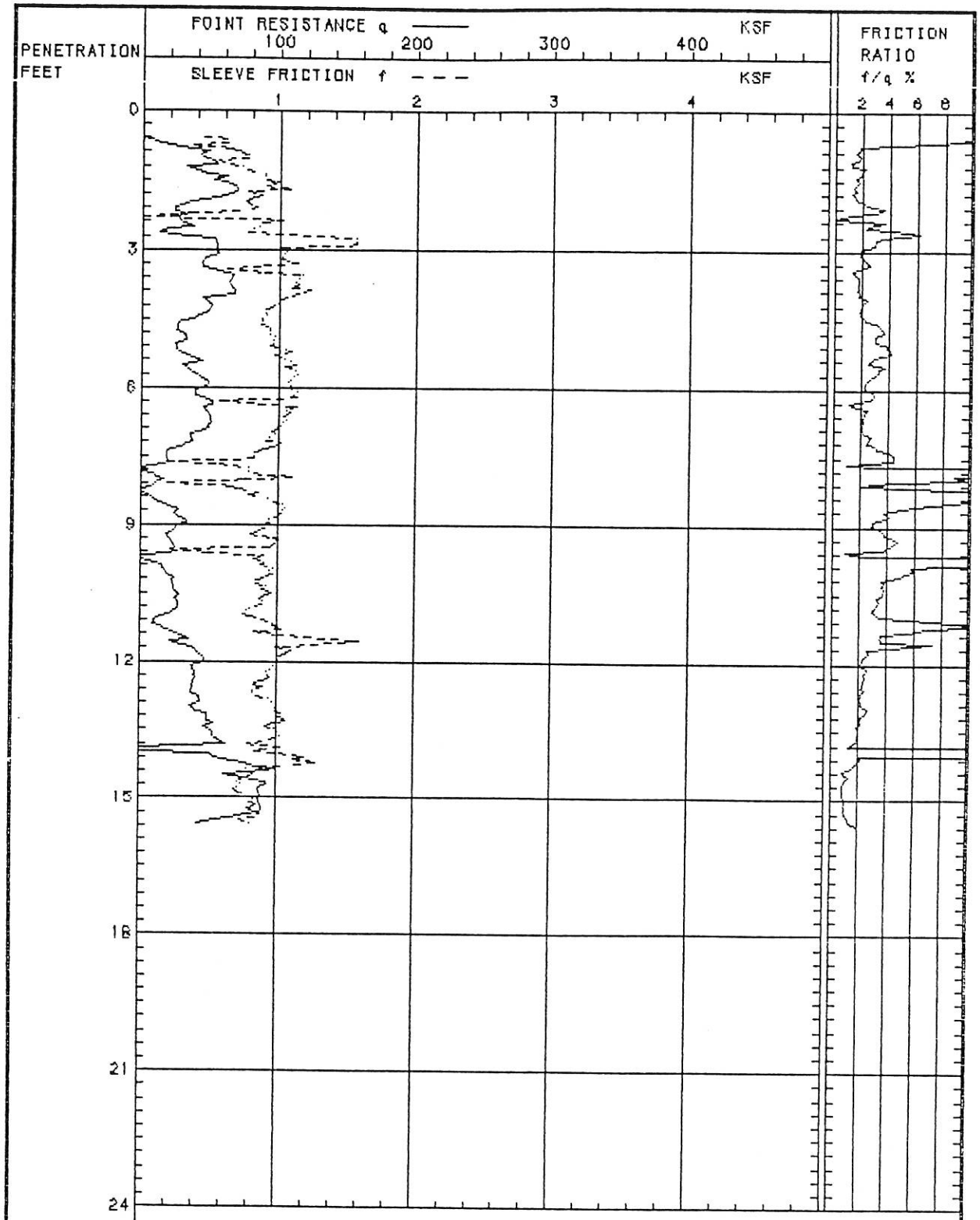
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 57S
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	91.50	.39	.43	SAND TO SILTY SAND	SM-SP	.04	10			100+	42	.50+
.80	102.57	.80	.78	SAND TO SILTY SAND	SM-SP	.05	12			100+	42	.50+
1.00	74.59	.57	.77	SILTY SAND TO SANDY SILT	SM-ML	.05	11			100+	42	.50+
1.20	86.57	.89	1.02	SILTY SAND TO SANDY SILT	SM-ML	.07	13			100+	42	.50+
1.40	68.77	.58	.84	SILTY SAND TO SANDY SILT	SM-ML	.08	10			96	42	.50+
1.60	65.82	.69	1.06	SILTY SAND TO SANDY SILT	SM-ML	.09	10			92	41	.50+
1.80	63.21	.62	.98	SILTY SAND TO SANDY SILT	SM-ML	.10	10			88	40	.50+
2.00	46.24	.77	1.66	SANDY SILT TO CLAYEY SILT	ML-MH	.10	8	3.418	13.5	76	39	.50+
2.20	55.83	.93	1.66	SANDY SILT TO CLAYEY SILT	ML-MH	.11	10	4.128	13.5	81	39	.50+
2.40	76.98	1.06	1.37	SILTY SAND TO SANDY SILT	SM-ML	.13	12			91	41	.50+
2.60	107.45	1.29	1.20	SILTY SAND TO SANDY SILT	SM-ML	.14	17			100+	42	.50+
2.80	141.19	1.35	.95	SAND TO SILTY SAND	SM-SP	.17	16			100+	42	.50+
3.00	131.97	1.49	1.13	SILTY SAND TO SANDY SILT	SM-ML	.17	21			100+	42	.50+
3.20	171.01	1.73	1.01	SAND TO SILTY SAND	SM-SP	.19	20			100+	42	.50+
3.40	214.91	1.85	.86	SAND TO SILTY SAND	SM-SP	.20	25			100+	42	.50+
3.60	149.73	1.29	.86	SAND TO SILTY SAND	SM-SP	.22	17			100+	42	.50+
3.80	124.69	1.08	.87	SAND TO SILTY SAND	SM-SP	.23	14			100+	42	.50+
4.00	135.50	.96	.71	SAND TO SILTY SAND	SM-SP	.24	16			100+	42	.50+
4.20	115.37	.97	.84	SAND TO SILTY SAND	SM-SP	.25	13			100+	42	.50+
4.40	115.30	.84	.73	SAND TO SILTY SAND	SM-SP	.26	13			99	42	.50+
4.60	122.71	1.00	.82	SAND TO SILTY SAND	SM-SP	.28	14			100+	42	.50+
4.80	135.53	1.48	1.09	SAND TO SILTY SAND	SM-SP	.29	16			100+	42	.50+
5.00	147.97	1.00	.67	SAND TO SILTY SAND	SM-SP	.30	17			100+	42	.50+
5.20	158.17	1.04	.66	SAND TO SILTY SAND	SM-SP	.31	18			100+	42	.50+
5.40	153.11	.95	.62	SAND TO SILTY SAND	SM-SP	.32	18			100+	42	.50+
5.60	140.88	.98	.69	SAND TO SILTY SAND	SM-SP	.34	16			100+	42	.50+
5.80	133.40	.90	.67	SAND TO SILTY SAND	SM-SP	.35	15			98	42	.50+
6.00	128.15	.93	.72	SAND TO SILTY SAND	SM-SP	.36	15			96	42	.50+
6.20	123.13	.79	.64	SAND TO SILTY SAND	SM-SP	.37	14			93	42	.50+
6.40	120.30	.73	.60	SAND TO SILTY SAND	SM-SP	.38	14			91	41	.50+
6.60	99.29	.52	.52	SAND TO SILTY SAND	SM-SP	.40	11			83	41	.50+
6.80	98.64	.63	.64	SAND TO SILTY SAND	SM-SP	.41	11			83	40	.50+
7.00	87.11	.86	.99	SILTY SAND TO SANDY SILT	SM-ML	.38	13			80	39	.50+
7.20	107.67	.46	.43	SAND TO SILTY SAND	SM-SP	.43	12			81	41	.50+
7.40	129.03	1.44	1.12	SILTY SAND TO SANDY SILT	SM-ML	.41	20			93	41	.50+
7.60	139.69	1.10	.79	SAND TO SILTY SAND	SM-SP	.46	16			93	42	.50+
7.80	111.98	1.21	1.08	SILTY SAND TO SANDY SILT	SM-ML	.43	17			88	40	.50+
8.00	95.01	.74	.78	SILTY SAND TO SANDY SILT	SM-ML	.44	15			80	39	.50+
8.20	113.65	.89	.79	SAND TO SILTY SAND	SM-SP	.49	13			84	41	.50+
8.40	76.96	.50	.65	SILTY SAND TO SANDY SILT	SM-ML	.46	12			72	38	.50+
8.60	50.38	.76	1.51	SANDY SILT TO CLAYEY SILT	ML-MH	.43	9	3.700	13.5	62	37	.24
8.80	85.74	.75	.88	SILTY SAND TO SANDY SILT	SM-ML	.48	13			74	38	.50+
9.00	101.62	.74	.73	SAND TO SILTY SAND	SM-SP	.54	12			79	40	.50+
9.20	82.59	.54	.65	SILTY SAND TO SANDY SILT	SM-ML	.51	13			72	38	.50+
9.40	81.65	.16	.19	SAND TO SILTY SAND	SM-SP	.56	9			70	39	.50+

9.60	63.39	.36	.57	SILTY SAND TO SANDY SILT	SM-ML	.53	10			64	37	.29
9.80	62.34	.33	.53	SILTY SAND TO SANDY SILT	SM-ML	.54	9			63	37	.27
10.00	69.51	.67	.96	SILTY SAND TO SANDY SILT	SM-ML	.55	11			66	37	.34
10.20	72.62	.54	.74	SILTY SAND TO SANDY SILT	SM-ML	.56	11			66	37	.36
10.40	54.63	.25	.45	SILTY SAND TO SANDY SILT	SM-ML	.57	8			59	36	.21
10.60	45.68	.54	1.18	SANDY SILT TO CLAYEY SILT	ML-MH	.53	8	3.344	13.5	54	36	.18
10.80	51.04	.47	.91	SILTY SAND TO SANDY SILT	SM-ML	.59	8			55	36	.19
11.00	.24	.47	195.46	ORGANIC MATERIAL	OL-OH	.33	1	-.006	13.5			
11.20	49.69	.51	1.02	SANDY SILT TO CLAYEY SILT	ML-MH	.56	9	3.639	13.5	56	36	.19
11.40	52.41	.57	1.08	SANDY SILT TO CLAYEY SILT	ML-MH	.57	10	3.840	13.5	59	36	.20
11.60	41.11	.42	1.03	SANDY SILT TO CLAYEY SILT	ML-MH	.58	7	3.002	13.5	49	35	.17
11.80	49.07	.56	1.15	SANDY SILT TO CLAYEY SILT	ML-MH	.59	9	3.591	13.5	54	36	.18
12.00	39.47	.43	1.10	SANDY SILT TO CLAYEY SILT	ML-MH	.60	7	2.879	13.5	47	35	.16
12.20	31.56	.34	1.08	SANDY SILT TO CLAYEY SILT	ML-MH	.61	6	2.293	13.5	40	34	.14
12.40	27.15	.49	1.81	CLAYEY SILT TO SILTY CLAY	MH-CL	.56	6	1.970	13.5			
12.60	40.08	.49	1.23	SANDY SILT TO CLAYEY SILT	ML-MH	.63	7	2.922	13.5	46	34	.16
12.80	35.87	.54	1.50	SANDY SILT TO CLAYEY SILT	ML-MH	.64	6	2.610	13.5	42	34	.15
13.00	34.65	.60	1.74	SANDY SILT TO CLAYEY SILT	ML-MH	.65	6	2.518	13.5	41	34	.15
13.20	36.90	.30	.82	SANDY SILT TO CLAYEY SILT	ML-MH	.66	7	2.685	13.5	42	34	.15
13.40	21.28	.51	2.40	CLAYEY SILT TO SILTY CLAY	MH-CL	.60	5	1.532	13.5			
13.60	29.64	.33	1.10	SANDY SILT TO CLAYEY SILT	ML-MH	.68	5	2.145	13.5	34	33	.13
13.80	27.31	.50	1.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.62	6	1.977	13.5			
14.00	36.39	.31	.86	SANDY SILT TO CLAYEY SILT	ML-MH	.70	6	2.644	13.5	41	34	.14
14.20	40.83	.52	1.28	SANDY SILT TO CLAYEY SILT	ML-MH	.71	7	2.972	13.5	43	34	.15
14.40	42.59	.57	1.33	SANDY SILT TO CLAYEY SILT	ML-MH	.72	8	3.101	13.5	44	34	.16
14.60	38.80	.57	1.46	SANDY SILT TO CLAYEY SILT	ML-MH	.73	7	2.820	13.5	41	34	.15



RESULT OF CONE PENETRATION TEST

58N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

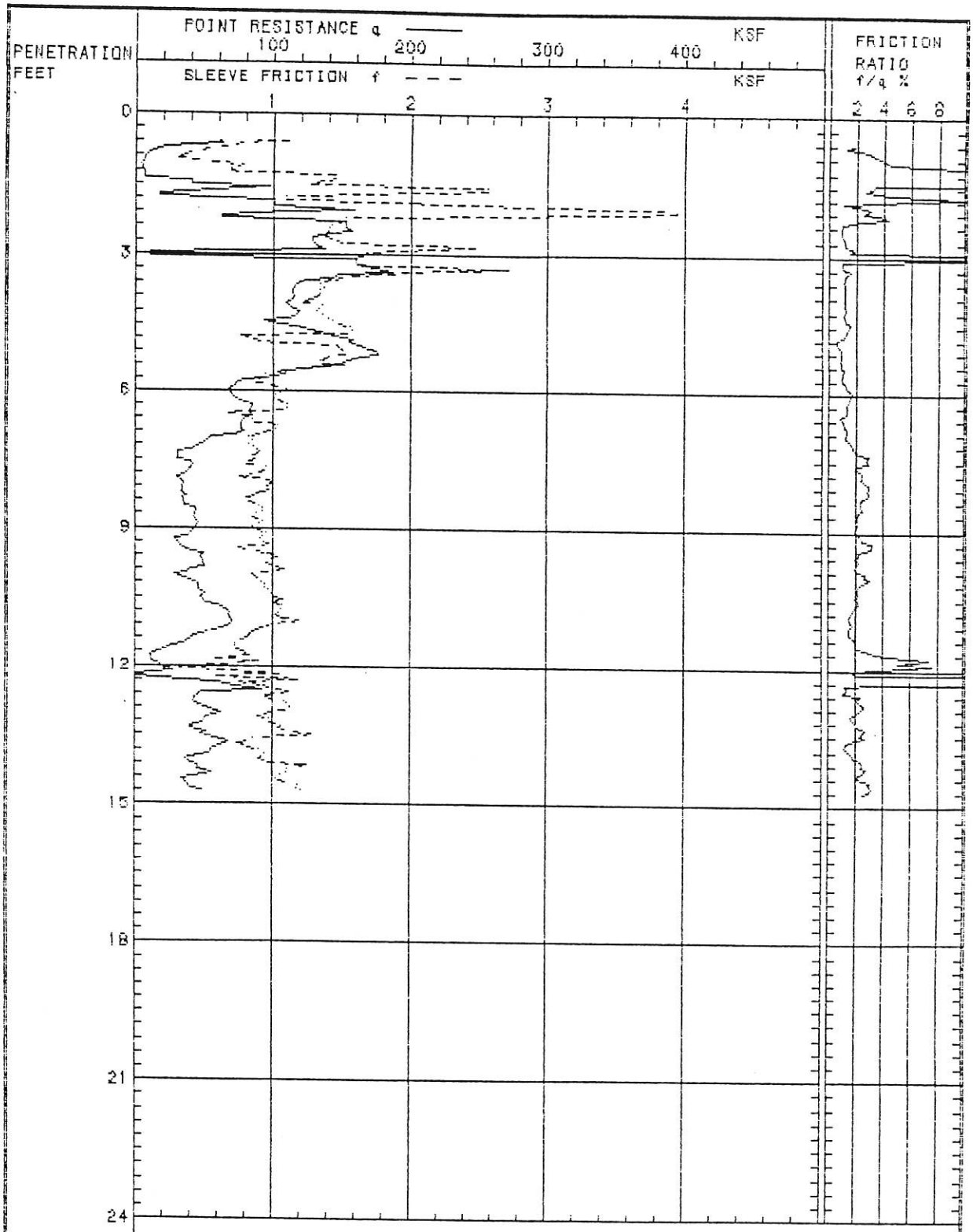
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 1605.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01970206
BORING NO. : 58N
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	3.44	.53	15.29	ORGANIC MATERIAL	OL-OH	.02	1	.254	13.5			
.80	28.04	.18	.65	SANDY SILT TO CLAYEY SILT	ML-MH	.04	5	2.074	13.5	68	38	.50+
1.00	44.09	.80	1.82	SANDY SILT TO CLAYEY SILT	ML-MH	.05	8	3.262	13.5	78	39	.50+
1.20	43.18	.44	1.01	SANDY SILT TO CLAYEY SILT	ML-MH	.06	8	3.194	13.5	77	39	.50+
1.40	54.60	.82	1.50	SANDY SILT TO CLAYEY SILT	ML-MH	.07	10	4.039	13.5	85	40	.50+
1.60	63.94	.93	1.45	SANDY SILT TO CLAYEY SILT	ML-MH	.08	12	4.731	13.5	92	41	.50+
1.80	64.21	.82	1.28	SILTY SAND TO SANDY SILT	SM-ML	.10	10			87	41	.50+
2.00	32.66	.87	2.67	CLAYEY SILT TO SILTY CLAY	MH-CL	.09	7	2.413	13.5			
2.20	27.05	.74	2.73	CLAYEY SILT TO SILTY CLAY	MH-CL	.10	6	1.996	13.5			
2.40	29.02	.04	.13	SANDY SILT TO CLAYEY SILT	ML-MH	.12	5	2.141	13.5	64	37	.50+
2.60	16.12	.80	4.93	CLAY	CH	.10	7	1.187	13.5			
2.80	53.00	1.56	2.95	CLAYEY SILT TO SILTY CLAY	MH-CL	.13	12	3.917	13.5			
3.00	54.11	1.03	1.91	SANDY SILT TO CLAYEY SILT	ML-MH	.15	10	3.997	13.5	77	39	.50+
3.20	46.00	1.08	2.34	SANDY SILT TO CLAYEY SILT	ML-MH	.16	8	3.395	13.5	72	38	.50+
3.40	47.70	.74	1.55	SANDY SILT TO CLAYEY SILT	ML-MH	.17	9	3.521	13.5	72	39	.50+
3.60	66.05	1.16	1.75	SANDY SILT TO CLAYEY SILT	ML-MH	.18	12	4.879	13.5	82	40	.50+
3.80	65.30	1.10	1.69	SANDY SILT TO CLAYEY SILT	ML-MH	.19	12	4.823	13.5	81	39	.50+
4.00	55.77	1.27	2.28	SANDY SILT TO CLAYEY SILT	ML-MH	.20	10	4.116	13.5	75	39	.50+
4.20	49.93	.98	1.96	SANDY SILT TO CLAYEY SILT	ML-MH	.21	9	3.683	13.5	71	39	.50+
4.40	44.29	.91	2.05	SANDY SILT TO CLAYEY SILT	ML-MH	.22	8	3.264	13.5	67	38	.50+
4.60	27.74	.90	3.26	SILTY CLAY TO CLAY	CL-CH	.18	8	2.041	13.5			
4.80	28.51	.91	3.19	SILTY CLAY TO CLAY	CL-CH	.19	9	2.098	13.5			
5.00	28.31	.98	3.47	SILTY CLAY TO CLAY	CL-CH	.20	9	2.083	13.5			
5.20	26.07	1.07	4.12	CLAY	CH	.21	12	1.916	13.5			
5.40	42.04	1.08	2.57	CLAYEY SILT TO SILTY CLAY	MH-CL	.24	10	3.096	13.5			
5.60	33.75	1.11	3.29	SILTY CLAY TO CLAY	CL-CH	.22	10	2.483	13.5			
5.80	44.25	1.10	2.49	CLAYEY SILT TO SILTY CLAY	MH-CL	.26	10	3.259	13.5			
6.00	43.57	1.08	2.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.27	10	3.207	13.5			
6.20	42.04	1.12	2.67	CLAYEY SILT TO SILTY CLAY	MH-CL	.28	10	3.093	13.5			
6.40	48.48	.26	.54	SILTY SAND TO SANDY SILT	SM-ML	.35	7			64	37	.30
6.60	49.43	1.06	2.15	SANDY SILT TO CLAYEY SILT	ML-MH	.33	9	3.637	13.5	65	37	.35
6.80	49.69	1.03	2.07	SANDY SILT TO CLAYEY SILT	ML-MH	.34	9	3.656	13.5	65	37	.34
7.00	39.26	.98	2.51	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	9	2.835	13.5			
7.20	35.44	.96	2.72	CLAYEY SILT TO SILTY CLAY	MH-CL	.32	8	2.601	13.5			
7.40	20.43	.88	4.32	CLAY	CH	.30	9	1.492	13.5			
7.60	18.94	.52	2.72	SILTY CLAY TO CLAY	CL-CH	.30	6	1.390	13.5			
7.80	.00	.79	999.00	ORGANIC MATERIAL	OL-OH	.23	1	-.017	13.5			
8.00	13.99	.92	6.58	CLAY	CH	.32	6	1.013	13.5			
8.20	3.73	.68	18.33	ORGANIC MATERIAL	OL-OH	.25	1	.258	13.5			
8.40	6.62	.85	12.87	ORGANIC MATERIAL	OL-OH	.25	3	.472	13.5			
8.60	20.62	1.04	5.05	CLAY	CH	.34	9	1.502	13.5			
8.80	26.54	1.00	3.78	SILTY CLAY TO CLAY	CL-CH	.35	8	1.940	13.5			
9.00	30.30	.91	2.99	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	7	2.214	13.5			
9.20	20.69	.95	4.61	CLAY	CH	.37	9	1.505	13.5			
9.40	22.87	1.00	4.38	CLAY	CH	.38	10	1.666	13.5			

9.60	23.63	.35	1.48	CLAYEY SILT TO SILTY CLAY	MH-CL	.43	5	1.718	13.5			
9.80	5.58	.86	15.49	ORGANIC MATERIAL	OL-OH	.29	2	.391	13.5			
10.00	16.96	.96	5.63	CLAY	CH	.40	8	1.227	13.5			
10.20	23.88	.96	4.01	CLAY	CH	.41	11	1.738	13.5			
10.40	24.35	.90	3.71	SILTY CLAY TO CLAY	CL-CH	.42	7	1.773	13.5			
10.60	27.08	1.00	3.70	SILTY CLAY TO CLAY	CL-CH	.42	8	1.974	13.5			
10.80	27.80	.85	3.04	SILTY CLAY TO CLAY	CL-CH	.43	8	2.027	13.5			
11.00	18.51	.45	2.44	SILTY CLAY TO CLAY	CL-CH	.44	5	1.338	13.5			
11.20	11.55	.94	8.11	CLAY	CH	.45	5	.823	13.5			
11.40	26.02	.92	3.53	SILTY CLAY TO CLAY	CL-CH	.46	8	1.874	13.5			
11.60	25.94	1.17	4.50	CLAY	CH	.46	12	1.887	13.5			
11.80	42.41	1.05	2.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.53	10	3.102	13.5			
12.00	46.98	1.01	2.16	SANDY SILT TO CLAYEY SILT	ML-MH	.60	9	3.435	13.5	52	35	.18
12.20	39.22	.94	2.40	CLAYEY SILT TO SILTY CLAY	MH-CL	.55	9	2.865	13.5			
12.40	40.23	.92	2.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.56	9	2.938	13.5			
12.60	38.00	.83	2.18	CLAYEY SILT TO SILTY CLAY	MH-CL	.57	9	2.773	13.5			
12.80	43.78	.90	2.05	SANDY SILT TO CLAYEY SILT	ML-MH	.64	8	3.196	13.5	48	35	.16
13.00	38.05	1.01	2.65	CLAYEY SILT TO SILTY CLAY	MH-CL	.58	9	2.775	13.5			
13.20	47.43	1.03	2.07	SANDY SILT TO CLAYEY SILT	ML-MH	.66	9	3.613	13.5	51	35	.18
13.40	50.37	1.09	2.16	SANDY SILT TO CLAYEY SILT	ML-MH	.67	9	3.682	13.5	52	35	.18
13.60	53.62	1.02	1.90	SANDY SILT TO CLAYEY SILT	ML-MH	.68	10	3.922	13.5	53	36	.18
13.80	61.20	.85	1.38	SANDY SILT TO CLAYEY SILT	ML-MH	.69	11	4.482	13.5	58	36	.20
14.00	25.07	.93	3.72	SILTY CLAY TO CLAY	CL-CH	.56	8	1.815	13.5			
14.20	68.46	1.20	1.76	SANDY SILT TO CLAYEY SILT	ML-MH	.71	13	5.018	13.5	61	37	.23
14.40	90.96	.91	1.00	SILTY SAND TO SANDY SILT	SM-ML	.79	14			66	37	.25
14.60	84.27	.83	.99	SILTY SAND TO SANDY SILT	SM-ML	.80	13			64	37	.28
14.80	87.33	.74	.85	SILTY SAND TO SANDY SILT	SM-ML	.81	13			64	37	.30
15.00	88.08	.81	.92	SILTY SAND TO SANDY SILT	SM-ML	.82	14			64	37	.30
15.20	89.03	.83	.93	SILTY SAND TO SANDY SILT	SM-ML	.84	14			64	37	.30
15.40	72.69	.85	1.17	SILTY SAND TO SANDY SILT	SM-ML	.85	11			59	36	.21



RESULT OF CONE PENETRATION TEST

58M

JOB NUMBER: 01870206
CONE NUMBER: 001
LOCATION: ISLE DERNIERES

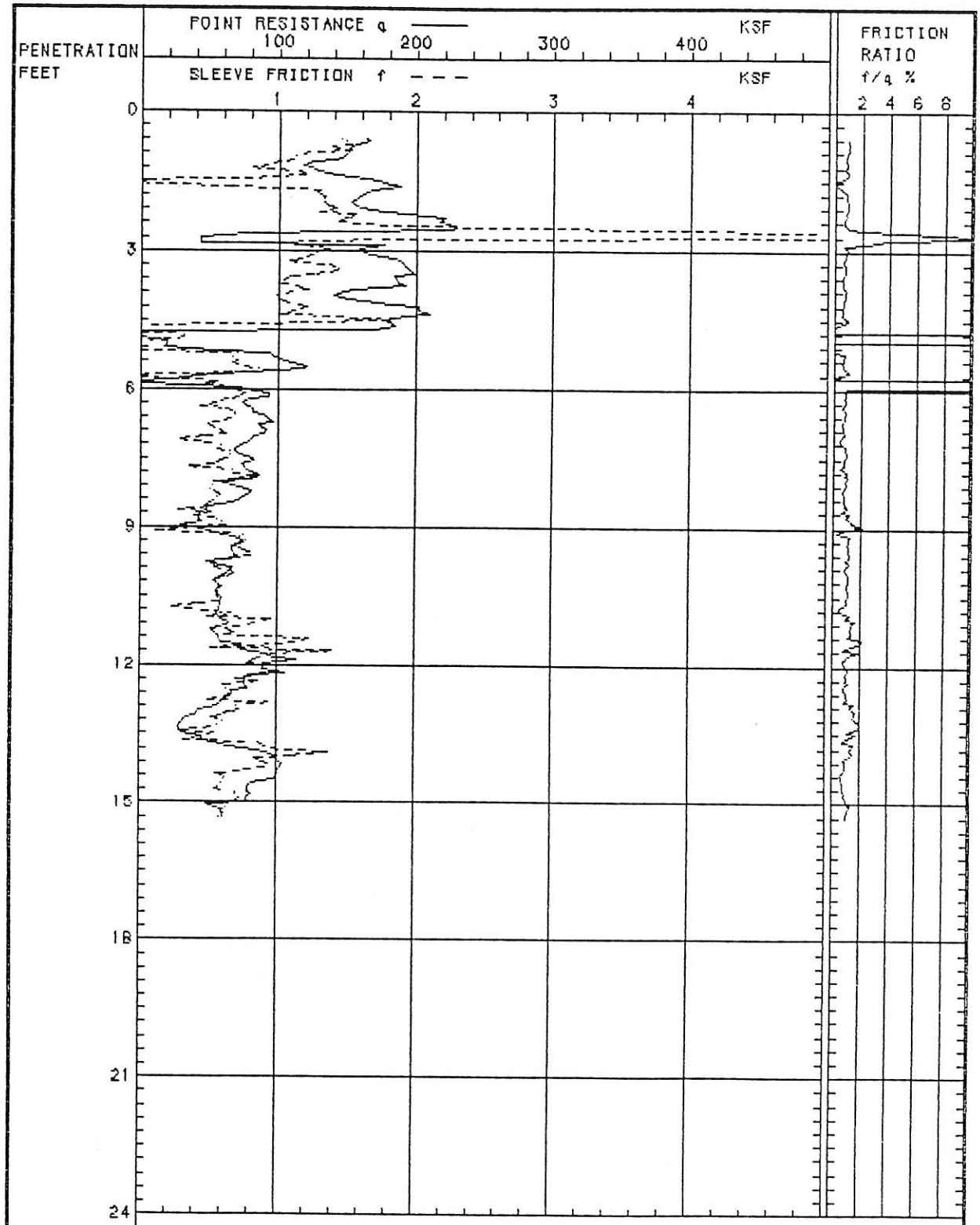
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/11/87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 58M
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	61.98	.95	1.52	SANDY SILT TO CLAYEY SILT	ML-MH	.03	11	4.589	13.5	100+	42	.50+
.80	14.27	.43	3.00	SILTY CLAY TO CLAY	CL-CH	.03	4	1.054	13.5			
1.00	6.27	.43	6.84	ORGANIC MATERIAL	OL-OH	.03	3	.462	13.5			
1.20	5.53	.72	12.94	ORGANIC MATERIAL	OL-OH	.04	2	.407	13.5			
1.40	23.84	.73	3.06	SILTY CLAY TO CLAY	CL-CH	.06	7	1.761	13.5			
1.60	77.51	1.92	2.48	SANDY SILT TO CLAYEY SILT	ML-MH	.08	14	5.736	13.5	100+	42	.50+
1.80	59.20	1.09	1.84	SANDY SILT TO CLAYEY SILT	ML-MH	.09	11	4.378	13.5	86	40	.50+
2.00	130.30	3.47	2.66	SANDY SILT TO CLAYEY SILT	ML-MH	.10	24	9.644	13.5	100+	42	.50+
2.20	62.97	1.64	2.60	SANDY SILT TO CLAYEY SILT	ML-MH	.11	12	4.656	13.5	87	40	.50+
2.40	152.50	1.42	.93	SAND TO SILTY SAND	SM-SP	.14	18			100+	42	.50+
2.60	135.80	1.38	1.02	SAND TO SILTY SAND	SM-SP	.16	16			100+	42	.50+
2.80	131.46	1.23	.94	SAND TO SILTY SAND	SM-SP	.17	15			100+	42	.50+
3.00	10.82	1.66	15.38	CLAY	CH	.12	5	.793	13.5			
3.20	160.62	1.61	1.00	SAND TO SILTY SAND	SM-SP	.19	19			100+	42	.50+
3.40	167.10	1.91	1.14	SAND TO SILTY SAND	SM-SP	.20	20			100+	42	.50+
3.60	120.73	1.36	1.13	SILTY SAND TO SANDY SILT	SM-ML	.20	19			100+	42	.50+
3.80	114.62	1.34	1.17	SILTY SAND TO SANDY SILT	SM-ML	.21	18			100+	42	.50+
4.00	111.80	1.34	1.20	SILTY SAND TO SANDY SILT	SM-ML	.22	17			100+	42	.50+
4.20	116.82	1.33	1.14	SILTY SAND TO SANDY SILT	SM-ML	.23	18			100+	42	.50+
4.40	102.99	1.42	1.38	SILTY SAND TO SANDY SILT	SM-ML	.24	16			95	41	.50+
4.60	122.21	1.57	1.29	SILTY SAND TO SANDY SILT	SM-ML	.25	19			100+	42	.50+
4.80	151.22	.21	.14	SAND TO SILTY SAND	SM-SP	.29	18			100+	42	.50+
5.00	166.37	1.31	.79	SAND TO SILTY SAND	SM-SP	.30	19			100+	42	.50+
5.20	171.11	1.48	.86	SAND TO SILTY SAND	SM-SP	.31	20			100+	42	.50+
5.40	145.40	1.44	.99	SAND TO SILTY SAND	SM-SP	.32	17			100+	42	.50+
5.60	108.97	1.06	.97	SILTY SAND TO SANDY SILT	SM-ML	.31	17			92	41	.50+
5.80	75.79	.89	1.17	SILTY SAND TO SANDY SILT	SM-ML	.32	12			78	39	.50+
6.00	68.00	1.07	1.58	SANDY SILT TO CLAYEY SILT	ML-MH	.30	13	5.015	13.5	75	39	.50+
6.20	74.64	1.03	1.38	SILTY SAND TO SANDY SILT	SM-ML	.34	11			76	39	.50+
6.40	83.88	1.09	1.30	SILTY SAND TO SANDY SILT	SM-ML	.35	13			80	39	.50+
6.60	82.18	.42	.51	SILTY SAND TO SANDY SILT	SM-ML	.36	12			79	39	.50+
6.80	77.05	.97	1.25	SILTY SAND TO SANDY SILT	SM-ML	.37	12			76	39	.50+
7.00	64.15	.93	1.44	SANDY SILT TO CLAYEY SILT	ML-MH	.35	12	4.726	13.5	71	38	.50+
7.20	47.00	.85	1.80	SANDY SILT TO CLAYEY SILT	ML-MH	.36	9	3.455	13.5	63	37	.27
7.40	31.06	.88	2.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	7	2.276	13.5			
7.60	40.82	.82	2.01	SANDY SILT TO CLAYEY SILT	ML-MH	.38	7	2.996	13.5	59	36	.21
7.80	37.65	.94	2.51	CLAYEY SILT TO SILTY CLAY	MH-CL	.35	9	2.763	13.5			
8.00	33.81	.99	2.93	CLAYEY SILT TO SILTY CLAY	MH-CL	.36	8	2.478	13.5			
8.20	33.70	.65	1.93	CLAYEY SILT TO SILTY CLAY	MH-CL	.37	8	2.469	13.5			
8.40	34.80	.87	2.49	CLAYEY SILT TO SILTY CLAY	MH-CL	.39	8	2.550	13.5			
8.60	44.03	.92	2.10	SANDY SILT TO CLAYEY SILT	ML-MH	.43	8	3.229	13.5	59	36	.20
8.80	43.65	.86	1.97	SANDY SILT TO CLAYEY SILT	ML-MH	.44	8	3.201	13.5	58	36	.20
9.00	44.27	.87	1.96	SANDY SILT TO CLAYEY SILT	ML-MH	.45	8	3.246	13.5	53	36	.20
9.20	33.89	1.00	2.94	CLAYEY SILT TO SILTY CLAY	MH-CL	.41	8	2.479	13.5			
9.40	33.19	.86	2.60	CLAYEY SILT TO SILTY CLAY	MH-CL	.42	7	2.427	13.5			

9.60	48.96	1.01	2.07	SANDY SILT TO CLAYEY SILT	ML-MH	.48	9	3.391	13.5	60	36	.21
9.80	49.92	.99	1.98	SANDY SILT TO CLAYEY SILT	ML-MH	.49	9	3.662	13.5	60	35	.21
10.00	33.27	1.08	3.24	SILTY CLAY TO CLAY	CL-CH	.40	10	2.435	13.5			
10.20	44.74	.92	2.06	SANDY SILT TO CLAYEY SILT	ML-MH	.51	8	3.277	13.5	55	36	.19
10.40	48.41	1.11	2.29	SANDY SILT TO CLAYEY SILT	ML-MH	.52	9	3.548	13.5	57	36	.20
10.60	50.22	1.01	2.01	SANDY SILT TO CLAYEY SILT	ML-MH	.53	9	3.681	13.5	58	36	.20
10.80	66.88	1.26	1.88	SANDY SILT TO CLAYEY SILT	ML-MH	.54	12	4.914	13.5	65	37	.31
11.00	69.23	1.16	1.68	SANDY SILT TO CLAYEY SILT	ML-MH	.55	13	5.087	13.5	66	37	.33
11.20	61.04	.89	1.47	SANDY SILT TO CLAYEY SILT	ML-MH	.56	11	4.480	13.5	62	37	.25
11.40	41.67	.79	1.89	SANDY SILT TO CLAYEY SILT	ML-MH	.57	7	3.044	13.5	49	35	.17
11.60	24.64	.54	2.19	CLAYEY SILT TO SILTY CLAY	MH-CL	.52	5	1.786	13.5			
11.80	11.44	.72	6.31	CLAY	CH	.47	5	.812	13.5			
12.00	18.20	.49	2.68	SILTY CLAY TO CLAY	CL-CH	.48	5	1.313	13.5			
12.20	.00	.83	999.00	ORGANIC MATERIAL	OL-OH	.37	1	-.027	13.5			
12.40	66.05	.52	.79	SILTY SAND TO SANDY SILT	SM-ML	.68	10			61	37	.23
12.60	47.00	1.01	2.14	SANDY SILT TO CLAYEY SILT	ML-MH	.63	9	3.435	13.5	51	35	.17
12.80	43.04	1.09	2.54	CLAYEY SILT TO SILTY CLAY	MH-CL	.58	10	3.145	13.5			
13.00	60.47	1.08	1.79	SANDY SILT TO CLAYEY SILT	ML-MH	.65	11	4.431	13.5	60	39	.21
13.20	50.01	.99	1.98	SANDY SILT TO CLAYEY SILT	ML-MH	.66	9	3.655	13.5	52	35	.18
13.40	45.63	1.03	2.26	SANDY SILT TO CLAYEY SILT	ML-MH	.67	8	3.331	13.5	48	35	.17
13.60	62.81	.85	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.68	12	4.602	13.5	60	36	.21
13.80	57.09	.58	1.02	SILTY SAND TO SANDY SILT	SM-ML	.76	9			52	35	.18
14.00	38.65	.95	2.46	CLAYEY SILT TO SILTY CLAY	MH-CL	.63	9	2.816	13.5			
14.20	45.51	1.18	2.60	CLAYEY SILT TO SILTY CLAY	MH-CL	.64	10	3.324	13.5			
14.40	42.97	1.08	2.52	CLAYEY SILT TO SILTY CLAY	MH-CL	.65	10	3.135	13.5			
14.60	39.33	1.18	3.00	CLAYEY SILT TO SILTY CLAY	MH-CL	.66	9	2.865	13.5			



RESULT OF CONE PENETRATION TEST

58S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

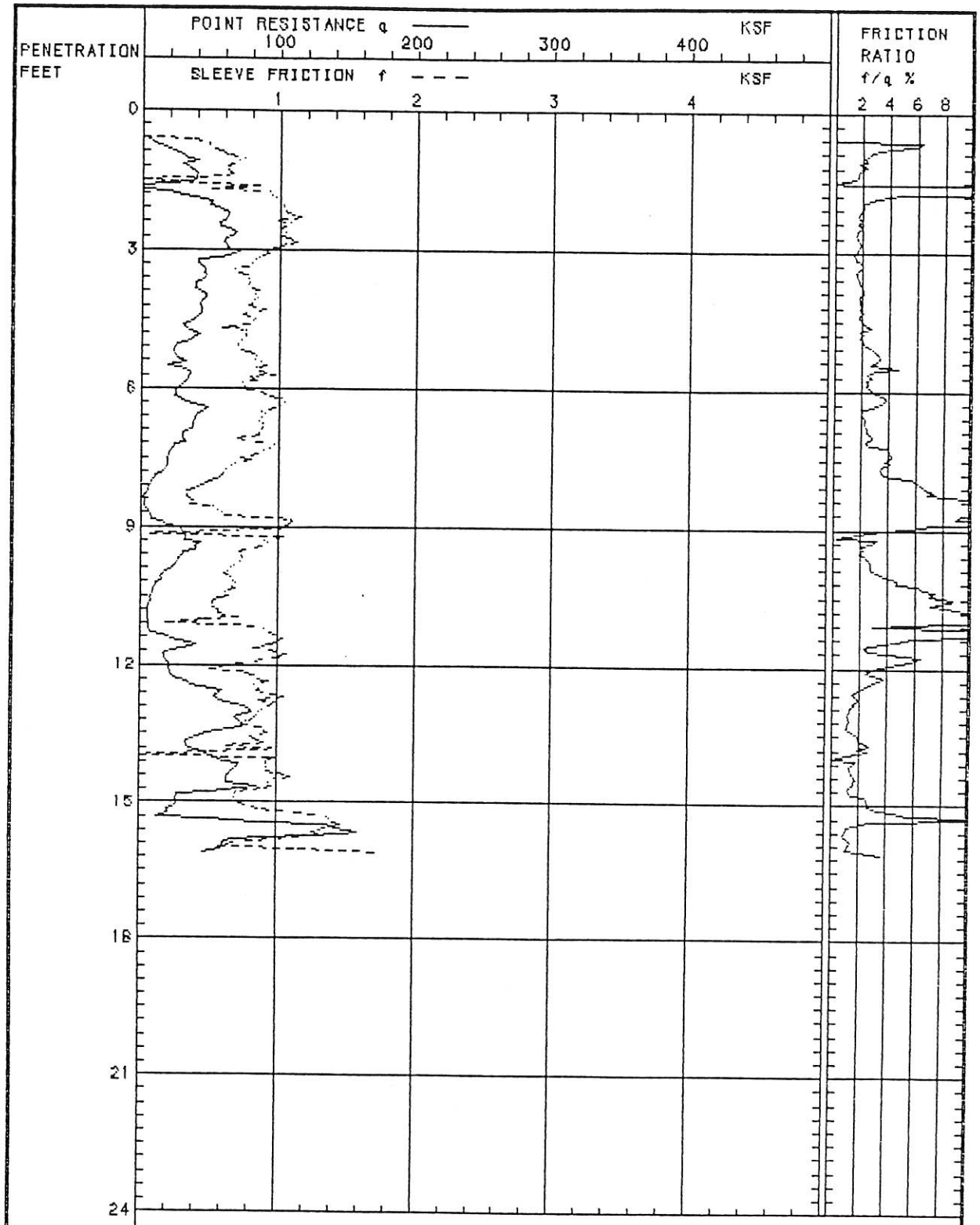
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 58S
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	164.80	2.77	1.68	SILTY SAND TO SANDY SILT	SM-ML	.03	26			100+	42	.50+
.80	151.76	1.55	1.02	SAND TO SILTY SAND	SM-SP	.05	18			100+	42	.50+
1.00	144.88	1.11	.76	SAND TO SILTY SAND	SM-SP	.06	17			100+	42	.50+
1.20	120.64	.98	.81	SAND TO SILTY SAND	SM-SP	.07	14			100+	42	.50+
1.40	147.57	1.10	.74	SAND TO SILTY SAND	SM-SP	.08	17			100+	42	.50+
1.60	182.25	.23	.12	SAND	SW-SP	.10	17			100+	44	.50+
1.80	162.16	1.16	.72	SAND TO SILTY SAND	SM-SP	.11	19			100+	42	.50+
2.00	154.71	1.35	.87	SAND TO SILTY SAND	SM-SP	.12	18			100+	42	.50+
2.20	184.95	1.53	.83	SAND TO SILTY SAND	SM-SP	.13	22			100+	42	.50+
2.40	220.50	1.71	.77	SAND TO SILTY SAND	SM-SP	.14	26			100+	42	.50+
2.60	152.24	5.11	3.36	SANDY SILT TO CLAYEY SILT	ML-MH	.13	29	11.267	13.5	100+	42	.50+
2.80	43.78	1.67	3.82	SILTY CLAY TO CLAY	CL-CH	.11	13	3.235	13.5			
3.00	160.49	1.34	.84	SAND TO SILTY SAND	SM-SP	.18	19			100+	42	.50+
3.20	186.68	1.39	.75	SAND TO SILTY SAND	SM-SP	.19	22			100+	42	.50+
3.40	194.31	1.43	.74	SAND TO SILTY SAND	SM-SP	.20	23			100+	42	.50+
3.60	185.33	1.17	.63	SAND TO SILTY SAND	SM-SP	.22	22			100+	42	.50+
3.80	174.24	1.16	.67	SAND TO SILTY SAND	SM-SP	.23	20			100+	42	.50+
4.00	146.08	1.00	.68	SAND TO SILTY SAND	SM-SP	.24	17			100+	42	.50+
4.20	191.80	1.18	.61	SAND TO SILTY SAND	SM-SP	.25	22			100+	42	.50+
4.40	202.11	1.22	.60	SAND TO SILTY SAND	SM-SP	.26	23			100+	42	.50+
4.60	182.86	.46	.25	SAND	SW-SP	.30	17			100+	44	.50+
4.80	.00	.16	999.00	ORGANIC MATERIAL	OL-OH	.14	1	-.011	13.5			
5.00	19.68	.09	.48	SANDY SILT TO CLAYEY SILT	ML-MH	.25	3	1.439	13.5	48	35	.15
5.20	74.64	.53	.70	SILTY SAND TO SANDY SILT	SM-ML	.29	11			79	39	.50+
5.40	107.47	.69	.64	SAND TO SILTY SAND	SM-SP	.32	12			90	41	.50+
5.60	98.79	.64	.65	SAND TO SILTY SAND	SM-SP	.34	11			86	41	.50+
5.80	19.09	.28	1.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.26	4	1.395	13.5			
6.00	77.17	.67	.87	SILTY SAND TO SANDY SILT	SM-ML	.33	12			78	39	.50+
6.20	86.89	.69	.79	SILTY SAND TO SANDY SILT	SM-ML	.34	13			82	39	.50+
6.40	80.29	.60	.75	SILTY SAND TO SANDY SILT	SM-ML	.35	12			78	39	.50+
6.60	90.99	.67	.74	SILTY SAND TO SANDY SILT	SM-ML	.36	14			82	40	.50+
6.80	87.61	.59	.67	SILTY SAND TO SANDY SILT	SM-ML	.37	13			80	39	.50+
7.00	86.37	.74	.85	SILTY SAND TO SANDY SILT	SM-ML	.38	13			79	39	.50+
7.20	75.16	.52	.69	SILTY SAND TO SANDY SILT	SM-ML	.40	12			74	39	.50+
7.40	70.33	.65	.92	SILTY SAND TO SANDY SILT	SM-ML	.41	11			71	38	.50+
7.60	78.26	.55	.71	SILTY SAND TO SANDY SILT	SM-ML	.42	12			74	39	.50+
7.80	80.63	.67	.83	SILTY SAND TO SANDY SILT	SM-ML	.43	12			75	39	.50+
8.00	69.25	.91	1.31	SILTY SAND TO SANDY SILT	SM-ML	.44	11			69	38	.50+
8.20	78.94	.52	.66	SILTY SAND TO SANDY SILT	SM-ML	.45	12			73	38	.50+
8.40	73.32	.28	.38	SILTY SAND TO SANDY SILT	SM-ML	.46	11			70	38	.50+
8.60	49.70	.38	.79	SILTY SAND TO SANDY SILT	SM-ML	.47	7			60	36	.21
8.80	42.31	.20	.47	SILTY SAND TO SANDY SILT	SM-ML	.48	6			54	36	.18
9.00	34.37	.45	1.30	SANDY SILT TO CLAYEY SILT	ML-MH	.45	6	2.513	13.5	43	35	.17
9.20	64.40	.74	1.15	SILTY SAND TO SANDY SILT	SM-ML	.51	10			65	37	.32
9.40	71.52	.61	.86	SILTY SAND TO SANDY SILT	SM-ML	.52	11			68	38	.41

9.60	67.88	.81	1.19	SILTY SAND TO SANDY SILT	SM-ML	.53	10			56	37	.34
9.80	53.24	.65	1.22	SANDY SILT TO CLAYEY SILT	ML-MH	.49	10	3.908	13.5	61	37	.23
10.00	64.46	.68	1.05	SILTY SAND TO SANDY SILT	SM-ML	.55	10			64	37	.28
10.20	54.65	.62	1.13	SANDY SILT TO CLAYEY SILT	ML-MH	.51	10	4.010	13.5	61	37	.23
10.40	55.97	.76	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.52	10	4.107	13.5	61	37	.23
10.60	59.54	.55	.92	SILTY SAND TO SANDY SILT	SM-ML	.59	9			61	37	.23
10.80	57.56	.35	.60	SILTY SAND TO SANDY SILT	SM-ML	.59	9			60	36	.21
11.00	57.92	.89	1.53	SANDY SILT TO CLAYEY SILT	ML-MH	.55	11	4.249	13.5	61	37	.23
11.20	55.52	.72	1.30	SANDY SILT TO CLAYEY SILT	ML-MH	.56	10	4.071	13.5	60	36	.22
11.40	57.06	.92	1.62	SANDY SILT TO CLAYEY SILT	ML-MH	.57	10	4.184	13.5	60	37	.22
11.60	74.28	1.13	1.52	SANDY SILT TO CLAYEY SILT	ML-MH	.58	14	5.459	13.5	66	37	.36
11.80	94.90	.93	.98	SILTY SAND TO SANDY SILT	SM-ML	.65	15			72	38	.50+
12.00	90.27	.65	.72	SILTY SAND TO SANDY SILT	SM-ML	.66	14			70	38	.50+
12.20	95.51	.91	.95	SILTY SAND TO SANDY SILT	SM-ML	.67	15			71	38	.50+
12.40	76.65	.68	.88	SILTY SAND TO SANDY SILT	SM-ML	.68	12			64	37	.29
12.60	67.65	.74	1.10	SILTY SAND TO SANDY SILT	SM-ML	.69	10			61	37	.23
12.80	61.13	.86	1.40	SANDY SILT TO CLAYEY SILT	ML-MH	.64	11	4.481	13.5	60	36	.22
13.00	43.80	.70	1.60	SANDY SILT TO CLAYEY SILT	ML-MH	.65	8	3.196	13.5	48	35	.16
13.20	32.74	.58	1.77	SANDY SILT TO CLAYEY SILT	ML-MH	.66	6	2.376	13.5	40	34	.14
13.40	28.95	.38	1.33	SANDY SILT TO CLAYEY SILT	ML-MH	.67	5	2.095	13.5	34	33	.13
13.60	45.76	.80	1.75	SANDY SILT TO CLAYEY SILT	ML-MH	.68	8	3.337	13.5	48	35	.16
13.80	70.47	.95	1.35	SILTY SAND TO SANDY SILT	SM-ML	.76	11			60	37	.22
14.00	98.63	.89	.90	SILTY SAND TO SANDY SILT	SM-ML	.77	15			69	38	.47
14.20	103.70	.93	.90	SILTY SAND TO SANDY SILT	SM-ML	.78	16			71	38	.50+
14.40	100.24	.59	.59	SAND TO SILTY SAND	SM-SP	.86	12			67	39	.39
14.60	80.52	.61	.76	SILTY SAND TO SANDY SILT	SM-ML	.80	12			63	37	.26
14.80	80.40	.70	.87	SILTY SAND TO SANDY SILT	SM-ML	.81	12			62	37	.25
15.00	64.01	.72	1.12	SILTY SAND TO SANDY SILT	SM-ML	.82	10			54	36	.19
15.20	60.26	.61	1.02	SILTY SAND TO SANDY SILT	SM-ML	.84	9			52	35	.18



RESULT OF CONE PENETRATION TEST

59N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

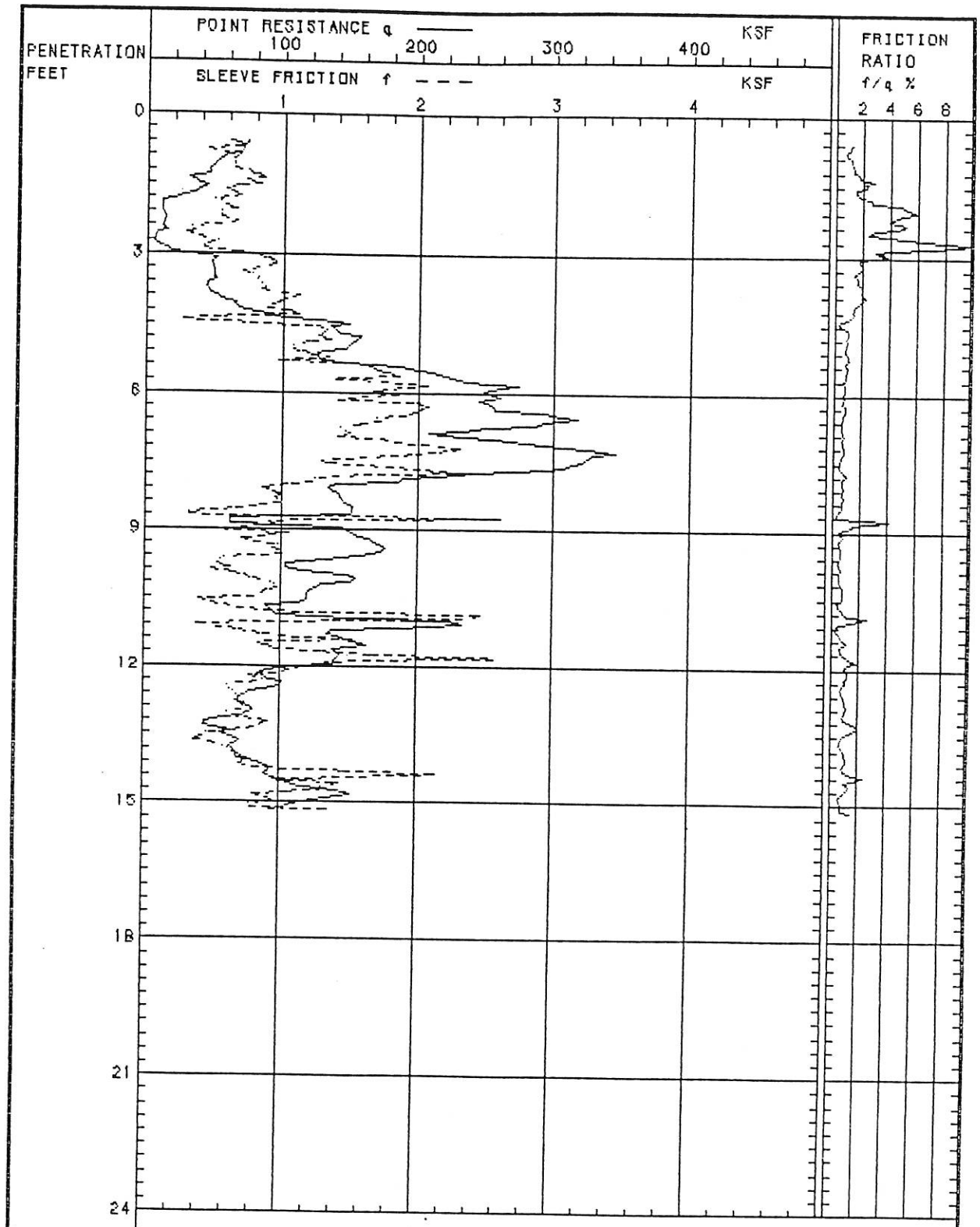
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 59N
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	3.94	.19	4.75	CLAY	CH	.02	1	.290	13.5			
.80	15.74	.51	3.22	CLAY	CH	.03	7	1.164	13.5			
1.00	30.99	.69	2.23	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	7	2.292	13.5			
1.20	30.99	.70	2.27	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	7	2.292	13.5			
1.40	39.60	.62	1.56	SANDY SILT TO CLAYEY SILT	ML-MH	.07	7	2.928	13.5	74	38	.50+
1.60	17.99	.58	3.23	SILTY CLAY TO CLAY	CL-CH	.06	5	1.328	13.5			
1.80	24.59	.94	3.81	CLAY	CH	.07	11	1.816	13.5			
2.00	50.06	1.00	2.00	SANDY SILT TO CLAYEY SILT	ML-MH	.10	9	3.700	13.5	78	39	.50+
2.20	61.98	.56	.91	SILTY SAND TO SANDY SILT	SM-ML	.12	9			85	40	.50+
2.40	58.30	1.03	1.77	SANDY SILT TO CLAYEY SILT	ML-MH	.12	11	4.310	13.5	82	40	.50+
2.60	66.16	.98	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.13	12	4.891	13.5	87	40	.50+
2.80	60.26	1.09	1.81	SANDY SILT TO CLAYEY SILT	ML-MH	.14	11	4.454	13.5	82	40	.50+
3.00	66.64	.94	1.42	SANDY SILT TO CLAYEY SILT	ML-MH	.15	12	4.925	13.5	85	40	.50+
3.20	49.47	.84	1.70	SANDY SILT TO CLAYEY SILT	ML-MH	.16	9	3.653	13.5	74	38	.50+
3.40	45.26	.73	1.61	SANDY SILT TO CLAYEY SILT	ML-MH	.17	8	3.340	13.5	71	38	.50+
3.60	46.25	.80	1.74	SANDY SILT TO CLAYEY SILT	ML-MH	.18	8	3.412	13.5	71	38	.50+
3.80	38.99	.80	2.06	SANDY SILT TO CLAYEY SILT	ML-MH	.19	7	2.874	13.5	66	37	.50+
4.00	46.98	.83	1.78	SANDY SILT TO CLAYEY SILT	ML-MH	.20	9	3.465	13.5	70	38	.50+
4.20	42.74	.84	1.96	SANDY SILT TO CLAYEY SILT	ML-MH	.21	8	3.150	13.5	67	37	.50+
4.40	43.05	.75	1.74	SANDY SILT TO CLAYEY SILT	ML-MH	.22	8	3.172	13.5	67	37	.50+
4.60	33.72	.84	2.48	CLAYEY SILT TO SILTY CLAY	MH-CL	.21	8	2.482	13.5			
4.80	38.84	.76	1.96	SANDY SILT TO CLAYEY SILT	ML-MH	.24	7	2.859	13.5	64	37	.33
5.00	31.51	.74	2.35	CLAYEY SILT TO SILTY CLAY	MH-CL	.22	7	2.318	13.5			
5.20	23.61	.75	3.16	SILTY CLAY TO CLAY	CL-CH	.21	7	1.734	13.5			
5.40	30.23	.82	2.71	CLAYEY SILT TO SILTY CLAY	MH-CL	.24	7	2.222	13.5			
5.60	31.39	.85	2.71	CLAYEY SILT TO SILTY CLAY	MH-CL	.25	7	2.307	13.5			
5.80	33.95	.82	2.40	CLAYEY SILT TO SILTY CLAY	MH-CL	.26	8	2.495	13.5			
6.00	26.57	.69	2.59	CLAYEY SILT TO SILTY CLAY	MH-CL	.27	6	1.948	13.5			
6.20	26.30	.98	3.71	SILTY CLAY TO CLAY	CL-CH	.25	8	1.930	13.5			
6.40	46.22	.99	2.14	SANDY SILT TO CLAYEY SILT	ML-MH	.32	8	3.400	13.5	64	37	.31
6.60	40.35	.89	2.21	SANDY SILT TO CLAYEY SILT	ML-MH	.33	7	2.964	13.5	61	37	.23
6.80	37.64	.81	2.16	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	9	2.765	13.5			
7.00	30.38	.83	2.74	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	7	2.227	13.5			
7.20	28.57	.87	3.06	SILTY CLAY TO CLAY	CL-CH	.29	9	2.095	13.5			
7.40	20.79	.86	4.12	CLAY	CH	.30	9	1.518	13.5			
7.60	19.43	.74	3.82	CLAY	CH	.30	9	1.417	13.5			
7.80	16.25	.37	2.27	SILTY CLAY TO CLAY	CL-CH	.31	5	1.181	13.5			
8.00	8.49	.52	6.07	CLAY	CH	.32	4	.605	13.5			
8.20	5.17	.21	4.15	CLAY	CH	.33	2	.359	13.5			
8.40	2.21	.36	16.20	ORGANIC MATERIAL	OL-OH	.25	1	.145	13.5			
8.60	3.92	.33	8.29	ORGANIC MATERIAL	OL-OH	.26	1	.272	13.5			
8.80	7.13	.96	13.53	ORGANIC MATERIAL	OL-OH	.26	3	.509	13.5			
9.00	23.80	1.06	4.43	CLAY	CH	.36	11	1.736	13.5			
9.20	32.72	.27	.84	SANDY SILT TO CLAYEY SILT	ML-MH	.46	6	2.389	13.5	40	35	.15
9.40	41.85	.91	2.17	SANDY SILT TO CLAYEY SILT	ML-MH	.47	8	3.065	13.5	55	36	.19

9.60	30.51	.85	2.78	CLAYEY SILT TO SILTY CLAY	MH-CL	.43	7	2.228	13.5			
9.80	25.84	.70	2.70	CLAYEY SILT TO SILTY CLAY	MH-CL	.44	6	1.881	13.5			
10.00	17.47	.63	3.58	CLAY	CH	.40	8	1.265	13.5			
10.20	12.94	.70	5.44	CLAY	CH	.41	6	.928	13.5			
10.40	9.10	.66	7.21	CLAY	CH	.42	4	.644	13.5			
10.60	7.13	.37	5.17	CLAY	CH	.42	3	.497	13.5			
10.80	5.41	.55	10.14	ORGANIC MATERIAL	OL-OH	.32	2	.377	13.5			
11.00	5.41	.41	7.61	ORGANIC MATERIAL	OL-OH	.33	2	.376	13.5			
11.20	6.40	.72	11.23	ORGANIC MATERIAL	OL-OH	.34	3	.449	13.5			
11.40	19.88	1.03	5.16	CLAY	CH	.46	9	1.439	13.5			
11.60	36.60	.94	2.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.52	8	2.672	13.5			
11.80	17.21	1.02	5.95	CLAY	CH	.47	9	1.240	13.5			
12.00	21.15	.77	3.64	CLAY	CH	.48	10	1.531	13.5			
12.20	22.25	.75	3.39	SILTY CLAY TO CLAY	CL-CH	.49	7	1.612	13.5			
12.40	35.39	.89	2.51	CLAYEY SILT TO SILTY CLAY	MH-CL	.56	8	2.580	13.5			
12.60	57.96	.93	1.61	SANDY SILT TO CLAYEY SILT	ML-MH	.63	11	4.247	13.5	59	36	.21
12.80	60.87	.97	1.60	SANDY SILT TO CLAYEY SILT	ML-MH	.64	11	4.461	13.5	60	36	.21
13.00	81.16	1.03	1.27	SILTY SAND TO SANDY SILT	SM-ML	.71	12			65	37	.31
13.20	71.26	.80	1.12	SILTY SAND TO SANDY SILT	SM-ML	.73	11			61	37	.24
13.40	66.33	.97	1.47	SANDY SILT TO CLAYEY SILT	ML-MH	.67	12	4.864	13.5	61	37	.23
13.60	38.56	.86	2.24	CLAYEY SILT TO SILTY CLAY	MH-CL	.61	9	2.811	13.5			
13.80	35.28	.95	2.69	CLAYEY SILT TO SILTY CLAY	MH-CL	.62	8	2.568	13.5			
14.00	53.57	.23	.42	SILTY SAND TO SANDY SILT	SM-ML	.77	8			50	35	.17
14.20	72.08	.93	1.29	SILTY SAND TO SANDY SILT	SM-ML	.79	11			60	37	.22
14.40	64.59	1.06	1.64	SANDY SILT TO CLAYEY SILT	ML-MH	.72	12	4.731	13.5	59	36	.21
14.60	74.53	.96	1.28	SILTY SAND TO SANDY SILT	SM-ML	.80	11			61	37	.23
14.80	40.10	.35	.87	SANDY SILT TO CLAYEY SILT	ML-MH	.74	7	2.916	13.5	42	34	.15
15.00	27.36	.70	2.57	CLAYEY SILT TO SILTY CLAY	MH-CL	.67	6	1.977	13.5			
15.20	20.41	1.02	4.98	CLAY	CH	.61	9	1.467	13.5			
15.40	67.96	1.40	2.06	SANDY SILT TO CLAYEY SILT	ML-MH	.77	13	4.977	13.5	59	36	.21
15.60	151.58	1.31	.87	SAND TO SILTY SAND	SM-SP	.94	18			80	40	.50+
15.80	80.75	1.02	1.26	SILTY SAND TO SANDY SILT	SM-ML	.87	12			61	37	.24
16.00	60.33	1.08	1.79	SANDY SILT TO CLAYEY SILT	ML-MH	.80	11	4.410	13.5	53	35	.18



RESULT OF CONE PENETRATION TEST

59S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

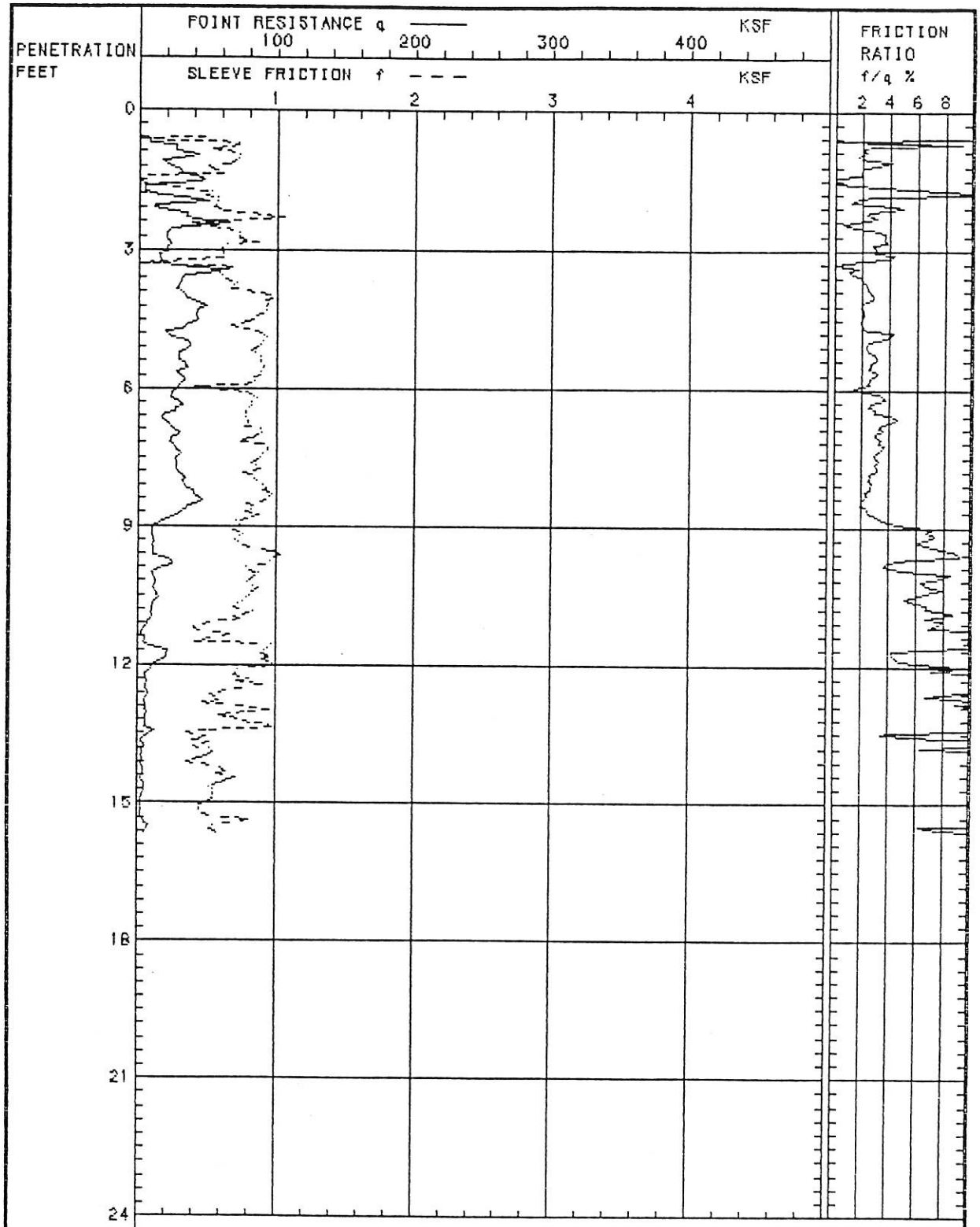
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 59S
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	63.95	.73	1.15	SILTY SAND TO SANDY SILT	SM-ML	.03	10			100+	42	.50+
.80	69.12	.10	.14	SILTY SAND TO SANDY SILT	SM-ML	.04	11			100+	42	.50+
1.00	52.58	.58	1.10	SANDY SILT TO CLAYEY SILT	ML-MH	.05	10	3.891	13.5	86	40	.50+
1.20	46.24	.68	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.06	8	3.421	13.5	79	39	.50+
1.40	32.16	.79	2.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.06	7	2.377	13.5			
1.60	41.82	.62	1.49	SANDY SILT TO CLAYEY SILT	ML-MH	.08	8	3.092	13.5	75	39	.50+
1.80	22.76	.64	2.81	SILTY CLAY TO CLAY	CL-CH	.07	7	1.681	13.5			
2.00	10.95	.56	5.13	CLAY	CH	.08	5	.805	13.5			
2.20	13.28	.27	2.04	SILTY CLAY TO CLAY	CL-CH	.09	4	.977	13.5			
2.40	11.56	.44	3.77	CLAY	CH	.10	5	.849	13.5			
2.60	6.64	.33	5.00	CLAY	CH	.10	3	.484	13.5			
2.80	7.62	.46	5.98	CLAY	CH	.11	3	.556	13.5			
3.00	30.70	.54	1.77	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	7	2.264	13.5			
3.20	47.84	.94	1.97	SANDY SILT TO CLAYEY SILT	ML-MH	.16	9	3.532	13.5	73	38	.50+
3.40	49.32	.53	1.07	SANDY SILT TO CLAYEY SILT	ML-MH	.17	9	3.640	13.5	73	38	.50+
3.60	47.61	.86	1.81	SANDY SILT TO CLAYEY SILT	ML-MH	.18	9	3.513	13.5	71	38	.50+
3.80	46.27	.95	2.06	SANDY SILT TO CLAYEY SILT	ML-MH	.19	8	3.413	13.5	70	38	.50+
4.00	60.48	.98	1.62	SANDY SILT TO CLAYEY SILT	ML-MH	.20	11	4.465	13.5	77	39	.50+
4.20	70.27	1.01	1.43	SANDY SILT TO CLAYEY SILT	ML-MH	.21	13	5.190	13.5	82	40	.50+
4.40	113.56	.27	.24	SAND TO SILTY SAND	SM-SP	.26	13			98	42	.50+
4.60	136.69	.82	.60	SAND TO SILTY SAND	SM-SP	.28	16			100+	42	.50+
4.80	156.44	1.31	.84	SAND TO SILTY SAND	SM-SP	.29	18			100+	42	.50+
5.00	147.59	1.02	.69	SAND TO SILTY SAND	SM-SP	.30	17			100+	42	.50+
5.20	125.10	1.15	.92	SAND TO SILTY SAND	SM-SP	.31	14			98	42	.50+
5.40	176.28	2.06	1.17	SAND TO SILTY SAND	SM-SP	.32	21			100+	42	.50+
5.60	215.06	1.82	.85	SAND TO SILTY SAND	SM-SP	.34	25			100+	42	.50+
5.80	253.43	1.96	.77	SAND	SW-SP	.38	24			100+	44	.50+
6.00	251.11	1.70	.68	SAND	SW-SP	.39	24			100+	44	.50+
6.20	247.54	1.58	.64	SAND	SW-SP	.40	23			100+	44	.50+
6.40	274.58	2.01	.73	SAND	SW-SP	.42	26			100+	44	.50+
6.60	304.62	1.71	.56	SAND	SW-SP	.43	29			100+	44	.50+
6.80	242.11	2.38	.98	SAND TO SILTY SAND	SM-SP	.41	28			100+	42	.50+
7.00	243.76	1.67	.69	SAND	SW-SP	.45	23			100+	44	.50+
7.20	315.73	2.23	.71	SAND	SW-SP	.47	30			100+	44	.50+
7.40	326.79	1.74	.53	SAND	SW-SP	.48	31			100+	44	.50+
7.60	310.20	1.03	.33	SAND	SW-SP	.49	29			100+	44	.50+
7.80	229.02	1.67	.73	SAND TO SILTY SAND	SM-SP	.47	27			100+	42	.50+
8.00	163.58	1.15	.70	SAND TO SILTY SAND	SM-SP	.48	19			97	42	.50+
8.20	139.94	.97	.69	SAND TO SILTY SAND	SM-SP	.49	16			91	41	.50+
8.40	145.11	.98	.68	SAND TO SILTY SAND	SM-SP	.50	17			92	42	.50+
8.60	151.89	.56	.37	SAND TO SILTY SAND	SM-SP	.52	18			93	42	.50+
8.80	62.48	1.77	2.84	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	14	4.598	13.5			
9.00	145.34	.75	.51	SAND TO SILTY SAND	SM-SP	.54	17			90	41	.50+
9.20	160.57	.76	.47	SAND TO SILTY SAND	SM-SP	.55	19			94	42	.50+
9.40	174.60	.96	.55	SAND TO SILTY SAND	SM-SP	.56	20			97	42	.50+

9.60	156.83	.80	.51	SAND TO SILTY SAND	SM-SP	.58	18			92	41	.50+
9.80	103.31	.59	.56	SAND TO SILTY SAND	SM-SP	.59	12			77	40	.50+
10.00	139.07	.69	.50	SAND TO SILTY SAND	SM-SP	.60	16			86	41	.50+
10.20	140.60	1.11	.79	SAND TO SILTY SAND	SM-SP	.61	16			86	41	.50+
10.40	120.80	.89	.74	SAND TO SILTY SAND	SM-SP	.62	14			81	40	.50+
10.60	116.38	.61	.52	SAND TO SILTY SAND	SM-SP	.64	13			80	40	.50+
10.80	93.57	.96	1.03	SILTY SAND TO SANDY SILT	SM-ML	.59	14			73	38	.50+
11.00	188.10	1.19	.63	SAND TO SILTY SAND	SM-SP	.66	22			96	42	.50+
11.20	162.48	.60	.37	SAND TO SILTY SAND	SM-SP	.67	19			87	41	.50+
11.40	144.51	1.36	.94	SAND TO SILTY SAND	SM-SP	.68	17			85	41	.50+
11.60	151.48	.86	.57	SAND TO SILTY SAND	SM-SP	.70	18			86	41	.50+
11.80	142.68	1.65	1.16	SAND TO SILTY SAND	SM-SP	.71	17			84	41	.50+
12.00	124.48	1.16	.93	SAND TO SILTY SAND	SM-SP	.72	14			79	40	.50+
12.20	85.96	.88	1.03	SILTY SAND TO SANDY SILT	SM-ML	.67	13			68	38	.41
12.40	101.36	.47	.47	SAND TO SILTY SAND	SM-SP	.74	12			71	39	.50+
12.60	76.29	.57	.75	SILTY SAND TO SANDY SILT	SM-ML	.69	12			64	37	.28
12.80	70.35	.74	1.05	SILTY SAND TO SANDY SILT	SM-ML	.70	11			62	37	.24
13.00	78.63	.71	.91	SILTY SAND TO SANDY SILT	SM-ML	.71	12			64	37	.29
13.20	52.53	.83	1.59	SANDY SILT TO CLAYEY SILT	ML-MH	.66	10	3.842	13.5	53	36	.19
13.40	58.16	.80	1.37	SANDY SILT TO CLAYEY SILT	ML-MH	.67	11	4.259	13.5	57	36	.20
13.60	67.69	.50	.73	SILTY SAND TO SANDY SILT	SM-ML	.75	10			60	36	.21
13.80	64.92	.28	.43	SILTY SAND TO SANDY SILT	SM-ML	.76	10			59	36	.20
14.00	68.99	.74	1.07	SILTY SAND TO SANDY SILT	SM-ML	.77	11			60	36	.21
14.20	90.44	.76	.84	SILTY SAND TO SANDY SILT	SM-ML	.78	14			66	37	.35
14.40	91.94	1.86	2.02	SANDY SILT TO CLAYEY SILT	ML-MH	.72	17	6.757	13.5	68	38	.44
14.60	111.09	1.22	1.10	SILTY SAND TO SANDY SILT	SM-ML	.80	17			72	38	.50+
14.80	150.74	.54	.36	SAND TO SILTY SAND	SM-SP	.89	18			81	40	.50+
15.00	113.46	.94	.83	SAND TO SILTY SAND	SM-SP	.90	13			70	39	.50+



RESULT OF CONE PENETRATION TEST

57N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

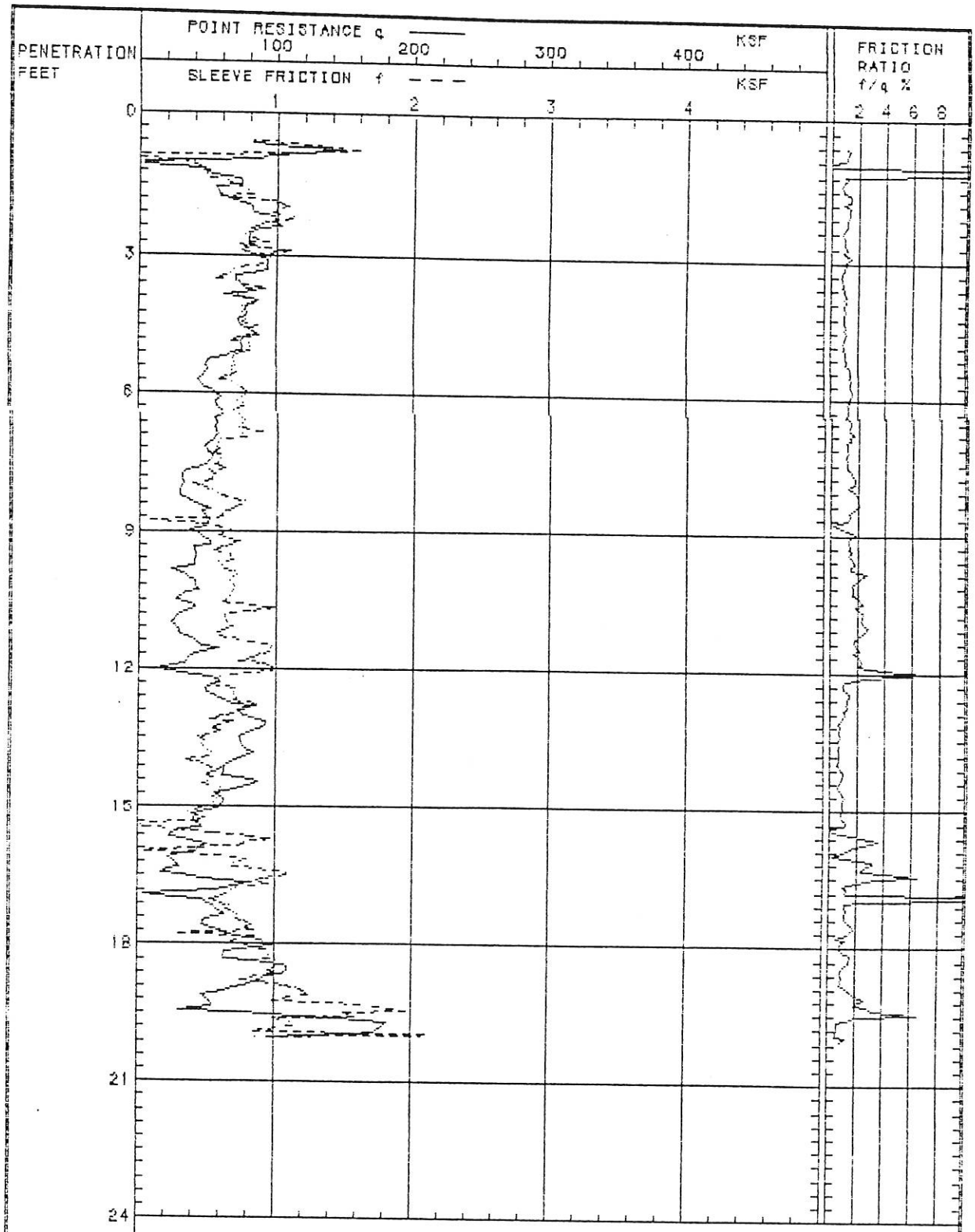
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 55N
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	43.53	.63	1.45	SANDY SILT TO CLAYEY SILT	ML-MH	.03	8	3.222	13.5	80	39	.50+
.80	71.33	.63	.89	SILTY SAND TO SANDY SILT	SM-ML	.04	11			100+	42	.50+
1.00	49.44	.47	.94	SANDY SILT TO CLAYEY SILT	ML-MH	.05	9	3.659	13.5	83	40	.50+
1.20	17.10	.35	2.07	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	4	1.262	13.5			
1.40	16.49	.16	.96	CLAYEY SILT TO SILTY CLAY	MH-CL	.06	3	1.217	13.5			
1.60	16.72	.71	4.25	CLAY	CH	.06	8	1.234	13.5			
1.80	34.43	1.02	2.95	CLAYEY SILT TO SILTY CLAY	MH-CL	.08	8	2.544	13.5			
2.00	51.96	.98	1.88	SANDY SILT TO CLAYEY SILT	ML-MH	.10	9	3.841	13.5	80	39	.50+
2.20	40.81	.68	1.67	SANDY SILT TO CLAYEY SILT	ML-MH	.11	7	3.015	13.5	72	38	.50+
2.40	67.40	.99	1.46	SANDY SILT TO CLAYEY SILT	ML-MH	.12	12	4.983	13.5	89	40	.50+
2.60	76.98	.84	1.09	SILTY SAND TO SANDY SILT	SM-ML	.14	12			92	41	.50+
2.80	67.40	.73	1.08	SILTY SAND TO SANDY SILT	SM-ML	.15	10			85	40	.50+
3.00	58.80	.32	.55	SILTY SAND TO SANDY SILT	SM-ML	.17	9			79	39	.50+
3.20	37.12	.28	.76	SANDY SILT TO CLAYEY SILT	ML-MH	.16	7	2.738	13.5	67	37	.50+
3.40	34.55	.71	2.06	CLAYEY SILT TO SILTY CLAY	MH-CL	.15	8	2.548	13.5			
3.60	49.18	.74	1.51	SANDY SILT TO CLAYEY SILT	ML-MH	.18	9	3.629	13.5	72	39	.50+
3.80	60.02	.67	1.12	SILTY SAND TO SANDY SILT	SM-ML	.21	9			77	37	.50+
4.00	44.54	.64	1.45	SANDY SILT TO CLAYEY SILT	ML-MH	.20	8	3.284	13.5	69	38	.50+
4.20	52.88	.29	.55	SILTY SAND TO SANDY SILT	SM-ML	.23	8			71	38	.50+
4.40	49.10	.61	1.24	SANDY SILT TO CLAYEY SILT	ML-MH	.22	9	3.621	13.5	70	38	.50+
4.60	46.01	.32	.69	SILTY SAND TO SANDY SILT	SM-ML	.25	7			67	37	.50+
4.80	40.22	.34	.84	SANDY SILT TO CLAYEY SILT	ML-MH	.24	7	2.961	13.5	64	37	.37
5.00	37.89	.66	1.73	SANDY SILT TO CLAYEY SILT	ML-MH	.25	7	2.788	13.5	63	37	.29
5.20	32.00	.61	1.90	CLAYEY SILT TO SILTY CLAY	MH-CL	.23	7	2.353	13.5			
5.40	26.63	.59	2.22	CLAYEY SILT TO SILTY CLAY	MH-CL	.24	6	1.954	13.5			
5.60	33.43	.65	1.95	CLAYEY SILT TO SILTY CLAY	MH-CL	.25	8	2.458	13.5			
5.80	33.34	.63	1.90	CLAYEY SILT TO SILTY CLAY	MH-CL	.26	7	2.450	13.5			
6.00	33.94	.62	1.82	SANDY SILT TO CLAYEY SILT	ML-MH	.30	6	2.492	13.5	58	36	.20
6.20	40.83	.74	1.81	SANDY SILT TO CLAYEY SILT	ML-MH	.31	7	3.002	13.5	62	37	.25
6.40	46.73	.69	1.49	SANDY SILT TO CLAYEY SILT	ML-MH	.32	8	3.438	13.5	64	37	.32
6.60	43.05	.20	.46	SILTY SAND TO SANDY SILT	SM-ML	.36	6			61	37	.23
6.80	39.19	.58	1.47	SANDY SILT TO CLAYEY SILT	ML-MH	.34	7	2.878	13.5	60	36	.22
7.00	46.48	.62	1.34	SANDY SILT TO CLAYEY SILT	ML-MH	.35	8	3.417	13.5	63	37	.27
7.20	44.82	.62	1.37	SANDY SILT TO CLAYEY SILT	ML-MH	.36	8	3.294	13.5	62	37	.25
7.40	43.81	.55	1.25	SANDY SILT TO CLAYEY SILT	ML-MH	.37	8	3.218	13.5	61	37	.23
7.60	32.98	.55	1.66	SANDY SILT TO CLAYEY SILT	ML-MH	.38	6	2.414	13.5	52	35	.17
7.80	28.78	.53	1.84	CLAYEY SILT TO SILTY CLAY	MH-CL	.35	6	2.106	13.5			
8.00	25.83	.56	2.15	CLAYEY SILT TO SILTY CLAY	MH-CL	.36	6	1.887	13.5			
8.20	11.55	.36	3.09	CLAY	CH	.33	5	.831	13.5			
8.40	4.93	.03	.70	SENSITIVE FINE GRAINED	OL-CH	.25	1	.346	13.5			
8.60	4.55	.07	1.57	SENSITIVE FINE GRAINED	OL-CH	.26	1	.318	13.5			
8.80	4.31	.11	2.48	CLAY	CH	.35	2	.293	13.5			
9.00	12.93	.88	6.81	CLAY	CH	.36	6	.931	13.5			
9.20	24.10	.55	2.27	CLAYEY SILT TO SILTY CLAY	MH-CL	.41	5	1.754	13.5			
9.40	59.67	.90	1.51	SANDY SILT TO CLAYEY SILT	ML-MH	.47	11	4.385	13.5	84	37	.30

9.60	77.51	.85	1.09	SILTY SAND TO SANDY SILT	SM-ML	.53	12			69	33	.30
9.80	50.76	.36	.71	SILTY SAND TO SANDY SILT	SM-ML	.54	9			59	36	.20
10.00	45.49	.68	1.49	SANDY SILT TO CLAYEY SILT	ML-MH	.50	8	3.333	13.5	56	36	.19
10.20	56.13	.58	1.03	SILTY SAND TO SANDY SILT	SM-ML	.56	8			60	36	.22
10.40	46.72	.51	1.10	SANDY SILT TO CLAYEY SILT	ML-MH	.52	8	3.422	13.5	56	36	.19
10.60	40.07	.56	1.39	SANDY SILT TO CLAYEY SILT	ML-MH	.53	7	2.929	13.5	50	35	.17
10.80	47.95	.29	.59	SILTY SAND TO SANDY SILT	SM-ML	.59	7			53	36	.18
11.00	41.14	.58	1.41	SANDY SILT TO CLAYEY SILT	ML-MH	.55	7	3.006	13.5	50	35	.17
11.20	42.59	.48	1.13	SANDY SILT TO CLAYEY SILT	ML-MH	.56	8	3.113	13.5	51	35	.17
11.40	37.93	.52	1.36	SANDY SILT TO CLAYEY SILT	ML-MH	.57	7	2.767	13.5	47	35	.16
11.60	32.23	.56	1.73	SANDY SILT TO CLAYEY SILT	ML-MH	.58	6	2.344	13.5	42	34	.15
11.80	38.57	.66	1.72	SANDY SILT TO CLAYEY SILT	ML-MH	.59	7	2.813	13.5	46	35	.16
12.00	42.47	.61	1.44	SANDY SILT TO CLAYEY SILT	ML-MH	.60	8	3.101	13.5	49	35	.17
12.20	37.91	.25	.67	SANDY SILT TO CLAYEY SILT	ML-MH	.61	7	2.763	13.5	45	34	.16
12.40	24.63	.66	2.69	CLAYEY SILT TO SILTY CLAY	MH-CL	.56	5	1.783	13.5			
12.60	33.89	.78	2.31	CLAYEY SILT TO SILTY CLAY	MH-CL	.57	8	2.468	13.5			
12.80	25.13	.65	2.57	CLAYEY SILT TO SILTY CLAY	MH-CL	.58	6	1.818	13.5			
13.00	20.66	.48	2.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.58	4	1.487	13.5			
13.20	22.61	.73	3.25	SILTY CLAY TO CLAY	CL-CH	.53	7	1.636	13.5			
13.40	26.09	.68	2.59	CLAYEY SILT TO SILTY CLAY	MH-CL	.60	6	1.888	13.5			
13.60	34.64	.67	1.95	CLAYEY SILT TO SILTY CLAY	MH-CL	.61	8	2.520	13.5			
13.80	38.16	.54	1.42	SANDY SILT TO CLAYEY SILT	ML-MH	.69	7	2.776	13.5	42	34	.15
14.00	30.74	.53	1.72	CLAYEY SILT TO SILTY CLAY	MH-CL	.63	7	2.230	13.5			
14.20	29.77	.54	1.80	CLAYEY SILT TO SILTY CLAY	MH-CL	.64	7	2.158	13.5			
14.40	43.48	.53	1.23	SANDY SILT TO CLAYEY SILT	ML-MH	.72	8	3.167	13.5	45	34	.16
14.60	47.31	.81	1.71	SANDY SILT TO CLAYEY SILT	ML-MH	.73	9	3.450	13.5	47	35	.16
14.80	51.09	.69	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.74	9	3.729	13.5	49	35	.17
15.00	75.54	.77	1.02	SILTY SAND TO SANDY SILT	SM-ML	.82	12			61	37	.23
15.20	57.89	.69	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	.76	11	4.232	13.5	53	35	.18
15.40	56.65	.44	.78	SILTY SAND TO SANDY SILT	SM-ML	.85	9			49	35	.17
15.60	30.66	.70	2.29	CLAYEY SILT TO SILTY CLAY	MH-CL	.70	7	2.219	13.5			
15.80	34.53	.62	1.78	SANDY SILT TO CLAYEY SILT	ML-MH	.79	6	2.499	13.5	35	33	.14
16.00	34.94	.75	2.15	CLAYEY SILT TO SILTY CLAY	MH-CL	.72	8	2.535	13.5			



RESULT OF CONE PENETRATION TEST

55M

JOB NUMBER: 01870206
CONE NUMBER: 001
LOCATION: ISLE DERNIERES

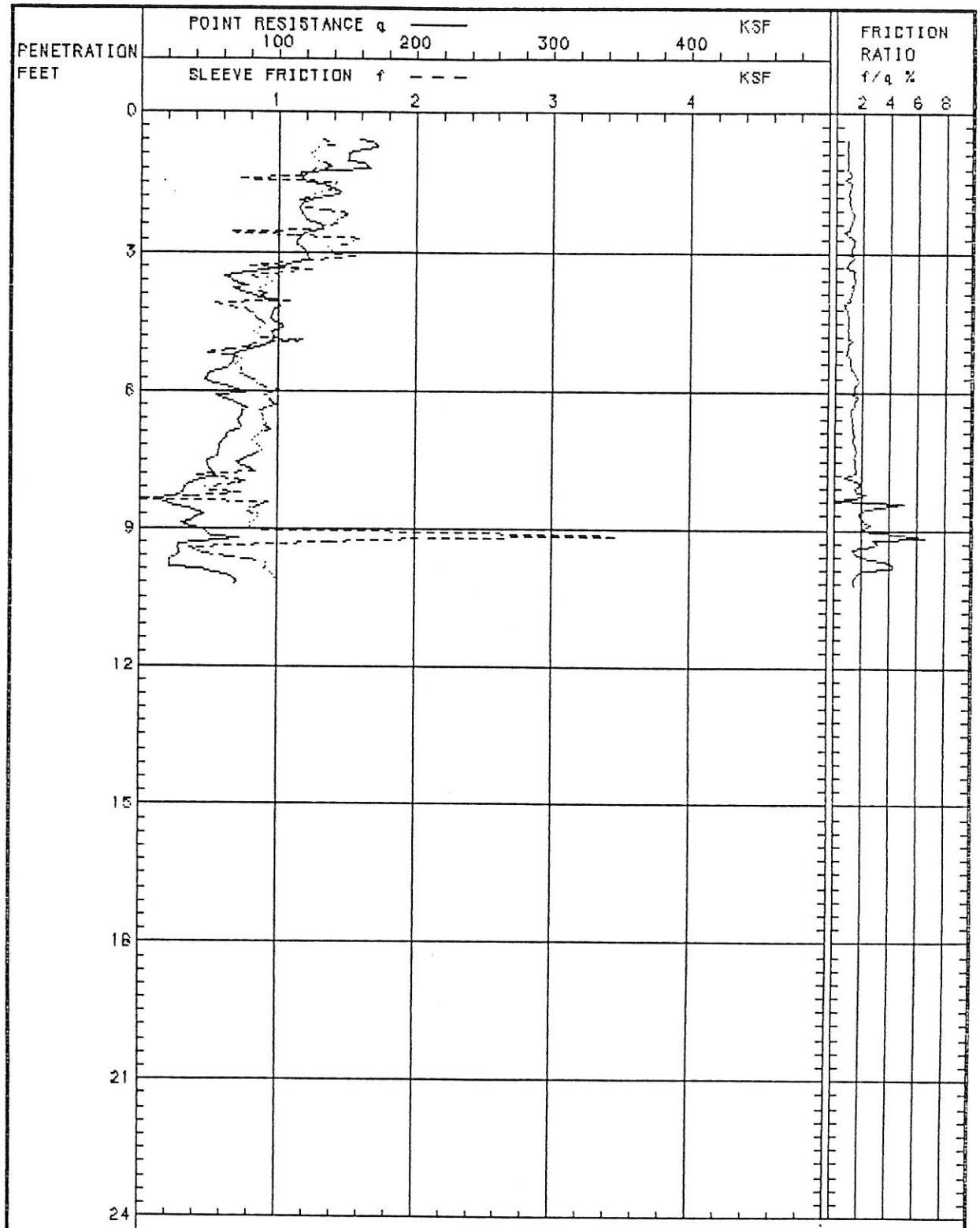
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/11/87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870203
BORING NO. : 55M
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	82.65	.96	1.16	SILTY SAND TO SANDY SILT	SM-ML	.03	13			100+	42	.50+
.80	135.16	1.20	.89	SAND TO SILTY SAND	SM-SP	.05	16			100+	42	.50+
1.00	45.54	.20	.43	SILTY SAND TO SANDY SILT	SM-ML	.05	7			79	39	.50+
1.20	45.75	.49	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	.06	8	3.384	13.5	79	39	.50+
1.40	73.54	.26	.35	SILTY SAND TO SANDY SILT	SM-ML	.08	11			100+	42	.50+
1.60	56.02	.79	1.41	SANDY SILT TO CLAYEY SILT	ML-MH	.08	10	4.144	13.5	85	40	.50+
1.80	65.42	.77	1.18	SILTY SAND TO SANDY SILT	SM-ML	.10	10			90	41	.50+
2.00	81.91	1.05	1.29	SILTY SAND TO SANDY SILT	SM-ML	.11	13			100+	42	.50+
2.20	98.63	1.11	1.13	SILTY SAND TO SANDY SILT	SM-ML	.12	15			100+	42	.50+
2.40	95.70	.83	.87	SILTY SAND TO SANDY SILT	SM-ML	.13	15			100+	42	.50+
2.60	79.76	.84	1.05	SILTY SAND TO SANDY SILT	SM-ML	.14	12			94	41	.50+
2.80	81.18	.94	1.16	SILTY SAND TO SANDY SILT	SM-ML	.15	12			93	41	.50+
3.00	86.50	.89	1.03	SILTY SAND TO SANDY SILT	SM-ML	.17	13			95	41	.50+
3.20	93.47	.85	.91	SILTY SAND TO SANDY SILT	SM-ML	.18	14			98	42	.50+
3.40	76.15	.65	.85	SILTY SAND TO SANDY SILT	SM-ML	.19	12			87	40	.50+
3.60	73.54	.72	.98	SILTY SAND TO SANDY SILT	SM-ML	.20	11			85	40	.50+
3.80	73.97	1.00	1.36	SILTY SAND TO SANDY SILT	SM-ML	.21	11			84	40	.50+
4.00	83.40	.85	1.01	SILTY SAND TO SANDY SILT	SM-ML	.22	13			88	40	.50+
4.20	77.97	.82	1.05	SILTY SAND TO SANDY SILT	SM-ML	.23	12			84	40	.50+
4.40	72.43	.77	1.07	SILTY SAND TO SANDY SILT	SM-ML	.24	11			81	39	.50+
4.60	80.67	.85	1.05	SILTY SAND TO SANDY SILT	SM-ML	.25	12			84	40	.50+
4.80	75.83	.78	1.02	SILTY SAND TO SANDY SILT	SM-ML	.26	12			81	39	.50+
5.00	75.27	.81	1.07	SILTY SAND TO SANDY SILT	SM-ML	.27	12			80	39	.50+
5.20	58.95	.70	1.19	SANDY SILT TO CLAYEY SILT	ML-MH	.26	11	4.347	13.5	73	38	.50+
5.40	49.11	.69	1.40	SANDY SILT TO CLAYEY SILT	ML-MH	.27	9	3.618	13.5	69	38	.50+
5.60	47.23	.72	1.53	SANDY SILT TO CLAYEY SILT	ML-MH	.28	9	3.478	13.5	66	37	.43
5.80	45.37	.72	1.58	SANDY SILT TO CLAYEY SILT	ML-MH	.29	8	3.340	13.5	65	37	.35
6.00	55.83	.79	1.41	SANDY SILT TO CLAYEY SILT	ML-MH	.30	10	4.113	13.5	69	38	.50+
6.20	56.39	.77	1.36	SANDY SILT TO CLAYEY SILT	ML-MH	.31	10	4.154	13.5	69	38	.50+
6.40	60.76	.72	1.19	SILTY SAND TO SANDY SILT	SM-ML	.35	9			69	38	.50+
6.60	55.71	.76	1.37	SANDY SILT TO CLAYEY SILT	ML-MH	.33	10	4.102	13.5	68	38	.50+
6.80	54.97	.86	1.56	SANDY SILT TO CLAYEY SILT	ML-MH	.34	10	4.047	13.5	67	37	.45
7.00	54.36	.79	1.46	SANDY SILT TO CLAYEY SILT	ML-MH	.35	10	4.001	13.5	67	37	.41
7.20	47.71	.50	1.04	SANDY SILT TO CLAYEY SILT	ML-MH	.36	9	3.508	13.5	63	37	.28
7.40	52.64	.58	1.11	SANDY SILT TO CLAYEY SILT	ML-MH	.37	10	3.872	13.5	65	37	.33
7.60	44.80	.54	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	.38	8	3.291	13.5	61	37	.23
7.80	30.99	.54	1.74	CLAYEY SILT TO SILTY CLAY	MH-CL	.35	7	2.270	13.5			
8.00	31.49	.12	.38	SANDY SILT TO CLAYEY SILT	ML-MH	.40	6	2.303	13.5	50	35	.16
8.20	29.39	.55	1.85	CLAYEY SILT TO SILTY CLAY	MH-CL	.37	7	2.150	13.5			
8.40	40.80	.76	1.86	SANDY SILT TO CLAYEY SILT	ML-MH	.42	7	2.991	13.5	57	36	.19
8.60	46.29	.65	1.39	SANDY SILT TO CLAYEY SILT	ML-MH	.43	8	3.397	13.5	60	36	.22
8.80	49.70	.04	.08	SILTY SAND TO SANDY SILT	SM-ML	.48	7			60	36	.21
9.00	38.65	.69	1.78	SANDY SILT TO CLAYEY SILT	ML-MH	.45	7	2.830	13.5	53	35	.18
9.20	50.65	.69	1.37	SANDY SILT TO CLAYEY SILT	ML-MH	.46	9	3.718	13.5	61	37	.23
9.40	40.03	.68	1.69	SANDY SILT TO CLAYEY SILT	ML-MH	.47	7	2.930	13.5	53	35	.18

9.60	40.59	.67	1.66	SANDY SILT TO CLAYEY SILT	ML-MH	.48	7	2.971	13.5	53	35	.18
9.80	31.97	.53	1.65	SANDY SILT TO CLAYEY SILT	ML-MH	.49	6	2.332	13.5	46	34	.15
10.00	34.67	.73	2.12	CLAYEY SILT TO SILTY CLAY	MH-CL	.45	8	2.535	13.5			
10.20	40.96	.63	1.54	SANDY SILT TO CLAYEY SILT	ML-MH	.51	7	2.976	13.5	52	35	.17
10.40	32.50	.74	2.28	CLAYEY SILT TO SILTY CLAY	MH-CL	.47	7	2.373	13.5			
10.60	36.84	.56	1.51	SANDY SILT TO CLAYEY SILT	ML-MH	.53	7	2.670	13.5	48	35	.16
10.80	31.29	.72	2.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.49	7	2.282	13.5			
11.00	24.61	.58	2.35	CLAYEY SILT TO SILTY CLAY	MH-CL	.49	5	1.786	13.5			
11.20	28.91	.67	2.38	CLAYEY SILT TO SILTY CLAY	MH-CL	.50	6	2.104	13.5			
11.40	40.56	.74	1.81	SANDY SILT TO CLAYEY SILT	ML-MH	.57	7	2.963	13.5	49	35	.17
11.60	52.74	1.08	2.05	SANDY SILT TO CLAYEY SILT	ML-MH	.58	10	3.863	13.5	57	36	.20
11.80	35.67	.78	2.20	CLAYEY SILT TO SILTY CLAY	MH-CL	.53	8	2.603	13.5			
12.00	16.28	.72	4.44	CLAY	CH	.48	7	1.170	13.5			
12.20	54.29	.59	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	.61	10	3.977	13.5	57	36	.20
12.40	50.96	.61	1.21	SANDY SILT TO CLAYEY SILT	ML-MH	.62	9	3.729	13.5	54	35	.19
12.60	56.17	.69	1.23	SANDY SILT TO CLAYEY SILT	ML-MH	.63	10	4.114	13.5	57	36	.20
12.80	77.32	.95	1.22	SILTY SAND TO SANDY SILT	SM-ML	.70	12			64	37	.29
13.00	75.79	.68	.90	SILTY SAND TO SANDY SILT	SM-ML	.71	12			63	37	.27
13.20	92.48	.65	.70	SILTY SAND TO SANDY SILT	SM-ML	.73	14			68	39	.44
13.40	79.63	.48	.60	SILTY SAND TO SANDY SILT	SM-ML	.74	12			64	37	.28
13.60	74.92	.46	.62	SILTY SAND TO SANDY SILT	SM-ML	.75	11			62	37	.25
13.80	81.86	.26	.32	SAND TO SILTY SAND	SM-SP	.83	9			62	38	.26
14.00	69.15	.37	.53	SILTY SAND TO SANDY SILT	SM-ML	.77	11			60	36	.21
14.20	62.97	.66	1.05	SILTY SAND TO SANDY SILT	SM-ML	.78	10			55	35	.19
14.40	80.72	.54	.67	SILTY SAND TO SANDY SILT	SM-ML	.79	12			63	37	.26
14.60	70.21	.42	.59	SILTY SAND TO SANDY SILT	SM-ML	.80	11			59	36	.21
14.80	60.90	.59	.97	SILTY SAND TO SANDY SILT	SM-ML	.81	9			53	35	.18
15.00	59.04	.28	.48	SILTY SAND TO SANDY SILT	SM-ML	.82	9			51	35	.18
15.20	42.14	.49	1.16	SANDY SILT TO CLAYEY SILT	ML-MH	.76	8	3.065	13.5	43	34	.15
15.40	45.22	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.85	7			42	34	.15
15.60	23.38	.58	2.48	CLAYEY SILT TO SILTY CLAY	MH-CL	.70	5	1.680	13.5			
15.80	46.88	.78	1.66	SANDY SILT TO CLAYEY SILT	ML-MH	.79	8	3.414	13.5	45	34	.16
16.00	37.26	.20	.55	SANDY SILT TO CLAYEY SILT	ML-MH	.80	7	2.701	13.5	38	33	.14
16.20	26.40	.70	2.63	CLAYEY SILT TO SILTY CLAY	MH-CL	.73	6	1.902	13.5			
16.40	19.24	.79	4.10	CLAY	CH	.66	9	1.377	13.5			
16.60	62.09	.85	1.38	SANDY SILT TO CLAYEY SILT	ML-MH	.83	11	4.538	13.5	53	35	.18
16.80	59.85	.70	1.17	SILTY SAND TO SANDY SILT	SM-ML	.92	9			49	35	.17
17.00	36.26	.56	1.55	SANDY SILT TO CLAYEY SILT	ML-MH	.85	6	2.623	13.5	35	33	.14
17.20	56.06	.65	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.86	10	4.089	13.5	48	35	.17
17.40	56.99	.65	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	.87	10	4.157	13.5	49	35	.17
17.60	50.18	.81	1.60	SANDY SILT TO CLAYEY SILT	ML-MH	.88	9	3.652	13.5	44	34	.16
17.80	68.54	.57	.84	SILTY SAND TO SANDY SILT	SM-ML	.98	10			52	35	.18
18.00	95.09	.73	.77	SILTY SAND TO SANDY SILT	SM-ML	.99	15			63	37	.27
18.20	63.22	.98	1.55	SANDY SILT TO CLAYEY SILT	ML-MH	.91	12	4.616	13.5	51	35	.18
18.40	95.02	.99	1.04	SILTY SAND TO SANDY SILT	SM-ML	1.01	15			62	37	.26
18.60	107.77	.98	.91	SAND TO SILTY SAND	SM-SP	1.12	12			64	38	.29
18.80	87.15	.83	.95	SILTY SAND TO SANDY SILT	SM-ML	1.03	13			50	36	.22
19.00	66.89	1.20	1.80	SANDY SILT TO CLAYEY SILT	ML-MH	.95	12	4.884	13.5	52	35	.18
19.20	50.82	.90	1.77	SANDY SILT TO CLAYEY SILT	ML-MH	.96	9	3.693	13.5	43	34	.15
19.40	42.40	1.56	3.68	SILTY CLAY TO CLAY	CL-CH	.78	13	3.083	13.5			
19.60	130.95	1.30	1.00	SAND TO SILTY SAND	SM-SP	1.18	15			69	39	.45
19.80	178.36	1.08	.61	SAND TO SILTY SAND	SM-SP	1.19	21			80	40	.50+
20.00	126.57	1.51	1.19	SILTY SAND TO SANDY SILT	SM-ML	1.10	20			69	38	.47



RESULT OF CONE PENETRATION TEST

55S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

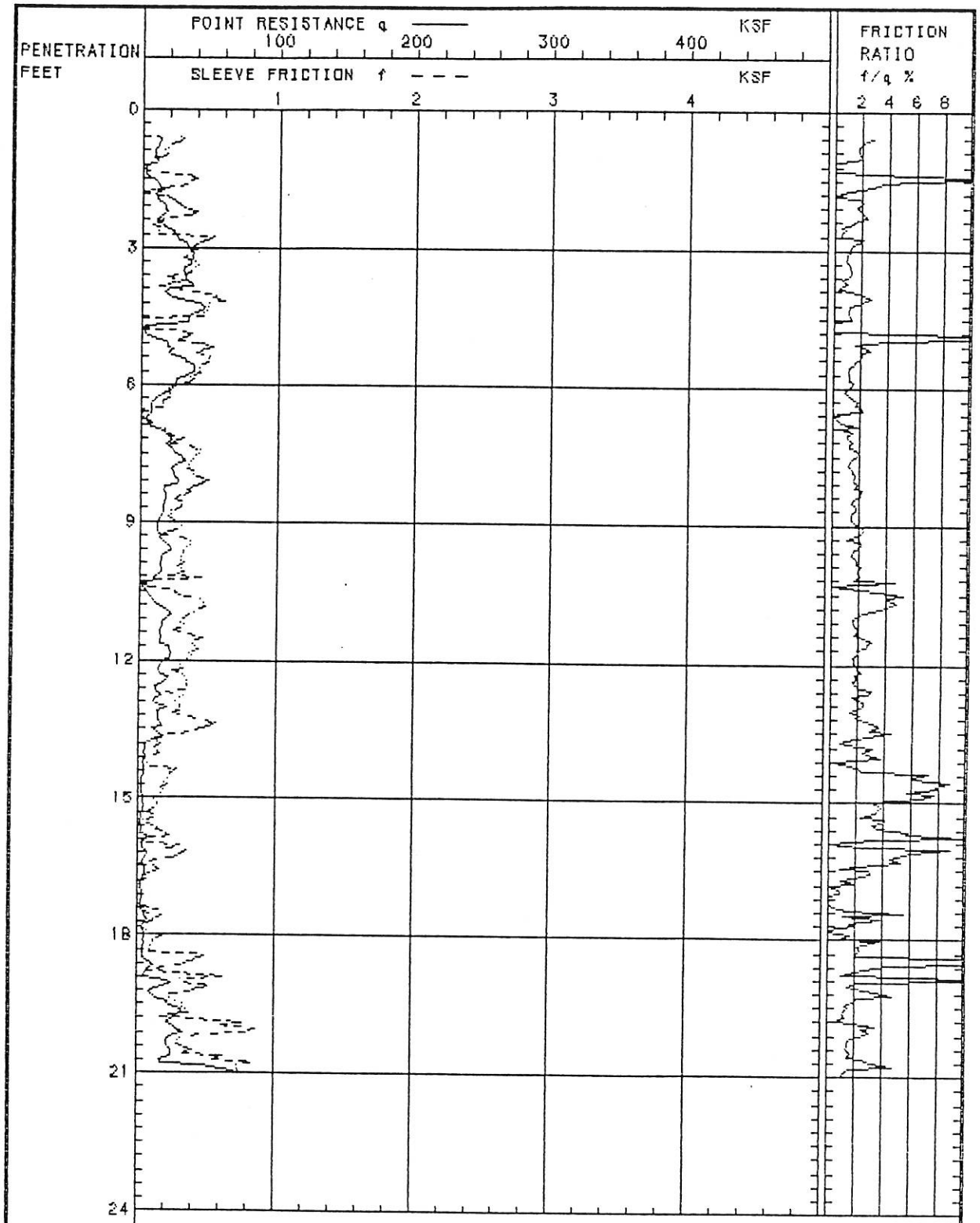
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 555
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	163.57	1.34	.82	SAND TO SILTY SAND	SM-SP	.04	19			100+	42	.50+
.80	163.82	1.39	.85	SAND TO SILTY SAND	SM-SP	.05	19			100+	42	.50+
1.00	159.72	1.21	.80	SAND TO SILTY SAND	SM-SP	.06	18			100+	42	.50+
1.20	165.78	1.42	.86	SAND TO SILTY SAND	SM-SP	.07	19			100+	42	.50+
1.40	116.56	1.12	.96	SAND TO SILTY SAND	SM-SP	.08	13			100+	42	.50+
1.60	135.77	1.41	1.04	SAND TO SILTY SAND	SM-SP	.10	16			100+	42	.50+
1.80	136.16	1.19	.87	SAND TO SILTY SAND	SM-SP	.11	16			100+	42	.50+
2.00	116.34	1.21	1.04	SILTY SAND TO SANDY SILT	SM-ML	.11	18			100+	42	.50+
2.20	117.45	1.49	1.27	SILTY SAND TO SANDY SILT	SM-ML	.12	18			100+	42	.50+
2.40	130.61	1.38	1.06	SAND TO SILTY SAND	SM-SP	.14	15			100+	42	.50+
2.60	120.04	1.39	1.16	SILTY SAND TO SANDY SILT	SM-ML	.14	19			100+	42	.50+
2.80	113.64	1.52	1.34	SILTY SAND TO SANDY SILT	SM-ML	.15	18			100+	42	.50+
3.00	120.28	1.40	1.16	SILTY SAND TO SANDY SILT	SM-ML	.17	19			100+	42	.50+
3.20	116.86	1.27	1.09	SILTY SAND TO SANDY SILT	SM-ML	.18	18			100+	42	.50+
3.40	85.01	.83	.97	SILTY SAND TO SANDY SILT	SM-ML	.19	13			92	41	.50+
3.60	66.16	.33	.50	SILTY SAND TO SANDY SILT	SM-ML	.20	10			81	39	.50+
3.80	70.82	.92	1.30	SILTY SAND TO SANDY SILT	SM-ML	.21	11			82	40	.50+
4.00	92.69	.97	1.05	SILTY SAND TO SANDY SILT	SM-ML	.22	14			92	41	.50+
4.20	99.63	.20	.20	SAND TO SILTY SAND	SM-SP	.25	11			93	42	.50+
4.40	95.07	.88	.93	SILTY SAND TO SANDY SILT	SM-ML	.24	15			92	41	.50+
4.60	103.06	.45	.44	SAND TO SILTY SAND	SM-SP	.28	12			92	42	.50+
4.80	96.85	.88	.91	SILTY SAND TO SANDY SILT	SM-ML	.26	15			91	41	.50+
5.00	89.81	.82	.91	SILTY SAND TO SANDY SILT	SM-ML	.27	14			87	40	.50+
5.20	69.00	.71	1.03	SILTY SAND TO SANDY SILT	SM-ML	.29	11			77	39	.50+
5.40	66.17	.71	1.07	SILTY SAND TO SANDY SILT	SM-ML	.30	10			75	39	.50+
5.60	52.79	.76	1.44	SANDY SILT TO CLAYEY SILT	ML-MH	.28	10	3.839	13.5	69	39	.50+
5.80	50.76	.84	1.66	SANDY SILT TO CLAYEY SILT	ML-MH	.29	9	3.739	13.5	67	38	.50+
6.00	73.52	1.08	1.47	SILTY SAND TO SANDY SILT	SM-ML	.33	11			76	39	.50+
6.20	63.93	.97	1.52	SANDY SILT TO CLAYEY SILT	ML-MH	.31	12	4.712	13.5	73	38	.50+
6.40	76.51	.90	1.17	SILTY SAND TO SANDY SILT	SM-ML	.35	12			77	39	.50+
6.60	72.70	.91	1.25	SILTY SAND TO SANDY SILT	SM-ML	.36	11			74	38	.50+
6.80	72.81	.93	1.28	SILTY SAND TO SANDY SILT	SM-ML	.37	11			74	38	.50+
7.00	63.21	1.00	1.58	SANDY SILT TO CLAYEY SILT	ML-MH	.35	12	4.656	13.5	71	38	.50+
7.20	57.80	.88	1.52	SANDY SILT TO CLAYEY SILT	ML-MH	.36	11	4.255	13.5	68	36	.47
7.40	56.57	.74	1.31	SANDY SILT TO CLAYEY SILT	ML-MH	.37	10	4.163	13.5	67	37	.41
7.60	48.79	.79	1.63	SANDY SILT TO CLAYEY SILT	ML-MH	.38	9	3.586	13.5	63	37	.27
7.80	53.85	.24	.44	SILTY SAND TO SANDY SILT	SM-ML	.43	8			62	37	.28
8.00	38.76	.38	.98	SANDY SILT TO CLAYEY SILT	ML-MH	.40	7	2.812	13.5	56	36	.19
8.20	31.73	.62	1.96	CLAYEY SILT TO SILTY CLAY	MH-CL	.37	7	2.323	13.5			
8.40	14.84	.22	1.46	CLAYEY SILT TO SILTY CLAY	MH-CL	.38	3	1.071	13.5			
8.60	38.81	.79	2.04	SANDY SILT TO CLAYEY SILT	ML-MH	.43	7	2.843	13.5	54	36	.18
8.80	39.38	.87	2.20	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	7	2.888	13.5			
9.00	41.76	.81	1.93	SANDY SILT TO CLAYEY SILT	ML-MH	.45	8	3.060	13.5	56	36	.19
9.20	62.35	2.75	4.41	SILTY CLAY TO CLAY	CL-CH	.37	19	4.591	13.5			
9.40	28.11	.48	1.71	CLAYEY SILT TO SILTY CLAY	MH-CL	.42	6	2.051	13.5			

9.60	27.20	.56	2.07	CLAYEY SILT TO SILTY CLAY	MH-CL	.43	6	1.983	13.5				
9.80	21.65	.89	4.09	CLAY	CH	.39	10	1.574	13.5				
10.00	58.47	.96	1.64	SANDY SILT TO CLAYEY SILT	ML-MH	.50	11	4.294	13.5	63	37	.26	
10.20	46.61	1.00	2.14	SANDY SILT TO CLAYEY SILT	ML-MH	.51	8	3.415	13.5	56	36	.19	



RESULT OF CONE PENETRATION TEST

56N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

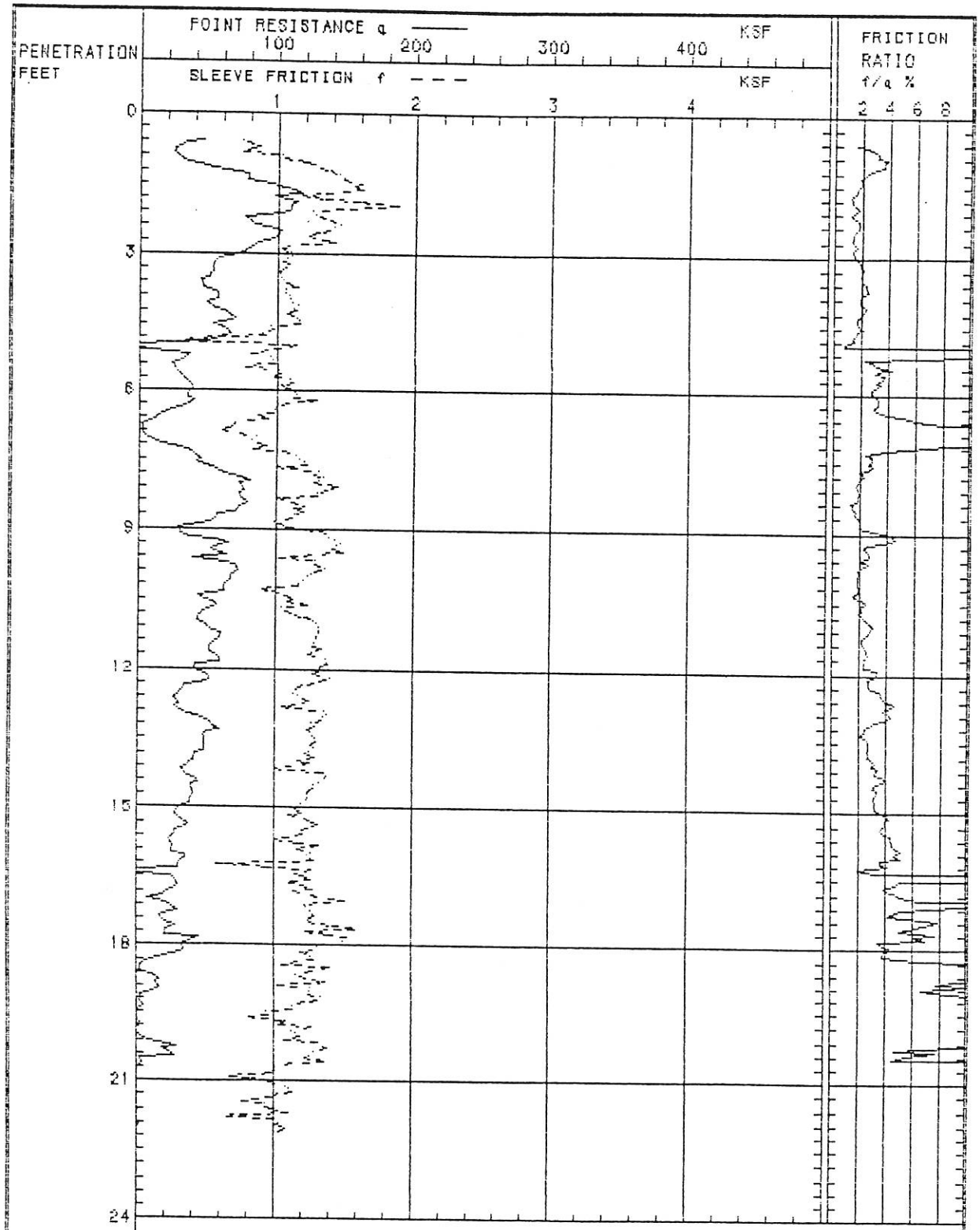
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 56M N
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	11.81	.28	2.36	SILTY CLAY TO CLAY	CL-CH	.02	3	.873	13.5			
.80	11.31	.11	1.01	SENSITIVE FINE GRAINED	OL-CH	.02	2	.836	13.5			
1.00	8.98	.14	1.61	SENSITIVE FINE GRAINED	OL-CH	.03	2	.663	13.5			
1.20	5.91	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.04	1	.435	13.5			
1.40	2.46	.23	9.48	ORGANIC MATERIAL	OL-OH	.04	1	.179	13.5			
1.60	10.82	.34	3.11	CLAY	CH	.06	5	.797	13.5			
1.80	12.55	.04	.35	SENSITIVE FINE GRAINED	OL-CH	.05	3	.926	13.5			
2.00	13.52	.27	2.03	SILTY CLAY TO CLAY	CL-CH	.08	4	.996	13.5			
2.20	17.71	.20	1.12	CLAYEY SILT TO SILTY CLAY	MH-CL	.10	4	1.304	13.5			
2.40	11.31	.15	1.36	SENSITIVE FINE GRAINED	OL-CH	.07	2	.833	13.5			
2.60	19.67	.06	.32	SANDY SILT TO CLAYEY SILT	ML-MH	.13	3	1.447	13.5	56	35	.21
2.80	25.70	.03	.12	SANDY SILT TO CLAYEY SILT	ML-MH	.14	4	1.893	13.5	61	37	.31
3.00	34.56	.41	1.18	SANDY SILT TO CLAYEY SILT	ML-MH	.15	6	2.549	13.5	66	37	.50+
3.20	36.90	.32	.86	SANDY SILT TO CLAYEY SILT	ML-MH	.16	7	2.721	13.5	66	37	.50+
3.40	33.09	.43	1.31	SANDY SILT TO CLAYEY SILT	ML-MH	.17	6	2.439	13.5	64	37	.42
3.60	31.08	.23	.75	SANDY SILT TO CLAYEY SILT	ML-MH	.18	5	2.289	13.5	62	37	.32
3.80	36.89	.12	.34	SANDY SILT TO CLAYEY SILT	ML-MH	.19	7	2.719	13.5	65	37	.47
4.00	18.56	.33	1.80	CLAYEY SILT TO SILTY CLAY	MH-CL	.18	4	1.362	13.5			
4.20	37.86	.55	1.45	SANDY SILT TO CLAYEY SILT	ML-MH	.21	7	2.789	13.5	64	37	.41
4.40	41.71	.47	1.13	SANDY SILT TO CLAYEY SILT	ML-MH	.22	7	3.073	13.5	66	37	.50+
4.60	34.19	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.25	5			61	37	.24
4.80	2.70	.15	5.61	ORGANIC MATERIAL	OL-OH	.14	1	.190	13.5			
5.00	13.00	.30	2.28	SILTY CLAY TO CLAY	CL-CH	.20	4	.949	13.5			
5.20	21.14	.30	1.44	CLAYEY SILT TO SILTY CLAY	MH-CL	.23	5	1.549	13.5			
5.40	28.94	.51	1.77	CLAYEY SILT TO SILTY CLAY	MH-CL	.24	6	2.126	13.5			
5.60	38.37	.44	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	.28	7	2.821	13.5	62	37	.26
5.80	33.84	.42	1.25	SANDY SILT TO CLAYEY SILT	ML-MH	.29	6	2.485	13.5	59	36	.21
6.00	25.58	.28	1.11	SANDY SILT TO CLAYEY SILT	ML-MH	.30	4	1.873	13.5	50	35	.16
6.20	16.98	.10	.61	SENSITIVE FINE GRAINED	OL-CH	.19	4	1.244	13.5			
6.40	8.74	.17	1.92	SILTY CLAY TO CLAY	CL-CH	.26	2	.628	13.5			
6.60	7.38	.01	.14	SENSITIVE FINE GRAINED	OL-CH	.20	1	.532	13.5			
6.80	3.99	.04	1.02	SENSITIVE FINE GRAINED	OL-CH	.20	0	.280	13.5			
7.00	14.24	.17	1.23	SENSITIVE FINE GRAINED	OL-CH	.21	3	1.039	13.5			
7.20	22.13	.22	.99	SANDY SILT TO CLAYEY SILT	ML-MH	.36	4	1.613	13.5	44	34	.14
7.40	21.94	.42	1.93	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	5	1.601	13.5			
7.60	30.25	.20	.68	SANDY SILT TO CLAYEY SILT	ML-MH	.38	5	2.212	13.5	50	35	.16
7.80	24.18	.36	1.50	CLAYEY SILT TO SILTY CLAY	MH-CL	.35	5	1.765	13.5			
8.00	24.83	.40	1.60	CLAYEY SILT TO SILTY CLAY	MH-CL	.36	5	1.813	13.5			
8.20	22.07	.53	2.41	CLAYEY SILT TO SILTY CLAY	MH-CL	.37	5	1.607	13.5			
8.40	18.16	.33	1.81	CLAYEY SILT TO SILTY CLAY	MH-CL	.38	4	1.318	13.5			
8.60	17.47	.15	.86	CLAYEY SILT TO SILTY CLAY	MH-CL	.39	4	1.265	13.5			
8.80	16.48	.25	1.49	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	3	1.192	13.5			
9.00	13.29	.13	.97	SENSITIVE FINE GRAINED	OL-CH	.27	3	.964	13.5			
9.20	12.79	.25	1.93	SILTY CLAY TO CLAY	CL-CH	.37	4	.920	13.5			
9.40	15.48	.33	2.13	SILTY CLAY TO CLAY	CL-CH	.38	4	1.112	13.5			

9.60	22.38	.25	1.14	CLAYEY SILT TO SILTY CLAY	MH-CL	.43	5	1.626	13.5			
9.80	16.23	.30	1.85	CLAYEY SILT TO SILTY CLAY	MH-CL	.44	3	1.170	13.5			
10.00	15.24	.31	2.06	SILTY CLAY TO CLAY	CL-CH	.40	4	1.099	13.5			
10.20	11.34	.42	3.73	CLAY	CH	.41	5	.809	13.5			
10.40	1.97	.04	2.17	ORGANIC MATERIAL	OL-OH	.31	1	.123	13.5			
10.60	6.88	.29	4.23	CLAY	CH	.42	3	.478	13.5			
10.80	13.49	.48	3.52	CLAY	CH	.43	6	.968	13.5			
11.00	22.37	.20	.92	SANDY SILT TO CLAYEY SILT	ML-MH	.55	4	1.616	13.5	31	32	.13
11.20	17.22	.31	1.81	CLAYEY SILT TO SILTY CLAY	MH-CL	.50	4	1.238	13.5			
11.40	15.25	.13	.84	SENSITIVE FINE GRAINED	OL-CH	.34	3	1.104	13.5			
11.60	15.38	.41	2.66	SILTY CLAY TO CLAY	CL-CH	.46	4	1.105	13.5			
11.80	22.62	.40	1.78	CLAYEY SILT TO SILTY CLAY	MH-CL	.53	5	1.636	13.5			
12.00	19.47	.37	1.92	CLAYEY SILT TO SILTY CLAY	MH-CL	.54	4	1.402	13.5			
12.20	14.27	.29	2.00	SILTY CLAY TO CLAY	CL-CH	.49	4	1.021	13.5			
12.40	20.92	.26	1.23	CLAYEY SILT TO SILTY CLAY	MH-CL	.56	5	1.508	13.5			
12.60	12.17	.31	2.58	SILTY CLAY TO CLAY	CL-CH	.50	3	.864	13.5			
12.80	14.55	.22	1.51	CLAYEY SILT TO SILTY CLAY	MH-CL	.58	3	1.035	13.5			
13.00	18.65	.21	1.15	CLAYEY SILT TO SILTY CLAY	MH-CL	.58	4	1.338	13.5			
13.20	14.14	.08	.54	SENSITIVE FINE GRAINED	OL-CH	.40	3	1.018	13.5			
13.40	16.83	.37	2.20	SILTY CLAY TO CLAY	CL-CH	.54	5	1.297	13.5			
13.60	15.10	.26	1.71	CLAYEY SILT TO SILTY CLAY	MH-CL	.61	3	1.073	13.5			
13.80	6.29	.08	1.29	SENSITIVE FINE GRAINED	OL-CH	.41	1	.436	13.5			
14.00	4.43	.15	3.42	CLAY	CH	.56	2	.296	13.5			
14.20	4.20	.06	1.34	SENSITIVE FINE GRAINED	OL-CH	.43	1	.279	13.5			
14.40	3.94	.26	6.67	ORGANIC MATERIAL	OL-OH	.43	1	.260	13.5			
14.60	2.46	.17	6.76	ORGANIC MATERIAL	OL-OH	.44	1	.130	13.5			
14.80	2.71	.18	6.54	ORGANIC MATERIAL	OL-OH	.44	1	.168	13.5			
15.00	3.95	.14	3.61	CLAY	CH	.60	1	.248	13.5			
15.20	3.70	.13	3.52	CLAY	CH	.61	1	.229	13.5			
15.40	2.95	.12	4.03	CLAY	CH	.62	1	.173	13.5			
15.60	2.21	.11	4.78	ORGANIC MATERIAL	OL-OH	.47	1	.129	13.5			
15.80	4.37	.22	5.13	CLAY	CH	.63	2	.277	13.5			
16.00	3.19	.19	5.81	ORGANIC MATERIAL	OL-OH	.48	1	.201	13.5			
16.20	6.64	.33	5.03	CLAY	CH	.65	3	.444	13.5			
16.40	3.22	.01	.29	SENSITIVE FINE GRAINED	OL-CH	.49	0	.202	13.5			
16.60	5.17	.13	2.51	CLAY	CH	.66	2	.334	13.5			
16.80	3.20	.04	1.11	SENSITIVE FINE GRAINED	OL-CH	.50	0	.200	13.5			
17.00	2.94	.01	.37	SENSITIVE FINE GRAINED	OL-CH	.51	0	.130	13.5			
17.20	3.20	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.52	0	.199	13.5			
17.40	2.95	.10	3.49	CLAY	CH	.70	1	.167	13.5			
17.60	6.12	.15	2.50	CLAY	CH	.70	2	.401	13.5			
17.80	3.70	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.53	0	.234	13.5			
18.00	4.92	.11	2.32	CLAY	CH	.72	2	.311	13.5			
18.20	4.93	.07	1.43	SENSITIVE FINE GRAINED	OL-CH	.55	1	.325	13.5			
18.40	4.43	.39	8.89	ORGANIC MATERIAL	OL-OH	.55	2	.297	13.5			
18.60	10.53	.33	3.15	CLAY	CH	.74	5	.725	13.5			
18.80	6.29	.20	3.25	CLAY	CH	.75	3	.410	13.5			
19.00	20.15	.42	2.09	CLAYEY SILT TO SILTY CLAY	MH-CL	.86	4	1.429	13.5			
19.20	10.89	.19	1.77	SILTY CLAY TO CLAY	CL-CH	.77	3	.750	13.5			
19.40	17.82	.27	1.49	CLAYEY SILT TO SILTY CLAY	MH-CL	.87	4	1.256	13.5			
19.60	30.19	.17	.57	SANDY SILT TO CLAYEY SILT	ML-MH	.98	5	2.164	13.5	25	32	.12
19.80	27.23	.36	1.32	SANDY SILT TO CLAYEY SILT	ML-MH	.99	5	1.943	13.5	22	31	.12
20.00	26.89	.84	3.13	SILTY CLAY TO CLAY	CL-CH	.80	8	1.932	13.5			
20.20	25.16	.39	1.56	CLAYEY SILT TO SILTY CLAY	MH-CL	.91	6	1.796	13.5			
20.40	22.85	.32	1.40	CLAYEY SILT TO SILTY CLAY	MH-CL	.92	5	1.625	13.5			
20.60	25.09	.58	2.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.93	6	1.790	13.5			
20.80	32.74	.79	2.40	CLAYEY SILT TO SILTY CLAY	MH-CL	.94	7	2.356	13.5			



RESULT OF CONE PENETRATION TEST

56M

JOB NUMBER: 01870206
CONE NUMBER: 001
LOCATION: ISLE DERNIERES

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/11/97

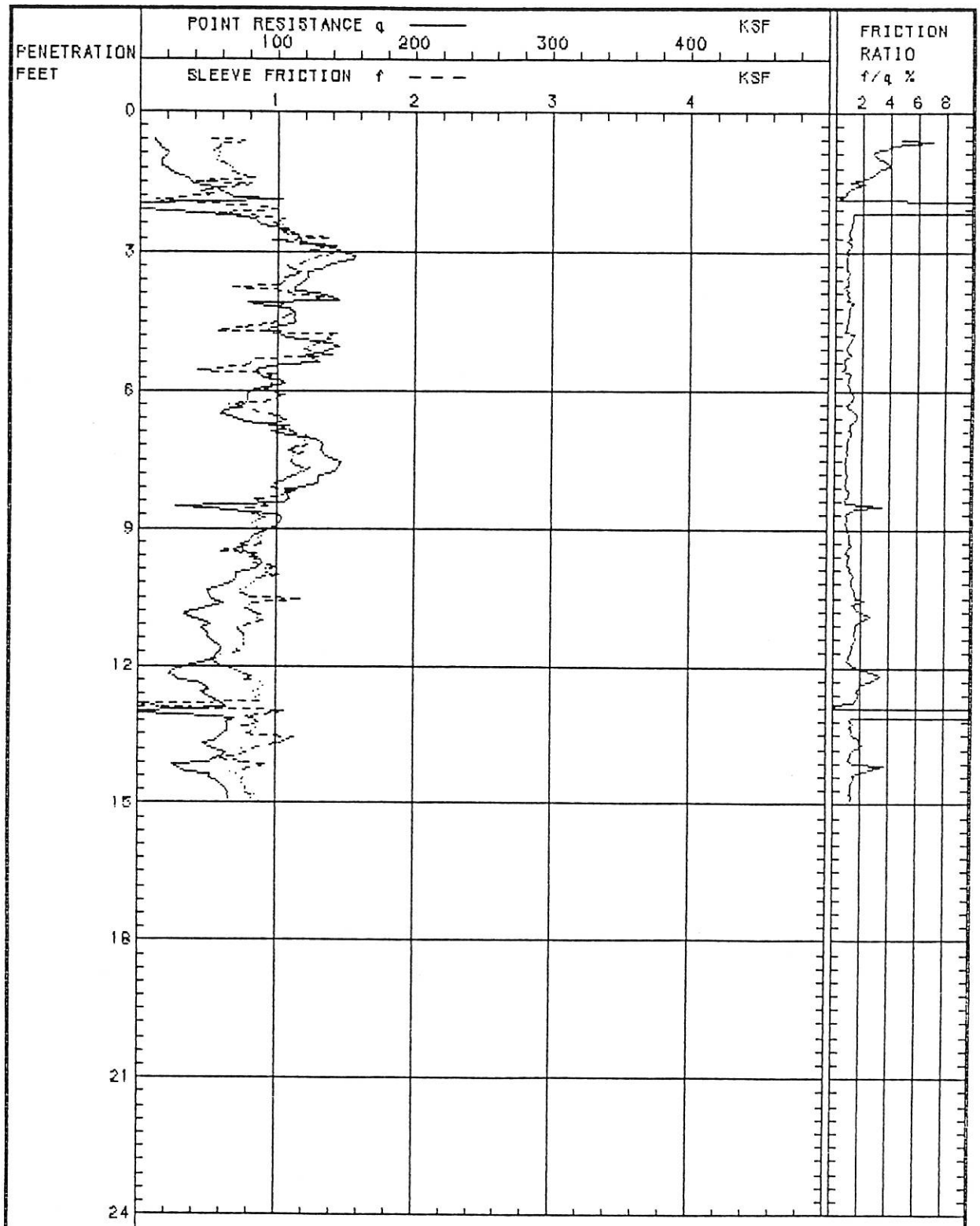
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01860206
BORING NO. : 56M
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	39.85	.74	1.85	SANDY SILT TO CLAYEY SILT	ML-MH	.03	7	2.949	13.5	77	39	.50+
.80	24.84	.98	3.95	CLAY	CH	.03	11	1.838	13.5			
1.00	31.73	1.12	3.55	SILTY CLAY TO CLAY	CL-CH	.04	10	2.347	13.5			
1.20	58.04	1.08	1.86	SANDY SILT TO CLAYEY SILT	ML-MH	.06	11	4.295	13.5	90	41	.50+
1.40	77.97	1.47	1.88	SANDY SILT TO CLAYEY SILT	ML-MH	.07	14	5.771	13.5	100+	42	.50+
1.60	105.51	1.59	1.51	SILTY SAND TO SANDY SILT	SM-ML	.09	16			100+	42	.50+
1.80	102.07	1.46	1.43	SILTY SAND TO SANDY SILT	SM-ML	.10	16			100+	42	.50+
2.00	109.46	1.72	1.57	SILTY SAND TO SANDY SILT	SM-ML	.11	17			100+	42	.50+
2.20	84.39	1.29	1.53	SILTY SAND TO SANDY SILT	SM-ML	.12	13			100+	42	.50+
2.40	87.67	1.43	1.63	SILTY SAND TO SANDY SILT	SM-ML	.13	13			100+	42	.50+
2.60	100.60	1.26	1.26	SILTY SAND TO SANDY SILT	SM-ML	.14	16			100+	42	.50+
2.80	84.50	1.32	1.57	SILTY SAND TO SANDY SILT	SM-ML	.15	13			95	41	.50+
3.00	70.61	1.13	1.60	SANDY SILT TO CLAYEY SILT	ML-MH	.15	13	5.219	13.5	87	40	.50+
3.20	53.75	1.08	2.02	SANDY SILT TO CLAYEY SILT	ML-MH	.16	10	3.969	13.5	76	39	.50+
3.40	52.15	.77	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.17	9	3.850	13.5	75	39	.50+
3.60	44.76	1.07	2.39	CLAYEY SILT TO SILTY CLAY	MH-CL	.16	10	3.304	13.5			
3.80	53.36	1.06	1.98	SANDY SILT TO CLAYEY SILT	ML-MH	.19	10	3.938	13.5	74	38	.50+
4.00	52.66	1.13	2.14	SANDY SILT TO CLAYEY SILT	ML-MH	.20	10	3.886	13.5	73	38	.50+
4.20	57.54	1.13	1.97	SANDY SILT TO CLAYEY SILT	ML-MH	.21	11	4.246	13.5	75	39	.50+
4.40	68.14	1.18	1.73	SANDY SILT TO CLAYEY SILT	ML-MH	.22	13	5.031	13.5	80	39	.50+
4.60	60.92	1.01	1.65	SANDY SILT TO CLAYEY SILT	ML-MH	.23	11	4.496	13.5	76	39	.50+
4.80	58.32	.65	1.12	SILTY SAND TO SANDY SILT	SM-ML	.26	9			72	38	.50+
5.00	.00	1.09	999.00	ORGANIC MATERIAL	OL-OH	.15	1	-.011	13.5			
5.20	35.67	.81	2.28	CLAYEY SILT TO SILTY CLAY	MH-CL	.23	9	2.625	13.5			
5.40	23.73	.95	4.02	CLAY	CH	.22	11	1.742	13.5			
5.60	27.79	.96	3.47	SILTY CLAY TO CLAY	CL-CH	.22	8	2.042	13.5			
5.80	34.42	1.11	3.22	CLAYEY SILT TO SILTY CLAY	MH-CL	.26	8	2.530	13.5			
6.00	37.28	.99	2.65	CLAYEY SILT TO SILTY CLAY	MH-CL	.27	8	2.741	13.5			
6.20	37.37	1.21	3.24	CLAYEY SILT TO SILTY CLAY	MH-CL	.28	8	2.747	13.5			
6.40	26.83	.78	2.89	CLAYEY SILT TO SILTY CLAY	MH-CL	.29	6	1.966	13.5			
6.60	13.17	.92	7.01	CLAY	CH	.26	6	.956	13.5			
6.80	2.21	.57	25.62	ORGANIC MATERIAL	OL-OH	.20	1	.149	13.5			
7.00	3.44	.79	22.93	ORGANIC MATERIAL	OL-OH	.21	1	.239	13.5			
7.20	19.88	.89	4.50	CLAY	CH	.29	9	1.451	13.5			
7.40	39.09	1.17	2.99	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	9	2.871	13.5			
7.60	44.80	1.18	2.62	CLAYEY SILT TO SILTY CLAY	MH-CL	.34	10	3.293	13.5			
7.80	62.68	1.29	2.06	SANDY SILT TO CLAYEY SILT	ML-MH	.39	12	4.611	13.5	69	38	.50+
8.00	77.16	1.42	1.84	SANDY SILT TO CLAYEY SILT	ML-MH	.40	14	5.686	13.5	75	39	.50+
8.20	74.55	1.28	1.72	SANDY SILT TO CLAYEY SILT	ML-MH	.41	14	5.492	13.5	73	38	.50+
8.40	76.96	.80	1.04	SILTY SAND TO SANDY SILT	SM-ML	.46	12			72	38	.50+
8.60	70.79	1.13	1.60	SANDY SILT TO CLAYEY SILT	ML-MH	.43	13	5.212	13.5	71	38	.50+
8.80	54.38	.83	1.52	SANDY SILT TO CLAYEY SILT	ML-MH	.44	10	3.996	13.5	63	37	.27
9.00	29.08	1.12	3.85	SILTY CLAY TO CLAY	CL-CH	.36	9	2.138	13.5			
9.20	46.13	1.41	3.05	CLAYEY SILT TO SILTY CLAY	MH-CL	.41	11	3.386	13.5			
9.40	55.75	1.43	2.56	SANDY SILT TO CLAYEY SILT	ML-MH	.47	10	4.095	13.5	63	37	.26

9.60	51.95	1.50	2.90	CLAYEY SILT TO SILTY CLAY	MH-CL	.43	12	3.816	13.5			
9.80	70.58	1.32	1.87	SANDY SILT TO CLAYEY SILT	ML-MH	.49	13	5.132	13.5	68	39	.45
10.00	67.65	1.30	1.93	SANDY SILT TO CLAYEY SILT	ML-MH	.50	12	4.974	13.5	67	37	.37
10.20	62.23	1.12	1.79	SANDY SILT TO CLAYEY SILT	ML-MH	.51	11	4.572	13.5	64	37	.29
10.40	53.52	1.21	2.26	SANDY SILT TO CLAYEY SILT	ML-MH	.52	10	3.926	13.5	60	37	.27
10.60	55.07	1.16	2.10	SANDY SILT TO CLAYEY SILT	ML-MH	.53	10	4.040	13.5	61	37	.22
10.80	46.26	1.19	2.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.47	11	3.390	13.5			
11.00	44.80	1.27	2.84	CLAYEY SILT TO SILTY CLAY	MH-CL	.49	10	3.282	13.5			
11.20	57.51	1.32	2.30	SANDY SILT TO CLAYEY SILT	ML-MH	.56	11	4.218	13.5	61	37	.23
11.40	56.61	1.28	2.26	SANDY SILT TO CLAYEY SILT	ML-MH	.57	10	4.151	13.5	60	36	.22
11.60	52.14	1.28	2.46	SANDY SILT TO CLAYEY SILT	ML-MH	.58	9	3.820	13.5	57	36	.20
11.80	59.27	1.33	2.25	SANDY SILT TO CLAYEY SILT	ML-MH	.59	11	4.347	13.5	61	37	.22
12.00	41.08	1.37	3.32	CLAYEY SILT TO SILTY CLAY	MH-CL	.54	9	3.003	13.5			
12.20	51.90	1.39	2.68	CLAYEY SILT TO SILTY CLAY	MH-CL	.55	12	3.804	13.5			
12.40	33.28	1.22	3.68	SILTY CLAY TO CLAY	CL-CH	.50	10	2.429	13.5			
12.60	27.58	1.16	4.19	CLAY	CH	.50	13	2.005	13.5			
12.80	28.57	1.32	4.61	CLAY	CH	.51	13	2.078	13.5			
13.00	39.05	1.36	3.49	SILTY CLAY TO CLAY	CL-CH	.52	12	2.854	13.5			
13.20	53.36	1.35	2.54	SANDY SILT TO CLAYEY SILT	ML-MH	.66	10	3.904	13.5	54	36	.19
13.40	49.78	1.29	2.60	CLAYEY SILT TO SILTY CLAY	MH-CL	.60	11	3.643	13.5			
13.60	48.70	1.29	2.66	CLAYEY SILT TO SILTY CLAY	MH-CL	.61	11	3.562	13.5			
13.80	45.08	1.31	2.91	CLAYEY SILT TO SILTY CLAY	MH-CL	.62	10	3.293	13.5			
14.00	39.14	1.17	2.99	CLAYEY SILT TO SILTY CLAY	MH-CL	.63	9	2.853	13.5			
14.20	32.94	1.36	4.13	SILTY CLAY TO CLAY	CL-CH	.57	10	2.398	13.5			
14.40	43.02	1.37	3.18	CLAYEY SILT TO SILTY CLAY	MH-CL	.65	10	3.139	13.5			
14.60	40.02	1.26	3.16	CLAYEY SILT TO SILTY CLAY	MH-CL	.66	9	2.916	13.5			
14.80	39.11	1.24	3.17	CLAYEY SILT TO SILTY CLAY	MH-CL	.67	9	2.848	13.5			
15.00	30.83	1.19	3.87	SILTY CLAY TO CLAY	CL-CH	.60	9	2.239	13.5			
15.20	29.48	1.16	3.93	SILTY CLAY TO CLAY	CL-CH	.61	9	2.139	13.5			
15.40	35.10	1.29	3.69	SILTY CLAY TO CLAY	CL-CH	.62	11	2.555	13.5			
15.60	26.60	1.20	4.50	CLAY	CH	.62	12	1.924	13.5			
15.80	25.32	1.25	4.92	CLAY	CH	.63	12	1.829	13.5			
16.00	29.89	1.26	4.21	CLAY	CH	.64	14	2.167	13.5			
16.20	30.76	.95	3.08	CLAYEY SILT TO SILTY CLAY	MH-CL	.73	7	2.225	13.5			
16.40	.00	1.22	999.00	ORGANIC MATERIAL	OL-OH	.49	1	-.036	13.5			
16.60	28.15	1.06	3.77	SILTY CLAY TO CLAY	CL-CH	.66	8	2.036	13.5			
16.80	24.51	1.28	5.22	CLAY	CH	.67	11	1.766	13.5			
17.00	11.83	1.36	11.47	CLAY	CH	.68	5	.926	13.5			
17.20	27.98	1.24	4.43	CLAY	CH	.69	13	2.021	13.5			
17.40	17.56	1.26	7.18	CLAY	CH	.70	8	1.250	13.5			
17.60	24.94	1.51	6.05	CLAY	CH	.70	11	1.795	13.5			
17.80	32.39	1.63	5.02	CLAY	CH	.71	15	2.346	13.5			
18.00	32.95	1.42	4.30	CLAY	CH	.72	15	2.387	13.5			
18.20	26.23	1.23	4.69	CLAY	CH	.73	12	1.889	13.5			
18.40	4.97	1.17	23.52	ORGANIC MATERIAL	OL-OH	.55	2	.327	13.5			
18.60	5.80	1.03	17.69	ORGANIC MATERIAL	OL-OH	.56	2	.388	13.5			
18.80	15.29	1.17	7.66	CLAY	CH	.75	7	1.077	13.5			
19.00	14.59	1.23	8.41	CLAY	CH	.76	6	1.024	13.5			
19.20	2.22	1.30	58.62	ORGANIC MATERIAL	OL-OH	.58	1	.122	13.5			
19.40	2.53	1.13	44.81	ORGANIC MATERIAL	OL-OH	.58	1	.144	13.5			
19.60	.00	.89	999.00	ORGANIC MATERIAL	OL-OH	.59	1	-.043	13.5			
19.80	2.02	1.15	56.88	ORGANIC MATERIAL	OL-OH	.59	1	.106	13.5			
20.00	1.19	1.02	85.75	ORGANIC MATERIAL	OL-OH	.60	1	.044	13.5			
20.20	21.92	1.39	6.35	CLAY	CH	.81	10	1.564	13.5			
20.40	25.51	.99	3.89	CLAY	CH	.82	12	1.829	13.5			
20.60	3.79	1.16	30.46	ORGANIC MATERIAL	OL-OH	.62	1	.235	13.5			
20.80	.00	.99	999.00	ORGANIC MATERIAL	OL-OH	.62	1	-.046	13.5			
21.00	.00	.90	999.00	ORGANIC MATERIAL	OL-OH	.63	1	-.047	13.5			
21.20	.25	1.12	441.71	ORGANIC MATERIAL	OL-OH	.64	1	-.028	13.5			
21.40	.00	.88	999.00	ORGANIC MATERIAL	OL-OH	.64	1	-.047	13.5			

21.60	.00	.96	999.00	ORGANIC MATERIAL	OL-OH	.65	1	-.048	13.5
21.80	.24	.83	346.69	ORGANIC MATERIAL	OL-OH	.65	1	-.031	13.5
22.00	.76	1.05	137.30	ORGANIC MATERIAL	OL-OH	.66	1	.008	13.5



RESULT OF CONE PENETRATION TEST

56S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

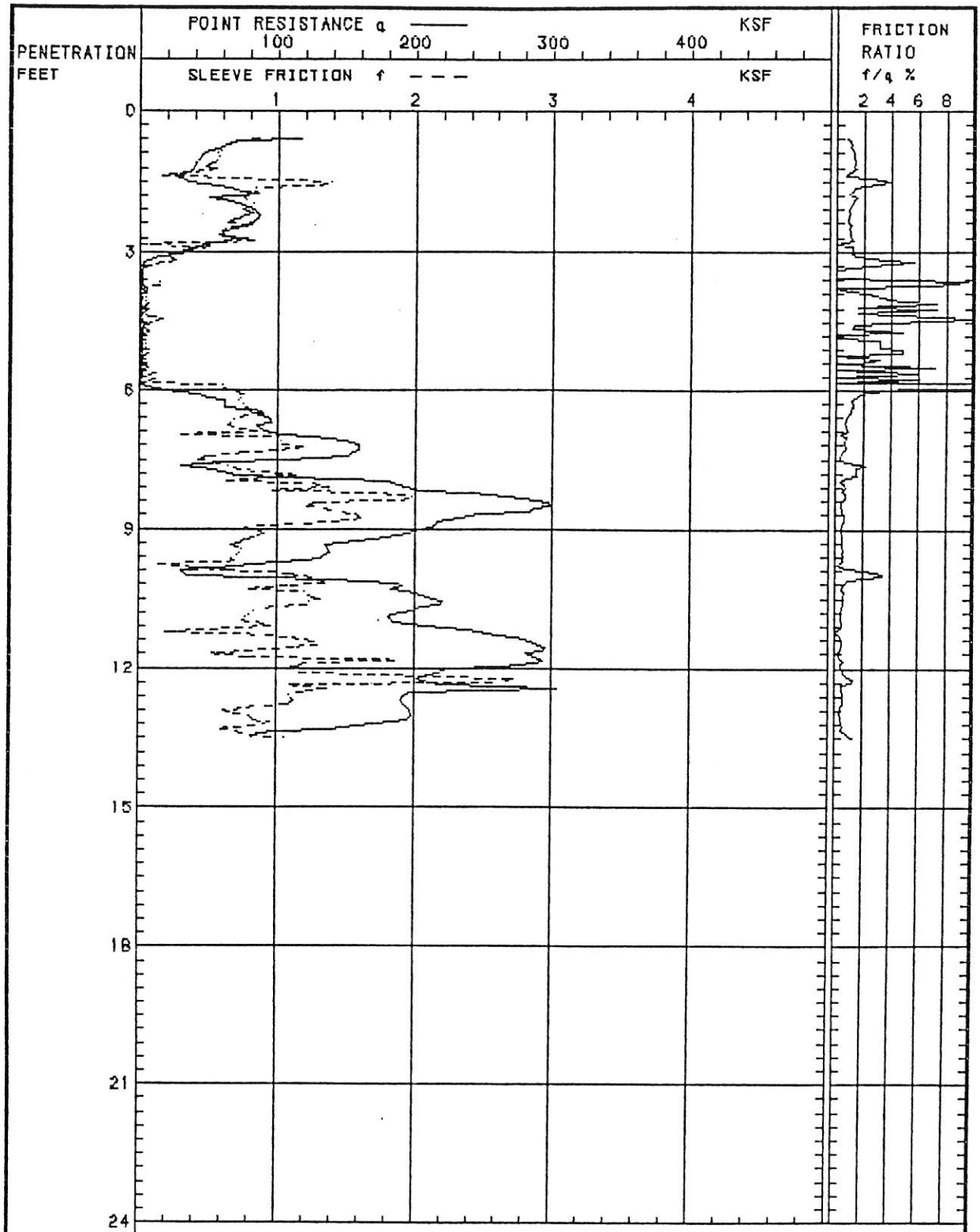
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 565
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	10.82	.64	5.89	CLAY	CH	.02	5	.800	13.5			
.80	16.72	.56	3.35	CLAY	CH	.03	8	1.236	13.5			
1.00	17.46	.61	3.48	CLAY	CH	.04	8	1.291	13.5			
1.20	18.20	.66	3.64	CLAY	CH	.05	8	1.345	13.5			
1.40	32.46	.50	1.54	SANDY SILT TO CLAYEY SILT	ML-MH	.07	6	2.400	13.5	69	38	.50+
1.60	46.72	.81	1.73	SANDY SILT TO CLAYEY SILT	ML-MH	.08	8	3.455	13.5	78	39	.50+
1.80	65.91	.36	.55	SILTY SAND TO SANDY SILT	SM-ML	.10	10			90	41	.50+
2.00	.25	.70	284.03	ORGANIC MATERIAL	OL-OH	.06	1	.014	13.5			
2.20	55.07	1.43	2.60	SANDY SILT TO CLAYEY SILT	ML-MH	.11	10	4.071	13.5	81	39	.50+
2.40	87.19	1.04	1.19	SILTY SAND TO SANDY SILT	SM-ML	.13	13			100+	42	.50+
2.60	110.43	1.06	.96	SILTY SAND TO SANDY SILT	SM-ML	.14	17			100+	42	.50+
2.80	116.34	1.14	.98	SAND TO SILTY SAND	SM-SP	.17	13			100+	42	.50+
3.00	147.08	1.32	.90	SAND TO SILTY SAND	SM-SP	.18	17			100+	42	.50+
3.20	150.18	1.19	.79	SAND TO SILTY SAND	SM-SP	.19	17			100+	42	.50+
3.40	127.19	1.14	.90	SAND TO SILTY SAND	SM-SP	.20	15			100+	42	.50+
3.60	120.90	1.04	.86	SAND TO SILTY SAND	SM-SP	.22	14			100+	42	.50+
3.80	112.90	.88	.78	SAND TO SILTY SAND	SM-SP	.23	13			100+	42	.50+
4.00	141.66	1.26	.89	SAND TO SILTY SAND	SM-SP	.24	16			100+	42	.50+
4.20	100.68	1.14	1.13	SILTY SAND TO SANDY SILT	SM-ML	.23	16			95	41	.50+
4.40	112.41	1.06	.94	SAND TO SILTY SAND	SM-SP	.26	13			97	42	.50+
4.60	103.47	.87	.84	SAND TO SILTY SAND	SM-SP	.28	12			92	42	.50+
4.80	103.62	1.30	1.26	SILTY SAND TO SANDY SILT	SM-ML	.26	16			94	41	.50+
5.00	141.90	1.51	1.07	SAND TO SILTY SAND	SM-SP	.30	16			100+	42	.50+
5.20	127.20	1.47	1.15	SILTY SAND TO SANDY SILT	SM-ML	.29	20			100+	42	.50+
5.40	117.67	.76	.64	SAND TO SILTY SAND	SM-SP	.32	14			94	42	.50+
5.60	86.63	.83	.95	SILTY SAND TO SANDY SILT	SM-ML	.31	13			83	40	.50+
5.80	103.53	1.11	1.07	SILTY SAND TO SANDY SILT	SM-ML	.32	16			89	41	.50+
6.00	82.05	.94	1.14	SILTY SAND TO SANDY SILT	SM-ML	.33	13			80	39	.50+
6.20	78.25	.96	1.22	SILTY SAND TO SANDY SILT	SM-ML	.34	12			78	39	.50+
6.40	65.95	.51	.77	SILTY SAND TO SANDY SILT	SM-ML	.35	10			72	38	.50+
6.60	69.03	1.01	1.46	SANDY SILT TO CLAYEY SILT	ML-MH	.33	13	5.089	13.5	74	39	.50+
6.80	104.27	.87	.84	SAND TO SILTY SAND	SM-SP	.41	12			84	41	.50+
7.00	114.74	1.19	1.04	SILTY SAND TO SANDY SILT	SM-ML	.38	18			89	41	.50+
7.20	133.07	1.19	.90	SAND TO SILTY SAND	SM-SP	.43	15			93	42	.50+
7.40	134.54	1.11	.83	SAND TO SILTY SAND	SM-SP	.44	16			92	42	.50+
7.60	146.11	1.08	.74	SAND TO SILTY SAND	SM-SP	.46	17			95	42	.50+
7.80	137.44	1.28	.93	SAND TO SILTY SAND	SM-SP	.47	16			92	41	.50+
8.00	129.90	.99	.76	SAND TO SILTY SAND	SM-SP	.48	15			89	41	.50+
8.20	106.75	1.11	1.04	SILTY SAND TO SANDY SILT	SM-ML	.45	17			83	40	.50+
8.40	107.75	.87	.80	SAND TO SILTY SAND	SM-SP	.50	12			82	40	.50+
8.60	65.27	.94	1.28	SILTY SAND TO SANDY SILT	SM-ML	.47	10			67	37	.39
8.80	103.43	.90	.87	SAND TO SILTY SAND	SM-SP	.53	12			80	40	.50+
9.00	96.94	.97	1.00	SILTY SAND TO SANDY SILT	SM-ML	.49	15			79	39	.50+
9.20	82.16	.88	1.07	SILTY SAND TO SANDY SILT	SM-ML	.51	13			72	39	.50+
9.40	75.14	.82	1.09	SILTY SAND TO SANDY SILT	SM-ML	.52	11			69	39	.48

9.60	82.86	.76	.91	SILTY SAND TO SANDY SILT	SM-ML	.53	13			72	39	.50+
9.80	88.57	.92	1.04	SILTY SAND TO SANDY SILT	SM-ML	.54	14			73	38	.50+
10.00	70.84	.97	1.37	SILTY SAND TO SANDY SILT	SM-ML	.55	11			66	37	.35
10.20	66.44	1.05	1.58	SANDY SILT TO CLAYEY SILT	ML-MH	.51	12	4.884	13.5	66	37	.34
10.40	50.78	.78	1.54	SANDY SILT TO CLAYEY SILT	ML-MH	.52	9	3.723	13.5	59	35	.21
10.60	57.25	1.00	1.75	SANDY SILT TO CLAYEY SILT	ML-MH	.53	10	4.201	13.5	61	37	.24
10.80	41.05	.82	2.00	SANDY SILT TO CLAYEY SILT	ML-MH	.54	7	3.001	13.5	50	35	.17
11.00	43.82	.22	.50	SILTY SAND TO SANDY SILT	SM-ML	.60	6			50	35	.17
11.20	47.33	.82	1.74	SANDY SILT TO CLAYEY SILT	ML-MH	.56	9	3.464	13.5	54	36	.18
11.40	51.39	.77	1.49	SANDY SILT TO CLAYEY SILT	ML-MH	.57	9	3.764	13.5	57	36	.20
11.60	59.77	.76	1.27	SANDY SILT TO CLAYEY SILT	ML-MH	.58	11	4.384	13.5	61	37	.23
11.80	56.09	.59	1.04	SILTY SAND TO SANDY SILT	SM-ML	.65	8			56	36	.19
12.00	37.92	.31	.82	SANDY SILT TO CLAYEY SILT	ML-MH	.60	7	2.765	13.5	45	34	.16
12.20	24.32	.77	3.16	SILTY CLAY TO CLAY	CL-CH	.49	7	1.765	13.5			
12.40	45.96	.90	1.96	SANDY SILT TO CLAYEY SILT	ML-MH	.62	8	3.358	13.5	50	35	.17
12.60	47.56	.90	1.88	SANDY SILT TO CLAYEY SILT	ML-MH	.63	9	3.476	13.5	51	35	.17
12.80	59.75	.45	.75	SILTY SAND TO SANDY SILT	SM-ML	.70	9			57	36	.20
13.00	.00	1.02	999.00	ORGANIC MATERIAL	OL-OH	.39	1	-.029	13.5			
13.20	67.20	.88	1.31	SILTY SAND TO SANDY SILT	SM-ML	.73	10			60	34	.22
13.40	65.19	.81	1.24	SILTY SAND TO SANDY SILT	SM-ML	.74	10			59	34	.21
13.60	57.59	.86	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.68	11	4.215	13.5	56	36	.19
13.80	53.95	.83	1.53	SANDY SILT TO CLAYEY SILT	ML-MH	.69	10	3.945	13.5	53	36	.19
14.00	58.59	.65	1.11	SILTY SAND TO SANDY SILT	SM-ML	.77	9			53	35	.18
14.20	27.62	.87	3.15	SILTY CLAY TO CLAY	CL-CH	.57	8	2.004	13.5			
14.40	52.16	.77	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.72	9	3.810	13.5	51	35	.17
14.60	61.47	.77	1.25	SANDY SILT TO CLAYEY SILT	ML-MH	.73	11	4.499	13.5	57	36	.20
14.80	65.68	.82	1.25	SILTY SAND TO SANDY SILT	SM-ML	.81	10			56	36	.19



RESULT OF CONE PENETRATION TEST

60N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

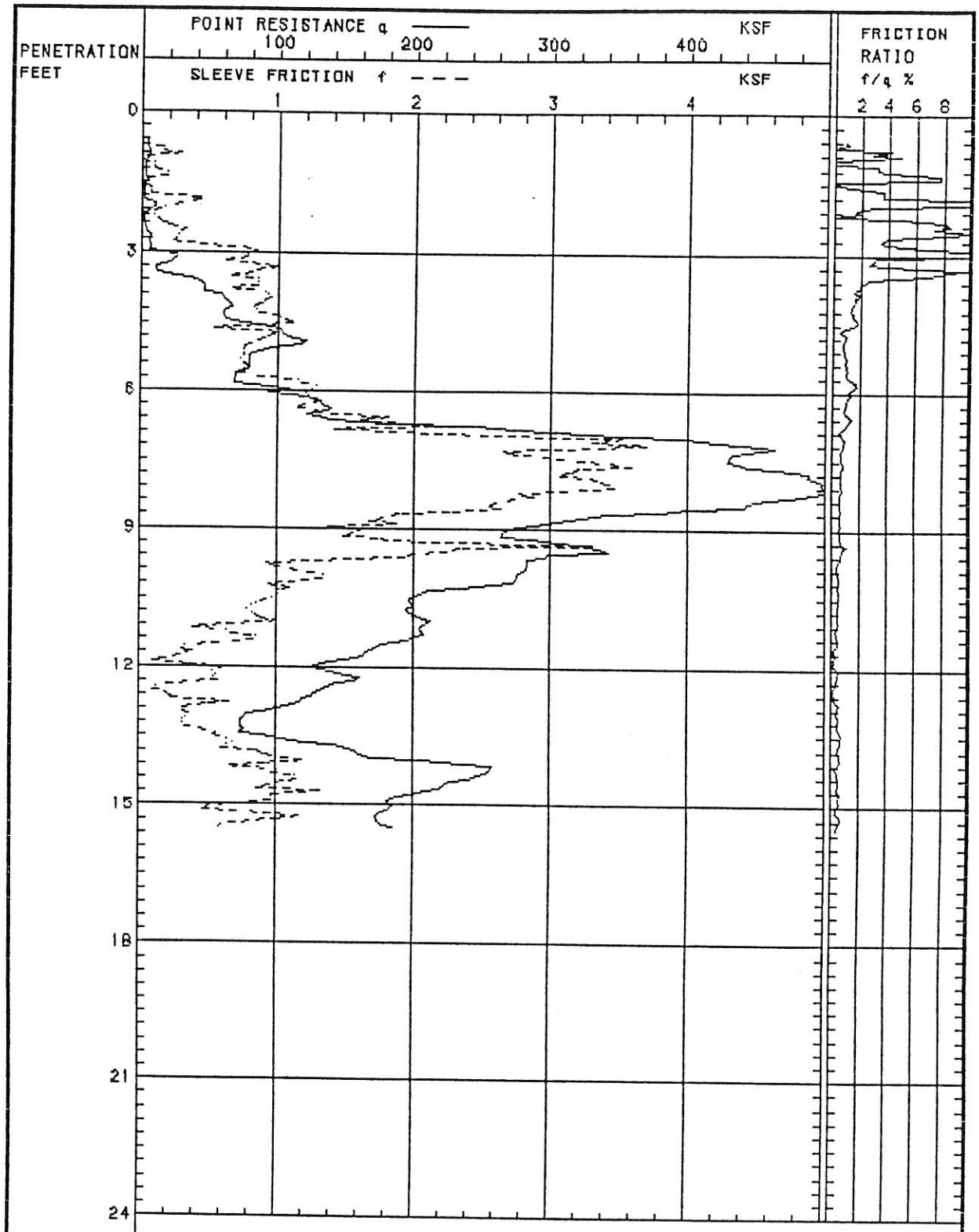
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 60N
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	94.95	.79	.83	SILTY SAND TO SANDY SILT	SM-ML	.03	15			100+	42	.50+
.80	56.08	.29	.52	SILTY SAND TO SANDY SILT	SM-ML	.04	8			91	41	.50+
1.00	43.35	.55	1.27	SANDY SILT TO CLAYEY SILT	ML-MH	.05	8	3.208	13.5	78	39	.50+
1.20	39.23	.14	.35	SILTY SAND TO SANDY SILT	SM-ML	.07	6			74	38	.50+
1.40	27.91	.87	3.11	SILTY CLAY TO CLAY	CL-CH	.06	8	2.064	13.5			
1.60	55.82	1.10	1.97	SANDY SILT TO CLAYEY SILT	ML-MH	.08	10	4.129	13.5	85	40	.50+
1.80	68.29	.83	1.22	SILTY SAND TO SANDY SILT	SM-ML	.10	10			92	41	.50+
2.00	74.77	.80	1.08	SILTY SAND TO SANDY SILT	SM-ML	.11	11			95	41	.50+
2.20	85.59	.77	.90	SILTY SAND TO SANDY SILT	SM-ML	.12	13			100+	42	.50+
2.40	79.33	.79	.99	SILTY SAND TO SANDY SILT	SM-ML	.13	12			95	41	.50+
2.60	59.77	.58	.97	SILTY SAND TO SANDY SILT	SM-ML	.14	9			81	39	.50+
2.80	56.11	.41	.74	SILTY SAND TO SANDY SILT	SM-ML	.15	8			78	39	.50+
3.00	30.01	.34	1.13	SANDY SILT TO CLAYEY SILT	ML-MH	.15	5	2.212	13.5	63	37	.41
3.20	5.17	.21	4.14	CLAY	CH	.13	2	.374	13.5			
3.40	1.97	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.10	0	.138	13.5			
3.60	1.72	.07	4.03	ORGANIC MATERIAL	OL-OH	.11	1	.120	13.5			
3.80	5.17	.02	.45	SENSITIVE FINE GRAINED	OL-CH	.11	1	.374	13.5			
4.00	1.23	.05	3.82	ORGANIC MATERIAL	OL-OH	.12	1	.082	13.5			
4.20	1.23	.05	3.81	ORGANIC MATERIAL	OL-OH	.13	1	.092	13.5			
4.40	1.23	.12	9.56	ORGANIC MATERIAL	OL-OH	.13	1	.081	13.5			
4.60	2.71	.03	1.29	SENSITIVE FINE GRAINED	OL-CH	.14	0	.191	13.5			
4.80	1.23	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.14	0	.081	13.5			
5.00	1.48	.05	3.17	ORGANIC MATERIAL	OL-OH	.15	1	.098	13.5			
5.20	1.23	.04	2.90	ORGANIC MATERIAL	OL-OH	.16	1	.080	13.5			
5.40	1.48	.01	.79	ORGANIC MATERIAL	OL-OH	.16	1	.097	13.5			
5.60	1.47	.06	4.00	ORGANIC MATERIAL	OL-OH	.17	1	.097	13.5			
5.80	1.24	.06	4.87	ORGANIC MATERIAL	OL-OH	.17	1	.079	13.5			
6.00	19.86	.66	3.30	SILTY CLAY TO CLAY	CL-CH	.24	6	1.453	13.5			
6.20	55.79	.73	1.30	SANDY SILT TO CLAYEY SILT	ML-MH	.31	10	4.109	13.5	69	38	.50+
6.40	70.27	.80	1.14	SILTY SAND TO SANDY SILT	SM-ML	.35	11			74	38	.50+
6.60	92.21	.73	.79	SILTY SAND TO SANDY SILT	SM-ML	.36	14			82	40	.50+
6.80	87.18	.70	.81	SILTY SAND TO SANDY SILT	SM-ML	.37	13			90	39	.50+
7.00	114.26	.65	.57	SAND TO SILTY SAND	SM-SP	.42	13			87	41	.50+
7.20	159.51	1.03	.64	SAND TO SILTY SAND	SM-SP	.43	19			100+	42	.50+
7.40	153.26	.25	.16	SAND TO SILTY SAND	SM-SP	.44	18			98	42	.50+
7.60	45.92	.59	1.28	SANDY SILT TO CLAYEY SILT	ML-MH	.38	8	3.373	13.5	62	37	.24
7.80	65.86	1.01	1.54	SANDY SILT TO CLAYEY SILT	ML-MH	.39	12	4.850	13.5	79	39	.50+
8.00	182.25	1.49	.82	SAND TO SILTY SAND	SM-SP	.48	21			100+	42	.50+
8.20	222.63	1.37	.61	SAND	SW-SP	.53	21			100+	44	.50+
8.40	287.92	1.62	.56	SAND	SW-SP	.55	27			100+	44	.50+
8.60	285.59	1.41	.49	SAND	SW-SP	.56	27			100+	44	.50+
8.80	224.92	1.53	.68	SAND	SW-SP	.57	21			100+	44	.50+
9.00	208.27	.80	.38	SAND	SW-SP	.58	19			100+	44	.50+
9.20	174.94	.86	.49	SAND TO SILTY SAND	SM-SP	.55	20			98	42	.50+
9.40	135.82	.73	.54	SAND TO SILTY SAND	SM-SP	.56	16			87	41	.50+

9.60	133.83	.69	.52	SAND TO SILTY SAND	SM-SP	.58	16			86	41	.50+
9.80	70.29	.26	.37	SILTY SAND TO SANDY SILT	SM-ML	.54	11			65	37	.36
10.00	34.05	.16	.48	SANDY SILT TO CLAYEY SILT	ML-MH	.50	6	2.435	13.5	47	35	.16
10.20	189.37	1.38	.73	SAND TO SILTY SAND	SM-SP	.61	22			98	42	.50+
10.40	199.89	1.12	.56	SAND TO SILTY SAND	SM-SP	.62	23			100+	42	.50+
10.60	219.66	1.23	.56	SAND	SW-SP	.69	21			100+	44	.50+
10.80	191.48	.75	.39	SAND	SW-SP	.70	18			95	44	.50+
11.00	184.40	.19	.10	SAND	SW-SP	.71	17			93	44	.50+
11.20	242.46	.55	.23	SAND	SW-SP	.73	23			100+	44	.50+
11.40	279.09	1.20	.43	SAND	SW-SP	.74	26			100+	44	.50+
11.60	294.43	.91	.31	SAND	SW-SP	.75	28			100+	44	.50+
11.80	290.80	1.61	.55	SAND	SW-SP	.77	27			100+	44	.50+
12.00	244.84	1.16	.47	SAND	SW-SP	.78	23			100+	44	.50+
12.20	203.70	2.13	1.04	SAND TO SILTY SAND	SM-SP	.73	24			96	42	.50+
12.40	261.45	1.23	.47	SAND	SW-SP	.81	25			100+	44	.50+
12.60	193.12	1.00	.52	SAND TO SILTY SAND	SM-SP	.76	23			93	42	.50+
12.80	193.31	.26	.14	SAND	SW-SP	.83	18			90	43	.50+
13.00	198.37	.75	.38	SAND	SW-SP	.84	19			91	43	.50+
13.20	172.19	.91	.53	SAND TO SILTY SAND	SM-SP	.79	20			87	41	.50+
13.40	90.31	.53	.58	SAND TO SILTY SAND	SM-SP	.80	10			66	39	.33



RESULT OF CONE PENETRATION TEST

60S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

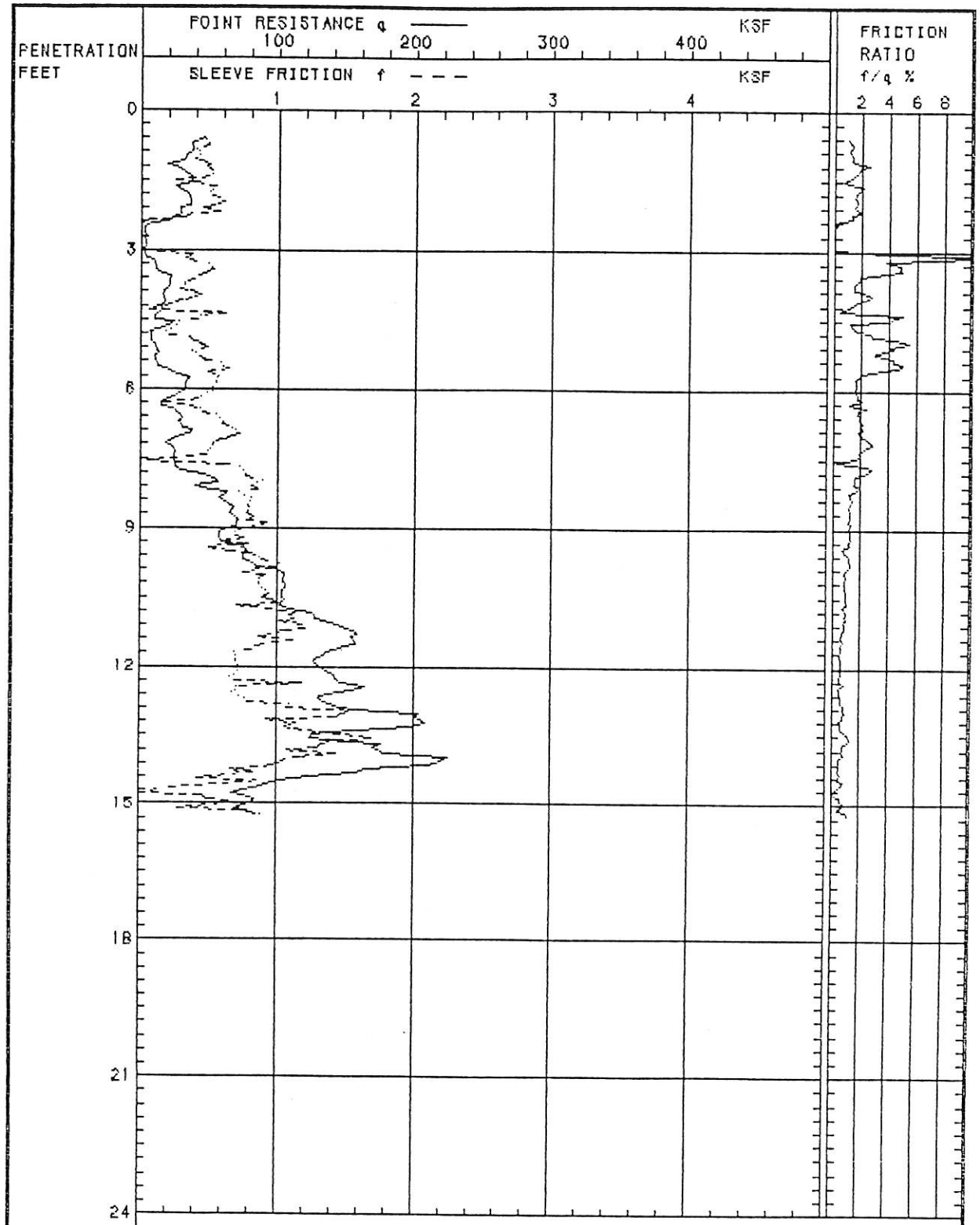
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 60S
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	4.92	.04	.91	SENSITIVE FINE GRAINED	OL-CH	.02	1	.363	13.5			
.80	4.92	.16	3.32	CLAY	CH	.03	2	.362	13.5			
1.00	4.67	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.03	1	.344	13.5			
1.20	2.71	.09	3.48	ORGANIC MATERIAL	OL-OH	.04	1	.198	13.5			
1.40	3.44	.09	2.74	CLAY	CH	.04	1	.251	13.5			
1.60	1.97	.05	2.36	ORGANIC MATERIAL	OL-OH	.05	1	.142	13.5			
1.80	1.97	.25	12.55	ORGANIC MATERIAL	OL-OH	.05	1	.142	13.5			
2.00	10.33	.08	.80	SENSITIVE FINE GRAINED	OL-CH	.06	2	.761	13.5			
2.20	2.95	.05	1.60	SENSITIVE FINE GRAINED	OL-CH	.07	0	.214	13.5			
2.40	2.46	.13	5.29	ORGANIC MATERIAL	OL-OH	.07	1	.177	13.5			
2.60	5.16	.28	5.51	CLAY	CH	.10	2	.375	13.5			
2.80	6.33	.44	7.02	ORGANIC MATERIAL	OL-OH	.08	3	.463	13.5			
3.00	15.71	.81	5.15	CLAY	CH	.12	7	1.155	13.5			
3.20	22.88	.57	2.49	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	5	1.684	13.5			
3.40	11.56	.86	7.43	CLAY	CH	.14	5	.846	13.5			
3.60	39.83	.85	2.13	SANDY SILT TO CLAYEY SILT	ML-MH	.18	7	2.937	13.5	67	37	.50+
3.80	45.75	.89	1.96	SANDY SILT TO CLAYEY SILT	ML-MH	.19	8	3.375	13.5	70	38	.50+
4.00	62.22	.93	1.49	SANDY SILT TO CLAYEY SILT	ML-MH	.20	11	4.594	13.5	78	39	.50+
4.20	64.21	.86	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.21	12	4.741	13.5	79	39	.50+
4.40	61.24	1.03	1.67	SANDY SILT TO CLAYEY SILT	ML-MH	.22	11	4.520	13.5	77	39	.50+
4.60	94.65	.98	1.03	SILTY SAND TO SANDY SILT	SM-ML	.25	15			90	41	.50+
4.80	108.45	.94	.87	SAND TO SILTY SAND	SM-SP	.29	12			94	42	.50+
5.00	106.57	.54	.50	SAND TO SILTY SAND	SM-SP	.30	12			92	41	.50+
5.20	80.50	.73	.90	SILTY SAND TO SANDY SILT	SM-ML	.29	12			82	40	.50+
5.40	79.20	.75	.95	SILTY SAND TO SANDY SILT	SM-ML	.30	12			81	39	.50+
5.60	73.95	.86	1.16	SILTY SAND TO SANDY SILT	SM-ML	.31	11			78	39	.50+
5.80	68.63	1.17	1.70	SANDY SILT TO CLAYEY SILT	ML-MH	.29	13	5.062	13.5	76	39	.50+
6.00	101.40	1.36	1.34	SILTY SAND TO SANDY SILT	SM-ML	.33	16			88	40	.50+
6.20	130.10	1.29	.99	SAND TO SILTY SAND	SM-SP	.37	15			95	42	.50+
6.40	138.24	1.18	.85	SAND TO SILTY SAND	SM-SP	.38	16			97	42	.50+
6.60	134.08	1.57	1.17	SILTY SAND TO SANDY SILT	SM-ML	.36	21			98	42	.50+
6.80	259.61	1.78	.69	SAND	SW-SP	.44	24			100+	44	.50+
7.00	374.25	2.81	.75	SAND	SW-SP	.45	35			100+	44	.50+
7.20	458.68	3.49	.76	SAND	SW-SP	.47	43			100+	44	.50+
7.40	431.44	2.64	.61	SAND	SW-SP	.48	41			100+	44	.50+
7.60	440.36	3.45	.78	SAND	SW-SP	.49	42			100+	44	.50+
7.80	487.76	2.90	.59	SAND	SW-SP	.51	46			100+	44	.50+
8.00	497.96	3.50	.70	SAND	SW-SP	.52	47			100+	44	.50+
8.20	495.43	3.65	.74	SAND	SW-SP	.53	47			100+	44	.50+
8.40	450.71	2.67	.59	SAND	SW-SP	.55	43			100+	44	.50+
8.60	390.72	2.29	.59	SAND	SW-SP	.56	37			100+	44	.50+
8.80	313.85	1.74	.55	SAND	SW-SP	.57	30			100+	44	.50+
9.00	273.57	1.37	.50	SAND	SW-SP	.58	26			100+	44	.50+
9.20	274.24	1.68	.61	SAND	SW-SP	.60	26			100+	44	.50+
9.40	327.78	2.26	.69	SAND	SW-SP	.61	31			100+	44	.50+

9.60	297.14	1.98	.67	SAND	SW-SP	.62	29	100+	44	.50+
9.80	282.62	.97	.34	SAND	SW-SP	.64	27	100+	44	.50+
10.00	276.48	1.44	.52	SAND	SW-SP	.65	26	100+	44	.50+
10.20	265.75	1.17	.44	SAND	SW-SP	.66	25	100+	44	.50+
10.40	208.87	.94	.45	SAND	SW-SP	.68	20	100+	44	.50+
10.60	198.11	.93	.47	SAND	SW-SP	.69	18	97	44	.50+
10.80	196.19	.81	.41	SAND	SW-SP	.70	18	96	44	.50+
11.00	210.01	.95	.45	SAND	SW-SP	.71	20	98	44	.50+
11.20	205.00	.46	.23	SAND	SW-SP	.73	19	97	44	.50+
11.40	199.30	.84	.42	SAND	SW-SP	.74	19	95	44	.50+
11.60	171.97	.35	.20	SAND	SW-SP	.75	16	89	43	.50+
11.80	157.28	.35	.22	SAND TO SILTY SAND	SM-SP	.71	18	87	41	.50+
12.00	127.79	.13	.10	SAND TO SILTY SAND	SM-SP	.72	15	80	40	.50+
12.20	156.35	.55	.35	SAND TO SILTY SAND	SM-SP	.73	18	86	41	.50+
12.40	141.01	.16	.11	SAND TO SILTY SAND	SM-SP	.74	16	82	40	.50+
12.60	126.69	.21	.16	SAND TO SILTY SAND	SM-SP	.76	15	77	40	.50+
12.80	115.40	.49	.43	SAND TO SILTY SAND	SM-SP	.77	13	73	40	.50+
13.00	84.47	.35	.42	SAND TO SILTY SAND	SM-SP	.78	10	64	38	.30
13.20	74.77	.27	.37	SILTY SAND TO SANDY SILT	SM-ML	.73	11	63	37	.26
13.40	75.29	.39	.52	SILTY SAND TO SANDY SILT	SM-ML	.74	12	62	37	.25
13.60	112.25	.66	.59	SAND TO SILTY SAND	SM-SP	.82	13	72	39	.50+
13.80	154.67	.68	.44	SAND TO SILTY SAND	SM-SP	.83	18	83	41	.50+
14.00	187.29	1.12	.60	SAND TO SILTY SAND	SM-SP	.84	22	99	41	.50+
14.20	257.18	.74	.29	SAND	SW-SP	.92	24	99	41	.50+
14.40	244.06	1.15	.47	SAND	SW-SP	.94	23	96	44	.50+
14.60	221.15	2.48	1.12	SAND TO SILTY SAND	SM-SP	.88	26	94	42	.50+
14.80	193.69	1.01	.52	SAND TO SILTY SAND	SM-SP	.89	23	89	41	.50+
15.00	184.33	.63	.34	SAND	SW-SP	.97	17	85	43	.50+
15.20	174.92	.57	.33	SAND	SW-SP	.99	16	83	43	.50+
15.40	175.82	2.17	1.24	SAND TO SILTY SAND	SM-SP	.92	21	85	41	.50+



RESULT OF CONE PENETRATION TEST

61N

JOB NUMBER: 0187-0206

CONE NUMBER: 001

LOCATION: ISLE DENIERES

GROUND SURFACE ELEV.: 0.0 FEET

DEPTH TO GROUNDWATER: 0.0 FEET

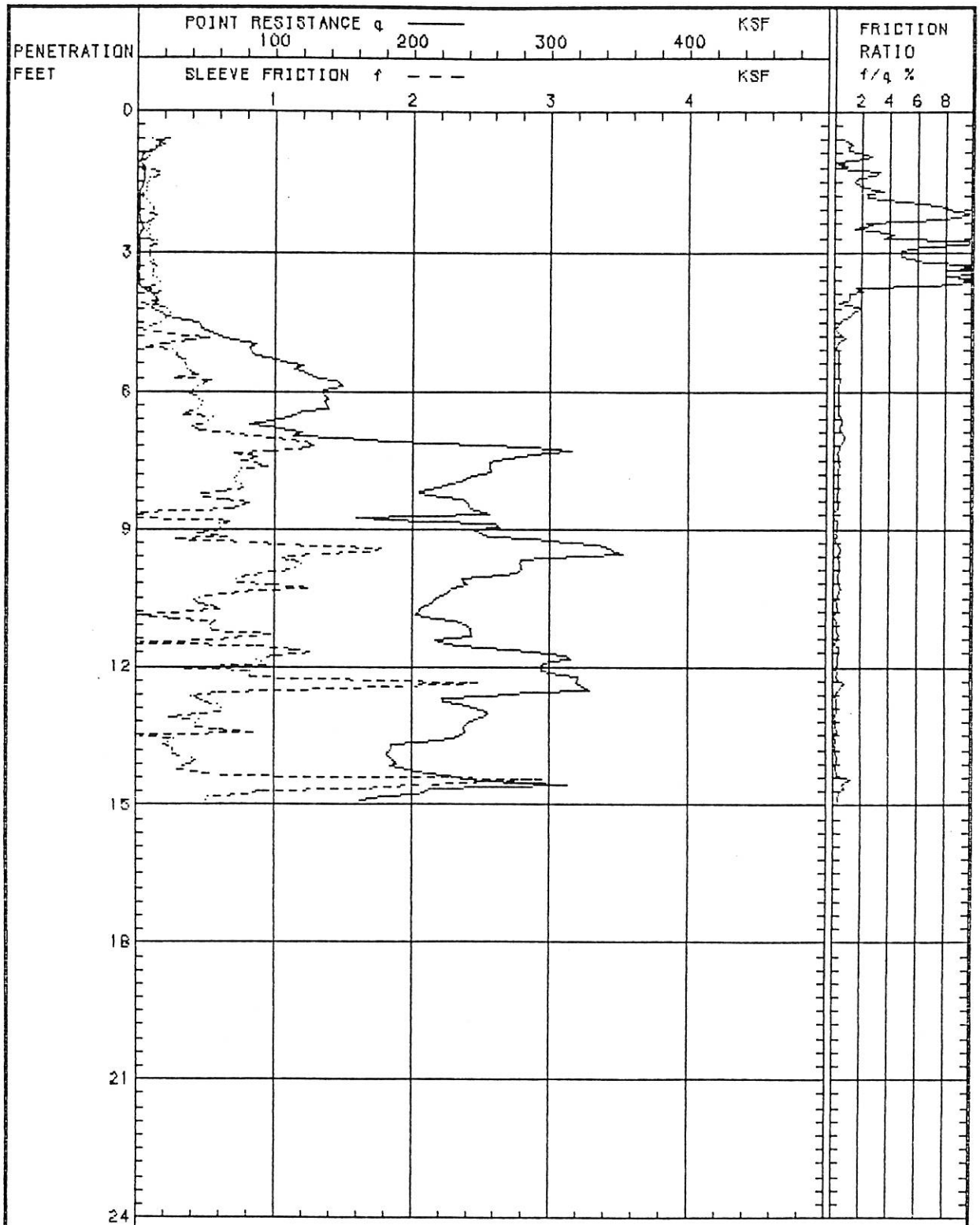
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 61N
CONE NO. : 001
DATE : 05/11/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	45.01	.60	1.34	SANDY SILT TO CLAYEY SILT	ML-MH	.03	8	3.332	13.5	82	40	.50+
.80	37.26	.43	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.04	7	2.757	13.5	75	39	.50+
1.00	32.10	.41	1.28	SANDY SILT TO CLAYEY SILT	ML-MH	.05	6	2.374	13.5	70	38	.50+
1.20	22.26	.44	1.98	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	5	1.645	13.5			
1.40	35.66	.51	1.43	SANDY SILT TO CLAYEY SILT	ML-MH	.07	6	2.637	13.5	71	38	.50+
1.60	31.37	.13	.42	SANDY SILT TO CLAYEY SILT	ML-MH	.08	6	2.318	13.5	68	38	.50+
1.80	33.69	.51	1.51	SANDY SILT TO CLAYEY SILT	ML-MH	.09	6	2.487	13.5	69	38	.50+
2.00	36.16	.33	.90	SANDY SILT TO CLAYEY SILT	ML-MH	.10	6	2.671	13.5	70	38	.50+
2.20	28.90	.43	1.49	SANDY SILT TO CLAYEY SILT	ML-MH	.11	5	2.133	13.5	64	37	.50+
2.40	14.04	.01	.08	SENSITIVE FINE GRAINED	OL-CH	.07	3	1.034	13.5			
2.60	2.95	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.08	0	.213	13.5			
2.80	3.20	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.08	0	.231	13.5			
3.00	2.95	.06	1.97	SENSITIVE FINE GRAINED	OL-CH	.09	0	.212	13.5			
3.20	6.88	.34	4.94	CLAY	CH	.13	3	.500	13.5			
3.40	10.82	.52	4.78	CLAY	CH	.14	5	.792	13.5			
3.60	21.52	.39	1.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.16	5	1.582	13.5			
3.80	20.17	.16	.80	CLAYEY SILT TO SILTY CLAY	MH-CL	.17	4	1.482	13.5			
4.00	16.42	.31	1.89	CLAYEY SILT TO SILTY CLAY	MH-CL	.18	3	1.203	13.5			
4.20	15.87	.08	.47	SENSITIVE FINE GRAINED	OL-CH	.13	3	1.166	13.5			
4.40	11.08	.34	3.09	CLAY	CH	.18	5	.807	13.5			
4.60	22.15	.27	1.21	CLAYEY SILT TO SILTY CLAY	MH-CL	.21	5	1.625	13.5			
4.80	7.13	.23	3.18	CLAY	CH	.19	3	.514	13.5			
5.00	9.09	.42	4.65	CLAY	CH	.20	4	.658	13.5			
5.20	12.54	.13	1.03	SENSITIVE FINE GRAINED	OL-CH	.16	3	.917	13.5			
5.40	11.31	.53	4.69	CLAY	CH	.22	5	.822	13.5			
5.60	20.89	.57	2.74	SILTY CLAY TO CLAY	CL-CH	.22	6	1.531	13.5			
5.80	34.82	.62	1.79	SANDY SILT TO CLAYEY SILT	ML-MH	.29	6	2.558	13.5	60	36	.21
6.00	32.47	.53	1.63	SANDY SILT TO CLAYEY SILT	ML-MH	.30	6	2.383	13.5	57	36	.19
6.20	23.02	.38	1.63	CLAYEY SILT TO SILTY CLAY	MH-CL	.28	5	1.685	13.5			
6.40	19.64	.40	2.02	CLAYEY SILT TO SILTY CLAY	MH-CL	.29	4	1.433	13.5			
6.60	29.26	.32	1.10	SANDY SILT TO CLAYEY SILT	ML-MH	.33	5	2.143	13.5	52	35	.17
6.80	30.18	.65	2.17	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	7	2.213	13.5			
7.00	33.12	.70	2.11	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	7	2.430	13.5			
7.20	19.85	.56	2.80	SILTY CLAY TO CLAY	CL-CH	.29	6	1.449	13.5			
7.40	25.09	.50	1.98	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	6	1.834	13.5			
7.60	24.84	.22	.88	SANDY SILT TO CLAYEY SILT	ML-MH	.38	4	1.812	13.5	45	34	.15
7.80	37.79	.76	2.01	SANDY SILT TO CLAYEY SILT	ML-MH	.39	7	2.770	13.5	56	36	.19
8.00	56.57	.95	1.68	SANDY SILT TO CLAYEY SILT	ML-MH	.40	10	4.161	13.5	66	37	.35
8.20	58.04	.77	1.33	SANDY SILT TO CLAYEY SILT	ML-MH	.41	11	4.269	13.5	66	37	.36
8.40	60.11	.84	1.40	SANDY SILT TO CLAYEY SILT	ML-MH	.42	11	4.422	13.5	66	37	.38
8.60	67.04	.77	1.14	SILTY SAND TO SANDY SILT	SM-ML	.47	10			67	37	.41
8.80	70.11	.79	1.12	SILTY SAND TO SANDY SILT	SM-ML	.48	11			68	39	.45
9.00	67.19	.78	1.16	SILTY SAND TO SANDY SILT	SM-ML	.49	10			67	37	.37
9.20	57.68	.75	1.30	SANDY SILT TO CLAYEY SILT	ML-MH	.46	11	4.239	13.5	64	37	.29
9.40	70.28	.66	.94	SILTY SAND TO SANDY SILT	SM-ML	.52	11			67	37	.39

9.60	74.90	.62	.83	SILTY SAND TO SANDY SILT	SM-ML	.53	11	63	39	.46
9.80	84.11	1.01	1.20	SILTY SAND TO SANDY SILT	SM-ML	.54	13	72	39	.50+
10.00	105.15	.78	.74	SAND TO SILTY SAND	SM-SP	.60	12	77	40	.50+
10.20	105.27	.87	.83	SAND TO SILTY SAND	SM-SP	.61	12	77	40	.50+
10.40	103.31	.91	.88	SILTY SAND TO SANDY SILT	SM-ML	.57	16	78	39	.50+
10.60	104.06	.98	.94	SILTY SAND TO SANDY SILT	SM-ML	.58	16	77	39	.50+
10.80	116.70	1.73	1.48	SILTY SAND TO SANDY SILT	SM-ML	.59	18	81	39	.50+
11.00	131.29	1.07	.82	SAND TO SILTY SAND	SM-SP	.66	15	83	40	.50+
11.20	152.46	1.47	.96	SAND TO SILTY SAND	SM-SP	.67	18	87	41	.50+
11.40	155.19	.99	.64	SAND TO SILTY SAND	SM-SP	.68	18	87	41	.50+
11.60	145.92	.83	.57	SAND TO SILTY SAND	SM-SP	.70	17	85	41	.50+
11.80	131.16	.60	.46	SAND TO SILTY SAND	SM-SP	.71	15	81	40	.50+
12.00	130.89	.69	.53	SAND TO SILTY SAND	SM-SP	.72	15	81	40	.50+
12.20	141.92	2.01	1.41	SILTY SAND TO SANDY SILT	SM-ML	.67	22	85	40	.50+
12.40	155.53	.95	.61	SAND TO SILTY SAND	SM-SP	.74	18	85	41	.50+
12.60	138.36	.70	.51	SAND TO SILTY SAND	SM-SP	.76	16	81	40	.50+
12.80	136.60	1.01	.74	SAND TO SILTY SAND	SM-SP	.77	16	81	40	.50+
13.00	189.36	1.46	.77	SAND TO SILTY SAND	SM-SP	.78	22	91	41	.50+
13.20	206.70	1.21	.59	SAND TO SILTY SAND	SM-SP	.79	24	94	42	.50+
13.40	159.05	1.18	.74	SAND TO SILTY SAND	SM-SP	.80	19	84	41	.50+
13.60	137.54	1.65	1.20	SILTY SAND TO SANDY SILT	SM-ML	.75	21	82	39	.50+
13.80	172.56	1.17	.68	SAND TO SILTY SAND	SM-SP	.83	20	86	41	.50+
14.00	224.11	1.12	.50	SAND	SW-SP	.91	21	94	44	.50+
14.20	187.89	.82	.44	SAND	SW-SP	.92	17	87	43	.50+
14.40	125.46	.76	.60	SAND TO SILTY SAND	SM-SP	.86	15	75	40	.50+
14.60	88.88	.48	.54	SAND TO SILTY SAND	SM-SP	.88	10	63	38	.28
14.80	71.86	.12	.17	SAND TO SILTY SAND	SM-SP	.87	9	57	38	.20
15.00	79.27	.46	.57	SILTY SAND TO SANDY SILT	SM-ML	.82	12	62	37	.24
15.20	81.21	.88	1.08	SILTY SAND TO SANDY SILT	SM-ML	.84	12	62	37	.25



RESULT OF CONE PENETRATION TEST

61S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

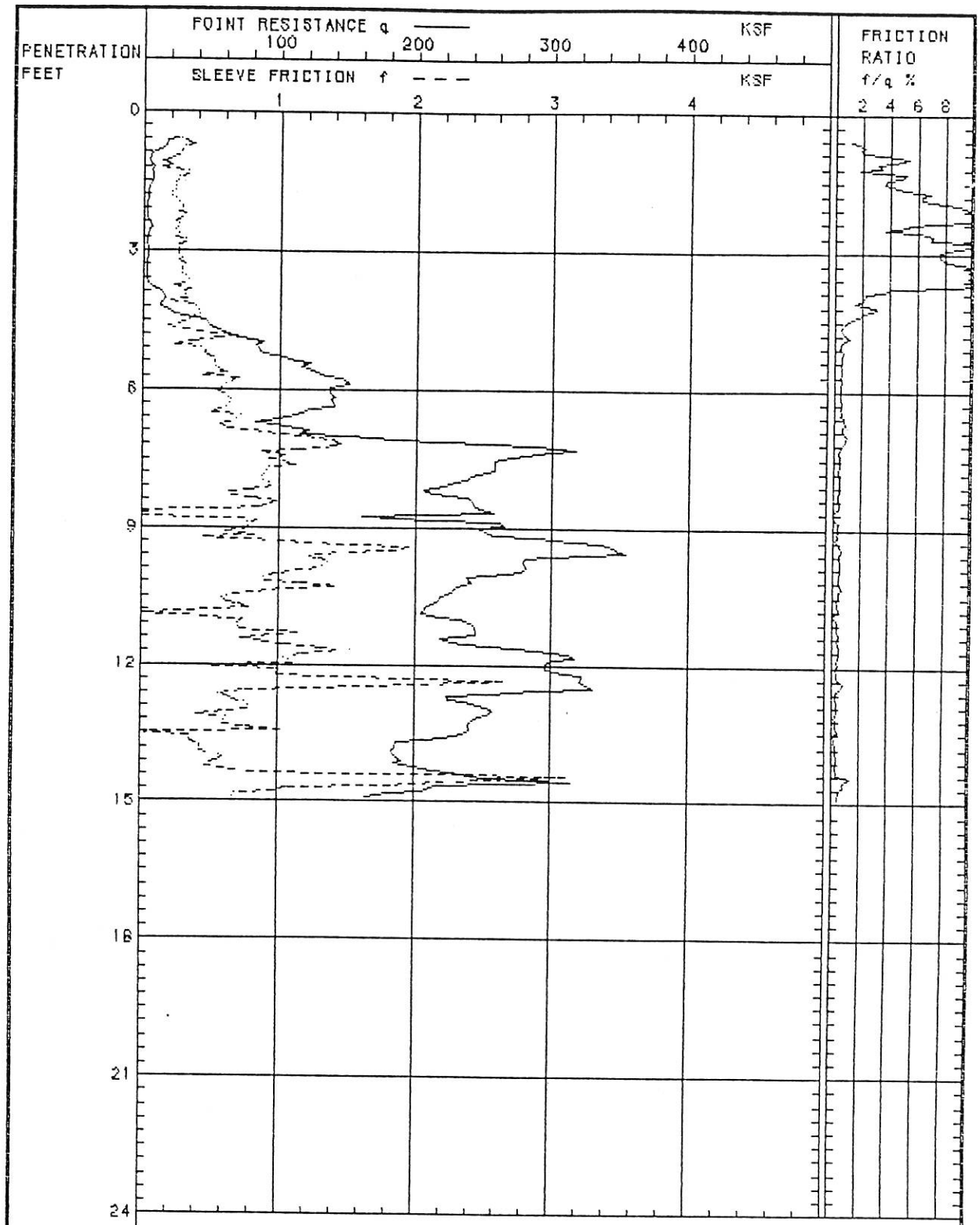
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 615
CONE NO. : 001
DATE : 05/12/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	53.37	.65	1.22	SANDY SILT TO CLAYEY SILT	ML-MH	.03	10	3.951	13.5	91	41	.50+
.80	93.46	.80	.86	SILTY SAND TO SANDY SILT	SM-ML	.04	14			100+	42	.50+
1.00	110.09	.54	.49	SAND TO SILTY SAND	SM-SP	.06	13			100+	42	.50+
1.20	105.76	.89	.84	SAND TO SILTY SAND	SM-SP	.07	12			100+	42	.50+
1.40	83.14	.18	.22	SAND TO SILTY SAND	SM-SP	.08	9			100+	42	.50+
1.60	61.49	.38	.62	SILTY SAND TO SANDY SILT	SM-ML	.09	9			88	40	.50+
1.80	48.46	.21	.42	SILTY SAND TO SANDY SILT	SM-ML	.10	7			77	39	.50+
2.00	18.70	.21	1.12	CLAYEY SILT TO SILTY CLAY	MH-CL	.09	4	1.379	13.5			
2.20	8.61	.12	1.34	SENSITIVE FINE GRAINED	OL-CH	.07	2	.633	13.5			
2.40	4.18	.08	1.92	SENSITIVE FINE GRAINED	OL-CH	.07	1	.394	13.5			
2.60	4.67	.09	1.98	SENSITIVE FINE GRAINED	OL-CH	.08	1	.340	13.5			
2.80	4.43	.12	2.63	CLAY	CH	.11	2	.320	13.5			
3.00	4.18	.09	2.22	SENSITIVE FINE GRAINED	OL-CH	.09	1	.303	13.5			
3.20	3.44	.11	3.05	CLAY	CH	.13	1	.246	13.5			
3.40	3.44	.14	4.13	CLAY	CH	.14	1	.245	13.5			
3.60	2.95	.17	5.61	ORGANIC MATERIAL	OL-OH	.11	1	.211	13.5			
3.80	3.32	.19	5.69	ORGANIC MATERIAL	OL-OH	.11	1	.237	13.5			
4.00	4.43	.20	4.54	CLAY	CH	.16	2	.316	13.5			
4.20	6.63	.26	3.92	CLAY	CH	.17	3	.478	13.5			
4.40	7.26	.47	6.45	CLAY	CH	.18	3	.525	13.5			
4.60	22.84	.32	1.42	CLAYEY SILT TO SILTY CLAY	MH-CL	.21	5	1.676	13.5			
4.80	27.14	.42	1.56	CLAYEY SILT TO SILTY CLAY	MH-CL	.22	6	1.995	13.5			
5.00	43.05	.45	1.04	SANDY SILT TO CLAYEY SILT	ML-MH	.25	8	3.170	13.5	65	37	.41
5.20	21.26	.36	1.70	CLAYEY SILT TO SILTY CLAY	MH-CL	.23	5	1.557	13.5			
5.40	54.32	.64	1.19	SANDY SILT TO CLAYEY SILT	ML-MH	.27	10	4.003	13.5	70	38	.50+
5.60	69.10	.58	.84	SILTY SAND TO SANDY SILT	SM-ML	.31	11			75	39	.50+
5.80	68.50	.71	1.04	SILTY SAND TO SANDY SILT	SM-ML	.32	10			75	39	.50+
6.00	73.04	.69	.94	SILTY SAND TO SANDY SILT	SM-ML	.33	11			76	39	.50+
6.20	106.72	.73	.68	SAND TO SILTY SAND	SM-SP	.37	12			87	41	.50+
6.40	108.43	1.32	1.22	SILTY SAND TO SANDY SILT	SM-ML	.35	17			89	41	.50+
6.60	135.81	.63	.46	SAND TO SILTY SAND	SM-SP	.40	16			96	42	.50+
6.80	119.30	.85	.71	SAND TO SILTY SAND	SM-SP	.41	14			89	41	.50+
7.00	115.84	.46	.40	SAND TO SILTY SAND	SM-SP	.42	13			88	41	.50+
7.20	92.01	.58	.63	SAND TO SILTY SAND	SM-SP	.43	11			79	40	.50+
7.40	80.32	.52	.65	SILTY SAND TO SANDY SILT	SM-ML	.41	12			76	39	.50+
7.60	78.59	.75	.95	SILTY SAND TO SANDY SILT	SM-ML	.42	12			74	38	.50+
7.80	135.39	1.64	1.21	SILTY SAND TO SANDY SILT	SM-ML	.43	21			93	41	.50+
8.00	252.37	1.00	.40	SAND	SW-SP	.52	24			100+	44	.50+
8.20	273.18	3.19	1.17	SAND TO SILTY SAND	SM-SP	.49	32			100+	42	.50+
8.40	301.18	2.06	.69	SAND	SW-SP	.55	28			100+	44	.50+
8.60	284.86	.92	.32	SAND	SW-SP	.56	27			100+	44	.50+
8.80	297.49	1.06	.36	SAND	SW-SP	.57	29			100+	44	.50+
9.00	138.52	1.54	1.11	SAND TO SILTY SAND	SM-SP	.54	16			89	41	.50+
9.20	265.55	.91	.34	SAND	SW-SP	.60	25			100+	44	.50+
9.40	304.36	.96	.32	SAND	SW-SP	.61	29			100+	44	.50+

9.60	315.36	1.00	.32	SAND	SW-SP	.62	30	100+	44	.50+
9.80	272.84	1.28	.47	SAND	SW-SP	.64	26	100+	44	.50+
10.00	224.60	.86	.38	SAND	SW-SP	.65	21	100+	44	.50+
10.20	212.02	.79	.37	SAND	SW-SP	.66	20	100+	44	.50+
10.40	215.51	.99	.46	SAND	SW-SP	.68	20	100+	44	.50+
10.60	231.97	1.29	.56	SAND	SW-SP	.69	22	100+	44	.50+
10.80	190.09	.56	.30	SAND	SW-SP	.70	18	91	44	.50+
11.00	204.08	.83	.41	SAND	SW-SP	.71	19	97	44	.50+
11.20	200.73	.56	.28	SAND	SW-SP	.73	19	96	44	.50+
11.40	221.02	.91	.41	SAND	SW-SP	.74	21	97	44	.50+
11.60	247.53	.12	.05	SAND	SW-SP	.75	23	100+	44	.50+
11.80	271.32	.77	.29	SAND	SW-SP	.77	25	100+	44	.50+
12.00	263.56	.87	.33	SAND	SW-SP	.78	25	100+	44	.50+
12.20	248.51	.47	.19	SAND	SW-SP	.79	23	100+	44	.50+
12.40	285.71	1.71	.60	SAND	SW-SP	.81	27	100+	44	.50+
12.60	276.10	.82	.30	SAND	SW-SP	.82	26	100+	44	.50+
12.80	229.85	1.01	.44	SAND	SW-SP	.83	22	98	44	.50+
13.00	199.60	.60	.30	SAND	SW-SP	.84	19	91	44	.50+
13.20	220.71	.72	.32	SAND	SW-SP	.86	21	95	44	.50+
13.40	226.31	.68	.30	SAND	SW-SP	.87	21	95	44	.50+
13.60	212.01	.86	.41	SAND	SW-SP	.88	20	92	44	.50+
13.80	221.10	.60	.27	SAND	SW-SP	.90	21	94	44	.50+
14.00	250.17	.65	.26	SAND	SW-SP	.91	23	98	44	.50+
14.20	239.60	1.03	.43	SAND	SW-SP	.92	22	96	44	.50+
14.40	223.40	.81	.36	SAND	SW-SP	.94	21	93	44	.50+
14.60	213.75	.75	.35	SAND	SW-SP	.95	20	91	43	.50+
14.80	209.23	.67	.32	SAND	SW-SP	.96	20	90	43	.50+
15.00	139.55	.43	.31	SAND TO SILTY SAND	SM-SP	.99	16	78	40	.50+



RESULT OF CONE PENETRATION TEST

62N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

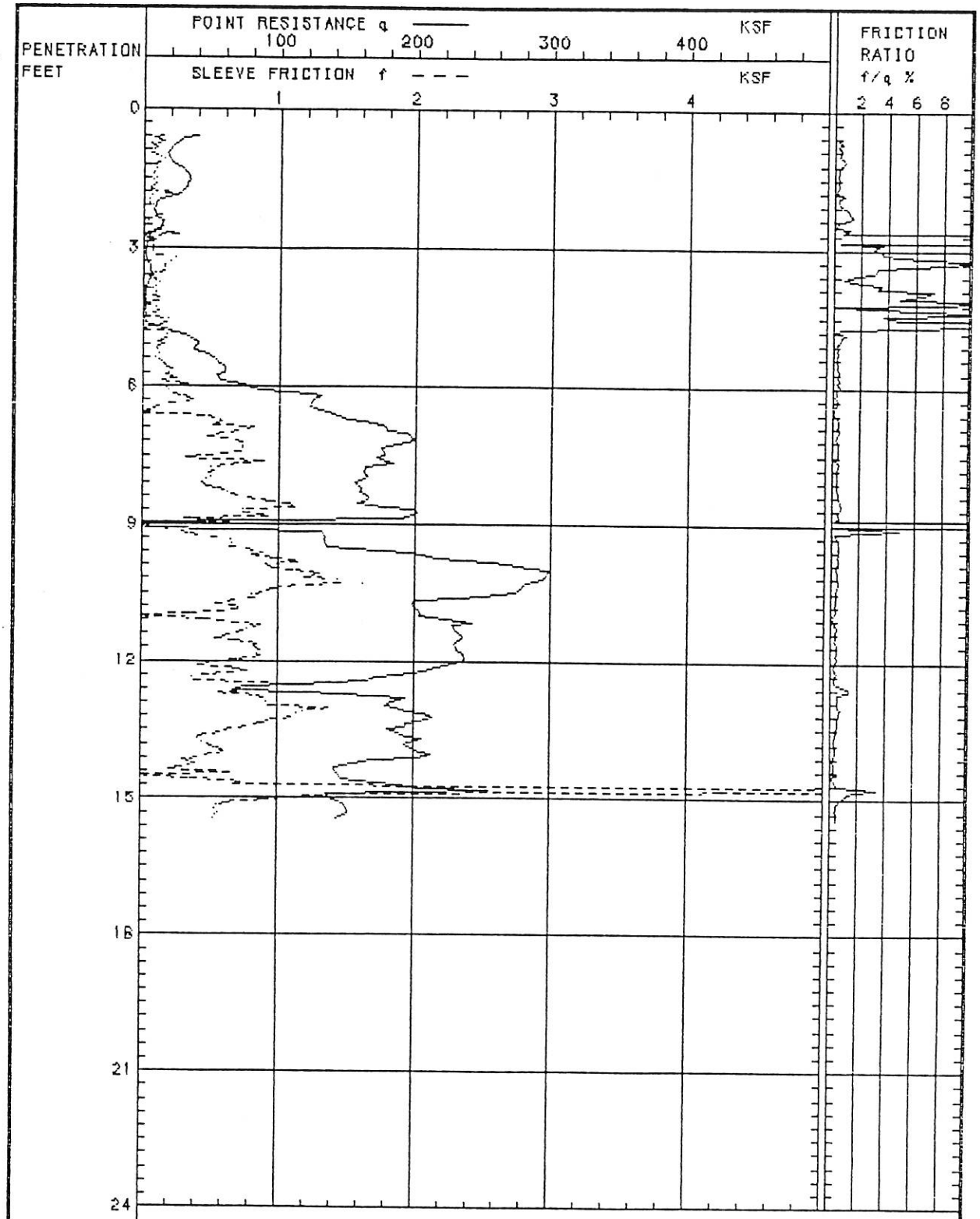
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 62N
CONE NO. : 001
DATE : 05/12/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. 'N'	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	21.40	.34	1.59	CLAYEY SILT TO SILTY CLAY	MH-CL	.03	5	1.583	13.5			
.80	15.25	.30	1.94	SILTY CLAY TO CLAY	CL-CH	.03	4	1.127	13.5			
1.00	4.80	.23	4.80	CLAY	CH	.04	2	.352	13.5			
1.20	7.01	.14	1.97	SENSITIVE FINE GRAINED	OL-CH	.04	1	.517	13.5			
1.40	6.87	.30	4.29	CLAY	CH	.06	3	.506	13.5			
1.60	5.29	.24	4.49	CLAY	CH	.06	2	.387	13.5			
1.80	3.44	.21	6.21	ORGANIC MATERIAL	OL-OH	.05	1	.251	13.5			
2.00	2.95	.27	9.30	ORGANIC MATERIAL	OL-OH	.06	1	.214	13.5			
2.20	2.71	.29	10.56	ORGANIC MATERIAL	OL-OH	.07	1	.195	13.5			
2.40	4.67	.25	5.31	CLAY	CH	.10	2	.339	13.5			
2.60	3.81	.24	6.24	ORGANIC MATERIAL	OL-OH	.08	1	.277	13.5			
2.80	2.95	.31	10.51	ORGANIC MATERIAL	OL-OH	.08	1	.212	13.5			
3.00	3.44	.31	9.05	ORGANIC MATERIAL	OL-OH	.09	1	.248	13.5			
3.20	3.20	.27	8.58	ORGANIC MATERIAL	OL-OH	.10	1	.230	13.5			
3.40	2.71	.25	9.26	ORGANIC MATERIAL	OL-OH	.10	1	.193	13.5			
3.60	2.95	.32	10.86	ORGANIC MATERIAL	OL-OH	.11	1	.211	13.5			
3.80	7.61	.29	3.79	CLAY	CH	.15	3	.553	13.5			
4.00	15.98	.40	2.51	SILTY CLAY TO CLAY	CL-CH	.16	5	1.172	13.5			
4.20	12.79	.38	2.96	CLAY	CH	.17	6	.935	13.5			
4.40	26.79	.47	1.75	CLAYEY SILT TO SILTY CLAY	MH-CL	.20	6	1.970	13.5			
4.60	47.96	.23	.47	SILTY SAND TO SANDY SILT	SM-ML	.25	7			68	39	.50+
4.80	62.46	.43	.69	SILTY SAND TO SANDY SILT	SM-ML	.26	9			75	39	.50+
5.00	85.86	.40	.46	SAND TO SILTY SAND	SM-SP	.30	10			83	41	.50+
5.20	87.31	.46	.52	SAND TO SILTY SAND	SM-SP	.31	10			83	41	.50+
5.40	117.53	.26	.22	SAND TO SILTY SAND	SM-SP	.32	16			94	42	.50+
5.60	124.19	.60	.48	SAND TO SILTY SAND	SM-SP	.34	14			96	42	.50+
5.80	147.56	.68	.46	SAND TO SILTY SAND	SM-SP	.35	17			100+	42	.50+
6.00	136.88	.58	.42	SAND TO SILTY SAND	SM-SP	.36	16			99	42	.50+
6.20	139.48	.66	.47	SAND TO SILTY SAND	SM-SP	.37	16			99	42	.50+
6.40	131.31	.60	.46	SAND TO SILTY SAND	SM-SP	.38	15			95	42	.50+
6.60	105.58	1.23	1.17	SILTY SAND TO SANDY SILT	SM-ML	.36	16			87	40	.50+
6.80	105.20	.61	.58	SAND TO SILTY SAND	SM-SP	.41	12			85	41	.50+
7.00	132.22	.60	.45	SAND TO SILTY SAND	SM-SP	.42	15			93	42	.50+
7.20	269.90	1.42	.53	SAND	SW-SP	.47	25			100+	44	.50+
7.40	289.85	.89	.31	SAND	SW-SP	.48	27			100+	44	.50+
7.60	257.77	1.10	.43	SAND	SW-SP	.49	24			100+	44	.50+
7.80	252.18	.77	.30	SAND	SW-SP	.51	24			100+	44	.50+
8.00	233.46	.91	.39	SAND	SW-SP	.52	22			100+	44	.50+
8.20	206.86	.53	.25	SAND	SW-SP	.53	19			100+	44	.50+
8.40	237.80	.82	.34	SAND	SW-SP	.55	22			100+	44	.50+
8.60	247.88	.43	.17	SAND	SW-SP	.56	23			100+	44	.50+
8.80	185.64	.00	.00	SAND	SW-SP	.57	17			100+	44	.50+
9.00	255.33	.67	.26	SAND	SW-SP	.59	24			100+	44	.50+
9.20	272.57	.64	.24	SAND	SW-SP	.60	26			100+	44	.50+
9.40	340.12	1.63	.48	SAND	SW-SP	.61	32			100+	44	.50+

9.60	327.02	1.60	.49	SAND	SW-SP	.62	31	100+	44	.50+
9.80	279.72	1.33	.48	SAND	SW-SP	.64	26	100+	44	.50+
10.00	272.60	2.07	.76	SAND	SW-SP	.65	26	100+	44	.50+
10.20	240.60	1.05	.44	SAND	SW-SP	.66	23	100+	44	.50+
10.40	227.90	1.97	.87	SAND TO SILTY SAND	SM-SP	.68	27	100+	42	.50+
10.60	216.96	.63	.29	SAND	SW-SP	.69	20	100+	44	.50+
10.80	206.50	.59	.29	SAND	SW-SP	.70	19	98	44	.50+
11.00	225.56	.56	.25	SAND	SW-SP	.71	21	100+	44	.50+
11.20	243.76	.75	.31	SAND	SW-SP	.73	23	100+	44	.50+
11.40	231.92	1.18	.51	SAND	SW-SP	.74	22	100+	44	.50+
11.60	253.77	1.18	.46	SAND	SW-SP	.75	24	100+	44	.50+
11.80	314.55	2.28	.72	SAND	SW-SP	.77	30	100+	44	.50+
12.00	295.53	.78	.26	SAND	SW-SP	.78	28	100+	43	.50+
12.20	315.46	.98	.31	SAND	SW-SP	.79	30	100+	44	.50+
12.40	322.78	2.00	.62	SAND	SW-SP	.81	30	100+	44	.50+
12.60	272.09	.71	.26	SAND	SW-SP	.82	26	100+	44	.50+
12.80	230.11	.72	.31	SAND	SW-SP	.83	22	98	44	.50+
13.00	256.54	.70	.27	SAND	SW-SP	.84	24	100+	44	.50+
13.20	244.79	.56	.23	SAND	SW-SP	.86	23	99	44	.50+
13.40	240.05	.90	.37	SAND	SW-SP	.87	22	98	44	.50+
13.60	219.87	.64	.29	SAND	SW-SP	.88	21	94	44	.50+
13.80	186.26	.52	.28	SAND	SW-SP	.90	17	87	43	.50+
14.00	186.49	.14	.07	SAND	SW-SP	.91	17	87	43	.50+
14.20	192.27	.58	.30	SAND	SW-SP	.92	18	89	43	.50+
14.40	234.01	1.93	.82	SAND TO SILTY SAND	SM-SP	.86	28	97	42	.50+
14.60	265.96	2.03	.76	SAND	SW-SP	.95	25	100+	44	.50+
14.80	194.58	.84	.43	SAND	SW-SP	.96	18	87	43	.50+



RESULT OF CONE PENETRATION TEST

62S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

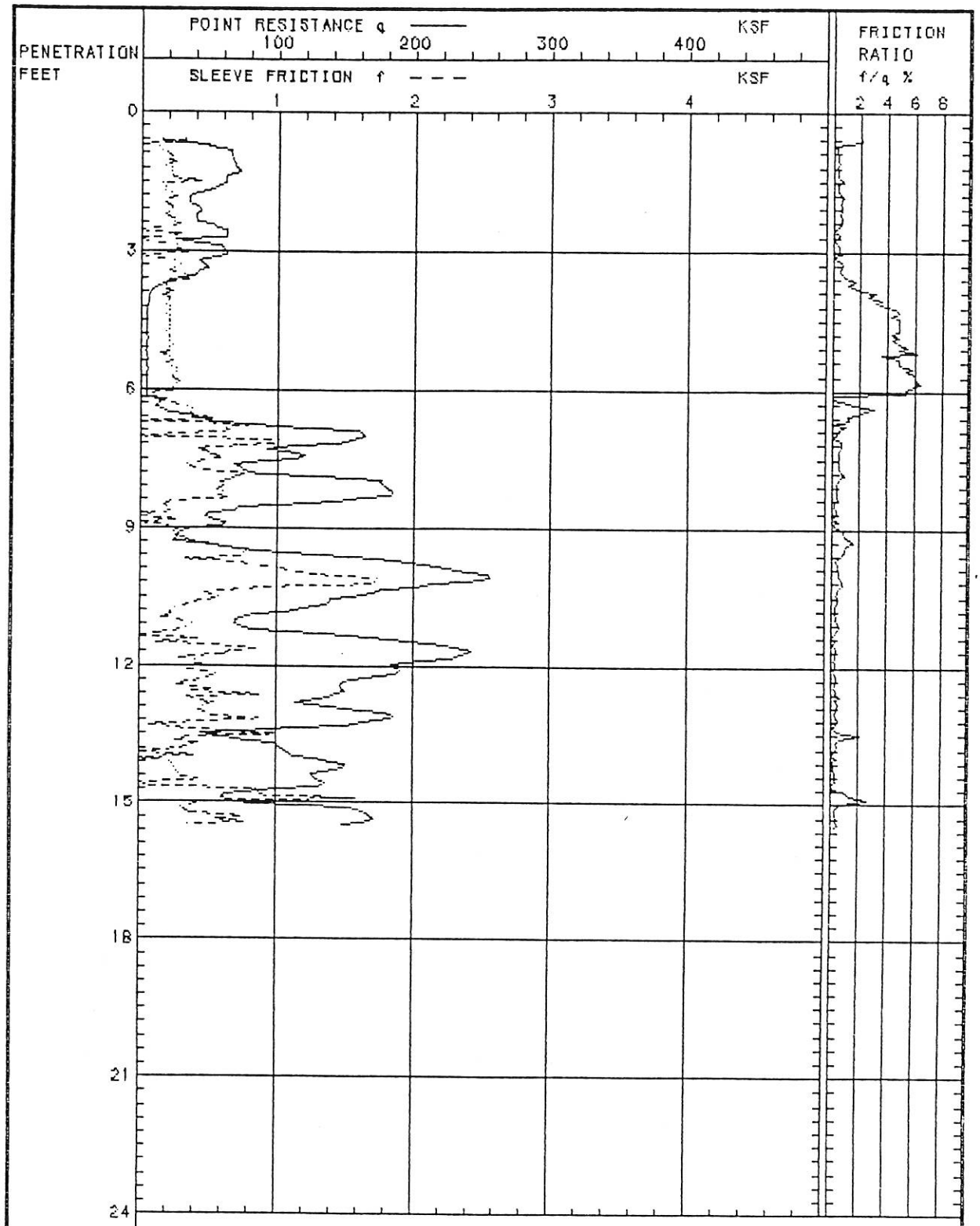
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 62S
CONE NO. : 001
DATE : 05/12/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UNC. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	34.68	.11	.32	SANDY SILT TO CLAYEY SILT	ML-MH	.03	6	2.567	13.5	74	38	.50+
.80	22.63	.06	.28	SANDY SILT TO CLAYEY SILT	ML-MH	.04	4	1.673	13.5	64	37	.50+
1.00	18.08	.14	.79	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	4	1.336	13.5			
1.20	22.14	.09	.42	SANDY SILT TO CLAYEY SILT	ML-MH	.06	4	1.635	13.5	63	37	.50+
1.40	31.73	.10	.33	SANDY SILT TO CLAYEY SILT	ML-MH	.07	6	2.345	13.5	69	39	.50+
1.60	32.96	.08	.25	SANDY SILT TO CLAYEY SILT	ML-MH	.08	6	2.436	13.5	69	39	.50+
1.80	28.53	.13	.45	SANDY SILT TO CLAYEY SILT	ML-MH	.09	5	2.107	13.5	65	37	.50+
2.00	10.83	.04	.38	SENSITIVE FINE GRAINED	OL-CH	.06	2	.797	13.5			
2.20	7.62	.11	1.50	SENSITIVE FINE GRAINED	OL-CH	.07	1	.560	13.5			
2.40	13.03	.09	.65	SENSITIVE FINE GRAINED	OL-CH	.07	3	.960	13.5			
2.60	12.30	.06	.47	SENSITIVE FINE GRAINED	OL-CH	.08	2	.905	13.5			
2.80	4.66	.05	.99	SENSITIVE FINE GRAINED	OL-CH	.08	1	.339	13.5			
3.00	2.21	.07	3.19	ORGANIC MATERIAL	OL-OH	.09	1	.157	13.5			
3.20	1.72	.16	9.59	ORGANIC MATERIAL	OL-OH	.10	1	.120	13.5			
3.40	5.04	.16	3.25	CLAY	CH	.14	2	.363	13.5			
3.60	5.78	.07	1.29	SENSITIVE FINE GRAINED	OL-CH	.11	1	.420	13.5			
3.80	3.20	.11	3.35	CLAY	CH	.15	1	.226	13.5			
4.00	1.48	.08	5.64	ORGANIC MATERIAL	OL-OH	.12	1	.106	13.5			
4.20	1.48	.06	4.06	ORGANIC MATERIAL	OL-OH	.13	1	.109	13.5			
4.40	1.47	.10	6.46	ORGANIC MATERIAL	OL-OH	.13	1	.070	13.5			
4.60	1.23	.18	14.74	ORGANIC MATERIAL	OL-OH	.14	1	.081	13.5			
4.80	19.53	.04	.23	SENSITIVE FINE GRAINED	OL-CH	.14	4	1.426	13.5			
5.00	38.85	.15	.38	SILTY SAND TO SANDY SILT	SM-ML	.27	5			62	37	.27
5.20	37.39	.29	.77	SANDY SILT TO CLAYEY SILT	ML-MH	.26	7	2.750	13.5	62	37	.27
5.40	52.75	.12	.22	SILTY SAND TO SANDY SILT	SM-ML	.30	9			68	39	.50+
5.60	59.52	.14	.24	SILTY SAND TO SANDY SILT	SM-ML	.31	9			71	39	.50+
5.80	55.03	.23	.42	SILTY SAND TO SANDY SILT	SM-ML	.32	8			68	38	.50+
6.00	77.45	.26	.33	SAND TO SILTY SAND	SM-SP	.36	9			77	40	.50+
6.20	127.38	.47	.37	SAND TO SILTY SAND	SM-SP	.37	15			94	41	.50+
6.40	123.48	.18	.14	SAND TO SILTY SAND	SM-SP	.38	14			92	42	.50+
6.60	139.55	.14	.10	SAND TO SILTY SAND	SM-SP	.40	16			97	42	.50+
6.80	168.92	.55	.33	SAND TO SILTY SAND	SM-SP	.41	20			100+	42	.50+
7.00	186.62	1.46	.78	SAND TO SILTY SAND	SM-SP	.42	22			100+	42	.50+
7.20	196.56	.71	.36	SAND	SW-SP	.47	18			100+	44	.50+
7.40	175.86	.73	.41	SAND TO SILTY SAND	SM-SP	.44	21			100+	42	.50+
7.60	175.22	.73	.42	SAND TO SILTY SAND	SM-SP	.46	20			100+	42	.50+
7.80	163.20	.50	.31	SAND TO SILTY SAND	SM-SP	.47	19			100+	42	.50+
8.00	164.32	.56	.34	SAND TO SILTY SAND	SM-SP	.48	19			93	42	.50+
8.20	160.05	.55	.34	SAND TO SILTY SAND	SM-SP	.49	19			97	42	.50+
8.40	164.59	1.46	.89	SAND TO SILTY SAND	SM-SP	.50	19			90	42	.50+
8.60	168.11	.94	.56	SAND TO SILTY SAND	SM-SP	.52	20			78	42	.50+
8.80	198.29	.84	.42	SAND	SW-SP	.57	18			100+	44	.50+
9.00	.00	.33	999.00	ORGANIC MATERIAL	OL-OH	.27	1	-.020	13.5			
9.20	132.45	.32	.24	SAND TO SILTY SAND	SM-SP	.55	15			87	41	.50+
9.40	134.04	.65	.48	SAND TO SILTY SAND	SM-SP	.56	16			86	41	.50+

9.60	175.08	1.46	.84	SAND TO SILTY SAND	SM-SP	.58	20	97	42	.50+
9.80	235.35	.56	.24	SAND	SW-SP	.64	22	100+	44	.50+
10.00	291.36	1.05	.36	SAND	SW-SP	.65	27	100+	44	.50+
10.20	294.56	1.40	.48	SAND	SW-SP	.66	28	100+	44	.50+
10.40	278.69	1.05	.38	SAND	SW-SP	.68	26	100+	44	.50+
10.60	248.79	.83	.34	SAND	SW-SP	.69	23	100+	44	.50+
10.80	199.71	.58	.29	SAND	SW-SP	.70	19	97	44	.50+
11.00	203.91	1.08	.53	SAND	SW-SP	.71	19	97	44	.50+
11.20	235.51	.88	.38	SAND	SW-SP	.73	22	100+	44	.50+
11.40	232.65	.42	.18	SAND	SW-SP	.74	22	100+	44	.50+
11.60	231.23	.78	.34	SAND	SW-SP	.75	22	100+	44	.50+
11.80	233.87	.86	.37	SAND	SW-SP	.77	22	100+	44	.50+
12.00	235.90	.56	.24	SAND	SW-SP	.78	22	100+	44	.50+
12.20	209.83	.73	.35	SAND	SW-SP	.79	20	95	44	.50+
12.40	169.05	.82	.48	SAND TO SILTY SAND	SM-SP	.74	20	88	41	.50+
12.60	72.08	.63	.88	SILTY SAND TO SANDY SILT	SM-ML	.69	11	62	37	.25
12.80	183.03	.87	.48	SAND TO SILTY SAND	SM-SP	.77	21	90	41	.50+
13.00	183.42	1.00	.54	SAND TO SILTY SAND	SM-SP	.78	21	90	41	.50+
13.20	210.73	1.08	.51	SAND	SW-SP	.85	20	93	44	.50+
13.40	194.07	.79	.41	SAND	SW-SP	.87	18	89	43	.50+
13.60	191.66	.93	.48	SAND	SW-SP	.89	18	89	43	.50+
13.80	195.27	.42	.22	SAND	SW-SP	.90	18	89	43	.50+
14.00	208.49	.57	.27	SAND	SW-SP	.91	19	91	43	.50+
14.20	163.22	.33	.20	SAND	SW-SP	.92	15	82	43	.50+
14.40	142.89	.16	.11	SAND TO SILTY SAND	SM-SP	.86	17	80	40	.50+
14.60	159.35	.91	.57	SAND TO SILTY SAND	SM-SP	.88	19	83	40	.50+
14.80	229.68	4.95	2.16	SILTY SAND TO SANDY SILT	SM-ML	.81	36	78	42	.50+
15.00	139.80	.82	.59	SAND TO SILTY SAND	SM-SP	.90	16	78	40	.50+
15.20	150.14	.57	.38	SAND TO SILTY SAND	SM-SP	.91	17	80	40	.50+
15.40	146.66	.54	.37	SAND TO SILTY SAND	SM-SP	.92	17	79	40	.50+



RESULT OF CONE PENETRATION TEST

63N

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

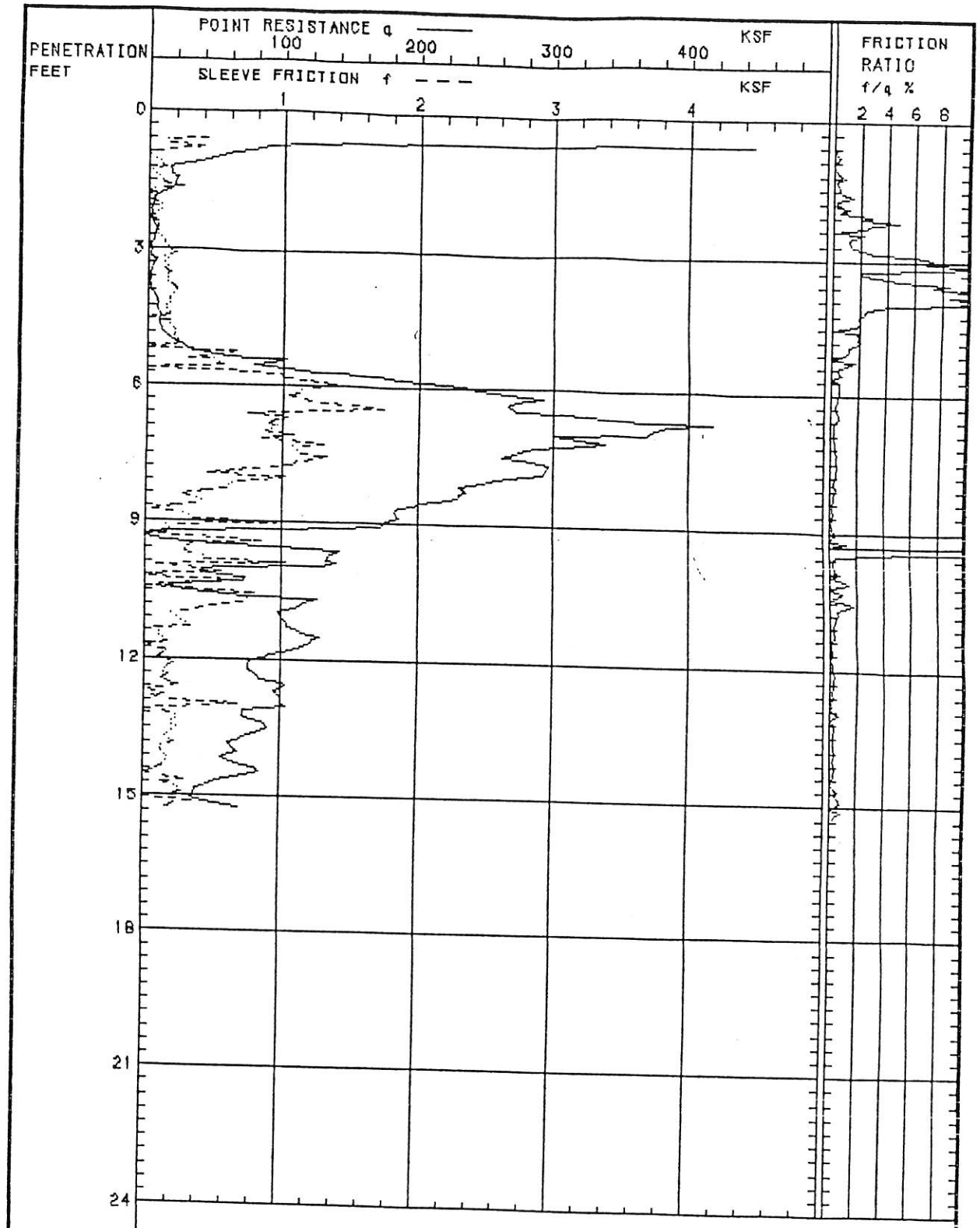
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 63N
CONE NO. : 001
DATE : 05/12/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	15.25	.32	2.08	SILTY CLAY TO CLAY	CL-CH	.02	4	1.128	13.5			
.80	58.04	.13	.22	SILTY SAND TO SANDY SILT	SM-ML	.04	9			93	41	.50+
1.00	66.41	.21	.32	SILTY SAND TO SANDY SILT	SM-ML	.05	10			99	42	.50+
1.20	68.87	.22	.32	SILTY SAND TO SANDY SILT	SM-ML	.07	10			98	42	.50+
1.40	62.91	.29	.47	SILTY SAND TO SANDY SILT	SM-ML	.08	10			91	41	.50+
1.60	58.79	.16	.28	SILTY SAND TO SANDY SILT	SM-ML	.09	9			86	40	.50+
1.80	38.50	.18	.46	SANDY SILT TO CLAYEY SILT	ML-MH	.09	7	2.845	13.5	72	38	.50+
2.00	38.12	.20	.53	SANDY SILT TO CLAYEY SILT	ML-MH	.10	7	2.816	13.5	71	38	.50+
2.20	41.94	.24	.56	SILTY SAND TO SANDY SILT	SM-ML	.12	6			72	38	.50+
2.40	46.72	.26	.56	SILTY SAND TO SANDY SILT	SM-ML	.13	7			74	38	.50+
2.60	62.84	.05	.08	SILTY SAND TO SANDY SILT	SM-ML	.14	10			83	40	.50+
2.80	33.79	.06	.19	SANDY SILT TO CLAYEY SILT	ML-MH	.14	6	2.493	13.5	66	37	.50+
3.00	61.86	.32	.52	SILTY SAND TO SANDY SILT	SM-ML	.17	9			81	39	.50+
3.20	45.27	.12	.27	SILTY SAND TO SANDY SILT	SM-ML	.18	7			70	38	.50+
3.40	46.13	.33	.71	SILTY SAND TO SANDY SILT	SM-ML	.19	7			70	38	.50+
3.60	30.54	.31	1.00	SANDY SILT TO CLAYEY SILT	ML-MH	.18	5	2.249	13.5	62	37	.30
3.80	11.08	.19	1.68	SILTY CLAY TO CLAY	CL-CH	.15	3	.809	13.5			
4.00	6.15	.19	3.05	CLAY	CH	.16	2	.444	13.5			
4.20	4.80	.19	4.06	CLAY	CH	.17	2	.343	13.5			
4.40	4.43	.20	4.53	CLAY	CH	.18	2	.315	13.5			
4.60	4.43	.23	5.09	CLAY	CH	.18	2	.314	13.5			
4.80	4.43	.20	4.53	CLAY	CH	.19	2	.314	13.5			
5.00	4.43	.23	5.08	CLAY	CH	.20	2	.313	13.5			
5.20	3.69	.18	4.79	ORGANIC MATERIAL	OL-OH	.16	1	.262	13.5			
5.40	4.43	.21	4.80	CLAY	CH	.22	2	.312	13.5			
5.60	4.68	.26	5.46	CLAY	CH	.22	2	.330	13.5			
5.80	4.18	.26	6.24	ORGANIC MATERIAL	OL-OH	.17	2	.297	13.5			
6.00	4.43	.24	5.35	ORGANIC MATERIAL	OL-OH	.18	2	.315	13.5			
6.20	11.74	.14	1.20	SENSITIVE FINE GRAINED	OL-CH	.19	2	.856	13.5			
6.40	13.45	.42	3.10	CLAY	CH	.26	6	.977	13.5			
6.60	38.94	.27	.70	SANDY SILT TO CLAYEY SILT	ML-MH	.33	7	2.860	13.5	60	36	.22
6.80	101.64	.72	.71	SAND TO SILTY SAND	SM-SP	.41	12			84	41	.50+
7.00	164.06	1.86	1.13	SAND TO SILTY SAND	SM-SP	.42	19			100+	42	.50+
7.20	129.54	1.23	.95	SAND TO SILTY SAND	SM-SP	.43	15			91	41	.50+
7.40	113.13	.38	.34	SAND TO SILTY SAND	SM-SP	.44	13			86	41	.50+
7.60	80.06	.40	.51	SILTY SAND TO SANDY SILT	SM-ML	.42	12			75	39	.50+
7.80	80.86	.61	.75	SILTY SAND TO SANDY SILT	SM-ML	.43	12			75	39	.50+
8.00	175.87	.63	.36	SAND	SW-SP	.52	16			100+	44	.50+
8.20	183.48	.58	.32	SAND	SW-SP	.53	17			100+	44	.50+
8.40	153.36	.43	.28	SAND TO SILTY SAND	SM-SP	.50	18			95	42	.50+
8.60	70.61	.21	.30	SILTY SAND TO SANDY SILT	SM-ML	.47	11			69	38	.48
8.80	51.36	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.48	8			61	37	.22
9.00	49.33	.24	.48	SILTY SAND TO SANDY SILT	SM-ML	.49	7			59	36	.21
9.20	26.32	.22	.84	SANDY SILT TO CLAYEY SILT	ML-MH	.46	5	1.915	13.5	42	34	.14
9.40	52.88	.53	1.00	SANDY SILT TO CLAYEY SILT	ML-MH	.47	10	3.882	13.5	62	37	.24

9.60	129.56	.75	.58	SAND TO SILTY SAND	SM-SP	.58	15	85	41	.50+
9.80	207.71	.56	.27	SAND	SW-SP	.64	19	100+	44	.50+
10.00	247.21	1.25	.51	SAND	SW-SP	.65	23	100+	44	.50+
10.20	226.98	1.71	.75	SAND TO SILTY SAND	SM-SP	.61	27	100+	42	.50+
10.40	174.20	.50	.29	SAND	SW-SP	.68	16	92	44	.50+
10.60	138.98	.48	.34	SAND TO SILTY SAND	SM-SP	.64	16	85	41	.50+
10.80	113.01	.49	.43	SAND TO SILTY SAND	SM-SP	.65	13	78	40	.50+
11.00	72.22	.20	.27	SILTY SAND TO SANDY SILT	SM-ML	.60	11	65	37	.31
11.20	79.24	.30	.38	SAND TO SILTY SAND	SM-SP	.67	9	65	39	.33
11.40	168.13	.03	.02	SAND	SW-SP	.74	16	88	43	.50+
11.60	230.34	.69	.30	SAND	SW-SP	.75	22	100+	44	.50+
11.80	231.52	.45	.20	SAND	SW-SP	.77	22	100+	44	.50+
12.00	184.72	.39	.21	SAND	SW-SP	.78	17	90	43	.50+
12.20	181.62	.55	.30	SAND	SW-SP	.79	17	89	43	.50+
12.40	148.71	.40	.27	SAND TO SILTY SAND	SM-SP	.74	17	84	41	.50+
12.60	145.45	.63	.43	SAND TO SILTY SAND	SM-SP	.76	17	83	41	.50+
12.80	118.38	.59	.50	SAND TO SILTY SAND	SM-SP	.77	14	76	40	.50+
13.00	171.28	.46	.27	SAND	SW-SP	.84	16	86	43	.50+
13.20	174.83	.51	.29	SAND	SW-SP	.86	16	86	43	.50+
13.40	94.94	.65	.68	SAND TO SILTY SAND	SM-SP	.80	11	67	39	.39
13.60	69.81	.45	.65	SILTY SAND TO SANDY SILT	SM-ML	.75	11	60	37	.22
13.80	102.77	.86	.83	SAND TO SILTY SAND	SM-SP	.83	12	69	39	.46
14.00	120.35	.21	.17	SAND TO SILTY SAND	SM-SP	.84	14	74	40	.50+
14.20	150.55	1.08	.72	SAND TO SILTY SAND	SM-SP	.85	18	82	40	.50+
14.40	127.15	.33	.26	SAND TO SILTY SAND	SM-SP	.86	15	75	40	.50+
14.60	133.62	.04	.03	SAND TO SILTY SAND	SM-SP	.88	16	77	40	.50+
14.80	69.76	.94	1.34	SILTY SAND TO SANDY SILT	SM-ML	.81	11	58	36	.21
15.00	76.86	.54	.70	SILTY SAND TO SANDY SILT	SM-ML	.82	12	61	37	.23
15.20	162.64	.36	.22	SAND	SW-SP	.99	15	81	42	.50+
15.40	167.85	.67	.40	SAND TO SILTY SAND	SM-SP	.92	20	83	41	.50+



RESULT OF CONE PENETRATION TEST

63S

JOB NUMBER: 0187-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET

DATE: 10 MAY 87

MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 63S
CONE NO. : 001
DATE : 05/12/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	329.61	.28	.09	SAND	SW-SP	.04	31			100+	44	.50+
.80	83.14	.29	.34	SAND TO SILTY SAND	SM-SP	.05	9			100+	42	.50+
1.00	47.72	.04	.08	SILTY SAND TO SANDY SILT	SM-ML	.05	7			81	39	.50+
1.20	18.45	.09	.51	SENSITIVE FINE GRAINED	OL-CH	.04	4	1.364	13.5			
1.40	19.43	.11	.57	SANDY SILT TO CLAYEY SILT	ML-MH	.07	3	1.434	13.5	60	37	.50+
1.60	18.69	.18	.97	CLAYEY SILT TO SILTY CLAY	MH-CL	.07	4	1.379	13.5			
1.80	9.10	.02	.22	SENSITIVE FINE GRAINED	OL-CH	.05	2	.670	13.5			
2.00	3.94	.06	1.47	SENSITIVE FINE GRAINED	OL-CH	.06	0	.287	13.5			
2.20	2.21	.08	3.72	ORGANIC MATERIAL	OL-OH	.07	1	.159	13.5			
2.40	2.70	.03	1.23	SENSITIVE FINE GRAINED	OL-CH	.07	0	.195	13.5			
2.60	5.66	.07	1.20	SENSITIVE FINE GRAINED	OL-CH	.08	1	.413	13.5			
2.80	4.18	.11	2.54	CLAY	CH	.11	2	.302	13.5			
3.00	2.21	.14	6.49	ORGANIC MATERIAL	OL-OH	.09	1	.157	13.5			
3.20	4.17	.13	3.08	CLAY	CH	.13	1	.299	13.5			
3.40	2.95	.13	4.42	ORGANIC MATERIAL	OL-OH	.10	1	.211	13.5			
3.60	1.72	.14	8.31	ORGANIC MATERIAL	OL-OH	.11	1	.120	13.5			
3.80	1.97	.19	9.65	ORGANIC MATERIAL	OL-OH	.11	1	.137	13.5			
4.00	5.41	.17	3.06	CLAY	CH	.16	2	.389	13.5			
4.20	7.26	.16	2.15	CLAY	CH	.17	3	.525	13.5			
4.40	8.85	.16	1.82	SENSITIVE FINE GRAINED	OL-CH	.13	2	.646	13.5			
4.60	8.61	.16	1.86	SENSITIVE FINE GRAINED	OL-CH	.14	2	.628	13.5			
4.80	11.06	.20	1.83	SILTY CLAY TO CLAY	CL-CH	.19	3	.805	13.5			
5.00	21.37	.32	1.51	CLAYEY SILT TO SILTY CLAY	MH-CL	.22	5	1.567	13.5			
5.20	33.66	.33	.97	SANDY SILT TO CLAYEY SILT	ML-MH	.26	6	2.474	13.5	60	36	.23
5.40	88.94	.27	.31	SAND TO SILTY SAND	SM-SP	.32	10			83	41	.50+
5.60	90.18	.42	.46	SAND TO SILTY SAND	SM-SP	.34	10			83	41	.50+
5.80	178.02	1.00	.56	SAND TO SILTY SAND	SM-SP	.35	21			100+	42	.50+
6.00	238.42	1.32	.56	SAND	SW-SP	.39	22			100+	44	.50+
6.20	285.01	1.01	.35	SAND	SW-SP	.40	27			100+	44	.50+
6.40	267.84	1.81	.67	SAND	SW-SP	.42	25			100+	44	.50+
6.60	323.41	1.00	.31	SAND	SW-SP	.43	30			100+	44	.50+
6.80	379.57	.95	.25	SAND	SW-SP	.44	36			100+	44	.50+
7.00	334.49	1.04	.31	SAND	SW-SP	.45	32			100+	44	.50+
7.20	331.38	.99	.30	SAND	SW-SP	.47	31			100+	44	.50+
7.40	275.65	.97	.35	SAND	SW-SP	.48	26			100+	44	.50+
7.60	283.22	1.12	.39	SAND	SW-SP	.49	27			100+	44	.50+
7.80	294.06	.30	.10	SAND	SW-SP	.51	28			100+	44	.50+
8.00	262.38	.86	.33	SAND	SW-SP	.52	25			100+	44	.50+
8.20	231.56	.62	.27	SAND	SW-SP	.53	22			100+	44	.50+
8.40	229.99	.72	.31	SAND	SW-SP	.55	22			100+	44	.50+
8.60	199.25	.39	.20	SAND	SW-SP	.56	19			100+	44	.50+
8.80	183.48	.16	.09	SAND	SW-SP	.57	17			99	44	.50+
9.00	176.13	.60	.34	SAND	SW-SP	.58	16			96	44	.50+
9.20	59.85	.19	.31	SILTY SAND TO SANDY SILT	SM-ML	.51	9			63	37	.27
9.40	7.04	.55	7.76	ORGANIC MATERIAL	OL-OH	.28	3	.500	13.5			

9.60	118.97	.30	.25	SAND TO SILTY SAND	SM-SP	.58	14			82	40	.50+
9.80	133.07	.43	.33	SAND TO SILTY SAND	SM-SP	.59	15			85	41	.50+
10.00	91.56	.16	.18	SAND TO SILTY SAND	SM-SP	.60	10			72	39	.50+
10.20	64.81	.17	.26	SILTY SAND TO SANDY SILT	SM-ML	.56	10			63	37	.28
10.40	27.99	.15	.52	SANDY SILT TO CLAYEY SILT	ML-MH	.52	5	2.035	13.5	41	34	.14
10.60	60.30	.91	1.51	SANDY SILT TO CLAYEY SILT	ML-MH	.53	11	4.427	13.5	63	37	.26
10.80	115.08	.81	.70	SAND TO SILTY SAND	SM-SP	.65	13			79	40	.50+
11.00	98.50	.26	.26	SAND TO SILTY SAND	SM-SP	.66	11			73	39	.50+
11.20	103.92	.28	.27	SAND TO SILTY SAND	SM-SP	.67	12			74	40	.50+
11.40	112.73	.16	.15	SAND TO SILTY SAND	SM-SP	.68	13			77	40	.50+
11.60	122.50	.15	.12	SAND TO SILTY SAND	SM-SP	.70	14			80	40	.50+
11.80	107.21	.04	.03	SAND TO SILTY SAND	SM-SP	.71	12			74	40	.50+
12.00	82.97	.13	.15	SAND TO SILTY SAND	SM-SP	.72	9			65	39	.33
12.20	76.25	.06	.07	SAND TO SILTY SAND	SM-SP	.73	9			63	38	.26
12.40	83.24	.13	.16	SAND TO SILTY SAND	SM-SP	.74	9			65	39	.31
12.60	101.86	.24	.24	SAND TO SILTY SAND	SM-SP	.76	12			71	39	.50+
12.80	98.74	.10	.10	SAND TO SILTY SAND	SM-SP	.77	11			69	39	.48
13.00	102.03	.68	.67	SAND TO SILTY SAND	SM-SP	.78	12			70	39	.50+
13.20	72.07	.18	.24	SILTY SAND TO SANDY SILT	SM-ML	.73	11			62	37	.24
13.40	88.03	.21	.24	SAND TO SILTY SAND	SM-SP	.80	10			65	39	.31
13.60	81.14	.25	.31	SAND TO SILTY SAND	SM-SP	.82	9			62	38	.26
13.80	65.25	.23	.36	SILTY SAND TO SANDY SILT	SM-ML	.76	10			58	36	.20
14.00	68.11	.16	.24	SILTY SAND TO SANDY SILT	SM-ML	.77	10			59	36	.21
14.20	60.64	.15	.26	SILTY SAND TO SANDY SILT	SM-ML	.78	9			54	36	.19
14.40	83.60	.17	.21	SAND TO SILTY SAND	SM-SP	.86	10			62	38	.25

SUMMARY OF TEST RESULTS

CONE NUMBER	SAMPLE NUMBER	DEPTH (FT)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	WATER CONTENT (%)	UNIT WEIGHT		SHEAR STRENGTH (KSF)			PERCENT PASSING NO. 200 SIEVE
						DRY (PCF)	TOTAL (PCF)	POCKET PENE-TROMETER	U	VR	
46	S	0.5									0
46	M	0.5									0
47	S	0.5									1
47	M	0.5									0
47	N	0.5									4
48	S	0.5									14
48	M	0.5									0
48	N	0.5									
49	S	0.5									0
49	M	0.5									2
49	N	0.5	33	28							
50	S	0.5									0
50	M	0.5									0
50	N	0.5									6
51	S	0.5									0
51	M	0.5									0
51	N	0.5									5
52	S	0.5									0
52	M	0.5									0
52	N	0.5									0
53	S	0.5									2
53	M	0.5									0

LEGEND:

U-Unconfined Compression
VR-Remolded Miniature Vane

SUMMARY OF TEST RESULTS

CONE NUMBER	SAMPLE NUMBER	DEPTH (FT)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	WATER CONTENT (%)	UNIT WEIGHT		SHEAR STRENGTH (KSF)			PERCENT PASSING NO. 200 SIEVE
						DRY (PCF)	TOTAL (PCF)	POCKET PENE-TROMETER	U	VR	
53	N	0.5									1
54	S	0.5									
54	M	0.5									0
54	N	0.5									0
55	S	0.5									0
55	M	0.5									0
55	N	0.5									0
56	S	0.5									0
56	M	0.5									0
56	N	0.5									0
57	S	0.5									0
57	M	0.5									0
57	N	0.5									0
58	S	0.5									0
58	M	0.5									0
58	N	0.5									0
59	S	0.5									0
59	N	0.5									
60	S	0.5									0
60	N	0.5									0
61	S	0.5									0
61	N	0.5									1

LEGEND:

U-Unconfined Compression
VR-Remolded Miniature Vane

SUMMARY OF TEST RESULTS

CONE NUMBER	SAMPLE NUMBER	DEPTH (FT)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	WATER CONTENT (%)	UNIT WEIGHT		SHEAR STRENGTH (KSF)			PERCENT PASSING NO. 200 SIEVE
						DRY (PCF)	TOTAL (PCF)	POCKET PENE-TROMETER	U	VR	
62	S	0.5									0
62	N	0.5									0
63	S	0.5									1
63	N	0.5									4

LEGEND:

U-Unconfined Compression
VR-Remolded Miniature Vane

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 46 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: DC DATE:6-17-87

CHECKED BY: DC DATE:6-20-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 330.62

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.93	4.750	-2.25	99.7	0.3	
10	1.84	2.000	-1.00	99.4	0.6	
20	2.22	0.850	0.23	99.3	0.7	
40	3.34	0.425	1.23	99.0	1.0	
70	144.46	0.212	2.24	56.3	43.7	
100	318.47	0.150	2.74	3.7	96.3	
200	330.25	0.075	3.74	0.1	99.9	
PAN	330.54			#N/A	#N/A	

PARAMETERS

COASTAL: D PERCENTILE COARSER	SIZE, PHI UNITS	GEOTECHNICAL: D PERCENTILE FINER	SIZE, mm
5	1.290	10	0.158
16	1.468	15	0.164
25	1.652	30	0.182
50	2.286	60	0.235
75	2.505	85	0.366
84	2.597	90	0.388
95	2.721		

POORLY GRADED — Cu= 1.489, Cc= 0.893

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 46 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 412.57

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	3.10	4.750	-2.25	99.2	0.8	
10	5.66	2.000	-1.00	98.6	1.4	
20	13.86	0.850	0.23	96.6	3.4	
40	27.66	0.425	1.23	93.3	6.7	
70	244.66	0.212	2.24	40.7	59.3	
100	401.21	0.150	2.74	2.8	97.2	
200	412.08	0.075	3.74	0.1	99.9	
PAN	412.52			#N/A	#N/A	

PARAMETERS			
COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	0.533	10	0.163
16	1.343	15	0.171
25	1.466	30	0.195
50	1.954	60	0.303
75	2.416	85	0.398
84	2.534	90	0.414
95	2.700		
		POORLY GRADED	Cu= 1.862 Cc= 0.776

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 47 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 385.54

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.00	2.000	-1.00	100.0	0.0	
20	0.19	0.850	0.23	100.0	0.0	
40	1.33	0.425	1.23	99.7	0.3	
70	103.90	0.212	2.24	73.1	26.9	
100	311.85	0.150	2.74	19.1	80.9	
200	369.48	0.075	3.74	4.2	95.8	
PAN	385.47			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.342
16	1.678
25	2.110
50	2.422
75	2.669
84	2.885
95	3.652

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.106
15	0.131
30	0.163
60	0.198
85	0.321
90	0.359

POORLY GRADED — Cu= 1.869, Cc= 1.273

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 47 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: LIGHT GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 364.96

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.00	2.000	-1.00	100.0	0.0	
20	0.13	0.850	0.23	100.0	0.0	
40	1.41	0.425	1.23	99.6	0.4	
70	146.54	0.212	2.24	59.8	40.2	
100	330.63	0.150	2.74	9.4	90.6	
200	364.02	0.075	3.74	0.3	99.7	
PAN	364.65			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.304
16	1.501
25	1.709
50	2.318
75	2.555
84	2.656
95	3.114

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.151
15	0.157
30	0.176
60	0.213
85	0.358
90	0.382

POORLY GRADED Cu= 1.413 Cc= 0.969

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 47 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 370.90

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	5.10	4.750	-2.25	98.6	1.4	
10	6.46	2.000	-1.00	98.3	1.7	
20	8.08	0.850	0.23	97.8	2.2	
40	11.91	0.425	1.23	96.8	3.2	
70	80.44	0.212	2.24	78.3	21.7	
100	271.52	0.150	2.74	26.8	73.2	
200	366.11	0.075	3.74	1.3	98.7	
PAN	370.98			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.292
16	1.789
25	2.263
50	2.482
75	2.785
84	3.061
95	3.527

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.102
15	0.117
30	0.154
60	0.191
85	0.302
90	0.358

POORLY GRADED — Cu= 1.870, Cc= 1.218

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328
CORE NO: 48 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:11-17-87
CHECKED BY: DC DATE:11-17-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 359.09

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	2.70	4.750	-2.25	99.2	0.8	
10	2.87	2.000	-1.00	99.2	0.8	
20	3.60	0.850	0.23	99.0	1.0	
40	5.46	0.425	1.23	98.5	1.5	
70	122.67	0.212	2.24	65.8	34.2	
100	317.38	0.150	2.74	11.6	88.4	
200	358.57	0.075	3.74	0.1	99.9	
PAN	358.88			#N/A	#N/A	

PARAMETERS

COASTAL: D PERCENTILE COARSER	SIZE, PHI UNITS	GEOTECHNICAL: D PERCENTILE FINER	SIZE, mm
5	1.298	10	0.140
16	1.544	15	0.154
25	1.821	30	0.172
50	2.360	60	0.206
75	2.589	85	0.349
84	2.686	90	0.379
95	3.206		

POORLY GRADED — Cu= 1.468, Cc= 1.026

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-19-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 48 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY SILTY FINE SAND W/SHELL FRAGMENTS & CLAY POCKETS

TESTED BY: DC DATE:11-19-87

CHECKED BY: DC DATE:11-19-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 416.09

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	4.08	4.750	-2.25	99.0	1.0	
10	5.90	2.000	-1.00	98.6	1.4	
20	8.81	0.850	0.23	97.9	2.1	
40	13.39	0.425	1.23	96.8	3.2	
70	113.11	0.212	2.24	72.8	27.2	
100	260.33	0.150	2.74	37.4	62.6	
200	356.43	0.075	3.74	14.3	85.7	
PAN	415.76			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.278	10	#N/A
16	1.624	15	0.077
25	2.081	30	0.127
50	2.531	60	0.191
75	3.168	85	0.333
84	3.629	90	0.375
95	#N/A		

Cu= #N/A

Cc= #N/A

****

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 49 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS & ORGANICS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 331.44

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.31	4.750	-2.25	99.9	0.1	
10	0.47	2.000	-1.00	99.9	0.1	
20	1.24	0.850	0.23	99.6	0.4	
40	2.11	0.425	1.23	99.4	0.6	
70	107.31	0.212	2.24	67.6	32.4	
100	284.23	0.150	2.74	14.2	85.8	
200	325.72	0.075	3.74	1.7	98.3	
PAN	331.32			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.318	10	0.126
16	1.579	15	0.151
25	1.880	30	0.169
50	2.377	60	0.204
75	2.615	85	0.341
84	2.716	90	0.372
95	3.382		

POORLY GRADED Cu= 1.616 Cc= 1.116

****

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 49 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:6-17-87

CHECKED BY: DC DATE:6-20-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 320.11

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	14.75	4.750	-2.25	95.4	4.6	
10	17.15	2.000	-1.00	94.6	5.4	
20	18.68	0.850	0.23	94.2	5.8	
40	20.88	0.425	1.23	93.5	6.5	
70	57.32	0.212	2.24	82.1	17.9	
100	273.06	0.150	2.74	14.7	85.3	
200	319.74	0.075	3.74	0.1	99.9	
PAN	319.89			#N/A	#N/A	

PARAMETERS

COASTAL: D PERCENTILE COARSER	SIZE, PHI UNITS	GEOTECHNICAL: D PERCENTILE FINER	SIZE, mm
5	-2.147	10	0.127
16	1.967	15	0.150
25	2.280	30	0.165
50	2.446	60	0.193
75	2.643	85	0.277
84	2.725	90	0.370
95	3.299		

POORLY GRADED — Cu= 1.514, Cc= 1.109

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328
CORE NO: 50 SAMPLE NO: N PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS,ORGANICS & MICA
TESTED BY: DC DATE:11-17-87
CHECKED BY: DC DATE:11-17-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 344.65

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.06	2.000	-1.00	100.0	0.0	
20	0.45	0.850	0.23	99.9	0.1	
40	1.14	0.425	1.23	99.7	0.3	
70	202.90	0.212	2.24	41.1	58.9	
100	242.10	0.150	2.74	29.8	70.2	
200	325.19	0.075	3.74	5.6	94.4	
PAN	344.44			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.282	10	0.090
16	1.406	15	0.106
25	1.525	30	0.151
50	1.990	60	0.293
75	2.876	85	0.381
84	3.200	90	0.396
95	#N/A		

POORLY GRADED — Cu= 3.268, Cc= 0.875

McCLELLAND ENGINEERS, INC.; WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328
CORE NO: 50 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: LIGHT GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:11-17-87
CHECKED BY: DC DATE:11-17-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 321.35

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	4.15	4.750	-2.25	98.7	1.3	
10	4.42	2.000	-1.00	98.6	1.4	
20	6.70	0.850	0.23	97.9	2.1	
40	13.68	0.425	1.23	95.7	4.3	
70	139.85	0.212	2.24	56.5	43.5	
100	301.88	0.150	2.74	6.1	93.9	
200	320.88	0.075	3.74	0.1	99.9	
PAN	321.18			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.245	10	0.155
16	1.429	15	0.162
25	1.619	30	0.181
50	2.290	60	0.236
75	2.520	85	0.376
84	2.618	90	0.400
95	2.863		

POORLY GRADED — Cu= 1.521, Cc= 0.890

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 50 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS & ORGANICS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 370.57

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	5.45	4.750	-2.25	98.5	1.5	
10	14.21	2.000	-1.00	96.2	3.8	
20	20.96	0.850	0.23	94.3	5.7	
40	25.10	0.425	1.23	93.2	6.8	
70	118.12	0.212	2.24	68.1	31.9	
100	321.73	0.150	2.74	13.2	86.8	
200	370.24	0.075	3.74	0.1	99.9	
PAN	370.44			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	-0.685	10	0.133
16	1.481	15	0.152
25	1.829	30	0.170
50	2.377	60	0.203
75	2.607	85	0.366
84	2.705	90	0.403
95	3.256		

POORLY GRADED Cu= 1.530 Cc= 1.068

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 51 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 293.15

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.01	2.000	-1.00	100.0	0.0	
20	0.43	0.850	0.23	99.9	0.1	
40	2.11	0.425	1.23	99.3	0.7	
70	84.11	0.212	2.24	71.3	28.7	
100	226.73	0.150	2.74	22.7	77.3	
200	277.83	0.075	3.74	5.2	94.8	
PAN	292.84			#N/A	#N/A	

PARAMETERS			
COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.328	10	0.097
16	1.636	15	0.119
25	2.018	30	0.160
50	2.427	60	0.198
75	2.707	85	0.329
84	3.025	90	0.365
95	#N/A		
		POORLY GRADED	Cu= 2.048 Cc= 1.331

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 51 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: LIGHT GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 380.69

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	15.41	4.750	-2.25	96.0	4.0	
10	19.70	2.000	-1.00	94.8	5.2	
20	23.85	0.850	0.23	93.7	6.3	
40	26.74	0.425	1.23	93.0	7.0	
70	132.76	0.212	2.24	65.1	34.9	
100	342.37	0.150	2.74	10.1	89.9	
200	380.25	0.075	3.74	0.1	99.9	
PAN	380.57			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	-1.980	10	0.150
16	1.446	15	0.156
25	1.737	30	0.173
50	2.352	60	0.207
75	2.576	85	0.374
84	2.670	90	0.407
95	3.140		

POORLY GRADED — Cu= 1.381, Cc= 0.974

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 51 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY,GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 388.28

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.50	2.000	-1.00	99.9	0.1	
20	1.03	0.850	0.23	99.7	0.3	
40	2.33	0.425	1.23	99.4	0.6	
70	53.38	0.212	2.24	86.3	13.7	
100	314.48	0.150	2.74	19.0	81.0	
200	387.82	0.075	3.74	0.1	99.9	
PAN	388.25			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.455	10	0.116
16	2.251	15	0.135
25	2.306	30	0.161
50	2.477	60	0.189
75	2.681	85	0.211
84	2.848	90	0.284
95	3.386		

POORLY GRADED — Cu= 1.630, Cc= 1.181

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 52 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 339.37

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.00	2.000	-1.00	100.0	0.0	
20	0.07	0.850	0.23	100.0	0.0	
40	0.82	0.425	1.23	99.8	0.2	
70	131.07	0.212	2.24	61.4	38.6	
100	310.45	0.150	2.74	8.5	91.5	
200	338.18	0.075	3.74	0.4	99.6	
PAN	339.23			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.309	10	0.152
16	1.516	15	0.158
25	1.737	30	0.176
50	2.326	60	0.210
75	2.554	85	0.355
84	2.650	90	0.380
95	3.068		

POORLY GRADED — Cu= 1.386, Cc= 0.972

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328
CORE NO: 52 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: LIGHT GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:11-17-87
CHECKED BY: DC DATE:11-17-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 378.32

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.03	2.000	-1.00	100.0	0.0	
20	0.09	0.850	0.23	100.0	0.0	
40	0.50	0.425	1.23	99.9	0.1	
70	129.38	0.212	2.24	65.8	34.2	
100	327.85	0.150	2.74	13.3	86.7	
200	377.62	0.075	3.74	0.2	99.8	
PAN	378.08			#N/A	#N/A	

PARAMETERS			
COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.321	10	0.132
16	1.563	15	0.152
25	1.834	30	0.171
50	2.364	60	0.206
75	2.603	85	0.345
84	2.705	90	0.373
95	3.266		
		POORLY GRADED	Cu= 1.556 Cc= 1.072

****

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 52 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 332.72

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.22	2.000	-1.00	99.9	0.1	
20	0.27	0.850	0.23	99.9	0.1	
40	0.35	0.425	1.23	99.9	0.1	
70	59.86	0.212	2.24	82.0	18.0	
100	291.89	0.150	2.74	12.3	87.7	
200	332.15	0.075	3.74	0.2	99.8	
PAN	332.65			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.410	10	0.137
16	2.049	15	0.153
25	2.278	30	0.167
50	2.437	60	0.193
75	2.626	85	0.256
84	2.703	90	0.320
95	3.231		
		POORLY GRADED	Cu= 1.413 Cc= 1.049

****

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328
CORE NO: 53 SAMPLE NO: N PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:11-17-87
CHECKED BY: DC DATE:11-17-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 230.37

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.04	2.000	-1.00	100.0	0.0	
20	0.26	0.850	0.23	99.9	0.1	
40	1.32	0.425	1.23	99.4	0.6	
70	59.16	0.212	2.24	74.3	25.7	
100	199.47	0.150	2.74	13.4	86.6	
200	229.18	0.075	3.74	0.5	99.5	
PAN	230.36			#N/A	#N/A	

PARAMETERS			
COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.343	10	0.131
16	1.704	15	0.152
25	2.188	30	0.168
50	2.409	60	0.198
75	2.622	85	0.316
84	2.710	90	0.357
95	3.285		
		POORLY GRADED	Cu= 1.509 Cc= 1.081

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 53 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 294.11

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.43	2.000	-1.00	99.9	0.1	
20	0.93	0.850	0.23	99.7	0.3	
40	1.75	0.425	1.23	99.4	0.6	
70	91.87	0.212	2.24	68.8	31.2	
100	245.64	0.150	2.74	16.5	83.5	
200	293.22	0.075	3.74	0.3	99.7	
PAN	294.03			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.322	10	0.121
16	1.596	15	0.144
25	1.918	30	0.167
50	2.390	60	0.202
75	2.637	85	0.338
84	2.757	90	0.370
95	3.349		

POORLY GRADED — Cu= 1.664, Cc= 1.134

****

McCLELLAND ENGINEERS, INC.; WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 53 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS & ORGANICS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 229.81

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	3.07	4.750	-2.25	98.7	1.3	
10	5.15	2.000	-1.00	97.8	2.2	
20	8.95	0.850	0.23	96.1	3.9	
40	12.41	0.425	1.23	94.6	5.4	
70	46.32	0.212	2.24	79.8	20.2	
100	153.47	0.150	2.74	33.2	66.8	
200	224.60	0.075	3.74	2.3	97.7	
PAN	229.79			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	0.777	10	0.095
16	1.820	15	0.107
25	2.280	30	0.143
50	2.528	60	0.187
75	2.929	85	0.299
84	3.186	90	0.369
95	3.605		
		POORLY GRADED	Cu= 1.965 Cc= 1.150

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McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 54 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:6-17-87

CHECKED BY: DC DATE:6-20-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 298.52

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.46	4.750	-2.25	99.8	0.2	
10	0.93	2.000	-1.00	99.7	0.3	
20	2.13	0.850	0.23	99.3	0.7	
40	4.85	0.425	1.23	98.4	1.6	
70	104.30	0.212	2.24	65.1	34.9	
100	256.21	0.150	2.74	14.2	85.8	
200	298.08	0.075	3.74	0.1	99.9	
PAN	298.39			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.295	10	0.129
16	1.533	15	0.151
25	1.800	30	0.170
50	2.362	60	0.206
75	2.609	85	0.352
84	2.714	90	0.380
95	3.287		

POORLY GRADED Cu= 1.598 Cc= 1.090

****

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 54 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 337.74

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.71	4.750	-2.25	99.8	0.2	
10	0.71	2.000	-1.00	99.8	0.2	
20	0.89	0.850	0.23	99.7	0.3	
40	1.08	0.425	1.23	99.7	0.3	
70	37.24	0.212	2.24	89.0	11.0	
100	243.10	0.150	2.74	28.0	72.0	
200	337.36	0.075	3.74	0.1	99.9	
PAN	337.73			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.538
16	2.270
25	2.332
50	2.528
75	2.811
84	3.068
95	3.488

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.103
15	0.117
30	0.152
60	0.184
85	0.208
90	0.238

POORLY GRADED — Cu= 1.781, Cc= 1.223

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328
CORE NO: 55 SAMPLE NO: N PENETRATION, ft: SURFACE
MATERIAL: GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:11-17-87
CHECKED BY: DC DATE:11-17-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 259.55

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.27	2.000	-1.00	99.9	0.1	
20	0.32	0.850	0.23	99.9	0.1	
40	1.19	0.425	1.23	99.5	0.5	
70	85.56	0.212	2.24	67.0	33.0	
100	247.81	0.150	2.74	4.5	95.5	
200	259.26	0.075	3.74	0.1	99.9	
PAN	259.36			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.319	10	0.156
16	1.574	15	0.161
25	1.864	30	0.176
50	2.351	60	0.205
75	2.545	85	0.342
84	2.625	90	0.373
95	2.732		

POORLY GRADED — Cu= 1.319, Cc= 0.972

****

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 55 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 363.36

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	6.26	4.750	-2.25	98.3	1.7	
10	10.18	2.000	-1.00	97.2	2.8	
20	16.57	0.850	0.23	95.4	4.6	
40	22.82	0.425	1.23	93.7	6.3	
70	171.47	0.212	2.24	52.8	47.2	
100	343.57	0.150	2.74	5.4	94.6	
200	362.57	0.075	3.74	0.2	99.8	
PAN	363.10			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	0.369	10	0.156
16	1.384	15	0.163
25	1.556	30	0.183
50	2.261	60	0.258
75	2.501	85	0.388
84	2.603	90	0.409
95	2.795		
		POORLY GRADED	Cu= 1.649 Cc= 0.833

****

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328
CORE NO: 55 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:11-17-87
CHECKED BY: DC DATE:11-17-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 317.24

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.50	4.750	-2.25	99.8	0.2	
10	0.85	2.000	-1.00	99.7	0.3	
20	1.12	0.850	0.23	99.6	0.4	
40	2.26	0.425	1.23	99.3	0.7	
70	100.92	0.212	2.24	68.2	31.8	
100	286.63	0.150	2.74	9.6	90.4	
200	316.39	0.075	3.74	0.3	99.7	
PAN	316.58			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.318
16	1.586
25	1.898
50	2.368
75	2.581
84	2.670
95	3.127

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.150
15	0.156
30	0.173
60	0.204
85	0.340
90	0.372

POORLY GRADED — Cu= 1.355, Cc= 0.971

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 56 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:6-17-87

CHECKED BY: DC DATE:6-20-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 324.40

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.93	4.750	-2.25	99.7	0.3	
10	1.20	2.000	-1.00	99.6	0.4	
20	2.67	0.850	0.23	99.2	0.8	
40	5.04	0.425	1.23	98.4	1.6	
70	130.99	0.212	2.24	59.6	40.4	
100	295.79	0.150	2.74	8.8	91.2	
200	323.98	0.075	3.74	0.1	99.9	
PAN	324.22			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.287
16	1.485
25	1.694
50	2.315
75	2.550
84	2.650
95	3.076

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.152
15	0.158
30	0.177
60	0.215
85	0.362
90	0.387

POORLY GRADED — Cu= 1.417, Cc= 0.962

****

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 56 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: DC DATE:6-17-87

CHECKED BY: DC DATE:6-20-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 306.70

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.93	4.750	-2.25	99.4	0.6	
10	2.46	2.000	-1.00	99.2	0.8	
20	3.06	0.850	0.23	99.0	1.0	
40	4.09	0.425	1.23	98.7	1.3	
70	87.36	0.212	2.24	71.5	28.5	
100	281.69	0.150	2.74	8.2	91.8	
200	306.39	0.075	3.74	0.1	99.9	
PAN	306.69			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.316	10	0.152
16	1.631	15	0.157
25	2.024	30	0.172
50	2.381	60	0.201
75	2.579	85	0.331
84	2.660	90	0.368
95	3.033		

POORLY GRADED Cu= 1.325 Cc= 0.971

****

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 56 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:6-17-87

CHECKED BY: DC DATE:6-20-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 240.87

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.31	4.750	-2.25	99.9	0.1	
10	0.36	2.000	-1.00	99.9	0.1	
20	0.57	0.850	0.23	99.8	0.2	
40	1.09	0.425	1.23	99.5	0.5	
70	34.68	0.212	2.24	85.6	14.4	
100	186.85	0.150	2.74	22.4	77.6	
200	240.48	0.075	3.74	0.2	99.8	
PAN	240.65			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.449	10	0.110
16	2.248	15	0.126
25	2.306	30	0.158
50	2.489	60	0.188
75	2.711	85	0.211
84	2.947	90	0.291
95	3.435		

POORLY GRADED — Cu= 1.712, Cc= 1.209

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 57 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 296.32

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.78	4.750	-2.25	99.7	0.3	
10	0.84	2.000	-1.00	99.7	0.3	
20	1.05	0.850	0.23	99.6	0.4	
40	1.72	0.425	1.23	99.4	0.6	
70	106.59	0.212	2.24	64.0	36.0	
100	258.21	0.150	2.74	12.9	87.1	
200	295.33	0.075	3.74	0.3	99.7	
PAN	296.17			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.310
16	1.537
25	1.787
50	2.352
75	2.595
84	2.698
95	3.259

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.134
15	0.153
30	0.172
60	0.207
85	0.350
90	0.378

POORLY GRADED — Cu= 1.548, Cc= 1.062

McCLELLAND ENGINEERS, INC.; WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 57 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 286.48

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	3.51	4.750	-2.25	98.8	1.2	
10	4.17	2.000	-1.00	98.5	1.5	
20	5.02	0.850	0.23	98.2	1.8	
40	6.43	0.425	1.23	97.8	2.2	
70	127.33	0.212	2.24	55.6	44.4	
100	270.97	0.150	2.74	5.4	94.6	
200	285.77	0.075	3.74	0.2	99.8	
PAN	286.26			#N/A	#N/A	

PARAMETERS			
COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.273	10	0.156
16	1.449	15	0.163
25	1.630	30	0.182
50	2.282	60	0.240
75	2.512	85	0.371
84	2.610	90	0.393
95	2.791		
		POORLY GRADED	Cu= 1.538 Cc= 0.879

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McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 57 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:6-17-87

CHECKED BY: DC DATE:6-20-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 267.91

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.15	4.750	-2.25	99.9	0.1	
10	0.15	2.000	-1.00	99.9	0.1	
20	0.48	0.850	0.23	99.8	0.2	
40	1.43	0.425	1.23	99.5	0.5	
70	75.74	0.212	2.24	71.7	28.3	
100	225.81	0.150	2.74	15.7	84.3	
200	267.09	0.075	3.74	0.3	99.7	
PAN	267.79			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.333	10	0.124
16	1.647	15	0.147
25	2.039	30	0.167
50	2.404	60	0.200
75	2.636	85	0.327
84	2.734	90	0.363
95	3.333		

POORLY GRADED Cu= 1.615 Cc= 1.125

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McCLELLAND ENGINEERS, INC.; WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 58 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 331.81

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.23	4.750	-2.25	99.6	0.4	
10	2.33	2.000	-1.00	99.3	0.7	
20	3.59	0.850	0.23	98.9	1.1	
40	4.52	0.425	1.23	98.6	1.4	
70	116.85	0.212	2.24	64.8	35.2	
100	304.12	0.150	2.74	8.3	91.7	
200	331.48	0.075	3.74	0.1	99.9	
PAN	331.63			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.299	10	0.152
16	1.534	15	0.158
25	1.796	30	0.175
50	2.347	60	0.207
75	2.563	85	0.351
84	2.653	90	0.380
95	3.046		

POORLY GRADED Cu= 1.363 Cc= 0.972

****

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 58 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 321.71

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.21	4.750	-2.25	99.9	0.1	
10	0.35	2.000	-1.00	99.9	0.1	
20	0.63	0.850	0.23	99.8	0.2	
40	1.10	0.425	1.23	99.7	0.3	
70	106.16	0.212	2.24	67.0	33.0	
100	289.62	0.150	2.74	10.0	90.0	
200	320.96	0.075	3.74	0.2	99.8	
PAN	321.66			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.321
16	1.575
25	1.865
50	2.363
75	2.580
84	2.671
95	3.142

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.150
15	0.156
30	0.173
60	0.205
85	0.342
90	0.372

POORLY GRADED — Cu= 1.365, Cc= 0.972

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328
CORE NO: 58 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:11-17-87
CHECKED BY: DC DATE:11-17-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 246.25

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.30	4.750	-2.25	99.9	0.1	
10	0.34	2.000	-1.00	99.9	0.1	
20	0.50	0.850	0.23	99.8	0.2	
40	0.89	0.425	1.23	99.6	0.4	
70	75.97	0.212	2.24	69.1	30.9	
100	220.48	0.150	2.74	10.5	89.5	
200	246.06	0.075	3.74	0.1	99.9	
PAN	246.16			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.327
16	1.605
25	1.934
50	2.375
75	2.589
84	2.678
95	3.156

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.147
15	0.155
30	0.172
60	0.203
85	0.336
90	0.368

POORLY GRADED — Cu= 1.381, Cc= 0.988

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 59 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 354.74

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.20	4.750	-2.25	99.9	0.1	
10	0.32	2.000	-1.00	99.9	0.1	
20	1.15	0.850	0.23	99.7	0.3	
40	3.35	0.425	1.23	99.1	0.9	
70	94.41	0.212	2.24	73.4	26.6	
100	284.63	0.150	2.74	19.8	80.2	
200	353.87	0.075	3.74	0.2	99.8	
PAN	354.66			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.331	10	0.114
16	1.676	15	0.133
25	2.127	30	0.163
50	2.426	60	0.197
75	2.676	85	0.321
84	2.873	90	0.361
95	3.404		

POORLY GRADED — Cu= 1.729, Cc= 1.173

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 59 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:6-17-87

CHECKED BY: DC DATE:6-20-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 299.43

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.55	4.750	-2.25	99.5	0.5	
10	2.96	2.000	-1.00	99.0	1.0	
20	5.10	0.850	0.23	98.3	1.7	
40	8.03	0.425	1.23	97.3	2.7	
70	113.56	0.212	2.24	62.1	37.9	
100	273.86	0.150	2.74	8.5	91.5	
200	298.60	0.075	3.74	0.3	99.7	
PAN	299.08			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.273
16	1.489
25	1.724
50	2.331
75	2.556
84	2.651
95	3.066

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.152
15	0.158
30	0.176
60	0.210
85	0.362
90	0.389

POORLY GRADED — Cu= 1.382, Cc= 0.972

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 60 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: LIGHT GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 279.53

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.03	2.000	-1.00	100.0	0.0	
20	0.33	0.850	0.23	99.9	0.1	
40	2.05	0.425	1.23	99.3	0.7	
70	101.09	0.212	2.24	63.8	36.2	
100	256.04	0.150	2.74	8.4	91.6	
200	279.08	0.075	3.74	0.2	99.8	
PAN	279.38			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.307	10	0.152
16	1.533	15	0.158
25	1.781	30	0.175
50	2.341	60	0.208
75	2.561	85	0.351
84	2.653	90	0.379
95	3.052		

POORLY GRADED — Cu= 1.369, Cc= 0.972

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 60 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: DC DATE:6-17-87

CHECKED BY: DC DATE:6-20-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 217.34

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.00	2.000	-1.00	100.0	0.0	
20	0.07	0.850	0.23	100.0	0.0	
40	0.58	0.425	1.23	99.7	0.3	
70	44.61	0.212	2.24	79.5	20.5	
100	189.07	0.150	2.74	13.0	87.0	
200	217.05	0.075	3.74	0.1	99.9	
PAN	217.15			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.382
16	1.892
25	2.265
50	2.430
75	2.627
84	2.708
95	3.253

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.134
15	0.152
30	0.167
60	0.195
85	0.281
90	0.335

POORLY GRADED Cu= 1.458 Cc= 1.068

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 61 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-17-87

CHECKED BY: DC DATE:11-17-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 395.62

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.07	2.000	-1.00	100.0	0.0	
20	0.36	0.850	0.23	99.9	0.1	
40	1.57	0.425	1.23	99.6	0.4	
70	128.71	0.212	2.24	67.5	32.5	
100	331.69	0.150	2.74	16.2	83.8	
200	392.84	0.075	3.74	0.7	99.3	
PAN	395.57			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.321	10	0.122
16	1.580	15	0.145
25	1.878	30	0.168
50	2.382	60	0.204
75	2.632	85	0.341
84	2.744	90	0.372
95	3.363		

POORLY GRADED — Cu= 1.673, Cc= 1.135

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 61 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: RG DATE:6-17-87

CHECKED BY: DC DATE:6-20-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 270.15

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.65	4.750	-2.25	99.4	0.6	
10	2.67	2.000	-1.00	99.0	1.0	
20	5.32	0.850	0.23	98.0	2.0	
40	9.30	0.425	1.23	96.6	3.4	
70	85.63	0.212	2.24	68.3	31.7	
100	251.70	0.150	2.74	6.8	93.2	
200	269.85	0.075	3.74	0.1	99.9	
PAN	270.13			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.267	10	0.153
16	1.544	15	0.159
25	1.875	30	0.174
50	2.363	60	0.204
75	2.563	85	0.350
84	2.645	90	0.384
95	2.934		

POORLY GRADED Cu= 1.330 Cc= 0.971

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328
CORE NO: 62 SAMPLE NO: N PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND
TESTED BY: RG DATE:6-17-87
CHECKED BY: DC DATE:6-20-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 331.48

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.08	2.000	-1.00	100.0	0.0	
20	0.24	0.850	0.23	99.9	0.1	
40	0.73	0.425	1.23	99.8	0.2	
70	112.23	0.212	2.24	66.1	33.9	
100	296.69	0.150	2.74	10.5	89.5	
200	330.93	0.075	3.74	0.2	99.8	
PAN	331.31			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.321
16	1.566
25	1.842
50	2.359
75	2.582
84	2.675
95	3.162

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.147
15	0.155
30	0.173
60	0.206
85	0.344
90	0.373

POORLY GRADED Cu= 1.401 Cc= 0.990

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 62 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: RG DATE:6-17-87

CHECKED BY: DC DATE:6-20-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 374.70

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	3.55	4.750	-2.25	99.1	0.9	
10	4.68	2.000	-1.00	98.8	1.2	
20	6.82	0.850	0.23	98.2	1.8	
40	9.92	0.425	1.23	97.4	2.6	
70	51.01	0.212	2.24	86.4	13.6	
100	298.83	0.150	2.74	20.2	79.8	
200	374.27	0.075	3.74	0.1	99.9	
PAN	374.48			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.369
16	2.252
25	2.308
50	2.482
75	2.692
84	2.887
95	3.405

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.113
15	0.132
30	0.160
60	0.188
85	0.211
90	0.294

POORLY GRADED — Cu= 1.660, Cc= 1.194

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 63 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY,DARK GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: RG DATE:6-17-87

CHECKED BY: DC DATE:6-20-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 280.24

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.77	4.750	-2.25	99.7	0.3	
10	1.01	2.000	-1.00	99.6	0.4	
20	2.75	0.850	0.23	99.0	1.0	
40	4.54	0.425	1.23	98.4	1.6	
70	27.58	0.212	2.24	90.2	9.8	
100	183.51	0.150	2.74	34.5	65.5	
200	269.28	0.075	3.74	3.9	96.1	
PAN	279.87			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.516	10	0.091
16	2.282	15	0.104
25	2.351	30	0.140
50	2.572	60	0.179
75	2.965	85	0.207
84	3.235	90	0.212
95	3.682		

POORLY GRADED — Cu= 1.973, Cc= 1.195

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE — PROGRAM NAME: GSMECH.MP

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-17-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 63 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: RG DATE:6-17-87

CHECKED BY: DC DATE:6-20-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 356.49

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	42.24	4.750	-2.25	88.2	11.8	
10	45.73	2.000	-1.00	87.2	12.8	
20	50.40	0.850	0.23	85.9	14.1	
40	59.61	0.425	1.23	83.3	16.7	
70	148.73	0.212	2.24	58.3	41.7	
100	326.24	0.150	2.74	8.5	91.5	
200	354.77	0.075	3.74	0.5	99.5	
PAN	356.35			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	#N/A
16	0.760
25	1.453
50	2.306
75	2.543
84	2.644
95	3.072

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.152
15	0.159
30	0.178
60	0.231
85	0.749
90	#N/A

POORLY GRADED Cu= 1.516 Cc= 0.903