VOLUME IB
GEOTECHNICAL DATA REPORT
MIDDLE 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

VOLUME Ib
GEOTECHNICAL DATA REPORT
MIDDLE ISLAND
ISLES DERNIERES STABILIZATION PROJECT
STATE PROJECT NO. 750-55-01
TERREBONNE PARISH, LOUISIANA

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R e p o r t

t o

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

Houma, Louisiana

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

December 1987

McClelland engineers

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

Mr. Rogers, we are pleased to submit Volume Ib, 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 Ib presents the field and laboratory data for the Middle Island Segment. Volumes Ia and Ic contain the field and laboratory data for the East and West 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(R14.25)
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 Ib, the Geotechnical Data Report - Middle 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.

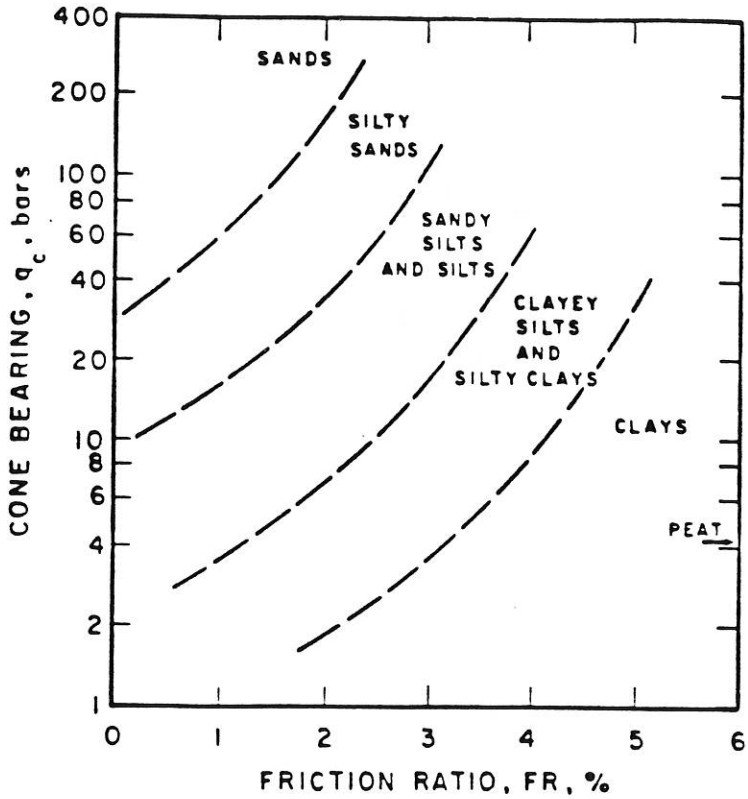
The purpose of this study was to develop site-specific preliminary geotechnical information on the island segments and in the proposed borrow areas north of the islands. It should be recognized that while significant portions of the design concepts can be finalized using the information presented here, optimization of design alternatives requires additional study. To accomplish the purpose of this study, a total of 180 cone penetrometer soundings were performed, with 42 occurring on the Middle Island. The soundings ranged in depth from 16 to 43 ft and were located about 1500 ft on center along the Middle 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.

SECTION I

INTERPRETATION OF CONE PENETROMETER DATA



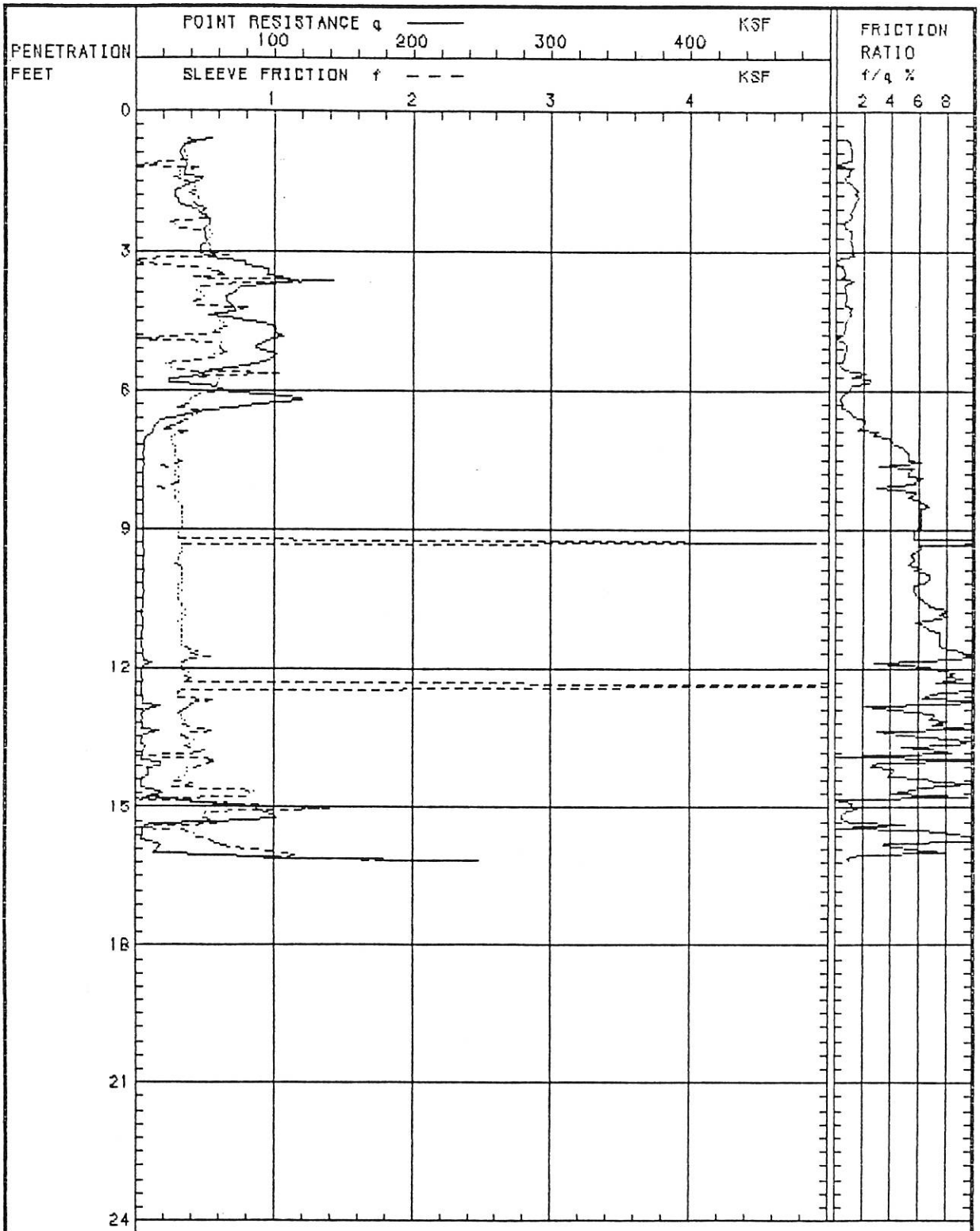
Notes:

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

32N

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

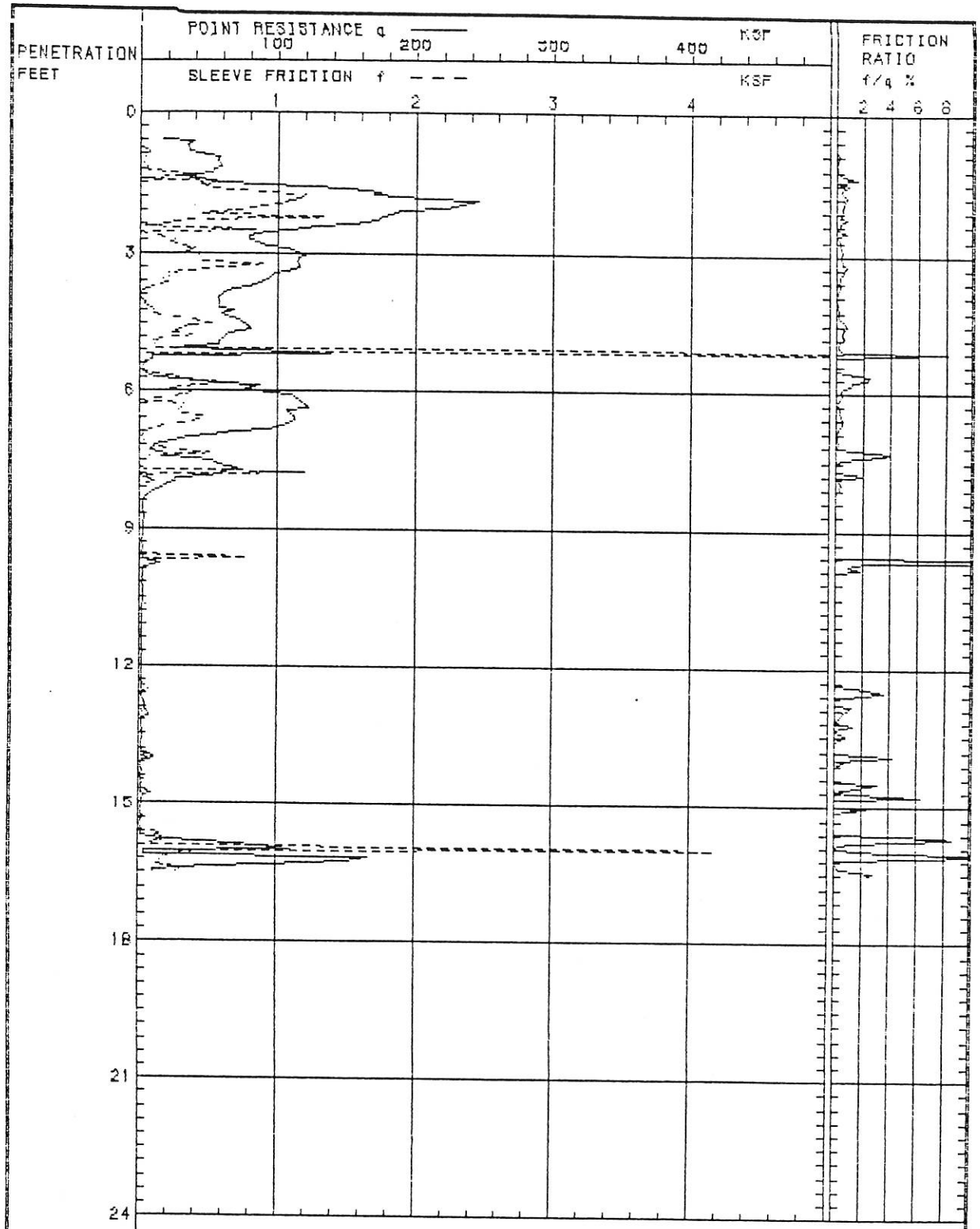
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 32N
CONE NO. : 001
DATE : 05/06/87

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	50.67	.40	.79	SILTY SAND TO SANDY SILT	SM-ML	.03	8			87	40	.50+
.80	33.45	.54	1.60	SANDY SILT TO CLAYEY SILT	ML-MH	.04	6	2.475	13.5	72	38	.50+
1.00	34.19	.37	1.09	SANDY SILT TO CLAYEY SILT	ML-MH	.05	6	2.529	13.5	72	38	.50+
1.20	36.53	.08	.22	SILTY SAND TO SANDY SILT	SM-ML	.07	5			72	38	.50+
1.40	42.05	.30	.71	SANDY SILT TO CLAYEY SILT	ML-MH	.07	8	3.110	13.5	75	39	.50+
1.60	37.64	.34	.89	SANDY SILT TO CLAYEY SILT	ML-MH	.08	7	2.732	13.5	72	38	.50+
1.80	28.47	.45	1.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.08	6	2.103	13.5			
2.00	33.94	.53	1.56	SANDY SILT TO CLAYEY SILT	ML-MH	.10	6	2.506	13.5	68	38	.50+
2.20	47.22	.51	1.07	SANDY SILT TO CLAYEY SILT	ML-MH	.11	9	3.490	13.5	76	39	.50+
2.40	53.38	.13	.24	SILTY SAND TO SANDY SILT	SM-ML	.13	8			78	39	.50+
2.60	49.93	.48	.97	SANDY SILT TO CLAYEY SILT	ML-MH	.13	9	3.689	13.5	76	39	.50+
2.80	50.92	.42	.83	SILTY SAND TO SANDY SILT	SM-ML	.15	8			75	39	.50+
3.00	47.23	.54	1.15	SANDY SILT TO CLAYEY SILT	ML-MH	.15	9	3.487	13.5	72	39	.50+
3.20	70.06	.00	.00	SAND TO SILTY SAND	SM-SP	.19	9			83	41	.50+
3.40	95.93	.45	.47	SAND TO SILTY SAND	SM-SP	.20	11			96	42	.50+
3.60	109.07	1.23	1.13	SILTY SAND TO SANDY SILT	SM-ML	.20	17			100+	42	.50+
3.80	74.79	.46	.61	SILTY SAND TO SANDY SILT	SM-ML	.21	11			84	40	.50+
4.00	65.55	.48	.73	SILTY SAND TO SANDY SILT	SM-ML	.22	10			79	39	.50+
4.20	70.34	.33	.47	SILTY SAND TO SANDY SILT	SM-ML	.23	11			81	39	.50+
4.40	59.54	.81	1.37	SANDY SILT TO CLAYEY SILT	ML-MH	.22	11	4.394	13.5	76	39	.50+
4.60	97.13	1.47	1.51	SILTY SAND TO SANDY SILT	SM-ML	.25	15			92	41	.50+
4.80	104.27	.38	.36	SAND TO SILTY SAND	SM-SP	.29	12			92	41	.50+
5.00	90.04	.46	.51	SAND TO SILTY SAND	SM-SP	.30	10			85	41	.50+
5.20	99.85	.61	.61	SAND TO SILTY SAND	SM-SP	.31	11			88	41	.50+
5.40	90.54	.71	.79	SILTY SAND TO SANDY SILT	SM-ML	.30	14			85	40	.50+
5.60	51.56	.34	.66	SILTY SAND TO SANDY SILT	SM-ML	.31	8			67	37	.46
5.80	24.60	.42	1.72	CLAYEY SILT TO SILTY CLAY	MH-CL	.26	5	1.803	13.5			
6.00	65.15	.57	.88	SILTY SAND TO SANDY SILT	SM-ML	.33	10			72	38	.50+
6.20	119.29	.34	.28	SAND TO SILTY SAND	SM-SP	.37	14			92	41	.50+
6.40	60.96	.44	.71	SILTY SAND TO SANDY SILT	SM-ML	.35	9			69	38	.50+
6.60	25.65	.35	1.36	CLAYEY SILT TO SILTY CLAY	MH-CL	.30	6	1.878	13.5			
6.80	13.41	.30	2.26	SILTY CLAY TO CLAY	CL-CH	.27	4	.973	13.5			
7.00	8.63	.27	3.15	CLAY	CH	.28	4	.618	13.5			
7.20	6.15	.27	4.43	CLAY	CH	.29	2	.434	13.5			
7.40	5.41	.28	5.25	CLAY	CH	.30	2	.379	13.5			
7.60	5.65	.26	4.61	CLAY	CH	.30	2	.396	13.5			
7.80	5.41	.28	5.25	CLAY	CH	.31	2	.378	13.5			
8.00	5.41	.31	5.70	CLAY	CH	.32	2	.377	13.5			
8.20	5.16	.30	5.74	CLAY	CH	.33	2	.358	13.5			
8.40	4.92	.30	6.02	ORGANIC MATERIAL	OL-OH	.25	2	.346	13.5			
8.60	5.41	.31	5.71	CLAY	CH	.34	2	.375	13.5			
8.80	5.41	.33	6.14	ORGANIC MATERIAL	OL-OH	.26	2	.381	13.5			
9.00	5.41	.32	5.92	CLAY	CH	.36	2	.374	13.5			
9.20	5.41	.31	5.69	CLAY	CH	.37	2	.374	13.5			
9.40	5.41	.33	6.13	ORGANIC MATERIAL	OL-OH	.28	2	.380	13.5			

9.60	5.66	.32	5.69	CLAY	CH	.38	2	.391	13.5			
9.80	5.41	.31	5.69	CLAY	CH	.39	2	.372	13.5			
10.00	4.92	.32	6.55	ORGANIC MATERIAL	OL-OH	.30	2	.342	13.5			
10.20	5.29	.31	5.94	ORGANIC MATERIAL	OL-OH	.31	2	.369	13.5			
10.40	5.66	.32	5.67	CLAY	CH	.42	2	.389	13.5			
10.60	4.92	.31	6.40	ORGANIC MATERIAL	OL-OH	.32	2	.341	13.5			
10.80	4.43	.35	7.79	ORGANIC MATERIAL	OL-OH	.32	2	.304	13.5			
11.00	5.16	.32	6.25	ORGANIC MATERIAL	OL-OH	.33	2	.358	13.5			
11.20	4.68	.33	7.12	ORGANIC MATERIAL	OL-OH	.34	2	.322	13.5			
11.40	4.43	.32	7.28	ORGANIC MATERIAL	OL-OH	.34	2	.303	13.5			
11.60	4.79	.42	8.80	ORGANIC MATERIAL	OL-OH	.35	2	.329	13.5			
11.80	5.65	.46	8.20	ORGANIC MATERIAL	OL-OH	.35	2	.393	13.5			
12.00	4.68	.32	6.87	ORGANIC MATERIAL	OL-OH	.36	2	.320	13.5			
12.20	4.43	.38	8.60	ORGANIC MATERIAL	OL-OH	.37	2	.301	13.5			
12.40	3.94	2.91	73.89	ORGANIC MATERIAL	OL-OH	.37	1	.264	13.5			
12.60	4.67	.31	6.61	ORGANIC MATERIAL	OL-OH	.38	2	.318	13.5			
12.80	11.68	.40	3.46	CLAY	CH	.51	5	.827	13.5			
13.00	4.55	.31	6.91	ORGANIC MATERIAL	OL-OH	.39	2	.308	13.5			
13.20	4.67	.35	7.53	ORGANIC MATERIAL	OL-OH	.40	2	.316	13.5			
13.40	12.40	.44	3.57	CLAY	CH	.54	5	.879	13.5			
13.60	4.43	.42	9.40	ORGANIC MATERIAL	OL-OH	.41	2	.298	13.5			
13.80	5.91	.43	7.25	ORGANIC MATERIAL	OL-OH	.41	2	.407	13.5			
14.00	11.17	.57	5.06	CLAY	CH	.56	5	.786	13.5			
14.20	8.98	.37	4.15	CLAY	CH	.57	4	.623	13.5			
14.40	4.44	.29	6.45	ORGANIC MATERIAL	OL-OH	.43	2	.297	13.5			
14.60	10.69	.56	5.23	CLAY	CH	.58	5	.749	13.5			
14.80	17.51	.74	4.23	CLAY	CH	.59	8	1.253	13.5			
15.00	88.31	.87	.99	SILTY SAND TO SANDY SILT	SM-ML	.82	14			65	37	.30
15.20	100.31	.37	.37	SAND TO SILTY SAND	SM-SP	.91	12			66	39	.35
15.40	8.68	.31	3.52	CLAY	CH	.62	4	.597	13.5			
15.60	4.68	.44	9.32	ORGANIC MATERIAL	OL-OH	.47	2	.312	13.5			
15.80	17.19	.49	2.87	SILTY CLAY TO CLAY	CL-CH	.63	5	1.227	13.5			
16.00	37.06	1.03	2.77	CLAYEY SILT TO SILTY CLAY	MH-CL	.72	8	2.692	13.5			



RESULT OF CONE PENETRATION TEST

32M

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

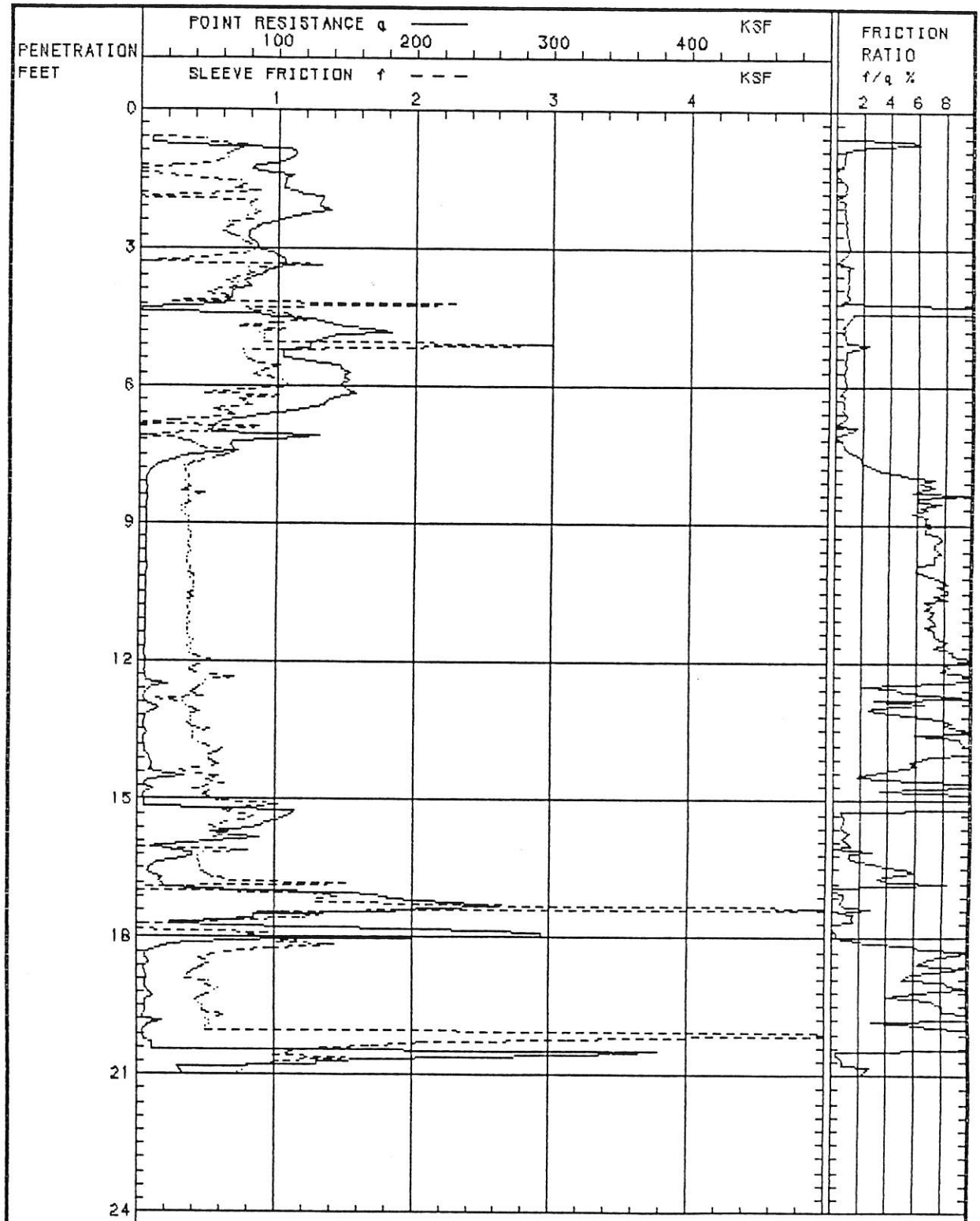
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/6/87

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

PROJECT NO. : 01870206
BORING NO. : 32M
CONE NO. : 001
DATE : 05/06/87

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	28.04	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.03	5	2.075	13.5	69	39	.50+
.80	35.60	.05	.15	SILTY SAND TO SANDY SILT	SM-ML	.04	5			73	39	.50+
1.00	57.07	.06	.11	SILTY SAND TO SANDY SILT	SM-ML	.05	9			50	41	.50+
1.20	56.33	.02	.04	SILTY SAND TO SANDY SILT	SM-ML	.07	8			87	40	.50+
1.40	35.72	.13	.38	SANDY SILT TO CLAYEY SILT	ML-MH	.07	6	2.640	13.5	71	38	.50+
1.60	120.97	.22	.19	SAND TO SILTY SAND	SM-SP	.10	14			100+	42	.50+
1.80	188.62	1.18	.63	SAND TO SILTY SAND	SM-SP	.11	22			100+	42	.50+
2.00	227.78	.98	.43	SAND	SW-SP	.13	21			100+	44	.50+
2.20	179.44	1.17	.65	SAND TO SILTY SAND	SM-SP	.13	21			100+	42	.50+
2.40	141.47	.52	.37	SAND TO SILTY SAND	SM-SP	.14	16			100+	42	.50+
2.60	85.86	.07	.08	SAND TO SILTY SAND	SM-SP	.16	10			96	42	.50+
2.80	88.91	.06	.07	SAND TO SILTY SAND	SM-SP	.17	10			96	42	.50+
3.00	117.07	.34	.29	SAND TO SILTY SAND	SM-SP	.18	14			100+	42	.50+
3.20	114.62	.68	.59	SAND TO SILTY SAND	SM-SP	.19	13			100+	42	.50+
3.40	102.59	.28	.28	SAND TO SILTY SAND	SM-SP	.20	12			99	42	.50+
3.60	90.28	.19	.21	SAND TO SILTY SAND	SM-SP	.22	10			92	41	.50+
3.80	65.57	.03	.05	SILTY SAND TO SANDY SILT	SM-ML	.21	10			90	39	.50+
4.00	57.19	.01	.02	SILTY SAND TO SANDY SILT	SM-ML	.22	9			74	38	.50+
4.20	62.94	.07	.12	SILTY SAND TO SANDY SILT	SM-ML	.23	10			77	39	.50+
4.40	69.10	.20	.29	SILTY SAND TO SANDY SILT	SM-ML	.24	11			79	39	.50+
4.60	79.68	.30	.38	SAND TO SILTY SAND	SM-SP	.28	9			82	40	.50+
4.80	62.05	.20	.32	SILTY SAND TO SANDY SILT	SM-ML	.26	9			74	38	.50+
5.00	40.70	.06	.14	SILTY SAND TO SANDY SILT	SM-ML	.27	6			63	37	.30
5.20	74.49	.00	.00	SAND TO SILTY SAND	SM-SP	.31	8			78	40	.50+
5.40	3.20	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.16	0	.225	13.5			
5.60	2.94	.05	1.82	SENSITIVE FINE GRAINED	OL-CH	.17	0	.206	13.5			
5.80	42.69	.17	.39	SILTY SAND TO SANDY SILT	SM-ML	.32	6			62	37	.26
6.00	85.04	.54	.64	SILTY SAND TO SANDY SILT	SM-ML	.33	13			81	39	.50+
6.20	115.10	.23	.20	SAND TO SILTY SAND	SM-SP	.37	13			90	41	.50+
6.40	114.69	.54	.47	SAND TO SILTY SAND	SM-SP	.38	13			89	41	.50+
6.60	112.65	.45	.40	SAND TO SILTY SAND	SM-SP	.40	13			88	41	.50+
6.80	99.42	.70	.70	SAND TO SILTY SAND	SM-SP	.41	11			83	40	.50+
7.00	44.72	.01	.02	SILTY SAND TO SANDY SILT	SM-ML	.38	7			61	37	.23
7.20	10.82	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.22	2	.786	13.5			
7.40	18.41	.13	.70	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	4	1.339	13.5			
7.60	58.37	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.42	9			66	37	.35
7.80	56.99	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.43	9			65	37	.31
8.00	23.52	.08	.34	SANDY SILT TO CLAYEY SILT	ML-MH	.40	4	1.713	13.5	43	34	.14
8.20	8.62	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.25	2	.621	13.5			
8.40	2.96	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.25	0	.200	13.5			
8.60	2.71	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.26	0	.182	13.5			
8.80	3.20	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.26	0	.218	13.5			
9.00	2.46	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.27	0	.162	13.5			
9.20	2.22	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.28	0	.144	13.5			
9.40	2.21	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.28	0	.147	13.5			

9.60	2.46	.37	15.17	ORGANIC MATERIAL	OL-OH	.29	1	.161	13.5			
9.80	9.67	.07	.74	SENSITIVE FINE GRAINED	OL-CH	.29	2	.695	13.5			
10.00	2.58	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.30	0	.169	13.5			
10.20	2.22	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.31	0	.142	13.5			
10.40	2.46	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.31	0	.159	13.5			
10.60	2.46	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.32	0	.159	13.5			
10.80	1.97	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.32	0	.122	13.5			
11.00	1.97	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.33	0	.121	13.5			
11.20	1.97	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.34	0	.121	13.5			
11.40	1.97	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.34	0	.120	13.5			
11.60	1.97	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.35	0	.120	13.5			
11.80	1.73	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.35	0	.102	13.5			
12.00	1.97	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.36	0	.119	13.5			
12.20	1.97	.05	2.44	ORGANIC MATERIAL	OL-OH	.37	1	.119	13.5			
12.40	1.97	.03	1.74	ORGANIC MATERIAL	OL-OH	.37	1	.118	13.5			
12.60	1.98	.02	1.21	ORGANIC MATERIAL	OL-OH	.38	1	.118	13.5			
12.80	3.56	.01	.32	SENSITIVE FINE GRAINED	OL-CH	.38	0	.236	13.5			
13.00	4.78	.01	.28	SENSITIVE FINE GRAINED	OL-CH	.39	1	.325	13.5			
13.20	1.60	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.40	0	.089	13.5			
13.40	2.45	.01	.44	SENSITIVE FINE GRAINED	OL-CH	.40	0	.152	13.5			
13.60	1.98	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.41	0	.116	13.5			
13.80	1.73	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.41	0	.097	13.5			
14.00	11.31	.05	.40	SENSITIVE FINE GRAINED	OL-CH	.42	2	.897	13.5			
14.20	1.72	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.43	0	.096	13.5			
14.40	1.48	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.43	0	.077	13.5			
14.60	1.48	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.44	0	.077	13.5			
14.80	2.44	.05	1.96	ORGANIC MATERIAL	OL-OH	.44	1	.148	13.5			
15.00	1.74	.01	.65	ORGANIC MATERIAL	OL-OH	.45	1	.095	13.5			
15.20	1.22	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.46	0	.057	13.5			
15.40	1.24	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.46	0	.057	13.5			
15.60	1.72	.11	6.65	ORGANIC MATERIAL	OL-OH	.47	1	.092	13.5			
15.80	32.11	.18	.55	SANDY SILT TO CLAYEY SILT	ML-MH	.79	6	2.320	13.5	32	33	.13
16.00	58.57	2.34	3.99	SILTY CLAY TO CLAY	CL-CH	.64	18	4.291	13.5			
16.20	159.09	.09	.06	SAND	SW-SP	1.05	15			79	42	.42
16.40	31.86	.26	.81	SANDY SILT TO CLAYEY SILT	ML-MH	.82	6	2.299	13.5	31	32	.13



RESULT OF CONE PENETRATION TEST

32S

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

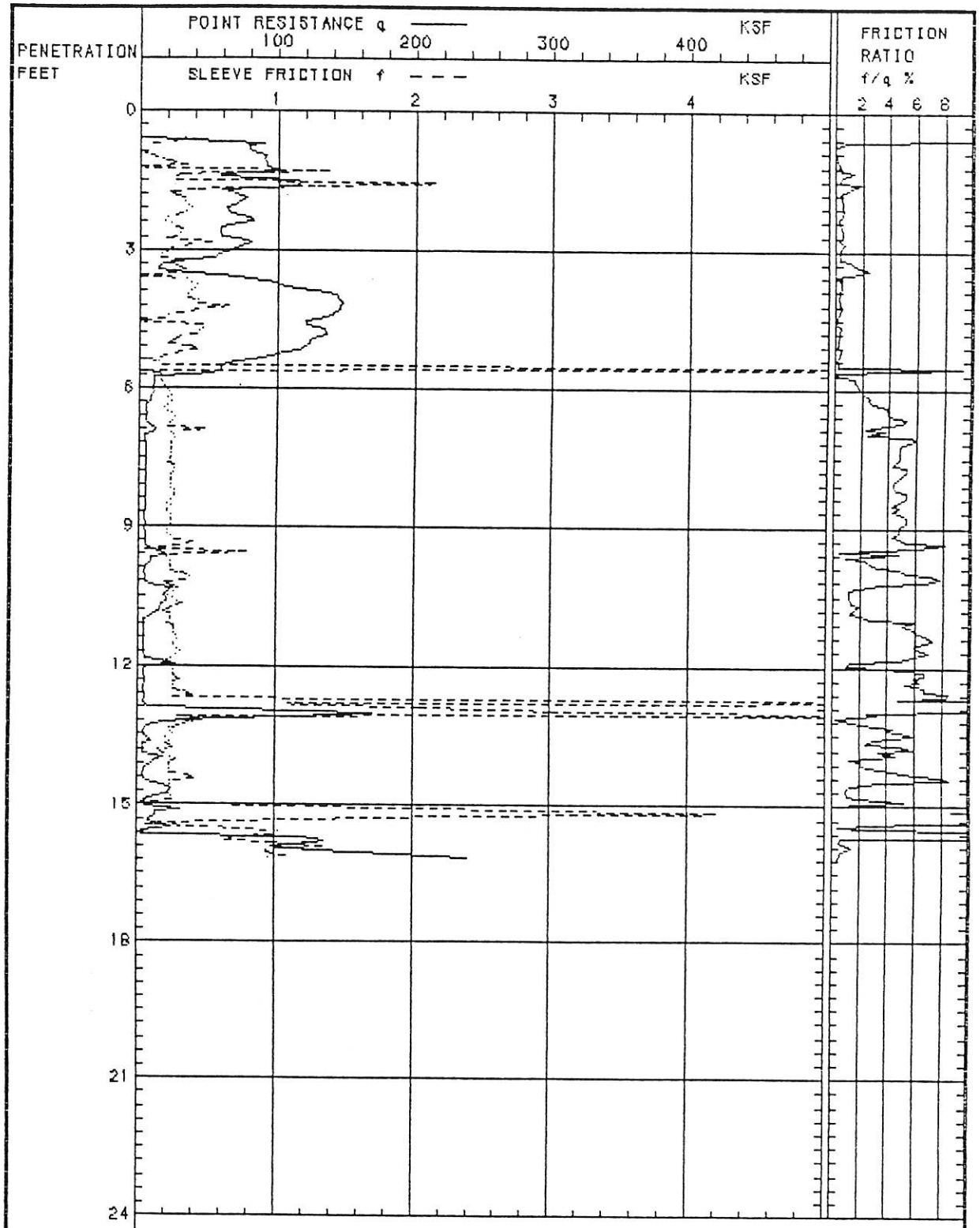
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 32S
CONE NO. : 001
DATE : 05/06/87

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	.24	2.57	CLAY	CH	.02	4	.691	13.5			
.80	68.36	.76	1.10	SILTY SAND TO SANDY SILT	SM-ML	.04	10			100+	42	.50+
1.00	111.30	.62	.56	SAND TO SILTY SAND	SM-SP	.06	13			100+	42	.50+
1.20	92.00	.51	.55	SAND TO SILTY SAND	SM-SP	.07	11			100+	42	.50+
1.40	103.36	.27	.26	SAND TO SILTY SAND	SM-SP	.08	12			100+	42	.50+
1.60	104.97	.67	.63	SAND TO SILTY SAND	SM-SP	.10	12			100+	42	.50+
1.80	115.84	.52	.45	SAND TO SILTY SAND	SM-SP	.11	13			100+	42	.50+
2.00	130.98	.59	.45	SAND TO SILTY SAND	SM-SP	.12	15			100+	42	.50+
2.20	133.33	.86	.64	SAND TO SILTY SAND	SM-SP	.13	15			100+	42	.50+
2.40	100.36	.73	.73	SAND TO SILTY SAND	SM-SP	.14	12			100+	42	.50+
2.60	82.90	.62	.74	SILTY SAND TO SANDY SILT	SM-ML	.14	13			96	41	.50+
2.80	79.81	.73	.92	SILTY SAND TO SANDY SILT	SM-ML	.15	12			93	41	.50+
3.00	87.19	.81	.93	SILTY SAND TO SANDY SILT	SM-ML	.17	13			96	41	.50+
3.20	102.31	.62	.61	SAND TO SILTY SAND	SM-SP	.19	12			100+	42	.50+
3.40	103.07	1.05	1.02	SILTY SAND TO SANDY SILT	SM-ML	.19	16			100+	42	.50+
3.60	86.36	.80	.93	SILTY SAND TO SANDY SILT	SM-ML	.20	13			91	41	.50+
3.80	79.44	.75	.94	SILTY SAND TO SANDY SILT	SM-ML	.21	12			87	40	.50+
4.00	66.90	.65	.97	SILTY SAND TO SANDY SILT	SM-ML	.22	10			80	39	.50+
4.20	61.74	1.26	2.04	SANDY SILT TO CLAYEY SILT	ML-MH	.21	11	4.558	13.5	77	39	.50+
4.40	43.05	.94	2.17	SANDY SILT TO CLAYEY SILT	ML-MH	.22	8	3.172	13.5	67	37	.50+
4.60	131.06	1.11	.85	SAND TO SILTY SAND	SM-SP	.28	15			100+	42	.50+
4.80	174.21	.83	.48	SAND TO SILTY SAND	SM-SP	.29	20			100+	42	.50+
5.00	130.14	.90	.69	SAND TO SILTY SAND	SM-SP	.30	15			100+	42	.50+
5.20	113.71	4.01	3.52	CLAYEY SILT TO SILTY CLAY	MH-CL	.23	27	8.405	13.5			
5.40	110.15	.78	.71	SAND TO SILTY SAND	SM-SP	.32	13			92	41	.50+
5.60	145.86	.98	.67	SAND TO SILTY SAND	SM-SP	.34	17			100+	42	.50+
5.80	148.56	.88	.59	SAND TO SILTY SAND	SM-SP	.35	17			100+	42	.50+
6.00	147.39	1.03	.70	SAND TO SILTY SAND	SM-SP	.36	17			100+	42	.50+
6.20	152.42	.54	.35	SAND TO SILTY SAND	SM-SP	.37	18			100+	42	.50+
6.40	134.79	.80	.59	SAND TO SILTY SAND	SM-SP	.38	16			96	42	.50+
6.60	100.71	.87	.86	SILTY SAND TO SANDY SILT	SM-ML	.36	16			86	40	.50-
6.80	58.56	.56	.96	SILTY SAND TO SANDY SILT	SM-ML	.37	9			67	38	.45
7.00	52.64	.32	.60	SILTY SAND TO SANDY SILT	SM-ML	.38	8			64	37	.31
7.20	83.91	.42	.51	SAND TO SILTY SAND	SM-SP	.43	10			76	40	.50+
7.40	68.25	.67	.97	SILTY SAND TO SANDY SILT	SM-ML	.41	10			70	39	.50+
7.60	27.95	.53	1.89	CLAYEY SILT TO SILTY CLAY	MH-CL	.34	6	2.045	13.5			
7.80	10.90	.34	3.13	CLAY	CH	.31	5	.784	13.5			
8.00	5.67	.36	6.29	ORGANIC MATERIAL	OL-OH	.24	2	.402	13.5			
8.20	5.41	.37	6.82	ORGANIC MATERIAL	OL-OH	.25	2	.392	13.5			
8.40	5.41	.42	7.72	ORGANIC MATERIAL	OL-OH	.25	2	.332	13.5			
8.60	4.92	.34	7.01	ORGANIC MATERIAL	OL-OH	.26	2	.345	13.5			
8.80	5.17	.32	6.19	ORGANIC MATERIAL	OL-OH	.26	2	.363	13.5			
9.00	5.17	.36	6.89	ORGANIC MATERIAL	OL-OH	.27	2	.363	13.5			
9.20	5.29	.36	6.86	ORGANIC MATERIAL	OL-OH	.28	2	.371	13.5			
9.40	4.92	.37	7.50	ORGANIC MATERIAL	OL-OH	.28	2	.344	13.5			

9.60	4.92	.37	7.51	ORGANIC MATERIAL	OL-OH	.29	2	.343	13.5			
9.80	4.92	.36	7.23	ORGANIC MATERIAL	OL-OH	.29	2	.343	13.5			
10.00	6.40	.38	5.95	CLAY	CH	.40	3	.444	13.5			
10.20	5.17	.39	7.60	ORGANIC MATERIAL	OL-OH	.31	2	.360	13.5			
10.40	5.17	.40	7.83	ORGANIC MATERIAL	OL-OH	.31	2	.360	13.5			
10.60	4.92	.38	7.72	ORGANIC MATERIAL	OL-OH	.32	2	.341	13.5			
10.80	5.41	.37	6.81	ORGANIC MATERIAL	OL-OH	.32	2	.377	13.5			
11.00	5.41	.37	6.84	ORGANIC MATERIAL	OL-OH	.33	2	.376	13.5			
11.20	5.29	.36	6.75	ORGANIC MATERIAL	OL-OH	.34	2	.367	13.5			
11.40	4.92	.36	7.25	ORGANIC MATERIAL	OL-OH	.34	2	.339	13.5			
11.60	4.92	.39	7.99	ORGANIC MATERIAL	OL-OH	.35	2	.339	13.5			
11.80	4.43	.38	8.61	ORGANIC MATERIAL	OL-OH	.35	2	.302	13.5			
12.00	5.16	.48	9.26	ORGANIC MATERIAL	OL-OH	.36	2	.356	13.5			
12.20	4.68	.38	8.14	ORGANIC MATERIAL	OL-OH	.37	2	.319	13.5			
12.40	5.64	.60	10.65	ORGANIC MATERIAL	OL-OH	.37	2	.391	13.5			
12.60	9.12	.44	4.77	CLAY	CH	.50	4	.638	13.5			
12.80	4.43	.31	6.97	ORGANIC MATERIAL	OL-OH	.38	2	.300	13.5			
13.00	13.25	.37	2.79	SILTY CLAY TO CLAY	CL-CH	.52	4	.943	13.5			
13.20	5.92	.37	6.26	ORGANIC MATERIAL	OL-OH	.40	2	.409	13.5			
13.40	4.43	.40	8.98	ORGANIC MATERIAL	OL-OH	.40	2	.299	13.5			
13.60	5.68	.43	7.56	ORGANIC MATERIAL	OL-OH	.41	2	.391	13.5			
13.80	4.79	.46	9.57	ORGANIC MATERIAL	OL-OH	.41	2	.324	13.5			
14.00	6.12	.50	8.13	ORGANIC MATERIAL	OL-OH	.42	2	.423	13.5			
14.20	9.59	.56	5.81	CLAY	CH	.57	4	.668	13.5			
14.40	14.74	.56	3.79	CLAY	CH	.58	7	1.049	13.5			
14.60	6.68	.57	8.52	ORGANIC MATERIAL	OL-OH	.44	3	.462	13.5			
14.80	9.88	.42	4.28	CLAY	CH	.59	4	.688	13.5			
15.00	4.67	.51	10.95	ORGANIC MATERIAL	OL-OH	.45	2	.312	13.5			
15.20	58.80	.51	.86	SILTY SAND TO SANDY SILT	SM-ML	.84	9			51	35	.18
15.40	105.11	.73	.70	SAND TO SILTY SAND	SM-SP	.92	12			67	39	.39
15.60	81.01	.56	.70	SILTY SAND TO SANDY SILT	SM-ML	.86	12			62	37	.24
15.80	79.85	.59	.74	SILTY SAND TO SANDY SILT	SM-ML	.87	12			61	37	.23
16.00	17.76	.40	2.26	SILTY CLAY TO CLAY	CL-CH	.64	5	1.268	13.5			
16.20	39.85	.45	1.12	SANDY SILT TO CLAYEY SILT	ML-MH	.91	7	2.892	13.5	40	34	.14
16.40	13.69	.44	3.22	CLAY	CH	.66	6	.965	13.5			
16.60	10.39	.49	4.76	CLAY	CH	.66	4	.720	13.5			
16.80	17.19	.51	2.99	SILTY CLAY TO CLAY	CL-CH	.67	5	1.224	13.5			
17.00	116.36	.62	.53	SAND TO SILTY SAND	SM-SP	1.02	13			68	39	.43
17.20	205.03	1.31	.64	SAND TO SILTY SAND	SM-SP	1.03	24			87	41	.50+
17.40	196.39	3.47	1.77	SILTY SAND TO SANDY SILT	SM-ML	.96	31			87	40	.50+
17.60	61.62	1.28	2.08	SANDY SILT TO CLAYEY SILT	ML-MH	.88	11	4.499	13.5	51	35	.18
17.80	160.70	.13	.08	SAND	SW-SP	1.16	15			77	42	.34
18.00	203.16	1.00	.49	SAND	SW-SP	1.17	19			84	43	.50+
18.20	20.30	1.22	5.99	CLAY	CH	.73	9	1.450	13.5			
18.40	6.40	.49	7.64	ORGANIC MATERIAL	OL-OH	.55	3	.433	13.5			
18.60	6.69	.50	7.49	ORGANIC MATERIAL	OL-OH	.56	3	.454	13.5			
18.80	6.51	.37	5.73	CLAY	CH	.75	3	.427	13.5			
19.00	6.16	.46	7.51	ORGANIC MATERIAL	OL-OH	.57	2	.414	13.5			
19.20	8.81	.55	6.20	CLAY	CH	.77	4	.576	13.5			
19.40	5.90	.44	7.45	ORGANIC MATERIAL	OL-OH	.58	2	.394	13.5			
19.60	5.90	.48	8.09	ORGANIC MATERIAL	OL-OH	.59	2	.394	13.5			
19.80	10.86	.51	4.70	CLAY	CH	.79	5	.746	13.5			
20.00	5.71	.50	8.79	ORGANIC MATERIAL	OL-CH	.60	2	.379	13.5			
20.20	4.67	.50	10.65	ORGANIC MATERIAL	OL-OH	.61	2	.301	13.5			
20.40	10.82	1.48	13.68	CLAY	CH	.82	5	.741	13.5			
20.60	276.55	1.00	.36	SAND	SW-SP	1.34	26			91	44	.50+
20.80	81.48	1.10	1.34	SILTY SAND TO SANDY SILT	SM-ML	1.14	13			54	36	.19



RESULT OF CONE PENETRATION TEST

33N

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

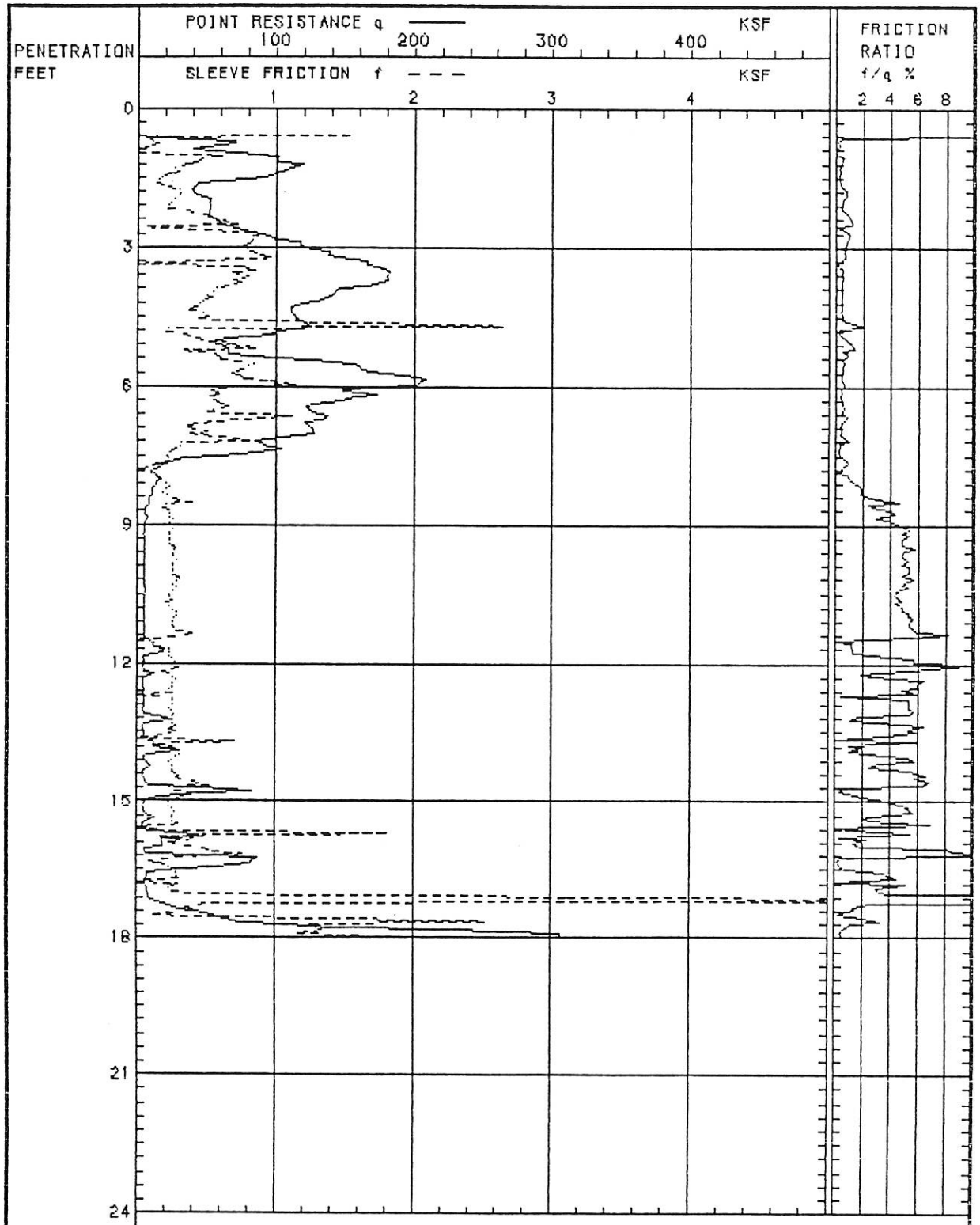
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 33N
CONE NO. : 001
DATE : 05/06/87

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	18.69	.31	1.66	CLAYEY SILT TO SILTY CLAY	MH-CL	.02	4	1.383	13.5			
.80	79.20	.15	.18	SAND TO SILTY SAND	SM-SP	.05	9			100+	42	.50+
1.00	90.76	.05	.06	SAND TO SILTY SAND	SM-SP	.06	10			100+	42	.50+
1.20	91.50	.17	.19	SAND TO SILTY SAND	SM-SP	.07	10			100+	42	.50+
1.40	58.54	.28	.48	SILTY SAND TO SANDY SILT	SM-ML	.08	9			88	40	.50+
1.60	114.87	2.09	1.82	SILTY SAND TO SANDY SILT	SM-ML	.09	18			100+	42	.50+
1.80	69.54	.70	1.01	SILTY SAND TO SANDY SILT	SM-ML	.10	11			93	41	.50+
2.00	70.72	.33	.47	SILTY SAND TO SANDY SILT	SM-ML	.11	11			92	41	.50+
2.20	65.18	.32	.49	SILTY SAND TO SANDY SILT	SM-ML	.12	10			87	40	.50+
2.40	77.50	.20	.26	SAND TO SILTY SAND	SM-SP	.14	9			92	42	.50+
2.60	58.66	.29	.49	SILTY SAND TO SANDY SILT	SM-ML	.14	9			80	39	.50+
2.80	76.23	.36	.47	SILTY SAND TO SANDY SILT	SM-ML	.15	12			90	41	.50+
3.00	67.04	.22	.33	SILTY SAND TO SANDY SILT	SM-ML	.17	10			84	40	.50+
3.20	45.54	.25	.55	SILTY SAND TO SANDY SILT	SM-ML	.18	7			71	38	.50+
3.40	13.77	.26	1.91	SILTY CLAY TO CLAY	CL-CH	.14	4	1.010	13.5			
3.60	69.31	.17	.25	SILTY SAND TO SANDY SILT	SM-ML	.20	11			82	40	.50+
3.80	106.72	.41	.38	SAND TO SILTY SAND	SM-SP	.23	12			99	42	.50+
4.00	143.03	.37	.26	SAND TO SILTY SAND	SM-SP	.24	17			100+	42	.50+
4.20	146.85	.53	.36	SAND TO SILTY SAND	SM-SP	.25	17			100+	42	.50+
4.40	140.69	.40	.29	SAND TO SILTY SAND	SM-SP	.26	16			100+	42	.50+
4.60	120.77	.23	.19	SAND TO SILTY SAND	SM-SP	.28	14			100+	42	.50+
4.80	135.28	.29	.21	SAND TO SILTY SAND	SM-SP	.29	16			100+	42	.50+
5.00	123.72	.28	.23	SAND TO SILTY SAND	SM-SP	.30	14			99	42	.50+
5.20	110.48	1.24	1.12	SILTY SAND TO SANDY SILT	SM-ML	.29	17			95	41	.50+
5.40	76.42	.16	.20	SAND TO SILTY SAND	SM-SP	.32	9			78	40	.50+
5.60	59.03	2.75	4.65	SILTY CLAY TO CLAY	CL-CH	.22	18	4.356	13.5			
5.80	11.31	.19	1.64	SILTY CLAY TO CLAY	CL-CH	.23	3	.821	13.5			
6.00	10.45	.20	1.87	SILTY CLAY TO CLAY	CL-CH	.24	3	.756	13.5			
6.20	8.92	.23	2.54	CLAY	CH	.25	4	.642	13.5			
6.40	5.17	.22	4.35	CLAY	CH	.26	2	.364	13.5			
6.60	5.42	.25	4.58	CLAY	CH	.26	2	.382	13.5			
6.80	7.61	.29	3.82	CLAY	CH	.27	3	.543	13.5			
7.00	7.16	.24	3.33	CLAY	CH	.28	3	.510	13.5			
7.20	4.80	.24	5.06	CLAY	CH	.29	2	.334	13.5			
7.40	4.92	.24	4.80	CLAY	CH	.30	2	.342	13.5			
7.60	4.92	.24	4.82	CLAY	CH	.30	2	.342	13.5			
7.80	4.92	.26	5.30	CLAY	CH	.31	2	.341	13.5			
8.00	5.29	.27	5.19	CLAY	CH	.32	2	.368	13.5			
8.20	5.04	.25	5.04	CLAY	CH	.33	2	.349	13.5			
8.40	4.92	.25	5.05	CLAY	CH	.34	2	.340	13.5			
8.60	4.92	.22	4.57	CLAY	CH	.34	2	.339	13.5			
8.80	4.43	.24	5.34	ORGANIC MATERIAL	OL-OH	.25	2	.308	13.5			
9.00	4.68	.22	4.80	CLAY	CH	.36	2	.320	13.5			
9.20	4.92	.20	4.10	CLAY	CH	.37	2	.337	13.5			
9.40	4.92	.29	5.87	ORGANIC MATERIAL	OL-OH	.28	2	.344	13.5			

9.60	18.66	.49	2.62	SILTY CLAY TO CLAY	CL-CH	.39	5	1.354	13.5			
9.80	8.26	.24	2.86	CLAY	CH	.39	3	.582	13.5			
10.00	4.43	.24	5.38	ORGANIC MATERIAL	OL-OH	.30	2	.306	13.5			
10.20	5.29	.24	4.56	CLAY	CH	.41	2	.361	13.5			
10.40	23.88	.28	1.16	SANDY SILT TO CLAYEY SILT	ML-MH	.52	4	1.731	13.5	36	33	.13
10.60	20.53	.26	1.28	CLAYEY SILT TO SILTY CLAY	MH-CL	.48	4	1.485	13.5			
10.80	15.32	.20	1.33	CLAYEY SILT TO SILTY CLAY	MH-CL	.49	3	1.099	13.5			
11.00	6.43	.31	4.84	CLAY	CH	.44	3	.444	13.5			
11.20	4.43	.26	5.90	ORGANIC MATERIAL	OL-OH	.34	2	.303	13.5			
11.40	3.94	.26	6.65	ORGANIC MATERIAL	OL-OH	.34	1	.266	13.5			
11.60	4.43	.26	5.92	ORGANIC MATERIAL	OL-OH	.35	2	.302	13.5			
11.80	4.79	.26	5.38	CLAY	CH	.47	2	.320	13.5			
12.00	17.40	.26	1.50	CLAYEY SILT TO SILTY CLAY	MH-CL	.54	4	1.249	13.5			
12.20	4.18	.27	6.52	ORGANIC MATERIAL	OL-OH	.37	2	.282	13.5			
12.40	4.44	.26	5.89	ORGANIC MATERIAL	OL-OH	.37	2	.301	13.5			
12.60	4.42	.37	8.34	ORGANIC MATERIAL	OL-OH	.38	2	.299	13.5			
12.80	3.94	3.88	98.65	ORGANIC MATERIAL	OL-OH	.38	1	.263	13.5			
13.00	144.88	2.91	2.01	SILTY SAND TO SANDY SILT	SM-ML	.71	23			84	40	.50+
13.20	38.75	.42	1.07	SANDY SILT TO CLAYEY SILT	ML-MH	.66	7	2.822	13.5	44	34	.15
13.40	5.18	.23	4.36	CLAY	CH	.54	2	.344	13.5			
13.60	8.46	.24	2.86	CLAY	CH	.54	4	.586	13.5			
13.80	4.43	.21	4.68	CLAY	CH	.55	2	.287	13.5			
14.00	16.67	.25	1.52	CLAYEY SILT TO SILTY CLAY	MH-CL	.63	3	1.188	13.5			
14.20	7.17	.23	3.16	CLAY	CH	.57	3	.489	13.5			
14.40	4.67	.37	7.94	ORGANIC MATERIAL	OL-OH	.43	2	.314	13.5			
14.60	22.06	.28	1.29	CLAYEY SILT TO SILTY CLAY	MH-CL	.66	5	1.586	13.5			
14.80	17.93	.24	1.35	CLAYEY SILT TO SILTY CLAY	MH-CL	.67	4	1.279	13.5			
15.00	6.02	.99	16.44	ORGANIC MATERIAL	OL-OH	.45	2	.412	13.5			
15.20	13.28	4.09	30.76	CLAY	CH	.61	6	.939	13.5			
15.40	12.26	1.80	14.68	CLAY	CH	.62	5	.863	13.5			
15.60	3.44	1.01	29.24	ORGANIC MATERIAL	OL-OH	.47	1	.220	13.5			
15.80	132.66	1.87	1.41	SILTY SAND TO SANDY SILT	SM-ML	.87	21			77	39	.50+
16.00	142.62	.89	.63	SAND TO SILTY SAND	SM-SP	.96	17			77	40	.50+



RESULT OF CONE PENETRATION TEST

33M

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

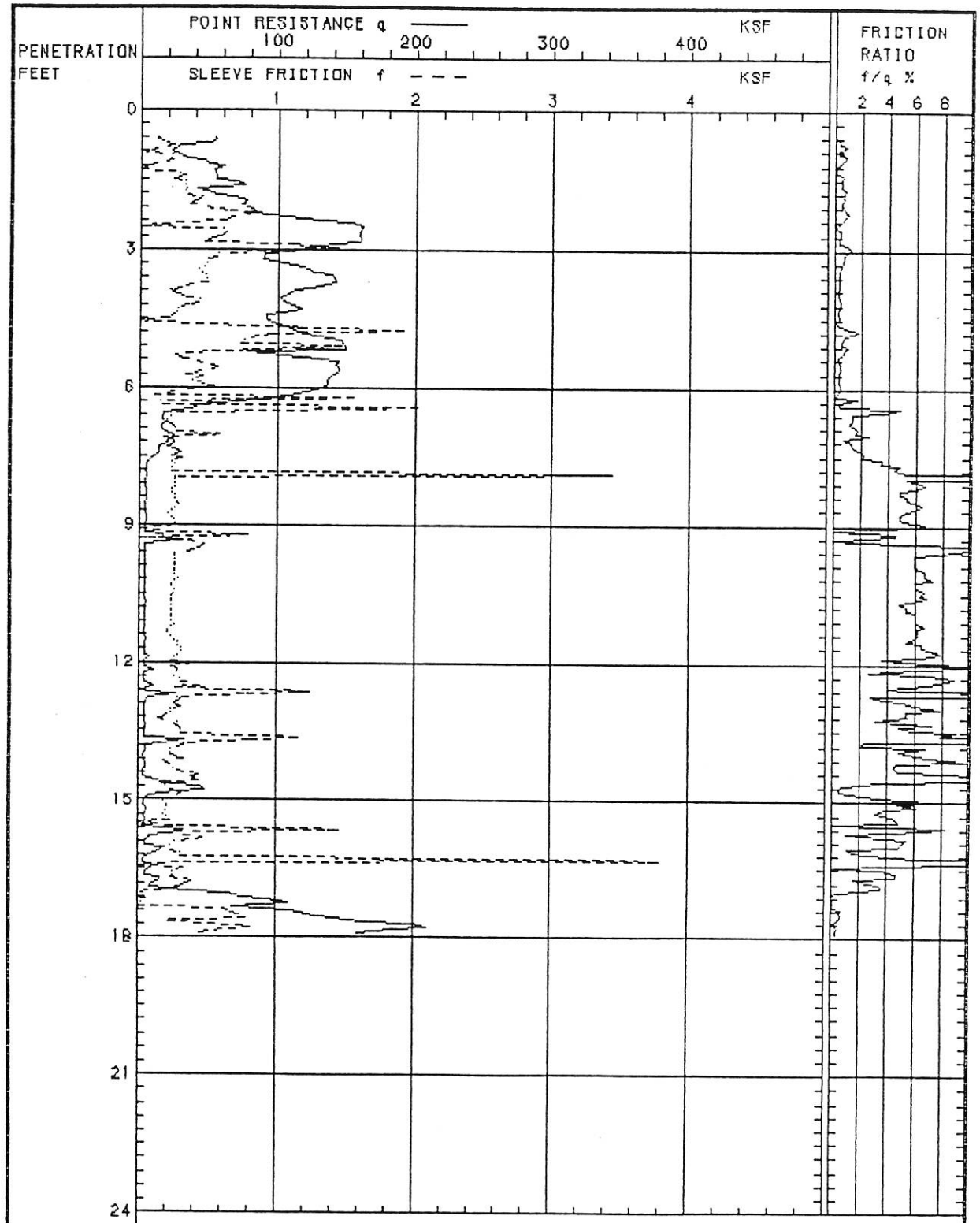
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 33M
CONE NO. : 001
DATE : 05/06/87

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	13.77	.79	5.75	CLAY	CH	.02	6	1.019	13.5			
.80	60.02	.13	.21	SILTY SAND TO SANDY SILT	SM-ML	.04	9			95	41	.50+
1.00	86.38	.47	.54	SAND TO SILTY SAND	SM-SP	.06	10			100+	42	.50+
1.20	110.18	.22	.20	SAND TO SILTY SAND	SM-SP	.07	13			100+	42	.50+
1.40	101.83	.27	.27	SAND TO SILTY SAND	SM-SP	.08	12			100+	42	.50+
1.60	61.77	.14	.23	SILTY SAND TO SANDY SILT	SM-ML	.09	9			89	40	.50+
1.80	40.21	.52	1.29	SANDY SILT TO CLAYEY SILT	ML-MH	.09	7	2.972	13.5	73	38	.50+
2.00	52.88	.32	.60	SILTY SAND TO SANDY SILT	SM-ML	.11	8			79	39	.50+
2.20	52.39	.28	.54	SILTY SAND TO SANDY SILT	SM-ML	.12	8			79	39	.50+
2.40	56.08	.58	1.04	SILTY SAND TO SANDY SILT	SM-ML	.13	8			80	39	.50+
2.60	71.32	.14	.20	SILTY SAND TO SANDY SILT	SM-ML	.14	11			89	40	.50+
2.80	97.64	.85	.87	SILTY SAND TO SANDY SILT	SM-ML	.15	15			100+	42	.50+
3.00	122.23	.78	.64	SAND TO SILTY SAND	SM-SP	.19	14			100+	42	.50+
3.20	141.17	.92	.65	SAND TO SILTY SAND	SM-SP	.19	16			100+	42	.50+
3.40	169.82	.21	.12	SAND	SW-SP	.22	16			100+	44	.50+
3.60	181.28	.74	.41	SAND	SW-SP	.23	17			100+	44	.50+
3.80	171.71	.47	.27	SAND	SW-SP	.25	16			100+	44	.50+
4.00	141.56	.55	.39	SAND TO SILTY SAND	SM-SP	.24	16			100+	42	.50+
4.20	124.24	.28	.23	SAND TO SILTY SAND	SM-SP	.25	14			100+	42	.50+
4.40	110.87	.46	.41	SAND TO SILTY SAND	SM-SP	.26	13			97	42	.50+
4.60	117.80	.29	.24	SAND TO SILTY SAND	SM-SP	.28	14			99	42	.50+
4.80	104.70	.82	.78	SAND TO SILTY SAND	SM-SP	.29	12			92	42	.50+
5.00	59.56	.40	.67	SILTY SAND TO SANDY SILT	SM-ML	.27	9			73	39	.50+
5.20	65.92	.78	1.19	SILTY SAND TO SANDY SILT	SM-ML	.29	10			75	39	.50+
5.40	112.56	.61	.54	SAND TO SILTY SAND	SM-SP	.32	13			92	42	.50+
5.60	161.35	1.71	1.06	SAND TO SILTY SAND	SM-SP	.34	19			100+	42	.50+
5.80	201.39	.90	.45	SAND	SW-SP	.38	19			100+	44	.50+
6.00	175.60	.89	.51	SAND TO SILTY SAND	SM-SP	.35	21			100+	42	.50+
6.20	165.61	.38	.23	SAND	SW-SP	.40	15			100+	44	.50+
6.40	124.61	.56	.45	SAND TO SILTY SAND	SM-SP	.38	14			93	42	.50+
6.60	132.03	.81	.61	SAND TO SILTY SAND	SM-SP	.40	15			94	42	.50+
6.80	122.73	.50	.40	SAND TO SILTY SAND	SM-SP	.41	14			91	41	.50+
7.00	127.41	.45	.35	SAND TO SILTY SAND	SM-SP	.42	15			91	41	.50+
7.20	87.42	.68	.78	SILTY SAND TO SANDY SILT	SM-ML	.40	13			79	39	.50+
7.40	95.53	.26	.27	SAND TO SILTY SAND	SM-SP	.44	11			80	40	.50+
7.60	29.33	.19	.66	SANDY SILT TO CLAYEY SILT	ML-MH	.38	5	2.144	13.5	49	35	.16
7.80	13.07	.13	.99	SENSITIVE FINE GRAINED	CL-CH	.23	3	.951	13.5			
8.00	15.98	.20	1.24	CLAYEY SILT TO SILTY CLAY	MH-CL	.36	3	1.157	13.5			
8.20	11.87	.21	1.74	SILTY CLAY TO CLAY	CL-CH	.33	3	.835	13.5			
8.40	9.61	.25	2.57	CLAY	CH	.34	4	.697	13.5			
8.60	7.40	.20	2.70	CLAY	CH	.34	3	.522	13.5			
8.80	6.63	.23	3.40	CLAY	CH	.35	3	.465	13.5			
9.00	5.17	.24	4.57	CLAY	CH	.36	2	.356	13.5			
9.20	4.68	.23	4.83	CLAY	CH	.37	2	.319	13.5			
9.40	4.92	.24	4.80	CLAY	CH	.38	2	.337	13.5			

9.60	5.41	.25	4.61	CLAY	CH	.38	2	.372	13.5			
9.80	5.41	.27	5.04	CLAY	CH	.39	2	.372	13.5			
10.00	4.92	.21	4.36	CLAY	CH	.40	2	.335	13.5			
10.20	5.41	.28	5.14	CLAY	CH	.41	2	.371	13.5			
10.40	5.65	.33	5.89	CLAY	CH	.42	2	.388	13.5			
10.60	5.41	.25	4.70	CLAY	CH	.42	2	.369	13.5			
10.80	5.16	.26	5.08	CLAY	CH	.43	2	.350	13.5			
11.00	5.17	.25	4.85	CLAY	CH	.44	2	.350	13.5			
11.20	4.92	.35	7.17	ORGANIC MATERIAL	OL-OH	.34	2	.340	13.5			
11.40	4.92	.28	5.70	ORGANIC MATERIAL	OL-OH	.34	2	.339	13.5			
11.60	12.04	.14	1.16	SENSITIVE FINE GRAINED	OL-CH	.35	2	.966	13.5			
11.80	12.66	.24	1.87	SILTY CLAY TO CLAY	CL-CH	.47	4	.903	13.5			
12.00	4.07	.27	6.70	ORGANIC MATERIAL	OL-OH	.36	1	.275	13.5			
12.20	9.04	.21	2.34	CLAY	CH	.49	4	.633	13.5			
12.40	4.43	.27	6.16	ORGANIC MATERIAL	OL-OH	.37	2	.300	13.5			
12.60	4.68	.25	5.31	CLAY	CH	.50	2	.309	13.5			
12.80	4.92	.26	5.30	CLAY	CH	.51	2	.326	13.5			
13.00	4.43	.24	5.38	ORGANIC MATERIAL	OL-OH	.39	2	.299	13.5			
13.20	19.95	.26	1.32	CLAYEY SILT TO SILTY CLAY	MH-CL	.59	4	1.434	13.5			
13.40	4.43	.26	5.89	ORGANIC MATERIAL	OL-OH	.40	2	.298	13.5			
13.60	4.68	.09	1.99	SENSITIVE FINE GRAINED	OL-CH	.41	1	.316	13.5			
13.80	12.30	.17	1.42	SENSITIVE FINE GRAINED	OL-CH	.41	2	.880	13.5			
14.00	6.92	.29	4.15	CLAY	CH	.56	3	.471	13.5			
14.20	8.82	.26	2.94	CLAY	CH	.57	4	.612	13.5			
14.40	4.55	.27	5.84	ORGANIC MATERIAL	OL-OH	.43	2	.305	13.5			
14.60	7.11	.39	5.54	CLAY	CH	.58	3	.483	13.5			
14.80	66.54	.35	.52	SILTY SAND TO SANDY SILT	SM-ML	.81	10			56	36	.20
15.00	6.29	.25	4.05	CLAY	CH	.60	3	.421	13.5			
15.20	4.92	.26	5.24	CLAY	CH	.61	2	.319	13.5			
15.40	10.41	.26	2.51	CLAY	CH	.62	4	.725	13.5			
15.60	5.86	.12	2.04	SENSITIVE FINE GRAINED	OL-CH	.47	1	.399	13.5			
15.80	34.31	.29	.86	SANDY SILT TO CLAYEY SILT	ML-MH	.79	6	2.483	13.5	35	33	.14
16.00	12.95	.38	2.92	CLAY	CH	.64	6	.912	13.5			
16.20	46.26	.56	1.21	SANDY SILT TO CLAYEY SILT	ML-MH	.81	8	3.367	13.5	44	34	.16
16.40	70.66	.49	.69	SILTY SAND TO SANDY SILT	SM-ML	.90	11			56	36	.20
16.60	7.63	.29	3.79	CLAY	CH	.66	3	.316	13.5			
16.80	6.16	.31	4.98	CLAY	CH	.67	2	.406	13.5			
17.00	8.35	.30	3.63	CLAY	CH	.68	3	.568	13.5			
17.20	15.39	4.55	29.55	CLAY	CH	.69	7	1.989	13.5			
17.40	40.31	.32	.79	SANDY SILT TO CLAYEY SILT	ML-MH	.87	7	2.922	13.5	38	33	.14
17.60	69.71	1.91	2.74	SANDY SILT TO CLAYEY SILT	ML-MH	.88	13	5.099	13.5	56	36	.20
17.80	182.05	.76	.42	SAND	SW-SP	1.16	17			81	42	.50+



RESULT OF CONE PENETRATION TEST

33S

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

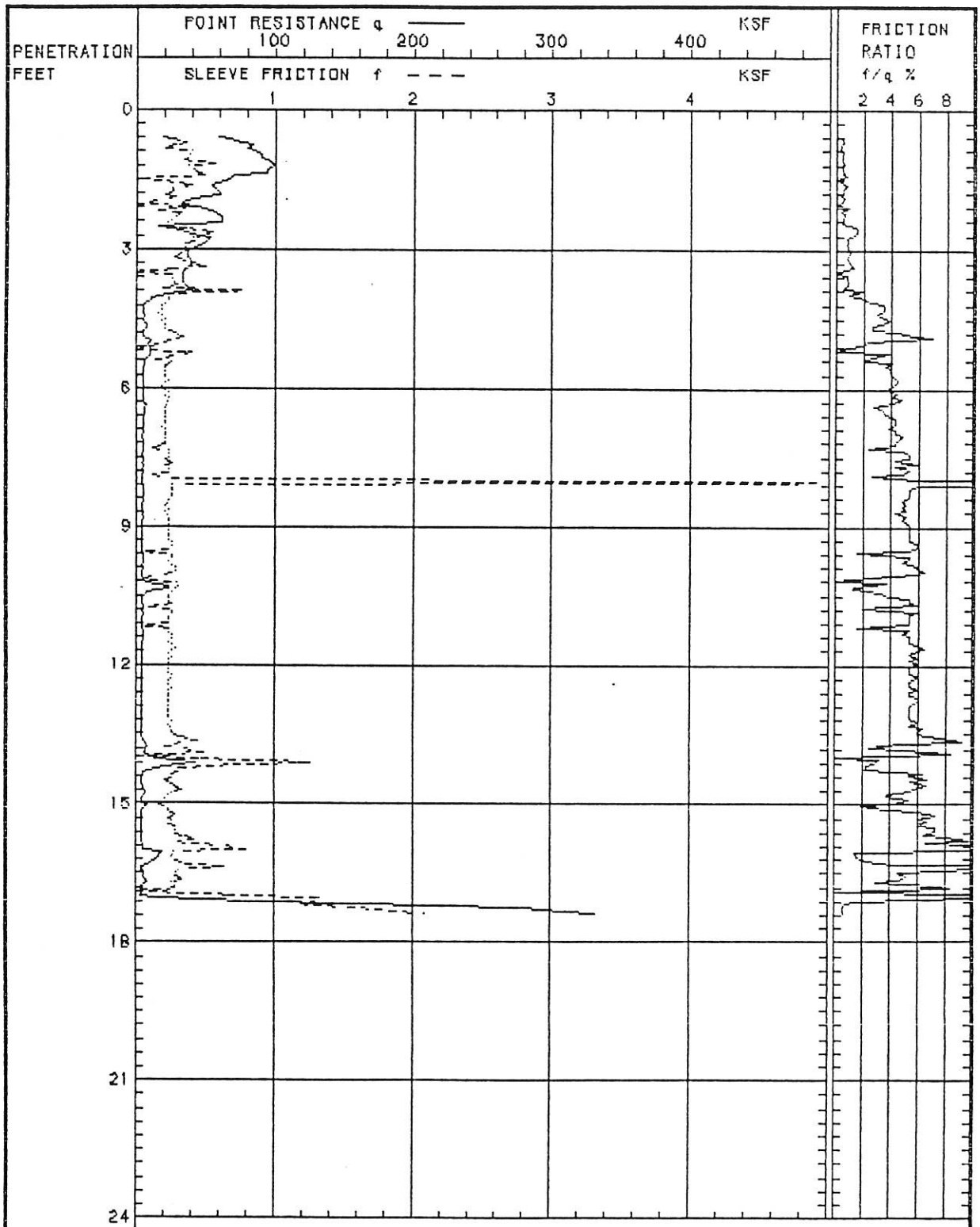
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 33S
CONE NO. : 001
DATE : 05/06/87

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	55.10	.11	.20	SILTY SAND TO SANDY SILT	SM-ML	.03	8			92	41	.50+
.80	27.43	.08	.28	SANDY SILT TO CLAYEY SILT	ML-MH	.04	5	2.029	13.5	68	38	.50+
1.00	31.11	.17	.53	SANDY SILT TO CLAYEY SILT	ML-MH	.05	5	2.301	13.5	70	38	.50+
1.20	55.34	.11	.19	SILTY SAND TO SANDY SILT	SM-ML	.07	8			86	40	.50+
1.40	55.16	.28	.50	SILTY SAND TO SANDY SILT	SM-ML	.08	8			85	40	.50+
1.60	73.05	.27	.37	SILTY SAND TO SANDY SILT	SM-ML	.09	11			98	42	.50+
1.80	52.38	.35	.66	SILTY SAND TO SANDY SILT	SM-ML	.10	8			80	39	.50+
2.00	75.64	.47	.62	SILTY SAND TO SANDY SILT	SM-ML	.11	12			96	41	.50+
2.20	82.77	.62	.75	SILTY SAND TO SANDY SILT	SM-ML	.12	13			99	42	.50+
2.40	142.14	.31	.22	SAND TO SILTY SAND	SM-SP	.14	17			100+	42	.50+
2.60	160.50	.47	.29	SAND TO SILTY SAND	SM-SP	.16	19			100+	42	.50+
2.80	160.13	.35	.22	SAND TO SILTY SAND	SM-SP	.17	19			100+	42	.50+
3.00	116.37	.88	.75	SAND TO SILTY SAND	SM-SP	.18	13			100+	42	.50+
3.20	89.78	.52	.57	SAND TO SILTY SAND	SM-SP	.19	10			94	42	.50+
3.40	120.02	.46	.39	SAND TO SILTY SAND	SM-SP	.20	14			100+	42	.50+
3.60	140.20	.48	.34	SAND TO SILTY SAND	SM-SP	.22	16			100+	42	.50+
3.80	130.39	.46	.35	SAND TO SILTY SAND	SM-SP	.23	15			100+	42	.50+
4.00	104.98	.32	.31	SAND TO SILTY SAND	SM-SP	.24	12			96	42	.50+
4.20	109.20	.71	.65	SAND TO SILTY SAND	SM-SP	.25	13			97	42	.50+
4.40	97.93	.26	.27	SAND TO SILTY SAND	SM-SP	.26	11			91	41	.50+
4.60	96.39	.20	.21	SAND TO SILTY SAND	SM-SP	.28	11			89	41	.50+
4.80	115.21	1.59	1.38	SILTY SAND TO SANDY SILT	SM-ML	.26	18			99	42	.50+
5.00	146.72	.60	.41	SAND TO SILTY SAND	SM-SP	.30	17			100+	42	.50+
5.20	114.01	1.71	1.50	SILTY SAND TO SANDY SILT	SM-ML	.29	18			96	42	.50+
5.40	137.20	.37	.27	SAND TO SILTY SAND	SM-SP	.32	16			100+	42	.50+
5.60	144.01	.48	.33	SAND TO SILTY SAND	SM-SP	.34	17			100+	42	.50+
5.80	137.63	.37	.27	SAND TO SILTY SAND	SM-SP	.35	16			100+	42	.50+
6.00	132.11	1.54	1.16	SILTY SAND TO SANDY SILT	SM-ML	.33	21			100+	42	.50+
6.20	102.13	1.60	1.56	SILTY SAND TO SANDY SILT	SM-ML	.34	16			87	40	.50+
6.40	41.81	.18	.43	SILTY SAND TO SANDY SILT	SM-ML	.35	6			61	37	.23
6.60	17.28	1.59	9.20	CLAY	CH	.29	8	1.261	13.5			
6.80	17.72	.23	1.27	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	4	1.290	13.5			
7.00	20.27	.24	1.20	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	4	1.478	13.5			
7.20	20.17	.25	1.25	CLAYEY SILT TO SILTY CLAY	MH-CL	.32	4	1.470	13.5			
7.40	14.27	.28	1.99	SILTY CLAY TO CLAY	CL-CH	.30	4	1.035	13.5			
7.60	7.88	.27	3.46	CLAY	CH	.30	3	.561	13.5			
7.80	4.92	.24	4.80	CLAY	CH	.31	2	.342	13.5			
8.00	4.68	.26	5.61	ORGANIC MATERIAL	OL-OH	.24	2	.329	13.5			
8.20	4.67	.24	5.19	CLAY	CH	.33	2	.322	13.5			
8.40	4.92	.26	5.30	CLAY	CH	.34	2	.340	13.5			
8.60	4.43	.27	6.16	ORGANIC MATERIAL	OL-OH	.26	2	.309	13.5			
8.80	4.67	.22	4.81	CLAY	CH	.35	2	.320	13.5			
9.00	4.06	.20	4.84	CLAY	CH	.36	1	.274	13.5			
9.20	10.98	.49	4.49	CLAY	CH	.37	5	.786	13.5			
9.40	16.65	.42	2.50	SILTY CLAY TO CLAY	CL-CH	.38	5	1.205	13.5			

9.60	4.43	.33	7.55	ORGANIC MATERIAL	OL-OH	.29	2	.307	13.5			
9.80	4.43	.26	5.89	ORGANIC MATERIAL	OL-OH	.29	2	.306	13.5			
10.00	3.94	.26	6.64	ORGANIC MATERIAL	OL-OH	.30	1	.269	13.5			
10.20	4.18	.27	6.55	ORGANIC MATERIAL	OL-OH	.31	2	.287	13.5			
10.40	3.94	.25	6.33	ORGANIC MATERIAL	OL-OH	.31	1	.268	13.5			
10.60	3.81	.24	6.21	ORGANIC MATERIAL	OL-OH	.32	1	.258	13.5			
10.80	4.43	.24	5.36	ORGANIC MATERIAL	OL-OH	.32	2	.304	13.5			
11.00	3.94	.24	6.07	ORGANIC MATERIAL	OL-OH	.33	1	.267	13.5			
11.20	3.94	.25	6.35	ORGANIC MATERIAL	OL-OH	.34	1	.267	13.5			
11.40	3.69	.22	6.09	ORGANIC MATERIAL	OL-OH	.34	1	.248	13.5			
11.60	4.43	.29	6.57	ORGANIC MATERIAL	OL-OH	.35	2	.302	13.5			
11.80	4.18	.30	7.09	ORGANIC MATERIAL	OL-OH	.35	2	.283	13.5			
12.00	3.56	.24	6.66	ORGANIC MATERIAL	OL-OH	.36	1	.237	13.5			
12.20	7.44	.25	3.39	CLAY	CH	.49	3	.515	13.5			
12.40	4.05	.30	7.32	ORGANIC MATERIAL	OL-OH	.37	1	.273	13.5			
12.60	4.92	.75	15.16	ORGANIC MATERIAL	OL-OH	.39	2	.336	13.5			
12.80	7.03	.28	3.97	CLAY	CH	.51	3	.483	13.5			
13.00	4.18	.27	6.56	ORGANIC MATERIAL	OL-OH	.39	2	.281	13.5			
13.20	4.18	.18	4.24	CLAY	CH	.53	2	.270	13.5			
13.40	5.41	.29	5.27	CLAY	CH	.54	2	.361	13.5			
13.60	3.94	.73	18.48	ORGANIC MATERIAL	OL-OH	.41	1	.261	13.5			
13.80	10.94	.33	3.04	CLAY	CH	.55	5	.770	13.5			
14.00	3.69	.24	6.43	ORGANIC MATERIAL	OL-OH	.42	1	.243	13.5			
14.20	4.66	.21	4.56	CLAY	CH	.57	2	.303	13.5			
14.40	3.44	.31	9.02	ORGANIC MATERIAL	OL-OH	.43	1	.223	13.5			
14.60	18.32	.31	1.69	CLAYEY SILT TO SILTY CLAY	MH-CL	.66	4	1.308	13.5			
14.80	38.84	.25	.63	SANDY SILT TO CLAYEY SILT	ML-MH	.74	7	2.822	13.5	41	34	.15
15.00	3.94	.24	6.04	ORGANIC MATERIAL	OL-OH	.45	1	.258	13.5			
15.20	5.89	.22	3.82	CLAY	CH	.61	2	.391	13.5			
15.40	4.79	.23	4.69	CLAY	CH	.62	2	.309	13.5			
15.60	18.10	.86	4.74	CLAY	CH	.62	8	1.275	13.5			
15.80	8.85	.40	4.55	CLAY	CH	.63	4	.609	13.5			
16.00	12.12	.21	1.75	SILTY CLAY TO CLAY	CL-CH	.64	3	.851	13.5			
16.20	8.70	.31	3.56	CLAY	CH	.65	4	.596	13.5			
16.40	7.52	.16	2.07	CLAY	CH	.66	3	.509	13.5			
16.60	5.41	.25	4.64	CLAY	CH	.66	2	.352	13.5			
16.80	12.73	.25	1.98	SILTY CLAY TO CLAY	CL-CH	.67	4	.893	13.5			
17.00	51.20	.06	.11	SILTY SAND TO SANDY SILT	SM-ML	.93	8			43	34	.16
17.20	100.87	.47	.46	SAND TO SILTY SAND	SM-SP	1.03	12			64	38	.28
17.40	106.92	.06	.06	SAND TO SILTY SAND	SM-SP	1.04	12			65	33	.32
17.60	152.59	.36	.23	SAND TO SILTY SAND	SM-SP	1.06	18			77	40	.50+
17.80	198.09	.73	.37	SAND	SW-SP	1.16	18			84	33	.50+



RESULT OF CONE PENETRATION TEST

34N

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

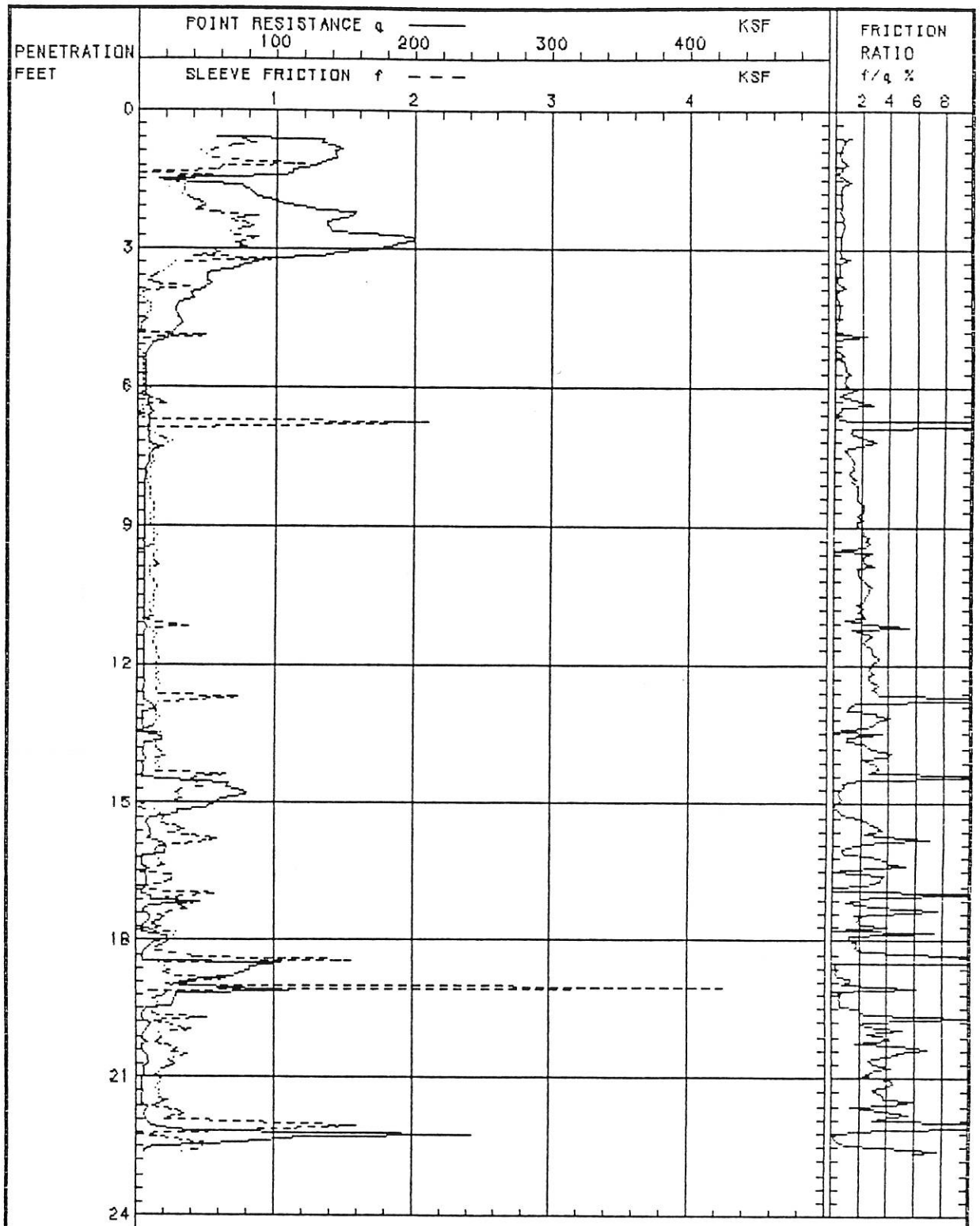
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 34M
CONE NO. : 001
DATE : 05/06/87

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	63.70	.23	.36	SILTY SAND TO SANDY SILT	SM-ML	.03	10			100+	42	.50+
.80	82.28	.45	.54	SILTY SAND TO SANDY SILT	SM-ML	.04	13			100+	42	.50+
1.00	90.02	.42	.47	SAND TO SILTY SAND	SM-SP	.06	10			100+	42	.50+
1.20	99.12	.47	.47	SAND TO SILTY SAND	SM-SP	.07	11			100+	42	.50+
1.40	82.78	.34	.41	SAND TO SILTY SAND	SM-SP	.08	9			100+	42	.50+
1.60	59.29	.56	.94	SILTY SAND TO SANDY SILT	SM-ML	.09	9			87	40	.50+
1.80	60.26	.28	.46	SILTY SAND TO SANDY SILT	SM-ML	.10	9			86	40	.50+
2.00	33.95	.15	.45	SANDY SILT TO CLAYEY SILT	ML-MH	.10	6	2.507	13.5	68	38	.50+
2.20	55.58	.25	.44	SILTY SAND TO SANDY SILT	SM-ML	.12	8			80	39	.50+
2.40	61.49	.23	.37	SILTY SAND TO SANDY SILT	SM-ML	.13	9			85	40	.50+
2.60	31.22	.47	1.50	SANDY SILT TO CLAYEY SILT	ML-MH	.13	5	2.303	13.5	65	37	.50+
2.80	52.52	.40	.76	SILTY SAND TO SANDY SILT	SM-ML	.15	8			76	39	.50+
3.00	39.61	.67	1.70	SANDY SILT TO CLAYEY SILT	ML-MH	.15	7	2.923	13.5	69	38	.50+
3.20	37.63	.29	.77	SANDY SILT TO CLAYEY SILT	ML-MH	.16	7	2.776	13.5	67	37	.50+
3.40	37.89	.38	.99	SANDY SILT TO CLAYEY SILT	ML-MH	.17	7	2.794	13.5	66	37	.50+
3.60	33.45	.19	.58	SANDY SILT TO CLAYEY SILT	ML-MH	.18	6	2.165	13.5	63	37	.39
3.80	36.52	.42	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	.19	6	2.671	13.5	65	37	.45
4.00	17.00	.22	1.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.18	4	1.246	13.5			
4.20	5.91	.19	3.00	CLAY	CH	.17	2	.475	13.5			
4.40	5.66	.18	3.11	CLAY	CH	.18	2	.406	13.5			
4.60	6.39	.20	3.11	CLAY	CH	.19	3	.459	13.5			
4.80	5.41	.27	4.98	CLAY	CH	.19	2	.387	13.5			
5.00	9.60	.33	3.46	CLAY	CH	.20	4	.696	13.5			
5.20	10.70	.06	.55	SENSITIVE FINE GRAINED	OL-CH	.16	2	.781	13.5			
5.40	6.64	.16	2.37	CLAY	CH	.22	3	.476	13.5			
5.60	5.41	.21	3.94	CLAY	CH	.22	2	.384	13.5			
5.80	5.16	.22	4.34	CLAY	CH	.23	2	.365	13.5			
6.00	5.16	.22	4.34	CLAY	CH	.24	2	.355	13.5			
6.20	5.04	.23	4.65	CLAY	CH	.25	2	.355	13.5			
6.40	7.14	.21	2.97	CLAY	CH	.26	3	.510	13.5			
6.60	5.42	.21	3.92	CLAY	CH	.26	2	.382	13.5			
6.80	4.92	.21	4.32	CLAY	CH	.27	2	.344	13.5			
7.00	4.68	.21	4.56	CLAY	CH	.28	2	.326	13.5			
7.20	4.92	.21	4.32	CLAY	CH	.29	2	.343	13.5			
7.40	4.68	.24	5.06	CLAY	CH	.30	2	.324	13.5			
7.60	4.68	.24	5.05	CLAY	CH	.30	2	.324	13.5			
7.80	4.67	.24	5.07	CLAY	CH	.31	2	.323	13.5			
8.00	4.43	2.56	57.76	ORGANIC MATERIAL	OL-OH	.24	2	.310	13.5			
8.20	4.92	.26	5.29	CLAY	CH	.33	2	.340	13.5			
8.40	4.92	.25	5.06	CLAY	CH	.34	2	.340	13.5			
8.60	4.55	.21	4.67	CLAY	CH	.34	2	.311	13.5			
8.80	4.67	.23	4.83	CLAY	CH	.35	2	.320	13.5			
9.00	4.43	.24	5.35	ORGANIC MATERIAL	OL-OH	.27	2	.308	13.5			
9.20	4.43	.23	5.10	CLAY	CH	.37	2	.301	13.5			
9.40	4.43	.26	5.89	ORGANIC MATERIAL	OL-OH	.28	2	.307	13.5			

9.60	4.67	.16	3.49	CLAY	CH	.38	2	.317	13.5			
9.80	4.68	.25	5.31	CLAY	CH	.39	2	.317	13.5			
10.00	4.43	.27	6.16	ORGANIC MATERIAL	OL-OH	.30	2	.306	13.5			
10.20	6.37	.14	2.26	CLAY	CH	.41	3	.442	13.5			
10.40	15.61	.25	1.60	CLAYEY SILT TO SILTY CLAY	MH-CL	.47	3	1.122	13.5			
10.60	4.43	.24	5.34	ORGANIC MATERIAL	OL-OH	.32	2	.304	13.5			
10.80	4.68	.18	3.74	CLAY	CH	.43	2	.314	13.5			
11.00	4.43	.24	5.35	ORGANIC MATERIAL	OL-OH	.33	2	.304	13.5			
11.20	4.43	.15	3.40	CLAY	CH	.45	2	.295	13.5			
11.40	4.92	.26	5.30	CLAY	CH	.46	2	.331	13.5			
11.60	4.43	.27	6.16	ORGANIC MATERIAL	OL-OH	.35	2	.302	13.5			
11.80	4.43	.25	5.62	ORGANIC MATERIAL	OL-OH	.35	2	.302	13.5			
12.00	4.18	.28	6.82	ORGANIC MATERIAL	OL-OH	.36	2	.283	13.5			
12.20	4.43	.25	5.75	ORGANIC MATERIAL	OL-OH	.37	2	.301	13.5			
12.40	4.43	.24	5.48	ORGANIC MATERIAL	OL-OH	.37	2	.300	13.5			
12.60	4.43	.24	5.36	ORGANIC MATERIAL	OL-OH	.38	2	.300	13.5			
12.80	4.06	.24	5.84	ORGANIC MATERIAL	OL-OH	.38	1	.272	13.5			
13.00	4.43	.24	5.35	ORGANIC MATERIAL	OL-OH	.39	2	.299	13.5			
13.20	4.43	.24	5.35	ORGANIC MATERIAL	OL-OH	.40	2	.299	13.5			
13.40	4.18	.25	5.98	ORGANIC MATERIAL	OL-OH	.40	2	.280	13.5			
13.60	4.67	.39	8.34	ORGANIC MATERIAL	OL-OH	.41	2	.316	13.5			
13.80	7.76	.28	3.61	CLAY	CH	.55	3	.534	13.5			
14.00	12.50	.48	3.86	CLAY	CH	.56	5	.884	13.5			
14.20	22.30	.49	2.21	CLAYEY SILT TO SILTY CLAY	MH-CL	.64	5	1.605	13.5			
14.40	4.44	.26	5.89	ORGANIC MATERIAL	OL-OH	.43	2	.297	13.5			
14.60	4.66	.28	6.09	ORGANIC MATERIAL	OL-OH	.44	2	.313	13.5			
14.80	6.65	.25	3.75	CLAY	CH	.59	3	.448	13.5			
15.00	6.59	.20	3.07	CLAY	CH	.60	3	.444	13.5			
15.20	3.94	.26	6.63	ORGANIC MATERIAL	OL-OH	.46	1	.258	13.5			
15.40	3.94	.25	6.34	ORGANIC MATERIAL	OL-OH	.46	1	.257	13.5			
15.60	4.18	.29	6.83	ORGANIC MATERIAL	OL-OH	.47	2	.275	13.5			
15.80	4.55	.48	10.65	ORGANIC MATERIAL	OL-OH	.47	2	.302	13.5			
16.00	12.12	.55	4.50	CLAY	CH	.64	5	.851	13.5			
16.20	14.68	.28	1.92	SILTY CLAY TO CLAY	CL-CH	.65	4	1.040	13.5			
16.40	3.94	.48	12.20	ORGANIC MATERIAL	OL-OH	.49	1	.255	13.5			
16.60	6.25	.28	4.42	CLAY	CH	.66	2	.414	13.5			
16.80	3.70	.29	7.73	ORGANIC MATERIAL	OL-OH	.50	1	.236	13.5			
17.00	8.24	.77	9.37	ORGANIC MATERIAL	OL-OH	.51	3	.573	13.5			
17.20	215.88	1.36	.63	SAND	SW-SP	1.12	20			87	43	.50+



RESULT OF CONE PENETRATION TEST

34M

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

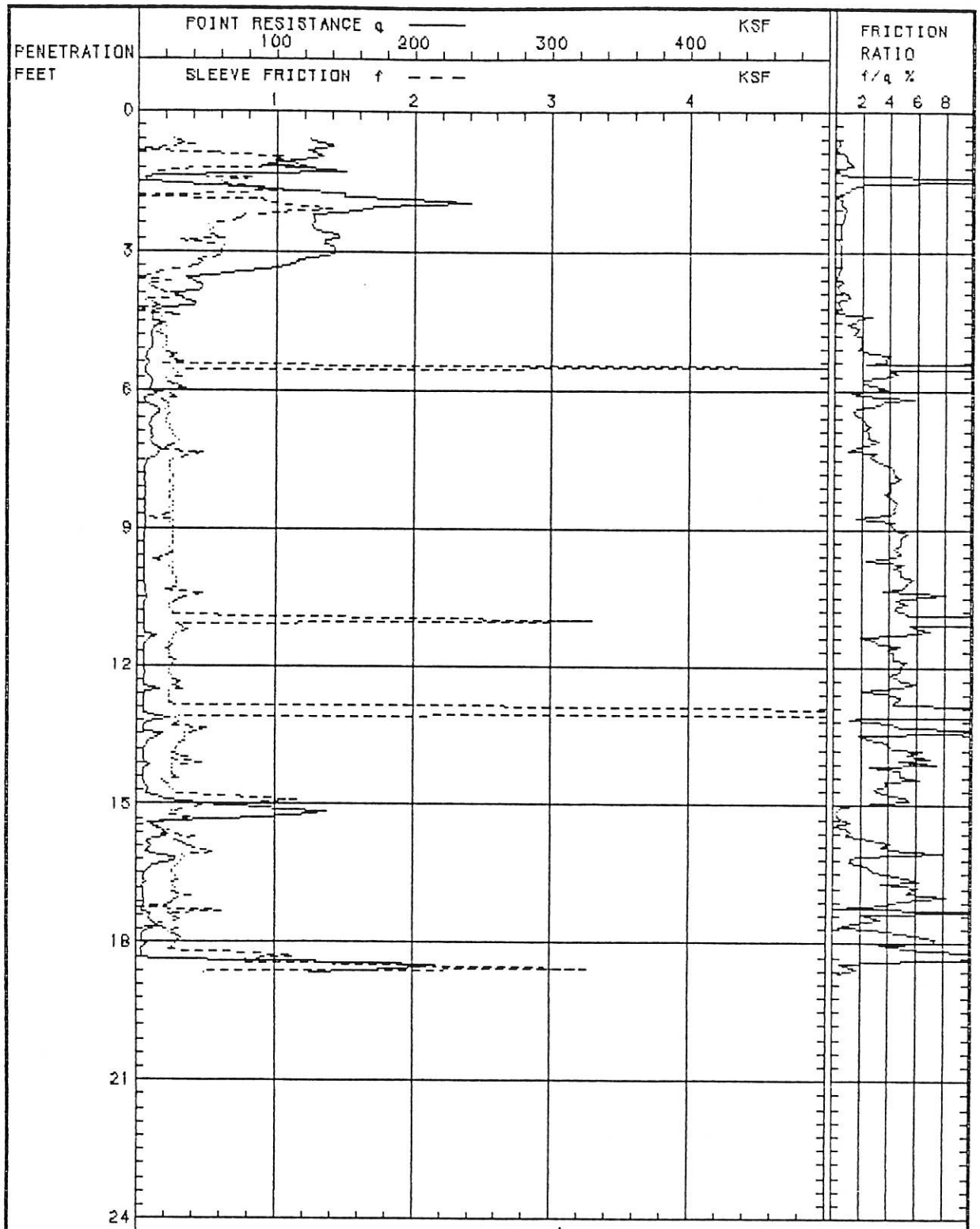
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 34M
CONE NO. : 001
DATE : 05/06/87

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	95.68	1.31	1.37	SILTY SAND TO SANDY SILT	SM-ML	.03	15			100+	42	.50+
.80	143.83	.57	.40	SAND TO SILTY SAND	SM-SP	.05	17			100+	42	.50+
1.00	143.28	.47	.33	SAND TO SILTY SAND	SM-SP	.06	17			100+	42	.50+
1.20	129.38	.91	.70	SAND TO SILTY SAND	SM-SP	.07	15			100+	42	.50+
1.40	108.48	.27	.25	SAND TO SILTY SAND	SM-SP	.08	12			100+	42	.50+
1.60	47.67	.25	.52	SILTY SAND TO SANDY SILT	SM-ML	.09	7			78	39	.50+
1.80	82.89	.34	.41	SAND TO SILTY SAND	SM-SP	.11	9			100+	42	.50+
2.00	102.81	.62	.60	SAND TO SILTY SAND	SM-SP	.12	12			100+	42	.50+
2.20	144.59	.49	.34	SAND TO SILTY SAND	SM-SP	.13	17			100+	42	.50+
2.40	139.72	.71	.51	SAND TO SILTY SAND	SM-SP	.14	16			100+	42	.50+
2.60	139.71	.71	.51	SAND TO SILTY SAND	SM-SP	.16	16			100+	42	.50+
2.80	198.99	.82	.41	SAND	SW-SP	.18	19			100+	44	.50+
3.00	172.22	.67	.39	SAND TO SILTY SAND	SM-SP	.18	20			100+	42	.50+
3.20	113.22	.70	.62	SAND TO SILTY SAND	SM-SP	.19	13			100+	42	.50+
3.40	73.79	.12	.16	SAND TO SILTY SAND	SM-SP	.20	8			84	41	.50+
3.60	50.36	.13	.26	SILTY SAND TO SANDY SILT	SM-ML	.20	8			72	38	.50+
3.80	51.17	.06	.12	SILTY SAND TO SANDY SILT	SM-ML	.21	8			72	38	.50+
4.00	39.47	.25	.63	SANDY SILT TO CLAYEY SILT	ML-MH	.20	7	2.909	13.5	66	37	.50+
4.20	29.52	.11	.36	SANDY SILT TO CLAYEY SILT	ML-MH	.21	5	2.171	13.5	60	36	.23
4.40	28.41	.08	.29	SANDY SILT TO CLAYEY SILT	ML-MH	.22	5	2.088	13.5	58	36	.21
4.60	31.73	.03	.09	SANDY SILT TO CLAYEY SILT	ML-MH	.23	6	2.333	13.5	60	37	.23
4.80	26.45	.14	.55	SANDY SILT TO CLAYEY SILT	ML-MH	.24	5	1.942	13.5	55	36	.19
5.00	16.51	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.15	3	1.212	13.5			
5.20	8.24	.01	.13	SENSITIVE FINE GRAINED	OL-CH	.16	1	.599	13.5			
5.40	6.40	.02	.33	SENSITIVE FINE GRAINED	OL-CH	.16	1	.462	13.5			
5.60	5.90	.05	.83	SENSITIVE FINE GRAINED	OL-CH	.17	1	.423	13.5			
5.80	5.90	.04	.72	SENSITIVE FINE GRAINED	OL-CH	.17	1	.424	13.5			
6.00	5.90	.05	.92	SENSITIVE FINE GRAINED	OL-CH	.18	1	.424	13.5			
6.20	7.12	.04	.58	SENSITIVE FINE GRAINED	OL-CH	.19	1	.514	13.5			
6.40	7.87	.17	2.12	CLAY	CH	.26	3	.564	13.5			
6.60	9.86	.05	.46	SENSITIVE FINE GRAINED	OL-CH	.20	2	.715	13.5			
6.80	8.36	2.07	24.76	ORGANIC MATERIAL	OL-OH	.20	4	.604	13.5			
7.00	8.42	.60	7.10	CLAY	CH	.28	4	.603	13.5			
7.20	8.24	.09	1.13	SENSITIVE FINE GRAINED	OL-CH	.22	1	.594	13.5			
7.40	11.08	.10	.87	SENSITIVE FINE GRAINED	OL-CH	.22	2	.804	13.5			
7.60	8.49	.08	.95	SENSITIVE FINE GRAINED	OL-CH	.23	2	.612	13.5			
7.80	6.27	.09	1.36	SENSITIVE FINE GRAINED	OL-CH	.23	1	.447	13.5			
8.00	5.66	.08	1.41	SENSITIVE FINE GRAINED	OL-CH	.24	1	.401	13.5			
8.20	5.41	.09	1.69	SENSITIVE FINE GRAINED	OL-CH	.25	1	.393	13.5			
8.40	5.41	.09	1.69	SENSITIVE FINE GRAINED	OL-CH	.25	1	.382	13.5			
8.60	5.41	.17	3.06	CLAY	CH	.34	2	.375	13.5			
8.80	5.41	.10	1.91	SENSITIVE FINE GRAINED	OL-CH	.26	1	.381	13.5			
9.00	5.41	.07	1.27	SENSITIVE FINE GRAINED	OL-CH	.27	1	.361	13.5			
9.20	5.41	.13	2.48	CLAY	CH	.37	2	.374	13.5			
9.40	4.67	.12	2.48	CLAY	CH	.38	2	.318	13.5			

9.60	5.16	.13	2.48	CLAY	CH	.38	2	.354	13.5			
9.80	5.41	.14	2.57	CLAY	CH	.39	2	.372	13.5			
10.00	5.41	.11	1.95	SENSITIVE FINE GRAINED	OL-CH	.30	1	.379	13.5			
10.20	4.92	.12	2.35	CLAY	CH	.41	2	.334	13.5			
10.40	5.17	.14	2.73	CLAY	CH	.42	2	.352	13.5			
10.60	5.29	.12	2.19	SENSITIVE FINE GRAINED	OL-CH	.32	1	.368	13.5			
10.80	5.41	.10	1.92	SENSITIVE FINE GRAINED	OL-CH	.32	1	.377	13.5			
11.00	5.04	.12	2.40	CLAY	CH	.44	2	.341	13.5			
11.20	6.89	.24	3.47	CLAY	CH	.45	3	.477	13.5			
11.40	4.92	.16	3.34	CLAY	CH	.46	2	.331	13.5			
11.60	5.04	.13	2.66	CLAY	CH	.46	2	.339	13.5			
11.80	4.92	.15	3.09	CLAY	CH	.47	2	.329	13.5			
12.00	4.92	.14	2.84	CLAY	CH	.48	2	.329	13.5			
12.20	5.41	.15	2.80	CLAY	CH	.49	2	.365	13.5			
12.40	5.42	.16	3.03	CLAY	CH	.50	2	.365	13.5			
12.60	4.67	.15	3.25	CLAY	CH	.50	2	.309	13.5			
12.80	7.09	.14	1.93	SENSITIVE FINE GRAINED	OL-CH	.38	1	.497	13.5			
13.00	9.44	.14	1.49	SENSITIVE FINE GRAINED	OL-CH	.39	2	.670	13.5			
13.20	4.18	.15	3.65	CLAY	CH	.53	2	.270	13.5			
13.40	4.92	.13	2.66	CLAY	CH	.54	2	.325	13.5			
13.60	18.20	.17	.91	CLAYEY SILT TO SILTY CLAY	MH-CL	.61	4	1.303	13.5			
13.80	5.30	.14	2.64	CLAY	CH	.55	2	.351	13.5			
14.00	6.13	.18	2.88	CLAY	CH	.56	2	.413	13.5			
14.20	4.67	.15	3.25	CLAY	CH	.57	2	.304	13.5			
14.40	4.43	.55	12.49	ORGANIC MATERIAL	OL-OH	.43	2	.296	13.5			
14.60	65.94	.27	.42	SILTY SAND TO SANDY SILT	SM-ML	.80	10			36	36	.20
14.80	79.70	.30	.37	SAND TO SILTY SAND	SM-SP	.89	9			40	38	.23
15.00	56.49	.09	.15	SILTY SAND TO SANDY SILT	SM-ML	.82	9			50	35	.17
15.20	30.50	.23	.76	SANDY SILT TO CLAYEY SILT	ML-MH	.76	5	2.203	13.5	32	33	.13
15.40	7.58	.20	2.58	CLAY	CH	.62	3	.516	13.5			
15.60	10.20	.32	3.12	CLAY	CH	.62	4	.709	13.5			
15.80	11.37	.52	4.56	CLAY	CH	.63	5	.795	13.5			
16.00	21.66	.15	.67	SANDY SILT TO CLAYEY SILT	ML-MH	.80	4	1.345	13.5	20	31	.11
16.20	4.68	.15	3.26	CLAY	CH	.65	2	.299	13.5			
16.40	6.58	.20	3.04	CLAY	CH	.66	3	.439	13.5			
16.60	7.13	.19	2.69	CLAY	CH	.66	3	.479	13.5			
16.80	8.35	.10	1.16	SENSITIVE FINE GRAINED	OL-CH	.50	1	.581	13.5			
17.00	7.78	.46	5.89	CLAY	CH	.68	3	.526	13.5			
17.20	28.99	.38	1.32	SANDY SILT TO CLAYEY SILT	ML-MH	.86	5	2.084	13.5	27	37	.12
17.40	7.56	.15	2.02	CLAY	CH	.70	3	.508	13.5			
17.60	7.43	.13	1.76	SENSITIVE FINE GRAINED	OL-CH	.53	1	.511	13.5			
17.80	3.94	.14	3.62	CLAY	CH	.71	1	.239	13.5			
18.00	18.20	.22	1.21	CLAYEY SILT TO SILTY CLAY	MH-CL	.81	4	1.288	13.5			
18.20	7.41	.20	2.69	CLAY	CH	.73	3	.495	13.5			
18.40	4.67	.98	21.11	ORGANIC MATERIAL	OL-OH	.55	2	.305	13.5			
18.60	82.64	.17	.21	SAND TO SILTY SAND	SM-SP	1.12	9			55	37	.20
18.80	59.09	.46	.78	SILTY SAND TO SANDY SILT	SM-ML	1.03	9			43	34	.16
19.00	48.13	.19	.39	SILTY SAND TO SANDY SILT	SM-ML	1.04	7			39	34	.14
19.20	29.52	.42	1.44	SANDY SILT TO CLAYEY SILT	ML-MH	.96	5	2.115	13.5	23	32	.12
19.40	26.39	.16	.60	SANDY SILT TO CLAYEY SILT	ML-MH	.97	5	1.883	13.5	22	31	.12
19.60	5.19	.12	2.35	CLAY	CH	.78	2	.326	13.5			
19.80	8.29	.16	1.94	CLAY	CH	.79	3	.556	13.5			
20.00	7.15	.20	2.81	CLAY	CH	.80	3	.471	13.5			
20.20	6.34	.17	2.61	CLAY	CH	.81	3	.419	13.5			
20.40	4.90	.28	5.75	ORGANIC MATERIAL	OL-OH	.61	2	.318	13.5			
20.60	8.85	.26	2.92	CLAY	CH	.82	4	.595	13.5			
20.80	5.65	.15	2.69	CLAY	CH	.83	2	.357	13.5			
21.00	5.44	.16	3.02	CLAY	CH	.84	2	.341	13.5			
21.20	4.29	.16	3.82	CLAY	CH	.85	2	.255	13.5			
21.40	4.43	.17	3.73	CLAY	CH	.86	2	.265	13.5			

21.60	6.32	.06	.88	SENSITIVE FINE GRAINED	OL-CH	.65	1	.420	13.5			
21.80	6.40	.23	3.59	CLAY	CH	.87	3	.409	13.5			
22.00	9.81	1.24	12.65	ORGANIC MATERIAL	OL-OH	.66	4	.678	13.5			
22.20	139.40	.34	.25	SAND TO SILTY SAND	SM-SP	1.33	16			68	39	.42
22.40	72.70	.40	.56	SILTY SAND TO SANDY SILT	SM-ML	1.23	11			48	35	.17
22.60	5.19	.39	7.60	ORGANIC MATERIAL	OL-OH	.68	2	.334	13.5			



RESULT OF CONE PENETRATION TEST

34S

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

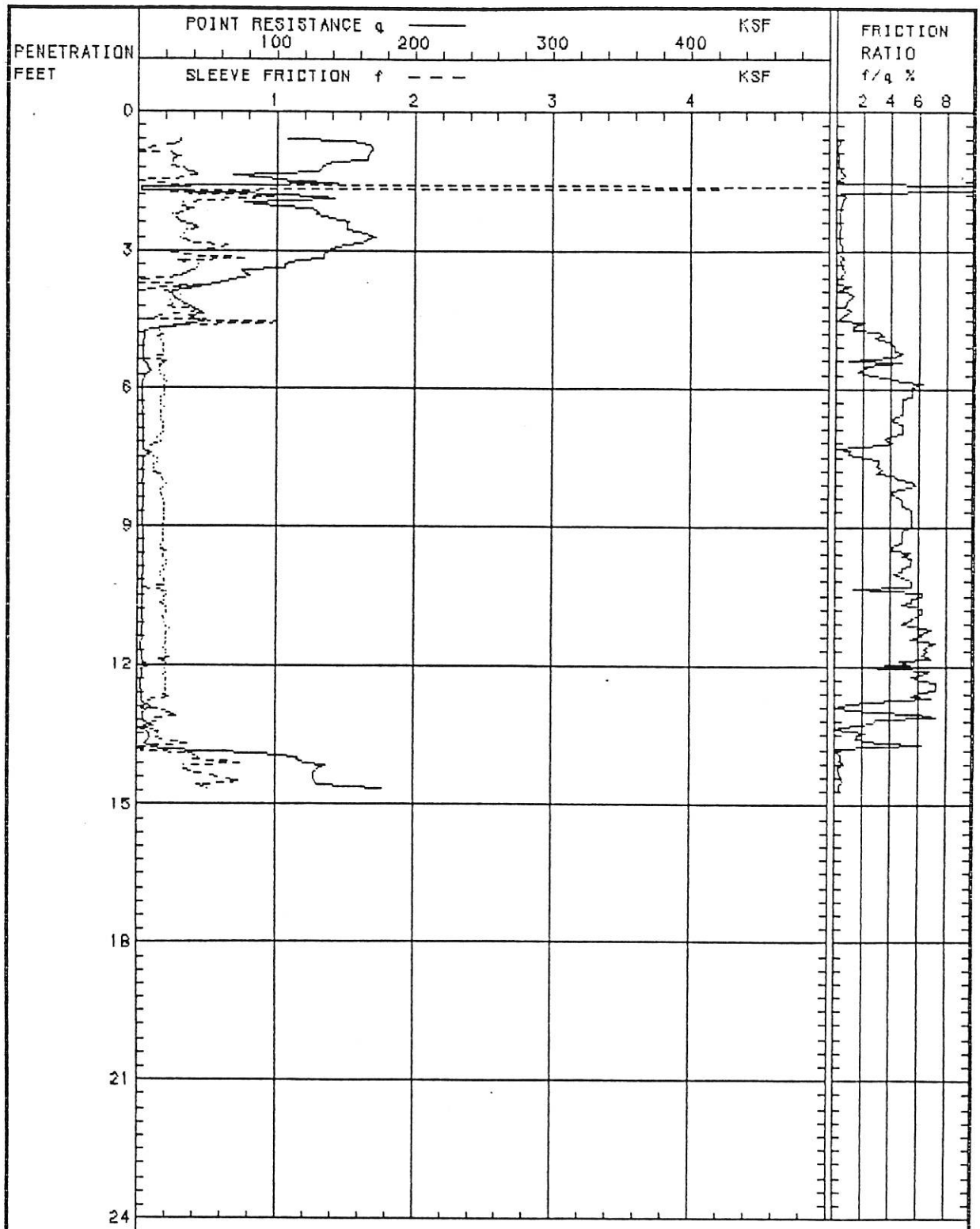
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 34S
CONE NO. : 001
DATE : 05/06/87

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	124.71	.27	.22	SAND TO SILTY SAND	SM-SP	.04	14			100+	42	.50+
.80	131.84	.54	.41	SAND TO SILTY SAND	SM-SP	.05	15			100+	42	.50+
1.00	125.94	1.02	.81	SAND TO SILTY SAND	SM-SP	.06	15			100+	42	.50+
1.20	105.38	.54	.51	SAND TO SILTY SAND	SM-SP	.07	12			100+	42	.50+
1.40	10.34	.49	4.74	CLAY	CH	.06	4	.762	13.5			
1.60	52.35	.74	1.41	SANDY SILT TO CLAYEY SILT	ML-MH	.08	10	3.872	13.5	82	40	.50+
1.80	149.55	.66	.44	SAND TO SILTY SAND	SM-SP	.11	17			100+	42	.50+
2.00	207.18	1.45	.70	SAND TO SILTY SAND	SM-SP	.12	24			100+	42	.50+
2.20	136.78	.93	.68	SAND TO SILTY SAND	SM-SP	.13	16			100+	42	.50+
2.40	126.43	.55	.44	SAND TO SILTY SAND	SM-SP	.14	15			100+	42	.50+
2.60	136.73	.53	.38	SAND TO SILTY SAND	SM-SP	.16	16			100+	42	.50+
2.80	135.04	.40	.30	SAND TO SILTY SAND	SM-SP	.17	16			100+	42	.50+
3.00	142.17	.60	.42	SAND TO SILTY SAND	SM-SP	.18	17			100+	42	.50+
3.20	116.10	.45	.39	SAND TO SILTY SAND	SM-SP	.19	13			100+	42	.50+
3.40	83.91	.21	.25	SAND TO SILTY SAND	SM-SP	.20	10			90	41	.50+
3.60	38.23	.02	.05	SILTY SAND TO SANDY SILT	SM-ML	.20	6			65	37	.48
3.80	45.51	.14	.32	SILTY SAND TO SANDY SILT	SM-ML	.21	7			69	38	.50+
4.00	33.68	.10	.31	SANDY SILT TO CLAYEY SILT	ML-MH	.20	6	2.480	13.5	63	37	.32
4.20	30.32	.18	.61	SANDY SILT TO CLAYEY SILT	ML-MH	.21	5	2.230	13.5	60	37	.24
4.40	10.95	.13	1.19	SENSITIVE FINE GRAINED	OL-CH	.13	2	.891	13.5			
4.60	16.01	.20	1.22	CLAYEY SILT TO SILTY CLAY	MH-CL	.21	3	1.171	13.5			
4.80	10.45	.14	1.35	SENSITIVE FINE GRAINED	OL-CH	.14	2	.761	13.5			
5.00	10.94	.20	1.84	SILTY CLAY TO CLAY	CL-CH	.20	3	.776	13.5			
5.20	7.38	.25	3.33	CLAY	CH	.21	3	.531	13.5			
5.40	8.61	.26	3.02	CLAY	CH	.22	4	.622	13.5			
5.60	6.40	.25	3.87	CLAY	CH	.22	3	.457	13.5			
5.80	10.82	.22	2.05	SILTY CLAY TO CLAY	CL-CH	.23	3	.784	13.5			
6.00	10.38	.20	1.92	SILTY CLAY TO CLAY	CL-CH	.24	3	.751	13.5			
6.20	4.92	.23	4.72	CLAY	CH	.25	2	.346	13.5			
6.40	14.50	.22	1.49	CLAYEY SILT TO SILTY CLAY	MH-CL	.29	3	1.053	13.5			
6.60	11.33	.25	2.17	SILTY CLAY TO CLAY	CL-CH	.26	3	.820	13.5			
6.80	9.83	.23	2.36	CLAY	CH	.27	4	.708	13.5			
7.00	11.06	.27	2.46	SILTY CLAY TO CLAY	CL-CH	.28	3	.799	13.5			
7.20	12.29	.24	1.93	SILTY CLAY TO CLAY	CL-CH	.29	3	.889	13.5			
7.40	14.76	.37	2.50	SILTY CLAY TO CLAY	CL-CH	.30	4	1.072	13.5			
7.60	6.52	.24	3.71	CLAY	CH	.30	3	.461	13.5			
7.80	5.65	.25	4.39	CLAY	CH	.31	2	.396	13.5			
8.00	5.65	.24	4.16	CLAY	CH	.32	2	.395	13.5			
8.20	6.40	.25	3.88	CLAY	CH	.33	3	.449	13.5			
8.40	5.53	.24	4.36	CLAY	CH	.34	2	.385	13.5			
8.60	5.65	.25	4.38	CLAY	CH	.34	2	.393	13.5			
8.80	5.90	.17	2.95	CLAY	CH	.35	2	.411	13.5			
9.00	5.90	.26	4.41	CLAY	CH	.36	2	.411	13.5			
9.20	5.41	.33	6.18	ORGANIC MATERIAL	OL-OH	.28	2	.390	13.5			
9.40	5.41	.25	4.59	CLAY	CH	.38	2	.373	13.5			

9.60	5.17	.26	5.06	CLAY	CH	.38	2	.354	13.5			
9.80	5.29	.21	3.89	CLAY	CH	.39	2	.363	13.5			
10.00	5.41	.26	4.81	CLAY	CH	.40	2	.371	13.5			
10.20	5.41	.28	5.24	CLAY	CH	.41	2	.371	13.5			
10.40	5.90	.34	5.78	CLAY	CH	.42	2	.406	13.5			
10.60	5.92	.38	6.49	ORGANIC MATERIAL	OL-OH	.32	2	.415	13.5			
10.80	5.17	.25	4.80	CLAY	CH	.43	2	.351	13.5			
11.00	4.92	1.74	35.40	ORGANIC MATERIAL	OL-OH	.33	2	.340	13.5			
11.20	5.41	.35	6.50	ORGANIC MATERIAL	OL-OH	.34	2	.376	13.5			
11.40	11.61	.26	2.26	SILTY CLAY TO CLAY	CL-CH	.46	3	.826	13.5			
11.60	5.41	.24	4.37	CLAY	CH	.46	2	.366	13.5			
11.80	5.41	.24	4.36	CLAY	CH	.47	2	.366	13.5			
12.00	5.41	.26	4.81	CLAY	CH	.48	2	.365	13.5			
12.20	5.66	.25	4.41	CLAY	CH	.49	2	.383	13.5			
12.40	5.41	.26	4.79	CLAY	CH	.50	2	.364	13.5			
12.60	5.67	.24	4.16	CLAY	CH	.50	2	.383	13.5			
12.80	5.41	.24	4.36	CLAY	CH	.51	2	.363	13.5			
13.00	5.41	6.90	127.58	ORGANIC MATERIAL	OL-OH	.39	2	.372	13.5			
13.20	15.90	.30	1.86	CLAYEY SILT TO SILTY CLAY	MH-CL	.59	3	1.134	13.5			
13.40	4.92	.37	7.44	ORGANIC MATERIAL	OL-OH	.40	2	.335	13.5			
13.60	11.61	.35	3.05	CLAY	CH	.54	5	.820	13.5			
13.80	5.68	.25	4.37	CLAY	CH	.55	2	.390	13.5			
14.00	5.41	.32	5.90	CLAY	CH	.56	2	.359	13.5			
14.20	7.67	.26	3.39	CLAY	CH	.57	3	.526	13.5			
14.40	5.17	.28	5.48	CLAY	CH	.58	2	.340	13.5			
14.60	7.11	.32	4.48	CLAY	CH	.58	3	.483	13.5			
14.80	10.56	.48	4.53	CLAY	CH	.59	5	.739	13.5			
15.00	60.34	.65	1.08	SILTY SAND TO SANDY SILT	SM-ML	.82	9			52	35	.19
15.20	125.96	.25	.20	SAND TO SILTY SAND	SM-SP	.91	15			74	39	.50+
15.40	15.35	.25	1.65	CLAYEY SILT TO SILTY CLAY	MH-CL	.69	3	1.086	13.5			
15.60	20.53	.29	1.41	CLAYEY SILT TO SILTY CLAY	MH-CL	.70	4	1.469	13.5			
15.80	8.12	.25	3.06	CLAY	CH	.63	3	.555	13.5			
16.00	7.89	.51	6.44	CLAY	CH	.64	3	.537	13.5			
16.20	28.05	.34	1.21	SANDY SILT TO CLAYEY SILT	ML-MH	.81	5	2.018	13.5	27	32	.12
16.40	9.86	.28	2.81	CLAY	CH	.66	4	.682	13.5			
16.60	5.17	.30	5.71	CLAY	CH	.66	2	.334	13.5			
16.80	4.67	.34	7.19	ORGANIC MATERIAL	OL-OH	.50	2	.308	13.5			
17.00	4.92	.36	7.25	ORGANIC MATERIAL	OL-OH	.51	2	.327	13.5			
17.20	5.44	.13	2.46	CLAY	CH	.69	2	.352	13.5			
17.40	10.36	.29	2.82	CLAY	CH	.70	4	.716	13.5			
17.60	14.47	.13	.92	SENSITIVE FINE GRAINED	OL-CH	.53	3	1.033	13.5			
17.80	4.68	.25	5.32	CLAY	CH	.71	2	.294	13.5			
18.00	6.09	.29	4.68	CLAY	CH	.72	2	.398	13.5			
18.20	3.68	.45	12.31	ORGANIC MATERIAL	OL-OH	.55	1	.232	13.5			
18.40	88.65	.79	.90	SILTY SAND TO SANDY SILT	SM-ML	1.01	14			61	37	.23
18.60	159.06	1.92	1.21	SAND TO SILTY SAND	SM-SP	1.12	19			77	40	.50+



RESULT OF CONE PENETRATION TEST

35N

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

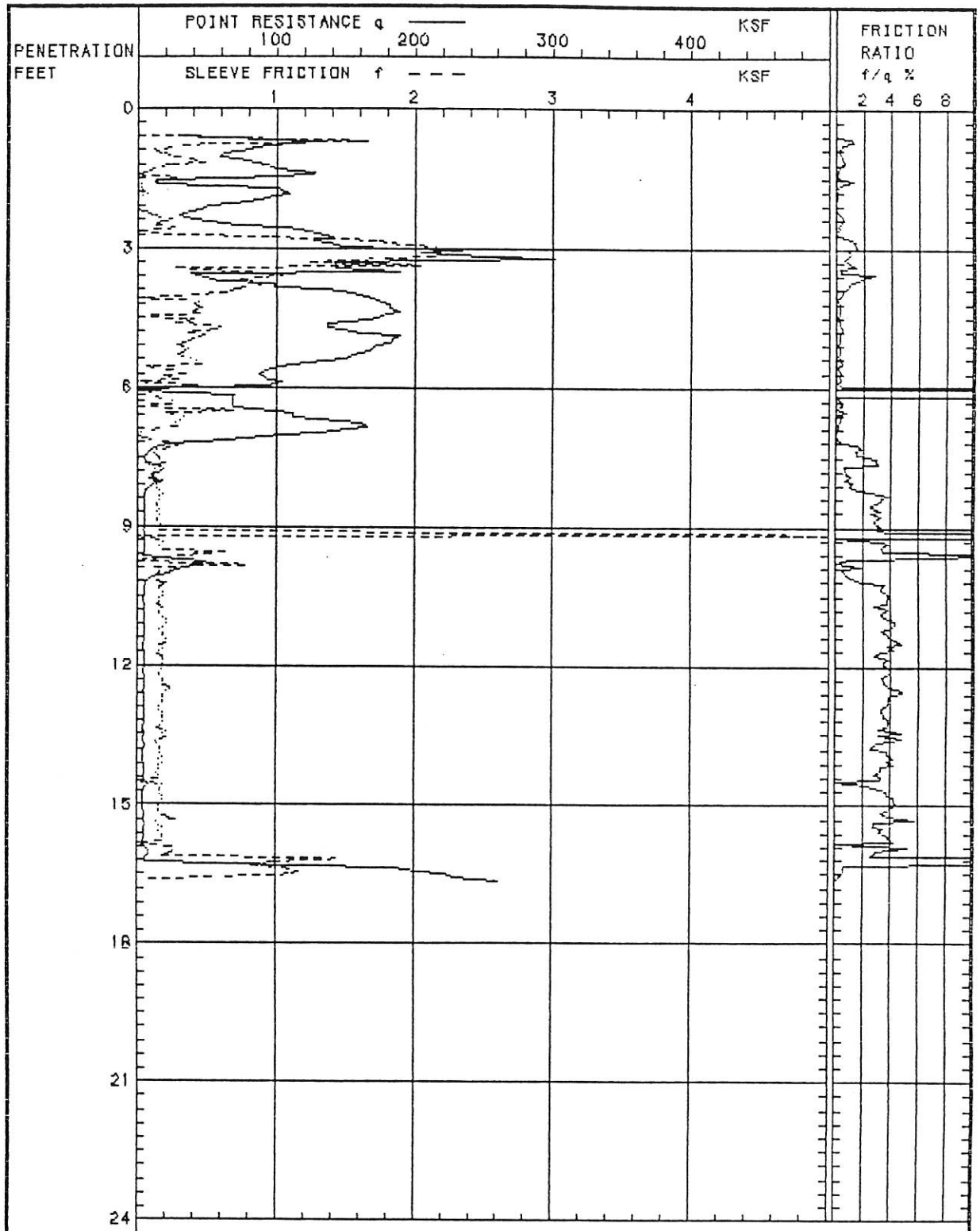
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 35N
CONE NO. : 001
DATE : 05/06/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UNF. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	131.10	.31	.24	SAND TO SILTY SAND	SM-SP	.04	15			100+	42	.50+
.80	169.23	.00	.00	SAND	SW-SP	.05	16			100-	44	.50+
1.00	166.27	.21	.12	SAND	SW-SP	.06	15			100+	41	.50+
1.20	133.68	.27	.20	SAND TO SILTY SAND	SM-SP	.07	16			100+	42	.50+
1.40	79.74	.27	.34	SAND TO SILTY SAND	SM-SP	.08	9			100+	42	.50+
1.60	73.91	2.90	3.92	CLAYEY SILT TO SILTY CLAY	MH-CL	.07	17	5.469	13.5			
1.80	100.54	.22	.22	SAND TO SILTY SAND	SM-SP	.11	12			100+	42	.50+
2.00	89.14	.79	.88	SILTY SAND TO SANDY SILT	SM-ML	.11	14			100+	42	.50+
2.20	129.50	.40	.31	SAND TO SILTY SAND	SM-SP	.13	15			100+	42	.50+
2.40	151.76	.33	.22	SAND TO SILTY SAND	SM-SP	.14	18			100+	42	.50+
2.60	157.89	.23	.15	SAND	SW-SP	.17	15			100+	41	.50+
2.80	164.31	.38	.23	SAND	SW-SP	.18	15			100+	44	.50+
3.00	138.24	.40	.29	SAND TO SILTY SAND	SM-SP	.18	16			100+	42	.50+
3.20	124.99	.53	.43	SAND TO SILTY SAND	SM-SP	.19	14			100+	42	.50+
3.40	90.83	.43	.47	SAND TO SILTY SAND	SM-SP	.20	10			93	42	.50+
3.60	74.80	.22	.29	SILTY SAND TO SANDY SILT	SM-ML	.20	11			85	40	.50+
3.80	42.34	.29	.69	SANDY SILT TO CLAYEY SILT	ML-MH	.19	8	3.122	13.5	68	38	.50+
4.00	26.31	.29	1.11	SANDY SILT TO CLAYEY SILT	ML-MH	.20	5	1.934	13.5	58	35	.21
4.20	35.90	.22	.63	SANDY SILT TO CLAYEY SILT	ML-MH	.21	6	2.644	13.5	63	37	.35
4.40	42.22	.51	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	.22	8	3.111	13.5	66	37	.50+
4.60	38.92	.69	1.78	SANDY SILT TO CLAYEY SILT	ML-MH	.23	7	2.966	13.5	64	37	.36
4.80	5.41	.17	3.09	CLAY	CH	.19	2	.387	13.5			
5.00	4.43	.18	3.99	CLAY	CH	.20	2	.313	13.5			
5.20	4.18	.20	4.81	CLAY	CH	.21	2	.294	13.5			
5.40	4.43	.20	4.62	CLAY	CH	.22	2	.312	13.5			
5.60	8.84	.20	2.27	CLAY	CH	.22	4	.638	13.5			
5.80	4.56	.18	4.02	CLAY	CH	.23	2	.320	13.5			
6.00	3.44	.19	5.50	ORGANIC MATERIAL	OL-OH	.18	1	.242	13.5			
6.20	3.44	.18	5.33	ORGANIC MATERIAL	OL-OH	.19	1	.241	13.5			
6.40	3.69	.18	4.81	ORGANIC MATERIAL	OL-OH	.19	1	.259	13.5			
6.60	3.69	.20	5.50	ORGANIC MATERIAL	OL-OH	.20	1	.258	13.5			
6.80	3.94	.19	4.80	CLAY	CH	.27	1	.271	13.5			
7.00	3.94	.14	3.62	CLAY	CH	.28	1	.271	13.5			
7.20	3.94	.14	3.58	CLAY	CH	.29	1	.270	13.5			
7.40	6.86	.07	.99	SENSITIVE FINE GRAINED	OL-CH	.22	1	.491	13.5			
7.60	4.43	.14	3.19	CLAY	CH	.30	2	.305	13.5			
7.80	3.69	.12	3.17	CLAY	CH	.31	1	.250	13.5			
8.00	3.69	.19	5.17	ORGANIC MATERIAL	OL-OH	.24	1	.256	13.5			
8.20	3.94	.18	4.50	CLAY	CH	.33	1	.267	13.5			
8.40	3.94	.19	4.85	CLAY	CH	.34	1	.267	13.5			
8.60	3.69	.19	5.13	ORGANIC MATERIAL	OL-OH	.26	1	.254	13.5			
8.80	3.44	.19	5.50	ORGANIC MATERIAL	OL-OH	.26	1	.236	13.5			
9.00	3.44	.19	5.49	ORGANIC MATERIAL	OL-OH	.27	1	.235	13.5			
9.20	3.94	.19	4.80	CLAY	CH	.37	1	.264	13.5			
9.40	3.94	.18	4.50	CLAY	CH	.38	1	.264	13.5			

9.60	3.94	.20	5.12	ORGANIC MATERIAL	OL-OH	.29	1	.270	13.5			
9.80	3.94	.21	5.42	ORGANIC MATERIAL	OL-OH	.29	1	.270	13.5			
10.00	3.94	.18	4.51	CLAY	CH	.40	1	.262	13.5			
10.20	3.44	.19	5.50	ORGANIC MATERIAL	OL-OH	.31	1	.232	13.5			
10.40	3.44	.13	3.72	CLAY	CH	.42	1	.224	13.5			
10.60	3.44	.19	5.50	ORGANIC MATERIAL	OL-OH	.32	1	.232	13.5			
10.80	3.44	.20	5.90	ORGANIC MATERIAL	OL-OH	.32	1	.231	13.5			
11.00	3.44	.20	5.68	ORGANIC MATERIAL	OL-OH	.33	1	.231	13.5			
11.20	3.44	.21	6.24	ORGANIC MATERIAL	OL-OH	.34	1	.230	13.5			
11.40	3.69	.21	5.81	ORGANIC MATERIAL	OL-OH	.34	1	.248	13.5			
11.60	2.95	.15	5.21	ORGANIC MATERIAL	OL-OH	.35	1	.193	13.5			
11.80	3.44	.23	6.54	ORGANIC MATERIAL	OL-OH	.35	1	.229	13.5			
12.00	7.08	.20	2.85	CLAY	CH	.48	3	.489	13.5			
12.20	3.44	.21	6.21	ORGANIC MATERIAL	OL-OH	.37	1	.228	13.5			
12.40	2.95	.21	7.24	ORGANIC MATERIAL	OL-OH	.37	1	.191	13.5			
12.60	3.44	.22	6.37	ORGANIC MATERIAL	OL-OH	.38	1	.227	13.5			
12.80	3.68	.15	4.05	CLAY	CH	.51	1	.235	13.5			
13.00	5.56	.16	2.87	CLAY	CH	.52	2	.374	13.5			
13.20	4.67	.18	3.79	CLAY	CH	.53	2	.307	13.5			
13.40	6.00	.05	.77	SENSITIVE FINE GRAINED	OL-CH	.40	1	.415	13.5			
13.60	8.50	.20	2.30	CLAY	CH	.54	4	.590	13.5			
13.80	15.06	.09	.62	SENSITIVE FINE GRAINED	OL-CH	.41	3	1.085	13.5			
14.00	116.10	.43	.37	SAND TO SILTY SAND	SM-SP	.84	13			73	39	.50+
14.20	133.88	.34	.26	SAND TO SILTY SAND	SM-SP	.85	16			78	40	.50+
14.40	127.66	.44	.34	SAND TO SILTY SAND	SM-SP	.86	15			76	40	.50+
14.60	153.22	.47	.31	SAND TO SILTY SAND	SM-SP	.88	19			82	40	.50+



RESULT OF CONE PENETRATION TEST

35M

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

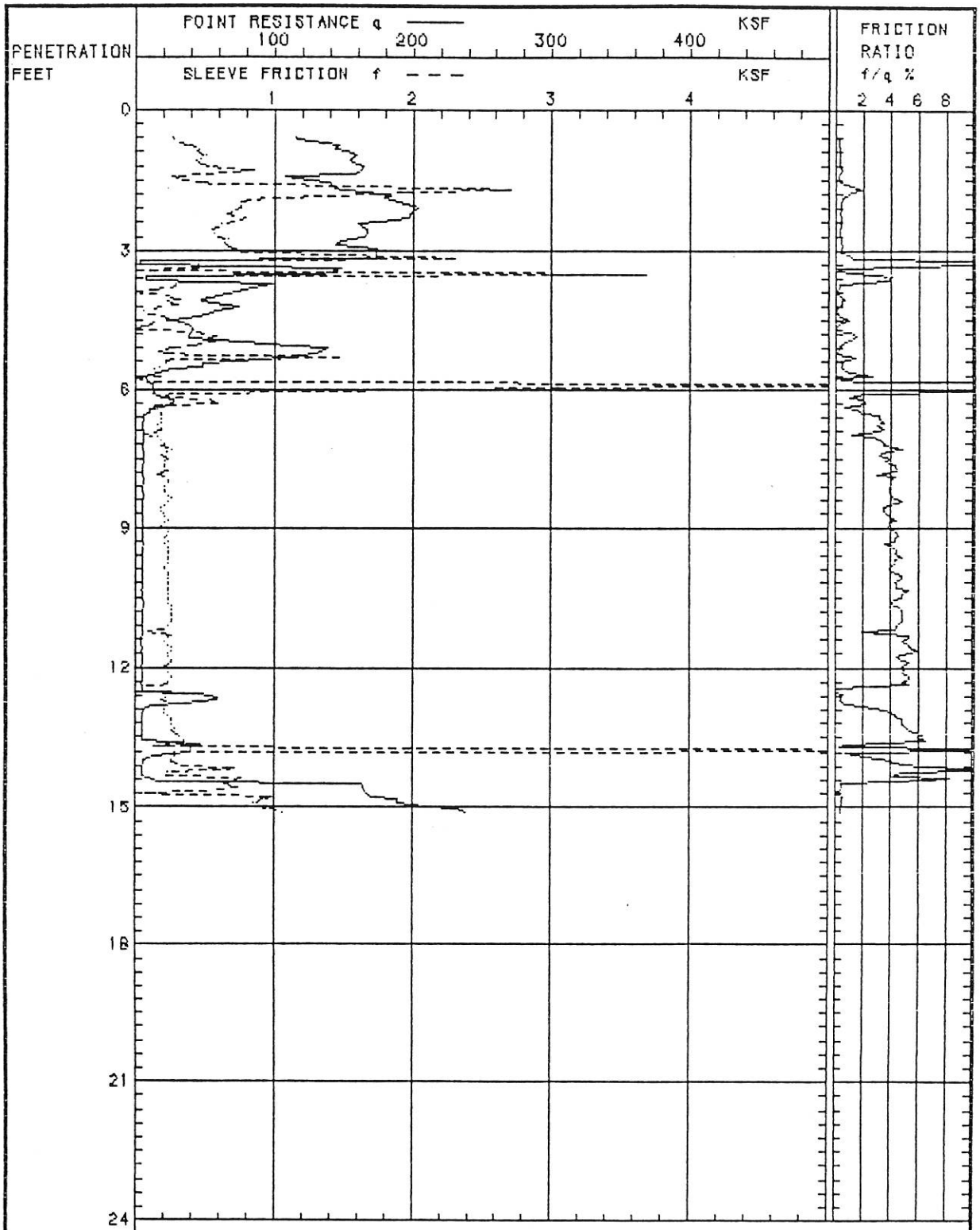
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : D01870206
BORING NO. : 35M
CONE NO. : 001
DATE : 05/06/87

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	45.50	.34	.74	SILTY SAND TO SANDY SILT	SM-ML	.03	7			82	40	.50+
.80	97.16	.43	.44	SAND TO SILTY SAND	SM-SP	.05	11			100+	42	.50+
1.00	60.57	.10	.16	SILTY SAND TO SANDY SILT	SM-ML	.05	9			93	41	.50+
1.20	88.79	.40	.45	SAND TO SILTY SAND	SM-SP	.07	10			100+	42	.50+
1.40	127.41	.00	.00	SAND TO SILTY SAND	SM-SP	.08	15			100+	42	.50+
1.60	13.77	.10	.74	SENSITIVE FINE GRAINED	OL-CH	.05	3	1.017	13.5			
1.80	106.74	.05	.05	SAND TO SILTY SAND	SM-SP	.11	12			100+	42	.50+
2.00	78.73	.00	.00	SAND TO SILTY SAND	SM-SP	.12	9			96	42	.50+
2.20	42.07	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.12	6			72	38	.50+
2.40	46.35	.18	.38	SILTY SAND TO SANDY SILT	SM-ML	.13	7			74	38	.50+
2.60	115.09	.13	.12	SAND TO SILTY SAND	SM-SP	.16	13			100+	42	.50+
2.80	134.20	.74	.55	SAND TO SILTY SAND	SM-SP	.17	16			100+	42	.50+
3.00	191.20	2.16	1.13	SAND TO SILTY SAND	SM-SP	.18	22			100+	42	.50+
3.20	276.86	1.79	.65	SAND	SW-SP	.21	26			100+	44	.50+
3.40	142.54	.52	.37	SAND TO SILTY SAND	SM-SP	.20	17			100+	42	.50+
3.60	43.51	.99	2.27	SANDY SILT TO CLAYEY SILT	ML-MH	.18	8	3.210	13.5	69	38	.50+
3.80	98.39	.85	.86	SILTY SAND TO SANDY SILT	SM-ML	.21	15			97	42	.50+
4.00	159.85	.32	.20	SAND	SW-SP	.26	15			100+	44	.50+
4.20	179.17	.31	.17	SAND	SW-SP	.27	17			100+	44	.50+
4.40	184.99	.43	.23	SAND	SW-SP	.29	17			100+	44	.50+
4.60	152.10	.34	.23	SAND TO SILTY SAND	SM-SP	.29	18			100+	42	.50+
4.80	155.16	.46	.30	SAND TO SILTY SAND	SM-SP	.29	18			100+	42	.50+
5.00	183.00	.21	.12	SAND	SW-SP	.32	17			100+	44	.50+
5.20	168.19	.35	.21	SAND	SW-SP	.34	16			100+	44	.50+
5.40	142.72	.22	.15	SAND TO SILTY SAND	SM-SP	.32	17			100+	42	.50+
5.60	97.81	.13	.13	SAND TO SILTY SAND	SM-SP	.34	11			86	41	.50+
5.80	91.98	.31	.34	SAND TO SILTY SAND	SM-SP	.35	11			83	41	.50+
6.00	47.37	.33	.70	SILTY SAND TO SANDY SILT	SM-ML	.33	7			64	37	.31
6.20	69.37	.04	.06	SAND TO SILTY SAND	SM-SP	.37	8			72	39	.50+
6.40	69.11	.06	.09	SAND TO SILTY SAND	SM-SP	.38	8			72	39	.50+
6.60	112.16	.27	.24	SAND TO SILTY SAND	SM-SP	.40	13			88	41	.50+
6.80	163.79	.28	.17	SAND	SW-SP	.44	15			100+	44	.50+
7.00	118.19	.03	.03	SAND TO SILTY SAND	SM-SP	.42	14			88	41	.50+
7.20	34.32	.25	.74	SANDY SILT TO CLAYEY SILT	ML-MH	.36	6	2.515	13.5	54	36	.18
7.40	8.74	.15	1.66	SENSITIVE FINE GRAINED	OL-CH	.22	2	.631	13.5			
7.60	5.90	.18	3.01	CLAY	CH	.30	2	.414	13.5			
7.80	17.49	.12	.67	SENSITIVE FINE GRAINED	OL-CH	.23	4	1.278	13.5			
8.00	14.01	.17	1.21	SENSITIVE FINE GRAINED	OL-CH	.24	3	1.020	13.5			
8.20	7.64	.15	1.99	CLAY	CH	.33	3	.542	13.5			
8.40	4.92	.16	3.33	CLAY	CH	.34	2	.340	13.5			
8.60	5.17	.15	2.94	CLAY	CH	.34	2	.357	13.5			
8.80	4.92	.15	3.10	CLAY	CH	.35	2	.338	13.5			
9.00	4.92	.15	3.10	CLAY	CH	.36	2	.338	13.5			
9.20	4.92	2.56	52.01	ORGANIC MATERIAL	OL-OH	.28	2	.344	13.5			
9.40	4.92	.18	3.58	CLAY	CH	.38	2	.337	13.5			

9.60	4.68	.49	10.49	ORGANIC MATERIAL	OL-OH	.29	2	.325	13.5			
9.80	45.56	.03	.07	SILTY SAND TO SANDY SILT	SM-ML	.54	7			54	36	.13
10.00	23.12	.16	.69	SANDY SILT TO CLAYEY SILT	ML-MH	.50	4	1.676	13.5	36	33	.13
10.20	6.65	.18	2.64	CLAY	CH	.41	3	.463	13.5			
10.40	4.92	.18	3.58	CLAY	CH	.42	2	.334	13.5			
10.60	4.43	.16	3.71	CLAY	CH	.42	2	.297	13.5			
10.80	4.92	.18	3.59	CLAY	CH	.43	2	.332	13.5			
11.00	4.92	.20	4.07	CLAY	CH	.44	2	.332	13.5			
11.20	4.92	.18	3.59	CLAY	CH	.45	2	.331	13.5			
11.40	4.92	.20	4.08	CLAY	CH	.45	2	.331	13.5			
11.60	4.43	.18	3.97	CLAY	CH	.46	2	.294	13.5			
11.80	4.92	.16	3.32	CLAY	CH	.47	2	.329	13.5			
12.00	5.17	.19	3.65	CLAY	CH	.48	2	.347	13.5			
12.20	4.67	.17	3.64	CLAY	CH	.49	2	.310	13.5			
12.40	5.17	.19	3.65	CLAY	CH	.50	2	.346	13.5			
12.60	4.67	.18	3.80	CLAY	CH	.50	2	.309	13.5			
12.80	4.92	.19	3.83	CLAY	CH	.51	2	.326	13.5			
13.00	5.16	.18	3.41	CLAY	CH	.52	2	.344	13.5			
13.20	4.92	.19	3.84	CLAY	CH	.53	2	.325	13.5			
13.40	4.43	.18	3.96	CLAY	CH	.54	2	.289	13.5			
13.60	4.43	.18	3.98	CLAY	CH	.54	2	.288	13.5			
13.80	5.43	.16	3.03	CLAY	CH	.55	2	.361	13.5			
14.00	4.43	.18	3.99	CLAY	CH	.56	2	.286	13.5			
14.20	4.92	.16	3.34	CLAY	CH	.57	2	.322	13.5			
14.40	4.92	.16	3.31	CLAY	CH	.58	2	.322	13.5			
14.60	6.68	.18	2.65	CLAY	CH	.58	3	.451	13.5			
14.80	4.43	.18	3.99	CLAY	CH	.59	2	.284	13.5			
15.00	3.94	.17	4.21	CLAY	CH	.60	1	.247	13.5			
15.20	4.92	.18	3.58	CLAY	CH	.61	2	.319	13.5			
15.40	5.40	.14	2.63	CLAY	CH	.62	2	.354	13.5			
15.60	5.05	.19	3.74	CLAY	CH	.62	2	.327	13.5			
15.80	4.43	.10	2.18	SENSITIVE FINE GRAINED	OL-CH	.47	1	.293	13.5			
16.00	8.85	.19	2.13	CLAY	CH	.64	4	.609	13.5			
16.20	6.14	1.21	19.66	ORGANIC MATERIAL	OL-OH	.49	2	.419	13.5			
16.40	193.85	1.11	.57	SAND TO SILTY SAND	SM-SP	.98	23			86	41	.50+
16.60	244.59	.46	.19	SAND	SW-SP	1.08	23			92	44	.50+



RESULT OF CONE PENETRATION TEST

35S

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

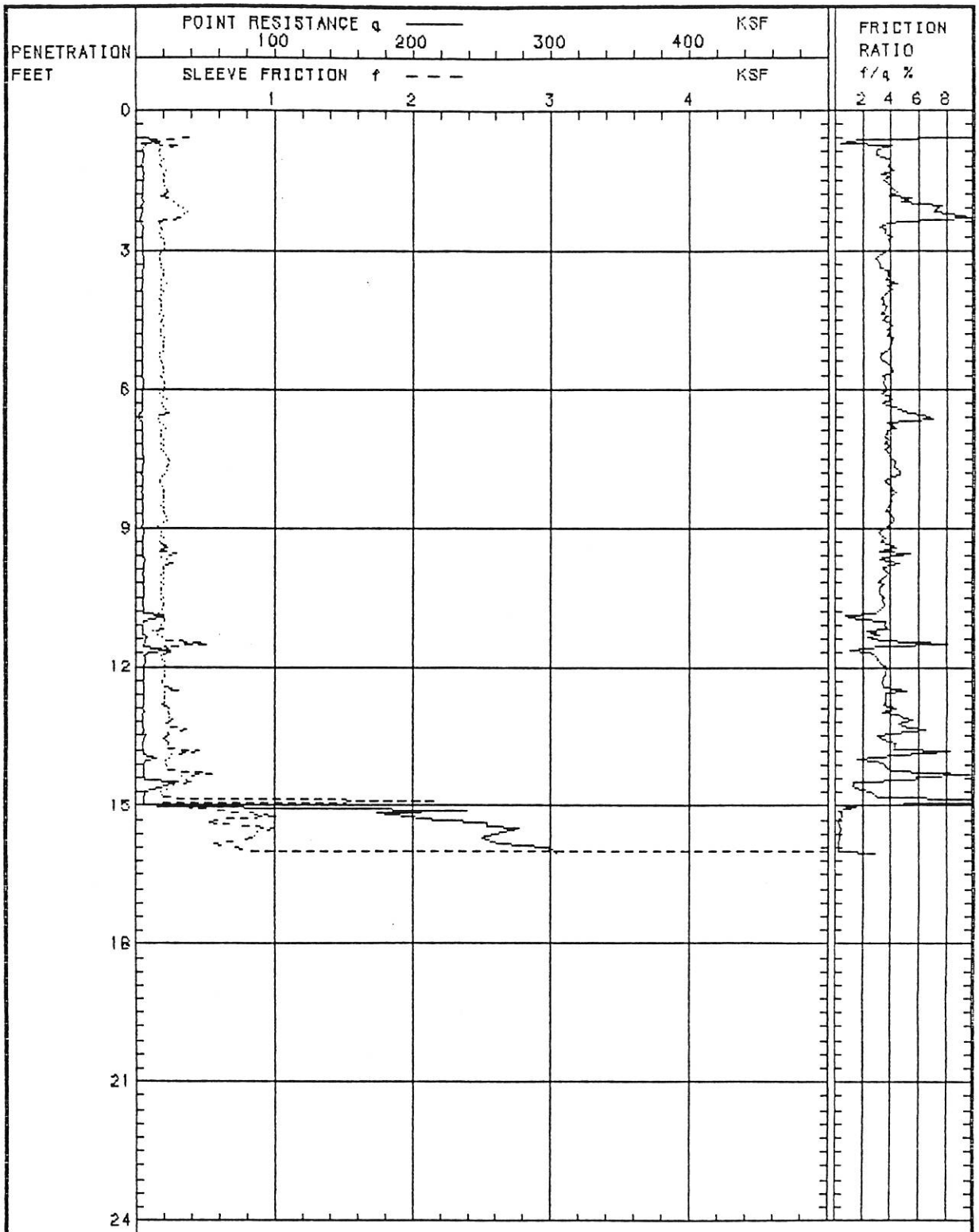
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 35S
CONE NO. : 001
DATE : 05/06/87

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	115.60	.27	.24	SAND TO SILTY SAND	SM-SP	.04	13			100+	42	.50+
.80	145.24	.38	.26	SAND TO SILTY SAND	SM-SP	.05	17			100+	42	.50+
1.00	157.67	.37	.23	SAND TO SILTY SAND	SM-SP	.06	18			100+	42	.50+
1.20	162.27	.55	.34	SAND TO SILTY SAND	SM-SP	.07	19			100+	42	.50+
1.40	132.73	.95	.71	SAND TO SILTY SAND	SM-SP	.08	15			100+	42	.50+
1.60	140.69	.28	.20	SAND TO SILTY SAND	SM-SP	.10	16			100+	42	.50+
1.80	175.60	1.55	.88	SAND TO SILTY SAND	SM-SP	.11	21			100+	42	.50+
2.00	194.98	.33	.17	SAND	SW-SP	.13	18			100+	44	.50+
2.20	199.24	.69	.34	SAND	SW-SP	.14	19			100+	44	.50+
2.40	168.76	.69	.41	SAND TO SILTY SAND	SM-SP	.14	20			100+	42	.50+
2.60	167.01	.36	.21	SAND	SW-SP	.17	15			100+	44	.50+
2.80	150.18	.63	.42	SAND TO SILTY SAND	SM-SP	.17	17			100+	42	.50+
3.00	174.15	.50	.29	SAND	SW-SP	.20	16			100+	44	.50+
3.20	89.14	1.38	1.55	SILTY SAND TO SANDY SILT	SM-ML	.18	14			95	41	.50+
3.40	147.10	.23	.16	SAND TO SILTY SAND	SM-SP	.20	17			100+	42	.50+
3.60	7.38	.29	3.92	CLAY	CH	.14	3	.536	13.5			
3.80	84.89	.15	.18	SAND TO SILTY SAND	SM-SP	.23	10			88	41	.50+
4.00	53.90	.25	.46	SILTY SAND TO SANDY SILT	SM-ML	.22	8			73	38	.50+
4.20	69.58	.26	.37	SILTY SAND TO SANDY SILT	SM-ML	.23	11			80	39	.50+
4.40	48.54	.26	.54	SILTY SAND TO SANDY SILT	SM-ML	.24	7			69	38	.50+
4.60	36.63	.51	1.39	SANDY SILT TO CLAYEY SILT	ML-MH	.23	7	2.696	13.5	63	37	.31
4.80	39.61	.44	1.10	SANDY SILT TO CLAYEY SILT	ML-MH	.24	7	2.916	13.5	64	37	.35
5.00	94.58	1.22	1.29	SILTY SAND TO SANDY SILT	SM-ML	.27	15			89	40	.50+
5.20	131.61	.24	.18	SAND TO SILTY SAND	SM-SP	.31	15			100+	42	.50+
5.40	61.34	.22	.36	SILTY SAND TO SANDY SILT	SM-ML	.30	9			72	38	.50+
5.60	21.68	.15	.69	SANDY SILT TO CLAYEY SILT	ML-MH	.28	4	1.585	13.5	48	35	.15
5.80	7.99	.15	1.83	SENSITIVE FINE GRAINED	OL-CH	.17	1	.579	13.5			
6.00	13.28	.33	2.48	SILTY CLAY TO CLAY	CL-CH	.24	4	.966	13.5			
6.20	23.83	.48	2.03	CLAYEY SILT TO SILTY CLAY	MH-CL	.28	5	1.744	13.5			
6.40	15.29	.15	.98	SENSITIVE FINE GRAINED	OL-CH	.19	3	1.119	13.5			
6.60	5.90	.19	3.18	CLAY	CH	.26	2	.418	13.5			
6.80	5.41	.18	3.24	CLAY	CH	.27	2	.391	13.5			
7.00	5.90	.11	1.94	SENSITIVE FINE GRAINED	OL-CH	.21	1	.422	13.5			
7.20	5.66	.20	3.53	CLAY	CH	.29	2	.398	13.5			
7.40	5.90	.19	3.20	CLAY	CH	.30	2	.415	13.5			
7.60	5.42	.21	3.92	CLAY	CH	.30	2	.379	13.5			
7.80	5.41	.20	3.70	CLAY	CH	.31	2	.378	13.5			
8.00	5.90	.24	4.00	CLAY	CH	.32	2	.414	13.5			
8.20	5.41	.21	3.91	CLAY	CH	.33	2	.377	13.5			
8.40	5.42	.25	4.58	CLAY	CH	.34	2	.376	13.5			
8.60	5.41	.19	3.47	CLAY	CH	.34	2	.375	13.5			
8.80	5.41	.21	3.92	CLAY	CH	.35	2	.375	13.5			
9.00	5.16	.20	3.87	CLAY	CH	.36	2	.356	13.5			
9.20	4.92	.21	4.32	CLAY	CH	.37	2	.337	13.5			
9.40	5.66	.22	3.95	CLAY	CH	.38	2	.391	13.5			

9.60	5.17	.24	4.59	CLAY	CH	.38	2	.354	13.5			
9.80	5.41	.22	4.03	CLAY	CH	.39	2	.372	13.5			
10.00	5.17	.24	4.57	CLAY	CH	.40	2	.353	13.5			
10.20	5.41	.24	4.36	CLAY	CH	.41	2	.371	13.5			
10.40	4.67	.23	4.84	CLAY	CH	.42	2	.315	13.5			
10.60	5.65	.24	4.17	CLAY	CH	.42	2	.387	13.5			
10.80	5.41	.25	4.62	CLAY	CH	.43	2	.369	13.5			
11.00	5.41	.26	4.81	CLAY	CH	.44	2	.368	13.5			
11.20	4.92	.15	3.12	CLAY	CH	.45	2	.331	13.5			
11.40	4.43	.22	5.08	CLAY	CH	.46	2	.294	13.5			
11.60	4.68	.26	5.57	ORGANIC MATERIAL	OL-OH	.35	2	.321	13.5			
11.80	5.41	.25	4.59	CLAY	CH	.47	2	.366	13.5			
12.00	4.43	.23	5.09	CLAY	CH	.48	2	.272	13.5			
12.20	4.92	.25	5.18	CLAY	CH	.49	2	.328	13.5			
12.40	4.67	.12	2.58	CLAY	CH	.50	2	.309	13.5			
12.60	53.26	.25	.47	SILTY SAND TO SANDY SILT	SM-ML	.69	8			53	35	.18
12.80	23.96	.22	.93	SANDY SILT TO CLAYEY SILT	ML-MH	.64	4	1.727	13.5	28	32	.12
13.00	5.16	.22	4.36	CLAY	CH	.52	2	.344	13.5			
13.20	5.41	.26	4.81	CLAY	CH	.53	2	.362	13.5			
13.40	4.92	.28	5.77	ORGANIC MATERIAL	OL-OH	.40	2	.335	13.5			
13.60	25.66	.35	1.36	CLAYEY SILT TO SILTY CLAY	MH-CL	.61	6	1.856	13.5			
13.80	40.34	3.36	8.33	CLAY	CH	.55	19	2.947	13.5			
14.00	6.40	.26	4.07	CLAY	CH	.56	3	.432	13.5			
14.20	5.17	.48	9.28	ORGANIC MATERIAL	OL-OH	.43	2	.351	13.5			
14.40	12.72	.68	5.32	CLAY	CH	.58	6	.899	13.5			
14.60	165.28	.55	.34	SAND TO SILTY SAND	SM-SP	.88	19			84	41	.50+
14.80	180.10	.87	.49	SAND TO SILTY SAND	SM-SP	.89	21			85	41	.50+
15.00	220.89	.94	.43	SAND	SW-SP	.97	21			91	44	.50+



RESULT OF CONE PENETRATION TEST

36N

JOB NUMBER: 0187-0206
CONE NUMBER: 5005
LOCATION: ISLE DENIERES

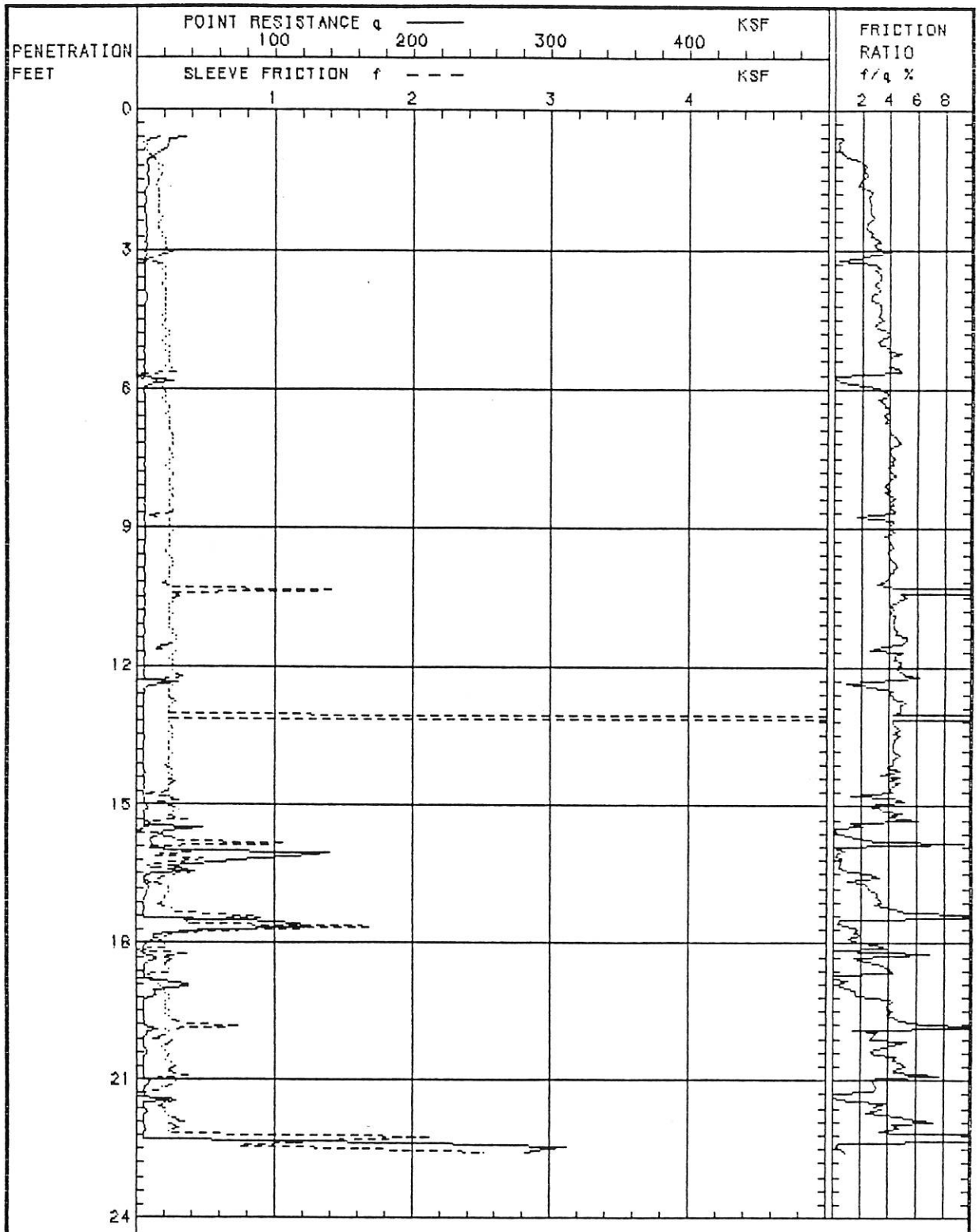
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 36N.DO
CONE NO. : 5006
DATE : 05/07/87

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	8.96	.33	3.69	CLAY	CH	.02	4	.662	13.5			
.80	6.34	.24	3.75	CLAY	CH	.03	3	.467	13.5			
1.00	5.62	.19	3.38	CLAY	CH	.04	2	.413	13.5			
1.20	4.72	.19	3.98	CLAY	CH	.05	2	.346	13.5			
1.40	5.62	.20	3.63	CLAY	CH	.06	2	.412	13.5			
1.60	5.38	.20	3.81	CLAY	CH	.06	2	.394	13.5			
1.80	5.02	.24	4.70	CLAY	CH	.07	2	.367	13.5			
2.00	4.90	.29	5.85	ORGANIC MATERIAL	OL-OH	.06	2	.359	13.5			
2.20	4.78	.36	7.56	ORGANIC MATERIAL	OL-OH	.07	2	.349	13.5			
2.40	3.94	.17	4.32	CLAY	CH	.10	1	.285	13.5			
2.60	5.08	.19	3.73	CLAY	CH	.10	2	.369	13.5			
2.80	5.26	.20	3.90	CLAY	CH	.11	2	.381	13.5			
3.00	5.26	.20	3.77	CLAY	CH	.12	2	.381	13.5			
3.20	5.86	.18	3.14	CLAY	CH	.13	2	.424	13.5			
3.40	5.50	.19	3.52	CLAY	CH	.14	2	.397	13.5			
3.60	5.20	.21	3.96	CLAY	CH	.14	2	.375	13.5			
3.80	4.78	.19	3.93	CLAY	CH	.15	2	.343	13.5			
4.00	5.26	.20	3.87	CLAY	CH	.16	2	.378	13.5			
4.20	5.26	.19	3.57	CLAY	CH	.17	2	.377	13.5			
4.40	5.26	.19	3.57	CLAY	CH	.18	2	.377	13.5			
4.60	4.90	.19	3.97	CLAY	CH	.18	2	.349	13.5			
4.80	4.90	.19	3.85	CLAY	CH	.19	2	.349	13.5			
5.00	5.02	.21	4.16	CLAY	CH	.20	2	.357	13.5			
5.20	5.26	.19	3.56	CLAY	CH	.21	2	.374	13.5			
5.40	5.38	.23	4.19	CLAY	CH	.22	2	.383	13.5			
5.60	4.84	.20	4.11	CLAY	CH	.22	2	.342	13.5			
5.80	5.74	.20	3.54	CLAY	CH	.23	2	.408	13.5			
6.00	5.62	.20	3.60	CLAY	CH	.24	2	.398	13.5			
6.20	5.26	.21	4.01	CLAY	CH	.25	2	.371	13.5			
6.40	4.78	.21	4.37	CLAY	CH	.26	2	.335	13.5			
6.60	2.63	.17	6.54	ORGANIC MATERIAL	OL-OH	.20	1	.180	13.5			
6.80	5.02	.21	4.21	CLAY	CH	.27	2	.332	13.5			
7.00	5.14	.19	3.66	CLAY	CH	.28	2	.360	13.5			
7.20	5.14	.19	3.77	CLAY	CH	.29	2	.359	13.5			
7.40	5.38	.25	4.58	CLAY	CH	.30	2	.376	13.5			
7.60	5.56	.23	4.21	CLAY	CH	.30	2	.339	13.5			
7.80	4.66	.22	4.66	CLAY	CH	.31	2	.322	13.5			
8.00	4.96	.18	3.65	CLAY	CH	.32	2	.344	13.5			
8.20	4.66	.20	4.29	CLAY	CH	.33	2	.321	13.5			
8.40	4.96	.20	3.98	CLAY	CH	.34	2	.343	13.5			
8.60	5.38	.20	3.71	CLAY	CH	.34	2	.373	13.5			
8.80	5.26	.22	4.22	CLAY	CH	.35	2	.364	13.5			
9.00	4.89	.18	3.70	CLAY	CH	.36	2	.336	13.5			
9.20	5.50	.19	3.53	CLAY	CH	.37	2	.380	13.5			
9.40	5.02	.21	4.18	CLAY	CH	.38	2	.344	13.5			

9.60	5.38	.24	4.50	CLAY	CH	.39	2	.373	13.5			
9.80	5.74	.25	4.35	CLAY	CH	.39	2	.396	13.5			
10.00	5.02	.19	3.83	CLAY	CH	.40	2	.342	13.5			
10.20	5.74	.19	3.35	CLAY	CH	.41	2	.395	13.5			
10.40	5.74	.20	3.42	CLAY	CH	.42	2	.394	13.5			
10.60	5.50	.19	3.50	CLAY	CH	.42	2	.376	13.5			
10.80	5.74	.22	3.83	CLAY	CH	.43	2	.393	13.5			
11.00	9.44	.20	2.08	SILTY CLAY TO CLAY	CL-CH	.44	3	.667	13.5			
11.20	5.38	.16	3.02	CLAY	CH	.45	2	.365	13.5			
11.40	7.42	.28	3.72	CLAY	CH	.46	3	.516	13.5			
11.60	14.32	.23	1.61	CLAYEY SILT TO SILTY CLAY	MH-CL	.52	3	1.022	13.5			
11.80	6.33	.19	3.02	CLAY	CH	.47	3	.434	13.5			
12.00	5.86	.21	3.67	CLAY	CH	.48	2	.398	13.5			
12.20	5.85	.21	3.57	CLAY	CH	.49	2	.398	13.5			
12.40	5.85	.20	3.47	CLAY	CH	.50	2	.397	13.5			
12.60	5.74	.21	3.65	CLAY	CH	.50	2	.388	13.5			
12.80	5.68	.22	3.85	CLAY	CH	.51	2	.383	13.5			
13.00	6.11	.24	3.92	CLAY	CH	.52	2	.414	13.5			
13.20	4.78	.24	5.12	CLAY	CH	.53	2	.315	13.5			
13.40	5.62	.30	5.40	CLAY	CH	.54	2	.377	13.5			
13.60	5.62	.22	3.93	CLAY	CH	.54	2	.376	13.5			
13.80	5.56	.24	4.30	CLAY	CH	.55	2	.371	13.5			
14.00	11.56	.23	2.00	SILTY CLAY TO CLAY	CL-CH	.56	3	.815	13.5			
14.20	5.98	.22	3.67	CLAY	CH	.57	2	.401	13.5			
14.40	6.09	.34	5.60	CLAY	CH	.58	2	.408	13.5			
14.60	17.07	.23	1.34	CLAYEY SILT TO SILTY CLAY	MH-CL	.66	4	1.216	13.5			
14.80	6.46	.19	3.02	CLAY	CH	.59	3	.435	13.5			
15.00	14.74	.18	1.21	SENSITIVE FINE GRAINED	OL-CH	.45	3	1.058	13.5			
15.20	185.74	.77	.41	SAND	SW-SP	.99	17			85	43	.50+
15.40	253.88	.65	.25	SAND	SW-SP	1.00	24			96	44	.50+
15.60	259.46	.81	.31	SAND	SW-SP	1.01	24			97	44	.50+
15.80	259.76	.52	.20	SAND	SW-SP	1.03	24			96	46	.50+
16.00	303.61	4.73	1.56	SAND TO SILTY SAND	SM-SP	.96	36			100+	42	.50+



RESULT OF CONE PENETRATION TEST

36M

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

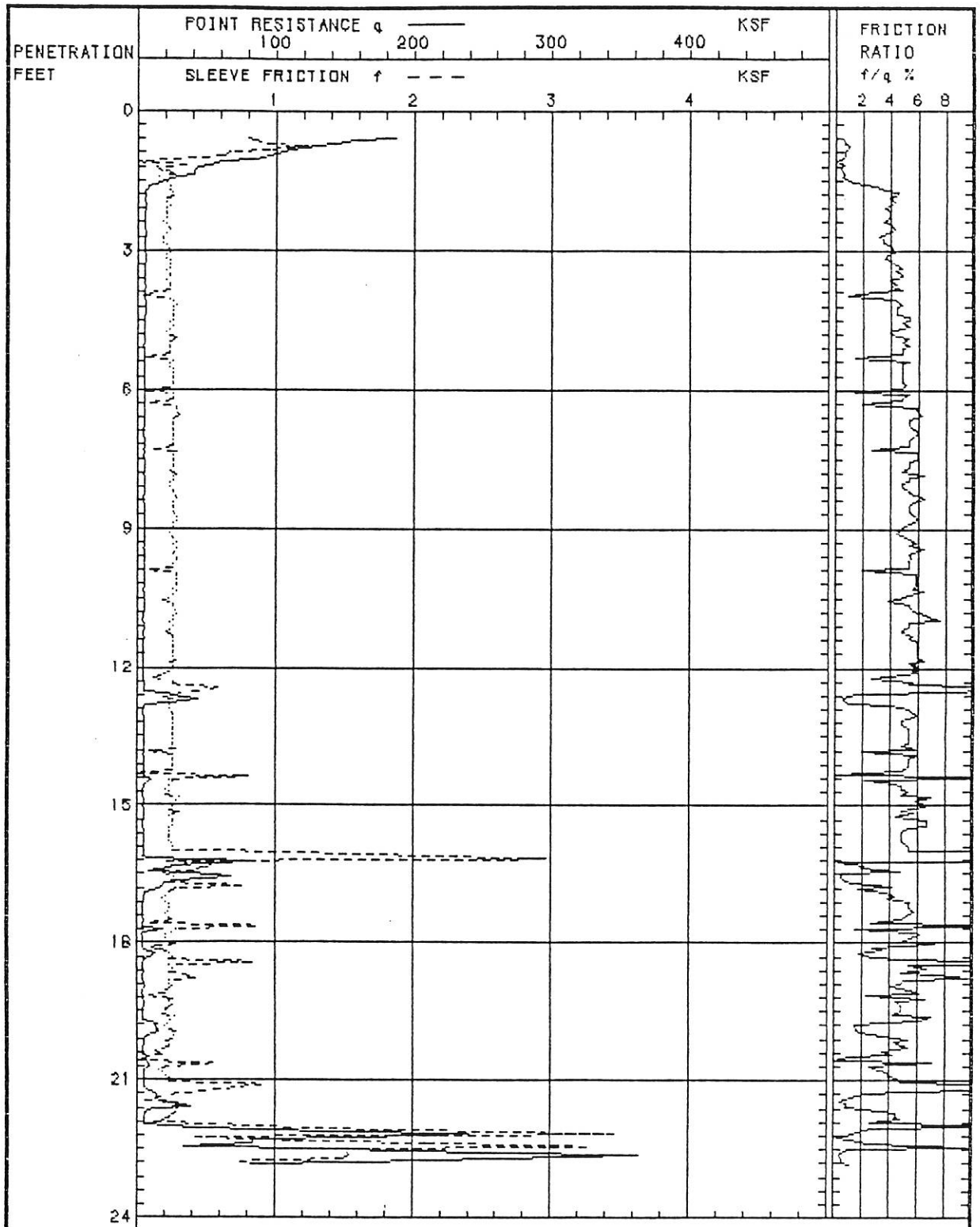
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 36M
CONE NO. : 001
DATE : 05/06/87

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	30.01	.13	.42	SANDY SILT TO CLAYEY SILT	ML-MH	.03	5	2.221	13.5	70	33	.50+
.80	22.38	.07	.31	SANDY SILT TO CLAYEY SILT	ML-MH	.04	4	1.655	13.5	64	37	.50+
1.00	12.30	.10	.82	SENSITIVE FINE GRAINED	OL-CH	.03	2	.909	13.5			
1.20	8.12	.24	2.91	CLAY	CH	.05	3	.598	13.5			
1.40	7.63	.17	2.29	CLAY	CH	.06	3	.561	13.5			
1.60	8.36	.14	1.73	SENSITIVE FINE GRAINED	OL-CH	.05	2	.616	13.5			
1.80	6.15	.21	3.45	CLAY	CH	.07	2	.450	13.5			
2.00	6.52	.16	2.50	CLAY	CH	.08	3	.477	13.5			
2.20	6.40	.22	3.50	CLAY	CH	.09	3	.467	13.5			
2.40	6.89	.15	2.19	CLAY	CH	.10	3	.503	13.5			
2.60	7.13	.17	2.44	CLAY	CH	.10	3	.521	13.5			
2.80	6.64	.25	3.72	CLAY	CH	.11	3	.484	13.5			
3.00	6.64	.25	3.72	CLAY	CH	.12	3	.483	13.5			
3.20	6.40	.10	1.63	SENSITIVE FINE GRAINED	OL-CH	.10	1	.467	13.5			
3.40	6.40	.20	3.11	CLAY	CH	.14	3	.464	13.5			
3.60	6.40	.21	3.30	CLAY	CH	.14	3	.463	13.5			
3.80	6.40	.20	3.10	CLAY	CH	.15	3	.462	13.5			
4.00	7.87	.21	2.67	CLAY	CH	.16	3	.571	13.5			
4.20	6.40	.22	3.50	CLAY	CH	.17	3	.461	13.5			
4.40	6.15	.20	3.24	CLAY	CH	.18	2	.443	13.5			
4.60	6.40	.22	3.51	CLAY	CH	.18	3	.460	13.5			
4.80	5.90	.24	3.99	CLAY	CH	.19	2	.423	13.5			
5.00	6.15	.20	3.25	CLAY	CH	.20	2	.441	13.5			
5.20	5.17	.22	4.32	CLAY	CH	.21	2	.367	13.5			
5.40	5.90	.24	4.00	CLAY	CH	.22	2	.421	13.5			
5.60	5.66	.27	4.83	CLAY	CH	.22	2	.402	13.5			
5.80	15.90	.07	.43	SENSITIVE FINE GRAINED	OL-CH	.17	3	1.165	13.5			
6.00	5.66	.20	3.54	CLAY	CH	.24	2	.401	13.5			
6.20	5.78	.19	3.34	CLAY	CH	.25	2	.410	13.5			
6.40	6.15	.24	3.83	CLAY	CH	.26	2	.437	13.5			
6.60	6.02	.22	3.60	CLAY	CH	.26	2	.427	13.5			
6.80	5.90	.24	3.99	CLAY	CH	.27	2	.417	13.5			
7.00	5.90	.25	4.22	CLAY	CH	.28	2	.417	13.5			
7.20	5.65	.26	4.59	CLAY	CH	.29	2	.398	13.5			
7.40	5.90	.20	3.40	CLAY	CH	.30	2	.415	13.5			
7.60	5.54	.24	4.37	CLAY	CH	.30	2	.388	13.5			
7.80	5.90	.25	4.19	CLAY	CH	.31	2	.414	13.5			
8.00	5.90	.24	3.98	CLAY	CH	.32	2	.414	13.5			
8.20	6.40	.25	3.87	CLAY	CH	.33	3	.449	13.5			
8.40	5.78	.25	4.39	CLAY	CH	.34	2	.403	13.5			
8.60	5.90	.25	4.19	CLAY	CH	.34	2	.412	13.5			
8.80	5.41	.16	3.00	CLAY	CH	.35	2	.375	13.5			
9.00	5.90	.24	3.99	CLAY	CH	.36	2	.411	13.5			
9.20	6.15	.24	3.85	CLAY	CH	.37	2	.428	13.5			
9.40	5.54	.24	4.26	CLAY	CH	.38	2	.382	13.5			

9.60	5.65	.22	3.95	CLAY	CH	.38	2	.390	13.5			
9.80	5.78	.25	4.39	CLAY	CH	.39	2	.399	13.5			
10.00	5.65	.24	4.17	CLAY	CH	.40	2	.399	13.5			
10.20	5.90	.19	3.20	CLAY	CH	.41	2	.407	13.5			
10.40	5.41	.85	15.64	ORGANIC MATERIAL	OL-OH	.31	2	.378	13.5			
10.60	5.65	.26	4.60	CLAY	CH	.42	2	.387	13.5			
10.80	5.65	.24	4.17	CLAY	CH	.43	2	.387	13.5			
11.00	5.41	.24	4.36	CLAY	CH	.44	2	.368	13.5			
11.20	5.53	.24	4.37	CLAY	CH	.45	2	.377	13.5			
11.40	5.41	.28	5.25	CLAY	CH	.46	2	.367	13.5			
11.60	5.41	.18	3.28	CLAY	CH	.46	2	.366	13.5			
11.80	5.66	.25	4.38	CLAY	CH	.47	2	.384	13.5			
12.00	5.65	.27	4.82	CLAY	CH	.48	2	.383	13.5			
12.20	5.41	.32	5.83	CLAY	CH	.49	2	.365	13.5			
12.40	19.86	.26	1.31	CLAYEY SILT TO SILTY CLAY	MH-CL	.56	4	1.430	13.5			
12.60	5.66	.24	4.17	CLAY	CH	.50	2	.382	13.5			
12.80	5.41	.27	5.04	CLAY	CH	.51	2	.363	13.5			
13.00	5.16	.24	4.57	CLAY	CH	.52	2	.344	13.5			
13.20	5.41	.24	4.36	CLAY	CH	.53	2	.362	13.5			
13.40	5.41	.26	4.80	CLAY	CH	.54	2	.361	13.5			
13.60	5.66	.25	4.38	CLAY	CH	.54	2	.379	13.5			
13.80	5.41	.24	4.38	CLAY	CH	.55	2	.360	13.5			
14.00	5.41	.24	4.36	CLAY	CH	.56	2	.359	13.5			
14.20	5.41	.23	4.34	CLAY	CH	.57	2	.359	13.5			
14.40	5.65	.25	4.39	CLAY	CH	.58	2	.376	13.5			
14.60	5.65	.24	4.17	CLAY	CH	.58	2	.375	13.5			
14.80	5.41	.15	2.76	CLAY	CH	.59	2	.357	13.5			
15.00	6.62	.19	2.80	CLAY	CH	.60	3	.446	13.5			
15.20	5.65	.29	5.06	CLAY	CH	.61	2	.374	13.5			
15.40	6.15	.10	1.64	SENSITIVE FINE GRAINED	OL-CH	.46	1	.422	13.5			
15.60	19.35	.09	.47	SANDY SILT TO CLAYEY SILT	ML-MH	.78	3	1.376	13.5	18	31	.11
15.80	10.56	.53	4.99	CLAY	CH	.63	5	.735	13.5			
16.00	80.78	.28	.35	SAND TO SILTY SAND	SM-SP	.96	9			59	33	.21
16.20	73.40	.32	.44	SILTY SAND TO SANDY SILT	SM-ML	.89	11			58	36	.20
16.40	35.69	.34	.95	SANDY SILT TO CLAYEY SILT	ML-MH	.82	6	2.533	13.5	35	33	.14
16.60	6.40	.19	3.01	CLAY	CH	.66	3	.425	13.5			
16.80	9.35	.26	2.78	CLAY	CH	.67	4	.643	13.5			
17.00	6.65	.23	3.42	CLAY	CH	.68	3	.442	13.5			
17.20	5.65	.21	3.73	CLAY	CH	.69	2	.368	13.5			
17.40	5.65	.75	13.31	ORGANIC MATERIAL	OL-OH	.52	2	.380	13.5			
17.60	119.98	1.03	.86	SAND TO SILTY SAND	SM-SP	1.06	14			68	39	.44
17.80	19.10	.30	1.56	CLAYEY SILT TO SILTY CLAY	MH-CL	.80	4	1.355	13.5			
18.00	8.40	.19	2.30	CLAY	CH	.72	4	.569	13.5			
18.20	5.41	.18	3.35	CLAY	CH	.73	2	.347	13.5			
18.40	10.68	.24	2.21	SILTY CLAY TO CLAY	CL-CH	.74	3	.736	13.5			
18.60	5.66	.24	4.15	CLAY	CH	.74	2	.364	13.5			
18.80	11.90	.09	.75	SENSITIVE FINE GRAINED	OL-CH	.56	2	.839	13.5			
19.00	25.43	.21	.82	SANDY SILT TO CLAYEY SILT	ML-MH	.95	4	1.813	13.5	21	31	.11
19.20	10.20	.24	2.31	SILTY CLAY TO CLAY	CL-CH	.77	3	.699	13.5			
19.40	5.41	.21	3.92	CLAY	CH	.78	2	.343	13.5			
19.60	5.41	.26	4.80	CLAY	CH	.78	2	.343	13.5			
19.80	5.78	.62	10.67	ORGANIC MATERIAL	OL-OH	.59	2	.384	13.5			
20.00	7.38	.22	3.05	CLAY	CH	.80	3	.487	13.5			
20.20	4.92	.24	4.79	CLAY	CH	.81	2	.305	13.5			
20.40	7.87	.22	2.85	CLAY	CH	.82	3	.523	13.5			
20.60	5.04	.23	4.55	CLAY	CH	.82	2	.312	13.5			
20.80	5.41	.25	4.60	CLAY	CH	.83	2	.339	13.5			
21.00	7.30	.22	3.02	CLAY	CH	.84	3	.479	13.5			
21.20	5.66	.18	3.11	CLAY	CH	.85	2	.357	13.5			
21.40	13.99	.14	.98	SENSITIVE FINE GRAINED	OL-CH	.64	3	.989	13.5			

21.60	5.65	.19	3.29	CLAY	CH	.86	2	.354	13.5			
21.80	4.92	.25	5.04	CLAY	CH	.97	2	.300	13.5			
22.00	5.89	.27	4.59	CLAY	CH	.89	2	.371	13.5			
22.20	5.41	1.17	21.55	ORGANIC MATERIAL	OL-OH	.67	2	.351	13.5			
22.40	255.00	8.82	3.46	SANDY SILT TO CLAYEY SILT	ML-MH	1.12	48	18.806	13.5	93	41	.50+



RESULT OF CONE PENETRATION TEST

36S

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

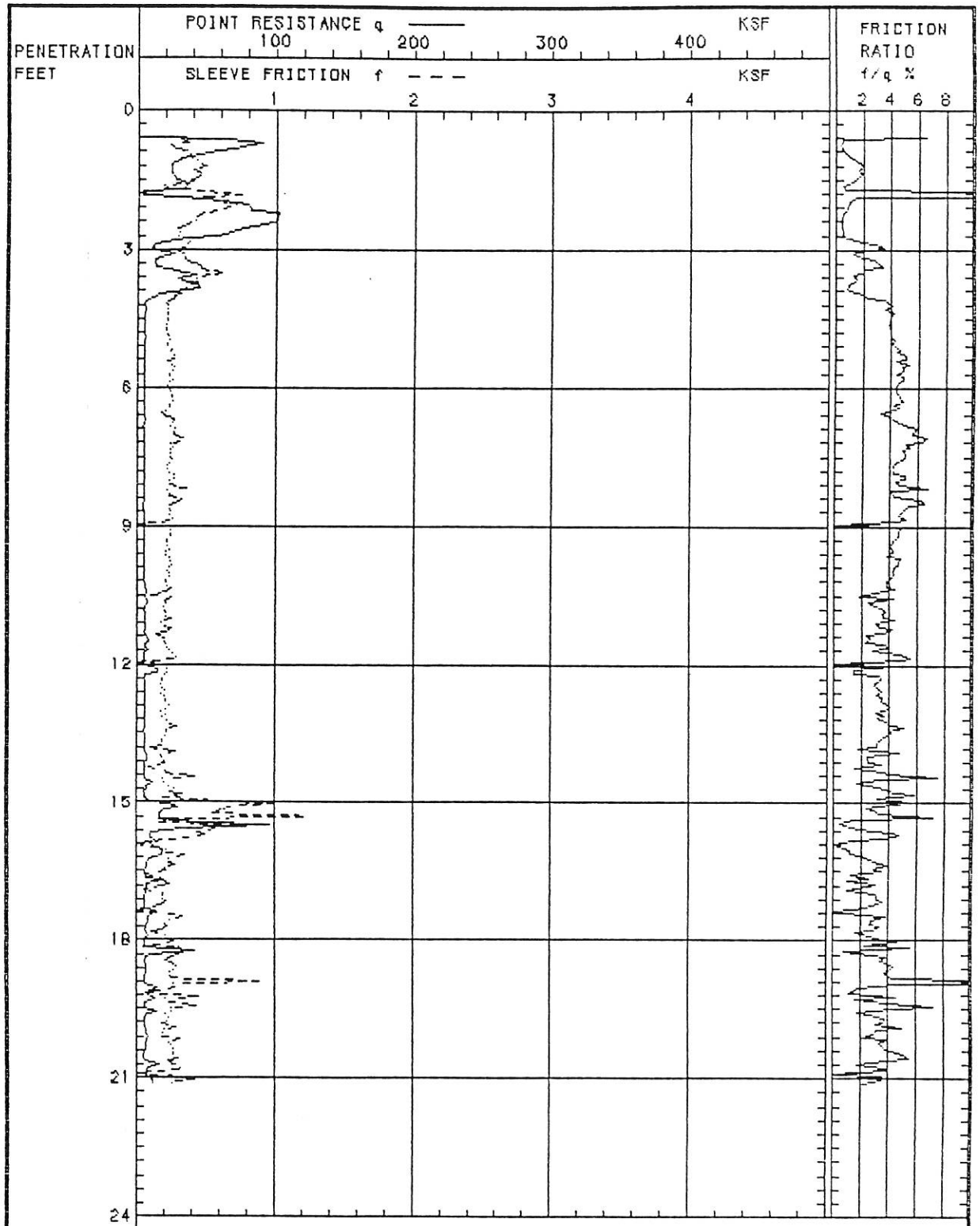
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 36S
CONE NO. : 001
DATE : 05/06/87

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	172.18	1.02	.59	SAND TO SILTY SAND	SM-SP	.04	20			100+	42	.50+
.80	120.28	.98	.82	SAND TO SILTY SAND	SM-SP	.05	14			100+	42	.50+
1.00	91.13	.56	.62	SAND TO SILTY SAND	SM-SP	.06	10			100-	42	.50+
1.20	48.83	.10	.20	SILTY SAND TO SANDY SILT	SM-ML	.07	7			81	39	.50+
1.40	35.43	.25	.71	SANDY SILT TO CLAYEY SILT	ML-MH	.07	6	2.619	13.5	71	38	.50+
1.60	12.31	.24	1.93	SILTY CLAY TO CLAY	CL-CH	.06	3	.907	13.5			
1.80	5.66	.27	4.83	CLAY	CH	.07	2	.414	13.5			
2.00	5.41	.22	4.13	CLAY	CH	.08	2	.395	13.5			
2.20	5.41	.21	3.92	CLAY	CH	.09	2	.394	13.5			
2.40	5.41	.20	3.69	CLAY	CH	.10	2	.394	13.5			
2.60	5.53	.22	4.04	CLAY	CH	.10	2	.402	13.5			
2.80	5.41	.19	3.47	CLAY	CH	.11	2	.393	13.5			
3.00	5.41	.25	4.59	CLAY	CH	.12	2	.392	13.5			
3.20	5.90	.22	3.80	CLAY	CH	.13	2	.423	13.5			
3.40	4.92	.22	4.56	CLAY	CH	.14	2	.354	13.5			
3.60	5.16	.22	4.33	CLAY	CH	.14	2	.372	13.5			
3.80	5.41	.24	4.37	CLAY	CH	.15	2	.390	13.5			
4.00	5.16	.10	1.87	SENSITIVE FINE GRAINED	OL-CH	.12	1	.374	13.5			
4.20	5.90	.27	4.60	CLAY	CH	.17	2	.425	13.5			
4.40	5.41	.26	4.81	CLAY	CH	.18	2	.398	13.5			
4.60	4.92	.25	5.04	CLAY	CH	.18	2	.351	13.5			
4.80	5.41	.22	4.14	CLAY	CH	.19	2	.387	13.5			
5.00	4.68	.24	5.06	CLAY	CH	.20	2	.331	13.5			
5.20	4.92	.24	4.80	CLAY	CH	.21	2	.349	13.5			
5.40	4.92	.25	5.05	CLAY	CH	.22	2	.348	13.5			
5.60	5.41	.28	5.25	CLAY	CH	.22	2	.384	13.5			
5.80	5.41	.26	4.81	CLAY	CH	.23	2	.384	13.5			
6.00	4.92	.15	3.10	CLAY	CH	.24	2	.347	13.5			
6.20	5.41	.26	4.81	CLAY	CH	.25	2	.382	13.5			
6.40	4.92	.28	5.78	ORGANIC MATERIAL	OL-OH	.19	2	.350	13.5			
6.60	4.92	.30	6.17	ORGANIC MATERIAL	OL-OH	.20	2	.350	13.5			
6.80	4.80	.27	5.70	ORGANIC MATERIAL	OL-OH	.20	2	.340	13.5			
7.00	4.55	.26	5.72	ORGANIC MATERIAL	OL-OH	.21	2	.321	13.5			
7.20	4.92	.26	5.30	CLAY	CH	.29	2	.343	13.5			
7.40	4.68	.27	5.83	ORGANIC MATERIAL	OL-OH	.22	2	.330	13.5			
7.60	4.92	.27	5.58	CLAY	CH	.30	2	.342	13.5			
7.80	4.68	.26	5.56	ORGANIC MATERIAL	OL-OH	.23	2	.329	13.5			
8.00	4.92	.25	5.05	CLAY	CH	.32	2	.341	13.5			
8.20	4.92	.26	5.30	CLAY	CH	.33	2	.340	13.5			
8.40	4.55	.28	6.12	ORGANIC MATERIAL	OL-OH	.25	2	.318	13.5			
8.60	4.92	.26	5.29	CLAY	CH	.34	2	.339	13.5			
8.80	4.92	.28	5.66	ORGANIC MATERIAL	OL-OH	.26	2	.345	13.5			
9.00	5.41	.26	4.81	CLAY	CH	.36	2	.374	13.5			
9.20	4.92	.35	7.06	ORGANIC MATERIAL	OL-OH	.28	2	.344	13.5			
9.40	4.68	.27	5.82	ORGANIC MATERIAL	OL-OH	.29	2	.326	13.5			

9.60	5.04	.27	5.28	CLAY	CH	.38	2	.345	13.5			
9.80	4.92	.26	5.29	CLAY	CH	.39	2	.335	13.5			
10.00	4.92	.28	5.78	ORGANIC MATERIAL	OL-OH	.30	2	.342	13.5			
10.20	4.92	.26	5.32	CLAY	CH	.41	2	.334	13.5			
10.40	4.67	.27	5.84	ORGANIC MATERIAL	OL-OH	.31	2	.323	13.5			
10.60	4.92	.21	4.19	CLAY	CH	.42	2	.333	13.5			
10.80	4.68	.27	5.87	ORGANIC MATERIAL	OL-OH	.32	2	.322	13.5			
11.00	3.93	.25	6.33	ORGANIC MATERIAL	OL-OH	.33	1	.246	13.5			
11.20	4.68	.24	5.09	CLAY	CH	.45	2	.313	13.5			
11.40	4.68	.26	5.58	ORGANIC MATERIAL	OL-OH	.34	2	.321	13.5			
11.60	4.43	.26	5.89	ORGANIC MATERIAL	OL-OH	.35	2	.302	13.5			
11.80	4.43	.27	6.16	ORGANIC MATERIAL	OL-OH	.35	2	.302	13.5			
12.00	4.43	.25	5.63	ORGANIC MATERIAL	OL-OH	.36	2	.301	13.5			
12.20	4.43	.18	4.03	CLAY	CH	.49	2	.292	13.5			
12.40	4.92	.42	8.51	ORGANIC MATERIAL	OL-OH	.37	2	.337	13.5			
12.60	26.83	.31	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	.63	5	1.941	13.5	33	33	.13
12.80	14.92	.24	1.59	CLAYEY SILT TO SILTY CLAY	MH-CL	.58	3	1.063	13.5			
13.00	4.43	.26	5.92	ORGANIC MATERIAL	OL-OH	.39	2	.299	13.5			
13.20	5.41	.26	4.81	CLAY	CH	.53	2	.362	13.5			
13.40	4.92	.26	5.32	CLAY	CH	.54	2	.325	13.5			
13.60	4.92	.26	5.29	CLAY	CH	.54	2	.324	13.5			
13.80	4.92	.19	3.87	CLAY	CH	.55	2	.324	13.5			
14.00	4.92	.26	5.29	CLAY	CH	.56	2	.323	13.5			
14.20	5.16	.26	5.05	CLAY	CH	.57	2	.340	13.5			
14.40	7.81	.53	6.79	CLAY	CH	.58	3	.536	13.5			
14.60	4.68	.23	4.81	CLAY	CH	.58	2	.303	13.5			
14.80	4.43	.26	5.87	ORGANIC MATERIAL	OL-OH	.44	2	.295	13.5			
15.00	3.94	.26	6.61	ORGANIC MATERIAL	OL-OH	.45	1	.258	13.5			
15.20	5.41	.27	5.07	CLAY	CH	.61	2	.356	13.5			
15.40	3.94	.26	6.66	ORGANIC MATERIAL	OL-OH	.46	1	.257	13.5			
15.60	4.92	.24	4.80	CLAY	CH	.62	2	.318	13.5			
15.80	4.92	.23	4.59	CLAY	CH	.63	2	.318	13.5			
16.00	4.92	.94	19.08	ORGANIC MATERIAL	OL-OH	.48	2	.329	13.5			
16.20	45.83	1.62	3.54	CLAYEY SILT TO SILTY CLAY	MH-CL	.73	10	3.341	13.5			
16.40	17.42	.62	3.57	CLAY	CH	.66	8	1.242	13.5			
16.60	49.43	.35	.71	SILTY SAND TO SANDY SILT	SM-ML	.91	7			43	34	.15
16.80	17.91	.35	1.98	CLAYEY SILT TO SILTY CLAY	MH-CL	.76	4	1.271	13.5			
17.00	4.92	.20	4.09	CLAY	CH	.68	2	.314	13.5			
17.20	4.43	.24	5.36	ORGANIC MATERIAL	OL-OH	.52	2	.290	13.5			
17.40	4.29	.22	5.21	CLAY	CH	.70	2	.287	13.5			
17.60	3.94	.47	12.02	ORGANIC MATERIAL	OL-OH	.53	1	.252	13.5			
17.80	3.95	.34	8.56	ORGANIC MATERIAL	OL-OH	.53	1	.253	13.5			
18.00	4.19	.25	5.92	ORGANIC MATERIAL	OL-OH	.54	2	.270	13.5			
18.20	9.23	.27	2.97	CLAY	CH	.73	4	.630	13.5			
18.40	4.68	.53	11.32	ORGANIC MATERIAL	OL-OH	.55	2	.306	13.5			
18.60	4.41	.25	5.64	ORGANIC MATERIAL	OL-OH	.56	2	.286	13.5			
18.80	4.55	.38	8.41	ORGANIC MATERIAL	OL-OH	.56	2	.295	13.5			
19.00	5.20	.24	4.58	CLAY	CH	.76	2	.327	13.5			
19.20	3.94	.17	4.41	CLAY	CH	.77	1	.235	13.5			
19.40	4.93	.24	4.81	CLAY	CH	.78	2	.308	13.5			
19.60	4.19	.23	5.52	ORGANIC MATERIAL	OL-OH	.59	2	.267	13.5			
19.80	14.16	.21	1.50	CLAYEY SILT TO SILTY CLAY	MH-CL	.89	3	.583	13.5			
20.00	11.92	.34	2.89	CLAY	CH	.80	5	.824	13.5			
20.20	4.92	.24	4.94	CLAY	CH	.81	2	.305	13.5			
20.40	4.17	.24	5.86	ORGANIC MATERIAL	OL-OH	.61	1	.264	13.5			
20.60	6.92	.36	5.13	CLAY	CH	.82	3	.452	13.5			
20.80	4.92	.19	3.84	CLAY	CH	.83	2	.302	13.5			
21.00	5.05	.23	4.56	CLAY	CH	.84	2	.312	13.5			
21.20	7.06	.46	6.50	CLAY	CH	.85	2	.461	13.5			
21.40	15.11	.12	.81	SENSITIVE FINE GRAINED	OL-CH	.64	3	1.072	13.5			

21.60	26.01	.30	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	1.08	4	1.847	13.5	20	21	.11
21.80	5.17	.24	4.57	CLAY	CH	.87	2	.319	13.5			
22.00	23.49	2.55	10.84	CLAY	CH	.88	11	1.675	13.5			
22.20	203.45	2.86	1.40	SAND TO SILTY SAND	SM-SP	1.33	24			81	40	.50+
22.40	59.85	2.12	3.54	CLAYEY SILT TO SILTY CLAY	MH-CL	1.01	14	4.358	13.5			
22.60	306.37	1.61	.53	SAND	SW-SP	1.47	29			93	44	.50+
22.80	122.52	.84	.68	SAND TO SILTY SAND	SM-SP	1.37	14			63	39	.28



RESULT OF CONE PENETRATION TEST

37N

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

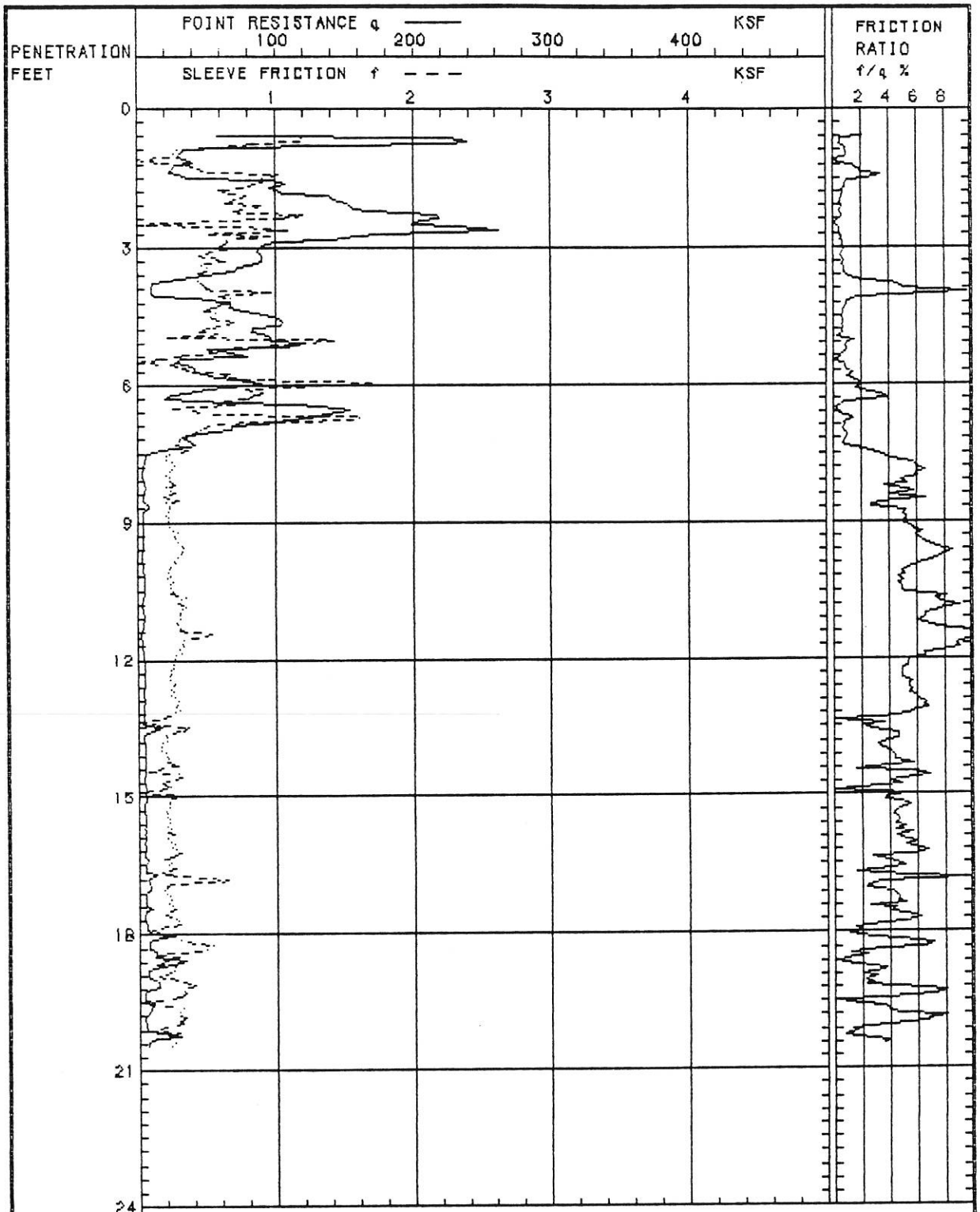
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 37N
CONE NO. : 5006
DATE : 05/07/87

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	34.18	.25	.74	SANDY SILT TO CLAYEY SILT	ML-MH	.03	6	2.530	13.5	73	39	.50+
.80	75.31	.56	.74	SILTY SAND TO SANDY SILT	SM-ML	.04	12			100+	42	.50+
1.00	38.20	.38	1.01	SANDY SILT TO CLAYEY SILT	ML-MH	.05	7	2.826	13.5	74	39	.50+
1.20	24.38	.39	1.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	5	1.802	13.5			
1.40	25.22	.45	1.79	CLAYEY SILT TO SILTY CLAY	MH-CL	.06	6	1.863	13.5			
1.60	34.30	.29	.85	SANDY SILT TO CLAYEY SILT	ML-MH	.08	6	2.535	13.5	70	38	.50+
1.80	3.11	.64	20.50	ORGANIC MATERIAL	OL-OH	.05	1	.226	13.5			
2.00	70.62	.58	.82	SILTY SAND TO SANDY SILT	SM-ML	.11	11			92	41	.50+
2.20	91.90	.36	.39	SAND TO SILTY SAND	SM-SP	.13	11			100+	42	.50+
2.40	99.93	.40	.40	SAND TO SILTY SAND	SM-SP	.14	11			100+	42	.50+
2.60	72.39	.29	.40	SILTY SAND TO SANDY SILT	SM-ML	.14	11			89	41	.50+
2.80	28.36	.36	1.26	SANDY SILT TO CLAYEY SILT	ML-MH	.14	5	2.090	13.5	62	37	.49
3.00	14.03	.31	2.24	SILTY CLAY TO CLAY	CL-CH	.12	4	1.030	13.5			
3.20	14.77	.41	2.79	SILTY CLAY TO CLAY	CL-CH	.13	4	1.085	13.5			
3.40	18.33	.40	2.20	CLAYEY SILT TO SILTY CLAY	MH-CL	.15	4	1.346	13.5			
3.60	35.95	.68	1.90	SANDY SILT TO CLAYEY SILT	ML-MH	.18	6	2.650	13.5	65	37	.49
3.80	44.34	.37	.83	SANDY SILT TO CLAYEY SILT	ML-MH	.19	8	3.271	13.5	69	38	.50+
4.00	13.94	.30	2.18	SILTY CLAY TO CLAY	CL-CH	.16	4	1.020	13.5			
4.20	5.50	.21	3.91	CLAY	CH	.17	2	.395	13.5			
4.40	5.38	.22	4.11	CLAY	CH	.18	2	.385	13.5			
4.60	5.50	.22	3.91	CLAY	CH	.18	2	.394	13.5			
4.80	5.38	.22	4.00	CLAY	CH	.19	2	.384	13.5			
5.00	5.44	.23	4.23	CLAY	CH	.20	2	.388	13.5			
5.20	5.50	.25	4.55	CLAY	CH	.21	2	.392	13.5			
5.40	5.14	.24	4.76	CLAY	CH	.22	2	.365	13.5			
5.60	5.38	.26	4.87	CLAY	CH	.22	2	.382	13.5			
5.80	5.02	.24	4.87	CLAY	CH	.23	2	.355	13.5			
6.00	5.14	.23	4.41	CLAY	CH	.24	2	.363	13.5			
6.20	5.50	.26	4.64	CLAY	CH	.25	2	.389	13.5			
6.40	5.26	.23	4.43	CLAY	CH	.26	2	.371	13.5			
6.60	5.38	.20	3.67	CLAY	CH	.26	2	.379	13.5			
6.80	5.02	.23	4.63	CLAY	CH	.27	2	.352	13.5			
7.00	4.78	.27	5.59	ORGANIC MATERIAL	OL-OH	.21	2	.339	13.5			
7.20	4.90	.28	5.70	ORGANIC MATERIAL	OL-OH	.22	2	.347	13.5			
7.40	4.90	.24	5.00	CLAY	CH	.30	2	.341	13.5			
7.60	5.38	.24	4.43	CLAY	CH	.30	2	.376	13.5			
7.80	5.44	.23	4.23	CLAY	CH	.31	2	.390	13.5			
8.00	5.26	.25	4.76	CLAY	CH	.32	2	.366	13.5			
8.20	5.38	.29	5.38	CLAY	CH	.33	2	.374	13.5			
8.40	5.38	.28	5.21	CLAY	CH	.34	2	.374	13.5			
8.60	4.48	.24	5.28	CLAY	CH	.34	2	.306	13.5			
8.80	5.02	.24	4.88	CLAY	CH	.35	2	.346	13.5			
9.00	4.90	.12	2.54	CLAY	CH	.36	2	.336	13.5			
9.20	5.26	.24	4.65	CLAY	CH	.37	2	.362	13.5			
9.40	5.38	.22	4.13	CLAY	CH	.38	2	.370	13.5			

9.60	5.26	.21	4.02	CLAY	CH	.38	2	.361	13.5			
9.80	5.38	.25	4.64	CLAY	CH	.39	2	.369	13.5			
10.00	5.32	.22	4.21	CLAY	CH	.40	2	.364	13.5			
10.20	5.50	.21	3.81	CLAY	CH	.41	2	.377	13.5			
10.40	6.33	.23	3.67	CLAY	CH	.42	3	.438	13.5			
10.60	6.80	.22	3.29	CLAY	CH	.42	3	.472	13.5			
10.80	5.62	.24	4.25	CLAY	CH	.43	2	.384	13.5			
11.00	5.80	.24	4.18	CLAY	CH	.44	2	.397	13.5			
11.20	5.98	.23	3.77	CLAY	CH	.45	2	.410	13.5			
11.40	6.86	.16	2.30	CLAY	CH	.46	3	.475	13.5			
11.60	5.74	.22	3.78	CLAY	CH	.46	2	.391	13.5			
11.80	5.38	.28	5.30	CLAY	CH	.47	2	.364	13.5			
12.00	5.73	.13	2.24	CLAY	CH	.48	2	.389	13.5			
12.20	10.84	.21	1.93	SILTY CLAY TO CLAY	CL-CH	.49	3	.767	13.5			
12.40	5.85	.18	3.10	CLAY	CH	.50	2	.397	13.5			
12.60	5.74	.19	3.25	CLAY	CH	.50	2	.388	13.5			
12.80	5.98	.21	3.50	CLAY	CH	.51	2	.405	13.5			
13.00	5.74	.19	3.35	CLAY	CH	.52	2	.386	13.5			
13.20	5.86	.20	3.42	CLAY	CH	.53	2	.395	13.5			
13.40	5.62	.23	4.03	CLAY	CH	.54	2	.377	13.5			
13.60	5.74	.20	3.44	CLAY	CH	.54	2	.385	13.5			
13.80	5.98	.21	3.51	CLAY	CH	.55	2	.402	13.5			
14.00	7.65	.18	2.40	CLAY	CH	.56	3	.525	13.5			
14.20	5.86	.15	2.54	CLAY	CH	.57	2	.392	13.5			
14.40	5.74	.32	5.61	CLAY	CH	.58	2	.382	13.5			
14.60	9.74	.22	2.24	SILTY CLAY TO CLAY	CL-CH	.58	3	.678	13.5			
14.80	5.62	.29	5.09	CLAY	CH	.59	2	.372	13.5			
15.00	16.71	.78	4.67	CLAY	CH	.60	8	1.193	13.5			
15.20	19.11	.58	3.02	SILTY CLAY TO CLAY	CL-CH	.61	6	1.371	13.5			
15.40	31.11	.21	.67	SANDY SILT TO CLAYEY SILT	ML-MH	.77	5	2.247	13.5	32	33	.13
15.60	22.37	.45	2.02	CLAYEY SILT TO SILTY CLAY	MH-CL	.70	5	1.605	13.5			
15.80	12.03	.35	2.89	CLAY	CH	.63	5	.844	13.5			
16.00	16.92	.16	.97	CLAYEY SILT TO SILTY CLAY	MH-CL	.72	4	1.200	13.5			
16.20	13.97	.30	2.12	SILTY CLAY TO CLAY	CL-CH	.65	4	.997	13.5			
16.40	7.29	.25	3.41	CLAY	CH	.66	3	.492	13.5			
16.60	6.32	.12	1.97	SENSITIVE FINE GRAINED	OL-CH	.50	1	.431	13.5			
16.80	7.66	.21	2.79	CLAY	CH	.67	3	.517	13.5			
17.00	6.34	.20	3.10	CLAY	CH	.68	3	.419	13.5			
17.20	6.10	.20	3.24	CLAY	CH	.69	2	.401	13.5			
17.40	13.19	.08	.63	SENSITIVE FINE GRAINED	OL-CH	.52	3	.938	13.5			
17.60	8.38	.22	2.68	CLAY	CH	.70	4	.569	13.5			
17.80	6.45	.14	2.24	CLAY	CH	.71	3	.425	13.5			
18.00	5.98	.25	4.15	CLAY	CH	.72	2	.389	13.5			
18.20	23.65	.32	1.35	CLAYEY SILT TO SILTY CLAY	MH-CL	.82	5	1.691	13.5			
18.40	6.40	.27	4.21	CLAY	CH	.74	3	.420	13.5			
18.60	6.64	.28	4.28	CLAY	CH	.74	3	.436	13.5			
18.80	5.92	.25	4.24	CLAY	CH	.75	2	.393	13.5			
19.00	10.50	.28	2.65	CLAY	CH	.76	5	.722	13.5			
19.20	8.20	.11	1.31	SENSITIVE FINE GRAINED	OL-CH	.58	1	.565	13.5			
19.40	5.98	.33	5.50	CLAY	CH	.78	2	.385	13.5			
19.60	11.45	.23	2.02	SILTY CLAY TO CLAY	CL-CH	.78	3	.790	13.5			
19.80	5.98	.20	3.40	CLAY	CH	.79	2	.384	13.5			
20.00	6.45	.23	3.52	CLAY	CH	.80	3	.419	13.5			
20.20	7.54	.22	2.98	CLAY	CH	.81	3	.499	13.5			
20.40	6.48	.24	3.75	CLAY	CH	.82	3	.419	13.5			
20.60	5.61	.24	4.19	CLAY	CH	.82	2	.355	13.5			
20.80	8.14	.31	3.86	CLAY	CH	.83	3	.541	13.5			
21.00	9.24	.33	3.58	CLAY	CH	.84	4	.622	13.5			



RESULT OF CONE PENETRATION TEST

37M

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

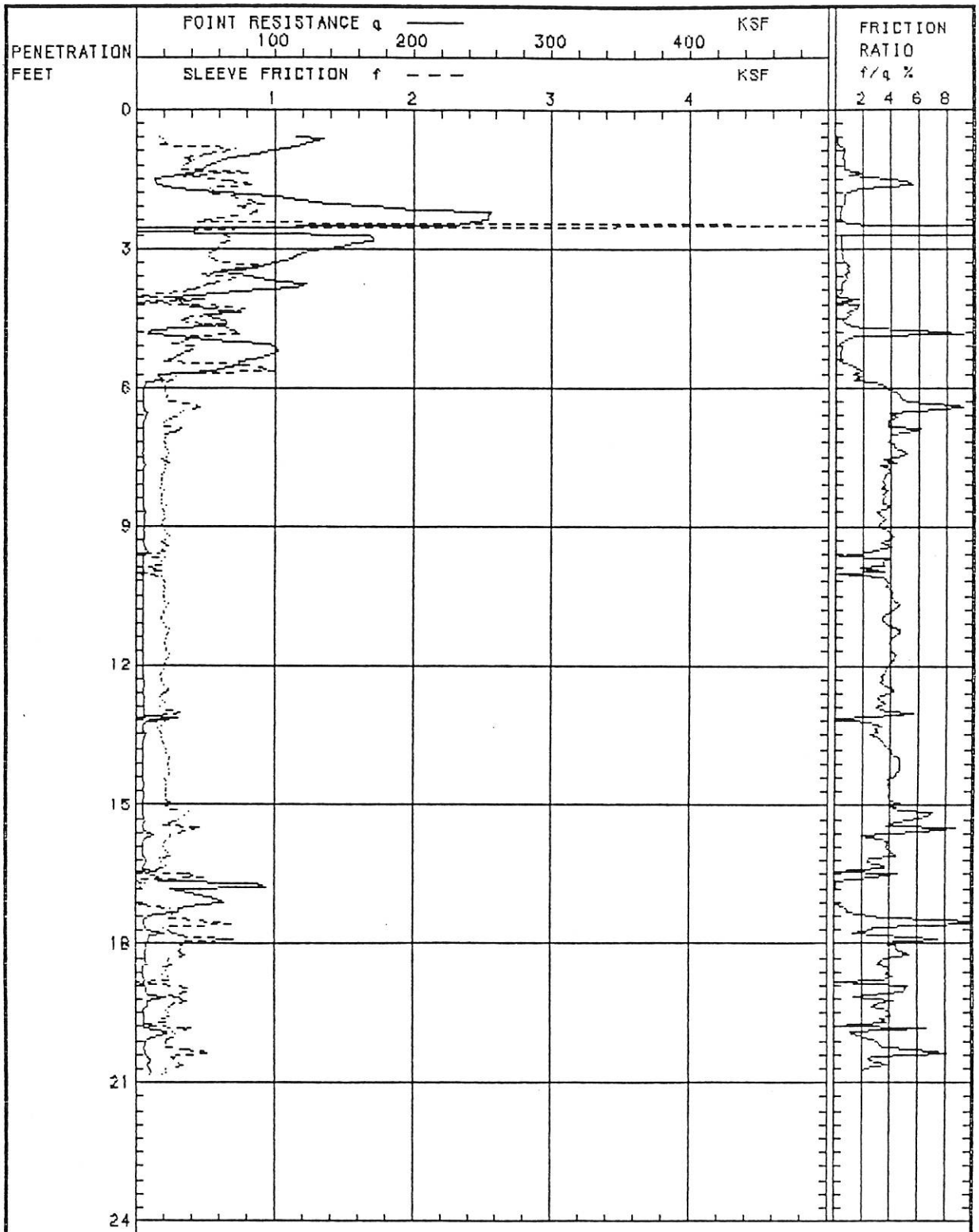
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 37M
CONE NO. : 5006
DATE : 05/07/87

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	142.95	1.19	.84	SAND TO SILTY SAND	SM-SP	.04	17			100+	42	.50+
.80	145.03	.33	.22	SAND TO SILTY SAND	SM-SP	.05	17			100+	42	.50+
1.00	30.12	.18	.60	SANDY SILT TO CLAYEY SILT	ML-MH	.05	5	2.228	13.5	69	38	.50+
1.20	34.43	.56	1.63	SANDY SILT TO CLAYEY SILT	ML-MH	.06	6	2.546	13.5	71	38	.50+
1.40	27.07	.62	2.27	CLAYEY SILT TO SILTY CLAY	MH-CL	.06	6	2.001	13.5			
1.60	102.79	.68	.66	SAND TO SILTY SAND	SM-SP	.10	12			100+	42	.50+
1.80	103.45	.70	.67	SAND TO SILTY SAND	SM-SP	.11	12			100+	42	.50+
2.00	146.90	.75	.51	SAND TO SILTY SAND	SM-SP	.12	17			100+	42	.50+
2.20	163.51	.74	.45	SAND TO SILTY SAND	SM-SP	.13	19			100+	42	.50+
2.40	212.91	.97	.46	SAND	SW-SP	.16	20			100+	44	.50+
2.60	246.61	1.03	.42	SAND	SW-SP	.17	23			100+	44	.50+
2.80	150.29	.81	.54	SAND TO SILTY SAND	SM-SP	.17	17			100+	42	.50+
3.00	88.70	.63	.71	SILTY SAND TO SANDY SILT	SM-ML	.17	14			97	42	.50+
3.20	90.25	.50	.55	SAND TO SILTY SAND	SM-SP	.19	10			94	42	.50+
3.40	77.00	.54	.71	SILTY SAND TO SANDY SILT	SM-ML	.19	12			87	40	.50+
3.60	50.01	.44	.89	SILTY SAND TO SANDY SILT	SM-ML	.20	7			72	38	.50+
3.80	10.64	.48	4.50	CLAY	CH	.15	5	.777	13.5			
4.00	11.47	.78	6.81	CLAY	CH	.16	5	.838	13.5			
4.20	64.77	.44	.69	SILTY SAND TO SANDY SILT	SM-ML	.23	10			78	39	.50+
4.40	81.25	.57	.71	SILTY SAND TO SANDY SILT	SM-ML	.24	12			85	40	.50+
4.60	103.99	.40	.38	SAND TO SILTY SAND	SM-SP	.28	12			93	42	.50+
4.80	83.14	.64	.77	SILTY SAND TO SANDY SILT	SM-ML	.26	13			84	40	.50+
5.00	97.18	.82	.84	SILTY SAND TO SANDY SILT	SM-ML	.27	15			90	41	.50+
5.20	81.35	.90	1.10	SILTY SAND TO SANDY SILT	SM-ML	.29	12			82	40	.50+
5.40	55.88	.28	.51	SILTY SAND TO SANDY SILT	SM-ML	.30	8			70	38	.50+
5.60	38.16	1.08	2.83	CLAYEY SILT TO SILTY CLAY	MH-CL	.25	9	2.808	13.5			
5.80	53.40	.53	.99	SILTY SAND TO SANDY SILT	SM-ML	.32	8			67	38	.48
6.00	78.28	1.46	1.86	SANDY SILT TO CLAYEY SILT	ML-MH	.30	14	5.776	13.5	80	39	.50+
6.20	30.29	.47	1.55	SANDY SILT TO CLAYEY SILT	ML-MH	.31	5	2.221	13.5	54	36	.18
6.40	91.20	.68	.74	SILTY SAND TO SANDY SILT	SM-ML	.35	14			83	40	.50+
6.60	146.14	.60	.41	SAND TO SILTY SAND	SM-SP	.40	17			99	42	.50+
6.80	100.87	1.10	1.10	SILTY SAND TO SANDY SILT	SM-ML	.37	16			85	40	.50+
7.00	62.45	.42	.68	SILTY SAND TO SANDY SILT	SM-ML	.38	9			69	38	.50+
7.20	36.29	.34	.92	SANDY SILT TO CLAYEY SILT	ML-MH	.36	6	2.662	13.5	56	36	.19
7.40	28.08	.36	1.30	SANDY SILT TO CLAYEY SILT	ML-MH	.37	5	2.053	13.5	48	35	.16
7.60	5.62	.21	3.77	CLAY	CH	.30	2	.394	13.5			
7.80	4.31	.26	6.05	ORGANIC MATERIAL	OL-OH	.23	2	.302	13.5			
8.00	3.70	.22	6.00	ORGANIC MATERIAL	OL-OH	.24	1	.257	13.5			
8.20	5.50	.25	4.48	CLAY	CH	.33	2	.383	13.5			
8.40	4.72	.29	6.05	ORGANIC MATERIAL	OL-OH	.25	2	.331	13.5			
8.60	6.67	.22	3.36	CLAY	CH	.34	3	.469	13.5			
8.80	4.30	.21	4.92	CLAY	CH	.35	2	.293	13.5			
9.00	4.30	.22	5.08	CLAY	CH	.36	2	.292	13.5			
9.20	4.54	.24	5.39	CLAY	CH	.37	2	.309	13.5			
9.40	4.54	.29	6.29	ORGANIC MATERIAL	OL-OH	.28	2	.316	13.5			
9.60	4.19	.33	7.94	ORGANIC MATERIAL	OL-OH	.29	2	.289	13.5			
9.80	3.83	.28	7.34	ORGANIC MATERIAL	OL-OH	.29	1	.262	13.5			
10.00	4.30	.24	5.59	ORGANIC MATERIAL	OL-OH	.30	2	.297	13.5			
10.20	4.78	.23	4.89	CLAY	CH	.41	2	.324	13.5			

10.40	3.14	.24	4.78	CLAY	CH	.42	2	.330	13.5			
10.60	4.55	.30	6.54	ORGANIC MATERIAL	OL-OH	.32	2	.313	13.5			
10.80	3.83	.32	8.37	ORGANIC MATERIAL	OL-OH	.32	1	.259	13.5			
11.00	4.54	.26	5.68	ORGANIC MATERIAL	OL-OH	.33	2	.312	13.5			
11.20	4.60	.30	6.50	ORGANIC MATERIAL	OL-OH	.34	2	.316	13.5			
11.40	3.00	.42	14.13	ORGANIC MATERIAL	OL-OH	.34	1	.197	13.5			
11.60	3.46	.34	9.76	ORGANIC MATERIAL	OL-OH	.35	1	.231	13.5			
11.80	3.70	.31	8.35	ORGANIC MATERIAL	OL-OH	.35	1	.248	13.5			
12.00	4.42	.21	4.86	CLAY	CH	.48	2	.292	13.5			
12.20	4.90	.25	5.12	CLAY	CH	.49	2	.327	13.5			
12.40	4.78	.23	4.90	CLAY	CH	.50	2	.317	13.5			
12.60	4.66	.25	5.40	CLAY	CH	.50	2	.308	13.5			
12.80	4.54	.26	5.67	ORGANIC MATERIAL	OL-OH	.38	2	.308	13.5			
13.00	4.30	.30	7.00	ORGANIC MATERIAL	OL-OH	.39	2	.290	13.5			
13.20	4.43	.29	6.49	ORGANIC MATERIAL	OL-OH	.40	2	.298	13.5			
13.40	5.02	.09	1.84	SENSITIVE FINE GRAINED	OL-CH	.40	1	.342	13.5			
13.60	7.72	.24	3.17	CLAY	CH	.54	3	.531	13.5			
13.80	4.54	.19	4.28	CLAY	CH	.55	2	.296	13.5			
14.00	4.84	.18	3.67	CLAY	CH	.56	2	.317	13.5			
14.20	4.90	.22	4.43	CLAY	CH	.57	2	.321	13.5			
14.40	4.90	.13	2.74	CLAY	CH	.58	2	.320	13.5			
14.60	4.54	.27	5.94	ORGANIC MATERIAL	OL-OH	.44	2	.304	13.5			
14.80	5.25	.22	4.13	CLAY	CH	.59	2	.345	13.5			
15.00	5.73	.27	4.76	CLAY	CH	.60	2	.380	13.5			
15.20	4.31	.22	5.20	CLAY	CH	.61	2	.274	13.5			
15.40	4.78	.24	5.02	CLAY	CH	.62	2	.308	13.5			
15.60	4.78	.22	4.56	CLAY	CH	.62	2	.308	13.5			
15.80	4.66	.23	5.02	CLAY	CH	.63	2	.299	13.5			
16.00	4.43	.25	5.54	ORGANIC MATERIAL	OL-OH	.48	2	.292	13.5			
16.20	4.66	.29	6.17	ORGANIC MATERIAL	OL-OH	.49	2	.310	13.5			
16.40	6.47	.20	3.04	CLAY	CH	.66	3	.430	13.5			
16.60	5.38	.22	4.06	CLAY	CH	.66	2	.349	13.5			
16.80	7.55	.74	9.86	ORGANIC MATERIAL	OL-OH	.50	3	.522	13.5			
17.00	8.13	.19	2.40	CLAY	CH	.68	3	.552	13.5			
17.20	5.02	.23	4.55	CLAY	CH	.69	2	.321	13.5			
17.40	7.58	.26	3.39	CLAY	CH	.70	3	.510	13.5			
17.60	4.54	.23	4.99	CLAY	CH	.70	2	.284	13.5			
17.80	5.80	.25	4.28	CLAY	CH	.71	2	.377	13.5			
18.00	16.66	.23	1.40	CLAYEY SILT TO SILTY CLAY	MH-CL	.81	3	1.174	13.5			
18.20	7.47	.35	4.62	CLAY	CH	.73	3	.499	13.5			
18.40	12.74	.41	3.23	CLAY	CH	.74	6	.889	13.5			
18.60	29.53	.12	.42	SANDY SILT TO CLAYEY SILT	ML-MH	.93	5	2.118	13.5	26	32	.12
18.80	6.69	.24	3.59	CLAY	CH	.75	3	.440	13.5			
19.00	10.78	.29	2.71	CLAY	CH	.76	5	.742	13.5			
19.20	10.06	.34	3.36	CLAY	CH	.77	4	.688	13.5			
19.40	4.30	.26	6.04	ORGANIC MATERIAL	OL-OH	.58	2	.275	13.5			
19.60	9.46	.25	2.63	CLAY	CH	.78	4	.643	13.5			
19.80	5.29	.32	6.03	ORGANIC MATERIAL	OL-OH	.59	2	.348	13.5			
20.00	4.90	.28	5.68	ORGANIC MATERIAL	OL-OH	.60	2	.318	13.5			
20.20	23.79	.18	.76	SANDY SILT TO CLAYEY SILT	ML-MH	1.01	4	1.688	13.5	19	31	.11
20.40	6.58	.25	3.77	CLAY	CH	.82	3	.427	13.5			



RESULT OF CONE PENETRATION TEST

37S

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

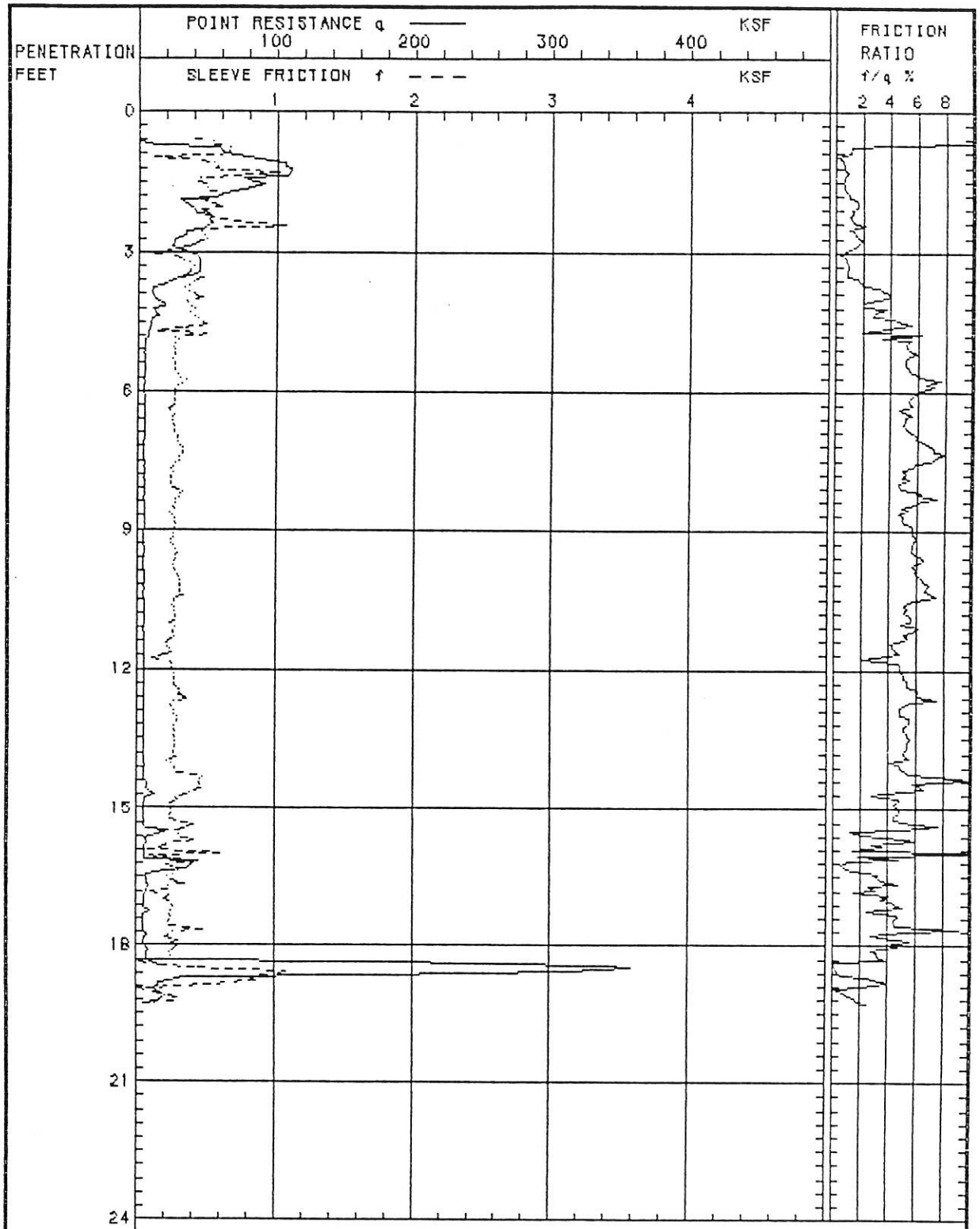
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 37S
CONE NO. : 5006
DATE : 05/07/87

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	125.27	.18	.14	SAND TO SILTY SAND	SM-SP	.04	15			100+	42	.50+
.80	114.87	.45	.39	SAND TO SILTY SAND	SM-SP	.05	13			100+	42	.50+
1.00	78.00	.58	.75	SILTY SAND TO SANDY SILT	SM-ML	.05	12			100+	42	.50+
1.20	54.63	.57	1.04	SANDY SILT TO CLAYEY SILT	ML-MH	.06	10	4.042	13.5	87	40	.50+
1.40	35.87	.32	.88	SANDY SILT TO CLAYEY SILT	ML-MH	.07	6	2.652	13.5	71	39	.50+
1.60	14.22	.55	3.84	CLAY	CH	.06	6	1.049	13.5			
1.80	61.64	.55	.90	SILTY SAND TO SANDY SILT	SM-ML	.10	9			87	40	.50+
2.00	128.60	.96	.75	SAND TO SILTY SAND	SM-SP	.12	15			100+	42	.50+
2.20	229.08	.87	.38	SAND	SW-SP	.14	21			100+	44	.50+
2.40	249.00	.49	.20	SAND	SW-SP	.16	23			100+	44	.50+
2.60	.00	.52	999.00	ORGANIC MATERIAL	OL-OH	.08	1	-.006	13.5			
2.80	170.57	.68	.40	SAND TO SILTY SAND	SM-SP	.17	20			100+	42	.50+
3.00	137.09	.54	.39	SAND TO SILTY SAND	SM-SP	.18	16			100+	42	.50+
3.20	113.32	.53	.47	SAND TO SILTY SAND	SM-SP	.19	13			100+	42	.50+
3.40	88.70	.70	.79	SILTY SAND TO SANDY SILT	SM-ML	.19	14			94	41	.50+
3.60	81.28	.75	.92	SILTY SAND TO SANDY SILT	SM-ML	.20	12			89	40	.50+
3.80	119.19	.57	.48	SAND TO SILTY SAND	SM-SP	.23	14			100+	42	.50+
4.00	42.70	.10	.23	SILTY SAND TO SANDY SILT	SM-ML	.22	6			67	37	.50+
4.20	33.47	.27	.81	SANDY SILT TO CLAYEY SILT	ML-MH	.21	6	2.464	13.5	62	37	.29
4.40	62.77	.86	1.37	SANDY SILT TO CLAYEY SILT	ML-MH	.22	12	4.634	13.5	77	39	.50+
4.60	65.02	.41	.63	SILTY SAND TO SANDY SILT	SM-ML	.25	10			77	39	.50+
4.80	10.17	.49	4.82	CLAY	CH	.19	4	.739	13.5			
5.00	73.13	.32	.44	SILTY SAND TO SANDY SILT	SM-ML	.27	11			79	39	.50+
5.20	102.08	.69	.68	SAND TO SILTY SAND	SM-SP	.31	12			89	41	.50+
5.40	79.41	.23	.29	SAND TO SILTY SAND	SM-SP	.32	9			80	40	.50+
5.60	61.01	.94	1.55	SANDY SILT TO CLAYEY SILT	ML-MH	.28	11	4.478	13.5	73	39	.50+
5.80	17.91	.28	1.54	CLAYEY SILT TO SILTY CLAY	MH-CL	.26	4	1.309	13.5			
6.00	5.62	.25	4.44	CLAY	CH	.24	2	.398	13.5			
6.20	4.78	.22	4.60	CLAY	CH	.25	2	.336	13.5			
6.40	5.02	.45	8.91	ORGANIC MATERIAL	OL-OH	.19	2	.358	13.5			
6.60	7.30	.31	4.21	CLAY	CH	.26	3	.521	13.5			
6.80	5.26	.20	3.79	CLAY	CH	.27	2	.369	13.5			
7.00	5.26	.20	3.84	CLAY	CH	.28	2	.369	13.5			
7.20	5.14	.21	4.00	CLAY	CH	.29	2	.359	13.5			
7.40	4.66	.24	5.11	CLAY	CH	.30	2	.323	13.5			
7.60	5.38	.21	3.98	CLAY	CH	.30	2	.376	13.3			
7.80	5.26	.19	3.68	CLAY	CH	.31	2	.366	13.5			
8.00	5.44	.19	3.46	CLAY	CH	.32	2	.379	13.5			
8.20	5.26	.19	3.57	CLAY	CH	.33	2	.365	13.5			
8.40	5.38	.19	3.49	CLAY	CH	.34	2	.373	13.5			
8.60	5.50	.21	3.77	CLAY	CH	.34	2	.382	13.5			
8.80	5.98	.21	3.50	CLAY	CH	.35	2	.417	13.5			
9.00	5.98	.19	3.13	CLAY	CH	.36	2	.416	13.5			
9.20	5.74	.20	3.43	CLAY	CH	.37	2	.398	13.5			
9.40	5.62	.21	3.73	CLAY	CH	.38	2	.389	13.5			

9.60	7.78	.12	1.49	SENSITIVE FINE GRAINED	OL-CH	.29	1	.555	13.5			
9.80	5.38	.19	3.50	CLAY	CH	.39	2	.370	13.5			
10.00	6.08	.10	1.63	SENSITIVE FINE GRAINED	OL-CH	.30	1	.428	13.5			
10.20	5.38	.20	3.80	CLAY	CH	.41	2	.369	13.5			
10.40	5.02	.21	4.10	CLAY	CH	.42	2	.341	13.5			
10.60	4.84	.21	4.30	CLAY	CH	.42	2	.327	13.5			
10.80	5.02	.21	4.19	CLAY	CH	.43	2	.340	13.5			
11.00	5.50	.19	3.41	CLAY	CH	.44	2	.375	13.5			
11.20	5.26	.23	4.43	CLAY	CH	.45	2	.356	13.5			
11.40	5.38	.25	4.63	CLAY	CH	.46	2	.365	13.5			
11.60	5.38	.22	4.01	CLAY	CH	.46	2	.364	13.5			
11.80	5.50	.22	4.04	CLAY	CH	.47	2	.372	13.5			
12.00	5.44	.21	3.92	CLAY	CH	.48	2	.367	13.5			
12.20	5.26	.18	3.46	CLAY	CH	.49	2	.357	13.5			
12.40	5.68	.20	3.49	CLAY	CH	.50	2	.384	13.5			
12.60	5.50	.21	3.81	CLAY	CH	.50	2	.370	13.5			
12.80	5.74	.20	3.54	CLAY	CH	.51	2	.387	13.5			
13.00	5.86	.27	4.61	CLAY	CH	.52	2	.396	13.5			
13.20	19.57	.10	.53	SANDY SILT TO CLAYEY SILT	ML-MH	.66	3	1.401	13.5	21	31	.11
13.40	5.50	.17	3.04	CLAY	CH	.54	2	.368	13.5			
13.60	5.62	.19	3.31	CLAY	CH	.54	2	.376	13.5			
13.80	5.50	.22	3.93	CLAY	CH	.55	2	.366	13.5			
14.00	5.26	.24	4.66	CLAY	CH	.56	2	.348	13.5			
14.20	5.14	.24	4.63	CLAY	CH	.57	2	.338	13.5			
14.40	5.50	.23	4.13	CLAY	CH	.58	2	.365	13.5			
14.60	5.62	.21	3.73	CLAY	CH	.58	2	.373	13.5			
14.80	5.68	.22	3.90	CLAY	CH	.59	2	.377	13.5			
15.00	5.38	.24	4.54	CLAY	CH	.60	2	.354	13.5			
15.20	5.38	.37	6.91	ORGANIC MATERIAL	OL-OH	.46	2	.365	13.5			
15.40	5.87	.24	4.17	CLAY	CH	.62	2	.389	13.5			
15.60	9.47	.28	2.92	CLAY	CH	.62	4	.656	13.5			
15.80	5.62	.22	3.84	CLAY	CH	.63	2	.370	13.5			
16.00	5.50	.20	3.70	CLAY	CH	.64	2	.360	13.5			
16.20	7.28	.20	2.79	CLAY	CH	.65	3	.491	13.5			
16.40	5.73	.10	1.81	SENSITIVE FINE GRAINED	OL-CH	.49	1	.398	13.5			
16.60	16.97	.25	1.49	CLAYEY SILT TO SILTY CLAY	MH-CL	.75	4	1.202	13.5			
16.80	60.86	.22	.36	SILTY SAND TO SANDY SILT	SM-ML	.92	9			49	35	.17
17.00	55.33	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.93	8			46	34	.16
17.20	39.66	.19	.47	SANDY SILT TO CLAYEY SILT	ML-MH	.86	7	2.874	13.5	38	33	.14
17.40	10.86	.25	2.34	SILTY CLAY TO CLAY	CL-CH	.70	3	.753	13.5			
17.60	6.50	.58	8.99	ORGANIC MATERIAL	OL-OH	.53	3	.442	13.5			
17.80	15.69	.27	1.74	CLAYEY SILT TO SILTY CLAY	MH-CL	.80	3	1.103	13.5			
18.00	8.39	.32	3.79	CLAY	CH	.72	4	.568	13.5			
18.20	6.57	.34	5.10	CLAY	CH	.73	3	.433	13.5			
18.40	7.51	.25	3.32	CLAY	CH	.74	3	.502	13.5			
18.60	5.38	.21	3.87	CLAY	CH	.74	2	.344	13.5			
18.80	6.35	.12	1.96	SENSITIVE FINE GRAINED	OL-CH	.56	1	.429	13.5			
19.00	7.41	.37	5.04	CLAY	CH	.76	3	.493	13.5			
19.20	15.36	.29	1.87	CLAYEY SILT TO SILTY CLAY	MH-CL	.86	3	1.074	13.5			
19.40	7.22	.23	3.21	CLAY	CH	.79	3	.477	13.5			
19.60	5.98	.22	3.69	CLAY	CH	.78	2	.385	13.5			
19.80	5.98	.19	3.24	CLAY	CH	.79	2	.384	13.5			
20.00	17.73	.28	1.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.90	4	1.217	13.5			
20.20	6.46	.21	3.18	CLAY	CH	.81	3	.419	13.5			
20.40	7.56	.44	5.82	CLAY	CH	.82	3	.499	13.5			
20.60	9.58	.27	2.80	CLAY	CH	.82	4	.649	13.5			
20.80	10.41	.21	1.98	SILTY CLAY TO CLAY	CL-CH	.83	3	.709	13.5			



RESULT OF CONE PENETRATION TEST

38N

JOB NUMBER: 0187-0206

CONE NUMBER: 5006

LOCATION: ISLE DENIERES

GROUND SURFACE ELEV.: 0.0 FEET

DEPTH TO GROUNDWATER: 0.0 FEET

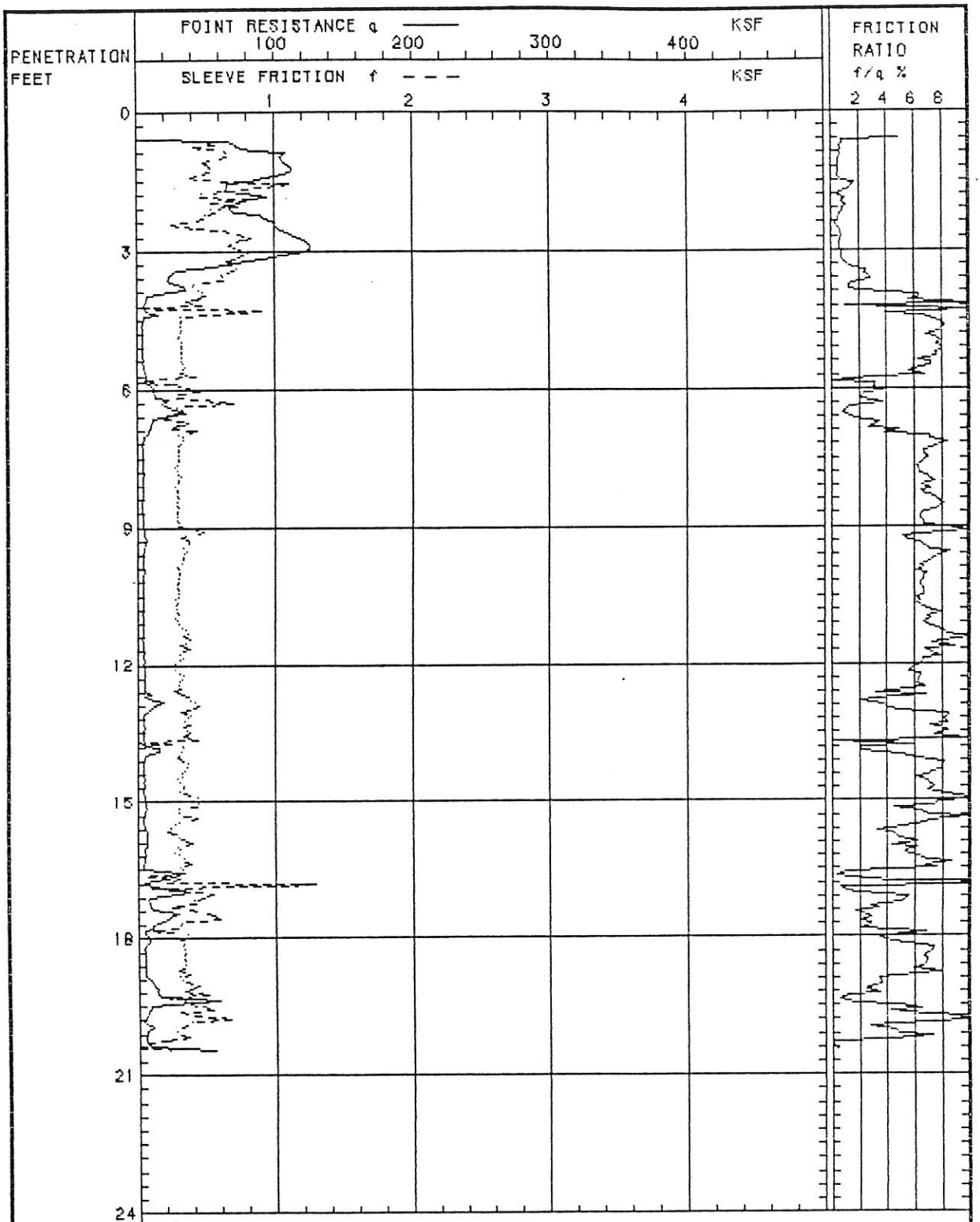
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 38N
CONE NO. : 5006
DATE : 05/07/87

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	1.20	.47	39.34	ORGANIC MATERIAL	OL-OH	.02	1	.087	13.5			
.80	59.17	.60	1.01	SILTY SAND TO SANDY SILT	SM-ML	.04	9			94	41	.50+
1.00	87.37	.50	.57	SAND TO SILTY SAND	SM-SP	.06	10			100+	42	.50+
1.20	108.18	.56	.51	SAND TO SILTY SAND	SM-SP	.07	12			100+	42	.50+
1.40	91.94	1.23	1.34	SILTY SAND TO SANDY SILT	SM-ML	.08	14			100+	42	.50+
1.60	86.55	.52	.60	SILTY SAND TO SANDY SILT	SM-ML	.09	13			100+	42	.50+
1.80	59.53	.68	1.15	SILTY SAND TO SANDY SILT	SM-ML	.10	9			85	40	.50+
2.00	36.42	.60	1.65	SANDY SILT TO CLAYEY SILT	ML-MH	.10	6	2.691	13.5	70	38	.50+
2.20	46.84	.50	1.07	SANDY SILT TO CLAYEY SILT	ML-MH	.11	8	3.462	13.5	76	39	.50+
2.40	51.76	.92	1.78	SANDY SILT TO CLAYEY SILT	ML-MH	.12	9	3.825	13.5	78	39	.50+
2.60	33.95	.47	1.38	SANDY SILT TO CLAYEY SILT	ML-MH	.13	6	2.595	13.5	66	37	.50+
2.80	25.64	.46	1.78	CLAYEY SILT TO SILTY CLAY	MH-CL	.13	6	1.890	13.5			
3.00	36.86	.19	.52	SANDY SILT TO CLAYEY SILT	ML-MH	.15	7	2.719	13.5	67	37	.50+
3.20	43.99	.36	.82	SANDY SILT TO CLAYEY SILT	ML-MH	.16	8	3.247	13.5	71	38	.50+
3.40	44.53	.38	.86	SANDY SILT TO CLAYEY SILT	ML-MH	.17	8	3.286	13.5	70	38	.50+
3.60	26.67	.37	1.39	SANDY SILT TO CLAYEY SILT	ML-MH	.18	5	1.962	13.5	60	36	.23
3.80	10.49	.40	3.81	CLAY	CH	.15	5	.766	13.5			
4.00	13.26	.36	2.74	SILTY CLAY TO CLAY	CL-CH	.16	4	.971	13.5			
4.20	15.20	.38	2.48	SILTY CLAY TO CLAY	CL-CH	.17	4	1.114	13.5			
4.40	12.56	.42	3.33	CLAY	CH	.18	6	.918	13.5			
4.60	8.79	.41	4.66	CLAY	CH	.18	4	.637	13.5			
4.80	7.89	.24	3.00	CLAY	CH	.19	3	.570	13.5			
5.00	5.14	.26	5.11	CLAY	CH	.20	2	.366	13.5			
5.20	4.78	.27	5.59	ORGANIC MATERIAL	OL-OH	.16	2	.342	13.5			
5.40	5.26	.27	5.09	CLAY	CH	.22	2	.374	13.5			
5.60	4.96	.28	5.63	CLAY	CH	.22	2	.351	13.5			
5.80	4.66	.33	7.12	ORGANIC MATERIAL	OL-OH	.17	2	.332	13.5			
6.00	4.42	.27	6.06	ORGANIC MATERIAL	OL-OH	.18	2	.314	13.5			
6.20	5.02	.27	5.34	CLAY	CH	.25	2	.354	13.5			
6.40	4.78	.23	4.78	CLAY	CH	.26	2	.335	13.5			
6.60	5.02	.26	5.09	CLAY	CH	.26	2	.352	13.5			
6.80	5.14	.26	4.97	CLAY	CH	.27	2	.361	13.5			
7.00	4.96	.29	5.75	ORGANIC MATERIAL	OL-OH	.21	2	.352	13.5			
7.20	4.54	.32	7.05	ORGANIC MATERIAL	OL-OH	.22	2	.320	13.5			
7.40	4.12	.32	7.76	ORGANIC MATERIAL	OL-OH	.22	1	.289	13.5			
7.60	4.66	.27	5.74	ORGANIC MATERIAL	OL-OH	.23	2	.329	13.5			
7.80	5.02	.25	5.00	CLAY	CH	.31	2	.349	13.5			
8.00	5.26	.24	4.65	CLAY	CH	.32	2	.366	13.5			
8.20	5.26	.30	5.76	CLAY	CH	.33	2	.345	13.5			
8.40	4.60	.28	6.19	ORGANIC MATERIAL	OL-OH	.25	2	.312	13.5			
8.60	5.02	.25	4.98	CLAY	CH	.34	2	.349	13.5			
8.80	5.38	.27	5.03	CLAY	CH	.35	2	.372	13.5			
9.00	4.66	.26	5.65	ORGANIC MATERIAL	OL-OH	.27	2	.325	13.5			
9.20	4.30	.25	5.92	ORGANIC MATERIAL	OL-OH	.28	2	.298	13.5			
9.40	4.78	.27	5.61	ORGANIC MATERIAL	OL-OH	.28	2	.333	13.5			

9.60	4.42	.28	6.34	ORGANIC MATERIAL	OL-OH	.29	2	.306	13.5			
9.80	4.54	.26	5.78	ORGANIC MATERIAL	OL-OH	.29	2	.315	13.5			
10.00	4.78	.30	6.20	ORGANIC MATERIAL	OL-OH	.30	2	.332	13.5			
10.20	4.60	.31	6.81	ORGANIC MATERIAL	OL-OH	.31	2	.318	13.5			
10.40	4.54	.32	7.14	ORGANIC MATERIAL	OL-OH	.31	2	.313	13.5			
10.60	5.02	.26	5.21	CLAY	CH	.42	2	.340	13.5			
10.80	5.14	.27	5.31	CLAY	CH	.43	2	.349	13.5			
11.00	4.90	.26	5.26	CLAY	CH	.44	2	.331	13.5			
11.20	4.78	.26	5.36	CLAY	CH	.45	2	.321	13.5			
11.40	5.02	.23	4.65	CLAY	CH	.46	2	.339	13.5			
11.60	5.26	.23	4.33	CLAY	CH	.46	2	.355	13.5			
11.80	5.26	.18	3.34	CLAY	CH	.47	2	.355	13.5			
12.00	5.26	.25	4.72	CLAY	CH	.48	2	.354	13.5			
12.20	5.14	.27	5.20	CLAY	CH	.49	2	.345	13.3			
12.40	5.08	.28	5.48	CLAY	CH	.50	2	.339	13.5			
12.60	4.90	.33	6.72	ORGANIC MATERIAL	OL-OH	.38	2	.335	13.5			
12.80	5.02	.25	4.97	CLAY	CH	.51	2	.334	13.5			
13.00	5.38	.28	5.16	CLAY	CH	.52	2	.360	13.5			
13.20	5.26	.28	5.40	CLAY	CH	.53	2	.350	13.5			
13.40	5.14	.27	5.31	CLAY	CH	.54	2	.341	13.5			
13.60	5.26	.33	6.24	ORGANIC MATERIAL	OL-OH	.41	2	.359	13.5			
13.80	5.26	.27	5.07	CLAY	CH	.55	2	.349	13.5			
14.00	5.26	.22	4.17	CLAY	CH	.56	2	.348	13.5			
14.20	5.38	.29	5.34	CLAY	CH	.57	2	.357	13.5			
14.40	6.30	.36	5.68	CLAY	CH	.58	3	.424	13.5			
14.60	8.63	.44	5.15	CLAY	CH	.58	4	.596	13.5			
14.80	6.22	.29	4.74	CLAY	CH	.59	2	.417	13.5			
15.00	5.26	.25	4.71	CLAY	CH	.60	2	.345	13.5			
15.20	5.50	.24	4.43	CLAY	CH	.61	2	.362	13.5			
15.40	6.20	.37	5.91	CLAY	CH	.62	2	.414	13.5			
15.60	10.62	.32	2.98	CLAY	CH	.62	5	.740	13.5			
15.80	6.96	.22	3.17	CLAY	CH	.63	3	.468	13.5			
16.00	5.74	.37	6.37	ORGANIC MATERIAL	OL-OH	.48	2	.389	13.5			
16.20	42.06	.42	1.00	SANDY SILT TO CLAYEY SILT	ML-MH	.81	9	3.055	13.5	41	34	.15
16.40	14.98	.28	1.88	SILTY CLAY TO CLAY	CL-CH	.66	4	1.061	13.5			
16.60	7.35	.33	4.50	CLAY	CH	.66	3	.495	13.5			
16.80	7.41	.17	2.31	CLAY	CH	.67	3	.499	13.5			
17.00	5.74	.22	3.84	CLAY	CH	.68	2	.375	13.5			
17.20	7.82	.23	2.98	CLAY	CH	.69	3	.528	13.5			
17.40	5.44	.24	4.48	CLAY	CH	.70	2	.351	13.5			
17.60	5.38	.36	6.70	ORGANIC MATERIAL	OL-OH	.53	2	.360	13.5			
17.80	7.21	.22	3.07	CLAY	CH	.71	3	.481	13.5			
18.00	5.96	.26	4.30	CLAY	CH	.72	2	.388	13.5			
18.20	7.65	.21	2.75	CLAY	CH	.73	3	.513	13.5			
18.40	253.65	.16	.06	SAND	SW-SP	1.20	24			91	13	.50+
18.60	243.28	1.63	.67	SAND	SW-SP	1.21	23			89	43	.50+
18.80	20.62	.61	2.94	SILTY CLAY TO CLAY	CL-CH	.75	6	1.472	13.5			
19.00	14.85	.29	1.94	SILTY CLAY TO CLAY	CL-CH	.76	4	1.044	13.5			
19.20	17.55	.27	1.52	CLAYEY SILT TO SILTY CLAY	MH-CL	.86	4	1.236	13.5			



RESULT OF CONE PENETRATION TEST

38M

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

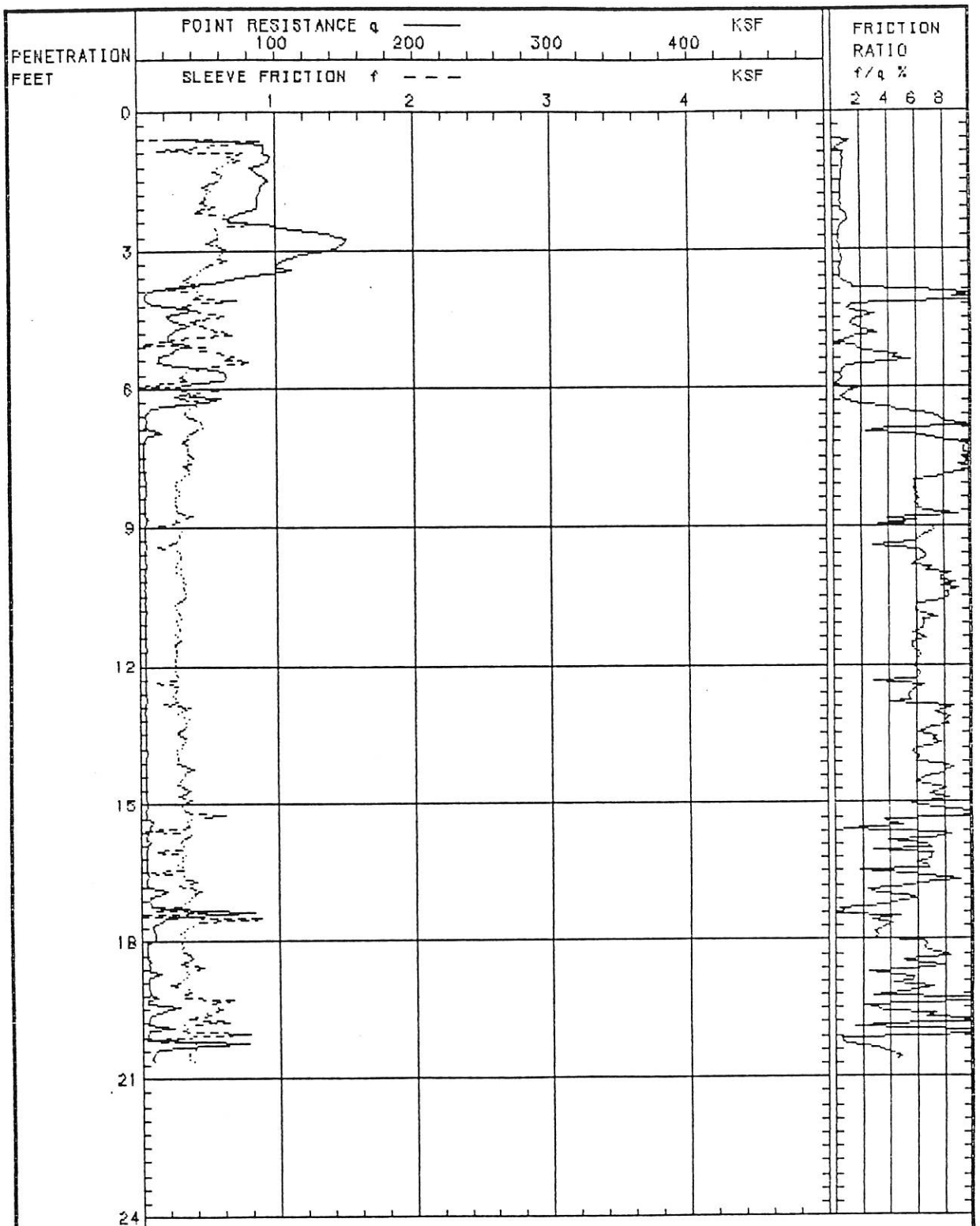
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 38M
CONE NO. : 5006
DATE : 05/07/87

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	33.58	.27	.81	SANDY SILT TO CLAYEY SILT	ML-MH	.03	6	2.485	13.5	73	38	.50+
.80	78.65	.53	.68	SILTY SAND TO SANDY SILT	SM-ML	.04	12			100+	42	.50+
1.00	105.13	.62	.59	SAND TO SILTY SAND	SM-SP	.06	12			100+	42	.50+
1.20	112.60	.49	.44	SAND TO SILTY SAND	SM-SP	.07	13			100+	42	.50+
1.40	97.55	.43	.44	SAND TO SILTY SAND	SM-SP	.08	11			100+	42	.50+
1.60	66.10	1.91	2.89	SANDY SILT TO CLAYEY SILT	ML-MH	.08	12	4.891	13.5	73	41	.50+
1.80	87.27	.61	.70	SILTY SAND TO SANDY SILT	SM-ML	.10	13			100+	42	.50+
2.00	71.25	.65	.91	SILTY SAND TO SANDY SILT	SM-ML	.11	11			93	41	.50+
2.20	80.54	.54	.67	SILTY SAND TO SANDY SILT	SM-ML	.12	12			98	42	.50+
2.40	100.41	.58	.57	SAND TO SILTY SAND	SM-SP	.14	12			100+	42	.50+
2.60	108.35	.68	.63	SAND TO SILTY SAND	SM-SP	.16	12			100+	42	.50+
2.80	123.05	.73	.59	SAND TO SILTY SAND	SM-SP	.17	14			100+	42	.50+
3.00	121.58	.60	.49	SAND TO SILTY SAND	SM-SP	.19	14			100+	42	.50+
3.20	86.45	.69	.79	SILTY SAND TO SANDY SILT	SM-ML	.18	13			94	41	.50+
3.40	37.09	.52	1.39	SANDY SILT TO CLAYEY SILT	ML-MH	.17	7	2.735	13.5	66	37	.50+
3.60	23.34	.61	2.59	CLAYEY SILT TO SILTY CLAY	MH-CL	.16	5	1.717	13.5			
3.80	34.78	.43	1.24	SANDY SILT TO CLAYEY SILT	ML-MH	.19	6	2.562	13.5	64	37	.39
4.00	7.53	.46	6.17	CLAY	CH	.16	3	.546	13.5			
4.20	4.78	.26	5.48	CLAY	CH	.17	2	.342	13.5			
4.40	10.31	.32	3.08	CLAY	CH	.18	4	.751	13.5			
4.60	3.95	.32	7.99	ORGANIC MATERIAL	OL-OH	.14	1	.282	13.5			
4.80	4.30	.33	7.74	ORGANIC MATERIAL	OL-OH	.14	2	.308	13.5			
5.00	4.24	.32	7.55	ORGANIC MATERIAL	OL-OH	.15	2	.303	13.5			
5.20	4.18	.32	7.76	ORGANIC MATERIAL	OL-OH	.16	2	.298	13.5			
5.40	4.96	.33	6.72	ORGANIC MATERIAL	OL-OH	.16	2	.356	13.5			
5.60	5.50	.33	5.96	CLAY	CH	.22	2	.391	13.5			
5.80	5.99	.17	2.86	CLAY	CH	.23	2	.426	13.5			
6.00	12.19	.38	3.15	CLAY	CH	.24	5	.885	13.5			
6.20	18.84	.30	1.62	CLAYEY SILT TO SILTY CLAY	MH-CL	.28	4	1.375	13.5			
6.40	25.32	.42	1.66	CLAYEY SILT TO SILTY CLAY	MH-CL	.29	6	1.854	13.5			
6.60	18.11	.28	1.53	CLAYEY SILT TO SILTY CLAY	MH-CL	.30	4	1.319	13.5			
6.80	9.80	.28	2.83	CLAY	CH	.27	4	.706	13.5			
7.00	6.35	.32	5.04	CLAY	CH	.29	3	.450	13.5			
7.20	3.83	.31	8.02	ORGANIC MATERIAL	OL-OH	.22	1	.267	13.5			
7.40	4.54	.30	6.67	ORGANIC MATERIAL	OL-OH	.22	2	.320	13.5			
7.60	4.54	.33	7.19	ORGANIC MATERIAL	OL-OH	.23	2	.320	13.5			
7.80	4.72	.30	6.30	ORGANIC MATERIAL	OL-OH	.23	2	.332	13.5			
8.00	4.19	.30	7.25	ORGANIC MATERIAL	OL-OH	.24	2	.292	13.5			
8.20	4.30	.29	6.80	ORGANIC MATERIAL	OL-OH	.25	2	.300	13.5			
8.40	3.95	.30	7.59	ORGANIC MATERIAL	OL-OH	.25	1	.274	13.5			
8.60	3.83	.30	7.77	ORGANIC MATERIAL	OL-OH	.26	1	.264	13.5			
8.80	4.54	.29	6.41	ORGANIC MATERIAL	OL-OH	.26	2	.317	13.5			
9.00	4.66	.31	6.59	ORGANIC MATERIAL	OL-OH	.27	2	.325	13.5			
9.20	5.85	.36	6.21	ORGANIC MATERIAL	OL-OH	.28	2	.413	13.5			
9.40	5.50	.36	6.52	ORGANIC MATERIAL	OL-OH	.28	2	.387	13.5			

9.60	4.18	.34	8.18	ORGANIC MATERIAL	OL-OH	.29	2	.288	13.5			
9.80	4.54	.31	6.78	ORGANIC MATERIAL	OL-OH	.29	2	.315	13.5			
10.00	4.78	.36	7.46	ORGANIC MATERIAL	OL-OH	.30	2	.332	13.5			
10.20	4.54	.30	6.54	ORGANIC MATERIAL	OL-OH	.31	2	.314	13.5			
10.40	4.54	.30	6.66	ORGANIC MATERIAL	OL-OH	.31	2	.313	13.5			
10.60	4.54	.29	6.29	ORGANIC MATERIAL	OL-OH	.32	2	.313	13.5			
10.80	4.19	.29	6.86	ORGANIC MATERIAL	OL-OH	.32	2	.286	13.5			
11.00	4.06	.29	7.03	ORGANIC MATERIAL	OL-OH	.33	1	.277	13.5			
11.20	4.54	.34	7.41	ORGANIC MATERIAL	OL-OH	.34	2	.312	13.5			
11.40	3.83	.36	9.38	ORGANIC MATERIAL	OL-OH	.34	1	.258	13.5			
11.60	4.30	.35	8.06	ORGANIC MATERIAL	OL-OH	.35	2	.293	13.5			
11.80	4.30	.32	7.55	ORGANIC MATERIAL	OL-OH	.35	2	.293	13.5			
12.00	4.54	.30	6.50	ORGANIC MATERIAL	OL-OH	.36	2	.309	13.5			
12.20	5.38	.31	5.82	CLAY	CH	.49	2	.362	13.5			
12.40	4.96	.32	6.35	ORGANIC MATERIAL	OL-OH	.37	2	.340	13.5			
12.60	7.36	.28	3.78	CLAY	CH	.50	3	.508	13.5			
12.80	15.66	.39	2.47	SILTY CLAY TO CLAY	CL-CH	.51	4	1.122	13.5			
13.00	7.92	.33	4.20	CLAY	CH	.52	3	.548	13.5			
13.20	4.30	.41	9.64	ORGANIC MATERIAL	OL-OH	.40	2	.289	13.5			
13.40	4.55	.31	6.73	ORGANIC MATERIAL	OL-OH	.40	2	.307	13.5			
13.60	4.54	.43	9.46	ORGANIC MATERIAL	OL-OH	.41	2	.306	13.5			
13.80	10.53	.33	3.13	CLAY	CH	.55	5	.739	13.5			
14.00	5.68	.31	5.46	CLAY	CH	.56	2	.380	13.5			
14.20	4.54	.36	8.03	ORGANIC MATERIAL	OL-OH	.43	2	.305	13.5			
14.40	4.60	.32	6.87	ORGANIC MATERIAL	OL-OH	.43	2	.309	13.5			
14.60	4.66	.32	6.97	ORGANIC MATERIAL	OL-OH	.44	2	.313	13.5			
14.80	4.54	.32	7.14	ORGANIC MATERIAL	OL-OH	.44	2	.304	13.5			
15.00	5.13	.46	9.00	ORGANIC MATERIAL	OL-OH	.45	2	.346	13.5			
15.20	5.76	.30	5.25	CLAY	CH	.61	2	.382	13.5			
15.40	4.30	.37	8.64	ORGANIC MATERIAL	OL-OH	.46	2	.295	13.5			
15.60	5.72	.25	4.36	CLAY	CH	.62	2	.377	13.5			
15.80	6.45	.34	5.26	CLAY	CH	.63	3	.431	13.5			
16.00	5.88	.30	5.11	CLAY	CH	.64	2	.388	13.5			
16.20	5.62	.31	5.51	CLAY	CH	.65	2	.368	13.5			
16.40	4.54	.35	7.73	ORGANIC MATERIAL	OL-OH	.49	2	.300	13.5			
16.60	29.28	.34	1.15	SANDY SILT TO CLAYEY SILT	ML-MH	.83	5	2.108	13.5	28	32	.12
16.80	4.78	.74	15.40	ORGANIC MATERIAL	OL-OH	.50	2	.317	13.5			
17.00	33.93	.48	1.42	SANDY SILT TO CLAYEY SILT	ML-MH	.85	6	2.450	13.5	32	33	.13
17.20	8.06	.37	4.65	CLAY	CH	.69	3	.546	13.5			
17.40	20.32	.51	2.49	SILTY CLAY TO CLAY	CL-CH	.70	6	1.454	13.5			
17.60	18.95	.53	2.79	SILTY CLAY TO CLAY	CL-CH	.70	6	1.352	13.5			
17.80	8.33	.20	2.43	CLAY	CH	.71	3	.564	13.5			
18.00	8.85	.34	3.80	CLAY	CH	.72	4	.602	13.5			
18.20	5.28	.33	6.25	ORGANIC MATERIAL	OL-OH	.55	2	.351	13.5			
18.40	4.90	.34	6.84	ORGANIC MATERIAL	OL-OH	.55	2	.322	13.5			
18.60	5.02	.32	6.41	ORGANIC MATERIAL	OL-OH	.56	2	.331	13.5			
18.80	4.78	.34	7.12	ORGANIC MATERIAL	OL-OH	.56	2	.312	13.5			
19.00	10.96	.39	3.59	CLAY	CH	.76	5	.756	13.5			
19.20	14.03	.45	3.20	CLAY	CH	.77	6	.932	13.5			
19.40	42.10	.35	.84	SANDY SILT TO CLAYEY SILT	ML-MH	.97	8	3.047	13.5	36	37	.14
19.60	7.79	.51	6.58	CLAY	CH	.78	3	.519	13.5			
19.80	4.07	.53	13.00	ORGANIC MATERIAL	OL-OH	.59	1	.259	13.5			
20.00	8.68	.29	3.39	CLAY	CH	.80	4	.581	13.5			
20.20	4.90	.29	5.95	ORGANIC MATERIAL	OL-OH	.61	2	.318	13.5			
20.40	31.69	.11	.35	SANDY SILT TO CLAYEY SILT	ML-MH	1.02	6	2.272	13.5	26	32	.12



RESULT OF CONE PENETRATION TEST

38S

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

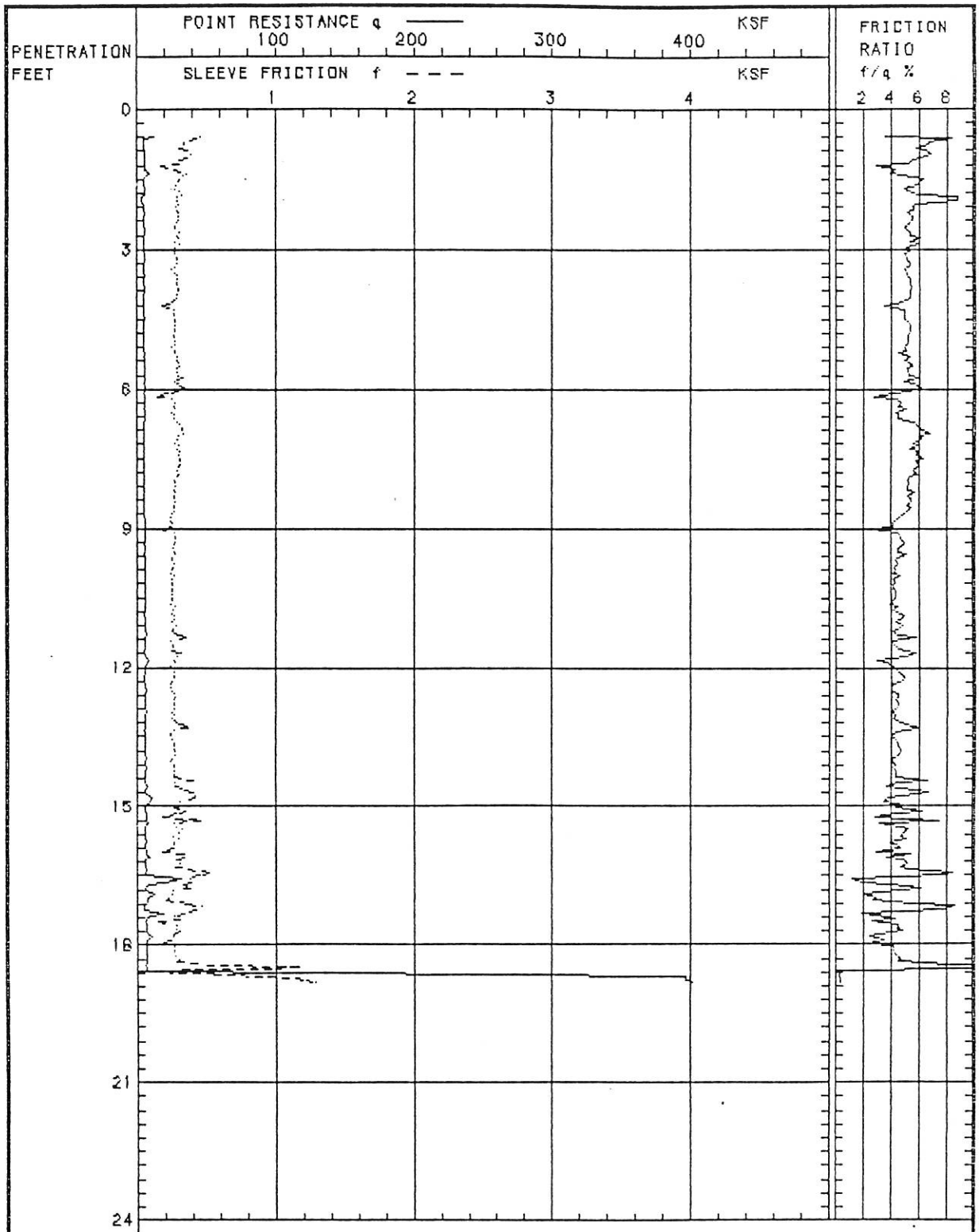
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 38S
CONE NO. : 5006
DATE : 05/07/87

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	43.27	.45	1.03	SANDY SILT TO CLAYEY SILT	ML-MH	.03	8	3.203	13.5	80	39	.50+
.80	91.68	.53	.58	SAND TO SILTY SAND	SM-SP	.05	10			100+	42	.50+
1.00	96.46	.70	.73	SAND TO SILTY SAND	SM-SP	.06	11			100+	42	.50+
1.20	84.69	.58	.69	SILTY SAND TO SANDY SILT	SM-ML	.07	13			100+	42	.50+
1.40	91.08	.93	1.02	SILTY SAND TO SANDY SILT	SM-ML	.08	14			100+	42	.50+
1.60	90.97	.51	.56	SAND TO SILTY SAND	SM-SP	.10	10			100+	42	.50+
1.80	87.98	.57	.64	SILTY SAND TO SANDY SILT	SM-ML	.10	14			100+	42	.50+
2.00	87.02	.40	.46	SAND TO SILTY SAND	SM-SP	.12	10			100+	42	.50+
2.20	74.00	.65	.88	SILTY SAND TO SANDY SILT	SM-ML	.12	11			93	41	.50+
2.40	80.41	.60	.74	SILTY SAND TO SANDY SILT	SM-ML	.13	12			96	41	.50+
2.60	125.71	.55	.44	SAND TO SILTY SAND	SM-SP	.16	15			100+	42	.50+
2.80	151.15	.58	.38	SAND TO SILTY SAND	SM-SP	.17	18			100+	42	.50+
3.00	137.37	.63	.46	SAND TO SILTY SAND	SM-SP	.18	16			100+	42	.50+
3.20	108.73	.58	.53	SAND TO SILTY SAND	SM-SP	.19	13			100+	42	.50+
3.40	106.48	.39	.37	SAND TO SILTY SAND	SM-SP	.20	12			100+	42	.50+
3.60	74.44	.36	.48	SILTY SAND TO SANDY SILT	SM-ML	.20	11			85	40	.50+
3.80	25.39	.34	1.33	CLAYEY SILT TO SILTY CLAY	MH-CL	.17	6	1.869	13.5			
4.00	4.78	.44	9.28	ORGANIC MATERIAL	OL-OH	.12	2	.345	13.5			
4.20	17.30	.36	2.09	CLAYEY SILT TO SILTY CLAY	MH-CL	.19	4	1.267	13.5			
4.40	24.52	.49	1.99	CLAYEY SILT TO SILTY CLAY	MH-CL	.20	5	1.802	13.5			
4.60	32.00	.42	1.31	SANDY SILT TO CLAYEY SILT	ML-MH	.23	6	2.353	13.5	60	37	.24
4.80	24.28	.55	2.26	CLAYEY SILT TO SILTY CLAY	MH-CL	.22	5	1.783	13.5			
5.00	29.35	.29	.98	SANDY SILT TO CLAYEY SILT	ML-MH	.25	5	2.156	13.5	57	36	.20
5.20	25.82	.38	1.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.23	5	1.895	13.5			
5.40	14.55	.73	5.04	CLAY	CH	.22	6	1.062	13.5			
5.60	54.69	.37	.67	SILTY SAND TO SANDY SILT	SM-ML	.31	8			68	38	.50+
5.80	63.48	.33	.52	SILTY SAND TO SANDY SILT	SM-ML	.32	10			72	38	.50+
6.00	30.10	.11	.37	SANDY SILT TO CLAYEY SILT	ML-MH	.30	5	2.207	13.5	54	36	.18
6.20	49.15	.29	.59	SILTY SAND TO SANDY SILT	SM-ML	.34	7			64	37	.33
6.40	14.99	.33	2.21	SILTY CLAY TO CLAY	CL-CH	.26	4	1.091	13.5			
6.60	5.14	.36	6.92	ORGANIC MATERIAL	OL-OH	.20	2	.366	13.5			
6.80	5.08	.50	9.78	ORGANIC MATERIAL	OL-OH	.20	2	.361	13.5			
7.00	11.52	.37	3.21	CLAY	CH	.28	5	.933	13.5			
7.20	3.71	.34	9.12	ORGANIC MATERIAL	OL-OH	.22	1	.259	13.5			
7.40	3.83	.36	9.43	ORGANIC MATERIAL	OL-OH	.22	1	.267	13.5			
7.60	3.83	.37	9.74	ORGANIC MATERIAL	OL-OH	.23	1	.266	13.5			
7.80	3.82	.37	9.71	ORGANIC MATERIAL	OL-OH	.23	1	.266	13.5			
8.00	4.54	.30	6.54	ORGANIC MATERIAL	OL-OH	.24	2	.318	13.5			
8.20	4.90	.30	6.05	ORGANIC MATERIAL	OL-OH	.25	2	.345	13.5			
8.40	4.42	.27	6.08	ORGANIC MATERIAL	OL-OH	.25	2	.302	13.5			
8.60	4.54	.28	6.18	ORGANIC MATERIAL	OL-OH	.26	2	.317	13.5			
8.80	5.60	.33	5.91	CLAY	CH	.35	2	.329	13.5			
9.00	4.54	.23	5.16	CLAY	CH	.36	2	.310	13.5			
9.20	4.42	.29	6.59	ORGANIC MATERIAL	OL-OH	.28	2	.307	13.5			
9.40	4.66	.20	4.34	CLAY	CH	.38	2	.317	13.5			

9.60	4.54	.30	6.54	ORGANIC MATERIAL	OL-OH	.29	2	.315	13.5			
9.80	4.66	.28	5.91	ORGANIC MATERIAL	OL-OH	.29	2	.323	13.5			
10.00	3.83	.29	7.49	ORGANIC MATERIAL	OL-OH	.30	1	.261	13.5			
10.20	3.95	.33	8.28	ORGANIC MATERIAL	OL-OH	.31	1	.270	13.5			
10.40	3.82	.32	8.35	ORGANIC MATERIAL	OL-OH	.31	1	.260	13.5			
10.60	3.89	.29	7.59	ORGANIC MATERIAL	OL-OH	.32	1	.264	13.5			
10.80	4.66	.27	5.90	ORGANIC MATERIAL	OL-OH	.32	2	.321	13.5			
11.00	4.12	.30	7.22	ORGANIC MATERIAL	OL-OH	.33	1	.281	13.5			
11.20	4.54	.29	6.41	ORGANIC MATERIAL	OL-OH	.34	2	.312	13.5			
11.40	4.54	.32	7.00	ORGANIC MATERIAL	OL-OH	.34	2	.311	13.5			
11.60	4.66	.26	5.65	ORGANIC MATERIAL	OL-OH	.35	2	.319	13.5			
11.80	4.30	.27	6.22	ORGANIC MATERIAL	OL-OH	.35	2	.293	13.5			
12.00	4.30	.25	5.81	ORGANIC MATERIAL	OL-OH	.36	2	.292	13.5			
12.20	4.42	.27	6.21	ORGANIC MATERIAL	OL-OH	.37	2	.300	13.5			
12.40	4.30	.20	4.64	CLAY	CH	.50	2	.232	13.5			
12.60	4.54	.25	5.53	ORGANIC MATERIAL	OL-OH	.38	2	.308	13.5			
12.80	4.79	.23	4.84	CLAY	CH	.51	2	.317	13.5			
13.00	3.83	.29	7.65	ORGANIC MATERIAL	OL-OH	.39	1	.254	13.5			
13.20	4.24	.35	8.35	ORGANIC MATERIAL	OL-CH	.40	2	.285	13.5			
13.40	4.43	.30	6.85	ORGANIC MATERIAL	OL-OH	.40	2	.298	13.5			
13.60	4.54	.33	7.30	ORGANIC MATERIAL	OL-OH	.41	2	.306	13.5			
13.80	4.42	.29	6.65	ORGANIC MATERIAL	OL-OH	.41	2	.297	13.5			
14.00	4.54	.28	6.17	ORGANIC MATERIAL	OL-OH	.42	2	.305	13.5			
14.20	4.42	.36	8.13	ORGANIC MATERIAL	OL-OH	.43	2	.296	13.5			
14.40	4.30	.31	7.31	ORGANIC MATERIAL	OL-OH	.43	2	.286	13.5			
14.60	4.43	.28	6.31	ORGANIC MATERIAL	OL-OH	.44	2	.295	13.5			
14.80	4.19	.30	7.24	ORGANIC MATERIAL	OL-OH	.44	2	.277	13.5			
15.00	5.13	.31	6.03	ORGANIC MATERIAL	OL-OH	.45	2	.347	13.5			
15.20	3.94	.34	8.54	ORGANIC MATERIAL	OL-OH	.46	1	.259	13.5			
15.40	8.98	.33	3.65	CLAY	CH	.62	4	.619	13.5			
15.60	5.39	.37	6.82	ORGANIC MATERIAL	OL-OH	.47	2	.365	13.5			
15.80	5.94	.30	5.00	CLAY	CH	.63	2	.393	13.5			
16.00	4.42	.21	4.86	CLAY	CH	.64	2	.280	13.5			
16.20	4.30	.30	7.03	ORGANIC MATERIAL	OL-OH	.49	2	.283	13.5			
16.40	4.54	.31	6.74	ORGANIC MATERIAL	OL-OH	.49	2	.300	13.5			
16.60	5.04	.32	6.33	ORGANIC MATERIAL	OL-OH	.50	2	.337	13.5			
16.80	5.36	.28	5.14	CLAY	CH	.67	2	.347	13.5			
17.00	10.30	.37	3.61	CLAY	CH	.69	4	.712	13.5			
17.20	7.19	.31	4.32	CLAY	CH	.69	3	.482	13.5			
17.40	59.31	.25	.41	SILTY SAND TO SANDY SILT	SM-ML	.96	9			47	35	.17
17.60	12.28	.35	2.86	CLAY	CH	.70	5	.857	13.5			
17.80	9.91	.30	3.01	CLAY	CH	.71	4	.681	13.5			
18.00	7.49	.29	3.87	CLAY	CH	.72	3	.501	13.5			
18.20	4.54	.30	6.53	ORGANIC MATERIAL	OL-OH	.55	2	.296	13.5			
18.40	5.59	.34	6.07	ORGANIC MATERIAL	OL-OH	.55	2	.373	13.5			
18.60	5.85	.35	6.04	CLAY	CH	.74	2	.379	13.5			
18.80	6.24	.35	5.59	CLAY	CH	.75	2	.407	13.5			
19.00	4.84	.33	6.74	ORGANIC MATERIAL	OL-OH	.57	2	.316	13.5			
19.20	8.77	.31	3.58	CLAY	CH	.77	4	.593	13.5			
19.40	15.69	.55	3.50	CLAY	CH	.78	7	1.105	13.5			
19.60	10.25	.53	5.14	CLAY	CH	.79	4	.791	13.5			
19.80	4.54	.47	10.40	ORGANIC MATERIAL	OL-OH	.59	2	.292	13.5			
20.00	4.79	.53	11.13	ORGANIC MATERIAL	OL-OH	.60	2	.310	13.5			
20.20	41.76	.20	.49	SILTY SAND TO SANDY SILT	SM-ML	1.11	6			33	33	.13
20.40	10.92	.42	3.82	CLAY	CH	.82	5	.749	13.5			
20.60	6.59	.36	5.44	CLAY	CH	.82	3	.427	13.5			



RESULT OF CONE PENETRATION TEST

39N

JOB NUMBER: 0187-0206
CONE NUMBER: 5005
LOCATION: ISLE DENIERES

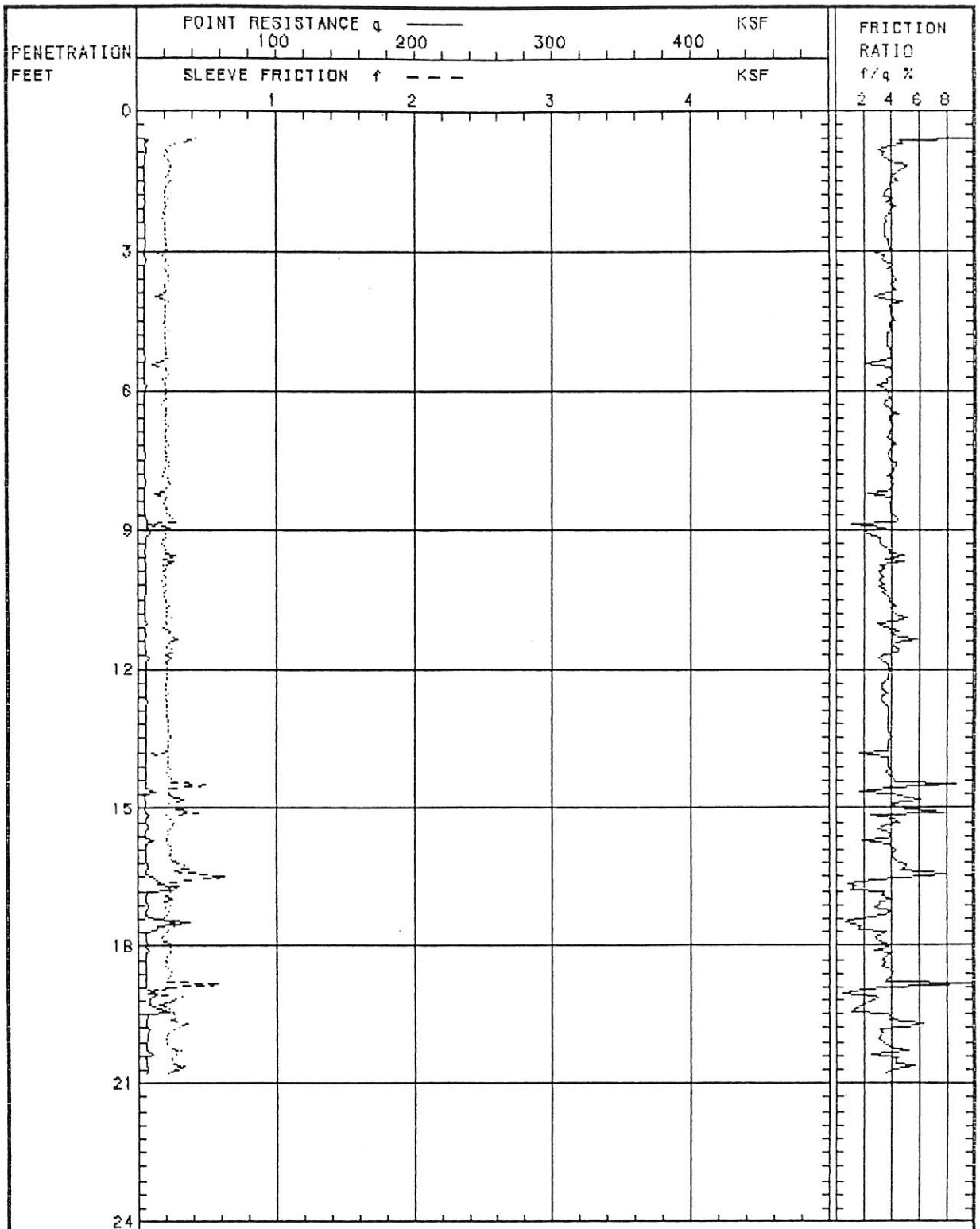
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 39N
CONE NO. : 5006
DATE : 05/07/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UNR. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	9.05	.45	4.96	CLAY	CH	.02	4	.669	13.5			
.80	5.35	.33	6.16	ORGANIC MATERIAL	OL-OH	.02	2	.394	13.5			
1.00	5.82	.38	6.51	ORGANIC MATERIAL	OL-OH	.03	2	.429	13.5			
1.20	6.06	.24	4.04	CLAY	CH	.05	2	.446	13.5			
1.40	8.22	.35	4.24	CLAY	CH	.06	3	.604	13.5			
1.60	4.99	.29	5.92	ORGANIC MATERIAL	OL-OH	.05	2	.366	13.5			
1.80	5.82	.32	5.47	CLAY	CH	.07	2	.426	13.5			
2.00	4.27	.30	6.95	ORGANIC MATERIAL	OL-OH	.06	2	.312	13.5			
2.20	5.58	.30	5.30	CLAY	CH	.09	2	.407	13.5			
2.40	5.47	.30	5.41	CLAY	CH	.10	2	.398	13.5			
2.60	5.82	.30	5.09	CLAY	CH	.10	2	.424	13.5			
2.80	5.11	.29	5.69	CLAY	CH	.11	2	.370	13.5			
3.00	5.35	.28	5.21	CLAY	CH	.12	2	.387	13.5			
3.20	5.70	.29	5.14	CLAY	CH	.13	2	.413	13.5			
3.40	5.29	.26	5.01	CLAY	CH	.14	2	.381	13.5			
3.60	5.59	.29	5.20	CLAY	CH	.14	2	.403	13.5			
3.80	5.52	.29	5.30	CLAY	CH	.15	2	.399	13.5			
4.00	5.47	.29	5.31	CLAY	CH	.16	2	.393	13.5			
4.20	5.47	.23	4.24	CLAY	CH	.17	2	.392	13.5			
4.40	5.47	.27	4.90	CLAY	CH	.18	2	.392	13.5			
4.60	5.35	.28	5.23	CLAY	CH	.18	2	.382	13.5			
4.80	5.23	.28	5.30	CLAY	CH	.19	2	.373	13.5			
5.00	5.47	.28	5.11	CLAY	CH	.20	2	.390	13.5			
5.20	5.82	.28	4.78	CLAY	CH	.21	2	.416	13.5			
5.40	5.82	.30	5.07	CLAY	CH	.22	2	.415	13.5			
5.60	5.70	.28	4.86	CLAY	CH	.22	2	.406	13.5			
5.80	5.70	.28	4.98	CLAY	CH	.23	2	.405	13.5			
6.00	5.70	.32	5.68	CLAY	CH	.24	2	.405	13.5			
6.20	5.76	.19	3.21	CLAY	CH	.25	2	.409	13.5			
6.40	5.71	.27	4.77	CLAY	CH	.26	2	.404	13.5			
6.60	5.94	.27	4.51	CLAY	CH	.26	2	.421	13.5			
6.80	5.47	.32	5.84	CLAY	CH	.27	2	.385	13.5			
7.00	4.99	.32	6.42	ORGANIC MATERIAL	OL-OH	.21	2	.354	13.5			
7.20	5.11	.28	5.52	CLAY	CH	.29	2	.357	13.5			
7.40	5.23	.31	5.89	ORGANIC MATERIAL	OL-OH	.22	2	.371	13.5			
7.60	5.35	.34	6.34	ORGANIC MATERIAL	OL-OH	.23	2	.379	13.5			
7.80	5.23	.30	5.67	CLAY	CH	.31	2	.364	13.5			
8.00	5.23	.26	5.06	CLAY	CH	.32	2	.363	13.5			
8.20	5.11	.28	5.49	CLAY	CH	.33	2	.354	13.5			
8.40	5.11	.27	5.37	CLAY	CH	.34	2	.353	13.5			
8.60	5.10	.29	5.61	CLAY	CH	.34	2	.353	13.5			
8.80	5.46	.25	4.51	CLAY	CH	.35	2	.379	13.5			
9.00	6.18	.21	3.41	CLAY	CH	.36	2	.431	13.5			
9.20	5.94	.28	4.69	CLAY	CH	.37	2	.413	13.5			
9.40	5.58	.26	4.69	CLAY	CH	.38	2	.386	13.5			

9.60	5.58	.27	4.87	CLAY	CH	.38	2	.385	13.5			
9.80	6.06	.25	4.15	CLAY	CH	.39	2	.420	13.5			
10.00	5.76	.26	4.58	CLAY	CH	.40	2	.397	13.5			
10.20	6.06	.25	4.21	CLAY	CH	.41	2	.419	13.5			
10.40	5.94	.25	4.29	CLAY	CH	.42	2	.409	13.5			
10.60	6.18	.25	4.03	CLAY	CH	.42	2	.427	13.5			
10.80	5.83	.26	4.40	CLAY	CH	.43	2	.400	13.5			
11.00	5.82	.26	4.48	CLAY	CH	.44	2	.399	13.5			
11.20	6.06	.26	4.28	CLAY	CH	.45	2	.416	13.5			
11.40	6.18	.33	5.36	CLAY	CH	.45	2	.424	13.5			
11.60	5.59	.26	4.58	CLAY	CH	.46	2	.390	13.5			
11.80	7.23	.27	3.80	CLAY	CH	.47	3	.501	13.5			
12.00	6.06	.25	4.13	CLAY	CH	.48	2	.414	13.5			
12.20	5.47	.27	4.89	CLAY	CH	.49	2	.369	13.5			
12.40	6.06	.25	4.05	CLAY	CH	.50	2	.412	13.5			
12.60	6.06	.27	4.48	CLAY	CH	.50	2	.412	13.5			
12.80	5.94	.27	4.50	CLAY	CH	.51	2	.402	13.5			
13.00	6.30	.26	4.13	CLAY	CH	.52	3	.428	13.5			
13.20	6.18	.29	4.67	CLAY	CH	.53	2	.419	13.5			
13.40	5.70	.26	4.48	CLAY	CH	.54	2	.382	13.5			
13.60	5.94	.26	4.39	CLAY	CH	.54	2	.409	13.5			
13.80	5.82	.27	4.62	CLAY	CH	.55	2	.390	13.5			
14.00	6.19	.25	4.02	CLAY	CH	.56	2	.417	13.5			
14.20	6.30	.26	4.07	CLAY	CH	.57	3	.425	13.5			
14.40	6.18	.34	5.43	CLAY	CH	.58	2	.415	13.5			
14.60	6.80	.28	4.08	CLAY	CH	.59	3	.460	13.5			
14.80	9.92	.42	4.22	CLAY	CH	.59	4	.691	13.5			
15.00	6.43	.30	4.68	CLAY	CH	.60	3	.432	13.5			
15.20	6.42	.24	3.67	CLAY	CH	.61	3	.431	13.5			
15.40	7.28	.28	3.80	CLAY	CH	.62	3	.474	13.5			
15.60	5.95	.28	4.75	CLAY	CH	.62	2	.394	13.5			
15.80	6.55	.27	4.07	CLAY	CH	.63	3	.438	13.5			
16.00	6.42	.27	4.13	CLAY	CH	.64	3	.428	13.5			
16.20	5.94	.30	5.02	CLAY	CH	.65	2	.392	13.5			
16.40	6.67	.44	6.63	ORGANIC MATERIAL	OL-OH	.49	3	.458	13.5			
16.60	26.41	.37	1.41	SANDY SILT TO CLAYEY SILT	ML-MH	.83	5	1.895	13.5	25	32	.12
16.80	5.95	.32	5.44	CLAY	CH	.67	2	.391	13.5			
17.00	7.86	.24	3.00	CLAY	CH	.68	3	.532	13.5			
17.20	5.47	.45	8.18	ORGANIC MATERIAL	OL-OH	.52	2	.367	13.5			
17.40	8.12	.29	3.54	CLAY	CH	.70	3	.550	13.5			
17.60	6.42	.29	4.45	CLAY	CH	.70	3	.424	13.5			
17.80	9.49	.26	2.78	CLAY	CH	.71	4	.650	13.5			
18.00	6.79	.21	3.14	CLAY	CH	.72	3	.450	13.5			
18.20	6.42	.27	4.22	CLAY	CH	.73	3	.422	13.5			
18.40	6.30	.39	6.22	CLAY	CH	.74	3	.413	13.5			
18.60	128.39	.27	.21	SAND TO SILTY SAND	SM-SP	1.12	15			69	29	.48
18.80	398.90	1.25	.31	SAND	SW-SP	1.22	38			100+	44	.50+



RESULT OF CONE PENETRATION TEST

39M

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

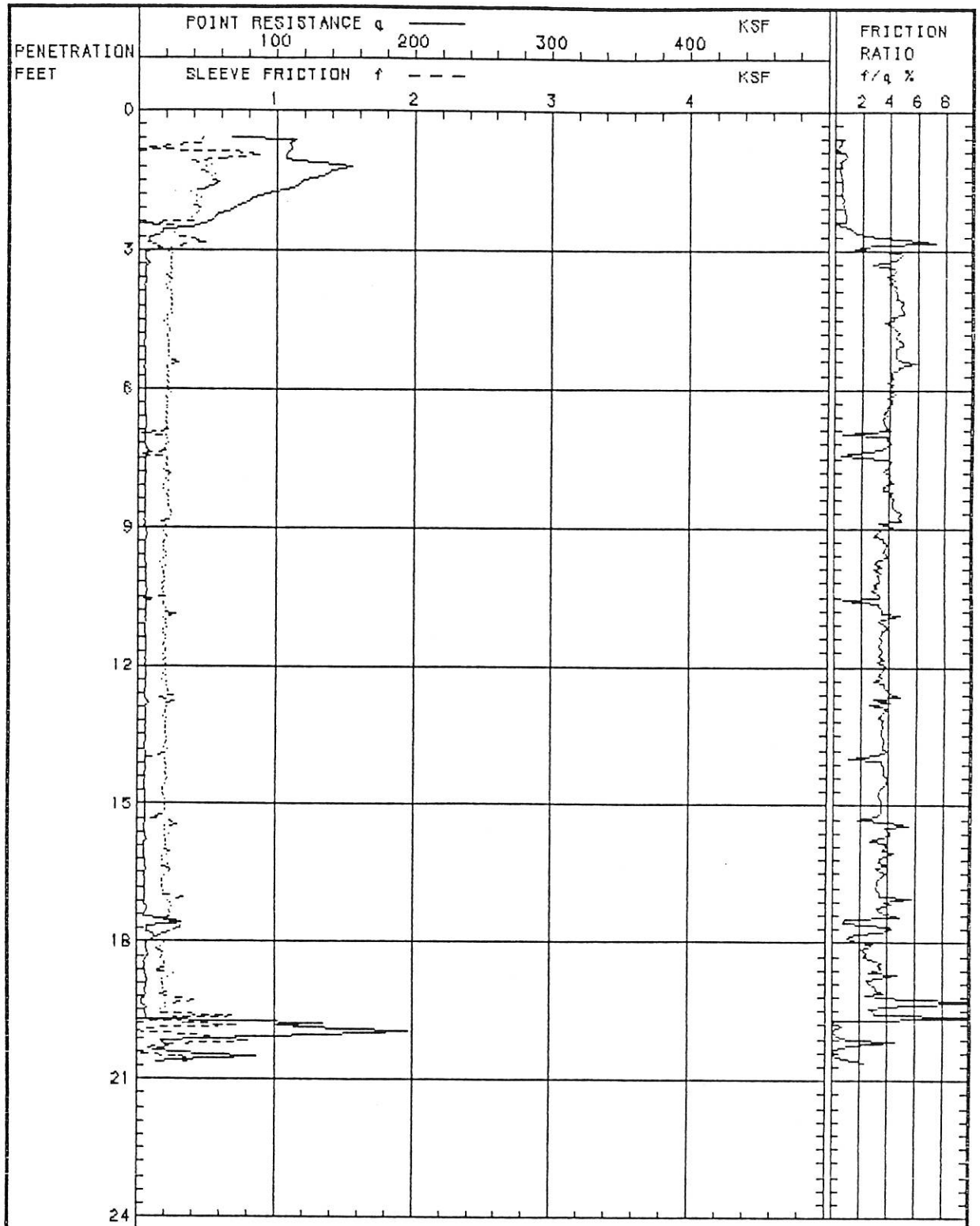
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 39M,
CONE NO. : 5006
DATE : 05/07/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UNO. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	5.82	.41	7.01	ORGANIC MATERIAL	OL-OH	.02	2	.429	13.5			
.80	6.53	.17	2.64	CLAY	CH	.03	3	.482	13.5			
1.00	5.94	.21	3.57	CLAY	CH	.04	2	.437	13.5			
1.20	4.74	.25	5.27	CLAY	CH	.05	2	.348	13.5			
1.40	5.22	.22	4.16	CLAY	CH	.06	2	.382	13.5			
1.60	5.58	.21	3.84	CLAY	CH	.06	2	.408	13.5			
1.80	5.82	.20	3.44	CLAY	CH	.07	2	.425	13.5			
2.00	5.34	.21	3.89	CLAY	CH	.08	2	.390	13.5			
2.20	5.10	.19	3.71	CLAY	CH	.09	2	.371	13.5			
2.40	5.58	.20	3.59	CLAY	CH	.10	2	.406	13.5			
2.60	5.70	.20	3.54	CLAY	CH	.10	2	.414	13.5			
2.80	5.70	.21	3.71	CLAY	CH	.11	2	.414	13.5			
3.00	5.46	.19	3.46	CLAY	CH	.12	2	.395	13.5			
3.20	6.18	.21	3.48	CLAY	CH	.13	2	.448	13.5			
3.40	5.34	.20	3.81	CLAY	CH	.14	2	.385	13.5			
3.60	5.28	.22	4.25	CLAY	CH	.14	2	.380	13.5			
3.80	4.98	.21	4.16	CLAY	CH	.15	2	.358	13.5			
4.00	5.10	.17	3.30	CLAY	CH	.16	2	.366	13.5			
4.20	5.22	.20	3.86	CLAY	CH	.17	2	.374	13.5			
4.40	5.10	.20	3.97	CLAY	CH	.18	2	.365	13.5			
4.60	5.10	.20	3.83	CLAY	CH	.18	2	.364	13.5			
4.80	5.46	.20	3.68	CLAY	CH	.19	2	.390	13.5			
5.00	5.46	.20	3.73	CLAY	CH	.20	2	.389	13.5			
5.20	5.46	.21	3.87	CLAY	CH	.21	2	.389	13.5			
5.40	5.58	.15	2.65	CLAY	CH	.22	2	.397	13.5			
5.60	5.46	.22	3.99	CLAY	CH	.22	2	.398	13.5			
5.80	5.34	.19	3.60	CLAY	CH	.23	2	.378	13.5			
6.00	5.82	.21	3.64	CLAY	CH	.24	2	.413	13.5			
6.20	5.46	.20	3.68	CLAY	CH	.25	2	.386	13.5			
6.40	5.46	.21	3.91	CLAY	CH	.26	2	.385	13.5			
6.60	5.22	.20	3.85	CLAY	CH	.26	2	.367	13.5			
6.80	5.46	.26	4.77	CLAY	CH	.27	2	.384	13.5			
7.00	5.40	.20	3.73	CLAY	CH	.28	2	.379	13.5			
7.20	5.10	.21	4.16	CLAY	CH	.29	2	.356	13.5			
7.40	5.70	.21	3.73	CLAY	CH	.30	2	.400	13.5			
7.60	5.22	.22	4.31	CLAY	CH	.30	2	.364	13.5			
7.80	4.98	.22	4.41	CLAY	CH	.31	2	.346	13.5			
8.00	5.70	.23	4.02	CLAY	CH	.32	2	.398	13.5			
8.20	5.34	.16	2.94	CLAY	CH	.33	2	.371	13.5			
8.40	4.98	.20	3.92	CLAY	CH	.34	2	.344	13.5			
8.60	5.46	.21	3.87	CLAY	CH	.34	2	.379	13.5			
8.80	6.05	.21	3.46	CLAY	CH	.35	2	.422	13.5			
9.00	7.95	.22	2.73	CLAY	CH	.36	3	.562	13.5			
9.20	6.06	.19	3.21	CLAY	CH	.37	2	.421	13.5			
9.40	5.46	.19	3.57	CLAY	CH	.38	2	.377	13.5			

9.60	5.58	.23	4.21	CLAY	CH	.38	2	.385	13.5
9.80	5.82	.19	3.32	CLAY	CH	.39	2	.402	13.5
10.00	5.94	.22	3.70	CLAY	CH	.40	2	.410	13.5
10.20	5.93	.19	3.28	CLAY	CH	.41	2	.409	13.5
10.40	5.46	.20	3.62	CLAY	CH	.42	2	.374	13.5
10.60	5.22	.22	4.18	CLAY	CH	.42	2	.355	13.5
10.80	4.98	.21	4.29	CLAY	CH	.43	2	.337	13.5
11.00	5.92	.21	3.49	CLAY	CH	.44	2	.406	13.5
11.20	5.45	.23	4.20	CLAY	CH	.45	2	.371	13.5
11.40	5.10	.26	5.06	CLAY	CH	.46	2	.344	13.5
11.60	5.58	.25	4.44	CLAY	CH	.46	2	.379	13.5
11.80	7.03	.22	3.17	CLAY	CH	.47	3	.486	13.5
12.00	5.58	.21	3.79	CLAY	CH	.48	2	.378	13.5
12.20	5.70	.21	3.70	CLAY	CH	.49	2	.386	13.5
12.40	5.94	.20	3.41	CLAY	CH	.50	2	.403	13.5
12.60	6.05	.20	3.28	CLAY	CH	.50	2	.411	13.5
12.80	5.82	.21	3.67	CLAY	CH	.51	2	.393	13.5
13.00	5.70	.21	3.70	CLAY	CH	.52	2	.383	13.5
13.20	5.94	.22	3.74	CLAY	CH	.53	2	.401	13.5
13.40	5.94	.23	3.84	CLAY	CH	.54	2	.400	13.5
13.60	5.94	.22	3.74	CLAY	CH	.54	2	.399	13.5
13.80	5.94	.16	2.72	CLAY	CH	.55	2	.399	13.5
14.00	5.94	.22	3.74	CLAY	CH	.56	2	.398	13.5
14.20	5.94	.22	3.75	CLAY	CH	.57	2	.398	13.5
14.40	5.88	.31	5.21	CLAY	CH	.58	2	.393	13.5
14.60	9.44	.22	2.36	CLAY	CH	.58	4	.656	13.5
14.80	5.46	.30	5.43	CLAY	CH	.59	2	.360	13.5
15.00	5.58	.27	4.91	CLAY	CH	.60	2	.369	13.5
15.20	7.16	.21	2.99	CLAY	CH	.61	3	.486	13.5
15.40	7.30	.24	3.31	CLAY	CH	.62	3	.495	13.5
15.60	5.57	.21	3.85	CLAY	CH	.62	2	.367	13.5
15.80	5.81	.23	3.92	CLAY	CH	.63	2	.384	13.5
16.00	5.70	.23	4.10	CLAY	CH	.64	2	.375	13.5
16.20	6.29	.28	4.46	CLAY	CH	.65	3	.418	13.5
16.40	5.70	.23	4.11	CLAY	CH	.66	2	.373	13.5
16.60	15.45	.27	1.75	CLAYEY SILT TO SILTY CLAY	MH-CL	.73	3	1.089	13.5
16.80	16.21	.24	1.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.76	3	1.145	13.5
17.00	6.18	.22	3.63	CLAY	CH	.68	2	.407	13.5
17.20	6.55	.21	3.26	CLAY	CH	.69	3	.435	13.5
17.40	15.01	.21	1.37	CLAYEY SILT TO SILTY CLAY	MH-CL	.78	3	1.054	13.5
17.60	14.19	.24	1.69	CLAYEY SILT TO SILTY CLAY	MH-CL	.79	3	.933	13.5
17.80	6.05	.18	3.00	CLAY	CH	.71	2	.396	13.5
18.00	6.30	.24	3.83	CLAY	CH	.72	3	.413	13.5
18.20	5.81	.22	3.82	CLAY	CH	.73	2	.377	13.5
18.40	5.94	.21	3.46	CLAY	CH	.74	2	.385	13.5
18.60	5.88	.24	4.07	CLAY	CH	.74	2	.380	13.5
18.80	5.94	.39	6.56	ORGANIC MATERIAL	OL-OH	.56	2	.398	13.5
19.00	10.62	.15	1.39	SENSITIVE FINE GRAINED	OL-CH	.57	2	.744	13.5
19.20	8.80	.25	2.83	CLAY	CH	.77	4	.595	13.5
19.40	19.04	.25	1.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.87	4	1.346	13.5
19.60	6.24	.29	4.65	CLAY	CH	.78	2	.404	13.5
19.80	7.10	.27	3.85	CLAY	CH	.79	3	.467	13.5
20.00	6.41	.20	3.19	CLAY	CH	.80	3	.416	13.5
20.20	5.82	.23	3.87	CLAY	CH	.81	2	.371	13.5
20.40	8.41	.28	3.34	CLAY	CH	.82	4	.563	13.5
20.60	5.94	.29	4.93	CLAY	CH	.32	2	.379	13.5



RESULT OF CONE PENETRATION TEST

39S

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

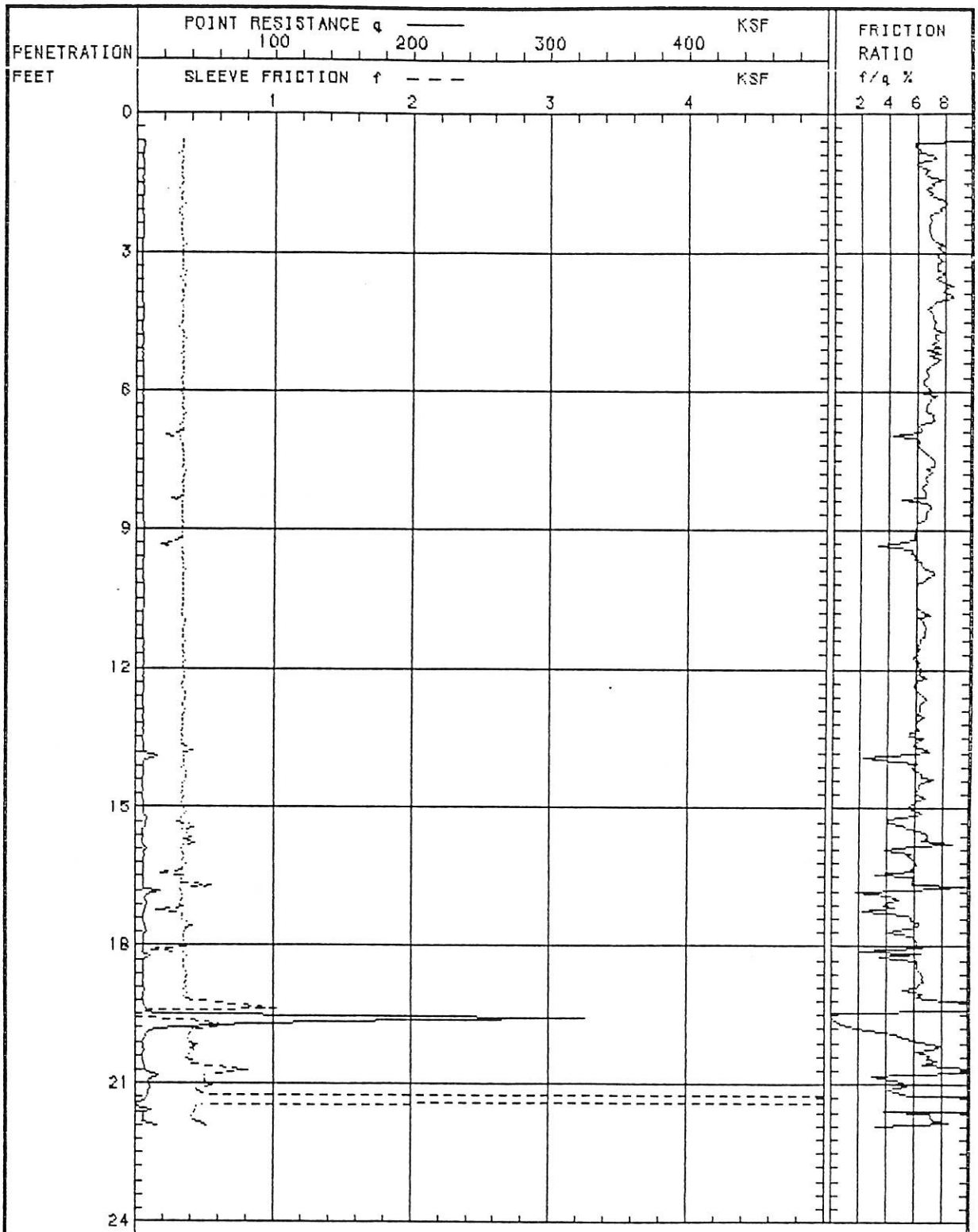
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 39S
CONE NO. : 5006
DATE : 05/07/87

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	91.44	.81	.89	SILTY SAND TO SANDY SILT	SM-ML	.03	14			100+	42	.50+
.80	110.30	.14	.12	SAND TO SILTY SAND	SM-SP	.05	13			100+	42	.50+
1.00	107.34	.75	.70	SAND TO SILTY SAND	SM-SP	.06	12			100+	42	.50+
1.20	149.65	.51	.34	SAND TO SILTY SAND	SM-SP	.07	17			100+	42	.50+
1.40	135.49	.55	.40	SAND TO SILTY SAND	SM-SP	.09	16			100+	42	.50+
1.60	116.91	.42	.36	SAND TO SILTY SAND	SM-SP	.10	13			100+	42	.50+
1.80	93.24	.44	.47	SAND TO SILTY SAND	SM-SP	.11	11			100+	42	.50+
2.00	76.75	.41	.53	SILTY SAND TO SANDY SILT	SM-ML	.11	12			97	42	.50+
2.20	61.69	.47	.77	SILTY SAND TO SANDY SILT	SM-ML	.12	9			85	40	.50+
2.40	49.61	.20	.41	SILTY SAND TO SANDY SILT	SM-ML	.13	7			76	39	.50+
2.60	17.45	.24	1.37	CLAYEY SILT TO SILTY CLAY	MH-CL	.12	4	1.294	13.5			
2.80	7.29	.44	5.97	CLAY	CH	.11	3	.532	13.5			
3.00	10.90	.23	2.09	SILTY CLAY TO CLAY	CL-CH	.12	3	.799	13.5			
3.20	5.26	.23	4.44	CLAY	CH	.13	2	.380	13.5			
3.40	5.50	.23	4.22	CLAY	CH	.14	2	.397	13.5			
3.60	5.50	.22	4.04	CLAY	CH	.14	2	.397	13.5			
3.80	4.72	.21	4.40	CLAY	CH	.15	2	.339	13.5			
4.00	5.38	.24	4.45	CLAY	CH	.16	2	.387	13.5			
4.20	5.02	.25	4.91	CLAY	CH	.17	2	.359	13.5			
4.40	4.96	.22	4.36	CLAY	CH	.18	2	.354	13.5			
4.60	5.14	.20	3.90	CLAY	CH	.18	2	.367	13.5			
4.80	4.78	.22	4.56	CLAY	CH	.19	2	.340	13.5			
5.00	4.54	.22	4.90	CLAY	CH	.20	2	.322	13.5			
5.20	5.02	.22	4.43	CLAY	CH	.21	2	.356	13.5			
5.40	5.02	.27	5.35	CLAY	CH	.22	2	.356	13.5			
5.60	5.02	.22	4.32	CLAY	CH	.22	2	.355	13.5			
5.80	5.38	.22	4.02	CLAY	CH	.23	2	.381	13.5			
6.00	5.38	.22	4.02	CLAY	CH	.24	2	.381	13.5			
6.20	5.14	.20	3.99	CLAY	CH	.25	2	.362	13.5			
6.40	5.50	.21	3.76	CLAY	CH	.26	2	.389	13.5			
6.60	5.62	.20	3.63	CLAY	CH	.26	2	.397	13.5			
6.80	5.68	.21	3.75	CLAY	CH	.27	2	.400	13.5			
7.00	5.26	.11	2.16	SENSITIVE FINE GRAINED	OL-CH	.21	1	.374	13.5			
7.20	5.26	.21	4.03	CLAY	CH	.29	2	.368	13.5			
7.40	6.94	.12	1.66	SENSITIVE FINE GRAINED	OL-CH	.22	1	.498	13.5			
7.60	5.02	.21	4.08	CLAY	CH	.30	2	.349	13.5			
7.80	5.50	.21	3.83	CLAY	CH	.31	2	.384	13.5			
8.00	5.08	.20	3.87	CLAY	CH	.32	2	.353	13.5			
8.20	5.26	.21	3.90	CLAY	CH	.33	2	.365	13.5			
8.40	5.14	.28	5.39	CLAY	CH	.34	2	.356	13.5			
8.60	5.14	.23	4.44	CLAY	CH	.34	2	.355	13.5			
8.80	4.78	.23	4.78	CLAY	CH	.35	2	.329	13.5			
9.00	5.13	.20	3.93	CLAY	CH	.36	2	.354	13.5			
9.20	6.34	.20	3.19	CLAY	CH	.37	3	.443	13.5			
9.40	4.90	.20	4.04	CLAY	CH	.38	2	.335	13.5			

9.60	5.14	.20	3.86	CLAY	CH	.38	2	.352	13.5			
9.80	5.62	.17	2.96	CLAY	CH	.39	2	.387	13.5			
10.00	5.73	.19	3.25	CLAY	CH	.40	2	.395	13.5			
10.20	5.98	.19	3.26	CLAY	CH	.41	2	.412	13.5			
10.40	6.10	.18	2.96	CLAY	CH	.42	2	.421	13.5			
10.60	5.86	.11	1.92	SENSITIVE FINE GRAINED	OL-CH	.32	1	.410	13.5			
10.80	5.74	.20	3.46	CLAY	CH	.43	2	.393	13.5			
11.00	5.73	.19	3.37	CLAY	CH	.44	2	.392	13.5			
11.20	5.32	.20	3.84	CLAY	CH	.45	2	.361	13.5			
11.40	5.86	.20	3.38	CLAY	CH	.46	2	.400	13.5			
11.60	5.74	.19	3.31	CLAY	CH	.46	2	.391	13.5			
11.80	5.62	.19	3.43	CLAY	CH	.47	2	.381	13.5			
12.00	5.26	.19	3.62	CLAY	CH	.49	2	.354	13.5			
12.20	5.74	.20	3.45	CLAY	CH	.49	2	.389	13.5			
12.40	5.74	.21	3.66	CLAY	CH	.50	2	.388	13.5			
12.60	5.50	.21	3.74	CLAY	CH	.50	2	.379	13.5			
12.80	7.28	.24	3.28	CLAY	CH	.51	3	.501	13.5			
13.00	5.74	.21	3.62	CLAY	CH	.52	2	.396	13.5			
13.20	5.74	.20	3.56	CLAY	CH	.53	2	.386	13.5			
13.40	5.74	.20	3.45	CLAY	CH	.54	2	.385	13.5			
13.60	5.74	.21	3.66	CLAY	CH	.54	2	.385	13.5			
13.80	5.50	.21	3.79	CLAY	CH	.55	2	.366	13.5			
14.00	5.74	.13	2.25	CLAY	CH	.56	2	.384	13.5			
14.20	5.74	.21	3.66	CLAY	CH	.57	2	.383	13.5			
14.40	5.62	.22	3.84	CLAY	CH	.58	2	.373	13.5			
14.60	5.38	.22	4.03	CLAY	CH	.58	2	.355	13.5			
14.80	5.74	.20	3.41	CLAY	CH	.59	2	.381	13.5			
15.00	5.74	.20	3.45	CLAY	CH	.60	2	.381	13.5			
15.20	5.74	.19	3.36	CLAY	CH	.61	2	.380	13.5			
15.40	5.50	.26	4.75	CLAY	CH	.62	2	.362	13.5			
15.60	5.25	.22	4.14	CLAY	CH	.62	2	.343	13.5			
15.80	6.72	.21	3.12	CLAY	CH	.63	3	.451	13.5			
16.00	5.50	.22	4.01	CLAY	CH	.64	2	.360	13.5			
16.20	5.56	.20	3.54	CLAY	CH	.65	2	.364	13.5			
16.40	6.56	.21	3.27	CLAY	CH	.66	3	.437	13.5			
16.60	5.62	.19	3.42	CLAY	CH	.66	2	.367	13.5			
16.80	5.98	.19	3.12	CLAY	CH	.67	2	.393	13.5			
17.00	5.85	.27	4.60	CLAY	CH	.68	2	.383	13.5			
17.20	6.66	.29	4.43	CLAY	CH	.69	3	.443	13.5			
17.40	5.51	.24	4.31	CLAY	CH	.70	2	.357	13.5			
17.60	20.65	.26	1.27	CLAYEY SILT TO SILTY CLAY	MH-CL	.79	4	1.471	13.5			
17.80	9.14	.23	2.50	CLAY	CH	.71	4	.625	13.5			
18.00	8.47	.19	2.22	CLAY	CH	.72	4	.574	13.5			
18.20	7.46	.16	2.09	CLAY	CH	.73	3	.499	13.5			
18.40	5.99	.19	3.11	CLAY	CH	.74	2	.389	13.5			
18.60	5.61	.17	3.11	CLAY	CH	.74	2	.361	13.5			
18.80	7.04	.18	2.62	CLAY	CH	.75	3	.466	13.5			
19.00	6.34	.20	3.09	CLAY	CH	.76	3	.413	13.5			
19.20	6.12	.22	3.66	CLAY	CH	.77	2	.396	13.5			
19.40	5.80	.21	3.61	CLAY	CH	.78	2	.372	13.5			
19.60	6.20	.43	6.90	ORGANIC MATERIAL	OL-OH	.59	2	.416	13.5			
19.80	119.42	.44	.37	SAND TO SILTY SAND	SM-SP	1.19	14			66	39	.34
20.00	166.70	.19	.11	SAND	SW-SP	1.30	15			75	42	.29
20.20	19.03	.67	3.51	CLAY	CH	.81	9	1.349	13.5			
20.40	29.80	.07	.25	SANDY SILT TO CLAYEY SILT	ML-MH	1.02	5	2.132	13.5	24	31	.12
20.60	21.11	.37	1.76	CLAYEY SILT TO SILTY CLAY	MH-CL	.93	5	1.495	13.5			



RESULT OF CONE PENETRATION TEST

40N

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
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. : 40N
CONE NO. : 5006
DATE : 05/07/87

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	4.54	.34	7.38	ORGANIC MATERIAL	OL-OH	.02	2	.335	13.5			
.80	5.38	.33	6.09	ORGANIC MATERIAL	OL-OH	.02	2	.397	13.5			
1.00	5.02	.33	6.66	ORGANIC MATERIAL	OL-OH	.03	2	.370	13.5			
1.20	4.90	.33	6.66	ORGANIC MATERIAL	OL-OH	.04	2	.360	13.5			
1.40	4.48	.33	7.44	ORGANIC MATERIAL	OL-OH	.04	2	.329	13.5			
1.60	4.66	.32	6.84	ORGANIC MATERIAL	OL-OH	.05	2	.342	13.5			
1.80	4.54	.33	7.18	ORGANIC MATERIAL	OL-OH	.05	2	.332	13.5			
2.00	4.30	.34	7.83	ORGANIC MATERIAL	OL-OH	.06	2	.314	13.5			
2.20	4.66	.34	7.38	ORGANIC MATERIAL	OL-OH	.07	2	.340	13.5			
2.40	4.78	.33	6.84	ORGANIC MATERIAL	OL-OH	.07	2	.349	13.5			
2.60	4.78	.33	6.82	ORGANIC MATERIAL	OL-OH	.08	2	.348	13.5			
2.80	4.60	.35	7.68	ORGANIC MATERIAL	OL-OH	.08	2	.335	13.5			
3.00	4.42	.34	7.61	ORGANIC MATERIAL	OL-OH	.09	2	.321	13.5			
3.20	4.42	.34	7.61	ORGANIC MATERIAL	OL-OH	.10	2	.320	13.5			
3.40	4.54	.35	7.66	ORGANIC MATERIAL	OL-OH	.10	2	.329	13.5			
3.60	4.30	.33	7.58	ORGANIC MATERIAL	OL-OH	.11	2	.311	13.5			
3.80	4.30	.34	7.98	ORGANIC MATERIAL	OL-OH	.11	2	.310	13.5			
4.00	4.30	.34	7.86	ORGANIC MATERIAL	OL-OH	.12	2	.310	13.5			
4.20	4.90	.33	6.79	ORGANIC MATERIAL	OL-OH	.13	2	.354	13.5			
4.40	4.78	.34	7.03	ORGANIC MATERIAL	OL-OH	.13	2	.344	13.5			
4.60	4.48	.33	7.32	ORGANIC MATERIAL	OL-OH	.14	2	.322	13.5			
4.80	4.78	.35	7.26	ORGANIC MATERIAL	OL-OH	.14	2	.344	13.5			
5.00	4.66	.34	7.32	ORGANIC MATERIAL	OL-OH	.15	2	.334	13.5			
5.20	4.66	.34	7.21	ORGANIC MATERIAL	OL-OH	.16	2	.334	13.5			
5.40	4.78	.34	7.12	ORGANIC MATERIAL	OL-OH	.16	2	.342	13.5			
5.60	5.20	.34	6.60	ORGANIC MATERIAL	OL-OH	.17	2	.373	13.5			
5.80	5.14	.33	6.41	ORGANIC MATERIAL	OL-OH	.17	2	.369	13.5			
6.00	5.02	.34	6.69	ORGANIC MATERIAL	OL-OH	.18	2	.357	13.5			
6.20	5.02	.35	6.90	ORGANIC MATERIAL	OL-OH	.19	2	.358	13.5			
6.40	5.14	.37	7.12	ORGANIC MATERIAL	OL-OH	.19	2	.366	13.5			
6.60	4.84	.35	7.20	ORGANIC MATERIAL	OL-OH	.20	2	.344	13.5			
6.80	5.38	.33	6.21	ORGANIC MATERIAL	OL-OH	.20	2	.383	13.5			
7.00	5.38	.27	5.05	CLAY	CH	.28	2	.378	13.5			
7.20	5.50	.33	6.08	ORGANIC MATERIAL	OL-OH	.22	2	.391	13.5			
7.40	5.14	.35	6.80	ORGANIC MATERIAL	OL-OH	.22	2	.364	13.5			
7.60	4.78	.35	7.25	ORGANIC MATERIAL	OL-OH	.23	2	.377	13.5			
7.80	5.14	.35	6.78	ORGANIC MATERIAL	OL-OH	.23	2	.363	13.5			
8.00	5.08	.34	6.64	ORGANIC MATERIAL	OL-OH	.24	2	.359	13.5			
8.20	5.26	.35	6.57	ORGANIC MATERIAL	OL-OH	.25	2	.371	13.5			
8.40	5.14	.30	5.75	CLAY	CH	.24	2	.356	13.5			
8.60	4.90	.34	6.84	ORGANIC MATERIAL	OL-OH	.25	2	.344	13.5			
8.80	5.26	.36	6.81	ORGANIC MATERIAL	OL-OH	.26	2	.370	13.5			
9.00	5.56	.34	6.05	ORGANIC MATERIAL	OL-OH	.27	2	.372	13.5			
9.20	5.74	.33	5.80	CLAY	CH	.37	2	.398	13.5			
9.40	5.80	.22	3.84	CLAY	CH	.38	2	.402	13.5			

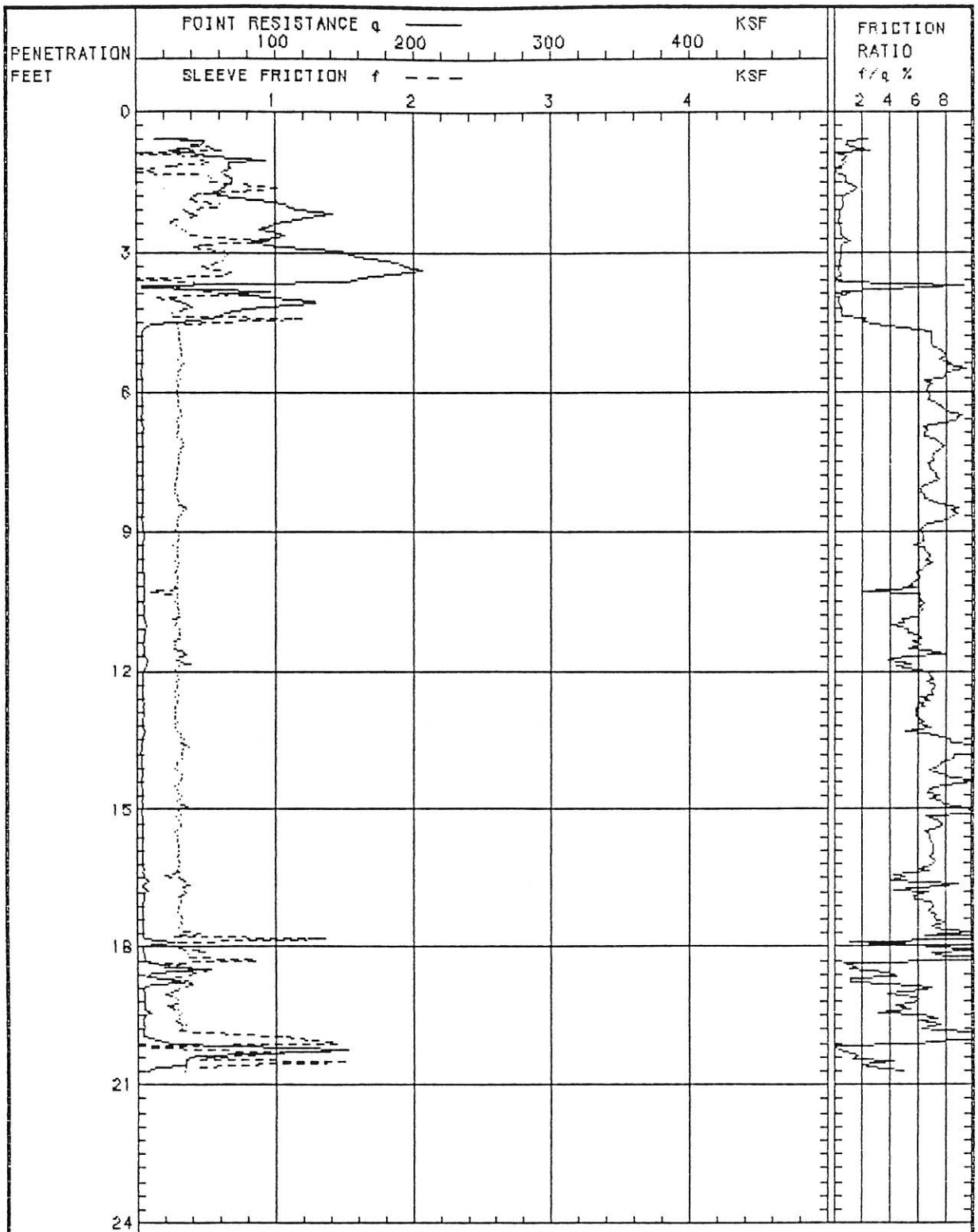
9.60	5.74	.34	5.92	CLAY	CH	.38	2	.397	13.5			
9.80	5.38	.34	6.40	ORGANIC MATERIAL	OL-OH	.29	2	.377	13.5			
10.00	4.90	.34	7.04	ORGANIC MATERIAL	OL-OH	.30	2	.341	13.5			
10.20	5.74	.35	6.02	CLAY	CH	.41	2	.395	13.5			
10.40	5.74	.34	6.00	CLAY	CH	.42	2	.374	13.5			
10.60	5.74	.35	6.08	CLAY	CH	.42	2	.394	13.5			
10.80	5.02	.34	6.71	ORGANIC MATERIAL	OL-OH	.32	2	.348	13.5			
11.00	5.50	.36	6.49	ORGANIC MATERIAL	OL-OH	.32	2	.383	13.5			
11.20	5.26	.35	6.56	ORGANIC MATERIAL	OL-OH	.34	2	.365	13.5			
11.40	5.62	.35	6.23	ORGANIC MATERIAL	OL-OH	.34	2	.391	13.5			
11.60	5.62	.35	6.24	ORGANIC MATERIAL	OL-OH	.35	2	.390	13.5			
11.80	5.86	.35	5.98	CLAY	CH	.47	2	.399	13.5			
12.00	5.50	.35	6.37	ORGANIC MATERIAL	OL-OH	.36	2	.381	13.5			
12.20	5.49	.36	6.47	ORGANIC MATERIAL	OL-OH	.37	2	.380	13.5			
12.40	5.74	.34	5.91	CLAY	CH	.50	2	.388	13.5			
12.60	5.38	.36	6.62	ORGANIC MATERIAL	OL-OH	.38	2	.371	13.5			
12.80	5.50	.34	6.26	ORGANIC MATERIAL	OL-OH	.38	2	.379	13.5			
13.00	5.50	.33	6.00	ORGANIC MATERIAL	OL-OH	.39	2	.379	13.5			
13.20	5.74	.34	6.00	CLAY	CH	.53	2	.386	13.5			
13.40	6.09	.37	6.08	CLAY	CH	.54	2	.412	13.5			
13.60	5.62	.34	5.97	CLAY	CH	.54	2	.376	13.5			
13.80	5.98	.38	6.44	ORGANIC MATERIAL	OL-OH	.41	2	.412	13.5			
14.00	6.71	.35	5.29	CLAY	CH	.56	3	.456	13.5			
14.20	5.74	.35	6.11	CLAY	CH	.57	2	.383	13.5			
14.40	5.25	.36	6.89	ORGANIC MATERIAL	OL-OH	.43	2	.357	13.5			
14.60	5.62	.35	6.15	ORGANIC MATERIAL	OL-OH	.41	2	.394	13.5			
14.80	5.38	.35	6.50	ORGANIC MATERIAL	OL-OH	.44	2	.365	13.5			
15.00	5.98	.34	5.65	CLAY	CH	.60	2	.399	13.5			
15.20	7.03	.35	4.95	CLAY	CH	.61	3	.476	13.5			
15.40	7.90	.41	5.26	CLAY	CH	.62	3	.532	13.5			
15.60	5.73	.39	6.76	ORGANIC MATERIAL	OL-OH	.47	2	.390	13.5			
15.80	5.49	.40	7.24	ORGANIC MATERIAL	OL-OH	.47	2	.371	13.5			
16.00	6.21	.35	5.62	CLAY	CH	.64	2	.413	13.5			
16.20	5.85	.35	6.06	CLAY	CH	.65	2	.386	13.5			
16.40	5.85	.27	4.56	CLAY	CH	.66	2	.385	13.5			
16.60	5.74	.33	5.80	CLAY	CH	.66	2	.376	13.5			
16.80	12.15	.33	2.70	SILTY CLAY TO CLAY	CL-CH	.67	3	.850	13.5			
17.00	7.49	.34	4.60	CLAY	CH	.68	3	.504	13.5			
17.20	7.25	.20	2.73	CLAY	CH	.69	3	.406	13.5			
17.40	5.98	.34	5.73	CLAY	CH	.70	2	.371	13.5			
17.60	7.16	.41	5.67	CLAY	CH	.70	3	.479	13.5			
17.80	6.10	.36	5.83	CLAY	CH	.71	2	.399	13.5			
18.00	5.74	.37	6.39	ORGANIC MATERIAL	OL-OH	.54	2	.395	13.5			
18.20	8.06	.37	4.55	CLAY	CH	.73	3	.543	13.5			
18.40	5.74	.36	6.20	ORGANIC MATERIAL	OL-OH	.55	2	.384	13.5			
18.60	5.74	.38	6.53	ORGANIC MATERIAL	OL-OH	.56	2	.384	13.5			
18.80	5.61	.36	6.50	ORGANIC MATERIAL	OL-OH	.56	2	.374	13.5			
19.00	6.35	.37	5.78	CLAY	CH	.76	3	.414	13.5			
19.20	5.49	.38	6.87	ORGANIC MATERIAL	OL-OH	.59	2	.334	13.5			
19.40	7.99	.21	2.57	CLAY	CH	.78	3	.535	13.5			
19.60	267.56	.15	.05	SAND	SW-SP	1.27	25			91	44	.504
19.80	24.76	.51	2.05	CLAYEY SILT TO SILTY CLAY	MH-CL	.89	5	1.760	13.5			
20.00	7.31	.39	5.34	CLAY	CH	.80	3	.482	13.5			
20.20	5.62	.43	7.62	ORGANIC MATERIAL	OL-OH	.61	2	.372	13.5			
20.40	5.38	.38	7.02	ORGANIC MATERIAL	OL-OH	.61	2	.353	13.5			
20.60	6.68	.41	6.14	CLAY	CH	.82	3	.434	13.5			
20.80	14.15	.55	3.89	CLAY	CH	.83	6	.986	13.5			
21.00	9.81	.50	5.11	CLAY	CH	.84	4	.654	13.5			
21.20	9.56	.49	5.17	CLAY	CH	.85	4	.646	13.5			
21.40	3.57	11.55	323.03	ORGANIC MATERIAL	OL-OH	.64	1	.217	13.5			

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

PROJECT NO. : 01870206
BORING NO. : 40M
CONE NO. : 5006
DATE : 05/07/87

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	23.91	.43	1.81	CLAYEY SILT TO SILTY CLAY	MH-CL	.03	5	1.769	13.5			
.80	18.95	.50	2.63	SILTY CLAY TO CLAY	CL-CH	.03	6	1.401	13.5			
1.00	12.79	.48	3.76	CLAY	CH	.04	6	.944	13.5			
1.20	16.50	.47	2.86	SILTY CLAY TO CLAY	CL-CH	.05	5	1.219	13.5			
1.40	20.56	.61	2.95	SILTY CLAY TO CLAY	CL-CH	.06	6	1.519	13.5			
1.60	22.24	.39	1.73	CLAYEY SILT TO SILTY CLAY	MH-CL	.07	5	1.642	13.5			
1.80	5.62	.37	6.64	ORGANIC MATERIAL	OL-OH	.05	2	.412	13.5			
2.00	4.78	.44	9.26	ORGANIC MATERIAL	OL-OH	.06	2	.350	13.5			
2.20	4.30	.38	8.79	ORGANIC MATERIAL	OL-OH	.07	2	.314	13.5			
2.40	5.50	.35	6.44	ORGANIC MATERIAL	OL-OH	.07	2	.402	13.5			
2.60	5.14	.36	7.05	ORGANIC MATERIAL	OL-OH	.08	2	.375	13.5			
2.80	4.90	.37	7.65	ORGANIC MATERIAL	OL-OH	.08	2	.357	13.5			
3.00	5.14	.38	7.33	ORGANIC MATERIAL	OL-OH	.09	2	.374	13.5			
3.20	5.02	.37	7.45	ORGANIC MATERIAL	OL-OH	.10	2	.365	13.5			
3.40	5.26	.37	7.12	ORGANIC MATERIAL	OL-OH	.10	2	.382	13.5			
3.60	4.78	.37	7.82	ORGANIC MATERIAL	OL-OH	.11	2	.346	13.5			
3.80	5.26	.37	7.13	ORGANIC MATERIAL	OL-OH	.11	2	.381	13.5			
4.00	5.02	.38	7.66	ORGANIC MATERIAL	OL-OH	.12	2	.363	13.5			
4.20	4.90	.38	7.79	ORGANIC MATERIAL	OL-OH	.13	2	.354	13.5			
4.40	4.06	.36	8.83	ORGANIC MATERIAL	OL-OH	.13	1	.291	13.5			
4.60	4.66	.38	8.14	ORGANIC MATERIAL	OL-OH	.14	2	.335	13.5			
4.80	5.14	.37	7.17	ORGANIC MATERIAL	OL-OH	.14	2	.370	13.5			
5.00	4.90	.38	7.72	ORGANIC MATERIAL	OL-OH	.15	2	.352	13.5			
5.20	5.14	.37	7.16	ORGANIC MATERIAL	OL-OH	.16	2	.369	13.5			
5.40	5.26	.30	5.62	CLAY	CH	.22	2	.374	13.5			
5.60	5.02	.37	7.34	ORGANIC MATERIAL	OL-OH	.17	2	.359	13.5			
5.80	5.14	.37	7.18	ORGANIC MATERIAL	OL-OH	.17	2	.369	13.5			
6.00	4.96	.37	7.38	ORGANIC MATERIAL	OL-OH	.18	2	.354	13.5			
6.20	5.38	.37	6.85	ORGANIC MATERIAL	OL-OH	.19	2	.385	13.5			
6.40	5.02	.37	7.43	ORGANIC MATERIAL	OL-OH	.19	2	.358	13.5			
6.60	5.20	.37	7.03	ORGANIC MATERIAL	OL-OH	.20	2	.370	13.5			
6.80	5.14	.37	7.16	ORGANIC MATERIAL	OL-OH	.20	2	.366	13.5			
7.00	5.14	.35	6.72	ORGANIC MATERIAL	OL-OH	.21	2	.363	13.5			
7.20	5.02	.37	7.46	ORGANIC MATERIAL	OL-OH	.22	2	.356	13.5			
7.40	4.78	.44	9.12	ORGANIC MATERIAL	OL-OH	.22	2	.338	13.5			
7.60	5.14	.36	7.06	ORGANIC MATERIAL	OL-OH	.23	2	.364	13.5			
7.80	5.14	.38	7.48	ORGANIC MATERIAL	OL-OH	.23	2	.363	13.5			
8.00	5.14	.36	7.07	ORGANIC MATERIAL	OL-OH	.24	2	.363	13.5			
8.20	5.02	.37	7.46	ORGANIC MATERIAL	OL-OH	.25	2	.354	13.5			
8.40	4.78	.35	7.35	ORGANIC MATERIAL	OL-OH	.25	2	.336	13.5			
8.60	5.26	.37	7.02	ORGANIC MATERIAL	OL-OH	.26	2	.371	13.5			
8.80	5.02	.36	7.25	ORGANIC MATERIAL	OL-OH	.26	2	.352	13.5			
9.00	5.02	.37	7.45	ORGANIC MATERIAL	OL-OH	.27	2	.352	13.5			
9.20	5.26	.37	6.95	ORGANIC MATERIAL	OL-OH	.28	2	.369	13.5			
9.40	5.50	.38	6.84	ORGANIC MATERIAL	OL-OH	.28	2	.386	13.5			

9.60	6.68	.33	5.67	CLAY	CH	.38	3	.466	13.5
9.80	5.50	.37	6.69	ORGANIC MATERIAL	OL-OH	.29	2	.386	13.5
10.00	5.02	.35	6.98	ORGANIC MATERIAL	OL-OH	.30	2	.349	13.5
10.20	5.62	.41	7.38	ORGANIC MATERIAL	OL-OH	.31	2	.394	13.5
10.40	7.68	.36	4.72	CLAY	CH	.42	3	.538	13.5
10.60	5.26	.36	6.94	ORGANIC MATERIAL	OL-OH	.32	2	.366	13.5
10.80	5.14	.37	7.15	ORGANIC MATERIAL	OL-OH	.32	2	.357	13.5
11.00	5.38	.37	6.83	ORGANIC MATERIAL	OL-OH	.33	2	.374	13.5
11.20	5.02	.37	7.34	ORGANIC MATERIAL	OL-OH	.34	2	.347	13.5
11.40	5.26	.36	6.87	ORGANIC MATERIAL	OL-OH	.34	2	.364	13.5
11.60	5.31	.35	6.57	ORGANIC MATERIAL	OL-OH	.35	2	.368	13.5
11.80	5.26	.36	6.91	ORGANIC MATERIAL	OL-OH	.35	2	.363	13.5
12.00	4.91	.38	7.75	ORGANIC MATERIAL	OL-OH	.36	2	.337	13.5
12.20	4.37	.42	9.60	ORGANIC MATERIAL	OL-OH	.37	2	.296	13.5
12.40	5.14	.37	7.17	ORGANIC MATERIAL	OL-OH	.37	2	.353	13.5
12.60	5.61	.35	6.32	ORGANIC MATERIAL	OL-OH	.38	2	.388	13.5
12.80	5.50	.37	6.68	ORGANIC MATERIAL	OL-OH	.38	2	.379	13.5
13.00	5.73	.38	6.71	ORGANIC MATERIAL	OL-OH	.39	2	.396	13.5
13.20	5.38	.36	6.72	ORGANIC MATERIAL	OL-OH	.40	2	.369	13.5
13.40	5.50	.39	7.11	ORGANIC MATERIAL	OL-OH	.40	2	.378	13.5
13.60	5.38	.38	7.12	ORGANIC MATERIAL	OL-OH	.41	2	.368	13.5
13.80	5.73	.40	6.91	ORGANIC MATERIAL	OL-OH	.41	2	.394	13.5
14.00	20.01	.38	1.91	CLAYEY SILT TO SILTY CLAY	MH-CL	.63	4	1.436	13.5
14.20	6.61	.47	7.11	ORGANIC MATERIAL	OL-OH	.43	3	.458	13.5
14.40	7.33	.40	5.50	CLAY	CH	.58	3	.500	13.5
14.60	4.90	.38	7.69	ORGANIC MATERIAL	OL-OH	.44	2	.330	13.5
14.80	5.50	.37	6.79	ORGANIC MATERIAL	OL-OH	.44	2	.374	13.5
15.00	5.50	.43	7.75	ORGANIC MATERIAL	OL-OH	.45	2	.374	13.5
15.20	5.50	.37	6.68	ORGANIC MATERIAL	OL-OH	.46	2	.374	13.5
15.40	5.38	.40	7.36	ORGANIC MATERIAL	OL-OH	.46	2	.364	13.5
15.60	5.38	.40	7.40	ORGANIC MATERIAL	OL-OH	.47	2	.364	13.5
15.80	8.77	.36	4.12	CLAY	CH	.63	4	.603	13.5
16.00	5.62	.37	6.55	ORGANIC MATERIAL	OL-OH	.48	2	.381	13.5
16.20	5.50	.36	6.58	ORGANIC MATERIAL	OL-OH	.49	2	.371	13.5
16.40	5.26	.38	7.18	ORGANIC MATERIAL	OL-OH	.49	2	.353	13.5
16.60	5.08	.37	7.29	ORGANIC MATERIAL	OL-OH	.50	2	.340	13.5
16.80	5.50	.37	6.79	ORGANIC MATERIAL	OL-OH	.50	2	.370	13.5
17.00	5.50	.37	6.69	ORGANIC MATERIAL	OL-OH	.51	2	.370	13.5
17.20	5.74	.38	6.60	ORGANIC MATERIAL	OL-OH	.52	2	.387	13.5
17.40	5.38	.39	7.23	ORGANIC MATERIAL	OL-OH	.52	2	.360	13.5
17.60	5.50	.36	6.63	ORGANIC MATERIAL	OL-OH	.53	2	.368	13.5
17.80	5.27	.74	14.08	ORGANIC MATERIAL	OL-OH	.53	2	.350	13.5
18.00	25.64	.46	1.81	CLAYEY SILT TO SILTY CLAY	MH-CL	.81	6	1.839	13.5
18.20	6.71	.37	5.46	CLAY	CH	.73	3	.443	13.5
18.40	5.74	.37	6.45	ORGANIC MATERIAL	OL-OH	.55	2	.385	13.5
18.60	5.50	.35	6.44	ORGANIC MATERIAL	OL-OH	.56	2	.366	13.5
18.80	8.12	.43	5.27	CLAY	CH	.75	3	.546	13.5
19.00	11.53	.39	3.40	CLAY	CH	.76	5	.798	13.5
19.20	5.51	.39	7.06	ORGANIC MATERIAL	OL-OH	.58	2	.365	13.5
19.40	5.50	.38	6.87	ORGANIC MATERIAL	OL-OH	.58	2	.364	13.5
19.60	5.26	.41	7.75	ORGANIC MATERIAL	OL-OH	.59	2	.346	13.5
19.80	5.50	.41	7.46	ORGANIC MATERIAL	OL-OH	.59	2	.353	13.5
20.00	16.74	.46	2.76	SILTY CLAY TO CLAY	CL-CH	.80	5	1.101	13.5
20.20	13.24	.43	3.23	CLAY	CH	.81	6	.921	13.5
20.40	7.14	.39	5.42	CLAY	CH	.82	3	.468	13.5
20.60	5.38	.37	6.93	ORGANIC MATERIAL	OL-OH	.62	2	.353	13.5



RESULT OF CONE PENETRATION TEST

40S

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

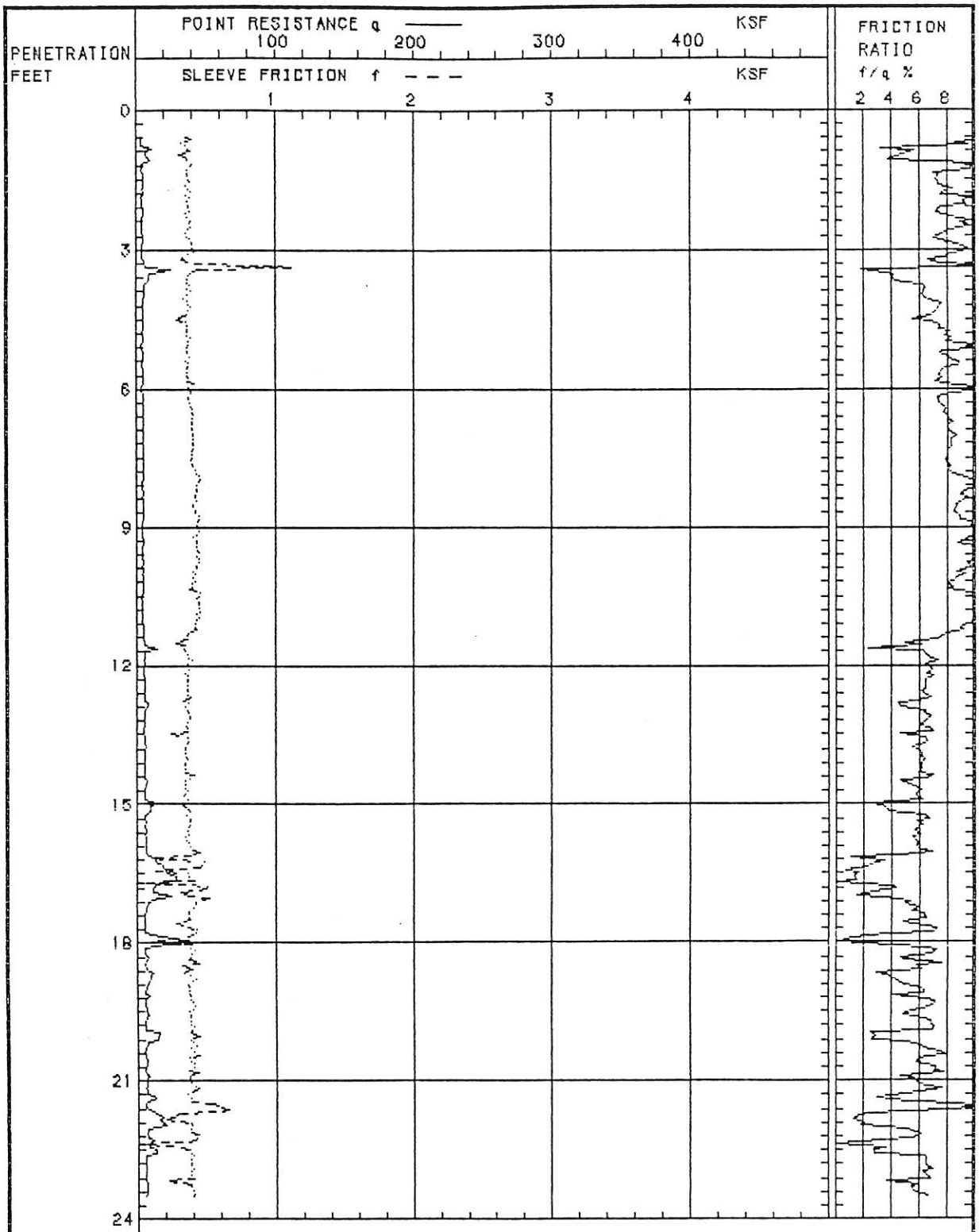
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 40S
CONE NO. : 5006
DATE : 05/07/87

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	31.79	.42	1.31	SANDY SILT TO CLAYEY SILT	ML-MH	.03	6	2.353	13.5	71	38	.50+
.80	34.67	.28	.80	SANDY SILT TO CLAYEY SILT	ML-MH	.04	6	2.565	13.3	73	38	.50+
1.00	73.74	.48	.65	SILTY SAND TO SANDY SILT	SM-ML	.05	11			100+	42	.50+
1.20	68.01	.15	.22	SILTY SAND TO SANDY SILT	SM-ML	.07	10			98	42	.50+
1.40	67.35	.48	.71	SILTY SAND TO SANDY SILT	SM-ML	.08	10			95	41	.50+
1.60	64.91	.85	1.31	SANDY SILT TO CLAYEY SILT	ML-MH	.08	12	4.802	13.5	92	41	.50+
1.80	62.02	.45	.72	SILTY SAND TO SANDY SILT	SM-ML	.10	9			87	40	.50+
2.00	108.89	.59	.55	SAND TO SILTY SAND	SM-SP	.12	13			100+	42	.50+
2.20	136.76	.36	.26	SAND TO SILTY SAND	SM-SP	.13	16			100+	42	.50+
2.40	99.69	.43	.43	SAND TO SILTY SAND	SM-SP	.14	11			100+	42	.50+
2.60	102.19	.36	.35	SAND TO SILTY SAND	SM-SP	.16	12			100+	42	.50+
2.80	88.32	.45	.51	SAND TO SILTY SAND	SM-SP	.17	10			95	42	.50+
3.00	151.67	.65	.43	SAND TO SILTY SAND	SM-SP	.18	18			100+	42	.50+
3.20	184.13	.59	.32	SAND	SW-SP	.21	17			100+	44	.50+
3.40	202.39	.62	.31	SAND	SW-SP	.22	19			100+	44	.50+
3.60	157.33	.21	.13	SAND	SW-SP	.23	15			100+	44	.50+
3.80	50.57	.54	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	.19	9	3.732	13.5	73	38	.50+
4.00	112.10	.40	.36	SAND TO SILTY SAND	SM-SP	.24	13			100+	42	.50+
4.20	87.18	.37	.42	SAND TO SILTY SAND	SM-SP	.25	10			87	41	.50+
4.40	56.32	.73	1.30	SANDY SILT TO CLAYEY SILT	ML-MH	.22	10	4.155	13.5	74	38	.50+
4.60	8.50	.30	3.49	CLAY	CH	.18	4	.616	13.5			
4.80	4.54	.31	6.91	ORGANIC MATERIAL	OL-OH	.14	2	.326	13.5			
5.00	4.54	.32	7.02	ORGANIC MATERIAL	OL-OH	.15	2	.325	13.5			
5.20	4.12	.33	7.91	ORGANIC MATERIAL	OL-OH	.16	1	.294	13.5			
5.40	4.06	.33	8.21	ORGANIC MATERIAL	OL-OH	.16	1	.289	13.5			
5.60	3.70	.31	8.27	ORGANIC MATERIAL	OL-OH	.17	1	.262	13.5			
5.80	4.42	.30	6.71	ORGANIC MATERIAL	OL-OH	.17	2	.315	13.5			
6.00	4.42	.34	7.67	ORGANIC MATERIAL	OL-OH	.18	2	.314	13.5			
6.20	4.42	.30	6.87	ORGANIC MATERIAL	OL-OH	.19	2	.314	13.5			
6.40	4.06	.32	7.88	ORGANIC MATERIAL	OL-OH	.19	1	.287	13.5			
6.60	3.41	.30	8.81	ORGANIC MATERIAL	OL-OH	.20	1	.238	13.5			
6.80	4.66	.30	6.49	ORGANIC MATERIAL	OL-OH	.20	2	.330	13.5			
7.00	4.54	.31	6.79	ORGANIC MATERIAL	OL-OH	.21	2	.321	13.5			
7.20	4.18	.33	7.79	ORGANIC MATERIAL	OL-OH	.22	2	.294	13.5			
7.40	4.30	.30	7.04	ORGANIC MATERIAL	OL-OH	.22	2	.302	13.5			
7.60	4.42	.30	6.74	ORGANIC MATERIAL	OL-OH	.23	2	.311	13.5			
7.80	4.06	.29	7.21	ORGANIC MATERIAL	OL-OH	.23	1	.284	13.5			
8.00	4.18	.28	6.70	ORGANIC MATERIAL	OL-OH	.24	2	.292	13.5			
8.20	4.54	.29	6.30	ORGANIC MATERIAL	OL-OH	.25	2	.313	13.5			
8.40	4.19	.29	6.84	ORGANIC MATERIAL	OL-OH	.25	2	.291	13.5			
8.60	3.83	.33	8.56	ORGANIC MATERIAL	OL-OH	.26	1	.264	13.5			
8.80	3.94	.37	9.48	ORGANIC MATERIAL	OL-OH	.26	1	.272	13.5			
9.00	4.54	.28	6.22	ORGANIC MATERIAL	OL-OH	.27	2	.316	13.5			
9.20	4.66	.30	6.37	ORGANIC MATERIAL	OL-OH	.28	2	.325	13.5			
9.40	4.54	.29	6.43	ORGANIC MATERIAL	OL-OH	.28	2	.316	13.5			

9.60	4.30	.29	6.65	ORGANIC MATERIAL	OL-OH	.29	2	.297	13.5			
9.80	4.54	.33	7.18	ORGANIC MATERIAL	OL-OH	.29	2	.315	13.5			
10.00	4.78	.29	6.00	ORGANIC MATERIAL	OL-OH	.30	2	.332	13.5			
10.20	5.14	.28	5.54	CLAY	CH	.41	2	.351	13.5			
10.40	4.78	.29	6.09	ORGANIC MATERIAL	OL-OH	.31	2	.331	13.5			
10.60	4.66	.29	6.23	ORGANIC MATERIAL	OL-OH	.32	2	.322	13.5			
10.80	5.14	.33	6.41	ORGANIC MATERIAL	OL-OH	.32	2	.357	13.5			
11.00	6.21	.28	4.54	CLAY	CH	.44	2	.427	13.5			
11.20	5.62	.31	5.46	CLAY	CH	.45	2	.383	13.5			
11.40	4.66	.29	6.18	ORGANIC MATERIAL	OL-OH	.34	2	.320	13.5			
11.60	4.66	.33	7.14	ORGANIC MATERIAL	OL-OH	.35	2	.320	13.5			
11.80	7.29	.34	4.63	CLAY	CH	.47	3	.505	13.5			
12.00	4.55	.33	7.21	ORGANIC MATERIAL	OL-OH	.36	2	.310	13.5			
12.20	4.30	.28	6.60	ORGANIC MATERIAL	OL-OH	.37	2	.292	13.5			
12.40	4.06	.29	7.04	ORGANIC MATERIAL	OL-OH	.37	1	.273	13.5			
12.60	4.42	.29	6.45	ORGANIC MATERIAL	OL-OH	.38	2	.300	13.5			
12.80	4.54	.28	6.16	ORGANIC MATERIAL	OL-OH	.38	2	.308	13.5			
13.00	4.72	.28	6.00	ORGANIC MATERIAL	OL-OH	.39	2	.321	13.5			
13.20	4.31	.28	6.45	ORGANIC MATERIAL	OL-OH	.40	2	.290	13.5			
13.40	4.43	.32	7.12	ORGANIC MATERIAL	OL-OH	.40	2	.298	13.5			
13.60	3.59	.35	9.62	ORGANIC MATERIAL	OL-OH	.41	1	.236	13.5			
13.80	3.34	.36	10.90	ORGANIC MATERIAL	OL-OH	.41	1	.217	13.5			
14.00	3.83	.30	7.87	ORGANIC MATERIAL	OL-OH	.42	1	.252	13.5			
14.20	4.30	.31	7.22	ORGANIC MATERIAL	OL-OH	.43	2	.287	13.5			
14.40	3.22	.31	9.54	ORGANIC MATERIAL	OL-OH	.43	1	.207	13.5			
14.60	4.42	.30	6.72	ORGANIC MATERIAL	OL-OH	.44	2	.295	13.5			
14.80	4.19	.32	7.73	ORGANIC MATERIAL	OL-OH	.44	2	.278	13.5			
15.00	3.72	.36	9.59	ORGANIC MATERIAL	OL-OH	.45	1	.242	13.5			
15.20	4.19	.31	7.38	ORGANIC MATERIAL	OL-OH	.46	2	.276	13.5			
15.40	4.06	.30	7.33	ORGANIC MATERIAL	OL-OH	.46	1	.267	13.5			
15.60	4.30	.29	6.78	ORGANIC MATERIAL	OL-OH	.47	2	.284	13.5			
15.80	4.30	.30	7.05	ORGANIC MATERIAL	OL-OH	.47	2	.284	13.5			
16.00	4.30	.30	6.92	ORGANIC MATERIAL	OL-OH	.48	2	.283	13.5			
16.20	4.30	.31	7.16	ORGANIC MATERIAL	OL-OH	.49	2	.283	13.5			
16.40	4.66	.26	5.51	ORGANIC MATERIAL	OL-OH	.49	2	.309	13.5			
16.60	6.51	.37	5.61	CLAY	CH	.66	3	.433	13.5			
16.80	6.73	.34	5.06	CLAY	CH	.67	3	.449	13.5			
17.00	5.03	.31	6.25	ORGANIC MATERIAL	OL-OH	.51	2	.335	13.5			
17.20	4.30	.30	6.91	ORGANIC MATERIAL	OL-OH	.52	2	.281	13.5			
17.40	4.43	.32	7.24	ORGANIC MATERIAL	OL-OH	.52	2	.289	13.5			
17.60	4.30	.32	7.43	ORGANIC MATERIAL	OL-OH	.53	2	.280	13.5			
17.80	4.41	.80	18.08	ORGANIC MATERIAL	OL-OH	.53	2	.287	13.5			
18.00	4.54	.30	6.51	ORGANIC MATERIAL	OL-OH	.54	2	.296	13.5			
18.20	5.03	.37	7.40	ORGANIC MATERIAL	OL-OH	.55	2	.332	13.5			
18.40	17.47	.21	1.20	CLAYEY SILT TO SILTY CLAY	MH-CL	.83	4	1.233	13.5			
18.60	9.14	.40	4.37	CLAY	CH	.74	4	.622	13.5			
18.80	22.57	.40	1.77	CLAYEY SILT TO SILTY CLAY	MH-CL	.85	5	1.609	13.5			
19.00	4.89	.25	5.05	CLAY	CH	.76	2	.306	13.5			
19.20	4.90	.29	5.91	ORGANIC MATERIAL	OL-OH	.58	2	.320	13.5			
19.40	7.58	.30	3.99	CLAY	CH	.78	3	.504	13.5			
19.60	4.30	.29	6.77	ORGANIC MATERIAL	OL-OH	.59	2	.275	13.5			
19.80	4.56	.31	6.79	ORGANIC MATERIAL	OL-OH	.59	2	.293	13.5			
20.00	9.29	1.17	12.58	ORGANIC MATERIAL	OL-OH	.60	4	.644	13.5			
20.20	109.82	.20	.18	SAND TO SILTY SAND	SM-SP	1.21	13			63	39	.27
20.40	39.46	.47	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	1.02	7	2.847	13.5	32	33	.13
20.60	24.94	.53	2.13	CLAYEY SILT TO SILTY CLAY	MH-CL	.93	5	1.779	13.5			



RESULT OF CONE PENETRATION TEST

41N

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

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

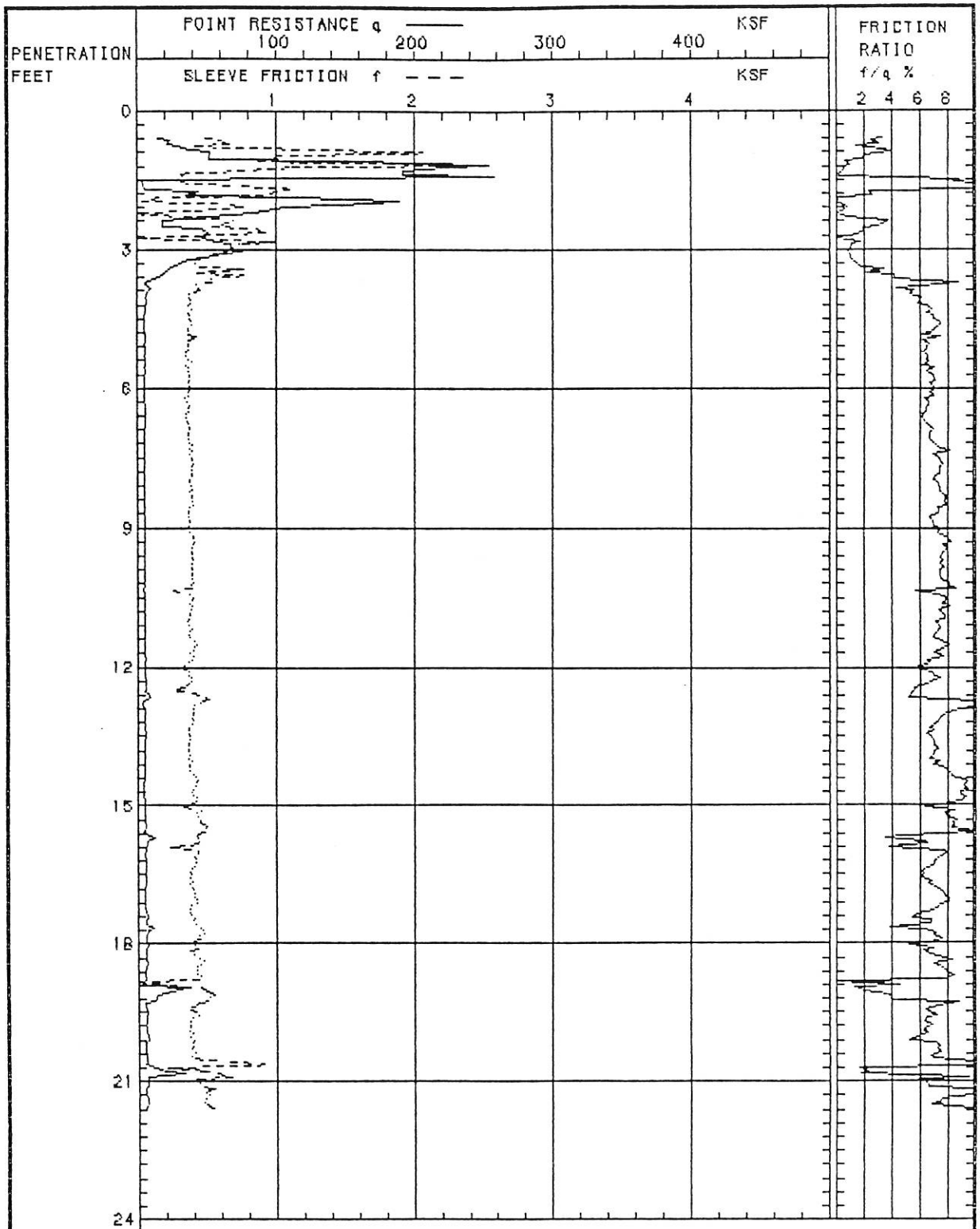
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 41N
CONE NO. : 5006
DATE : 05/07/87

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	3.35	.38	11.45	ORGANIC MATERIAL	OL-OH	.02	1	.247	13.5			
.80	7.65	.37	4.84	CLAY	CH	.03	3	.564	13.5			
1.00	7.89	.34	4.32	CLAY	CH	.04	3	.581	13.5			
1.20	4.06	.40	9.80	ORGANIC MATERIAL	OL-OH	.04	1	.298	13.5			
1.40	5.14	.37	7.16	ORGANIC MATERIAL	OL-OH	.04	2	.378	13.5			
1.60	5.08	.38	7.50	ORGANIC MATERIAL	OL-OH	.05	2	.373	13.5			
1.80	4.90	.38	7.70	ORGANIC MATERIAL	OL-OH	.05	2	.359	13.5			
2.00	4.06	.37	9.20	ORGANIC MATERIAL	OL-OH	.06	1	.297	13.5			
2.20	5.14	.37	7.21	ORGANIC MATERIAL	OL-OH	.07	2	.376	13.5			
2.40	4.18	.39	9.27	ORGANIC MATERIAL	OL-OH	.07	2	.305	13.5			
2.60	4.42	.37	8.32	ORGANIC MATERIAL	OL-OH	.08	2	.322	13.5			
2.80	5.26	.41	7.82	ORGANIC MATERIAL	OL-OH	.08	2	.383	13.5			
3.00	4.42	.41	9.27	ORGANIC MATERIAL	OL-OH	.09	2	.321	13.5			
3.20	4.66	.36	7.65	ORGANIC MATERIAL	OL-OH	.10	2	.338	13.5			
3.40	15.98	.79	4.94	CLAY	CH	.14	7	1.174	13.5			
3.60	9.08	.47	5.18	CLAY	CH	.14	4	.662	13.5			
3.80	5.98	.38	6.31	ORGANIC MATERIAL	OL-OH	.11	2	.434	13.5			
4.00	5.74	.36	6.22	ORGANIC MATERIAL	OL-OH	.12	2	.416	13.5			
4.20	5.14	.38	7.49	ORGANIC MATERIAL	OL-OH	.13	2	.371	13.5			
4.40	5.26	.36	6.89	ORGANIC MATERIAL	OL-OH	.13	2	.380	13.5			
4.60	5.14	.36	7.08	ORGANIC MATERIAL	OL-OH	.14	2	.371	13.5			
4.80	4.66	.38	8.07	ORGANIC MATERIAL	OL-OH	.14	2	.335	13.5			
5.00	4.31	.38	8.75	ORGANIC MATERIAL	OL-OH	.15	2	.309	13.5			
5.20	4.90	.37	7.55	ORGANIC MATERIAL	OL-OH	.16	2	.351	13.5			
5.40	4.30	.37	8.60	ORGANIC MATERIAL	OL-OH	.16	2	.307	13.5			
5.60	4.84	.37	7.62	ORGANIC MATERIAL	OL-OH	.17	2	.346	13.5			
5.80	5.14	.38	7.31	ORGANIC MATERIAL	OL-OH	.17	2	.368	13.5			
6.00	3.59	.39	10.75	ORGANIC MATERIAL	OL-OH	.18	1	.252	13.5			
6.20	5.26	.38	7.22	ORGANIC MATERIAL	OL-OH	.19	2	.376	13.5			
6.40	5.08	.39	7.75	ORGANIC MATERIAL	OL-OH	.19	2	.362	13.5			
6.60	5.14	.41	7.95	ORGANIC MATERIAL	OL-OH	.20	2	.356	13.5			
6.80	5.02	.40	7.95	ORGANIC MATERIAL	OL-OH	.20	2	.357	13.5			
7.00	4.84	.41	8.49	ORGANIC MATERIAL	OL-OH	.21	2	.343	13.5			
7.20	5.02	.41	8.24	ORGANIC MATERIAL	OL-OH	.22	2	.356	13.5			
7.40	5.02	.40	8.02	ORGANIC MATERIAL	OL-OH	.22	2	.355	13.5			
7.60	5.02	.40	7.90	ORGANIC MATERIAL	OL-OH	.23	2	.355	13.5			
7.80	5.26	.44	8.38	ORGANIC MATERIAL	OL-OH	.23	2	.372	13.5			
8.00	4.66	.45	9.75	ORGANIC MATERIAL	OL-OH	.24	2	.328	13.5			
8.20	4.66	.44	9.38	ORGANIC MATERIAL	OL-OH	.25	2	.327	13.5			
8.40	4.66	.43	9.25	ORGANIC MATERIAL	OL-OH	.25	2	.327	13.5			
8.60	4.90	.42	8.56	ORGANIC MATERIAL	OL-OH	.26	2	.344	13.5			
8.80	5.02	.45	8.94	ORGANIC MATERIAL	OL-OH	.26	2	.352	13.5			
9.00	4.54	.44	9.70	ORGANIC MATERIAL	OL-OH	.27	2	.316	13.5			
9.20	4.18	.43	10.17	ORGANIC MATERIAL	OL-OH	.28	2	.289	13.5			
9.40	4.67	.44	9.41	ORGANIC MATERIAL	OL-OH	.28	2	.325	13.5			

9.60	4.06	.45	11.07	ORGANIC MATERIAL	OL-OH	.29	1	.280	13.5		
9.80	4.66	.44	9.50	ORGANIC MATERIAL	OL-OH	.29	2	.324	13.5		
10.00	4.66	.42	9.00	ORGANIC MATERIAL	OL-OH	.30	2	.323	13.5		
10.20	5.02	.41	8.26	ORGANIC MATERIAL	OL-OH	.31	2	.349	13.5		
10.40	4.78	.42	8.86	ORGANIC MATERIAL	OL-OH	.31	2	.331	13.5		
10.60	3.94	.44	11.27	ORGANIC MATERIAL	OL-OH	.32	1	.269	13.5		
10.80	4.30	.44	10.22	ORGANIC MATERIAL	OL-OH	.32	2	.295	13.5		
11.00	4.30	.44	10.29	ORGANIC MATERIAL	OL-OH	.33	2	.294	13.5		
11.20	4.78	.43	9.02	ORGANIC MATERIAL	OL-OH	.34	2	.329	13.5		
11.40	4.90	.37	7.49	ORGANIC MATERIAL	OL-OH	.34	2	.338	13.5		
11.60	10.20	.35	3.43	CLAY	CH	.46	4	.721	13.5		
11.80	5.68	.38	6.62	ORGANIC MATERIAL	OL-OH	.35	2	.394	13.5		
12.00	5.62	.37	6.54	ORGANIC MATERIAL	OL-OH	.36	2	.390	13.5		
12.20	5.38	.36	6.71	ORGANIC MATERIAL	OL-OH	.37	2	.371	13.5		
12.40	5.74	.37	6.39	ORGANIC MATERIAL	OL-OH	.37	2	.397	13.5		
12.60	5.86	.38	6.51	ORGANIC MATERIAL	OL-OH	.38	2	.406	13.5		
12.80	7.03	.36	5.10	CLAY	CH	.51	3	.483	13.5		
13.00	5.85	.39	6.60	ORGANIC MATERIAL	OL-OH	.39	2	.405	13.5		
13.20	5.74	.37	6.50	ORGANIC MATERIAL	OL-OH	.40	2	.396	13.5		
13.40	5.38	.37	6.82	ORGANIC MATERIAL	OL-OH	.40	2	.369	13.5		
13.60	5.74	.37	6.47	ORGANIC MATERIAL	OL-OH	.41	2	.395	13.5		
13.80	6.22	.36	5.71	CLAY	CH	.55	2	.420	13.5		
14.00	5.86	.37	6.30	ORGANIC MATERIAL	OL-OH	.42	2	.403	13.5		
14.20	5.74	.35	6.19	ORGANIC MATERIAL	OL-OH	.43	2	.393	13.5		
14.40	5.98	.40	6.62	ORGANIC MATERIAL	OL-OH	.43	2	.411	13.5		
14.60	6.40	.35	5.53	CLAY	CH	.58	3	.431	13.5		
14.80	6.10	.35	5.73	CLAY	CH	.59	2	.408	13.5		
15.00	12.06	.40	3.28	CLAY	CH	.60	5	.949	13.5		
15.20	8.18	.38	4.61	CLAY	CH	.61	3	.861	13.5		
15.40	6.46	.39	6.02	CLAY	CH	.62	3	.433	13.5		
15.60	6.34	.37	5.84	CLAY	CH	.62	3	.423	13.5		
15.80	6.45	.36	5.64	CLAY	CH	.63	3	.431	13.5		
16.00	6.69	.44	6.60	CLAY	CH	.64	3	.448	13.5		
16.20	13.13	.31	2.34	SILTY CLAY TO CLAY	CL-CH	.65	4	.925	13.5		
16.40	20.19	.44	2.16	CLAYEY SILT TO SILTY CLAY	MH-CL	.74	4	1.441	13.5		
16.60	28.45	.40	1.39	SANDY SILT TO CLAYEY SILT	ML-MH	.83	5	2.046	13.5	27	32	.12
16.80	12.20	.51	4.15	CLAY	CH	.67	5	.954	13.5		
17.00	20.79	.45	2.15	CLAYEY SILT TO SILTY CLAY	MH-CL	.76	4	1.494	13.5		
17.20	7.79	.42	5.41	CLAY	CH	.69	3	.526	13.5		
17.40	5.98	.38	6.31	ORGANIC MATERIAL	OL-OH	.52	2	.404	13.5		
17.60	5.86	.33	5.56	CLAY	CH	.70	2	.382	13.5		
17.80	8.30	.42	5.09	CLAY	CH	.71	3	.562	13.5		
18.00	32.41	.27	.83	SANDY SILT TO CLAYEY SILT	ML-MH	.90	6	2.334	13.5	29	32	.13
18.20	5.74	.41	7.07	ORGANIC MATERIAL	OL-OH	.55	2	.395	13.5		
18.40	6.84	.42	6.08	CLAY	CH	.74	3	.452	13.5		
18.60	9.13	.37	4.07	CLAY	CH	.74	4	.621	13.5		
18.80	9.76	.41	4.24	CLAY	CH	.75	4	.667	13.5		
19.00	6.35	.38	5.92	CLAY	CH	.76	3	.414	13.5		
19.20	7.82	.39	4.97	CLAY	CH	.77	3	.522	13.5		
19.40	6.21	.41	6.58	ORGANIC MATERIAL	OL-OH	.58	2	.417	13.5		
19.60	7.55	.39	5.16	CLAY	CH	.78	3	.501	13.5		
19.80	5.74	.39	6.77	ORGANIC MATERIAL	OL-OH	.59	2	.391	13.5		
20.00	15.60	.39	2.47	SILTY CLAY TO CLAY	CL-CH	.80	4	1.097	13.5		
20.20	7.42	.40	5.39	CLAY	CH	.81	3	.490	13.5		
20.40	5.61	.43	7.70	ORGANIC MATERIAL	OL-OH	.61	2	.371	13.5		
20.60	6.93	.40	5.79	CLAY	CH	.82	3	.452	13.5		
20.80	5.49	.41	7.40	ORGANIC MATERIAL	OL-OH	.62	2	.361	13.5		
21.00	6.69	.38	5.71	CLAY	CH	.84	3	.434	13.5		
21.20	6.08	.42	6.94	ORGANIC MATERIAL	OL-OH	.64	2	.404	13.5		
21.40	10.37	.39	3.75	CLAY	CH	.86	4	.705	13.5		

21.60	7.02	.53	7.54	ORGANIC MATERIAL	OL-OH	.65	3	.472	13.5
21.80	17.26	.30	1.75	CLAYEY SILT TO SILTY CLAY	MH-CL	.98	4	1.206	13.5
22.00	14.57	.40	2.73	SILTY CLAY TO CLAY	CL-CH	.88	4	1.014	13.5
22.20	7.40	.43	5.74	CLAY	CH	.89	3	.483	13.5
22.40	8.48	.15	1.78	SENSITIVE FINE GRAINED	OL-CH	.67	2	.579	13.5
22.60	10.04	.39	3.92	CLAY	CH	.90	4	.677	13.5
22.80	5.98	.39	6.50	ORGANIC MATERIAL	OL-OH	.68	2	.392	13.5
23.00	6.10	.39	6.37	ORGANIC MATERIAL	OL-OH	.69	2	.401	13.5
23.20	6.33	.30	4.80	CLAY	CH	.93	3	.400	13.5
23.40	6.94	.40	5.83	CLAY	CH	.94	3	.445	13.5



RESULT OF CONE PENETRATION TEST

41M

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

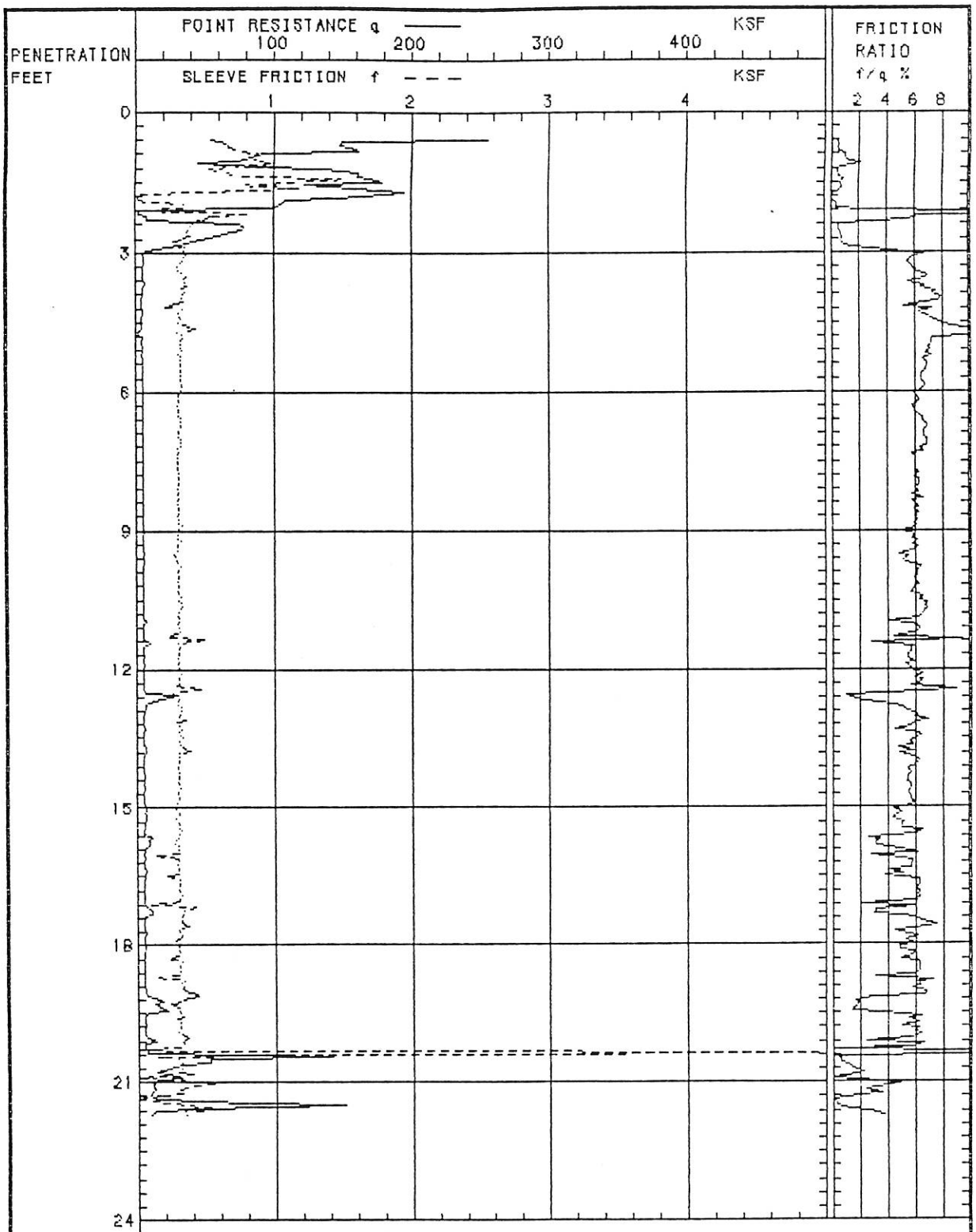
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 41M
CONE NO. : 5006
DATE : 05/07/87

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	19.24	.55	2.88	SILTY CLAY TO CLAY	CL-CH	.02	6	1.424	13.5			
.80	33.77	.40	1.18	SANDY SILT TO CLAYEY SILT	ML-MH	.04	6	2.478	13.5	72	38	.50+
1.00	52.06	1.09	2.10	SANDY SILT TO CLAYEY SILT	ML-MH	.05	9	3.852	13.5	86	40	.50+
1.20	238.84	1.78	.75	SAND	SW-SP	.08	22			100+	44	.50+
1.40	224.92	.32	.14	SAND	SW-SP	.09	21			100+	41	.50+
1.60	4.18	.54	12.87	ORGANIC MATERIAL	OL-OH	.05	2	.306	13.5			
1.80	39.69	1.13	2.86	CLAYEY SILT TO SILTY CLAY	MH-CL	.09	9	2.934	13.5			
2.00	167.40	.36	.21	SAND	SW-SP	.13	16			100+	46	.50+
2.20	88.82	.10	.11	SAND TO SILTY SAND	SM-SP	.13	10			100+	42	.50+
2.40	18.35	.66	3.57	CLAY	CH	.10	8	1.352	13.5			
2.60	48.52	.89	1.84	SANDY SILT TO CLAYEY SILT	ML-MH	.13	9	3.585	13.5	75	39	.50+
2.80	51.86	.18	.35	SILTY SAND TO SANDY SILT	SM-ML	.15	8			76	39	.50+
3.00	71.94	.82	1.13	SILTY SAND TO SANDY SILT	SM-ML	.17	11			97	40	.50+
3.20	43.18	.50	1.16	SANDY SILT TO CLAYEY SILT	ML-MH	.16	8	3.187	13.5	70	38	.50+
3.40	23.91	.45	1.87	CLAYEY SILT TO SILTY CLAY	MH-CL	.15	5	1.760	13.5			
3.60	15.79	.65	4.14	CLAY	CH	.14	7	1.159	13.5			
3.80	8.00	.44	5.53	CLAY	CH	.15	3	.581	13.5			
4.00	6.70	.40	5.91	CLAY	CH	.16	3	.484	13.5			
4.20	6.22	.38	6.08	CLAY	CH	.17	2	.448	13.5			
4.40	5.62	.37	6.64	ORGANIC MATERIAL	OL-OH	.13	2	.406	13.5			
4.60	5.26	.38	7.27	ORGANIC MATERIAL	OL-OH	.14	2	.379	13.5			
4.80	5.62	.37	6.53	ORGANIC MATERIAL	OL-OH	.14	2	.405	13.5			
5.00	5.74	.36	6.36	ORGANIC MATERIAL	OL-OH	.15	2	.414	13.5			
5.20	5.74	.36	6.25	ORGANIC MATERIAL	OL-OH	.16	2	.413	13.5			
5.40	5.86	.38	6.47	ORGANIC MATERIAL	OL-OH	.16	2	.422	13.5			
5.60	5.50	.37	6.68	ORGANIC MATERIAL	OL-OH	.17	2	.395	13.5			
5.80	5.38	.38	7.00	ORGANIC MATERIAL	OL-OH	.17	2	.386	13.5			
6.00	5.50	.38	6.84	ORGANIC MATERIAL	OL-OH	.18	2	.394	13.5			
6.20	5.38	.36	6.62	ORGANIC MATERIAL	OL-OH	.19	2	.385	13.5			
6.40	5.74	.38	6.54	ORGANIC MATERIAL	OL-OH	.19	2	.411	13.5			
6.60	5.74	.36	6.20	ORGANIC MATERIAL	OL-OH	.20	2	.410	13.5			
6.80	5.68	.37	6.52	ORGANIC MATERIAL	OL-OH	.20	2	.406	13.5			
7.00	5.50	.37	6.68	ORGANIC MATERIAL	OL-OH	.21	2	.392	13.5			
7.20	5.50	.39	7.07	ORGANIC MATERIAL	OL-OH	.22	2	.391	13.5			
7.40	5.14	.39	7.50	ORGANIC MATERIAL	OL-OH	.22	2	.364	13.5			
7.60	5.26	.40	7.53	ORGANIC MATERIAL	OL-OH	.23	2	.373	13.5			
7.80	5.26	.39	7.41	ORGANIC MATERIAL	OL-OH	.23	2	.372	13.5			
8.00	5.38	.38	7.05	ORGANIC MATERIAL	OL-OH	.24	2	.381	13.5			
8.20	5.20	.39	7.52	ORGANIC MATERIAL	OL-OH	.25	2	.367	13.5			
8.40	5.02	.39	7.79	ORGANIC MATERIAL	OL-OH	.25	2	.353	13.5			
8.60	5.14	.37	7.27	ORGANIC MATERIAL	OL-OH	.26	2	.362	13.5			
8.80	5.30	.37	6.79	ORGANIC MATERIAL	OL-OH	.26	2	.388	13.5			
9.00	5.14	.37	7.25	ORGANIC MATERIAL	OL-OH	.27	2	.361	13.5			
9.20	5.08	.40	7.80	ORGANIC MATERIAL	OL-OH	.28	2	.356	13.5			
9.40	5.14	.40	7.82	ORGANIC MATERIAL	OL-OH	.29	2	.360	13.5			

9.60	5.20	.39	7.51	ORGANIC MATERIAL	OL-OH	.29	2	.364	13.5		
9.80	5.14	.39	7.60	ORGANIC MATERIAL	OL-OH	.29	2	.359	13.5		
10.00	5.26	.39	7.43	ORGANIC MATERIAL	OL-OH	.30	2	.367	13.5		
10.20	4.90	.39	8.01	ORGANIC MATERIAL	OL-OH	.31	2	.340	13.5		
10.40	4.90	.32	6.48	ORGANIC MATERIAL	OL-OH	.31	2	.340	13.5		
10.60	5.02	.39	7.68	ORGANIC MATERIAL	OL-OH	.32	2	.348	13.5		
10.80	5.14	.38	7.47	ORGANIC MATERIAL	OL-OH	.32	2	.357	13.5		
11.00	4.90	.36	7.41	ORGANIC MATERIAL	OL-OH	.33	2	.338	13.5		
11.20	5.26	.38	7.32	ORGANIC MATERIAL	OL-OH	.34	2	.365	13.5		
11.40	5.50	.40	7.20	ORGANIC MATERIAL	OL-OH	.34	2	.382	13.5		
11.60	5.38	.40	7.37	ORGANIC MATERIAL	OL-OH	.35	2	.373	13.5		
11.80	5.61	.40	7.05	ORGANIC MATERIAL	OL-OH	.35	2	.389	13.5		
12.00	5.50	.37	6.79	ORGANIC MATERIAL	OL-OH	.36	2	.381	13.5		
12.20	5.26	.38	7.18	ORGANIC MATERIAL	OL-OH	.37	2	.362	13.5		
12.40	5.85	.38	6.54	ORGANIC MATERIAL	OL-OH	.37	2	.406	13.5		
12.60	8.47	.44	5.23	CLAY	CH	.50	4	.590	13.5		
12.80	3.83	.43	11.28	ORGANIC MATERIAL	OL-OH	.38	1	.255	13.5		
13.00	5.14	.40	7.82	ORGANIC MATERIAL	OL-OH	.39	2	.352	13.5		
13.20	5.50	.40	7.20	ORGANIC MATERIAL	OL-OH	.40	2	.378	13.5		
13.40	5.49	.41	7.38	ORGANIC MATERIAL	OL-OH	.40	2	.377	13.5		
13.60	5.38	.37	6.95	ORGANIC MATERIAL	OL-OH	.41	2	.368	13.5		
13.80	5.14	.37	7.21	ORGANIC MATERIAL	OL-OH	.41	2	.350	13.5		
14.00	5.38	.38	7.04	ORGANIC MATERIAL	OL-OH	.42	2	.368	13.5		
14.20	4.90	.38	7.80	ORGANIC MATERIAL	OL-OH	.43	2	.332	13.5		
14.40	4.90	.43	8.69	ORGANIC MATERIAL	OL-OH	.43	2	.331	13.5		
14.60	4.43	.39	8.83	ORGANIC MATERIAL	OL-OH	.44	2	.295	13.5		
14.80	4.54	.41	9.11	ORGANIC MATERIAL	OL-OH	.44	2	.304	13.5		
15.00	5.14	.35	6.78	ORGANIC MATERIAL	OL-OH	.45	2	.347	13.5		
15.20	5.50	.43	7.81	ORGANIC MATERIAL	OL-OH	.46	2	.374	13.5		
15.40	5.73	.45	7.88	ORGANIC MATERIAL	OL-OH	.46	2	.390	13.5		
15.60	6.53	.48	7.37	ORGANIC MATERIAL	OL-OH	.47	3	.449	13.5		
15.80	6.94	.39	5.66	CLAY	CH	.63	3	.467	13.5		
16.00	5.62	.43	7.73	ORGANIC MATERIAL	OL-OH	.48	2	.381	13.5		
16.20	5.85	.40	6.77	ORGANIC MATERIAL	OL-OH	.49	2	.399	13.5		
16.40	6.15	.39	6.26	CLAY	CH	.66	2	.407	13.5		
16.60	5.98	.38	6.42	ORGANIC MATERIAL	OL-OH	.50	2	.406	13.5		
16.80	5.50	.39	7.06	ORGANIC MATERIAL	OL-OH	.50	2	.370	13.5		
17.00	5.26	.42	7.96	ORGANIC MATERIAL	OL-OH	.51	2	.352	13.5		
17.20	5.26	.40	7.52	ORGANIC MATERIAL	OL-OH	.52	2	.351	13.5		
17.40	7.16	.40	5.60	CLAY	CH	.70	3	.479	13.5		
17.60	9.01	.44	4.84	CLAY	CH	.70	4	.615	13.5		
17.80	6.52	.47	7.24	ORGANIC MATERIAL	OL-OH	.53	3	.443	13.5		
18.00	6.79	.39	5.70	CLAY	CH	.72	3	.449	13.5		
18.20	6.04	.41	6.77	ORGANIC MATERIAL	OL-OH	.55	2	.407	13.5		
18.40	6.09	.47	7.75	ORGANIC MATERIAL	OL-OH	.55	2	.410	13.5		
18.60	5.38	.42	7.87	ORGANIC MATERIAL	OL-OH	.56	2	.357	13.5		
18.80	5.16	.23	4.46	CLAY	CH	.75	2	.326	13.5		
19.00	30.27	.48	1.58	SANDY SILT TO CLAYEY SILT	ML-MH	.95	5	2.172	13.5	26	32	.12
19.20	12.92	.52	3.99	CLAY	CH	.77	6	.900	13.5		
19.40	5.55	.40	7.13	ORGANIC MATERIAL	OL-OH	.58	2	.368	13.5		
19.60	5.98	.41	6.90	ORGANIC MATERIAL	OL-OH	.59	2	.399	13.5		
19.80	5.61	.43	7.71	ORGANIC MATERIAL	OL-OH	.59	2	.372	13.5		
20.00	6.21	.39	6.24	CLAY	CH	.80	2	.401	13.5		
20.20	5.38	.38	7.08	ORGANIC MATERIAL	OL-OH	.61	2	.354	13.5		
20.40	5.61	.40	7.12	ORGANIC MATERIAL	OL-OH	.61	2	.371	13.5		
20.60	5.52	.65	11.83	ORGANIC MATERIAL	OL-OH	.62	2	.363	13.5		
20.80	26.70	.52	1.95	CLAYEY SILT TO SILTY CLAY	MH-CL	.94	6	1.908	13.5		
21.00	6.99	.51	7.25	ORGANIC MATERIAL	OL-OH	.63	3	.471	13.5		
21.20	5.02	.52	10.34	ORGANIC MATERIAL	OL-OH	.64	2	.325	13.5		
21.40	6.45	.48	7.49	ORGANIC MATERIAL	OL-OH	.64	3	.431	13.5		



RESULT OF CONE PENETRATION TEST

41S

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

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

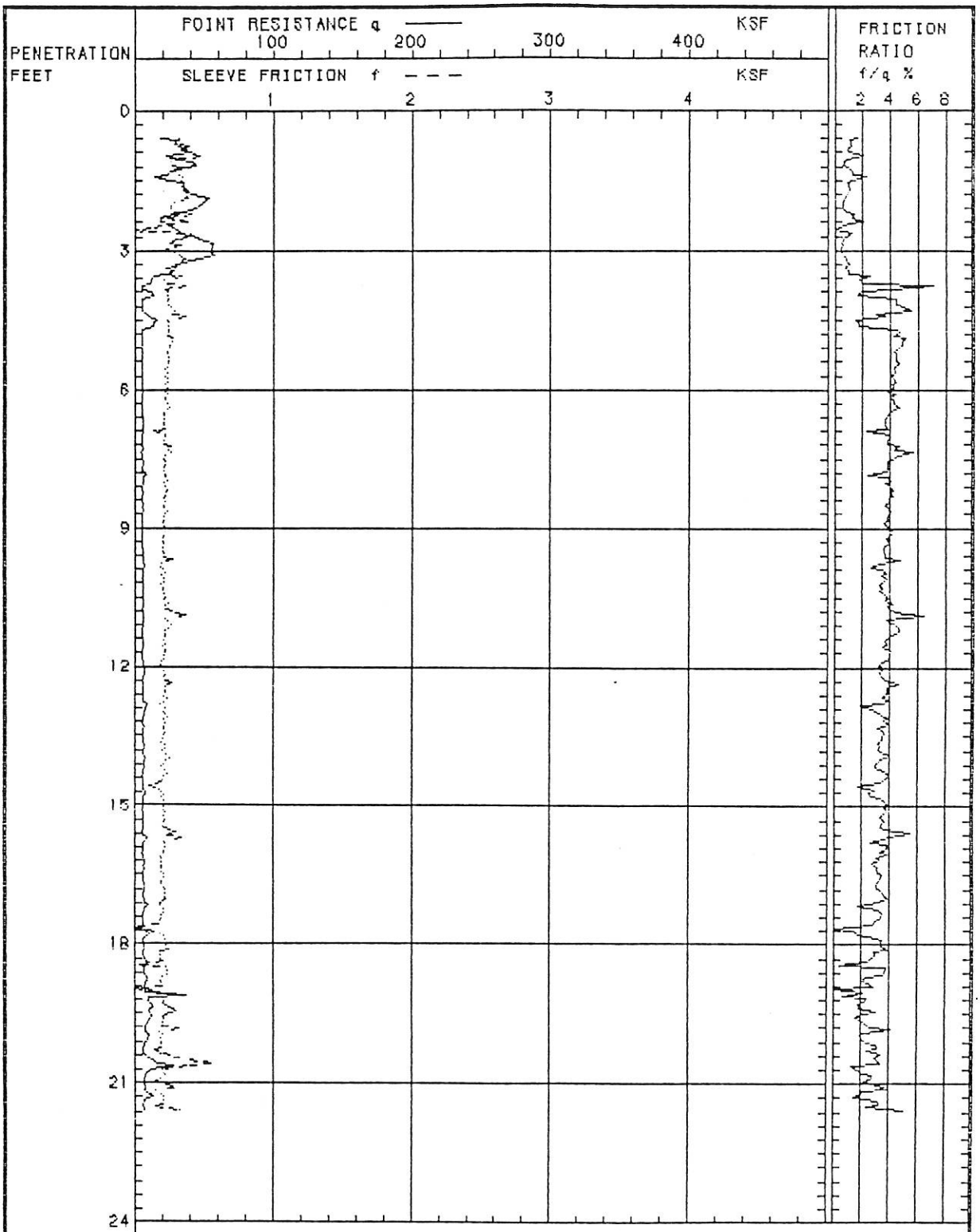
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 41S
CONE NO. : 5006
DATE : 05/07/87

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	202.26	.75	.37	SAND	SW-SP	.04	19			100+	44	.50+
.80	158.59	.66	.42	SAND TO SILTY SAND	SM-SP	.05	18			100+	42	.50+
1.00	78.84	.71	.90	SILTY SAND TO SANDY SILT	SM-ML	.05	12			100+	42	.50+
1.20	112.70	.58	.52	SAND TO SILTY SAND	SM-SP	.07	13			100+	42	.50+
1.40	165.67	1.14	.69	SAND TO SILTY SAND	SM-SP	.09	19			100+	42	.50+
1.60	140.90	1.45	1.03	SAND TO SILTY SAND	SM-SP	.10	16			100+	42	.50+
1.80	164.27	.01	.00	SAND	SW-SP	.12	15			100+	44	.50+
2.00	102.56	.27	.26	SAND TO SILTY SAND	SM-SP	.12	12			100+	42	.50+
2.20	5.73	.68	11.79	ORGANIC MATERIAL	OL-OH	.07	2	.420	13.5			
2.40	75.78	.41	.54	SILTY SAND TO SANDY SILT	SM-ML	.13	12			93	41	.50+
2.60	64.80	.39	.61	SILTY SAND TO SANDY SILT	SM-ML	.14	10			84	40	.50+
2.80	37.61	.29	.78	SANDY SILT TO CLAYEY SILT	ML-MH	.14	7	2.776	13.5	68	39	.50+
3.00	7.06	.36	5.10	CLAY	CH	.12	3	.514	13.5			
3.20	6.10	.35	5.69	CLAY	CH	.13	2	.442	13.5			
3.40	5.26	.33	6.20	ORGANIC MATERIAL	OL-OH	.10	2	.382	13.5			
3.60	5.85	.36	6.08	CLAY	CH	.14	2	.423	13.5			
3.80	5.02	.35	6.92	ORGANIC MATERIAL	OL-OH	.11	2	.364	13.5			
4.00	4.42	.34	7.74	ORGANIC MATERIAL	OL-OH	.12	2	.319	13.5			
4.20	4.54	.28	6.27	ORGANIC MATERIAL	OL-OH	.13	2	.327	13.5			
4.40	4.54	.32	7.05	ORGANIC MATERIAL	OL-OH	.13	2	.327	13.5			
4.60	4.42	.39	8.77	ORGANIC MATERIAL	OL-OH	.14	2	.317	13.5			
4.80	3.46	.34	9.89	ORGANIC MATERIAL	OL-OH	.14	1	.245	13.5			
5.00	4.66	.32	6.92	ORGANIC MATERIAL	OL-OH	.15	2	.334	13.5			
5.20	4.60	.33	7.11	ORGANIC MATERIAL	OL-OH	.16	2	.329	13.5			
5.40	4.78	.32	6.78	ORGANIC MATERIAL	OL-OH	.16	2	.342	13.5			
5.60	4.90	.32	6.61	ORGANIC MATERIAL	OL-OH	.17	2	.351	13.5			
5.80	5.02	.33	6.56	ORGANIC MATERIAL	OL-OH	.17	2	.359	13.5			
6.00	5.14	.32	6.28	ORGANIC MATERIAL	OL-OH	.18	2	.367	13.5			
6.20	5.02	.31	6.21	ORGANIC MATERIAL	OL-OH	.19	2	.358	13.5			
6.40	5.26	.31	5.94	ORGANIC MATERIAL	OL-OH	.19	2	.375	13.5			
6.60	5.02	.32	6.46	ORGANIC MATERIAL	OL-OH	.20	2	.357	13.5			
6.80	4.78	.32	6.67	ORGANIC MATERIAL	OL-OH	.20	2	.339	13.5			
7.00	4.78	.32	6.67	ORGANIC MATERIAL	OL-OH	.21	2	.339	13.5			
7.20	4.78	.31	6.54	ORGANIC MATERIAL	OL-OH	.22	2	.338	13.5			
7.40	5.14	.30	5.86	ORGANIC MATERIAL	OL-OH	.22	2	.364	13.5			
7.60	5.02	.30	6.00	ORGANIC MATERIAL	OL-OH	.23	2	.355	13.5			
7.80	5.14	.31	6.08	ORGANIC MATERIAL	OL-OH	.23	2	.363	13.5			
8.00	5.02	.31	6.22	ORGANIC MATERIAL	OL-OH	.24	2	.354	13.5			
8.20	5.14	.31	5.97	ORGANIC MATERIAL	OL-OH	.25	2	.362	13.5			
8.40	5.14	.30	5.85	ORGANIC MATERIAL	OL-OH	.25	2	.362	13.5			
8.60	5.14	.32	6.31	ORGANIC MATERIAL	OL-OH	.26	2	.362	13.5			
8.80	5.14	.31	6.06	ORGANIC MATERIAL	OL-OH	.26	2	.361	13.5			
9.00	5.73	.31	5.35	CLAY	CH	.36	2	.398	13.5			
9.20	5.26	.31	5.94	ORGANIC MATERIAL	OL-OH	.28	2	.369	13.5			

9.40	5.02	.30	5.98	ORGANIC MATERIAL	OL-OH	.28	2	.351	13.5			
9.60	5.50	.29	5.26	CLAY	CH	.38	2	.379	13.5			
9.80	5.02	.32	6.40	ORGANIC MATERIAL	OL-OH	.29	2	.350	13.5			
10.00	5.20	.31	5.95	ORGANIC MATERIAL	OL-OH	.30	2	.363	13.5			
10.20	5.14	.31	6.06	ORGANIC MATERIAL	OL-OH	.31	2	.358	13.5			
10.40	5.26	.32	6.05	ORGANIC MATERIAL	OL-OH	.31	2	.367	13.5			
10.60	4.90	.33	6.73	ORGANIC MATERIAL	OL-OH	.32	2	.339	13.5			
10.80	4.78	.31	6.45	ORGANIC MATERIAL	OL-OH	.32	2	.330	13.5			
11.00	6.60	.31	4.65	CLAY	CH	.44	3	.456	13.5			
11.20	5.26	.31	5.93	ORGANIC MATERIAL	OL-OH	.34	2	.365	13.5			
11.40	7.85	.40	5.06	CLAY	CH	.46	3	.547	13.5			
11.60	5.50	.31	5.62	CLAY	CH	.46	2	.373	13.5			
11.80	5.38	.31	5.79	CLAY	CH	.47	2	.364	13.5			
12.00	5.50	.31	5.58	CLAY	CH	.48	2	.372	13.5			
12.20	5.02	.31	6.21	ORGANIC MATERIAL	OL-OH	.37	2	.345	13.5			
12.40	5.26	.38	7.24	ORGANIC MATERIAL	OL-OH	.37	2	.362	13.5			
12.60	24.26	.34	1.39	CLAYEY SILT TO SILTY CLAY	MH-CL	.57	5	1.755	13.5			
12.80	6.70	.30	4.55	CLAY	CH	.51	3	.458	13.5			
13.00	5.26	.32	6.00	ORGANIC MATERIAL	OL-OH	.39	2	.361	13.5			
13.20	5.25	.30	5.77	CLAY	CH	.53	2	.350	13.5			
13.40	5.14	.33	6.45	ORGANIC MATERIAL	OL-OH	.40	2	.351	13.5			
13.60	5.50	.32	5.77	CLAY	CH	.54	2	.367	13.5			
13.80	6.58	.32	4.82	CLAY	CH	.55	3	.446	13.5			
14.00	5.02	.31	6.21	ORGANIC MATERIAL	OL-OH	.42	2	.341	13.5			
14.20	5.50	.30	5.54	CLAY	CH	.57	2	.365	13.5			
14.40	5.68	.31	5.48	CLAY	CH	.58	2	.378	13.5			
14.60	5.62	.31	5.54	CLAY	CH	.58	2	.373	13.5			
14.80	5.50	.31	5.66	CLAY	CH	.59	2	.363	13.5			
15.00	6.21	.30	4.79	CLAY	CH	.60	2	.416	13.5			
15.20	6.69	.30	4.47	CLAY	CH	.61	3	.451	13.5			
15.40	6.22	.31	5.02	CLAY	CH	.62	2	.415	13.5			
15.60	8.41	.30	3.61	CLAY	CH	.62	4	.577	13.5			
15.80	9.29	.30	3.21	CLAY	CH	.63	4	.641	13.5			
16.00	5.14	.23	4.45	CLAY	CH	.64	2	.333	13.5			
16.20	5.26	.30	5.67	CLAY	CH	.65	2	.342	13.5			
16.40	6.59	.30	4.55	CLAY	CH	.66	3	.439	13.5			
16.60	5.02	.31	6.22	ORGANIC MATERIAL	OL-OH	.50	2	.335	13.5			
16.80	5.02	.31	6.10	ORGANIC MATERIAL	OL-OH	.50	2	.335	13.5			
17.00	5.02	.31	6.16	ORGANIC MATERIAL	OL-OH	.51	2	.334	13.5			
17.20	9.15	.39	4.24	CLAY	CH	.69	4	.627	13.5			
17.40	5.75	.32	5.63	CLAY	CH	.70	2	.374	13.5			
17.60	5.02	.34	6.73	ORGANIC MATERIAL	OL-OH	.53	2	.333	13.5			
17.80	5.63	.32	5.74	CLAY	CH	.71	2	.364	13.5			
18.00	5.72	.31	5.33	CLAY	CH	.72	2	.371	13.5			
18.20	5.26	.31	5.83	CLAY	CH	.73	2	.336	13.5			
18.40	5.14	.32	6.19	ORGANIC MATERIAL	OL-OH	.55	2	.340	13.5			
18.60	5.02	.31	6.12	ORGANIC MATERIAL	OL-OH	.56	2	.331	13.5			
18.80	5.01	.33	6.66	ORGANIC MATERIAL	OL-OH	.56	2	.330	13.5			
19.00	5.74	.33	5.79	CLAY	CH	.76	2	.369	13.5			
19.20	15.75	.35	2.23	SILTY CLAY TO CLAY	CL-CH	.77	5	1.110	13.5			
19.40	19.30	.30	1.57	CLAYEY SILT TO SILTY CLAY	MH-CL	.87	4	1.365	13.5			
19.60	5.26	.31	5.92	ORGANIC MATERIAL	OL-OH	.59	2	.346	13.5			
19.80	5.64	.31	5.55	CLAY	CH	.79	2	.359	13.5			
20.00	5.72	.35	6.03	CLAY	CH	.80	2	.364	13.5			
20.20	5.14	.32	6.24	ORGANIC MATERIAL	OL-OH	.61	2	.336	13.5			
20.40	72.10	2.61	3.63	CLAYEY SILT TO SILTY CLAY	MH-CL	.92	17	5.273	13.5			
20.60	43.22	.41	.96	SANDY SILT TO CLAYEY SILT	ML-MH	1.03	8	3.125	13.5	35	33	.14
20.80	17.67	.22	1.27	CLAYEY SILT TO SILTY CLAY	MH-CL	.94	4	1.240	13.5			
21.00	14.07	.42	3.02	CLAY	CH	.84	6	.980	13.5			
21.20	10.93	.31	2.86	CLAY	CH	.85	5	.747	13.5			

21.40	46.62	.09	.20	SILTY SAND TO SANDY SILT	S'-ML	1.18	7			34	33	.14
21.60	28.44	.46	1.62	CLAYEY SILT TO SILTY CLAY	'H-CL	.97	6	2.034	13.5			



RESULT OF CONE PENETRATION TEST

42N

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

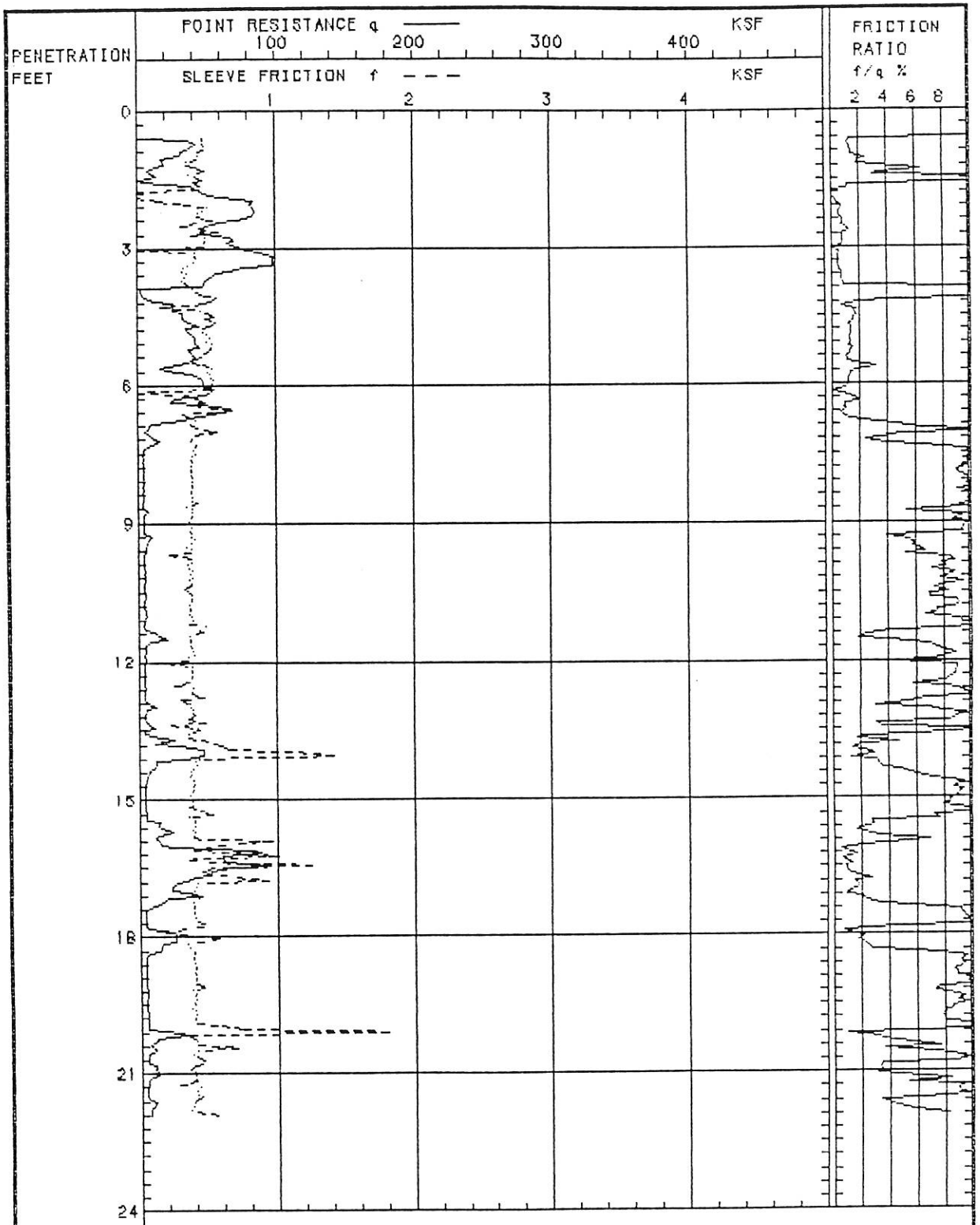
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 42N
CONE NO. : 5006
DATE : 05/07/87

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	24.38	.34	1.39	CLAYEY SILT TO SILTY CLAY	MH-CL	.03	5	1.804	13.5			
.80	33.95	.24	.71	SANDY SILT TO CLAYEY SILT	ML-MH	.04	6	2.512	13.5	72	38	.50+
1.00	27.37	.28	1.01	SANDY SILT TO CLAYEY SILT	ML-MH	.05	5	2.024	13.5	67	37	.50+
1.20	40.65	.30	.75	SANDY SILT TO CLAYEY SILT	ML-MH	.06	7	3.006	13.5	75	39	.50+
1.40	19.25	.27	1.39	CLAYEY SILT TO SILTY CLAY	MH-CL	.06	4	1.421	13.5			
1.60	34.90	.34	.96	SANDY SILT TO CLAYEY SILT	ML-MH	.08	6	2.580	13.5	70	38	.50+
1.80	42.42	.33	.78	SANDY SILT TO CLAYEY SILT	ML-MH	.09	8	3.136	13.5	74	38	.50+
2.00	48.71	.29	.60	SILTY SAND TO SANDY SILT	SM-ML	.11	7			77	39	.50+
2.20	32.64	.35	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	.11	6	2.410	13.5	67	37	.50+
2.40	22.58	.34	1.50	CLAYEY SILT TO SILTY CLAY	MH-CL	.11	5	1.665	13.5			
2.60	31.67	.20	.63	SANDY SILT TO CLAYEY SILT	ML-MH	.13	6	2.336	13.5	65	37	.50+
2.80	51.50	.34	.65	SILTY SAND TO SANDY SILT	SM-ML	.15	8			75	39	.50+
3.00	55.22	.26	.46	SILTY SAND TO SANDY SILT	SM-ML	.17	8			77	39	.50+
3.20	43.88	.33	.74	SANDY SILT TO CLAYEY SILT	ML-MH	.16	8	3.238	13.5	70	38	.50+
3.40	28.84	.29	1.01	SANDY SILT TO CLAYEY SILT	ML-MH	.17	5	2.124	13.5	61	37	.29
3.60	12.55	.28	2.20	SILTY CLAY TO CLAY	CL-CH	.14	4	.919	13.5			
3.80	5.26	.30	5.64	CLAY	CH	.15	2	.378	13.5			
4.00	9.70	.24	2.46	CLAY	CH	.16	4	.707	13.5			
4.20	5.38	.25	4.65	CLAY	CH	.17	2	.386	13.5			
4.40	9.56	.32	3.34	CLAY	CH	.18	4	.695	13.5			
4.60	13.87	.24	1.76	SILTY CLAY TO CLAY	CL-CH	.18	4	1.013	13.5			
4.80	5.38	.24	4.43	CLAY	CH	.19	2	.384	13.5			
5.00	5.38	.26	4.84	CLAY	CH	.20	2	.384	13.5			
5.20	5.38	.23	4.32	CLAY	CH	.21	2	.383	13.5			
5.40	5.38	.24	4.54	CLAY	CH	.22	2	.383	13.5			
5.60	5.32	.22	4.16	CLAY	CH	.22	2	.377	13.5			
5.80	5.38	.23	4.33	CLAY	CH	.23	2	.381	13.5			
6.00	5.62	.23	4.04	CLAY	CH	.24	2	.398	13.5			
6.20	5.38	.22	4.11	CLAY	CH	.25	2	.380	13.5			
6.40	5.50	.26	4.67	CLAY	CH	.26	2	.389	13.5			
6.60	5.62	.21	3.73	CLAY	CH	.26	2	.397	13.5			
6.80	5.74	.22	3.75	CLAY	CH	.27	2	.405	13.5			
7.00	5.50	.22	4.02	CLAY	CH	.28	2	.387	13.5			
7.20	5.50	.23	4.24	CLAY	CH	.29	2	.386	13.5			
7.40	4.66	.24	5.12	CLAY	CH	.30	2	.323	13.5			
7.60	5.74	.22	3.85	CLAY	CH	.30	2	.402	13.5			
7.80	7.15	.26	3.67	CLAY	CH	.31	3	.507	13.5			
8.00	5.74	.21	3.71	CLAY	CH	.32	2	.401	13.5			
8.20	5.62	.22	3.90	CLAY	CH	.33	2	.392	13.5			
8.40	5.44	.22	4.07	CLAY	CH	.34	2	.378	13.5			
8.60	5.62	.22	3.94	CLAY	CH	.34	2	.391	13.5			
8.80	5.50	.21	3.77	CLAY	CH	.35	2	.381	13.5			
9.00	5.50	.22	3.93	CLAY	CH	.36	2	.381	13.5			
9.20	5.26	.21	3.90	CLAY	CH	.37	2	.362	13.5			
9.40	5.50	.20	3.70	CLAY	CH	.38	2	.379	13.5			

9.60	5.74	.23	3.92	CLAY	CH	.39	2	.397	13.5
9.80	6.45	.19	2.97	CLAY	CH	.39	3	.449	13.5
10.00	5.86	.22	3.72	CLAY	CH	.40	2	.404	13.5
10.20	5.86	.20	3.37	CLAY	CH	.41	2	.404	13.5
10.40	5.98	.21	3.55	CLAY	CH	.42	2	.412	13.5
10.60	5.74	.23	3.94	CLAY	CH	.42	2	.394	13.5
10.80	5.62	.22	3.87	CLAY	CH	.43	2	.384	13.5
11.00	5.92	.27	4.51	CLAY	CH	.44	2	.406	13.5
11.20	5.02	.23	4.64	CLAY	CH	.45	2	.339	13.5
11.40	5.62	.21	3.83	CLAY	CH	.46	2	.382	13.5
11.60	5.62	.21	3.74	CLAY	CH	.46	2	.382	13.5
11.80	5.38	.21	3.89	CLAY	CH	.47	2	.363	13.5
12.00	5.86	.20	3.44	CLAY	CH	.48	2	.398	13.5
12.20	6.22	.22	3.46	CLAY	CH	.49	2	.425	13.5
12.40	5.74	.24	4.24	CLAY	CH	.50	2	.388	13.5
12.60	5.85	.21	3.67	CLAY	CH	.50	2	.396	13.5
12.80	7.61	.31	4.02	CLAY	CH	.51	3	.526	13.5
13.00	6.45	.21	3.32	CLAY	CH	.52	3	.440	13.5
13.20	5.62	.21	3.79	CLAY	CH	.53	2	.377	13.5
13.40	5.98	.21	3.59	CLAY	CH	.54	2	.403	13.5
13.60	5.97	.21	3.58	CLAY	CH	.54	2	.402	13.5
13.80	6.46	.21	3.29	CLAY	CH	.55	3	.438	13.5
14.00	7.29	.24	3.30	CLAY	CH	.56	3	.499	13.5
14.20	6.40	.22	3.40	CLAY	CH	.57	3	.432	13.5
14.40	5.62	.26	4.55	CLAY	CH	.58	2	.373	13.5
14.60	5.98	.19	3.10	CLAY	CH	.58	2	.399	13.5
14.80	6.95	.20	2.93	CLAY	CH	.59	3	.471	13.5
15.00	5.86	.22	3.77	CLAY	CH	.60	2	.390	13.5
15.20	6.09	.21	3.52	CLAY	CH	.61	2	.406	13.5
15.40	5.98	.21	3.46	CLAY	CH	.62	2	.397	13.5
15.60	5.73	.27	4.70	CLAY	CH	.62	2	.379	13.5
15.80	6.84	.21	3.13	CLAY	CH	.63	3	.460	13.5
16.00	5.87	.21	3.56	CLAY	CH	.64	2	.387	13.5
16.20	6.56	.20	2.99	CLAY	CH	.65	3	.438	13.5
16.40	6.34	.20	3.15	CLAY	CH	.66	3	.421	13.5
16.60	6.22	.20	3.24	CLAY	CH	.66	2	.411	13.5
16.80	6.58	.22	3.31	CLAY	CH	.67	3	.437	13.5
17.00	6.09	.22	3.67	CLAY	CH	.68	2	.401	13.5
17.20	8.54	.20	2.31	CLAY	CH	.69	4	.581	13.5
17.40	5.85	.20	3.36	CLAY	CH	.70	2	.392	13.5
17.60	6.22	.09	1.43	SENSITIVE FINE GRAINED	OL-CH	.53	1	.421	13.5
17.80	9.65	.19	2.00	SILTY CLAY TO CLAY	CL-CH	.71	3	.662	13.5
18.00	6.45	.21	3.19	CLAY	CH	.72	3	.424	13.5
18.20	6.28	.24	3.76	CLAY	CH	.73	3	.411	13.5
18.40	9.42	.08	.81	SENSITIVE FINE GRAINED	OL-CH	.55	2	.657	13.5
18.60	6.45	.23	3.63	CLAY	CH	.74	3	.423	13.5
18.80	8.63	.18	2.12	CLAY	CH	.75	4	.583	13.5
19.00	7.47	.17	2.34	CLAY	CH	.76	3	.497	13.5
19.20	9.69	.21	2.13	SILTY CLAY TO CLAY	CL-CH	.77	3	.661	13.5
19.40	11.77	.19	1.64	SILTY CLAY TO CLAY	CL-CH	.78	3	.814	13.5
19.60	11.62	.20	1.76	SILTY CLAY TO CLAY	CL-CH	.78	3	.803	13.5
19.80	7.62	.25	3.25	CLAY	CH	.79	3	.506	13.5
20.00	9.94	.19	1.95	SILTY CLAY TO CLAY	CL-CH	.80	3	.677	13.5
20.20	6.34	.18	2.91	CLAY	CH	.81	3	.410	13.5
20.40	7.72	.24	3.08	CLAY	CH	.82	3	.512	13.5
20.60	22.29	.43	1.94	CLAYEY SILT TO SILTY CLAY	MH-CL	.93	5	1.582	13.5
20.80	8.64	.21	2.48	CLAY	CH	.83	4	.578	13.5
21.00	6.87	.18	2.65	CLAY	CH	.84	3	.446	13.5
21.20	8.45	.17	2.06	CLAY	CH	.85	4	.563	13.5
21.40	6.34	.20	3.11	CLAY	CH	.86	3	.406	13.5



RESULT OF CONE PENETRATION TEST

42M

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

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

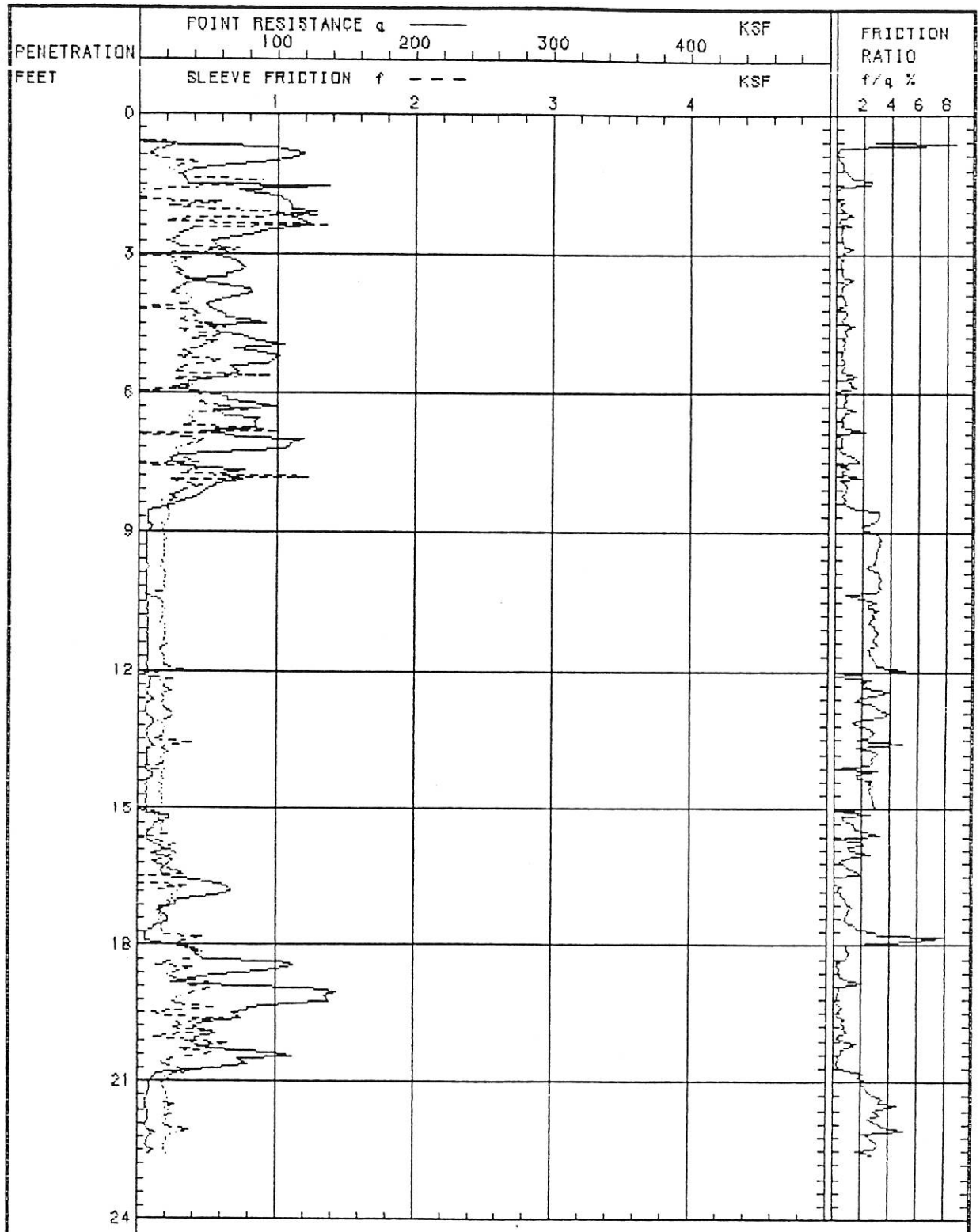
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 42M
CONE NO. : 5006
DATE : 05/07/87

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	19.24	.48	2.48	SILTY CLAY TO CLAY	CL-CH	.02	6	1.424	13.5			
.80	38.37	.49	1.27	SANDY SILT TO CLAYEY SILT	ML-MH	.04	7	2.839	13.5	75	39	.50+
1.00	24.39	.39	1.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	5	1.803	13.5			
1.20	16.86	.38	2.25	SILTY CLAY TO CLAY	CL-CH	.05	5	1.245	13.5			
1.40	12.49	.44	3.50	CLAY	CH	.06	5	.921	13.5			
1.60	20.89	.43	2.08	CLAYEY SILT TO SILTY CLAY	MH-CL	.07	5	1.542	13.5			
1.80	48.64	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.10	7			78	39	.50+
2.00	82.96	.13	.15	SAND TO SILTY SAND	SM-SP	.12	9			89	42	.50+
2.20	84.87	.46	.54	SILTY SAND TO SANDY SILT	SM-ML	.12	13			100+	42	.50+
2.40	66.00	.51	.77	SILTY SAND TO SANDY SILT	SM-ML	.13	10			86	40	.50+
2.60	47.34	.60	1.27	SANDY SILT TO CLAYEY SILT	ML-MH	.13	9	3.497	13.5	74	39	.50+
2.80	69.21	1.20	1.74	SANDY SILT TO CLAYEY SILT	ML-MH	.14	13	5.116	13.5	87	40	.50+
3.00	76.55	.12	.16	SAND TO SILTY SAND	SM-SP	.18	9			88	41	.50+
3.20	98.50	.48	.49	SAND TO SILTY SAND	SM-SP	.19	11			99	42	.50+
3.40	88.08	.37	.42	SAND TO SILTY SAND	SM-SP	.20	10			92	41	.50+
3.60	55.59	.37	.67	SILTY SAND TO SANDY SILT	SM-ML	.20	8			75	39	.50+
3.80	48.47	.39	.81	SILTY SAND TO SANDY SILT	SM-ML	.21	7			70	38	.50+
4.00	3.58	.45	12.69	ORGANIC MATERIAL	OL-OH	.12	1	.256	13.5			
4.20	19.09	.68	3.58	CLAY	CH	.17	9	1.401	13.5			
4.40	29.15	.48	1.64	CLAYEY SILT TO SILTY CLAY	MH-CL	.20	6	2.144	13.5			
4.60	35.01	.47	1.33	SANDY SILT TO CLAYEY SILT	ML-MH	.23	6	2.576	13.5	62	37	.28
4.80	36.18	.54	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.24	6	2.663	13.5	62	37	.28
5.00	42.02	.50	1.19	SANDY SILT TO CLAYEY SILT	ML-MH	.25	8	3.094	13.5	65	37	.38
5.20	41.09	.55	1.34	SANDY SILT TO CLAYEY SILT	ML-MH	.26	7	3.024	13.5	64	37	.33
5.40	41.84	.44	1.04	SANDY SILT TO CLAYEY SILT	ML-MH	.27	8	3.079	13.5	64	37	.33
5.60	23.84	.43	1.81	CLAYEY SILT TO SILTY CLAY	MH-CL	.25	5	1.747	13.5			
5.80	42.17	.52	1.23	SANDY SILT TO CLAYEY SILT	ML-MH	.29	8	3.102	13.5	63	37	.30
6.00	48.35	.56	1.16	SANDY SILT TO CLAYEY SILT	ML-MH	.30	9	3.559	13.5	66	37	.40
6.20	51.05	.44	.87	SILTY SAND TO SANDY SILT	SM-ML	.34	8			65	37	.36
6.40	35.26	.51	1.45	SANDY SILT TO CLAYEY SILT	ML-MH	.32	6	2.588	13.5	58	35	.20
6.60	61.09	.59	.97	SILTY SAND TO SANDY SILT	SM-ML	.36	9			69	38	.50+
6.80	22.82	.40	1.75	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	5	1.667	13.5			
7.00	6.35	.50	7.95	ORGANIC MATERIAL	OL-OH	.21	3	.455	13.5			
7.20	13.72	.39	2.86	SILTY CLAY TO CLAY	CL-CH	.29	4	.995	13.5			
7.40	5.39	.40	7.50	ORGANIC MATERIAL	OL-OH	.22	2	.383	13.5			
7.60	3.94	.39	9.86	ORGANIC MATERIAL	OL-OH	.23	1	.275	13.5			
7.80	4.06	.39	9.49	ORGANIC MATERIAL	OL-OH	.23	1	.284	13.5			
8.00	4.12	.39	9.48	ORGANIC MATERIAL	OL-OH	.24	1	.288	13.5			
8.20	3.95	.39	9.98	ORGANIC MATERIAL	OL-OH	.25	1	.274	13.5			
8.40	3.88	.39	9.93	ORGANIC MATERIAL	OL-OH	.25	1	.269	13.5			
8.60	3.83	.40	10.34	ORGANIC MATERIAL	OL-OH	.26	1	.264	13.5			
8.80	5.76	.40	6.90	ORGANIC MATERIAL	OL-OH	.26	2	.407	13.5			
9.00	4.07	.38	9.27	ORGANIC MATERIAL	OL-OH	.27	1	.281	13.5			
9.20	4.06	.40	9.73	ORGANIC MATERIAL	OL-OH	.28	1	.281	13.5			
9.40	7.48	.39	5.18	CLAY	CH	.38	3	.526	13.5			

9.60	5.98	.38	6.38	ORGANIC MATERIAL	OL-OH	.29	2	.422	13.5			
9.80	4.42	.38	8.62	ORGANIC MATERIAL	OL-OH	.29	2	.306	13.5			
10.00	5.01	.38	7.60	ORGANIC MATERIAL	OL-OH	.30	2	.349	13.5			
10.20	4.78	.38	7.99	ORGANIC MATERIAL	OL-OH	.31	2	.332	13.5			
10.40	4.54	.36	7.88	ORGANIC MATERIAL	OL-OH	.31	2	.313	13.5			
10.60	5.50	.38	6.95	ORGANIC MATERIAL	OL-OH	.32	2	.384	13.5			
10.80	4.18	.37	8.95	ORGANIC MATERIAL	OL-OH	.32	2	.286	13.5			
11.00	5.37	.37	6.97	ORGANIC MATERIAL	OL-OH	.33	2	.374	13.5			
11.20	3.77	.46	12.30	ORGANIC MATERIAL	OL-OH	.34	1	.254	13.5			
11.40	13.00	.42	3.24	CLAY	CH	.46	6	.929	13.5			
11.60	7.44	.40	5.37	CLAY	CH	.46	3	.517	13.5			
11.80	4.79	.40	8.31	ORGANIC MATERIAL	OL-OH	.35	2	.328	13.5			
12.00	4.79	.28	5.89	ORGANIC MATERIAL	OL-OH	.36	2	.328	13.5			
12.20	4.30	.38	8.87	ORGANIC MATERIAL	OL-OH	.37	2	.292	13.5			
12.40	4.54	.38	8.27	ORGANIC MATERIAL	OL-OH	.37	2	.309	13.5			
12.60	4.43	.39	8.76	ORGANIC MATERIAL	OL-OH	.38	2	.300	13.5			
12.80	4.42	.39	8.86	ORGANIC MATERIAL	OL-OH	.38	2	.299	13.5			
13.00	9.15	.40	4.41	CLAY	CH	.52	4	.639	13.5			
13.20	4.19	.39	9.26	ORGANIC MATERIAL	OL-OH	.40	2	.281	13.5			
13.40	9.64	.33	3.43	CLAY	CH	.54	4	.674	13.5			
13.60	9.80	.36	3.67	CLAY	CH	.54	4	.686	13.5			
13.80	20.08	.57	2.86	SILTY CLAY TO CLAY	CL-CH	.55	6	1.447	13.5			
14.00	46.80	1.22	2.61	CLAYEY SILT TO SILTY CLAY	MH-CL	.63	11	3.420	13.5			
14.20	12.91	.41	3.20	CLAY	CH	.57	6	.914	13.5			
14.40	7.30	.38	5.14	CLAY	CH	.58	3	.498	13.5			
14.60	4.91	.40	8.11	ORGANIC MATERIAL	OL-OH	.44	2	.332	13.5			
14.80	4.31	.39	9.01	ORGANIC MATERIAL	OL-OH	.44	2	.286	13.5			
15.00	4.42	.38	8.63	ORGANIC MATERIAL	OL-OH	.45	2	.294	13.5			
15.20	4.54	.37	8.23	ORGANIC MATERIAL	OL-OH	.46	2	.303	13.5			
15.40	5.14	.45	8.77	ORGANIC MATERIAL	OL-OH	.46	2	.346	13.5			
15.60	16.40	.42	2.53	SILTY CLAY TO CLAY	CL-CH	.62	5	1.169	13.5			
15.80	13.48	.55	4.08	CLAY	CH	.63	6	.952	13.5			
16.00	20.34	.57	2.78	SILTY CLAY TO CLAY	CL-CH	.64	6	1.459	13.5			
16.20	74.56	1.02	1.37	SILTY SAND TO SANDY SILT	SM-ML	.89	11			58	36	.21
16.40	78.38	.87	1.11	SILTY SAND TO SANDY SILT	SM-ML	.90	12			60	36	.22
16.60	51.64	.43	.83	SILTY SAND TO SANDY SILT	SM-ML	.91	8			44	34	.16
16.80	31.03	.49	1.59	SANDY SILT TO CLAYEY SILT	ML-MH	.84	5	2.237	13.5	29	32	.13
17.00	28.67	.39	1.38	SANDY SILT TO CLAYEY SILT	ML-MH	.85	5	2.061	13.5	27	32	.12
17.20	18.82	.42	2.23	CLAYEY SILT TO SILTY CLAY	MH-CL	.77	4	1.337	13.5			
17.40	5.65	.39	6.96	ORGANIC MATERIAL	OL-OH	.52	2	.390	13.5			
17.60	4.30	.41	9.47	ORGANIC MATERIAL	OL-OH	.53	2	.280	13.5			
17.80	5.46	.41	7.58	ORGANIC MATERIAL	OL-OH	.53	2	.365	13.5			
18.00	25.99	.34	1.31	SANDY SILT TO CLAYEY SILT	ML-MH	.90	4	1.859	13.5	23	31	.12
18.20	15.91	.52	3.30	CLAY	CH	.73	7	1.125	13.5			
18.40	5.53	.39	7.02	ORGANIC MATERIAL	OL-OH	.55	2	.369	13.5			
18.60	4.30	.42	9.73	ORGANIC MATERIAL	OL-OH	.56	2	.277	13.5			
18.80	4.54	.39	8.67	ORGANIC MATERIAL	OL-OH	.56	2	.295	13.5			
19.00	4.12	.42	10.12	ORGANIC MATERIAL	OL-OH	.57	1	.263	13.5			
19.20	5.25	.39	7.47	ORGANIC MATERIAL	OL-OH	.58	2	.346	13.5			
19.40	4.30	.39	9.15	ORGANIC MATERIAL	OL-OH	.58	2	.276	13.5			
19.60	4.42	.38	8.59	ORGANIC MATERIAL	OL-OH	.59	2	.294	13.5			
19.80	5.02	.40	8.04	ORGANIC MATERIAL	OL-OH	.59	2	.328	13.5			
20.00	5.20	.65	12.58	ORGANIC MATERIAL	OL-OH	.60	2	.341	13.5			
20.20	22.90	.37	1.60	CLAYEY SILT TO SILTY CLAY	MH-CL	.91	5	1.629	13.5			
20.40	8.16	.41	5.02	CLAY	CH	.82	3	.544	13.5			
20.60	5.03	.39	7.78	ORGANIC MATERIAL	OL-OH	.62	2	.327	13.5			
20.80	8.03	.41	5.14	CLAY	CH	.83	3	.533	13.5			
21.00	11.91	.40	3.32	CLAY	CH	.84	5	.820	13.5			
21.20	5.01	.34	6.86	ORGANIC MATERIAL	OL-OH	.64	2	.324	13.5			
21.40	4.54	.41	8.96	ORGANIC MATERIAL	OL-OH	.64	2	.299	13.5			

21.60	8.65	.39	4.57	CLAY	CH	.86	4	.577	13.5
21.80	7.06	.43	6.08	CLAY	CH	.87	3	.458	13.5



RESULT OF CONE PENETRATION TEST

42S

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

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

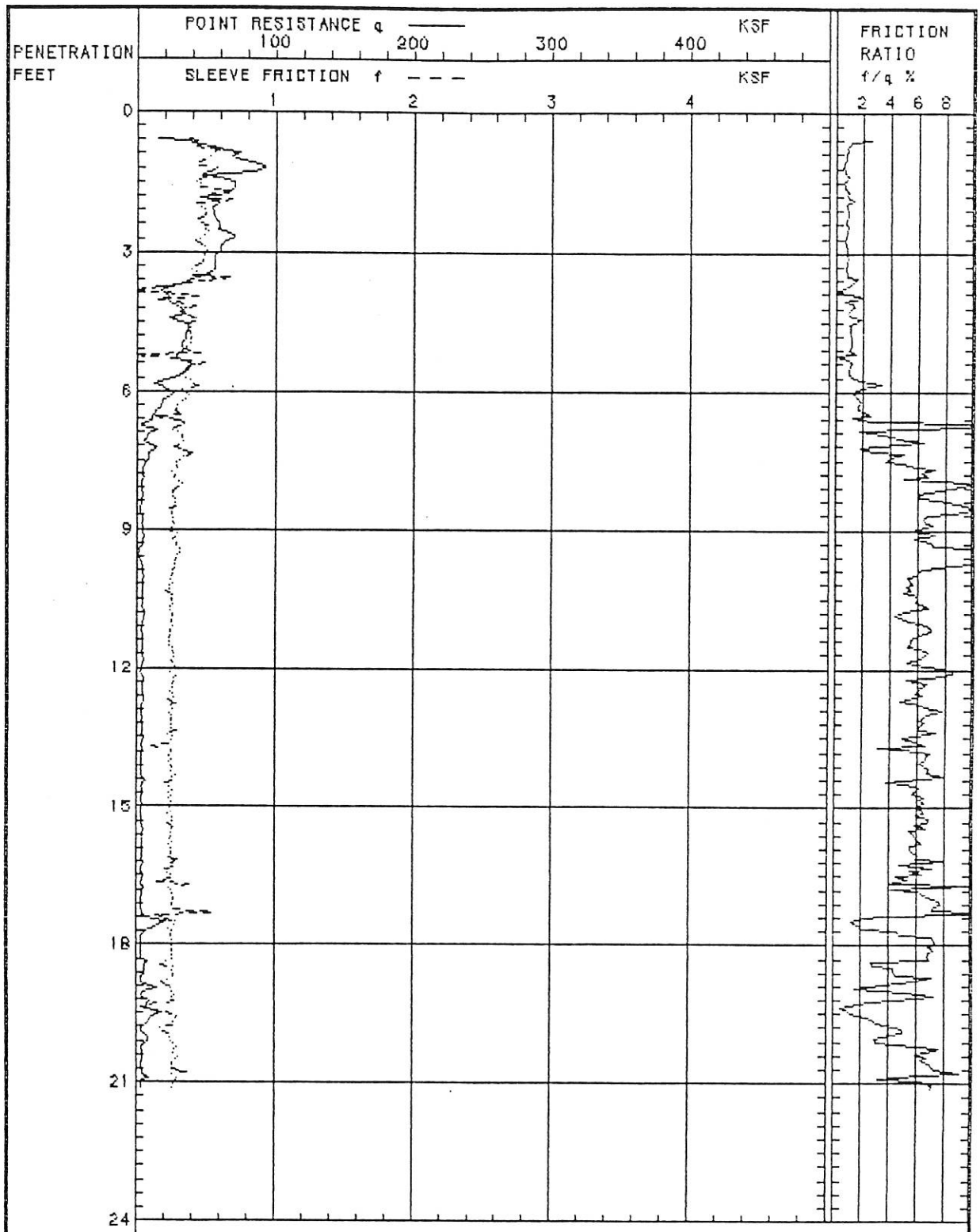
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 42S
CONE NO. : 5006
DATE : 05/07/87

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	2.75	.17	6.05	ORGANIC MATERIAL	OL-OH	.02	1	.202	13.5			
.80	111.52	.11	.10	SAND TO SILTY SAND	SM-SP	.05	13			100+	42	.50+
1.00	97.19	.19	.20	SAND TO SILTY SAND	SM-SP	.06	11			100+	42	.50+
1.20	39.21	.43	1.10	SANDY SILT TO CLAYEY SILT	ML-MH	.06	7	2.900	13.5	74	38	.50+
1.40	33.65	.74	2.20	CLAYEY SILT TO SILTY CLAY	MH-CL	.06	8	2.488	13.5			
1.60	105.00	.79	.76	SAND TO SILTY SAND	SM-SP	.10	12			100+	42	.50+
1.80	102.91	.15	.14	SAND TO SILTY SAND	SM-SP	.11	12			100+	42	.50+
2.00	109.97	.23	.21	SAND TO SILTY SAND	SM-SP	.12	13			100+	42	.50+
2.20	109.51	.49	.44	SAND TO SILTY SAND	SM-SP	.13	13			100+	42	.50+
2.40	117.04	.88	.75	SAND TO SILTY SAND	SM-SP	.14	14			100+	42	.50+
2.60	78.86	.27	.34	SAND TO SILTY SAND	SM-SP	.16	9			92	41	.50+
2.80	54.98	.30	.55	SILTY SAND TO SANDY SILT	SM-ML	.15	8			77	39	.50+
3.00	60.14	.96	1.59	SANDY SILT TO CLAYEY SILT	ML-MH	.15	11	4.444	13.5	81	39	.50+
3.20	72.92	.25	.34	SILTY SAND TO SANDY SILT	SM-ML	.18	11			86	40	.50+
3.40	68.27	.26	.37	SILTY SAND TO SANDY SILT	SM-ML	.19	10			83	40	.50+
3.60	43.50	.29	.67	SANDY SILT TO CLAYEY SILT	ML-MH	.18	8	3.209	13.5	69	38	.50+
3.80	81.04	.26	.33	SAND TO SILTY SAND	SM-SP	.23	9			86	41	.50+
4.00	57.52	.31	.53	SILTY SAND TO SANDY SILT	SM-ML	.22	9			75	39	.50+
4.20	52.77	.33	.62	SILTY SAND TO SANDY SILT	SM-ML	.23	8			71	38	.50+
4.40	69.41	.27	.40	SILTY SAND TO SANDY SILT	SM-ML	.24	11			80	39	.50+
4.60	51.65	.29	.56	SILTY SAND TO SANDY SILT	SM-ML	.25	8			70	39	.50+
4.80	77.44	.50	.64	SILTY SAND TO SANDY SILT	SM-ML	.26	12			82	40	.50+
5.00	87.20	.64	.73	SILTY SAND TO SANDY SILT	SM-ML	.27	13			85	40	.50+
5.20	98.59	.34	.34	SAND TO SILTY SAND	SM-SP	.31	11			88	41	.50+
5.40	79.41	.73	.92	SILTY SAND TO SANDY SILT	SM-ML	.30	12			81	39	.50+
5.60	69.12	.61	.88	SILTY SAND TO SANDY SILT	SM-ML	.31	11			75	39	.50+
5.80	36.10	.40	1.11	SANDY SILT TO CLAYEY SILT	ML-MH	.29	6	2.653	13.5	60	36	.22
6.00	47.48	.41	.85	SANDY SILT TO CLAYEY SILT	ML-MH	.30	9	3.495	13.5	65	37	.38
6.20	71.77	.34	.48	SILTY SAND TO SANDY SILT	SM-ML	.34	11			75	39	.50+
6.40	56.49	.40	.70	SILTY SAND TO SANDY SILT	SM-ML	.35	9			67	38	.46
6.60	85.37	.40	.47	SAND TO SILTY SAND	SM-SP	.40	10			78	40	.50+
6.80	65.63	.18	.28	SILTY SAND TO SANDY SILT	SM-ML	.37	10			71	38	.50+
7.00	95.15	.41	.43	SAND TO SILTY SAND	SM-SP	.42	11			81	40	.50+
7.20	106.88	.23	.22	SAND TO SILTY SAND	SM-SP	.43	12			84	41	.50+
7.40	26.43	.33	1.24	SANDY SILT TO CLAYEY SILT	ML-MH	.37	5	1.930	13.5	47	35	.15
7.60	37.20	.09	.25	SILTY SAND TO SANDY SILT	SM-ML	.42	5			54	36	.18
7.80	63.13	.87	1.37	SANDY SILT TO CLAYEY SILT	ML-MH	.39	12	4.647	13.5	69	38	.50+
8.00	56.42	.40	.72	SILTY SAND TO SANDY SILT	SM-ML	.44	9			64	37	.29
8.20	44.96	.23	.51	SILTY SAND TO SANDY SILT	SM-ML	.45	7			58	36	.20
8.40	28.37	.19	.66	SANDY SILT TO CLAYEY SILT	ML-MH	.42	5	2.070	13.5	46	34	.15
8.60	6.93	.23	3.33	CLAY	CH	.34	3	.488	13.5			
8.80	6.93	.18	2.61	CLAY	CH	.35	3	.487	13.5			
9.00	7.31	.17	2.36	CLAY	CH	.36	3	.514	13.5			
9.20	5.98	.19	3.11	CLAY	CH	.37	2	.415	13.5			
9.40	6.09	.19	3.04	CLAY	CH	.38	2	.424	13.5			

9.60	6.16	.18	2.97	CLAY	CH	.38	2	.428	13.5			
9.80	6.82	.17	2.55	CLAY	CH	.39	3	.476	13.5			
10.00	6.10	.21	3.40	CLAY	CH	.40	2	.422	13.5			
10.20	5.98	.19	3.20	CLAY	CH	.41	2	.412	13.5			
10.40	6.10	.08	1.36	SENSITIVE FINE GRAINED	OL-CH	.31	1	.429	13.5			
10.60	7.17	.17	2.42	CLAY	CH	.42	3	.500	13.5			
10.80	6.22	.21	3.37	CLAY	CH	.43	2	.429	13.5			
11.00	6.87	.19	2.77	CLAY	CH	.44	3	.476	13.5			
11.20	6.33	.20	3.19	CLAY	CH	.45	3	.436	13.5			
11.40	6.69	.20	3.01	CLAY	CH	.46	3	.462	13.5			
11.60	6.69	.17	2.56	CLAY	CH	.46	3	.461	13.5			
11.80	6.40	.18	2.89	CLAY	CH	.47	3	.439	13.5			
12.00	6.45	.25	3.94	CLAY	CH	.48	3	.443	13.5			
12.20	8.74	.20	2.32	CLAY	CH	.49	4	.611	13.5			
12.40	7.43	.21	2.88	CLAY	CH	.50	3	.514	13.5			
12.60	10.85	.19	1.71	SILTY CLAY TO CLAY	CL-CH	.50	3	.767	13.5			
12.80	6.09	.19	3.12	CLAY	CH	.51	2	.413	13.5			
13.00	8.57	.22	2.53	CLAY	CH	.52	4	.596	13.5			
13.20	9.72	.18	1.90	SILTY CLAY TO CLAY	CL-CH	.53	3	.681	13.5			
13.40	6.81	.19	2.75	CLAY	CH	.54	3	.464	13.5			
13.60	10.24	.30	2.91	CLAY	CH	.54	4	.718	13.5			
13.80	6.70	.22	3.28	CLAY	CH	.55	3	.455	13.5			
14.00	6.99	.18	2.60	CLAY	CH	.56	3	.476	13.5			
14.20	8.56	.18	2.15	CLAY	CH	.57	4	.592	13.5			
14.40	6.58	.18	2.78	CLAY	CH	.58	3	.445	13.5			
14.60	6.58	.17	2.55	CLAY	CH	.58	3	.414	13.5			
14.80	6.34	.17	2.74	CLAY	CH	.59	3	.426	13.5			
15.00	6.57	.10	1.53	SENSITIVE FINE GRAINED	OL-CH	.45	1	.453	13.5			
15.20	22.71	.28	1.21	CLAYEY SILT TO SILTY CLAY	MH-CL	.68	5	1.632	13.5			
15.40	11.78	.18	1.49	SENSITIVE FINE GRAINED	OL-CH	.46	2	.839	13.5			
15.60	6.45	.11	1.71	SENSITIVE FINE GRAINED	OL-CH	.47	1	.443	13.5			
15.80	14.43	.25	1.74	SILTY CLAY TO CLAY	CL-CH	.63	4	1.022	13.5			
16.00	14.20	.25	1.77	SILTY CLAY TO CLAY	CL-CH	.64	4	1.004	13.5			
16.20	23.53	.13	.55	SANDY SILT TO CLAYEY SILT	ML-MH	.81	4	1.683	13.5	22	31	.12
16.40	17.38	.20	1.17	CLAYEY SILT TO SILTY CLAY	MH-CL	.74	4	1.233	13.5			
16.60	50.24	.09	.18	SILTY SAND TO SANDY SILT	SM-ML	.91	8			43	34	.16
16.80	68.13	.22	.32	SILTY SAND TO SANDY SILT	SM-ML	.92	10			53	36	.19
17.00	29.58	.23	.79	SANDY SILT TO CLAYEY SILT	ML-MH	.85	5	2.128	13.5	28	32	.12
17.20	15.61	.32	2.08	SILTY CLAY TO CLAY	CL-CH	.69	4	1.105	13.5			
17.40	21.63	.18	.83	SANDY SILT TO CLAYEY SILT	ML-MH	.87	4	1.538	13.5	19	31	.11
17.60	11.37	.17	1.53	SENSITIVE FINE GRAINED	OL-CH	.53	2	.803	13.5			
17.80	6.10	.33	5.40	CLAY	CH	.71	2	.399	13.5			
18.00	28.74	.24	.84	SANDY SILT TO CLAYEY SILT	ML-MH	.90	5	2.062	13.5	26	32	.12
18.20	42.30	.41	.97	SANDY SILT TO CLAYEY SILT	ML-MH	.91	8	3.066	13.5	38	33	.14
18.40	107.68	.19	.18	SAND TO SILTY SAND	SM-SP	1.10	12			64	38	.30
18.60	75.04	.57	.76	SILTY SAND TO SANDY SILT	SM-ML	1.02	11			54	36	.19
18.80	29.29	.64	2.19	CLAYEY SILT TO SILTY CLAY	MH-CL	.85	7	2.107	13.5			
19.00	133.69	.43	.32	SAND TO SILTY SAND	SM-SP	1.14	16			70	39	.50+
19.20	137.91	1.09	.79	SAND TO SILTY SAND	SM-SP	1.15	16			71	39	.50+
19.40	79.86	.54	.68	SILTY SAND TO SANDY SILT	SM-ML	1.07	12			55	36	.20
19.60	73.76	.60	.81	SILTY SAND TO SANDY SILT	SM-ML	1.06	11			52	35	.18
19.80	40.88	.29	.72	SANDY SILT TO CLAYEY SILT	ML-MH	.99	7	2.955	13.5	34	33	.14
20.00	49.64	.63	1.27	SANDY SILT TO CLAYEY SILT	ML-MH	1.00	9	3.603	13.5	41	34	.15
20.20	42.82	.57	1.33	SANDY SILT TO CLAYEY SILT	ML-MH	1.01	8	3.097	13.5	36	33	.14
20.40	104.61	.52	.49	SAND TO SILTY SAND	SM-SP	1.22	12			61	38	.24
20.60	78.03	.26	.34	SAND TO SILTY SAND	SM-SP	1.24	9			50	37	.18
20.80	19.67	.27	1.39	CLAYEY SILT TO SILTY CLAY	MH-CL	.94	4	1.388	13.5			
21.00	9.41	.19	1.97	SILTY CLAY TO CLAY	CL-CH	.84	3	.635	13.5			
21.20	7.95	.17	2.14	CLAY	CH	.85	3	.526	13.5			
21.40	6.16	.23	3.77	CLAY	CH	.86	2	.393	13.5			

21.60	6.90	.19	2.82	CLAY	CH	.86	3	.447	13.5
21.80	7.41	.22	2.96	CLAY	CH	.87	3	.484	13.5
22.00	6.55	.29	4.38	CLAY	CH	.88	3	.420	13.5
22.20	8.64	.23	2.62	CLAY	CH	.89	4	.574	13.5
22.40	6.21	.19	3.11	CLAY	CH	.90	2	.393	13.5



RESULT OF CONE PENETRATION TEST

43N

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

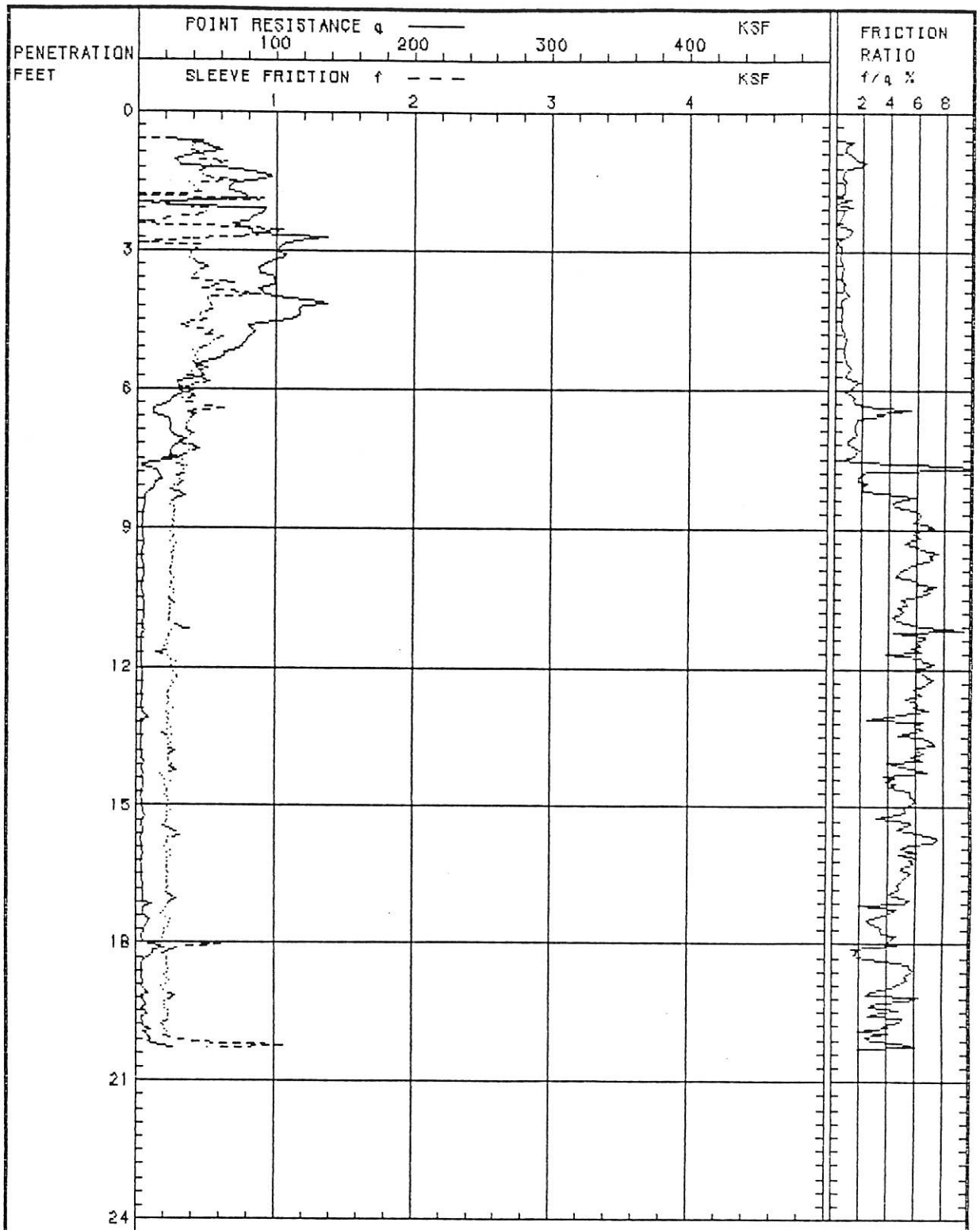
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 43N
CONE NO. : 5006
DATE : 05/07/87

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	25.82	.41	1.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.03	6	1.910	13.5			
.80	58.45	.36	.62	SILTY SAND TO SANDY SILT	SM-ML	.04	9			93	41	.50+
1.00	72.40	.58	.80	SILTY SAND TO SANDY SILT	SM-ML	.05	11			100+	42	.50+
1.20	92.28	.39	.42	SAND TO SILTY SAND	SM-SP	.07	11			100+	42	.50+
1.40	53.87	.56	1.04	SANDY SILT TO CLAYEY SILT	ML-MH	.07	10	3.985	13.5	85	40	.50+
1.60	69.81	.45	.65	SILTY SAND TO SANDY SILT	SM-ML	.09	11			95	41	.50+
1.80	56.14	.84	1.50	SANDY SILT TO CLAYEY SILT	ML-MH	.09	10	4.152	13.5	84	40	.50+
2.00	57.02	.44	.78	SILTY SAND TO SANDY SILT	SM-ML	.11	9			82	40	.50+
2.20	55.10	.49	.89	SILTY SAND TO SANDY SILT	SM-ML	.12	8			80	39	.50+
2.40	59.05	.49	.82	SILTY SAND TO SANDY SILT	SM-ML	.13	9			82	39	.50+
2.60	66.45	.40	.61	SILTY SAND TO SANDY SILT	SM-ML	.14	10			85	40	.50+
2.80	62.88	.50	.80	SILTY SAND TO SANDY SILT	SM-ML	.15	10			82	40	.50+
3.00	59.05	.50	.84	SILTY SAND TO SANDY SILT	SM-ML	.17	9			79	39	.50+
3.20	56.42	.48	.86	SILTY SAND TO SANDY SILT	SM-ML	.18	9			77	39	.50+
3.40	54.99	.41	.74	SILTY SAND TO SANDY SILT	SM-ML	.19	8			75	39	.50+
3.60	39.46	.62	1.57	SANDY SILT TO CLAYEY SILT	ML-MH	.18	7	2.910	13.5	67	37	.50+
3.80	21.29	.08	.37	SANDY SILT TO CLAYEY SILT	ML-MH	.19	4	1.563	13.5	53	36	.18
4.00	22.77	.43	1.89	CLAYEY SILT TO SILTY CLAY	MH-CL	.18	5	1.673	13.5			
4.20	30.65	.39	1.29	SANDY SILT TO CLAYEY SILT	ML-MH	.21	5	2.255	13.5	60	37	.25
4.40	27.76	.45	1.62	CLAYEY SILT TO SILTY CLAY	MH-CL	.20	6	2.041	13.5			
4.60	36.70	.38	1.03	SANDY SILT TO CLAYEY SILT	ML-MH	.23	7	2.701	13.5	63	37	.31
4.80	35.02	.36	1.02	SANDY SILT TO CLAYEY SILT	ML-MH	.24	6	2.577	13.5	62	37	.26
5.00	32.78	.37	1.13	SANDY SILT TO CLAYEY SILT	ML-MH	.25	6	2.410	13.5	60	36	.23
5.20	30.01	.23	.77	SANDY SILT TO CLAYEY SILT	ML-MH	.26	5	2.204	13.5	57	36	.20
5.40	38.43	.46	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	.27	7	2.827	13.5	62	37	.27
5.60	34.44	.34	.98	SANDY SILT TO CLAYEY SILT	ML-MH	.28	6	2.531	13.5	60	36	.22
5.80	16.83	.41	2.42	SILTY CLAY TO CLAY	CL-CH	.23	5	1.229	13.5			
6.00	24.49	.34	1.40	CLAYEY SILT TO SILTY CLAY	MH-CL	.27	5	1.794	13.5			
6.20	19.13	.32	1.65	CLAYEY SILT TO SILTY CLAY	MH-CL	.28	4	1.397	13.5			
6.40	15.20	.30	1.95	SILTY CLAY TO CLAY	CL-CH	.26	4	1.107	13.5			
6.60	11.24	.22	1.91	SILTY CLAY TO CLAY	CL-CH	.26	3	.813	13.5			
6.80	9.27	.29	3.12	CLAY	CH	.27	4	.666	13.5			
7.00	7.65	.30	3.96	CLAY	CH	.28	3	.546	13.5			
7.20	12.20	.29	2.35	SILTY CLAY TO CLAY	CL-CH	.29	3	.882	13.5			
7.40	8.19	.37	4.51	CLAY	CH	.30	3	.585	13.5			
7.60	5.32	.27	5.05	CLAY	CH	.30	2	.372	13.5			
7.80	4.06	.28	6.83	ORGANIC MATERIAL	OL-OH	.23	1	.284	13.5			
8.00	3.23	.30	9.31	ORGANIC MATERIAL	OL-OH	.24	1	.221	13.5			
8.20	4.06	.26	6.49	ORGANIC MATERIAL	OL-OH	.25	1	.293	13.5			
8.40	3.41	.27	7.96	ORGANIC MATERIAL	OL-OH	.25	1	.234	13.5			
8.60	2.63	.24	9.22	ORGANIC MATERIAL	OL-OH	.26	1	.175	13.5			
8.80	4.01	.26	6.55	ORGANIC MATERIAL	OL-OH	.26	1	.277	13.5			
9.00	3.95	.23	5.83	ORGANIC MATERIAL	OL-OH	.27	1	.272	13.5			
9.20	4.43	.32	7.13	ORGANIC MATERIAL	OL-OH	.28	2	.308	13.5			
9.40	3.12	.30	9.61	ORGANIC MATERIAL	OL-OH	.28	1	.210	13.5			

9.60	1.55	.34	21.97	ORGANIC MATERIAL	OL-OH	.29	1	.093	13.5
9.80	3.82	.28	7.35	ORGANIC MATERIAL	OL-OH	.29	1	.261	13.5
10.00	4.54	.27	5.84	ORGANIC MATERIAL	OL-OH	.30	2	.314	13.5
10.20	4.54	.24	5.25	CLAY	CH	.41	2	.306	13.5
10.40	4.30	.24	5.47	ORGANIC MATERIAL	OL-OH	.31	2	.296	13.5
10.60	4.13	.25	5.99	ORGANIC MATERIAL	OL-OH	.32	1	.282	13.5
10.80	5.37	.25	4.66	CLAY	CH	.43	2	.366	13.5
11.00	4.43	.26	5.82	ORGANIC MATERIAL	OL-OH	.33	2	.304	13.5
11.20	3.70	.25	6.67	ORGANIC MATERIAL	OL-OH	.34	1	.249	13.5
11.40	4.30	.25	5.71	ORGANIC MATERIAL	OL-OH	.34	2	.293	13.5
11.60	4.01	.25	6.31	ORGANIC MATERIAL	OL-OH	.35	1	.271	13.5
11.80	4.54	.26	5.71	ORGANIC MATERIAL	OL-OH	.35	2	.310	13.5
12.00	3.41	.27	7.81	ORGANIC MATERIAL	OL-OH	.36	1	.226	13.5
12.20	4.65	.28	5.93	ORGANIC MATERIAL	OL-OH	.37	2	.317	13.5
12.40	4.18	.26	6.32	ORGANIC MATERIAL	OL-OH	.37	2	.282	13.5
12.60	4.53	.26	5.83	ORGANIC MATERIAL	OL-OH	.38	2	.308	13.5
12.80	4.19	.27	6.36	ORGANIC MATERIAL	OL-OH	.38	2	.292	13.5
13.00	3.70	.24	6.54	ORGANIC MATERIAL	OL-OH	.39	1	.245	13.5
13.20	3.94	.25	6.38	ORGANIC MATERIAL	OL-OH	.40	1	.263	13.5
13.40	3.89	.23	5.93	ORGANIC MATERIAL	OL-OH	.40	1	.258	13.5
13.60	3.95	.24	6.14	ORGANIC MATERIAL	OL-OH	.41	1	.262	13.5
13.80	3.83	.25	6.49	ORGANIC MATERIAL	OL-OH	.41	1	.253	13.5
14.00	3.83	.24	6.35	ORGANIC MATERIAL	OL-OH	.42	1	.252	13.5
14.20	3.77	.27	7.07	ORGANIC MATERIAL	OL-OH	.43	1	.247	13.5
14.40	5.47	.26	4.74	CLAY	CH	.58	2	.362	13.5
14.60	4.18	.30	7.10	ORGANIC MATERIAL	OL-OH	.44	2	.277	13.5
14.80	3.83	.24	6.34	ORGANIC MATERIAL	OL-OH	.44	1	.250	13.5
15.00	3.95	.25	6.35	ORGANIC MATERIAL	OL-OH	.45	1	.259	13.5
15.20	3.83	.26	6.71	ORGANIC MATERIAL	OL-OH	.46	1	.250	13.5
15.40	3.94	.25	6.24	ORGANIC MATERIAL	OL-OH	.46	1	.258	13.5
15.60	4.24	.25	5.83	ORGANIC MATERIAL	OL-OH	.47	2	.280	13.5
15.80	4.18	.25	5.91	ORGANIC MATERIAL	OL-OH	.47	2	.275	13.5
16.00	4.19	.28	6.80	ORGANIC MATERIAL	OL-OH	.48	2	.275	13.5
16.20	4.53	.28	6.12	ORGANIC MATERIAL	OL-OH	.49	2	.299	13.5
16.40	3.71	.24	6.40	ORGANIC MATERIAL	OL-OH	.49	1	.238	13.5
16.60	4.25	.18	4.17	CLAY	CH	.66	2	.266	13.5
16.80	4.92	.24	4.92	CLAY	CH	.67	2	.315	13.5
17.00	3.71	.27	7.25	ORGANIC MATERIAL	OL-OH	.51	1	.237	13.5
17.20	3.70	.26	7.13	ORGANIC MATERIAL	OL-OH	.52	1	.236	13.5
17.40	8.26	.22	2.63	CLAY	CH	.70	3	.561	13.5
17.60	13.69	.25	1.80	SILTY CLAY TO CLAY	CL-CH	.70	4	.962	13.5
17.80	4.44	.26	5.93	ORGANIC MATERIAL	OL-OH	.53	2	.290	13.5
18.00	3.76	.26	6.90	ORGANIC MATERIAL	OL-OH	.54	1	.239	13.5
18.20	3.83	.26	6.78	ORGANIC MATERIAL	OL-OH	.55	1	.243	13.5
18.40	7.20	.27	3.73	CLAY	CH	.74	3	.479	13.5
18.60	5.98	.27	4.43	CLAY	CH	.74	2	.388	13.5
18.80	3.83	.23	6.07	ORGANIC MATERIAL	OL-OH	.56	1	.242	13.5
19.00	10.43	.25	2.43	SILTY CLAY TO CLAY	CL-CH	.76	3	.716	13.5
19.20	7.21	.26	3.65	CLAY	CH	.77	3	.477	13.5
19.40	9.31	.27	2.91	CLAY	CH	.78	4	.632	13.5
19.60	11.32	.29	2.57	SILTY CLAY TO CLAY	CL-CH	.78	3	.781	13.5
19.80	4.88	.20	4.10	CLAY	CH	.79	2	.303	13.5
20.00	6.90	.24	3.50	CLAY	CH	.80	3	.452	13.5
20.20	4.93	.28	5.68	ORGANIC MATERIAL	OL-OH	.61	2	.320	13.5
20.40	4.54	.27	5.84	ORGANIC MATERIAL	OL-OH	.61	2	.291	13.5
20.60	3.77	.26	6.90	ORGANIC MATERIAL	OL-OH	.62	1	.233	13.5
20.80	4.06	.31	7.75	ORGANIC MATERIAL	OL-OH	.62	1	.255	13.5
21.00	4.19	.27	6.53	ORGANIC MATERIAL	OL-OH	.63	2	.264	13.5



RESULT OF CONE PENETRATION TEST

43M

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

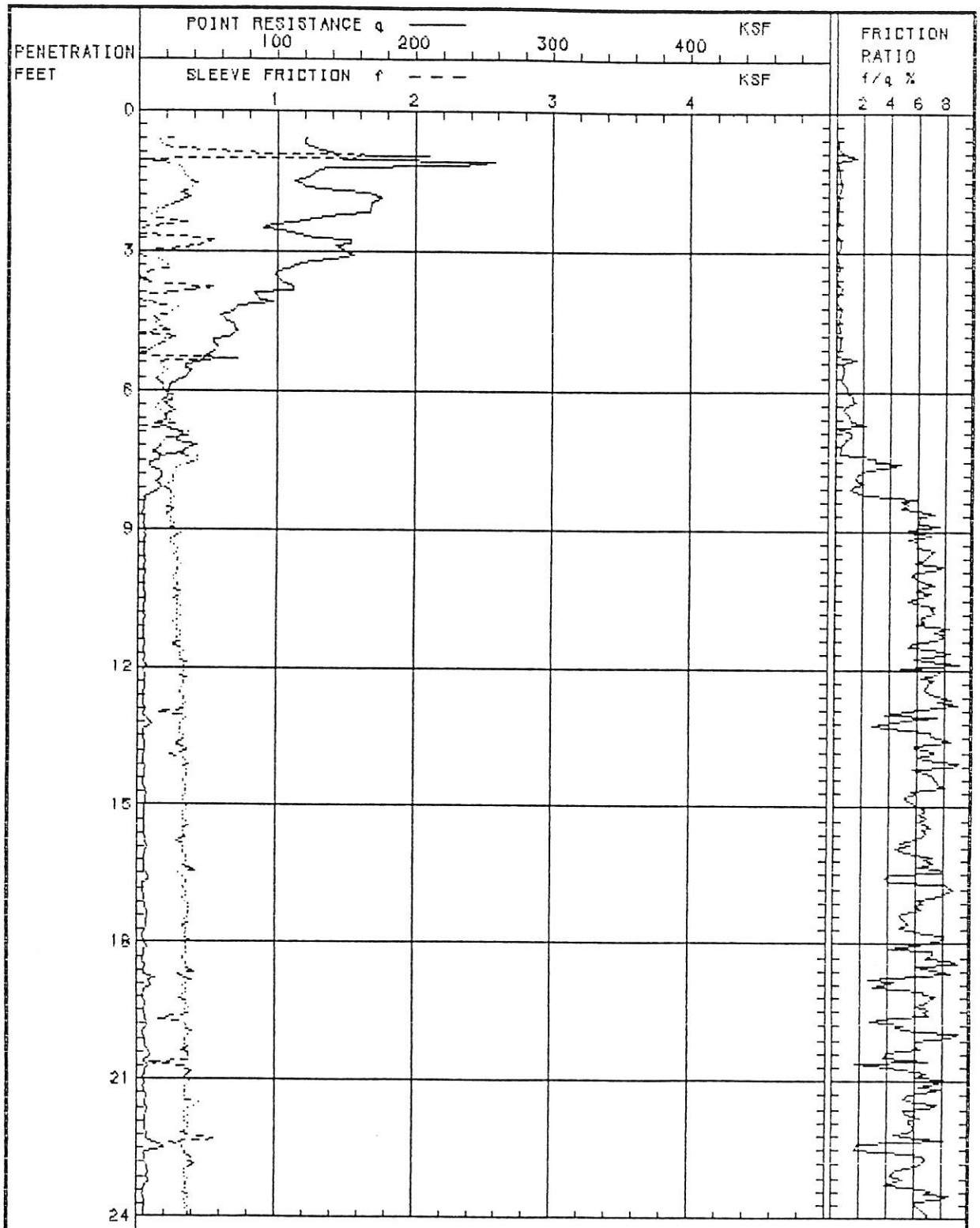
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 43M
CONE NO. : 5006
DATE : 05/07/87

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	27.37	.23	.85	SANDY SILT TO CLAYEY SILT	ML-MH	.03	5	2.025	13.5	63	38	.50+
.80	56.06	.39	.70	SILTY SAND TO SANDY SILT	SM-ML	.04	8			91	41	.50+
1.00	30.90	.63	2.03	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	7	2.286	13.5			
1.20	45.41	.52	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	.06	8	3.359	13.5	79	39	.50+
1.40	96.10	.56	.59	SAND TO SILTY SAND	SM-SP	.08	11			100+	42	.50+
1.60	67.90	.43	.64	SILTY SAND TO SANDY SILT	SM-ML	.09	10			94	41	.50+
1.80	75.96	.11	.14	SAND TO SILTY SAND	SM-SP	.11	9			96	42	.50+
2.00	21.28	.24	1.11	CLAYEY SILT TO SILTY CLAY	MH-CL	.09	5	1.569	13.5			
2.20	89.89	.48	.53	SAND TO SILTY SAND	SM-SP	.13	10			100+	42	.50+
2.40	74.55	.19	.26	SAND TO SILTY SAND	SM-SP	.14	8			90	41	.50+
2.60	82.72	1.06	1.28	SILTY SAND TO SANDY SILT	SM-ML	.14	13			96	41	.50+
2.80	116.03	.19	.16	SAND TO SILTY SAND	SM-SP	.17	13			100+	42	.50+
3.00	101.84	.41	.40	SAND TO SILTY SAND	SM-SP	.18	12			100+	42	.50+
3.20	102.10	.39	.38	SAND TO SILTY SAND	SM-SP	.19	12			100+	42	.50+
3.40	87.86	.49	.56	SAND TO SILTY SAND	SM-SP	.20	10			92	41	.50+
3.60	98.02	.40	.41	SAND TO SILTY SAND	SM-SP	.22	11			96	42	.50+
3.80	93.08	.87	.93	SILTY SAND TO SANDY SILT	SM-ML	.21	14			94	41	.50+
4.00	100.01	1.03	1.03	SILTY SAND TO SANDY SILT	SM-ML	.22	15			96	42	.50+
4.20	128.96	.51	.40	SAND TO SILTY SAND	SM-SP	.25	15			100+	42	.50+
4.40	117.78	.46	.39	SAND TO SILTY SAND	SM-SP	.26	14			100+	42	.50+
4.60	90.31	.41	.46	SAND TO SILTY SAND	SM-SP	.28	10			87	41	.50+
4.80	83.62	.56	.68	SILTY SAND TO SANDY SILT	SM-ML	.26	13			85	40	.50+
5.00	77.59	.56	.72	SILTY SAND TO SANDY SILT	SM-ML	.27	12			81	39	.50+
5.20	66.42	.45	.68	SILTY SAND TO SANDY SILT	SM-ML	.29	10			75	39	.50+
5.40	51.66	.42	.81	SILTY SAND TO SANDY SILT	SM-ML	.30	8			68	38	.50+
5.60	44.40	.47	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	.28	8	3.268	13.5	65	37	.36
5.80	37.12	.49	1.33	SANDY SILT TO CLAYEY SILT	ML-MH	.29	7	2.728	13.5	61	37	.23
6.00	35.22	.53	1.52	SANDY SILT TO CLAYEY SILT	ML-MH	.30	6	2.587	13.5	59	36	.21
6.20	26.49	.40	1.52	CLAYEY SILT TO SILTY CLAY	MH-CL	.28	6	1.941	13.5			
6.40	13.77	.46	3.32	CLAY	CH	.26	6	1.001	13.5			
6.60	17.40	.41	2.34	SILTY CLAY TO CLAY	CL-CH	.26	5	1.270	13.5			
6.80	24.21	.36	1.49	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	5	1.770	13.5			
7.00	25.99	.38	1.45	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	6	1.902	13.5			
7.20	30.02	.22	.73	SANDY SILT TO CLAYEY SILT	ML-MH	.36	5	2.197	13.5	51	35	.17
7.40	24.54	.35	1.41	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	5	1.793	13.5			
7.60	12.65	.31	2.43	SILTY CLAY TO CLAY	CL-CH	.30	4	.915	13.5			
7.80	15.29	.34	2.22	SILTY CLAY TO CLAY	CL-CH	.31	4	1.109	13.5			
8.00	16.16	.31	1.89	CLAYEY SILT TO SILTY CLAY	MH-CL	.36	3	1.171	13.5			
8.20	10.42	.26	2.45	SILTY CLAY TO CLAY	CL-CH	.33	3	.748	13.5			
8.40	5.98	.28	4.70	CLAY	CH	.34	2	.418	13.5			
8.60	4.91	.28	5.61	CLAY	CH	.34	2	.338	13.5			
8.80	4.42	.26	5.95	ORGANIC MATERIAL	OL-OH	.26	2	.308	13.5			
9.00	3.82	.26	6.76	ORGANIC MATERIAL	OL-OH	.27	1	.263	13.5			
9.20	4.42	.26	5.93	ORGANIC MATERIAL	OL-OH	.28	2	.307	13.5			
9.40	4.67	.28	5.94	ORGANIC MATERIAL	OL-OH	.28	2	.325	13.5			

9.60	3.59	.25	7.05	ORGANIC MATERIAL	OL-OH	.29	1	.244	13.5
9.80	4.66	.25	5.43	CLAY	CH	.39	2	.316	13.5
10.00	5.38	.25	4.59	CLAY	CH	.40	2	.369	13.5
10.20	3.71	.25	6.69	ORGANIC MATERIAL	OL-OH	.31	1	.252	13.5
10.40	4.06	.27	6.61	ORGANIC MATERIAL	OL-OH	.31	1	.278	13.5
10.60	4.90	.26	5.23	CLAY	CH	.42	2	.331	13.5
10.80	5.02	.24	4.87	CLAY	CH	.43	2	.340	13.5
11.00	4.79	.24	4.93	CLAY	CH	.44	2	.322	13.5
11.20	4.89	.32	6.50	ORGANIC MATERIAL	OL-OH	.34	2	.337	13.5
11.40	3.59	.23	6.32	ORGANIC MATERIAL	OL-OH	.34	1	.240	13.5
11.60	3.47	.21	6.03	ORGANIC MATERIAL	OL-OH	.35	1	.231	13.5
11.80	3.70	.24	6.39	ORGANIC MATERIAL	OL-OH	.35	1	.248	13.5
12.00	3.94	.24	6.13	ORGANIC MATERIAL	OL-OH	.36	1	.265	13.5
12.20	4.19	.28	6.80	ORGANIC MATERIAL	OL-OH	.37	2	.283	13.5
12.40	4.18	.26	6.22	ORGANIC MATERIAL	OL-OH	.37	2	.282	13.5
12.60	3.94	.26	6.51	ORGANIC MATERIAL	OL-OH	.38	1	.264	13.5
12.80	3.83	.23	6.03	ORGANIC MATERIAL	OL-OH	.38	1	.255	13.5
13.00	5.13	.23	4.48	CLAY	CH	.52	2	.341	13.5
13.20	3.70	.23	6.25	ORGANIC MATERIAL	OL-OH	.40	1	.245	13.5
13.40	3.83	.20	5.33	ORGANIC MATERIAL	OL-OH	.40	1	.254	13.5
13.60	3.35	.24	7.25	ORGANIC MATERIAL	OL-OH	.41	1	.218	13.5
13.80	4.06	.26	6.38	ORGANIC MATERIAL	OL-OH	.41	1	.270	13.5
14.00	4.76	.24	5.10	CLAY	CH	.56	2	.311	13.5
14.20	4.30	.27	6.24	ORGANIC MATERIAL	OL-OH	.43	2	.287	13.5
14.40	4.89	.23	4.69	CLAY	CH	.58	2	.319	13.5
14.60	4.67	.22	4.70	CLAY	CH	.58	2	.303	13.5
14.80	3.83	.22	5.83	ORGANIC MATERIAL	OL-OH	.44	1	.250	13.5
15.00	4.24	.23	5.34	ORGANIC MATERIAL	OL-OH	.45	2	.281	13.5
15.20	5.95	.24	4.01	CLAY	CH	.61	2	.396	13.5
15.40	3.89	.20	5.11	ORGANIC MATERIAL	OL-OH	.46	1	.254	13.5
15.60	4.55	.31	6.73	ORGANIC MATERIAL	OL-OH	.47	2	.302	13.5
15.80	3.57	.22	6.29	ORGANIC MATERIAL	OL-OH	.47	1	.230	13.5
16.00	4.41	.24	5.36	ORGANIC MATERIAL	OL-OH	.48	2	.291	13.5
16.20	3.95	.22	5.67	ORGANIC MATERIAL	OL-OH	.49	1	.256	13.5
16.40	4.31	.22	5.17	CLAY	CH	.66	2	.271	13.5
16.60	4.48	.23	5.05	CLAY	CH	.66	2	.283	13.5
16.80	4.78	.23	4.85	CLAY	CH	.67	2	.304	13.5
17.00	5.32	.27	5.16	CLAY	CH	.68	2	.344	13.5
17.20	8.58	.24	2.74	CLAY	CH	.69	4	.585	13.5
17.40	6.24	.20	3.24	CLAY	CH	.70	2	.411	13.5
17.60	7.37	.24	3.21	CLAY	CH	.70	3	.494	13.5
17.80	5.04	.22	4.27	CLAY	CH	.71	2	.321	13.5
18.00	8.80	.22	2.46	CLAY	CH	.72	4	.598	13.5
18.20	12.67	.21	1.67	SILTY CLAY TO CLAY	CL-CH	.73	4	.885	13.5
18.40	5.05	.22	4.28	CLAY	CH	.74	2	.319	13.5
18.60	4.06	.23	5.54	ORGANIC MATERIAL	OL-OH	.56	1	.260	13.5
18.80	4.41	.23	5.32	ORGANIC MATERIAL	OL-OH	.56	2	.285	13.5
19.00	5.58	.20	3.57	CLAY	CH	.76	2	.357	13.5
19.20	4.43	.26	5.94	ORGANIC MATERIAL	OL-OH	.58	2	.285	13.5
19.40	6.02	.25	4.14	CLAY	CH	.78	2	.389	13.5
19.60	6.76	.26	3.83	CLAY	CH	.78	3	.442	13.5
19.80	4.78	.19	3.99	CLAY	CH	.79	2	.296	13.5
20.00	6.83	.22	3.16	CLAY	CH	.80	3	.447	13.5
20.20	12.83	.60	4.64	CLAY	CH	.81	6	.891	13.5

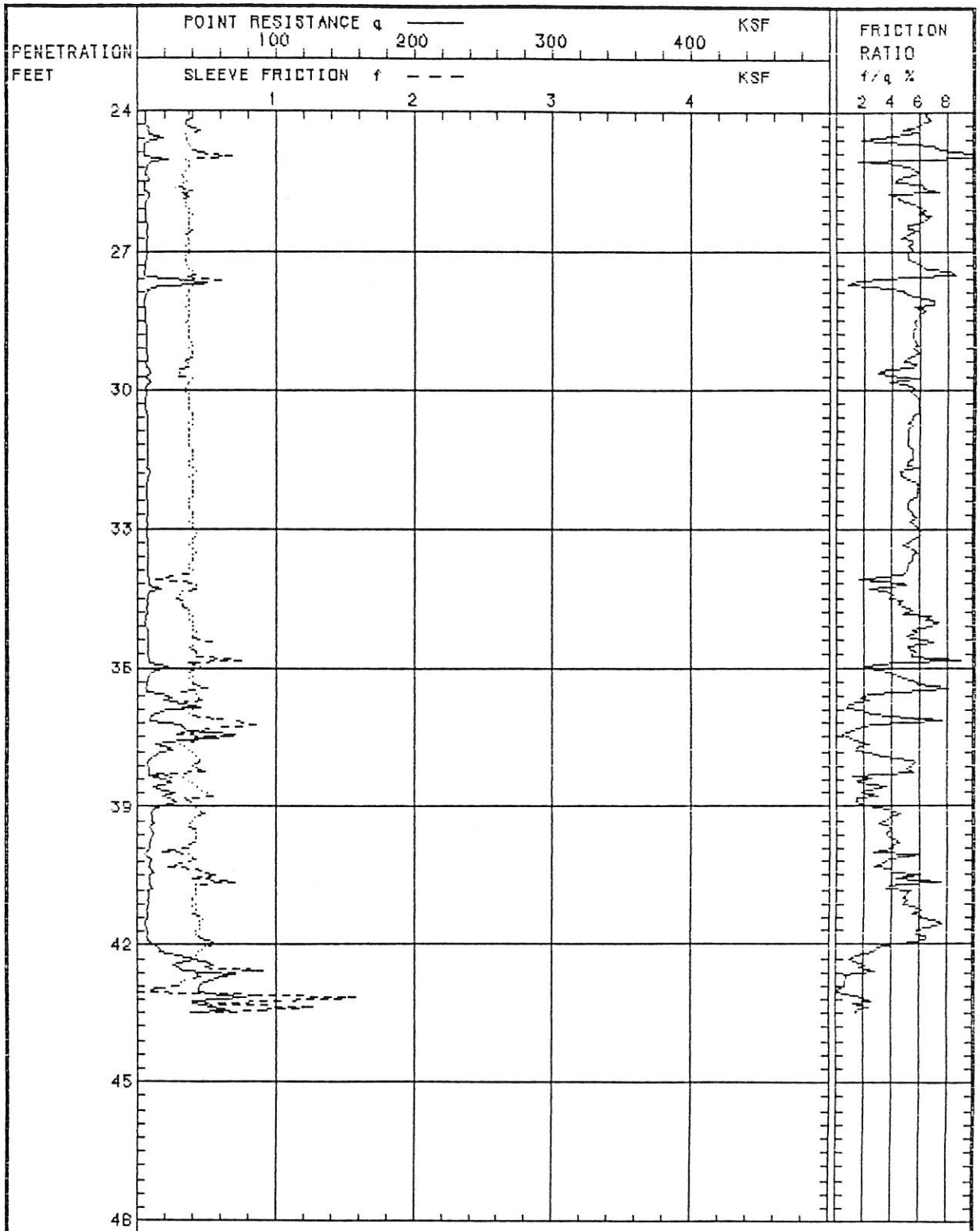


RESULT OF CONE PENETRATION TEST

43S

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



RESULT OF CONE PENETRATION TEST

43S

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

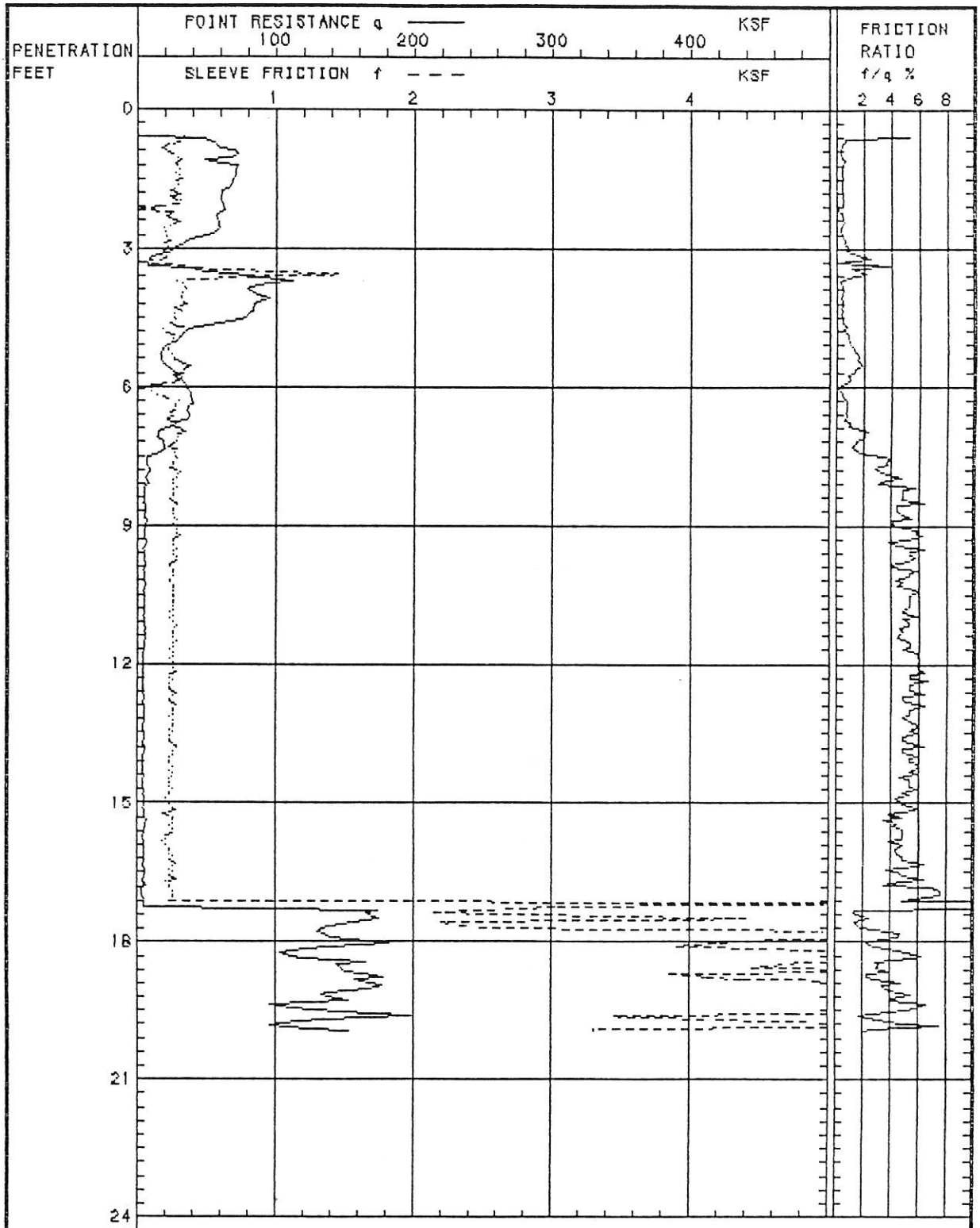
PROJECT NO. : 01870206
BORING NO. : 43S
CONE NO. : 001
DATE : 05/08/87

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	121.02	.20	.17	SAND TO SILTY SAND	SM-SP	.04	14			100+	42	.50+
.80	128.15	.11	.08	SAND TO SILTY SAND	SM-SP	.05	15			100+	42	.50+
1.00	146.23	.20	.14	SAND TO SILTY SAND	SM-SP	.06	17			100+	42	.50+
1.20	184.53	.38	.21	SAND	SW-SP	.08	17			100+	44	.50+
1.40	124.46	.33	.27	SAND TO SILTY SAND	SM-SP	.08	14			100+	42	.50+
1.60	119.41	.38	.32	SAND TO SILTY SAND	SM-SP	.10	14			100+	42	.50+
1.80	169.95	.34	.20	SAND	SW-SP	.12	16			100+	44	.50+
2.00	168.80	.29	.17	SAND	SW-SP	.13	16			100+	44	.50+
2.20	157.45	.11	.07	SAND	SW-SP	.14	15			100+	44	.50+
2.40	105.17	.13	.12	SAND TO SILTY SAND	SM-SP	.14	12			100+	42	.50+
2.60	109.65	.01	.01	SAND TO SILTY SAND	SM-SP	.16	13			100+	42	.50+
2.80	153.48	.38	.24	SAND TO SILTY SAND	SM-SP	.17	18			100+	42	.50+
3.00	150.40	.11	.07	SAND TO SILTY SAND	SM-SP	.18	18			100+	42	.50+
3.20	133.35	.15	.12	SAND TO SILTY SAND	SM-SP	.19	15			100+	42	.50+
3.40	104.68	.19	.18	SAND TO SILTY SAND	SM-SP	.20	12			100+	42	.50+
3.60	101.79	.05	.05	SAND TO SILTY SAND	SM-SP	.22	12			97	42	.50+
3.80	112.16	.50	.45	SAND TO SILTY SAND	SM-SP	.23	13			100+	42	.50+
4.00	86.88	.11	.13	SAND TO SILTY SAND	SM-SP	.24	10			88	41	.50+
4.20	71.83	.22	.31	SILTY SAND TO SANDY SILT	SM-ML	.23	11			81	39	.50+
4.40	60.81	.23	.38	SILTY SAND TO SANDY SILT	SM-ML	.24	9			75	39	.50+
4.60	69.12	.14	.21	SILTY SAND TO SANDY SILT	SM-ML	.25	11			79	39	.50+
4.80	67.65	.13	.19	SILTY SAND TO SANDY SILT	SM-ML	.26	10			77	39	.50+
5.00	56.07	.16	.28	SILTY SAND TO SANDY SILT	SM-ML	.27	8			71	38	.50+
5.20	51.67	.10	.19	SILTY SAND TO SANDY SILT	SM-ML	.29	8			68	38	.50+
5.40	39.15	.16	.41	SILTY SAND TO SANDY SILT	SM-ML	.30	6			61	37	.25
5.60	37.39	.19	.52	SANDY SILT TO CLAYEY SILT	ML-MH	.28	7	2.749	13.5	61	37	.25
5.80	28.18	.17	.59	SANDY SILT TO CLAYEY SILT	ML-MH	.29	5	2.066	13.5	53	36	.18
6.00	21.40	.17	.81	SANDY SILT TO CLAYEY SILT	ML-MH	.30	4	1.563	13.5	46	35	.15
6.20	18.46	.26	1.42	CLAYEY SILT TO SILTY CLAY	MH-CL	.28	4	1.347	13.5			
6.40	25.08	.14	.56	SANDY SILT TO CLAYEY SILT	ML-MH	.32	4	1.834	13.5	48	35	.16
6.60	20.05	.19	.96	CLAYEY SILT TO SILTY CLAY	MH-CL	.30	4	1.463	13.5			
6.80	22.17	.20	.91	SANDY SILT TO CLAYEY SILT	ML-MH	.34	4	1.617	13.5	45	34	.15
7.00	30.03	.28	.94	SANDY SILT TO CLAYEY SILT	ML-MH	.35	5	2.198	13.5	51	35	.17
7.20	40.24	.15	.37	SILTY SAND TO SANDY SILT	SM-ML	.40	6			57	36	.20
7.40	23.71	.26	1.12	SANDY SILT TO CLAYEY SILT	ML-MH	.37	4	1.729	13.5	44	34	.15
7.60	8.36	.35	4.18	CLAY	CH	.30	4	.597	13.5			
7.80	16.73	.26	1.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.35	4	1.213	13.5			
8.00	13.51	.23	1.73	SILTY CLAY TO CLAY	CL-CH	.32	4	.977	13.5			
8.20	12.07	.22	1.85	SILTY CLAY TO CLAY	CL-CH	.33	3	.870	13.5			
8.40	4.68	.24	5.06	CLAY	CH	.34	2	.322	13.5			
8.60	3.70	.24	6.43	ORGANIC MATERIAL	OL-OH	.26	1	.255	13.5			
8.80	3.94	.24	6.03	ORGANIC MATERIAL	OL-OH	.26	1	.272	13.5			
9.00	4.91	.26	5.30	CLAY	CH	.36	2	.337	13.5			
9.20	4.43	.25	5.62	ORGANIC MATERIAL	OL-OH	.28	2	.308	13.5			
9.40	4.18	.27	6.53	ORGANIC MATERIAL	OL-OH	.28	2	.289	13.5			

9.60	4.18	.27	6.38	ORGANIC MATERIAL	OL-OH	.29	2	.288	13.5
9.80	3.94	.30	7.54	ORGANIC MATERIAL	OL-OH	.29	1	.270	13.5
10.00	4.68	.26	5.61	ORGANIC MATERIAL	OL-OH	.30	2	.324	13.5
10.20	4.18	.28	6.82	ORGANIC MATERIAL	OL-OH	.31	2	.287	13.5
10.40	4.67	.31	6.61	ORGANIC MATERIAL	OL-OH	.31	2	.323	13.5
10.60	4.43	.29	6.43	ORGANIC MATERIAL	OL-OH	.32	2	.305	13.5
10.80	4.18	.28	6.82	ORGANIC MATERIAL	OL-OH	.32	2	.285	13.5
11.00	4.43	.27	6.18	ORGANIC MATERIAL	OL-OH	.33	2	.304	13.5
11.20	3.94	.30	7.55	ORGANIC MATERIAL	OL-OH	.34	1	.267	13.5
11.40	4.66	.30	6.36	ORGANIC MATERIAL	OL-OH	.34	2	.320	13.5
11.60	4.19	.32	7.66	ORGANIC MATERIAL	OL-OH	.35	2	.284	13.5
11.80	4.69	.31	6.58	ORGANIC MATERIAL	OL-OH	.35	2	.321	13.5
12.00	5.44	.35	6.37	ORGANIC MATERIAL	OL-OH	.36	2	.376	13.5
12.20	4.92	.33	6.75	ORGANIC MATERIAL	OL-OH	.37	2	.337	13.5
12.40	4.92	.33	6.78	ORGANIC MATERIAL	OL-OH	.37	2	.337	13.5
12.60	4.06	.33	8.06	ORGANIC MATERIAL	OL-OH	.38	1	.273	13.5
12.80	4.18	.34	8.25	ORGANIC MATERIAL	OL-OH	.38	2	.281	13.5
13.00	4.43	.24	5.53	ORGANIC MATERIAL	OL-OH	.39	2	.299	13.5
13.20	9.31	.32	3.44	CLAY	CH	.53	4	.650	13.5
13.40	4.43	.31	6.98	ORGANIC MATERIAL	OL-OH	.40	2	.298	13.5
13.60	4.42	.31	7.00	ORGANIC MATERIAL	OL-OH	.41	2	.297	13.5
13.80	4.92	.36	7.26	ORGANIC MATERIAL	OL-OH	.41	2	.334	13.5
14.00	4.19	.34	8.22	ORGANIC MATERIAL	OL-OH	.42	2	.279	13.5
14.20	5.66	.34	6.08	CLAY	CH	.57	2	.377	13.5
14.40	4.68	.35	7.38	ORGANIC MATERIAL	OL-OH	.43	2	.315	13.5
14.60	5.39	.36	6.59	ORGANIC MATERIAL	OL-OH	.44	2	.367	13.5
14.80	6.65	.34	5.18	CLAY	CH	.59	3	.448	13.5
15.00	5.41	.34	6.25	ORGANIC MATERIAL	OL-OH	.45	2	.367	13.5
15.20	5.17	.33	6.42	ORGANIC MATERIAL	OL-OH	.46	2	.349	13.5
15.40	5.41	.36	6.60	ORGANIC MATERIAL	OL-OH	.46	2	.367	13.5
15.60	5.16	.33	6.44	ORGANIC MATERIAL	OL-OH	.47	2	.348	13.5
15.80	5.90	.34	5.72	CLAY	CH	.63	2	.390	13.5
16.00	6.03	.34	5.61	CLAY	CH	.64	2	.400	13.5
16.20	5.17	.36	6.89	ORGANIC MATERIAL	OL-OH	.49	2	.347	13.5
16.40	5.16	.37	7.09	ORGANIC MATERIAL	OL-OH	.49	2	.346	13.5
16.60	8.85	.35	3.90	CLAY	CH	.66	4	.607	13.5
16.80	3.94	.32	8.18	ORGANIC MATERIAL	OL-OH	.50	1	.254	13.5
17.00	5.16	.34	6.55	ORGANIC MATERIAL	OL-OH	.51	2	.344	13.5
17.20	6.16	.38	6.15	CLAY	CH	.69	2	.405	13.5
17.40	7.63	.37	4.89	CLAY	CH	.70	3	.514	13.5
17.60	6.89	.34	4.91	CLAY	CH	.70	3	.458	13.5
17.80	4.93	.36	7.23	ORGANIC MATERIAL	OL-OH	.53	2	.326	13.5
18.00	5.90	.38	6.43	ORGANIC MATERIAL	OL-OH	.54	2	.397	13.5
18.20	4.92	.36	7.26	ORGANIC MATERIAL	OL-OH	.55	2	.324	13.5
18.40	3.94	.34	8.74	ORGANIC MATERIAL	OL-OH	.55	1	.251	13.5
18.60	4.92	.39	7.89	ORGANIC MATERIAL	OL-OH	.56	2	.323	13.5
18.80	11.38	.39	3.43	CLAY	CH	.75	5	.787	13.5
19.00	8.44	.34	4.08	CLAY	CH	.76	4	.569	13.5
19.20	4.43	.32	7.27	ORGANIC MATERIAL	OL-OH	.58	2	.285	13.5
19.40	5.66	.37	6.50	ORGANIC MATERIAL	OL-OH	.58	2	.376	13.5
19.60	5.65	.35	6.13	ORGANIC MATERIAL	OL-OH	.59	2	.375	13.5
19.80	7.36	.31	4.17	CLAY	CH	.79	3	.487	13.5
20.00	4.43	.37	8.34	ORGANIC MATERIAL	OL-OH	.60	2	.284	13.5
20.20	5.90	.35	6.00	CLAY	CH	.81	2	.377	13.5
20.40	9.08	.35	3.89	CLAY	CH	.82	4	.612	13.5
20.60	5.41	.24	4.41	CLAY	CH	.82	2	.340	13.5
20.80	5.90	.38	6.43	ORGANIC MATERIAL	OL-OH	.62	2	.391	13.5
21.00	4.67	.37	7.89	ORGANIC MATERIAL	OL-OH	.63	2	.293	13.5
21.20	4.90	.36	7.25	ORGANIC MATERIAL	OL-OH	.64	2	.316	13.5
21.40	6.41	.36	5.55	CLAY	CH	.86	3	.411	13.5

21.60	6.62	.38	5.75	CLAY	CH	.86	3	.426	13.5
21.80	6.14	.37	5.99	CLAY	CH	.87	2	.390	13.5
22.00	6.40	.38	5.93	CLAY	CH	.88	3	.409	13.5
22.20	7.26	.39	5.32	CLAY	CH	.89	3	.472	13.5
22.40	16.01	.39	2.44	SILTY CLAY TO CLAY	CL-CH	.90	5	1.120	13.5
22.60	5.92	.36	6.01	CLAY	CH	.90	2	.371	13.5
22.80	6.38	.40	6.29	CLAY	CH	.91	3	.405	13.5
23.00	8.11	.37	4.53	CLAY	CH	.92	3	.532	13.5
23.20	8.71	.36	4.08	CLAY	CH	.93	4	.577	13.5
23.40	4.92	.35	7.02	ORGANIC MATERIAL	OL-OH	.70	2	.312	13.5
23.60	5.39	.37	6.83	ORGANIC MATERIAL	OL-OH	.71	2	.347	13.5
23.80	5.67	.37	6.51	ORGANIC MATERIAL	OL-OH	.71	2	.367	13.5
24.00	5.65	.38	6.73	ORGANIC MATERIAL	OL-OH	.72	2	.365	13.5
24.20	5.90	.38	6.43	ORGANIC MATERIAL	OL-OH	.73	2	.383	13.5
24.40	8.13	.43	5.31	CLAY	CH	.98	3	.530	13.5
24.60	15.17	.36	2.35	SILTY CLAY TO CLAY	CL-CH	.98	4	1.051	13.5
24.80	5.17	.39	7.58	ORGANIC MATERIAL	OL-OH	.74	2	.328	13.5
25.00	13.71	.53	3.85	CLAY	CH	1.00	6	.941	13.5
25.20	7.14	.38	5.32	CLAY	CH	1.01	3	.454	13.5
25.40	6.87	.34	4.89	CLAY	CH	1.02	3	.434	13.5
25.60	5.17	.32	6.17	ORGANIC MATERIAL	OL-OH	.77	2	.326	13.5
25.80	8.62	.35	4.11	CLAY	CH	1.03	4	.562	13.5
26.00	6.16	.36	5.78	CLAY	CH	1.04	2	.379	13.5
26.20	6.16	.39	6.35	ORGANIC MATERIAL	OL-OH	.79	2	.398	13.5
26.40	6.87	.38	5.52	CLAY	CH	1.06	3	.431	13.5
26.60	6.89	.38	5.51	CLAY	CH	1.06	3	.431	13.5
26.80	6.89	.37	5.42	CLAY	CH	1.07	3	.431	13.5
27.00	7.12	.38	5.32	CLAY	CH	1.08	3	.448	13.5
27.20	6.65	.36	5.35	CLAY	CH	1.09	3	.412	13.5
27.40	5.43	.39	7.21	ORGANIC MATERIAL	OL-OH	.82	2	.341	13.5
27.60	22.24	.48	2.18	CLAYEY SILT TO SILTY CLAY	MH-CL	1.24	5	1.556	13.5
27.80	11.96	.39	3.27	CLAY	CH	1.11	5	.804	13.5
28.00	5.92	.37	6.21	CLAY	CH	1.12	2	.356	13.5
28.20	5.88	.37	6.26	ORGANIC MATERIAL	OL-OH	.85	2	.373	13.5
28.40	6.40	.38	5.93	CLAY	CH	1.14	3	.390	13.5
28.60	6.51	.36	5.54	CLAY	CH	1.14	3	.398	13.5
28.80	6.89	.38	5.50	CLAY	CH	1.15	3	.425	13.5
29.00	6.89	.39	5.69	CLAY	CH	1.16	3	.424	13.5
29.20	6.89	.40	5.84	CLAY	CH	1.17	3	.424	13.5
29.40	6.91	.36	5.16	CLAY	CH	1.18	3	.425	13.5
29.60	9.43	.32	3.44	CLAY	CH	1.18	4	.611	13.5
29.80	8.30	.39	4.72	CLAY	CH	1.19	3	.527	13.5
30.00	6.51	.36	5.54	CLAY	CH	1.20	3	.394	13.5
30.20	6.40	.38	5.93	CLAY	CH	1.21	3	.384	13.5
30.40	6.40	.37	5.75	CLAY	CH	1.22	3	.384	13.5
30.60	7.38	.40	5.46	CLAY	CH	1.22	3	.456	13.5
30.80	7.38	.39	5.30	CLAY	CH	1.23	3	.455	13.5
31.00	7.38	.38	5.13	CLAY	CH	1.24	3	.455	13.5
31.20	7.38	.38	5.13	CLAY	CH	1.25	3	.454	13.5
31.40	7.38	.40	5.46	CLAY	CH	1.26	3	.454	13.5
31.60	7.38	.38	5.12	CLAY	CH	1.26	3	.453	13.5
31.80	8.99	.42	4.61	CLAY	CH	1.27	4	.572	13.5
32.00	7.14	.40	5.64	CLAY	CH	1.28	3	.434	13.5
32.20	6.89	.46	6.70	ORGANIC MATERIAL	OL-OH	.97	3	.439	13.5
32.40	7.25	.38	5.31	CLAY	CH	1.30	3	.441	13.5
32.60	7.38	.39	5.29	CLAY	CH	1.30	3	.450	13.5
32.80	7.00	.40	5.75	CLAY	CH	1.31	3	.422	13.5
33.00	6.89	.40	5.85	CLAY	CH	1.32	3	.412	13.5
33.20	7.12	.38	5.32	CLAY	CH	1.33	3	.429	13.5
33.40	7.64	.39	5.11	CLAY	CH	1.34	3	.467	13.5

33.60	7.38	.45	6.10	CLAY	CH	1.34	3	.447	13.5			
33.80	7.38	.38	5.21	CLAY	CH	1.35	3	.446	13.5			
34.00	7.87	.39	4.95	CLAY	CH	1.36	3	.482	13.5			
34.20	8.36	.35	4.18	CLAY	CH	1.37	4	.518	13.5			
34.40	8.41	.32	3.80	CLAY	CH	1.38	4	.521	13.5			
34.60	7.12	.33	4.65	CLAY	CH	1.38	3	.425	13.5			
34.80	7.35	.38	5.17	CLAY	CH	1.39	3	.442	13.5			
35.00	5.67	.39	6.89	ORGANIC MATERIAL	OL-OH	1.05	2	.342	13.5			
35.20	7.38	.41	5.61	CLAY	CH	1.41	3	.442	13.5			
35.40	7.61	.47	6.19	CLAY	CH	1.42	3	.459	13.5			
35.60	7.38	.40	5.43	CLAY	CH	1.42	3	.441	13.5			
35.80	8.10	.58	7.16	CLAY	CH	1.43	3	.494	13.5			
36.00	20.27	.44	2.16	CLAYEY SILT TO SILTY CLAY	MH-CL	1.62	4	1.331	13.5			
36.20	8.39	.39	4.67	CLAY	CH	1.45	4	.514	13.5			
36.40	6.65	.46	6.85	ORGANIC MATERIAL	OL-OH	1.09	3	.412	13.5			
36.60	21.44	.44	2.06	CLAYEY SILT TO SILTY CLAY	MH-CL	1.65	5	1.466	13.5			
36.80	38.89	.35	.90	SANDY SILT TO CLAYEY SILT	ML-MH	1.84	7	2.744	13.5	21	31	.11
37.00	12.69	.39	3.06	CLAY	CH	1.48	6	.830	13.5			
37.20	20.06	.77	3.86	CLAY	CH	1.49	9	1.376	13.5			
37.40	52.94	.37	.70	SILTY SAND TO SANDY SILT	SM-ML	2.06	8			26	32	.12
37.60	23.65	.32	1.36	CLAYEY SILT TO SILTY CLAY	MH-CL	1.69	5	1.626	13.5			
37.80	21.88	.45	2.08	CLAYEY SILT TO SILTY CLAY	MH-CL	1.70	5	1.495	13.5			
38.00	8.13	.45	5.54	CLAY	CH	1.52	3	.490	13.5			
38.20	8.60	.46	5.33	CLAY	CH	1.53	4	.524	13.5			
38.40	18.63	.36	1.91	CLAYEY SILT TO SILTY CLAY	MH-CL	1.73	4	1.252	13.5			
38.60	15.53	.45	2.91	SILTY CLAY TO CLAY	CL-CH	1.54	4	1.036	13.5			
38.80	20.64	.52	2.50	SILTY CLAY TO CLAY	CL-CH	1.55	6	1.414	13.5			
39.00	16.66	.39	2.34	SILTY CLAY TO CLAY	CL-CH	1.56	5	1.118	13.5			
39.20	10.75	.43	3.97	CLAY	CH	1.57	5	.680	13.5			
39.40	11.16	.39	3.49	CLAY	CH	1.58	5	.710	13.5			
39.60	11.57	.58	5.00	CLAY	CH	1.58	5	.740	13.5			
39.80	9.35	.41	4.43	CLAY	CH	1.59	4	.574	13.5			
40.00	6.66	.27	4.13	CLAY	CH	1.60	3	.374	13.5			
40.20	10.39	.40	3.89	CLAY	CH	1.61	4	.650	13.5			
40.40	11.62	.43	3.69	CLAY	CH	1.62	5	.741	13.5			
40.60	9.35	.67	7.21	CLAY	CH	1.62	4	.572	13.5			
40.80	9.95	.43	4.28	CLAY	CH	1.63	4	.616	13.5			
41.00	8.13	.40	4.94	CLAY	CH	1.64	3	.481	13.5			
41.20	7.15	.41	5.79	CLAY	CH	1.65	3	.407	13.5			
41.40	7.61	.46	6.09	CLAY	CH	1.66	3	.441	13.5			
41.60	6.37	.45	7.08	ORGANIC MATERIAL	OL-OH	1.25	3	.379	13.5			
41.80	7.15	.44	6.10	CLAY	CH	1.67	3	.406	13.5			
42.00	12.96	.53	4.05	CLAY	CH	1.68	6	.836	13.5			
42.20	22.36	.44	1.96	CLAYEY SILT TO SILTY CLAY	MH-CL	1.90	5	1.516	13.5			
42.40	30.91	.42	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	2.12	5	2.133	13.5	11	30	.11
42.60	50.72	.69	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	2.13	9	3.600	13.5	25	32	.12
42.80	51.60	.44	.84	SILTY SAND TO SANDY SILT	SM-ML	2.35	9			24	31	.12
43.00	44.54	.08	.18	SILTY SAND TO SANDY SILT	SM-ML	2.37	7			20	31	.11
43.20	60.44	1.08	1.78	SANDY SILT TO CLAYEY SILT	ML-MH	2.16	11	4.317	13.5	29	32	.13
43.40	59.72	.55	.92	SILTY SAND TO SANDY SILT	SM-ML	2.39	9			27	32	.12



RESULT OF CONE PENETRATION TEST

44N

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

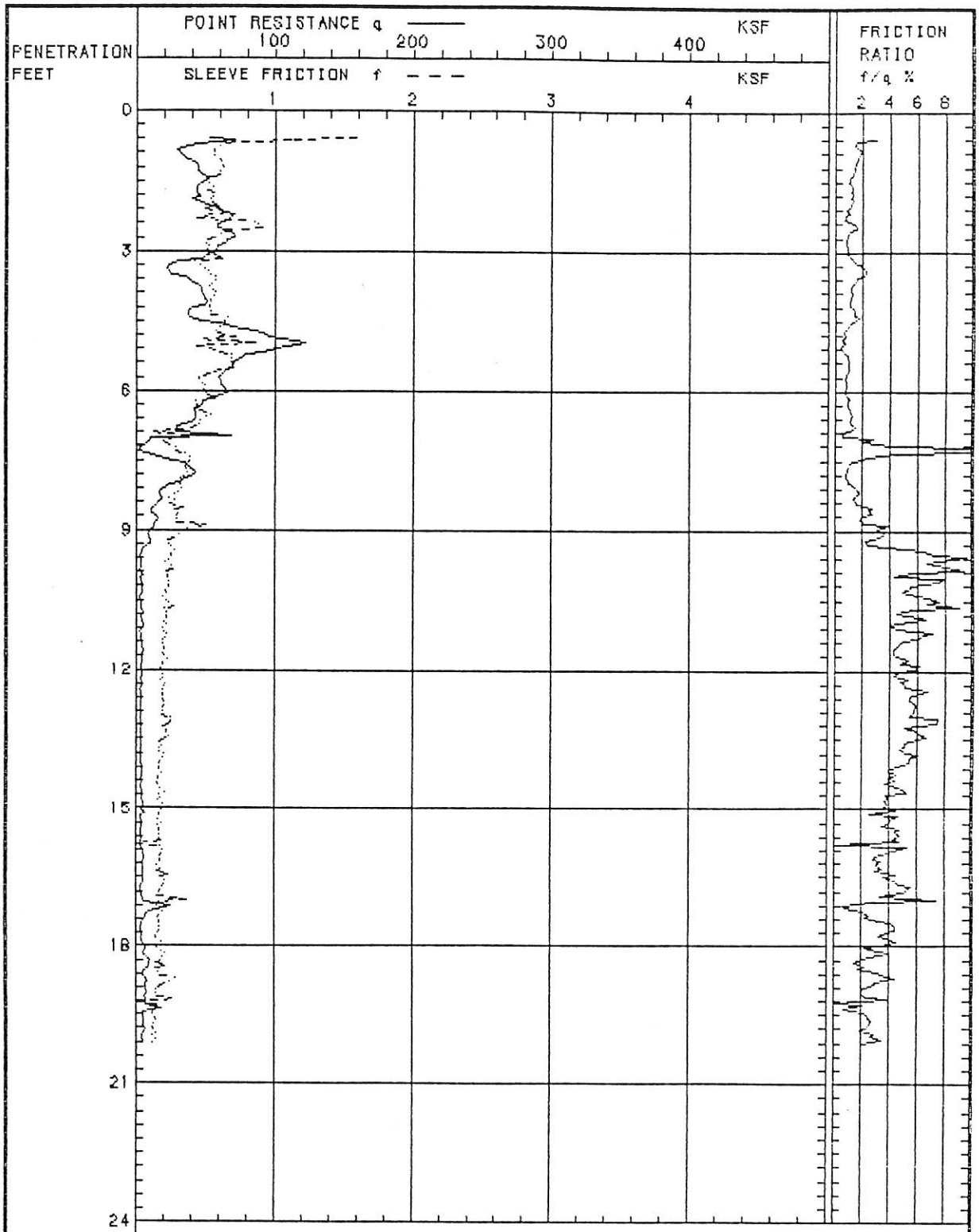
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 44N
CONE NO. : 001
DATE : 05/08/87

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	27.05	.35	1.29	SANDY SILT TO CLAYEY SILT	ML-MH	.03	5	2.002	13.5	68	38	.50+
.80	58.05	.21	.36	SILTY SAND TO SANDY SILT	SM-ML	.04	9			93	41	.50+
1.00	69.86	.31	.44	SILTY SAND TO SANDY SILT	SM-ML	.05	11			100+	42	.50+
1.20	66.65	.28	.42	SILTY SAND TO SANDY SILT	SM-ML	.07	10			96	42	.50+
1.40	70.90	.27	.38	SILTY SAND TO SANDY SILT	SM-ML	.08	11			98	42	.50+
1.60	67.89	.57	.84	SILTY SAND TO SANDY SILT	SM-ML	.09	10			94	41	.50+
1.80	61.06	.29	.48	SILTY SAND TO SANDY SILT	SM-ML	.10	9			87	40	.50+
2.00	61.00	.31	.50	SILTY SAND TO SANDY SILT	SM-ML	.11	9			85	40	.50+
2.20	62.23	.05	.09	SILTY SAND TO SANDY SILT	SM-ML	.12	9			85	40	.50+
2.40	58.05	.27	.47	SILTY SAND TO SANDY SILT	SM-ML	.13	9			81	39	.50+
2.60	57.81	.29	.50	SILTY SAND TO SANDY SILT	SM-ML	.14	9			80	39	.50+
2.80	39.37	.23	.59	SANDY SILT TO CLAYEY SILT	ML-MH	.14	7	2.906	13.5	69	38	.50+
3.00	26.82	.20	.76	SANDY SILT TO CLAYEY SILT	ML-MH	.15	5	1.975	13.5	61	37	.30
3.20	9.60	.21	2.19	SILTY CLAY TO CLAY	CL-CH	.13	3	.701	13.5			
3.40	23.30	.36	1.53	CLAYEY SILT TO SILTY CLAY	MH-CL	.15	5	1.714	13.5			
3.60	78.90	1.15	1.46	SILTY SAND TO SANDY SILT	SM-ML	.20	12			87	40	.50+
3.80	88.83	.39	.44	SAND TO SILTY SAND	SM-SP	.23	10			90	41	.50+
4.00	87.37	.44	.50	SAND TO SILTY SAND	SM-SP	.24	10			88	41	.50+
4.20	85.36	.32	.37	SAND TO SILTY SAND	SM-SP	.25	10			86	41	.50+
4.40	81.92	.29	.36	SAND TO SILTY SAND	SM-SP	.26	9			84	41	.50+
4.60	67.20	.29	.43	SILTY SAND TO SANDY SILT	SM-ML	.25	10			78	39	.50+
4.80	35.68	.20	.56	SANDY SILT TO CLAYEY SILT	ML-MH	.24	6	2.625	13.5	62	37	.27
5.00	28.79	.23	.80	SANDY SILT TO CLAYEY SILT	ML-MH	.25	5	2.114	13.5	57	36	.20
5.20	18.20	.23	1.24	CLAYEY SILT TO SILTY CLAY	MH-CL	.23	4	1.331	13.5			
5.40	17.71	.27	1.53	CLAYEY SILT TO SILTY CLAY	MH-CL	.24	4	1.294	13.5			
5.60	23.11	.37	1.61	CLAYEY SILT TO SILTY CLAY	MH-CL	.25	5	1.693	13.5			
5.80	31.24	.28	.91	SANDY SILT TO CLAYEY SILT	ML-MH	.29	5	2.292	13.5	56	36	.19
6.00	35.42	.32	.91	SANDY SILT TO CLAYEY SILT	ML-MH	.30	6	2.601	13.5	59	36	.21
6.20	38.50	.23	.60	SANDY SILT TO CLAYEY SILT	ML-MH	.31	7	2.829	13.5	61	37	.23
6.40	38.63	.27	.70	SANDY SILT TO CLAYEY SILT	ML-MH	.32	7	2.838	13.5	60	37	.22
6.60	37.51	.27	.71	SANDY SILT TO CLAYEY SILT	ML-MH	.33	7	2.754	13.5	59	36	.21
6.80	27.55	.26	.94	SANDY SILT TO CLAYEY SILT	ML-MH	.34	5	2.016	13.5	50	35	.16
7.00	15.01	.34	2.24	SILTY CLAY TO CLAY	CL-CH	.28	4	1.091	13.5			
7.20	18.94	.29	1.51	CLAYEY SILT TO SILTY CLAY	MH-CL	.32	4	1.379	13.5			
7.40	18.47	.27	1.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	4	1.343	13.5			
7.60	7.07	.26	3.65	CLAY	CH	.30	3	.501	13.5			
7.80	8.85	.27	3.05	CLAY	CH	.31	4	.632	13.5			
8.00	6.51	.28	4.24	CLAY	CH	.32	3	.459	13.5			
8.20	5.16	.27	5.27	CLAY	CH	.33	2	.358	13.5			
8.40	5.17	.25	4.80	CLAY	CH	.34	2	.358	13.5			
8.60	6.15	.27	4.42	CLAY	CH	.34	2	.430	13.5			
8.80	5.17	.22	4.34	CLAY	CH	.35	2	.357	13.5			
9.00	6.15	.27	4.33	CLAY	CH	.36	2	.429	13.5			
9.20	4.92	.30	6.01	ORGANIC MATERIAL	OL-OH	.28	2	.344	13.5			
9.40	6.40	.26	4.07	CLAY	CH	.38	3	.446	13.5			

9.60	4.92	.26	5.29	CLAY	CH	.38	2	.336	13.5			
9.80	5.65	.26	4.61	CLAY	CH	.39	2	.390	13.5			
10.00	4.67	.26	5.57	ORGANIC MATERIAL	OL-OH	.30	2	.324	13.5			
10.20	5.17	.24	4.56	CLAY	CH	.41	2	.353	13.5			
10.40	4.68	.26	5.57	ORGANIC MATERIAL	OL-OH	.31	2	.323	13.5			
10.60	4.92	.26	5.29	CLAY	CH	.42	2	.333	13.5			
10.80	5.16	.29	5.54	CLAY	CH	.43	2	.350	13.5			
11.00	4.67	.25	5.32	CLAY	CH	.44	2	.313	13.5			
11.20	5.65	.29	5.04	CLAY	CH	.45	2	.386	13.5			
11.40	5.78	.26	4.50	CLAY	CH	.46	2	.394	13.5			
11.60	4.92	.26	5.30	CLAY	CH	.46	2	.330	13.5			
11.80	4.43	.26	5.90	ORGANIC MATERIAL	OL-OH	.35	2	.302	13.5			
12.00	4.43	.26	5.89	ORGANIC MATERIAL	OL-OH	.36	2	.301	13.5			
12.20	4.43	.26	5.91	ORGANIC MATERIAL	OL-OH	.37	2	.301	13.5			
12.40	4.18	.25	5.96	ORGANIC MATERIAL	OL-OH	.37	2	.282	13.5			
12.60	4.43	.26	5.87	ORGANIC MATERIAL	OL-OH	.38	2	.300	13.5			
12.80	4.80	.25	5.18	CLAY	CH	.51	2	.318	13.5			
13.00	4.92	.26	5.29	CLAY	CH	.52	2	.326	13.5			
13.20	4.92	.25	5.05	CLAY	CH	.53	2	.325	13.5			
13.40	4.43	.25	5.62	ORGANIC MATERIAL	OL-OH	.40	2	.298	13.5			
13.60	4.92	.24	4.81	CLAY	CH	.54	2	.324	13.5			
13.80	5.15	.28	5.52	CLAY	CH	.55	2	.341	13.5			
14.00	4.43	.25	5.63	ORGANIC MATERIAL	OL-OH	.42	2	.297	13.5			
14.20	4.18	.25	5.95	ORGANIC MATERIAL	OL-OH	.43	2	.278	13.5			
14.40	4.91	.25	5.09	CLAY	CH	.58	2	.321	13.5			
14.60	4.43	.24	5.34	ORGANIC MATERIAL	OL-OH	.44	2	.296	13.5			
14.80	4.68	.24	5.06	CLAY	CH	.59	2	.303	13.5			
15.00	4.67	.22	4.80	CLAY	CH	.60	2	.301	13.5			
15.20	4.92	.24	4.80	CLAY	CH	.61	2	.319	13.5			
15.40	6.66	.25	3.74	CLAY	CH	.62	3	.448	13.5			
15.60	5.41	.26	4.82	CLAY	CH	.62	2	.355	13.5			
15.80	4.67	.20	4.30	CLAY	CH	.63	2	.299	13.5			
16.00	5.41	.24	4.36	CLAY	CH	.64	2	.353	13.5			
16.20	5.17	.25	4.82	CLAY	CH	.65	2	.335	13.5			
16.40	5.39	.24	4.40	CLAY	CH	.66	2	.330	13.5			
16.60	4.68	.26	5.54	ORGANIC MATERIAL	OL-OH	.50	2	.310	13.5			
16.80	5.21	.24	4.56	CLAY	CH	.67	2	.336	13.5			
17.00	3.68	.26	7.07	ORGANIC MATERIAL	OL-OH	.51	1	.235	13.5			
17.20	4.92	4.96	100.86	ORGANIC MATERIAL	OL-OH	.52	2	.326	13.5			
17.40	168.62	3.53	2.10	SILTY SAND TO SANDY SILT	SM-ML	.96	26			83	40	.50+
17.60	148.43	2.27	1.53	SILTY SAND TO SANDY SILT	SM-ML	.97	23			79	39	.50+
17.80	132.39	5.32	4.02	CLAYEY SILT TO SILTY CLAY	MH-CL	.80	31	9.747	13.5			
18.00	175.68	2.77	1.58	SILTY SAND TO SANDY SILT	SM-ML	.99	28			83	40	.50+
18.20	113.08	5.22	4.61	SILTY CLAY TO CLAY	CL-CH	.73	36	8.322	13.5			
18.40	142.28	5.87	4.12	CLAYEY SILT TO SILTY CLAY	MH-CL	.83	34	10.478	13.5			
18.60	149.08	5.65	3.79	CLAYEY SILT TO SILTY CLAY	MH-CL	.84	35	10.981	13.5			
18.80	168.78	4.43	2.63	SANDY SILT TO CLAYEY SILT	ML-MH	.94	32	12.432	13.5	83	40	.50+
19.00	173.54	3.77	2.17	SILTY SAND TO SANDY SILT	SM-ML	1.04	27			82	40	.50+
19.20	138.33	4.47	3.23	SANDY SILT TO CLAYEY SILT	ML-MH	.96	26	10.176	13.5	76	39	.50+
19.40	103.83	6.39	6.16	CLAY	CH	.78	49	7.633	13.5			
19.60	184.32	4.53	2.46	SILTY SAND TO SANDY SILT	SM-ML	1.09	29			83	40	.50+
19.80	99.86	4.44	4.45	SILTY CLAY TO CLAY	CL-CH	.79	31	7.338	13.5			



RESULT OF CONE PENETRATION TEST

44M

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

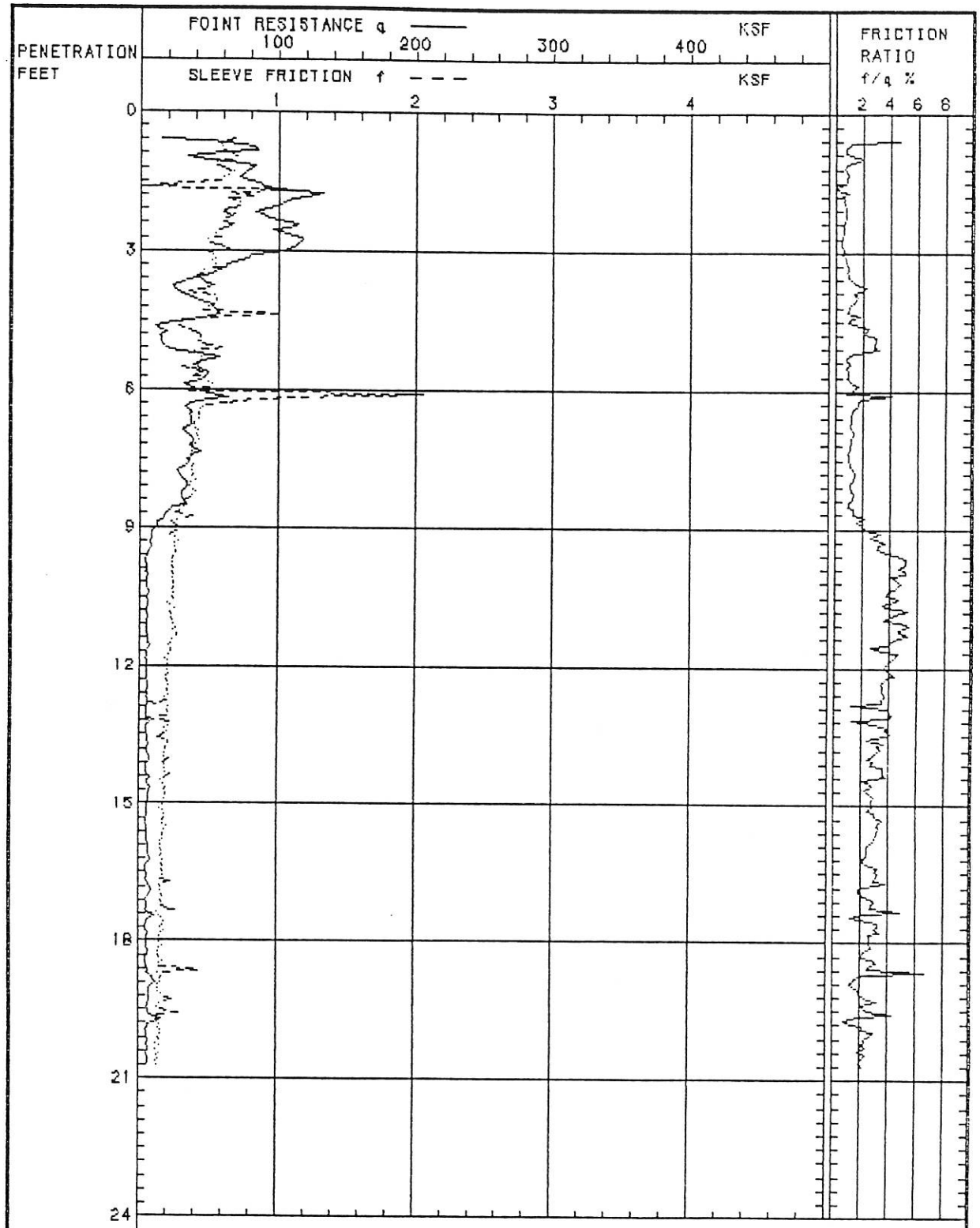
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 44M
CONE NO. : 5006
DATE : 05/08/87

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	61.80	1.20	1.94	SANDY SILT TO CLAYEY SILT	ML-MH	.03	11	4.575	13.5	100+	42	.50+
.80	33.23	.58	1.75	SANDY SILT TO CLAYEY SILT	ML-MH	.04	6	2.459	13.5	72	38	.50+
1.00	35.38	.56	1.57	SANDY SILT TO CLAYEY SILT	ML-MH	.05	6	2.617	13.5	72	38	.50+
1.20	44.35	.61	1.39	SANDY SILT TO CLAYEY SILT	ML-MH	.06	8	3.280	13.5	78	39	.50+
1.40	49.60	.55	1.11	SANDY SILT TO CLAYEY SILT	ML-MH	.07	9	3.669	13.5	81	39	.50+
1.60	44.77	.52	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.08	8	3.310	13.5	76	39	.50+
1.80	44.94	.55	1.23	SANDY SILT TO CLAYEY SILT	ML-MH	.09	8	3.322	13.5	76	39	.50+
2.00	50.76	.59	1.16	SANDY SILT TO CLAYEY SILT	ML-MH	.10	9	3.753	13.5	79	39	.50+
2.20	66.93	.54	.81	SILTY SAND TO SANDY SILT	SM-ML	.12	10			88	40	.50+
2.40	60.61	.95	1.57	SANDY SILT TO CLAYEY SILT	ML-MH	.12	11	4.481	13.5	84	40	.50+
2.60	66.93	.68	1.02	SILTY SAND TO SANDY SILT	SM-ML	.14	10			86	40	.50+
2.80	64.79	.51	.79	SILTY SAND TO SANDY SILT	SM-ML	.15	10			83	40	.50+
3.00	56.54	.52	.91	SILTY SAND TO SANDY SILT	SM-ML	.17	9			78	39	.50+
3.20	39.36	.54	1.38	SANDY SILT TO CLAYEY SILT	ML-MH	.16	7	2.904	13.5	68	38	.50+
3.40	22.53	.41	1.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.15	5	1.657	13.5			
3.60	37.05	.57	1.53	SANDY SILT TO CLAYEY SILT	ML-MH	.18	7	2.731	13.5	65	37	.50+
3.80	46.44	.54	1.15	SANDY SILT TO CLAYEY SILT	ML-MH	.19	8	3.426	13.5	70	38	.50+
4.00	48.94	.55	1.12	SANDY SILT TO CLAYEY SILT	ML-MH	.20	9	3.611	13.5	71	38	.50+
4.20	45.39	.53	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.21	8	3.346	13.5	69	38	.50+
4.40	38.06	.63	1.65	SANDY SILT TO CLAYEY SILT	ML-MH	.22	7	2.803	13.5	64	37	.37
4.60	64.40	.87	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.23	12	4.753	13.5	78	39	.50+
4.80	93.52	.69	.73	SILTY SAND TO SANDY SILT	SM-ML	.26	14			89	41	.50+
5.00	115.51	.65	.56	SAND TO SILTY SAND	SM-SP	.30	13			95	42	.50+
5.20	85.75	.63	.74	SILTY SAND TO SANDY SILT	SM-ML	.29	13			84	40	.50+
5.40	70.05	.69	.99	SILTY SAND TO SANDY SILT	SM-ML	.30	11			77	39	.50+
5.60	63.84	.44	.69	SILTY SAND TO SANDY SILT	SM-ML	.31	10			73	38	.50+
5.80	60.60	.48	.79	SILTY SAND TO SANDY SILT	SM-ML	.32	9			71	38	.50+
6.00	65.50	.41	.63	SILTY SAND TO SANDY SILT	SM-ML	.33	10			73	38	.50+
6.20	51.07	.45	.87	SILTY SAND TO SANDY SILT	SM-ML	.34	8			65	37	.36
6.40	41.96	.45	1.08	SANDY SILT TO CLAYEY SILT	ML-MH	.32	8	3.084	13.5	62	37	.25
6.60	42.44	.23	.54	SILTY SAND TO SANDY SILT	SM-ML	.36	6			61	37	.23
6.80	29.17	.36	1.24	SANDY SILT TO CLAYEY SILT	ML-MH	.34	5	2.135	13.5	51	35	.17
7.00	39.73	.31	.77	SANDY SILT TO CLAYEY SILT	ML-MH	.35	7	2.917	13.5	60	36	.21
7.20	4.14	.26	6.29	ORGANIC MATERIAL	OL-OH	.22	1	.291	13.5			
7.40	11.79	.37	3.14	CLAY	CH	.30	5	.852	13.5			
7.60	36.21	.37	1.03	SANDY SILT TO CLAYEY SILT	ML-MH	.38	6	2.654	13.5	55	36	.19
7.80	41.37	.35	.85	SANDY SILT TO CLAYEY SILT	ML-MH	.39	7	3.036	13.5	59	36	.21
8.00	28.25	.35	1.25	SANDY SILT TO CLAYEY SILT	ML-MH	.40	5	2.063	13.5	47	35	.16
8.20	16.50	.29	1.74	CLAYEY SILT TO SILTY CLAY	MH-CL	.37	3	1.195	13.5			
8.40	16.99	.26	1.53	CLAYEY SILT TO SILTY CLAY	MH-CL	.38	4	1.231	13.5			
8.60	11.12	.29	2.61	CLAY	CH	.34	5	.798	13.5			
8.80	14.60	.28	1.91	SILTY CLAY TO CLAY	CL-CH	.35	4	1.055	13.5			
9.00	11.01	.28	2.59	SILTY CLAY TO CLAY	CL-CH	.36	3	.789	13.5			
9.20	9.89	.24	2.39	CLAY	CH	.37	4	.705	13.5			
9.40	5.51	.25	4.47	CLAY	CH	.38	2	.331	13.5			

9.60	2.87	.24	8.54	ORGANIC MATERIAL	OL-OH	.29	1	.191	13.5
9.80	2.99	.26	8.61	ORGANIC MATERIAL	OL-OH	.29	1	.200	13.5
10.00	4.08	.23	5.54	ORGANIC MATERIAL	OL-OH	.30	1	.280	13.5
10.20	4.30	.24	5.65	ORGANIC MATERIAL	OL-OH	.31	2	.296	13.5
10.40	3.48	.21	5.90	ORGANIC MATERIAL	OL-OH	.31	1	.234	13.5
10.60	3.35	.26	7.71	ORGANIC MATERIAL	OL-OH	.32	1	.225	13.5
10.80	4.19	.20	4.70	CLAY	CH	.43	2	.279	13.5
11.00	4.95	.22	4.41	CLAY	CH	.44	2	.334	13.5
11.20	3.10	.21	6.74	ORGANIC MATERIAL	OL-OH	.34	1	.205	13.5
11.40	3.94	.19	4.81	CLAY	CH	.46	1	.258	13.5
11.60	4.66	.20	4.20	CLAY	CH	.46	2	.311	13.5
11.80	4.19	.21	5.04	CLAY	CH	.47	2	.275	13.5
12.00	3.58	.19	5.19	ORGANIC MATERIAL	OL-OH	.36	1	.238	13.5
12.20	3.70	.19	5.02	ORGANIC MATERIAL	OL-OH	.37	1	.247	13.5
12.40	3.48	.20	5.72	ORGANIC MATERIAL	OL-OH	.37	1	.230	13.5
12.60	3.59	.19	5.38	ORGANIC MATERIAL	OL-OH	.38	1	.238	13.5
12.80	3.35	.20	5.85	ORGANIC MATERIAL	OL-OH	.38	1	.219	13.5
13.00	3.35	.22	6.43	ORGANIC MATERIAL	OL-OH	.39	1	.219	13.5
13.20	3.58	.22	6.18	ORGANIC MATERIAL	OL-OH	.40	1	.236	13.5
13.40	3.59	.23	6.32	ORGANIC MATERIAL	OL-OH	.40	1	.236	13.5
13.60	3.46	.18	5.08	ORGANIC MATERIAL	OL-OH	.41	1	.226	13.5
13.80	3.35	.19	5.59	ORGANIC MATERIAL	OL-OH	.41	1	.217	13.5
14.00	3.35	.17	5.21	ORGANIC MATERIAL	OL-OH	.42	1	.217	13.5
14.20	4.19	.18	4.18	CLAY	CH	.57	2	.268	13.5
14.40	3.82	.15	4.01	CLAY	CH	.58	1	.240	13.5
14.60	3.82	.20	5.11	ORGANIC MATERIAL	OL-OH	.44	1	.251	13.5
14.80	4.43	.17	3.78	CLAY	CH	.59	2	.284	13.5
15.00	4.31	.17	3.98	CLAY	CH	.60	2	.275	13.5
15.20	3.70	.16	4.38	CLAY	CH	.61	1	.229	13.5
15.40	4.07	.16	4.03	CLAY	CH	.62	1	.256	13.5
15.60	3.82	.17	4.45	CLAY	CH	.62	1	.237	13.5
15.80	3.35	.09	2.58	CLAY	CH	.63	1	.201	13.5
16.00	5.61	.18	3.23	CLAY	CH	.64	2	.368	13.5
16.20	5.14	.17	3.23	CLAY	CH	.65	2	.333	13.5
16.40	5.26	.19	3.68	CLAY	CH	.66	2	.341	13.5
16.60	4.55	.27	5.98	ORGANIC MATERIAL	OL-OH	.50	2	.300	13.5
16.80	3.38	.18	5.25	ORGANIC MATERIAL	OL-OH	.50	1	.213	13.5
17.00	5.49	.27	4.94	CLAY	CH	.68	2	.356	13.5
17.20	15.57	.18	1.18	CLAYEY SILT TO SILTY CLAY	MH-CL	.77	3	1.096	13.5
17.40	6.12	.16	2.67	CLAY	CH	.70	2	.402	13.5
17.60	3.83	.16	4.19	CLAY	CH	.70	1	.231	13.5
17.80	4.19	.15	3.47	CLAY	CH	.71	2	.258	13.5
18.00	5.83	.16	2.73	CLAY	CH	.72	2	.378	13.5
18.20	6.36	.20	3.16	CLAY	CH	.73	3	.418	13.5
18.40	9.62	.20	2.10	SILTY CLAY TO CLAY	CL-CH	.74	3	.658	13.5
18.60	5.03	.15	3.08	CLAY	CH	.74	2	.317	13.5
18.80	7.55	.20	2.60	CLAY	CH	.75	3	.503	13.5
19.00	7.17	.12	1.74	SENSITIVE FINE GRAINED	OL-CH	.57	1	.489	13.5
19.20	6.75	.05	.78	SENSITIVE FINE GRAINED	OL-CH	.58	1	.457	13.5
19.40	12.38	.13	1.07	SENSITIVE FINE GRAINED	OL-CH	.59	2	.874	13.5
19.60	5.26	.14	2.62	CLAY	CH	.78	2	.332	13.5
19.80	5.72	.12	2.13	SENSITIVE FINE GRAINED	OL-CH	.59	1	.379	13.5
20.00	4.31	.13	3.04	CLAY	CH	.80	2	.260	13.5



RESULT OF CONE PENETRATION TEST

44S

JOB NUMBER: 0187-0206
CONE NUMBER: 5006
LOCATION: ISLE DENIERES

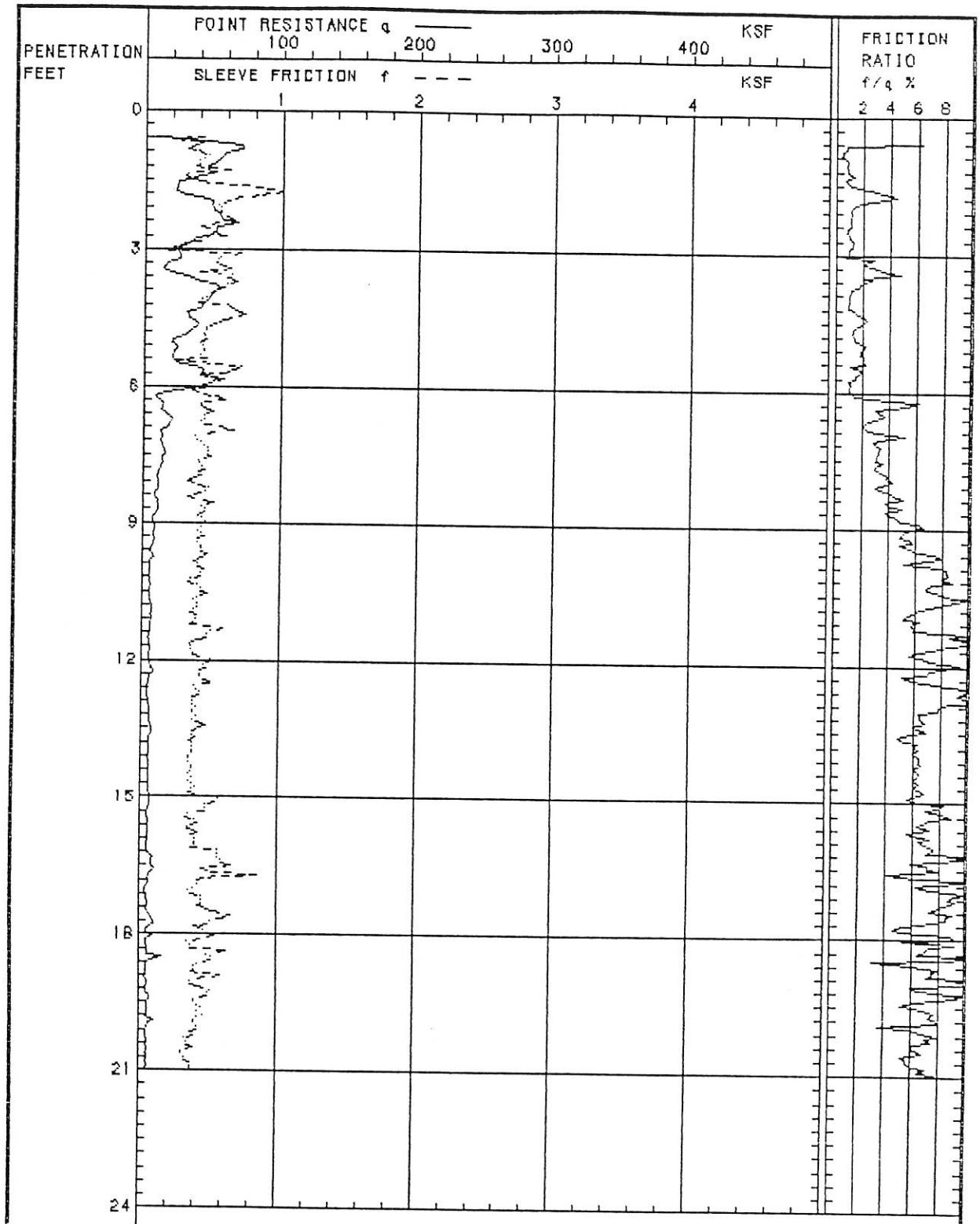
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 44S
CONE NO. : 5006
DATE : 05/08/87

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	32.03	.66	2.06	CLAYEY SILT TO SILTY CLAY	MH-CL	.03	7	2.371	13.5			
.80	83.79	.49	.58	SILTY SAND TO SANDY SILT	SM-ML	.04	13			100+	42	.50+
1.00	42.13	.66	1.57	SANDY SILT TO CLAYEY SILT	ML-MH	.05	8	3.117	13.5	77	39	.50+
1.20	82.72	.58	.70	SILTY SAND TO SANDY SILT	SM-ML	.07	13			100+	42	.50+
1.40	73.10	.70	.96	SILTY SAND TO SANDY SILT	SM-ML	.08	11			100+	42	.50+
1.60	88.09	.18	.21	SAND TO SILTY SAND	SM-SP	.10	10			100+	42	.50+
1.80	126.84	.74	.58	SAND TO SILTY SAND	SM-SP	.11	15			100+	42	.50+
2.00	101.85	.54	.53	SAND TO SILTY SAND	SM-SP	.12	12			100+	42	.50+
2.20	85.76	.68	.80	SILTY SAND TO SANDY SILT	SM-ML	.12	13			100+	42	.50+
2.40	110.68	.48	.43	SAND TO SILTY SAND	SM-SP	.14	13			100+	42	.50+
2.60	101.35	.63	.62	SAND TO SILTY SAND	SM-SP	.16	12			100+	42	.50+
2.80	116.43	.49	.42	SAND TO SILTY SAND	SM-SP	.17	13			100+	42	.50+
3.00	103.17	.57	.55	SAND TO SILTY SAND	SM-SP	.18	12			100+	42	.50+
3.20	75.91	.53	.70	SILTY SAND TO SANDY SILT	SM-ML	.18	12			88	40	.50+
3.40	59.18	.55	.92	SILTY SAND TO SANDY SILT	SM-ML	.19	9			78	39	.50+
3.60	40.91	.38	.92	SANDY SILT TO CLAYEY SILT	ML-MH	.18	7	3.017	13.5	68	38	.50+
3.80	24.50	.44	1.81	CLAYEY SILT TO SILTY CLAY	MH-CL	.17	5	1.802	13.5			
4.00	36.80	.54	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.20	7	2.711	13.5	64	37	.41
4.20	52.66	.53	1.01	SANDY SILT TO CLAYEY SILT	ML-MH	.21	10	3.885	13.5	73	38	.50+
4.40	55.36	.69	1.24	SANDY SILT TO CLAYEY SILT	ML-MH	.22	10	4.084	13.5	73	38	.50+
4.60	17.55	.29	1.64	CLAYEY SILT TO SILTY CLAY	MH-CL	.21	4	1.285	13.5			
4.80	17.05	.40	2.36	SILTY CLAY TO CLAY	CL-CH	.19	5	1.249	13.5			
5.00	15.77	.46	2.94	SILTY CLAY TO CLAY	CL-CH	.20	5	1.153	13.5			
5.20	34.62	.34	.98	SANDY SILT TO CLAYEY SILT	ML-MH	.26	6	2.545	13.5	61	37	.24
5.40	42.87	.42	.97	SANDY SILT TO CLAYEY SILT	ML-MH	.27	8	3.155	13.5	64	37	.35
5.60	45.99	.56	1.21	SANDY SILT TO CLAYEY SILT	ML-MH	.28	8	3.386	13.5	65	37	.40
5.80	43.05	.42	.97	SANDY SILT TO CLAYEY SILT	ML-MH	.29	8	3.168	13.5	64	37	.31
6.00	41.21	.39	.96	SANDY SILT TO CLAYEY SILT	ML-MH	.30	7	3.031	13.5	62	37	.27
6.20	56.96	.42	.73	SILTY SAND TO SANDY SILT	SM-ML	.34	9			68	38	.50+
6.40	33.71	.39	1.15	SANDY SILT TO CLAYEY SILT	ML-MH	.32	6	2.473	13.5	56	36	.19
6.60	36.34	.42	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.33	6	2.667	13.5	58	36	.20
6.80	35.22	.37	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	.34	6	2.584	13.5	57	36	.19
7.00	35.59	.41	1.16	SANDY SILT TO CLAYEY SILT	ML-MH	.35	6	2.610	13.5	56	36	.19
7.20	36.70	.52	1.41	SANDY SILT TO CLAYEY SILT	ML-MH	.36	7	2.692	13.5	57	36	.19
7.40	40.68	.38	.94	SANDY SILT TO CLAYEY SILT	ML-MH	.37	7	2.986	13.5	60	36	.21
7.60	34.79	.33	.94	SANDY SILT TO CLAYEY SILT	ML-MH	.38	6	2.549	13.5	54	36	.18
7.80	27.61	.39	1.41	SANDY SILT TO CLAYEY SILT	ML-MH	.39	5	2.016	13.5	47	35	.15
8.00	33.22	.39	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.40	6	2.431	13.5	51	35	.17
8.20	31.21	.36	1.15	SANDY SILT TO CLAYEY SILT	ML-MH	.41	5	2.282	13.5	49	35	.16
8.40	31.07	.34	1.10	SANDY SILT TO CLAYEY SILT	ML-MH	.42	5	2.270	13.5	48	35	.16
8.60	22.73	.30	1.34	CLAYEY SILT TO SILTY CLAY	MH-CL	.39	5	1.655	13.5			
8.80	17.34	.27	1.53	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	4	1.255	13.5			
9.00	12.55	.26	2.11	SILTY CLAY TO CLAY	CL-CH	.36	4	.903	13.5			
9.20	8.31	.19	2.27	CLAY	CH	.37	3	.588	13.5			
9.40	8.19	.27	3.24	CLAY	CH	.38	3	.578	13.5			

9.60	5.33	.25	4.67	CLAY	CH	.38	2	.366	13.5
9.80	4.78	.23	4.91	CLAY	CH	.39	2	.325	13.5
10.00	5.25	.24	4.55	CLAY	CH	.40	2	.359	13.5
10.20	5.14	.24	4.67	CLAY	CH	.41	2	.350	13.5
10.40	6.21	.24	3.91	CLAY	CH	.42	2	.429	13.5
10.60	5.62	.22	3.95	CLAY	CH	.42	2	.385	13.5
10.80	4.90	.24	4.85	CLAY	CH	.43	2	.331	13.5
11.00	5.51	.23	4.14	CLAY	CH	.44	2	.376	13.5
11.20	5.38	.26	4.80	CLAY	CH	.45	2	.365	13.5
11.40	5.74	.25	4.38	CLAY	CH	.46	2	.391	13.5
11.60	7.13	.21	3.01	CLAY	CH	.46	3	.493	13.5
11.80	4.66	.20	4.28	CLAY	CH	.47	2	.311	13.5
12.00	5.50	.20	3.64	CLAY	CH	.48	2	.372	13.5
12.20	5.02	.20	4.06	CLAY	CH	.49	2	.335	13.5
12.40	5.98	.20	3.41	CLAY	CH	.50	2	.406	13.5
12.60	5.62	.20	3.63	CLAY	CH	.50	2	.379	13.5
12.80	5.85	.14	2.37	CLAY	CH	.51	2	.396	13.5
13.00	5.02	.21	4.09	CLAY	CH	.52	2	.333	13.5
13.20	6.31	.14	2.25	CLAY	CH	.53	3	.428	13.5
13.40	4.90	.19	3.94	CLAY	CH	.54	2	.323	13.5
13.60	5.74	.17	3.02	CLAY	CH	.54	2	.385	13.5
13.80	5.85	.19	3.33	CLAY	CH	.55	2	.393	13.5
14.00	7.65	.20	2.65	CLAY	CH	.56	3	.525	13.5
14.20	5.26	.19	3.56	CLAY	CH	.57	2	.348	13.5
14.40	7.38	.21	2.82	CLAY	CH	.58	3	.504	13.5
14.60	7.39	.19	2.60	CLAY	CH	.58	3	.504	13.5
14.80	6.82	.20	2.87	CLAY	CH	.59	3	.461	13.5
15.00	6.34	.17	2.75	CLAY	CH	.60	3	.425	13.5
15.20	6.09	.18	2.99	CLAY	CH	.61	2	.406	13.5
15.40	5.38	.17	3.25	CLAY	CH	.62	2	.353	13.5
15.60	5.86	.18	3.10	CLAY	CH	.62	2	.388	13.5
15.80	5.98	.17	2.80	CLAY	CH	.63	2	.396	13.5
16.00	6.75	.16	2.41	CLAY	CH	.64	3	.453	13.5
16.20	7.82	.17	2.23	CLAY	CH	.65	3	.531	13.5
16.40	5.50	.17	3.10	CLAY	CH	.66	2	.359	13.5
16.60	5.62	.17	2.99	CLAY	CH	.66	2	.367	13.5
16.80	7.63	.18	2.31	CLAY	CH	.67	3	.515	13.5
17.00	7.13	.17	2.41	CLAY	CH	.68	3	.478	13.5
17.20	6.09	.16	2.70	CLAY	CH	.69	2	.400	13.5
17.40	8.88	.14	1.62	SENSITIVE FINE GRAINED	OL-CH	.52	2	.619	13.5
17.60	5.62	.18	3.24	CLAY	CH	.70	2	.364	13.5
17.80	5.96	.18	2.95	CLAY	CH	.71	2	.389	13.5
18.00	5.74	.15	2.64	CLAY	CH	.72	2	.372	13.5
18.20	6.45	.15	2.26	CLAY	CH	.73	3	.424	13.5
18.40	5.50	.16	2.98	CLAY	CH	.74	2	.353	13.5
18.60	6.33	.29	4.56	CLAY	CH	.74	3	.414	13.5
18.80	10.40	.17	1.66	SENSITIVE FINE GRAINED	OL-CH	.56	2	.729	13.5
19.00	9.12	.14	1.59	SENSITIVE FINE GRAINED	OL-CH	.57	2	.633	13.5
19.20	7.89	.18	2.31	CLAY	CH	.77	3	.527	13.5
19.40	6.59	.15	2.20	CLAY	CH	.78	3	.431	13.5
19.60	7.04	.22	3.09	CLAY	CH	.78	3	.464	13.5
19.80	9.02	.15	1.62	SENSITIVE FINE GRAINED	OL-CH	.59	2	.624	13.5
20.00	5.73	.16	2.84	CLAY	CH	.80	2	.355	13.5
20.20	6.34	.14	2.20	CLAY	CH	.81	3	.410	13.5
20.40	6.71	.14	2.07	CLAY	CH	.82	3	.436	13.5
20.60	6.94	.13	1.94	SENSITIVE FINE GRAINED	OL-CH	.62	1	.468	13.5



RESULT OF CONE PENETRATION TEST

45N

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

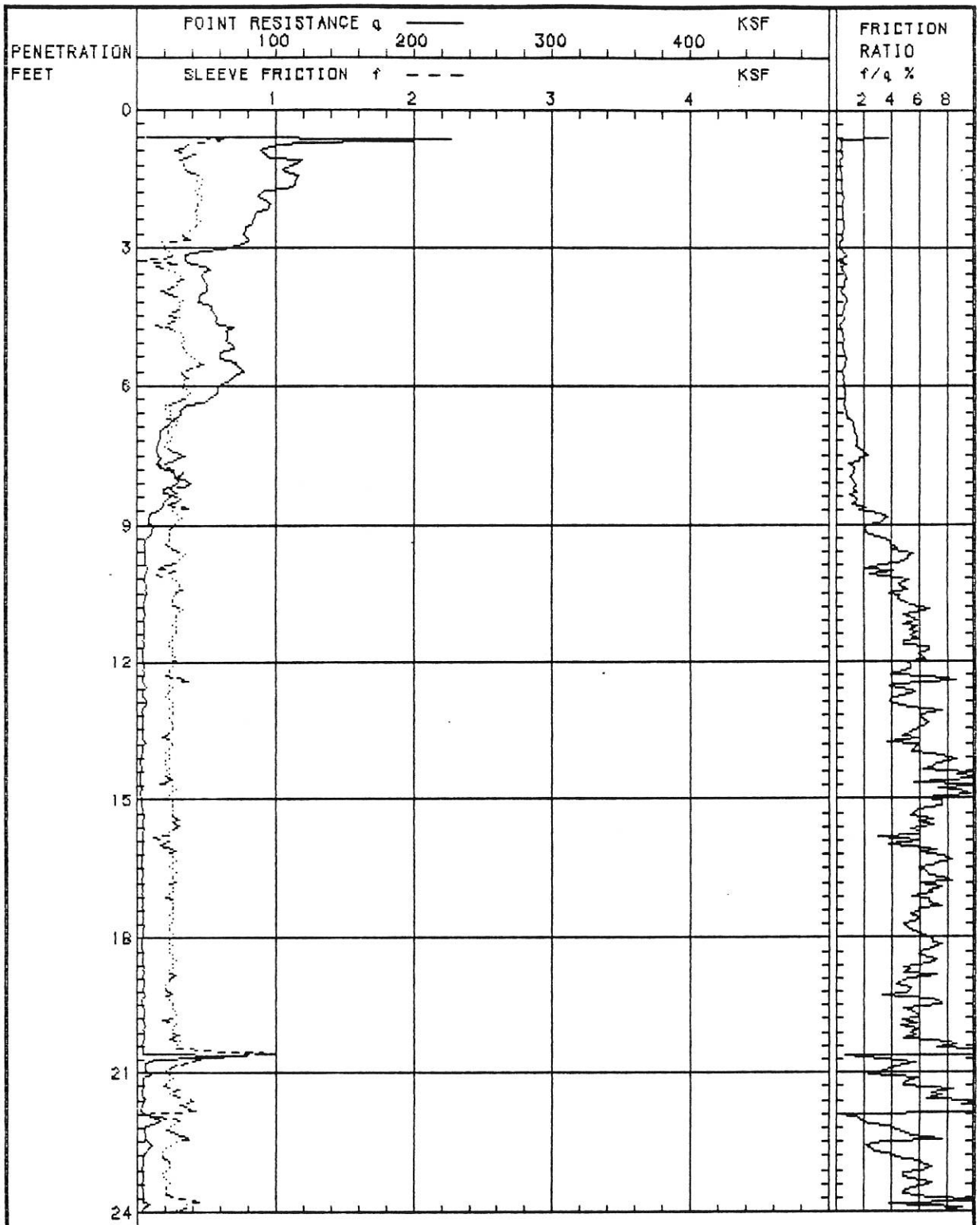
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 45N
CONE NO. : 001
DATE : 05/08/87

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	18.45	.33	1.78	CLAYEY SILT TO SILTY CLAY	MH-CL	.03	4	1.364	13.5			
.80	70.35	.48	.69	SILTY SAND TO SANDY SILT	SM-ML	.04	11			100+	42	.50+
1.00	55.84	.44	.79	SILTY SAND TO SANDY SILT	SM-ML	.05	8			89	40	.50+
1.20	47.35	.37	.79	SILTY SAND TO SANDY SILT	SM-ML	.07	7			79	39	.50+
1.40	44.53	.30	.67	SILTY SAND TO SANDY SILT	SM-ML	.08	7			77	39	.50+
1.60	23.74	.53	2.24	CLAYEY SILT TO SILTY CLAY	MH-CL	.07	5	1.753	13.5			
1.80	25.82	.91	3.53	SILTY CLAY TO CLAY	CL-CH	.07	8	1.907	13.5			
2.00	49.32	.58	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.10	9	3.646	13.5	78	39	.50+
2.20	51.89	.55	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	.11	9	3.836	13.5	79	39	.50+
2.40	62.21	.52	.84	SILTY SAND TO SANDY SILT	SM-ML	.13	9			84	40	.50+
2.60	51.65	.52	1.01	SANDY SILT TO CLAYEY SILT	ML-MH	.13	9	3.817	13.5	77	39	.50+
2.80	35.92	.43	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	.14	6	2.650	13.5	67	37	.50+
3.00	24.60	.30	1.23	SANDY SILT TO CLAYEY SILT	ML-MH	.15	4	1.811	13.5	60	36	.25
3.20	26.07	.74	2.84	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	6	1.921	13.5			
3.40	14.15	.56	3.93	CLAY	CH	.14	6	1.038	13.5			
3.60	30.23	.62	2.05	CLAYEY SILT TO SILTY CLAY	MH-CL	.16	7	2.227	13.5			
3.80	53.12	.48	.90	SILTY SAND TO SANDY SILT	SM-ML	.21	8			73	38	.50+
4.00	48.40	.40	.83	SILTY SAND TO SANDY SILT	SM-ML	.22	7			70	38	.50+
4.20	43.05	.36	.83	SANDY SILT TO CLAYEY SILT	ML-MH	.21	8	3.173	13.5	67	37	.50+
4.40	31.36	.74	2.35	CLAYEY SILT TO SILTY CLAY	MH-CL	.20	7	2.308	13.5			
4.60	37.62	.58	1.54	SANDY SILT TO CLAYEY SILT	ML-MH	.23	7	2.770	13.5	63	37	.33
4.80	33.34	.44	1.33	SANDY SILT TO CLAYEY SILT	ML-MH	.24	6	2.452	13.5	61	37	.24
5.00	20.42	.44	2.14	CLAYEY SILT TO SILTY CLAY	MH-CL	.22	4	1.496	13.5			
5.20	23.13	.43	1.88	CLAYEY SILT TO SILTY CLAY	MH-CL	.23	5	1.696	13.5			
5.40	21.39	.35	1.61	CLAYEY SILT TO SILTY CLAY	MH-CL	.24	5	1.567	13.5			
5.60	40.56	.62	1.52	SANDY SILT TO CLAYEY SILT	ML-MH	.28	7	2.984	13.5	63	37	.29
5.80	49.85	.60	1.21	SANDY SILT TO CLAYEY SILT	ML-MH	.29	9	3.671	13.5	67	37	.48
6.00	40.14	.45	1.13	SANDY SILT TO CLAYEY SILT	ML-MH	.30	7	2.951	13.5	62	37	.25
6.20	9.60	.47	4.91	CLAY	CH	.25	4	.693	13.5			
6.40	13.78	.42	3.06	CLAY	CH	.26	6	1.002	13.5			
6.60	16.34	.49	3.02	SILTY CLAY TO CLAY	CL-CH	.26	5	1.191	13.5			
6.80	19.44	.43	2.22	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	4	1.417	13.5			
7.00	12.91	.59	4.58	CLAY	CH	.28	6	.936	13.5			
7.20	12.55	.31	2.44	SILTY CLAY TO CLAY	CL-CH	.29	4	.908	13.5			
7.40	14.88	.46	3.11	CLAY	CH	.30	7	1.080	13.5			
7.60	13.53	.45	3.30	CLAY	CH	.30	6	.980	13.5			
7.80	11.93	.42	3.50	CLAY	CH	.31	5	.861	13.5			
8.00	9.84	.41	4.19	CLAY	CH	.32	4	.705	13.5			
8.20	11.19	.44	3.90	CLAY	CH	.33	5	.805	13.5			
8.40	8.61	.38	4.37	CLAY	CH	.34	4	.613	13.5			
8.60	10.82	.47	4.37	CLAY	CH	.34	5	.776	13.5			
8.80	9.11	.43	4.69	CLAY	CH	.35	4	.649	13.5			
9.00	7.25	.44	6.12	CLAY	CH	.36	3	.519	13.5			
9.20	8.12	.41	5.10	CLAY	CH	.37	3	.574	13.5			
9.40	7.88	.40	5.12	CLAY	CH	.38	3	.556	13.5			

9.60	5.66	.43	7.54	ORGANIC MATERIAL	OL-OH	.29	2	.398	13.5
9.80	6.67	.38	5.72	CLAY	CH	.39	3	.465	13.5
10.00	5.16	.43	8.30	ORGANIC MATERIAL	OL-OH	.30	2	.360	13.5
10.20	4.92	.39	7.99	ORGANIC MATERIAL	OL-OH	.31	2	.342	13.5
10.40	5.66	.42	7.36	ORGANIC MATERIAL	OL-OH	.31	2	.396	13.5
10.60	4.92	.44	8.96	ORGANIC MATERIAL	OL-OH	.32	2	.341	13.5
10.80	6.64	.40	6.07	CLAY	CH	.43	3	.460	13.5
11.00	6.65	.38	5.70	CLAY	CH	.44	3	.460	13.5
11.20	6.27	.43	6.91	ORGANIC MATERIAL	OL-OH	.34	3	.440	13.5
11.40	5.42	.49	9.03	ORGANIC MATERIAL	OL-OH	.34	2	.376	13.5
11.60	4.92	.36	7.25	ORGANIC MATERIAL	OL-OH	.35	2	.339	13.5
11.80	5.91	.37	6.23	ORGANIC MATERIAL	OL-OH	.35	2	.412	13.5
12.00	5.65	.51	9.05	ORGANIC MATERIAL	OL-OH	.36	2	.392	13.5
12.20	7.61	.45	5.93	CLAY	CH	.49	3	.528	13.5
12.40	5.91	.44	7.46	ORGANIC MATERIAL	OL-OH	.37	2	.410	13.5
12.60	4.18	.39	9.41	ORGANIC MATERIAL	OL-OH	.38	2	.281	13.5
12.80	4.18	.41	9.70	ORGANIC MATERIAL	OL-OH	.38	2	.281	13.5
13.00	5.64	.39	6.94	ORGANIC MATERIAL	OL-OH	.39	2	.389	13.5
13.20	5.90	.39	6.63	ORGANIC MATERIAL	OL-OH	.40	2	.408	13.5
13.40	6.64	.44	6.60	ORGANIC MATERIAL	OL-OH	.40	3	.462	13.5
13.60	7.51	.39	5.13	CLAY	CH	.54	3	.516	13.5
13.80	5.90	.37	6.22	ORGANIC MATERIAL	OL-OH	.41	2	.407	13.5
14.00	5.90	.36	6.05	CLAY	CH	.56	2	.396	13.5
14.20	5.65	.36	6.30	ORGANIC MATERIAL	OL-OH	.43	2	.387	13.5
14.40	5.90	.36	6.06	CLAY	CH	.58	2	.395	13.5
14.60	5.90	.36	6.03	CLAY	CH	.58	2	.394	13.5
14.80	5.90	.36	6.07	CLAY	CH	.59	2	.393	13.5
15.00	6.76	.52	7.64	ORGANIC MATERIAL	OL-OH	.45	3	.468	13.5
15.20	6.41	.48	7.44	ORGANIC MATERIAL	OL-OH	.46	3	.441	13.5
15.40	4.92	.34	6.99	ORGANIC MATERIAL	OL-OH	.46	2	.330	13.5
15.60	6.14	.39	6.39	ORGANIC MATERIAL	OL-OH	.47	2	.420	13.5
15.80	5.90	.40	6.86	ORGANIC MATERIAL	OL-OH	.47	2	.402	13.5
16.00	5.41	.40	7.47	ORGANIC MATERIAL	OL-OH	.48	2	.365	13.5
16.20	5.65	.57	10.08	ORGANIC MATERIAL	OL-OH	.49	2	.383	13.5
16.40	8.36	.59	7.09	CLAY	CH	.66	4	.571	13.5
16.60	9.62	.49	5.06	CLAY	CH	.66	4	.664	13.5
16.80	6.64	.45	6.84	ORGANIC MATERIAL	OL-OH	.50	3	.454	13.5
17.00	3.94	.33	8.46	ORGANIC MATERIAL	OL-OH	.51	1	.254	13.5
17.20	5.16	.45	8.76	ORGANIC MATERIAL	OL-OH	.52	2	.344	13.5
17.40	5.66	.38	6.76	ORGANIC MATERIAL	OL-OH	.52	2	.381	13.5
17.60	8.59	.60	6.96	CLAY	CH	.70	4	.584	13.5
17.80	9.39	.45	4.84	CLAY	CH	.71	4	.642	13.5
18.00	7.81	.52	6.72	CLAY	CH	.72	3	.525	13.5
18.20	5.16	.36	7.01	ORGANIC MATERIAL	OL-OH	.55	2	.342	13.5
18.40	5.90	.57	9.62	ORGANIC MATERIAL	OL-OH	.55	2	.396	13.5
18.60	7.18	.48	6.66	CLAY	CH	.74	3	.477	13.5
18.80	5.41	.39	7.28	ORGANIC MATERIAL	OL-OH	.56	2	.359	13.5
19.00	5.13	.36	6.97	ORGANIC MATERIAL	OL-OH	.57	2	.338	13.5
19.20	5.41	.47	8.76	ORGANIC MATERIAL	OL-OH	.58	2	.358	13.5
19.40	7.87	.45	5.76	CLAY	CH	.78	3	.526	13.5
19.60	5.90	.44	7.45	ORGANIC MATERIAL	OL-OH	.59	2	.394	13.5
19.80	5.66	.45	7.94	ORGANIC MATERIAL	OL-OH	.59	2	.376	13.5
20.00	6.65	.42	6.26	CLAY	CH	.80	3	.433	13.5
20.20	5.41	.39	7.24	ORGANIC MATERIAL	OL-OH	.61	2	.356	13.5
20.40	5.66	.36	6.28	ORGANIC MATERIAL	OL-OH	.61	2	.374	13.5
20.60	5.66	.31	5.44	CLAY	CH	.82	2	.359	13.5
20.80	5.41	.36	6.57	ORGANIC MATERIAL	OL-OH	.62	2	.355	13.5

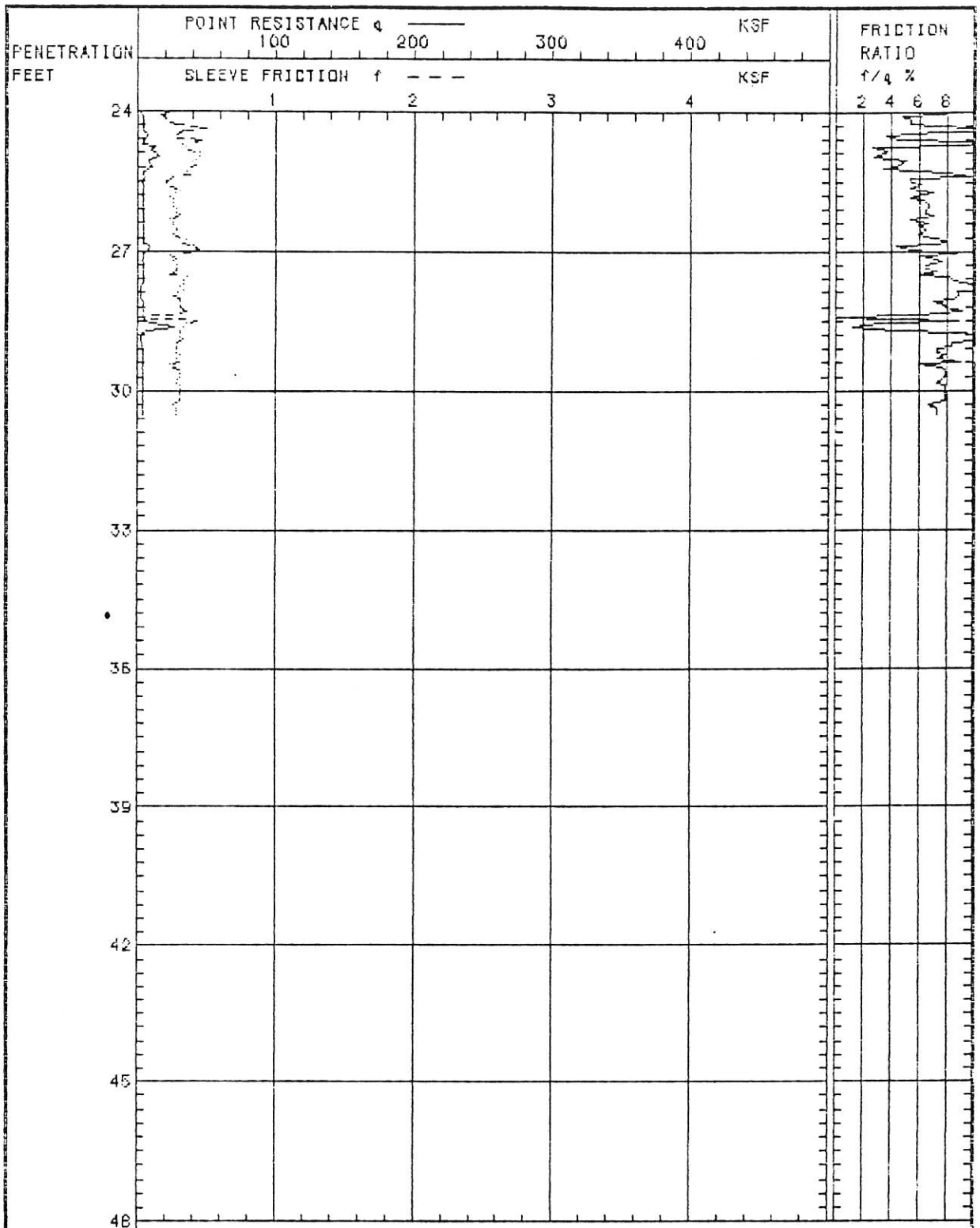


RESULT OF CONE PENETRATION TEST

45M

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



RESULT OF CONE PENETRATION TEST

45M

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

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

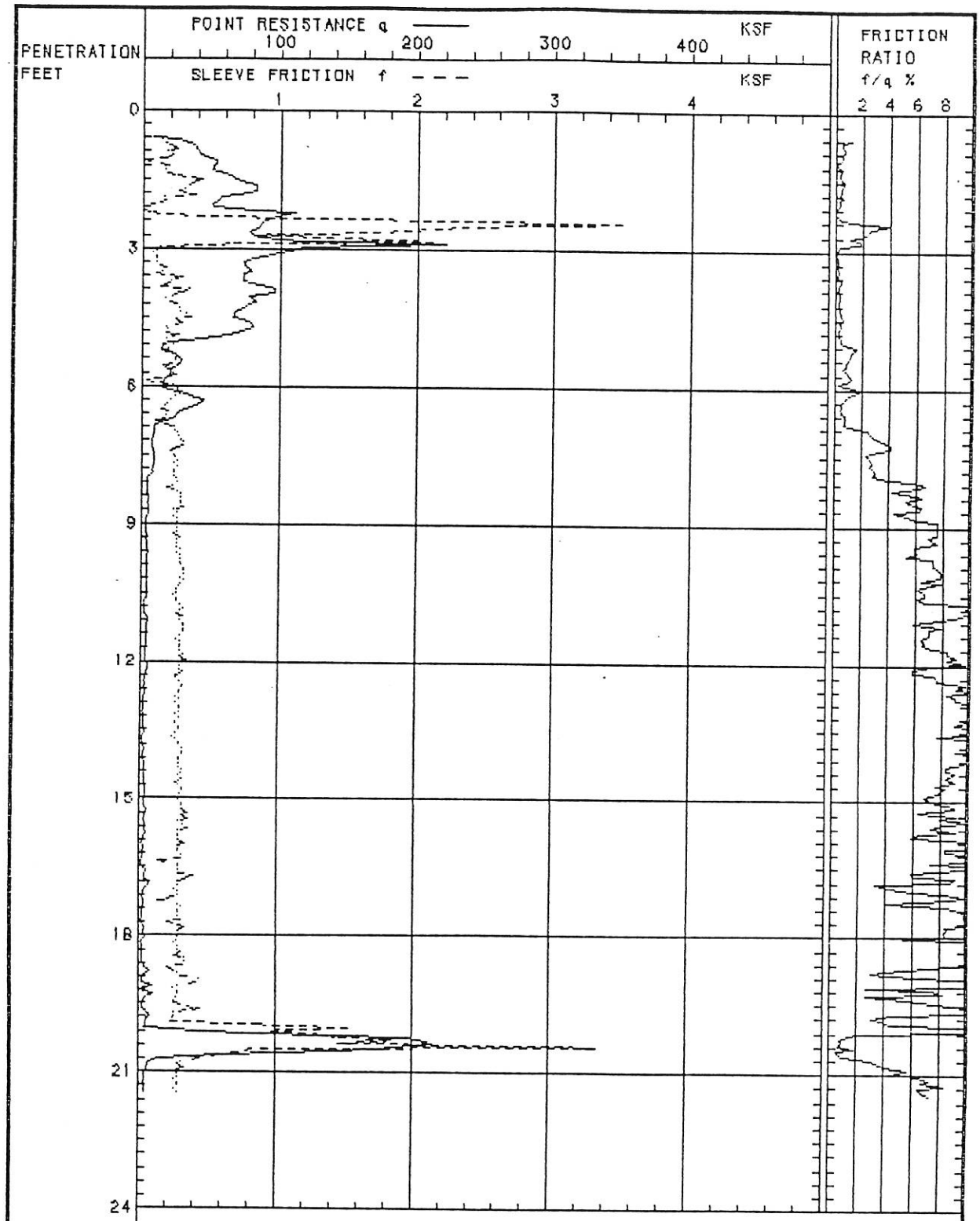
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 45M
CONE NO. : 001
DATE : 05/08/87

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	117.06	.45	.39	SAND TO SILTY SAND	SM-SP	.04	14			100+	42	.50+
.80	97.41	.34	.35	SAND TO SILTY SAND	SM-SP	.05	11			100+	42	.50+
1.00	94.20	.27	.29	SAND TO SILTY SAND	SM-SP	.06	11			100+	42	.50+
1.20	113.88	.36	.31	SAND TO SILTY SAND	SM-SP	.07	13			100+	42	.50+
1.40	113.76	.43	.38	SAND TO SILTY SAND	SM-SP	.08	13			100+	42	.50+
1.60	114.37	.22	.19	SAND TO SILTY SAND	SM-SP	.10	13			100+	42	.50+
1.80	90.64	.47	.52	SAND TO SILTY SAND	SM-SP	.11	10			100+	42	.50+
2.00	94.69	.45	.48	SAND TO SILTY SAND	SM-SP	.12	11			100+	42	.50+
2.20	90.53	.45	.50	SAND TO SILTY SAND	SM-SP	.13	10			100+	42	.50+
2.40	84.12	.43	.52	SAND TO SILTY SAND	SM-SP	.14	10			97	42	.50+
2.60	78.71	.29	.37	SAND TO SILTY SAND	SM-SP	.16	9			92	41	.50+
2.80	80.00	.39	.49	SILTY SAND TO SANDY SILT	SM-ML	.15	12			93	41	.50+
3.00	67.66	.10	.15	SILTY SAND TO SANDY SILT	SM-ML	.17	10			94	40	.50+
3.20	35.05	.20	.57	SANDY SILT TO CLAYEY SILT	ML-MH	.16	6	2.584	13.5	65	37	.50+
3.40	44.99	.24	.53	SILTY SAND TO SANDY SILT	SM-ML	.19	7			70	38	.50+
3.60	47.72	.20	.43	SILTY SAND TO SANDY SILT	SM-ML	.20	7			70	38	.50+
3.80	50.17	.29	.58	SILTY SAND TO SANDY SILT	SM-ML	.21	8			71	38	.50+
4.00	48.34	.26	.55	SILTY SAND TO SANDY SILT	SM-ML	.22	7			70	38	.50+
4.20	44.80	.22	.48	SILTY SAND TO SANDY SILT	SM-ML	.23	7			67	37	.50+
4.40	54.54	.27	.49	SILTY SAND TO SANDY SILT	SM-ML	.24	8			72	38	.50+
4.60	57.31	.29	.51	SILTY SAND TO SANDY SILT	SM-ML	.25	9			73	38	.50+
4.80	67.04	.08	.11	SILTY SAND TO SANDY SILT	SM-ML	.26	10			77	39	.50+
5.00	65.06	.35	.53	SILTY SAND TO SANDY SILT	SM-ML	.27	10			75	39	.50+
5.20	69.85	.29	.41	SILTY SAND TO SANDY SILT	SM-ML	.29	11			77	39	.50+
5.40	60.14	.52	.86	SILTY SAND TO SANDY SILT	SM-ML	.30	9			72	38	.50+
5.60	72.55	.37	.51	SILTY SAND TO SANDY SILT	SM-ML	.31	11			77	39	.50+
5.80	70.73	.36	.52	SILTY SAND TO SANDY SILT	SM-ML	.32	11			76	39	.50+
6.00	60.15	.32	.54	SILTY SAND TO SANDY SILT	SM-ML	.33	9			70	38	.50+
6.20	57.56	.38	.65	SILTY SAND TO SANDY SILT	SM-ML	.34	9			68	38	.50+
6.40	42.86	.24	.55	SILTY SAND TO SANDY SILT	SM-ML	.35	6			61	37	.24
6.60	31.24	.24	.77	SANDY SILT TO CLAYEY SILT	ML-MH	.33	5	2.289	13.5	54	36	.18
6.80	24.36	.27	1.09	SANDY SILT TO CLAYEY SILT	ML-MH	.34	4	1.779	13.5	47	35	.15
7.00	17.10	.25	1.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	4	1.243	13.5			
7.20	15.75	.26	1.63	CLAYEY SILT TO SILTY CLAY	MH-CL	.32	3	1.142	13.5			
7.40	14.27	.26	1.84	SILTY CLAY TO CLAY	CL-CH	.30	4	1.035	13.5			
7.60	16.25	.26	1.57	CLAYEY SILT TO SILTY CLAY	MH-CL	.34	3	1.178	13.5			
7.80	21.59	.28	1.28	CLAYEY SILT TO SILTY CLAY	MH-CL	.35	5	1.573	13.5			
8.00	29.26	.30	1.02	SANDY SILT TO CLAYEY SILT	ML-MH	.40	5	2.137	13.5	48	35	.16
8.20	21.67	.28	1.29	CLAYEY SILT TO SILTY CLAY	MH-CL	.37	5	1.578	13.5			
8.40	24.13	.28	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.42	4	1.756	13.5	42	34	.14
8.60	18.34	.23	1.28	CLAYEY SILT TO SILTY CLAY	MH-CL	.39	4	1.329	13.5			
8.80	9.10	.26	2.83	CLAY	CH	.35	4	.648	13.5			
9.00	10.80	.28	2.58	CLAY	CH	.36	5	.773	13.5			
9.20	10.34	.24	2.28	SILTY CLAY TO CLAY	CL-CH	.37	3	.738	13.5			
9.40	5.79	.22	3.76	CLAY	CH	.38	2	.401	13.5			

9.60	6.40	.31	4.80	CLAY	CH	.38	3	.445	13.5			
9.80	6.15	.30	4.81	CLAY	CH	.39	2	.426	13.5			
10.00	7.39	.16	2.13	CLAY	CH	.40	3	.517	13.5			
10.20	5.66	.27	4.79	CLAY	CH	.41	2	.389	13.5			
10.40	6.52	.33	4.99	CLAY	CH	.42	3	.452	13.5			
10.60	5.90	.24	4.01	CLAY	CH	.42	2	.406	13.5			
10.80	4.92	.30	6.01	ORGANIC MATERIAL	OL-OH	.32	2	.340	13.5			
11.00	5.66	.28	5.03	CLAY	CH	.44	2	.387	13.5			
11.20	5.17	.27	5.26	CLAY	CH	.45	2	.350	13.5			
11.40	4.92	.27	5.55	CLAY	CH	.46	2	.331	13.5			
11.60	4.92	.24	4.82	CLAY	CH	.46	2	.330	13.5			
11.80	4.18	.26	6.25	ORGANIC MATERIAL	OL-OH	.35	2	.283	13.5			
12.00	4.55	.28	6.13	ORGANIC MATERIAL	OL-OH	.36	2	.310	13.5			
12.20	4.67	.24	5.06	CLAY	CH	.49	2	.310	13.5			
12.40	4.43	.32	7.22	ORGANIC MATERIAL	OL-OH	.37	2	.300	13.5			
12.60	5.68	.25	4.39	CLAY	CH	.50	2	.383	13.5			
12.80	5.03	.22	4.43	CLAY	CH	.51	2	.335	13.5			
13.00	5.05	.24	4.81	CLAY	CH	.52	2	.336	13.5			
13.20	3.94	.25	6.34	ORGANIC MATERIAL	OL-OH	.40	1	.262	13.5			
13.40	4.06	.26	6.43	ORGANIC MATERIAL	OL-OH	.40	1	.271	13.5			
13.60	4.19	.21	5.07	CLAY	CH	.54	2	.270	13.5			
13.80	5.68	.26	4.61	CLAY	CH	.55	2	.380	13.5			
14.00	3.69	.23	6.12	ORGANIC MATERIAL	OL-OH	.42	1	.243	13.5			
14.20	2.70	.21	7.91	ORGANIC MATERIAL	OL-OH	.43	1	.168	13.5			
14.40	2.96	.23	7.64	ORGANIC MATERIAL	OL-OH	.43	1	.187	13.5			
14.60	2.70	.21	7.96	ORGANIC MATERIAL	OL-OH	.44	1	.168	13.5			
14.80	3.45	.27	7.94	ORGANIC MATERIAL	OL-OH	.44	1	.223	13.5			
15.00	3.69	.25	6.75	ORGANIC MATERIAL	OL-OH	.45	1	.240	13.5			
15.20	3.92	.25	6.36	ORGANIC MATERIAL	OL-OH	.46	1	.257	13.5			
15.40	4.68	.28	6.08	ORGANIC MATERIAL	OL-OH	.46	2	.312	13.5			
15.60	4.67	.29	6.13	ORGANIC MATERIAL	OL-OH	.47	2	.311	13.5			
15.80	3.94	.18	4.53	CLAY	CH	.63	1	.245	13.5			
16.00	4.19	.19	4.50	CLAY	CH	.64	2	.263	13.5			
16.20	3.70	.25	6.75	ORGANIC MATERIAL	OL-OH	.49	1	.238	13.5			
16.40	3.44	.25	7.23	ORGANIC MATERIAL	OL-OH	.49	1	.219	13.5			
16.60	4.19	.27	6.55	ORGANIC MATERIAL	OL-OH	.50	2	.273	13.5			
16.80	3.68	.26	7.12	ORGANIC MATERIAL	OL-OH	.50	1	.236	13.5			
17.00	3.70	.25	6.75	ORGANIC MATERIAL	OL-OH	.51	1	.236	13.5			
17.20	3.94	.26	6.64	ORGANIC MATERIAL	OL-OH	.52	1	.253	13.5			
17.40	4.43	.26	5.89	ORGANIC MATERIAL	OL-OH	.52	2	.289	13.5			
17.60	4.43	.25	5.66	ORGANIC MATERIAL	OL-OH	.53	2	.289	13.5			
17.80	4.55	.24	5.21	CLAY	CH	.71	2	.285	13.5			
18.00	3.70	.25	6.76	ORGANIC MATERIAL	OL-OH	.54	1	.234	13.5			
18.20	3.44	.25	7.24	ORGANIC MATERIAL	OL-OH	.55	1	.215	13.5			
18.40	4.19	.26	6.24	ORGANIC MATERIAL	OL-OH	.55	2	.269	13.5			
18.60	4.65	.26	5.60	ORGANIC MATERIAL	OL-OH	.56	2	.303	13.5			
18.80	4.44	.26	5.85	ORGANIC MATERIAL	OL-OH	.56	2	.287	13.5			
19.00	4.92	.23	4.58	CLAY	CH	.76	2	.308	13.5			
19.20	4.53	.21	4.67	CLAY	CH	.77	2	.279	13.5			
19.40	3.44	.25	7.22	ORGANIC MATERIAL	OL-OH	.58	1	.212	13.5			
19.60	5.29	.27	5.04	CLAY	CH	.78	2	.334	13.5			
19.80	4.19	.21	5.08	CLAY	CH	.79	2	.252	13.5			
20.00	5.19	.25	4.82	CLAY	CH	.80	2	.325	13.5			
20.20	5.17	.27	5.30	CLAY	CH	.81	2	.323	13.5			
20.40	3.68	.27	7.46	ORGANIC MATERIAL	OL-OH	.61	1	.227	13.5			
20.60	40.69	.76	1.86	SANDY SILT TO CLAYEY SILT	ML-MH	1.03	7	2.938	13.5	33	33	.13
20.80	6.16	.32	5.26	CLAY	CH	.83	2	.394	13.5			
21.00	8.05	.22	2.79	CLAY	CH	.84	3	.534	13.5			
21.20	4.43	.22	4.87	CLAY	CH	.85	2	.265	13.5			
21.40	3.57	.22	6.26	ORGANIC MATERIAL	OL-OH	.64	1	.217	13.5			

21.60	4.95	.39	7.96	ORGANIC MATERIAL	OL-OH	.65	2	.319	13.5
21.80	2.95	.34	11.56	ORGANIC MATERIAL	OL-OH	.65	1	.170	13.5
22.00	13.93	.33	2.39	SILTY CLAY TO CLAY	CL-CH	.88	4	.967	13.5
22.20	5.68	.24	4.28	CLAY	CH	.89	2	.355	13.5
22.40	5.43	.34	6.29	ORGANIC MATERIAL	OL-OH	.67	2	.352	13.5
22.60	10.12	.21	2.12	SILTY CLAY TO CLAY	CL-CH	.90	3	.683	13.5
22.80	4.43	.19	4.27	CLAY	CH	.91	2	.260	13.5
23.00	3.70	.24	6.42	ORGANIC MATERIAL	OL-OH	.69	1	.223	13.5
23.20	3.94	.19	4.81	CLAY	CH	.93	1	.223	13.5
23.40	3.44	.23	6.55	ORGANIC MATERIAL	OL-OH	.70	1	.203	13.5
23.60	4.43	.21	4.81	CLAY	CH	.94	2	.258	13.5
23.80	6.80	.41	5.99	CLAY	CH	.95	3	.433	13.5
24.00	3.21	.24	7.50	ORGANIC MATERIAL	OL-OH	.72	1	.184	13.5
24.20	4.17	.22	5.23	ORGANIC MATERIAL	OL-OH	.73	1	.255	13.5
24.40	4.17	.42	10.01	ORGANIC MATERIAL	OL-OH	.73	1	.255	13.5
24.60	5.21	.37	7.19	ORGANIC MATERIAL	OL-OH	.74	2	.331	13.5
24.80	11.62	.38	3.25	CLAY	CH	.99	5	.787	13.5
25.00	12.44	.40	3.19	CLAY	CH	1.00	5	.847	13.5
25.20	10.55	.39	3.66	CLAY	CH	1.01	5	.707	13.5
25.40	4.41	.32	7.35	ORGANIC MATERIAL	OL-OH	.76	2	.270	13.5
25.60	3.92	.22	5.73	ORGANIC MATERIAL	OL-OH	.77	1	.233	13.5
25.80	4.43	.25	5.68	ORGANIC MATERIAL	OL-OH	.77	2	.271	13.5
26.00	3.94	.26	6.63	ORGANIC MATERIAL	OL-OH	.78	1	.234	13.5
26.20	4.43	.30	6.70	ORGANIC MATERIAL	OL-OH	.79	2	.270	13.5
26.40	4.17	.26	6.25	ORGANIC MATERIAL	OL-OH	.79	1	.250	13.5
26.60	4.43	.27	6.17	ORGANIC MATERIAL	OL-OH	.80	2	.269	13.5
26.80	4.43	.34	7.72	ORGANIC MATERIAL	OL-OH	.80	2	.268	13.5
27.00	6.47	.42	6.48	CLAY	CH	1.08	3	.399	13.5
27.20	3.70	.27	7.39	ORGANIC MATERIAL	OL-OH	.82	1	.214	13.5
27.40	4.19	.29	6.80	ORGANIC MATERIAL	OL-OH	.82	2	.250	13.5
27.60	4.19	.35	8.27	ORGANIC MATERIAL	OL-OH	.83	2	.249	13.5
27.80	2.95	.32	10.90	ORGANIC MATERIAL	OL-OH	.83	1	.157	13.5
28.00	3.31	.27	8.24	ORGANIC MATERIAL	OL-OH	.84	1	.183	13.5
28.20	3.94	.31	7.86	ORGANIC MATERIAL	OL-OH	.85	1	.229	13.5
28.40	4.90	.14	2.77	CLAY	CH	1.14	2	.279	13.5
28.60	18.86	.34	1.83	CLAYEY SILT TO SILTY CLAY	MH-CL	1.29	4	1.302	13.5
28.80	3.21	.31	9.67	ORGANIC MATERIAL	OL-OH	.86	1	.174	13.5
29.00	3.44	.29	8.29	ORGANIC MATERIAL	OL-OH	.87	1	.191	13.5
29.20	3.94	.30	7.55	ORGANIC MATERIAL	OL-OH	.88	1	.227	13.5
29.40	3.68	.28	7.48	ORGANIC MATERIAL	OL-OH	.88	1	.207	13.5
29.60	3.94	.31	7.86	ORGANIC MATERIAL	OL-OH	.89	1	.226	13.5
29.80	3.94	.22	5.70	ORGANIC MATERIAL	OL-OH	.89	1	.225	13.5
30.00	3.94	.31	7.86	ORGANIC MATERIAL	OL-OH	.90	1	.225	13.5
30.20	3.94	.31	7.86	ORGANIC MATERIAL	OL-OH	.91	1	.224	13.5
30.40	3.94	.29	7.25	ORGANIC MATERIAL	OL-OH	.91	1	.224	13.5



RESULT OF CONE PENETRATION TEST

45S

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

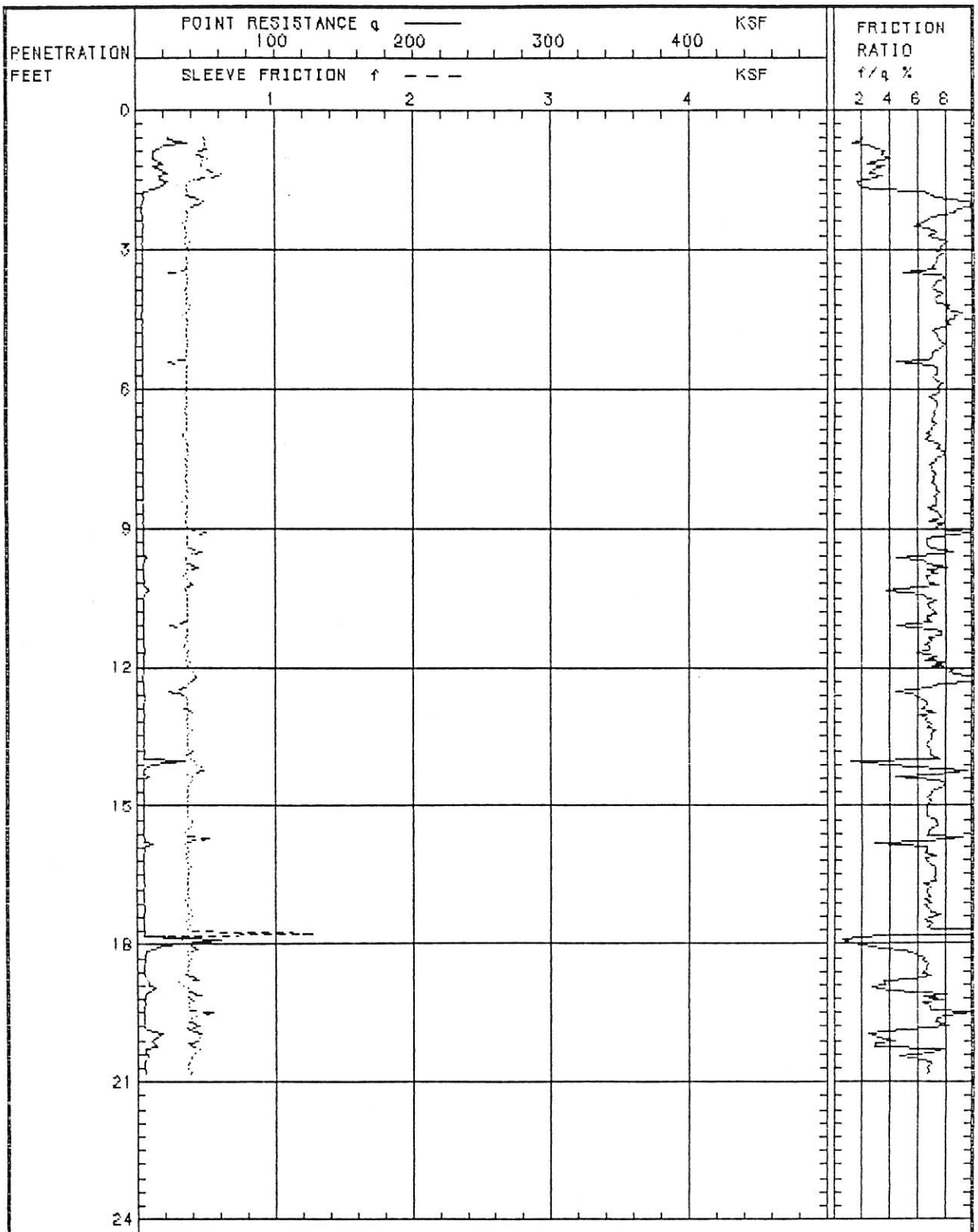
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 45S
CONE NO. : 001
DATE : 05/08/87

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	16.97	.11	.67	SENSITIVE FINE GRAINED	OL-CH	.02	4	1.256	13.5			
.80	38.37	.21	.54	SANDY SILT TO CLAYEY SILT	ML-MH	.04	7	2.839	13.5	75	39	.50+
1.00	45.50	.19	.43	SILTY SAND TO SANDY SILT	SM-ML	.05	7			79	39	.50+
1.20	51.90	.16	.30	SILTY SAND TO SANDY SILT	SM-ML	.07	8			83	40	.50+
1.40	61.49	.22	.35	SILTY SAND TO SANDY SILT	SM-ML	.08	9			90	41	.50+
1.60	76.73	.36	.47	SILTY SAND TO SANDY SILT	SM-ML	.09	12			100+	42	.50+
1.80	76.51	.23	.31	SAND TO SILTY SAND	SM-SP	.11	9			97	42	.50+
2.00	52.64	.52	.99	SANDY SILT TO CLAYEY SILT	ML-MH	.10	10	3.892	13.5	80	39	.50+
2.20	95.64	.11	.11	SAND TO SILTY SAND	SM-SP	.13	11			100+	42	.50+
2.40	88.06	1.36	1.55	SILTY SAND TO SANDY SILT	SM-ML	.13	14			100+	42	.50+
2.60	81.06	1.16	1.43	SILTY SAND TO SANDY SILT	SM-ML	.14	12			95	41	.50+
2.80	100.79	1.09	1.08	SILTY SAND TO SANDY SILT	SM-ML	.15	16			100+	42	.50+
3.00	112.18	.14	.12	SAND TO SILTY SAND	SM-SP	.18	13			100+	42	.50+
3.20	85.12	.04	.05	SAND TO SILTY SAND	SM-SP	.19	10			91	41	.50+
3.40	75.26	.11	.15	SAND TO SILTY SAND	SM-SP	.20	9			85	41	.50+
3.60	73.30	.25	.34	SILTY SAND TO SANDY SILT	SM-ML	.20	11			84	40	.50+
3.80	85.32	.17	.20	SAND TO SILTY SAND	SM-SP	.23	10			88	41	.50+
4.00	87.12	.46	.52	SAND TO SILTY SAND	SM-SP	.24	10			88	41	.50+
4.20	79.95	.23	.28	SAND TO SILTY SAND	SM-SP	.25	9			84	41	.50+
4.40	67.52	.30	.44	SILTY SAND TO SANDY SILT	SM-ML	.24	10			79	39	.50+
4.60	75.98	.31	.41	SILTY SAND TO SANDY SILT	SM-ML	.25	12			82	40	.50+
4.80	72.59	.18	.25	SILTY SAND TO SANDY SILT	SM-ML	.26	11			80	39	.50+
5.00	32.30	.19	.59	SANDY SILT TO CLAYEY SILT	ML-MH	.25	6	2.374	13.5	60	36	.22
5.20	14.39	.18	1.28	CLAYEY SILT TO SILTY CLAY	MH-CL	.23	3	1.049	13.5			
5.40	28.28	.32	1.12	SANDY SILT TO CLAYEY SILT	ML-MH	.27	5	2.075	13.5	55	38	.13
5.60	23.63	.17	.74	SANDY SILT TO CLAYEY SILT	ML-MH	.28	4	1.730	13.5	50	35	.16
5.80	18.71	.30	1.62	CLAYEY SILT TO SILTY CLAY	MH-CL	.26	4	1.367	13.5			
6.00	15.37	.20	1.32	CLAYEY SILT TO SILTY CLAY	MH-CL	.27	3	1.119	13.5			
6.20	33.69	.42	1.25	SANDY SILT TO CLAYEY SILT	ML-MH	.31	6	2.473	13.5	57	36	.20
6.40	40.84	.18	.44	SILTY SAND TO SANDY SILT	SM-ML	.35	6			60	38	.22
6.60	26.70	.17	.63	SANDY SILT TO CLAYEY SILT	ML-MH	.33	5	1.953	13.5	49	35	.16
6.80	14.17	.18	1.28	SENSITIVE FINE GRAINED	OL-CH	.20	3	1.035	13.5			
7.00	9.44	.25	2.63	CLAY	CH	.29	4	.679	13.5			
7.20	7.38	.29	3.90	CLAY	CH	.29	3	.525	13.5			
7.40	8.36	.22	2.65	CLAY	CH	.30	4	.597	13.5			
7.60	9.35	.28	3.03	CLAY	CH	.30	4	.670	13.5			
7.80	8.37	.25	2.95	CLAY	CH	.31	4	.597	13.5			
8.00	5.17	.25	4.82	CLAY	CH	.32	2	.360	13.5			
8.20	4.30	.21	4.81	CLAY	CH	.33	2	.294	13.5			
8.40	4.91	.28	5.79	ORGANIC MATERIAL	OL-OH	.25	2	.345	13.5			
8.60	4.67	.27	5.83	ORGANIC MATERIAL	OL-OH	.26	2	.327	13.5			
8.80	4.43	.25	5.64	ORGANIC MATERIAL	OL-OH	.26	2	.309	13.5			
9.00	3.44	.26	7.61	ORGANIC MATERIAL	OL-OH	.27	1	.235	13.5			
9.20	3.44	.24	7.08	ORGANIC MATERIAL	OL-OH	.28	1	.235	13.5			
9.40	3.93	.29	7.26	ORGANIC MATERIAL	OL-OH	.28	1	.270	13.5			

9.60	4.79	.26	5.45	CLAY	CH	.38	2	.327	13.5			
9.80	3.94	.29	7.25	ORGANIC MATERIAL	OL-OH	.29	1	.270	13.5			
10.00	3.94	.31	7.86	ORGANIC MATERIAL	OL-OH	.30	1	.269	13.5			
10.20	4.19	.30	7.09	ORGANIC MATERIAL	OL-OH	.31	2	.287	13.5			
10.40	4.19	.27	6.56	ORGANIC MATERIAL	OL-OH	.31	2	.287	13.5			
10.60	3.94	.25	6.36	ORGANIC MATERIAL	OL-OH	.32	1	.268	13.5			
10.80	2.95	.30	10.10	ORGANIC MATERIAL	OL-OH	.32	1	.195	13.5			
11.00	3.44	.28	8.28	ORGANIC MATERIAL	OL-OH	.33	1	.230	13.5			
11.20	4.18	.29	6.87	ORGANIC MATERIAL	OL-OH	.34	2	.285	13.5			
11.40	4.43	.29	6.57	ORGANIC MATERIAL	OL-OH	.34	2	.303	13.5			
11.60	4.19	.29	6.83	ORGANIC MATERIAL	OL-OH	.35	2	.284	13.5			
11.80	3.44	.29	8.30	ORGANIC MATERIAL	OL-OH	.35	1	.229	13.5			
12.00	3.69	.31	8.38	ORGANIC MATERIAL	OL-OH	.36	1	.246	13.5			
12.20	4.56	.28	6.14	ORGANIC MATERIAL	OL-OH	.37	2	.310	13.5			
12.40	3.20	.27	8.55	ORGANIC MATERIAL	OL-OH	.37	1	.210	13.5			
12.60	3.19	.29	8.99	ORGANIC MATERIAL	OL-OH	.38	1	.209	13.5			
12.80	2.95	.27	9.30	ORGANIC MATERIAL	OL-OH	.38	1	.190	13.5			
13.00	2.46	.29	11.69	ORGANIC MATERIAL	OL-OH	.39	1	.153	13.5			
13.20	2.70	.29	10.61	ORGANIC MATERIAL	OL-OH	.40	1	.171	13.5			
13.40	2.46	.27	11.14	ORGANIC MATERIAL	OL-OH	.40	1	.152	13.5			
13.60	2.72	.25	9.24	ORGANIC MATERIAL	OL-OH	.41	1	.171	13.5			
13.80	1.97	.29	14.54	ORGANIC MATERIAL	OL-OH	.41	1	.115	13.5			
14.00	2.95	.31	10.53	ORGANIC MATERIAL	OL-OH	.42	1	.188	13.5			
14.20	3.19	.29	8.95	ORGANIC MATERIAL	OL-OH	.43	1	.205	13.5			
14.40	3.44	.31	9.02	ORGANIC MATERIAL	OL-OH	.43	1	.223	13.5			
14.60	3.44	.27	7.77	ORGANIC MATERIAL	OL-OH	.44	1	.223	13.5			
14.80	3.94	.31	7.86	ORGANIC MATERIAL	OL-OH	.44	1	.259	13.5			
15.00	3.82	.29	7.64	ORGANIC MATERIAL	OL-OH	.45	1	.249	13.5			
15.20	4.16	.31	7.43	ORGANIC MATERIAL	OL-OH	.46	1	.275	13.5			
15.40	3.70	.33	9.01	ORGANIC MATERIAL	OL-OH	.46	1	.239	13.5			
15.60	4.19	.32	7.66	ORGANIC MATERIAL	OL-OH	.47	2	.275	13.5			
15.80	4.20	.29	6.83	ORGANIC MATERIAL	OL-OH	.47	2	.276	13.5			
16.00	2.69	.31	11.56	ORGANIC MATERIAL	OL-OH	.48	1	.164	13.5			
16.20	2.71	.30	11.01	ORGANIC MATERIAL	OL-OH	.49	1	.165	13.5			
16.40	1.97	.21	10.75	ORGANIC MATERIAL	OL-OH	.49	1	.109	13.5			
16.60	4.80	.31	6.53	ORGANIC MATERIAL	OL-OH	.50	2	.317	13.5			
16.80	6.33	.27	4.34	CLAY	CH	.67	3	.419	13.5			
17.00	3.95	.27	6.94	ORGANIC MATERIAL	OL-OH	.51	1	.253	13.5			
17.20	3.19	.20	6.36	ORGANIC MATERIAL	OL-OH	.52	1	.198	13.5			
17.40	3.20	.30	9.32	ORGANIC MATERIAL	OL-OH	.52	1	.199	13.5			
17.60	2.47	.30	12.06	ORGANIC MATERIAL	OL-OH	.53	1	.144	13.5			
17.80	3.68	.31	8.40	ORGANIC MATERIAL	OL-OH	.53	1	.233	13.5			
18.00	4.40	.29	6.52	ORGANIC MATERIAL	OL-OH	.54	2	.286	13.5			
18.20	2.21	.27	12.15	ORGANIC MATERIAL	OL-OH	.55	1	.123	13.5			
18.40	2.46	.29	11.67	ORGANIC MATERIAL	OL-OH	.55	1	.141	13.5			
18.60	3.67	.33	9.03	ORGANIC MATERIAL	OL-OH	.56	1	.230	13.5			
18.80	7.90	.27	3.47	CLAY	CH	.75	3	.529	13.5			
19.00	2.46	.44	17.86	ORGANIC MATERIAL	OL-OH	.57	1	.140	13.5			
19.20	3.44	.27	7.82	ORGANIC MATERIAL	OL-OH	.58	1	.212	13.5			
19.40	4.20	.26	6.28	ORGANIC MATERIAL	OL-OH	.58	2	.268	13.5			
19.60	2.70	.35	13.11	ORGANIC MATERIAL	OL-OH	.59	1	.156	13.5			
19.80	7.41	.27	3.68	CLAY	CH	.79	3	.490	13.5			
20.00	4.68	1.20	25.70	ORGANIC MATERIAL	OL-OH	.60	2	.302	13.5			
20.20	139.30	1.38	.99	SAND TO SILTY SAND	SM-SP	1.21	16			70	39	.50*
20.40	201.62	2.38	1.18	SAND TO SILTY SAND	SM-SP	1.22	24			83	41	.50*
20.60	83.56	.67	.80	SILTY SAND TO SANDY SILT	SM-ML	1.13	13			55	36	.20
20.80	7.77	.31	4.04	CLAY	CH	.83	3	.514	13.5			
21.00	5.19	.29	5.50	CLAY	CH	.84	2	.322	13.5			
21.20	3.70	.27	7.38	ORGANIC MATERIAL	OL-OH	.64	1	.227	13.5			
21.40	3.94	.27	6.94	ORGANIC MATERIAL	OL-OH	.64	1	.244	13.5			



RESULT OF CONE PENETRATION TEST

40M

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

SECTION II

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	
32	S	0.5									0
32	M	0.5									1
32	N	0.5									0
33	S	0.5									0
33	M	0.5									0
33	N	0.5									0
34	S	0.5									0
34	M	0.5									0
34	N	0.5									0
35	S	0.5									0
35	M	0.5									0
35	N	0.5									0
36	S	0.5									0
36	M	0.5									0
36	N	0.5	37	25	60					0.07	
37	S	0.5									0
37	M	0.5									
37	N	0.5									0
38	S	0.5									0
38	M	0.5									0
38	N	0.5									0
39	S	0.5									0

LEGEND:

U-Unconfined Compression
VR-Remolded Miniature Vane

McCLELLAND ENGINEERS

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	
39	M	0.5			234					0.18	
39	N	0.5	57	23							
40	S	0.5									0
40	M	0.5									0
40	N	0.5	72	18	86					0.06	
41	S	0.5									0
41	M	0.5									0
41	N	0.5	38	24	38					0.08	
42	S	0.5									0
42	M	0.5									0
42	N	0.5									5
43	S	0.5									0
43	M	0.5									0
43	N	0.5									0
44	S	0.5									0
44	M	0.5									1
44	N	0.5									2
45	S	0.5									0
45	M	0.5									0
45	N	0.5									4

LEGEND:

U-Unconfined Compression
VR-Remolded Miniature Vane

SECTION III

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-2-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 32 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: RG DATE:6-3-87

CHECKED BY: DC DATE:6-4-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 263.19

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.11	4.750	-2.25	100.0	0.0	
10	0.73	2.000	-1.00	99.7	0.3	
20	1.87	0.850	0.23	99.3	0.7	
40	3.86	0.425	1.23	98.5	1.5	
70	21.64	0.212	2.24	91.8	8.2	
100	130.87	0.150	2.74	50.3	49.7	
200	262.14	0.075	3.74	0.4	99.6	
PAN	263.16			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.614	10	0.090
16	2.314	15	0.098
25	2.411	30	0.121
50	2.741	60	0.165
75	3.138	85	0.202
84	3.324	90	0.210
95	3.600		

POORLY GRADED — Cu= 1.827, Cc= 0.980

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-2-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 32 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: RG DATE:6-3-87

CHECKED BY: DC DATE:6-4-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 221.86

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.90	4.750	-2.25	99.6	0.4	
10	1.47	2.000	-1.00	99.3	0.7	
20	3.06	0.850	0.23	98.6	1.4	
40	5.20	0.425	1.23	97.7	2.3	
70	25.55	0.212	2.24	88.5	11.5	
100	119.28	0.150	2.74	46.2	53.8	
200	220.85	0.075	3.74	0.5	99.5	
PAN	221.70			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.422
16	2.281
25	2.372
50	2.681
75	3.098
84	3.294
95	3.590

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.092
15	0.100
30	0.125
60	0.171
85	0.207
90	0.255

POORLY GRADED

Cu= 1.866

Cc= 0.993

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-2-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 32 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: RG DATE:6-3-87

CHECKED BY: DC DATE:6-4-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 230.27

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.52	4.750	-2.25	99.8	0.2	
10	1.29	2.000	-1.00	99.4	0.6	
20	3.11	0.850	0.23	98.6	1.4	
40	5.16	0.425	1.23	97.8	2.2	
70	34.11	0.212	2.24	85.2	14.8	
100	151.39	0.150	2.74	34.3	65.7	
200	229.90	0.075	3.74	0.2	99.8	
PAN	230.18			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.372
16	2.247
25	2.320
50	2.555
75	2.934
84	3.165
95	3.532

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.098
15	0.109
30	0.141
60	0.182
85	0.212
90	0.306

POORLY GRADED — Cu= 1.862, Cc= 1.117

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-18-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 33 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-18-87

CHECKED BY: DC DATE:11-18-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 268.41

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	0.88	0.850	0.23	99.7	0.3	
40	2.26	0.425	1.23	99.2	0.8	
70	73.36	0.212	2.24	72.7	27.3	
100	242.32	0.150	2.74	9.7	90.3	
200	268.10	0.075	3.74	0.1	99.9	
PAN	268.34			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.330	10	0.150
16	1.662	15	0.156
25	2.086	30	0.171
50	2.391	60	0.200
75	2.592	85	0.324
84	2.675	90	0.363
95	3.123		

POORLY GRADED — Cu= 1.332, Cc= 0.971

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-18-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 33 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: LIGHT GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-18-87

CHECKED BY: DC DATE:11-18-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 287.55

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.65	4.750	-2.25	99.8	0.2	
10	1.29	2.000	-1.00	99.6	0.4	
20	3.09	0.850	0.23	98.9	1.1	
40	4.39	0.425	1.23	98.5	1.5	
70	74.40	0.212	2.24	74.1	25.9	
100	226.51	0.150	2.74	21.2	78.8	
200	287.09	0.075	3.74	0.2	99.8	
PAN	287.39			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.321	10	0.112
16	1.684	15	0.129
25	2.173	30	0.161
50	2.436	60	0.196
75	2.692	85	0.320
84	2.915	90	0.362
95	3.420		

POORLY GRADED — Cu= 1.758, Cc= 1.182

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-18-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 33 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-18-87

CHECKED BY: DC DATE:11-18-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 259.44

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	0.11	0.850	0.23	100.0	0.0	
40	0.19	0.425	1.23	99.9	0.1	
70	43.91	0.212	2.24	83.1	16.9	
100	224.69	0.150	2.74	13.4	86.6	
200	259.08	0.075	3.74	0.1	99.9	
PAN	259.40			#N/A	#N/A	

PARAMETERS

COASTAL: D PERCENTILE COARSER	SIZE, PHI UNITS	GEOTECHNICAL: D PERCENTILE FINER	SIZE, mm
5	1.424	10	0.132
16	2.140	15	0.152
25	2.285	30	0.166
50	2.445	60	0.192
75	2.635	85	0.242
84	2.713	90	0.312
95	3.265		

POORLY GRADED — Cu= 1.458, Cc= 1.080

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-18-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 34 SAMPLE NO: N PENETRATION, ft: SURFACE

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

TESTED BY: DC DATE:11-18-87

CHECKED BY: DC DATE:11-18-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 313.67

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.15	4.750	-2.25	99.6	0.4	
10	1.49	2.000	-1.00	99.5	0.5	
20	2.45	0.850	0.23	99.2	0.8	
40	4.15	0.425	1.23	98.7	1.3	
70	96.30	0.212	2.24	69.3	30.7	
100	252.81	0.150	2.74	19.4	80.6	
200	313.25	0.075	3.74	0.1	99.9	
PAN	313.57			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.310	10	0.115
16	1.593	15	0.134
25	1.931	30	0.164
50	2.403	60	0.201
75	2.667	85	0.339
84	2.861	90	0.372
95	3.393		

POORLY GRADED — Cu= 1.748, Cc= 1.162

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-2-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 34 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: RG DATE:6-3-87

CHECKED BY: DC DATE:6-4-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 263.19

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	4.40	4.750	-2.25	98.3	1.7	
10	5.23	2.000	-1.00	98.0	2.0	
20	9.05	0.850	0.23	96.6	3.4	
40	13.80	0.425	1.23	94.8	5.2	
70	78.64	0.212	2.24	70.1	29.9	
100	216.83	0.150	2.74	17.6	82.4	
200	263.13	0.075	3.74	0.0	100.0	
PAN	263.20			#N/A	#N/A	

PARAMETERS		
COASTAL		GEOTECHNICAL
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	0.964	10	0.119
16	1.538	15	0.140
25	1.925	30	0.165
50	2.401	60	0.201
75	2.650	85	0.353
84	2.800	90	0.391
95	3.357		
		POORLY GRADED	Cu= 1.685 Cc= 1.145

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-18-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328
CORE NO: 34 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS & MICA
TESTED BY: DC DATE:11-18-87
CHECKED BY: DC DATE:11-18-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 252.29

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.02	4.750	-2.25	100.0	0.0	
10	0.09	2.000	-1.00	100.0	0.0	
20	0.29	0.850	0.23	99.9	0.1	
40	0.72	0.425	1.23	99.7	0.3	
70	40.13	0.212	2.24	84.1	15.9	
100	179.95	0.150	2.74	28.7	71.3	
200	251.94	0.075	3.74	0.1	99.9	
PAN	252.18			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.431	10	0.102
16	2.239	15	0.116
25	2.305	30	0.152
50	2.515	60	0.186
75	2.826	85	0.228
84	3.080	90	0.305
95	3.494		

POORLY GRADED — Cu= 1.817, Cc= 1.206

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-18-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 35 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-18-87

CHECKED BY: DC DATE:11-18-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 287.07

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	0.11	2.000	-1.00	100.0	0.0	
20	0.57	0.850	0.23	99.8	0.2	
40	2.12	0.425	1.23	99.3	0.7	
70	86.15	0.212	2.24	70.0	30.0	
100	264.94	0.150	2.74	7.7	92.3	
200	286.52	0.075	3.74	0.2	99.8	
PAN	286.92			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.323	10	0.152
16	1.613	15	0.158
25	1.962	30	0.173
50	2.373	60	0.203
75	2.572	85	0.334
84	2.655	90	0.368
95	3.006		

POORLY GRADED — Cu= 1.329, Cc= 0.971

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: 35 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: LIGHT GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-19-87

CHECKED BY: DC DATE:11-19-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 277.41

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	5.35	4.750	-2.25	98.1	1.9	
10	6.48	2.000	-1.00	97.7	2.3	
20	10.59	0.850	0.23	96.2	3.8	
40	12.84	0.425	1.23	95.4	4.6	
70	78.57	0.212	2.24	71.7	28.3	
100	242.51	0.150	2.74	12.6	87.4	
200	277.07	0.075	3.74	0.1	99.9	
PAN	277.34			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.243	10	0.135
16	1.575	15	0.153
25	2.006	30	0.169
50	2.394	60	0.200
75	2.610	85	0.344
84	2.701	90	0.385
95	3.239		

POORLY GRADED — Cu= 1.479, Cc= 1.054

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: 35 SAMPLE NO: S 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: 219.37

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	0.26	0.850	0.23	99.9	0.1	
40	1.29	0.425	1.23	99.4	0.6	
70	21.90	0.212	2.24	90.0	10.0	
100	129.17	0.150	2.74	41.1	58.9	
200	218.80	0.075	3.74	0.3	99.7	
PAN	219.38			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.566
16	2.287
25	2.367
50	2.626
75	3.036
84	3.245
95	3.567

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.094
15	0.104
30	0.131
60	0.175
85	0.206
90	0.212

POORLY GRADED Cu= 1.860 Cc= 1.040

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-2-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 36 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: RG DATE:6-3-87

CHECKED BY: DC DATE:6-4-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 237.37

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.06	4.750	-2.25	100.0	0.0	
10	7.22	2.000	-1.00	97.0	3.0	
20	15.20	0.850	0.23	93.6	6.4	
40	23.73	0.425	1.23	90.0	10.0	
70	104.03	0.212	2.24	56.2	43.8	
100	212.11	0.150	2.74	10.6	89.4	
200	236.42	0.075	3.74	0.4	99.6	
PAN	236.84			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	-0.733	10	0.146
16	1.344	15	0.156
25	1.543	30	0.177
50	2.293	60	0.242
75	2.552	85	0.399
84	2.664	90	0.425
95	3.181		

POORLY GRADED — Cu= 1.662, Cc= 0.893

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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: 36 SAMPLE NO: S PENETRATION, ft: SURFACE

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

TESTED BY: DC DATE:11-19-87

CHECKED BY: DC DATE:11-19-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 297.31

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	98.8	1.2	
10	6.79	2.000	-1.00	97.7	2.3	
20	10.62	0.850	0.23	96.4	3.6	
40	14.97	0.425	1.23	95.0	5.0	
70	88.99	0.212	2.24	70.1	29.9	
100	245.28	0.150	2.74	17.5	82.5	
200	297.12	0.075	3.74	0.1	99.9	
PAN	297.38			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.178	10	0.119
16	1.541	15	0.140
25	1.925	30	0.166
50	2.401	60	0.201
75	2.649	85	0.352
84	2.796	90	0.390
95	3.357		
		POORLY GRADED	Cu= 1.683 Cc= 1.144

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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: 37 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: 209.82

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	0.05	0.850	0.23	100.0	0.0	
40	0.35	0.425	1.23	99.8	0.2	
70	33.16	0.212	2.24	84.2	15.8	
100	162.64	0.150	2.74	22.5	77.5	
200	209.53	0.075	3.74	0.1	99.9	
PAN	209.70			#N/A	#N/A	

PARAMETERS			
COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.436	10	0.110
16	2.239	15	0.126
25	2.298	30	0.158
50	2.484	60	0.189
75	2.711	85	0.226
84	2.949	90	0.304
95	3.435		
		POORLY GRADED	Cu= 1.720 Cc= 1.206

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: 37 SAMPLE NO: S 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: 305.17

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	0.33	2.000	-1.00	99.9	0.1	
20	0.82	0.850	0.23	99.7	0.3	
40	1.71	0.425	1.23	99.4	0.6	
70	30.80	0.212	2.24	89.9	10.1	
100	253.11	0.150	2.74	17.1	82.9	
200	304.29	0.075	3.74	0.3	99.7	
PAN	304.89			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.563
16	2.270
25	2.322
50	2.481
75	2.669
84	2.780
95	3.360

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.120
15	0.141
30	0.162
60	0.188
85	0.208
90	0.215

POORLY GRADED — Cu= 1.563, Cc= 1.161

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: 38 SAMPLE NO: N 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: 282.25

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.55	4.750	-2.25	99.8	0.2	
10	3.99	2.000	-1.00	98.6	1.4	
20	12.99	0.850	0.23	95.4	4.6	
40	22.32	0.425	1.23	92.1	7.9	
70	169.52	0.212	2.24	39.9	60.1	
100	272.45	0.150	2.74	3.5	96.5	
200	281.89	0.075	3.74	0.1	99.9	
PAN	282.24			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	0.293	10	0.162
16	1.329	15	0.171
25	1.450	30	0.196
50	1.932	60	0.307
75	2.414	85	0.401
84	2.537	90	0.418
95	2.710		

POORLY GRADED — Cu= 1.896, Cc= 0.774

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: 38 SAMPLE NO: M 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: 256.25

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	0.21	2.000	-1.00	99.9	0.1	
20	1.81	0.850	0.23	99.3	0.7	
40	6.02	0.425	1.23	97.7	2.3	
70	45.44	0.212	2.24	82.3	17.7	
100	196.57	0.150	2.74	23.3	76.7	
200	255.57	0.075	3.74	0.3	99.7	
PAN	256.03			#N/A	#N/A	

PARAMETERS

COASTAL: D PERCENTILE COARSER	SIZE, PHI UNITS	GEOTECHNICAL: D PERCENTILE FINER	SIZE, mm
5	1.340	10	0.108
16	2.047	15	0.124
25	2.288	30	0.158
50	2.481	60	0.190
75	2.719	85	0.258
84	2.970	90	0.332
95	3.450		

POORLY GRADED — Cu= 1.751, Cc= 1.208

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: 38 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: 264.94

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	40.99	4.750	-2.25	84.5	15.5	
10	50.46	2.000	-1.00	81.0	19.0	
20	53.18	0.850	0.23	79.9	20.1	
40	55.87	0.425	1.23	78.9	21.1	
70	72.90	0.212	2.24	72.5	27.5	
100	215.96	0.150	2.74	18.5	81.5	
200	264.83	0.075	3.74	0.0	100.0	
PAN	265.02			#N/A	#N/A	

PARAMETERS			
COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	#N/A	10	0.117
16	-2.227	15	0.137
25	1.698	30	0.164
50	2.417	60	0.198
75	2.662	85	#N/A
84	2.830	90	#N/A
95	3.374		
		POORLY GRADED	Cu= 1.695 Cc= 1.157

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: 39 SAMPLE NO: S PENETRATION, ft: SURFACE

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

TESTED BY: DC DATE:11-19-87

CHECKED BY: DC DATE:11-19-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 270.65

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.17	4.750	-2.25	99.6	0.4	
10	3.03	2.000	-1.00	98.9	1.1	
20	7.69	0.850	0.23	97.2	2.8	
40	10.91	0.425	1.23	96.0	4.0	
70	52.17	0.212	2.24	80.7	19.3	
100	206.43	0.150	2.74	23.7	76.3	
200	270.32	0.075	3.74	0.1	99.9	
PAN	270.67			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.272	10	0.108
16	1.903	15	0.124
25	2.278	30	0.157
50	2.476	60	0.190
75	2.723	85	0.283
84	2.979	90	0.354
95	3.449		

POORLY GRADED — Cu= 1.764, Cc= 1.203

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-18-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 40 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-18-87

CHECKED BY: DC DATE:11-18-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 301.02

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.10	4.750	-2.25	99.6	0.4	
10	12.38	2.000	-1.00	95.9	4.1	
20	23.47	0.850	0.23	92.2	7.8	
40	27.22	0.425	1.23	91.0	9.0	
70	103.17	0.212	2.24	65.7	34.3	
100	271.51	0.150	2.74	9.8	90.2	
200	300.26	0.075	3.74	0.3	99.7	
PAN	300.64			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	-0.918	10	0.150
16	1.412	15	0.156
25	1.723	30	0.173
50	2.355	60	0.206
75	2.576	85	0.383
84	2.668	90	0.419
95	3.134		

POORLY GRADED — Cu= 1.371, 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: 40 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: 242.15

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	7.51	4.750	-2.25	96.9	3.1	
10	8.04	2.000	-1.00	96.7	3.3	
20	8.63	0.850	0.23	96.4	3.6	
40	9.03	0.425	1.23	96.3	3.7	
70	19.99	0.212	2.24	91.7	8.3	
100	142.06	0.150	2.74	41.3	58.7	
200	241.58	0.075	3.74	0.2	99.8	
PAN	241.97			#N/A	#N/A	

PARAMETERS

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.415	10	0.094
16	2.300	15	0.103
25	2.378	30	0.131
50	2.632	60	0.174
75	3.038	85	0.204
84	3.247	90	0.210
95	3.567		

POORLY GRADED — Cu= 1.851, Cc= 1.042

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: 41 SAMPLE NO: M 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: 211.78

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.16	4.750	-2.25	99.9	0.1	
10	0.99	2.000	-1.00	99.5	0.5	
20	3.26	0.850	0.23	98.5	1.5	
40	5.23	0.425	1.23	97.5	2.5	
70	42.20	0.212	2.24	80.1	19.9	
100	163.09	0.150	2.74	23.0	77.0	
200	211.79	0.075	3.74	0.0	100.0	
PAN	211.83			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.322	10	0.109
16	1.890	15	0.125
25	2.273	30	0.158
50	2.470	60	0.191
75	2.715	85	0.283
84	2.960	90	0.346
95	3.435		

POORLY GRADED — Cu= 1.750, Cc= 1.197

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: 41 SAMPLE NO: S 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: 284.14

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	0.14	2.000	-1.00	100.0	0.0	
20	0.69	0.850	0.23	99.8	0.2	
40	1.47	0.425	1.23	99.5	0.5	
70	44.46	0.212	2.24	84.4	15.6	
100	224.44	0.150	2.74	21.0	79.0	
200	283.95	0.075	3.74	0.1	99.9	
PAN	284.05			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.427
16	2.240
25	2.298
50	2.478
75	2.697
84	2.908
95	3.413

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.112
15	0.130
30	0.159
60	0.189
85	0.224
90	0.304

POORLY GRADED — Cu= 1.686, Cc= 1.196

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: 42 SAMPLE NO: N PENETRATION, ft: SURFACE
MATERIAL: DARK GRAY,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: 317.33

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.49	4.750	-2.25	99.8	0.2	
10	1.05	2.000	-1.00	99.7	0.3	
20	2.47	0.850	0.23	99.2	0.8	
40	6.16	0.425	1.23	98.1	1.9	
70	79.82	0.212	2.24	74.8	25.2	
100	258.02	0.150	2.74	18.7	81.3	
200	300.60	0.075	3.74	5.3	94.7	
PAN	316.63			#N/A	#N/A	

PARAMETERS

COASTAL: D PERCENTILE COARSER	SIZE, PHI UNITS	GEOTECHNICAL: D PERCENTILE FINER	SIZE, mm
5	1.314	10	0.103
16	1.695	15	0.131
25	2.226	30	0.163
50	2.429	60	0.196
75	2.667	85	0.318
84	2.879	90	0.362
95	#N/A		

POORLY GRADED — Cu= 1.909, Cc= 1.318

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: 42 SAMPLE NO: M 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: 337.83

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	3.53	4.750	-2.25	99.0	1.0	
10	4.98	2.000	-1.00	98.5	1.5	
20	10.50	0.850	0.23	96.9	3.1	
40	13.41	0.425	1.23	96.0	4.0	
70	86.06	0.212	2.24	74.5	25.5	
100	254.72	0.150	2.74	24.6	75.4	
200	337.34	0.075	3.74	0.1	99.9	
PAN	337.76			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.262	10	0.107
16	1.649	15	0.122
25	2.197	30	0.157
50	2.453	60	0.195
75	2.732	85	0.329
84	2.999	90	0.375
95	3.459		

POORLY GRADED — Cu= 1.825, Cc= 1.187

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: 42 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: LIGHT GRAY,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: 242.28

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	0.00	2.000	-1.00	100.0	0.0	
20	0.06	0.850	0.23	100.0	0.0	
40	0.23	0.425	1.23	99.9	0.1	
70	30.44	0.212	2.24	87.4	12.6	
100	178.08	0.150	2.74	26.5	73.5	
200	241.82	0.075	3.74	0.2	99.8	
PAN	242.21			#N/A	#N/A	

PARAMETERS			
COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.502	10	0.105
16	2.260	15	0.119
25	2.322	30	0.154
50	2.515	60	0.185
75	2.775	85	0.210
84	3.040	90	0.265
95	3.478		
		POORLY GRADED	Cu= 1.772 Cc= 1.223

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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: 43 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: 297.98

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.45	4.750	-2.25	99.8	0.2	
10	1.05	2.000	-1.00	99.6	0.4	
20	3.57	0.850	0.23	98.8	1.2	
40	6.46	0.425	1.23	97.8	2.2	
70	80.32	0.212	2.24	73.0	27.0	
100	245.59	0.150	2.74	17.6	82.4	
200	297.50	0.075	3.74	0.2	99.8	
PAN	297.98			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.303	10	0.119
16	1.648	15	0.140
25	2.101	30	0.165
50	2.417	60	0.198
75	2.655	85	0.328
84	2.799	90	0.368
95	3.363		
		POORLY GRADED	Cu= 1.666 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: 43 SAMPLE NO: M 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: 306.76

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	0.55	2.000	-1.00	99.8	0.2	
20	2.55	0.850	0.23	99.2	0.8	
40	11.00	0.425	1.23	96.4	3.6	
70	80.39	0.212	2.24	73.8	26.2	
100	245.24	0.150	2.74	20.1	79.9	
200	305.76	0.075	3.74	0.3	99.7	
PAN	306.63			#N/A	#N/A	

PARAMETERS			
COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.271	10	0.113
16	1.639	15	0.132
25	2.143	30	0.162
50	2.429	60	0.197
75	2.680	85	0.330
84	2.882	90	0.374
95	3.412		
		POORLY GRADED	Cu= 1.737 Cc= 1.178

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-18-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 43 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-18-87

CHECKED BY: DC DATE:11-18-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 306.23

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	8.12	4.750	-2.25	97.3	2.7	
10	12.58	2.000	-1.00	95.9	4.1	
20	16.47	0.850	0.23	94.6	5.4	
40	18.78	0.425	1.23	93.9	6.1	
70	51.70	0.212	2.24	83.1	16.9	
100	165.99	0.150	2.74	45.8	54.2	
200	305.82	0.075	3.74	0.1	99.9	
PAN	306.25			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	-0.624	10	0.092
16	2.095	15	0.101
25	2.327	30	0.125
50	2.667	60	0.175
75	3.090	85	0.258
84	3.286	90	0.360
95	3.580		

POORLY GRADED — Cu= 1.891, Cc= 0.977

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-18-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 44 SAMPLE NO: N PENETRATION, ft: SURFACE

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

TESTED BY: DC DATE:11-18-87

CHECKED BY: DC DATE:11-18-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 230.91

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	0.74	2.000	-1.00	99.7	0.3	
20	1.35	0.850	0.23	99.4	0.6	
40	2.03	0.425	1.23	99.1	0.9	
70	33.11	0.212	2.24	85.7	14.3	
100	135.50	0.150	2.74	41.3	58.7	
200	226.95	0.075	3.74	1.7	98.3	
PAN	230.88			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.434	10	0.092
16	2.253	15	0.102
25	2.337	30	0.130
50	2.618	60	0.177
75	3.051	85	0.211
84	3.271	90	0.293
95	3.613		

POORLY GRADED — Cu= 1.930, Cc= 1.037

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: 45 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: 345.86

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	0.30	0.850	0.23	99.9	0.1	
40	0.73	0.425	1.23	99.8	0.2	
70	45.26	0.212	2.24	86.9	13.1	
100	287.96	0.150	2.74	16.7	83.3	
200	345.48	0.075	3.74	0.1	99.9	
PAN	345.64			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.484	10	0.121
16	2.254	15	0.143
25	2.307	30	0.162
50	2.470	60	0.189
75	2.664	85	0.210
84	2.767	90	0.273
95	3.345		

POORLY GRADED — Cu= 1.562, Cc= 1.151

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-18-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 44 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-18-87

CHECKED BY: DC DATE:11-18-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 264.19

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	0.05	2.000	-1.00	100.0	0.0	
20	0.29	0.850	0.23	99.9	0.1	
40	1.16	0.425	1.23	99.6	0.4	
70	50.99	0.212	2.24	80.7	19.3	
100	200.42	0.150	2.74	24.1	75.9	
200	262.47	0.075	3.74	0.7	99.3	
PAN	264.15			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.387	10	0.106
16	1.957	15	0.122
25	2.278	30	0.157
50	2.478	60	0.190
75	2.727	85	0.271
84	2.995	90	0.330
95	3.476		

POORLY GRADED — Cu= 1.788, Cc= 1.215

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-18-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 44 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:11-18-87

CHECKED BY: DC DATE:11-18-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 298.90

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.99	4.750	-2.25	99.3	0.7	
10	2.60	2.000	-1.00	99.1	0.9	
20	3.85	0.850	0.23	98.7	1.3	
40	5.40	0.425	1.23	98.2	1.8	
70	40.85	0.212	2.24	86.3	13.7	
100	161.06	0.150	2.74	46.1	53.9	
200	298.50	0.075	3.74	0.1	99.9	
PAN	298.91			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.407
16	2.261
25	2.355
50	2.677
75	3.093
84	3.288
95	3.581

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.092
15	0.101
30	0.125
60	0.172
85	0.210
90	0.290

POORLY GRADED — Cu= 1.870, Cc= 0.985

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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: 45 SAMPLE NO: N PENETRATION, ft: SURFACE

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

TESTED BY: DC DATE:11-19-87

CHECKED BY: DC DATE:11-19-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 316.95

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	0.34	2.000	-1.00	99.9	0.1	
20	0.89	0.850	0.23	99.7	0.3	
40	2.09	0.425	1.23	99.3	0.7	
70	25.86	0.212	2.24	91.8	8.2	
100	219.89	0.150	2.74	30.6	69.4	
200	305.81	0.075	3.74	3.5	96.5	
PAN	316.77			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	1.668	10	0.094
16	2.290	15	0.108
25	2.352	30	0.148
50	2.551	60	0.181
75	2.884	85	0.205
84	3.169	90	0.210
95	3.654		

POORLY GRADED Cu= 1.921 Cc= 1.293

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 11-18-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328

CORE NO: 45 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/MANY SHELL FRAGMENTS & MICA

TESTED BY: DC DATE:11-18-87

CHECKED BY: DC DATE:11-18-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 307.47

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	16.24	4.750	-2.25	94.7	5.3	
10	24.02	2.000	-1.00	92.2	7.8	
20	35.33	0.850	0.23	88.5	11.5	
40	41.58	0.425	1.23	86.5	13.5	
70	263.10	0.212	2.24	14.4	85.6	
100	306.70	0.150	2.74	0.3	99.7	
200	307.45	0.075	3.74	0.0	100.0	
PAN	230.69			#N/A	#N/A	

| PARAMETERS |

COASTAL		GEOTECHNICAL	
D PERCENTILE COARSER	SIZE, PHI UNITS	D PERCENTILE FINER	SIZE, mm
5	#N/A	10	0.194
16	1.254	15	0.214
25	1.332	30	0.268
50	1.599	60	0.358
75	1.997	85	0.422
84	2.198	90	1.651
95	2.541		

POORLY GRADED Cu= 1.851 Cc= 1.033