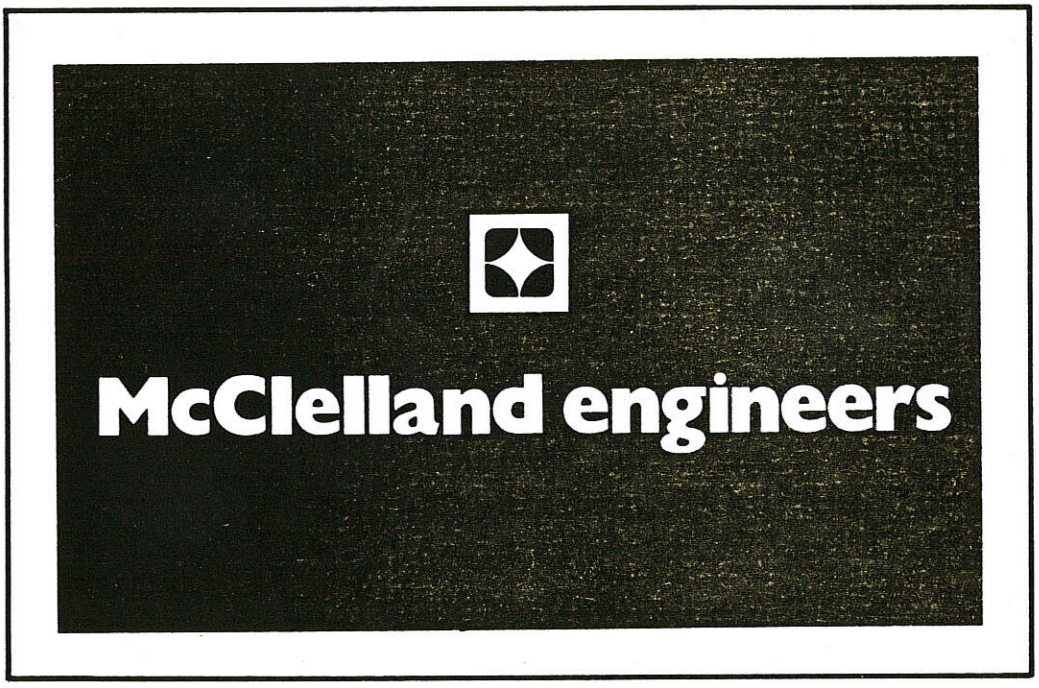
VOLUME Ia

GEOTECHNICAL DATA REPORT
EAST 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



VOLUME Ia
GEOTECHNICAL DATA REPORT
EAST ISLAND
ISLES DERNIERES STABILIZATION PROJECT
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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 Ia
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
East Island
Isles Dernieres Stabilization Project
State Project No. 750-55-01
Terrebonne Parish, Louisiana

Mr. Rogers, we are pleased to submit Volume Ia, 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 Ia presents the field and laboratory data for the East Island Segment. Volumes Ib and Ic contain the field and laboratory data for the Middle 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(R14.8)
Copies Submitted: (6)

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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 Ia, the Geotechnical Data Report - East 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.

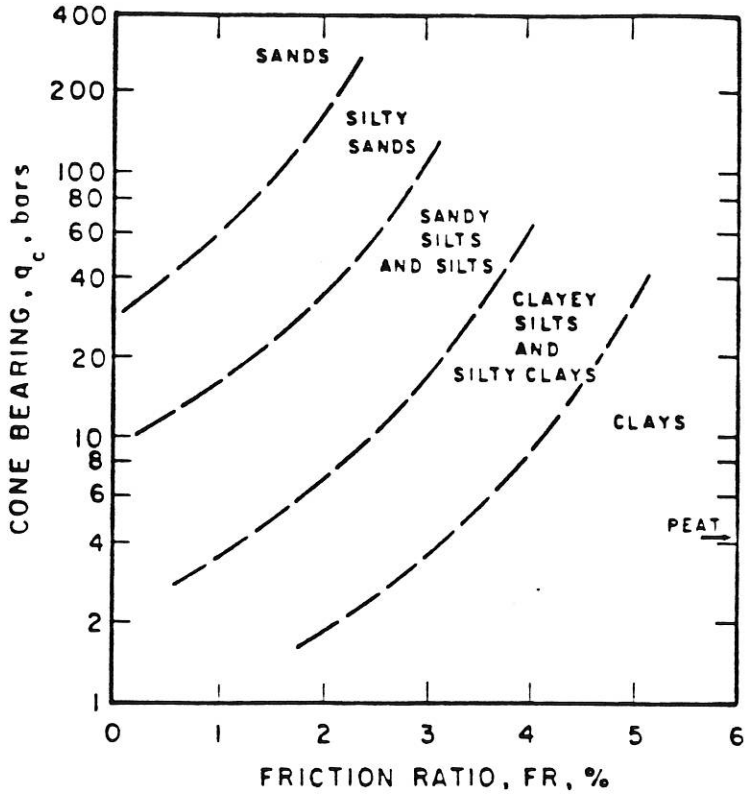
The purpose of this study was to develop site-specific preliminary geotechnical information on the island segments and in the proposed borrow areas north of the islands. It should be recognized that while significant portions of the design concepts can be finalized using the information presented here, optimization of design alternatives requires additional study. To accomplish the purpose of this study, a total of 180 cone penetrometer soundings were performed, with 91 occurring on the East Island. The soundings ranged in depth from 10 to 31 ft and were located about 1500 ft on center along the East 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



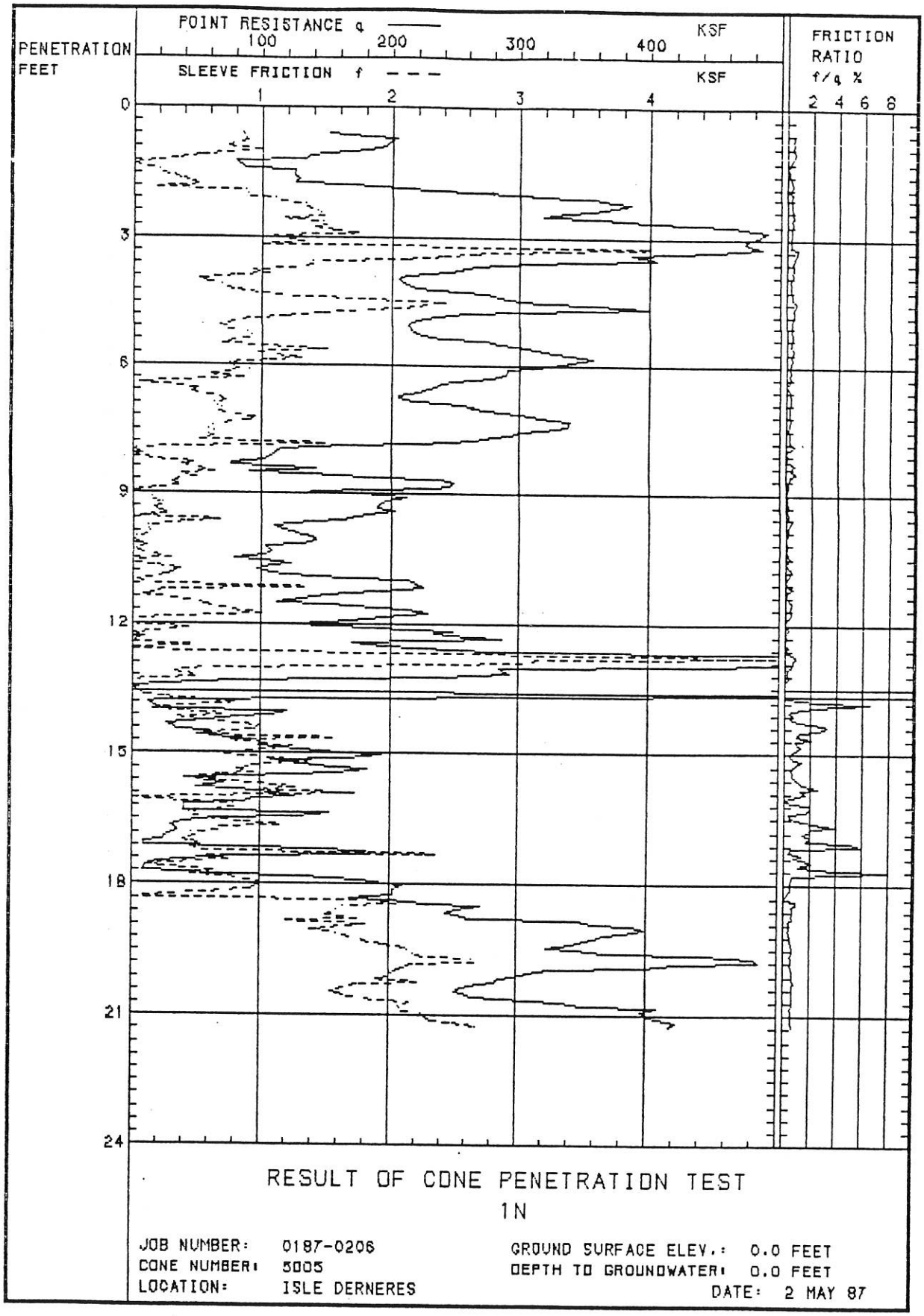
Notes:

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

1N

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

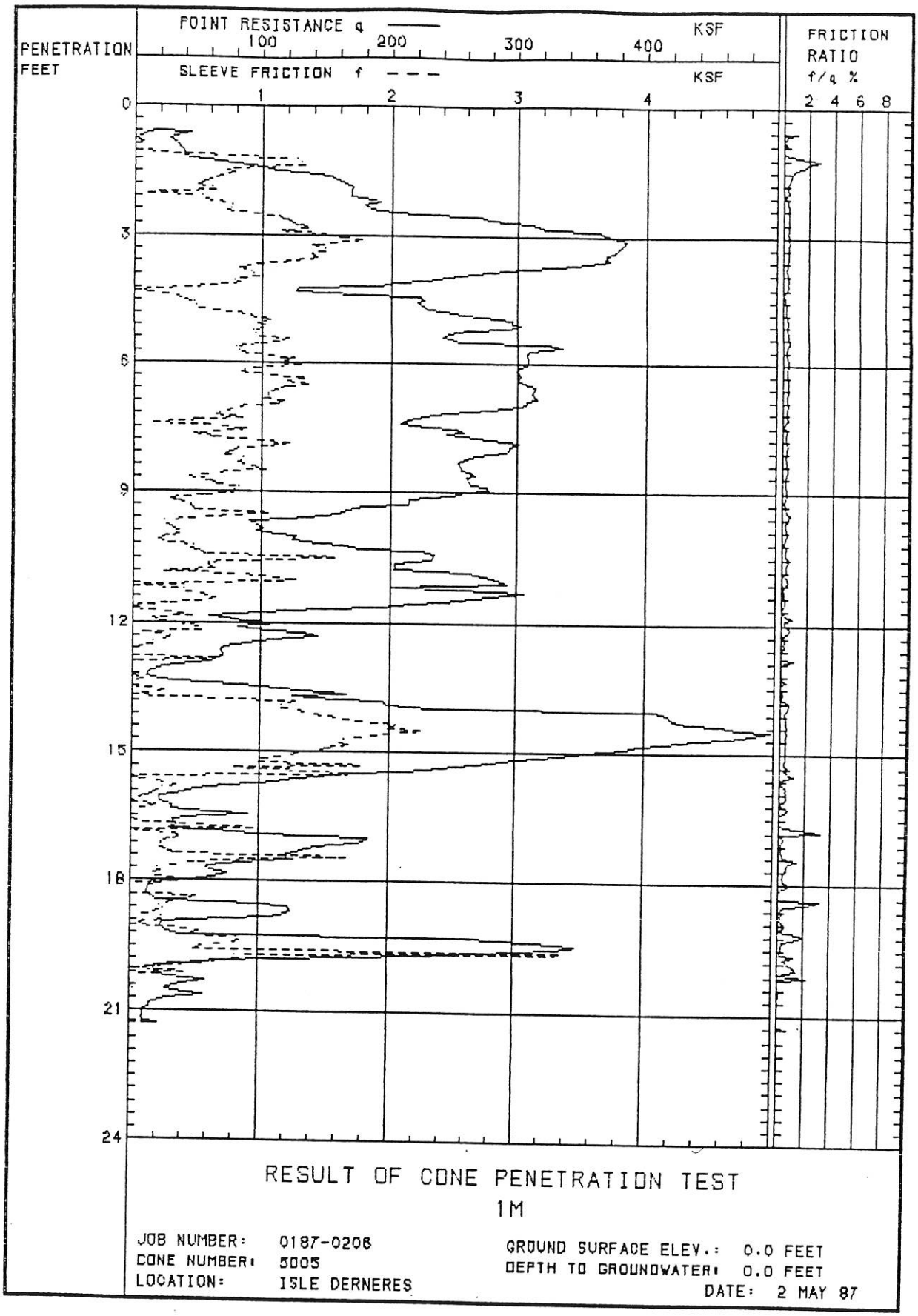
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 1N
CONE NO. : 5005
DATE : 04/29/87

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	158.55	.85	.54	SAND TO SILTY SAND	SM-SP	.04	18			100+	42	.50+
.80	198.26	.80	.40	SAND	SW-SP	.05	18			100+	44	.50+
1.00	167.01	.89	.53	SAND TO SILTY SAND	SM-SP	.06	19			100+	42	.50+
1.20	107.18	.19	.18	SAND TO SILTY SAND	SM-SP	.07	12			100+	42	.50+
1.40	106.62	.21	.20	SAND TO SILTY SAND	SM-SP	.08	12			100+	42	.50+
1.60	127.35	.20	.16	SAND TO SILTY SAND	SM-SP	.10	15			100+	42	.50+
1.80	188.37	.26	.14	SAND	SW-SP	.12	18			100+	44	.50+
2.00	319.88	1.17	.37	SAND	SW-SP	.13	30			100+	44	.50+
2.20	377.96	1.24	.33	SAND	SW-SP	.14	36			100+	44	.50+
2.40	346.04	2.45	.71	SAND	SW-SP	.16	33			100+	44	.50+
2.60	379.83	1.47	.39	SAND	SW-SP	.17	36			100+	44	.50+
2.80	480.24	1.49	.31	GRAVELLY SAND TO SAND	SW-GW	.18	38			100+	46	.50+
3.00	478.24	1.12	.23	GRAVELLY SAND TO SAND	SW-GW	.20	38			100+	46	.50+
3.20	482.05	3.17	.66	SAND	SW-SP	.21	46			100+	44	.50+
3.40	389.98	2.52	.65	SAND	SW-SP	.22	37			100+	44	.50+
3.60	313.80	1.58	.50	SAND	SW-SP	.23	30			100+	44	.50+
3.80	243.01	1.00	.41	SAND	SW-SP	.25	23			100+	44	.50+
4.00	207.14	.56	.27	SAND	SW-SP	.26	19			100+	44	.50+
4.20	226.03	.78	.34	SAND	SW-SP	.27	21			100+	44	.50+
4.40	287.43	1.17	.41	SAND	SW-SP	.29	27			100+	44	.50+
4.60	378.87	2.20	.58	SAND	SW-SP	.30	36			100+	44	.50+
4.80	247.05	1.11	.45	SAND	SW-SP	.31	23			100+	44	.50+
5.00	214.19	.65	.30	SAND	SW-SP	.32	20			100+	44	.50+
5.20	215.32	.81	.38	SAND	SW-SP	.34	20			100+	44	.50+
5.40	255.35	.87	.34	SAND	SW-SP	.35	24			100+	44	.50+
5.60	304.65	1.30	.43	SAND	SW-SP	.36	29			100+	44	.50+
5.80	347.73	1.21	.35	SAND	SW-SP	.38	33			100+	44	.50+
6.00	323.21	.77	.24	SAND	SW-SP	.39	30			100+	44	.50+
6.20	289.37	.66	.23	SAND	SW-SP	.40	27			100+	44	.50+
6.40	244.01	1.18	.48	SAND	SW-SP	.42	23			100+	44	.50+
6.60	225.34	.49	.22	SAND	SW-SP	.43	21			100+	44	.50+
6.80	211.18	.70	.33	SAND	SW-SP	.44	20			100+	44	.50+
7.00	263.03	.57	.22	SAND	SW-SP	.45	25			100+	44	.50+
7.20	312.23	.88	.28	SAND	SW-SP	.47	29			100+	44	.50+
7.40	337.58	1.09	.32	SAND	SW-SP	.48	32			100+	44	.50+
7.60	296.95	.62	.21	SAND	SW-SP	.49	28			100+	44	.50+
7.80	243.70	1.00	.41	SAND	SW-SP	.51	23			100+	44	.50+
8.00	115.48	.04	.04	SAND TO SILTY SAND	SM-SP	.48	13			85	41	.50+
8.20	104.09	.10	.10	SAND TO SILTY SAND	SM-SP	.49	12			81	40	.50+
8.40	109.58	.15	.13	SAND TO SILTY SAND	SM-SP	.50	13			82	40	.50+
8.60	158.98	.46	.29	SAND TO SILTY SAND	SM-SP	.52	19			95	42	.50+
8.80	247.06	.18	.07	SAND	SW-SP	.57	23			100+	44	.50+
9.00	156.78	.26	.16	SAND TO SILTY SAND	SM-SP	.54	18			94	42	.50+
9.20	195.15	.18	.09	SAND	SW-SP	.60	18			100+	44	.50+
9.40	196.06	.55	.28	SAND	SW-SP	.61	18			100+	44	.50+

9.60	168.53	.53	.31	SAND	SW-SP	.62	16			93	44	.50+
9.80	113.50	.13	.11	SAND TO SILTY SAND	SM-SP	.59	13			80	40	.50+
10.00	136.12	.05	.04	SAND TO SILTY SAND	SM-SP	.60	16			86	41	.50+
10.20	118.10	.06	.05	SAND TO SILTY SAND	SM-SP	.61	14			81	40	.50+
10.40	105.91	.23	.21	SAND TO SILTY SAND	SM-SP	.62	12			77	40	.50+
10.60	112.23	.02	.02	SAND TO SILTY SAND	SM-SP	.64	13			78	40	.50+
10.80	102.72	.35	.34	SAND TO SILTY SAND	SM-SP	.65	12			74	40	.50+
11.00	189.89	.09	.05	SAND	SW-SP	.71	18			94	44	.50+
11.20	218.00	.80	.37	SAND	SW-SP	.73	20			99	44	.50+
11.40	141.45	.19	.14	SAND TO SILTY SAND	SM-SP	.68	16			84	41	.50+
11.60	170.12	.13	.08	SAND	SW-SP	.75	16			88	43	.50+
11.80	211.54	.54	.25	SAND	SW-SP	.77	20			96	44	.50+
12.00	138.74	.00	.00	SAND TO SILTY SAND	SM-SP	.72	16			83	40	.50+
12.20	241.29	.67	.28	SAND	SW-SP	.79	23			100+	44	.50+
12.40	229.82	.25	.11	SAND	SW-SP	.81	22			99	44	.50+
12.60	250.07	.16	.06	SAND	SW-SP	.82	23			100+	44	.50+
12.80	586.99	3.88	.66	SAND	SW-SP	.83	56			100+	44	.50+
13.00	361.50	2.28	.63	SAND	SW-SP	.84	34			100+	44	.50+
13.20	265.98	.47	.18	SAND	SW-SP	.86	25			100+	44	.50+
13.40	26.34	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.67	5	1.901	13.5	30	32	.13
13.60	292.50	.09	.03	SAND	SW-SP	.88	28			100+	44	.50+
13.80	16.97	.53	3.12	SILTY CLAY TO CLAY	CL-CH	.55	5	1.216	13.5			
14.00	71.12	.08	.11	SAND TO SILTY SAND	SM-SP	.84	8			58	38	.21
14.20	71.10	.66	.93	SILTY SAND TO SANDY SILT	SM-ML	.78	11			60	36	.22
14.40	33.07	.57	1.72	SANDY SILT TO CLAYEY SILT	ML-MH	.72	6	2.396	13.5	37	33	.14
14.60	65.25	.99	1.52	SANDY SILT TO CLAYEY SILT	ML-MH	.73	12	4.779	13.5	59	36	.21
14.80	99.36	.26	.26	SAND TO SILTY SAND	SM-SP	.89	11			66	39	.36
15.00	177.91	.77	.43	SAND TO SILTY SAND	SM-SP	.90	21			86	41	.50+
15.20	120.06	.88	.73	SAND TO SILTY SAND	SM-SP	.91	14			72	39	.50+
15.40	171.10	.89	.52	SAND TO SILTY SAND	SM-SP	.92	20			84	41	.50+
15.60	53.44	.54	1.02	SANDY SILT TO CLAYEY SILT	ML-MH	.78	10	3.901	13.5	49	35	.17
15.80	65.43	1.18	1.80	SANDY SILT TO CLAYEY SILT	ML-MH	.79	12	4.788	13.5	57	36	.20
16.00	111.61	.70	.62	SAND TO SILTY SAND	SM-SP	.96	13			68	39	.43
16.20	41.18	.76	1.84	SANDY SILT TO CLAYEY SILT	ML-MH	.81	7	2.990	13.5	41	34	.15
16.40	141.47	.47	.33	SAND TO SILTY SAND	SM-SP	.98	16			76	40	.50+
16.60	35.68	.71	1.99	SANDY SILT TO CLAYEY SILT	ML-MH	.83	6	2.581	13.5	35	33	.14
16.80	34.57	.57	1.66	SANDY SILT TO CLAYEY SILT	ML-MH	.84	6	2.498	13.5	33	33	.13
17.00	16.81	.54	3.20	SILTY CLAY TO CLAY	CL-CH	.68	5	1.195	13.5			
17.20	137.77	.55	.40	SAND TO SILTY SAND	SM-SP	1.03	16			74	40	.50+
17.40	62.44	.68	1.08	SILTY SAND TO SANDY SILT	SM-ML	.96	9			49	35	.17
17.60	10.12	.24	2.39	SILTY CLAY TO CLAY	CL-CH	.70	3	.697	13.5			
17.80	98.69	.73	.74	SAND TO SILTY SAND	SM-SP	1.07	11			62	38	.26
18.00	203.65	.97	.48	SAND	SW-SP	1.17	19			84	43	.50+
18.20	202.67	1.20	.59	SAND TO SILTY SAND	SM-SP	1.09	24			85	41	.50+
18.40	213.40	1.53	.72	SAND TO SILTY SAND	SM-SP	1.10	25			87	41	.50+
18.60	248.17	1.29	.52	SAND	SW-SP	1.21	23			90	43	.50+
18.80	303.16	1.49	.49	SAND	SW-SP	1.22	29			98	44	.50+
19.00	392.67	1.64	.42	SAND	SW-SP	1.23	37			100+	44	.50+
19.20	363.76	1.71	.47	SAND	SW-SP	1.25	34			100+	44	.50+
19.40	333.51	2.04	.61	SAND	SW-SP	1.26	31			100+	44	.50+
19.60	404.03	2.20	.54	SAND	SW-SP	1.27	38			100+	44	.50+
19.80	454.59	2.44	.54	SAND	SW-SP	1.29	43			100+	44	.50+
20.00	316.58	2.05	.65	SAND	SW-SP	1.30	30			98	44	.50+
20.20	284.42	2.06	.72	SAND	SW-SP	1.31	27			93	44	.50+
20.40	253.77	1.36	.54	SAND	SW-SP	1.33	24			88	43	.50+
20.60	274.07	1.75	.64	SAND	SW-SP	1.34	26			91	43	.50+
20.80	378.64	2.03	.54	SAND	SW-SP	1.35	36			100+	44	.50+
21.00	399.99	2.24	.56	SAND	SW-SP	1.37	38			100+	44	.50+
21.20	419.75	2.59	.62	SAND	SW-SP	1.38	40			100+	44	.50+



RESULT OF CONE PENETRATION TEST

1M

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

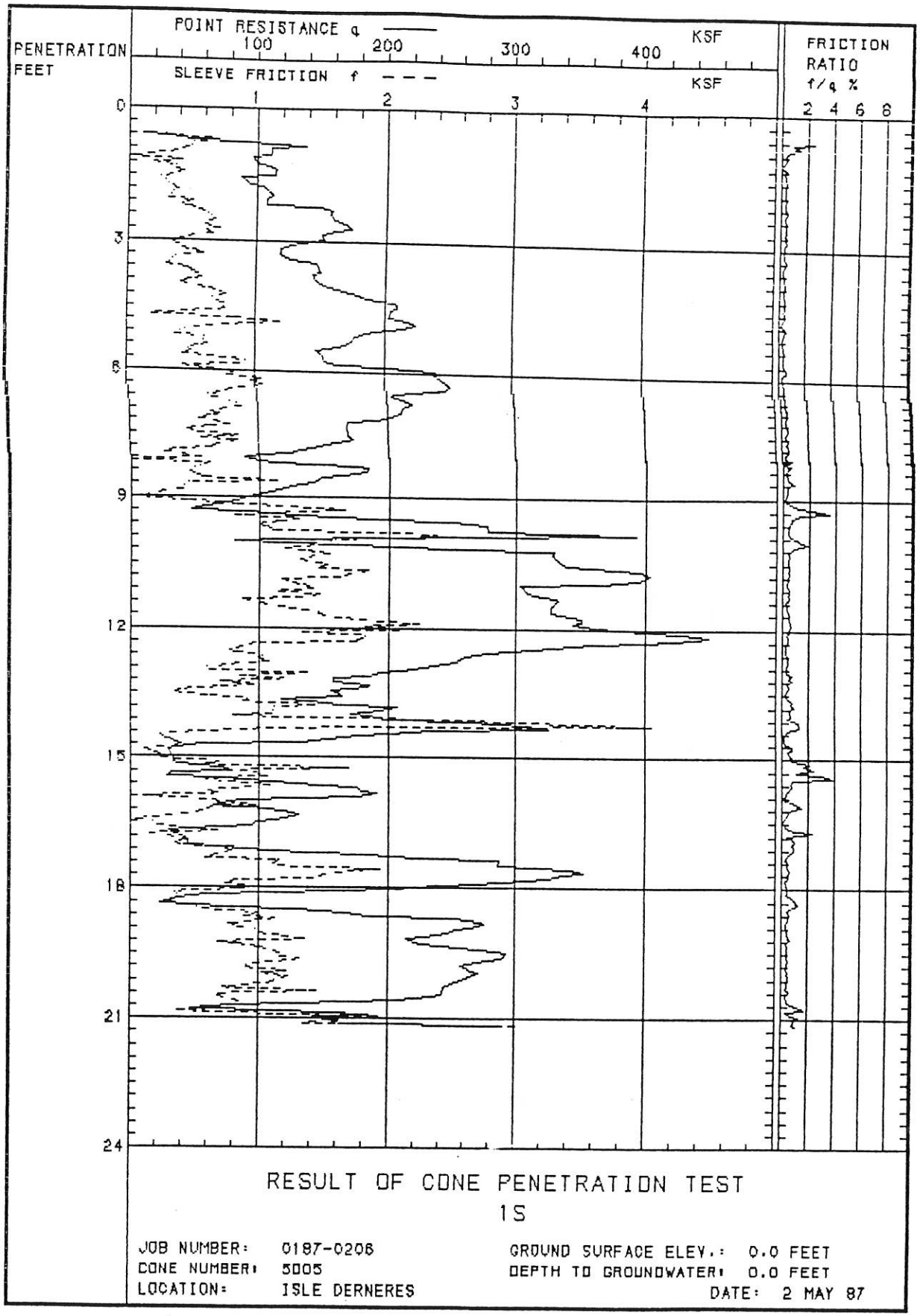
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 1M
CONE NO. : 5005
DATE : 04/29/87

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	29.92	.08	.28	SANDY SILT TO CLAYEY SILT	ML-MH	.03	5	2.214	13.5	70	38	.50+
.80	29.47	.05	.16	SANDY SILT TO CLAYEY SILT	ML-MH	.04	5	2.180	13.5	69	38	.50+
1.00	37.08	.01	.02	SILTY SAND TO SANDY SILT	SM-ML	.05	5			73	38	.50+
1.20	42.45	.63	1.49	SANDY SILT TO CLAYEY SILT	ML-MH	.06	8	3.140	13.5	77	39	.50+
1.40	95.77	1.18	1.23	SILTY SAND TO SANDY SILT	SM-ML	.08	15			100+	42	.50+
1.60	142.17	1.69	1.19	SILTY SAND TO SANDY SILT	SM-ML	.09	22			100+	42	.50+
1.80	164.56	.53	.32	SAND TO SILTY SAND	SM-SP	.11	19			100+	42	.50+
2.00	168.53	.37	.22	SAND	SW-SP	.13	16			100+	44	.50+
2.20	188.21	.68	.36	SAND	SW-SP	.14	18			100+	44	.50+
2.40	187.00	.71	.38	SAND	SW-SP	.16	17			100+	44	.50+
2.60	273.37	1.24	.45	SAND	SW-SP	.17	26			100+	44	.50+
2.80	318.64	1.33	.42	SAND	SW-SP	.18	30			100+	44	.50+
3.00	373.35	1.75	.47	SAND	SW-SP	.20	35			100+	44	.50+
3.20	380.92	1.48	.39	SAND	SW-SP	.21	36			100+	44	.50+
3.40	371.85	1.43	.39	SAND	SW-SP	.22	35			100+	44	.50+
3.60	363.44	1.21	.33	SAND	SW-SP	.23	34			100+	44	.50+
3.80	291.48	.92	.31	SAND	SW-SP	.25	27			100+	44	.50+
4.00	235.83	.89	.38	SAND	SW-SP	.26	22			100+	44	.50+
4.20	159.88	.66	.41	SAND TO SILTY SAND	SM-SP	.25	19			100+	42	.50+
4.40	198.15	.28	.14	SAND	SW-SP	.29	18			100+	44	.50+
4.60	222.42	.53	.24	SAND	SW-SP	.30	21			100+	44	.50+
4.80	248.66	.81	.33	SAND	SW-SP	.31	23			100+	44	.50+
5.00	295.37	1.02	.35	SAND	SW-SP	.32	28			100+	44	.50+
5.20	276.69	1.04	.37	SAND	SW-SP	.34	26			100+	44	.50+
5.40	243.29	1.10	.45	SAND	SW-SP	.35	23			100+	44	.50+
5.60	328.83	.89	.27	SAND	SW-SP	.36	31			100+	44	.50+
5.80	307.14	.99	.32	SAND	SW-SP	.38	29			100+	44	.50+
6.00	307.52	1.29	.42	SAND	SW-SP	.39	29			100+	44	.50+
6.20	299.59	.92	.31	SAND	SW-SP	.40	28			100+	44	.50+
6.40	301.00	1.27	.42	SAND	SW-SP	.42	28			100+	44	.50+
6.60	313.28	1.13	.36	SAND	SW-SP	.43	30			100+	44	.50+
6.80	314.10	1.03	.33	SAND	SW-SP	.44	30			100+	44	.50+
7.00	304.35	1.00	.33	SAND	SW-SP	.45	29			100+	44	.50+
7.20	238.92	.69	.29	SAND	SW-SP	.47	22			100+	44	.50+
7.40	211.01	.97	.46	SAND	SW-SP	.48	20			100+	44	.50+
7.60	253.65	.58	.23	SAND	SW-SP	.49	24			100+	44	.50+
7.80	278.37	.94	.34	SAND	SW-SP	.51	26			100+	44	.50+
8.00	294.10	.94	.32	SAND	SW-SP	.52	28			100+	44	.50+
8.20	265.10	.81	.31	SAND	SW-SP	.53	25			100+	44	.50+
8.40	253.81	.96	.38	SAND	SW-SP	.55	24			100+	44	.50+
8.60	263.38	.59	.22	SAND	SW-SP	.56	25			100+	44	.50+
8.80	261.99	.62	.24	SAND	SW-SP	.57	25			100+	44	.50+
9.00	268.13	.81	.30	SAND	SW-SP	.58	25			100+	44	.50+
9.20	214.37	.56	.26	SAND	SW-SP	.60	20			100+	44	.50+
9.40	173.22	.47	.27	SAND	SW-SP	.61	16			94	44	.50+

9.60	135.21	.20	.15	SAND TO SILTY SAND	SM-SP	.58	16			86	41	.50+
9.80	99.38	.25	.25	SAND TO SILTY SAND	SM-SP	.59	11			76	40	.50+
10.00	119.89	.08	.07	SAND TO SILTY SAND	SM-SP	.60	14			82	40	.50+
10.20	154.57	.40	.26	SAND TO SILTY SAND	SM-SP	.61	18			90	41	.50+
10.40	229.05	.63	.28	SAND	SW-SP	.68	21			100+	44	.50+
10.60	217.85	.69	.32	SAND	SW-SP	.69	20			100+	44	.50+
10.80	231.50	.45	.19	SAND	SW-SP	.70	22			100+	44	.50+
11.00	281.53	1.18	.42	SAND	SW-SP	.71	26			100+	44	.50+
11.20	225.90	.80	.36	SAND	SW-SP	.73	21			100+	44	.50+
11.40	279.23	.72	.26	SAND	SW-SP	.74	26			100+	44	.50+
11.60	205.81	.61	.30	SAND	SW-SP	.75	19			96	44	.50+
11.80	81.16	.08	.10	SAND TO SILTY SAND	SM-SP	.71	9			65	39	.32
12.00	101.27	.55	.54	SAND TO SILTY SAND	SM-SP	.72	12			72	39	.50+
12.20	120.23	.19	.16	SAND TO SILTY SAND	SM-SP	.73	14			78	40	.50+
12.40	111.21	.22	.20	SAND TO SILTY SAND	SM-SP	.74	13			74	40	.50+
12.60	70.61	.12	.17	SILTY SAND TO SANDY SILT	SM-ML	.69	11			62	37	.25
12.80	68.84	.00	.00	SAND TO SILTY SAND	SM-SP	.77	8			60	38	.21
13.00	29.77	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.65	5	2.157	13.5	36	33	.14
13.20	11.52	.02	.18	SENSITIVE FINE GRAINED	OL-CH	.40	2	.824	13.5			
13.40	58.58	.26	.44	SILTY SAND TO SANDY SILT	SM-ML	.74	9			54	36	.19
13.60	149.78	.37	.25	SAND TO SILTY SAND	SM-SP	.82	17			82	40	.50+
13.80	176.75	1.11	.63	SAND TO SILTY SAND	SM-SP	.83	21			87	41	.50+
14.00	318.91	1.23	.39	SAND	SW-SP	.91	30			100+	44	.50+
14.20	420.28	1.59	.38	SAND	SW-SP	.92	40			100+	44	.50+
14.40	464.27	2.02	.44	SAND	SW-SP	.94	44			100+	44	.50+
14.60	474.08	1.73	.37	SAND	SW-SP	.95	45			100+	44	.50+
14.80	405.55	1.65	.41	SAND	SW-SP	.96	38			100+	44	.50+
15.00	350.72	1.42	.40	SAND	SW-SP	.97	33			100+	44	.50+
15.20	290.35	1.04	.36	SAND	SW-SP	.99	27			100+	44	.50+
15.40	227.41	.74	.33	SAND	SW-SP	1.00	21			92	44	.50+
15.60	131.37	.51	.39	SAND TO SILTY SAND	SM-SP	.94	15			75	40	.50+
15.80	68.34	.32	.47	SILTY SAND TO SANDY SILT	SM-ML	.87	10			55	36	.19
16.00	28.29	.15	.53	SANDY SILT TO CLAYEY SILT	ML-MH	.80	5	2.036	13.5	28	32	.12
16.20	27.00	.10	.36	SANDY SILT TO CLAYEY SILT	ML-MH	.81	5	1.940	13.5	26	32	.12
16.40	66.41	.00	.00	SAND TO SILTY SAND	SM-SP	.98	7			51	37	.18
16.60	33.61	.01	.04	SANDY SILT TO CLAYEY SILT	ML-MH	.83	6	2.428	13.5	33	33	.13
16.80	46.89	.81	1.73	SANDY SILT TO CLAYEY SILT	ML-MH	.84	8	3.411	13.5	43	34	.15
17.00	183.88	.49	.27	SAND	SW-SP	1.10	17			82	43	.50+
17.20	146.92	.23	.16	SAND TO SILTY SAND	SM-SP	1.03	17			76	40	.50+
17.40	121.73	.27	.22	SAND TO SILTY SAND	SM-SP	1.04	14			69	39	.47
17.60	74.49	.12	.16	SAND TO SILTY SAND	SM-SP	1.06	8			53	37	.19
17.80	71.50	.18	.25	SILTY SAND TO SANDY SILT	SM-ML	.98	11			54	36	.19
18.00	38.38	.20	.52	SANDY SILT TO CLAYEY SILT	ML-MH	.90	7	2.776	13.5	35	33	.14
18.20	13.31	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.55	3	.946	13.5			
18.40	17.73	.32	1.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.83	4	1.252	13.5			
18.60	123.37	.23	.19	SAND TO SILTY SAND	SM-SP	1.12	14			68	39	.42
18.80	112.40	.17	.15	SAND TO SILTY SAND	SM-SP	1.13	13			65	39	.32
19.00	24.19	.28	1.15	SANDY SILT TO CLAYEY SILT	ML-MH	.95	4	1.722	13.5	20	31	.11
19.20	33.35	.48	1.43	SANDY SILT TO CLAYEY SILT	ML-MH	.96	6	2.399	13.5	28	32	.13
19.40	330.43	.44	.13	SAND	SW-SP	1.26	31			100+	44	.50+
19.60	288.51	2.64	.92	SAND	SW-SP	1.27	27			94	44	.50+
19.80	92.44	.79	.85	SILTY SAND TO SANDY SILT	SM-ML	1.09	14			60	37	.23
20.00	18.94	.00	.02	SENSITIVE FINE GRAINED	OL-CH	.60	4	1.358	13.5			
20.20	30.85	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	1.01	5	2.211	13.5	25	32	.12
20.40	35.47	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	1.12	5			27	32	.12
20.60	50.03	.01	.01	SILTY SAND TO SANDY SILT	SM-ML	1.13	7			38	33	.14
20.80	16.92	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.62	4	1.207	13.5			
21.00	10.76	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.63	2	.750	13.5			
21.20	9.97	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.64	2	.691	13.5			



RESULT OF CONE PENETRATION TEST

1S

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

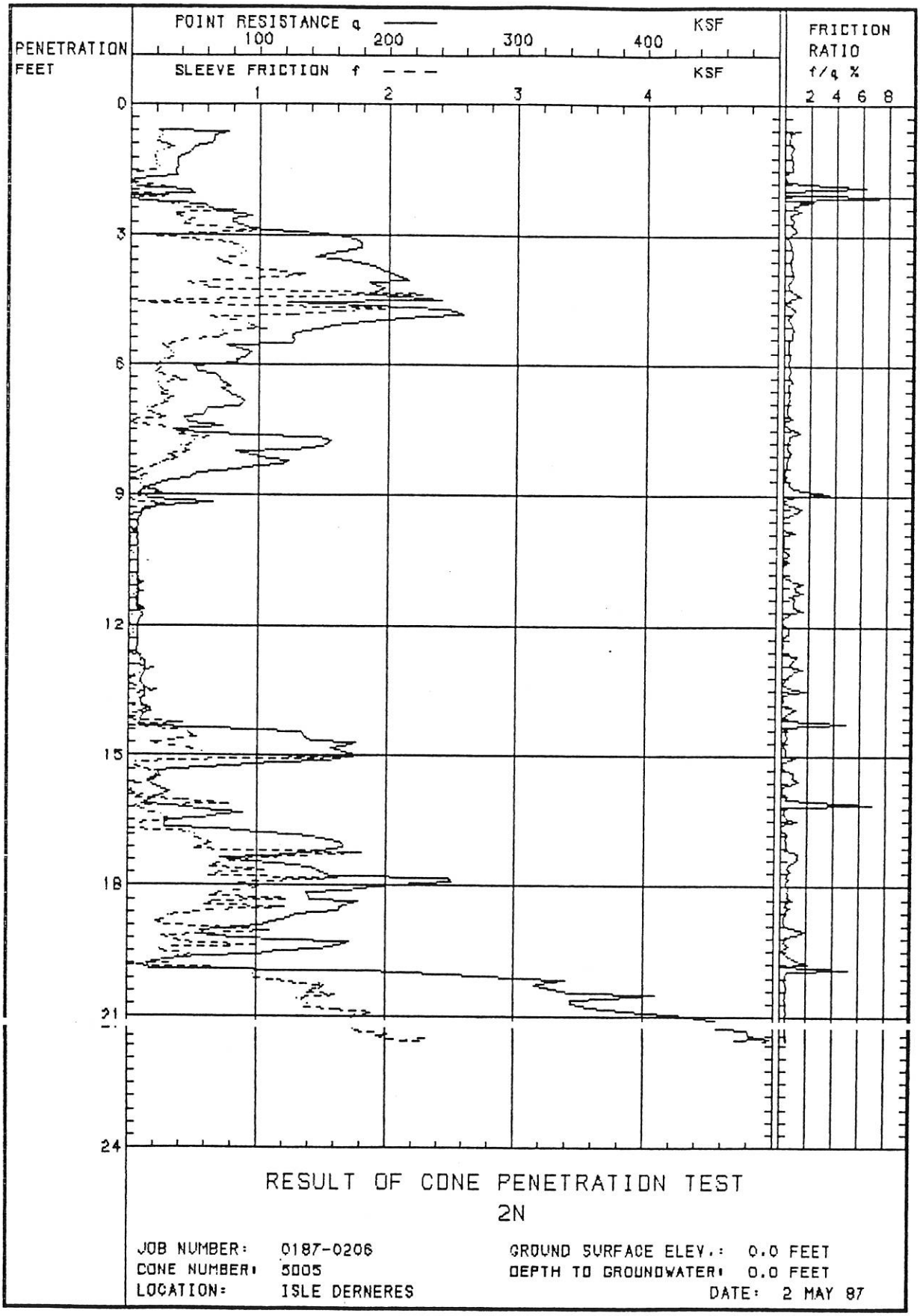
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 1S
CONE NO. : 5005
DATE : 04/29/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	21.48	.29	1.35	CLAYEY SILT TO SILTY CLAY	MH-CL	.03	5	1.589	13.5			
.80	114.05	.29	.25	SAND TO SILTY SAND	SM-SP	.05	13			100+	42	.50+
1.00	110.35	.29	.27	SAND TO SILTY SAND	SM-SP	.06	13			100+	42	.50+
1.20	98.59	.23	.23	SAND TO SILTY SAND	SM-SP	.07	11			100+	42	.50+
1.40	114.57	.19	.16	SAND TO SILTY SAND	SM-SP	.08	13			100+	42	.50+
1.60	89.57	.37	.41	SAND TO SILTY SAND	SM-SP	.10	10			100+	42	.50+
1.80	106.38	.26	.24	SAND TO SILTY SAND	SM-SP	.11	12			100+	42	.50+
2.00	110.61	.36	.32	SAND TO SILTY SAND	SM-SP	.12	13			100+	42	.50+
2.20	128.58	.49	.38	SAND TO SILTY SAND	SM-SP	.13	15			100+	42	.50+
2.40	158.11	.60	.38	SAND TO SILTY SAND	SM-SP	.14	18			100+	42	.50+
2.60	168.27	.62	.37	SAND TO SILTY SAND	SM-SP	.16	20			100+	42	.50+
2.80	156.53	.64	.41	SAND TO SILTY SAND	SM-SP	.17	18			100+	42	.50+
3.00	144.39	.38	.26	SAND TO SILTY SAND	SM-SP	.18	17			100+	42	.50+
3.20	119.68	.41	.35	SAND TO SILTY SAND	SM-SP	.19	14			100+	42	.50+
3.40	125.56	1.31	1.04	SAND TO SILTY SAND	SM-SP	.20	15			100+	42	.50+
3.60	148.32	.42	.28	SAND TO SILTY SAND	SM-SP	.22	17			100+	42	.50+
3.80	144.62	.42	.29	SAND TO SILTY SAND	SM-SP	.23	17			100+	42	.50+
4.00	152.78	.47	.31	SAND TO SILTY SAND	SM-SP	.24	18			100+	42	.50+
4.20	176.19	.75	.43	SAND TO SILTY SAND	SM-SP	.25	21			100+	42	.50+
4.40	207.91	.73	.35	SAND	SW-SP	.29	19			100+	44	.50+
4.60	203.89	.69	.34	SAND	SW-SP	.30	19			100+	44	.50+
4.80	216.32	.94	.44	SAND	SW-SP	.31	20			100+	44	.50+
5.00	203.51	.58	.29	SAND	SW-SP	.32	19			100+	44	.50+
5.20	176.72	.43	.25	SAND	SW-SP	.34	16			100+	44	.50+
5.40	167.01	.65	.39	SAND TO SILTY SAND	SM-SP	.32	19			100+	42	.50+
5.60	150.62	.48	.32	SAND TO SILTY SAND	SM-SP	.34	18			100+	42	.50+
5.80	158.01	.90	.57	SAND TO SILTY SAND	SM-SP	.35	18			100+	42	.50+
6.00	239.12	.20	.08	SAND	SW-SP	.39	22			100+	44	.50+
6.20	247.02	1.01	.41	SAND	SW-SP	.40	23			100+	44	.50+
6.40	241.98	.86	.36	SAND	SW-SP	.42	23			100+	44	.50+
6.60	207.52	.74	.36	SAND	SW-SP	.43	19			100+	44	.50+
6.80	215.36	1.61	.75	SAND TO SILTY SAND	SM-SP	.41	25			100+	42	.50+
7.00	208.19	.64	.31	SAND	SW-SP	.45	19			100+	44	.50+
7.20	181.43	.56	.31	SAND	SW-SP	.47	17			100+	44	.50+
7.40	168.66	.39	.23	SAND	SW-SP	.48	16			100+	44	.50+
7.60	171.83	.70	.41	SAND TO SILTY SAND	SM-SP	.46	20			100+	42	.50+
7.80	147.61	.67	.46	SAND TO SILTY SAND	SM-SP	.47	17			95	42	.50+
8.00	113.69	.36	.31	SAND TO SILTY SAND	SM-SP	.48	13			84	41	.50+
8.20	106.44	.60	.57	SAND TO SILTY SAND	SM-SP	.49	12			82	40	.50+
8.40	183.63	.35	.19	SAND	SW-SP	.55	17			100+	44	.50+
8.60	146.94	.55	.37	SAND TO SILTY SAND	SM-SP	.52	17			92	42	.50+
8.80	120.76	.41	.34	SAND TO SILTY SAND	SM-SP	.53	14			84	41	.50+
9.00	95.06	.15	.15	SAND TO SILTY SAND	SM-SP	.54	11			76	40	.50+
9.20	64.13	1.03	1.61	SANDY SILT TO CLAYEY SILT	ML-MH	.46	12	4.717	13.5	67	37	.38
9.40	109.05	1.03	.94	SILTY SAND TO SANDY SILT	SM-ML	.52	17			81	39	.50+

9.60	262.70	.89	.34	SAND	SW-SP	.62	25			100+	44	.50+
9.80	334.21	1.94	.58	SAND	SW-SP	.64	32			100+	44	.50+
10.00	102.21	2.42	2.37	SANDY SILT TO CLAYEY SILT	ML-MH	.50	19	7.534	13.5	80	39	.50+
10.20	289.68	1.10	.38	SAND	SW-SP	.66	27			100+	44	.50+
10.40	331.22	1.94	.59	SAND	SW-SP	.68	31			100+	44	.50+
10.60	357.73	1.49	.42	SAND	SW-SP	.69	34			100+	44	.50+
10.80	401.02	1.67	.42	SAND	SW-SP	.70	38			100+	44	.50+
11.00	335.52	1.33	.40	SAND	SW-SP	.71	32			100+	44	.50+
11.20	311.44	1.31	.42	SAND	SW-SP	.73	29			100+	44	.50+
11.40	331.21	1.84	.56	SAND	SW-SP	.74	31			100+	44	.50+
11.60	327.21	1.30	.40	SAND	SW-SP	.75	31			100+	44	.50+
11.80	350.36	1.74	.50	SAND	SW-SP	.77	33			100+	44	.50+
12.00	370.02	2.19	.59	SAND	SW-SP	.78	35			100+	44	.50+
12.20	443.02	1.81	.41	SAND	SW-SP	.79	42			100+	44	.50+
12.40	345.26	.74	.22	SAND	SW-SP	.81	33			100+	44	.50+
12.60	269.96	.90	.33	SAND	SW-SP	.82	25			100+	44	.50+
12.80	248.41	.96	.39	SAND	SW-SP	.83	23			100+	44	.50+
13.00	202.07	1.18	.58	SAND TO SILTY SAND	SM-SP	.78	24			94	42	.50+
13.20	158.04	.95	.60	SAND TO SILTY SAND	SM-SP	.79	18			85	41	.50+
13.40	170.60	.77	.45	SAND TO SILTY SAND	SM-SP	.80	20			87	41	.50+
13.60	141.89	.76	.53	SAND TO SILTY SAND	SM-SP	.82	16			81	40	.50+
13.80	184.71	1.42	.77	SAND TO SILTY SAND	SM-SP	.83	22			89	41	.50+
14.00	177.79	1.20	.67	SAND TO SILTY SAND	SM-SP	.84	21			87	41	.50+
14.20	284.67	3.64	1.28	SAND TO SILTY SAND	SM-SP	.85	34			100+	42	.50+
14.40	217.98	.32	.14	SAND	SW-SP	.94	20			92	44	.50+
14.60	143.94	.32	.22	SAND TO SILTY SAND	SM-SP	.88	17			80	40	.50+
14.80	32.81	.38	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	.74	6	2.376	13.5	35	33	.14
15.00	32.98	.37	1.12	SANDY SILT TO CLAYEY SILT	ML-MH	.75	6	2.388	13.5	35	33	.14
15.20	53.58	1.13	2.12	SANDY SILT TO CLAYEY SILT	ML-MH	.76	10	3.912	13.5	50	35	.17
15.40	30.48	.15	.50	SANDY SILT TO CLAYEY SILT	ML-MH	.77	5	2.201	13.5	31	32	.13
15.60	128.74	.92	.72	SAND TO SILTY SAND	SM-SP	.94	15			74	40	.50+
15.80	184.75	.65	.35	SAND	SW-SP	1.03	17			84	43	.50+
16.00	82.98	.92	1.11	SILTY SAND TO SANDY SILT	SM-ML	.88	13			62	37	.24
16.20	105.30	.63	.60	SAND TO SILTY SAND	SM-SP	.97	12			66	39	.35
16.40	120.37	.29	.24	SAND TO SILTY SAND	SM-SP	.98	14			70	39	.50+
16.60	71.43	.28	.39	SILTY SAND TO SANDY SILT	SM-ML	.91	11			56	36	.20
16.80	37.41	.22	.59	SANDY SILT TO CLAYEY SILT	ML-MH	.84	7	2.709	13.5	36	33	.14
17.00	45.77	.42	.92	SANDY SILT TO CLAYEY SILT	ML-MH	.85	8	3.327	13.5	42	34	.15
17.20	142.75	.91	.63	SAND TO SILTY SAND	SM-SP	1.03	17			75	40	.50+
17.40	286.81	1.16	.40	SAND	SW-SP	1.13	27			98	44	.50+
17.60	347.42	1.80	.52	SAND	SW-SP	1.14	33			100+	44	.50+
17.80	317.34	1.14	.36	SAND	SW-SP	1.16	30			100+	44	.50+
18.00	212.93	.92	.43	SAND	SW-SP	1.17	20			86	43	.50+
18.20	49.15	.65	1.32	SANDY SILT TO CLAYEY SILT	ML-MH	.91	9	3.573	13.5	43	34	.15
18.40	48.97	.47	.96	SANDY SILT TO CLAYEY SILT	ML-MH	.92	9	3.559	13.5	42	34	.15
18.60	175.20	.95	.54	SAND TO SILTY SAND	SM-SP	1.12	20			81	40	.50+
18.80	273.84	1.32	.48	SAND	SW-SP	1.22	26			93	44	.50+
19.00	250.46	1.00	.40	SAND	SW-SP	1.23	23			90	43	.50+
19.20	217.55	1.03	.47	SAND	SW-SP	1.25	20			85	43	.50+
19.40	270.15	.83	.31	SAND	SW-SP	1.26	25			92	44	.50+
19.60	290.30	1.24	.43	SAND	SW-SP	1.27	27			94	44	.50+
19.80	259.01	.98	.38	SAND	SW-SP	1.29	24			90	43	.50+
20.00	267.60	1.13	.42	SAND	SW-SP	1.30	25			91	43	.50+
20.20	250.21	1.08	.43	SAND	SW-SP	1.31	23			88	43	.50+
20.40	242.32	.71	.29	SAND	SW-SP	1.33	23			87	43	.50+
20.60	190.06	.83	.44	SAND	SW-SP	1.34	18			80	42	.43
20.80	81.05	.86	1.06	SILTY SAND TO SANDY SILT	SM-ML	1.14	12			54	36	.19
21.00	148.54	1.79	1.20	SAND TO SILTY SAND	SM-SP	1.26	17			71	39	.50+



RESULT OF CONE PENETRATION TEST

2N

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

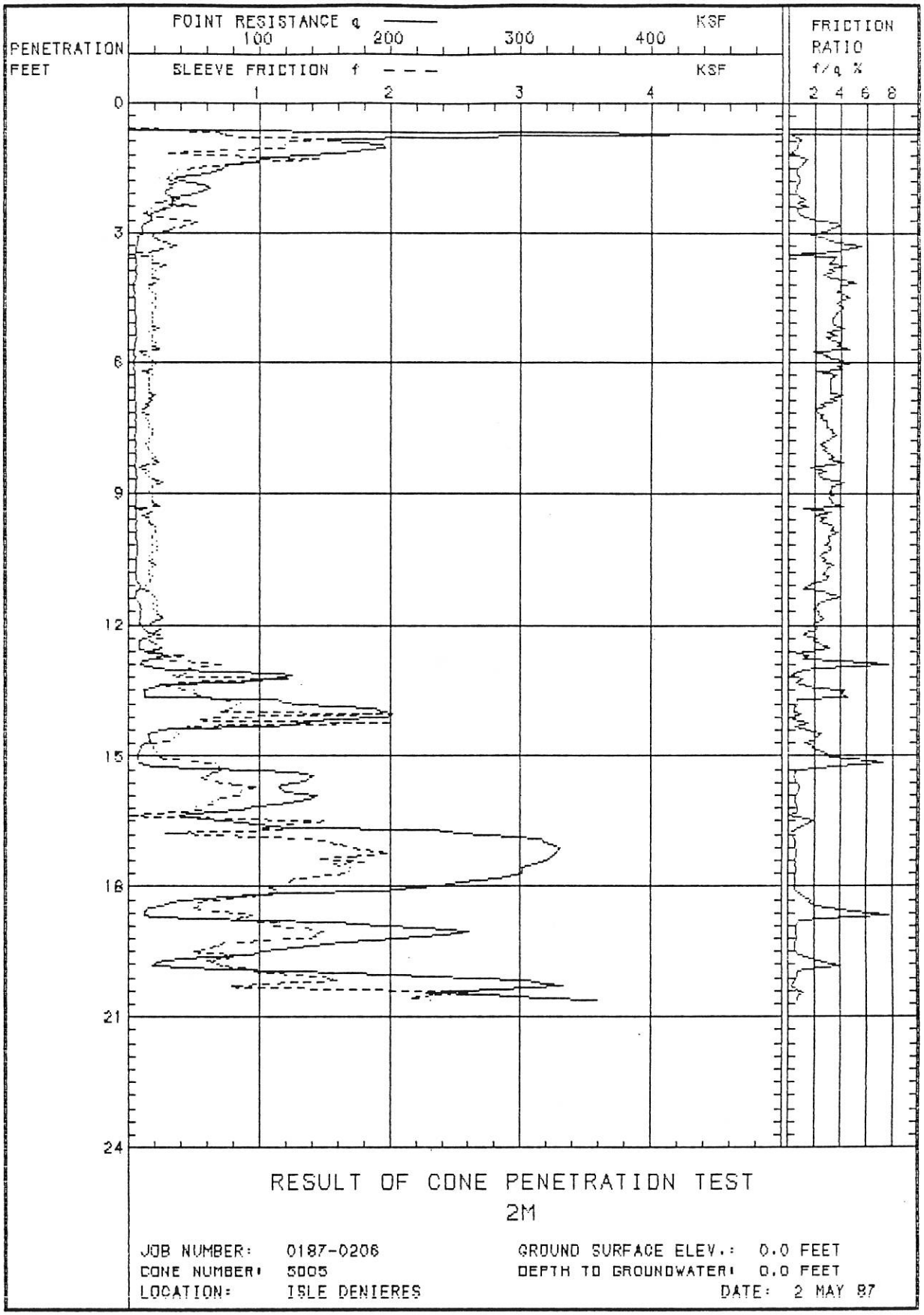
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 2N
CONE NO. : 5005
DATE : 04/29/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	48.84	.14	.29	SILTY SAND TO SANDY SILT	SM-ML	.03	7			85	40	.50+
.80	64.96	.22	.33	SILTY SAND TO SANDY SILT	SM-ML	.04	10			100+	42	.50+
1.00	49.36	.28	.57	SILTY SAND TO SANDY SILT	SM-ML	.05	7			82	40	.50+
1.20	39.26	.17	.43	SILTY SAND TO SANDY SILT	SM-ML	.07	6			74	38	.50+
1.40	37.50	.21	.56	SANDY SILT TO CLAYEY SILT	ML-MH	.07	7	2.772	13.5	72	38	.50+
1.60	36.06	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.09	5			70	38	.50+
1.80	3.32	.06	1.90	SENSITIVE FINE GRAINED	OL-CH	.05	0	.242	13.5			
2.00	48.07	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.11	7			76	39	.50+
2.20	5.62	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.07	1	.411	13.5			
2.40	63.93	.71	1.11	SILTY SAND TO SANDY SILT	SM-ML	.13	10			85	40	.50+
2.60	86.97	.43	.50	SAND TO SILTY SAND	SM-SP	.16	10			97	42	.50+
2.80	90.01	.58	.64	SILTY SAND TO SANDY SILT	SM-ML	.15	14			99	42	.50+
3.00	157.75	.59	.37	SAND TO SILTY SAND	SM-SP	.18	18			100+	42	.50+
3.20	179.01	.86	.48	SAND TO SILTY SAND	SM-SP	.19	21			100+	42	.50+
3.40	159.47	.88	.55	SAND TO SILTY SAND	SM-SP	.20	19			100+	42	.50+
3.60	167.09	.76	.45	SAND TO SILTY SAND	SM-SP	.22	20			100+	42	.50+
3.80	194.86	1.07	.55	SAND TO SILTY SAND	SM-SP	.23	23			100+	42	.50+
4.00	212.12	1.04	.49	SAND	SW-SP	.26	20			100+	44	.50+
4.20	194.09	.67	.35	SAND	SW-SP	.27	18			100+	44	.50+
4.40	197.86	1.70	.86	SAND TO SILTY SAND	SM-SP	.26	23			100+	42	.50+
4.60	152.55	.90	.59	SAND TO SILTY SAND	SM-SP	.28	18			100+	42	.50+
4.80	254.95	1.44	.56	SAND	SW-SP	.31	24			100+	44	.50+
5.00	183.46	.23	.13	SAND	SW-SP	.32	17			100+	44	.50+
5.20	140.95	.89	.63	SAND TO SILTY SAND	SM-SP	.31	16			100+	42	.50+
5.40	127.09	.38	.30	SAND TO SILTY SAND	SM-SP	.32	15			98	42	.50+
5.60	80.07	.27	.34	SAND TO SILTY SAND	SM-SP	.34	9			79	40	.50+
5.80	91.05	.34	.37	SAND TO SILTY SAND	SM-SP	.35	10			83	40	.50+
6.00	66.88	.21	.31	SILTY SAND TO SANDY SILT	SM-ML	.33	10			73	38	.50+
6.20	59.53	.21	.35	SILTY SAND TO SANDY SILT	SM-ML	.34	9			69	38	.50+
6.40	72.23	.33	.46	SILTY SAND TO SANDY SILT	SM-ML	.35	11			75	39	.50+
6.60	73.57	.17	.23	SAND TO SILTY SAND	SM-SP	.40	8			73	39	.50+
6.80	86.93	.31	.35	SAND TO SILTY SAND	SM-SP	.41	10			78	40	.50+
7.00	73.26	.28	.38	SILTY SAND TO SANDY SILT	SM-ML	.38	11			74	38	.50+
7.20	50.20	.26	.52	SILTY SAND TO SANDY SILT	SM-ML	.40	8			63	37	.27
7.40	59.71	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.41	9			67	37	.40
7.60	63.67	.38	.60	SILTY SAND TO SANDY SILT	SM-ML	.42	10			68	38	.46
7.80	154.23	.50	.32	SAND TO SILTY SAND	SM-SP	.47	18			97	42	.50+
8.00	105.49	.32	.30	SAND TO SILTY SAND	SM-SP	.48	12			82	40	.50+
8.20	115.76	.34	.29	SAND TO SILTY SAND	SM-SP	.49	13			84	41	.50+
8.40	91.90	.10	.11	SAND TO SILTY SAND	SM-SP	.50	11			76	40	.50+
8.60	49.38	.06	.11	SILTY SAND TO SANDY SILT	SM-ML	.47	7			60	36	.22
8.80	18.21	.10	.55	SENSITIVE FINE GRAINED	OL-CH	.26	4	1.329	13.5			
9.00	8.93	.19	2.09	CLAY	CH	.36	4	.635	13.5			
9.20	54.10	.17	.31	SILTY SAND TO SANDY SILT	SM-ML	.51	8			61	37	.23
9.40	9.72	.03	.30	SENSITIVE FINE GRAINED	OL-CH	.28	2	.699	13.5			

9.60	6.66	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.29	1	.472	13.5				
9.80	6.26	.00	.02	SENSITIVE FINE GRAINED	OL-CH	.29	1	.442	13.5				
10.00	5.89	.01	.11	SENSITIVE FINE GRAINED	OL-CH	.30	1	.414	13.5				
10.20	6.39	.00	.05	SENSITIVE FINE GRAINED	OL-CH	.31	1	.451	13.5				
10.40	6.65	.03	.49	SENSITIVE FINE GRAINED	OL-CH	.31	1	.469	13.5				
10.60	6.91	.00	.05	SENSITIVE FINE GRAINED	OL-CH	.32	1	.488	13.5				
10.80	6.40	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.32	1	.450	13.5				
11.00	7.03	.06	.83	SENSITIVE FINE GRAINED	OL-CH	.33	1	.497	13.5				
11.20	6.64	.08	1.27	SENSITIVE FINE GRAINED	OL-CH	.34	1	.467	13.5				
11.40	6.90	.06	.85	SENSITIVE FINE GRAINED	OL-CH	.34	1	.486	13.5				
11.60	7.16	.09	1.21	SENSITIVE FINE GRAINED	OL-CH	.35	1	.505	13.5				
11.80	9.48	.05	.58	SENSITIVE FINE GRAINED	OL-CH	.35	2	.676	13.5				
12.00	7.16	.02	.27	SENSITIVE FINE GRAINED	OL-CH	.36	1	.504	13.5				
12.20	6.65	.02	.30	SENSITIVE FINE GRAINED	OL-CH	.37	1	.465	13.5				
12.40	6.65	.00	.04	SENSITIVE FINE GRAINED	OL-CH	.37	1	.465	13.5				
12.60	5.88	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.38	1	.407	13.5				
12.80	11.22	.10	.88	SENSITIVE FINE GRAINED	OL-CH	.38	2	.803	13.5				
13.00	12.53	.15	1.24	SENSITIVE FINE GRAINED	OL-CH	.39	3	.899	13.5				
13.20	10.25	.02	.16	SENSITIVE FINE GRAINED	OL-CH	.40	2	.730	13.5				
13.40	11.68	.03	.25	SENSITIVE FINE GRAINED	OL-CH	.40	2	.835	13.5				
13.60	12.66	.06	.44	SENSITIVE FINE GRAINED	OL-CH	.41	3	.907	13.5				
13.80	9.84	.00	.03	SENSITIVE FINE GRAINED	OL-CH	.41	2	.698	13.5				
14.00	14.13	.03	.25	SENSITIVE FINE GRAINED	OL-CH	.42	3	1.016	13.5				
14.20	9.22	.21	2.30	CLAY	CH	.57	4	.641	13.5				
14.40	97.19	.38	.39	SAND TO SILTY SAND	SM-SP	.86	11			66	39	.35	
14.60	139.32	.55	.40	SAND TO SILTY SAND	SM-SP	.88	16			79	40	.50+	
14.80	161.99	.39	.24	SAND	SW-SP	.96	15			81	43	.50+	
15.00	172.71	1.17	.68	SAND TO SILTY SAND	SM-SP	.90	20			85	41	.50+	
15.20	97.06	.06	.06	SAND TO SILTY SAND	SM-SP	.91	11			65	39	.32	
15.40	23.52	.21	.89	SANDY SILT TO CLAYEY SILT	ML-MH	.77	4	1.685	13.5	23	31	.12	
15.60	16.21	.15	.94	SENSITIVE FINE GRAINED	OL-CH	.47	3	1.166	13.5				
15.80	29.59	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.79	5	2.134	13.5	30	32	.13	
16.00	17.90	.06	.34	SENSITIVE FINE GRAINED	OL-CH	.48	4	1.290	13.5				
16.20	45.50	.29	.64	SILTY SAND TO SANDY SILT	SM-ML	.89	7			41	34	.15	
16.40	65.39	.27	.42	SILTY SAND TO SANDY SILT	SM-ML	.90	10			53	35	.18	
16.60	28.38	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.83	5	2.041	13.5	27	32	.12	
16.80	116.51	.39	.33	SAND TO SILTY SAND	SM-SP	1.01	13			69	39	.44	
17.00	164.66	.64	.39	SAND TO SILTY SAND	SM-SP	1.02	19			81	40	.50+	
17.20	149.11	1.15	.77	SAND TO SILTY SAND	SM-SP	1.03	17			77	40	.50+	
17.40	82.45	.91	1.10	SILTY SAND TO SANDY SILT	SM-ML	.96	13			60	36	.22	
17.60	144.40	.85	.59	SAND TO SILTY SAND	SM-SP	1.06	17			75	40	.50+	
17.80	202.38	1.12	.55	SAND	SW-SP	1.16	19			84	43	.50+	
18.00	199.70	.91	.46	SAND	SW-SP	1.17	19			84	43	.50+	
18.20	139.23	.86	.61	SAND TO SILTY SAND	SM-SP	1.09	16			73	39	.50+	
18.40	173.53	.64	.37	SAND TO SILTY SAND	SM-SP	1.10	20			81	40	.50+	
18.60	148.00	.34	.23	SAND TO SILTY SAND	SM-SP	1.12	17			74	40	.50+	
18.80	116.35	.24	.21	SAND TO SILTY SAND	SM-SP	1.13	13			66	39	.35	
19.00	73.07	.75	1.03	SILTY SAND TO SANDY SILT	SM-ML	1.04	11			52	35	.18	
19.20	90.16	.32	.35	SAND TO SILTY SAND	SM-SP	1.15	10			58	38	.21	
19.40	156.22	.64	.41	SAND TO SILTY SAND	SM-SP	1.16	18			75	40	.50+	
19.60	79.63	.45	.57	SILTY SAND TO SANDY SILT	SM-ML	1.08	12			55	36	.19	
19.80	15.72	.46	2.95	SILTY CLAY TO CLAY	CL-CH	.79	5	1.106	13.5				
20.00	212.61	1.00	.47	SAND	SW-SP	1.30	20			83	43	.50+	
20.20	329.81	1.12	.34	SAND	SW-SP	1.31	31			99	44	.50+	
20.40	336.57	1.20	.36	SAND	SW-SP	1.33	32			100+	44	.50+	
20.60	358.99	1.25	.35	SAND	SW-SP	1.34	34			100+	44	.50+	
20.80	363.97	1.57	.43	SAND	SW-SP	1.35	34			100+	44	.50+	
21.00	432.61	1.76	.41	SAND	SW-SP	1.37	41			100+	44	.50+	
21.20	480.26	1.81	.38	SAND	SW-SP	1.38	46			100+	44	.50+	
21.40	493.68	2.16	.44	SAND	SW-SP	1.39	47			100+	44	.50+	



RESULT OF CONE PENETRATION TEST

2M

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

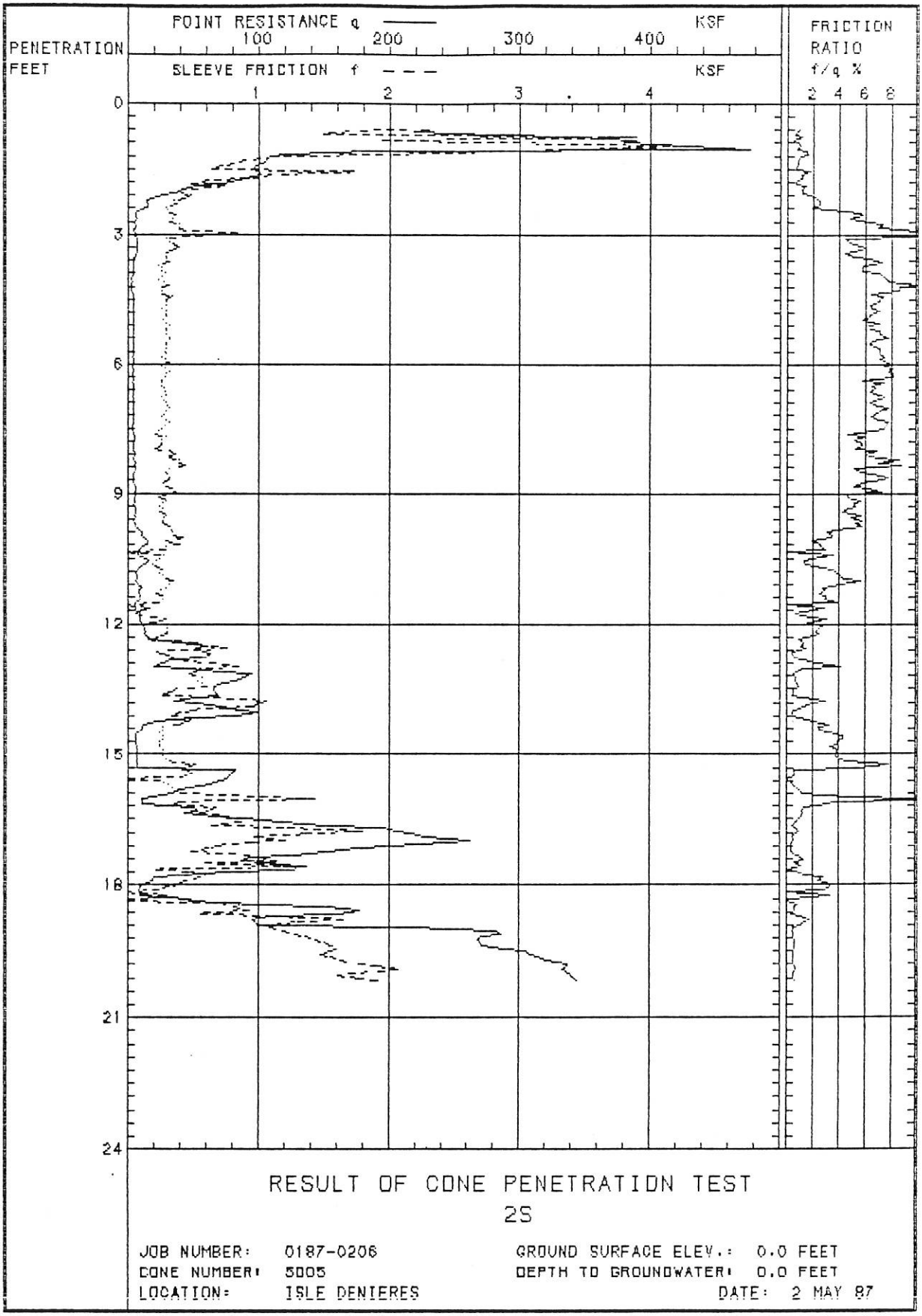
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 2M
CONE NO. : 5005
DATE : 04/29/87

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	.26	.24	95.31	ORGANIC MATERIAL	OL-OH	.02	1	.018	13.5			
.80	239.02	1.30	.55	SAND	SW-SP	.05	22			100+	44	.50+
1.00	195.38	1.19	.61	SAND TO SILTY SAND	SM-SP	.06	23			100+	42	.50+
1.20	146.04	.59	.41	SAND TO SILTY SAND	SM-SP	.07	17			100+	42	.50+
1.40	85.17	.90	1.06	SILTY SAND TO SANDY SILT	SM-ML	.08	13			100+	42	.50+
1.60	65.47	.22	.33	SILTY SAND TO SANDY SILT	SM-ML	.09	10			92	41	.50+
1.80	40.91	.32	.78	SANDY SILT TO CLAYEY SILT	ML-MH	.09	7	3.023	13.5	73	38	.50+
2.00	58.83	.24	.40	SILTY SAND TO SANDY SILT	SM-ML	.11	9			84	40	.50+
2.20	34.08	.29	.84	SANDY SILT TO CLAYEY SILT	ML-MH	.11	6	2.516	13.5	68	38	.50+
2.40	32.23	.34	1.07	SANDY SILT TO CLAYEY SILT	ML-MH	.12	6	2.378	13.5	66	37	.50+
2.60	17.64	.20	1.12	CLAYEY SILT TO SILTY CLAY	MH-CL	.12	4	1.298	13.5			
2.80	12.79	.46	3.62	CLAY	CH	.11	6	.939	13.5			
3.00	11.00	.23	2.09	SILTY CLAY TO CLAY	CL-CH	.12	3	.806	13.5			
3.20	7.42	.25	3.41	CLAY	CH	.13	3	.540	13.5			
3.40	5.88	.24	4.06	CLAY	CH	.14	2	.426	13.5			
3.60	5.37	.19	3.50	CLAY	CH	.14	2	.387	13.5			
3.80	6.39	.24	3.76	CLAY	CH	.15	3	.462	13.5			
4.00	6.40	.19	2.92	CLAY	CH	.16	3	.462	13.5			
4.20	4.09	.19	4.56	CLAY	CH	.17	1	.291	13.5			
4.40	5.11	.20	3.90	CLAY	CH	.18	2	.366	13.5			
4.60	5.11	.21	4.16	CLAY	CH	.18	2	.365	13.5			
4.80	5.11	.20	3.91	CLAY	CH	.19	2	.365	13.5			
5.00	5.63	.19	3.33	CLAY	CH	.20	2	.402	13.5			
5.20	5.37	.21	3.97	CLAY	CH	.21	2	.382	13.5			
5.40	5.88	.20	3.37	CLAY	CH	.22	2	.419	13.5			
5.60	5.24	.19	3.56	CLAY	CH	.22	2	.372	13.5			
5.80	4.60	.11	2.36	CLAY	CH	.23	2	.324	13.5			
6.00	4.60	.20	4.33	CLAY	CH	.24	2	.323	13.5			
6.20	4.86	.15	3.05	CLAY	CH	.25	2	.341	13.5			
6.40	5.11	.12	2.36	CLAY	CH	.26	2	.360	13.5			
6.60	5.11	.16	3.15	CLAY	CH	.26	2	.359	13.5			
6.80	5.11	.19	3.66	CLAY	CH	.27	2	.359	13.5			
7.00	5.63	.15	2.63	CLAY	CH	.28	2	.396	13.5			
7.20	5.62	.13	2.40	CLAY	CH	.29	2	.395	13.5			
7.40	5.37	.12	2.25	CLAY	CH	.30	2	.376	13.5			
7.60	5.63	.19	3.32	CLAY	CH	.30	2	.394	13.5			
7.80	5.37	.16	3.00	CLAY	CH	.31	2	.374	13.5			
8.00	5.62	.17	3.10	CLAY	CH	.32	2	.393	13.5			
8.20	6.14	.20	3.26	CLAY	CH	.33	2	.430	13.5			
8.40	5.11	.20	3.93	CLAY	CH	.34	2	.354	13.5			
8.60	6.39	.15	2.33	CLAY	CH	.34	3	.448	13.5			
8.80	5.89	.23	3.85	CLAY	CH	.35	2	.410	13.5			
9.00	5.11	.17	3.41	CLAY	CH	.36	2	.352	13.5			
9.20	5.63	.19	3.33	CLAY	CH	.37	2	.389	13.5			
9.40	5.37	.12	2.26	CLAY	CH	.38	2	.370	13.5			

9.60	6.13	.16	2.64	CLAY	CH	.38	2	.426	13.5			
9.80	6.39	.21	3.34	CLAY	CH	.39	3	.444	13.5			
10.00	6.14	.19	3.07	CLAY	CH	.40	2	.425	13.5			
10.20	6.65	.20	3.03	CLAY	CH	.41	3	.462	13.5			
10.40	6.65	.13	2.01	SENSITIVE FINE GRAINED	OL-CH	.31	1	.469	13.5			
10.60	6.14	.19	3.05	CLAY	CH	.42	2	.423	13.5			
10.80	5.88	.16	2.75	CLAY	CH	.43	2	.403	13.5			
11.00	6.38	.16	2.58	CLAY	CH	.44	3	.440	13.5			
11.20	7.70	.13	1.75	SENSITIVE FINE GRAINED	OL-CH	.34	1	.545	13.5			
11.40	6.12	.17	2.85	CLAY	CH	.46	2	.420	13.5			
11.60	9.97	.20	2.05	SILTY CLAY TO CLAY	CL-CH	.46	3	.704	13.5			
11.80	9.72	.24	2.49	CLAY	CH	.47	4	.685	13.5			
12.00	9.45	.19	2.02	SILTY CLAY TO CLAY	CL-CH	.48	3	.664	13.5			
12.20	18.25	.25	1.34	CLAYEY SILT TO SILTY CLAY	MH-CL	.55	4	1.311	13.5			
12.40	8.69	.19	2.18	CLAY	CH	.50	4	.607	13.5			
12.60	16.73	.18	1.07	CLAYEY SILT TO SILTY CLAY	MH-CL	.57	4	1.197	13.5			
12.80	15.68	.11	.70	SENSITIVE FINE GRAINED	OL-CH	.38	3	1.133	13.5			
13.00	27.50	.48	1.76	CLAYEY SILT TO SILTY CLAY	MH-CL	.59	6	1.994	13.5			
13.20	118.04	.77	.65	SAND TO SILTY SAND	SM-SP	.79	14			75	40	.50+
13.40	22.56	.30	1.31	CLAYEY SILT TO SILTY CLAY	MH-CL	.60	5	1.627	13.5			
13.60	12.53	.56	4.49	CLAY	CH	.54	5	.888	13.5			
13.80	124.65	1.51	1.21	SILTY SAND TO SANDY SILT	SM-ML	.76	19			78	39	.50+
14.00	198.38	1.65	.83	SAND TO SILTY SAND	SM-SP	.84	23			91	41	.50+
14.20	144.70	1.26	.87	SAND TO SILTY SAND	SM-SP	.85	17			81	40	.50+
14.40	26.50	.39	1.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.65	6	1.915	13.5			
14.60	17.12	.34	1.97	CLAYEY SILT TO SILTY CLAY	MH-CL	.66	4	1.219	13.5			
14.80	9.97	.19	1.90	SILTY CLAY TO CLAY	CL-CH	.59	3	.695	13.5			
15.00	7.67	.24	3.15	CLAY	CH	.60	3	.524	13.5			
15.20	13.96	.68	4.88	CLAY	CH	.61	6	.989	13.5			
15.40	134.35	1.52	1.13	SILTY SAND TO SANDY SILT	SM-ML	.85	21			78	39	.50+
15.60	127.31	.74	.58	SAND TO SILTY SAND	SM-SP	.94	15			73	39	.50+
15.80	118.89	.94	.79	SAND TO SILTY SAND	SM-SP	.95	14			71	39	.50+
16.00	134.09	.70	.52	SAND TO SILTY SAND	SM-SP	.96	16			75	40	.50+
16.20	91.94	.54	.58	SAND TO SILTY SAND	SM-SP	.97	11			62	38	.26
16.40	47.99	.37	.76	SILTY SAND TO SANDY SILT	SM-ML	.90	7			42	34	.15
16.60	110.06	1.15	1.04	SILTY SAND TO SANDY SILT	SM-ML	.91	17			69	38	.46
16.80	263.39	1.51	.57	SAND	SW-SP	1.09	25			95	44	.50+
17.00	321.15	1.55	.48	SAND	SW-SP	1.10	30			100+	44	.50+
17.20	328.13	1.90	.58	SAND	SW-SP	1.12	31			100+	44	.50+
17.40	319.36	1.50	.47	SAND	SW-SP	1.13	30			100+	44	.50+
17.60	301.26	1.69	.56	SAND	SW-SP	1.14	28			99	44	.50+
17.80	286.01	1.37	.48	SAND	SW-SP	1.16	27			97	44	.50+
18.00	228.88	1.16	.51	SAND	SW-SP	1.17	21			88	43	.50+
18.20	99.59	.92	.92	SILTY SAND TO SANDY SILT	SM-ML	1.00	15			64	37	.29
18.40	29.89	.58	1.92	CLAYEY SILT TO SILTY CLAY	MH-CL	.83	7	2.153	13.5			
18.60	12.54	.79	6.32	CLAY	CH	.74	6	.874	13.5			
18.80	127.05	.97	.76	SAND TO SILTY SAND	SM-SP	1.13	15			69	39	.45
19.00	242.73	1.42	.59	SAND	SW-SP	1.23	23			89	43	.50+
19.20	206.62	1.28	.62	SAND TO SILTY SAND	SM-SP	1.15	24			85	41	.50+
19.40	128.08	.62	.49	SAND TO SILTY SAND	SM-SP	1.16	15			68	39	.43
19.60	77.73	.79	1.02	SILTY SAND TO SANDY SILT	SM-ML	1.08	12			54	36	.19
19.80	19.47	.54	2.76	SILTY CLAY TO CLAY	CL-CH	.79	6	1.383	13.5			
20.00	162.57	1.12	.69	SAND TO SILTY SAND	SM-SP	1.20	19			76	40	.50+
20.20	311.82	1.35	.43	SAND	SW-SP	1.31	29			97	44	.50+
20.40	255.77	2.03	.79	SAND	SW-SP	1.33	24			89	43	.50+
20.60	337.98	2.24	.66	SAND	SW-SP	1.34	32			99	44	.50+



RESULT OF CONE PENETRATION TEST

2S

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

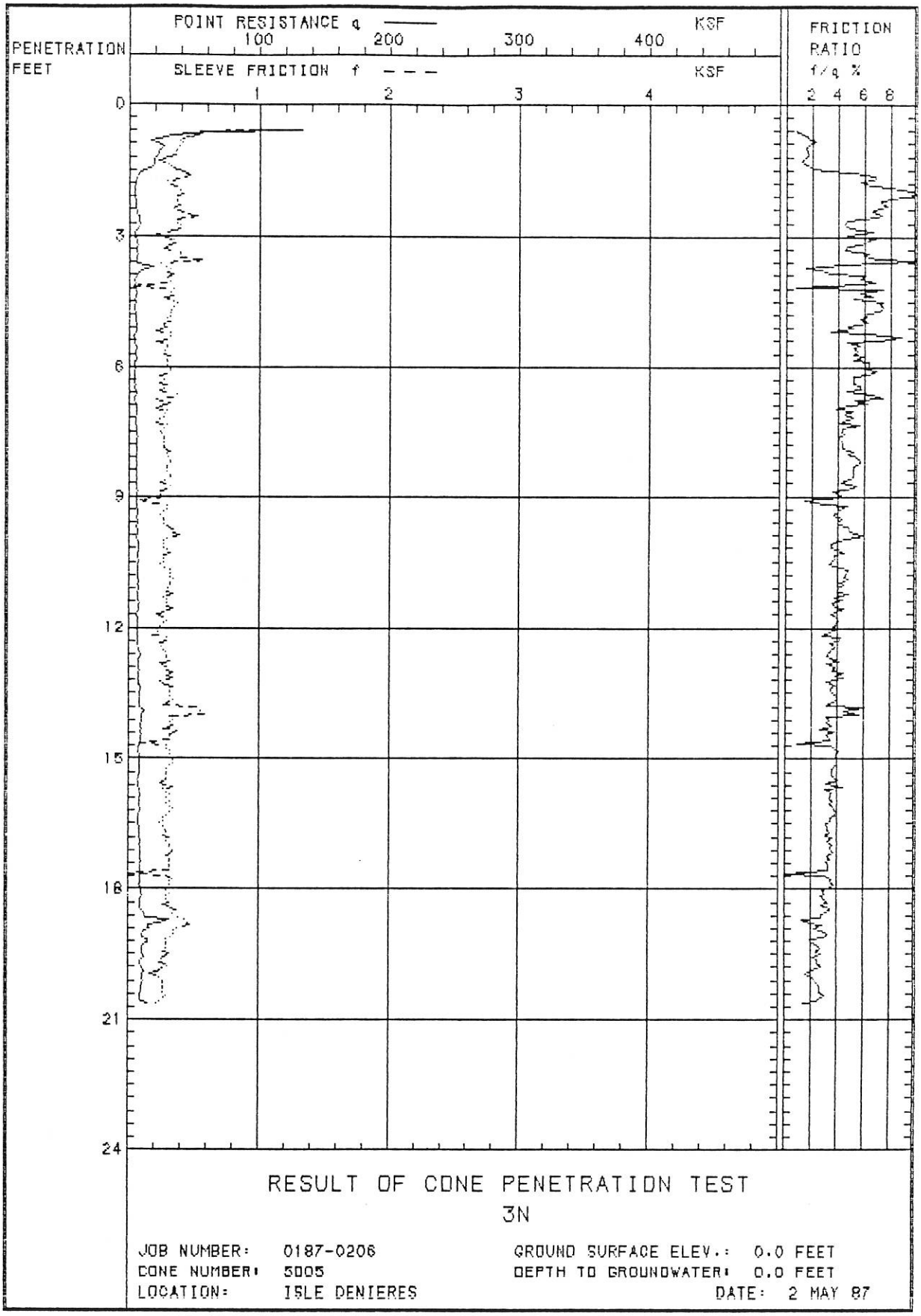
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 2S
CONE NO. : 5005
DATE : 04/29/87

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	224.79	1.79	.80	SAND TO SILTY SAND	SM-SP	.04	26			100+	42	.50+
.80	365.18	4.98	1.36	SAND TO SILTY SAND	SM-SP	.05	43			100+	42	.50+
1.00	452.06	3.98	.88	SAND	SW-SP	.06	43			100+	44	.50+
1.20	116.11	1.23	1.06	SILTY SAND TO SANDY SILT	SM-ML	.07	18			100+	42	.50+
1.40	100.64	.68	.67	SAND TO SILTY SAND	SM-SP	.08	12			100+	42	.50+
1.60	100.41	1.12	1.12	SILTY SAND TO SANDY SILT	SM-ML	.09	16			100+	42	.50+
1.80	78.78	.55	.70	SILTY SAND TO SANDY SILT	SM-ML	.10	12			100+	42	.50+
2.00	39.13	.42	1.09	SANDY SILT TO CLAYEY SILT	ML-MH	.10	7	2.891	13.5	71	38	.50+
2.20	16.37	.39	2.39	SILTY CLAY TO CLAY	CL-CH	.09	5	1.206	13.5			
2.40	12.54	.34	2.73	SILTY CLAY TO CLAY	CL-CH	.10	4	.922	13.5			
2.60	6.78	.28	4.08	CLAY	CH	.10	3	.494	13.5			
2.80	5.50	.37	6.80	ORGANIC MATERIAL	OL-OH	.08	2	.401	13.5			
3.00	4.99	.41	8.31	ORGANIC MATERIAL	OL-OH	.09	2	.363	13.5			
3.20	6.65	.33	4.98	CLAY	CH	.13	3	.483	13.5			
3.40	6.65	.32	4.77	CLAY	CH	.14	3	.482	13.5			
3.60	4.48	.28	6.19	ORGANIC MATERIAL	OL-OH	.11	2	.324	13.5			
3.80	4.60	.26	5.73	ORGANIC MATERIAL	OL-OH	.11	2	.333	13.5			
4.00	3.33	.25	7.52	ORGANIC MATERIAL	OL-OH	.12	1	.237	13.5			
4.20	3.07	.30	9.85	ORGANIC MATERIAL	OL-OH	.13	1	.218	13.5			
4.40	4.35	.30	6.96	ORGANIC MATERIAL	OL-OH	.13	2	.312	13.5			
4.60	4.35	.29	6.67	ORGANIC MATERIAL	OL-OH	.14	2	.312	13.5			
4.80	4.35	.29	6.68	ORGANIC MATERIAL	OL-OH	.14	2	.311	13.5			
5.00	4.35	.32	7.25	ORGANIC MATERIAL	OL-OH	.15	2	.311	13.5			
5.20	4.35	.30	6.81	ORGANIC MATERIAL	OL-OH	.16	2	.311	13.5			
5.40	4.35	.32	7.28	ORGANIC MATERIAL	OL-OH	.16	2	.310	13.5			
5.60	4.35	.22	5.12	CLAY	CH	.22	2	.306	13.5			
5.80	3.84	.28	7.21	ORGANIC MATERIAL	OL-OH	.17	1	.271	13.5			
6.00	3.84	.29	7.55	ORGANIC MATERIAL	OL-OH	.18	1	.271	13.5			
6.20	3.84	.30	7.89	ORGANIC MATERIAL	OL-OH	.19	1	.271	13.5			
6.40	4.10	.26	6.44	ORGANIC MATERIAL	OL-OH	.19	1	.289	13.5			
6.60	4.35	.24	5.42	ORGANIC MATERIAL	OL-OH	.20	2	.307	13.5			
6.80	3.83	.30	7.88	ORGANIC MATERIAL	OL-OH	.20	1	.269	13.5			
7.00	4.22	.31	7.33	ORGANIC MATERIAL	OL-OH	.21	2	.297	13.5			
7.20	4.09	.29	7.08	ORGANIC MATERIAL	OL-OH	.22	1	.287	13.5			
7.40	3.97	.30	7.63	ORGANIC MATERIAL	OL-OH	.22	1	.277	13.5			
7.60	4.09	.17	4.21	CLAY	CH	.30	1	.280	13.5			
7.80	4.86	.26	5.43	CLAY	CH	.31	2	.337	13.5			
8.00	4.34	.26	6.09	ORGANIC MATERIAL	OL-OH	.24	2	.304	13.5			
8.20	4.60	.36	7.72	ORGANIC MATERIAL	OL-OH	.25	2	.323	13.5			
8.40	5.62	.38	6.80	ORGANIC MATERIAL	OL-OH	.25	2	.398	13.5			
8.60	4.35	.26	6.02	ORGANIC MATERIAL	OL-OH	.26	2	.303	13.5			
8.80	5.11	.28	5.44	CLAY	CH	.35	2	.352	13.5			
9.00	5.87	.34	5.84	CLAY	CH	.36	2	.408	13.5			
9.20	5.11	.28	5.43	CLAY	CH	.37	2	.352	13.5			
9.40	5.63	.25	4.48	CLAY	CH	.38	2	.389	13.5			

9.60	5.12	.22	4.37	CLAY	CH	.38	2	.351	13.5			
9.80	7.14	.35	4.86	CLAY	CH	.39	3	.500	13.5			
10.00	11.49	.37	3.19	CLAY	CH	.40	5	.821	13.5			
10.20	13.33	.35	2.60	SILTY CLAY TO CLAY	CL-CH	.41	4	.957	13.5			
10.40	7.41	.14	1.83	SENSITIVE FINE GRAINED	OL-CH	.31	1	.526	13.5			
10.60	14.86	.25	1.71	CLAYEY SILT TO SILTY CLAY	MH-CL	.48	3	1.065	13.5			
10.80	6.92	.25	3.66	CLAY	CH	.43	3	.490	13.5			
11.00	6.40	.32	5.01	CLAY	CH	.44	3	.441	13.5			
11.20	9.73	.31	3.15	CLAY	CH	.45	4	.688	13.5			
11.40	9.08	.25	2.78	CLAY	CH	.46	4	.639	13.5			
11.60	5.37	.08	1.57	SENSITIVE FINE GRAINED	OL-CH	.35	1	.372	13.5			
11.80	9.72	.12	1.23	SENSITIVE FINE GRAINED	OL-CH	.35	2	.694	13.5			
12.00	10.86	.32	2.92	CLAY	CH	.48	5	.769	13.5			
12.20	12.80	.27	2.14	SILTY CLAY TO CLAY	CL-CH	.49	4	.912	13.5			
12.40	28.06	.34	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	.62	5	2.033	13.5	35	33	.13
12.60	54.93	.48	.87	SILTY SAND TO SANDY SILT	SM-ML	.69	8			54	36	.18
12.80	47.04	.56	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	.64	9	3.437	13.5	50	35	.17
13.00	32.88	.81	2.45	CLAYEY SILT TO SILTY CLAY	MH-CL	.58	7	2.392	13.5			
13.20	92.00	.49	.53	SAND TO SILTY SAND	SM-SP	.79	11			66	39	.36
13.40	69.89	.58	.83	SILTY SAND TO SANDY SILT	SM-ML	.74	11			61	37	.23
13.60	68.00	.68	.99	SILTY SAND TO SANDY SILT	SM-ML	.75	10			60	36	.22
13.80	44.31	1.03	2.33	SANDY SILT TO CLAYEY SILT	ML-MH	.69	8	3.231	13.5	47	35	.16
14.00	92.31	.30	.33	SAND TO SILTY SAND	SM-SP	.84	11			65	39	.32
14.20	37.01	.42	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	.71	7	2.689	13.5	41	34	.15
14.40	11.00	.27	2.42	SILTY CLAY TO CLAY	CL-CH	.58	3	.772	13.5			
14.60	6.14	.27	4.33	CLAY	CH	.58	2	.411	13.5			
14.80	6.64	.24	3.62	CLAY	CH	.59	3	.448	13.5			
15.00	6.90	.23	3.28	CLAY	CH	.60	3	.467	13.5			
15.20	6.78	.46	6.83	ORGANIC MATERIAL	OL-OH	.46	3	.468	13.5			
15.40	81.35	.42	.51	SILTY SAND TO SANDY SILT	SM-ML	.85	12			62	37	.25
15.60	70.95	.14	.19	SILTY SAND TO SANDY SILT	SM-ML	.86	11			57	36	.20
15.80	43.55	.36	.82	SANDY SILT TO CLAYEY SILT	ML-MH	.79	8	3.167	13.5	43	34	.15
16.00	15.19	.88	5.80	CLAY	CH	.64	7	1.078	13.5			
16.20	30.72	.34	1.12	SANDY SILT TO CLAYEY SILT	ML-MH	.81	5	2.216	13.5	30	32	.13
16.40	54.71	.86	1.57	SANDY SILT TO CLAYEY SILT	ML-MH	.82	10	3.991	13.5	49	35	.17
16.60	135.11	.76	.56	SAND TO SILTY SAND	SM-SP	1.00	16			74	40	.50+
16.80	211.10	1.60	.76	SAND TO SILTY SAND	SM-SP	1.01	25			89	41	.50+
17.00	253.66	.69	.27	SAND	SW-SP	1.10	24			93	44	.50+
17.20	165.00	.54	.32	SAND TO SILTY SAND	SM-SP	1.03	19			81	40	.50+
17.40	90.75	1.13	1.24	SILTY SAND TO SANDY SILT	SM-ML	.96	14			62	37	.26
17.60	128.93	.81	.63	SAND TO SILTY SAND	SM-SP	1.06	15			71	39	.50+
17.80	30.71	.57	1.87	CLAYEY SILT TO SILTY CLAY	MH-CL	.80	7	2.215	13.5			
18.00	10.77	.51	4.73	CLAY	CH	.72	5	.744	13.5			
18.20	8.94	.29	3.24	CLAY	CH	.73	4	.609	13.5			
18.40	72.81	.20	.27	SILTY SAND TO SANDY SILT	SM-ML	1.01	11			53	36	.19
18.60	170.28	.75	.44	SAND TO SILTY SAND	SM-SP	1.12	20			80	40	.50+
18.80	96.52	1.52	1.57	SILTY SAND TO SANDY SILT	SM-ML	1.03	15			62	37	.26
19.00	247.65	1.77	.71	SAND	SW-SP	1.23	23			89	43	.50+
19.20	269.19	1.39	.52	SAND	SW-SP	1.25	25			92	44	.50+
19.40	279.53	1.58	.57	SAND	SW-SP	1.26	26			93	44	.50+
19.60	311.27	1.52	.49	SAND	SW-SP	1.27	29			97	44	.50+
19.80	337.32	1.82	.54	SAND	SW-SP	1.29	32			100+	44	.50+
20.00	337.91	2.11	.62	SAND	SW-SP	1.30	32			100+	44	.50+



RESULT OF CONE PENETRATION TEST

3N

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

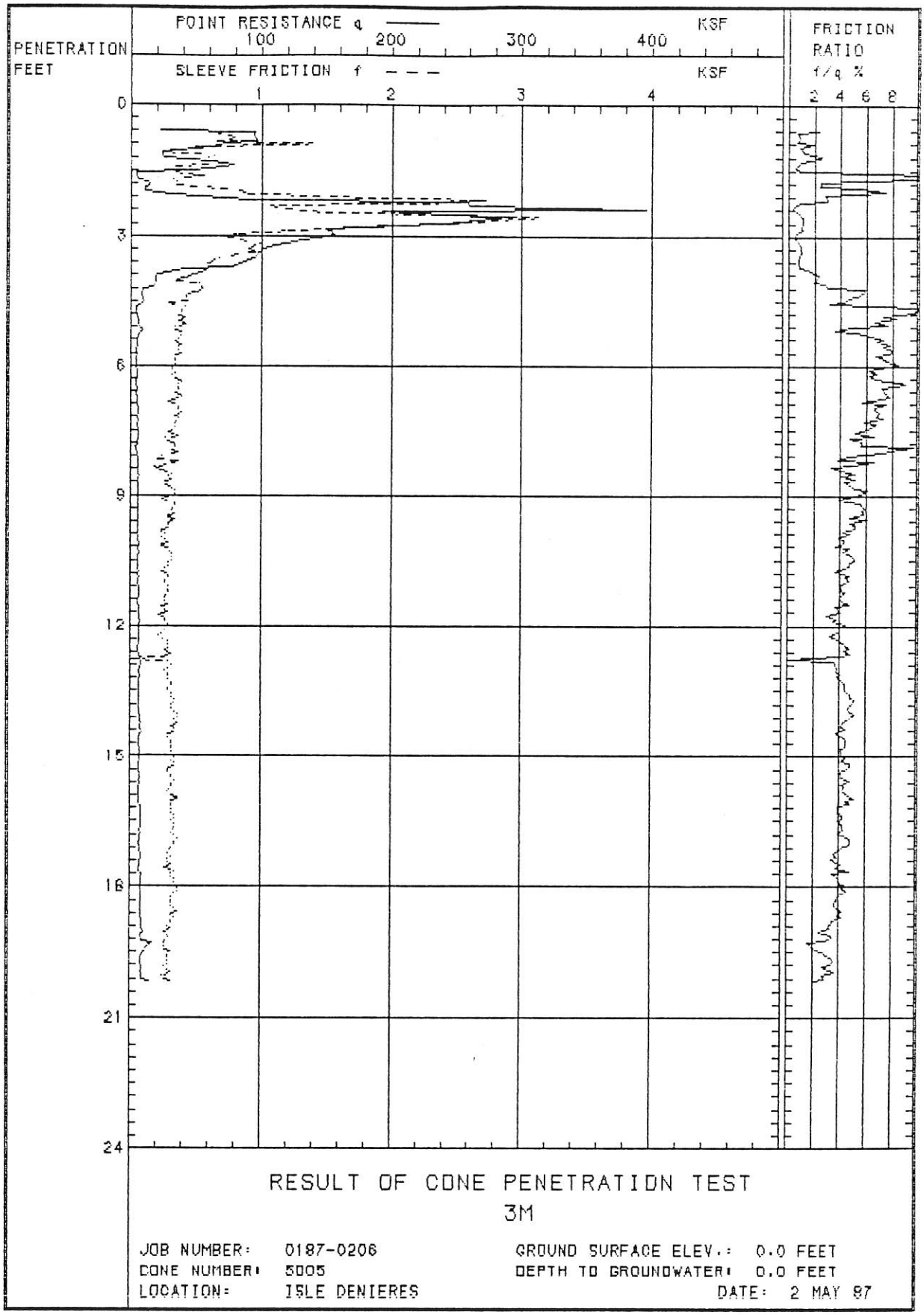
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 3N
CONE NO. : 5005
DATE : 04/29/87

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	96.93	.77	.80	SILTY SAND TO SANDY SILT	SM-ML	.03	15			100+	42	.50+
.80	22.89	.46	2.00	CLAYEY SILT TO SILTY CLAY	MH-CL	.04	5	1.693	13.5			
1.00	25.06	.36	1.43	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	6	1.853	13.5			
1.20	20.97	.29	1.37	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	5	1.549	13.5			
1.40	18.67	.30	1.59	CLAYEY SILT TO SILTY CLAY	MH-CL	.06	4	1.378	13.5			
1.60	7.55	.38	5.06	CLAY	CH	.06	3	.554	13.5			
1.80	4.99	.31	6.21	ORGANIC MATERIAL	OL-OH	.05	2	.365	13.5			
2.00	4.09	.41	9.95	ORGANIC MATERIAL	OL-OH	.06	1	.299	13.5			
2.20	5.11	.33	6.41	ORGANIC MATERIAL	OL-OH	.07	2	.374	13.5			
2.40	5.37	.36	6.66	ORGANIC MATERIAL	OL-OH	.07	2	.392	13.5			
2.60	7.80	.49	6.26	CLAY	CH	.10	3	.570	13.5			
2.80	7.93	.39	4.97	CLAY	CH	.11	3	.579	13.5			
3.00	4.35	.29	6.68	ORGANIC MATERIAL	OL-OH	.09	2	.315	13.5			
3.20	6.39	.36	5.67	CLAY	CH	.13	3	.464	13.5			
3.40	6.46	.43	6.66	ORGANIC MATERIAL	OL-OH	.10	3	.471	13.5			
3.60	5.63	.28	5.03	CLAY	CH	.14	2	.406	13.5			
3.80	10.24	.32	3.16	CLAY	CH	.15	4	.747	13.5			
4.00	4.86	.30	6.24	ORGANIC MATERIAL	OL-OH	.12	2	.351	13.5			
4.20	4.35	.19	4.29	CLAY	CH	.17	2	.309	13.5			
4.40	5.11	.30	5.94	ORGANIC MATERIAL	OL-OH	.13	2	.369	13.5			
4.60	4.86	.36	7.31	ORGANIC MATERIAL	OL-OH	.14	2	.350	13.5			
4.80	5.11	.31	6.07	ORGANIC MATERIAL	OL-OH	.14	2	.368	13.5			
5.00	5.37	.29	5.43	CLAY	CH	.20	2	.383	13.5			
5.20	5.63	.26	4.67	CLAY	CH	.21	2	.402	13.5			
5.40	4.35	.25	5.81	ORGANIC MATERIAL	OL-OH	.16	2	.310	13.5			
5.60	5.37	.30	5.63	CLAY	CH	.22	2	.381	13.5			
5.80	5.50	.28	5.17	CLAY	CH	.23	2	.390	13.5			
6.00	4.86	.30	6.24	ORGANIC MATERIAL	OL-OH	.18	2	.346	13.5			
6.20	4.60	.26	5.75	ORGANIC MATERIAL	OL-OH	.19	2	.327	13.5			
6.40	4.86	.26	5.44	CLAY	CH	.26	2	.341	13.5			
6.60	5.37	.30	5.63	CLAY	CH	.26	2	.378	13.5			
6.80	4.60	.26	5.76	ORGANIC MATERIAL	OL-OH	.20	2	.326	13.5			
7.00	5.63	.25	4.48	CLAY	CH	.28	2	.396	13.5			
7.20	5.11	.25	4.93	CLAY	CH	.29	2	.358	13.5			
7.40	5.62	.28	4.95	CLAY	CH	.30	2	.394	13.5			
7.60	6.13	.29	4.75	CLAY	CH	.30	2	.432	13.5			
7.80	6.14	.27	4.33	CLAY	CH	.31	2	.432	13.5			
8.00	6.14	.30	4.96	CLAY	CH	.32	2	.431	13.5			
8.20	5.63	.31	5.52	CLAY	CH	.33	2	.392	13.5			
8.40	5.63	.29	5.19	CLAY	CH	.34	2	.392	13.5			
8.60	6.14	.38	6.20	CLAY	CH	.34	2	.429	13.5			
8.80	6.01	.28	4.63	CLAY	CH	.35	2	.419	13.5			
9.00	5.88	.25	4.30	CLAY	CH	.36	2	.409	13.5			
9.20	6.14	.24	3.91	CLAY	CH	.37	2	.427	13.5			
9.40	6.65	.25	3.81	CLAY	CH	.38	3	.465	13.5			

9.60	6.65	.27	4.00	CLAY	CH	.38	3	.464	13.5
9.80	6.91	.34	4.98	CLAY	CH	.39	3	.483	13.5
10.00	6.39	.28	4.39	CLAY	CH	.40	3	.444	13.5
10.20	7.55	.28	3.70	CLAY	CH	.41	3	.529	13.5
10.40	7.16	.39	5.50	CLAY	CH	.42	3	.500	13.5
10.60	6.91	.32	4.69	CLAY	CH	.42	3	.480	13.5
10.80	7.03	.32	4.54	CLAY	CH	.43	3	.489	13.5
11.00	7.42	.32	4.30	CLAY	CH	.44	3	.517	13.5
11.20	7.16	.29	4.00	CLAY	CH	.45	3	.497	13.5
11.40	7.40	.29	3.96	CLAY	CH	.46	3	.515	13.5
11.60	7.42	.37	4.96	CLAY	CH	.46	3	.515	13.5
11.80	6.90	.27	3.95	CLAY	CH	.47	3	.476	13.5
12.00	6.65	.25	3.70	CLAY	CH	.48	3	.457	13.5
12.20	6.77	.21	3.16	CLAY	CH	.49	3	.466	13.5
12.40	6.91	.27	3.85	CLAY	CH	.50	3	.475	13.5
12.60	8.82	.29	3.26	CLAY	CH	.50	4	.616	13.5
12.80	7.67	.28	3.67	CLAY	CH	.51	3	.530	13.5
13.00	7.93	.32	4.02	CLAY	CH	.52	3	.549	13.5
13.20	7.67	.30	3.85	CLAY	CH	.53	3	.529	13.5
13.40	9.47	.34	3.59	CLAY	CH	.54	4	.662	13.5
13.60	8.43	.33	3.95	CLAY	CH	.54	4	.584	13.5
13.80	8.69	.40	4.58	CLAY	CH	.55	4	.603	13.5
14.00	10.23	.45	4.44	CLAY	CH	.56	4	.716	13.5
14.20	9.98	.33	3.35	CLAY	CH	.57	4	.697	13.5
14.40	9.97	.35	3.49	CLAY	CH	.58	4	.696	13.5
14.60	9.21	.21	2.23	CLAY	CH	.58	4	.639	13.5
14.80	7.67	.31	3.99	CLAY	CH	.59	3	.524	13.5
15.00	8.43	.33	3.94	CLAY	CH	.60	4	.590	13.5
15.20	8.18	.31	3.75	CLAY	CH	.61	3	.561	13.5
15.40	7.93	.29	3.69	CLAY	CH	.62	3	.542	13.5
15.60	7.67	.29	3.82	CLAY	CH	.62	3	.522	13.5
15.80	8.68	.31	3.53	CLAY	CH	.63	4	.596	13.5
16.00	8.69	.31	3.54	CLAY	CH	.64	4	.597	13.5
16.20	8.71	.33	3.82	CLAY	CH	.65	4	.597	13.5
16.40	7.67	.27	3.49	CLAY	CH	.66	3	.520	13.5
16.60	8.43	.24	2.87	CLAY	CH	.66	4	.575	13.5
16.80	8.69	.31	3.61	CLAY	CH	.67	4	.594	13.5
17.00	8.94	.32	3.59	CLAY	CH	.68	4	.612	13.5
17.20	9.21	.32	3.50	CLAY	CH	.69	4	.631	13.5
17.40	9.98	.32	3.22	CLAY	CH	.70	4	.688	13.5
17.60	9.72	.16	1.70	SENSITIVE FINE GRAINED	OL-CH	.53	2	.681	13.5
17.80	9.47	.33	3.53	CLAY	CH	.71	4	.649	13.5
18.00	9.70	.34	3.46	CLAY	CH	.72	4	.666	13.5
18.20	10.24	.30	2.88	CLAY	CH	.73	4	.705	13.5
18.40	9.47	.28	2.98	CLAY	CH	.74	4	.647	13.5
18.60	13.02	.81	6.25	CLAY	CH	.74	6	.909	13.5
18.80	20.44	.47	2.29	CLAYEY SILT TO SILTY CLAY	MH-CL	.85	4	1.451	13.5
19.00	11.53	.35	3.04	CLAY	CH	.76	5	.799	13.5
19.20	15.10	.30	1.97	SILTY CLAY TO CLAY	CL-CH	.77	4	1.061	13.5
19.40	10.99	.28	2.59	CLAY	CH	.78	5	.757	13.5
19.60	11.28	.24	2.15	SILTY CLAY TO CLAY	CL-CH	.78	3	.778	13.5
19.80	10.86	.26	2.43	SILTY CLAY TO CLAY	CL-CH	.79	3	.746	13.5
20.00	10.99	.19	1.75	SILTY CLAY TO CLAY	CL-CH	.80	3	.755	13.5
20.20	10.49	.28	2.68	CLAY	CH	.81	5	.717	13.5
20.40	9.98	.28	2.83	CLAY	CH	.82	4	.679	13.5
20.60	12.71	.23	1.84	SILTY CLAY TO CLAY	CL-CH	.82	4	.880	13.5



RESULT OF CONE PENETRATION TEST

3M

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

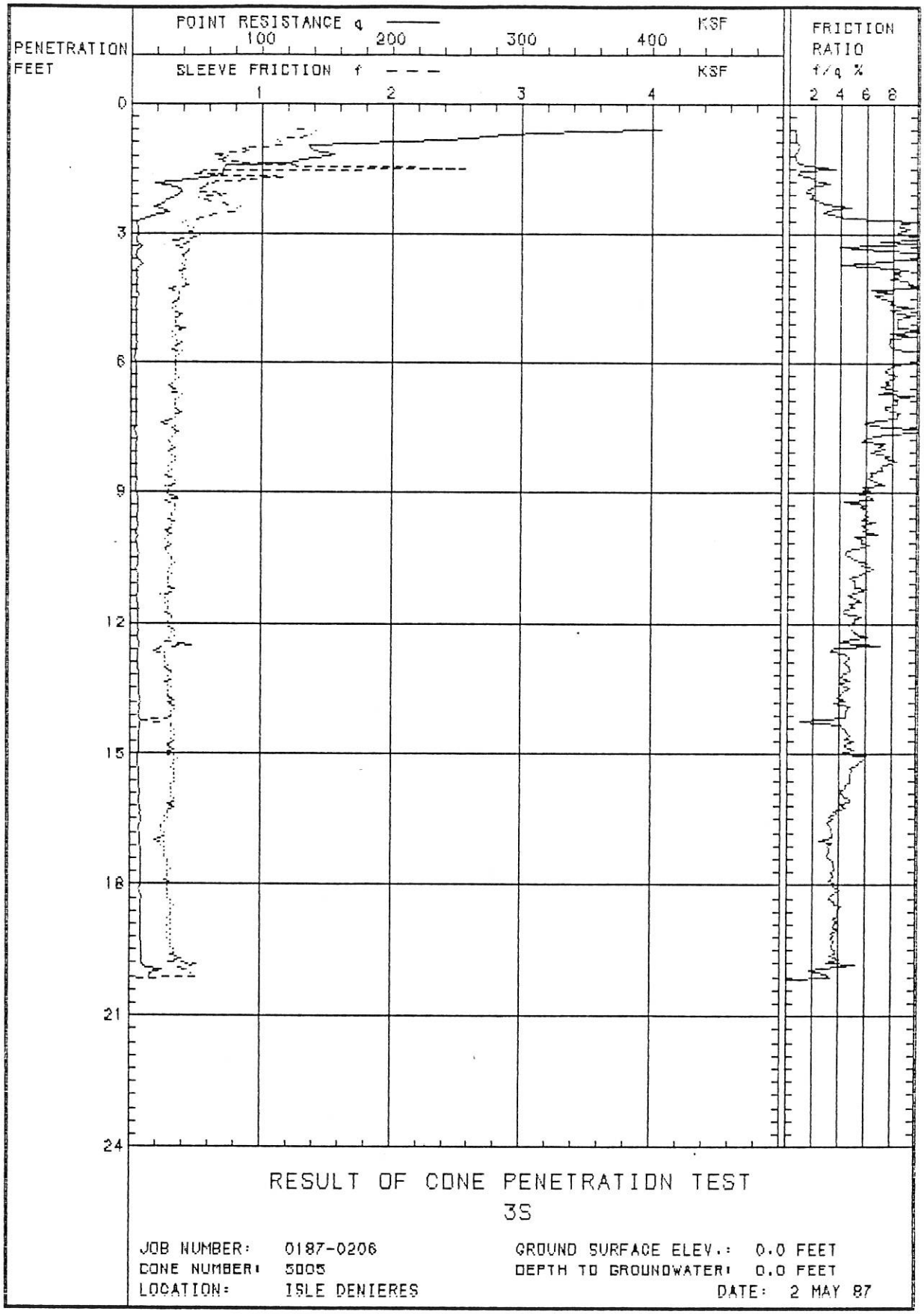
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 3M
CONE NO. : 5005
DATE : 04/29/87

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	59.07	.70	1.18	SANDY SILT TO CLAYEY SILT	ML-MH	.03	11	4.373	13.5	97	42	.50+
.80	96.41	.68	.71	SAND TO SILTY SAND	SM-SP	.05	11			100+	42	.50+
1.00	49.37	.51	1.04	SANDY SILT TO CLAYEY SILT	ML-MH	.05	9	3.653	13.5	83	40	.50+
1.20	24.81	.52	2.09	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	5	1.833	13.5			
1.40	74.68	.47	.63	SILTY SAND TO SANDY SILT	SM-ML	.08	11			100+	42	.50+
1.60	4.60	.45	9.80	ORGANIC MATERIAL	OL-OH	.05	2	.337	13.5			
1.80	14.06	.35	2.48	SILTY CLAY TO CLAY	CL-CH	.07	4	1.037	13.5			
2.00	21.46	1.00	4.68	CLAY	CH	.08	10	1.584	13.5			
2.20	174.20	2.55	1.47	SILTY SAND TO SANDY SILT	SM-ML	.12	27			100+	42	.50+
2.40	294.64	1.57	.53	SAND	SW-SP	.16	28			100+	44	.50+
2.60	278.02	2.97	1.07	SAND TO SILTY SAND	SM-SP	.16	33			100+	42	.50+
2.80	175.78	1.46	.83	SAND TO SILTY SAND	SM-SP	.17	21			100+	42	.50+
3.00	149.88	.81	.54	SAND TO SILTY SAND	SM-SP	.18	17			100+	42	.50+
3.20	115.10	.97	.84	SAND TO SILTY SAND	SM-SP	.19	13			100+	42	.50+
3.40	97.70	.90	.92	SILTY SAND TO SANDY SILT	SM-ML	.19	15			99	42	.50+
3.60	87.22	.61	.70	SILTY SAND TO SANDY SILT	SM-ML	.20	13			92	41	.50+
3.80	34.81	.62	1.79	SANDY SILT TO CLAYEY SILT	ML-MH	.19	6	2.565	13.5	64	37	.39
4.00	19.12	.45	2.34	CLAYEY SILT TO SILTY CLAY	MH-CL	.18	4	1.403	13.5			
4.20	13.58	.55	4.07	CLAY	CH	.17	6	.993	13.5			
4.40	8.69	.43	4.95	CLAY	CH	.18	4	.631	13.5			
4.60	6.66	.35	5.32	CLAY	CH	.18	3	.480	13.5			
4.80	4.60	.38	8.30	ORGANIC MATERIAL	OL-OH	.14	2	.330	13.5			
5.00	5.63	.40	7.07	ORGANIC MATERIAL	OL-OH	.15	2	.406	13.5			
5.20	8.70	.37	4.24	CLAY	CH	.21	4	.629	13.5			
5.40	5.11	.38	7.33	ORGANIC MATERIAL	OL-OH	.16	2	.367	13.5			
5.60	4.86	.37	7.58	ORGANIC MATERIAL	OL-OH	.17	2	.348	13.5			
5.80	4.86	.34	7.04	ORGANIC MATERIAL	OL-OH	.17	2	.347	13.5			
6.00	4.35	.33	7.59	ORGANIC MATERIAL	OL-OH	.18	2	.309	13.5			
6.20	5.11	.33	6.44	ORGANIC MATERIAL	OL-OH	.19	2	.365	13.5			
6.40	4.35	.38	8.78	ORGANIC MATERIAL	OL-OH	.19	2	.308	13.5			
6.60	4.86	.36	7.32	ORGANIC MATERIAL	OL-OH	.20	2	.345	13.5			
6.80	5.11	.33	6.45	ORGANIC MATERIAL	OL-OH	.20	2	.364	13.5			
7.00	5.63	.37	6.56	ORGANIC MATERIAL	OL-OH	.21	2	.401	13.5			
7.20	5.11	.36	6.96	ORGANIC MATERIAL	OL-OH	.22	2	.363	13.5			
7.40	5.24	.36	6.79	ORGANIC MATERIAL	OL-OH	.22	2	.372	13.5			
7.60	5.63	.28	5.06	CLAY	CH	.30	2	.394	13.5			
7.80	5.62	.32	5.61	CLAY	CH	.31	2	.393	13.5			
8.00	4.60	.34	7.45	ORGANIC MATERIAL	OL-OH	.24	2	.323	13.5			
8.20	5.63	.29	5.16	CLAY	CH	.33	2	.392	13.5			
8.40	5.75	.22	3.82	CLAY	CH	.34	2	.401	13.5			
8.60	6.66	.30	4.57	CLAY	CH	.34	3	.468	13.5			
8.80	5.88	.29	4.95	CLAY	CH	.35	2	.409	13.5			
9.00	6.14	.33	5.39	CLAY	CH	.36	2	.428	13.5			
9.20	6.14	.34	5.59	CLAY	CH	.37	2	.427	13.5			
9.40	5.75	.31	5.41	CLAY	CH	.38	2	.398	13.5			

9.60	5.88	.32	5.40	CLAY	CH	.38	2	.407	13.5
9.80	5.63	.27	4.73	CLAY	CH	.39	2	.388	13.5
10.00	6.14	.25	4.12	CLAY	CH	.40	2	.425	13.5
10.20	6.40	.27	4.16	CLAY	CH	.41	3	.444	13.5
10.40	6.52	.32	4.87	CLAY	CH	.42	3	.452	13.5
10.60	6.14	.29	4.76	CLAY	CH	.42	2	.423	13.5
10.80	6.40	.27	4.15	CLAY	CH	.43	3	.442	13.5
11.00	5.88	.27	4.54	CLAY	CH	.44	2	.403	13.5
11.20	6.91	.29	4.23	CLAY	CH	.45	3	.479	13.5
11.40	6.52	.27	4.17	CLAY	CH	.46	3	.449	13.5
11.60	6.65	.25	3.81	CLAY	CH	.46	3	.458	13.5
11.80	7.16	.24	3.36	CLAY	CH	.47	3	.495	13.5
12.00	6.65	.28	4.20	CLAY	CH	.48	3	.457	13.5
12.20	6.65	.23	3.43	CLAY	CH	.49	3	.456	13.5
12.40	6.91	.29	4.22	CLAY	CH	.50	3	.475	13.5
12.60	6.39	.29	4.58	CLAY	CH	.50	3	.436	13.5
12.80	7.92	.14	1.82	SENSITIVE FINE GRAINED	OL-CH	.38	1	.558	13.5
13.00	7.42	.28	3.78	CLAY	CH	.52	3	.511	13.5
13.20	7.42	.29	3.94	CLAY	CH	.53	3	.511	13.5
13.40	6.91	.31	4.42	CLAY	CH	.54	3	.472	13.5
13.60	6.65	.32	4.79	CLAY	CH	.54	3	.452	13.5
13.80	6.65	.33	4.97	CLAY	CH	.55	3	.452	13.5
14.00	7.16	.36	5.00	CLAY	CH	.56	3	.489	13.5
14.20	8.17	.36	4.38	CLAY	CH	.57	3	.563	13.5
14.40	8.42	.34	4.09	CLAY	CH	.58	4	.581	13.5
14.60	6.90	.31	4.43	CLAY	CH	.58	3	.468	13.5
14.80	7.41	.28	3.75	CLAY	CH	.59	3	.505	13.5
15.00	7.67	.33	4.32	CLAY	CH	.60	3	.524	13.5
15.20	7.16	.34	4.81	CLAY	CH	.61	3	.485	13.5
15.40	7.41	.31	4.13	CLAY	CH	.62	3	.503	13.5
15.60	7.41	.33	4.48	CLAY	CH	.62	3	.503	13.5
15.80	6.91	.27	3.84	CLAY	CH	.63	3	.465	13.5
16.00	7.16	.35	4.83	CLAY	CH	.64	3	.483	13.5
16.20	8.18	.38	4.70	CLAY	CH	.65	3	.558	13.5
16.40	8.18	.35	4.22	CLAY	CH	.66	3	.558	13.5
16.60	8.18	.35	4.22	CLAY	CH	.66	3	.557	13.5
16.80	8.06	.33	4.12	CLAY	CH	.67	3	.547	13.5
17.00	7.16	.35	4.82	CLAY	CH	.68	3	.480	13.5
17.20	7.92	.25	3.19	CLAY	CH	.69	3	.536	13.5
17.40	8.20	.29	3.57	CLAY	CH	.70	3	.556	13.5
17.60	7.16	.31	4.28	CLAY	CH	.70	3	.478	13.5
17.80	8.43	.33	3.94	CLAY	CH	.71	4	.572	13.5
18.00	8.43	.37	4.41	CLAY	CH	.72	4	.571	13.5
18.20	8.18	.28	3.41	CLAY	CH	.73	3	.552	13.5
18.40	8.69	.32	3.68	CLAY	CH	.74	4	.590	13.5
18.60	8.45	.35	4.11	CLAY	CH	.74	4	.571	13.5
18.80	9.21	.32	3.49	CLAY	CH	.75	4	.626	13.5
19.00	10.22	.29	2.89	CLAY	CH	.76	4	.700	13.5
19.20	8.94	.29	3.22	CLAY	CH	.77	4	.606	13.5
19.40	13.19	.28	2.14	SILTY CLAY TO CLAY	CL-CH	.78	4	.919	13.5
19.60	9.22	.29	3.19	CLAY	CH	.78	4	.625	13.5
19.80	9.19	.28	3.07	CLAY	CH	.79	4	.622	13.5
20.00	8.94	.29	3.20	CLAY	CH	.80	4	.603	13.5



RESULT OF CONE PENETRATION TEST

3S

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

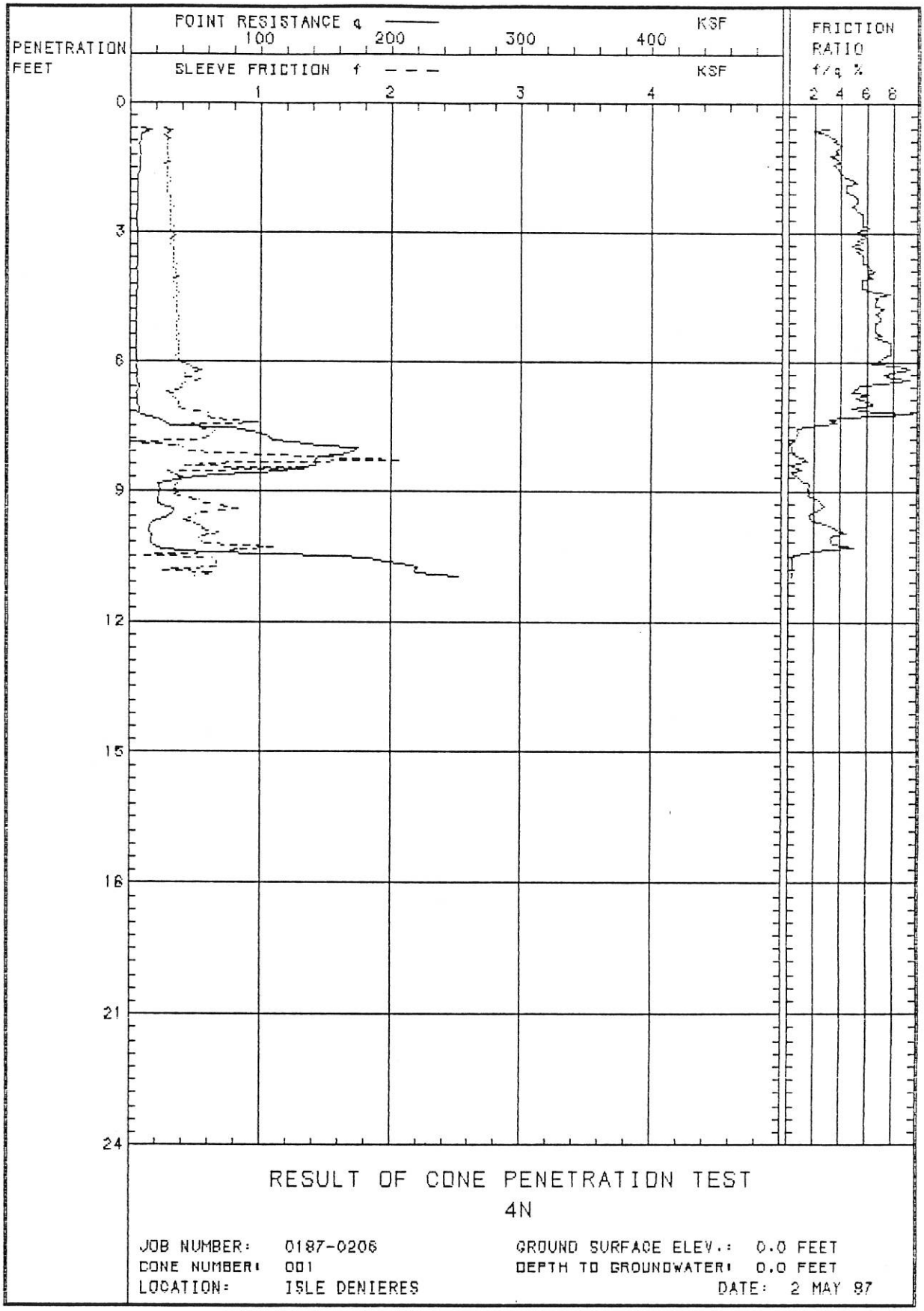
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 3S
CONE NO. : 5005
DATE : 04/29/87

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	376.45	1.24	.33	SAND	SW-SP	.04	36			100+	44	.50+
.80	258.30	1.24	.48	SAND	SW-SP	.05	24			100+	44	.50+
1.00	136.82	1.09	.79	SAND TO SILTY SAND	SM-SP	.06	16			100+	42	.50+
1.20	153.44	.69	.45	SAND TO SILTY SAND	SM-SP	.07	18			100+	42	.50+
1.40	96.32	1.09	1.13	SILTY SAND TO SANDY SILT	SM-ML	.08	15			100+	42	.50+
1.60	70.33	.53	.76	SILTY SAND TO SANDY SILT	SM-ML	.09	11			95	41	.50+
1.80	32.25	.46	1.43	SANDY SILT TO CLAYEY SILT	ML-MH	.09	6	2.382	13.5	68	38	.50+
2.00	38.36	.53	1.37	SANDY SILT TO CLAYEY SILT	ML-MH	.10	7	2.834	13.5	71	38	.50+
2.20	29.67	.54	1.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.10	7	2.191	13.5			
2.40	20.45	.82	4.03	CLAY	CH	.10	9	1.508	13.5			
2.60	16.64	.61	3.67	CLAY	CH	.10	7	1.225	13.5			
2.80	4.86	.45	9.17	ORGANIC MATERIAL	OL-OH	.08	2	.354	13.5			
3.00	5.50	.51	9.30	ORGANIC MATERIAL	OL-OH	.09	2	.401	13.5			
3.20	4.60	.38	8.34	ORGANIC MATERIAL	OL-OH	.10	2	.334	13.5			
3.40	5.37	.45	8.29	ORGANIC MATERIAL	OL-OH	.10	2	.391	13.5			
3.60	4.86	.41	8.46	ORGANIC MATERIAL	OL-OH	.11	2	.352	13.5			
3.80	5.63	.47	8.37	ORGANIC MATERIAL	OL-OH	.11	2	.409	13.5			
4.00	4.86	.39	8.11	ORGANIC MATERIAL	OL-OH	.12	2	.351	13.5			
4.20	4.35	.43	9.96	ORGANIC MATERIAL	OL-OH	.13	2	.313	13.5			
4.40	5.11	.37	7.21	ORGANIC MATERIAL	OL-OH	.13	2	.369	13.5			
4.60	4.35	.36	8.30	ORGANIC MATERIAL	OL-OH	.14	2	.312	13.5			
4.80	4.09	.33	8.03	ORGANIC MATERIAL	OL-OH	.14	1	.292	13.5			
5.00	4.09	.34	8.35	ORGANIC MATERIAL	OL-OH	.15	1	.292	13.5			
5.20	4.09	.38	9.29	ORGANIC MATERIAL	OL-OH	.16	1	.292	13.5			
5.40	3.83	.33	8.60	ORGANIC MATERIAL	OL-OH	.16	1	.272	13.5			
5.60	4.73	.37	7.90	ORGANIC MATERIAL	OL-OH	.17	2	.338	13.5			
5.80	3.58	.38	10.61	ORGANIC MATERIAL	OL-OH	.17	1	.252	13.5			
6.00	3.83	.30	7.87	ORGANIC MATERIAL	OL-OH	.18	1	.271	13.5			
6.20	4.60	.34	7.43	ORGANIC MATERIAL	OL-OH	.19	2	.327	13.5			
6.40	4.60	.35	7.71	ORGANIC MATERIAL	OL-OH	.19	2	.327	13.5			
6.60	4.09	.32	7.72	ORGANIC MATERIAL	OL-OH	.20	1	.288	13.5			
6.80	4.35	.38	8.76	ORGANIC MATERIAL	OL-OH	.20	2	.307	13.5			
7.00	4.34	.34	7.88	ORGANIC MATERIAL	OL-OH	.21	2	.306	13.5			
7.20	4.35	.37	8.46	ORGANIC MATERIAL	OL-OH	.22	2	.306	13.5			
7.40	4.35	.28	6.37	ORGANIC MATERIAL	OL-OH	.22	2	.306	13.5			
7.60	3.32	.34	10.30	ORGANIC MATERIAL	OL-OH	.23	1	.229	13.5			
7.80	5.11	.30	5.93	ORGANIC MATERIAL	OL-OH	.23	2	.362	13.5			
8.00	4.60	.31	6.73	ORGANIC MATERIAL	OL-OH	.24	2	.323	13.5			
8.20	4.34	.33	7.56	ORGANIC MATERIAL	OL-OH	.25	2	.304	13.5			
8.40	4.09	.29	7.06	ORGANIC MATERIAL	OL-OH	.25	1	.284	13.5			
8.60	4.35	.28	6.39	ORGANIC MATERIAL	OL-OH	.26	2	.303	13.5			
8.80	4.86	.34	7.04	ORGANIC MATERIAL	OL-OH	.26	2	.341	13.5			
9.00	4.86	.28	5.73	ORGANIC MATERIAL	OL-OH	.27	2	.340	13.5			
9.20	5.88	.32	5.41	CLAY	CH	.37	2	.408	13.5			
9.40	5.89	.28	4.69	CLAY	CH	.38	2	.408	13.5			

9.60	5.11	.30	5.95	ORGANIC MATERIAL	OL-OH	.29	2	.358	13.5
9.80	5.37	.32	5.88	CLAY	CH	.39	2	.369	13.5
10.00	5.11	.30	5.95	ORGANIC MATERIAL	OL-OH	.30	2	.356	13.5
10.20	5.11	.30	5.94	ORGANIC MATERIAL	OL-OH	.31	2	.356	13.5
10.40	6.39	.24	3.73	CLAY	CH	.42	3	.442	13.5
10.60	5.89	.33	5.60	CLAY	CH	.42	2	.405	13.5
10.80	4.85	.32	6.53	ORGANIC MATERIAL	OL-OH	.32	2	.336	13.5
11.00	5.89	.29	4.95	CLAY	CH	.44	2	.403	13.5
11.20	5.63	.32	5.63	CLAY	CH	.45	2	.384	13.5
11.40	5.11	.25	4.92	CLAY	CH	.46	2	.345	13.5
11.60	5.63	.28	4.96	CLAY	CH	.46	2	.382	13.5
11.80	5.89	.29	4.94	CLAY	CH	.47	2	.401	13.5
12.00	5.63	.28	4.96	CLAY	CH	.48	2	.381	13.5
12.20	6.40	.33	5.17	CLAY	CH	.49	3	.438	13.5
12.40	6.39	.25	3.94	CLAY	CH	.50	3	.437	13.5
12.60	6.15	.21	3.48	CLAY	CH	.50	2	.418	13.5
12.80	5.63	.27	4.72	CLAY	CH	.51	2	.379	13.5
13.00	5.89	.28	4.75	CLAY	CH	.52	2	.398	13.5
13.20	7.16	.31	4.27	CLAY	CH	.53	3	.491	13.5
13.40	6.65	.32	4.76	CLAY	CH	.54	3	.453	13.5
13.60	7.03	.30	4.26	CLAY	CH	.54	3	.480	13.5
13.80	7.92	.32	4.03	CLAY	CH	.55	3	.546	13.5
14.00	7.42	.33	4.47	CLAY	CH	.56	3	.508	13.5
14.20	7.91	.20	2.59	CLAY	CH	.57	3	.544	13.5
14.40	7.67	.33	4.32	CLAY	CH	.58	3	.526	13.5
14.60	7.16	.33	4.63	CLAY	CH	.58	3	.487	13.5
14.80	6.65	.29	4.40	CLAY	CH	.59	3	.449	13.5
15.00	6.15	.30	4.94	CLAY	CH	.60	2	.411	13.5
15.20	6.14	.29	4.76	CLAY	CH	.61	2	.410	13.5
15.40	7.03	.34	4.81	CLAY	CH	.62	3	.475	13.5
15.60	7.16	.34	4.81	CLAY	CH	.62	3	.484	13.5
15.80	7.41	.32	4.30	CLAY	CH	.63	3	.502	13.5
16.00	7.16	.33	4.63	CLAY	CH	.64	3	.483	13.5
16.20	7.41	.32	4.30	CLAY	CH	.65	3	.501	13.5
16.40	7.92	.28	3.55	CLAY	CH	.66	3	.538	13.5
16.60	7.95	.25	3.20	CLAY	CH	.66	3	.539	13.5
16.80	7.41	.25	3.43	CLAY	CH	.67	3	.499	13.5
17.00	7.67	.23	2.97	CLAY	CH	.68	3	.518	13.5
17.20	8.18	.23	2.80	CLAY	CH	.69	3	.555	13.5
17.40	8.31	.29	3.45	CLAY	CH	.70	3	.564	13.5
17.60	8.43	.31	3.64	CLAY	CH	.70	4	.572	13.5
17.80	8.18	.29	3.59	CLAY	CH	.71	3	.553	13.5
18.00	8.18	.31	3.74	CLAY	CH	.72	3	.553	13.5
18.20	8.17	.29	3.60	CLAY	CH	.73	3	.551	13.5
18.40	8.70	.32	3.68	CLAY	CH	.74	4	.590	13.5
18.60	8.18	.32	3.91	CLAY	CH	.74	3	.551	13.5
18.80	8.18	.31	3.75	CLAY	CH	.75	3	.550	13.5
19.00	8.18	.31	3.75	CLAY	CH	.76	3	.550	13.5
19.20	8.70	.31	3.54	CLAY	CH	.77	4	.587	13.5
19.40	9.21	.32	3.48	CLAY	CH	.78	4	.624	13.5
19.60	9.45	.33	3.54	CLAY	CH	.78	4	.642	13.5
19.80	9.72	.41	4.17	CLAY	CH	.79	4	.661	13.5
20.00	20.59	.52	2.52	SILTY CLAY TO CLAY	CL-CH	.80	6	1.466	13.5



RESULT OF CONE PENETRATION TEST

4N

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

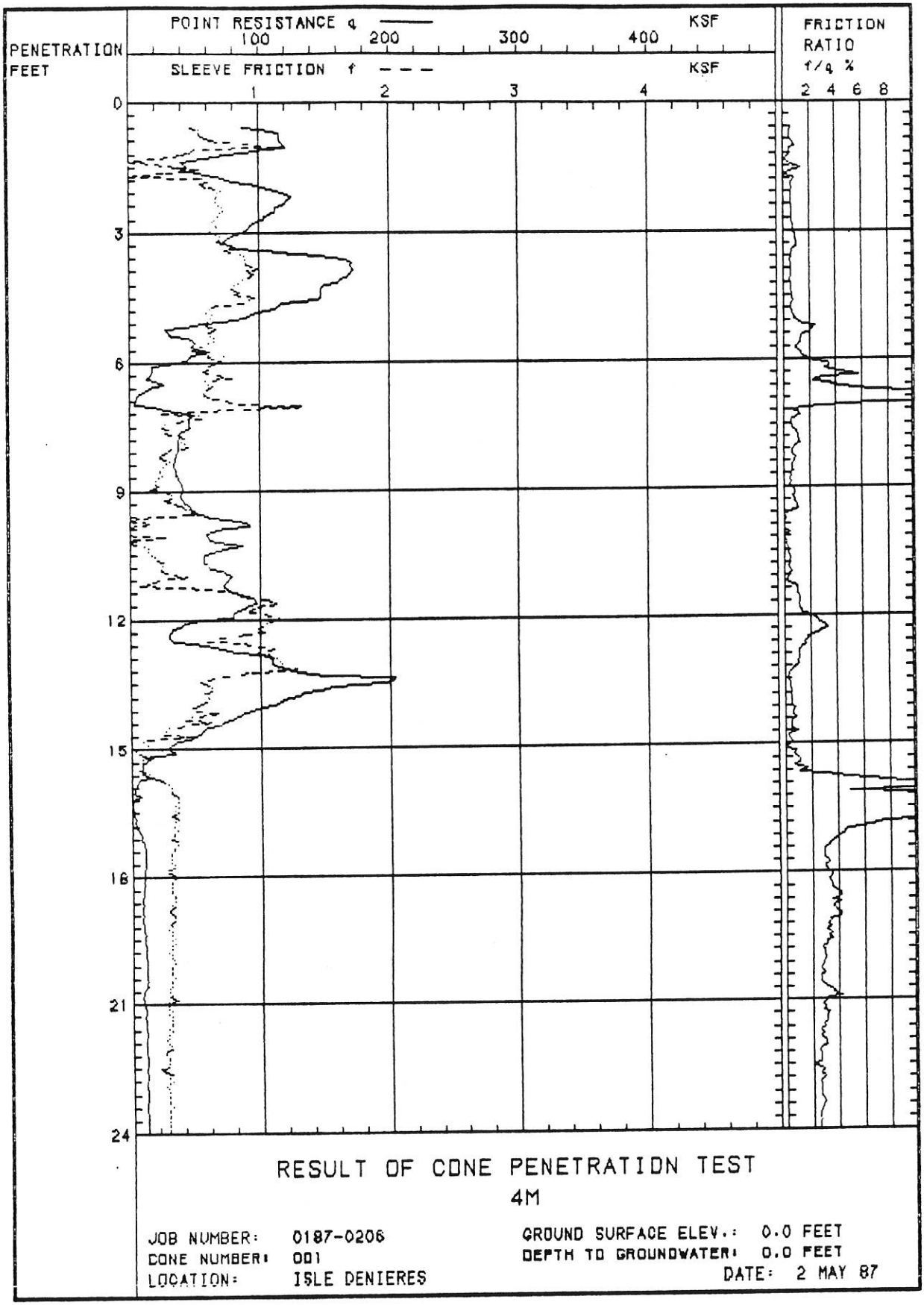
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 4N
CONE NO. : 001
DATE : 04/29/87

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	12.79	.29	2.29	SILTY CLAY TO CLAY	CL-CH	.02	4	.946	13.5			
.80	8.36	.28	3.37	CLAY	CH	.03	4	.617	13.5			
1.00	7.13	.28	3.96	CLAY	CH	.04	3	.525	13.5			
1.20	8.12	.28	3.47	CLAY	CH	.05	3	.598	13.5			
1.40	7.75	.30	3.88	CLAY	CH	.06	3	.570	13.5			
1.60	7.13	.28	3.97	CLAY	CH	.06	3	.524	13.5			
1.80	6.15	.31	5.00	CLAY	CH	.07	2	.450	13.5			
2.00	6.40	.28	4.44	CLAY	CH	.08	3	.468	13.5			
2.20	5.90	.31	5.21	CLAY	CH	.09	2	.431	13.5			
2.40	6.40	.32	5.00	CLAY	CH	.10	3	.467	13.5			
2.60	5.41	.31	5.69	CLAY	CH	.10	2	.393	13.5			
2.80	5.41	.31	5.69	CLAY	CH	.11	2	.393	13.5			
3.00	5.90	.32	5.42	CLAY	CH	.12	2	.428	13.5			
3.20	5.90	.32	5.41	CLAY	CH	.13	2	.428	13.5			
3.40	6.15	.33	5.40	CLAY	CH	.14	2	.445	13.5			
3.60	5.90	.33	5.62	CLAY	CH	.14	2	.427	13.5			
3.80	5.66	.34	6.08	CLAY	CH	.15	2	.408	13.5			
4.00	5.90	.37	6.23	ORGANIC MATERIAL	OL-OH	.12	2	.428	13.5			
4.20	6.15	.34	5.59	CLAY	CH	.17	2	.443	13.5			
4.40	5.17	.37	7.13	ORGANIC MATERIAL	OL-OH	.13	2	.373	13.5			
4.60	5.16	.34	6.67	ORGANIC MATERIAL	OL-OH	.14	2	.372	13.5			
4.80	5.04	.36	7.07	ORGANIC MATERIAL	OL-OH	.14	2	.363	13.5			
5.00	5.41	.38	7.03	ORGANIC MATERIAL	OL-OH	.15	2	.390	13.5			
5.20	5.41	.36	6.58	ORGANIC MATERIAL	OL-OH	.16	2	.389	13.5			
5.40	5.41	.37	6.82	ORGANIC MATERIAL	OL-OH	.16	2	.389	13.5			
5.60	4.92	.38	7.74	ORGANIC MATERIAL	OL-OH	.17	2	.352	13.5			
5.80	4.92	.38	7.74	ORGANIC MATERIAL	OL-OH	.17	2	.352	13.5			
6.00	5.90	.39	6.65	ORGANIC MATERIAL	OL-OH	.18	2	.424	13.5			
6.20	5.90	.48	8.08	ORGANIC MATERIAL	OL-OH	.19	2	.423	13.5			
6.40	5.66	.49	8.61	ORGANIC MATERIAL	OL-OH	.19	2	.405	13.5			
6.60	7.62	.40	5.30	CLAY	CH	.26	3	.545	13.5			
6.80	5.90	.33	5.62	CLAY	CH	.27	2	.417	13.5			
7.00	5.90	.38	6.41	ORGANIC MATERIAL	OL-OH	.21	2	.422	13.5			
7.20	6.89	.50	7.33	ORGANIC MATERIAL	OL-OH	.22	3	.495	13.5			
7.40	24.33	.84	3.45	SILTY CLAY TO CLAY	CL-CH	.30	7	1.780	13.5			
7.60	85.52	.54	.63	SILTY SAND TO SANDY SILT	SM-ML	.42	13			77	39	.50+
7.80	108.46	.57	.52	SAND TO SILTY SAND	SM-SP	.47	12			83	41	.50+
8.00	160.45	.39	.25	SAND TO SILTY SAND	SM-SP	.48	19			98	42	.50+
8.20	153.09	.90	.59	SAND TO SILTY SAND	SM-SP	.49	18			95	42	.50+
8.40	142.78	.60	.42	SAND TO SILTY SAND	SM-SP	.50	17			92	41	.50+
8.60	93.79	1.23	1.31	SILTY SAND TO SANDY SILT	SM-ML	.47	14			78	39	.50+
8.80	29.61	.38	1.27	SANDY SILT TO CLAYEY SILT	ML-MH	.44	5	2.161	13.5	46	35	.15
9.00	23.00	.34	1.48	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	5	1.674	13.5			
9.20	21.89	.50	2.27	CLAYEY SILT TO SILTY CLAY	MH-CL	.41	5	1.591	13.5			
9.40	29.70	.77	2.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.42	7	2.169	13.5			

9.60	30.04	.49	1.63	SANDY SILT TO CLAYEY SILT	ML-MH	.48	5	2.189	13.5	44	34	.15
9.80	16.49	.31	1.87	CLAYEY SILT TO SILTY CLAY	MH-CL	.44	3	1.189	13.5			
10.00	16.46	.64	3.87	CLAY	CH	.40	7	1.190	13.5			
10.20	16.73	.57	3.40	CLAY	CH	.41	8	1.209	13.5			
10.40	42.80	.79	1.84	SANDY SILT TO CLAYEY SILT	ML-MH	.52	8	3.132	13.5	53	35	.18
10.60	189.55	.65	.34	SAND	SW-SP	.69	18			95	44	.50+
10.80	219.91	.47	.21	SAND	SW-SP	.70	21			100+	44	.50+

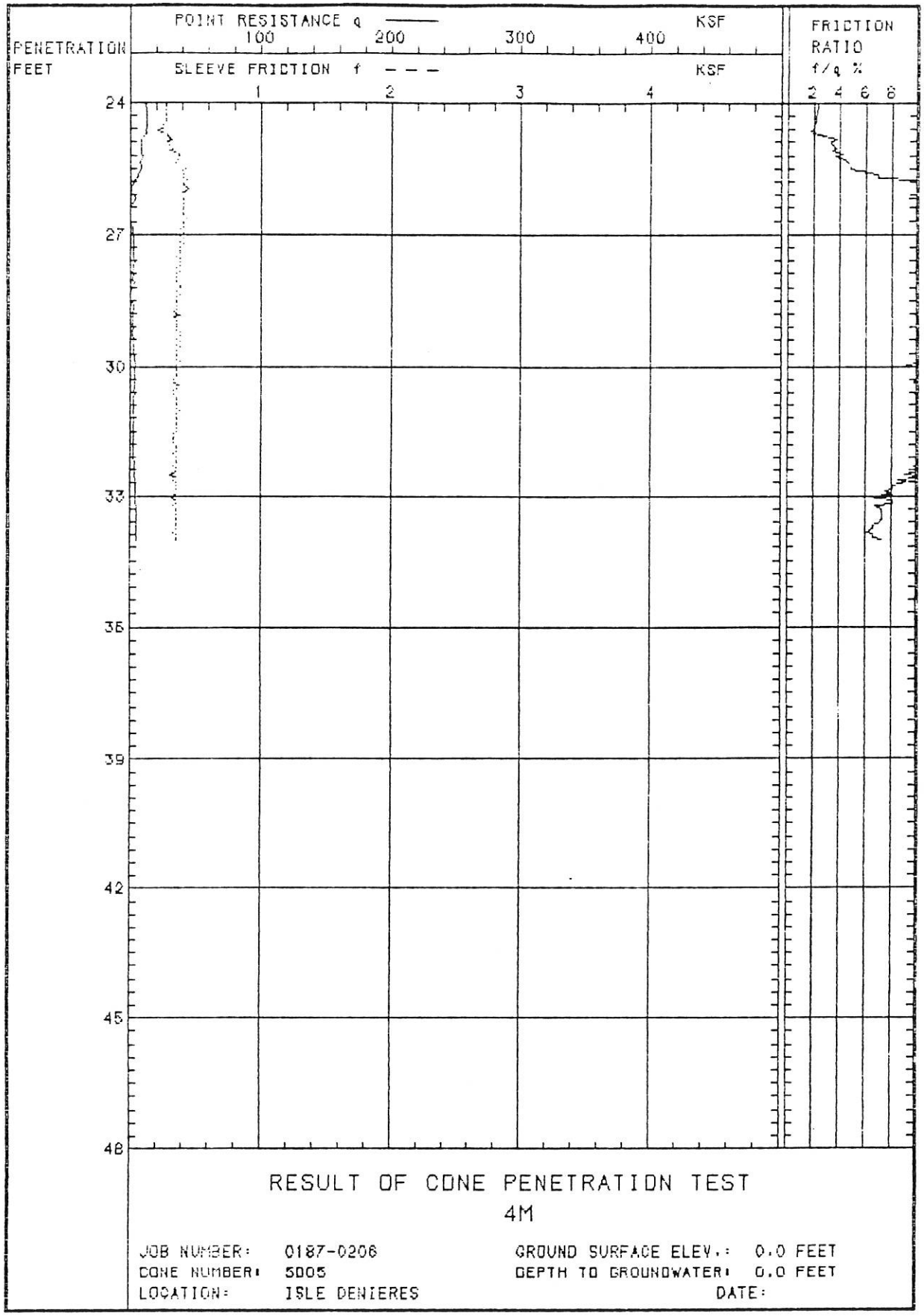


RESULT OF CONE PENETRATION TEST

4M

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

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87



RESULT OF CONE PENETRATION TEST

4M

JOB NUMBER: 0187-0206
CONE NUMBER: 5005
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

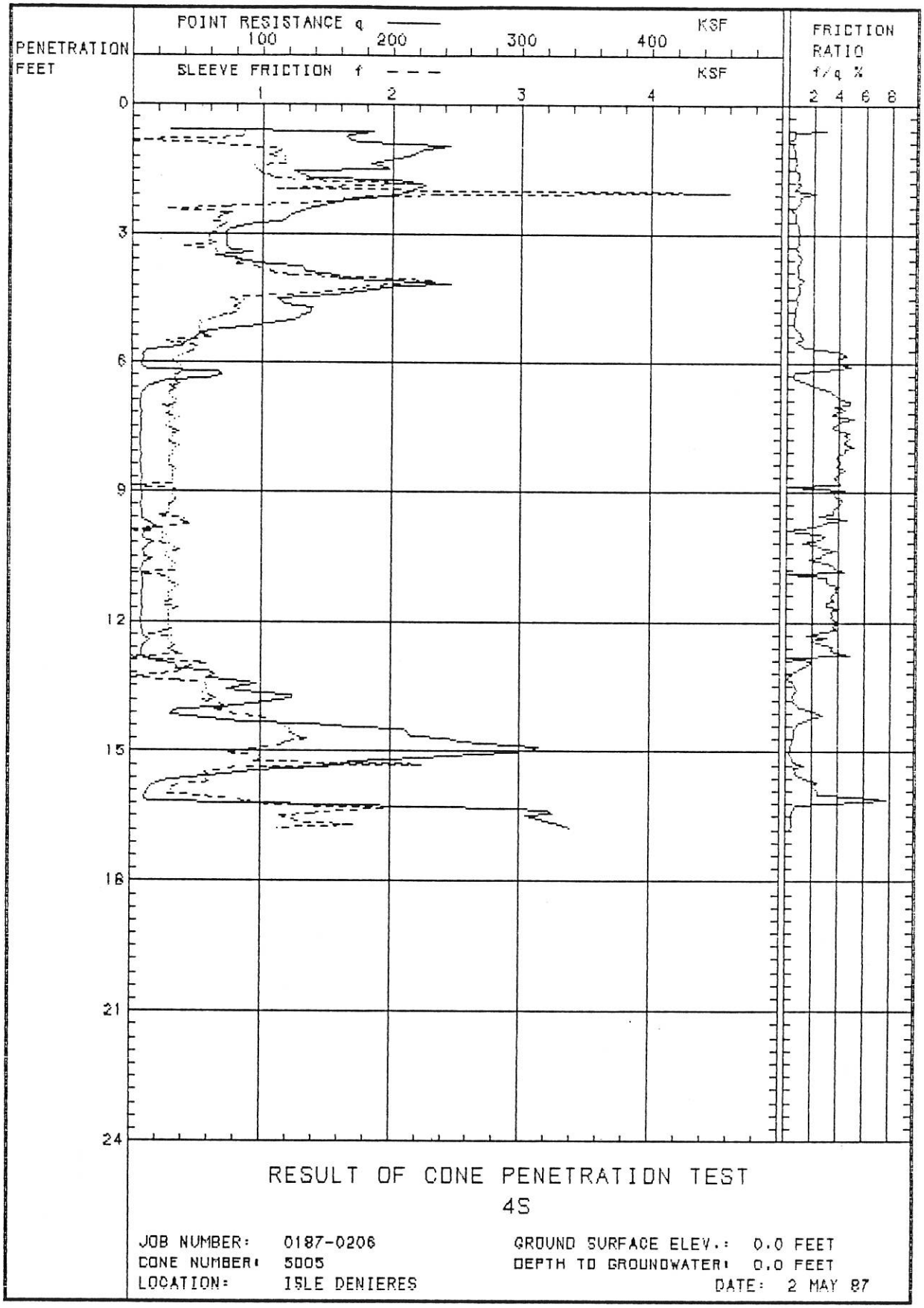
PROJECT NO. : 01870206
BORING NO. : 4M
CONE NO. : 001
DATE : 04/29/87

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	95.19	.51	.54	SAND TO SILTY SAND	SM-SP	.04	11			100+	42	.50+
.80	116.10	.58	.50	SAND TO SILTY SAND	SM-SP	.05	13			100+	42	.50+
1.00	120.15	1.00	.83	SAND TO SILTY SAND	SM-SP	.06	14			100+	42	.50+
1.20	81.67	.45	.55	SILTY SAND TO SANDY SILT	SM-ML	.07	13			100+	42	.50+
1.40	41.57	.11	.25	SILTY SAND TO SANDY SILT	SM-ML	.08	6			75	39	.50+
1.60	47.58	.36	.75	SILTY SAND TO SANDY SILT	SM-ML	.09	7			78	39	.50+
1.80	76.37	.45	.60	SILTY SAND TO SANDY SILT	SM-ML	.10	12			98	42	.50+
2.00	107.97	.66	.61	SAND TO SILTY SAND	SM-SP	.12	12			100+	42	.50+
2.20	124.46	.70	.57	SAND TO SILTY SAND	SM-SP	.13	14			100+	42	.50+
2.40	115.86	.71	.61	SAND TO SILTY SAND	SM-SP	.14	13			100+	42	.50+
2.60	107.99	.60	.56	SAND TO SILTY SAND	SM-SP	.16	12			100+	42	.50+
2.80	96.06	.67	.69	SAND TO SILTY SAND	SM-SP	.17	11			100+	42	.50+
3.00	86.35	.75	.87	SILTY SAND TO SANDY SILT	SM-ML	.17	13			95	41	.50+
3.20	74.16	.68	.92	SILTY SAND TO SANDY SILT	SM-ML	.18	11			87	40	.50+
3.40	92.92	.78	.84	SILTY SAND TO SANDY SILT	SM-ML	.19	14			96	42	.50+
3.60	157.13	.94	.60	SAND TO SILTY SAND	SM-SP	.22	18			100+	42	.50+
3.80	171.19	.95	.55	SAND TO SILTY SAND	SM-SP	.23	20			100+	42	.50+
4.00	168.98	.94	.56	SAND TO SILTY SAND	SM-SP	.24	20			100+	42	.50+
4.20	155.85	.83	.53	SAND TO SILTY SAND	SM-SP	.25	18			100+	42	.50+
4.40	148.04	.82	.55	SAND TO SILTY SAND	SM-SP	.26	17			100+	42	.50+
4.60	131.31	1.00	.76	SAND TO SILTY SAND	SM-SP	.28	15			100+	42	.50+
4.80	105.56	.63	.60	SAND TO SILTY SAND	SM-SP	.29	12			92	42	.50+
5.00	80.49	.61	.76	SILTY SAND TO SANDY SILT	SM-ML	.27	12			83	40	.50+
5.20	34.98	.65	1.85	SANDY SILT TO CLAYEY SILT	ML-MH	.26	6	2.572	13.5	61	37	.24
5.40	39.30	.64	1.63	SANDY SILT TO CLAYEY SILT	ML-MH	.27	7	2.891	13.5	63	37	.28
5.60	49.20	.62	1.25	SANDY SILT TO CLAYEY SILT	ML-MH	.28	9	3.624	13.5	67	37	.49
5.80	54.91	.69	1.26	SANDY SILT TO CLAYEY SILT	ML-MH	.29	10	4.046	13.5	69	38	.50+
6.00	36.23	.83	2.29	CLAYEY SILT TO SILTY CLAY	MH-CL	.27	8	2.664	13.5			
6.20	17.71	.58	3.26	SILTY CLAY TO CLAY	CL-CH	.25	5	1.293	13.5			
6.40	17.07	.76	4.44	CLAY	CH	.26	8	1.245	13.5			
6.60	16.13	.63	3.88	CLAY	CH	.26	7	1.176	13.5			
6.80	5.42	.61	11.26	ORGANIC MATERIAL	OL-OH	.20	2	.386	13.5			
7.00	11.73	1.08	9.24	CLAY	CH	.28	5	.848	13.5			
7.20	47.45	.39	.83	SANDY SILT TO CLAYEY SILT	ML-MH	.36	9	3.488	13.5	63	37	.27
7.40	45.99	.35	.75	SILTY SAND TO SANDY SILT	SM-ML	.41	7			61	37	.23
7.60	41.35	.29	.70	SANDY SILT TO CLAYEY SILT	ML-MH	.38	7	3.035	13.5	59	36	.21
7.80	38.13	.41	1.08	SANDY SILT TO CLAYEY SILT	ML-MH	.39	7	2.796	13.5	56	36	.19
8.00	37.39	.39	1.04	SANDY SILT TO CLAYEY SILT	ML-MH	.40	7	2.740	13.5	55	36	.18
8.20	35.42	.23	.66	SANDY SILT TO CLAYEY SILT	ML-MH	.41	6	2.594	13.5	52	35	.18
8.40	34.44	.21	.61	SANDY SILT TO CLAYEY SILT	ML-MH	.42	6	2.520	13.5	51	35	.17
8.60	36.28	.25	.69	SANDY SILT TO CLAYEY SILT	ML-MH	.43	6	2.655	13.5	52	35	.17
8.80	39.10	.20	.52	SANDY SILT TO CLAYEY SILT	ML-MH	.44	7	2.864	13.5	54	36	.18
9.00	41.08	.22	.53	SILTY SAND TO SANDY SILT	SM-ML	.49	6			53	35	.18
9.20	40.33	.30	.74	SANDY SILT TO CLAYEY SILT	ML-MH	.46	7	2.953	13.5	54	36	.18
9.40	46.97	.71	1.52	SANDY SILT TO CLAYEY SILT	ML-MH	.47	8	3.444	13.5	59	36	.20

9.60	59.10	.18	.31	SILTY SAND TO SANDY SILT	SM-ML	.53	9			62	37	.25
9.80	91.49	.08	.08	SAND TO SILTY SAND	SM-SP	.59	10			73	39	.50+
10.00	61.53	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.55	9			63	37	.26
10.20	64.64	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.56	10			63	37	.27
10.40	73.14	.20	.27	SILTY SAND TO SANDY SILT	SM-ML	.57	11			66	37	.36
10.60	56.88	.20	.35	SILTY SAND TO SANDY SILT	SM-ML	.58	9			60	36	.21
10.80	60.99	.25	.41	SILTY SAND TO SANDY SILT	SM-ML	.59	9			61	37	.23
11.00	76.72	.81	1.05	SILTY SAND TO SANDY SILT	SM-ML	.60	12			67	37	.37
11.20	72.57	.20	.28	SILTY SAND TO SANDY SILT	SM-ML	.62	11			65	37	.31
11.40	80.60	.76	.94	SILTY SAND TO SANDY SILT	SM-ML	.63	12			67	37	.39
11.60	97.14	1.07	1.10	SILTY SAND TO SANDY SILT	SM-ML	.64	15			73	38	.50+
11.80	83.94	.94	1.12	SILTY SAND TO SANDY SILT	SM-ML	.65	13			68	38	.41
12.00	67.37	1.13	1.68	SANDY SILT TO CLAYEY SILT	ML-MH	.60	12	4.946	13.5	63	37	.27
12.20	35.72	1.01	2.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.55	8	2.605	13.5			
12.40	30.26	.68	2.25	CLAYEY SILT TO SILTY CLAY	MH-CL	.56	7	2.200	13.5			
12.60	57.17	.89	1.55	SANDY SILT TO CLAYEY SILT	ML-MH	.63	10	4.188	13.5	58	36	.20
12.80	91.07	.98	1.07	SILTY SAND TO SANDY SILT	SM-ML	.70	14			69	38	.45
13.00	109.33	1.16	1.06	SILTY SAND TO SANDY SILT	SM-ML	.71	17			74	38	.50+
13.20	125.58	1.10	.87	SAND TO SILTY SAND	SM-SP	.79	15			77	40	.50+
13.40	203.67	.59	.29	SAND	SW-SP	.87	19			91	43	.50+
13.60	151.50	.61	.40	SAND TO SILTY SAND	SM-SP	.82	18			83	40	.50+
13.80	126.01	.60	.47	SAND TO SILTY SAND	SM-SP	.83	15			76	40	.50+
14.00	106.36	.23	.22	SAND TO SILTY SAND	SM-SP	.84	12			70	39	.50
14.20	85.89	.57	.67	SILTY SAND TO SANDY SILT	SM-ML	.78	13			65	37	.31
14.40	70.88	.52	.73	SILTY SAND TO SANDY SILT	SM-ML	.79	11			60	36	.22
14.60	54.39	.26	.48	SILTY SAND TO SANDY SILT	SM-ML	.80	8			49	35	.17
14.80	40.69	.11	.26	SILTY SAND TO SANDY SILT	SM-ML	.81	6			40	34	.15
15.00	29.11	.14	.47	SANDY SILT TO CLAYEY SILT	ML-MH	.75	5	2.101	13.5	30	32	.13
15.20	16.29	.13	.77	SENSITIVE FINE GRAINED	OL-CH	.46	3	1.173	13.5			
15.40	8.36	.09	1.06	SENSITIVE FINE GRAINED	OL-CH	.46	2	.585	13.5			
15.60	11.49	.15	1.31	SENSITIVE FINE GRAINED	OL-CH	.47	2	.816	13.5			
15.80	4.93	.27	5.56	CLAY	CH	.63	2	.318	13.5			
16.00	2.22	.31	13.90	ORGANIC MATERIAL	OL-OH	.48	1	.129	13.5			
16.20	1.74	.36	20.71	ORGANIC MATERIAL	OL-OH	.49	1	.093	13.5			
16.40	1.22	.35	28.42	ORGANIC MATERIAL	OL-OH	.49	1	.054	13.5			
16.60	2.69	.33	12.41	ORGANIC MATERIAL	OL-OH	.50	1	.162	13.5			
16.80	3.92	.34	8.77	ORGANIC MATERIAL	OL-OH	.50	1	.253	13.5			
17.00	7.13	.33	4.63	CLAY	CH	.68	3	.478	13.5			
17.20	9.09	.35	3.87	CLAY	CH	.69	4	.623	13.5			
17.40	10.08	.32	3.14	CLAY	CH	.70	4	.695	13.5			
17.60	10.33	.31	3.00	CLAY	CH	.70	4	.713	13.5			
17.80	9.60	.31	3.18	CLAY	CH	.71	4	.658	13.5			
18.00	9.60	.33	3.43	CLAY	CH	.72	4	.658	13.5			
18.20	9.11	.31	3.35	CLAY	CH	.73	4	.621	13.5			
18.40	8.62	.32	3.69	CLAY	CH	.74	4	.584	13.5			
18.60	8.35	.32	3.81	CLAY	CH	.74	3	.563	13.5			
18.80	7.87	.28	3.58	CLAY	CH	.75	3	.527	13.5			
19.00	7.87	.33	4.18	CLAY	CH	.76	3	.527	13.5			
19.20	8.85	.29	3.31	CLAY	CH	.77	4	.599	13.5			
19.40	9.60	.32	3.30	CLAY	CH	.78	4	.654	13.5			
19.60	9.59	.32	3.30	CLAY	CH	.78	4	.652	13.5			
19.80	10.33	.29	2.82	CLAY	CH	.79	4	.707	13.5			
20.00	10.82	.33	3.03	CLAY	CH	.80	5	.742	13.5			
20.20	11.06	.30	2.74	CLAY	CH	.81	5	.760	13.5			
20.40	11.55	.32	2.73	CLAY	CH	.82	5	.795	13.5			
20.60	11.09	.29	2.65	CLAY	CH	.82	5	.760	13.5			
20.80	8.12	.29	3.61	CLAY	CH	.83	3	.540	13.5			
21.00	9.09	.28	3.08	CLAY	CH	.84	4	.611	13.5			
21.20	10.09	.29	2.90	CLAY	CH	.85	4	.685	13.5			
21.40	9.84	.30	3.09	CLAY	CH	.86	4	.665	13.5			

21.60	10.08	.29	2.89	CLAY	CH	.86	4	.682	13.5
21.80	9.84	.27	2.73	CLAY	CH	.87	4	.664	13.5
22.00	9.84	.29	2.97	CLAY	CH	.88	4	.664	13.5
22.20	10.57	.27	2.53	CLAY	CH	.89	5	.717	13.5
22.40	10.82	.28	2.58	CLAY	CH	.90	5	.735	13.5
22.60	10.57	.28	2.64	CLAY	CH	.90	5	.716	13.5
22.80	10.33	.29	2.83	CLAY	CH	.91	4	.698	13.5
23.00	10.57	.29	2.77	CLAY	CH	.92	5	.715	13.5
23.20	10.82	.28	2.58	CLAY	CH	.93	5	.733	13.5
23.40	10.33	.29	2.83	CLAY	CH	.94	4	.696	13.5
23.60	11.06	.28	2.52	SILTY CLAY TO CLAY	CL-CH	.94	3	.749	13.5
23.80	11.06	.28	2.52	SILTY CLAY TO CLAY	CL-CH	.95	3	.749	13.5
24.00	11.55	.28	2.41	SILTY CLAY TO CLAY	CL-CH	.96	3	.785	13.5
24.20	12.30	.28	2.26	SILTY CLAY TO CLAY	CL-CH	.97	3	.839	13.5
24.40	12.79	.28	2.17	SILTY CLAY TO CLAY	CL-CH	.98	4	.875	13.5
24.60	12.32	.23	1.88	SILTY CLAY TO CLAY	CL-CH	.98	3	.839	13.5
24.80	9.36	.30	3.25	CLAY	CH	.99	4	.620	13.5
25.00	8.85	.29	3.31	CLAY	CH	1.00	4	.582	13.5
25.20	9.57	.49	5.17	CLAY	CH	1.01	4	.634	13.5
25.40	7.92	.44	5.52	CLAY	CH	1.02	3	.511	13.5
25.60	6.67	.41	6.18	CLAY	CH	1.02	3	.418	13.5
25.80	2.97	.42	14.16	ORGANIC MATERIAL	OL-OH	.77	1	.163	13.5
26.00	.75	.43	57.68	ORGANIC MATERIAL	OL-OH	.78	1	-.002	13.5
26.20	3.95	.41	10.32	ORGANIC MATERIAL	OL-OH	.79	1	.235	13.5
26.40	.75	.41	54.76	ORGANIC MATERIAL	OL-OH	.79	1	-.003	13.5
26.60	.24	.42	177.51	ORGANIC MATERIAL	OL-OH	.80	1	-.042	13.5
26.80	.71	.41	57.42	ORGANIC MATERIAL	OL-OH	.80	1	-.007	13.5
27.00	1.95	.40	20.29	ORGANIC MATERIAL	OL-OH	.81	1	.084	13.5
27.20	2.70	.39	14.62	ORGANIC MATERIAL	OL-OH	.82	1	.139	13.5
27.40	2.95	.42	14.25	ORGANIC MATERIAL	OL-OH	.82	1	.158	13.5
27.60	3.19	.38	12.01	ORGANIC MATERIAL	OL-OH	.83	1	.175	13.5
27.80	2.22	.37	16.68	ORGANIC MATERIAL	OL-OH	.83	1	.103	13.5
28.00	1.71	.36	20.95	ORGANIC MATERIAL	OL-OH	.84	1	.065	13.5
28.20	1.50	.38	25.72	ORGANIC MATERIAL	OL-OH	.85	1	.048	13.5
28.40	.49	.37	75.78	ORGANIC MATERIAL	OL-OH	.85	1	-.027	13.5
28.60	2.18	.36	16.45	ORGANIC MATERIAL	OL-OH	.86	1	.098	13.5
28.80	1.97	.36	18.22	ORGANIC MATERIAL	OL-OH	.86	1	.082	13.5
29.00	1.71	.36	20.98	ORGANIC MATERIAL	OL-OH	.87	1	.062	13.5
29.20	1.97	.37	18.84	ORGANIC MATERIAL	OL-OH	.88	1	.081	13.5
29.40	2.46	.37	15.04	ORGANIC MATERIAL	OL-OH	.88	1	.117	13.5
29.60	2.72	.37	13.65	ORGANIC MATERIAL	OL-OH	.89	1	.135	13.5
29.80	3.44	.36	10.39	ORGANIC MATERIAL	OL-OH	.89	1	.189	13.5
30.00	3.70	.36	9.68	ORGANIC MATERIAL	OL-OH	.90	1	.207	13.5
30.20	3.44	.36	10.40	ORGANIC MATERIAL	OL-OH	.91	1	.188	13.5
30.40	3.44	.36	10.37	ORGANIC MATERIAL	OL-OH	.91	1	.188	13.5
30.60	3.19	.33	10.49	ORGANIC MATERIAL	OL-OH	.92	1	.168	13.5
30.80	2.72	.36	13.21	ORGANIC MATERIAL	OL-OH	.92	1	.133	13.5
31.00	2.46	.37	15.05	ORGANIC MATERIAL	OL-OH	.93	1	.113	13.5
31.20	2.46	.36	14.59	ORGANIC MATERIAL	OL-OH	.94	1	.113	13.5
31.40	2.46	.36	14.58	ORGANIC MATERIAL	OL-OH	.94	1	.112	13.5
31.60	2.95	.33	11.33	ORGANIC MATERIAL	OL-OH	.95	1	.148	13.5
31.80	2.95	.35	11.72	ORGANIC MATERIAL	OL-OH	.95	1	.148	13.5
32.00	2.95	.35	11.75	ORGANIC MATERIAL	OL-OH	.96	1	.148	13.5
32.20	3.44	.36	10.40	ORGANIC MATERIAL	OL-OH	.97	1	.184	13.5
32.40	3.44	.36	10.40	ORGANIC MATERIAL	OL-OH	.97	1	.183	13.5
32.60	3.68	.35	9.40	ORGANIC MATERIAL	OL-OH	.98	1	.200	13.5
32.80	4.43	.36	8.07	ORGANIC MATERIAL	OL-OH	.98	2	.255	13.5
33.00	4.66	.33	7.17	ORGANIC MATERIAL	OL-OH	.99	2	.272	13.5
33.20	4.66	.35	7.41	ORGANIC MATERIAL	OL-OH	1.00	2	.272	13.5
33.40	4.92	.36	7.25	ORGANIC MATERIAL	OL-OH	1.00	2	.290	13.5

33.60	5.04	.36	7.07	ORGANIC MATERIAL	OL-OH	1.01	2	.298	13.5
33.80	5.41	.34	6.37	ORGANIC MATERIAL	OL-OH	1.01	2	.326	13.5



RESULT OF CONE PENETRATION TEST

4S

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

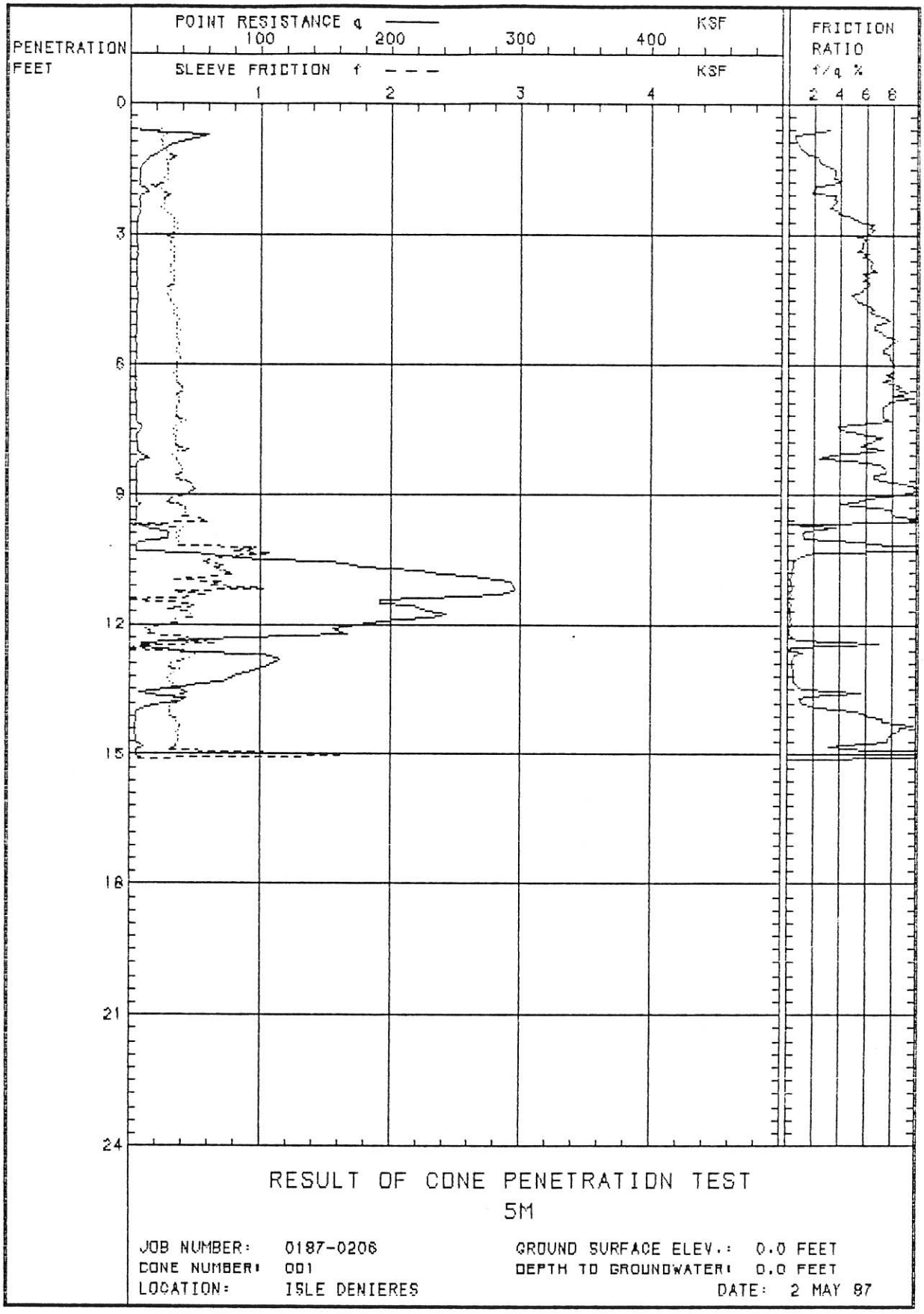
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 4S
CONE NO. : 5005
DATE : 04/29/87

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	107.65	.87	.81	SAND TO SILTY SAND	SM-SP	.04	12			100+	42	.50+
.80	166.87	.68	.41	SAND TO SILTY SAND	SM-SP	.05	19			100+	42	.50+
1.00	235.16	1.12	.48	SAND	SW-SP	.06	22			100+	44	.50+
1.20	214.05	1.11	.52	SAND	SW-SP	.08	20			100+	41	.50+
1.40	187.19	1.06	.57	SAND TO SILTY SAND	SM-SP	.09	22			100+	42	.50+
1.60	127.61	.54	.42	SAND TO SILTY SAND	SM-SP	.10	15			100+	42	.50+
1.80	211.48	1.75	.83	SAND TO SILTY SAND	SM-SP	.11	25			100+	42	.50+
2.00	214.19	1.42	.66	SAND TO SILTY SAND	SM-SP	.12	25			100+	42	.50+
2.20	173.92	1.64	.94	SAND TO SILTY SAND	SM-SP	.13	20			100+	42	.50+
2.40	137.85	.65	.47	SAND TO SILTY SAND	SM-SP	.14	16			100+	42	.50+
2.60	120.71	.69	.57	SAND TO SILTY SAND	SM-SP	.16	14			100+	42	.50+
2.80	89.02	.70	.78	SILTY SAND TO SANDY SILT	SM-ML	.15	14			98	42	.50+
3.00	71.99	.64	.89	SILTY SAND TO SANDY SILT	SM-ML	.17	11			87	40	.50+
3.20	72.63	.54	.75	SILTY SAND TO SANDY SILT	SM-ML	.18	11			86	40	.50+
3.40	84.61	.56	.66	SILTY SAND TO SANDY SILT	SM-ML	.19	13			92	41	.50+
3.60	81.62	.85	1.04	SILTY SAND TO SANDY SILT	SM-ML	.20	13			89	41	.50+
3.80	131.96	1.00	.76	SAND TO SILTY SAND	SM-SP	.23	15			100+	42	.50+
4.00	159.07	1.59	1.00	SAND TO SILTY SAND	SM-SP	.24	19			100+	42	.50+
4.20	225.67	1.83	.81	SAND TO SILTY SAND	SM-SP	.25	27			100+	42	.50+
4.40	160.88	1.21	.75	SAND TO SILTY SAND	SM-SP	.26	19			100+	42	.50+
4.60	115.52	.89	.77	SAND TO SILTY SAND	SM-SP	.28	13			98	42	.50+
4.80	137.33	.82	.59	SAND TO SILTY SAND	SM-SP	.29	16			100+	42	.50+
5.00	122.67	.62	.51	SAND TO SILTY SAND	SM-SP	.30	14			98	42	.50+
5.20	80.11	.53	.66	SILTY SAND TO SANDY SILT	SM-ML	.29	12			82	40	.50+
5.40	50.13	.59	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.27	9	3.693	13.5	68	39	.50+
5.60	39.64	.43	1.08	SANDY SILT TO CLAYEY SILT	ML-MH	.28	7	2.916	13.5	62	37	.27
5.80	9.98	.44	4.38	CLAY	CH	.23	4	.722	13.5			
6.00	8.06	.33	4.14	CLAY	CH	.24	3	.579	13.5			
6.20	39.41	.37	.95	SANDY SILT TO CLAYEY SILT	ML-MH	.31	7	2.876	13.5	61	37	.24
6.40	42.85	.36	.84	SANDY SILT TO CLAYEY SILT	ML-MH	.32	8	3.150	13.5	62	37	.26
6.60	12.29	.32	2.60	SILTY CLAY TO CLAY	CL-CH	.26	3	.891	13.5			
6.80	7.67	.31	3.98	CLAY	CH	.27	3	.548	13.5			
7.00	6.91	.29	4.25	CLAY	CH	.28	3	.491	13.5			
7.20	7.93	.28	3.53	CLAY	CH	.29	3	.566	13.5			
7.40	7.67	.26	3.44	CLAY	CH	.30	3	.546	13.5			
7.60	7.67	.33	4.32	CLAY	CH	.30	3	.546	13.5			
7.80	6.65	.31	4.60	CLAY	CH	.31	3	.469	13.5			
8.00	7.41	.36	4.83	CLAY	CH	.32	3	.525	13.5			
8.20	7.93	.31	3.86	CLAY	CH	.33	3	.563	13.5			
8.40	7.41	.29	3.91	CLAY	CH	.34	3	.524	13.5			
8.60	7.92	.32	4.04	CLAY	CH	.34	3	.562	13.5			
8.80	7.93	.32	4.02	CLAY	CH	.35	3	.561	13.5			
9.00	7.92	.32	4.04	CLAY	CH	.36	3	.560	13.5			
9.20	8.18	.34	4.22	CLAY	CH	.37	3	.579	13.5			
9.40	7.92	.29	3.71	CLAY	CH	.38	3	.559	13.5			

9.60	8.70	.31	3.58	CLAY	CH	.38	4	.616	13.5			
9.80	18.64	.35	1.88	CLAYEY SILT TO SILTY CLAY	MH-CL	.44	4	1.348	13.5			
10.00	9.73	.26	2.67	CLAY	CH	.40	4	.691	13.5			
10.20	15.37	.26	1.67	CLAYEY SILT TO SILTY CLAY	MH-CL	.46	3	1.105	13.5			
10.40	9.84	.35	3.54	CLAY	CH	.42	4	.693	13.5			
10.60	13.86	.33	2.40	SILTY CLAY TO CLAY	CL-CH	.42	4	.995	13.5			
10.80	8.19	.33	4.06	CLAY	CH	.43	3	.575	13.5			
11.00	9.20	.28	3.06	CLAY	CH	.44	4	.649	13.5			
11.20	9.21	.36	3.90	CLAY	CH	.45	4	.649	13.5			
11.40	8.44	.29	3.49	CLAY	CH	.45	4	.591	13.5			
11.60	8.70	.27	3.09	CLAY	CH	.46	4	.610	13.5			
11.80	8.44	.29	3.48	CLAY	CH	.47	4	.590	13.5			
12.00	7.80	.29	3.77	CLAY	CH	.48	3	.542	13.5			
12.20	8.69	.30	3.40	CLAY	CH	.49	4	.607	13.5			
12.40	12.74	.31	2.43	SILTY CLAY TO CLAY	CL-CH	.50	4	.907	13.5			
12.60	9.22	.32	3.47	CLAY	CH	.50	4	.645	13.5			
12.80	9.19	.21	2.24	CLAY	CH	.51	4	.643	13.5			
13.00	34.51	.52	1.52	SANDY SILT TO CLAYEY SILT	ML-MH	.65	6	2.508	13.5	41	34	.14
13.20	62.60	.37	.59	SILTY SAND TO SANDY SILT	SM-ML	.73	9			57	36	.20
13.40	87.02	.25	.28	SAND TO SILTY SAND	SM-SP	.80	10			65	38	.30
13.60	86.83	.66	.76	SILTY SAND TO SANDY SILT	SM-ML	.75	13			66	37	.34
13.80	119.28	.61	.51	SAND TO SILTY SAND	SM-SP	.83	14			74	40	.50+
14.00	54.03	.68	1.27	SANDY SILT TO CLAYEY SILT	ML-MH	.70	10	3.950	13.5	52	35	.18
14.20	45.10	.96	2.13	SANDY SILT TO CLAYEY SILT	ML-MH	.71	8	3.288	13.5	46	35	.16
14.40	154.88	3.66	2.36	SANDY SILT TO CLAYEY SILT	ML-MH	.72	29	11.419	13.5	86	40	.50+
14.60	214.67	1.27	.59	SAND	SW-SP	.95	20			91	43	.50+
14.80	263.21	1.19	.45	SAND	SW-SP	.96	25			99	44	.50+
15.00	300.40	.80	.27	SAND	SW-SP	.97	28			100+	44	.50+
15.20	197.26	.98	.50	SAND	SW-SP	.99	18			87	43	.50+
15.40	121.30	.44	.37	SAND TO SILTY SAND	SM-SP	.92	14			72	39	.50+
15.60	45.71	.59	1.28	SANDY SILT TO CLAYEY SILT	ML-MH	.78	8	3.328	13.5	44	34	.16
15.80	16.40	.35	2.14	SILTY CLAY TO CLAY	CL-CH	.63	5	1.168	13.5			
16.00	11.53	.44	3.80	CLAY	CH	.64	5	.806	13.5			
16.20	86.25	1.01	1.17	SILTY SAND TO SANDY SILT	SM-ML	.89	13			62	37	.26
16.40	323.46	2.03	.63	SAND	SW-SP	1.07	30			100+	44	.50+
16.60	320.06	1.29	.40	SAND	SW-SP	1.08	30			100+	44	.50+



RESULT OF CONE PENETRATION TEST

5M

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

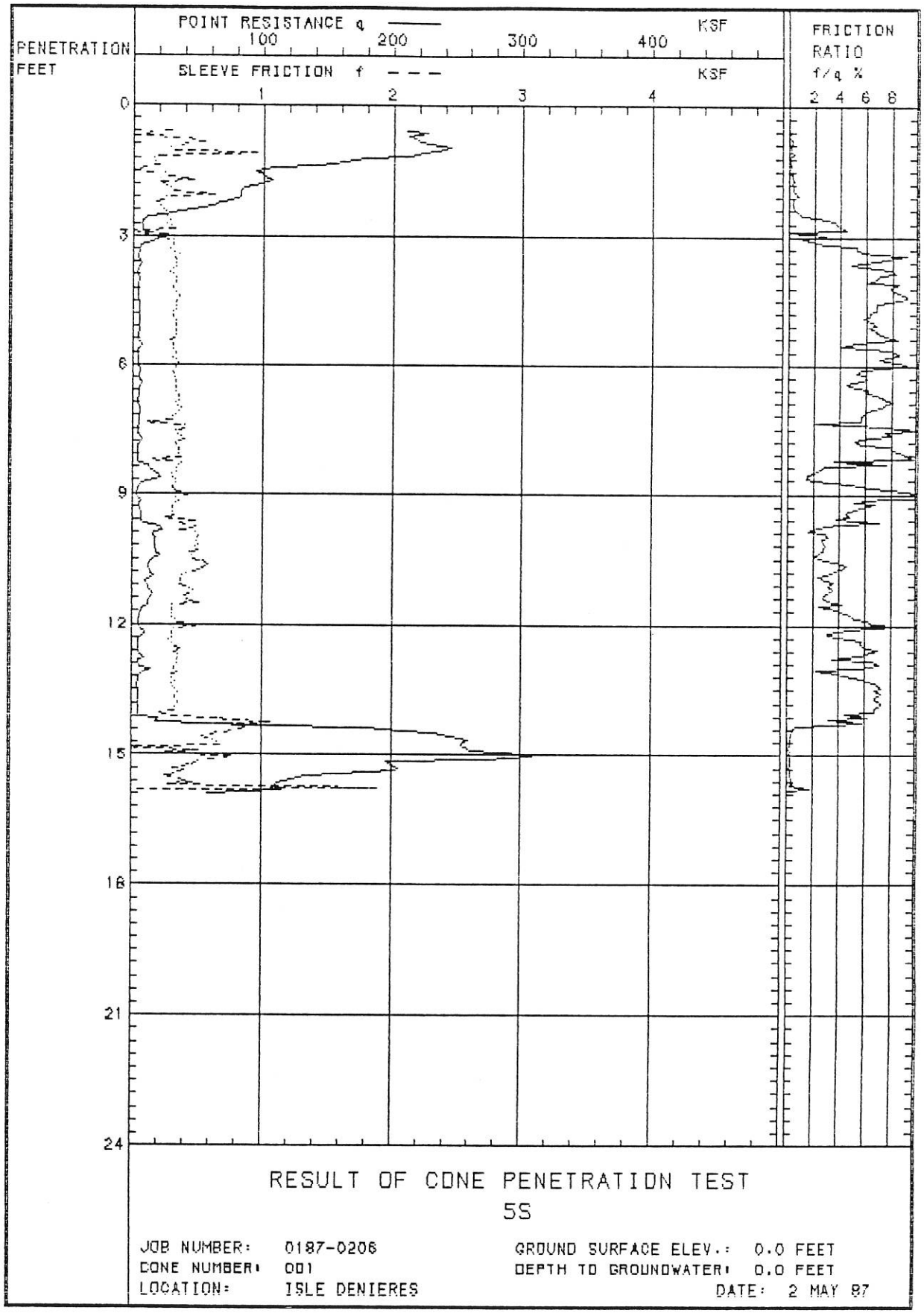
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 5M
CONE NO. : 001
DATE : 04/29/87

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	7.38	.21	2.89	CLAY	CH	.02	3	.545	13.5			
.80	50.18	.25	.49	SILTY SAND TO SANDY SILT	SM-ML	.04	8			85	40	.50+
1.00	28.29	.26	.93	SANDY SILT TO CLAYEY SILT	ML-MH	.05	5	2.092	13.5	68	38	.50+
1.20	17.71	.33	1.88	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	4	1.308	13.5			
1.40	10.09	.28	2.79	CLAY	CH	.06	4	.743	13.5			
1.60	7.87	.30	3.75	CLAY	CH	.06	3	.578	13.5			
1.80	7.13	.27	3.76	CLAY	CH	.07	3	.523	13.5			
2.00	13.28	.25	1.85	SILTY CLAY TO CLAY	CL-CH	.08	4	.978	13.5			
2.20	7.13	.26	3.62	CLAY	CH	.09	3	.522	13.5			
2.40	7.13	.25	3.45	CLAY	CH	.10	3	.521	13.5			
2.60	6.64	.31	4.72	CLAY	CH	.10	3	.484	13.5			
2.80	5.41	.34	6.36	ORGANIC MATERIAL	OL-OH	.08	2	.395	13.5			
3.00	5.41	.31	5.70	CLAY	CH	.12	2	.392	13.5			
3.20	5.41	.31	5.69	CLAY	CH	.13	2	.391	13.5			
3.40	5.66	.32	5.65	CLAY	CH	.14	2	.409	13.5			
3.60	5.29	.33	6.18	ORGANIC MATERIAL	OL-OH	.11	2	.384	13.5			
3.80	4.92	.32	6.51	ORGANIC MATERIAL	OL-OH	.11	2	.356	13.5			
4.00	5.66	.33	5.87	CLAY	CH	.16	2	.407	13.5			
4.20	5.17	.31	5.96	ORGANIC MATERIAL	OL-OH	.13	2	.373	13.5			
4.40	5.90	.30	5.02	CLAY	CH	.18	2	.424	13.5			
4.60	5.54	.33	5.89	CLAY	CH	.18	2	.396	13.5			
4.80	5.17	.33	6.44	ORGANIC MATERIAL	OL-OH	.14	2	.372	13.5			
5.00	5.04	.37	7.43	ORGANIC MATERIAL	OL-OH	.15	2	.362	13.5			
5.20	5.41	.37	6.82	ORGANIC MATERIAL	OL-OH	.16	2	.389	13.5			
5.40	4.43	.39	8.88	ORGANIC MATERIAL	OL-OH	.16	2	.316	13.5			
5.60	4.92	.36	7.37	ORGANIC MATERIAL	OL-OH	.17	2	.352	13.5			
5.80	4.92	.38	7.75	ORGANIC MATERIAL	OL-OH	.17	2	.352	13.5			
6.00	4.43	.36	8.07	ORGANIC MATERIAL	OL-OH	.18	2	.315	13.5			
6.20	4.43	.35	7.79	ORGANIC MATERIAL	OL-OH	.19	2	.314	13.5			
6.40	4.68	.41	8.69	ORGANIC MATERIAL	OL-OH	.19	2	.332	13.5			
6.60	4.68	.41	8.67	ORGANIC MATERIAL	OL-OH	.20	2	.332	13.5			
6.80	4.42	.37	8.35	ORGANIC MATERIAL	OL-OH	.20	2	.312	13.5			
7.00	4.92	.36	7.37	ORGANIC MATERIAL	OL-OH	.21	2	.349	13.5			
7.20	4.92	.36	7.24	ORGANIC MATERIAL	OL-OH	.22	2	.348	13.5			
7.40	7.61	.42	5.47	CLAY	CH	.30	3	.542	13.5			
7.60	6.41	.34	5.38	CLAY	CH	.30	3	.452	13.5			
7.80	5.65	.36	6.31	ORGANIC MATERIAL	OL-OH	.23	2	.402	13.5			
8.00	6.03	.37	6.10	CLAY	CH	.32	2	.423	13.5			
8.20	11.11	.36	3.21	CLAY	CH	.33	5	.799	13.5			
8.40	5.41	.42	7.73	ORGANIC MATERIAL	OL-OH	.25	2	.382	13.5			
8.60	5.41	.36	6.58	ORGANIC MATERIAL	OL-OH	.26	2	.382	13.5			
8.80	5.17	.43	8.35	ORGANIC MATERIAL	OL-OH	.26	2	.363	13.5			
9.00	4.92	.45	9.08	ORGANIC MATERIAL	OL-OH	.27	2	.344	13.5			
9.20	7.11	.32	4.49	CLAY	CH	.37	3	.499	13.5			
9.40	5.41	.43	7.93	ORGANIC MATERIAL	OL-OH	.28	2	.380	13.5			

9.60	4.92	.56	11.33	ORGANIC MATERIAL	OL-OH	.29	2	.343	13.5			
9.80	19.31	.41	2.11	CLAYEY SILT TO SILTY CLAY	MH-CL	.44	4	1.398	13.5			
10.00	29.40	.36	1.22	SANDY SILT TO CLAYEY SILT	ML-MH	.50	5	2.141	13.5	43	34	.15
10.20	4.92	.67	13.61	ORGANIC MATERIAL	OL-OH	.31	2	.342	13.5			
10.40	60.10	.90	1.50	SANDY SILT TO CLAYEY SILT	ML-MH	.52	11	4.414	13.5	63	37	.26
10.60	162.43	.64	.39	SAND TO SILTY SAND	SM-SP	.64	19			91	41	.50+
10.80	230.83	.75	.33	SAND	SW-SP	.70	22			100+	44	.50+
11.00	286.97	.52	.18	SAND	SW-SP	.71	27			100+	44	.50+
11.20	294.43	.69	.24	SAND	SW-SP	.73	28			100+	44	.50+
11.40	225.60	.23	.10	SAND	SW-SP	.74	21			100+	44	.50+
11.60	220.82	.39	.18	SAND	SW-SP	.75	21			99	44	.50+
11.80	236.96	2.00	.84	SAND TO SILTY SAND	SM-SP	.71	28			100+	42	.50+
12.00	179.62	.33	.18	SAND	SW-SP	.78	17			89	43	.50+
12.20	164.50	.14	.08	SAND	SW-SP	.79	15			86	43	.50+
12.40	33.89	.51	1.51	SANDY SILT TO CLAYEY SILT	ML-MH	.62	6	2.464	13.5	42	34	.15
12.60	34.76	.25	.71	SANDY SILT TO CLAYEY SILT	ML-MH	.63	6	2.528	13.5	42	34	.15
12.80	114.35	.34	.30	SAND TO SILTY SAND	SM-SP	.77	13			74	40	.50+
13.00	100.88	.34	.34	SAND TO SILTY SAND	SM-SP	.78	12			70	39	.50
13.20	80.48	.31	.38	SAND TO SILTY SAND	SM-SP	.79	9			63	38	.26
13.40	47.22	.35	.75	SILTY SAND TO SANDY SILT	SM-ML	.74	7			47	35	.16
13.60	16.55	.42	2.55	SILTY CLAY TO CLAY	CL-CH	.54	5	1.186	13.5			
13.80	32.60	.38	1.15	SANDY SILT TO CLAYEY SILT	ML-MH	.69	6	2.363	13.5	38	33	.14
14.00	5.66	.31	5.45	CLAY	CH	.56	2	.378	13.5			
14.20	4.92	.36	7.26	ORGANIC MATERIAL	OL-OH	.43	2	.333	13.5			
14.40	4.43	.38	8.61	ORGANIC MATERIAL	OL-OH	.43	2	.296	13.5			
14.60	4.92	.35	7.05	ORGANIC MATERIAL	OL-OH	.44	2	.332	13.5			
14.80	9.68	.36	3.73	CLAY	CH	.59	4	.673	13.5			
15.00	4.92	1.34	27.22	ORGANIC MATERIAL	OL-OH	.45	2	.331	13.5			



RESULT OF CONE PENETRATION TEST

5S

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

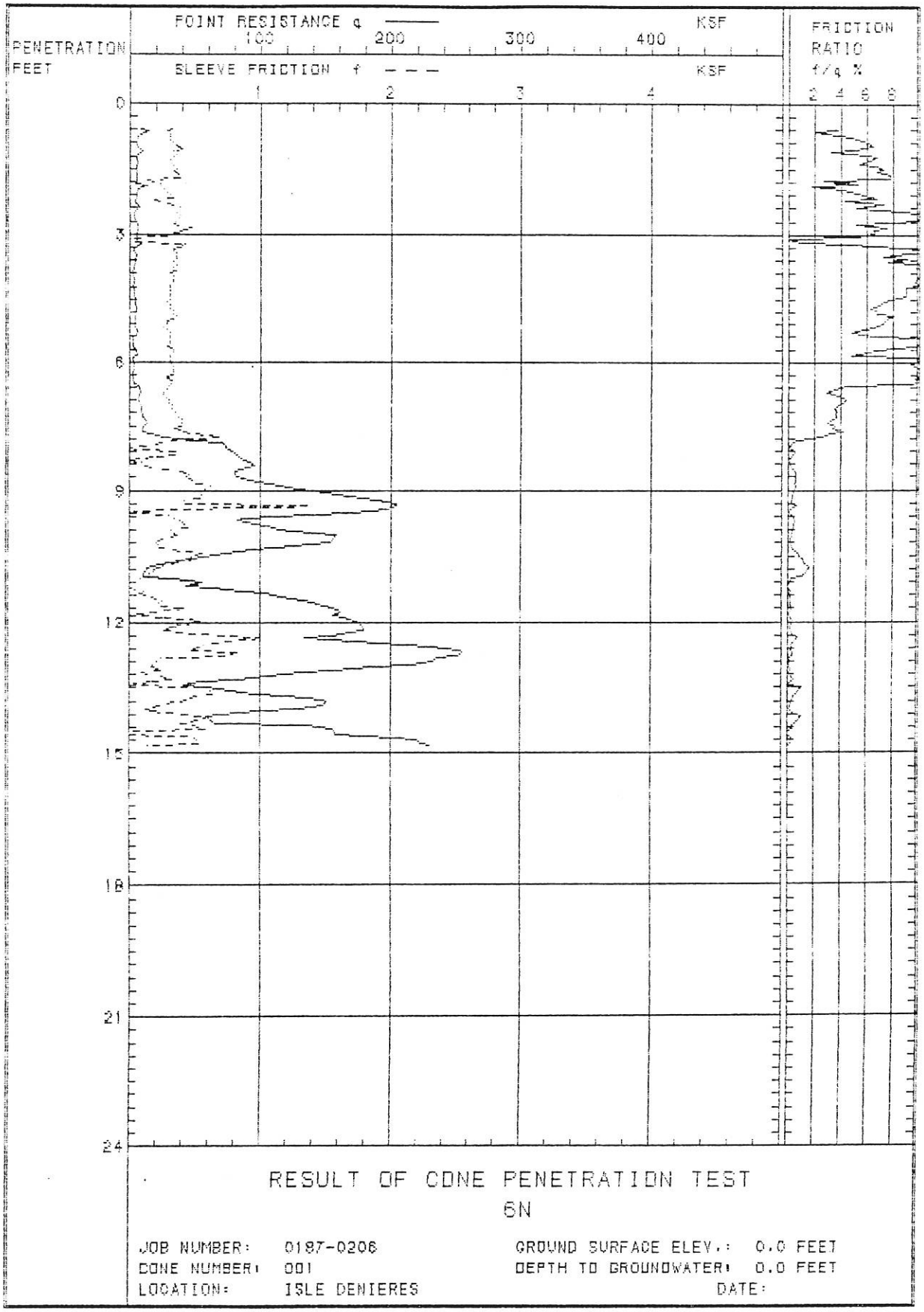
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 56
CONE NO. : 001
DATE : 04/29/87

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	218.66	.32	.15	SAND	SW-SP	.04	29			100+	44	.50+
.80	219.03	.42	.19	SAND	SW-SP	.05	29			100+	44	.50+
1.00	239.08	.45	.19	SAND	SW-SP	.06	22			100+	44	.50+
1.20	196.30	.18	.09	SAND	SW-SP	.08	18			100+	44	.50+
1.40	126.20	.25	.20	SAND TO SILTY SAND	SM-SP	.08	15			100+	42	.50+
1.60	99.55	.26	.26	SAND TO SILTY SAND	SM-SP	.10	11			100+	42	.50+
1.80	98.15	.24	.24	SAND TO SILTY SAND	SM-SP	.11	11			100+	42	.50+
2.00	83.14	.30	.36	SAND TO SILTY SAND	SM-SP	.12	9			100+	42	.50+
2.20	71.59	.21	.29	SILTY SAND TO SANDY SILT	SM-ML	.12	11			91	41	.50+
2.40	41.58	.28	.68	SANDY SILT TO CLAYEY SILT	ML-MH	.12	7	3.071	13.5	77	38	.50+
2.60	9.84	.27	2.75	CLAY	CH	.10	4	.722	13.5			
2.80	7.38	.29	3.98	CLAY	CH	.11	3	.538	13.5			
3.00	15.47	.25	1.63	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	3	1.136	13.5			
3.20	8.37	.31	3.68	CLAY	CH	.13	4	.611	13.5			
3.40	4.43	.41	9.18	ORGANIC MATERIAL	OL-OH	.10	2	.321	13.5			
3.60	5.90	.33	5.65	CLAY	CH	.14	2	.426	13.5			
3.80	3.69	.30	8.04	ORGANIC MATERIAL	OL-OH	.11	1	.265	13.5			
4.00	5.16	.33	6.46	ORGANIC MATERIAL	OL-OH	.12	2	.374	13.5			
4.20	3.94	.31	7.86	ORGANIC MATERIAL	OL-OH	.13	1	.282	13.5			
4.40	3.94	.36	9.07	ORGANIC MATERIAL	OL-OH	.13	1	.282	13.5			
4.60	4.92	.33	6.76	ORGANIC MATERIAL	OL-OH	.14	2	.354	13.5			
4.80	4.92	.31	6.31	ORGANIC MATERIAL	OL-OH	.14	2	.354	13.5			
5.00	5.04	.33	6.48	ORGANIC MATERIAL	OL-OH	.15	2	.362	13.5			
5.20	4.92	.33	6.78	ORGANIC MATERIAL	OL-OH	.16	2	.353	13.5			
5.40	4.18	.31	7.34	ORGANIC MATERIAL	OL-OH	.16	2	.298	13.5			
5.60	5.67	.31	5.46	CLAY	CH	.22	2	.403	13.5			
5.80	4.18	.32	7.69	ORGANIC MATERIAL	OL-OH	.17	2	.297	13.5			
6.00	4.18	.34	8.23	ORGANIC MATERIAL	OL-OH	.18	2	.296	13.5			
6.20	5.66	.31	5.45	CLAY	CH	.25	2	.401	13.5			
6.40	6.98	.33	4.82	CLAY	CH	.26	3	.491	13.5			
6.60	5.41	.33	6.15	ORGANIC MATERIAL	OL-OH	.20	2	.386	13.5			
6.80	4.68	.36	7.63	ORGANIC MATERIAL	OL-OH	.20	2	.331	13.5			
7.00	5.41	.37	6.80	ORGANIC MATERIAL	OL-OH	.21	2	.385	13.5			
7.20	5.66	.32	5.66	CLAY	CH	.27	2	.398	13.5			
7.40	5.41	.26	4.80	CLAY	CH	.30	2	.379	13.5			
7.60	4.43	.34	7.74	ORGANIC MATERIAL	OL-OH	.23	2	.311	13.5			
7.80	6.90	.37	5.36	CLAY	CH	.31	3	.489	13.5			
8.00	4.31	.36	8.30	ORGANIC MATERIAL	OL-OH	.24	2	.301	13.5			
8.20	4.18	.27	6.47	ORGANIC MATERIAL	OL-OH	.25	2	.291	13.5			
8.40	13.03	.34	2.61	SILTY CLAY TO CLAY	CL-CH	.34	4	.940	13.5			
8.60	20.90	.30	1.45	CLAYEY SILT TO SILTY CLAY	MH-CL	.39	5	1.519	13.5			
8.80	5.92	.32	5.44	CLAY	CH	.35	2	.412	13.5			
9.00	3.20	.40	12.61	ORGANIC MATERIAL	OL-OH	.27	1	.217	13.5			
9.20	5.92	.34	5.82	CLAY	CH	.37	2	.411	13.5			

9.40	6.39	.30	4.66	CLAY	CH	.39	3	.445	13.5			
9.60	6.89	.37	5.37	CLAY	CH	.38	3	.482	13.5			
9.80	22.62	.43	1.91	CLAYEY SILT TO SILTY CLAY	MH-CL	.44	5	1.643	13.5			
10.00	17.45	.52	2.95	SILTY CLAY TO CLAY	CL-CH	.40	5	1.263	13.5			
10.20	17.71	.49	2.76	SILTY CLAY TO CLAY	CL-CH	.41	5	1.282	13.5			
10.40	20.14	.47	2.33	CLAYEY SILT TO SILTY CLAY	MH-CL	.47	4	1.457	13.5			
10.60	13.66	.56	4.09	CLAY	CH	.42	6	.981	13.5			
10.80	14.02	.47	3.35	CLAY	CH	.43	6	1.006	13.5			
11.00	11.70	.36	3.06	CLAY	CH	.44	5	.839	13.5			
11.20	13.52	.46	3.37	CLAY	CH	.45	6	.968	13.5			
11.40	14.27	.41	2.87	SILTY CLAY TO CLAY	CL-CH	.46	4	1.024	13.5			
11.60	10.37	.31	2.96	CLAY	CH	.46	4	.738	13.5			
11.80	6.15	.31	5.01	CLAY	CH	.47	2	.421	13.5			
12.00	5.77	.35	6.03	CLAY	CH	.48	2	.392	13.5			
12.20	9.84	.31	3.13	CLAY	CH	.49	4	.693	13.5			
12.40	5.16	.29	5.54	CLAY	CH	.50	2	.366	13.5			
12.60	5.41	.33	6.08	ORGANIC MATERIAL	OL-OH	.38	2	.373	13.5			
12.80	7.92	.36	4.50	CLAY	CH	.51	3	.549	13.5			
13.00	10.25	.33	3.22	CLAY	CH	.52	4	.720	13.5			
13.20	6.16	.31	5.01	CLAY	CH	.53	2	.417	13.5			
13.40	4.43	.31	7.00	ORGANIC MATERIAL	OL-OH	.40	2	.298	13.5			
13.60	4.92	.33	6.76	ORGANIC MATERIAL	OL-OH	.41	2	.334	13.5			
13.80	4.92	.36	7.25	ORGANIC MATERIAL	OL-OH	.41	2	.334	13.5			
14.00	4.92	.28	5.66	ORGANIC MATERIAL	OL-OH	.42	2	.333	13.5			
14.20	19.83	.49	2.47	SILTY CLAY TO CLAY	CL-CH	.57	6	1.427	13.5			
14.40	194.01	.61	.31	SAND	SW-SP	.94	18			88	43	.50+
14.60	252.34	.70	.28	SAND	SW-SP	.95	24			99	44	.50+
14.80	255.27	.40	.16	SAND	SW-SP	.96	24			98	44	.50+
15.00	306.92	.48	.16	SAND	SW-SP	.97	29			100+	44	.50+
15.20	198.19	.47	.24	SAND	SW-SP	.99	18			87	43	.50+
15.40	181.52	.41	.23	SAND	SW-SP	1.00	17			84	43	.50+
15.60	117.58	.42	.36	SAND TO SILTY SAND	SM-SP	.74	14			71	39	.50+
15.80	113.33	.97	.86	SAND TO SILTY SAND	SM-SP	.95	13			69	39	.46



RESULT OF CONE PENETRATION TEST

6N

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

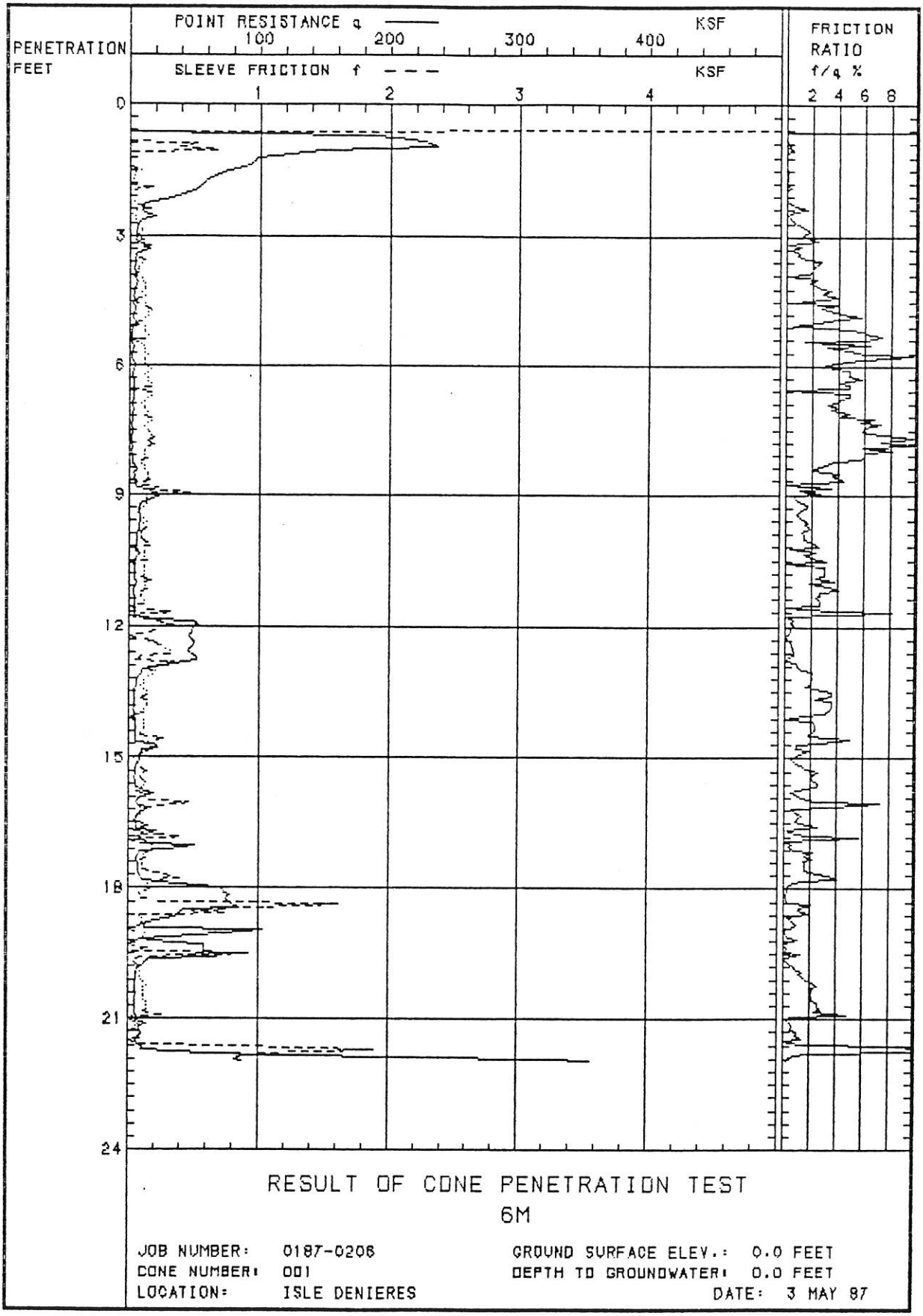
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE:

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

PROJECT NO. : 01870206
BORING NO. : 6N
CONE NO. : 001
DATE : 04/30/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	11.56	.31	2.65	SILTY CLAY TO CLAY	CL-CH	.02	3	.855	13.5			
.80	5.90	.31	5.22	CLAY	CH	.03	2	.435	13.5			
1.00	6.64	.35	5.23	CLAY	CH	.04	3	.489	13.5			
1.20	5.41	.34	6.36	ORGANIC MATERIAL	OL-OH	.04	2	.398	13.5			
1.40	5.41	.33	6.15	ORGANIC MATERIAL	OL-OH	.04	2	.398	13.5			
1.60	4.92	.36	7.25	ORGANIC MATERIAL	OL-OH	.05	2	.361	13.5			
1.80	4.67	.18	3.93	CLAY	CH	.07	2	.341	13.5			
2.00	5.90	.27	4.61	CLAY	CH	.08	2	.431	13.5			
2.20	4.67	.26	5.56	ORGANIC MATERIAL	OL-OH	.07	2	.341	13.5			
2.40	6.40	.38	5.88	CLAY	CH	.10	3	.467	13.5			
2.60	3.44	.38	11.05	ORGANIC MATERIAL	OL-OH	.08	1	.249	13.5			
2.80	6.40	.34	5.28	CLAY	CH	.11	3	.465	13.5			
3.00	5.41	.27	4.94	CLAY	CH	.12	2	.392	13.5			
3.20	7.12	.24	3.32	CLAY	CH	.13	3	.518	13.5			
3.40	3.44	.34	9.84	ORGANIC MATERIAL	OL-OH	.10	1	.247	13.5			
3.60	4.18	.35	8.28	ORGANIC MATERIAL	OL-OH	.11	2	.302	13.5			
3.80	3.20	.35	10.83	ORGANIC MATERIAL	OL-OH	.11	1	.229	13.5			
4.00	2.95	.33	11.33	ORGANIC MATERIAL	OL-OH	.12	1	.210	13.5			
4.20	3.20	.31	9.70	ORGANIC MATERIAL	OL-OH	.13	1	.227	13.5			
4.40	3.44	.31	8.99	ORGANIC MATERIAL	OL-OH	.13	1	.245	13.5			
4.60	4.18	.30	7.09	ORGANIC MATERIAL	OL-OH	.14	2	.299	13.5			
4.80	4.92	.33	6.77	ORGANIC MATERIAL	OL-OH	.14	2	.351	13.5			
5.00	4.18	.31	7.40	ORGANIC MATERIAL	OL-OH	.15	2	.299	13.5			
5.20	4.42	.30	6.71	ORGANIC MATERIAL	OL-OH	.16	2	.316	13.5			
5.40	3.82	.31	8.13	ORGANIC MATERIAL	OL-OH	.16	1	.271	13.5			
5.60	2.95	.30	10.04	ORGANIC MATERIAL	OL-OH	.17	1	.206	13.5			
5.80	5.90	.32	5.47	CLAY	CH	.23	2	.420	13.5			
6.00	3.20	.31	9.72	ORGANIC MATERIAL	OL-OH	.18	1	.223	13.5			
6.20	3.08	.33	10.87	ORGANIC MATERIAL	OL-OH	.19	1	.214	13.5			
6.40	2.71	.31	11.38	ORGANIC MATERIAL	OL-OH	.19	1	.186	13.5			
6.60	7.37	.29	3.98	CLAY	CH	.26	3	.527	13.5			
6.80	7.14	.27	3.79	CLAY	CH	.27	3	.508	13.5			
7.00	7.87	.32	4.02	CLAY	CH	.28	3	.562	13.5			
7.20	9.59	.35	3.66	CLAY	CH	.29	4	.689	13.5			
7.40	12.54	.40	3.19	CLAY	CH	.30	6	.907	13.5			
7.60	10.09	.38	3.75	CLAY	CH	.30	4	.725	13.5			
7.80	37.51	.53	1.41	SANDY SILT TO CLAYEY SILT	ML-MH	.39	7	2.750	13.5	55	36	.19
8.00	73.79	.15	.20	SAND TO SILTY SAND	SM-SP	.48	8			70	39	.50+
8.20	83.13	.27	.33	SAND TO SILTY SAND	SM-SP	.49	9			73	39	.50+
8.40	94.30	.09	.10	SAND TO SILTY SAND	SM-SP	.50	11			77	40	.50+
8.60	81.29	.40	.49	SILTY SAND TO SANDY SILT	SM-ML	.47	12			73	38	.50+
8.80	99.27	.51	.51	SAND TO SILTY SAND	SM-SP	.53	11			78	40	.50+
9.00	134.71	1.25	.93	SAND TO SILTY SAND	SM-SP	.54	16			88	41	.50+
9.20	183.91	.48	.26	SAND	SW-SP	.60	17			93	44	.50+
9.40	201.00	.82	.41	SAND	SW-SP	.61	19			100+	44	.50+

9.60	113.49	.44	.39	SAND TO SILTY SAND	SM-SP	.58	13			81	40	.50+
9.80	104.62	.47	.45	SAND TO SILTY SAND	SM-SP	.59	12			77	40	.50+
10.00	149.42	2.60	1.74	SILTY SAND TO SANDY SILT	SM-ML	.55	23			91	41	.50+
10.20	146.71	.48	.33	SAND TO SILTY SAND	SM-SP	.61	17			88	41	.50+
10.40	84.39	.47	.56	SILTY SAND TO SANDY SILT	SM-ML	.57	13			71	38	.50+
10.60	39.47	.44	1.12	SANDY SILT TO CLAYEY SILT	ML-MH	.53	7	2.884	13.5	50	35	.17
10.80	13.29	.21	1.56	SILTY CLAY TO CLAY	CL-CH	.43	4	.952	13.5			
11.00	21.96	.14	.62	SANDY SILT TO CLAYEY SILT	ML-MH	.55	4	1.586	13.5	30	32	.12
11.20	53.82	.03	.05	SILTY SAND TO SANDY SILT	SM-ML	.62	8			56	36	.19
11.40	110.35	.34	.31	SAND TO SILTY SAND	SM-SP	.68	13			76	40	.50+
11.60	144.56	.24	.17	SAND TO SILTY SAND	SM-SP	.70	17			84	41	.50+
11.80	159.19	.78	.49	SAND TO SILTY SAND	SM-SP	.71	19			87	41	.50+
12.00	174.61	.49	.28	SAND	SW-SP	.78	16			88	43	.50+
12.20	174.48	.32	.18	SAND	SW-SP	.79	16			88	43	.50+
12.40	153.27	.89	.58	SAND TO SILTY SAND	SM-SP	.74	18			85	41	.50+
12.60	241.96	.50	.21	SAND	SW-SP	.82	23			100+	44	.50+
12.80	243.89	.49	.20	SAND	SW-SP	.83	23			100+	44	.50+
13.00	201.85	.19	.09	SAND	SW-SP	.84	19			92	44	.50+
13.20	120.04	.17	.14	SAND TO SILTY SAND	SM-SP	.79	14			75	40	.50+
13.40	48.08	.10	.20	SILTY SAND TO SANDY SILT	SM-ML	.74	7			47	35	.16
13.60	86.89	.63	.72	SILTY SAND TO SANDY SILT	SM-ML	.75	13			66	37	.34
13.80	149.77	.39	.26	SAND TO SILTY SAND	SM-SP	.83	17			82	40	.50+
14.00	115.67	.16	.14	SAND TO SILTY SAND	SM-SP	.84	13			73	39	.50+
14.20	60.35	.39	.65	SILTY SAND TO SANDY SILT	SM-ML	.78	9			54	36	.19
14.40	145.66	2.01	1.38	SILTY SAND TO SANDY SILT	SM-ML	.79	23			82	40	.50+
14.60	180.05	.24	.14	SAND	SW-SP	.95	17			85	43	.50+
14.80	226.95	.34	.15	SAND	SW-SP	.96	21			93	44	.50+



RESULT OF CONE PENETRATION TEST

6M

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

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 3 MAY 87

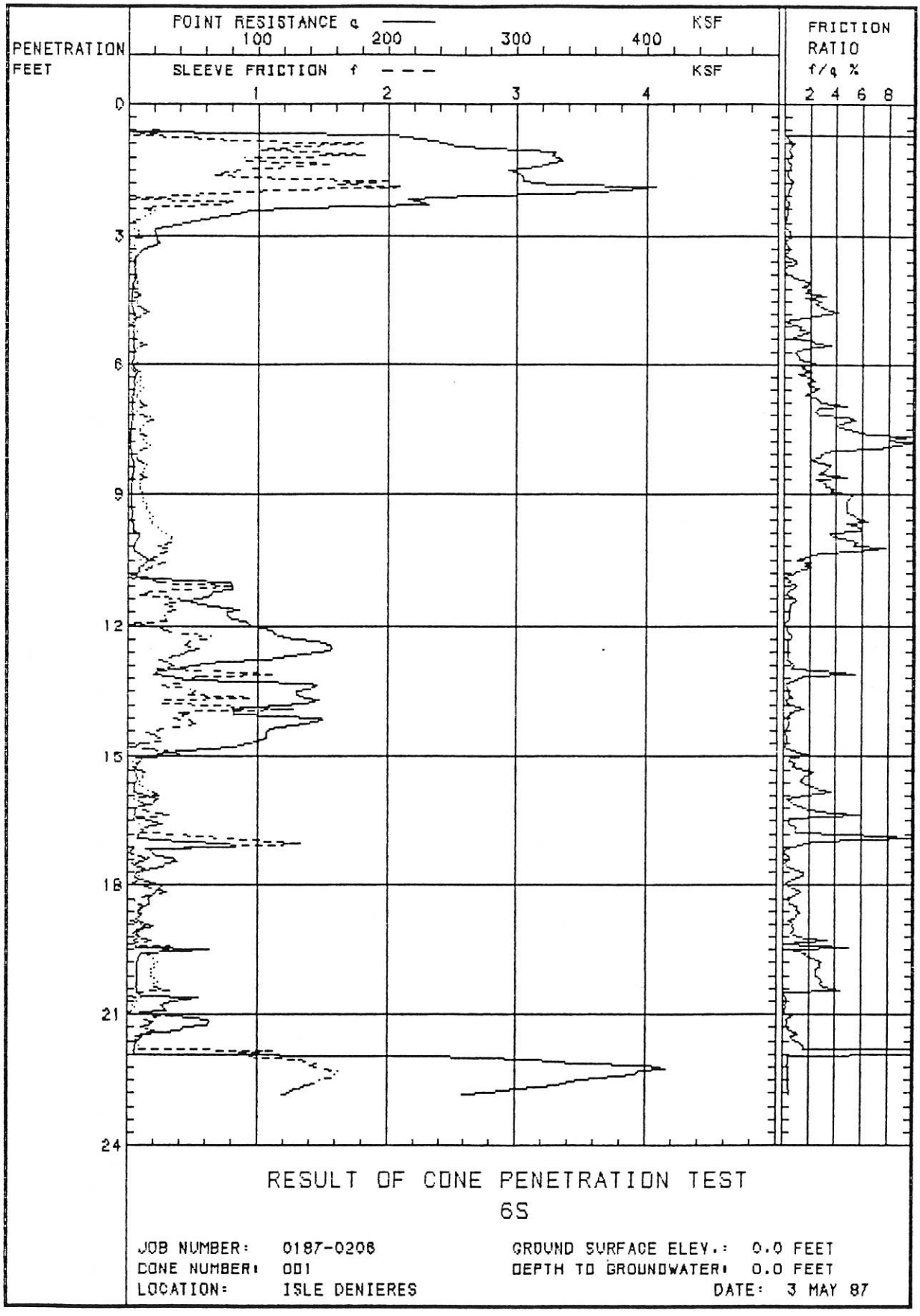
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 6M
CONE NO. : 001
DATE : 04/29/87

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	.98	3.18	323.21	ORGANIC MATERIAL	OL-OH	.02	1	.072	13.5			
.80	215.22	.43	.20	SAND	SW-SP	.05	20			100+	44	.50+
1.00	192.87	.53	.27	SAND	SW-SP	.06	18			100+	44	.50+
1.20	105.04	.00	.00	SAND TO SILTY SAND	SM-SP	.07	12			100+	42	.50+
1.40	89.53	.00	.00	SAND TO SILTY SAND	SM-SP	.08	10			100+	42	.50+
1.60	68.88	.08	.11	SILTY SAND TO SANDY SILT	SM-ML	.09	10			94	41	.50+
1.80	57.19	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.10	9			84	40	.50+
2.00	46.01	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.11	7			75	39	.50+
2.20	22.03	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.11	4	1.624	13.5	60	36	.32
2.40	9.59	.06	.59	SENSITIVE FINE GRAINED	OL-CH	.07	2	.705	13.5			
2.60	15.02	.04	.28	SENSITIVE FINE GRAINED	OL-CH	.08	3	1.107	13.5			
2.80	5.78	.07	1.27	SENSITIVE FINE GRAINED	OL-CH	.08	1	.422	13.5			
3.00	5.17	.05	.88	SENSITIVE FINE GRAINED	OL-CH	.09	1	.376	13.5			
3.20	11.43	.15	1.30	SENSITIVE FINE GRAINED	OL-CH	.10	2	.839	13.5			
3.40	6.15	.06	.92	SENSITIVE FINE GRAINED	OL-CH	.10	1	.448	13.5			
3.60	4.18	.11	2.52	CLAY	CH	.14	2	.299	13.5			
3.80	3.69	.07	1.86	SENSITIVE FINE GRAINED	OL-CH	.11	0	.265	13.5			
4.00	4.91	.08	1.66	SENSITIVE FINE GRAINED	OL-CH	.12	1	.355	13.5			
4.20	3.94	.12	2.99	CLAY	CH	.17	1	.279	13.5			
4.40	3.20	.11	3.31	CLAY	CH	.18	1	.224	13.5			
4.60	3.68	.12	3.17	CLAY	CH	.18	1	.259	13.5			
4.80	2.95	.14	4.78	ORGANIC MATERIAL	OL-OH	.14	1	.208	13.5			
5.00	4.18	.06	1.39	SENSITIVE FINE GRAINED	OL-CH	.15	1	.299	13.5			
5.20	1.97	.12	6.03	ORGANIC MATERIAL	OL-OH	.16	1	.134	13.5			
5.40	1.72	.07	4.08	ORGANIC MATERIAL	OL-OH	.16	1	.116	13.5			
5.60	2.96	.10	3.22	CLAY	CH	.22	1	.202	13.5			
5.80	1.72	.13	7.54	ORGANIC MATERIAL	OL-OH	.17	1	.115	13.5			
6.00	3.94	.08	2.11	SENSITIVE FINE GRAINED	OL-CH	.18	0	.278	13.5			
6.20	2.71	.13	4.79	ORGANIC MATERIAL	OL-OH	.19	1	.187	13.5			
6.40	3.44	.15	4.46	CLAY	CH	.26	1	.236	13.5			
6.60	3.20	.08	2.57	CLAY	CH	.26	1	.217	13.5			
6.80	3.20	.13	4.06	CLAY	CH	.27	1	.217	13.5			
7.00	3.20	.12	3.69	CLAY	CH	.28	1	.216	13.5			
7.20	2.71	.14	5.24	ORGANIC MATERIAL	OL-OH	.22	1	.185	13.5			
7.40	1.97	.13	6.62	ORGANIC MATERIAL	OL-OH	.22	1	.129	13.5			
7.60	2.22	.14	6.46	ORGANIC MATERIAL	OL-OH	.23	1	.147	13.5			
7.80	1.97	.17	8.46	ORGANIC MATERIAL	OL-OH	.23	1	.128	13.5			
8.00	1.72	.12	6.89	ORGANIC MATERIAL	OL-OH	.24	1	.110	13.5			
8.20	2.46	.12	4.77	ORGANIC MATERIAL	OL-OH	.25	1	.164	13.5			
8.40	5.16	.12	2.27	CLAY	CH	.34	2	.357	13.5			
8.60	3.69	.13	3.55	CLAY	CH	.34	1	.248	13.5			
8.80	5.15	.11	2.16	SENSITIVE FINE GRAINED	OL-CH	.26	1	.362	13.5			
9.00	20.87	.30	1.45	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	4	1.516	13.5			
9.20	9.86	.14	1.40	SENSITIVE FINE GRAINED	OL-CH	.28	2	.710	13.5			
9.40	7.62	.08	1.01	SENSITIVE FINE GRAINED	OL-CH	.28	1	.544	13.5			

9.60	8.61	.10	1.21	SENSITIVE FINE GRAINED	OL-CH	.29	2	.617	13.5				
9.80	7.38	.12	1.56	SENSITIVE FINE GRAINED	OL-CH	.29	1	.525	13.5				
10.00	6.40	.09	1.42	SENSITIVE FINE GRAINED	OL-CH	.30	1	.451	13.5				
10.20	5.91	.09	1.55	SENSITIVE FINE GRAINED	OL-CH	.31	1	.415	13.5				
10.40	7.15	.12	1.63	SENSITIVE FINE GRAINED	OL-CH	.31	1	.507	13.5				
10.60	3.94	.06	1.46	SENSITIVE FINE GRAINED	OL-CH	.32	0	.268	13.5				
10.80	3.94	.12	2.96	CLAY	CH	.43	1	.260	13.5				
11.00	5.40	.14	2.62	CLAY	CH	.44	2	.367	13.5				
11.20	3.44	.13	3.76	CLAY	CH	.45	1	.222	13.5				
11.40	4.18	.10	2.50	CLAY	CH	.46	2	.276	13.5				
11.60	3.94	.07	1.76	SENSITIVE FINE GRAINED	OL-CH	.35	0	.266	13.5				
11.80	11.92	.06	.50	SENSITIVE FINE GRAINED	OL-CH	.35	2	.857	13.5				
12.00	51.68	.27	.52	SILTY SAND TO SANDY SILT	SM-ML	.66	8			53	35	.18	
12.20	47.61	.20	.42	SILTY SAND TO SANDY SILT	SM-ML	.67	7			50	35	.17	
12.40	50.68	.20	.39	SILTY SAND TO SANDY SILT	SM-ML	.68	8			51	35	.18	
12.60	47.32	.26	.56	SILTY SAND TO SANDY SILT	SM-ML	.69	7			48	35	.17	
12.80	48.29	.20	.41	SILTY SAND TO SANDY SILT	SM-ML	.70	7			49	35	.17	
13.00	10.46	.17	1.66	SENSITIVE FINE GRAINED	OL-CH	.39	2	.746	13.5				
13.20	6.66	.15	2.30	CLAY	CH	.53	3	.454	13.5				
13.40	4.94	.10	2.12	SENSITIVE FINE GRAINED	OL-CH	.40	1	.336	13.5				
13.60	3.94	.12	2.98	CLAY	CH	.54	1	.251	13.5				
13.80	3.94	.14	3.59	CLAY	CH	.55	1	.251	13.5				
14.00	4.18	.09	2.21	SENSITIVE FINE GRAINED	OL-CH	.42	1	.278	13.5				
14.20	5.17	.12	2.24	CLAY	CH	.57	2	.341	13.5				
14.40	4.92	.10	2.11	SENSITIVE FINE GRAINED	OL-CH	.43	1	.332	13.5				
14.60	5.41	.21	3.90	CLAY	CH	.58	2	.359	13.5				
14.80	16.37	.17	1.05	CLAYEY SILT TO SILTY CLAY	MH-CL	.67	3	1.163	13.5				
15.00	9.11	.05	.59	SENSITIVE FINE GRAINED	OL-CH	.45	2	.641	13.5				
15.20	5.91	.10	1.76	SENSITIVE FINE GRAINED	OL-CH	.46	1	.404	13.5				
15.40	4.93	.10	2.11	SENSITIVE FINE GRAINED	OL-CH	.46	1	.331	13.5				
15.60	5.17	.11	2.05	SENSITIVE FINE GRAINED	OL-CH	.47	1	.348	13.5				
15.80	15.91	.15	.93	SENSITIVE FINE GRAINED	OL-CH	.47	3	1.144	13.5				
16.00	6.65	.31	4.68	CLAY	CH	.64	3	.445	13.5				
16.20	13.58	.09	.67	SENSITIVE FINE GRAINED	OL-CH	.49	3	.970	13.5				
16.40	5.92	.06	.93	SENSITIVE FINE GRAINED	OL-CH	.49	1	.402	13.5				
16.60	5.90	.08	1.39	SENSITIVE FINE GRAINED	OL-CH	.50	1	.400	13.5				
16.80	10.42	.23	2.18	SILTY CLAY TO CLAY	CL-CH	.67	3	.722	13.5				
17.00	33.50	.33	1.00	SANDY SILT TO CLAYEY SILT	ML-MH	.85	6	2.419	13.5	32	33	.13	
17.20	7.88	.17	2.22	CLAY	CH	.69	3	.533	13.5				
17.40	6.62	.10	1.53	SENSITIVE FINE GRAINED	OL-CH	.52	1	.452	13.5				
17.60	7.62	.13	1.65	SENSITIVE FINE GRAINED	OL-CH	.53	1	.525	13.5				
17.80	10.56	.19	1.77	SILTY CLAY TO CLAY	CL-CH	.71	3	.729	13.5				
18.00	71.29	.16	.23	SILTY SAND TO SANDY SILT	SM-ML	.99	11			53	35	.19	
18.20	77.15	.06	.07	SAND TO SILTY SAND	SM-SP	1.09	9			53	37	.19	
18.40	82.57	.89	1.08	SILTY SAND TO SANDY SILT	SM-ML	1.01	13			58	36	.21	
18.60	38.41	.18	.48	SANDY SILT TO CLAYEY SILT	ML-MH	.93	7	2.776	13.5	34	33	.14	
18.80	14.05	.12	.83	SENSITIVE FINE GRAINED	OL-CH	.56	3	.999	13.5				
19.00	88.48	.07	.08	SAND TO SILTY SAND	SM-SP	1.14	10			57	38	.21	
19.20	20.56	.07	.34	SANDY SILT TO CLAYEY SILT	ML-MH	.96	3	1.452	13.5	16	30	.11	
19.40	58.54	.03	.05	SILTY SAND TO SANDY SILT	SM-ML	1.07	9			44	34	.16	
19.60	43.28	.06	.13	SILTY SAND TO SANDY SILT	SM-ML	1.08	6			34	33	.14	
19.80	9.39	.08	.84	SENSITIVE FINE GRAINED	OL-CH	.59	2	.652	13.5				
20.00	5.90	.08	1.34	SENSITIVE FINE GRAINED	OL-CH	.60	1	.393	13.5				
20.20	5.41	.12	2.13	SENSITIVE FINE GRAINED	OL-CH	.61	1	.356	13.5				
20.40	5.65	.12	2.05	SENSITIVE FINE GRAINED	OL-CH	.61	1	.373	13.5				
20.60	5.41	.13	2.36	CLAY	CH	.82	2	.340	13.5				
20.80	4.92	.13	2.59	CLAY	CH	.83	2	.303	13.5				
21.00	6.65	.03	.39	SENSITIVE FINE GRAINED	OL-CH	.63	1	.446	13.5				
21.20	8.50	.13	1.49	SENSITIVE FINE GRAINED	OL-CH	.64	2	.582	13.5				
21.40	8.42	.09	1.07	SENSITIVE FINE GRAINED	OL-CH	.64	2	.576	13.5				

21.60	9.03	.09	.98	SENSITIVE FINE GRAINED	OL-CH	.65	2	.621	13.5			
21.80	86.50	1.15	1.33	SILTY SAND TO SANDY SILT	SM-ML	1.20	13			55	36	.20



RESULT OF CONE PENETRATION TEST

6S

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

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 3 MAY 87

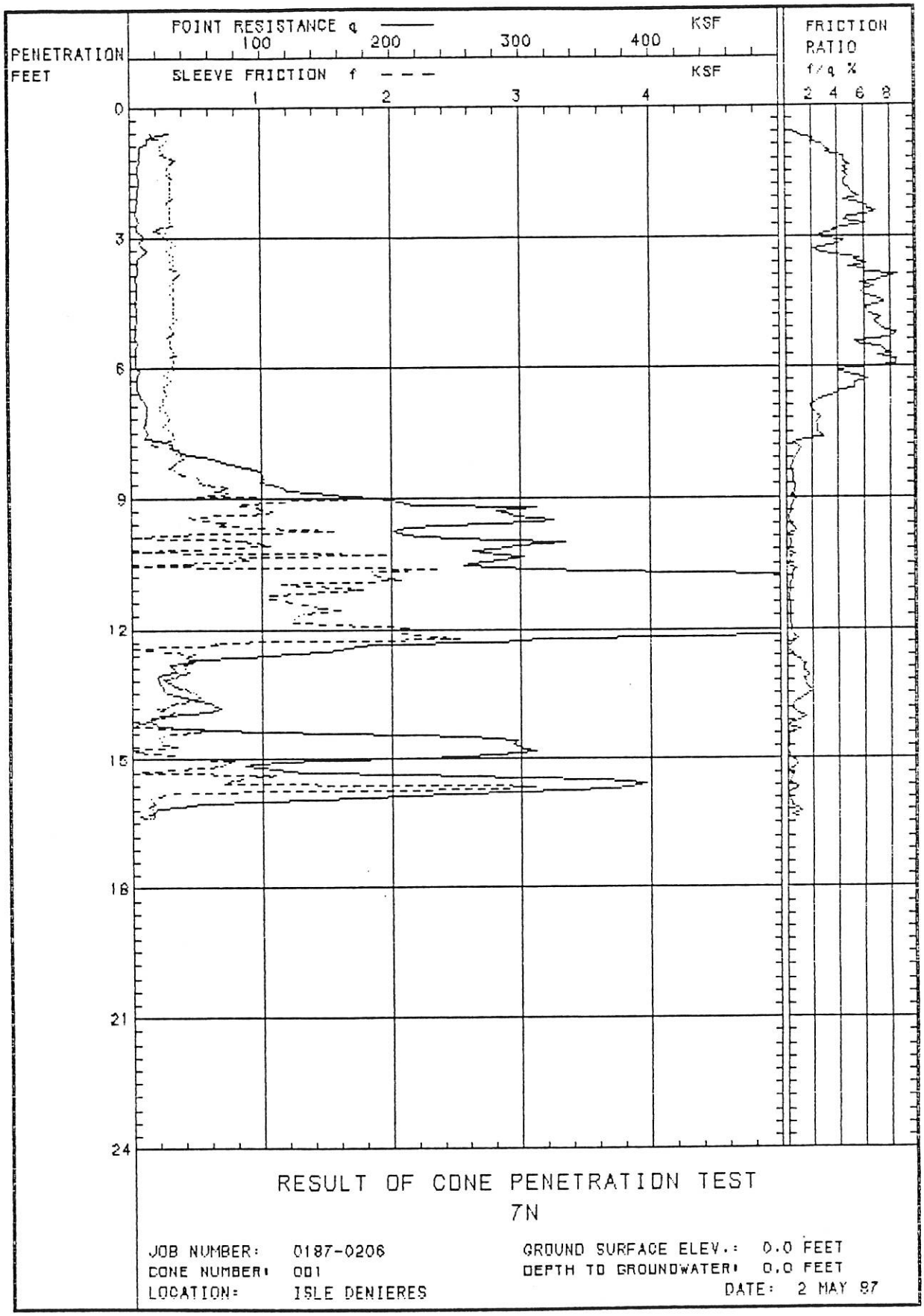
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 6S
CONE NO. : 001
DATE : 04/29/87

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	.00	.25	999.00	ORGANIC MATERIAL	OL-OH	.02	1	-.001	13.5			
.80	224.81	.65	.29	SAND	SW-SP	.05	21			100+	44	.50+
1.00	279.40	.79	.28	SAND	SW-SP	.06	26			100+	44	.50+
1.20	329.16	.83	.25	SAND	SW-SP	.08	31			100+	44	.50+
1.40	319.27	1.28	.40	SAND	SW-SP	.09	30			100+	44	.50+
1.60	300.94	.72	.24	SAND	SW-SP	.10	28			100+	44	.50+
1.80	316.05	1.81	.57	SAND	SW-SP	.12	30			100+	44	.50+
2.00	357.69	1.05	.29	SAND	SW-SP	.13	34			100+	44	.50+
2.20	219.02	.62	.28	SAND	SW-SP	.14	20			100+	44	.50+
2.40	111.72	.16	.14	SAND TO SILTY SAND	SM-SP	.14	13			100+	42	.50+
2.60	66.56	.10	.15	SILTY SAND TO SANDY SILT	SM-ML	.14	10			85	40	.50+
2.80	30.28	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.14	5	2.233	13.5	64	37	.49
3.00	21.70	.08	.39	SANDY SILT TO CLAYEY SILT	ML-MH	.15	4	1.597	13.5	57	36	.21
3.20	22.39	.03	.12	SANDY SILT TO CLAYEY SILT	ML-MH	.16	4	1.647	13.5	57	36	.21
3.40	7.87	.01	.12	SENSITIVE FINE GRAINED	OL-CH	.10	1	.576	13.5			
3.60	5.17	.03	.64	SENSITIVE FINE GRAINED	OL-CH	.11	1	.375	13.5			
3.80	5.16	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.11	1	.374	13.5			
4.00	5.17	.03	.67	SENSITIVE FINE GRAINED	OL-CH	.12	1	.374	13.5			
4.20	3.44	.06	1.67	SENSITIVE FINE GRAINED	OL-CH	.13	0	.246	13.5			
4.40	2.95	.07	2.37	SENSITIVE FINE GRAINED	OL-CH	.13	0	.209	13.5			
4.60	2.71	.07	2.55	SENSITIVE FINE GRAINED	OL-CH	.14	0	.190	13.5			
4.80	3.94	.13	3.25	CLAY	CH	.19	1	.277	13.5			
5.00	3.94	.01	.26	SENSITIVE FINE GRAINED	OL-CH	.15	0	.281	13.5			
5.20	3.69	.06	1.53	SENSITIVE FINE GRAINED	OL-CH	.16	0	.262	13.5			
5.40	3.69	.04	1.21	SENSITIVE FINE GRAINED	OL-CH	.16	0	.261	13.5			
5.60	4.18	.10	2.49	CLAY	CH	.22	2	.293	13.5			
5.80	4.18	.05	1.08	SENSITIVE FINE GRAINED	OL-CH	.17	1	.297	13.5			
6.00	3.20	.06	1.78	SENSITIVE FINE GRAINED	OL-CH	.18	0	.223	13.5			
6.20	5.40	.08	1.49	SENSITIVE FINE GRAINED	OL-CH	.19	1	.386	13.5			
6.40	3.94	.08	2.04	SENSITIVE FINE GRAINED	OL-CH	.19	0	.277	13.5			
6.60	4.43	.11	2.38	CLAY	CH	.26	2	.308	13.5			
6.80	3.20	.08	2.54	CLAY	CH	.27	1	.217	13.5			
7.00	3.20	.12	3.69	CLAY	CH	.28	1	.216	13.5			
7.20	3.44	.13	3.75	CLAY	CH	.29	1	.234	13.5			
7.40	2.95	.12	4.08	ORGANIC MATERIAL	OL-OH	.22	1	.202	13.5			
7.60	1.60	.09	5.94	ORGANIC MATERIAL	OL-OH	.23	1	.102	13.5			
7.80	1.48	.13	8.84	ORGANIC MATERIAL	OL-OH	.23	1	.092	13.5			
8.00	2.21	.12	5.36	ORGANIC MATERIAL	OL-OH	.24	1	.146	13.5			
8.20	2.95	.07	2.33	SENSITIVE FINE GRAINED	OL-CH	.25	0	.200	13.5			
8.40	3.94	.13	3.30	CLAY	CH	.34	1	.267	13.5			
8.60	3.20	.14	4.24	CLAY	CH	.34	1	.212	13.5			
8.80	2.95	.09	3.18	CLAY	CH	.35	1	.193	13.5			
9.00	2.59	.10	3.89	ORGANIC MATERIAL	OL-OH	.27	1	.172	13.5			
9.20	2.70	.13	4.80	ORGANIC MATERIAL	OL-OH	.28	1	.180	13.5			
9.40	3.19	.15	4.80	ORGANIC MATERIAL	OL-OH	.28	1	.216	13.5			

9.60	2.95	.18	5.99	ORGANIC MATERIAL	OL-OH	.29	1	.197	13.5			
9.80	4.18	.24	5.86	ORGANIC MATERIAL	OL-OH	.29	2	.288	13.5			
10.00	8.13	.33	4.09	CLAY	CH	.40	3	.572	13.5			
10.20	4.19	.27	6.45	ORGANIC MATERIAL	OL-OH	.31	2	.287	13.5			
10.40	10.55	.24	2.27	SILTY CLAY TO CLAY	CL-CH	.42	3	.751	13.5			
10.60	12.81	.23	1.82	SILTY CLAY TO CLAY	CL-CH	.42	4	.917	13.5			
10.80	7.89	.07	.89	SENSITIVE FINE GRAINED	OL-CH	.32	1	.560	13.5			
11.00	60.71	.18	.30	SILTY SAND TO SANDY SILT	SM-ML	.60	9			61	37	.23
11.20	73.66	.26	.35	SILTY SAND TO SANDY SILT	SM-ML	.62	11			65	37	.32
11.40	54.36	.07	.13	SILTY SAND TO SANDY SILT	SM-ML	.63	8			56	36	.19
11.60	75.83	.35	.47	SILTY SAND TO SANDY SILT	SM-ML	.64	12			65	37	.32
11.80	78.93	.42	.53	SILTY SAND TO SANDY SILT	SM-ML	.65	12			66	37	.35
12.00	94.92	.25	.27	SAND TO SILTY SAND	SM-SP	.72	11			69	39	.49
12.20	114.84	.53	.46	SAND TO SILTY SAND	SM-SP	.73	13			76	40	.50+
12.40	150.68	.46	.31	SAND TO SILTY SAND	SM-SP	.74	18			84	41	.50+
12.60	146.53	.46	.32	SAND TO SILTY SAND	SM-SP	.76	17			83	41	.50+
12.80	90.58	.16	.18	SAND TO SILTY SAND	SM-SP	.77	10			67	39	.36
13.00	31.36	.40	1.29	SANDY SILT TO CLAYEY SILT	ML-MH	.65	6	2.275	13.5	38	33	.14
13.20	39.23	.60	1.53	SANDY SILT TO CLAYEY SILT	ML-MH	.66	7	2.857	13.5	44	34	.15
13.40	143.45	.38	.26	SAND TO SILTY SAND	SM-SP	.80	17			81	40	.50+
13.60	133.25	.70	.53	SAND TO SILTY SAND	SM-SP	.82	15			79	40	.50+
13.80	127.12	.27	.22	SAND TO SILTY SAND	SM-SP	.83	15			77	40	.50+
14.00	81.90	.67	.82	SILTY SAND TO SANDY SILT	SM-ML	.77	13			64	37	.28
14.20	144.27	.50	.35	SAND TO SILTY SAND	SM-SP	.85	17			80	40	.50+
14.40	108.01	.28	.26	SAND TO SILTY SAND	SM-SP	.86	12			70	39	.49
14.60	103.38	.22	.21	SAND TO SILTY SAND	SM-SP	.88	12			68	39	.41
14.80	73.03	.11	.15	SAND TO SILTY SAND	SM-SP	.89	8			57	38	.20
15.00	16.33	.14	.85	SENSITIVE FINE GRAINED	OL-CH	.45	3	1.176	13.5			
15.20	7.14	.06	.78	SENSITIVE FINE GRAINED	OL-CH	.46	1	.495	13.5			
15.40	6.26	.13	2.11	CLAY	CH	.62	3	.418	13.5			
15.60	6.17	.09	1.48	SENSITIVE FINE GRAINED	OL-CH	.47	1	.422	13.5			
15.80	5.41	.12	2.23	CLAY	CH	.63	2	.354	13.5			
16.00	22.16	.07	.32	SANDY SILT TO CLAYEY SILT	ML-MH	.80	4	1.582	13.5	21	31	.11
16.20	7.67	.12	1.50	SENSITIVE FINE GRAINED	OL-CH	.49	1	.532	13.5			
16.40	8.05	.26	3.21	CLAY	CH	.66	3	.548	13.5			
16.60	20.09	.12	.62	SANDY SILT TO CLAYEY SILT	ML-MH	.83	3	1.426	13.5	18	31	.11
16.80	10.12	.06	.55	SENSITIVE FINE GRAINED	OL-CH	.50	2	.712	13.5			
17.00	60.13	1.02	1.70	SANDY SILT TO CLAYEY SILT	ML-MH	.85	11	4.391	13.5	51	35	.18
17.20	18.30	.06	.33	SENSITIVE FINE GRAINED	OL-CH	.52	4	1.317	13.5			
17.40	36.35	.14	.40	SANDY SILT TO CLAYEY SILT	ML-MH	.87	6	2.628	13.5	34	33	.13
17.60	21.09	.11	.54	SANDY SILT TO CLAYEY SILT	ML-MH	.88	4	1.497	13.5	18	31	.11
17.80	6.14	.04	.59	SENSITIVE FINE GRAINED	OL-CH	.53	1	.415	13.5			
18.00	25.30	.11	.45	SANDY SILT TO CLAYEY SILT	ML-MH	.90	4	1.808	13.5	22	31	.12
18.20	20.69	.10	.46	SANDY SILT TO CLAYEY SILT	ML-MH	.91	3	1.465	13.5	17	30	.11
18.40	16.84	.07	.44	SENSITIVE FINE GRAINED	OL-CH	.55	4	1.206	13.5			
18.60	8.85	.10	1.12	SENSITIVE FINE GRAINED	OL-CH	.56	2	.615	13.5			
18.80	8.11	.25	3.07	CLAY	CH	.75	3	.545	13.5			
19.00	15.63	.11	.73	SENSITIVE FINE GRAINED	OL-CH	.57	3	1.115	13.5			
19.20	7.88	.09	1.18	SENSITIVE FINE GRAINED	OL-CH	.58	1	.541	13.5			
19.40	6.51	.31	4.74	CLAY	CH	.78	3	.425	13.5			
19.60	10.85	.19	1.71	SILTY CLAY TO CLAY	CL-CH	.78	3	.746	13.5			
19.80	7.75	.23	2.95	CLAY	CH	.79	3	.516	13.5			
20.00	7.38	.19	2.52	CLAY	CH	.80	3	.487	13.5			
20.20	7.62	.22	2.91	CLAY	CH	.81	3	.504	13.5			
20.40	7.13	.27	3.74	CLAY	CH	.82	3	.467	13.5			
20.60	32.30	.05	.16	SANDY SILT TO CLAYEY SILT	ML-MH	1.03	6	2.316	13.5	26	32	.12
20.80	26.84	.13	.50	SANDY SILT TO CLAYEY SILT	ML-MH	1.04	5	1.911	13.5	21	31	.11
21.00	22.60	.03	.15	SANDY SILT TO CLAYEY SILT	ML-MH	1.05	4	1.596	13.5	17	30	.11
21.20	62.76	.18	.29	SILTY SAND TO SANDY SILT	SM-ML	1.17	10			44	34	.16
21.40	27.02	.17	.64	SANDY SILT TO CLAYEY SILT	ML-MH	1.07	5	1.922	13.5	21	31	.11

21.60	8.16	.05	.56	SENSITIVE FINE GRAINED	OL-CH	.65	1	.556	13.5			
21.80	5.54	.86	15.44	ORGANIC MATERIAL	OL-OH	.65	2	.362	13.5			
22.00	269.74	1.13	.42	SAND	SW-SP	1.43	25			89	43	.50+
22.20	408.08	1.47	.36	SAND	SW-SP	1.44	39			100+	44	.50+
22.40	378.52	1.80	.47	SAND	SW-SP	1.46	36			100+	44	.50+
22.60	334.56	1.58	.47	SAND	SW-SP	1.47	32			96	44	.50+
22.80	269.68	1.23	.45	SAND	SW-SP	1.48	25			88	43	.50+



RESULT OF CONE PENETRATION TEST

7N

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

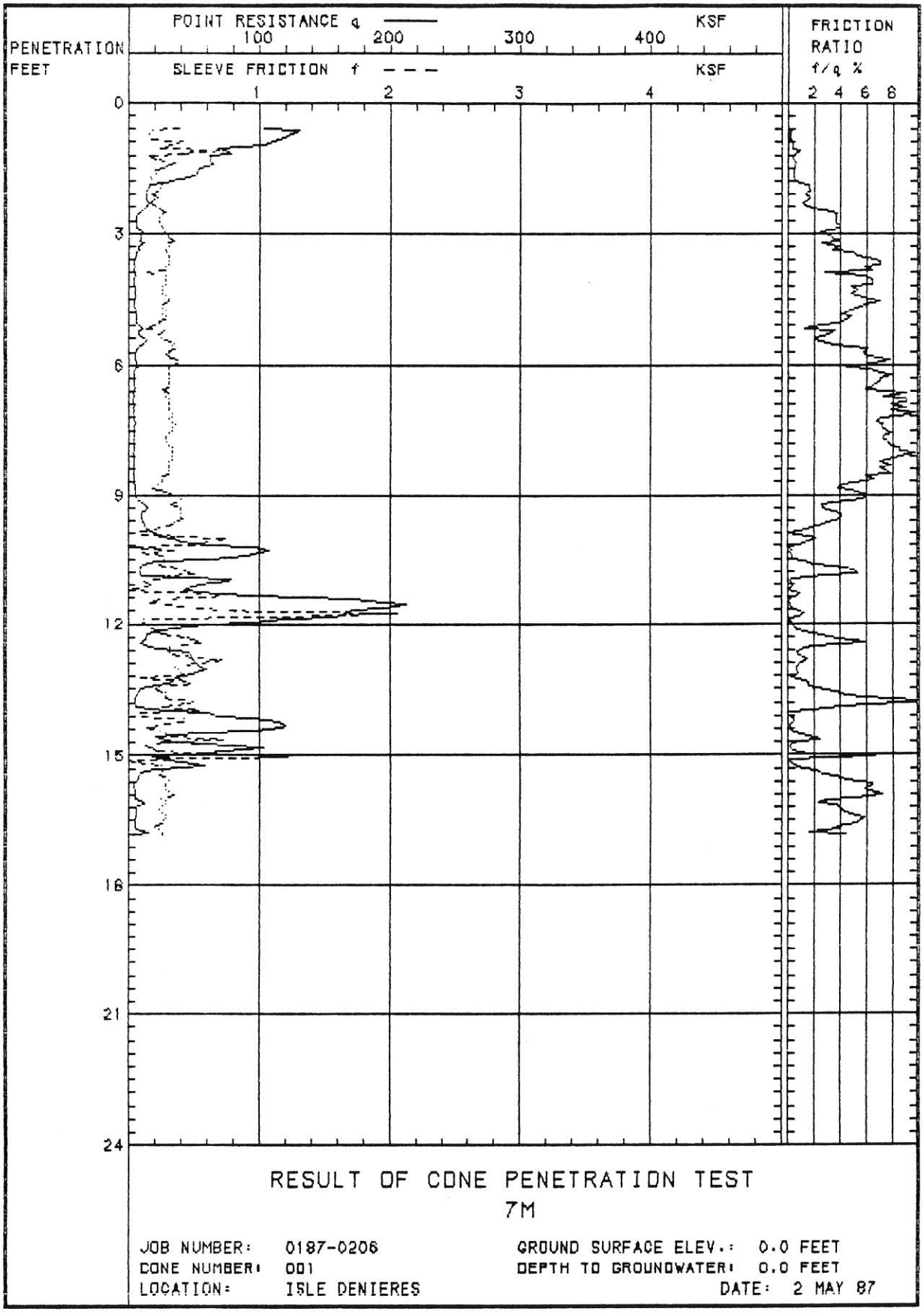
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 7N
CONE NO. : 001
DATE : 04/30/87

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	26.32	.17	.64	SANDY SILT TO CLAYEY SILT	ML-MH	.03	5	1.947	13.5	68	38	.50+
.80	13.28	.26	1.95	SILTY CLAY TO CLAY	CL-CH	.03	4	.981	13.5			
1.00	7.63	.25	3.31	CLAY	CH	.04	3	.562	13.5			
1.20	7.38	.33	4.49	CLAY	CH	.05	3	.543	13.5			
1.40	6.15	.31	5.01	CLAY	CH	.06	2	.451	13.5			
1.60	6.64	.31	4.62	CLAY	CH	.06	3	.487	13.5			
1.80	6.89	.32	4.66	CLAY	CH	.07	3	.505	13.5			
2.00	6.03	.31	5.10	CLAY	CH	.08	2	.440	13.5			
2.20	5.90	.28	4.82	CLAY	CH	.09	2	.431	13.5			
2.40	4.67	.31	6.59	ORGANIC MATERIAL	OL-OH	.07	2	.341	13.5			
2.60	6.64	.31	4.64	CLAY	CH	.10	3	.484	13.5			
2.80	4.92	.27	5.51	CLAY	CH	.11	2	.356	13.5			
3.00	10.08	.26	2.57	CLAY	CH	.12	4	.738	13.5			
3.20	8.85	.35	3.96	CLAY	CH	.13	4	.646	13.5			
3.40	9.97	.32	3.20	CLAY	CH	.14	4	.728	13.5			
3.60	5.66	.32	5.65	CLAY	CH	.14	2	.408	13.5			
3.80	6.15	.37	6.00	CLAY	CH	.15	2	.444	13.5			
4.00	4.67	.33	7.12	ORGANIC MATERIAL	OL-OH	.12	2	.337	13.5			
4.20	5.16	.33	6.43	ORGANIC MATERIAL	OL-OH	.13	2	.373	13.5			
4.40	5.17	.33	6.45	ORGANIC MATERIAL	OL-OH	.13	2	.373	13.5			
4.60	4.92	.33	6.76	ORGANIC MATERIAL	OL-OH	.14	2	.354	13.5			
4.80	5.17	.33	6.44	ORGANIC MATERIAL	OL-OH	.14	2	.372	13.5			
5.00	4.68	.32	6.87	ORGANIC MATERIAL	OL-OH	.15	2	.335	13.5			
5.20	4.18	.32	7.68	ORGANIC MATERIAL	OL-OH	.16	2	.298	13.5			
5.40	5.16	.31	5.98	ORGANIC MATERIAL	OL-OH	.16	2	.370	13.5			
5.60	4.43	.27	6.16	ORGANIC MATERIAL	OL-OH	.17	2	.316	13.5			
5.80	4.18	.32	7.68	ORGANIC MATERIAL	OL-OH	.17	2	.297	13.5			
6.00	5.16	.31	5.99	ORGANIC MATERIAL	OL-OH	.18	2	.369	13.5			
6.20	5.47	.31	5.64	CLAY	CH	.25	2	.387	13.5			
6.40	5.17	.27	5.26	CLAY	CH	.26	2	.364	13.5			
6.60	6.88	.32	4.62	CLAY	CH	.26	3	.490	13.5			
6.80	10.81	.25	2.35	SILTY CLAY TO CLAY	CL-CH	.27	3	.791	13.5			
7.00	12.54	.23	1.87	SILTY CLAY TO CLAY	CL-CH	.28	4	.908	13.5			
7.20	11.62	.33	2.88	CLAY	CH	.29	5	.840	13.5			
7.40	11.37	.28	2.49	SILTY CLAY TO CLAY	CL-CH	.30	3	.820	13.5			
7.60	11.94	.33	2.78	CLAY	CH	.30	5	.862	13.5			
7.80	31.73	.23	.73	SANDY SILT TO CLAYEY SILT	ML-MH	.39	6	2.322	13.5	50	35	.17
8.00	42.27	.18	.42	SILTY SAND TO SANDY SILT	SM-ML	.44	6			57	36	.19
8.20	73.51	.36	.50	SILTY SAND TO SANDY SILT	SM-ML	.45	11			71	38	.50+
8.40	98.37	.32	.32	SAND TO SILTY SAND	SM-SP	.50	11			79	40	.50+
8.60	100.86	.64	.64	SAND TO SILTY SAND	SM-SP	.52	12			79	40	.50+
8.80	118.04	.69	.59	SAND TO SILTY SAND	SM-SP	.53	14			84	41	.50+
9.00	178.43	1.09	.61	SAND TO SILTY SAND	SM-SP	.54	21			99	42	.50+
9.20	264.28	.86	.33	SAND	SW-SP	.60	25			100+	44	.50+
9.40	272.65	.61	.21	SAND	SW-SP	.61	28			100+	44	.50+

9.60	277.31	.66	.24	SAND	SW-SP	.62	26			100+	44	.50+
9.80	206.95	.56	.27	SAND	SW-SP	.64	19			100+	44	.50+
10.00	309.06	2.90	.94	SAND	SW-SP	.65	29			100+	44	.50+
10.20	272.04	.27	.10	SAND	SW-SP	.66	26			100+	44	.50+
10.40	294.55	.87	.29	SAND	SW-SP	.68	28			100+	44	.50+
10.60	282.21	.46	.16	SAND	SW-SP	.69	27			100+	44	.50+
10.80	532.78	1.93	.36	GRAVELLY SAND TO SAND	SW-GW	.70	42			100+	46	.50+
11.00	550.38	1.98	.36	GRAVELLY SAND TO SAND	SW-GW	.71	43			100+	46	.50+
11.20	664.63	1.24	.19	GRAVELLY SAND TO SAND	SW-GW	.73	53			100+	46	.50+
11.40	612.19	1.14	.19	GRAVELLY SAND TO SAND	SW-GW	.74	48			100+	46	.50+
11.60	625.29	1.51	.24	GRAVELLY SAND TO SAND	SW-GW	.75	49			100+	46	.50+
11.80	568.77	1.33	.23	GRAVELLY SAND TO SAND	SW-GW	.77	45			100+	46	.50+
12.00	596.12	3.94	.66	SAND	SW-SP	.78	57			100+	44	.50+
12.20	375.01	2.42	.64	SAND	SW-SP	.79	35			100+	44	.50+
12.40	177.27	.34	.19	SAND	SW-SP	.81	16			88	43	.50+
12.60	105.74	.49	.46	SAND TO SILTY SAND	SM-SP	.76	12			72	39	.50+
12.80	35.29	.47	1.32	SANDY SILT TO CLAYEY SILT	ML-MH	.64	6	2.567	13.5	42	34	.15
13.00	30.11	.55	1.83	CLAYEY SILT TO SILTY CLAY	MH-CL	.58	7	2.187	13.5			
13.20	20.41	.37	1.83	CLAYEY SILT TO SILTY CLAY	MH-CL	.59	4	1.468	13.5			
13.40	24.71	.44	1.76	CLAYEY SILT TO SILTY CLAY	MH-CL	.60	5	1.786	13.5			
13.60	45.65	.48	1.05	SANDY SILT TO CLAYEY SILT	ML-MH	.68	8	3.331	13.5	48	35	.16
13.80	66.74	.23	.35	SILTY SAND TO SANDY SILT	SM-ML	.76	10			59	36	.21
14.00	20.53	.28	1.35	CLAYEY SILT TO SILTY CLAY	MH-CL	.63	4	1.474	13.5			
14.20	19.27	.03	.17	SENSITIVE FINE GRAINED	OL-CH	.43	4	1.396	13.5			
14.40	157.50	.35	.22	SAND TO SILTY SAND	SM-SP	.86	18			83	40	.50+
14.60	295.68	.22	.07	SAND	SW-SP	.95	28			100+	44	.50+
14.80	306.62	.03	.01	SAND	SW-SP	.96	29			100+	44	.50+
15.00	185.34	.20	.11	SAND	SW-SP	.97	17			85	43	.50+
15.20	98.16	.45	.45	SAND TO SILTY SAND	SM-SP	.91	11			65	39	.33
15.40	257.32	.64	.25	SAND	SW-SP	1.00	24			97	44	.50+
15.60	389.88	2.50	.64	SAND	SW-SP	1.01	37			100+	44	.50+
15.80	274.08	.31	.11	SAND	SW-SP	1.03	26			99	44	.50+
16.00	78.03	.79	1.01	SILTY SAND TO SANDY SILT	SM-ML	.88	12			60	36	.22
16.20	18.73	.13	.69	CLAYEY SILT TO SILTY CLAY	MH-CL	.73	4	1.333	13.5			



RESULT OF CONE PENETRATION TEST

7M

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

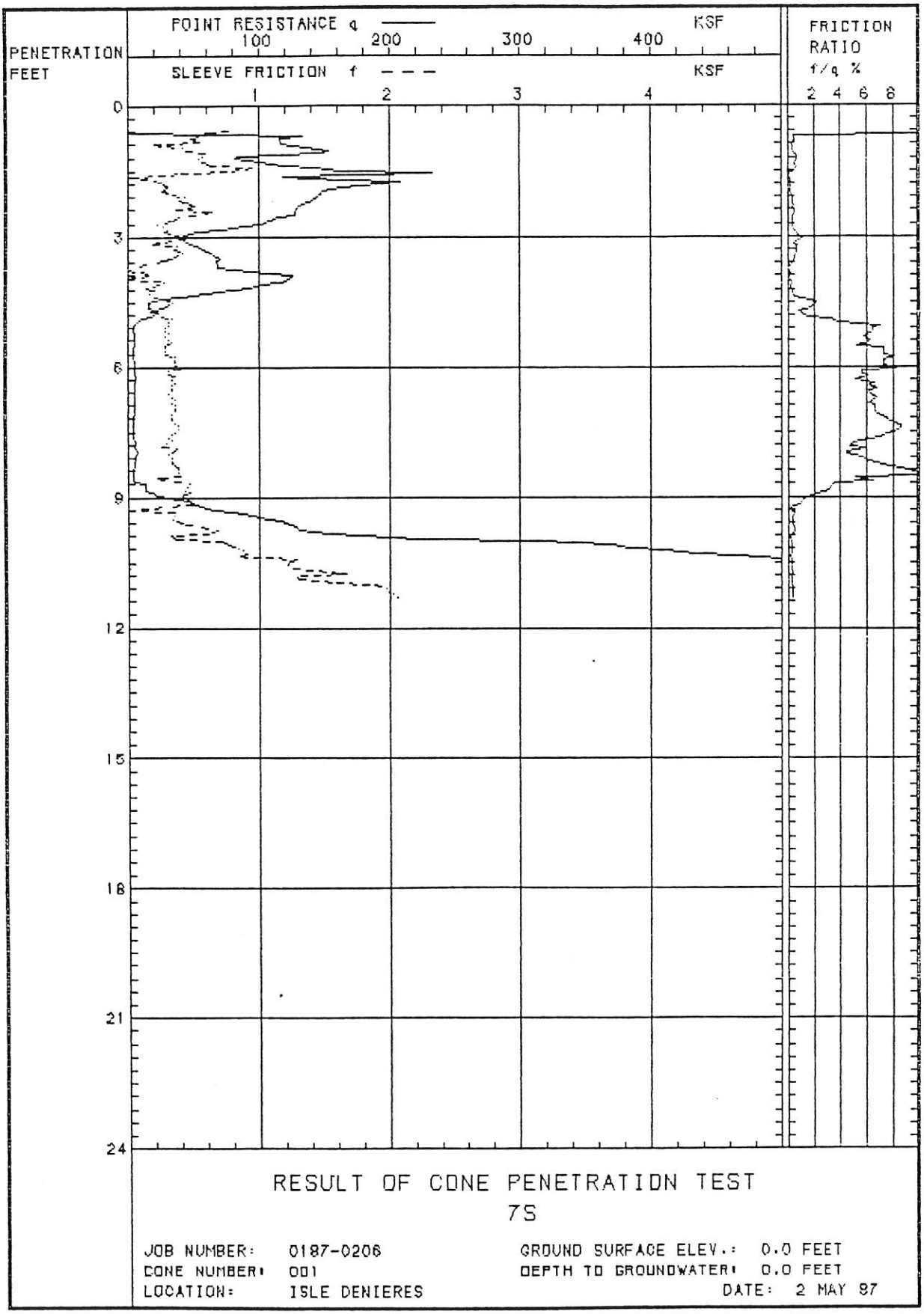
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 7M
CONE NO. : 001
DATE : 04/30/87

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	111.91	.08	.07	SAND TO SILTY SAND	SM-SP	.04	13			100+	42	.50+
.80	113.64	.00	.00	SAND TO SILTY SAND	SM-SP	.05	13			100+	42	.50+
1.00	80.57	.44	.54	SILTY SAND TO SANDY SILT	SM-ML	.05	12			100+	42	.50+
1.20	64.70	.02	.04	SILTY SAND TO SANDY SILT	SM-ML	.07	10			95	41	.50+
1.40	59.03	.13	.22	SILTY SAND TO SANDY SILT	SM-ML	.08	9			88	40	.50+
1.60	47.66	.03	.07	SILTY SAND TO SANDY SILT	SM-ML	.09	7			78	39	.50+
1.80	27.56	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.09	5	2.035	13.5	65	37	.50+
2.00	8.98	.00	.05	SENSITIVE FINE GRAINED	OL-CH	.06	2	.661	13.5			
2.20	8.12	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.07	1	.596	13.5			
2.40	8.12	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.07	1	.596	13.5			
2.60	1.23	.01	.95	ORGANIC MATERIAL	OL-OH	.08	1	.085	13.5			
2.80	.98	.01	.95	ORGANIC MATERIAL	OL-OH	.08	1	.067	13.5			
3.00	4.92	.03	.70	SENSITIVE FINE GRAINED	OL-CH	.09	1	.358	13.5			
3.20	4.91	.09	1.91	SENSITIVE FINE GRAINED	OL-CH	.10	1	.357	13.5			
3.40	1.73	.05	2.90	ORGANIC MATERIAL	OL-OH	.10	1	.120	13.5			
3.60	.00	.07	999.00	ORGANIC MATERIAL	OL-OH	.11	1	-.008	13.5			
3.80	.00	.05	999.00	ORGANIC MATERIAL	OL-OH	.11	1	-.008	13.5			
4.00	.00	.05	999.00	ORGANIC MATERIAL	OL-OH	.12	1	-.009	13.5			
4.20	.00	.04	999.00	ORGANIC MATERIAL	OL-OH	.13	1	-.009	13.5			
4.40	.00	.04	999.00	ORGANIC MATERIAL	OL-OH	.13	1	-.010	13.5			
4.60	.00	.05	999.00	ORGANIC MATERIAL	OL-OH	.14	1	-.010	13.5			
4.80	.74	.04	4.83	ORGANIC MATERIAL	OL-OH	.14	1	.044	13.5			
5.00	.74	.02	3.10	ORGANIC MATERIAL	OL-OH	.15	1	.044	13.5			
5.20	3.95	.02	.53	SENSITIVE FINE GRAINED	OL-CH	.16	0	.281	13.5			
5.40	7.62	.02	.32	SENSITIVE FINE GRAINED	OL-CH	.16	1	.552	13.5			
5.60	2.23	.11	4.87	ORGANIC MATERIAL	OL-OH	.17	1	.153	13.5			
5.80	.00	.02	999.00	ORGANIC MATERIAL	OL-OH	.17	1	-.013	13.5			
6.00	.73	.11	14.92	ORGANIC MATERIAL	OL-OH	.18	1	.041	13.5			
6.20	.00	.07	999.00	ORGANIC MATERIAL	OL-OH	.19	1	-.014	13.5			
6.40	.00	.07	999.00	ORGANIC MATERIAL	OL-OH	.19	1	-.014	13.5			
6.60	.00	.05	999.00	ORGANIC MATERIAL	OL-OH	.20	1	-.015	13.5			
6.80	.00	.07	999.00	ORGANIC MATERIAL	OL-OH	.20	1	-.015	13.5			
7.00	.00	.07	999.00	ORGANIC MATERIAL	OL-OH	.21	1	-.015	13.5			
7.20	.00	.08	999.00	ORGANIC MATERIAL	OL-OH	.22	1	-.016	13.5			
7.40	.00	.11	999.00	ORGANIC MATERIAL	OL-OH	.22	1	-.016	13.5			
7.60	.00	.06	999.00	ORGANIC MATERIAL	OL-OH	.23	1	-.017	13.5			
7.80	.00	.06	999.00	ORGANIC MATERIAL	OL-OH	.23	1	-.017	13.5			
8.00	.00	.10	999.00	ORGANIC MATERIAL	OL-OH	.24	1	-.018	13.5			
8.20	.00	.09	999.00	ORGANIC MATERIAL	OL-OH	.25	1	-.018	13.5			
8.40	.00	.07	999.00	ORGANIC MATERIAL	OL-OH	.25	1	-.019	13.5			
8.60	.00	.02	999.00	ORGANIC MATERIAL	OL-OH	.26	1	-.019	13.5			
8.80	.00	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.26	0	-.019	13.5			
9.00	.00	.11	999.00	ORGANIC MATERIAL	OL-OH	.27	1	-.020	13.5			
9.20	6.13	.11	1.84	SENSITIVE FINE GRAINED	OL-CH	.28	1	.434	13.5			
9.40	6.17	.17	2.67	CLAY	CH	.38	2	.429	13.5			
9.60	5.53	.13	2.27	CLAY	CH	.38	2	.381	13.5			
9.80	9.82	.00	.03	SENSITIVE FINE GRAINED	OL-CH	.29	2	.705	13.5			
10.00	24.28	.32	1.31	CLAYEY SILT TO SILTY CLAY	MH-CL	.45	5	1.765	13.5			
10.20	72.55	.14	.19	SAND TO SILTY SAND	SM-SP	.61	8			65	39	.31

10.60	11.14	.01	.09	SENSITIVE FINE GRAINED	OL-CH	.32	2	.802	13.5			
10.80	3.56	.16	4.54	CLAY	CH	.43	1	.231	13.5			
11.00	72.32	.03	.04	SAND TO SILTY SAND	SM-SP	.66	8			63	38	.27
11.20	37.95	.10	.26	SILTY SAND TO SANDY SILT	SM-ML	.62	6			45	34	.15
11.40	127.77	.24	.19	SAND TO SILTY SAND	SM-SP	.68	15			81	40	.50+
11.60	198.89	.02	.01	SAND	SW-SP	.75	19			94	44	.50+
11.80	157.47	.96	.61	SAND TO SILTY SAND	SM-SP	.71	18			87	41	.50+
12.00	72.12	.00	.00	SAND TO SILTY SAND	SM-SP	.72	8			62	38	.24
12.20	11.36	.13	1.14	SENSITIVE FINE GRAINED	OL-CH	.37	2	.814	13.5			
12.40	5.94	.17	2.85	CLAY	CH	.50	2	.403	13.5			
12.60	29.55	.08	.28	SANDY SILT TO CLAYEY SILT	ML-MH	.63	5	2.142	13.5	37	33	.14
12.80	43.78	.35	.79	SANDY SILT TO CLAYEY SILT	ML-MH	.64	8	3.196	13.5	48	35	.16
13.00	52.35	.14	.27	SILTY SAND TO SANDY SILT	SM-ML	.71	8			51	35	.18
13.20	37.52	.10	.26	SILTY SAND TO SANDY SILT	SM-ML	.73	5			41	34	.15
13.40	17.36	.12	.70	SENSITIVE FINE GRAINED	OL-CH	.40	4	1.256	13.5			
13.60	1.74	.05	2.80	ORGANIC MATERIAL	OL-OH	.41	1	.098	13.5			
13.80	.00	.23	999.00	ORGANIC MATERIAL	OL-OH	.41	1	-.031	13.5			
14.00	39.77	.16	.39	SILTY SAND TO SANDY SILT	SM-ML	.77	6			41	34	.15
14.20	100.40	.19	.19	SAND TO SILTY SAND	SM-SP	.85	12			68	39	.40
14.40	102.30	.00	.00	SAND TO SILTY SAND	SM-SP	.86	12			68	39	.41
14.60	19.83	.08	.39	SANDY SILT TO CLAYEY SILT	ML-MH	.73	3	1.415	13.5	20	31	.11
14.80	85.33	.36	.42	SAND TO SILTY SAND	SM-SP	.89	10			62	38	.25
15.00	26.62	.73	2.74	CLAYEY SILT TO SILTY CLAY	MH-CL	.67	6	1.922	13.5			
15.20	44.08	.01	.02	SILTY SAND TO SANDY SILT	SM-ML	.84	7			42	34	.15
15.40	4.95	.01	.23	SENSITIVE FINE GRAINED	OL-CH	.46	1	.333	13.5			
15.60	.76	.06	8.09	ORGANIC MATERIAL	OL-OH	.47	1	.021	13.5			
15.80	.00	.06	999.00	ORGANIC MATERIAL	OL-OH	.47	1	-.035	13.5			
16.00	2.16	.03	1.48	ORGANIC MATERIAL	OL-OH	.48	1	.125	13.5			
16.20	.76	.02	3.29	ORGANIC MATERIAL	OL-OH	.49	1	.020	13.5			
16.40	.25	.05	19.25	ORGANIC MATERIAL	OL-OH	.49	1	-.018	13.5			
16.60	.00	.01	999.00	ORGANIC MATERIAL	OL-OH	.50	1	-.037	13.5			
16.80	5.78	.02	.41	SENSITIVE FINE GRAINED	OL-CH	.50	1	.391	13.5			



RESULT OF CONE PENETRATION TEST

7S

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

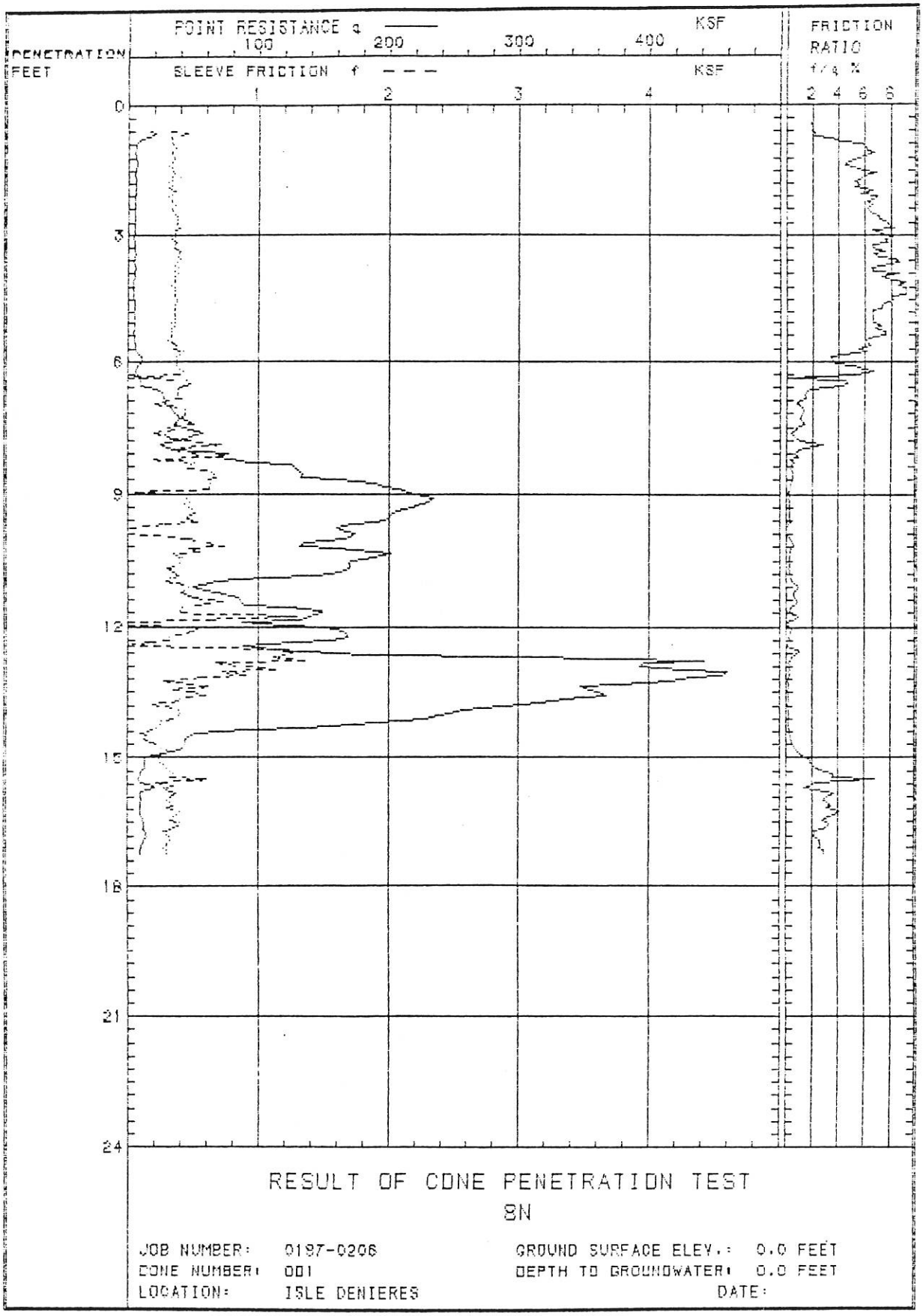
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 97

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

PROJECT NO. : 01870206
BORING NO. : 7S
CONE NO. : 001
DATE : 04/30/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	2.21	.53	23.74	ORGANIC MATERIAL	OL-OH	.02	1	.163	13.5			
.80	116.34	.43	.37	SAND TO SILTY SAND	SM-SP	.05	13			100+	42	.50+
1.00	145.11	.33	.23	SAND TO SILTY SAND	SM-SP	.06	17			100+	42	.50+
1.20	83.38	.52	.62	SILTY SAND TO SANDY SILT	SM-ML	.07	13			100+	42	.50+
1.40	131.58	.79	.60	SAND TO SILTY SAND	SM-SP	.08	15			100+	42	.50+
1.60	175.84	.52	.30	SAND	SW-SP	.10	16			100+	44	.50+
1.80	193.36	.37	.19	SAND	SW-SP	.12	18			100+	44	.50+
2.00	148.32	.41	.28	SAND TO SILTY SAND	SM-SP	.12	17			100+	42	.50+
2.20	139.34	.44	.32	SAND TO SILTY SAND	SM-SP	.13	16			100+	42	.50+
2.40	128.40	.61	.48	SAND TO SILTY SAND	SM-SP	.14	15			100+	42	.50+
2.60	111.92	.35	.31	SAND TO SILTY SAND	SM-SP	.16	13			100+	42	.50+
2.80	80.46	.28	.35	SAND TO SILTY SAND	SM-SP	.17	9			91	41	.50+
3.00	41.33	.39	.94	SANDY SILT TO CLAYEY SILT	ML-MH	.15	7	3.050	13.5	70	39	.50+
3.20	49.92	.28	.57	SILTY SAND TO SANDY SILT	SM-ML	.18	7			73	38	.50+
3.40	64.44	.35	.55	SILTY SAND TO SANDY SILT	SM-ML	.19	10			80	39	.50+
3.60	67.95	.19	.27	SILTY SAND TO SANDY SILT	SM-ML	.20	10			82	39	.50+
3.80	94.38	.08	.08	SAND TO SILTY SAND	SM-SP	.23	11			93	42	.50+
4.00	120.05	.14	.12	SAND TO SILTY SAND	SM-SP	.24	14			100+	42	.50+
4.20	87.11	.17	.20	SAND TO SILTY SAND	SM-SP	.25	10			87	41	.50+
4.40	33.25	.26	.79	SANDY SILT TO CLAYEY SILT	ML-MH	.22	6	2.447	13.5	61	37	.27
4.60	15.87	.29	1.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.21	3	1.160	13.5			
4.80	19.69	.24	1.24	CLAYEY SILT TO SILTY CLAY	MH-CL	.22	4	1.442	13.5			
5.00	6.16	.31	5.02	CLAY	CH	.20	2	.442	13.5			
5.20	4.67	.30	6.35	ORGANIC MATERIAL	OL-OH	.16	2	.334	13.5			
5.40	5.16	.32	6.21	ORGANIC MATERIAL	OL-OH	.16	2	.370	13.5			
5.60	3.94	.29	7.25	ORGANIC MATERIAL	OL-OH	.17	1	.279	13.5			
5.80	4.67	.34	7.18	ORGANIC MATERIAL	OL-OH	.17	2	.333	13.5			
6.00	4.92	.39	7.98	ORGANIC MATERIAL	OL-OH	.18	2	.351	13.5			
6.20	5.66	.33	5.86	CLAY	CH	.25	2	.401	13.5			
6.40	5.41	.34	6.37	ORGANIC MATERIAL	OL-OH	.19	2	.387	13.5			
6.60	5.17	.32	6.20	ORGANIC MATERIAL	OL-OH	.20	2	.368	13.5			
6.80	5.41	.34	6.36	ORGANIC MATERIAL	OL-OH	.20	2	.386	13.5			
7.00	5.41	.36	6.60	ORGANIC MATERIAL	OL-OH	.21	2	.385	13.5			
7.20	4.43	.33	7.52	ORGANIC MATERIAL	OL-OH	.22	2	.312	13.5			
7.40	4.43	.38	8.48	ORGANIC MATERIAL	OL-OH	.22	2	.312	13.5			
7.60	4.43	.32	7.23	ORGANIC MATERIAL	OL-OH	.23	2	.311	13.5			
7.80	5.66	.27	4.83	CLAY	CH	.31	2	.396	13.5			
8.00	7.14	.32	4.49	CLAY	CH	.32	3	.505	13.5			
8.20	5.17	.33	6.44	ORGANIC MATERIAL	OL-OH	.25	2	.365	13.5			
8.40	4.18	.38	9.12	ORGANIC MATERIAL	OL-OH	.25	2	.291	13.5			
8.60	4.91	.40	8.08	ORGANIC MATERIAL	OL-OH	.26	2	.345	13.5			
8.80	13.65	.45	3.26	CLAY	CH	.35	6	.985	13.5			
9.00	27.24	.43	1.56	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	6	1.988	13.5			
9.20	54.34	.38	.71	SILTY SAND TO SANDY SILT	SM-ML	.51	8			61	37	.23
9.40	87.59	.26	.30	SAND TO SILTY SAND	SM-SP	.56	10			72	39	.50+

9.60	120.47	.40	.33	SAND TO SILTY SAND	SM-SP	.58	14	83	40	.30+
9.80	142.37	.60	.42	SAND TO SILTY SAND	SM-SP	.59	17	88	41	.50+
10.00	267.46	.54	.20	SAND	SW-SP	.65	25	100+	44	.50+
10.20	396.78	6.42	1.62	SAND TO SILTY SAND	SM-SP	.61	47	100+	42	.50+
10.40	482.34	1.19	.25	GRAVELLY SAND TO SAND	SW-GW	.68	38	100+	46	.50+
10.60	540.03	1.24	.23	GRAVELLY SAND TO SAND	SW-GW	.69	43	100+	46	.50+
10.80	559.74	1.58	.28	GRAVELLY SAND TO SAND	SW-GW	.70	44	100+	46	.50+
11.00	707.73	1.34	.19	GRAVELLY SAND TO SAND	SW-GW	.71	56	100+	46	.50+
11.20	683.25	1.98	.29	GRAVELLY SAND TO SAND	SW-GW	.73	54	100+	46	.50+



RESULT OF CONE PENETRATION TEST

SN

JOB NUMBER: 0197-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

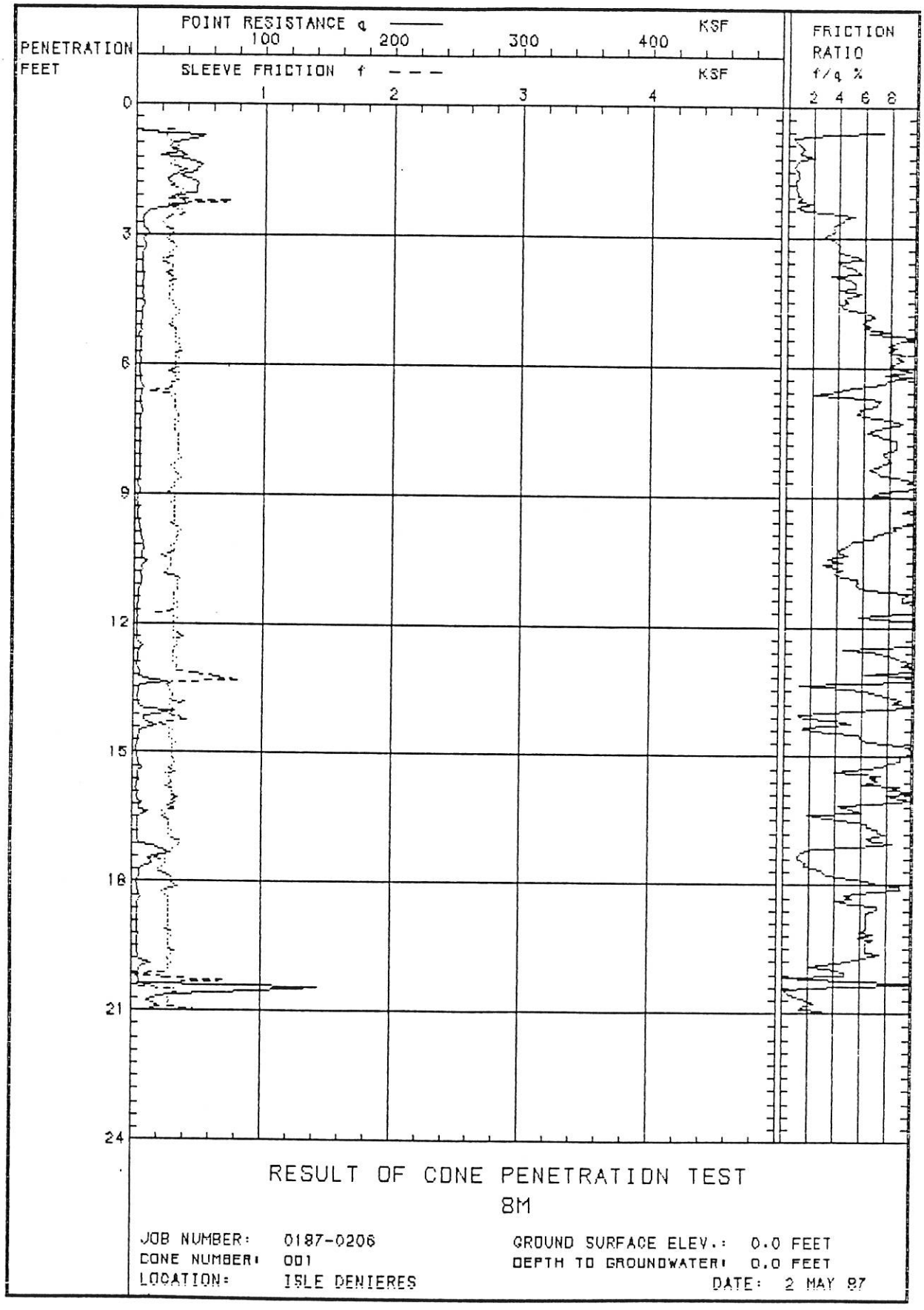
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE:

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

PROJECT NO. : 01870206
BORING NO. : BN
CONE NO. : 001
DATE : 04/30/87

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	18.94	.39	2.04	CLAYEY SILT TO SILTY CLAY	MH-CL	.03	4	1.401	13.5			
.80	8.86	.33	3.75	CLAY	CH	.03	4	.654	13.5			
1.00	5.66	.35	6.19	ORGANIC MATERIAL	OL-OH	.03	2	.417	13.5			
1.20	6.15	.35	5.77	CLAY	CH	.05	2	.452	13.5			
1.40	6.64	.32	4.82	CLAY	CH	.06	3	.488	13.5			
1.60	5.35	.34	6.38	ORGANIC MATERIAL	OL-OH	.05	2	.393	13.5			
1.80	5.90	.32	5.42	CLAY	CH	.07	2	.432	13.5			
2.00	5.66	.34	6.10	ORGANIC MATERIAL	OL-OH	.06	2	.415	13.5			
2.20	5.16	.33	6.43	ORGANIC MATERIAL	OL-OH	.07	2	.378	13.5			
2.40	5.41	.33	6.15	ORGANIC MATERIAL	OL-OH	.07	2	.396	13.5			
2.60	5.41	.37	6.92	ORGANIC MATERIAL	OL-OH	.08	2	.395	13.5			
2.80	4.92	.39	7.98	ORGANIC MATERIAL	OL-OH	.08	2	.358	13.5			
3.00	4.67	.36	7.64	ORGANIC MATERIAL	OL-OH	.09	2	.340	13.5			
3.20	5.16	.37	7.13	ORGANIC MATERIAL	OL-OH	.10	2	.375	13.5			
3.40	5.66	.38	6.75	ORGANIC MATERIAL	OL-OH	.10	2	.411	13.5			
3.60	4.67	.38	8.13	ORGANIC MATERIAL	OL-OH	.11	2	.338	13.5			
3.80	5.66	.37	6.52	ORGANIC MATERIAL	OL-OH	.11	2	.411	13.5			
4.00	4.67	.36	7.65	ORGANIC MATERIAL	OL-OH	.12	2	.337	13.5			
4.20	3.94	.35	8.78	ORGANIC MATERIAL	OL-OH	.13	1	.282	13.5			
4.40	4.18	.36	8.56	ORGANIC MATERIAL	OL-OH	.13	2	.300	13.5			
4.60	4.92	.37	7.49	ORGANIC MATERIAL	OL-OH	.14	2	.354	13.5			
4.80	5.41	.34	6.37	ORGANIC MATERIAL	OL-OH	.14	2	.390	13.5			
5.00	5.41	.36	6.59	ORGANIC MATERIAL	OL-OH	.15	2	.390	13.5			
5.20	4.92	.35	7.02	ORGANIC MATERIAL	OL-OH	.16	2	.353	13.5			
5.40	4.67	.33	7.13	ORGANIC MATERIAL	OL-OH	.16	2	.334	13.5			
5.60	5.66	.36	6.28	ORGANIC MATERIAL	OL-OH	.17	2	.406	13.5			
5.80	7.86	.39	4.97	CLAY	CH	.23	3	.565	13.5			
6.00	10.58	.36	3.41	CLAY	CH	.24	5	.766	13.5			
6.20	6.64	.41	6.23	CLAY	CH	.25	3	.474	13.5			
6.40	9.09	.22	2.44	CLAY	CH	.26	4	.655	13.5			
6.60	15.94	.41	2.57	SILTY CLAY TO CLAY	CL-CH	.26	5	1.161	13.5			
6.80	27.54	.42	1.52	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	6	2.018	13.5			
7.00	29.87	.41	1.36	SANDY SILT TO CLAYEY SILT	ML-MH	.35	5	2.187	13.5	51	35	.17
7.20	37.13	.45	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	.36	7	2.724	13.5	57	36	.19
7.40	37.40	.25	.68	SANDY SILT TO CLAYEY SILT	ML-MH	.37	7	2.743	13.5	57	36	.19
7.60	53.32	.28	.53	SILTY SAND TO SANDY SILT	SM-ML	.42	8			63	37	.28
7.80	38.45	.67	1.74	SANDY SILT TO CLAYEY SILT	ML-MH	.39	7	2.819	13.5	56	36	.19
8.00	32.93	.44	1.34	SANDY SILT TO CLAYEY SILT	ML-MH	.40	6	2.410	13.5	51	35	.17
8.20	73.96	.61	.82	SILTY SAND TO SANDY SILT	SM-ML	.45	11			71	38	.50+
8.40	127.14	.54	.42	SAND TO SILTY SAND	SM-SP	.50	15			87	41	.50+
8.60	133.82	.77	.58	SAND TO SILTY SAND	SM-SP	.52	16			88	41	.50+
8.80	193.04	.45	.24	SAND	SW-SP	.57	18			100+	44	.50+
9.00	217.52	.53	.24	SAND	SW-SP	.58	20			100+	44	.50+
9.20	228.54	.46	.20	SAND	SW-SP	.60	21			100+	44	.50+
9.40	207.04	.49	.24	SAND	SW-SP	.61	19			100+	44	.50+

9.60	195.61	.49	.25	SAND	SW-SP	.62	18			99	44	.50+
9.80	163.89	.00	.00	SAND	SW-SP	.64	15			91	43	.50+
10.00	168.76	.34	.20	SAND	SW-SP	.65	16			92	44	.50+
10.20	146.14	.55	.38	SAND TO SILTY SAND	SM-SP	.61	17			88	41	.50+
10.40	195.64	.41	.21	SAND	SW-SP	.68	18			97	44	.50+
10.60	169.59	.39	.23	SAND	SW-SP	.69	16			90	43	.50+
10.80	154.61	.38	.25	SAND TO SILTY SAND	SM-SP	.65	18			88	41	.50+
11.00	65.94	.33	.50	SILTY SAND TO SANDY SILT	SM-ML	.60	10			63	37	.26
11.20	63.75	.42	.66	SILTY SAND TO SANDY SILT	SM-ML	.62	10			62	37	.24
11.40	86.19	.53	.62	SILTY SAND TO SANDY SILT	SM-ML	.63	13			69	38	.49
11.60	135.57	.41	.31	SAND TO SILTY SAND	SM-SP	.70	16			82	40	.50+
11.80	136.57	1.27	.93	SAND TO SILTY SAND	SM-SP	.71	16			82	40	.50+
12.00	135.37	.69	.51	SAND TO SILTY SAND	SM-SP	.72	16			82	40	.50+
12.20	168.97	.37	.22	SAND	SW-SP	.79	16			87	43	.50+
12.40	108.83	.46	.42	SAND TO SILTY SAND	SM-SP	.74	13			73	39	.50+
12.60	159.45	1.26	.79	SAND TO SILTY SAND	SM-SP	.76	19			86	41	.50+
12.80	419.56	5.46	1.30	SAND	SW-SP	.83	40			100+	44	.50+
13.00	442.42	.54	.12	GRAVELLY SAND TO SAND	SW-GW	.84	35			100+	46	.50+
13.20	424.69	.72	.17	GRAVELLY SAND TO SAND	SW-GW	.86	33			100+	46	.50+
13.40	350.19	.25	.07	SAND	SW-SP	.87	33			100+	44	.50+
13.60	351.07	.51	.14	SAND	SW-SP	.88	33			100+	44	.50+
13.80	296.30	.00	.00	SAND	SW-SP	.90	28			100+	44	.50+
14.00	243.36	.34	.14	SAND	SW-SP	.91	23			97	44	.50+
14.20	191.99	.26	.14	SAND	SW-SP	.92	18			89	43	.50+
14.40	72.99	.15	.21	SAND TO SILTY SAND	SM-SP	.86	8			58	38	.21
14.60	44.27	.13	.30	SILTY SAND TO SANDY SILT	SM-ML	.80	7			43	34	.15
14.80	41.71	.28	.67	SANDY SILT TO CLAYEY SILT	ML-MH	.74	7	3.035	13.5	43	34	.15
15.00	14.53	.24	1.66	CLAYEY SILT TO SILTY CLAY	MH-CL	.67	3	1.026	13.5			
15.20	13.77	.29	2.11	SILTY CLAY TO CLAY	CL-CH	.61	4	.975	13.5			
15.40	9.60	.42	4.33	CLAY	CH	.62	4	.665	13.5			
15.60	14.89	.29	1.92	SILTY CLAY TO CLAY	CL-CH	.62	4	1.056	13.5			
15.80	10.58	.43	4.04	CLAY	CH	.63	5	.737	13.5			
16.00	10.58	.32	2.98	CLAY	CH	.64	5	.736	13.5			
16.20	9.84	.35	3.56	CLAY	CH	.65	4	.681	13.5			
16.40	11.30	.36	3.20	CLAY	CH	.66	5	.789	13.5			
16.60	12.06	.36	3.01	CLAY	CH	.66	5	.844	13.5			
16.80	14.75	.31	2.13	SILTY CLAY TO CLAY	CL-CH	.67	4	1.043	13.5			
17.00	11.63	.31	2.64	SILTY CLAY TO CLAY	CL-CH	.68	3	.811	13.5			
17.20	10.33	.30	2.94	CLAY	CH	.69	4	.714	13.5			



RESULT OF CONE PENETRATION TEST

8M

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

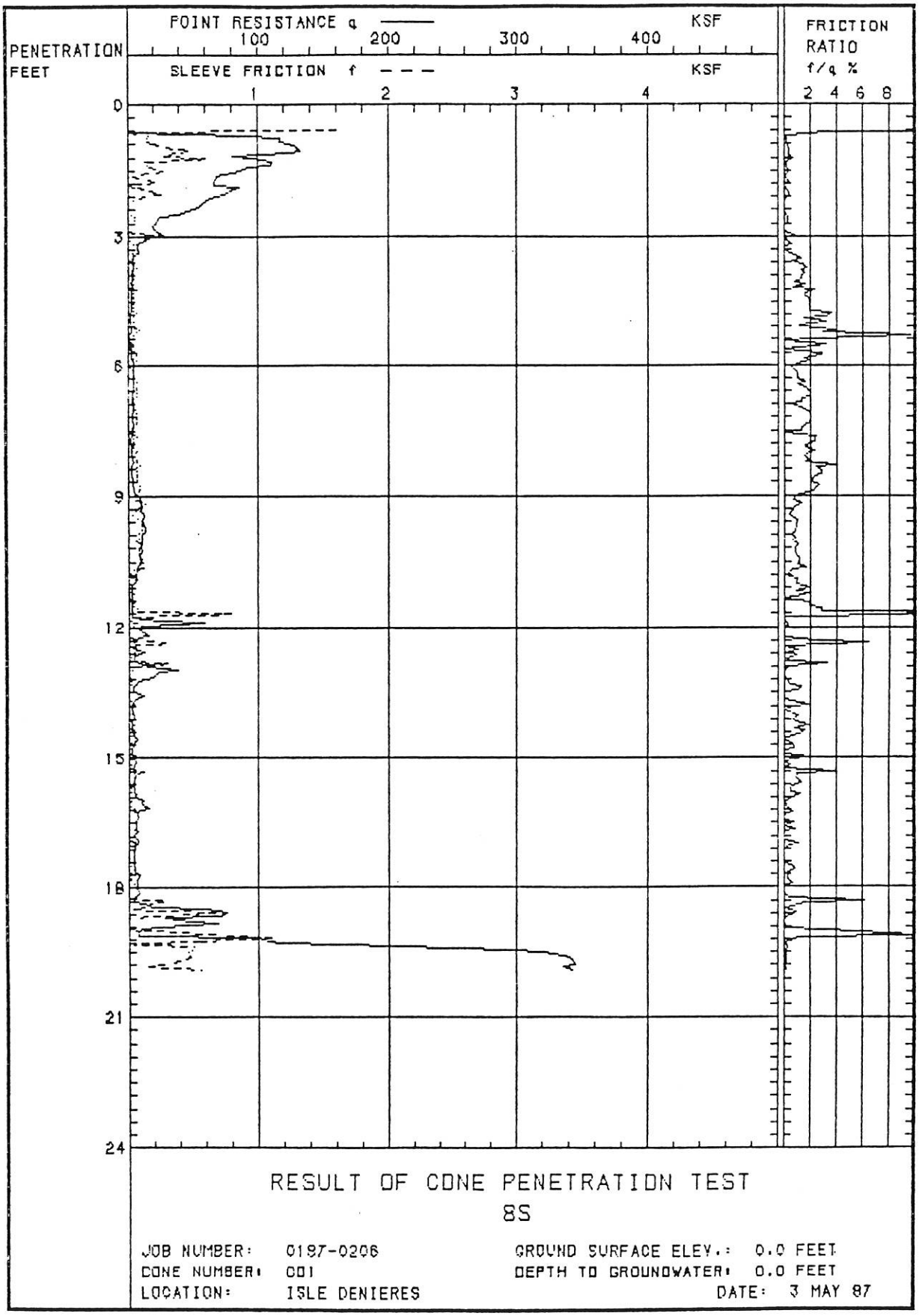
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 8M
CONE NO. : 001
DATE : 04/30/87

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	4.18	.22	5.23	ORGANIC MATERIAL	OL-OH	.02	2	.308	13.5			
.80	44.28	.29	.66	SILTY SAND TO SANDY SILT	SM-ML	.04	7			79	39	.50+
1.00	28.47	.27	.94	SANDY SILT TO CLAYEY SILT	ML-MH	.05	5	2.105	13.5	68	38	.50+
1.20	25.45	.27	1.07	SANDY SILT TO CLAYEY SILT	ML-MH	.06	4	1.881	13.5	65	37	.50+
1.40	51.16	.28	.55	SILTY SAND TO SANDY SILT	SM-ML	.08	8			81	39	.50+
1.60	40.72	.43	1.05	SANDY SILT TO CLAYEY SILT	ML-MH	.08	7	3.010	13.5	74	38	.50+
1.80	47.22	.27	.58	SILTY SAND TO SANDY SILT	SM-ML	.10	7			77	39	.50+
2.00	46.73	.37	.78	SILTY SAND TO SANDY SILT	SM-ML	.11	7			76	39	.50+
2.20	35.97	.63	1.76	SANDY SILT TO CLAYEY SILT	ML-MH	.11	6	2.656	13.5	69	38	.50+
2.40	16.00	.32	1.99	CLAYEY SILT TO SILTY CLAY	MH-CL	.11	3	1.177	13.5			
2.60	5.90	.26	4.39	CLAY	CH	.10	2	.430	13.5			
2.80	6.40	.22	3.48	CLAY	CH	.11	3	.465	13.5			
3.00	8.61	.39	4.56	CLAY	CH	.12	4	.629	13.5			
3.20	7.13	.34	4.84	CLAY	CH	.13	3	.519	13.5			
3.40	5.66	.27	4.81	CLAY	CH	.14	2	.409	13.5			
3.60	5.17	.21	4.10	CLAY	CH	.14	2	.372	13.5			
3.80	5.17	.28	5.48	CLAY	CH	.15	2	.371	13.5			
4.00	5.90	.30	5.02	CLAY	CH	.16	2	.425	13.5			
4.20	5.90	.27	4.62	CLAY	CH	.17	2	.425	13.5			
4.40	5.66	.26	4.59	CLAY	CH	.18	2	.406	13.5			
4.60	6.89	.27	3.97	CLAY	CH	.18	3	.497	13.5			
4.80	5.04	.33	6.48	ORGANIC MATERIAL	OL-OH	.14	2	.363	13.5			
5.00	4.68	.29	6.10	ORGANIC MATERIAL	OL-OH	.15	2	.335	13.5			
5.20	4.42	.31	7.01	ORGANIC MATERIAL	OL-OH	.16	2	.316	13.5			
5.40	3.69	.32	8.72	ORGANIC MATERIAL	OL-OH	.16	1	.261	13.5			
5.60	4.18	.33	8.01	ORGANIC MATERIAL	OL-OH	.17	2	.297	13.5			
5.80	3.57	.32	9.02	ORGANIC MATERIAL	OL-OH	.17	1	.251	13.5			
6.00	3.69	.31	8.39	ORGANIC MATERIAL	OL-OH	.18	1	.260	13.5			
6.20	3.44	.30	8.62	ORGANIC MATERIAL	OL-OH	.19	1	.241	13.5			
6.40	4.43	.31	6.94	ORGANIC MATERIAL	OL-OH	.19	2	.314	13.5			
6.60	6.16	.20	3.27	CLAY	CH	.26	2	.436	13.5			
6.80	4.18	.30	7.09	ORGANIC MATERIAL	OL-OH	.20	2	.294	13.5			
7.00	5.41	.31	5.69	CLAY	CH	.28	2	.380	13.5			
7.20	4.55	.33	7.20	ORGANIC MATERIAL	OL-OH	.22	2	.321	13.5			
7.40	4.18	.32	7.68	ORGANIC MATERIAL	OL-OH	.22	2	.293	13.5			
7.60	4.43	.32	7.26	ORGANIC MATERIAL	OL-OH	.23	2	.311	13.5			
7.80	3.94	.33	8.47	ORGANIC MATERIAL	OL-OH	.23	1	.274	13.5			
8.00	4.43	.33	7.52	ORGANIC MATERIAL	OL-OH	.24	2	.310	13.5			
8.20	4.43	.35	7.80	ORGANIC MATERIAL	OL-OH	.25	2	.310	13.5			
8.40	4.43	.30	6.71	ORGANIC MATERIAL	OL-OH	.25	2	.309	13.5			
8.60	3.81	.33	8.76	ORGANIC MATERIAL	OL-OH	.26	1	.263	13.5			
8.80	3.19	.31	9.69	ORGANIC MATERIAL	OL-OH	.26	1	.217	13.5			
9.00	3.69	.29	7.76	ORGANIC MATERIAL	OL-OH	.27	1	.254	13.5			
9.20	2.21	.30	13.49	ORGANIC MATERIAL	OL-OH	.28	1	.143	13.5			
9.40	3.20	.31	9.69	ORGANIC MATERIAL	OL-OH	.28	1	.216	13.5			

9.60	3.07	.30	9.88	ORGANIC MATERIAL	OL-OH	.29	1	.206	13.5			
9.80	4.42	.34	7.79	ORGANIC MATERIAL	OL-OH	.29	2	.306	13.5			
10.00	5.65	.27	4.83	CLAY	CH	.40	2	.389	13.5			
10.20	6.89	.29	4.28	CLAY	CH	.41	3	.480	13.5			
10.40	6.40	.26	4.04	CLAY	CH	.42	3	.443	13.5			
10.60	8.63	.28	3.28	CLAY	CH	.42	4	.608	13.5			
10.80	6.16	.25	4.02	CLAY	CH	.43	2	.424	13.5			
11.00	6.27	.35	5.59	CLAY	CH	.44	3	.432	13.5			
11.20	3.94	.33	8.47	ORGANIC MATERIAL	OL-OH	.34	1	.267	13.5			
11.40	3.44	.34	9.74	ORGANIC MATERIAL	OL-OH	.34	1	.230	13.5			
11.60	2.95	.32	10.91	ORGANIC MATERIAL	OL-OH	.35	1	.193	13.5			
11.80	3.19	.24	7.42	ORGANIC MATERIAL	OL-OH	.35	1	.210	13.5			
12.00	2.95	.31	10.51	ORGANIC MATERIAL	OL-OH	.36	1	.192	13.5			
12.20	2.95	.32	10.92	ORGANIC MATERIAL	OL-OH	.37	1	.192	13.5			
12.40	2.94	.32	10.85	ORGANIC MATERIAL	OL-OH	.37	1	.190	13.5			
12.60	4.44	.27	6.18	ORGANIC MATERIAL	OL-OH	.38	2	.301	13.5			
12.80	3.44	.32	9.35	ORGANIC MATERIAL	OL-OH	.38	1	.227	13.5			
13.00	3.19	.38	11.94	ORGANIC MATERIAL	OL-OH	.39	1	.208	13.5			
13.20	4.68	.57	12.18	ORGANIC MATERIAL	OL-OH	.40	2	.317	13.5			
13.40	16.20	.29	1.76	CLAYEY SILT TO SILTY CLAY	MH-CL	.60	3	1.155	13.5			
13.60	3.81	.29	7.65	ORGANIC MATERIAL	OL-OH	.41	1	.252	13.5			
13.80	3.44	.34	9.93	ORGANIC MATERIAL	OL-OH	.41	1	.224	13.5			
14.00	19.71	.38	1.94	CLAYEY SILT TO SILTY CLAY	MH-CL	.63	4	1.413	13.5			
14.20	8.49	.23	2.69	CLAY	CH	.57	4	.587	13.5			
14.40	13.64	.32	2.35	SILTY CLAY TO CLAY	CL-CH	.58	4	.968	13.5			
14.60	4.68	.29	6.24	ORGANIC MATERIAL	OL-OH	.44	2	.314	13.5			
14.80	3.32	.33	9.88	ORGANIC MATERIAL	OL-OH	.44	1	.213	13.5			
15.00	3.44	.31	8.99	ORGANIC MATERIAL	OL-OH	.45	1	.222	13.5			
15.20	4.18	.25	5.92	ORGANIC MATERIAL	OL-OH	.46	2	.276	13.5			
15.40	5.94	.31	5.20	CLAY	CH	.62	2	.394	13.5			
15.60	4.42	.31	7.03	ORGANIC MATERIAL	OL-OH	.47	2	.292	13.5			
15.80	3.08	.31	10.07	ORGANIC MATERIAL	OL-OH	.47	1	.193	13.5			
16.00	3.44	.33	9.61	ORGANIC MATERIAL	OL-OH	.48	1	.220	13.5			
16.20	6.67	.31	4.58	CLAY	CH	.65	3	.446	13.5			
16.40	10.39	.25	2.39	SILTY CLAY TO CLAY	CL-CH	.66	3	.721	13.5			
16.60	4.43	.29	6.45	ORGANIC MATERIAL	OL-OH	.50	2	.291	13.5			
16.80	3.94	.30	7.54	ORGANIC MATERIAL	OL-OH	.50	1	.254	13.5			
17.00	4.43	.34	7.64	ORGANIC MATERIAL	OL-OH	.51	2	.290	13.5			
17.20	19.10	.34	1.77	CLAYEY SILT TO SILTY CLAY	MH-CL	.77	4	1.357	13.5			
17.40	18.09	.38	2.11	CLAYEY SILT TO SILTY CLAY	MH-CL	.78	4	1.282	13.5			
17.60	12.16	.25	2.03	SILTY CLAY TO CLAY	CL-CH	.70	3	.849	13.5			
17.80	6.16	.23	3.67	CLAY	CH	.71	2	.403	13.5			
18.00	3.82	.31	8.09	ORGANIC MATERIAL	OL-OH	.54	1	.243	13.5			
18.20	4.67	.27	5.84	ORGANIC MATERIAL	OL-OH	.55	2	.305	13.5			
18.40	6.17	.29	4.62	CLAY	CH	.74	2	.402	13.5			
18.60	4.17	.28	6.83	ORGANIC MATERIAL	OL-OH	.56	1	.268	13.5			
18.80	4.43	.25	5.62	ORGANIC MATERIAL	OL-OH	.56	2	.286	13.5			
19.00	4.43	.28	6.44	ORGANIC MATERIAL	OL-OH	.57	2	.286	13.5			
19.20	4.67	.30	6.37	ORGANIC MATERIAL	OL-OH	.58	2	.303	13.5			
19.40	4.43	.28	6.44	ORGANIC MATERIAL	OL-OH	.58	2	.285	13.5			
19.60	4.43	.31	6.95	ORGANIC MATERIAL	OL-OH	.59	2	.284	13.5			
19.80	6.13	.28	4.55	CLAY	CH	.79	2	.395	13.5			
20.00	7.17	.28	3.96	CLAY	CH	.80	3	.472	13.5			
20.20	5.41	.13	2.33	CLAY	CH	.81	2	.341	13.5			
20.40	72.95	.16	.22	SILTY SAND TO SANDY SILT	SM-ML	1.12	11			50	35	.13
20.60	47.77	.31	.66	SILTY SAND TO SANDY SILT	SM-ML	1.13	7			36	33	.14
20.80	14.19	.29	2.05	SILTY CLAY TO CLAY	CL-CH	.83	4	.990	13.5			



RESULT OF CONE PENETRATION TEST

8S

JOB NUMBER: 0197-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

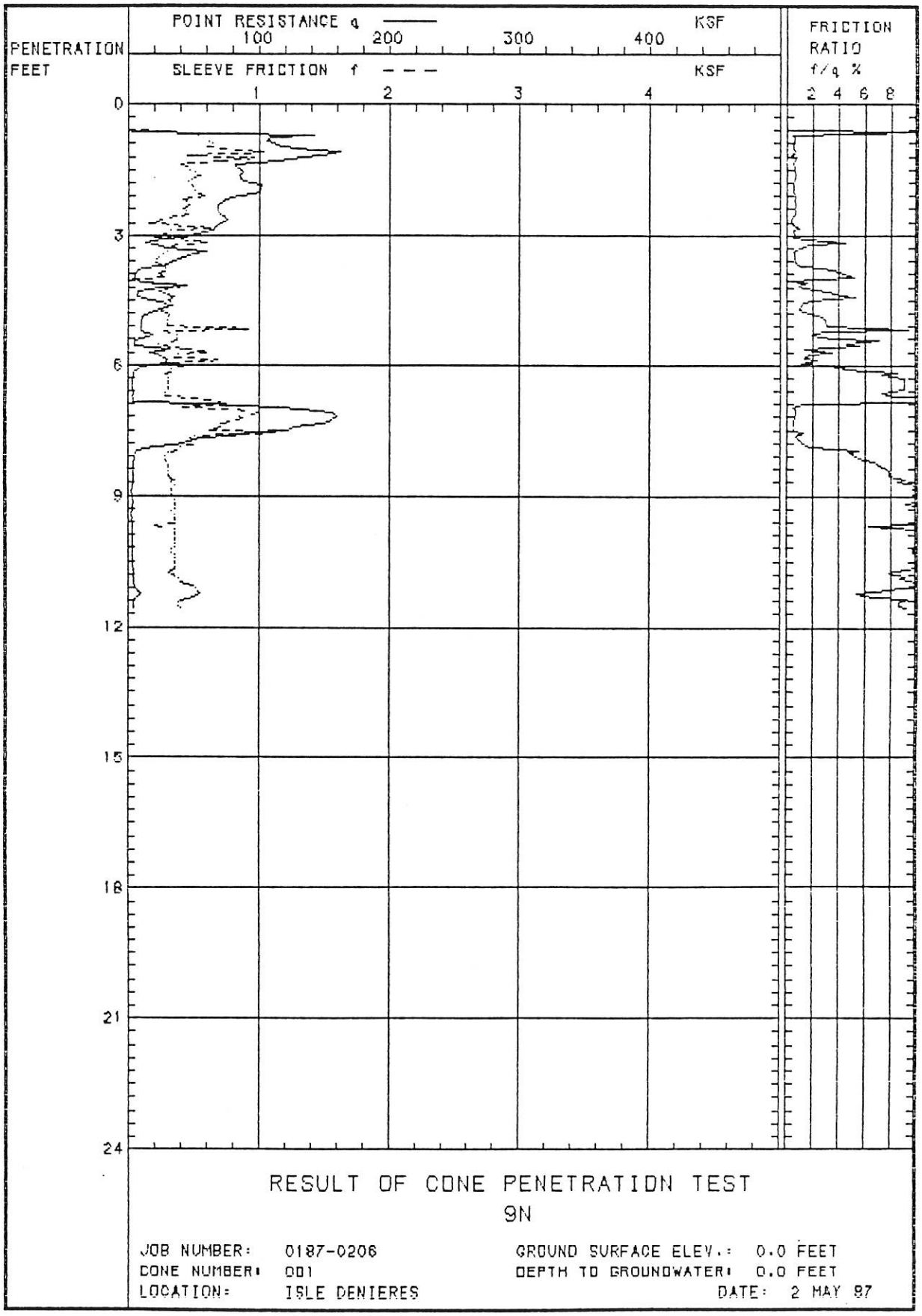
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 3 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : BS
CONE NO. : 001
DATE : 04/30/87

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	.81	329.11	ORGANIC MATERIAL	OL-OH	.02	1	.017	13.5			
.80	117.20	.28	.24	SAND TO SILTY SAND	SM-SP	.05	14			100+	42	.50+
1.00	131.59	.15	.11	SAND TO SILTY SAND	SM-SP	.06	15			100+	42	.50+
1.20	88.66	.50	.56	SAND TO SILTY SAND	SM-SP	.07	10			100+	42	.50+
1.40	101.84	.11	.11	SAND TO SILTY SAND	SM-SP	.08	12			100+	42	.50+
1.60	74.66	.33	.44	SILTY SAND TO SANDY SILT	SM-ML	.09	11			99	42	.50+
1.80	66.90	.11	.16	SILTY SAND TO SANDY SILT	SM-ML	.10	10			91	41	.50+
2.00	77.24	.13	.17	SAND TO SILTY SAND	SM-SP	.12	9			95	42	.50+
2.20	61.25	.02	.04	SILTY SAND TO SANDY SILT	SM-ML	.12	9			84	40	.50+
2.40	48.96	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.13	7			75	39	.50+
2.60	24.35	.05	.22	SANDY SILT TO CLAYEY SILT	ML-MH	.13	4	1.794	13.5	60	37	.30
2.80	20.04	.00	.02	SENSITIVE FINE GRAINED	OL-CH	.08	4	1.478	13.5			
3.00	20.69	.10	.49	SANDY SILT TO CLAYEY SILT	ML-MH	.15	3	1.521	13.5	56	36	.20
3.20	7.13	.03	.43	SENSITIVE FINE GRAINED	OL-CH	.10	1	.521	13.5			
3.40	6.90	.04	.51	SENSITIVE FINE GRAINED	OL-CH	.10	1	.503	13.5			
3.60	3.44	.05	1.31	SENSITIVE FINE GRAINED	OL-CH	.11	0	.247	13.5			
3.80	3.20	.05	1.41	SENSITIVE FINE GRAINED	OL-CH	.11	0	.229	13.5			
4.00	3.20	.03	1.04	SENSITIVE FINE GRAINED	OL-CH	.12	0	.228	13.5			
4.20	3.20	.05	1.42	SENSITIVE FINE GRAINED	OL-CH	.13	0	.228	13.5			
4.40	2.71	.05	1.70	SENSITIVE FINE GRAINED	OL-CH	.13	0	.191	13.5			
4.60	2.46	.05	1.88	ORGANIC MATERIAL	OL-OH	.14	1	.172	13.5			
4.80	1.72	.06	3.42	ORGANIC MATERIAL	OL-OH	.14	1	.117	13.5			
5.00	1.72	.03	1.99	ORGANIC MATERIAL	OL-OH	.15	1	.116	13.5			
5.20	2.46	.08	3.40	ORGANIC MATERIAL	OL-OH	.16	1	.171	13.5			
5.40	.98	.01	1.17	ORGANIC MATERIAL	OL-OH	.16	1	.061	13.5			
5.60	2.21	.02	1.05	ORGANIC MATERIAL	OL-OH	.17	1	.151	13.5			
5.80	2.70	.06	2.10	SENSITIVE FINE GRAINED	OL-CH	.17	0	.187	13.5			
6.00	4.43	.03	.73	SENSITIVE FINE GRAINED	OL-CH	.18	1	.315	13.5			
6.20	4.43	.04	1.00	SENSITIVE FINE GRAINED	OL-CH	.19	1	.314	13.5			
6.40	4.43	.06	1.28	SENSITIVE FINE GRAINED	OL-CH	.19	1	.314	13.5			
6.60	3.69	.05	1.28	SENSITIVE FINE GRAINED	OL-CH	.20	0	.259	13.5			
6.80	3.44	.04	1.30	SENSITIVE FINE GRAINED	OL-CH	.20	0	.240	13.5			
7.00	3.94	.02	.58	SENSITIVE FINE GRAINED	OL-CH	.21	0	.276	13.5			
7.20	3.44	.07	2.00	SENSITIVE FINE GRAINED	OL-CH	.22	0	.239	13.5			
7.40	3.69	.06	1.55	SENSITIVE FINE GRAINED	OL-CH	.22	0	.257	13.5			
7.60	3.20	.03	1.09	SENSITIVE FINE GRAINED	OL-CH	.23	0	.220	13.5			
7.80	2.45	.05	1.86	ORGANIC MATERIAL	OL-OH	.23	1	.164	13.5			
8.00	2.95	.12	4.03	CLAY	CH	.32	1	.195	13.5			
8.20	4.05	.06	1.56	SENSITIVE FINE GRAINED	OL-CH	.25	0	.282	13.5			
8.40	2.71	.07	2.58	SENSITIVE FINE GRAINED	OL-CH	.25	0	.182	13.5			
8.60	3.07	.07	2.25	SENSITIVE FINE GRAINED	OL-CH	.26	0	.209	13.5			
8.80	3.69	.09	2.51	CLAY	CH	.35	1	.247	13.5			
9.00	6.62	.26	3.92	CLAY	CH	.36	3	.464	13.5			
9.20	10.94	.10	.91	SENSITIVE FINE GRAINED	OL-CH	.28	2	.790	13.5			
9.40	10.80	.05	.46	SENSITIVE FINE GRAINED	OL-CH	.28	2	.779	13.5			

9.60	14.56	.11	.95	SENSITIVE FINE GRAINED	OL-CH	.29	2	.835	13.5			
9.80	13.05	.11	.85	SENSITIVE FINE GRAINED	OL-CH	.29	3	.945	13.5			
10.00	10.82	.06	.58	SENSITIVE FINE GRAINED	OL-CH	.30	2	.779	13.5			
10.20	10.57	.09	.83	SENSITIVE FINE GRAINED	OL-CH	.31	2	.761	13.5			
10.40	9.47	.09	.99	SENSITIVE FINE GRAINED	OL-CH	.31	2	.678	13.5			
10.60	7.89	.10	1.30	SENSITIVE FINE GRAINED	OL-CH	.32	1	.561	13.5			
10.80	6.15	.02	.31	SENSITIVE FINE GRAINED	OL-CH	.32	1	.431	13.5			
11.00	3.71	.03	.92	SENSITIVE FINE GRAINED	OL-CH	.33	0	.250	13.5			
11.20	2.46	.03	1.36	SENSITIVE FINE GRAINED	OL-CH	.34	0	.157	13.5			
11.40	2.46	.01	.46	SENSITIVE FINE GRAINED	OL-CH	.34	0	.157	13.5			
11.60	2.46	.07	2.84	ORGANIC MATERIAL	OL-OH	.35	1	.156	13.5			
11.80	13.34	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.35	3	.962	13.5			
12.00	10.39	.03	.33	SENSITIVE FINE GRAINED	OL-CH	.36	2	.743	13.5			
12.20	12.13	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.37	2	.871	13.5			
12.40	4.91	.23	4.69	CLAY	CH	.50	2	.327	13.5			
12.60	8.68	.04	.51	SENSITIVE FINE GRAINED	OL-CH	.38	2	.615	13.5			
12.80	6.59	.01	.19	SENSITIVE FINE GRAINED	OL-CH	.38	1	.460	13.5			
13.00	31.14	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.65	5	2.259	13.5	38	33	.14
13.20	13.89	.10	.68	SENSITIVE FINE GRAINED	OL-CH	.40	3	.999	13.5			
13.40	3.44	.04	1.20	SENSITIVE FINE GRAINED	OL-CH	.40	0	.225	13.5			
13.60	8.91	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.41	2	.630	13.5			
13.80	2.70	.03	1.24	SENSITIVE FINE GRAINED	OL-CH	.41	0	.169	13.5			
14.00	3.93	.05	1.20	SENSITIVE FINE GRAINED	OL-CH	.42	0	.260	13.5			
14.20	2.46	.03	1.35	SENSITIVE FINE GRAINED	OL-CH	.43	0	.151	13.5			
14.40	3.19	.04	1.37	SENSITIVE FINE GRAINED	OL-CH	.43	0	.204	13.5			
14.60	5.68	.01	.18	SENSITIVE FINE GRAINED	OL-CH	.44	1	.389	13.5			
14.80	2.95	.01	.37	SENSITIVE FINE GRAINED	OL-CH	.44	0	.186	13.5			
15.00	3.92	.04	1.12	SENSITIVE FINE GRAINED	OL-CH	.45	0	.257	13.5			
15.20	3.95	.01	.28	SENSITIVE FINE GRAINED	OL-CH	.46	0	.259	13.5			
15.40	4.67	.04	.96	SENSITIVE FINE GRAINED	OL-CH	.46	1	.312	13.5			
15.60	3.44	.03	.96	SENSITIVE FINE GRAINED	OL-CH	.47	0	.220	13.5			
15.80	4.42	.04	.91	SENSITIVE FINE GRAINED	OL-CH	.47	1	.292	13.5			
16.00	10.85	.00	.04	SENSITIVE FINE GRAINED	OL-CH	.48	2	.768	13.5			
16.20	11.18	.04	.37	SENSITIVE FINE GRAINED	OL-CH	.49	2	.792	13.5			
16.40	6.90	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.49	1	.475	13.5			
16.60	5.66	.02	.38	SENSITIVE FINE GRAINED	OL-CH	.50	1	.383	13.5			
16.80	4.43	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.50	1	.291	13.5			
17.00	6.04	.01	.25	SENSITIVE FINE GRAINED	OL-CH	.51	1	.410	13.5			
17.20	4.43	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.52	1	.290	13.5			
17.40	4.43	.00	.11	SENSITIVE FINE GRAINED	OL-CH	.52	1	.289	13.5			
17.60	4.92	.03	.59	SENSITIVE FINE GRAINED	OL-CH	.53	1	.325	13.5			
17.80	7.14	.01	.13	SENSITIVE FINE GRAINED	OL-CH	.53	1	.489	13.5			
18.00	6.63	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.54	1	.451	13.5			
18.20	5.94	.01	.11	SENSITIVE FINE GRAINED	OL-CH	.55	1	.400	13.5			
18.40	15.64	.16	1.01	SENSITIVE FINE GRAINED	OL-CH	.55	3	1.117	13.5			
18.60	73.36	.36	.49	SILTY SAND TO SANDY SILT	SM-ML	1.02	11			53	36	.19
18.80	58.87	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	1.03	9			45	34	.16
19.00	9.15	.21	2.31	CLAY	CH	.76	4	.621	13.5			
19.20	104.42	.83	.80	SAND TO SILTY SAND	SM-SP	1.15	12			62	38	.26
19.40	250.48	.37	.15	SAND	SW-SP	1.26	23			89	43	.50+
19.60	337.89	.45	.13	SAND	SW-SP	1.27	32			100+	44	.50+
19.80	340.31	1.64	.48	SAND	SW-SP	1.29	32			100+	44	.50+



RESULT OF CONE PENETRATION TEST

9N

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

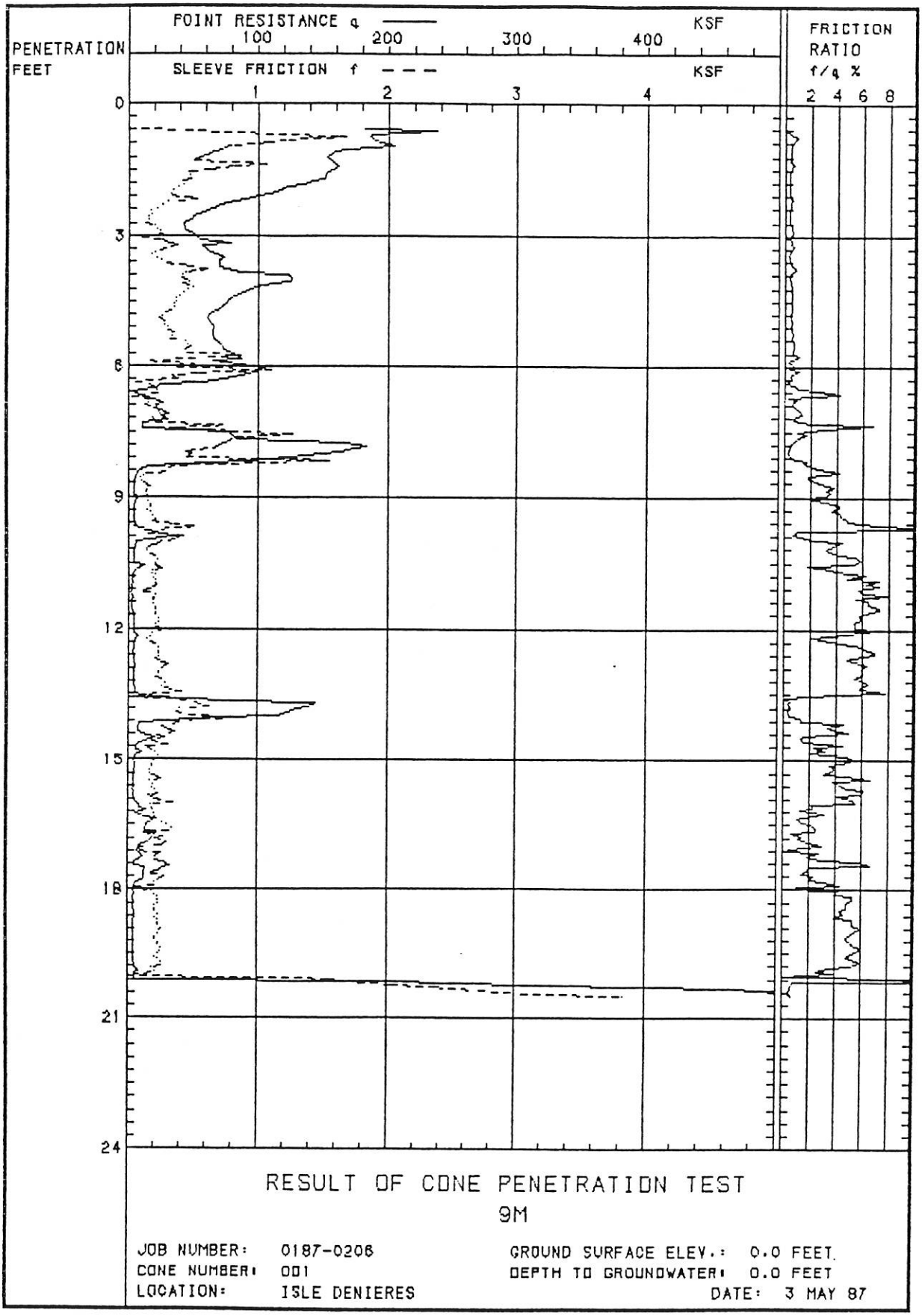
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 9N
CONE NO. : 001
DATE : 04/30/87

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	2.95	.16	5.31	ORGANIC MATERIAL	OL-OH	.02	1	.217	13.5			
.80	107.24	.72	.67	SAND TO SILTY SAND	SM-SP	.05	12			100+	42	.50+
1.00	130.11	1.06	.82	SAND TO SILTY SAND	SM-SP	.06	15			100+	42	.50+
1.20	141.07	.98	.70	SAND TO SILTY SAND	SM-SP	.07	16			100+	42	.50+
1.40	81.91	.43	.52	SILTY SAND TO SANDY SILT	SM-ML	.08	13			100+	42	.50+
1.60	86.71	.48	.56	SAND TO SILTY SAND	SM-SP	.10	10			100+	42	.50+
1.80	94.93	.48	.50	SAND TO SILTY SAND	SM-SP	.11	11			100+	42	.50+
2.00	98.88	.27	.27	SAND TO SILTY SAND	SM-SP	.12	11			100+	42	.50+
2.20	74.04	.43	.59	SILTY SAND TO SANDY SILT	SM-ML	.12	11			93	41	.50+
2.40	68.87	.61	.88	SILTY SAND TO SANDY SILT	SM-ML	.13	10			88	40	.50+
2.60	74.28	.40	.54	SILTY SAND TO SANDY SILT	SM-ML	.14	11			90	41	.50+
2.80	67.65	.51	.75	SILTY SAND TO SANDY SILT	SM-ML	.15	10			85	40	.50+
3.00	47.49	.25	.52	SILTY SAND TO SANDY SILT	SM-ML	.17	7			72	38	.50+
3.20	17.32	.52	3.02	SILTY CLAY TO CLAY	CL-CH	.13	5	1.274	13.5			
3.40	54.88	.93	1.69	SANDY SILT TO CLAYEY SILT	ML-MH	.17	10	4.052	13.5	76	39	.50+
3.60	35.55	.21	.60	SANDY SILT TO CLAYEY SILT	ML-MH	.18	6	2.620	13.5	65	37	.47
3.80	8.62	.28	3.30	CLAY	CH	.15	4	.627	13.5			
4.00	6.39	.14	2.21	CLAY	CH	.16	3	.461	13.5			
4.20	35.23	.38	1.08	SANDY SILT TO CLAYEY SILT	ML-MH	.21	6	2.594	13.5	63	37	.33
4.40	7.01	.33	4.71	CLAY	CH	.18	3	.506	13.5			
4.60	28.52	.31	1.08	SANDY SILT TO CLAYEY SILT	ML-MH	.23	5	2.095	13.5	58	36	.20
4.80	17.00	.27	1.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.22	4	1.243	13.5			
5.00	10.02	.34	3.42	CLAY	CH	.20	4	.728	13.5			
5.20	9.84	.29	2.90	CLAY	CH	.21	4	.713	13.5			
5.40	8.14	.33	4.10	CLAY	CH	.22	3	.587	13.5			
5.60	18.83	.35	1.86	CLAYEY SILT TO SILTY CLAY	MH-CL	.25	4	1.376	13.5			
5.80	25.31	.42	1.66	CLAYEY SILT TO SILTY CLAY	MH-CL	.26	6	1.856	13.5			
6.00	19.51	.37	1.88	CLAYEY SILT TO SILTY CLAY	MH-CL	.27	4	1.425	13.5			
6.20	3.94	.31	7.88	ORGANIC MATERIAL	OL-OH	.19	1	.278	13.5			
6.40	3.44	.31	9.00	ORGANIC MATERIAL	OL-OH	.19	1	.241	13.5			
6.60	3.69	.30	8.07	ORGANIC MATERIAL	OL-OH	.20	1	.258	13.5			
6.80	3.94	.49	12.44	ORGANIC MATERIAL	OL-OH	.20	1	.276	13.5			
7.00	123.88	.63	.51	SAND TO SILTY SAND	SM-SP	.42	14			90	41	.50+
7.20	159.15	.86	.54	SAND TO SILTY SAND	SM-SP	.43	19			100+	42	.50+
7.40	138.10	.71	.52	SAND TO SILTY SAND	SM-SP	.44	16			93	42	.50+
7.60	86.16	.82	.96	SILTY SAND TO SANDY SILT	SM-ML	.42	13			78	39	.50+
7.80	41.13	.72	1.75	SANDY SILT TO CLAYEY SILT	ML-MH	.39	7	3.018	13.5	59	36	.20
8.00	6.64	.34	5.19	CLAY	CH	.32	3	.468	13.5			
8.20	4.68	.30	6.39	ORGANIC MATERIAL	OL-OH	.25	2	.328	13.5			
8.40	4.06	.31	7.62	ORGANIC MATERIAL	OL-OH	.25	1	.282	13.5			
8.60	3.94	.33	8.47	ORGANIC MATERIAL	OL-OH	.26	1	.272	13.5			
8.80	3.44	.35	10.06	ORGANIC MATERIAL	OL-OH	.26	1	.236	13.5			
9.00	3.44	.33	9.69	ORGANIC MATERIAL	OL-OH	.27	1	.235	13.5			
9.20	3.69	.39	10.69	ORGANIC MATERIAL	OL-OH	.28	1	.253	13.5			
9.40	3.08	.36	11.65	ORGANIC MATERIAL	OL-OH	.28	1	.207	13.5			

9.60	3.19	.36	11.21	ORGANIC MATERIAL	OL-OH	.29	1	.215	13.5
9.80	3.44	.36	10.40	ORGANIC MATERIAL	OL-OH	.29	1	.233	13.5
10.00	3.44	.36	10.40	ORGANIC MATERIAL	OL-OH	.30	1	.233	13.5
10.20	3.44	.35	10.05	ORGANIC MATERIAL	OL-OH	.31	1	.232	13.5
10.40	3.44	.36	10.40	ORGANIC MATERIAL	OL-OH	.31	1	.232	13.5
10.60	3.44	.36	10.38	ORGANIC MATERIAL	OL-OH	.32	1	.232	13.5
10.80	3.94	.33	8.46	ORGANIC MATERIAL	OL-OH	.32	1	.268	13.5
11.00	3.94	.43	10.85	ORGANIC MATERIAL	OL-OH	.33	1	.267	13.5
11.20	9.08	.45	5.01	CLAY	CH	.45	4	.639	13.5
11.40	4.68	.42	8.94	ORGANIC MATERIAL	OL-OH	.34	2	.321	13.5



RESULT OF CONE PENETRATION TEST

9M

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

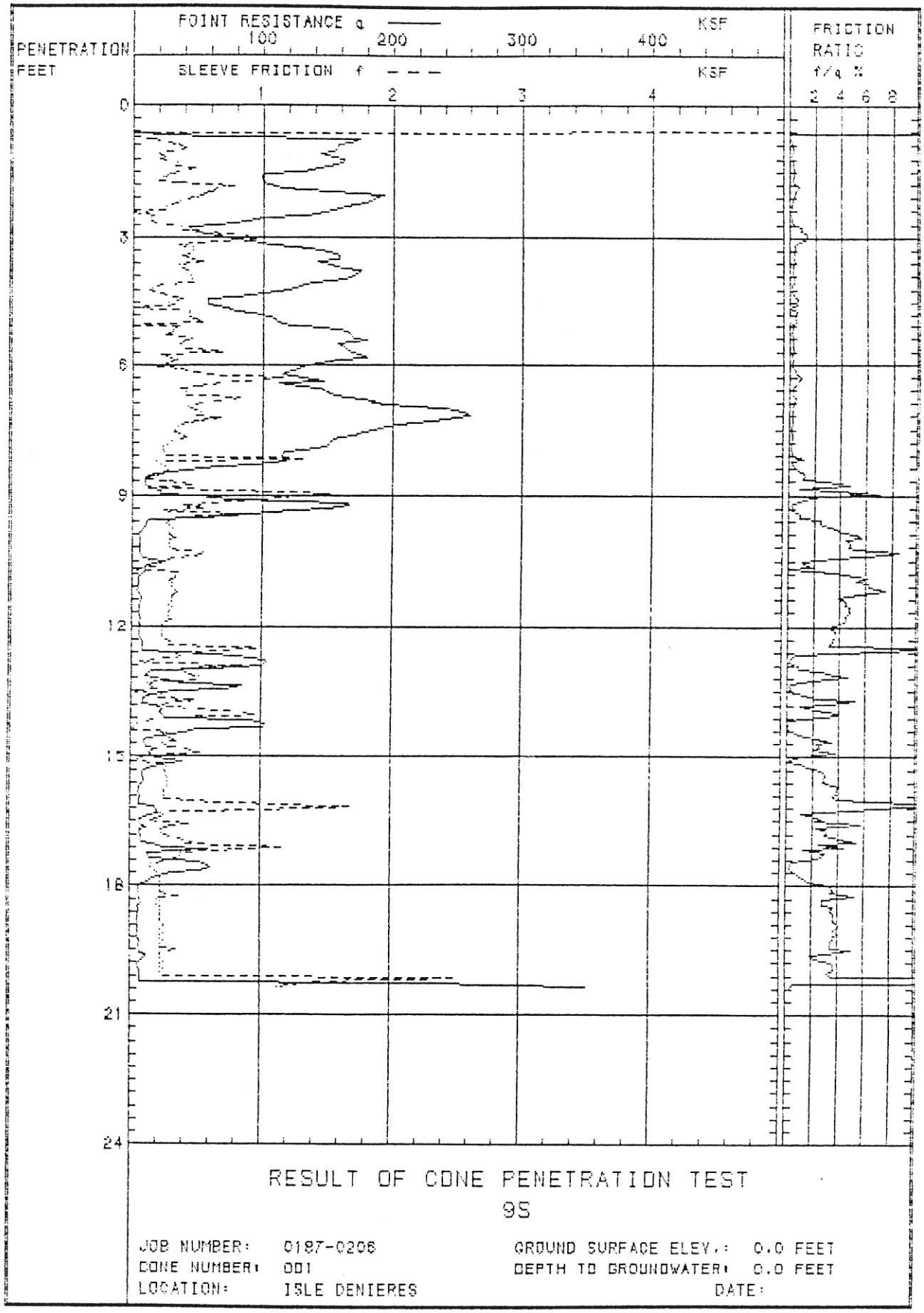
GROUND SURFACE ELEV.: 0.0 FEET.
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 3 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 9M
CONE NO. : 001
DATE : 04/30/87

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	209.56	.74	.35	SAND	SW-SP	.04	20			100+	44	.50+
.80	188.23	.81	.43	SAND	SW-SP	.05	18			100+	44	.50+
1.00	187.07	.85	.46	SAND	SW-SP	.06	17			100+	44	.50+
1.20	154.62	.59	.38	SAND TO SILTY SAND	SM-SP	.07	18			100+	42	.50+
1.40	161.11	.53	.33	SAND TO SILTY SAND	SM-SP	.08	19			100+	42	.50+
1.60	152.81	.50	.33	SAND TO SILTY SAND	SM-SP	.10	18			100+	42	.50+
1.80	138.98	.42	.30	SAND TO SILTY SAND	SM-SP	.11	16			100+	42	.50+
2.00	113.52	.34	.30	SAND TO SILTY SAND	SM-SP	.12	13			100+	42	.50+
2.20	86.34	.42	.49	SAND TO SILTY SAND	SM-SP	.13	10			100+	42	.50+
2.40	63.47	.09	.14	SILTY SAND TO SANDY SILT	SM-ML	.13	10			85	40	.50+
2.60	49.93	.16	.31	SILTY SAND TO SANDY SILT	SM-ML	.14	7			75	39	.50+
2.80	43.04	.21	.49	SILTY SAND TO SANDY SILT	SM-ML	.15	6			70	38	.50+
3.00	52.26	.26	.50	SILTY SAND TO SANDY SILT	SM-ML	.17	8			75	39	.50+
3.20	67.93	.35	.51	SILTY SAND TO SANDY SILT	SM-ML	.18	10			83	40	.50+
3.40	65.41	.21	.32	SILTY SAND TO SANDY SILT	SM-ML	.19	10			81	39	.50+
3.60	70.22	.30	.43	SILTY SAND TO SANDY SILT	SM-ML	.20	11			83	40	.50+
3.80	81.63	.53	.65	SILTY SAND TO SANDY SILT	SM-ML	.21	13			88	40	.50+
4.00	125.69	.44	.35	SAND TO SILTY SAND	SM-SP	.24	15			100+	42	.50+
4.20	96.43	.48	.50	SAND TO SILTY SAND	SM-SP	.25	11			91	41	.50+
4.40	81.18	.38	.47	SILTY SAND TO SANDY SILT	SM-ML	.24	12			85	40	.50+
4.60	74.29	.35	.47	SILTY SAND TO SANDY SILT	SM-ML	.25	11			81	39	.50+
4.80	63.47	.18	.28	SILTY SAND TO SANDY SILT	SM-ML	.26	10			75	39	.50+
5.00	63.51	.27	.43	SILTY SAND TO SANDY SILT	SM-ML	.27	10			75	39	.50+
5.20	65.18	.33	.50	SILTY SAND TO SANDY SILT	SM-ML	.29	10			75	39	.50+
5.40	67.63	.36	.53	SILTY SAND TO SANDY SILT	SM-ML	.30	10			75	39	.50+
5.60	73.05	.46	.63	SILTY SAND TO SANDY SILT	SM-ML	.31	11			77	39	.50+
5.80	85.82	.73	.85	SILTY SAND TO SANDY SILT	SM-ML	.32	13			82	40	.50+
6.00	95.23	.51	.53	SAND TO SILTY SAND	SM-SP	.36	11			84	41	.50+
6.20	89.81	.44	.49	SAND TO SILTY SAND	SM-SP	.37	10			81	40	.50+
6.40	41.47	.11	.26	SILTY SAND TO SANDY SILT	SM-ML	.35	6			60	37	.22
6.60	6.90	.22	3.16	CLAY	CH	.26	3	.492	13.5			
6.80	23.09	.22	.96	SANDY SILT TO CLAYEY SILT	ML-MH	.34	4	1.685	13.5	45	34	.15
7.00	22.19	.29	1.31	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	5	1.621	13.5			
7.20	28.52	.31	1.08	SANDY SILT TO CLAYEY SILT	ML-MH	.36	5	2.086	13.5	49	35	.16
7.40	10.82	.29	2.67	CLAY	CH	.30	5	.780	13.5			
7.60	80.29	1.15	1.44	SILTY SAND TO SANDY SILT	SM-ML	.42	12			75	39	.50+
7.80	175.28	.45	.26	SAND	SW-SP	.51	16			100+	44	.50+
8.00	157.26	.47	.30	SAND TO SILTY SAND	SM-SP	.48	18			97	42	.50+
8.20	77.90	.83	1.07	SILTY SAND TO SANDY SILT	SM-ML	.45	12			73	38	.50+
8.40	9.50	.30	3.18	CLAY	CH	.34	4	.679	13.5			
8.60	4.93	.15	3.13	CLAY	CH	.34	2	.339	13.5			
8.80	4.43	.13	3.04	CLAY	CH	.35	2	.302	13.5			
9.00	6.37	.14	2.21	CLAY	CH	.36	3	.445	13.5			
9.20	3.94	.16	4.04	CLAY	CH	.37	1	.264	13.5			
9.40	4.18	.18	4.23	CLAY	CH	.38	2	.282	13.5			

9.60	4.42	.15	3.51	CLAY	CH	.38	2	.299	13.5			
9.80	19.85	.24	1.22	CLAYEY SILT TO SILTY CLAY	MH-CL	.44	4	1.438	13.5			
10.00	11.64	.31	2.66	SILTY CLAY TO CLAY	CL-CH	.40	3	.833	13.5			
10.20	4.31	.15	3.41	CLAY	CH	.41	2	.289	13.5			
10.40	3.94	.22	5.63	ORGANIC MATERIAL	OL-OH	.31	1	.268	13.5			
10.60	9.88	.24	2.40	CLAY	CH	.42	4	.700	13.5			
10.80	3.69	.20	5.48	ORGANIC MATERIAL	OL-OH	.32	1	.249	13.5			
11.00	3.20	.21	6.70	ORGANIC MATERIAL	OL-OH	.33	1	.213	13.5			
11.20	2.33	.14	5.80	ORGANIC MATERIAL	OL-OH	.34	1	.148	13.5			
11.40	2.95	.19	6.44	ORGANIC MATERIAL	OL-OH	.34	1	.193	13.5			
11.60	3.19	.17	5.20	ORGANIC MATERIAL	OL-OH	.35	1	.211	13.5			
11.80	4.18	.24	5.68	ORGANIC MATERIAL	OL-OH	.35	2	.283	13.5			
12.00	3.94	.25	6.27	ORGANIC MATERIAL	OL-OH	.36	1	.265	13.5			
12.20	6.42	.15	2.39	CLAY	CH	.49	3	.440	13.5			
12.40	3.94	.23	5.73	ORGANIC MATERIAL	OL-OH	.37	1	.264	13.5			
12.60	3.93	.18	4.53	CLAY	CH	.50	1	.254	13.5			
12.80	4.67	.28	6.10	ORGANIC MATERIAL	OL-OH	.38	2	.317	13.5			
13.00	3.94	.24	6.02	ORGANIC MATERIAL	OL-OH	.39	1	.263	13.5			
13.20	4.43	.27	6.15	ORGANIC MATERIAL	OL-OH	.40	2	.299	13.5			
13.40	5.16	.35	6.77	ORGANIC MATERIAL	OL-OH	.40	2	.352	13.5			
13.60	46.88	.20	.42	SILTY SAND TO SANDY SILT	SM-ML	.75	7			46	35	.16
13.80	135.36	.57	.42	SAND TO SILTY SAND	SM-SP	.83	16			79	40	.50+
14.00	92.75	.65	.70	SILTY SAND TO SANDY SILT	SM-ML	.77	14			67	37	.39
14.20	8.37	.33	3.96	CLAY	CH	.57	4	.578	13.5			
14.40	10.75	.35	3.22	CLAY	CH	.58	5	.754	13.5			
14.60	9.65	.25	2.55	CLAY	CH	.58	4	.672	13.5			
14.80	8.31	.20	2.41	CLAY	CH	.59	3	.572	13.5			
15.00	3.94	.17	4.25	CLAY	CH	.60	1	.247	13.5			
15.20	4.68	.17	3.66	CLAY	CH	.61	2	.302	13.5			
15.40	3.94	.22	5.69	ORGANIC MATERIAL	OL-OH	.46	1	.257	13.5			
15.60	4.19	.19	4.52	CLAY	CH	.62	2	.264	13.5			
15.80	3.94	.20	5.10	ORGANIC MATERIAL	OL-OH	.47	1	.256	13.5			
16.00	7.36	.27	3.66	CLAY	CH	.64	3	.497	13.5			
16.20	10.42	.19	1.85	SILTY CLAY TO CLAY	CL-CH	.65	3	.724	13.5			
16.40	19.10	.25	1.29	CLAYEY SILT TO SILTY CLAY	MH-CL	.74	4	1.360	13.5			
16.60	13.53	.32	2.33	SILTY CLAY TO CLAY	CL-CH	.66	4	.953	13.5			
16.80	18.71	.24	1.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.76	4	1.330	13.5			
17.00	8.85	.16	1.86	SILTY CLAY TO CLAY	CL-CH	.68	2	.606	13.5			
17.20	10.55	.22	2.07	SILTY CLAY TO CLAY	CL-CH	.69	3	.730	13.5			
17.40	4.92	.30	6.11	ORGANIC MATERIAL	OL-OH	.52	2	.326	13.5			
17.60	12.79	.27	2.12	SILTY CLAY TO CLAY	CL-CH	.70	4	.895	13.5			
17.80	9.41	.22	2.39	CLAY	CH	.71	4	.644	13.5			
18.00	4.68	.09	1.96	SENSITIVE FINE GRAINED	OL-CH	.54	1	.307	13.5			
18.20	4.43	.24	5.34	ORGANIC MATERIAL	OL-OH	.55	2	.288	13.5			
18.40	4.43	.17	3.78	CLAY	CH	.74	2	.273	13.5			
18.60	5.28	.21	4.02	CLAY	CH	.74	2	.336	13.5			
18.80	4.43	.24	5.35	ORGANIC MATERIAL	OL-OH	.56	2	.286	13.5			
19.00	4.43	.27	6.20	ORGANIC MATERIAL	OL-OH	.57	2	.286	13.5			
19.20	4.43	.22	5.07	CLAY	CH	.77	2	.271	13.5			
19.40	4.43	.19	4.34	CLAY	CH	.78	2	.270	13.5			
19.60	4.43	.24	5.34	ORGANIC MATERIAL	OL-OH	.59	2	.284	13.5			
19.80	5.16	.22	4.34	CLAY	CH	.79	2	.323	13.5			
20.00	4.92	.10	1.96	SENSITIVE FINE GRAINED	OL-CH	.60	1	.320	13.5			
20.20	252.41	1.86	.74	SAND	SW-SP	1.31	24			88	43	.50+
20.40	564.89	2.89	.51	GRAVELLY SAND TO SAND	SW-GW	1.33	45			100+	46	.50+



RESULT OF CONE PENETRATION TEST

9S

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

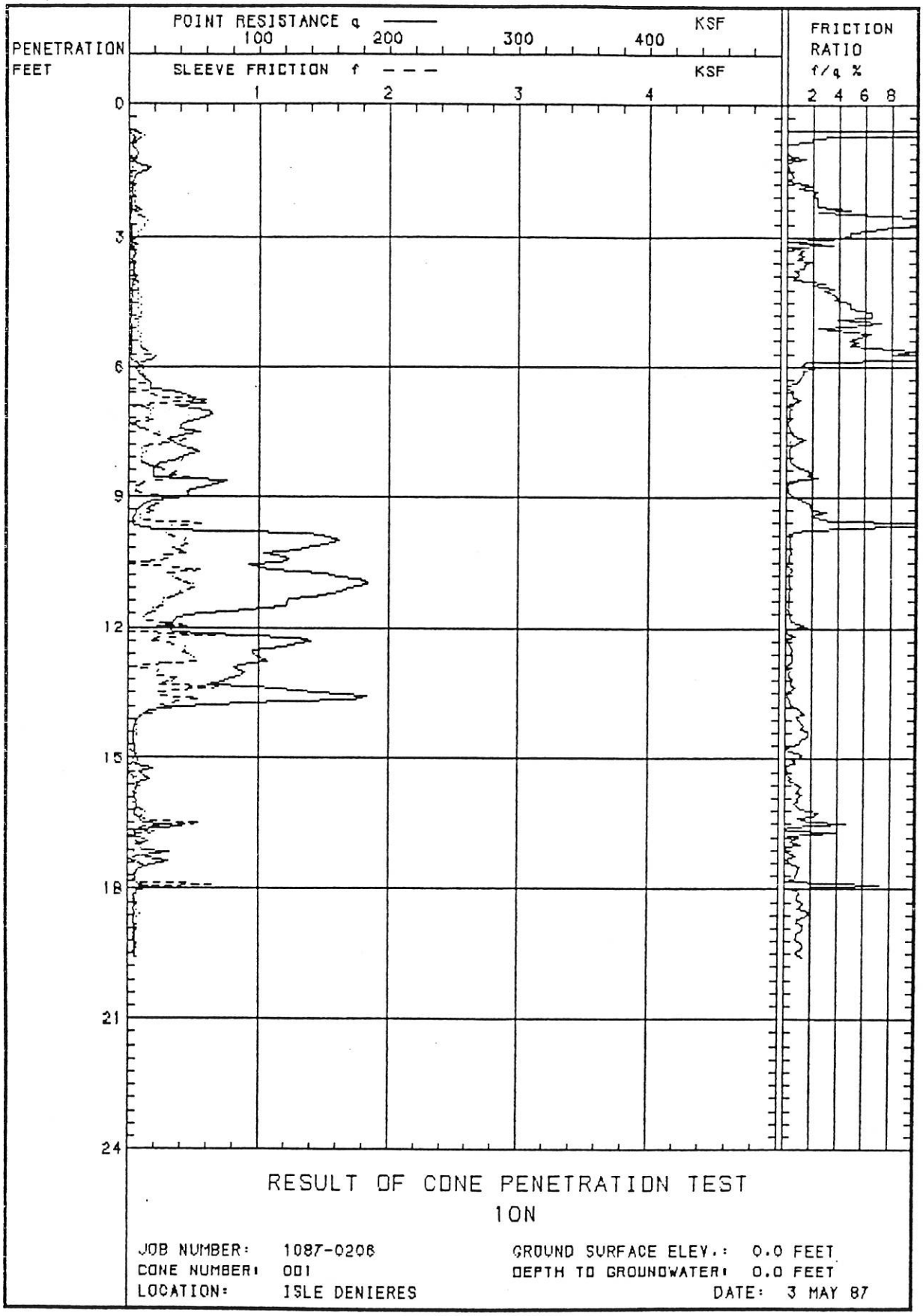
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE:

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

PROJECT NO. : 01870206
BORING NO. : 9S
CONE NO. : 001
DATE : 04/30/87

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	.00	4.48	999.00	ORGANIC MATERIAL	OL-OH	.02	1	-.001	13.5			
.80	170.70	.21	.12	SAND	SW-SP	.05	16			100+	44	.50+
1.00	155.70	.50	.32	SAND TO SILTY SAND	SM-SP	.06	18			100+	42	.50+
1.20	157.60	.24	.15	SAND	SW-SP	.08	15			100+	44	.50+
1.40	147.09	.27	.18	SAND TO SILTY SAND	SM-SP	.08	17			100+	42	.50+
1.60	99.25	.37	.37	SAND TO SILTY SAND	SM-SP	.10	11			100+	42	.50+
1.80	104.77	.57	.54	SAND TO SILTY SAND	SM-SP	.11	12			100+	42	.50+
2.00	172.38	.84	.49	SAND TO SILTY SAND	SM-SP	.12	20			100+	42	.50+
2.20	181.04	.35	.19	SAND	SW-SP	.14	17			100+	44	.50+
2.40	151.28	.12	.08	SAND TO SILTY SAND	SM-SP	.14	18			100+	42	.50+
2.60	94.47	.13	.14	SAND TO SILTY SAND	SM-SP	.16	11			100+	42	.50+
2.80	43.90	.37	.84	SANDY SILT TO CLAYEY SILT	ML-MH	.14	8	3.241	13.5	72	38	.50+
3.00	71.43	.77	1.08	SILTY SAND TO SANDY SILT	SM-ML	.17	11			86	40	.50+
3.20	115.81	.38	.33	SAND TO SILTY SAND	SM-SP	.19	13			100+	42	.50+
3.40	157.41	.60	.38	SAND TO SILTY SAND	SM-SP	.20	18			100+	42	.50+
3.60	146.82	.35	.24	SAND TO SILTY SAND	SM-SP	.22	17			100+	42	.50+
3.80	174.15	.42	.24	SAND	SW-SP	.25	16			100+	44	.50+
4.00	151.70	.41	.27	SAND TO SILTY SAND	SM-SP	.24	18			100+	42	.50+
4.20	122.75	.14	.11	SAND TO SILTY SAND	SM-SP	.25	14			100+	42	.50+
4.40	68.44	.31	.46	SILTY SAND TO SANDY SILT	SM-ML	.24	10			79	39	.50+
4.60	64.89	.16	.24	SILTY SAND TO SANDY SILT	SM-ML	.25	10			76	39	.50+
4.80	98.59	.43	.44	SAND TO SILTY SAND	SM-SP	.29	11			89	41	.50+
5.00	116.06	.49	.42	SAND TO SILTY SAND	SM-SP	.30	13			96	42	.50+
5.20	161.09	.31	.19	SAND	SW-SP	.34	15			100+	44	.50+
5.40	174.84	.61	.35	SAND	SW-SP	.35	16			100+	44	.50+
5.60	161.83	.43	.26	SAND TO SILTY SAND	SM-SP	.34	19			100+	42	.50+
5.80	177.32	.21	.12	SAND	SW-SP	.38	16			100+	44	.50+
6.00	136.45	.22	.16	SAND TO SILTY SAND	SM-SP	.36	16			99	42	.50+
6.20	116.48	.52	.45	SAND TO SILTY SAND	SM-SP	.37	13			91	41	.50+
6.40	130.02	1.48	1.14	SILTY SAND TO SANDY SILT	SM-ML	.35	20			97	42	.50+
6.60	146.82	.38	.26	SAND TO SILTY SAND	SM-SP	.40	17			99	42	.50+
6.80	175.52	.78	.44	SAND TO SILTY SAND	SM-SP	.41	21			100+	42	.50+
7.00	225.78	.54	.24	SAND	SW-SP	.45	21			100+	44	.50+
7.20	254.62	.58	.23	SAND	SW-SP	.47	24			100+	44	.50+
7.40	205.98	.50	.24	SAND	SW-SP	.48	19			100+	44	.50+
7.60	173.93	.36	.20	SAND	SW-SP	.49	16			100+	44	.50+
7.80	151.77	.31	.21	SAND TO SILTY SAND	SM-SP	.47	18			96	42	.50+
8.00	124.92	.24	.19	SAND TO SILTY SAND	SM-SP	.48	14			88	41	.50+
8.20	117.75	.33	.28	SAND TO SILTY SAND	SM-SP	.49	14			85	41	.50+
8.40	54.13	.24	.45	SILTY SAND TO SANDY SILT	SM-ML	.46	8			62	37	.25
8.60	12.07	.16	1.33	SENSITIVE FINE GRAINED	OL-CH	.26	2	.875	13.5			
8.80	12.75	.44	3.45	CLAY	CH	.35	6	.919	13.5			
9.00	35.36	1.38	3.91	SILTY CLAY TO CLAY	CL-CH	.36	11	2.593	13.5			
9.20	166.27	.53	.32	SAND TO SILTY SAND	SM-SP	.55	19			96	42	.50+
9.40	107.46	.53	.50	SAND TO SILTY SAND	SM-SP	.56	12			80	40	.50+

9.60	11.57	.28	2.43	SILTY CLAY TO CLAY	CL-CH	.38	3	.829	13.5			
9.80	7.64	.30	3.96	CLAY	CH	.39	3	.537	13.5			
10.00	6.15	.31	5.01	CLAY	CH	.40	2	.426	13.5			
10.20	6.15	.31	5.03	CLAY	CH	.41	2	.426	13.5			
10.40	7.86	.43	5.47	CLAY	CH	.42	3	.551	13.5			
10.60	12.84	.18	1.43	SENSITIVE FINE GRAINED	OL-CH	.32	3	.927	13.5			
10.80	8.14	.34	4.23	CLAY	CH	.43	3	.571	13.5			
11.00	5.17	.30	5.74	CLAY	CH	.44	2	.350	13.5			
11.20	4.91	.32	6.53	ORGANIC MATERIAL	OL-OH	.34	2	.339	13.5			
11.40	7.39	.31	4.16	CLAY	CH	.46	3	.513	13.5			
11.60	6.40	.16	2.45	CLAY	CH	.46	3	.439	13.5			
11.80	6.64	.30	4.54	CLAY	CH	.47	3	.457	13.5			
12.00	6.88	.24	3.42	CLAY	CH	.48	3	.474	13.5			
12.20	6.40	.37	5.83	CLAY	CH	.49	3	.438	13.5			
12.40	8.85	.29	3.31	CLAY	CH	.50	4	.619	13.5			
12.60	33.97	.29	.86	SANDY SILT TO CLAYEY SILT	ML-MH	.63	6	2.469	13.5	41	34	.15
12.80	103.54	.12	.12	SAND TO SILTY SAND	SM-SP	.77	12			71	39	.50+
13.00	38.82	.37	.96	SANDY SILT TO CLAYEY SILT	ML-MH	.65	7	2.827	13.5	44	34	.15
13.20	18.24	.32	1.74	CLAYEY SILT TO SILTY CLAY	MH-CL	.59	4	1.307	13.5			
13.40	79.33	.17	.21	SAND TO SILTY SAND	SM-SP	.80	9			62	38	.25
13.60	13.36	.22	1.65	SILTY CLAY TO CLAY	CL-CH	.54	4	.949	13.5			
13.80	13.43	.23	1.74	SILTY CLAY TO CLAY	CL-CH	.55	4	.954	13.5			
14.00	23.10	.73	3.17	SILTY CLAY TO CLAY	CL-CH	.56	7	1.670	13.5			
14.20	97.52	.11	.12	SAND TO SILTY SAND	SM-SP	.85	11			67	39	.37
14.40	47.09	.06	.13	SILTY SAND TO SANDY SILT	SM-ML	.79	7			45	34	.16
14.60	12.09	.32	2.61	SILTY CLAY TO CLAY	CL-CH	.58	3	.852	13.5			
14.80	16.38	.32	1.98	CLAYEY SILT TO SILTY CLAY	MH-CL	.67	3	1.164	13.5			
15.00	17.93	.49	2.73	SILTY CLAY TO CLAY	CL-CH	.60	5	1.284	13.5			
15.20	23.49	.21	.89	SANDY SILT TO CLAYEY SILT	ML-MH	.76	4	1.684	13.5	23	31	.12
15.40	9.47	.27	2.89	CLAY	CH	.62	4	.656	13.5			
15.60	9.37	.28	3.02	CLAY	CH	.62	4	.648	13.5			
15.80	6.65	.26	3.89	CLAY	CH	.63	3	.446	13.5			
16.00	6.89	.35	5.05	CLAY	CH	.64	3	.463	13.5			
16.20	19.04	1.33	7.01	CLAY	CH	.65	9	1.363	13.5			
16.40	11.40	.22	1.89	SILTY CLAY TO CLAY	CL-CH	.66	3	.796	13.5			
16.60	10.27	.37	3.59	CLAY	CH	.66	4	.712	13.5			
16.80	8.35	.27	3.23	CLAY	CH	.67	3	.569	13.5			
17.00	13.05	.65	4.98	CLAY	CH	.68	6	.916	13.5			
17.20	37.49	.38	1.01	SANDY SILT TO CLAYEY SILT	ML-MH	.86	7	2.713	13.5	35	33	.14
17.40	32.97	.31	.94	SANDY SILT TO CLAYEY SILT	ML-MH	.87	6	2.378	13.5	31	32	.13
17.60	57.67	.51	.88	SILTY SAND TO SANDY SILT	SM-ML	.97	9			46	35	.16
17.80	20.17	.23	1.15	CLAYEY SILT TO SILTY CLAY	MH-CL	.80	4	1.435	13.5			
18.00	7.39	.25	3.34	CLAY	CH	.72	3	.494	13.5			
18.20	7.01	.23	3.26	CLAY	CH	.73	3	.465	13.5			
18.40	7.88	.22	2.83	CLAY	CH	.74	3	.529	13.5			
18.60	6.65	.24	3.57	CLAY	CH	.74	3	.437	13.5			
18.80	6.40	.24	3.68	CLAY	CH	.75	3	.418	13.5			
19.00	6.40	.25	3.87	CLAY	CH	.76	3	.417	13.5			
19.20	6.40	.23	3.67	CLAY	CH	.77	3	.417	13.5			
19.40	6.89	.23	3.40	CLAY	CH	.78	3	.453	13.5			
19.60	9.77	.23	2.38	CLAY	CH	.78	4	.666	13.5			
19.80	6.90	.25	3.58	CLAY	CH	.79	3	.453	13.5			
20.00	7.13	.25	3.46	CLAY	CH	.80	3	.469	13.5			
20.20	7.87	2.00	25.41	ORGANIC MATERIAL	OL-OH	.61	3	.538	13.5			



RESULT OF CONE PENETRATION TEST

1ON

JOB NUMBER: 1087-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

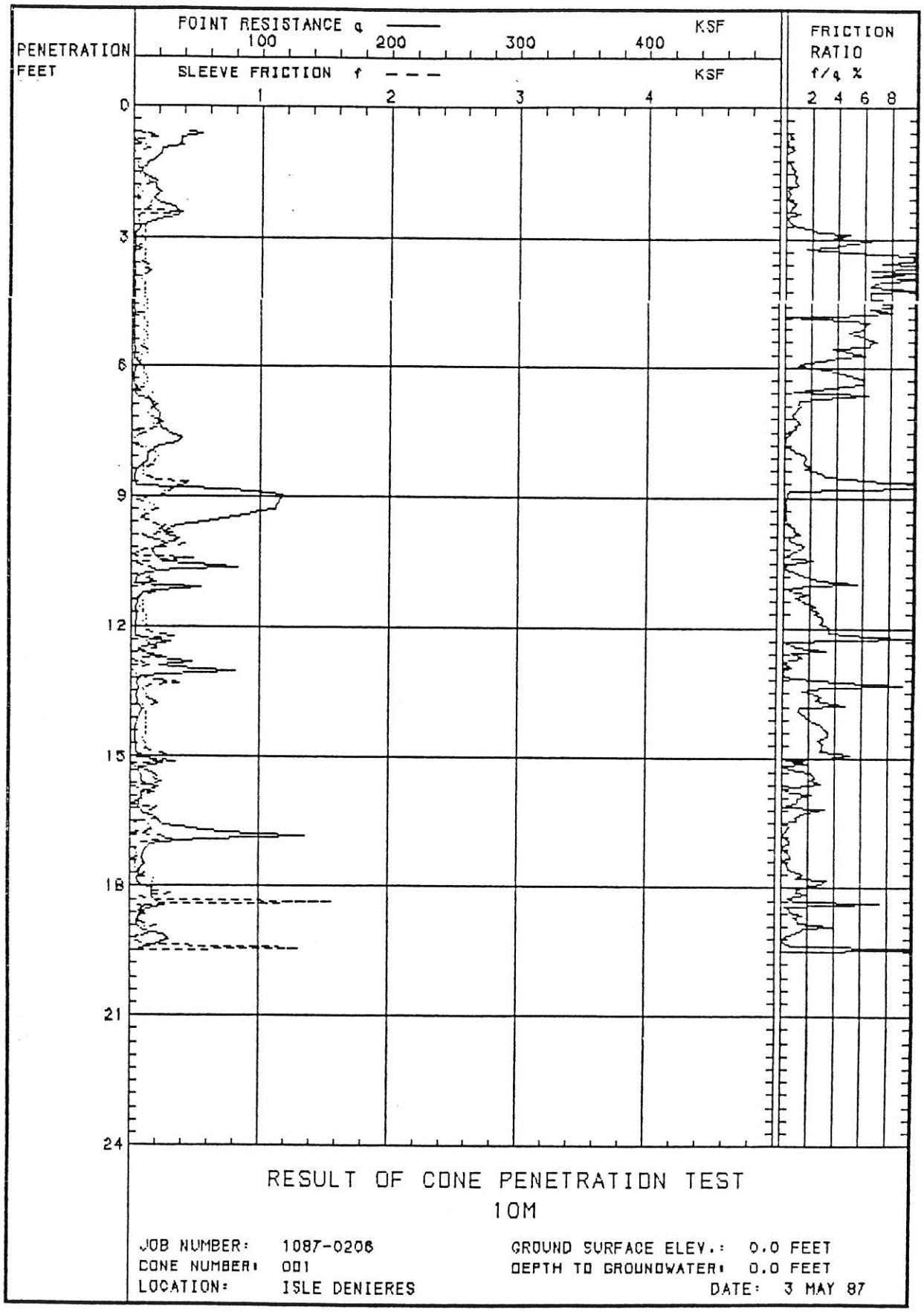
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 3 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 10N
CONE NO. : 001
DATE : 04/30/87

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	.00	.02	999.00	ORGANIC MATERIAL	OL-OH	.02	1	-.001	13.5			
.80	3.69	.07	1.89	SENSITIVE FINE GRAINED	OL-CH	.02	0	.272	13.5			
1.00	4.43	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.03	1	.326	13.5			
1.20	5.04	.05	.94	SENSITIVE FINE GRAINED	OL-CH	.04	1	.371	13.5			
1.40	13.52	.01	.09	SENSITIVE FINE GRAINED	OL-CH	.04	3	.999	13.5			
1.60	5.84	.03	.44	SENSITIVE FINE GRAINED	OL-CH	.05	1	.429	13.5			
1.80	2.71	.03	1.26	SENSITIVE FINE GRAINED	OL-CH	.05	0	.196	13.5			
2.00	2.21	.05	2.10	ORGANIC MATERIAL	OL-OH	.06	1	.159	13.5			
2.20	1.97	.05	2.36	ORGANIC MATERIAL	OL-OH	.07	1	.141	13.5			
2.40	1.97	.07	3.63	ORGANIC MATERIAL	OL-OH	.07	1	.140	13.5			
2.60	.74	.13	17.80	ORGANIC MATERIAL	OL-OH	.08	1	.049	13.5			
2.80	1.48	.11	7.25	ORGANIC MATERIAL	OL-OH	.08	1	.103	13.5			
3.00	1.48	.06	3.98	ORGANIC MATERIAL	OL-OH	.09	1	.103	13.5			
3.20	2.21	.03	1.57	ORGANIC MATERIAL	OL-OH	.10	1	.157	13.5			
3.40	4.43	.03	.78	SENSITIVE FINE GRAINED	OL-CH	.10	1	.321	13.5			
3.60	2.95	.06	1.95	SENSITIVE FINE GRAINED	OL-CH	.11	0	.210	13.5			
3.80	3.44	.10	2.95	CLAY	CH	.15	1	.244	13.5			
4.00	3.33	.06	1.93	SENSITIVE FINE GRAINED	OL-CH	.12	0	.237	13.5			
4.20	2.21	.07	3.18	ORGANIC MATERIAL	OL-OH	.13	1	.155	13.5			
4.40	2.22	.08	3.74	ORGANIC MATERIAL	OL-OH	.13	1	.154	13.5			
4.60	1.72	.08	4.82	ORGANIC MATERIAL	OL-OH	.14	1	.117	13.5			
4.80	1.48	.07	4.87	ORGANIC MATERIAL	OL-OH	.14	1	.099	13.5			
5.00	1.23	.07	5.76	ORGANIC MATERIAL	OL-OH	.15	1	.080	13.5			
5.20	1.48	.08	5.61	ORGANIC MATERIAL	OL-OH	.16	1	.098	13.5			
5.40	1.60	.08	4.79	ORGANIC MATERIAL	OL-OH	.16	1	.106	13.5			
5.60	1.48	.12	8.07	ORGANIC MATERIAL	OL-OH	.17	1	.097	13.5			
5.80	1.23	.19	15.17	ORGANIC MATERIAL	OL-OH	.17	1	.078	13.5			
6.00	7.15	.10	1.44	SENSITIVE FINE GRAINED	OL-CH	.18	1	.516	13.5			
6.20	9.58	.12	1.24	SENSITIVE FINE GRAINED	OL-CH	.19	2	.696	13.5			
6.40	17.10	.10	.57	SENSITIVE FINE GRAINED	OL-CH	.19	4	1.252	13.5			
6.60	38.08	.16	.42	SANDY SILT TO CLAYEY SILT	ML-MH	.33	7	2.796	13.5	60	36	.21
6.80	56.55	.46	.81	SILTY SAND TO SANDY SILT	SM-ML	.37	9			67	37	.40
7.00	55.10	.26	.48	SILTY SAND TO SANDY SILT	SM-ML	.38	8			65	37	.35
7.20	55.13	.16	.28	SILTY SAND TO SANDY SILT	SM-ML	.40	8			65	37	.33
7.40	39.60	.08	.19	SILTY SAND TO SANDY SILT	SM-ML	.41	6			56	36	.19
7.60	40.88	.41	.99	SANDY SILT TO CLAYEY SILT	ML-MH	.38	7	3.000	13.5	59	36	.21
7.80	38.83	.20	.52	SANDY SILT TO CLAYEY SILT	ML-MH	.39	7	2.847	13.5	57	36	.19
8.00	51.44	.12	.24	SILTY SAND TO SANDY SILT	SM-ML	.44	8			62	37	.25
8.20	30.56	.10	.33	SANDY SILT TO CLAYEY SILT	ML-MH	.41	5	2.233	13.5	48	35	.16
8.40	19.37	.26	1.33	CLAYEY SILT TO SILTY CLAY	MH-CL	.38	4	1.407	13.5			
8.60	46.88	.36	.78	SILTY SAND TO SANDY SILT	SM-ML	.47	7			59	36	.20
8.80	55.91	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.48	8			62	37	.25
9.00	46.05	.25	.54	SILTY SAND TO SANDY SILT	SM-ML	.49	7			57	36	.19
9.20	11.33	.17	1.49	SENSITIVE FINE GRAINED	OL-CH	.28	2	.819	13.5			
9.40	5.54	.11	1.90	SENSITIVE FINE GRAINED	OL-CH	.28	1	.390	13.5			

9.60	3.44	.34	9.73	ORGANIC MATERIAL	OL-OH	.29	1	.234	13.5			
9.80	77.65	.45	.58	SILTY SAND TO SANDY SILT	SM-ML	.54	12			69	38	.49
10.00	160.35	.44	.27	SAND TO SILTY SAND	SM-SP	.60	19			92	41	.50+
10.20	133.34	.17	.13	SAND TO SILTY SAND	SM-SP	.61	15			85	41	.50+
10.40	118.85	.34	.28	SAND TO SILTY SAND	SM-SP	.62	14			81	40	.50+
10.60	97.09	.14	.14	SAND TO SILTY SAND	SM-SP	.64	11			73	39	.50+
10.80	156.36	.32	.21	SAND TO SILTY SAND	SM-SP	.65	18			89	41	.50+
11.00	183.49	.47	.25	SAND	SW-SP	.71	17			92	44	.50+
11.20	159.93	1.56	.97	SAND TO SILTY SAND	SM-SP	.67	19			89	41	.50+
11.40	122.87	.33	.27	SAND TO SILTY SAND	SM-SP	.68	14			80	40	.50+
11.60	91.72	.20	.22	SAND TO SILTY SAND	SM-SP	.70	10			69	39	.47
11.80	36.91	.14	.38	SANDY SILT TO CLAYEY SILT	ML-MH	.59	7	2.691	13.5	45	34	.15
12.00	29.11	.34	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.60	5	2.112	13.5	38	33	.14
12.20	108.83	.46	.42	SAND TO SILTY SAND	SM-SP	.73	13			74	39	.50+
12.40	125.06	.37	.30	SAND TO SILTY SAND	SM-SP	.74	14			79	40	.50+
12.60	96.52	.34	.35	SAND TO SILTY SAND	SM-SP	.76	11			69	39	.46
12.80	100.72	.40	.40	SAND TO SILTY SAND	SM-SP	.77	12			70	39	.50+
13.00	86.91	.24	.28	SAND TO SILTY SAND	SM-SP	.78	10			65	39	.32
13.20	75.82	.45	.60	SILTY SAND TO SANDY SILT	SM-ML	.73	12			63	37	.26
13.40	113.11	.45	.40	SAND TO SILTY SAND	SM-SP	.80	13			73	39	.50+
13.60	178.67	.14	.08	SAND	SW-SP	.88	17			86	43	.50+
13.80	52.57	.48	.91	SILTY SAND TO SANDY SILT	SM-ML	.76	8			50	35	.17
14.00	11.82	.14	1.18	SENSITIVE FINE GRAINED	OL-CH	.42	2	.844	13.5			
14.20	5.42	.07	1.27	SENSITIVE FINE GRAINED	OL-CH	.43	1	.370	13.5			
14.40	3.94	.07	1.75	SENSITIVE FINE GRAINED	OL-CH	.43	0	.260	13.5			
14.60	3.94	.04	1.11	SENSITIVE FINE GRAINED	OL-CH	.44	0	.259	13.5			
14.80	5.29	.02	.30	SENSITIVE FINE GRAINED	OL-CH	.44	1	.359	13.5			
15.00	6.88	.05	.79	SENSITIVE FINE GRAINED	OL-CH	.45	1	.476	13.5			
15.20	12.65	.02	.16	SENSITIVE FINE GRAINED	OL-CH	.46	3	.903	13.5			
15.40	12.02	.05	.43	SENSITIVE FINE GRAINED	OL-CH	.46	2	.856	13.5			
15.60	7.63	.08	1.03	SENSITIVE FINE GRAINED	OL-CH	.47	1	.531	13.5			
15.80	5.29	.04	.82	SENSITIVE FINE GRAINED	OL-CH	.47	1	.357	13.5			
16.00	6.65	.05	.82	SENSITIVE FINE GRAINED	OL-CH	.48	1	.457	13.5			
16.20	5.66	.10	1.79	SENSITIVE FINE GRAINED	OL-CH	.49	1	.383	13.5			
16.40	9.20	.20	2.15	SILTY CLAY TO CLAY	CL-CH	.66	2	.633	13.5			
16.60	25.26	.07	.28	SANDY SILT TO CLAYEY SILT	ML-MH	.83	4	1.809	13.5	24	31	.12
16.80	6.60	.05	.73	SENSITIVE FINE GRAINED	OL-CH	.50	1	.451	13.5			
17.00	9.09	.06	.62	SENSITIVE FINE GRAINED	OL-CH	.51	2	.636	13.5			
17.20	21.67	.13	.60	SANDY SILT TO CLAYEY SILT	ML-MH	.86	4	1.541	13.5	19	31	.11
17.40	24.76	.09	.35	SANDY SILT TO CLAYEY SILT	ML-MH	.87	4	1.770	13.5	22	31	.12
17.60	6.41	.05	.72	SENSITIVE FINE GRAINED	OL-CH	.53	1	.436	13.5			
17.80	5.78	.01	.19	SENSITIVE FINE GRAINED	OL-CH	.53	1	.388	13.5			
18.00	12.95	.06	.43	SENSITIVE FINE GRAINED	OL-CH	.54	3	.919	13.5			
18.20	4.67	.04	.94	SENSITIVE FINE GRAINED	OL-CH	.55	1	.305	13.5			
18.40	4.68	.06	1.20	SENSITIVE FINE GRAINED	OL-CH	.55	1	.306	13.5			
18.60	4.68	.06	1.26	SENSITIVE FINE GRAINED	OL-CH	.56	1	.305	13.5			
18.80	4.79	.06	1.29	SENSITIVE FINE GRAINED	OL-CH	.56	1	.313	13.5			
19.00	4.92	.06	1.14	SENSITIVE FINE GRAINED	OL-CH	.57	1	.322	13.5			
19.20	5.29	.05	.94	SENSITIVE FINE GRAINED	OL-CH	.58	1	.349	13.5			
19.40	4.92	.06	1.14	SENSITIVE FINE GRAINED	OL-CH	.58	1	.321	13.5			



RESULT OF CONE PENETRATION TEST

10M

JOB NUMBER: 1087-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

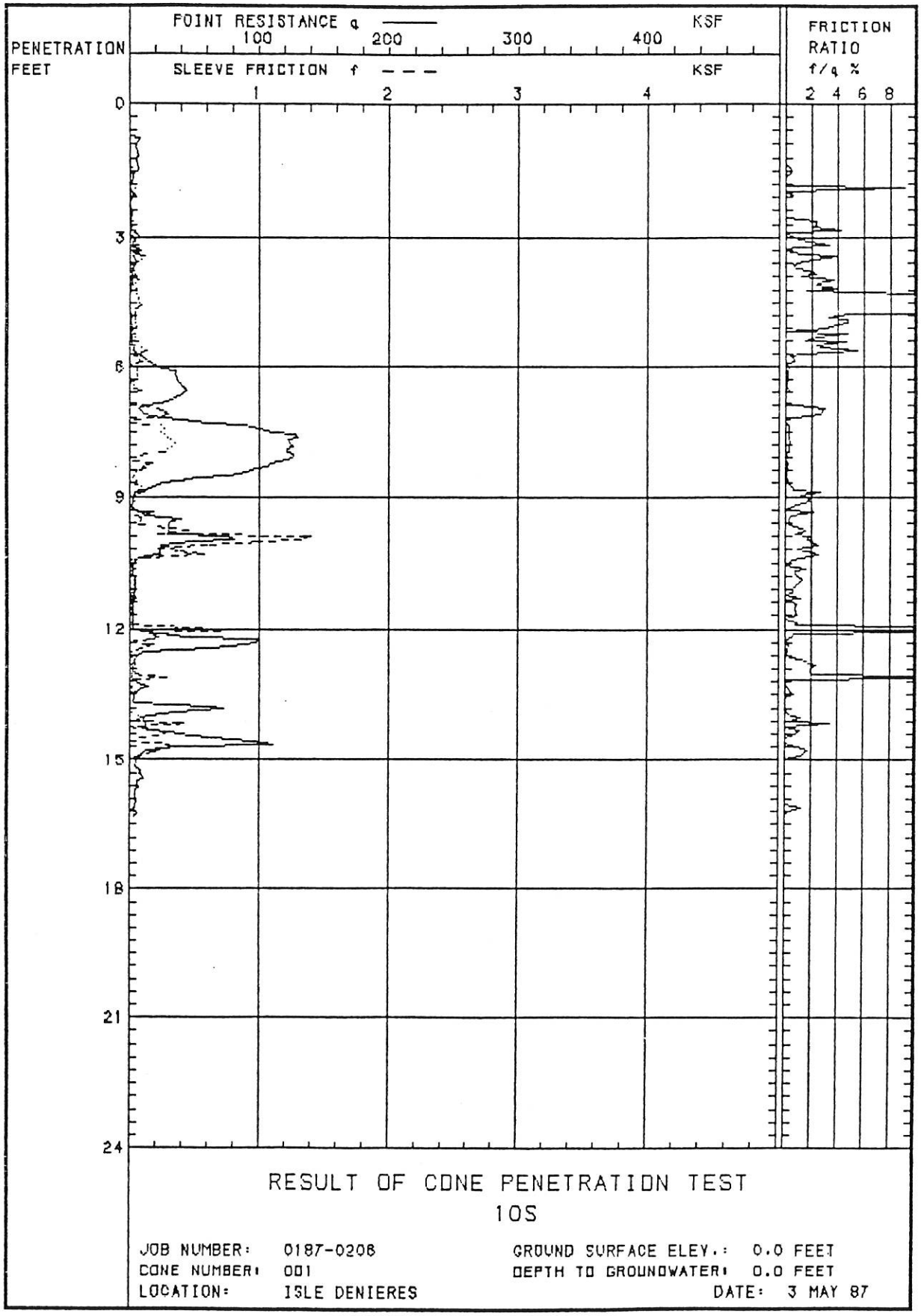
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 3 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : (10M) 10m
CONE NO. : 001
DATE : 04/30/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	48.45	.15	.32	SILTY SAND TO SANDY SILT	SM-ML	.03	7			85	40	.50+
.80	37.14	.08	.22	SILTY SAND TO SANDY SILT	SM-ML	.04	5			74	38	.50+
1.00	22.20	.05	.21	SANDY SILT TO CLAYEY SILT	ML-MH	.05	4	1.641	13.5	63	37	.50+
1.20	17.71	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.04	4	1.309	13.5			
1.40	8.12	.06	.76	SENSITIVE FINE GRAINED	OL-CH	.04	1	.598	13.5			
1.60	10.08	.07	.68	SENSITIVE FINE GRAINED	OL-CH	.05	2	.743	13.5			
1.80	17.34	.12	.71	SENSITIVE FINE GRAINED	OL-CH	.05	4	1.280	13.5			
2.00	20.17	.09	.43	SANDY SILT TO CLAYEY SILT	ML-MH	.10	3	1.487	13.5	59	36	.30
2.20	20.23	.10	.52	SANDY SILT TO CLAYEY SILT	ML-MH	.11	3	1.490	13.5	58	36	.26
2.40	35.79	.32	.90	SANDY SILT TO CLAYEY SILT	ML-MH	.12	6	2.642	13.5	68	38	.50+
2.60	20.92	.04	.20	SANDY SILT TO CLAYEY SILT	ML-MH	.13	4	1.540	13.5	58	36	.23
2.80	4.43	.09	2.13	SENSITIVE FINE GRAINED	OL-CH	.08	1	.322	13.5			
3.00	1.72	.08	4.79	ORGANIC MATERIAL	OL-OH	.09	1	.121	13.5			
3.20	1.72	.05	2.72	ORGANIC MATERIAL	OL-OH	.10	1	.121	13.5			
3.40	.98	.10	9.70	ORGANIC MATERIAL	OL-OH	.10	1	.065	13.5			
3.60	.98	.09	9.64	ORGANIC MATERIAL	OL-OH	.11	1	.065	13.5			
3.80	1.48	.12	8.12	ORGANIC MATERIAL	OL-OH	.11	1	.101	13.5			
4.00	1.23	.08	6.76	ORGANIC MATERIAL	OL-OH	.12	1	.082	13.5			
4.20	1.23	.06	4.84	ORGANIC MATERIAL	OL-OH	.13	1	.082	13.5			
4.40	1.48	.11	7.66	ORGANIC MATERIAL	OL-OH	.13	1	.100	13.5			
4.60	1.48	.11	7.20	ORGANIC MATERIAL	OL-OH	.14	1	.099	13.5			
4.80	1.97	.05	2.39	ORGANIC MATERIAL	OL-OH	.14	1	.135	13.5			
5.00	1.97	.12	6.03	ORGANIC MATERIAL	OL-OH	.15	1	.135	13.5			
5.20	1.97	.13	6.67	ORGANIC MATERIAL	OL-OH	.16	1	.134	13.5			
5.40	1.60	.10	6.30	ORGANIC MATERIAL	OL-OH	.16	1	.106	13.5			
5.60	2.21	.09	4.27	ORGANIC MATERIAL	OL-OH	.17	1	.151	13.5			
5.80	1.72	.11	6.12	ORGANIC MATERIAL	OL-OH	.17	1	.115	13.5			
6.00	4.94	.08	1.67	SENSITIVE FINE GRAINED	OL-CH	.18	1	.352	13.5			
6.20	1.97	.11	5.48	ORGANIC MATERIAL	OL-OH	.19	1	.132	13.5			
6.40	1.97	.10	5.08	ORGANIC MATERIAL	OL-OH	.19	1	.132	13.5			
6.60	2.71	.09	3.23	ORGANIC MATERIAL	OL-OH	.20	1	.186	13.5			
6.80	14.75	.17	1.13	SENSITIVE FINE GRAINED	OL-CH	.20	3	1.077	13.5			
7.00	17.94	.15	.83	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	4	1.306	13.5			
7.20	21.16	.12	.59	SANDY SILT TO CLAYEY SILT	ML-MH	.36	4	1.541	13.5	43	34	.14
7.40	22.26	.20	.92	SANDY SILT TO CLAYEY SILT	ML-MH	.37	4	1.621	13.5	43	34	.14
7.60	33.41	.08	.23	SANDY SILT TO CLAYEY SILT	ML-MH	.38	6	2.447	13.5	52	35	.17
7.80	29.59	.02	.06	SANDY SILT TO CLAYEY SILT	ML-MH	.39	5	2.163	13.5	49	35	.16
8.00	14.79	.19	1.31	CLAYEY SILT TO SILTY CLAY	MH-CL	.36	3	1.069	13.5			
8.20	12.30	.13	1.07	SENSITIVE FINE GRAINED	OL-CH	.25	2	.893	13.5			
8.40	4.69	.11	2.39	CLAY	CH	.34	2	.322	13.5			
8.60	2.46	.15	6.23	ORGANIC MATERIAL	OL-OH	.26	1	.163	13.5			
8.80	38.18	.77	2.01	SANDY SILT TO CLAYEY SILT	ML-MH	.44	7	2.796	13.5	53	36	.18
9.00	118.06	.36	.30	SAND TO SILTY SAND	SM-SP	.54	14			83	41	.50+
9.20	113.77	.07	.06	SAND TO SILTY SAND	SM-SP	.55	13			82	40	.50+
9.40	94.77	.15	.16	SAND TO SILTY SAND	SM-SP	.56	11			75	40	.50+

9.60	57.18	.15	.27	SILTY SAND TO SANDY SILT	SM-ML	.53	9			62	37	.24
9.80	27.82	.27	.98	SANDY SILT TO CLAYEY SILT	ML-MH	.49	5	2.024	13.5	42	34	.14
10.00	36.67	.17	.47	SANDY SILT TO CLAYEY SILT	ML-MH	.50	7	2.679	13.5	49	35	.16
10.20	18.24	.11	.61	SENSITIVE FINE GRAINED	OL-CH	.31	4	1.328	13.5			
10.40	20.03	.04	.18	SENSITIVE FINE GRAINED	OL-CH	.31	4	1.460	13.5			
10.60	65.41	.09	.13	SILTY SAND TO SANDY SILT	SM-ML	.58	10			63	37	.27
10.80	9.64	.15	1.59	SENSITIVE FINE GRAINED	OL-CH	.32	2	.690	13.5			
11.00	3.20	.12	3.86	CLAY	CH	.44	1	.205	13.5			
11.20	15.85	.17	1.06	CLAYEY SILT TO SILTY CLAY	MH-CL	.50	3	1.136	13.5			
11.40	5.41	.08	1.49	SENSITIVE FINE GRAINED	OL-CH	.34	1	.376	13.5			
11.60	3.44	.08	2.34	SENSITIVE FINE GRAINED	OL-CH	.35	0	.229	13.5			
11.80	3.94	.12	2.98	CLAY	CH	.47	1	.257	13.5			
12.00	3.44	.12	3.41	CLAY	CH	.48	1	.220	13.5			
12.20	3.44	.20	5.79	ORGANIC MATERIAL	OL-OH	.37	1	.228	13.5			
12.40	23.75	.12	.49	SANDY SILT TO CLAYEY SILT	ML-MH	.62	4	1.713	13.5	29	32	.12
12.60	10.80	.13	1.17	SENSITIVE FINE GRAINED	OL-CH	.38	2	.772	13.5			
12.80	39.70	.15	.37	SILTY SAND TO SANDY SILT	SM-ML	.70	6			43	34	.15
13.00	65.64	.05	.07	SILTY SAND TO SANDY SILT	SM-ML	.71	10			60	36	.21
13.20	7.42	.12	1.61	SENSITIVE FINE GRAINED	OL-CH	.40	1	.520	13.5			
13.40	5.83	.11	1.80	SENSITIVE FINE GRAINED	OL-CH	.40	1	.402	13.5			
13.60	4.30	.12	2.70	CLAY	CH	.54	2	.278	13.5			
13.80	5.51	.11	1.94	SENSITIVE FINE GRAINED	OL-CH	.41	1	.378	13.5			
14.00	7.02	.12	1.65	SENSITIVE FINE GRAINED	OL-CH	.42	1	.489	13.5			
14.20	4.44	.19	4.34	CLAY	CH	.57	2	.287	13.5			
14.40	3.44	.12	3.41	CLAY	CH	.58	1	.212	13.5			
14.60	3.44	.09	2.74	CLAY	CH	.58	1	.212	13.5			
14.80	3.94	.11	2.86	CLAY	CH	.59	1	.248	13.5			
15.00	12.13	.35	2.86	CLAY	CH	.60	5	.854	13.5			
15.20	17.64	.06	.32	SENSITIVE FINE GRAINED	OL-CH	.46	4	1.273	13.5			
15.40	7.61	.18	2.43	CLAY	CH	.62	3	.518	13.5			
15.60	11.01	.16	1.46	SENSITIVE FINE GRAINED	OL-CH	.47	2	.781	13.5			
15.80	11.89	.14	1.20	SENSITIVE FINE GRAINED	OL-CH	.47	2	.845	13.5			
16.00	7.15	.08	1.10	SENSITIVE FINE GRAINED	OL-CH	.48	1	.494	13.5			
16.20	7.36	.18	2.46	CLAY	CH	.65	3	.497	13.5			
16.40	18.66	.21	1.12	CLAYEY SILT TO SILTY CLAY	MH-CL	.74	4	1.327	13.5			
16.60	37.10	.07	.20	SILTY SAND TO SANDY SILT	SM-ML	.91	5			33	33	.13
16.80	115.11	.21	.18	SAND TO SILTY SAND	SM-SP	1.01	13			68	39	.42
17.00	19.80	.07	.38	SANDY SILT TO CLAYEY SILT	ML-MH	.85	3	1.404	13.5	17	30	.11
17.20	10.85	.18	1.64	SENSITIVE FINE GRAINED	OL-CH	.52	2	.765	13.5			
17.40	10.02	.04	.42	SENSITIVE FINE GRAINED	OL-CH	.52	2	.703	13.5			
17.60	7.40	.03	.45	SENSITIVE FINE GRAINED	OL-CH	.53	1	.509	13.5			
17.80	5.79	.17	2.87	CLAY	CH	.71	2	.376	13.5			
18.00	12.96	.18	1.38	SENSITIVE FINE GRAINED	OL-CH	.54	3	.920	13.5			
18.20	16.73	.10	.62	SENSITIVE FINE GRAINED	OL-CH	.55	4	1.199	13.5			
18.40	24.03	.84	3.49	SILTY CLAY TO CLAY	CL-CH	.74	7	1.725	13.5			
18.60	8.64	.09	1.04	SENSITIVE FINE GRAINED	OL-CH	.56	2	.599	13.5			
18.80	5.41	.07	1.23	SENSITIVE FINE GRAINED	OL-CH	.56	1	.359	13.5			
19.00	8.32	.18	2.18	CLAY	CH	.76	3	.560	13.5			
19.20	29.11	.04	.12	SANDY SILT TO CLAYEY SILT	ML-MH	.96	5	2.095	13.5	25	32	.12
19.40	13.69	.71	5.16	CLAY	CH	.78	6	.956	13.5			



RESULT OF CONE PENETRATION TEST

10S

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

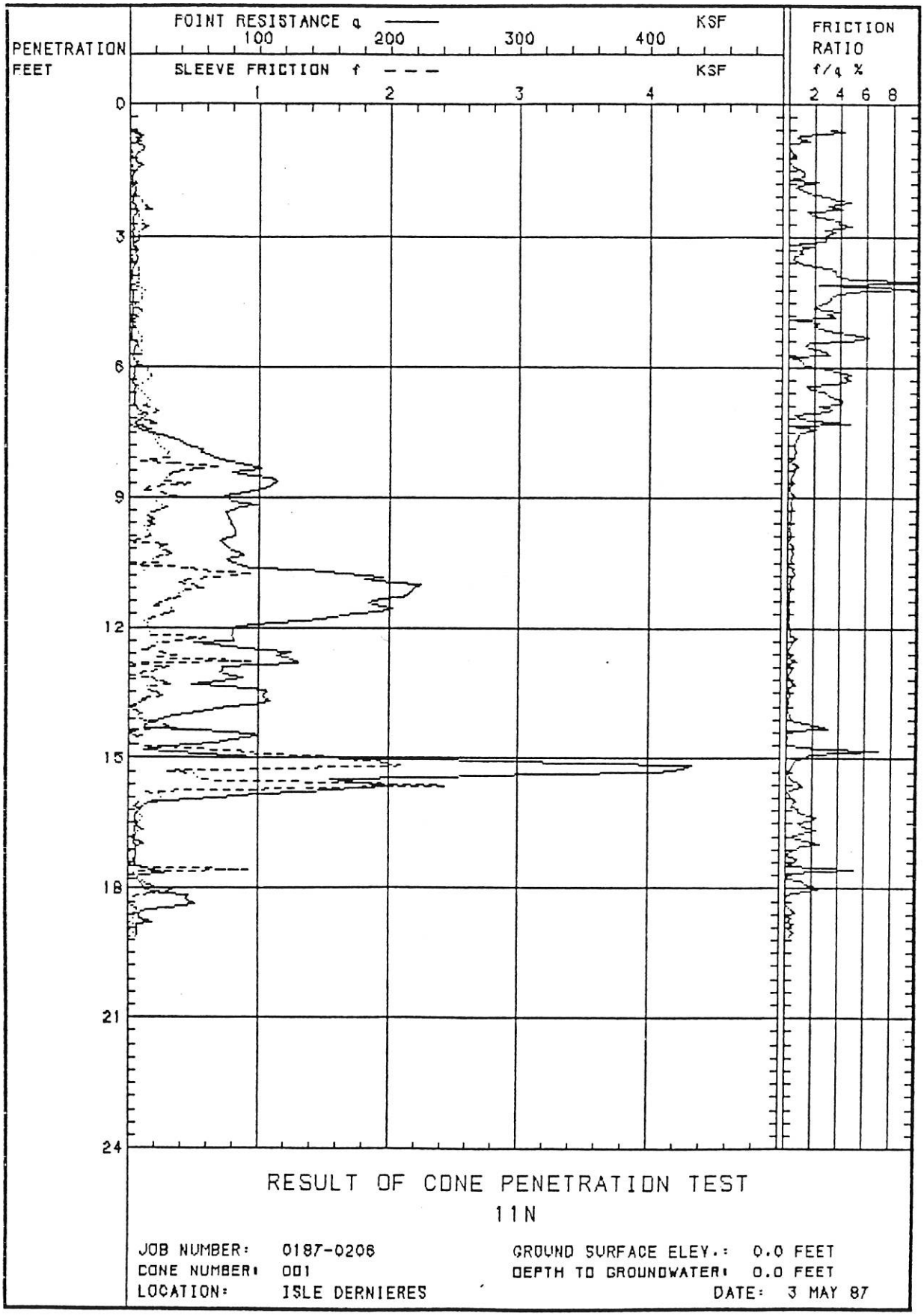
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 3 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 10S
CONE NO. : 001
DATE : 04/30/87

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	.00	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.02	0	-.001	13.5			
.80	7.38	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.02	1	.545	13.5			
1.00	5.16	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.03	1	.380	13.5			
1.20	5.54	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.04	1	.407	13.5			
1.40	6.64	.01	.16	SENSITIVE FINE GRAINED	OL-CH	.04	1	.489	13.5			
1.60	2.71	.01	.47	SENSITIVE FINE GRAINED	OL-CH	.05	0	.197	13.5			
1.80	.98	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.05	0	.069	13.5			
2.00	2.46	.01	.47	SENSITIVE FINE GRAINED	OL-CH	.06	0	.178	13.5			
2.20	.49	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.07	0	.032	13.5			
2.40	1.47	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.07	0	.104	13.5			
2.60	.98	.01	1.18	ORGANIC MATERIAL	OL-OH	.08	1	.067	13.5			
2.80	.98	.03	3.18	ORGANIC MATERIAL	OL-OH	.08	1	.067	13.5			
3.00	5.66	.03	.60	SENSITIVE FINE GRAINED	OL-CH	.09	1	.413	13.5			
3.20	2.70	.04	1.57	SENSITIVE FINE GRAINED	OL-CH	.10	0	.193	13.5			
3.40	3.94	.08	2.06	SENSITIVE FINE GRAINED	OL-CH	.10	0	.284	13.5			
3.60	4.80	.06	1.21	SENSITIVE FINE GRAINED	OL-CH	.11	1	.347	13.5			
3.80	1.97	.06	3.00	ORGANIC MATERIAL	OL-OH	.11	1	.137	13.5			
4.00	1.97	.11	5.52	ORGANIC MATERIAL	OL-OH	.12	1	.137	13.5			
4.20	1.35	.02	1.73	ORGANIC MATERIAL	OL-OH	.13	1	.091	13.5			
4.40	.49	.07	14.59	ORGANIC MATERIAL	OL-OH	.13	1	.027	13.5			
4.60	.25	.07	29.01	ORGANIC MATERIAL	OL-OH	.14	1	.008	13.5			
4.80	1.23	.05	3.85	ORGANIC MATERIAL	OL-OH	.14	1	.089	13.5			
5.00	1.23	.05	3.85	ORGANIC MATERIAL	OL-OH	.15	1	.080	13.5			
5.20	.74	.02	3.16	ORGANIC MATERIAL	OL-OH	.16	1	.043	13.5			
5.40	1.48	.05	3.09	ORGANIC MATERIAL	OL-OH	.16	1	.097	13.5			
5.60	2.96	.04	1.29	SENSITIVE FINE GRAINED	OL-CH	.17	0	.206	13.5			
5.80	11.55	.06	.49	SENSITIVE FINE GRAINED	OL-CH	.17	2	.843	13.5			
6.00	22.36	.06	.27	SANDY SILT TO CLAYEY SILT	ML-MH	.30	4	1.634	13.5	47	35	.15
6.20	35.41	.08	.23	SANDY SILT TO CLAYEY SILT	ML-MH	.31	6	2.600	13.5	59	36	.21
6.40	39.10	.02	.06	SILTY SAND TO SANDY SILT	SM-ML	.35	6			59	36	.21
6.60	42.57	.05	.11	SILTY SAND TO SANDY SILT	SM-ML	.36	6			61	37	.23
6.80	28.57	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.34	5	2.091	13.5	50	35	.17
7.00	7.98	.23	2.88	CLAY	CH	.28	3	.571	13.5			
7.20	32.64	.08	.23	SANDY SILT TO CLAYEY SILT	ML-MH	.36	6	2.391	13.5	53	35	.18
7.40	94.15	.26	.27	SAND TO SILTY SAND	SM-SP	.44	11			80	40	.50+
7.60	129.62	.29	.22	SAND TO SILTY SAND	SM-SP	.46	15			90	41	.50+
7.80	125.80	.32	.26	SAND TO SILTY SAND	SM-SP	.47	15			88	41	.50+
8.00	124.43	.14	.11	SAND TO SILTY SAND	SM-SP	.48	14			87	41	.50+
8.20	113.07	.13	.12	SAND TO SILTY SAND	SM-SP	.49	13			84	41	.50+
8.40	94.24	.09	.09	SAND TO SILTY SAND	SM-SP	.50	11			77	40	.50+
8.60	45.83	.02	.05	SILTY SAND TO SANDY SILT	SM-ML	.47	7			58	36	.20
8.80	15.54	.08	.52	SENSITIVE FINE GRAINED	OL-CH	.26	3	1.132	13.5			
9.00	3.45	.10	2.76	CLAY	CH	.36	1	.229	13.5			
9.20	2.09	.17	8.18	ORGANIC MATERIAL	OL-OH	.28	1	.135	13.5			
9.40	10.30	.03	.32	SENSITIVE FINE GRAINED	OL-CH	.28	2	.742	13.5			

9.60	30.76	.16	.52	SANDY SILT TO CLAYEY SILT	ML-MH	.48	5	2.243	13.5	45	34	.15
9.80	29.77	.34	1.15	SANDY SILT TO CLAYEY SILT	ML-MH	.49	5	2.167	13.5	44	34	.15
10.00	65.41	.77	1.18	SILTY SAND TO SANDY SILT	SM-ML	.55	10			64	37	.29
10.20	23.86	.82	3.42	SILTY CLAY TO CLAY	CL-CH	.41	7	1.737	13.5			
10.40	9.17	.16	1.76	SENSITIVE FINE GRAINED	OL-CH	.31	2	.656	13.5			
10.60	2.95	.01	.17	SENSITIVE FINE GRAINED	OL-CH	.32	0	.195	13.5			
10.80	3.44	.03	.94	SENSITIVE FINE GRAINED	OL-CH	.32	0	.231	13.5			
11.00	4.19	.04	.86	SENSITIVE FINE GRAINED	OL-CH	.33	1	.286	13.5			
11.20	3.57	.01	.15	SENSITIVE FINE GRAINED	OL-CH	.34	0	.239	13.5			
11.40	2.96	.01	.36	SENSITIVE FINE GRAINED	OL-CH	.34	0	.194	13.5			
11.60	2.83	.02	.77	SENSITIVE FINE GRAINED	OL-CH	.35	0	.184	13.5			
11.80	2.46	.01	.43	SENSITIVE FINE GRAINED	OL-CH	.35	0	.156	13.5			
12.00	2.95	.40	13.39	ORGANIC MATERIAL	OL-OH	.36	1	.192	13.5			
12.20	71.32	.19	.27	SILTY SAND TO SANDY SILT	SM-ML	.67	11			63	37	.26
12.40	76.97	.15	.20	SAND TO SILTY SAND	SM-SP	.74	9			63	38	.26
12.60	6.91	.02	.31	SENSITIVE FINE GRAINED	OL-CH	.38	1	.484	13.5			
12.80	2.22	.05	2.07	ORGANIC MATERIAL	OL-OH	.38	1	.136	13.5			
13.00	2.34	.10	4.47	ORGANIC MATERIAL	OL-OH	.39	1	.144	13.5			
13.20	4.40	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.40	1	.297	13.5			
13.40	7.18	.05	.66	SENSITIVE FINE GRAINED	OL-CH	.40	1	.502	13.5			
13.60	3.08	.01	.18	SENSITIVE FINE GRAINED	OL-CH	.41	0	.198	13.5			
13.80	67.03	.00	.00	SAND TO SILTY SAND	SM-SP	.83	8			56	39	.20
14.00	12.35	.04	.34	SENSITIVE FINE GRAINED	OL-CH	.42	2	.884	13.5			
14.20	12.54	.21	1.71	SILTY CLAY TO CLAY	CL-CH	.57	4	.887	13.5			
14.40	38.57	.23	.60	SANDY SILT TO CLAYEY SILT	ML-MH	.72	7	2.803	13.5	42	34	.15
14.60	102.90	.14	.13	SAND TO SILTY SAND	SM-SP	.88	12			68	39	.41
14.80	12.56	.21	1.68	SILTY CLAY TO CLAY	CL-CH	.59	4	.887	13.5			
15.00	5.91	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.45	1	.405	13.5			
15.20	6.34	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.46	1	.436	13.5			
15.40	10.43	.12	1.18	SENSITIVE FINE GRAINED	OL-CH	.46	2	.739	13.5			
15.60	6.64	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.47	1	.457	13.5			
15.80	3.94	.00	.01	SENSITIVE FINE GRAINED	OL-CH	.47	0	.256	13.5			
16.00	4.56	.01	.23	SENSITIVE FINE GRAINED	OL-CH	.48	1	.302	13.5			
16.20	4.39	.01	.25	SENSITIVE FINE GRAINED	OL-CH	.49	1	.289	13.5			



RESULT OF CONE PENETRATION TEST

11N

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

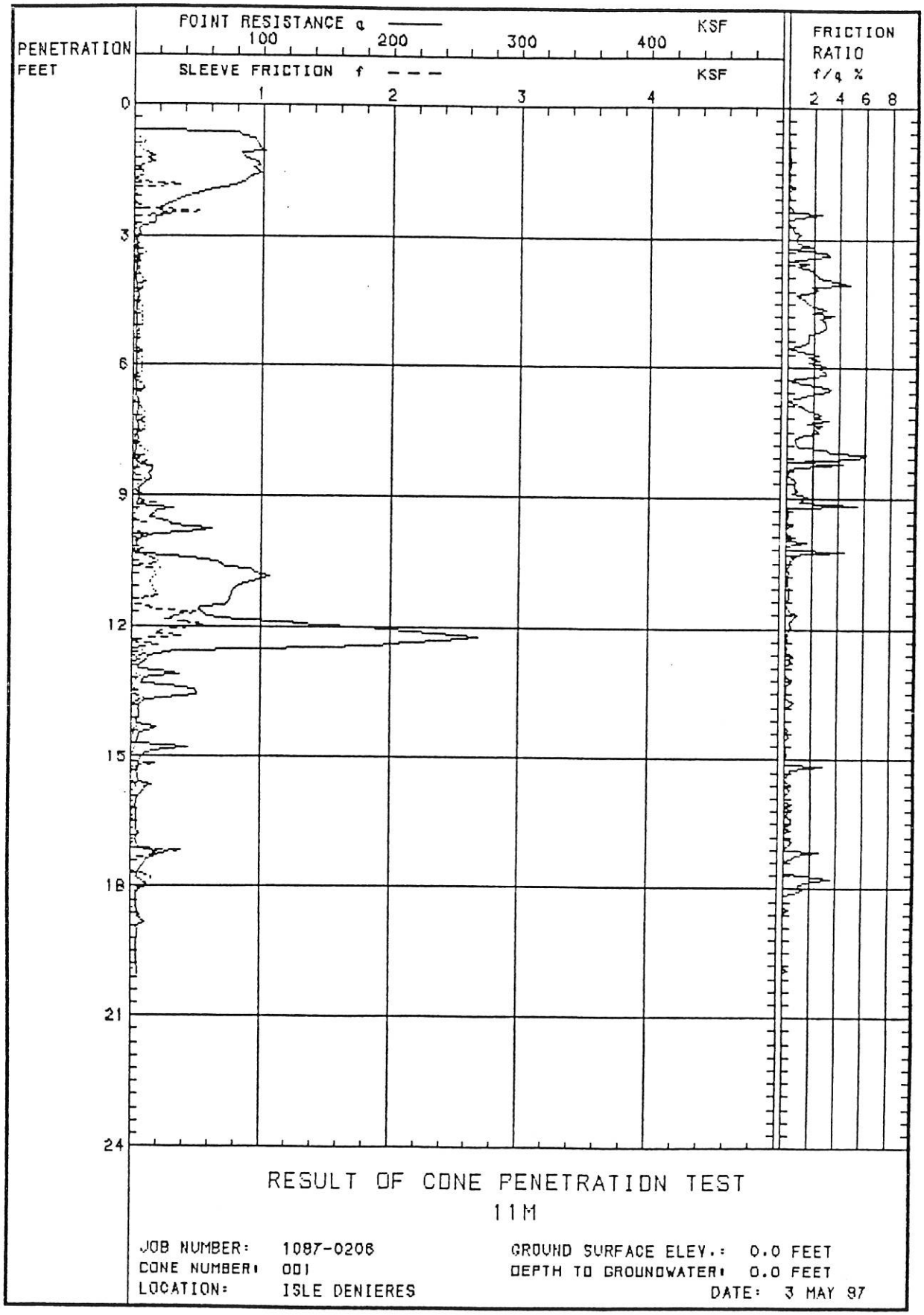
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 3 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 11N
CONE NO. : 001
DATE : 04/30/87

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	.74	.03	3.86	ORGANIC MATERIAL	OL-OH	.02	1	.053	13.5			
.80	6.40	.06	1.01	SENSITIVE FINE GRAINED	OL-CH	.02	1	.472	13.5			
1.00	10.82	.08	.78	SENSITIVE FINE GRAINED	OL-CH	.03	2	.799	13.5			
1.20	4.30	.01	.19	SENSITIVE FINE GRAINED	OL-CH	.04	1	.316	13.5			
1.40	8.37	.02	.25	SENSITIVE FINE GRAINED	OL-CH	.04	2	.617	13.5			
1.60	2.46	.05	2.18	ORGANIC MATERIAL	OL-OH	.05	1	.179	13.5			
1.80	2.46	.03	1.32	SENSITIVE FINE GRAINED	OL-CH	.05	0	.178	13.5			
2.00	3.20	.05	1.44	SENSITIVE FINE GRAINED	OL-CH	.06	0	.233	13.5			
2.20	2.21	.09	4.19	ORGANIC MATERIAL	OL-OH	.07	1	.159	13.5			
2.40	4.43	.12	2.65	CLAY	CH	.10	2	.321	13.5			
2.60	2.71	.08	3.02	ORGANIC MATERIAL	OL-OH	.08	1	.195	13.5			
2.80	3.20	.12	3.71	CLAY	CH	.11	1	.228	13.5			
3.00	2.46	.07	2.88	ORGANIC MATERIAL	OL-OH	.09	1	.176	13.5			
3.20	2.46	.02	.90	SENSITIVE FINE GRAINED	OL-CH	.10	0	.175	13.5			
3.40	4.55	.05	1.09	SENSITIVE FINE GRAINED	OL-CH	.10	1	.329	13.5			
3.60	4.31	.03	.79	SENSITIVE FINE GRAINED	OL-CH	.11	1	.311	13.5			
3.80	1.97	.07	3.59	ORGANIC MATERIAL	OL-OH	.11	1	.137	13.5			
4.00	.99	.07	7.23	ORGANIC MATERIAL	OL-OH	.12	1	.064	13.5			
4.20	1.47	.11	7.19	ORGANIC MATERIAL	OL-OH	.13	1	.100	13.5			
4.40	2.95	.08	2.84	CLAY	CH	.13	1	.206	13.5			
4.60	2.21	.05	2.08	ORGANIC MATERIAL	OL-OH	.14	1	.154	13.5			
4.80	2.22	.07	3.18	ORGANIC MATERIAL	OL-OH	.14	1	.153	13.5			
5.00	2.21	.05	2.10	ORGANIC MATERIAL	OL-OH	.15	1	.153	13.5			
5.20	1.72	.07	4.10	ORGANIC MATERIAL	OL-OH	.16	1	.116	13.5			
5.40	3.92	.12	3.02	CLAY	CH	.22	1	.274	13.5			
5.60	3.94	.08	2.07	SENSITIVE FINE GRAINED	OL-CH	.17	0	.279	13.5			
5.80	3.20	.01	.38	SENSITIVE FINE GRAINED	OL-CH	.17	0	.224	13.5			
6.00	4.92	.12	2.50	CLAY	CH	.24	2	.347	13.5			
6.20	3.69	.17	4.50	CLAY	CH	.25	1	.255	13.5			
6.40	3.93	.08	2.09	SENSITIVE FINE GRAINED	OL-CH	.19	0	.277	13.5			
6.60	3.69	.10	2.84	CLAY	CH	.26	1	.254	13.5			
6.80	3.69	.10	2.58	CLAY	CH	.27	1	.253	13.5			
7.00	6.76	.20	2.98	CLAY	CH	.28	3	.490	13.5			
7.20	9.61	.09	.97	SENSITIVE FINE GRAINED	OL-CH	.22	2	.696	13.5			
7.40	7.00	.19	2.58	CLAY	CH	.30	3	.497	13.5			
7.60	28.00	.21	.73	SANDY SILT TO CLAYEY SILT	ML-MH	.38	5	2.046	13.5	48	33	.16
7.80	45.72	.19	.42	SILTY SAND TO SANDY SILT	SM-ML	.43	7			60	36	.21
8.00	58.14	.29	.49	SILTY SAND TO SANDY SILT	SM-ML	.44	9			65	37	.32
8.20	81.37	.21	.26	SAND TO SILTY SAND	SM-SP	.49	9			72	39	.50+
8.40	90.65	.84	.92	SILTY SAND TO SANDY SILT	SM-ML	.46	14			77	39	.50+
8.60	111.89	.28	.25	SAND TO SILTY SAND	SM-SP	.52	13			82	40	.50+
8.80	102.64	.52	.51	SAND TO SILTY SAND	SM-SP	.53	12			79	40	.50+
9.00	74.82	.16	.22	SAND TO SILTY SAND	SM-SP	.54	8			68	39	.43
9.20	92.08	.27	.30	SAND TO SILTY SAND	SM-SP	.55	11			74	40	.50+
9.40	75.01	.18	.24	SAND TO SILTY SAND	SM-SP	.56	8			67	39	.40

9.60	78.71	.17	.21	SAND TO SILTY SAND	SM-SP	.58	9			69	39	.44
9.80	81.90	.26	.32	SAND TO SILTY SAND	SM-SP	.59	9			67	39	.48
10.00	71.78	.14	.20	SILTY SAND TO SANDY SILT	SM-ML	.55	11			66	37	.37
10.20	77.95	.25	.32	SAND TO SILTY SAND	SM-SP	.61	9			67	39	.37
10.40	82.01	.36	.44	SAND TO SILTY SAND	SM-SP	.62	9			68	39	.42
10.60	89.47	.24	.26	SAND TO SILTY SAND	SM-SP	.64	10			70	39	.50+
10.80	180.31	1.11	.62	SAND TO SILTY SAND	SM-SP	.65	21			94	42	.50+
11.00	213.63	.59	.28	SAND	SW-SP	.71	20			99	44	.50+
11.20	215.97	.43	.20	SAND	SW-SP	.73	20			99	44	.50+
11.40	188.85	.35	.18	SAND	SW-SP	.74	18			93	44	.50+
11.60	198.32	.33	.17	SAND	SW-SP	.75	18			94	44	.50+
11.80	147.27	.67	.45	SAND TO SILTY SAND	SM-SP	.71	17			85	41	.50+
12.00	82.69	.18	.22	SAND TO SILTY SAND	SM-SP	.72	9			65	39	.32
12.20	80.06	.38	.47	SILTY SAND TO SANDY SILT	SM-ML	.67	12			65	37	.34
12.40	63.53	.65	1.03	SILTY SAND TO SANDY SILT	SM-ML	.68	10			60	36	.21
12.60	119.88	.05	.05	SAND TO SILTY SAND	SM-SP	.76	14			77	40	.50+
12.80	130.34	.48	.37	SAND TO SILTY SAND	SM-SP	.77	15			80	40	.50+
13.00	71.35	.46	.65	SILTY SAND TO SANDY SILT	SM-ML	.71	11			62	37	.24
13.20	79.38	.09	.11	SAND TO SILTY SAND	SM-SP	.79	9			62	38	.26
13.40	91.09	.19	.21	SAND TO SILTY SAND	SM-SP	.80	10			66	39	.34
13.60	104.87	.23	.22	SAND TO SILTY SAND	SM-SP	.82	12			70	39	.50+
13.80	86.52	.50	.58	SILTY SAND TO SANDY SILT	SM-ML	.76	13			66	37	.33
14.00	40.57	.10	.24	SILTY SAND TO SANDY SILT	SM-ML	.77	6			41	34	.15
14.20	17.57	.11	.65	SENSITIVE FINE GRAINED	OL-CH	.43	4	1.270	13.5			
14.40	74.82	.10	.13	SAND TO SILTY SAND	SM-SP	.86	8			59	38	.21
14.60	74.67	.00	.01	SAND TO SILTY SAND	SM-SP	.88	8			59	38	.21
14.80	15.19	.29	1.91	SILTY CLAY TO CLAY	CL-CH	.59	4	1.082	13.5			
15.00	161.27	1.64	1.02	SAND TO SILTY SAND	SM-SP	.90	19			83	40	.50+
15.20	429.54	2.41	.56	SAND	SW-SP	.99	41			100+	44	.50+
15.40	277.33	.66	.24	SAND	SW-SP	1.00	26			100+	44	.50+
15.60	191.21	1.95	1.02	SAND TO SILTY SAND	SM-SP	.94	22			87	41	.50+
15.80	118.82	.16	.14	SAND TO SILTY SAND	SM-SP	.95	14			71	39	.50+
16.00	23.04	.16	.70	SANDY SILT TO CLAYEY SILT	ML-MH	.80	4	1.648	13.5	22	31	.12
16.20	8.88	.08	.90	SENSITIVE FINE GRAINED	OL-CH	.49	2	.622	13.5			
16.40	4.92	.10	2.09	SENSITIVE FINE GRAINED	OL-CH	.49	1	.328	13.5			
16.60	5.17	.09	1.76	SENSITIVE FINE GRAINED	OL-CH	.50	1	.346	13.5			
16.80	5.54	.05	.90	SENSITIVE FINE GRAINED	OL-CH	.50	1	.373	13.5			
17.00	5.15	.09	1.78	SENSITIVE FINE GRAINED	OL-CH	.51	1	.343	13.5			
17.20	5.90	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.52	1	.399	13.5			
17.40	4.92	.03	.62	SENSITIVE FINE GRAINED	OL-CH	.52	1	.326	13.5			
17.60	22.50	.03	.14	SANDY SILT TO CLAYEY SILT	ML-MH	.88	4	1.602	13.5	20	31	.11
17.80	7.85	.04	.49	SENSITIVE FINE GRAINED	OL-CH	.53	1	.542	13.5			
18.00	12.76	.32	2.47	SILTY CLAY TO CLAY	CL-CH	.72	4	.892	13.5			
18.20	45.79	.37	.81	SANDY SILT TO CLAYEY SILT	ML-MH	.91	8	3.324	13.5	41	34	.15
18.40	42.09	.04	.09	SILTY SAND TO SANDY SILT	SM-ML	1.01	6			35	33	.14
18.60	8.85	.06	.67	SENSITIVE FINE GRAINED	OL-CH	.56	2	.615	13.5			
18.80	12.95	.03	.23	SENSITIVE FINE GRAINED	OL-CH	.56	3	.918	13.5			
19.00	6.89	.03	.44	SENSITIVE FINE GRAINED	OL-CH	.57	1	.448	13.5			



RESULT OF CONE PENETRATION TEST

11M

JOB NUMBER: 1087-0208
CONE NUMBER: 001
LOCATION: ISLE DENIERES

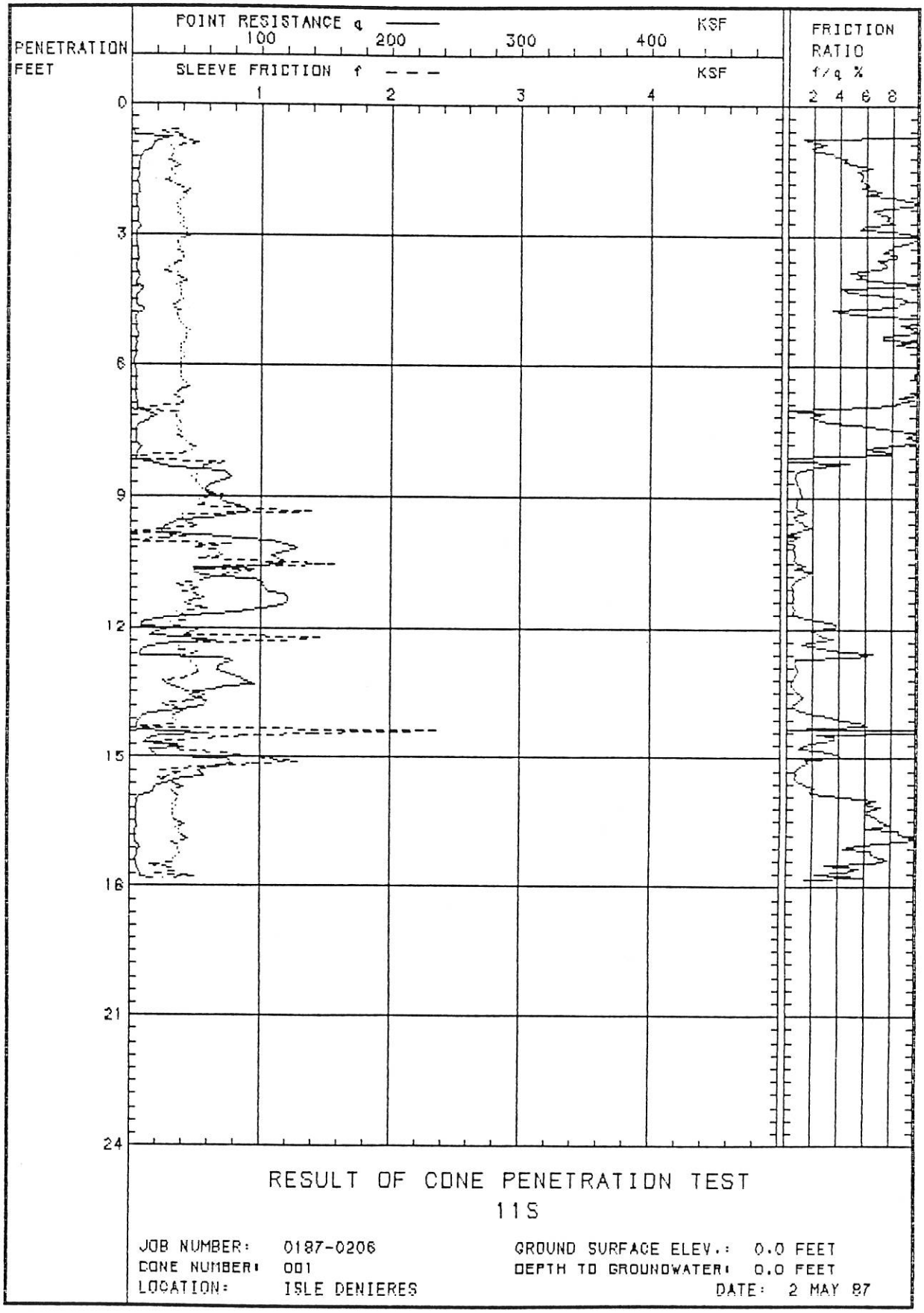
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 3 MAY 97

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

PROJECT NO. : 01870206
BORING NO. : 11M
CONE NO. : 001
DATE : 04/30/87

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	40.58	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.03	6			77	39	.50+
.80	94.70	.04	.04	SAND TO SILTY SAND	SM-SP	.05	11			100+	42	.50+
1.00	99.37	.00	.00	SAND TO SILTY SAND	SM-SP	.06	11			100+	42	.50+
1.20	86.58	.10	.11	SAND TO SILTY SAND	SM-SP	.07	10			100+	42	.50+
1.40	95.19	.04	.05	SAND TO SILTY SAND	SM-SP	.08	11			100+	42	.50+
1.60	94.33	.11	.12	SAND TO SILTY SAND	SM-SP	.10	11			100+	42	.50+
1.80	82.16	.22	.27	SAND TO SILTY SAND	SM-SP	.11	9			100+	42	.50+
2.00	52.65	.38	.72	SILTY SAND TO SANDY SILT	SM-ML	.11	8			79	39	.50+
2.20	33.21	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.12	5			66	37	.50+
2.40	19.92	.29	1.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.11	4	1.468	13.5			
2.60	16.97	.01	.06	SENSITIVE FINE GRAINED	OL-CH	.09	4	1.251	13.5			
2.80	5.66	.02	.35	SENSITIVE FINE GRAINED	OL-CH	.08	1	.413	13.5			
3.00	4.18	.01	.26	SENSITIVE FINE GRAINED	OL-CH	.09	1	.303	13.5			
3.20	2.46	.02	.94	SENSITIVE FINE GRAINED	OL-CH	.10	0	.175	13.5			
3.40	3.20	.08	2.54	CLAY	CH	.14	1	.227	13.5			
3.60	2.95	.03	1.15	SENSITIVE FINE GRAINED	OL-CH	.11	0	.211	13.5			
3.80	2.21	.05	2.10	ORGANIC MATERIAL	OL-OH	.11	1	.156	13.5			
4.00	1.97	.06	2.99	ORGANIC MATERIAL	OL-OH	.12	1	.137	13.5			
4.20	3.20	.07	2.16	SENSITIVE FINE GRAINED	OL-CH	.13	0	.227	13.5			
4.40	3.69	.05	1.24	SENSITIVE FINE GRAINED	OL-CH	.13	0	.264	13.5			
4.60	2.46	.05	1.86	ORGANIC MATERIAL	OL-OH	.14	1	.172	13.5			
4.80	2.46	.07	2.85	ORGANIC MATERIAL	OL-OH	.11	1	.171	13.5			
5.00	2.46	.07	2.86	ORGANIC MATERIAL	OL-OH	.15	1	.171	13.5			
5.20	2.46	.05	1.85	ORGANIC MATERIAL	OL-OH	.16	1	.170	13.5			
5.40	2.95	.05	1.56	SENSITIVE FINE GRAINED	OL-CH	.16	0	.207	13.5			
5.60	2.21	.02	.78	ORGANIC MATERIAL	OL-OH	.17	1	.151	13.5			
5.80	2.95	.06	1.95	SENSITIVE FINE GRAINED	OL-CH	.17	0	.206	13.5			
6.00	2.70	.07	2.64	CLAY	CH	.24	1	.182	13.5			
6.20	2.46	.05	2.13	ORGANIC MATERIAL	OL-OH	.19	1	.168	13.5			
6.40	2.46	.05	1.85	ORGANIC MATERIAL	OL-OH	.19	1	.168	13.5			
6.60	2.83	.09	2.68	CLAY	CH	.26	1	.196	13.5			
6.80	3.69	.01	.27	SENSITIVE FINE GRAINED	OL-CH	.23	0	.258	13.5			
7.00	4.18	.05	1.11	SENSITIVE FINE GRAINED	OL-CH	.21	1	.294	13.5			
7.20	3.20	.08	2.54	CLAY	CH	.29	1	.216	13.5			
7.40	3.93	.05	1.21	SENSITIVE FINE GRAINED	OL-CH	.22	0	.275	13.5			
7.60	3.20	.04	1.23	SENSITIVE FINE GRAINED	OL-CH	.23	0	.220	13.5			
7.80	2.96	.02	.73	SENSITIVE FINE GRAINED	OL-CH	.23	0	.202	13.5			
8.00	2.47	.07	2.90	ORGANIC MATERIAL	OL-OH	.24	1	.165	13.5			
8.20	1.96	.05	2.70	ORGANIC MATERIAL	OL-OH	.25	1	.127	13.5			
8.40	15.00	.02	.12	SENSITIVE FINE GRAINED	OL-CH	.25	3	1.093	13.5			
8.60	13.89	.07	.49	SENSITIVE FINE GRAINED	OL-CH	.26	3	1.010	13.5			
8.80	6.41	.04	.69	SENSITIVE FINE GRAINED	OL-CH	.26	1	.455	13.5			
9.00	4.67	.07	1.47	SENSITIVE FINE GRAINED	OL-CH	.27	1	.326	13.5			
9.20	3.44	.10	2.77	CLAY	CH	.37	1	.229	13.5			

9.40	18.10	.03	.15	SENSITIVE FINE GRAINED	OL-CH	.28	4	1.220	13.5		
9.60	25.77	.08	.33	SANDY SILT TO CLAYEY SILT	ML-MH	.48	4	1.873	13.5	41	34	.14
9.80	52.28	.02	.05	SILTY SAND TO SANDY SILT	SM-ML	.54	8			59	36	.21
10.00	6.92	.03	.50	SENSITIVE FINE GRAINED	OL-CH	.30	1	.491	13.5			
10.20	2.22	.04	1.97	ORGANIC MATERIAL	OL-CH	.31	1	.142	13.5			
10.40	27.03	.03	.12	SANDY SILT TO CLAYEY SILT	ML-MH	.52	5	1.963	13.5	40	31	.11
10.60	70.57	.06	.09	SAND TO SILTY SAND	SM-SP	.64	8			63	35	.27
10.80	100.75	.18	.18	SAND TO SILTY SAND	SM-SP	.65	12			78	40	.50+
11.00	91.06	.15	.16	SAND TO SILTY SAND	SM-SP	.66	10			70	35	.50+
11.20	78.35	.18	.23	SAND TO SILTY SAND	SM-SP	.67	9			65	29	.32
11.40	75.77	.05	.07	SAND TO SILTY SAND	SM-SP	.68	9			64	39	.25
11.60	52.65	.17	.32	SILTY SAND TO SANDY SILT	SM-ML	.64	8			54	35	.19
11.80	70.62	.31	.43	SILTY SAND TO SANDY SILT	SM-ML	.65	11			63	37	.27
12.00	160.92	.48	.30	SAND TO SILTY SAND	SM-SP	.72	19			87	41	.50+
12.20	260.09	.29	.11	SAND	SW-SP	.79	24			100+	44	.50+
12.40	201.43	.10	.05	SAND	SW-SP	.81	19			93	44	.50+
12.60	27.42	.10	.36	SANDY SILT TO CLAYEY SILT	ML-MH	.63	5	1.985	13.5	34	33	.13
12.80	10.84	.03	.32	SENSITIVE FINE GRAINED	OL-CH	.38	2	.775	13.5			
13.00	13.25	.01	.08	SENSITIVE FINE GRAINED	OL-CH	.39	3	.953	13.5			
13.20	11.37	.04	.37	SENSITIVE FINE GRAINED	OL-CH	.40	2	.813	13.5			
13.40	38.29	.02	.05	SILTY SAND TO SANDY SILT	SM-ML	.74	6			41	34	.15
13.60	38.38	.05	.13	SILTY SAND TO SANDY SILT	SM-ML	.75	6			41	34	.15
13.80	6.65	.01	.15	SENSITIVE FINE GRAINED	OL-CH	.41	1	.462	13.5			
14.00	6.02	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.42	1	.415	13.5			
14.20	3.68	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.43	0	.241	13.5			
14.40	12.15	.01	.08	SENSITIVE FINE GRAINED	OL-CH	.43	2	.868	13.5			
14.60	4.68	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.44	1	.314	13.5			
14.80	35.37	.02	.06	SILTY SAND TO SANDY SILT	SM-ML	.81	5			35	33	.14
15.00	8.26	.00	.05	SENSITIVE FINE GRAINED	OL-CH	.45	1	.578	13.5			
15.20	5.91	.11	1.79	SENSITIVE FINE GRAINED	OL-CH	.46	1	.404	13.5			
15.40	4.67	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.46	1	.312	13.5			
15.60	10.95	.07	.62	SENSITIVE FINE GRAINED	OL-CH	.47	2	.776	13.5			
15.80	9.12	.01	.06	SENSITIVE FINE GRAINED	OL-CH	.47	2	.640	13.5			
16.00	3.94	.01	.26	SENSITIVE FINE GRAINED	OL-CH	.48	0	.256	13.5			
16.20	3.68	.08	2.20	SENSITIVE FINE GRAINED	OL-CH	.49	0	.237	13.5			
16.40	3.94	.01	.38	SENSITIVE FINE GRAINED	OL-CH	.49	0	.255	13.5			
16.60	4.19	.01	.21	SENSITIVE FINE GRAINED	OL-CH	.50	1	.273	13.5			
16.80	5.45	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.50	1	.366	13.5			
17.00	4.67	.02	.41	SENSITIVE FINE GRAINED	OL-CH	.51	1	.308	13.5			
17.20	18.83	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.52	4	1.757	13.5			
17.40	12.07	.01	.06	SENSITIVE FINE GRAINED	OL-CH	.52	2	.855	13.5			
17.60	6.91	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.53	1	.473	13.5			
17.80	5.74	.15	2.59	CLAY	CH	.71	2	.373	13.5			
18.00	9.93	.12	1.17	SENSITIVE FINE GRAINED	OL-CH	.54	2	.696	13.5			
18.20	4.43	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.55	1	.298	13.5			
18.40	4.43	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.55	1	.297	13.5			
18.60	5.88	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.56	1	.394	13.5			
18.80	9.80	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.56	2	.684	13.5			
19.00	4.67	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.57	1	.303	13.5			
19.20	4.80	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.58	1	.313	13.5			
19.40	4.43	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.58	1	.285	13.5			
19.60	4.43	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.59	1	.284	13.5			
19.80	4.43	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.59	1	.284	13.5			
20.00	4.92	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.60	1	.329	13.5			



RESULT OF CONE PENETRATION TEST

11S

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

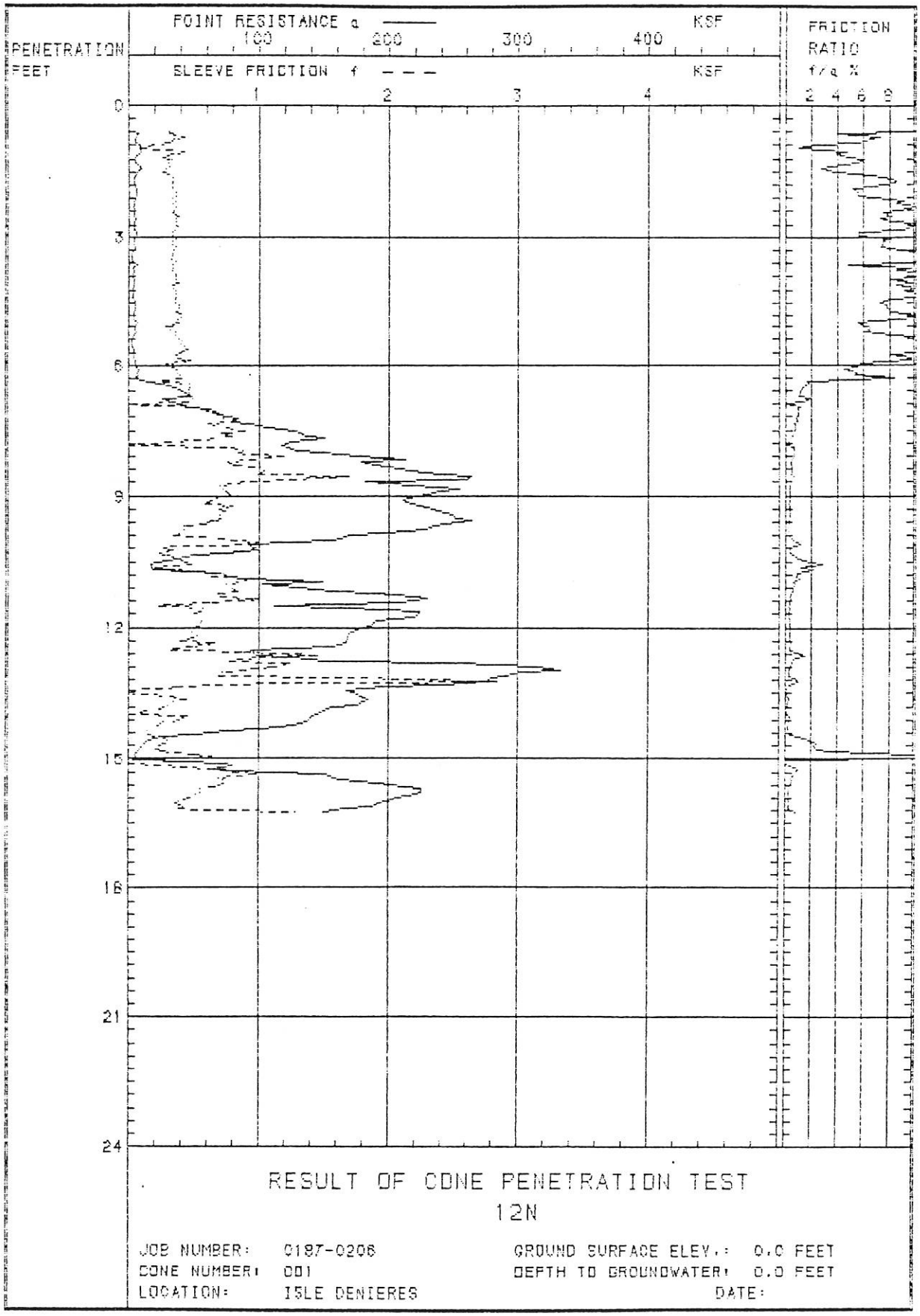
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 11S
CONE NO. : 001
DATE : 04/30/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	2.21	.30	13.45	ORGANIC MATERIAL	OL-OH	.02	1	.163	13.5			
.80	26.57	.42	1.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.04	6	1.965	13.5			
1.00	16.23	.38	2.31	SILTY CLAY TO CLAY	CL-CH	.04	5	1.200	13.5			
1.20	7.87	.32	4.07	CLAY	CH	.05	3	.580	13.5			
1.40	6.15	.37	5.99	CLAY	CH	.06	2	.451	13.5			
1.60	5.66	.35	6.11	ORGANIC MATERIAL	OL-OH	.05	2	.415	13.5			
1.80	4.92	.35	7.06	ORGANIC MATERIAL	OL-OH	.05	2	.360	13.5			
2.00	6.64	.43	6.46	CLAY	CH	.08	3	.486	13.5			
2.20	3.94	.39	9.98	ORGANIC MATERIAL	OL-OH	.07	1	.287	13.5			
2.40	5.66	.37	6.52	ORGANIC MATERIAL	OL-OH	.07	2	.414	13.5			
2.60	5.16	.39	7.59	ORGANIC MATERIAL	OL-OH	.08	2	.377	13.5			
2.80	6.89	.39	5.70	CLAY	CH	.11	3	.502	13.5			
3.00	4.43	.44	9.98	ORGANIC MATERIAL	OL-OH	.09	2	.321	13.5			
3.20	4.18	.36	8.53	ORGANIC MATERIAL	OL-OH	.10	2	.303	13.5			
3.40	4.92	.38	7.73	ORGANIC MATERIAL	OL-OH	.10	2	.357	13.5			
3.60	5.54	.39	6.99	ORGANIC MATERIAL	OL-OH	.11	2	.402	13.5			
3.80	4.92	.31	6.27	ORGANIC MATERIAL	OL-OH	.11	2	.356	13.5			
4.00	6.15	.39	6.39	ORGANIC MATERIAL	OL-OH	.12	2	.447	13.5			
4.20	6.87	.37	5.34	CLAY	CH	.17	3	.497	13.5			
4.40	4.67	.38	8.15	ORGANIC MATERIAL	OL-OH	.13	2	.337	13.5			
4.60	4.18	.35	8.43	ORGANIC MATERIAL	OL-OH	.14	2	.300	13.5			
4.80	7.64	.37	4.85	CLAY	CH	.19	3	.552	13.5			
5.00	3.93	.36	9.12	ORGANIC MATERIAL	OL-OH	.15	1	.280	13.5			
5.20	4.43	.44	9.94	ORGANIC MATERIAL	OL-OH	.16	2	.316	13.5			
5.40	5.17	.43	8.30	ORGANIC MATERIAL	OL-OH	.16	2	.371	13.5			
5.60	3.69	.38	10.34	ORGANIC MATERIAL	OL-OH	.17	1	.261	13.5			
5.80	3.69	.41	11.01	ORGANIC MATERIAL	OL-OH	.17	1	.261	13.5			
6.00	3.20	.38	11.98	ORGANIC MATERIAL	OL-OH	.18	1	.223	13.5			
6.20	3.94	.38	9.70	ORGANIC MATERIAL	OL-OH	.19	1	.278	13.5			
6.40	3.94	.42	10.61	ORGANIC MATERIAL	OL-OH	.19	1	.277	13.5			
6.60	3.69	.38	10.34	ORGANIC MATERIAL	OL-OH	.20	1	.259	13.5			
6.80	4.42	.39	8.87	ORGANIC MATERIAL	OL-OH	.20	2	.312	13.5			
7.00	5.65	.08	1.47	SENSITIVE FINE GRAINED	OL-CH	.21	1	.403	13.5			
7.20	18.22	.35	1.93	CLAYEY SILT TO SILTY CLAY	MH-CL	.32	4	1.326	13.5			
7.40	6.16	.37	6.00	CLAY	CH	.30	2	.435	13.5			
7.60	3.94	.39	9.84	ORGANIC MATERIAL	OL-OH	.23	1	.275	13.5			
7.80	5.40	.44	8.13	ORGANIC MATERIAL	OL-OH	.23	2	.383	13.5			
8.00	5.66	.40	6.98	ORGANIC MATERIAL	OL-OH	.24	2	.401	13.5			
8.20	9.78	.35	3.62	CLAY	CH	.33	4	.700	13.5			
8.40	52.41	.56	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	.42	10	3.851	13.5	63	37	.27
8.60	74.93	.48	.64	SILTY SAND TO SANDY SILT	SM-ML	.47	11			71	39	.50+
8.80	59.04	.54	.91	SILTY SAND TO SANDY SILT	SM-ML	.48	9			64	37	.28
9.00	65.61	.58	.89	SILTY SAND TO SANDY SILT	SM-ML	.49	10			66	37	.35
9.20	79.89	.57	.71	SILTY SAND TO SANDY SILT	SM-ML	.51	12			71	39	.50+
9.40	85.19	.90	1.06	SILTY SAND TO SANDY SILT	SM-ML	.52	13			73	38	.50+

9.60	34.47	.43	1.26	SANDY SILT TO CLAYEY SILT	ML-MH	.48	6	2.518	13.5	48	35	.16
9.80	24.85	.13	.52	SANDY SILT TO CLAYEY SILT	ML-MH	.49	4	1.805	13.5	40	34	.14
10.00	97.48	.12	.13	SAND TO SILTY SAND	SM-SP	.60	11			74	40	.50+
10.20	127.19	.57	.45	SAND TO SILTY SAND	SM-SP	.61	15			83	41	.50+
10.40	111.01	.62	.56	SAND TO SILTY SAND	SM-SP	.62	13			78	40	.50+
10.60	98.26	1.42	1.44	SILTY SAND TO SANDY SILT	SM-ML	.58	15			75	39	.50+
10.80	57.18	.70	1.22	SANDY SILT TO CLAYEY SILT	ML-MH	.54	10	4.196	13.5	61	37	.23
11.00	101.84	.18	.18	SAND TO SILTY SAND	SM-SP	.66	12			74	39	.50+
11.20	112.31	.52	.46	SAND TO SILTY SAND	SM-SP	.67	13			77	40	.50+
11.40	120.77	.46	.38	SAND TO SILTY SAND	SM-SP	.68	14			79	40	.50+
11.60	90.92	.55	.60	SAND TO SILTY SAND	SM-SP	.70	10			69	39	.46
11.80	21.05	.43	2.02	CLAYEY SILT TO SILTY CLAY	MH-CL	.53	5	1.520	13.5			
12.00	19.73	.32	1.62	CLAYEY SILT TO SILTY CLAY	MH-CL	.54	4	1.421	13.5			
12.20	27.91	1.00	3.57	SILTY CLAY TO CLAY	CL-CH	.49	8	2.031	13.5			
12.40	24.78	.39	1.57	CLAYEY SILT TO SILTY CLAY	MH-CL	.56	5	1.794	13.5			
12.60	7.87	.46	5.90	CLAY	CH	.50	3	.546	13.5			
12.80	76.55	.47	.61	SILTY SAND TO SANDY SILT	SM-ML	.70	12			64	37	.28
13.00	69.56	1.19	1.72	SANDY SILT TO CLAYEY SILT	ML-MH	.65	13	5.104	13.5	63	37	.26
13.20	86.54	.35	.40	SAND TO SILTY SAND	SM-SP	.79	10			65	39	.31
13.40	68.61	.37	.54	SILTY SAND TO SANDY SILT	SM-ML	.74	10			60	37	.22
13.60	49.19	.46	.94	SANDY SILT TO CLAYEY SILT	ML-MH	.68	9	3.593	13.5	50	35	.17
13.80	56.83	.36	.63	SILTY SAND TO SANDY SILT	SM-ML	.76	9			52	35	.18
14.00	12.85	.37	2.87	CLAY	CH	.56	6	.910	13.5			
14.20	5.91	.34	5.82	CLAY	CH	.57	2	.396	13.5			
14.40	33.12	1.34	4.03	SILTY CLAY TO CLAY	CL-CH	.58	10	2.411	13.5			
14.60	12.89	.34	2.63	SILTY CLAY TO CLAY	CL-CH	.58	4	.911	13.5			
14.80	28.58	.40	1.39	SANDY SILT TO CLAYEY SILT	ML-MH	.74	5	2.062	13.5	30	32	.13
15.00	47.86	.67	1.39	SANDY SILT TO CLAYEY SILT	ML-MH	.75	9	3.490	13.5	47	35	.16
15.20	71.04	.44	.62	SILTY SAND TO SANDY SILT	SM-ML	.84	11			58	36	.21
15.40	56.66	.55	.97	SILTY SAND TO SANDY SILT	SM-ML	.85	9			49	35	.17
15.60	27.41	.37	1.34	SANDY SILT TO CLAYEY SILT	ML-MH	.78	5	1.973	13.5	27	32	.12
15.80	18.45	.34	1.86	CLAYEY SILT TO SILTY CLAY	MH-CL	.71	4	1.314	13.5			
16.00	5.65	.38	6.78	ORGANIC MATERIAL	OL-OH	.48	2	.383	13.5			
16.20	5.16	.34	6.68	ORGANIC MATERIAL	OL-OH	.49	2	.346	13.5			
16.40	4.92	.32	6.57	ORGANIC MATERIAL	OL-OH	.49	2	.328	13.5			
16.60	5.65	.36	6.31	ORGANIC MATERIAL	OL-OH	.50	2	.382	13.5			
16.80	4.43	.39	8.88	ORGANIC MATERIAL	OL-OH	.50	2	.291	13.5			
17.00	5.63	.35	6.29	ORGANIC MATERIAL	OL-OH	.51	2	.379	13.5			
17.20	5.90	.38	6.45	ORGANIC MATERIAL	OL-OH	.52	2	.399	13.5			
17.40	4.67	.32	6.90	ORGANIC MATERIAL	OL-OH	.52	2	.307	13.5			
17.60	6.86	.34	4.97	CLAY	CH	.70	3	.456	13.5			
17.80	13.39	.38	2.87	SILTY CLAY TO CLAY	CL-CH	.71	4	.939	13.5			



RESULT OF CONE PENETRATION TEST

12N

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

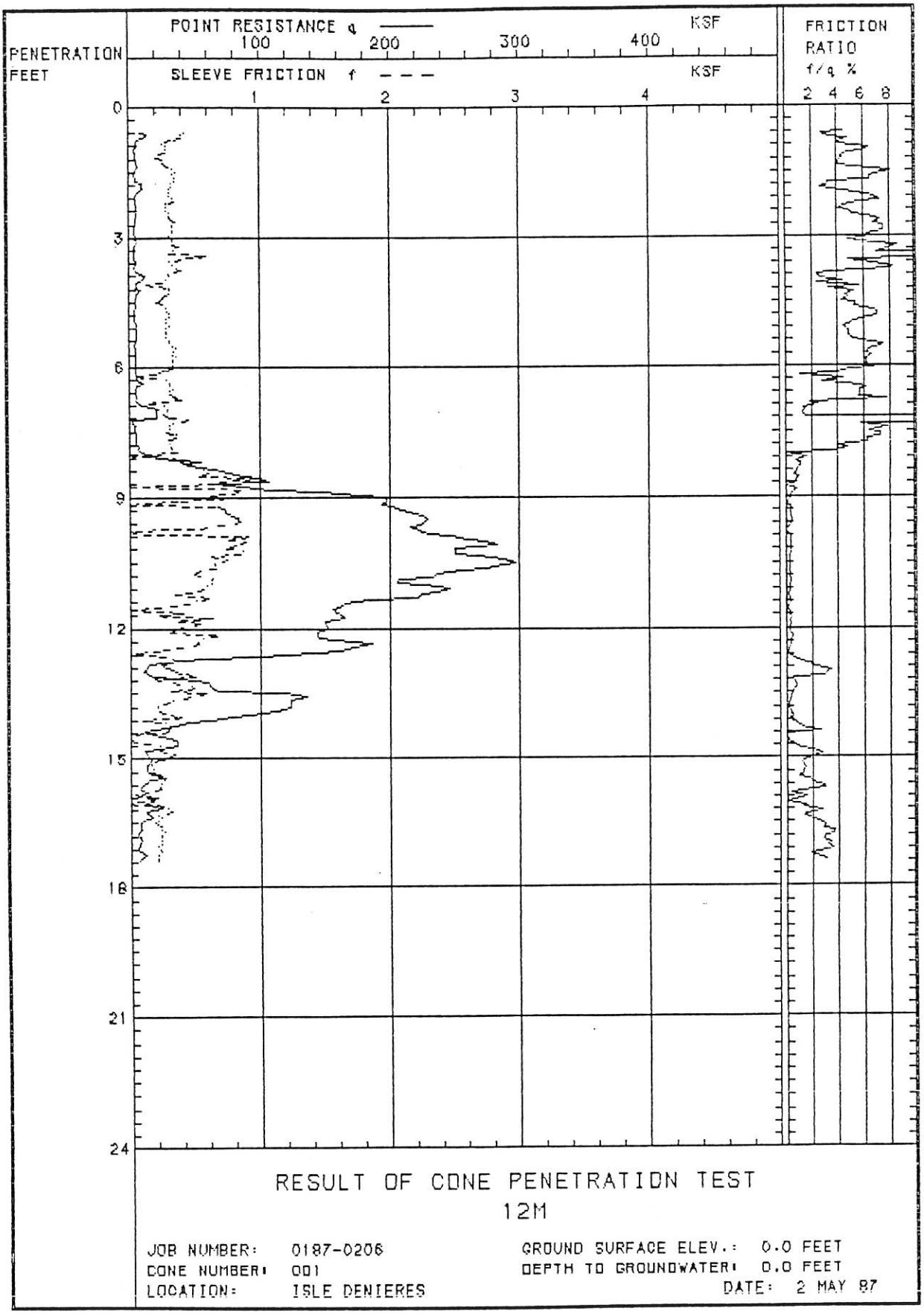
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE:

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

PROJECT NO. : 01870206
BORING NO. : 12N
CONE NO. : 001
DATE : 04/30/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	5.16	.31	5.96	ORGANIC MATERIAL	OL-OH	.02	2	.381	13.5			
.80	5.41	.33	6.08	ORGANIC MATERIAL	OL-OH	.02	2	.399	13.5			
1.00	9.22	.14	1.49	SENSITIVE FINE GRAINED	OL-CH	.03	2	.681	13.5			
1.20	5.41	.27	5.01	CLAY	CH	.05	2	.397	13.5			
1.40	9.59	.31	3.24	CLAY	CH	.06	4	.706	13.5			
1.60	5.04	.33	6.49	ORGANIC MATERIAL	OL-OH	.05	2	.370	13.5			
1.80	4.43	.32	7.27	ORGANIC MATERIAL	OL-OH	.05	2	.324	13.5			
2.00	6.40	.35	5.49	CLAY	CH	.08	3	.468	13.5			
2.20	3.94	.35	8.79	ORGANIC MATERIAL	OL-OH	.07	1	.287	13.5			
2.40	4.18	.35	8.28	ORGANIC MATERIAL	OL-OH	.07	2	.304	13.5			
2.60	4.67	.36	7.65	ORGANIC MATERIAL	OL-OH	.08	2	.340	13.5			
2.80	3.94	.37	9.35	ORGANIC MATERIAL	OL-OH	.08	1	.285	13.5			
3.00	5.17	.35	6.68	ORGANIC MATERIAL	OL-OH	.09	2	.376	13.5			
3.20	4.67	.35	7.40	ORGANIC MATERIAL	OL-OH	.10	2	.339	13.5			
3.40	2.83	.33	11.80	ORGANIC MATERIAL	OL-OH	.10	1	.202	13.5			
3.60	4.91	.35	7.04	ORGANIC MATERIAL	OL-OH	.11	2	.356	13.5			
3.80	3.69	.34	9.22	ORGANIC MATERIAL	OL-OH	.11	1	.265	13.5			
4.00	4.18	.37	8.84	ORGANIC MATERIAL	OL-OH	.12	2	.301	13.5			
4.20	3.69	.35	9.41	ORGANIC MATERIAL	OL-OH	.13	1	.264	13.5			
4.40	3.69	.36	9.68	ORGANIC MATERIAL	OL-OH	.13	1	.263	13.5			
4.60	4.92	.38	7.75	ORGANIC MATERIAL	OL-OH	.14	2	.354	13.5			
4.80	4.18	.40	9.66	ORGANIC MATERIAL	OL-OH	.14	2	.299	13.5			
5.00	6.15	.36	5.80	CLAY	CH	.20	2	.441	13.5			
5.20	5.41	.38	7.09	ORGANIC MATERIAL	OL-OH	.16	2	.389	13.5			
5.40	2.71	.39	14.58	ORGANIC MATERIAL	OL-OH	.16	1	.189	13.5			
5.60	3.44	.44	12.84	ORGANIC MATERIAL	OL-OH	.17	1	.242	13.5			
5.80	4.18	.37	8.81	ORGANIC MATERIAL	OL-OH	.17	2	.297	13.5			
6.00	5.41	.31	5.66	CLAY	CH	.24	2	.383	13.5			
6.20	7.13	.37	5.21	CLAY	CH	.25	3	.510	13.5			
6.40	20.37	.43	2.13	CLAYEY SILT TO SILTY CLAY	MH-CL	.29	4	1.488	13.5			
6.60	40.81	.41	1.01	SANDY SILT TO CLAYEY SILT	ML-MH	.33	7	2.998	13.5	61	37	.23
6.80	29.18	.35	1.18	SANDY SILT TO CLAYEY SILT	ML-MH	.34	5	2.136	13.5	51	35	.17
7.00	55.02	.55	1.00	SILTY SAND TO SANDY SILT	SM-ML	.38	9			65	37	.35
7.20	79.64	.64	.80	SILTY SAND TO SANDY SILT	SM-ML	.40	12			76	39	.50+
7.40	99.73	.64	.64	SAND TO SILTY SAND	SM-SP	.44	11			81	40	.50+
7.60	134.03	.46	.34	SAND TO SILTY SAND	SM-SP	.46	16			91	41	.50+
7.80	121.37	.52	.43	SAND TO SILTY SAND	SM-SP	.47	14			87	41	.50+
8.00	138.36	.86	.62	SAND TO SILTY SAND	SM-SP	.48	16			91	41	.50+
8.20	195.87	1.36	.69	SAND TO SILTY SAND	SM-SP	.49	23			100+	42	.50+
8.40	207.50	1.03	.50	SAND	SW-SP	.55	19			100+	44	.50+
8.60	262.22	2.04	.78	SAND	SW-SP	.56	25			100+	44	.50+
8.80	236.45	.93	.39	SAND	SW-SP	.57	22			100+	44	.50+
9.00	225.73	.81	.36	SAND	SW-SP	.58	21			100+	44	.50+
9.20	220.22	.78	.35	SAND	SW-SP	.60	21			100+	44	.50+
9.40	243.68	.72	.30	SAND	SW-SP	.61	23			100+	44	.50+

9.60	253.61	.65	.25	SAND	SW-SP	.62	24			100+	44	.50+
9.80	213.71	.73	.34	SAND	SW-SP	.64	20			100+	44	.50+
10.00	160.17	.86	.54	SAND TO SILTY SAND	SM-SP	.60	19			92	41	.50+
10.20	97.87	.42	.43	SAND TO SILTY SAND	SM-SP	.61	11			74	40	.50+
10.40	44.12	.33	.75	SANDY SILT TO CLAYEY SILT	ML-MH	.52	8	3.230	13.5	54	36	.18
10.60	17.46	.46	2.66	SILTY CLAY TO CLAY	CL-CH	.42	5	1.262	13.5			
10.80	74.49	.64	.86	SILTY SAND TO SANDY SILT	SM-ML	.59	11			66	37	.35
11.00	126.67	1.14	.90	SAND TO SILTY SAND	SM-SP	.66	15			81	40	.50+
11.20	173.63	.77	.44	SAND TO SILTY SAND	SM-SP	.67	20			92	41	.50+
11.40	219.32	.89	.41	SAND	SW-SP	.74	21			99	44	.50+
11.60	195.44	.65	.33	SAND	SW-SP	.75	18			94	44	.50+
11.80	205.38	.61	.30	SAND	SW-SP	.77	19			95	44	.50+
12.00	183.31	.54	.30	SAND	SW-SP	.78	17			90	43	.50+
12.20	168.61	.49	.29	SAND	SW-SP	.79	16			87	43	.50+
12.40	162.93	.56	.34	SAND TO SILTY SAND	SM-SP	.74	19			87	41	.50+
12.60	96.71	1.25	1.30	SILTY SAND TO SANDY SILT	SM-ML	.69	15			71	39	.50+
12.80	201.51	1.01	.50	SAND	SW-SP	.83	19			92	44	.50+
13.00	318.07	.88	.28	SAND	SW-SP	.84	30			100+	44	.50+
13.20	277.47	2.37	.86	SAND	SW-SP	.86	26			100+	44	.50+
13.40	182.79	.09	.05	SAND	SW-SP	.87	17			87	43	.50+
13.60	181.72	.38	.21	SAND	SW-SP	.88	17			87	43	.50+
13.80	166.48	.29	.17	SAND	SW-SP	.90	15			84	43	.50+
14.00	143.81	.10	.07	SAND TO SILTY SAND	SM-SP	.84	17			81	40	.50+
14.20	132.92	.25	.19	SAND TO SILTY SAND	SM-SP	.85	15			78	40	.50+
14.40	63.85	.17	.27	SILTY SAND TO SANDY SILT	SM-ML	.79	10			56	36	.19
14.60	14.07	.29	2.08	SILTY CLAY TO CLAY	CL-CH	.58	4	.999	13.5			
14.80	8.13	.24	2.89	CLAY	CH	.59	3	.559	13.5			
15.00	7.83	.35	4.46	CLAY	CH	.60	3	.535	13.5			
15.20	72.49	.00	.00	SAND TO SILTY SAND	SM-SP	.91	8			56	38	.20
15.40	154.89	.92	.60	SAND TO SILTY SAND	SM-SP	.92	18			81	40	.50+
15.60	202.20	.70	.35	SAND	SW-SP	1.01	19			87	43	.50+
15.80	224.12	.43	.19	SAND	SW-SP	1.03	21			90	43	.50+
16.00	196.43	.39	.20	SAND	SW-SP	1.04	18			86	43	.50+
16.20	159.60	.83	.52	SAND TO SILTY SAND	SM-SP	.97	19			81	40	.50+



RESULT OF CONE PENETRATION TEST

12M

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

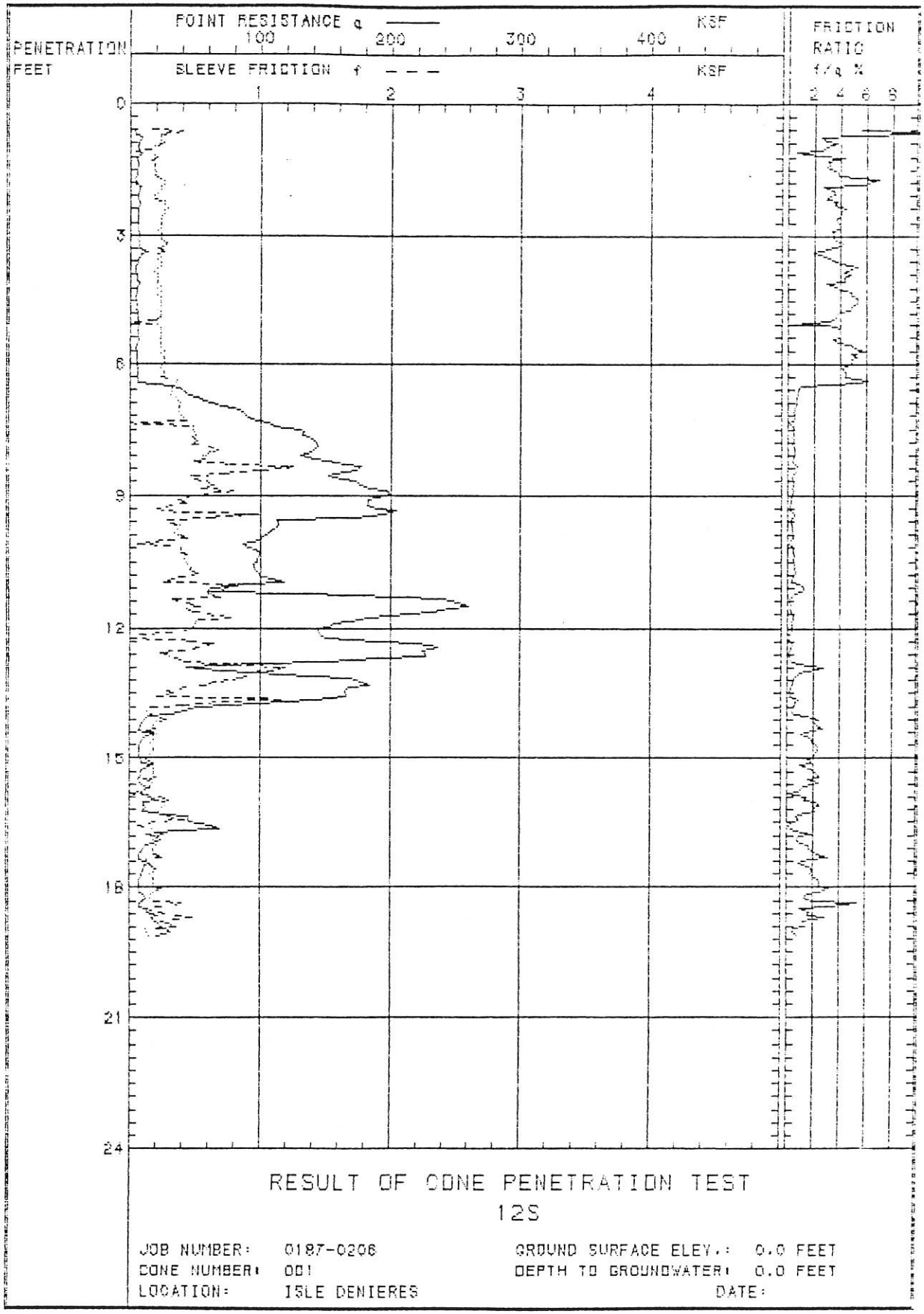
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 12M
CONE NO. : 001
DATE : 04/30/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	11.81	.41	3.50	CLAY	CH	.02	5	.873	13.5			
.80	6.64	.30	4.46	CLAY	CH	.03	3	.490	13.5			
1.00	4.67	.28	6.09	ORGANIC MATERIAL	OL-OH	.03	2	.344	13.5			
1.20	5.41	.23	4.34	CLAY	CH	.05	2	.397	13.5			
1.40	6.89	.32	4.66	CLAY	CH	.06	3	.506	13.5			
1.60	4.92	.34	6.96	ORGANIC MATERIAL	OL-OH	.05	2	.361	13.5			
1.80	10.08	.33	3.26	CLAY	CH	.07	4	.742	13.5			
2.00	5.91	.31	5.23	CLAY	CH	.08	2	.432	13.5			
2.20	4.92	.32	6.49	ORGANIC MATERIAL	OL-OH	.07	2	.360	13.5			
2.40	6.64	.29	4.36	CLAY	CH	.10	3	.485	13.5			
2.60	4.92	.33	6.76	ORGANIC MATERIAL	OL-OH	.08	2	.359	13.5			
2.80	4.43	.37	8.35	ORGANIC MATERIAL	OL-OH	.08	2	.322	13.5			
3.00	5.16	.33	6.44	ORGANIC MATERIAL	OL-OH	.09	2	.376	13.5			
3.20	4.67	.36	7.64	ORGANIC MATERIAL	OL-OH	.10	2	.339	13.5			
3.40	4.30	.33	7.74	ORGANIC MATERIAL	OL-OH	.10	2	.311	13.5			
3.60	5.66	.32	5.67	CLAY	CH	.14	2	.409	13.5			
3.80	6.88	.38	5.46	CLAY	CH	.15	3	.498	13.5			
4.00	8.38	.28	3.40	CLAY	CH	.16	4	.609	13.5			
4.20	7.37	.28	3.86	CLAY	CH	.17	3	.533	13.5			
4.40	5.53	.27	4.92	CLAY	CH	.18	2	.397	13.5			
4.60	5.16	.27	5.28	CLAY	CH	.18	2	.369	13.5			
4.80	4.43	.30	6.83	ORGANIC MATERIAL	OL-OH	.14	2	.317	13.5			
5.00	5.90	.30	5.01	CLAY	CH	.20	2	.422	13.5			
5.20	5.90	.28	4.81	CLAY	CH	.21	2	.422	13.5			
5.40	5.66	.31	5.46	CLAY	CH	.22	2	.403	13.5			
5.60	5.16	.34	6.68	ORGANIC MATERIAL	OL-OH	.17	2	.370	13.5			
5.80	5.41	.33	6.14	ORGANIC MATERIAL	OL-OH	.17	2	.388	13.5			
6.00	5.17	.33	6.43	ORGANIC MATERIAL	OL-OH	.18	2	.369	13.5			
6.20	5.66	.23	4.05	CLAY	CH	.25	2	.401	13.5			
6.40	8.63	.31	3.57	CLAY	CH	.26	4	.620	13.5			
6.60	5.41	.29	5.27	CLAY	CH	.26	2	.381	13.5			
6.80	6.57	.24	3.64	CLAY	CH	.27	3	.466	13.5			
7.00	21.90	.29	1.34	CLAYEY SILT TO SILTY CLAY	MH-CL	.31	5	1.599	13.5			
7.20	11.66	.38	3.27	CLAY	CH	.29	5	.842	13.5			
7.40	4.68	.31	6.60	ORGANIC MATERIAL	OL-OH	.22	2	.330	13.5			
7.60	4.92	.36	7.25	ORGANIC MATERIAL	OL-OH	.23	2	.348	13.5			
7.80	6.38	.30	4.65	CLAY	CH	.31	3	.449	13.5			
8.00	10.93	.08	.75	SENSITIVE FINE GRAINED	OL-CH	.24	2	.792	13.5			
8.20	48.05	.65	1.36	SANDY SILT TO CLAYEY SILT	ML-MH	.41	9	3.529	13.5	61	37	.24
8.40	70.78	.59	.83	SILTY SAND TO SANDY SILT	SM-ML	.46	11			69	38	.50+
8.60	103.01	.85	.82	SAND TO SILTY SAND	SM-SP	.52	12			80	40	.50+
8.80	97.88	.81	.83	SILTY SAND TO SANDY SILT	SM-ML	.48	15			79	39	.50+
9.00	187.54	.68	.36	SAND	SW-SP	.58	17			99	44	.50+
9.20	198.45	.18	.09	SAND	SW-SP	.60	19			100+	44	.50+
9.40	220.07	.74	.34	SAND	SW-SP	.61	21			100+	44	.50+

9.60	225.94	.87	.38	SAND	SW-SP	.62	21			100+	44	.50+
9.80	225.87	.19	.08	SAND	SW-SP	.64	21			100+	44	.50+
10.00	267.03	.57	.21	SAND	SW-SP	.65	25			100+	44	.50+
10.20	250.21	.93	.37	SAND	SW-SP	.66	23			100+	44	.50+
10.40	278.29	.69	.25	SAND	SW-SP	.68	26			100+	44	.50+
10.60	281.25	2.58	.92	SAND	SW-SP	.69	26			100+	44	.50+
10.80	235.18	.94	.40	SAND	SW-SP	.70	22			100+	44	.50+
11.00	216.02	1.84	.85	SAND TO SILTY SAND	SM-SP	.66	25			100+	42	.50+
11.20	230.92	.40	.17	SAND	SW-SP	.73	22			100+	44	.50+
11.40	175.54	.49	.28	SAND	SW-SP	.74	16			90	43	.50+
11.60	158.01	.06	.04	SAND	SW-SP	.75	15			86	43	.50+
11.80	158.04	.51	.32	SAND TO SILTY SAND	SM-SP	.71	18			87	41	.50+
12.00	152.01	.20	.13	SAND TO SILTY SAND	SM-SP	.72	18			85	41	.50+
12.20	145.11	.49	.34	SAND TO SILTY SAND	SM-SP	.73	17			84	41	.50+
12.40	179.93	.47	.26	SAND	SW-SP	.81	17			89	43	.50+
12.60	120.91	.11	.09	SAND TO SILTY SAND	SM-SP	.76	14			77	40	.50+
12.80	20.03	.27	1.34	CLAYEY SILT TO SILTY CLAY	MH-CL	.58	4	1.441	13.5			
13.00	11.53	.38	3.33	CLAY	CH	.52	5	.815	13.5			
13.20	49.35	.34	.70	SILTY SAND TO SANDY SILT	SM-ML	.73	7			49	35	.17
13.40	65.40	.35	.54	SILTY SAND TO SANDY SILT	SM-ML	.74	10			59	36	.21
13.60	129.87	.73	.56	SAND TO SILTY SAND	SM-SP	.82	15			78	40	.50+
13.80	123.72	.21	.17	SAND TO SILTY SAND	SM-SP	.83	14			75	40	.50+
14.00	85.73	.33	.38	SAND TO SILTY SAND	SM-SP	.84	10			63	38	.27
14.20	39.70	.29	.72	SANDY SILT TO CLAYEY SILT	ML-MH	.71	7	2.888	13.5	43	34	.15
14.40	14.07	.29	2.07	SILTY CLAY TO CLAY	CL-CH	.58	4	1.000	13.5			
14.60	35.66	.06	.16	SILTY SAND TO SANDY SILT	SM-ML	.80	5			36	33	.14
14.80	17.35	.25	1.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.67	4	1.236	13.5			
15.00	14.99	.23	1.54	CLAYEY SILT TO SILTY CLAY	MH-CL	.67	3	1.060	13.5			
15.20	12.54	.17	1.33	SENSITIVE FINE GRAINED	OL-CH	.46	3	.895	13.5			
15.40	22.78	.21	.92	SANDY SILT TO CLAYEY SILT	ML-MH	.77	4	1.630	13.5	22	31	.12
15.60	9.76	.24	2.44	CLAY	CH	.62	4	.677	13.5			
15.80	10.59	.15	1.39	SENSITIVE FINE GRAINED	OL-CH	.47	2	.750	13.5			
16.00	14.83	.35	2.36	SILTY CLAY TO CLAY	CL-CH	.64	4	1.051	13.5			
16.20	18.10	.31	1.73	CLAYEY SILT TO SILTY CLAY	MH-CL	.73	4	1.287	13.5			
16.40	13.86	.22	1.62	CLAYEY SILT TO SILTY CLAY	MH-CL	.74	3	.972	13.5			
16.60	8.11	.22	2.74	CLAY	CH	.66	3	.552	13.5			
16.80	7.11	.23	3.29	CLAY	CH	.67	3	.477	13.5			
17.00	6.77	.23	3.46	CLAY	CH	.68	3	.451	13.5			
17.20	9.54	.22	2.33	CLAY	CH	.69	4	.655	13.5			



RESULT OF CONE PENETRATION TEST

12S

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

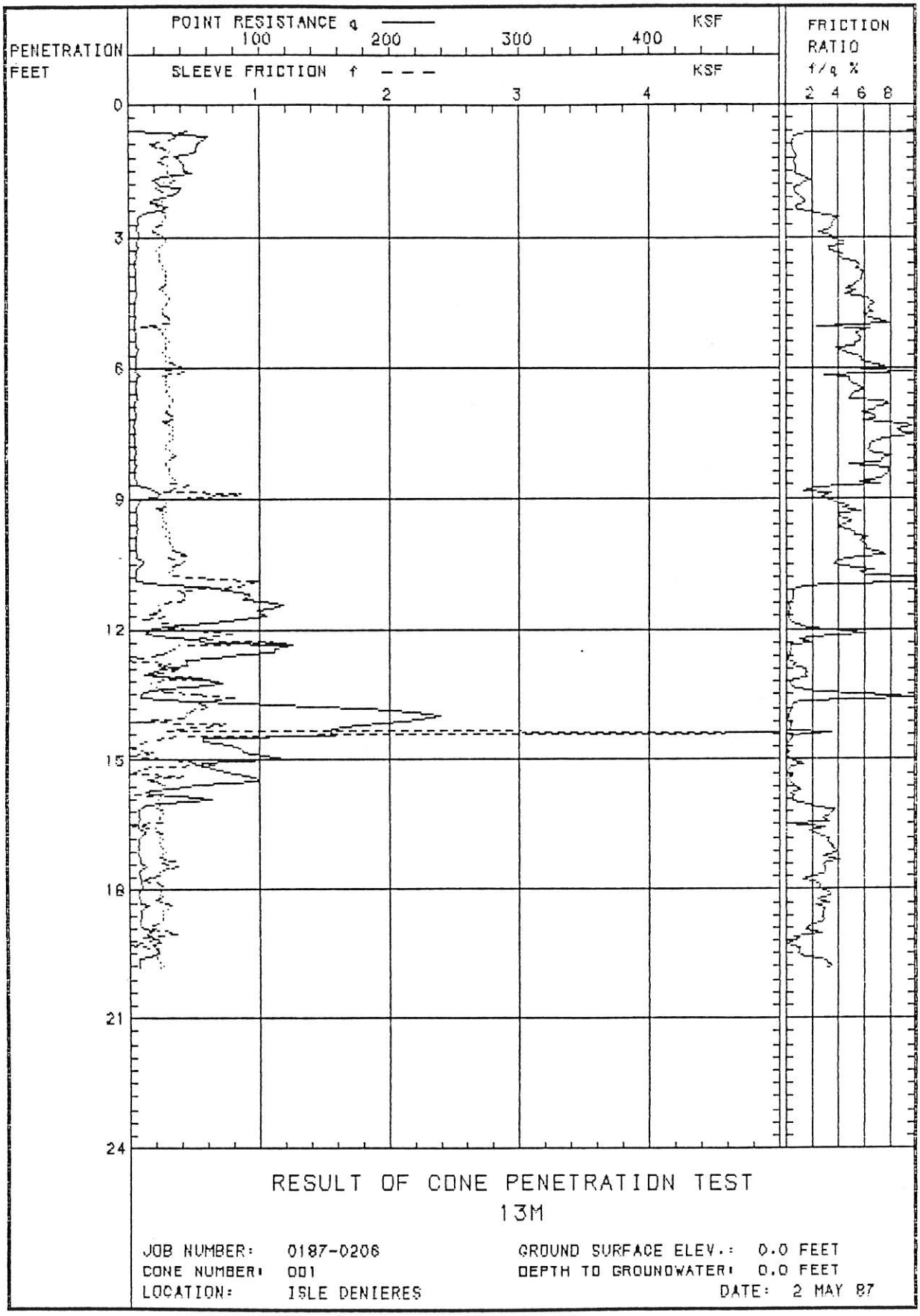
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE:

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

PROJECT NO. : 01870206
BORING NO. : 12S
CONE NO. : 001
DATE : 04/30/87

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	3.20	.28	8.84	ORGANIC MATERIAL	OL-OH	.02	1	.236	13.5			
.80	8.86	.23	2.65	CLAY	CH	.03	4	.654	13.5			
1.00	6.40	.17	2.71	CLAY	CH	.04	3	.471	13.5			
1.20	6.64	.20	3.00	CLAY	CH	.05	3	.489	13.5			
1.40	6.15	.19	3.06	CLAY	CH	.06	2	.451	13.5			
1.60	4.92	.19	3.85	CLAY	CH	.06	2	.360	13.5			
1.80	4.18	.26	6.17	ORGANIC MATERIAL	OL-OH	.05	2	.306	13.5			
2.00	6.40	.21	3.31	CLAY	CH	.08	3	.468	13.5			
2.20	6.64	.24	3.63	CLAY	CH	.09	3	.485	13.5			
2.40	6.40	.27	4.24	CLAY	CH	.10	3	.467	13.5			
2.60	6.40	.28	4.45	CLAY	CH	.10	3	.466	13.5			
2.80	5.90	.23	3.98	CLAY	CH	.11	2	.429	13.5			
3.00	6.89	.25	3.61	CLAY	CH	.12	3	.501	13.5			
3.20	6.76	.27	3.94	CLAY	CH	.13	3	.472	13.5			
3.40	11.08	.23	2.12	SILTY CLAY TO CLAY	CL-CH	.14	3	.811	13.5			
3.60	6.15	.22	3.65	CLAY	CH	.14	2	.445	13.5			
3.80	4.43	.20	4.53	CLAY	CH	.15	2	.317	13.5			
4.00	4.92	.22	4.55	CLAY	CH	.16	2	.353	13.5			
4.20	5.91	.21	3.60	CLAY	CH	.17	2	.425	13.5			
4.40	4.43	.22	5.08	CLAY	CH	.18	2	.315	13.5			
4.60	4.67	.24	5.05	CLAY	CH	.18	2	.332	13.5			
4.80	6.15	.24	3.83	CLAY	CH	.19	2	.441	13.5			
5.00	5.90	.10	1.75	SENSITIVE FINE GRAINED	OL-CH	.15	1	.426	13.5			
5.20	5.90	.24	3.99	CLAY	CH	.21	2	.422	13.5			
5.40	6.39	.24	3.69	CLAY	CH	.22	3	.457	13.5			
5.60	4.80	.24	5.06	CLAY	CH	.22	2	.339	13.5			
5.80	4.92	.25	5.04	CLAY	CH	.23	2	.347	13.5			
6.00	5.41	.32	5.93	CLAY	CH	.24	2	.383	13.5			
6.20	5.90	.25	4.29	CLAY	CH	.25	2	.419	13.5			
6.40	6.15	.35	5.76	CLAY	CH	.26	2	.436	13.5			
6.60	39.46	.32	.81	SANDY SILT TO CLAYEY SILT	ML-MH	.33	7	2.899	13.5	60	37	.22
6.80	54.58	.36	.66	SILTY SAND TO SANDY SILT	SM-ML	.37	8			65	37	.36
7.00	74.23	.72	.97	SILTY SAND TO SANDY SILT	SM-ML	.38	11			74	38	.50+
7.20	89.15	.40	.45	SAND TO SILTY SAND	SM-SP	.43	10			78	40	.50+
7.40	108.45	.24	.22	SAND TO SILTY SAND	SM-SP	.44	12			84	41	.50+
7.60	132.95	.48	.36	SAND TO SILTY SAND	SM-SP	.46	15			91	41	.50+
7.80	142.65	.50	.35	SAND TO SILTY SAND	SM-SP	.47	17			93	42	.50+
8.00	140.46	.50	.35	SAND TO SILTY SAND	SM-SP	.48	16			92	42	.50+
8.20	145.92	.54	.37	SAND TO SILTY SAND	SM-SP	.49	17			93	42	.50+
8.40	175.89	1.13	.64	SAND TO SILTY SAND	SM-SP	.50	21			100+	42	.50+
8.60	157.23	.50	.32	SAND TO SILTY SAND	SM-SP	.52	18			95	42	.50+
8.80	180.25	.60	.33	SAND	SW-SP	.57	17			98	44	.50+
9.00	197.54	1.63	.83	SAND TO SILTY SAND	SM-SP	.54	23			100+	42	.50+
9.20	182.26	.35	.19	SAND	SW-SP	.60	17			97	44	.50+
9.40	199.78	.19	.10	SAND	SW-SP	.61	19			100+	44	.50+

9.60	113.14	.84	.74	SAND TO SILTY SAND	SM-SP	.58	13			81	40	.50+
9.80	108.50	.35	.33	SAND TO SILTY SAND	SM-SP	.59	12			79	40	.50+
10.00	99.87	.36	.36	SAND TO SILTY SAND	SM-SP	.60	11			75	40	.50+
10.20	93.62	.41	.44	SAND TO SILTY SAND	SM-SP	.61	11			73	39	.50+
10.40	98.64	.22	.23	SAND TO SILTY SAND	SM-SP	.62	11			74	40	.50+
10.60	94.63	.44	.47	SAND TO SILTY SAND	SM-SP	.64	11			72	39	.50+
10.80	99.84	.48	.48	SAND TO SILTY SAND	SM-SP	.65	11			73	39	.50+
11.00	104.76	.55	.52	SAND TO SILTY SAND	SM-SP	.66	12			75	40	.50+
11.20	95.33	.94	.99	SILTY SAND TO SANDY SILT	SM-ML	.62	15			73	38	.50+
11.40	245.87	1.63	.66	SAND	SW-SP	.74	23			100+	44	.50+
11.60	238.95	.50	.21	SAND	SW-SP	.75	22			100+	44	.50+
11.80	176.73	.65	.37	SAND	SW-SP	.77	16			89	43	.50+
12.00	148.78	.45	.30	SAND TO SILTY SAND	SM-SP	.72	17			85	41	.50+
12.20	148.29	.00	.00	SAND	SW-SP	.79	14			83	43	.50+
12.40	229.10	.58	.25	SAND	SW-SP	.81	21			98	44	.50+
12.60	226.65	.36	.16	SAND	SW-SP	.82	21			97	44	.50+
12.80	125.91	.43	.34	SAND TO SILTY SAND	SM-SP	.77	15			78	40	.50+
13.00	82.28	.96	1.17	SILTY SAND TO SANDY SILT	SM-ML	.71	13			65	37	.32
13.20	173.58	.89	.51	SAND TO SILTY SAND	SM-SP	.79	20			88	41	.50+
13.40	166.92	.37	.22	SAND	SW-SP	.87	15			84	43	.50+
13.60	153.97	.67	.44	SAND TO SILTY SAND	SM-SP	.82	18			83	41	.50+
13.80	64.18	.16	.25	SILTY SAND TO SANDY SILT	SM-ML	.76	10			57	36	.20
14.00	23.55	.18	.77	SANDY SILT TO CLAYEY SILT	ML-MH	.70	4	1.693	13.5	25	32	.12
14.20	9.62	.20	2.06	SILTY CLAY TO CLAY	CL-CH	.57	3	.670	13.5			
14.40	12.91	.17	1.32	SENSITIVE FINE GRAINED	OL-CH	.43	3	.924	13.5			
14.60	9.12	.17	1.91	SILTY CLAY TO CLAY	CL-CH	.58	2	.632	13.5			
14.80	7.87	.18	2.28	CLAY	CH	.59	3	.539	13.5			
15.00	8.11	.14	1.78	SENSITIVE FINE GRAINED	OL-CH	.45	1	.568	13.5			
15.20	14.59	.18	1.21	SENSITIVE FINE GRAINED	OL-CH	.46	3	1.047	13.5			
15.40	8.43	.20	2.42	CLAY	CH	.62	4	.578	13.5			
15.60	9.54	.17	1.79	SILTY CLAY TO CLAY	CL-CH	.62	3	.661	13.5			
15.80	8.87	.18	2.02	SILTY CLAY TO CLAY	CL-CH	.63	2	.610	13.5			
16.00	17.11	.28	1.63	CLAYEY SILT TO SILTY CLAY	MH-CL	.72	4	1.214	13.5			
16.20	11.59	.11	.95	SENSITIVE FINE GRAINED	OL-CH	.49	2	.823	13.5			
16.40	45.38	.27	.60	SILTY SAND TO SANDY SILT	SM-ML	.90	7			41	34	.15
16.60	65.58	.12	.19	SILTY SAND TO SANDY SILT	SM-ML	.91	10			52	35	.18
16.80	16.41	.25	1.50	CLAYEY SILT TO SILTY CLAY	MH-CL	.76	3	1.160	13.5			
17.00	15.32	.19	1.27	CLAYEY SILT TO SILTY CLAY	MH-CL	.76	3	1.078	13.5			
17.20	8.88	.21	2.40	CLAY	CH	.69	4	.607	13.5			
17.40	11.95	.24	2.02	SILTY CLAY TO CLAY	CL-CH	.70	3	.833	13.5			
17.60	10.34	.13	1.25	SENSITIVE FINE GRAINED	OL-CH	.53	2	.727	13.5			
17.80	8.25	.18	2.18	CLAY	CH	.71	3	.558	13.5			
18.00	7.62	.22	2.88	CLAY	CH	.72	3	.511	13.5			
18.20	11.54	.21	1.85	SILTY CLAY TO CLAY	CL-CH	.73	3	.801	13.5			
18.40	7.62	.33	4.30	CLAY	CH	.74	3	.510	13.5			
18.60	17.59	.16	.93	CLAYEY SILT TO SILTY CLAY	MH-CL	.84	4	1.241	13.5			
18.80	21.11	.28	1.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.85	5	1.501	13.5			
19.00	29.46	.24	.83	SANDY SILT TO CLAYEY SILT	ML-MH	.95	5	2.112	13.5	25	32	.12



RESULT OF CONE PENETRATION TEST

13M

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

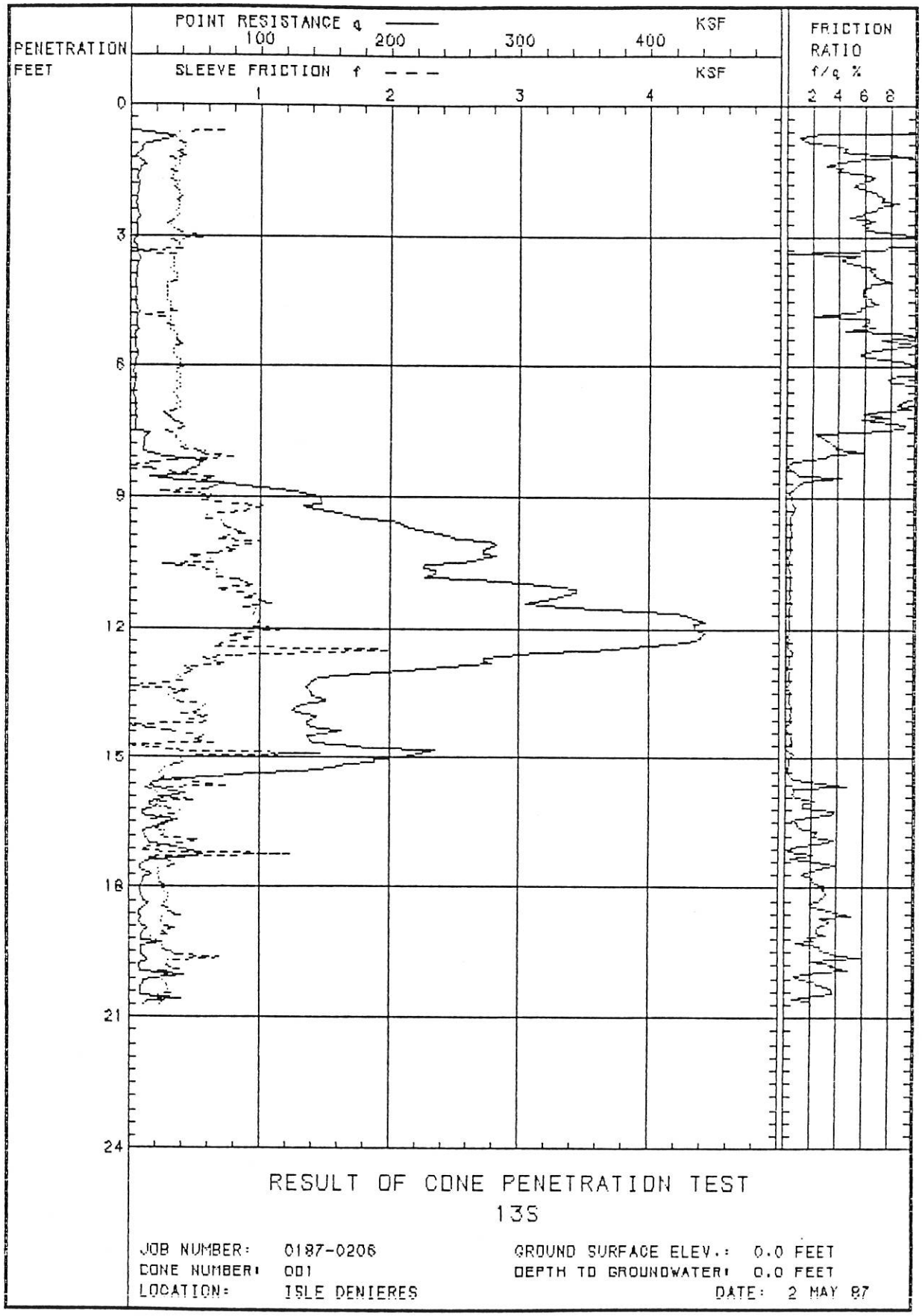
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 13M
CONE NO. : 001
DATE : 04/30/87

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	13.28	.43	3.23	CLAY	CH	.02	6	.982	13.5			
.80	57.06	.30	.53	SILTY SAND TO SANDY SILT	SM-ML	.04	9			92	41	.50+
1.00	51.90	.19	.37	SILTY SAND TO SANDY SILT	SM-ML	.05	8			85	40	.50+
1.20	36.59	.30	.81	SANDY SILT TO CLAYEY SILT	ML-MH	.06	7	2.706	13.5	73	38	.50+
1.40	42.06	.31	.73	SANDY SILT TO CLAYEY SILT	ML-MH	.07	8	3.110	13.5	75	39	.50+
1.60	37.53	.30	.81	SANDY SILT TO CLAYEY SILT	ML-MH	.08	7	2.774	13.5	72	38	.50+
1.80	22.78	.27	1.17	CLAYEY SILT TO SILTY CLAY	MH-CL	.08	5	1.681	13.5			
2.00	36.16	.28	.78	SANDY SILT TO CLAYEY SILT	ML-MH	.10	6	2.671	13.5	70	38	.50+
2.20	16.97	.24	1.42	CLAYEY SILT TO SILTY CLAY	MH-CL	.10	4	1.250	13.5			
2.40	20.43	.26	1.26	CLAYEY SILT TO SILTY CLAY	MH-CL	.11	4	1.505	13.5			
2.60	7.01	.28	3.95	CLAY	CH	.10	3	.512	13.5			
2.80	5.90	.20	3.36	CLAY	CH	.11	2	.429	13.5			
3.00	7.62	.27	3.56	CLAY	CH	.12	3	.556	13.5			
3.20	6.64	.25	3.73	CLAY	CH	.13	3	.482	13.5			
3.40	5.66	.24	4.18	CLAY	CH	.14	2	.409	13.5			
3.60	4.55	.24	5.33	CLAY	CH	.14	2	.326	13.5			
3.80	4.92	.28	5.78	ORGANIC MATERIAL	OL-OH	.11	2	.356	13.5			
4.00	5.16	.26	5.07	CLAY	CH	.16	2	.371	13.5			
4.20	5.04	.27	5.28	CLAY	CH	.17	2	.361	13.5			
4.40	4.92	.31	6.28	ORGANIC MATERIAL	OL-OH	.13	2	.355	13.5			
4.60	4.31	.28	6.48	ORGANIC MATERIAL	OL-OH	.14	2	.309	13.5			
4.80	4.67	.29	6.10	ORGANIC MATERIAL	OL-OH	.14	2	.335	13.5			
5.00	3.94	.20	5.11	ORGANIC MATERIAL	OL-OH	.15	1	.280	13.5			
5.20	4.92	.26	5.29	CLAY	CH	.21	2	.349	13.5			
5.40	5.41	.30	5.46	CLAY	CH	.22	2	.385	13.5			
5.60	6.65	.27	4.09	CLAY	CH	.22	3	.476	13.5			
5.80	5.17	.30	5.74	CLAY	CH	.23	2	.366	13.5			
6.00	5.17	.34	6.65	ORGANIC MATERIAL	OL-OH	.18	2	.369	13.5			
6.20	7.39	.27	3.68	CLAY	CH	.25	3	.529	13.5			
6.40	5.41	.30	5.47	CLAY	CH	.26	2	.382	13.5			
6.60	5.78	.30	5.11	CLAY	CH	.26	2	.408	13.5			
6.80	4.18	.32	7.68	ORGANIC MATERIAL	OL-OH	.20	2	.295	13.5			
7.00	4.67	.26	5.60	ORGANIC MATERIAL	OL-OH	.21	2	.330	13.5			
7.20	4.68	.30	6.38	ORGANIC MATERIAL	OL-OH	.22	2	.330	13.5			
7.40	3.69	.33	9.06	ORGANIC MATERIAL	OL-OH	.22	1	.257	13.5			
7.60	3.93	.33	8.48	ORGANIC MATERIAL	OL-OH	.23	1	.274	13.5			
7.80	4.43	.28	6.43	ORGANIC MATERIAL	OL-OH	.23	2	.311	13.5			
8.00	4.68	.31	6.63	ORGANIC MATERIAL	OL-OH	.24	2	.329	13.5			
8.20	4.91	.29	5.81	ORGANIC MATERIAL	OL-OH	.25	2	.345	13.5			
8.40	3.94	.31	7.85	ORGANIC MATERIAL	OL-OH	.25	1	.273	13.5			
8.60	5.28	.38	7.23	ORGANIC MATERIAL	OL-OH	.26	2	.372	13.5			
8.80	18.43	.32	1.72	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	4	1.336	13.5			
9.00	15.33	.27	1.79	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	3	1.105	13.5			
9.20	5.42	.25	4.58	CLAY	CH	.37	2	.374	13.5			
9.40	6.40	.26	4.06	CLAY	CH	.38	3	.446	13.5			

9.60	6.15	.28	4.61	CLAY	CH	.38	2	.427	13.5			
9.80	5.66	.30	5.24	CLAY	CH	.39	2	.390	13.5			
10.00	5.41	.32	5.93	CLAY	CH	.40	2	.371	13.5			
10.20	5.41	.37	6.80	ORGANIC MATERIAL	OL-OH	.31	2	.378	13.5			
10.40	8.08	.36	4.51	CLAY	CH	.42	3	.567	13.5			
10.60	6.42	.33	5.18	CLAY	CH	.42	3	.444	13.5			
10.80	5.41	.47	8.60	ORGANIC MATERIAL	OL-OH	.32	2	.377	13.5			
11.00	42.06	.53	1.27	SANDY SILT TO CLAYEY SILT	ML-MH	.55	8	3.074	13.5	51	35	.17
11.20	92.73	.49	.53	SAND TO SILTY SAND	SM-SP	.67	11			70	39	.50+
11.40	110.81	.27	.24	SAND TO SILTY SAND	SM-SP	.68	13			76	40	.50+
11.60	100.69	.25	.25	SAND TO SILTY SAND	SM-SP	.70	12			72	39	.50+
11.80	75.46	.19	.23	SAND TO SILTY SAND	SM-SP	.71	9			63	38	.27
12.00	16.99	.25	1.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.54	4	1.219	13.5			
12.20	41.83	.47	1.13	SANDY SILT TO CLAYEY SILT	ML-MH	.61	8	3.053	13.5	48	35	.15
12.40	118.93	.37	.31	SAND TO SILTY SAND	SM-SP	.74	14			77	40	.50+
12.60	77.19	.17	.22	SAND TO SILTY SAND	SM-SP	.76	9			63	38	.26
12.80	44.88	.17	.38	SILTY SAND TO SANDY SILT	SM-ML	.70	7			46	35	.16
13.00	14.31	.18	1.25	SENSITIVE FINE GRAINED	OL-CH	.39	3	1.031	13.5			
13.20	65.55	.22	.34	SILTY SAND TO SANDY SILT	SM-ML	.73	10			59	36	.21
13.40	18.58	.26	1.38	CLAYEY SILT TO SILTY CLAY	MH-CL	.60	4	1.331	13.5			
13.60	27.89	.74	2.67	CLAYEY SILT TO SILTY CLAY	MH-CL	.61	6	2.021	13.5			
13.80	161.67	.56	.34	SAND TO SILTY SAND	SM-SP	.83	19			84	41	.50+
14.00	235.72	.31	.13	SAND	SW-SP	.91	22			96	44	.50+
14.20	179.61	.78	.43	SAND TO SILTY SAND	SM-SP	.85	21			87	41	.50+
14.40	157.32	1.14	.72	SAND TO SILTY SAND	SM-SP	.86	18			83	40	.50+
14.60	66.68	.30	.45	SILTY SAND TO SANDY SILT	SM-ML	.80	10			57	36	.20
14.80	87.56	.33	.38	SAND TO SILTY SAND	SM-SP	.89	10			63	38	.26
15.00	97.92	.32	.33	SAND TO SILTY SAND	SM-SP	.90	11			66	39	.33
15.20	64.47	.31	.48	SILTY SAND TO SANDY SILT	SM-ML	.84	10			54	36	.19
15.40	95.33	.11	.11	SAND TO SILTY SAND	SM-SP	.92	11			64	38	.30
15.60	43.87	.29	.67	SILTY SAND TO SANDY SILT	SM-ML	.86	7			41	34	.15
15.80	26.96	.28	1.04	SANDY SILT TO CLAYEY SILT	ML-MH	.79	5	1.938	13.5	27	32	.12
16.00	19.84	.26	1.31	CLAYEY SILT TO SILTY CLAY	MH-CL	.72	4	1.416	13.5			
16.20	7.13	.26	3.62	CLAY	CH	.65	3	.480	13.5			
16.40	8.12	.25	3.03	CLAY	CH	.66	3	.553	13.5			
16.60	9.53	.21	2.18	SILTY CLAY TO CLAY	CL-CH	.66	3	.656	13.5			
16.80	8.12	.25	3.03	CLAY	CH	.67	3	.552	13.5			
17.00	7.13	.24	3.31	CLAY	CH	.68	3	.478	13.5			
17.20	7.61	.25	3.24	CLAY	CH	.69	3	.512	13.5			
17.40	10.76	.32	2.93	CLAY	CH	.70	5	.745	13.5			
17.60	7.99	.23	2.92	CLAY	CH	.70	3	.540	13.5			
17.80	9.47	.15	1.56	SENSITIVE FINE GRAINED	OL-CH	.53	2	.662	13.5			
18.00	8.88	.21	2.39	CLAY	CH	.72	4	.605	13.5			
18.20	7.98	.21	2.69	CLAY	CH	.73	3	.537	13.5			
18.40	12.36	.30	2.40	SILTY CLAY TO CLAY	CL-CH	.74	3	.861	13.5			
18.60	9.22	.26	2.79	CLAY	CH	.74	4	.628	13.5			
18.80	8.60	.20	2.38	CLAY	CH	.75	4	.581	13.5			
19.00	15.93	.16	1.03	CLAYEY SILT TO SILTY CLAY	MH-CL	.86	3	1.117	13.5			
19.20	22.59	.24	1.07	CLAYEY SILT TO SILTY CLAY	MH-CL	.86	5	1.609	13.5			
19.40	21.43	.26	1.21	CLAYEY SILT TO SILTY CLAY	MH-CL	.87	5	1.523	13.5			
19.60	11.30	.21	1.86	SILTY CLAY TO CLAY	CL-CH	.78	3	.779	13.5			
19.80	7.38	.25	3.34	CLAY	CH	.79	3	.488	13.5			



RESULT OF CONE PENETRATION TEST

13S

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

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

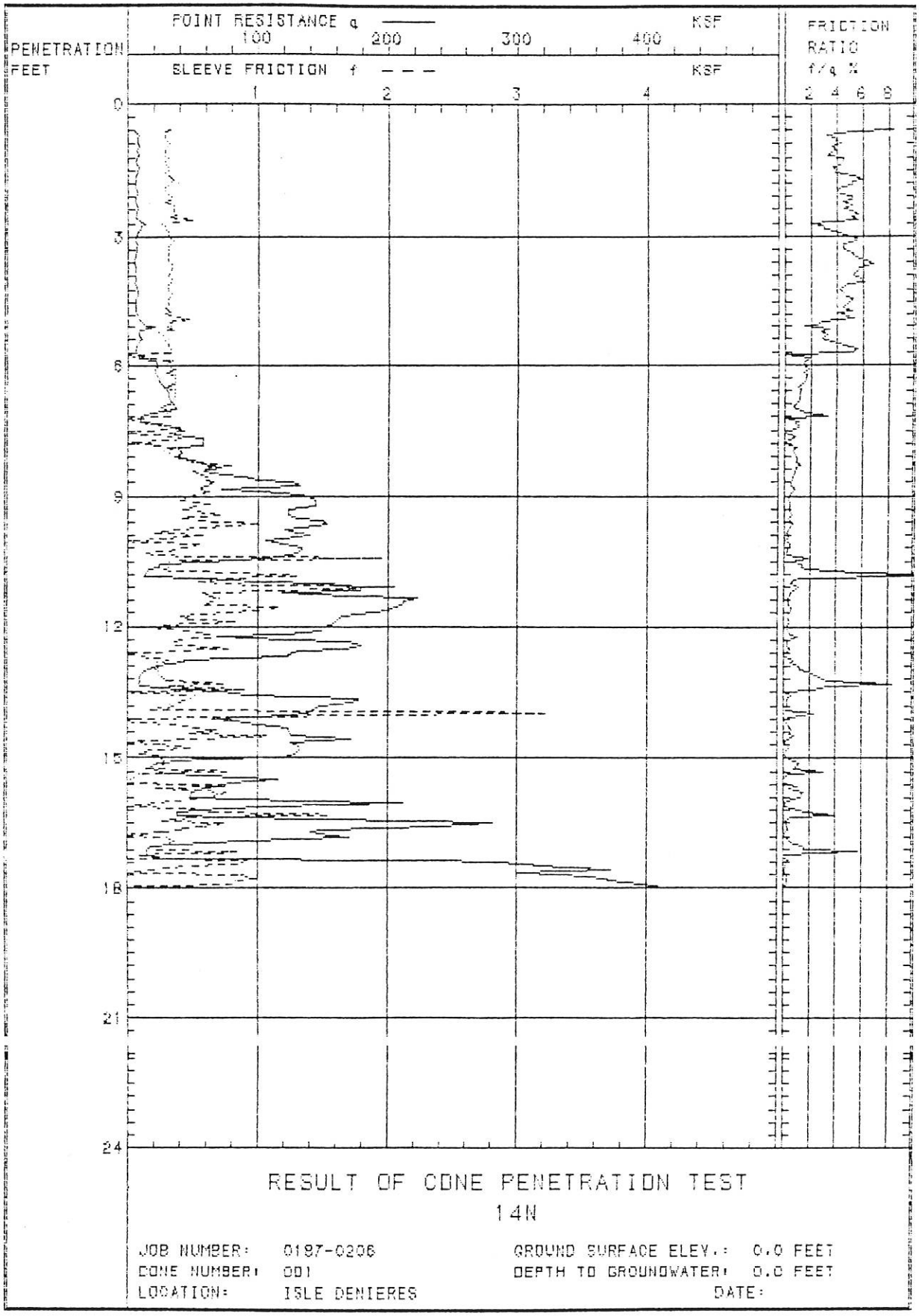
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 13S
CONE NO. : 001
DATE : 04/30/87

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	7.87	.55	6.97	CLAY	CH	.02	3	.581	13.5			
.80	26.81	.36	1.36	SANDY SILT TO CLAYEY SILT	ML-MH	.04	5	1.983	13.5	67	37	.50+
1.00	9.10	.38	4.20	CLAY	CH	.04	4	.671	13.5			
1.20	4.67	.36	7.78	ORGANIC MATERIAL	OL-OH	.04	2	.343	13.5			
1.40	10.09	.39	3.89	CLAY	CH	.06	4	.743	13.5			
1.60	5.66	.33	5.75	CLAY	CH	.06	2	.414	13.5			
1.80	6.89	.28	4.13	CLAY	CH	.07	3	.505	13.5			
2.00	5.53	.37	6.66	ORGANIC MATERIAL	OL-OH	.06	2	.406	13.5			
2.20	4.67	.37	7.88	ORGANIC MATERIAL	OL-OH	.07	2	.341	13.5			
2.40	5.66	.39	6.95	ORGANIC MATERIAL	OL-OH	.07	2	.414	13.5			
2.60	6.15	.34	5.60	CLAY	CH	.10	2	.448	13.5			
2.80	5.16	.32	6.23	ORGANIC MATERIAL	OL-OH	.08	2	.376	13.5			
3.00	4.92	.50	10.22	ORGANIC MATERIAL	OL-OH	.09	2	.358	13.5			
3.20	3.68	.38	10.32	ORGANIC MATERIAL	OL-OH	.10	1	.266	13.5			
3.40	6.15	.18	2.87	CLAY	CH	.14	2	.445	13.5			
3.60	7.14	.33	4.66	CLAY	CH	.14	3	.518	13.5			
3.80	4.92	.31	6.30	ORGANIC MATERIAL	OL-OH	.11	2	.356	13.5			
4.00	4.67	.36	7.64	ORGANIC MATERIAL	OL-OH	.12	2	.337	13.5			
4.20	4.67	.28	6.09	ORGANIC MATERIAL	OL-OH	.13	2	.337	13.5			
4.40	4.67	.29	6.12	ORGANIC MATERIAL	OL-OH	.13	2	.337	13.5			
4.60	4.92	.31	6.25	ORGANIC MATERIAL	OL-OH	.14	2	.354	13.5			
4.80	6.65	.24	3.57	CLAY	CH	.19	3	.478	13.5			
5.00	4.92	.30	6.01	ORGANIC MATERIAL	OL-OH	.15	2	.353	13.5			
5.20	5.42	.32	5.92	CLAY	CH	.21	2	.386	13.5			
5.40	4.68	.36	7.65	ORGANIC MATERIAL	OL-OH	.16	2	.334	13.5			
5.60	4.42	.34	7.77	ORGANIC MATERIAL	OL-OH	.17	2	.315	13.5			
5.80	5.42	.34	6.19	ORGANIC MATERIAL	OL-OH	.17	2	.398	13.5			
6.00	3.69	.40	10.85	ORGANIC MATERIAL	OL-OH	.18	1	.260	13.5			
6.20	3.68	.37	10.02	ORGANIC MATERIAL	OL-OH	.19	1	.259	13.5			
6.40	3.94	.37	9.40	ORGANIC MATERIAL	OL-OH	.19	1	.278	13.5			
6.60	2.95	.35	11.72	ORGANIC MATERIAL	OL-OH	.20	1	.204	13.5			
6.80	4.18	.35	8.30	ORGANIC MATERIAL	OL-OH	.20	2	.294	13.5			
7.00	4.42	.37	8.36	ORGANIC MATERIAL	OL-OH	.21	2	.312	13.5			
7.20	4.67	.31	6.62	ORGANIC MATERIAL	OL-OH	.22	2	.330	13.5			
7.40	4.55	.37	8.21	ORGANIC MATERIAL	OL-OH	.22	2	.321	13.5			
7.60	13.54	.34	2.50	SILTY CLAY TO CLAY	CL-CH	.30	4	.981	13.5			
7.80	11.07	.36	3.22	CLAY	CH	.31	5	.797	13.5			
8.00	12.76	.56	4.42	CLAY	CH	.32	6	.921	13.5			
8.20	56.11	.51	.91	SILTY SAND TO SANDY SILT	SM-ML	.45	8			64	37	.28
8.40	45.90	.22	.49	SILTY SAND TO SANDY SILT	SM-ML	.46	7			58	36	.20
8.60	26.54	.66	2.49	CLAYEY SILT TO SILTY CLAY	MH-CL	.39	6	1.937	13.5			
8.80	100.69	.53	.53	SAND TO SILTY SAND	SM-SP	.53	12			79	40	.50+
9.00	142.86	.63	.44	SAND TO SILTY SAND	SM-SP	.54	17			90	41	.50+
9.20	140.79	.87	.62	SAND TO SILTY SAND	SM-SP	.55	16			89	41	.50+
9.40	160.78	.77	.48	SAND TO SILTY SAND	SM-SP	.56	19			93	42	.50+

9.60	205.82	.71	.35	SAND	SW-SP	.62	19			100+	44	.50+
9.80	229.86	1.86	.81	SAND TO SILTY SAND	SM-SP	.59	27			100+	42	.50+
10.00	264.23	.83	.32	SAND	SW-SP	.65	25			100+	44	.50+
10.20	274.29	.78	.28	SAND	SW-SP	.66	26			100+	44	.50+
10.40	275.95	.51	.19	SAND	SW-SP	.68	26			100+	44	.50+
10.60	226.54	.40	.18	SAND	SW-SP	.69	21			100+	44	.50+
10.80	231.52	.43	.19	SAND	SW-SP	.70	22			100+	44	.50+
11.00	310.54	.47	.15	SAND	SW-SP	.71	29			100+	44	.50+
11.20	340.23	.90	.26	SAND	SW-SP	.73	32			100+	44	.50+
11.40	311.26	.82	.26	SAND	SW-SP	.74	29			100+	44	.50+
11.60	392.11	1.07	.27	SAND	SW-SP	.75	37			100+	44	.50+
11.80	438.86	1.02	.23	GRAVELLY SAND TO SAND	SW-GW	.77	35			100+	46	.50+
12.00	435.35	1.13	.26	SAND	SW-SP	.78	41			100+	44	.50+
12.20	438.80	.85	.19	GRAVELLY SAND TO SAND	SW-GW	.79	35			100+	46	.50+
12.40	400.71	1.40	.35	SAND	SW-SP	.81	38			100+	44	.50+
12.60	301.31	1.14	.38	SAND	SW-SP	.82	28			100+	44	.50+
12.80	275.43	.50	.18	SAND	SW-SP	.83	26			100+	44	.50+
13.00	202.60	.48	.24	SAND	SW-SP	.84	19			92	44	.50+
13.20	143.95	.34	.24	SAND TO SILTY SAND	SM-SP	.79	17			82	40	.50+
13.40	137.35	.10	.07	SAND TO SILTY SAND	SM-SP	.80	16			80	40	.50+
13.60	146.00	.32	.22	SAND TO SILTY SAND	SM-SP	.82	17			82	40	.50+
13.80	131.14	.52	.40	SAND TO SILTY SAND	SM-SP	.83	15			78	40	.50+
14.00	139.67	.60	.43	SAND TO SILTY SAND	SM-SP	.84	16			80	40	.50+
14.20	137.25	.71	.52	SAND TO SILTY SAND	SM-SP	.85	16			79	40	.50+
14.40	157.19	.38	.24	SAND TO SILTY SAND	SM-SP	.86	18			83	40	.50+
14.60	140.05	.63	.45	SAND TO SILTY SAND	SM-SP	.88	16			79	40	.50+
14.80	209.26	4.44	2.12	SILTY SAND TO SANDY SILT	SM-ML	.81	33			94	41	.50+
15.00	200.22	.41	.20	SAND	SW-SP	.97	19			88	43	.50+
15.20	162.23	.32	.20	SAND	SW-SP	.99	15			81	42	.50+
15.40	81.00	.24	.29	SAND TO SILTY SAND	SM-SP	.92	9			60	38	.22
15.60	17.25	.49	2.85	SILTY CLAY TO CLAY	CL-CH	.62	5	1.232	13.5			
15.80	37.50	.65	1.73	SANDY SILT TO CLAYEY SILT	ML-MH	.79	7	2.719	13.5	38	33	.14
16.00	19.14	.26	1.38	CLAYEY SILT TO SILTY CLAY	MH-CL	.72	4	1.364	13.5			
16.20	15.87	.34	2.12	SILTY CLAY TO CLAY	CL-CH	.65	5	1.128	13.5			
16.40	25.55	.33	1.31	SANDY SILT TO CLAYEY SILT	ML-MH	.82	4	1.832	13.5	24	31	.12
16.60	20.81	.22	1.05	CLAYEY SILT TO SILTY CLAY	MH-CL	.75	4	1.486	13.5			
16.80	11.81	.22	1.87	SILTY CLAY TO CLAY	CL-CH	.67	3	.825	13.5			
17.00	22.23	.24	1.06	CLAYEY SILT TO SILTY CLAY	MH-CL	.76	5	1.590	13.5			
17.20	52.54	.95	1.81	SANDY SILT TO CLAYEY SILT	ML-MH	.86	10	3.828	13.5	46	35	.16
17.40	14.09	.32	2.24	SILTY CLAY TO CLAY	CL-CH	.70	4	.992	13.5			
17.60	11.49	.23	1.98	SILTY CLAY TO CLAY	CL-CH	.70	3	.799	13.5			
17.80	11.06	.26	2.33	SILTY CLAY TO CLAY	CL-CH	.71	3	.767	13.5			
18.00	8.85	.28	3.18	CLAY	CH	.72	4	.603	13.5			
18.20	9.83	.32	3.21	CLAY	CH	.73	4	.674	13.5			
18.40	13.68	.29	2.09	SILTY CLAY TO CLAY	CL-CH	.74	4	.959	13.5			
18.60	7.87	.35	4.48	CLAY	CH	.74	3	.528	13.5			
18.80	7.38	.38	5.16	CLAY	CH	.75	3	.491	13.5			
19.00	12.59	.31	2.43	SILTY CLAY TO CLAY	CL-CH	.76	4	.876	13.5			
19.20	9.35	.19	2.02	SILTY CLAY TO CLAY	CL-CH	.77	2	.635	13.5			
19.40	9.35	.25	2.62	CLAY	CH	.78	4	.635	13.5			
19.60	10.54	.36	3.38	CLAY	CH	.78	5	.723	13.5			
19.80	7.87	.25	3.15	CLAY	CH	.79	3	.524	13.5			
20.00	24.84	.26	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	1.00	4	1.766	13.5	20	31	.11
20.20	11.08	.27	2.43	SILTY CLAY TO CLAY	CL-CH	.91	3	.761	13.5			
20.40	8.48	.29	3.38	CLAY	CH	.82	4	.568	13.5			
20.60	27.93	.25	.91	SANDY SILT TO CLAYEY SILT	ML-MH	1.03	5	1.993	13.5	22	31	.12

Notes:



RESULT OF CONE PENETRATION TEST

14N

JOB NUMBER: 0197-0206
CONE NUMBER: 001
LOCATION: ISLE DENIERES

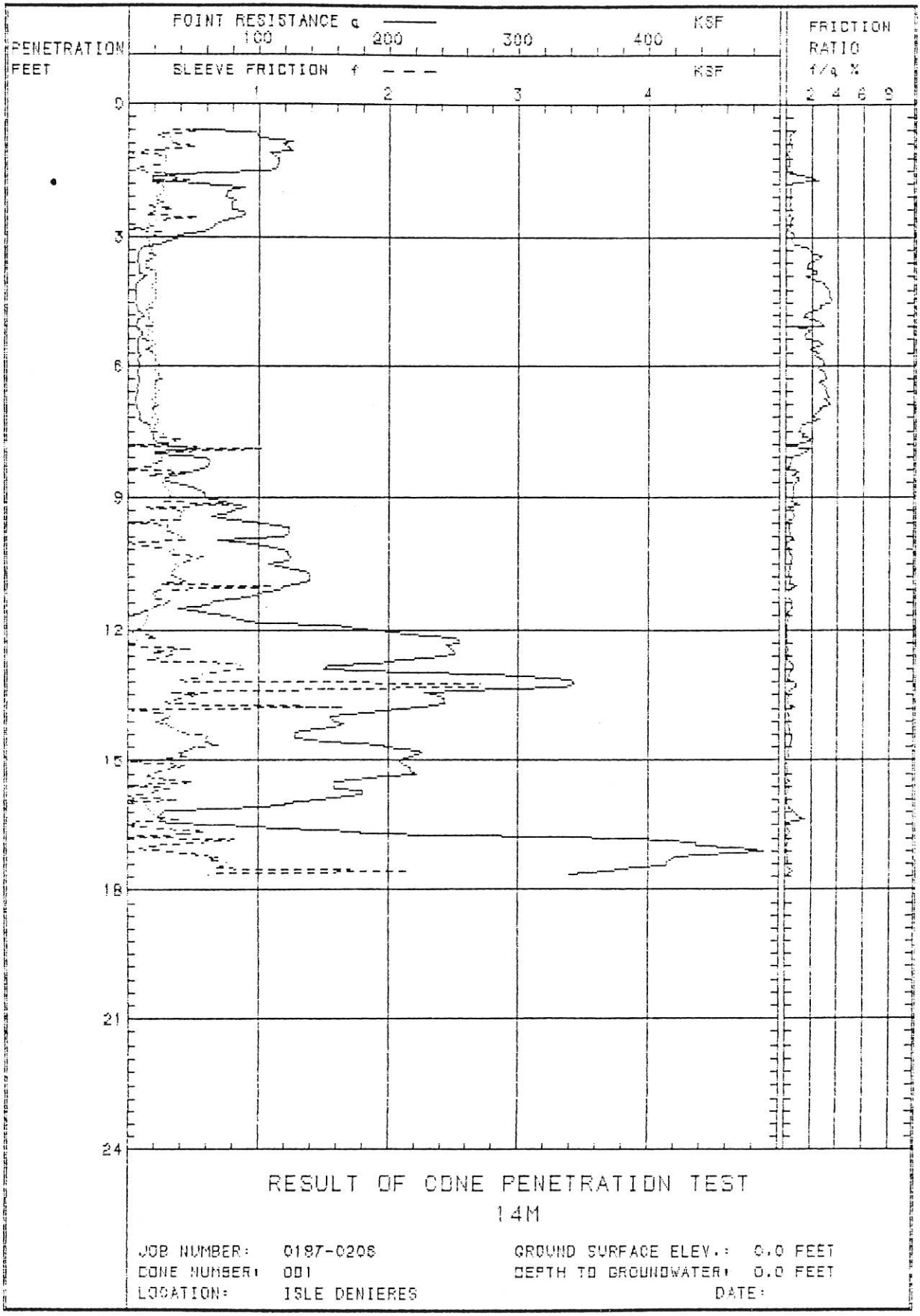
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE:

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

PROJECT NO. : 01870206
BORING NO. : 14N
CONE NO. : 001
DATE : 04/30/87

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	4.67	.31	6.54	ORGANIC MATERIAL	OL-OH	.02	2	.345	13.5			
.80	7.62	.29	3.85	CLAY	CH	.03	3	.562	13.5			
1.00	7.75	.32	4.12	CLAY	CH	.04	3	.571	13.5			
1.20	7.87	.30	3.75	CLAY	CH	.05	3	.580	13.5			
1.40	7.62	.31	4.04	CLAY	CH	.06	3	.561	13.5			
1.60	6.64	.30	4.45	CLAY	CH	.06	3	.487	13.5			
1.80	6.15	.32	5.21	CLAY	CH	.07	2	.450	13.5			
2.00	7.13	.30	4.22	CLAY	CH	.08	3	.522	13.5			
2.20	6.40	.31	4.79	CLAY	CH	.09	3	.467	13.5			
2.40	7.38	.38	5.15	CLAY	CH	.10	3	.540	13.5			
2.60	7.62	.41	5.39	CLAY	CH	.10	3	.557	13.5			
2.80	9.84	.28	2.88	CLAY	CH	.11	4	.720	13.5			
3.00	6.40	.32	5.08	CLAY	CH	.12	3	.465	13.5			
3.20	7.13	.32	4.48	CLAY	CH	.13	3	.519	13.5			
3.40	5.90	.33	5.64	CLAY	CH	.14	2	.427	13.5			
3.60	4.92	.32	6.50	ORGANIC MATERIAL	OL-OH	.11	2	.356	13.5			
3.80	5.90	.31	5.23	CLAY	CH	.15	2	.426	13.5			
4.00	5.53	.33	5.88	CLAY	CH	.16	2	.398	13.5			
4.20	7.13	.31	4.30	CLAY	CH	.17	3	.516	13.5			
4.40	6.40	.34	5.38	CLAY	CH	.18	3	.461	13.5			
4.60	6.40	.30	4.61	CLAY	CH	.18	3	.460	13.5			
4.80	7.38	.30	4.00	CLAY	CH	.19	3	.532	13.5			
5.00	12.54	.36	2.90	CLAY	CH	.20	6	.914	13.5			
5.20	9.35	.29	3.13	CLAY	CH	.21	4	.677	13.5			
5.40	9.77	.31	3.08	CLAY	CH	.22	4	.722	13.5			
5.60	6.40	.32	4.98	CLAY	CH	.22	3	.457	13.5			
5.80	8.11	.14	1.74	SENSITIVE FINE GRAINED	OL-CH	.17	1	.588	13.5			
6.00	22.13	.34	1.56	CLAYEY SILT TO SILTY CLAY	MH-CL	.27	5	1.619	13.5			
6.20	21.64	.36	1.68	CLAYEY SILT TO SILTY CLAY	MH-CL	.28	5	1.582	13.5			
6.40	24.71	.34	1.38	CLAYEY SILT TO SILTY CLAY	MH-CL	.29	5	1.809	13.5			
6.60	30.25	.37	1.22	SANDY SILT TO CLAYEY SILT	ML-MH	.33	5	2.216	13.5	53	35	.17
6.80	32.10	.32	1.00	SANDY SILT TO CLAYEY SILT	ML-MH	.34	6	2.352	13.5	54	36	.18
7.00	37.13	.33	.88	SANDY SILT TO CLAYEY SILT	ML-MH	.35	7	2.725	13.5	58	36	.20
7.20	9.84	.17	1.69	SENSITIVE FINE GRAINED	OL-CH	.22	2	.713	13.5			
7.40	28.97	.30	1.04	SANDY SILT TO CLAYEY SILT	ML-MH	.37	5	2.119	13.5	49	35	.16
7.60	38.30	.47	1.24	SANDY SILT TO CLAYEY SILT	ML-MH	.38	7	2.809	13.5	57	36	.19
7.80	57.56	.18	.32	SILTY SAND TO SANDY SILT	SM-ML	.43	9			65	37	.32
8.00	41.07	.51	1.23	SANDY SILT TO CLAYEY SILT	ML-MH	.40	7	3.012	13.5	58	36	.20
8.20	52.34	.49	.94	SILTY SAND TO SANDY SILT	SM-ML	.45	8			62	37	.25
8.40	65.14	.92	1.42	SANDY SILT TO CLAYEY SILT	ML-MH	.42	12	4.794	13.5	68	38	.49
8.60	94.14	.61	.65	SAND TO SILTY SAND	SM-SP	.52	11			76	40	.50+
8.80	102.58	.69	.67	SAND TO SILTY SAND	SM-SP	.53	12			79	40	.50+
9.00	135.24	.54	.40	SAND TO SILTY SAND	SM-SP	.54	16			88	41	.50+
9.20	144.26	.75	.52	SAND TO SILTY SAND	SM-SP	.55	17			90	41	.50+
9.40	123.48	.71	.57	SAND TO SILTY SAND	SM-SP	.56	14			84	41	.50+

9.60	151.00	.37	.24	SAND TO SILTY SAND	SM-SP	.58	18			90	41	.50+
9.80	125.56	.64	.51	SAND TO SILTY SAND	SM-SP	.59	15			83	41	.50+
10.00	112.62	.85	.76	SAND TO SILTY SAND	SM-SP	.60	13			80	40	.50+
10.20	134.30	.72	.54	SAND TO SILTY SAND	SM-SP	.61	16			85	41	.50+
10.40	116.24	1.08	.93	SAND TO SILTY SAND	SM-SP	.62	13			80	40	.50+
10.60	24.10	.29	1.21	CLAYEY SILT TO SILTY CLAY	MH-CL	.48	5	1.750	13.5			
10.80	13.17	1.05	7.94	CLAY	CH	.43	6	.944	13.5			
11.00	126.75	.65	.51	SAND TO SILTY SAND	SM-SP	.66	15			81	40	.50+
11.20	149.43	2.68	1.79	SILTY SAND TO SANDY SILT	SM-ML	.62	23			88	40	.50+
11.40	217.52	.68	.31	SAND	SW-SP	.74	20			99	44	.50+
11.60	202.96	.80	.39	SAND	SW-SP	.75	19			95	44	.50+
11.80	163.84	.70	.43	SAND TO SILTY SAND	SM-SP	.71	19			88	41	.50+
12.00	153.30	.27	.17	SAND TO SILTY SAND	SM-SP	.72	18			86	41	.50+
12.20	97.24	.60	.62	SAND TO SILTY SAND	SM-SP	.73	11			70	39	.50+
12.40	174.55	.36	.21	SAND	SW-SP	.81	16			88	43	.50+
12.60	127.73	.19	.15	SAND TO SILTY SAND	SM-SP	.76	15			79	40	.50+
12.80	43.29	.27	.63	SILTY SAND TO SANDY SILT	SM-ML	.70	6			45	34	.16
13.00	15.05	.22	1.46	CLAYEY SILT TO SILTY CLAY	MH-CL	.58	3	1.071	13.5			
13.20	9.23	.37	4.05	CLAY	CH	.53	4	.644	13.5			
13.40	24.78	.61	2.45	CLAYEY SILT TO SILTY CLAY	MH-CL	.60	5	1.791	13.5			
13.60	133.93	.52	.39	SAND TO SILTY SAND	SM-SP	.82	16			77	40	.50+
13.80	155.73	.38	.25	SAND TO SILTY SAND	SM-SP	.83	18			83	41	.50+
14.00	131.96	1.84	1.39	SILTY SAND TO SANDY SILT	SM-ML	.77	21			80	39	.50+
14.20	90.95	.24	.27	SAND TO SILTY SAND	SM-SP	.85	10			65	38	.31
14.40	124.57	.58	.46	SAND TO SILTY SAND	SM-SP	.86	14			75	40	.50+
14.60	149.06	1.32	.89	SAND TO SILTY SAND	SM-SP	.88	17			81	40	.50+
14.80	132.82	.34	.25	SAND TO SILTY SAND	SM-SP	.89	15			76	40	.50+
15.00	90.47	.24	.27	SAND TO SILTY SAND	SM-SP	.90	10			63	38	.28
15.20	19.87	.33	1.64	CLAYEY SILT TO SILTY CLAY	MH-CL	.68	4	1.421	13.5			
15.40	58.16	.07	.12	SILTY SAND TO SANDY SILT	SM-ML	.85	9			50	35	.17
15.60	74.52	.05	.07	SAND TO SILTY SAND	SM-SP	.94	8			57	38	.20
15.80	49.19	.78	1.58	SANDY SILT TO CLAYEY SILT	ML-MH	.79	9	3.585	13.5	46	35	.16
16.00	170.04	.34	.20	SAND	SW-SP	1.04	16			81	43	.50+
16.20	56.93	.58	1.01	SILTY SAND TO SANDY SILT	SM-ML	.89	9			48	35	.17
16.40	146.85	.37	.25	SAND TO SILTY SAND	SM-SP	.98	17			78	40	.50+
16.60	196.02	.99	.50	SAND	SW-SP	1.08	18			85	43	.50+
16.80	163.41	.32	.20	SAND	SW-SP	1.09	15			79	42	.42
17.00	27.79	.21	.75	SANDY SILT TO CLAYEY SILT	ML-MH	.85	5	1.996	13.5	26	32	.12
17.20	14.76	.14	.95	SENSITIVE FINE GRAINED	OL-CH	.52	3	1.055	13.5			
17.40	275.27	.89	.32	SAND	SW-SP	1.13	26			96	44	.50+
17.60	337.41	.21	.06	SAND	SW-SP	1.14	32			100+	44	.50+
17.80	369.44	.92	.25	SAND	SW-SP	1.16	35			100+	44	.50+



RESULT OF CONE PENETRATION TEST

14M

JOB NUMBER: 0197-0208
CONE NUMBER: 001
LOCATION: ISLE DENIERES

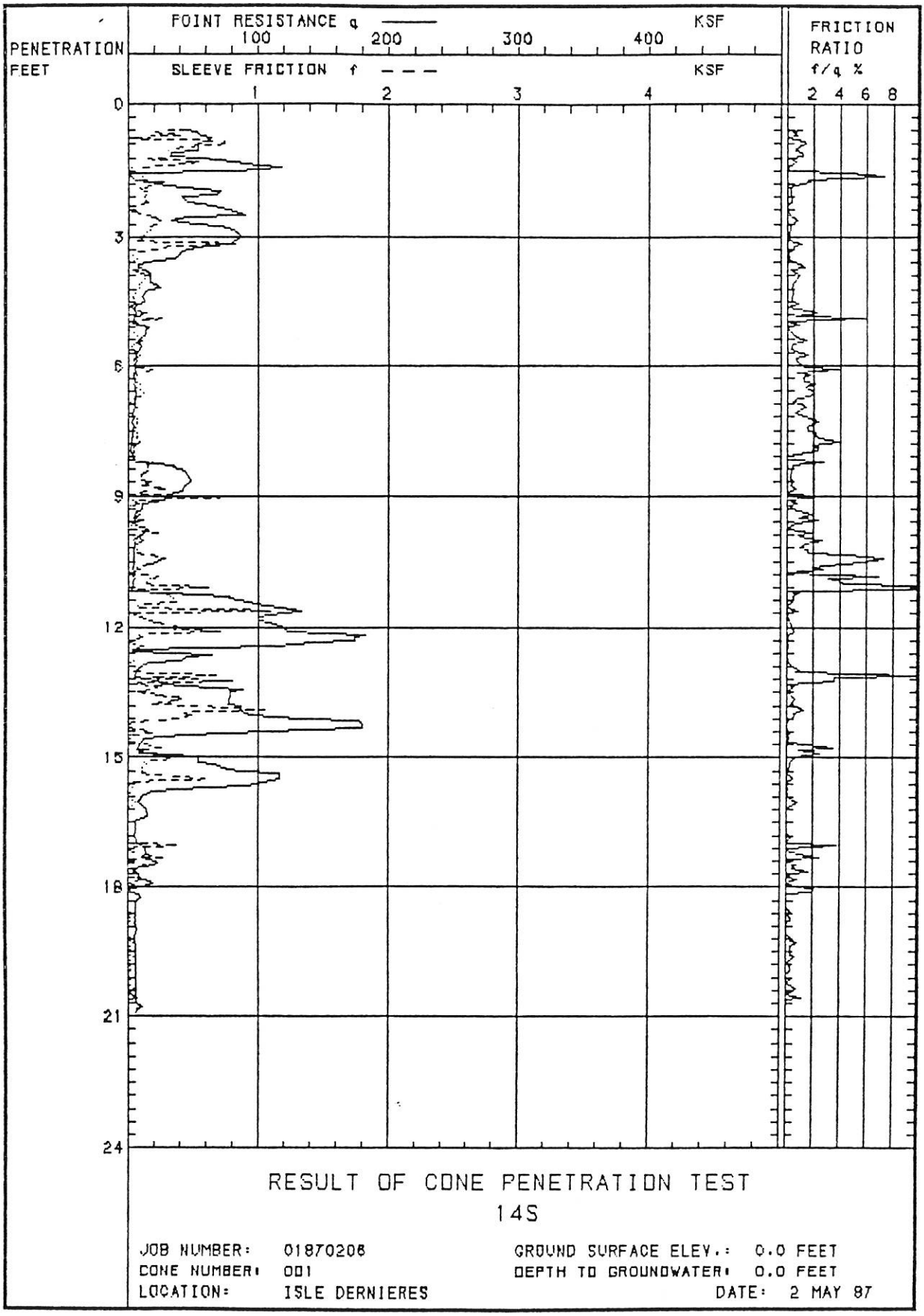
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE:

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

PROJECT NO. : 01870206
BORING NO. : 14M
CONE NO. : 001
DATE : 04/30/87

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	73.29	.41	.56	SILTY SAND TO SANDY SILT	SM-ML	.03	11			100+	42	.50+
.80	113.63	.34	.30	SAND TO SILTY SAND	SM-SP	.05	13			100+	42	.50+
1.00	124.09	.57	.46	SAND TO SILTY SAND	SM-SP	.06	14			100+	42	.50+
1.20	113.45	.33	.29	SAND TO SILTY SAND	SM-SP	.07	13			100+	42	.50+
1.40	114.62	.20	.18	SAND TO SILTY SAND	SM-SP	.08	13			100+	42	.50+
1.60	41.24	.25	.60	SANDY SILT TO CLAYEY SILT	ML-MH	.08	7	3.049	13.5	74	38	.50+
1.80	53.84	.20	.37	SILTY SAND TO SANDY SILT	SM-ML	.10	8			81	39	.50+
2.00	75.51	.27	.36	SILTY SAND TO SANDY SILT	SM-ML	.11	12			96	41	.50+
2.20	80.93	.24	.30	SAND TO SILTY SAND	SM-SP	.13	9			96	42	.50+
2.40	83.86	.27	.32	SAND TO SILTY SAND	SM-SP	.14	10			96	42	.50+
2.60	79.47	.36	.46	SILTY SAND TO SANDY SILT	SM-ML	.14	12			94	41	.50+
2.80	63.71	.10	.15	SILTY SAND TO SANDY SILT	SM-ML	.15	10			83	40	.50+
3.00	37.39	.18	.48	SANDY SILT TO CLAYEY SILT	ML-MH	.15	7	2.758	13.5	67	37	.50+
3.20	18.72	.17	.92	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	4	1.376	13.5			
3.40	7.75	.17	2.16	CLAY	CH	.14	3	.564	13.5			
3.60	7.62	.14	1.79	SENSITIVE FINE GRAINED	OL-CH	.11	1	.557	13.5			
3.80	8.85	.18	2.08	CLAY	CH	.15	4	.645	13.5			
4.00	9.11	.21	2.32	CLAY	CH	.16	4	.663	13.5			
4.20	6.15	.20	3.24	CLAY	CH	.17	2	.443	13.5			
4.40	6.15	.21	3.34	CLAY	CH	.18	2	.443	13.5			
4.60	6.64	.17	2.60	CLAY	CH	.18	3	.478	13.5			
4.80	11.56	.19	1.62	SILTY CLAY TO CLAY	CL-CH	.19	3	.842	13.5			
5.00	6.77	.18	2.66	CLAY	CH	.20	3	.486	13.5			
5.20	9.34	.17	1.84	SILTY CLAY TO CLAY	CL-CH	.21	2	.676	13.5			
5.40	7.75	.14	1.78	SENSITIVE FINE GRAINED	OL-CH	.16	1	.562	13.5			
5.60	7.38	.16	2.18	CLAY	CH	.22	3	.530	13.5			
5.80	8.86	.20	2.26	CLAY	CH	.23	4	.639	13.5			
6.00	8.48	.21	2.47	CLAY	CH	.24	4	.611	13.5			
6.20	7.87	.23	2.96	CLAY	CH	.25	3	.565	13.5			
6.40	7.88	.21	2.67	CLAY	CH	.26	3	.564	13.5			
6.60	7.38	.22	3.02	CLAY	CH	.26	3	.527	13.5			
6.80	6.40	.19	2.94	CLAY	CH	.27	3	.454	13.5			
7.00	7.25	.20	2.73	CLAY	CH	.28	3	.517	13.5			
7.20	8.98	.22	2.46	CLAY	CH	.29	4	.644	13.5			
7.40	17.22	.26	1.52	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	4	1.251	13.5			
7.60	19.43	.26	1.33	CLAYEY SILT TO SILTY CLAY	MH-CL	.34	4	1.414	13.5			
7.80	28.47	.16	.56	SANDY SILT TO CLAYEY SILT	ML-MH	.39	5	2.080	13.5	48	35	.16
8.00	21.15	.29	1.39	CLAYEY SILT TO SILTY CLAY	MH-CL	.36	5	1.540	13.5			
8.20	62.24	.22	.36	SILTY SAND TO SANDY SILT	SM-ML	.45	9			66	37	.36
8.40	52.70	.23	.43	SILTY SAND TO SANDY SILT	SM-ML	.46	8			62	37	.24
8.60	28.53	.29	1.01	SANDY SILT TO CLAYEY SILT	ML-MH	.43	5	2.082	13.5	46	34	.15
8.80	52.11	.25	.48	SILTY SAND TO SANDY SILT	SM-ML	.48	8			61	37	.23
9.00	58.17	.32	.54	SILTY SAND TO SANDY SILT	SM-ML	.49	9			63	37	.26
9.20	87.27	.51	.59	SILTY SAND TO SANDY SILT	SM-ML	.51	13			74	38	.50+
9.40	71.92	.71	.99	SILTY SAND TO SANDY SILT	SM-ML	.52	11			68	38	.42

9.60	103.67	.15	.14	SAND TO SILTY SAND	SM-SP	.58	12			78	40	.50+
9.80	123.24	.21	.17	SAND TO SILTY SAND	SM-SP	.59	14			83	40	.50+
10.00	77.23	.20	.26	SAND TO SILTY SAND	SM-SP	.60	9			67	39	.38
10.20	120.74	.34	.28	SAND TO SILTY SAND	SM-SP	.61	14			81	40	.50+
10.40	124.72	.47	.38	SAND TO SILTY SAND	SM-SP	.62	14			82	40	.50+
10.60	121.62	.42	.34	SAND TO SILTY SAND	SM-SP	.64	14			81	40	.50+
10.80	139.71	.36	.26	SAND TO SILTY SAND	SM-SP	.65	16			85	41	.50+
11.00	125.03	.93	.74	SAND TO SILTY SAND	SM-SP	.66	14			81	40	.50+
11.20	99.37	.20	.20	SAND TO SILTY SAND	SM-SP	.67	11			72	39	.50+
11.40	64.48	.27	.41	SILTY SAND TO SANDY SILT	SM-ML	.63	10			62	37	.24
11.60	57.14	.11	.19	SILTY SAND TO SANDY SILT	SM-ML	.64	9			58	36	.20
11.80	93.08	.07	.08	SAND TO SILTY SAND	SM-SP	.71	11			69	39	.48
12.00	184.21	.03	.02	SAND	SW-SP	.78	17			90	43	.50+
12.20	251.83	.14	.06	SAND	SW-SP	.79	24			100+	44	.50+
12.40	246.43	.05	.02	SAND	SW-SP	.81	23			100+	44	.50+
12.60	241.23	.29	.12	SAND	SW-SP	.82	23			100+	44	.50+
12.80	174.01	.72	.41	SAND TO SILTY SAND	SM-SP	.77	20			89	41	.50+
13.00	245.73	.65	.26	SAND	SW-SP	.84	23			100+	44	.50+
13.20	341.87	1.53	.45	SAND	SW-SP	.86	32			100+	44	.50+
13.40	259.24	2.15	.83	SAND	SW-SP	.87	24			100+	44	.50+
13.60	242.76	.35	.14	SAND	SW-SP	.88	23			98	44	.50+
13.80	217.85	.84	.38	SAND	SW-SP	.90	20			93	44	.50+
14.00	154.96	.31	.20	SAND TO SILTY SAND	SM-SP	.84	18			83	40	.50+
14.20	162.66	.21	.13	SAND	SW-SP	.92	15			82	43	.50+
14.40	128.52	.39	.30	SAND TO SILTY SAND	SM-SP	.86	15			76	40	.50+
14.60	174.40	.64	.37	SAND TO SILTY SAND	SM-SP	.88	20			86	41	.50+
14.80	224.78	2.13	.95	SAND TO SILTY SAND	SM-SP	.89	26			95	42	.50+
15.00	209.08	.49	.24	SAND	SW-SP	.97	20			89	43	.50+
15.20	217.43	.29	.13	SAND	SW-SP	.99	20			90	43	.50+
15.40	186.47	.27	.14	SAND	SW-SP	1.00	17			85	43	.50+
15.60	158.89	.36	.23	SAND TO SILTY SAND	SM-SP	.94	19			81	40	.50+
15.80	175.73	.04	.02	SAND	SW-SP	1.03	16			82	43	.50+
16.00	121.51	.07	.06	SAND TO SILTY SAND	SM-SP	.96	14			71	39	.50+
16.20	27.84	.19	.68	SANDY SILT TO CLAYEY SILT	ML-MH	.81	5	2.002	13.5	27	32	.12
16.40	27.75	.06	.22	SANDY SILT TO CLAYEY SILT	ML-MH	.82	5	1.995	13.5	27	32	.12
16.60	147.82	.40	.27	SAND TO SILTY SAND	SM-SP	1.00	17			78	40	.50+
16.80	355.36	.40	.11	SAND	SW-SP	1.09	34			100+	44	.50+
17.00	452.43	.16	.03	GRAVELLY SAND TO SAND	SW-GW	1.10	36			100+	46	.50+
17.20	444.07	.34	.08	GRAVELLY SAND TO SAND	SW-GW	1.12	35			100+	46	.50+
17.40	413.97	.75	.18	SAND	SW-SP	1.13	39			100+	44	.50+
17.60	354.09	1.39	.39	SAND	SW-SP	1.14	33			100+	44	.50+



RESULT OF CONE PENETRATION TEST

14S

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

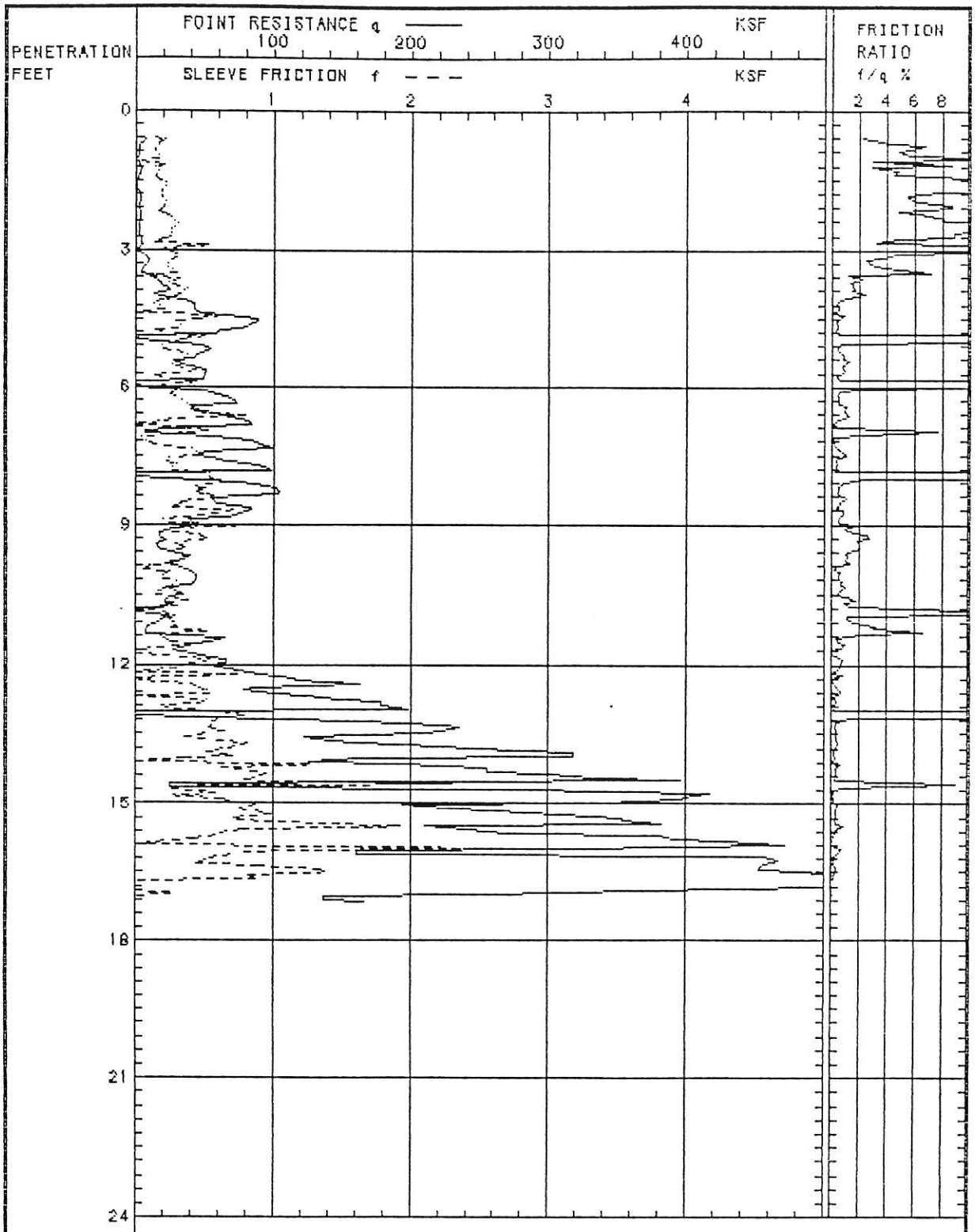
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 14S
CONE NO. : 001
DATE : 04/30/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	48.70	.33	.68	SILTY SAND TO SANDY SILT	SM-ML	.03	7			85	40	.50+
.80	62.48	.37	.60	SILTY SAND TO SANDY SILT	SM-ML	.04	9			97	42	.50+
1.00	54.60	.07	.12	SILTY SAND TO SANDY SILT	SM-ML	.05	8			87	40	.50+
1.20	44.66	.29	.64	SILTY SAND TO SANDY SILT	SM-ML	.07	7			78	39	.50+
1.40	109.44	.19	.17	SAND TO SILTY SAND	SM-SP	.08	13			100+	42	.50+
1.60	1.48	.09	5.87	ORGANIC MATERIAL	OL-OH	.05	1	.106	13.5			
1.80	23.11	.23	.98	SANDY SILT TO CLAYEY SILT	ML-MH	.09	4	1.705	13.5	62	37	.50+
2.00	69.86	.13	.18	SILTY SAND TO SANDY SILT	SM-ML	.11	11			92	41	.50+
2.20	45.44	.15	.34	SILTY SAND TO SANDY SILT	SM-ML	.12	7			74	38	.50+
2.40	79.19	.01	.01	SAND TO SILTY SAND	SM-SP	.14	9			93	42	.50+
2.60	39.93	.18	.46	SILTY SAND TO SANDY SILT	SM-ML	.14	6			69	38	.50+
2.80	75.74	.17	.22	SAND TO SILTY SAND	SM-SP	.17	9			89	41	.50+
3.00	85.84	.25	.29	SAND TO SILTY SAND	SM-SP	.18	10			93	42	.50+
3.20	70.87	.58	.81	SILTY SAND TO SANDY SILT	SM-ML	.18	11			85	40	.50+
3.40	40.34	.18	.44	SILTY SAND TO SANDY SILT	SM-ML	.19	6			67	37	.50+
3.60	14.91	.05	.33	SENSITIVE FINE GRAINED	OL-CH	.11	3	1.097	13.5			
3.80	14.87	.07	.48	SENSITIVE FINE GRAINED	OL-CH	.11	3	1.093	13.5			
4.00	17.09	.11	.66	SENSITIVE FINE GRAINED	OL-CH	.12	4	1.257	13.5			
4.20	20.69	.07	.36	SANDY SILT TO CLAYEY SILT	ML-MH	.21	3	1.517	13.5	51	35	.17
4.40	11.19	.04	.35	SENSITIVE FINE GRAINED	OL-CH	.13	2	.819	13.5			
4.60	6.41	.01	.17	SENSITIVE FINE GRAINED	OL-CH	.14	1	.464	13.5			
4.80	6.40	.09	1.45	SENSITIVE FINE GRAINED	OL-CH	.14	1	.463	13.5			
5.00	6.87	.04	.61	SENSITIVE FINE GRAINED	OL-CH	.15	1	.498	13.5			
5.20	13.77	.03	.19	SENSITIVE FINE GRAINED	OL-CH	.16	3	1.009	13.5			
5.40	8.37	.08	.95	SENSITIVE FINE GRAINED	OL-CH	.16	2	.608	13.5			
5.60	9.11	.02	.21	SENSITIVE FINE GRAINED	OL-CH	.17	2	.662	13.5			
5.80	6.15	.07	1.09	SENSITIVE FINE GRAINED	OL-CH	.17	1	.442	13.5			
6.00	4.92	.08	1.62	SENSITIVE FINE GRAINED	OL-CH	.18	1	.351	13.5			
6.20	5.18	.06	1.08	SENSITIVE FINE GRAINED	OL-CH	.19	1	.370	13.5			
6.40	4.92	.06	1.16	SENSITIVE FINE GRAINED	OL-CH	.19	1	.350	13.5			
6.60	5.65	.10	1.83	SENSITIVE FINE GRAINED	OL-CH	.20	1	.404	13.5			
6.80	5.17	.03	.62	SENSITIVE FINE GRAINED	OL-CH	.20	1	.368	13.5			
7.00	4.55	.06	1.25	SENSITIVE FINE GRAINED	OL-CH	.21	1	.322	13.5			
7.20	3.69	.06	1.55	SENSITIVE FINE GRAINED	OL-CH	.22	0	.257	13.5			
7.40	3.69	.08	2.23	SENSITIVE FINE GRAINED	OL-CH	.22	0	.257	13.5			
7.60	3.32	.06	1.92	SENSITIVE FINE GRAINED	OL-CH	.23	0	.229	13.5			
7.80	2.46	.07	2.88	ORGANIC MATERIAL	OL-OH	.23	1	.165	13.5			
8.00	2.45	.03	1.37	SENSITIVE FINE GRAINED	OL-CH	.24	0	.164	13.5			
8.20	5.39	.09	1.70	SENSITIVE FINE GRAINED	OL-CH	.25	1	.381	13.5			
8.40	39.79	.07	.19	SILTY SAND TO SANDY SILT	SM-ML	.46	6			53	36	.18
8.60	47.71	.10	.22	SILTY SAND TO SANDY SILT	SM-ML	.47	7			59	36	.21
8.80	43.55	.05	.12	SILTY SAND TO SANDY SILT	SM-ML	.48	6			55	36	.19
9.00	31.13	.46	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.45	5	2.272	13.5	47	35	.16
9.20	11.31	.05	.46	SENSITIVE FINE GRAINED	OL-CH	.28	2	.818	13.5			
9.40	6.66	.08	1.23	SENSITIVE FINE GRAINED	OL-CH	.28	1	.473	13.5			

9.60	4.92	.08	1.53	SENSITIVE FINE GRAINED	OL-CH	.29	1	.343	13.5			
9.80	14.16	.03	.24	SENSITIVE FINE GRAINED	OL-CH	.29	3	1.027	13.5			
10.00	5.43	.10	1.92	SENSITIVE FINE GRAINED	OL-CH	.30	1	.380	13.5			
10.20	4.43	.06	1.27	SENSITIVE FINE GRAINED	OL-CH	.31	1	.305	13.5			
10.40	3.94	.26	6.73	ORGANIC MATERIAL	OL-OH	.31	1	.268	13.5			
10.60	3.81	.15	3.87	CLAY	CH	.42	1	.251	13.5			
10.80	3.69	.12	3.17	CLAY	CH	.43	1	.242	13.5			
11.00	3.44	.14	4.12	CLAY	CH	.44	1	.222	13.5			
11.20	16.50	.13	.80	SENSITIVE FINE GRAINED	OL-CH	.34	3	1.177	13.5			
11.40	84.98	.24	.28	SAND TO SILTY SAND	SM-SP	.68	10			67	39	.33
11.60	125.81	.58	.46	SAND TO SILTY SAND	SM-SP	.70	15			80	40	.50+
11.80	99.86	.31	.31	SAND TO SILTY SAND	SM-SP	.71	11			71	39	.50+
12.00	118.52	.35	.29	SAND TO SILTY SAND	SM-SP	.72	14			77	40	.50+
12.20	178.64	.10	.06	SAND	SW-SP	.79	17			89	43	.50+
12.40	129.14	.06	.04	SAND TO SILTY SAND	SM-SP	.74	15			80	40	.50+
12.60	33.38	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.69	5			38	33	.14
12.80	29.00	.03	.10	SANDY SILT TO CLAYEY SILT	ML-MH	.64	5	2.101	13.5	36	33	.13
13.00	6.90	.22	3.15	CLAY	CH	.52	3	.472	13.5			
13.20	13.85	.49	3.56	CLAY	CH	.53	6	.987	13.5			
13.40	65.48	.28	.43	SILTY SAND TO SANDY SILT	SM-ML	.74	10			59	36	.21
13.60	78.04	.42	.54	SILTY SAND TO SANDY SILT	SM-ML	.75	12			63	37	.27
13.80	82.05	.11	.13	SAND TO SILTY SAND	SM-SP	.83	9			62	38	.26
14.00	91.65	.42	.46	SAND TO SILTY SAND	SM-SP	.84	10			65	39	.32
14.20	179.04	.08	.04	SAND	SW-SP	.92	17			85	43	.50+
14.40	108.64	.09	.08	SAND TO SILTY SAND	SM-SP	.86	13			70	39	.50+
14.60	11.57	.01	.07	SENSITIVE FINE GRAINED	OL-CH	.44	2	.824	13.5			
14.80	7.62	.19	2.56	CLAY	CH	.59	3	.521	13.5			
15.00	54.48	.29	.53	SILTY SAND TO SANDY SILT	SM-ML	.82	8			48	35	.17
15.20	69.54	.13	.18	SILTY SAND TO SANDY SILT	SM-ML	.84	11			57	36	.20
15.40	116.59	.09	.08	SAND TO SILTY SAND	SM-SP	.92	13			71	39	.50+
15.60	98.28	.16	.16	SAND TO SILTY SAND	SM-SP	.94	11			65	39	.31
15.80	17.76	.01	.04	SENSITIVE FINE GRAINED	OL-CH	.47	4	1.280	13.5			
16.00	8.51	.07	.81	SENSITIVE FINE GRAINED	OL-CH	.48	2	.595	13.5			
16.20	14.01	.01	.06	SENSITIVE FINE GRAINED	OL-CH	.49	3	1.092	13.5			
16.40	11.40	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.49	2	.808	13.5			
16.60	6.03	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.50	1	.410	13.5			
16.80	4.92	.01	.18	SENSITIVE FINE GRAINED	OL-CH	.50	1	.327	13.5			
17.00	8.45	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.51	2	.588	13.5			
17.20	13.76	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.52	3	.981	13.5			
17.40	20.03	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.52	4	1.445	13.5			
17.60	3.94	.04	1.03	SENSITIVE FINE GRAINED	OL-CH	.53	0	.252	13.5			
17.80	10.37	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.53	2	.729	13.5			
18.00	7.52	.06	.74	SENSITIVE FINE GRAINED	OL-CH	.54	1	.517	13.5			
18.20	9.57	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.55	2	.669	13.5			
18.40	5.90	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.55	1	.396	13.5			
18.60	5.90	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.56	1	.396	13.5			
18.80	5.66	.01	.17	SENSITIVE FINE GRAINED	OL-CH	.56	1	.378	13.5			
19.00	6.29	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.57	1	.424	13.5			
19.20	5.41	.02	.35	SENSITIVE FINE GRAINED	OL-CH	.58	1	.358	13.5			
19.40	5.90	.01	.16	SENSITIVE FINE GRAINED	OL-CH	.58	1	.394	13.5			
19.60	6.40	.04	.57	SENSITIVE FINE GRAINED	OL-CH	.59	1	.430	13.5			
19.80	5.90	.01	.16	SENSITIVE FINE GRAINED	OL-CH	.59	1	.393	13.5			
20.00	5.90	.01	.16	SENSITIVE FINE GRAINED	OL-CH	.60	1	.393	13.5			
20.20	5.90	.01	.16	SENSITIVE FINE GRAINED	OL-CH	.61	1	.392	13.5			
20.40	5.90	.03	.53	SENSITIVE FINE GRAINED	OL-CH	.61	1	.392	13.5			
20.60	6.14	.03	.56	SENSITIVE FINE GRAINED	OL-CH	.62	1	.409	13.5			
20.80	9.17	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.62	2	.633	13.5			



RESULT OF CONE PENETRATION TEST

15N

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

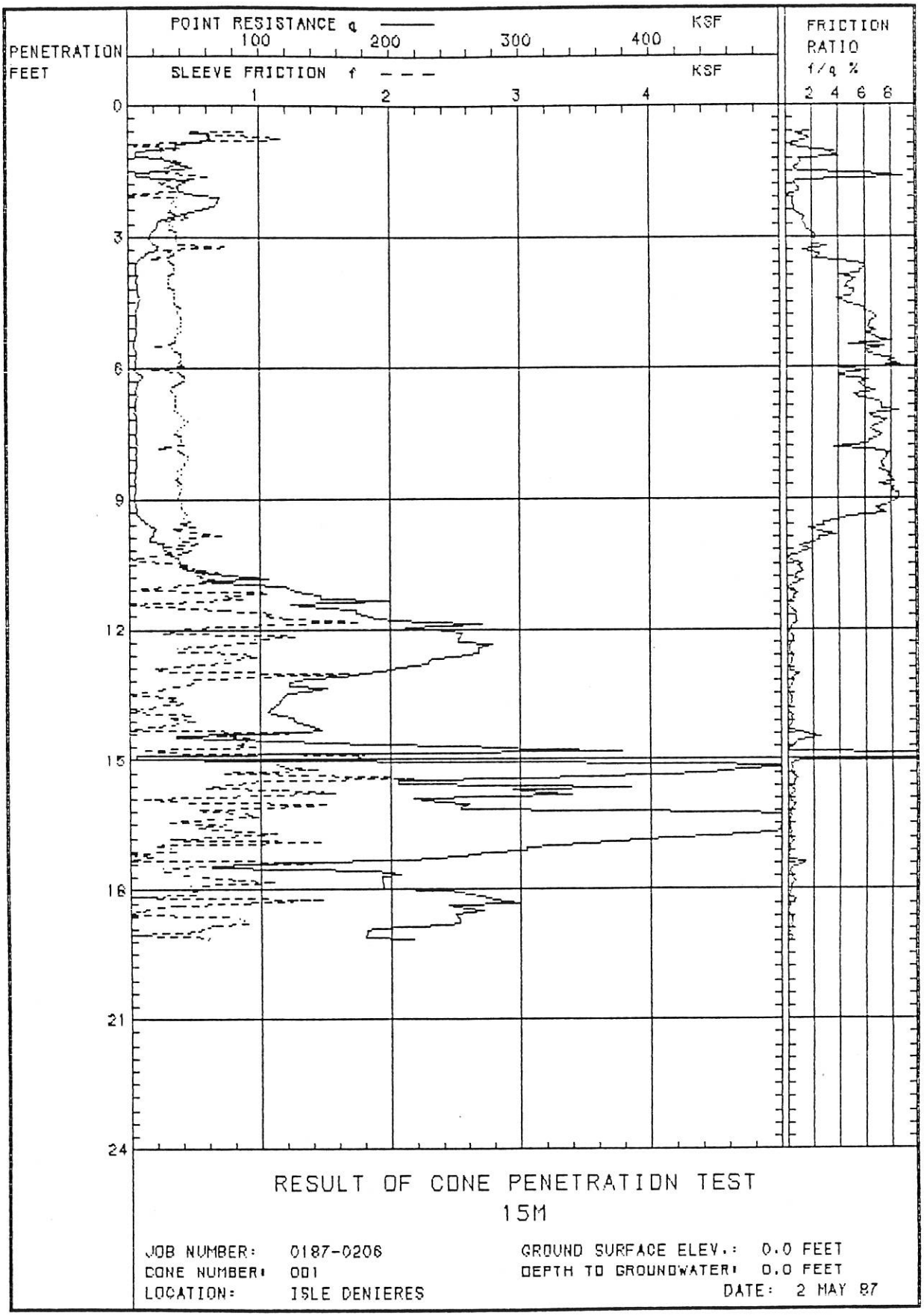
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 15N
CONE NO. : 001
DATE : 04/30/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	6.89	.18	2.58	CLAY	CH	.02	3	.508	13.5			
.80	2.46	.15	6.26	ORGANIC MATERIAL	OL-OH	.02	1	.180	13.5			
1.00	1.97	.17	8.47	ORGANIC MATERIAL	OL-OH	.03	1	.144	13.5			
1.20	3.69	.18	4.81	ORGANIC MATERIAL	OL-OH	.04	1	.271	13.5			
1.40	2.71	.17	6.21	ORGANIC MATERIAL	OL-OH	.04	1	.197	13.5			
1.60	.98	.22	21.86	ORGANIC MATERIAL	OL-OH	.05	1	.069	13.5			
1.80	2.95	.19	6.44	ORGANIC MATERIAL	OL-OH	.05	1	.215	13.5			
2.00	2.95	.21	7.25	ORGANIC MATERIAL	OL-OH	.06	1	.214	13.5			
2.20	3.44	.19	5.50	ORGANIC MATERIAL	OL-OH	.07	1	.250	13.5			
2.40	2.95	.28	9.33	ORGANIC MATERIAL	OL-OH	.07	1	.213	13.5			
2.60	2.70	.26	9.67	ORGANIC MATERIAL	OL-OH	.08	1	.195	13.5			
2.80	4.43	.18	4.01	CLAY	CH	.11	2	.320	13.5			
3.00	1.97	.25	12.62	ORGANIC MATERIAL	OL-OH	.09	1	.139	13.5			
3.20	9.34	.27	2.89	CLAY	CH	.13	4	.683	13.5			
3.40	5.91	.23	3.84	CLAY	CH	.14	2	.427	13.5			
3.60	11.73	.28	2.41	SILTY CLAY TO CLAY	CL-CH	.14	3	.858	13.5			
3.80	21.14	.23	1.09	CLAYEY SILT TO SILTY CLAY	MH-CL	.17	5	1.553	13.5			
4.00	18.85	.32	1.71	CLAYEY SILT TO SILTY CLAY	MH-CL	.18	4	1.383	13.5			
4.20	42.31	.15	.35	SILTY SAND TO SANDY SILT	SM-ML	.23	6			66	37	.47
4.40	57.01	.31	.54	SILTY SAND TO SANDY SILT	SM-ML	.24	9			73	39	.50+
4.60	85.61	.30	.35	SAND TO SILTY SAND	SM-SP	.28	10			85	41	.50+
4.80	59.78	.21	.36	SILTY SAND TO SANDY SILT	SM-ML	.26	9			73	39	.50+
5.00	16.62	.32	1.90	CLAYEY SILT TO SILTY CLAY	MH-CL	.22	3	1.215	13.5			
5.20	53.14	.25	.47	SILTY SAND TO SANDY SILT	SM-ML	.27	8			69	38	.50+
5.40	35.23	.40	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	.27	6	2.590	13.5	60	37	.23
5.60	45.22	.36	.81	SANDY SILT TO CLAYEY SILT	ML-MH	.28	8	3.329	13.5	65	37	.38
5.80	49.69	.20	.41	SILTY SAND TO SANDY SILT	SM-ML	.32	7			66	37	.38
6.00	7.08	.25	3.56	CLAY	CH	.24	3	.507	13.5			
6.20	62.20	.27	.44	SILTY SAND TO SANDY SILT	SM-ML	.34	9			71	38	.50+
6.40	56.48	.39	.68	SILTY SAND TO SANDY SILT	SM-ML	.35	9			67	38	.46
6.60	56.50	.63	1.11	SANDY SILT TO CLAYEY SILT	ML-MH	.33	10	4.161	13.5	68	38	.50+
6.80	83.12	.13	.16	SAND TO SILTY SAND	SM-SP	.41	9			77	40	.50+
7.00	6.89	.43	6.28	CLAY	CH	.28	3	.489	13.5			
7.20	85.58	.22	.26	SAND TO SILTY SAND	SM-SP	.43	10			77	40	.50+
7.40	75.89	.35	.46	SILTY SAND TO SANDY SILT	SM-ML	.41	12			74	38	.50+
7.60	60.42	.25	.42	SILTY SAND TO SANDY SILT	SM-ML	.42	9			67	37	.39
7.80	95.90	.27	.28	SAND TO SILTY SAND	SM-SP	.47	11			79	40	.50+
8.00	11.19	.54	4.81	CLAY	CH	.32	5	.805	13.5			
8.20	97.86	.47	.48	SAND TO SILTY SAND	SM-SP	.49	11			79	40	.50+
8.40	79.49	.37	.46	SILTY SAND TO SANDY SILT	SM-ML	.46	12			73	38	.50+
8.60	71.19	.30	.43	SILTY SAND TO SANDY SILT	SM-ML	.47	11			69	38	.50
8.80	71.88	.37	.51	SILTY SAND TO SANDY SILT	SM-ML	.48	11			69	38	.49
9.00	42.84	.66	1.53	SANDY SILT TO CLAYEY SILT	ML-MH	.45	8	3.140	13.5	57	36	.19
9.20	17.71	.37	2.06	CLAYEY SILT TO SILTY CLAY	MH-CL	.41	4	1.281	13.5			
9.40	18.75	.52	2.77	SILTY CLAY TO CLAY	CL-CH	.38	5	1.361	13.5			

9.60	25.98	.32	1.22	SANDY SILT TO CLAYEY SILT	ML-MH	.48	4	1.889	13.5	41	34	.14
9.80	28.38	.38	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.49	5	2.066	13.5	43	34	.14
10.00	38.59	.15	.39	SILTY SAND TO SANDY SILT	SM-ML	.55	6			48	35	.16
10.20	43.79	.22	.51	SILTY SAND TO SANDY SILT	SM-ML	.56	6			52	35	.17
10.40	26.03	.28	1.09	SANDY SILT TO CLAYEY SILT	ML-MH	.52	4	1.889	13.5	40	34	.14
10.60	23.39	.15	.64	SANDY SILT TO CLAYEY SILT	ML-MH	.53	4	1.693	13.5	34	33	.13
10.80	12.48	.21	1.66	SILTY CLAY TO CLAY	CL-CH	.43	3	.892	13.5			
11.00	22.90	.29	1.28	CLAYEY SILT TO SILTY CLAY	MH-CL	.49	5	1.660	13.5			
11.20	8.86	.28	3.19	CLAY	CH	.45	4	.623	13.5			
11.40	35.93	.25	.70	SANDY SILT TO CLAYEY SILT	ML-MH	.57	6	2.619	13.5	45	34	.15
11.60	38.46	.50	1.30	SANDY SILT TO CLAYEY SILT	ML-MH	.58	7	2.806	13.5	47	35	.16
11.80	48.03	.32	.66	SILTY SAND TO SANDY SILT	SM-ML	.65	7			51	35	.17
12.00	60.13	.65	1.08	SILTY SAND TO SANDY SILT	SM-ML	.66	9			59	36	.21
12.20	86.27	.36	.42	SAND TO SILTY SAND	SM-SP	.73	10			66	39	.35
12.40	139.28	.18	.13	SAND TO SILTY SAND	SM-SP	.74	16			82	40	.50+
12.60	89.32	.34	.38	SAND TO SILTY SAND	SM-SP	.76	10			57	39	.36
12.80	163.78	.51	.31	SAND TO SILTY SAND	SM-SP	.77	19			86	41	.50+
13.00	101.26	.46	.45	SAND TO SILTY SAND	SM-SP	.78	12			70	39	.50+
13.20	102.88	.59	.58	SAND TO SILTY SAND	SM-SP	.79	12			70	39	.50+
13.40	229.49	.59	.26	SAND	SW-SP	.87	21			96	44	.50+
13.60	132.01	.71	.54	SAND TO SILTY SAND	SM-SP	.82	15			78	40	.50+
13.80	233.69	.68	.29	SAND	SW-SP	.90	22			96	44	.50+
14.00	243.11	.30	.12	SAND	SW-SP	.91	23			97	44	.50+
14.20	222.73	.65	.29	SAND	SW-SP	.92	21			93	44	.50+
14.40	316.70	.91	.29	SAND	SW-SP	.94	30			100+	44	.50+
14.60	25.58	1.30	5.10	CLAY	CH	.58	12	1.852	13.5			
14.80	411.39	.44	.11	GRAVELLY SAND TO SAND	SW-GW	.96	32			100+	46	.50+
15.00	268.72	.94	.35	SAND	SW-SP	.97	25			100+	44	.50+
15.20	284.04	.48	.17	SAND	SW-SP	.99	27			100+	44	.50+
15.40	367.64	.75	.20	SAND	SW-SP	1.00	35			100+	44	.50+
15.60	255.15	.65	.26	SAND	SW-SP	1.01	24			96	44	.50+
15.80	408.38	.22	.05	GRAVELLY SAND TO SAND	SW-GW	1.03	32			100+	46	.50+
16.00	240.29	.77	.32	SAND	SW-SP	1.04	23			93	44	.50+
16.20	461.30	.46	.10	GRAVELLY SAND TO SAND	SW-GW	1.05	36			100+	46	.50+
16.40	453.22	1.20	.27	GRAVELLY SAND TO SAND	SW-GW	1.07	36			100+	46	.50+
16.60	566.87	.84	.15	GRAVELLY SAND TO SAND	SW-GW	1.08	45			100+	46	.50+
16.80	690.34	.17	.03	GRAVELLY SAND TO SAND	SW-GW	1.09	55			100+	46	.50+
17.00	196.13	.00	.00	SAND	SW-SP	1.10	18			84	43	.50+



RESULT OF CONE PENETRATION TEST

15M

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

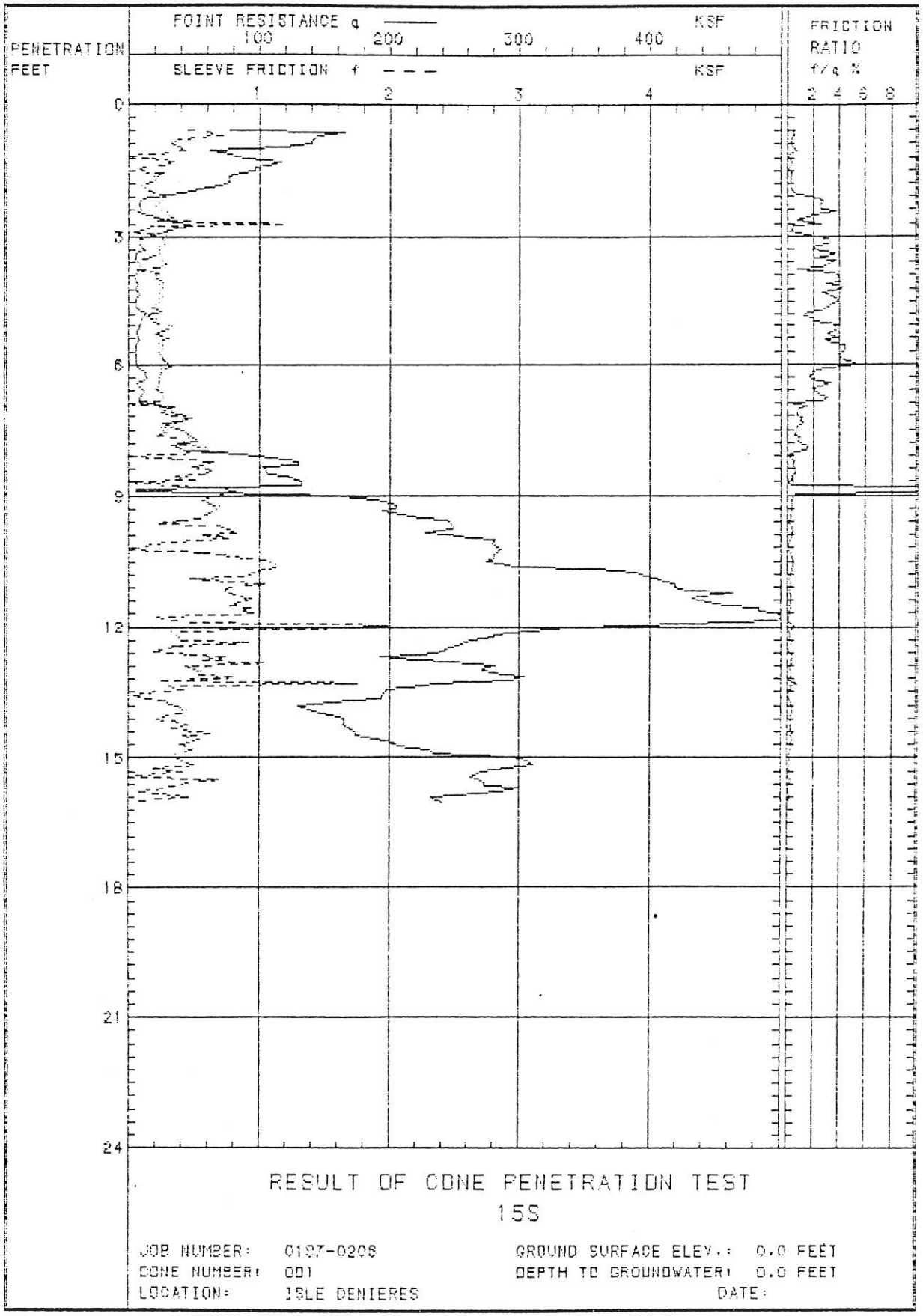
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 15M
CONE NO. : 001
DATE : 04/30/87

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	.68	1.23	SANDY SILT TO CLAYEY SILT	ML-MH	.03	10	4.079	13.5	93	41	.50+
.80	58.54	.77	1.32	SANDY SILT TO CLAYEY SILT	ML-MH	.04	11	4.334	13.5	94	41	.50+
1.00	21.90	.33	1.51	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	5	1.619	13.5			
1.20	16.22	.25	1.57	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	3	1.198	13.5			
1.40	46.24	.26	.56	SILTY SAND TO SANDY SILT	SM-ML	.08	7			78	39	.50+
1.60	6.64	.49	7.38	ORGANIC MATERIAL	OL-OH	.05	3	.489	13.5			
1.80	40.10	.27	.67	SANDY SILT TO CLAYEY SILT	ML-MH	.09	7	2.963	13.5	73	38	.50+
2.00	46.23	.19	.40	SILTY SAND TO SANDY SILT	SM-ML	.11	7			75	39	.50+
2.20	68.38	.34	.50	SILTY SAND TO SANDY SILT	SM-ML	.12	10			89	41	.50+
2.40	51.42	.32	.62	SILTY SAND TO SANDY SILT	SM-ML	.13	8			77	39	.50+
2.60	27.81	.38	1.36	SANDY SILT TO CLAYEY SILT	ML-MH	.13	5	2.050	13.5	63	37	.44
2.80	21.65	.35	1.62	CLAYEY SILT TO SILTY CLAY	MH-CL	.13	5	1.594	13.5			
3.00	16.48	.30	1.83	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	3	1.211	13.5			
3.20	21.39	.56	2.62	SILTY CLAY TO CLAY	CL-CH	.13	6	1.575	13.5			
3.40	13.77	.35	2.57	SILTY CLAY TO CLAY	CL-CH	.14	4	1.010	13.5			
3.60	6.64	.33	4.99	CLAY	CH	.14	3	.492	13.5			
3.80	6.40	.36	5.55	CLAY	CH	.15	3	.462	13.5			
4.00	6.15	.32	5.21	CLAY	CH	.16	2	.444	13.5			
4.20	6.89	.33	4.80	CLAY	CH	.17	3	.493	13.5			
4.40	8.36	.35	4.24	CLAY	CH	.18	4	.606	13.5			
4.60	7.13	.36	5.07	CLAY	CH	.18	3	.515	13.5			
4.80	5.90	.39	6.63	ORGANIC MATERIAL	OL-OH	.14	2	.427	13.5			
5.00	6.40	.34	5.39	CLAY	CH	.20	3	.459	13.5			
5.20	6.15	.39	6.39	ORGANIC MATERIAL	OL-OH	.16	2	.444	13.5			
5.40	4.68	.36	7.64	ORGANIC MATERIAL	OL-OH	.16	2	.334	13.5			
5.60	5.16	.34	6.66	ORGANIC MATERIAL	OL-CH	.17	2	.370	13.5			
5.80	5.42	.40	7.48	ORGANIC MATERIAL	OL-OH	.17	2	.389	13.5			
6.00	4.68	.31	6.56	ORGANIC MATERIAL	OL-OH	.18	2	.333	13.5			
6.20	10.82	.43	3.95	CLAY	CH	.25	5	.783	13.5			
6.40	6.40	.32	5.02	CLAY	CH	.26	3	.453	13.5			
6.60	5.89	.34	5.83	CLAY	CH	.26	2	.417	13.5			
6.80	5.17	.36	6.90	ORGANIC MATERIAL	OL-OH	.29	2	.368	13.5			
7.00	4.68	.37	7.86	ORGANIC MATERIAL	OL-OH	.21	2	.331	13.5			
7.20	6.15	.44	7.15	ORGANIC MATERIAL	OL-OH	.22	2	.440	13.5			
7.40	5.90	.36	6.05	CLAY	CH	.30	2	.415	13.5			
7.60	5.72	.40	7.00	ORGANIC MATERIAL	OL-OH	.23	2	.407	13.5			
7.80	6.64	.33	5.01	CLAY	CH	.31	3	.467	13.5			
8.00	5.65	.44	7.78	ORGANIC MATERIAL	OL-OH	.24	2	.401	13.5			
8.20	5.90	.43	7.26	ORGANIC MATERIAL	OL-OH	.25	2	.419	13.5			
8.40	5.29	.38	7.20	ORGANIC MATERIAL	OL-OH	.25	2	.373	13.5			
8.60	4.67	.38	8.14	ORGANIC MATERIAL	OL-OH	.26	2	.327	13.5			
8.80	4.92	.39	8.01	ORGANIC MATERIAL	OL-OH	.26	2	.345	13.5			
9.00	4.43	.38	8.60	ORGANIC MATERIAL	OL-OH	.27	2	.308	13.5			
9.20	5.65	.40	7.15	ORGANIC MATERIAL	OL-OH	.28	2	.398	13.5			
9.40	7.36	.45	6.14	CLAY	CH	.39	3	.517	13.5			

9.60	15.71	.45	2.87	SILTY CLAY TO CLAY	CL-CH	.38	5	1.136	13.5			
9.80	18.69	.59	3.14	SILTY CLAY TO CLAY	CL-CH	.39	5	1.356	13.5			
10.00	21.08	.47	2.23	CLAYEY SILT TO SILTY CLAY	MH-CL	.45	5	1.528	13.5			
10.20	29.23	.45	1.54	SANDY SILT TO CLAYEY SILT	ML-MH	.51	5	2.127	13.5	42	34	.15
10.40	37.87	.11	.29	SILTY SAND TO SANDY SILT	SM-ML	.57	6			47	35	.16
10.60	44.77	.46	1.02	SANDY SILT TO CLAYEY SILT	ML-MH	.53	8	3.277	13.5	54	36	.18
10.80	91.26	.31	.34	SAND TO SILTY SAND	SM-SP	.65	10			70	39	.50+
11.00	103.73	.57	.55	SAND TO SILTY SAND	SM-SP	.66	12			74	40	.50+
11.20	140.72	.55	.39	SAND TO SILTY SAND	SM-SP	.67	16			84	41	.50+
11.40	162.60	.84	.52	SAND TO SILTY SAND	SM-SP	.68	19			89	41	.50+
11.60	174.64	.85	.49	SAND TO SILTY SAND	SM-SP	.70	20			91	41	.50+
11.80	207.28	1.47	.71	SAND TO SILTY SAND	SM-SP	.71	24			98	42	.50+
12.00	222.47	1.27	.57	SAND	SW-SP	.78	21			93	44	.50+
12.20	253.11	.78	.31	SAND	SW-SP	.79	24			100+	44	.50+
12.40	273.36	.85	.31	SAND	SW-SP	.81	26			100+	46	.50+
12.60	259.41	.93	.36	SAND	SW-SP	.82	24			100+	47	.50+
12.80	229.73	1.23	.53	SAND	SW-SP	.83	22			97	44	.50+
13.00	187.43	1.31	.70	SAND TO SILTY SAND	SM-SP	.78	22			91	41	.50+
13.20	130.01	.49	.38	SAND TO SILTY SAND	SM-SP	.79	15			79	40	.50+
13.40	144.53	.21	.15	SAND TO SILTY SAND	SM-SP	.80	17			82	40	.50+
13.60	116.74	.23	.20	SAND TO SILTY SAND	SM-SP	.82	13			74	39	.50+
13.80	110.71	.11	.10	SAND TO SILTY SAND	SM-SP	.83	13			71	39	.50+
14.00	120.85	.30	.24	SAND TO SILTY SAND	SM-SP	.84	14			74	40	.50+
14.20	135.67	.29	.21	SAND TO SILTY SAND	SM-SP	.85	16			78	40	.50+
14.40	86.40	1.01	1.17	SILTY SAND TO SANDY SILT	SM-ML	.79	13			65	37	.31
14.60	150.28	.87	.58	SAND TO SILTY SAND	SM-SP	.88	17			81	40	.50+
14.80	344.13	.21	.06	SAND	SW-SP	.96	32			100+	44	.50+
15.00	56.17	1.41	2.51	SANDY SILT TO CLAYEY SILT	ML-MH	.75	10	4.105	13.5	52	35	.18
15.20	486.39	1.31	.27	GRAVELLY SAND TO SAND	SW-GW	.99	38			100+	46	.50+
15.40	356.67	.24	.07	SAND	SW-SP	1.00	34			100+	44	.50+
15.60	293.36	1.67	.57	SAND	SW-SP	1.01	28			100+	44	.50+
15.80	327.73	1.78	.54	SAND	SW-SP	1.03	31			100+	44	.50+
16.00	249.41	1.43	.58	SAND	SW-SP	1.04	23			94	44	.50+
16.20	358.03	.71	.20	SAND	SW-SP	1.05	34			100+	44	.50+
16.40	511.46	1.00	.20	GRAVELLY SAND TO SAND	SW-GW	1.07	40			100+	46	.50+
16.60	499.31	.66	.13	GRAVELLY SAND TO SAND	SW-GW	1.08	39			100+	46	.50+
16.80	434.31	3.79	.87	SAND	SW-SP	1.09	41			100+	44	.50+
17.00	316.36	.26	.08	SAND	SW-SP	1.10	30			100+	44	.50+
17.20	263.92	.09	.03	SAND	SW-SP	1.12	25			94	44	.50+
17.40	95.77	1.16	1.22	SILTY SAND TO SANDY SILT	SM-ML	.96	15			64	37	.22
17.60	198.00	.26	.13	SAND	SW-SP	1.14	18			84	43	.50+
17.80	193.82	.96	.50	SAND	SW-SP	1.16	18			83	43	.50+
18.00	218.51	.47	.22	SAND	SW-SP	1.17	20			86	43	.50+
18.20	274.86	.09	.03	SAND	SW-SP	1.18	26			94	44	.50+
18.40	251.45	1.32	.52	SAND	SW-SP	1.20	24			91	43	.50+
18.60	250.62	.06	.02	SAND	SW-SP	1.21	24			90	43	.50+
18.80	248.55	.89	.36	SAND	SW-SP	1.22	23			90	43	.50+
19.00	181.80	.54	.29	SAND	SW-SP	1.23	17			80	42	.46



RESULT OF CONE PENETRATION TEST

15S

JOB NUMBER: 0107-020S
CONE NUMBER: 001
LOCATION: ISLE DENIERES

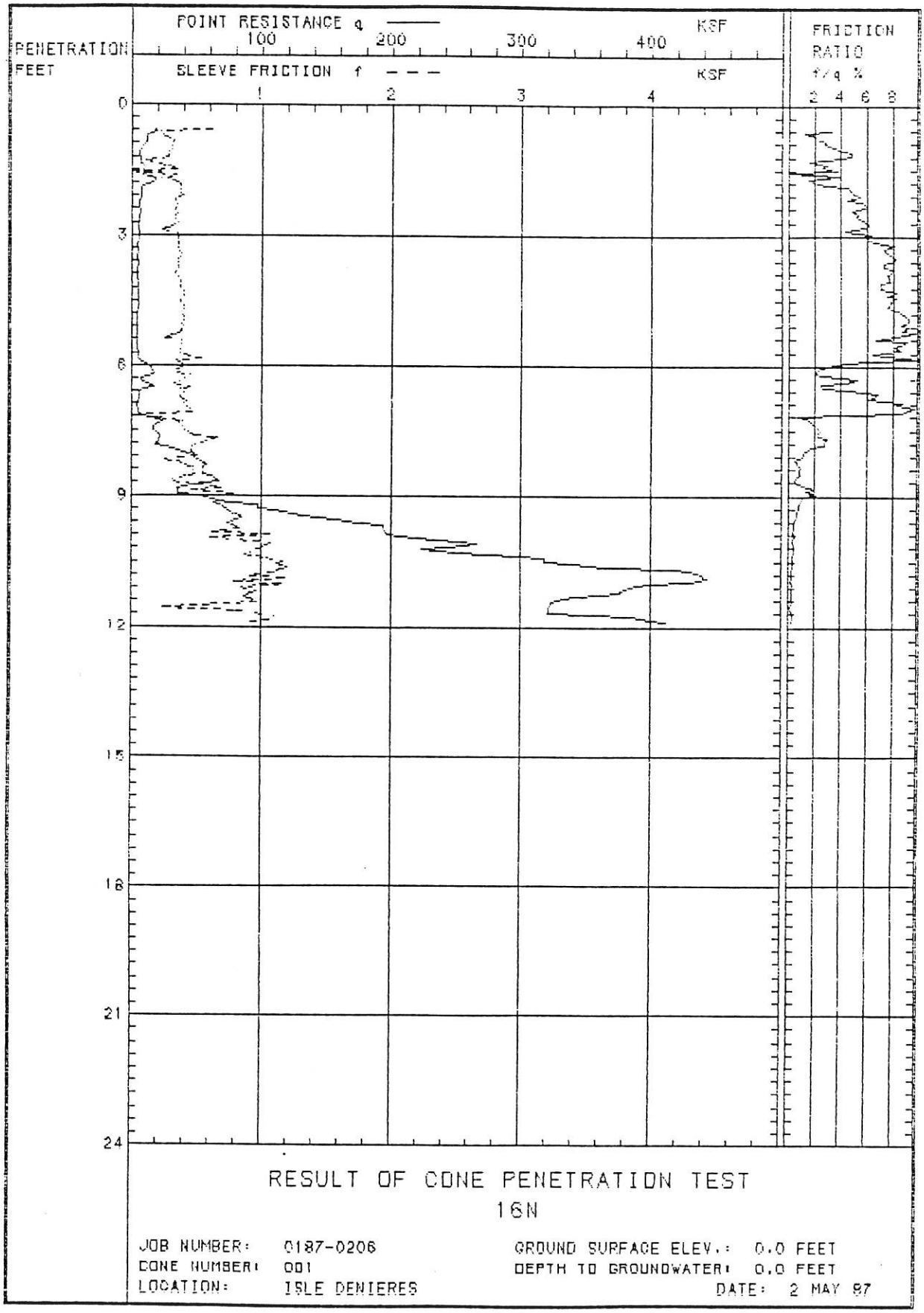
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE:

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

PROJECT NO. : 01870206
BORING NO. : 15S
CONE NO. : 001
DATE : 04/30/87

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	121.50	.52	.43	SAND TO SILTY SAND	SM-SP	.04	14			100+	42	.50+
.80	141.68	.41	.29	SAND TO SILTY SAND	SM-SP	.05	16			100+	42	.50+
1.00	90.17	.33	.36	SAND TO SILTY SAND	SM-SP	.06	10			100+	42	.50+
1.20	86.08	.04	.05	SAND TO SILTY SAND	SM-SP	.07	10			100+	42	.50+
1.40	101.84	.09	.09	SAND TO SILTY SAND	SM-SP	.08	12			100+	42	.50+
1.60	82.16	.15	.18	SAND TO SILTY SAND	SM-SP	.10	9			100+	42	.50+
1.80	74.29	.14	.19	SAND TO SILTY SAND	SM-SP	.11	8			95	42	.50+
2.00	40.60	.19	.46	SILTY SAND TO SANDY SILT	SM-ML	.11	6			72	38	.50+
2.20	8.86	.24	2.76	CLAY	CH	.09	4	.649	13.5			
2.40	8.86	.28	3.14	CLAY	CH	.10	4	.649	13.5			
2.60	25.81	.28	1.10	SANDY SILT TO CLAYEY SILT	ML-MH	.13	4	1.903	13.5	61	37	.35
2.80	39.14	.24	.61	SANDY SILT TO CLAYEY SILT	ML-MH	.14	7	2.889	13.5	69	38	.50+
3.00	13.67	.20	1.48	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	3	1.003	13.5			
3.20	9.71	.26	2.69	CLAY	CH	.13	4	.710	13.5			
3.40	6.15	.21	3.34	CLAY	CH	.14	2	.445	13.5			
3.60	7.87	.27	3.42	CLAY	CH	.14	3	.572	13.5			
3.80	7.88	.15	1.92	SENSITIVE FINE GRAINED	OL-CH	.11	1	.575	13.5			
4.00	5.90	.23	3.97	CLAY	CH	.16	2	.425	13.5			
4.20	5.90	.24	4.00	CLAY	CH	.17	2	.425	13.5			
4.40	7.01	.24	3.36	CLAY	CH	.18	3	.506	13.5			
4.60	5.90	.19	3.29	CLAY	CH	.18	2	.424	13.5			
4.80	12.30	.17	1.42	SENSITIVE FINE GRAINED	OL-CH	.14	2	.901	13.5			
5.00	9.11	.26	2.82	CLAY	CH	.20	4	.660	13.5			
5.20	7.63	.28	3.73	CLAY	CH	.21	3	.550	13.5			
5.40	8.36	.25	2.95	CLAY	CH	.22	4	.603	13.5			
5.60	5.90	.26	4.40	CLAY	CH	.22	2	.421	13.5			
5.80	6.40	.25	3.90	CLAY	CH	.23	3	.457	13.5			
6.00	6.39	.32	4.93	CLAY	CH	.24	3	.456	13.5			
6.20	13.04	.25	1.88	SILTY CLAY TO CLAY	CL-CH	.25	4	.947	13.5			
6.40	8.75	.23	2.65	CLAY	CH	.26	4	.629	13.5			
6.60	11.31	.23	2.05	SILTY CLAY TO CLAY	CL-CH	.26	3	.818	13.5			
6.80	8.85	.26	2.91	CLAY	CH	.27	4	.636	13.5			
7.00	28.49	.33	1.15	SANDY SILT TO CLAYEY SILT	ML-MH	.35	5	2.084	13.5	50	35	.16
7.20	43.30	.27	.62	SILTY SAND TO SANDY SILT	SM-ML	.40	6			60	36	.21
7.40	29.78	.40	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.37	5	2.179	13.5	50	35	.16
7.60	45.12	.27	.61	SILTY SAND TO SANDY SILT	SM-ML	.42	7			60	36	.21
7.80	42.91	.68	1.59	SANDY SILT TO CLAYEY SILT	ML-MH	.39	8	3.149	13.5	60	36	.21
8.00	55.44	.54	.98	SILTY SAND TO SANDY SILT	SM-ML	.44	8			64	37	.28
8.20	125.14	.27	.21	SAND TO SILTY SAND	SM-SP	.49	14			87	41	.50+
8.40	103.91	.74	.71	SAND TO SILTY SAND	SM-SP	.50	12			80	40	.50+
8.60	124.66	.44	.35	SAND TO SILTY SAND	SM-SP	.52	14			86	41	.50+
8.80	70.40	.53	.76	SILTY SAND TO SANDY SILT	SM-ML	.48	11			68	38	.45
9.00	138.43	.68	.49	SAND TO SILTY SAND	SM-SP	.54	16			89	41	.50+
9.20	203.39	.45	.22	SAND	SW-SP	.60	19			100+	44	.50+
9.40	202.02	.65	.32	SAND	SW-SP	.61	19			100+	44	.50+

9.60	245.45	.47	.19	SAND	SW-SP	.62	23	100+	44	.50+
9.80	238.37	.98	.41	SAND	SW-SP	.64	22	100+	44	.50+
10.00	271.66	.73	.27	SAND	SW-SP	.65	26	100+	44	.50+
10.20	284.31	.05	.02	SAND	SW-SP	.66	27	100+	44	.50+
10.40	280.40	.75	.27	SAND	SW-SP	.68	26	100+	44	.50+
10.60	290.95	1.09	.38	SAND	SW-SP	.69	27	100+	44	.50+
10.80	392.38	.84	.22	SAND	SW-SP	.70	37	100+	44	.50+
11.00	414.39	.90	.22	SAND	SW-SP	.71	39	100+	44	.50+
11.20	445.65	.49	.11	GRAVELLY SAND TO SAND	SW-GW	.73	35	100+	46	.50+
11.40	438.49	.50	.11	GRAVELLY SAND TO SAND	SW-GW	.74	35	100+	46	.50+
11.60	483.57	.91	.19	GRAVELLY SAND TO SAND	SW-GW	.75	38	100+	46	.50+
11.80	499.61	.27	.05	GRAVELLY SAND TO SAND	SW-GW	.77	39	100+	46	.50+
12.00	364.73	1.82	.50	SAND	SW-SP	.78	34	100+	44	.50+
12.20	280.40	3.21	1.14	SAND TO SILTY SAND	SM-SP	.73	33	100+	42	.50+
12.40	255.61	.44	.17	SAND	SW-SP	.81	24	100+	44	.50+
12.60	233.59	.16	.07	SAND	SW-SP	.82	22	99	44	.50+
12.80	233.54	.96	.41	SAND	SW-SP	.83	22	98	44	.50+
13.00	271.55	.54	.20	SAND	SW-SP	.84	26	100+	44	.50+
13.20	298.70	.54	.18	SAND	SW-SP	.86	28	100+	44	.50+
13.40	213.06	.37	.17	SAND	SW-SP	.87	20	93	44	.50+
13.60	194.32	.08	.04	SAND	SW-SP	.88	18	89	43	.50+
13.80	136.70	.33	.24	SAND TO SILTY SAND	SM-SP	.83	16	79	40	.50+
14.00	150.94	.43	.29	SAND TO SILTY SAND	SM-SP	.84	18	82	40	.50+
14.20	164.92	.39	.24	SAND	SW-SP	.92	15	83	43	.50+
14.40	172.89	.52	.30	SAND	SW-SP	.94	16	84	43	.50+
14.60	196.37	.35	.18	SAND	SW-SP	.95	18	89	43	.50+
14.80	223.67	.46	.21	SAND	SW-SP	.96	21	92	44	.50+
15.00	297.28	.38	.13	SAND	SW-SP	.97	28	100+	44	.50+
15.20	300.91	.48	.16	SAND	SW-SP	.99	28	100+	44	.50+
15.40	265.22	.20	.08	SAND	SW-SP	1.00	25	98	44	.50+
15.60	273.02	.78	.28	SAND	SW-SP	1.01	26	99	44	.50+
15.80	277.26	.42	.15	SAND	SW-SP	1.03	26	99	44	.50+
16.00	238.66	.12	.05	SAND	SW-SP	1.04	22	92	44	.50+



RESULT OF CONE PENETRATION TEST

16N

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

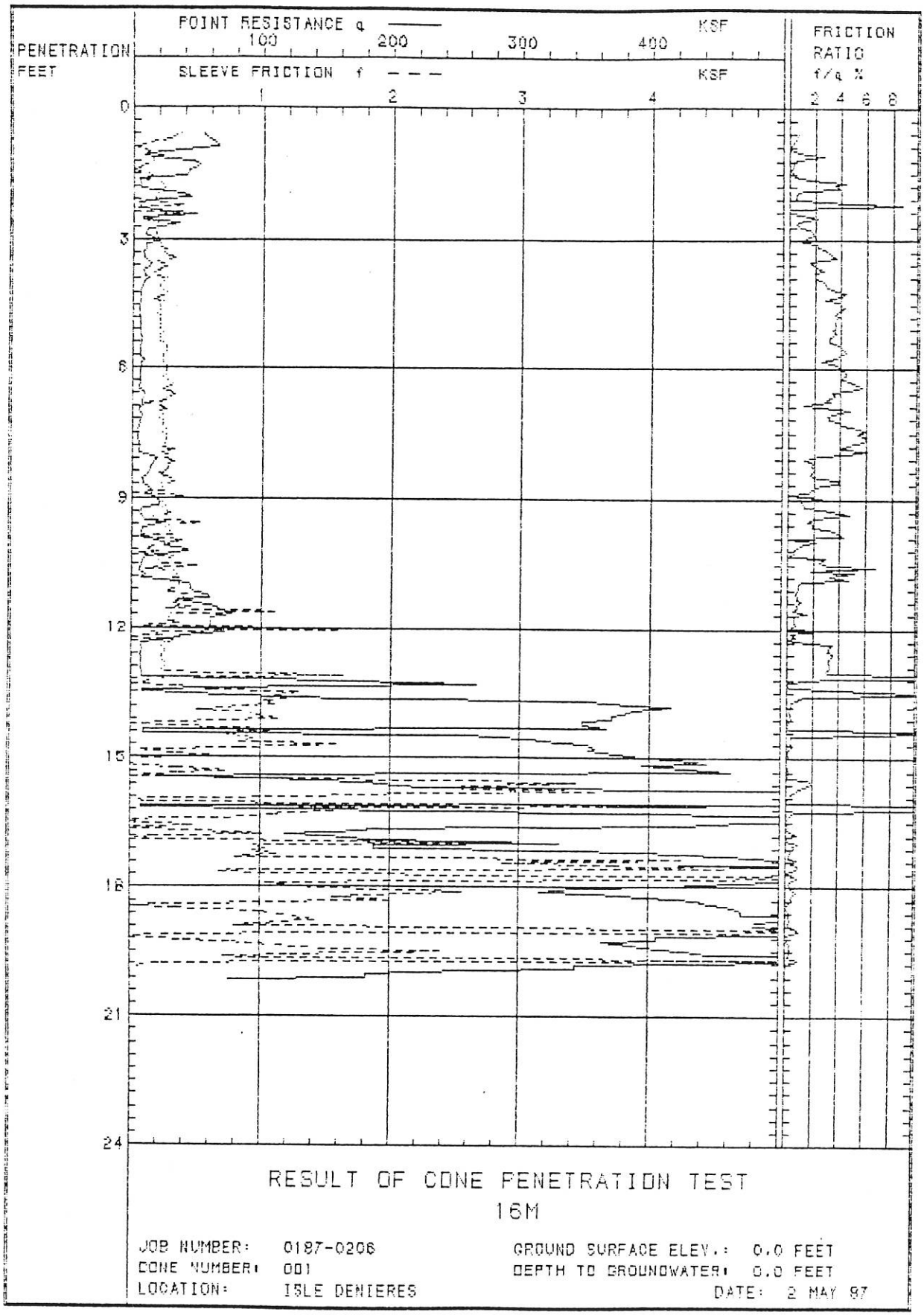
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 16N
CONE NO. : 001
DATE : 04/30/87

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	18.94	.42	2.23	CLAYEY SILT TO SILTY CLAY	MH-CL	.03	4	1.401	13.5			
.80	11.81	.31	2.63	SILTY CLAY TO CLAY	CL-CH	.03	3	.872	13.5			
1.00	8.12	.30	3.71	CLAY	CH	.04	3	.598	13.5			
1.20	6.39	.28	4.42	CLAY	CH	.05	3	.470	13.5			
1.40	8.85	.31	3.48	CLAY	CH	.06	4	.652	13.5			
1.60	8.98	.30	3.31	CLAY	CH	.06	4	.660	13.5			
1.80	15.75	.35	2.25	SILTY CLAY TO CLAY	CL-CH	.07	5	1.161	13.5			
2.00	7.75	.38	4.97	CLAY	CH	.08	3	.568	13.5			
2.20	6.64	.33	4.99	CLAY	CH	.09	3	.486	13.5			
2.40	6.64	.36	5.36	CLAY	CH	.10	3	.485	13.5			
2.60	6.15	.33	5.40	CLAY	CH	.10	2	.448	13.5			
2.80	5.41	.35	6.38	ORGANIC MATERIAL	OL-OH	.08	2	.395	13.5			
3.00	5.78	.33	5.65	CLAY	CH	.12	2	.419	13.5			
3.20	4.67	.36	7.63	ORGANIC MATERIAL	OL-OH	.10	2	.339	13.5			
3.40	4.92	.36	7.28	ORGANIC MATERIAL	OL-OH	.10	2	.357	13.5			
3.60	4.67	.36	7.64	ORGANIC MATERIAL	OL-OH	.11	2	.338	13.5			
3.80	4.43	.35	7.81	ORGANIC MATERIAL	OL-OH	.11	2	.320	13.5			
4.00	4.80	.37	7.68	ORGANIC MATERIAL	OL-OH	.12	2	.346	13.5			
4.20	5.41	.38	7.03	ORGANIC MATERIAL	OL-OH	.13	2	.391	13.5			
4.40	5.17	.39	7.63	ORGANIC MATERIAL	OL-OH	.13	2	.373	13.5			
4.60	5.16	.39	7.61	ORGANIC MATERIAL	OL-OH	.14	2	.372	13.5			
4.80	4.43	.38	8.64	ORGANIC MATERIAL	OL-OH	.14	2	.317	13.5			
5.00	4.43	.39	8.75	ORGANIC MATERIAL	OL-OH	.15	2	.317	13.5			
5.20	4.18	.38	9.12	ORGANIC MATERIAL	OL-OH	.16	2	.298	13.5			
5.40	4.06	.29	7.17	ORGANIC MATERIAL	OL-OH	.16	1	.289	13.5			
5.60	4.43	.37	8.31	ORGANIC MATERIAL	OL-OH	.17	2	.316	13.5			
5.80	5.41	.47	8.75	ORGANIC MATERIAL	OL-OH	.17	2	.388	13.5			
6.00	13.27	.39	2.97	CLAY	CH	.24	6	.965	13.5			
6.20	17.47	.40	2.30	SILTY CLAY TO CLAY	CL-CH	.25	5	1.275	13.5			
6.40	10.68	.39	3.65	CLAY	CH	.26	5	.772	13.5			
6.60	7.14	.39	5.48	CLAY	CH	.26	3	.510	13.5			
6.80	5.66	.40	7.15	ORGANIC MATERIAL	OL-OH	.20	2	.404	13.5			
7.00	4.67	.44	9.41	ORGANIC MATERIAL	OL-OH	.21	2	.330	13.5			
7.20	11.77	.20	1.73	SILTY CLAY TO CLAY	CL-CH	.29	3	.850	13.5			
7.40	18.96	.41	2.19	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	4	1.380	13.5			
7.60	20.53	.47	2.28	CLAYEY SILT TO SILTY CLAY	MH-CL	.34	4	1.495	13.5			
7.80	19.69	.76	3.85	CLAY	CH	.31	9	1.436	13.5			
8.00	38.34	.46	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	.40	7	2.811	13.5	56	36	.19
8.20	52.38	.31	.59	SILTY SAND TO SANDY SILT	SM-ML	.45	8			62	37	.25
8.40	55.47	.46	.84	SILTY SAND TO SANDY SILT	SM-ML	.46	8			63	37	.27
8.60	63.68	.37	.58	SILTY SAND TO SANDY SILT	SM-ML	.47	10			66	37	.35
8.80	41.15	.37	.90	SANDY SILT TO CLAYEY SILT	ML-MH	.44	7	3.016	13.5	56	36	.19
9.00	45.14	.70	1.55	SANDY SILT TO CLAYEY SILT	ML-MH	.45	8	3.311	13.5	58	36	.20
9.20	86.93	.85	.97	SILTY SAND TO SANDY SILT	SM-ML	.51	13			74	38	.50+
9.40	117.36	.78	.67	SAND TO SILTY SAND	SM-SP	.56	14			82	40	.50+

9.60	167.14	.77	.46	SAND TO SILTY SAND	SM-SP	.58	20	95	42	.50+
9.80	195.29	.89	.46	SAND	SW-SP	.64	18	98	44	.50+
10.00	227.88	.66	.29	SAND	SW-SP	.65	21	100+	44	.50+
10.20	234.19	.99	.42	SAND	SW-SP	.66	22	100+	44	.50+
10.40	296.56	.96	.32	SAND	SW-SP	.68	28	100+	44	.50+
10.60	351.79	1.16	.33	SAND	SW-SP	.69	33	100+	44	.50+
10.80	438.04	1.12	.26	SAND	SW-SP	.70	41	100+	44	.50+
11.00	413.97	.97	.23	SAND	SW-SP	.71	39	100+	44	.50+
11.20	376.33	1.03	.27	SAND	SW-SP	.73	36	100+	44	.50+
11.40	328.26	.99	.30	SAND	SW-SP	.74	31	100+	44	.50+
11.60	321.11	2.28	.71	SAND	SW-SP	.75	30	100+	44	.50+
11.80	392.08	1.06	.27	SAND	SW-SP	.77	37	100+	44	.50+



RESULT OF CONE PENETRATION TEST

16M

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

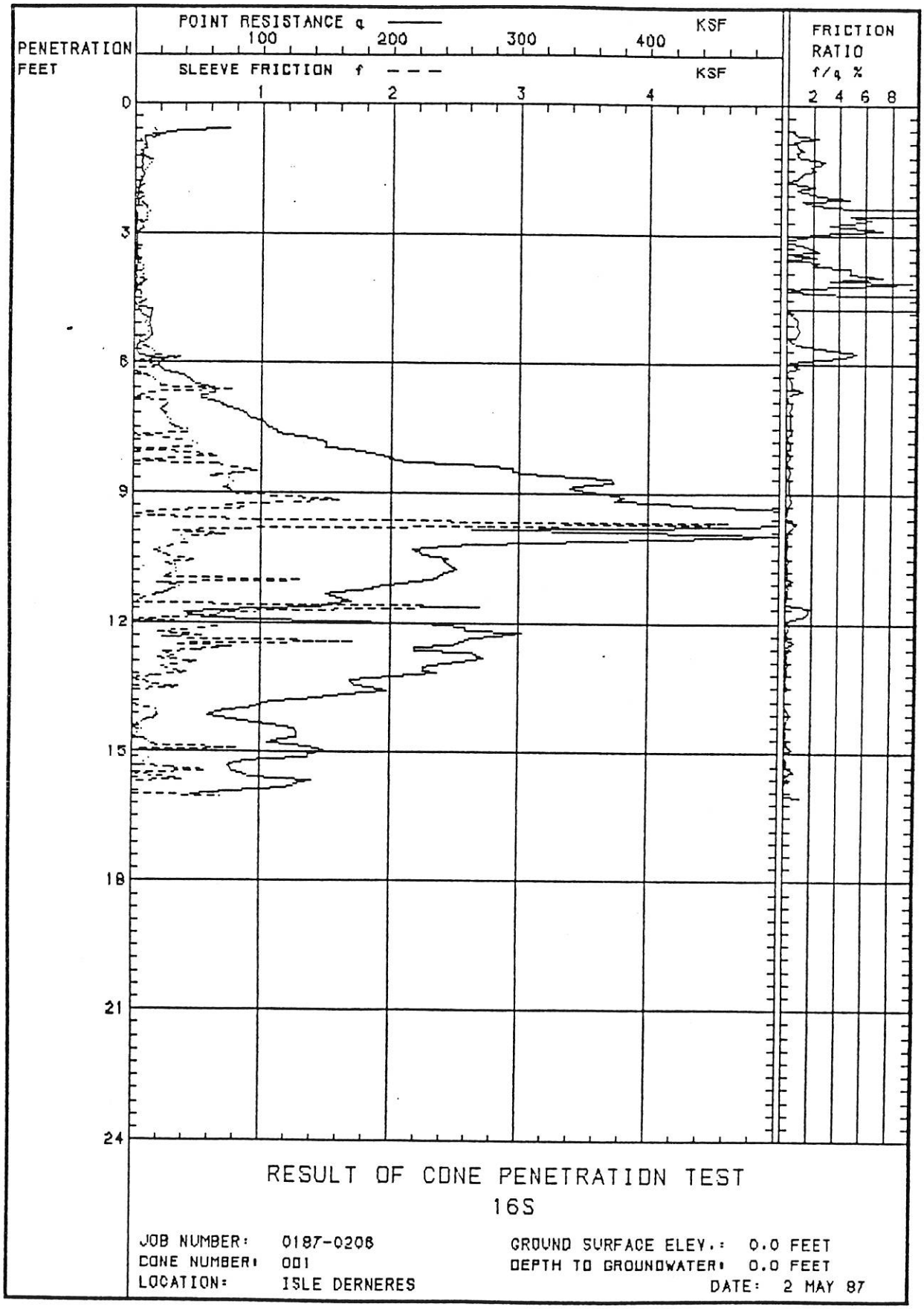
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 16M
CONE NO. : 001
DATE : 04/30/87

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	54.60	.37	.68	SILTY SAND TO SANDY SILT	SM-ML	.03	8			92	41	.50+
.80	63.21	.14	.22	SILTY SAND TO SANDY SILT	SM-ML	.04	10			98	42	.50+
1.00	25.22	.12	.49	SANDY SILT TO CLAYEY SILT	ML-MH	.05	4	1.865	13.5	65	37	.50+
1.20	36.76	.15	.41	SANDY SILT TO CLAYEY SILT	ML-MH	.06	7	2.719	13.5	73	38	.50+
1.40	45.02	.23	.50	SILTY SAND TO SANDY SILT	SM-ML	.08	7			77	39	.50+
1.60	22.66	.10	.46	SANDY SILT TO CLAYEY SILT	ML-MH	.08	4	1.673	13.5	62	37	.50+
1.80	6.40	.24	3.75	CLAY	CH	.07	3	.468	13.5			
2.00	41.81	.19	.45	SILTY SAND TO SANDY SILT	SM-ML	.11	6			72	38	.50+
2.20	4.43	.30	6.71	ORGANIC MATERIAL	OL-OH	.07	2	.323	13.5			
2.40	38.34	.21	.55	SANDY SILT TO CLAYEY SILT	ML-MH	.12	7	2.831	13.5	70	38	.50+
2.60	21.36	.13	.60	SANDY SILT TO CLAYEY SILT	ML-MH	.13	4	1.572	13.5	58	36	.24
2.80	11.19	.18	1.63	SENSITIVE FINE GRAINED	OL-CH	.08	2	.823	13.5			
3.00	17.45	.16	.94	CLAYEY SILT TO SILTY CLAY	MH-CL	.14	4	1.283	13.5			
3.20	9.84	.24	2.49	CLAY	CH	.13	4	.719	13.5			
3.40	8.61	.36	4.23	CLAY	CH	.14	4	.628	13.5			
3.60	13.53	.25	1.81	SILTY CLAY TO CLAY	CL-CH	.14	4	.992	13.5			
3.80	8.85	.17	1.93	SILTY CLAY TO CLAY	CL-CH	.15	2	.644	13.5			
4.00	8.12	.22	2.74	CLAY	CH	.16	3	.590	13.5			
4.20	6.15	.25	4.02	CLAY	CH	.17	2	.443	13.5			
4.40	5.90	.20	3.39	CLAY	CH	.18	2	.424	13.5			
4.60	5.16	.21	4.10	CLAY	CH	.18	2	.369	13.5			
4.80	5.66	.22	3.97	CLAY	CH	.19	2	.405	13.5			
5.00	5.90	.21	3.58	CLAY	CH	.20	2	.422	13.5			
5.20	6.40	.22	3.48	CLAY	CH	.21	3	.458	13.5			
5.40	6.77	.22	3.30	CLAY	CH	.22	3	.485	13.5			
5.60	6.15	.26	4.22	CLAY	CH	.22	2	.439	13.5			
5.80	7.86	.24	3.00	CLAY	CH	.23	3	.565	13.5			
6.00	6.52	.25	3.89	CLAY	CH	.24	3	.465	13.5			
6.20	5.90	.25	4.19	CLAY	CH	.25	2	.419	13.5			
6.40	5.66	.29	5.12	CLAY	CH	.26	2	.400	13.5			
6.60	8.85	.31	3.45	CLAY	CH	.26	4	.636	13.5			
6.80	7.87	.18	2.22	CLAY	CH	.27	3	.563	13.5			
7.00	5.41	.23	4.33	CLAY	CH	.28	2	.380	13.5			
7.20	6.40	.22	3.50	CLAY	CH	.29	3	.453	13.5			
7.40	4.68	.25	5.32	CLAY	CH	.30	2	.324	13.5			
7.60	4.43	.26	5.88	ORGANIC MATERIAL	OL-OH	.23	2	.311	13.5			
7.80	5.65	.24	4.20	CLAY	CH	.31	2	.396	13.5			
8.00	8.08	.25	3.07	CLAY	CH	.32	3	.575	13.5			
8.20	16.49	.30	1.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.37	3	1.194	13.5			
8.40	13.54	.27	2.02	SILTY CLAY TO CLAY	CL-CH	.34	4	.978	13.5			
8.60	8.11	.29	3.52	CLAY	CH	.34	3	.576	13.5			
8.80	14.75	.26	1.74	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	3	1.063	13.5			
9.00	17.92	.28	1.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	4	1.297	13.5			
9.20	14.84	.25	1.67	CLAYEY SILT TO SILTY CLAY	MH-CL	.41	3	1.068	13.5			
9.40	7.37	.27	3.62	CLAY	CH	.38	3	.518	13.5			

9.60	20.98	.40	1.93	CLAYEY SILT TO SILTY CLAY	MH-CL	.43	5	1.522	13.5			
9.80	7.38	.30	4.11	CLAY	CH	.39	3	.518	13.5			
10.00	21.59	.36	1.65	CLAYEY SILT TO SILTY CLAY	MH-CL	.45	5	1.566	13.5			
10.20	43.29	.16	.38	SILTY SAND TO SANDY SILT	SM-ML	.56	6			51	35	.17
10.40	10.10	.27	2.68	CLAY	CH	.42	4	.718	13.5			
10.60	6.89	.31	4.47	CLAY	CH	.42	3	.479	13.5			
10.80	9.37	.34	3.62	CLAY	CH	.43	4	.662	13.5			
11.00	44.26	.37	.83	SANDY SILT TO CLAYEY SILT	ML-MH	.55	8	3.238	13.5	52	35	.18
11.20	53.79	.24	.44	SILTY SAND TO SANDY SILT	SM-ML	.62	8			56	36	.19
11.40	43.41	.46	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	.57	8	3.173	13.5	51	35	.17
11.60	69.79	.68	.97	SILTY SAND TO SANDY SILT	SM-ML	.64	11			63	37	.27
11.80	61.00	.32	.52	SILTY SAND TO SANDY SILT	SM-ML	.65	9			60	36	.21
12.00	65.10	.94	1.44	SANDY SILT TO CLAYEY SILT	ML-MH	.60	12	4.778	13.5	62	37	.25
12.20	37.88	.13	.33	SILTY SAND TO SANDY SILT	SM-ML	.67	6			43	34	.15
12.40	7.38	.25	3.33	CLAY	CH	.50	3	.510	13.5			
12.60	7.14	.25	3.45	CLAY	CH	.50	3	.491	13.5			
12.80	7.87	.26	3.29	CLAY	CH	.51	3	.545	13.5			
13.00	8.11	.24	3.02	CLAY	CH	.52	3	.562	13.5			
13.20	87.01	.24	.28	SAND TO SILTY SAND	SM-SP	.79	10			65	39	.31
13.40	74.80	.47	.63	SILTY SAND TO SANDY SILT	SM-ML	.74	11			62	37	.25
13.60	122.31	1.15	.94	SAND TO SILTY SAND	SM-SP	.82	14			75	40	.50+
13.80	400.61	1.34	.34	SAND	SW-SP	.90	38			100+	44	.50+
14.00	375.00	.99	.26	SAND	SW-SP	.91	35			100+	44	.50+
14.20	347.80	.28	.08	SAND	SW-SP	.92	33			100+	44	.50+
14.40	10.33	.95	9.18	ORGANIC MATERIAL	OL-OH	.43	4	.733	13.5			
14.60	318.02	.89	.28	SAND	SW-SP	.95	30			100+	44	.50+
14.80	354.99	.54	.15	SAND	SW-SP	.96	34			100+	44	.50+
15.00	406.93	.51	.12	GRAVELLY SAND TO SAND	SW-GW	.97	32			100+	46	.50+
15.20	410.26	.18	.04	GRAVELLY SAND TO SAND	SW-GW	.99	32			100+	46	.50+
15.40	137.14	.18	.13	SAND TO SILTY SAND	SM-SP	.92	16			77	40	.50+
15.60	192.45	2.59	1.35	SAND TO SILTY SAND	SM-SP	.94	23			87	41	.50+
15.80	618.72	3.02	.49	GRAVELLY SAND TO SAND	SW-GW	1.03	49			100+	46	.50+
16.00	759.01	.10	.01	GRAVELLY SAND TO SAND	SW-GW	1.04	60			100+	46	.50+
16.20	117.86	1.44	1.22	SILTY SAND TO SANDY SILT	SM-ML	.89	18			72	39	.50+
16.40	570.43	.50	.09	GRAVELLY SAND TO SAND	SW-GW	1.07	45			100+	46	.50+
16.60	306.22	.25	.08	SAND	SW-SP	1.08	29			100+	44	.50+
16.80	134.88	.77	.57	SAND TO SILTY SAND	SM-SP	1.01	16			74	39	.50+
17.00	260.78	2.04	.78	SAND	SW-SP	1.10	24			94	44	.50+
17.20	383.07	1.03	.27	SAND	SW-SP	1.12	36			100+	44	.50+
17.40	578.32	5.92	1.02	SAND	SW-SP	1.13	55			100+	44	.50+
17.60	609.18	2.08	.34	GRAVELLY SAND TO SAND	SW-GW	1.14	48			100+	46	.50+
17.80	603.92	4.67	.77	SAND	SW-SP	1.16	57			100+	44	.50+
18.00	380.48	1.23	.32	SAND	SW-SP	1.17	36			100+	44	.50+
18.20	376.16	1.82	.48	SAND	SW-SP	1.18	36			100+	44	.50+
18.40	447.90	.00	.00	GRAVELLY SAND TO SAND	SW-GW	1.20	35			100+	46	.50+
18.60	470.29	.79	.17	GRAVELLY SAND TO SAND	SW-GW	1.21	37			100+	46	.50+
18.80	491.59	2.19	.45	SAND	SW-SP	1.22	47			100+	44	.50+
19.00	543.00	4.86	.89	SAND	SW-SP	1.23	52			100+	44	.50+
19.20	405.35	.31	.08	GRAVELLY SAND TO SAND	SW-GW	1.25	32			100+	46	.50+
19.40	395.83	1.29	.33	SAND	SW-SP	1.26	37			100+	44	.50+
19.60	514.76	.97	.19	GRAVELLY SAND TO SAND	SW-GW	1.27	41			100+	46	.50+
19.80	389.95	.12	.03	GRAVELLY SAND TO SAND	SW-GW	1.29	31			100+	46	.50+
20.00	223.40	.00	.00	SAND	SW-SP	1.30	21			85	43	.50+



RESULT OF CONE PENETRATION TEST

16S

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

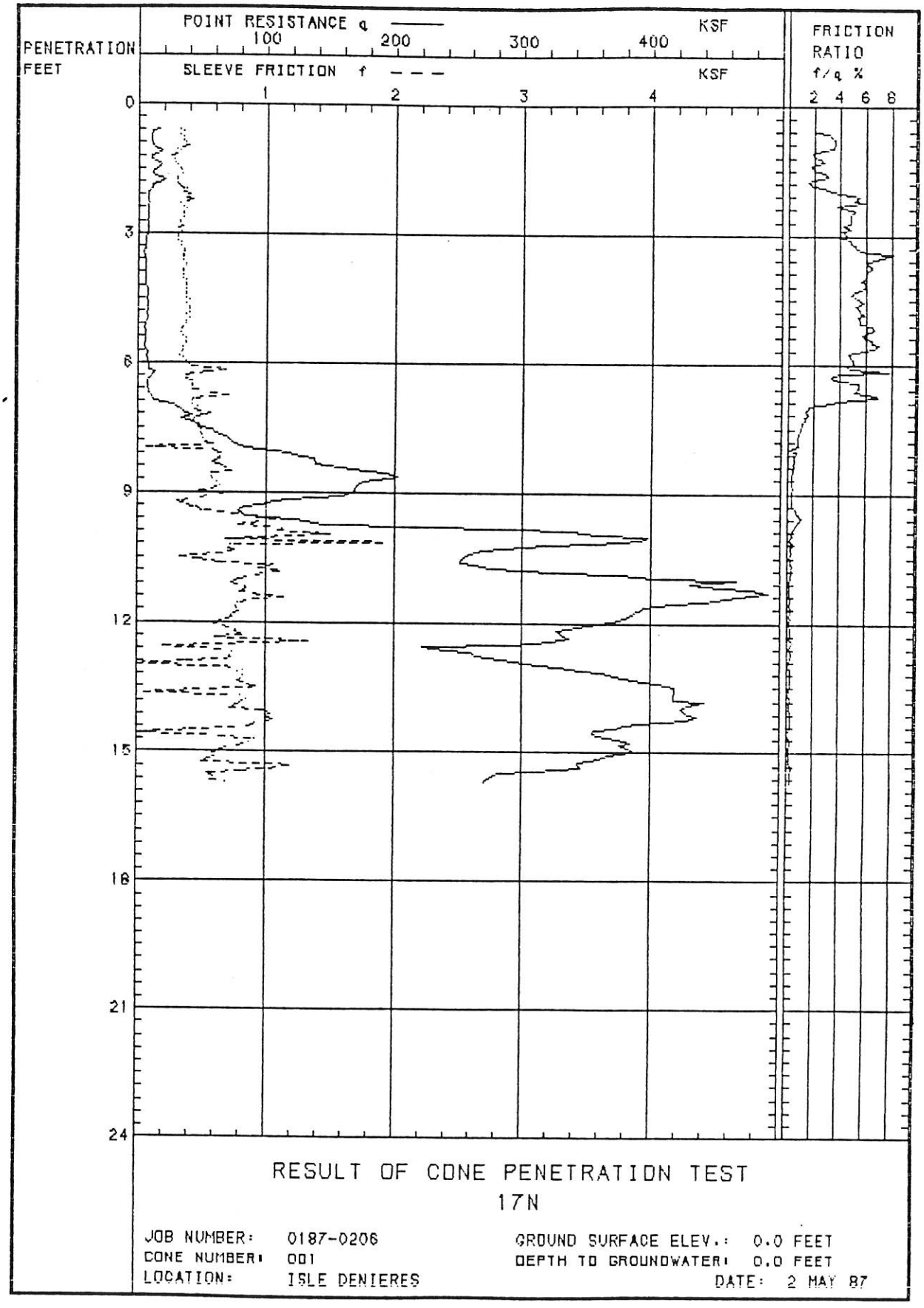
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 16S
CONE NO. : 001
DATE : 04/30/87

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	55.59	.16	.28	SILTY SAND TO SANDY SILT	SM-ML	.03	8			93	41	.50+
.80	7.87	.11	1.44	SENSITIVE FINE GRAINED	OL-CH	.02	1	.581	13.5			
1.00	8.24	.06	.74	SENSITIVE FINE GRAINED	OL-CH	.03	1	.608	13.5			
1.20	5.90	.06	.94	SENSITIVE FINE GRAINED	OL-CH	.04	1	.435	13.5			
1.40	5.90	.11	1.82	SENSITIVE FINE GRAINED	OL-CH	.04	1	.434	13.5			
1.60	6.21	.07	1.19	SENSITIVE FINE GRAINED	OL-CH	.05	1	.456	13.5			
1.80	4.67	.01	.26	SENSITIVE FINE GRAINED	OL-CH	.05	1	.342	13.5			
2.00	2.71	.05	1.95	SENSITIVE FINE GRAINED	OL-CH	.06	0	.196	13.5			
2.20	1.72	.06	3.76	ORGANIC MATERIAL	OL-OH	.07	1	.123	13.5			
2.40	.99	.10	9.67	ORGANIC MATERIAL	OL-OH	.07	1	.068	13.5			
2.60	1.72	.09	5.50	ORGANIC MATERIAL	OL-OH	.08	1	.122	13.5			
2.80	1.23	.06	4.87	ORGANIC MATERIAL	OL-OH	.08	1	.085	13.5			
3.00	1.35	.03	2.55	ORGANIC MATERIAL	OL-OH	.09	1	.094	13.5			
3.20	1.97	.01	.57	ORGANIC MATERIAL	OL-OH	.10	1	.139	13.5			
3.40	1.72	.04	2.38	ORGANIC MATERIAL	OL-OH	.10	1	.120	13.5			
3.60	2.21	.02	1.05	ORGANIC MATERIAL	OL-OH	.11	1	.156	13.5			
3.80	1.48	.07	4.83	ORGANIC MATERIAL	OL-OH	.11	1	.101	13.5			
4.00	1.23	.06	4.83	ORGANIC MATERIAL	OL-OH	.12	1	.092	13.5			
4.20	2.21	.05	2.12	ORGANIC MATERIAL	OL-OH	.13	1	.154	13.5			
4.40	.50	.05	9.72	ORGANIC MATERIAL	OL-OH	.13	1	.027	13.5			
4.60	.00	.06	999.00	ORGANIC MATERIAL	OL-OH	.14	1	-.010	13.5			
4.80	14.02	.03	.22	SENSITIVE FINE GRAINED	OL-CH	.14	3	1.028	13.5			
5.00	12.67	.13	1.06	SENSITIVE FINE GRAINED	OL-CH	.15	3	.927	13.5			
5.20	12.85	.13	1.03	SENSITIVE FINE GRAINED	OL-CH	.16	3	.940	13.5			
5.40	13.29	.08	.58	SENSITIVE FINE GRAINED	OL-CH	.16	3	.972	13.5			
5.60	4.44	.06	1.29	SENSITIVE FINE GRAINED	OL-CH	.17	1	.316	13.5			
5.80	3.44	.11	3.21	CLAY	CH	.23	1	.238	13.5			
6.00	21.66	.09	.42	SANDY SILT TO CLAYEY SILT	ML-MH	.30	4	1.582	13.5	46	35	.15
6.20	23.72	.05	.21	SANDY SILT TO CLAYEY SILT	ML-MH	.31	4	1.734	13.5	48	35	.16
6.40	44.88	.16	.37	SILTY SAND TO SANDY SILT	SM-ML	.35	7			62	37	.25
6.60	60.47	.49	.81	SILTY SAND TO SANDY SILT	SM-ML	.36	9			69	39	.50+
6.80	53.13	.76	1.44	SANDY SILT TO CLAYEY SILT	ML-MH	.34	10	3.910	13.5	66	37	.41
7.00	69.85	.26	.38	SILTY SAND TO SANDY SILT	SM-ML	.38	11			72	38	.50+
7.20	88.79	.25	.28	SAND TO SILTY SAND	SM-SP	.43	10			78	40	.50+
7.40	101.81	.30	.30	SAND TO SILTY SAND	SM-SP	.44	12			82	40	.50+
7.60	112.16	.43	.38	SAND TO SILTY SAND	SM-SP	.46	13			85	41	.50+
7.80	145.81	1.55	1.06	SAND TO SILTY SAND	SM-SP	.47	17			94	42	.50+
8.00	159.03	.23	.15	SAND	SW-SP	.52	15			95	44	.50+
8.20	198.74	1.62	.82	SAND TO SILTY SAND	SM-SP	.49	23			100+	42	.50+
8.40	273.76	.57	.21	SAND	SW-SP	.55	26			100+	44	.50+
8.60	324.16	.71	.22	SAND	SW-SP	.56	31			100+	44	.50+
8.80	358.31	.80	.22	SAND	SW-SP	.57	34			100+	44	.50+
9.00	359.45	.78	.22	SAND	SW-SP	.58	34			100+	44	.50+
9.20	390.62	1.39	.36	SAND	SW-SP	.60	37			100+	44	.50+
9.40	514.11	.38	.07	GRAVELLY SAND TO SAND	SW-GW	.61	41			100+	46	.50+

9.60	644.17	.51	.08	GRAVELLY SAND TO SAND	SW-GW	.62	51			100+	46	.50+
9.80	369.07	6.39	1.73	SAND TO SILTY SAND	SM-SP	.59	44			100+	42	.50+
10.00	485.15	.56	.11	GRAVELLY SAND TO SAND	SW-GW	.65	38			100+	46	.50+
10.20	255.50	.38	.15	SAND	SW-SP	.66	24			100+	44	.50+
10.40	223.55	.24	.11	SAND	SW-SP	.68	21			100+	44	.50+
10.60	242.75	.36	.15	SAND	SW-SP	.69	23			100+	44	.50+
10.80	247.01	.39	.16	SAND	SW-SP	.70	23			100+	44	.50+
11.00	233.47	.77	.33	SAND	SW-SP	.71	22			100+	44	.50+
11.20	187.43	2.36	1.26	SAND TO SILTY SAND	SM-SP	.67	22			95	42	.50+
11.40	155.49	.16	.11	SAND	SW-SP	.74	14			86	43	.50+
11.60	150.13	1.32	.88	SAND TO SILTY SAND	SM-SP	.70	17			86	41	.50+
11.80	45.18	.61	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.59	8	3.303	13.5	51	35	.17
12.00	184.55	.35	.19	SAND	SW-SP	.78	17			90	43	.50+
12.20	279.76	.10	.04	SAND	SW-SP	.79	26			100+	44	.50+
12.40	259.56	.96	.37	SAND	SW-SP	.81	24			100+	44	.50+
12.60	218.42	1.37	.63	SAND	SW-SP	.82	20			96	44	.50+
12.80	269.78	.21	.08	SAND	SW-SP	.83	25			100+	44	.50+
13.00	228.81	.29	.13	SAND	SW-SP	.84	21			97	44	.50+
13.20	219.85	.32	.15	SAND	SW-SP	.86	21			95	44	.50+
13.40	171.16	.24	.14	SAND	SW-SP	.87	16			85	43	.50+
13.60	182.34	.71	.39	SAND	SW-SP	.88	17			87	43	.50+
13.80	120.27	.00	.00	SAND TO SILTY SAND	SM-SP	.83	14			74	40	.50+
14.00	82.08	.14	.17	SAND TO SILTY SAND	SM-SP	.84	9			62	38	.25
14.20	68.56	.17	.25	SILTY SAND TO SANDY SILT	SM-ML	.78	10			59	36	.21
14.40	117.63	.00	.00	SAND TO SILTY SAND	SM-SP	.86	14			73	39	.50+
14.60	128.89	.00	.00	SAND TO SILTY SAND	SM-SP	.88	15			76	40	.50+
14.80	115.51	.30	.26	SAND TO SILTY SAND	SM-SP	.89	13			71	39	.50+
15.00	144.53	.00	.00	SAND TO SILTY SAND	SM-SP	.90	17			80	40	.50+
15.20	93.36	.01	.01	SAND TO SILTY SAND	SM-SP	.91	11			64	38	.29
15.40	77.80	.43	.55	SILTY SAND TO SANDY SILT	SM-ML	.85	12			61	37	.23
15.60	115.29	.19	.17	SAND TO SILTY SAND	SM-SP	.94	13			70	39	.50+
15.80	122.06	.00	.00	SAND TO SILTY SAND	SM-SP	.95	14			72	39	.50+
16.00	35.69	.34	.95	SANDY SILT TO CLAYEY SILT	ML-MH	.80	6	2.584	13.5	36	33	.14



RESULT OF CONE PENETRATION TEST

17N

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

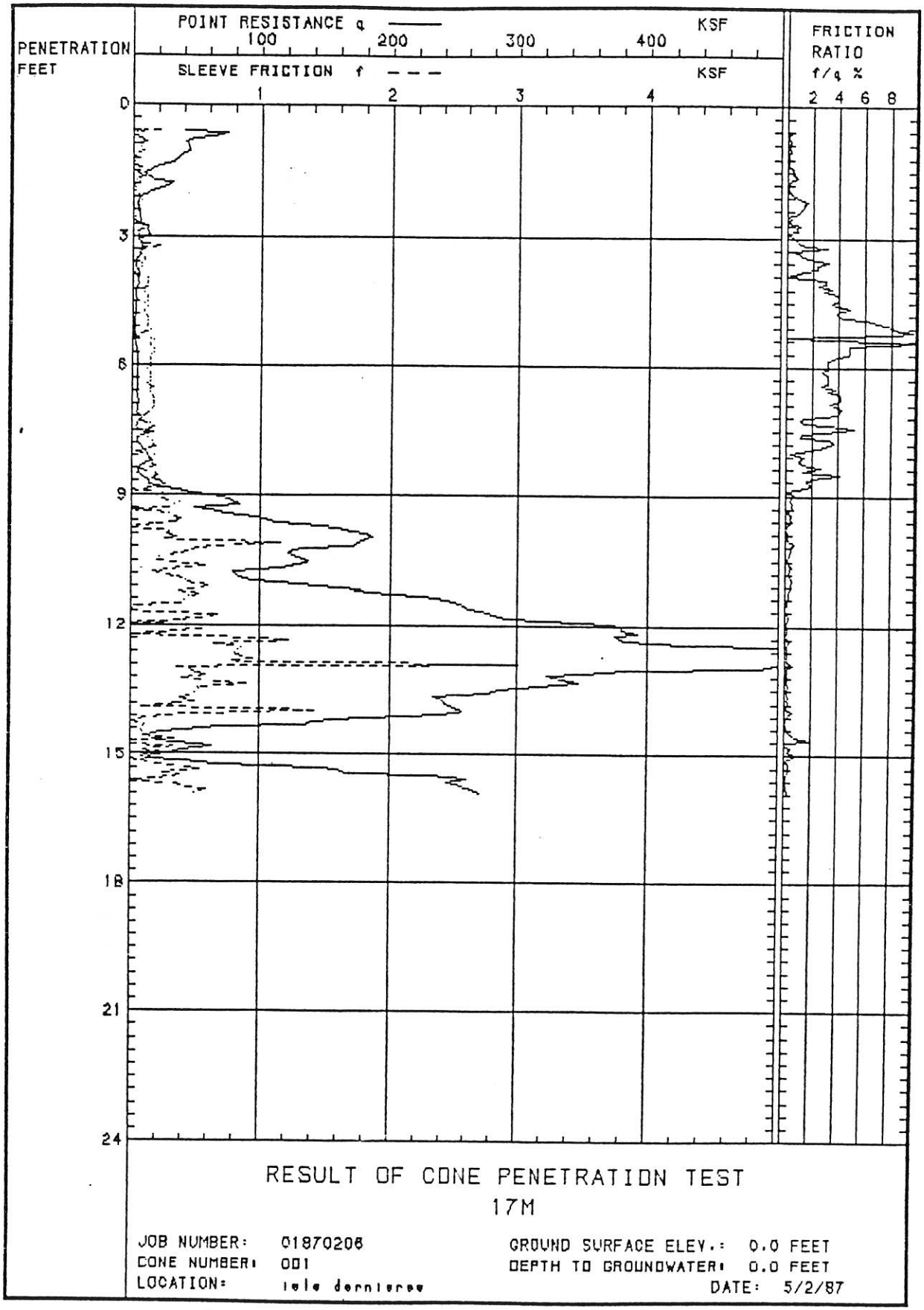
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 17N
CONE NO. : 001
DATE : 05/02/87

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	14.02	.34	2.43	SILTY CLAY TO CLAY	CL-CH	.02	4	1.037	13.5			
.80	9.84	.35	3.57	CLAY	CH	.03	4	.726	13.5			
1.00	13.03	.38	2.89	CLAY	CH	.04	6	.963	13.5			
1.20	12.79	.28	2.17	SILTY CLAY TO CLAY	CL-CH	.05	4	.944	13.5			
1.40	17.22	.33	1.91	CLAYEY SILT TO SILTY CLAY	MH-CL	.06	4	1.271	13.5			
1.60	11.56	.34	2.91	CLAY	CH	.06	5	.852	13.5			
1.80	18.21	.30	1.66	CLAYEY SILT TO SILTY CLAY	MH-CL	.08	4	1.343	13.5			
2.00	9.35	.37	3.92	CLAY	CH	.08	4	.687	13.5			
2.20	7.38	.40	5.45	CLAY	CH	.09	3	.540	13.5			
2.40	7.38	.42	5.63	CLAY	CH	.10	3	.539	13.5			
2.60	7.38	.35	4.80	CLAY	CH	.10	3	.539	13.5			
2.80	7.63	.34	4.49	CLAY	CH	.11	3	.557	13.5			
3.00	7.38	.32	4.33	CLAY	CH	.12	3	.538	13.5			
3.20	6.40	.32	5.00	CLAY	CH	.13	3	.464	13.5			
3.40	5.17	.36	6.90	ORGANIC MATERIAL	OL-OH	.10	2	.375	13.5			
3.60	5.66	.36	6.29	ORGANIC MATERIAL	OL-OH	.11	2	.411	13.5			
3.80	5.90	.37	6.23	ORGANIC MATERIAL	OL-OH	.11	2	.429	13.5			
4.00	6.15	.36	5.78	CLAY	CH	.16	2	.444	13.5			
4.20	6.40	.38	5.92	CLAY	CH	.17	3	.461	13.5			
4.40	7.63	.38	4.97	CLAY	CH	.18	3	.552	13.5			
4.60	7.13	.39	5.48	CLAY	CH	.18	3	.515	13.5			
4.80	7.13	.40	5.66	CLAY	CH	.19	3	.514	13.5			
5.00	7.13	.39	5.50	CLAY	CH	.20	3	.514	13.5			
5.20	5.41	.36	6.59	ORGANIC MATERIAL	OL-OH	.16	2	.389	13.5			
5.40	5.90	.37	6.24	ORGANIC MATERIAL	OL-OH	.16	2	.425	13.5			
5.60	5.41	.37	6.78	ORGANIC MATERIAL	OL-OH	.17	2	.388	13.5			
5.80	7.13	.37	5.16	CLAY	CH	.23	3	.511	13.5			
6.00	8.11	.39	4.80	CLAY	CH	.24	3	.583	13.5			
6.20	11.29	.55	4.85	CLAY	CH	.25	5	.818	13.5			
6.40	8.74	.41	4.74	CLAY	CH	.26	4	.628	13.5			
6.60	8.11	.43	5.24	CLAY	CH	.26	3	.582	13.5			
6.80	10.94	.64	5.86	CLAY	CH	.27	5	.790	13.5			
7.00	28.77	.45	1.56	SANDY SILT TO CLAYEY SILT	ML-MH	.35	5	2.105	13.5	59	35	.16
7.20	39.82	.53	1.32	SANDY SILT TO CLAYEY SILT	ML-MH	.36	7	2.923	13.5	59	36	.21
7.40	42.83	.50	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.37	8	3.145	13.5	60	37	.22
7.60	59.26	.49	.83	SILTY SAND TO SANDY SILT	SM-ML	.42	9			66	37	.37
7.80	72.43	.53	.73	SILTY SAND TO SANDY SILT	SM-ML	.43	11			71	38	.50+
8.00	89.23	.32	.36	SAND TO SILTY SAND	SM-SP	.48	10			76	40	.50+
8.20	132.76	.65	.49	SAND TO SILTY SAND	SM-SP	.49	15			89	41	.50+
8.40	148.20	.67	.45	SAND TO SILTY SAND	SM-SP	.50	17			93	42	.50+
8.60	198.20	.58	.29	SAND	SW-SP	.56	18			100+	44	.50+
8.80	173.68	.62	.35	SAND	SW-SP	.57	16			96	44	.50+
9.00	168.50	.40	.24	SAND	SW-SP	.58	16			94	44	.50+
9.20	112.42	.45	.40	SAND TO SILTY SAND	SM-SP	.55	13			81	40	.50+
9.40	81.32	.53	.65	SILTY SAND TO SANDY SILT	SM-ML	.52	12			71	38	.50+

9.60	102.33	.81	.79	SAND TO SILTY SAND	SM-SP	.58	12	77	40	.50+
9.80	216.16	.95	.44	SAND	SW-SP	.64	20	100+	44	.50+
10.00	376.78	2.43	.64	SAND	SW-SP	.65	36	100+	44	.50+
10.20	336.76	.71	.21	SAND	SW-SP	.66	32	100+	44	.50+
10.40	264.00	.72	.27	SAND	SW-SP	.68	25	100+	44	.50+
10.60	252.00	.26	.10	SAND	SW-SP	.69	24	100+	44	.50+
10.80	299.93	1.03	.34	SAND	SW-SP	.70	28	100+	44	.50+
11.00	433.88	.99	.23	SAND	SW-SP	.71	41	100+	44	.50+
11.20	464.69	.96	.21	GRAVELLY SAND TO SAND	SW-GW	.73	37	100+	46	.50+
11.40	467.99	1.03	.22	GRAVELLY SAND TO SAND	SW-GW	.74	37	100+	46	.50+
11.60	405.54	.77	.19	SAND	SW-SP	.75	38	100+	44	.50+
11.80	384.85	.78	.20	SAND	SW-SP	.77	36	100+	44	.50+
12.00	364.87	.39	.11	SAND	SW-SP	.78	34	100+	44	.50+
12.20	327.85	.78	.24	SAND	SW-SP	.79	31	100+	44	.50+
12.40	329.71	.44	.13	SAND	SW-SP	.81	31	100+	44	.50+
12.60	231.04	1.19	.51	SAND	SW-SP	.82	22	99	44	.50+
12.80	268.27	.73	.27	SAND	SW-SP	.83	25	100+	44	.50+
13.00	320.21	.20	.06	SAND	SW-SP	.84	30	100+	44	.50+
13.20	366.90	.81	.22	SAND	SW-SP	.86	35	100+	44	.50+
13.40	403.69	1.05	.26	SAND	SW-SP	.87	38	100+	44	.50+
13.60	417.78	.28	.07	GRAVELLY SAND TO SAND	SW-GW	.88	33	100+	46	.50+
13.80	429.22	.84	.20	GRAVELLY SAND TO SAND	SW-GW	.90	34	100+	46	.50+
14.00	424.39	.81	.19	GRAVELLY SAND TO SAND	SW-GW	.91	33	100+	46	.50+
14.20	431.52	1.03	.24	SAND	SW-SP	.92	41	100+	44	.50+
14.40	376.15	.91	.24	SAND	SW-SP	.94	36	100+	44	.50+
14.60	359.31	.58	.16	SAND	SW-SP	.95	34	100+	44	.50+
14.80	379.99	1.72	.45	SAND	SW-SP	.96	36	100+	44	.50+
15.00	381.51	.58	.15	SAND	SW-SP	.97	36	100+	44	.50+
15.20	351.68	.74	.21	SAND	SW-SP	.99	33	100+	44	.50+
15.40	327.31	.84	.26	SAND	SW-SP	1.00	31	100+	44	.50+
15.60	273.94	.63	.23	SAND	SW-SP	1.01	26	99	44	.50+



RESULT OF CONE PENETRATION TEST

17M

JOB NUMBER: 01870206
CONE NUMBER: 001
LOCATION: Isle dernieres

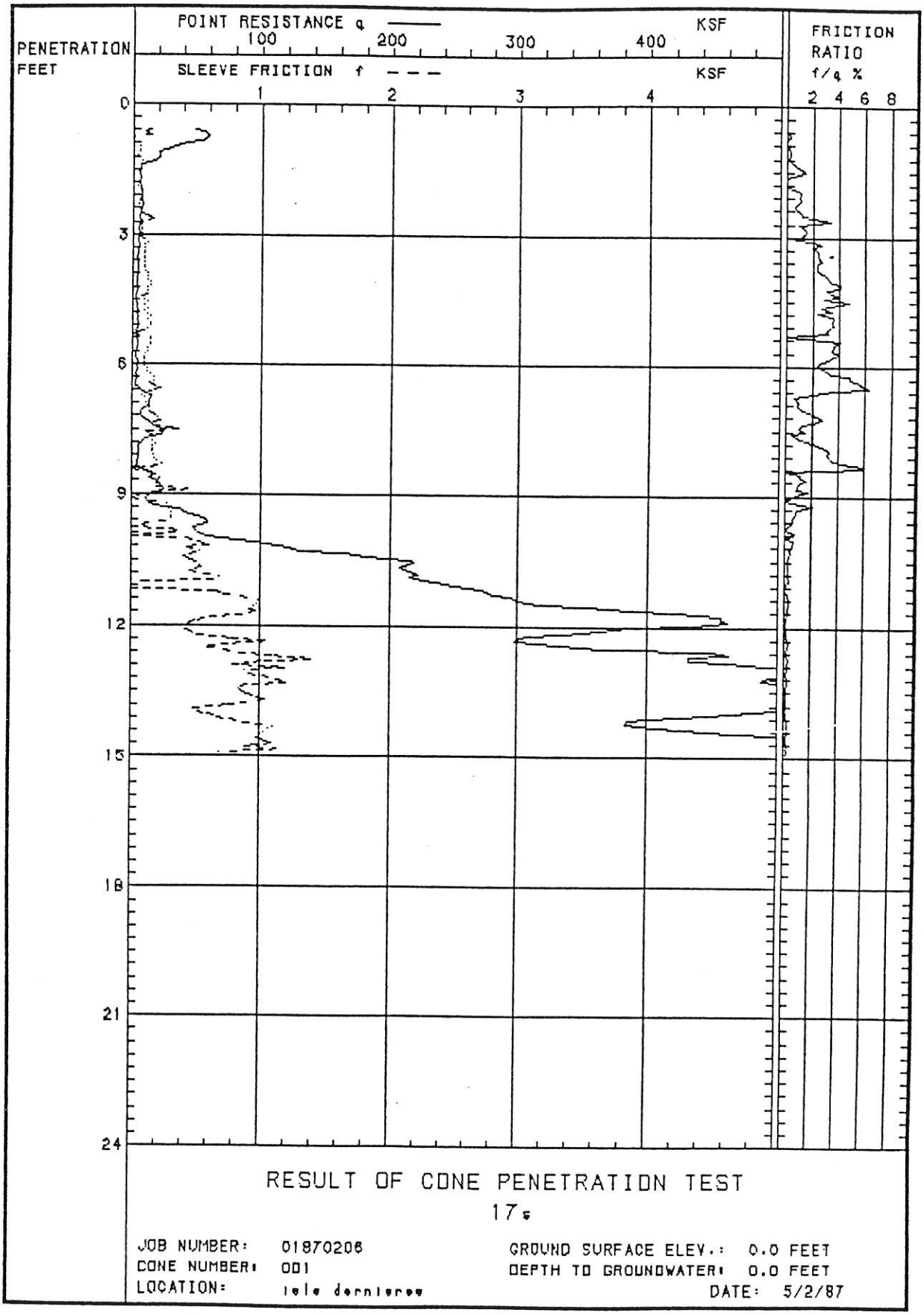
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/2/87

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

PROJECT NO. : 019870206
BORING NO. : 17W M
CONE NO. : 001
DATE : 05/02/87

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	56.57	.12	.21	SILTY SAND TO SANDY SILT	SM-ML	.03	9			94	41	.50+
.80	44.77	.06	.14	SILTY SAND TO SANDY SILT	SM-ML	.04	7			79	39	.50+
1.00	44.03	.06	.13	SILTY SAND TO SANDY SILT	SM-ML	.05	7			78	39	.50+
1.20	35.42	.01	.04	SILTY SAND TO SANDY SILT	SM-ML	.07	5			71	38	.50+
1.40	18.70	.02	.09	SENSITIVE FINE GRAINED	OL-CH	.04	4	1.382	13.5			
1.60	10.45	.08	.81	SENSITIVE FINE GRAINED	OL-CH	.05	2	.771	13.5			
1.80	29.52	.03	.11	SANDY SILT TO CLAYEY SILT	ML-MH	.09	5	2.180	13.5	66	37	.50+
2.00	12.06	.03	.21	SENSITIVE FINE GRAINED	OL-CH	.06	2	.889	13.5			
2.20	3.94	.06	1.44	SENSITIVE FINE GRAINED	OL-CH	.07	0	.287	13.5			
2.40	4.67	.06	1.20	SENSITIVE FINE GRAINED	OL-CH	.07	1	.341	13.5			
2.60	5.90	.01	.16	SENSITIVE FINE GRAINED	OL-CH	.08	1	.431	13.5			
2.80	11.32	.12	1.09	SENSITIVE FINE GRAINED	OL-CH	.08	2	.832	13.5			
3.00	9.61	.04	.45	SENSITIVE FINE GRAINED	OL-CH	.09	2	.705	13.5			
3.20	6.64	.15	2.25	CLAY	CH	.13	3	.482	13.5			
3.40	5.66	.03	.61	SENSITIVE FINE GRAINED	OL-CH	.10	1	.411	13.5			
3.60	2.95	.08	2.76	CLAY	CH	.14	1	.208	13.5			
3.80	4.18	.05	1.12	SENSITIVE FINE GRAINED	OL-CH	.11	1	.301	13.5			
4.00	3.94	.09	2.23	SENSITIVE FINE GRAINED	OL-CH	.12	0	.283	13.5			
4.20	2.95	.09	3.18	CLAY	CH	.17	1	.206	13.5			
4.40	2.95	.12	3.99	CLAY	CH	.18	1	.206	13.5			
4.60	2.46	.11	4.31	ORGANIC MATERIAL	OL-OH	.14	1	.172	13.5			
4.80	2.46	.10	3.90	ORGANIC MATERIAL	OL-OH	.14	1	.172	13.5			
5.00	1.60	.12	7.44	ORGANIC MATERIAL	OL-OH	.15	1	.107	13.5			
5.20	1.48	.13	8.87	ORGANIC MATERIAL	OL-OH	.16	1	.098	13.5			
5.40	1.72	.15	8.92	ORGANIC MATERIAL	OL-OH	.16	1	.116	13.5			
5.60	3.20	.15	4.79	ORGANIC MATERIAL	OL-OH	.17	1	.224	13.5			
5.80	4.18	.23	5.47	ORGANIC MATERIAL	OL-OH	.17	2	.297	13.5			
6.00	4.43	.14	3.17	CLAY	CH	.24	2	.310	13.5			
6.20	4.43	.14	3.17	CLAY	CH	.25	2	.310	13.5			
6.40	4.43	.15	3.31	CLAY	CH	.26	2	.309	13.5			
6.60	3.94	.14	3.58	CLAY	CH	.26	1	.272	13.5			
6.80	4.42	.17	3.79	CLAY	CH	.27	2	.307	13.5			
7.00	3.94	.16	4.18	CLAY	CH	.28	1	.271	13.5			
7.20	6.63	.11	1.60	SENSITIVE FINE GRAINED	OL-CH	.22	1	.475	13.5			
7.40	3.94	.15	3.87	CLAY	CH	.30	1	.270	13.5			
7.60	10.85	.13	1.19	SENSITIVE FINE GRAINED	OL-CH	.23	2	.787	13.5			
7.80	5.16	.17	3.24	CLAY	CH	.31	2	.359	13.5			
8.00	10.32	.07	.70	SENSITIVE FINE GRAINED	OL-CH	.24	2	.747	13.5			
8.20	15.00	.19	1.25	CLAYEY SILT TO SILTY CLAY	MH-CL	.37	3	1.083	13.5			
8.40	6.04	.09	1.50	SENSITIVE FINE GRAINED	OL-CH	.25	1	.429	13.5			
8.60	8.59	.18	2.11	CLAY	CH	.34	4	.611	13.5			
8.80	18.99	.19	1.02	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	4	1.377	13.5			
9.00	54.98	.24	.44	SILTY SAND TO SANDY SILT	SM-ML	.49	8			92	37	.24
9.20	82.87	.37	.44	SAND TO SILTY SAND	SM-SP	.55	9			71	39	.50+
9.40	67.56	.28	.42	SILTY SAND TO SANDY SILT	SM-ML	.52	10			66	37	.35

9.60	107.67	.36	.34	SAND TO SILTY SAND	SM-SP	.58	12			79	40	.50+
9.80	165.09	.07	.04	SAND	SW-SP	.64	15			91	44	.50+
10.00	184.02	.30	.17	SAND	SW-SP	.65	17			95	44	.50+
10.20	152.54	.59	.38	SAND TO SILTY SAND	SM-SP	.61	18			89	41	.50+
10.40	125.82	.25	.20	SAND TO SILTY SAND	SM-SP	.62	15			82	40	.50+
10.60	129.23	.23	.18	SAND TO SILTY SAND	SM-SP	.64	15			83	40	.50+
10.80	80.72	.51	.64	SILTY SAND TO SANDY SILT	SM-ML	.59	12			68	38	.44
11.00	103.63	.44	.42	SAND TO SILTY SAND	SM-SP	.66	12			74	40	.50+
11.20	175.04	.71	.40	SAND TO SILTY SAND	SM-SP	.67	20			92	42	.50+
11.40	234.75	.44	.19	SAND	SW-SP	.74	22			100+	44	.50+
11.60	259.47	1.02	.39	SAND	SW-SP	.75	24			100+	44	.50+
11.80	285.11	.42	.15	SAND	SW-SP	.77	27			100+	44	.50+
12.00	375.28	.29	.08	SAND	SW-SP	.78	35			100+	44	.50+
12.20	383.87	.62	.16	SAND	SW-SP	.79	36			100+	44	.50+
12.40	405.16	.95	.23	SAND	SW-SP	.81	38			100+	44	.50+
12.60	571.77	.82	.14	GRAVELLY SAND TO SAND	SW-GW	.82	45			100+	46	.50+
12.80	521.30	.88	.17	GRAVELLY SAND TO SAND	SW-GW	.83	41			100+	46	.50+
13.00	435.36	.18	.04	GRAVELLY SAND TO SAND	SW-GW	.84	34			100+	46	.50+
13.20	328.80	.52	.16	SAND	SW-SP	.86	31			100+	44	.50+
13.40	317.11	.72	.23	SAND	SW-SP	.87	30			100+	44	.50+
13.60	255.74	1.75	.68	SAND	SW-SP	.88	24			100+	44	.50+
13.80	243.02	.43	.18	SAND	SW-SP	.90	23			98	44	.50+
14.00	255.57	1.03	.40	SAND	SW-SP	.91	24			99	44	.50+
14.20	159.90	.07	.04	SAND	SW-SP	.92	15			82	43	.50+
14.40	56.38	.09	.16	SILTY SAND TO SANDY SILT	SM-ML	.79	9			51	35	.18
14.60	15.58	.08	.49	SENSITIVE FINE GRAINED	OL-CH	.44	3	1.122	13.5			
14.80	56.67	.16	.29	SILTY SAND TO SANDY SILT	SM-ML	.81	9			50	35	.17
15.00	24.50	.26	1.05	SANDY SILT TO CLAYEY SILT	ML-MH	.75	4	1.759	13.5	25	32	.12
15.20	53.87	.21	.39	SILTY SAND TO SANDY SILT	SM-ML	.84	8			48	35	.17
15.40	163.24	.40	.25	SAND	SW-SP	1.00	15			81	42	.50+
15.60	252.79	.48	.19	SAND	SW-SP	1.01	24			96	44	.50+
15.80	261.89	.51	.20	SAND	SW-SP	1.03	25			97	44	.50+



RESULT OF CONE PENETRATION TEST

17s

JOB NUMBER: 01870206
CONE NUMBER: 001
LOCATION: Isle dernieres

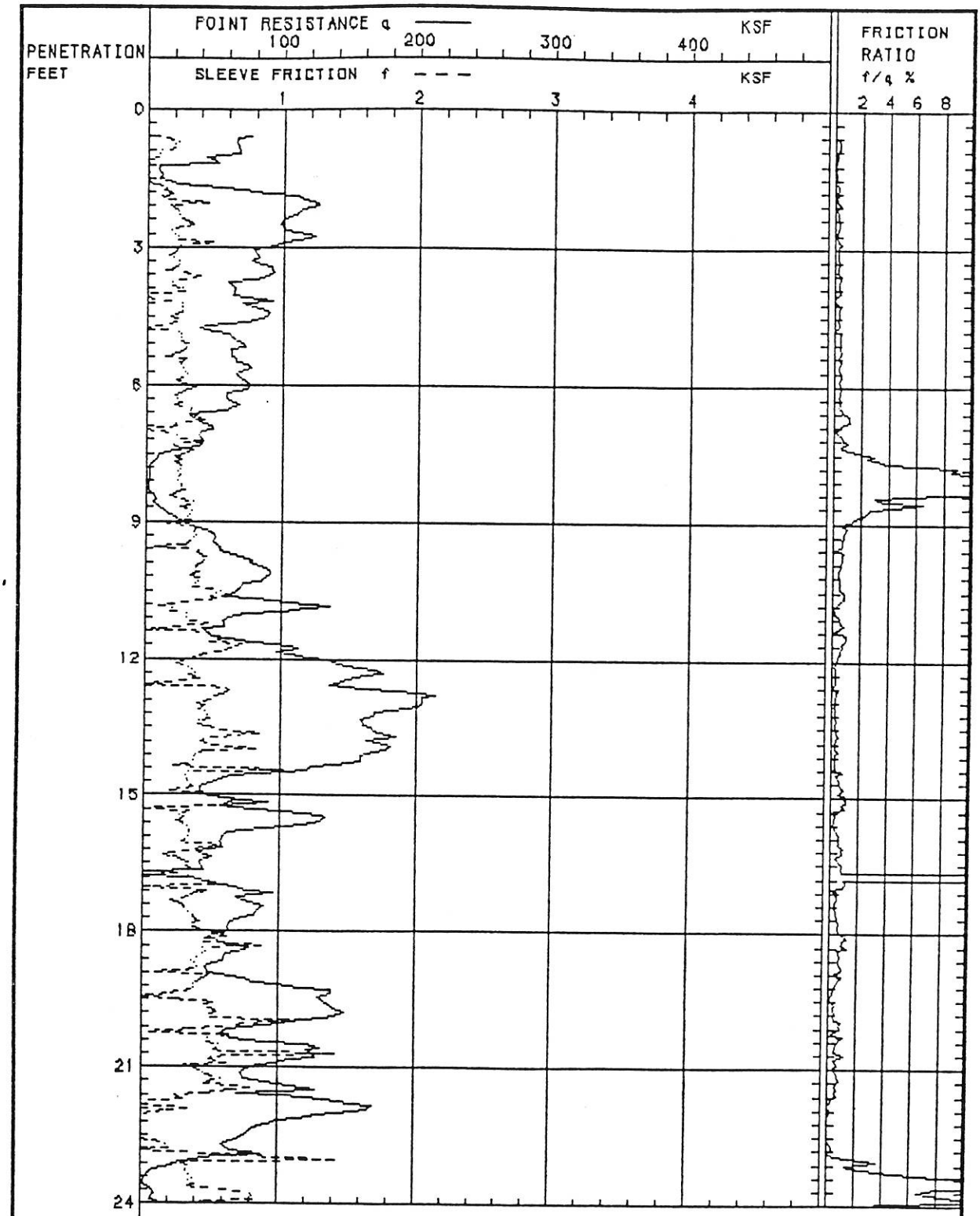
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/2/87

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

PROJECT NO. : 01870206
BORING NO. : 175
CONE NO. : 001
DATE : 05/02/87

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	51.90	.12	.22	SILTY SAND TO SANDY SILT	SM-ML	.03	8			89	40	.50+
.80	56.57	.01	.01	SILTY SAND TO SANDY SILT	SM-ML	.04	9			91	41	.50+
1.00	30.13	.05	.18	SANDY SILT TO CLAYEY SILT	ML-MH	.05	5	2.228	13.5	69	38	.50+
1.20	20.91	.04	.21	SANDY SILT TO CLAYEY SILT	ML-MH	.06	4	1.544	13.5	62	37	.50+
1.40	6.64	.03	.51	SENSITIVE FINE GRAINED	OL-CH	.04	1	.489	13.5			
1.60	4.92	.01	.22	SENSITIVE FINE GRAINED	OL-CH	.05	1	.361	13.5			
1.80	5.16	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.05	1	.379	13.5			
2.00	6.52	.06	.93	SENSITIVE FINE GRAINED	OL-CH	.06	1	.478	13.5			
2.20	6.39	.06	.93	SENSITIVE FINE GRAINED	OL-CH	.07	1	.469	13.5			
2.40	6.77	.06	.90	SENSITIVE FINE GRAINED	OL-CH	.07	1	.496	13.5			
2.60	5.17	.14	2.68	CLAY	CH	.10	2	.375	13.5			
2.80	4.92	.17	3.36	CLAY	CH	.11	2	.356	13.5			
3.00	5.90	.05	.84	SENSITIVE FINE GRAINED	OL-CH	.09	1	.430	13.5			
3.20	4.67	.10	2.24	SENSITIVE FINE GRAINED	OL-CH	.10	1	.339	13.5			
3.40	3.94	.09	2.38	CLAY	CH	.14	1	.281	13.5			
3.60	3.69	.09	2.52	CLAY	CH	.14	1	.263	13.5			
3.80	3.94	.13	3.30	CLAY	CH	.15	1	.280	13.5			
4.00	3.57	.12	3.29	CLAY	CH	.16	1	.252	13.5			
4.20	3.69	.13	3.51	CLAY	CH	.17	1	.261	13.5			
4.40	2.71	.11	4.15	ORGANIC MATERIAL	OL-OH	.13	1	.191	13.5			
4.60	3.20	.11	3.29	CLAY	CH	.18	1	.223	13.5			
4.80	3.69	.10	2.84	CLAY	CH	.19	1	.259	13.5			
5.00	3.69	.13	3.49	CLAY	CH	.20	1	.258	13.5			
5.20	3.45	.10	3.04	CLAY	CH	.21	1	.240	13.5			
5.40	4.19	.14	3.37	CLAY	CH	.22	2	.294	13.5			
5.60	3.69	.13	3.52	CLAY	CH	.22	1	.257	13.5			
5.80	2.95	.12	4.00	CLAY	CH	.23	1	.201	13.5			
6.00	3.69	.09	2.52	CLAY	CH	.24	1	.256	13.5			
6.20	3.20	.09	2.95	CLAY	CH	.25	1	.219	13.5			
6.40	2.71	.15	5.38	ORGANIC MATERIAL	OL-OH	.19	1	.186	13.5			
6.60	6.88	.19	2.79	CLAY	CH	.26	3	.490	13.5			
6.80	14.03	.03	.20	SENSITIVE FINE GRAINED	OL-CH	.20	3	1.024	13.5			
7.00	11.82	.15	1.27	SENSITIVE FINE GRAINED	OL-CH	.21	2	.860	13.5			
7.20	7.25	.16	2.21	CLAY	CH	.29	3	.516	13.5			
7.40	15.60	.18	1.18	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	3	1.131	13.5			
7.60	24.36	.13	.55	SANDY SILT TO CLAYEY SILT	ML-MH	.38	4	1.777	13.5	44	34	.15
7.80	7.63	.16	2.14	CLAY	CH	.31	3	.542	13.5			
8.00	5.16	.16	3.18	CLAY	CH	.32	2	.359	13.5			
8.20	4.68	.17	3.58	CLAY	CH	.33	2	.322	13.5			
8.40	5.63	.10	1.84	SENSITIVE FINE GRAINED	OL-CH	.25	1	.398	13.5			
8.60	15.77	.19	1.21	CLAYEY SILT TO SILTY CLAY	MH-CL	.39	3	1.139	13.5			
8.80	22.62	.26	1.13	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	5	1.646	13.5			
9.00	18.99	.18	.97	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	4	1.377	13.5			
9.20	13.15	.21	1.59	SILTY CLAY TO CLAY	CL-CH	.37	4	.947	13.5			
9.40	39.33	.30	.77	SANDY SILT TO CLAYEY SILT	ML-MH	.47	7	2.878	13.5	52	35	.18

9.60	57.78	.33	.58	SILTY SAND TO SANDY SILT	SM-ML	.53	9	62	37	.24
9.80	49.36	.31	.62	SILTY SAND TO SANDY SILT	SM-ML	.54	7	57	36	.20
10.00	64.37	.21	.33	SILTY SAND TO SANDY SILT	SM-ML	.55	10	64	37	.28
10.20	117.76	.59	.50	SAND TO SILTY SAND	SM-SP	.61	14	81	40	.50+
10.40	172.79	.46	.27	SAND	SW-SP	.68	16	92	44	.50+
10.60	215.04	1.25	.58	SAND	SW-SP	.69	20	100+	44	.50+
10.80	218.36	.56	.25	SAND	SW-SP	.70	20	100+	44	.50+
11.00	230.88	.23	.10	SAND	SW-SP	.71	22	100+	44	.50+
11.20	272.61	.18	.07	SAND	SW-SP	.73	26	100+	44	.50+
11.40	297.09	.92	.31	SAND	SW-SP	.74	28	100+	44	.50+
11.60	369.89	.69	.19	SAND	SW-SP	.75	35	100+	44	.50+
11.80	456.51	.73	.16	GRAVELLY SAND TO SAND	SW-GW	.77	36	100+	46	.50+
12.00	410.95	.35	.09	GRAVELLY SAND TO SAND	SW-GW	.78	32	100+	46	.50+
12.20	321.49	.54	.17	SAND	SW-SP	.79	30	100+	44	.50+
12.40	314.78	.64	.20	SAND	SW-SP	.81	30	100+	44	.50+
12.60	455.91	.78	.17	GRAVELLY SAND TO SAND	SW-GW	.82	36	100+	46	.50+
12.80	446.03	1.25	.28	SAND	SW-SP	.83	42	100+	44	.50+
13.00	581.92	1.04	.18	GRAVELLY SAND TO SAND	SW-GW	.84	46	100+	46	.50+
13.20	490.51	1.04	.21	GRAVELLY SAND TO SAND	SW-GW	.86	39	100+	46	.50+
13.40	544.76	.88	.16	GRAVELLY SAND TO SAND	SW-GW	.87	43	100+	46	.50+
13.60	603.44	.90	.15	GRAVELLY SAND TO SAND	SW-GW	.88	48	100+	46	.50+
13.80	563.50	.79	.14	GRAVELLY SAND TO SAND	SW-GW	.90	44	100+	46	.50+
14.00	455.22	.33	.07	GRAVELLY SAND TO SAND	SW-GW	.91	36	100+	46	.50+
14.20	383.57	.85	.22	SAND	SW-SP	.92	36	100+	44	.50+
14.40	445.77	.51	.11	GRAVELLY SAND TO SAND	SW-GW	.94	35	100+	46	.50+
14.60	566.44	1.01	.18	GRAVELLY SAND TO SAND	SW-GW	.95	45	100+	46	.50+
14.80	578.32	1.12	.19	GRAVELLY SAND TO SAND	SW-GW	.96	46	100+	46	.50+

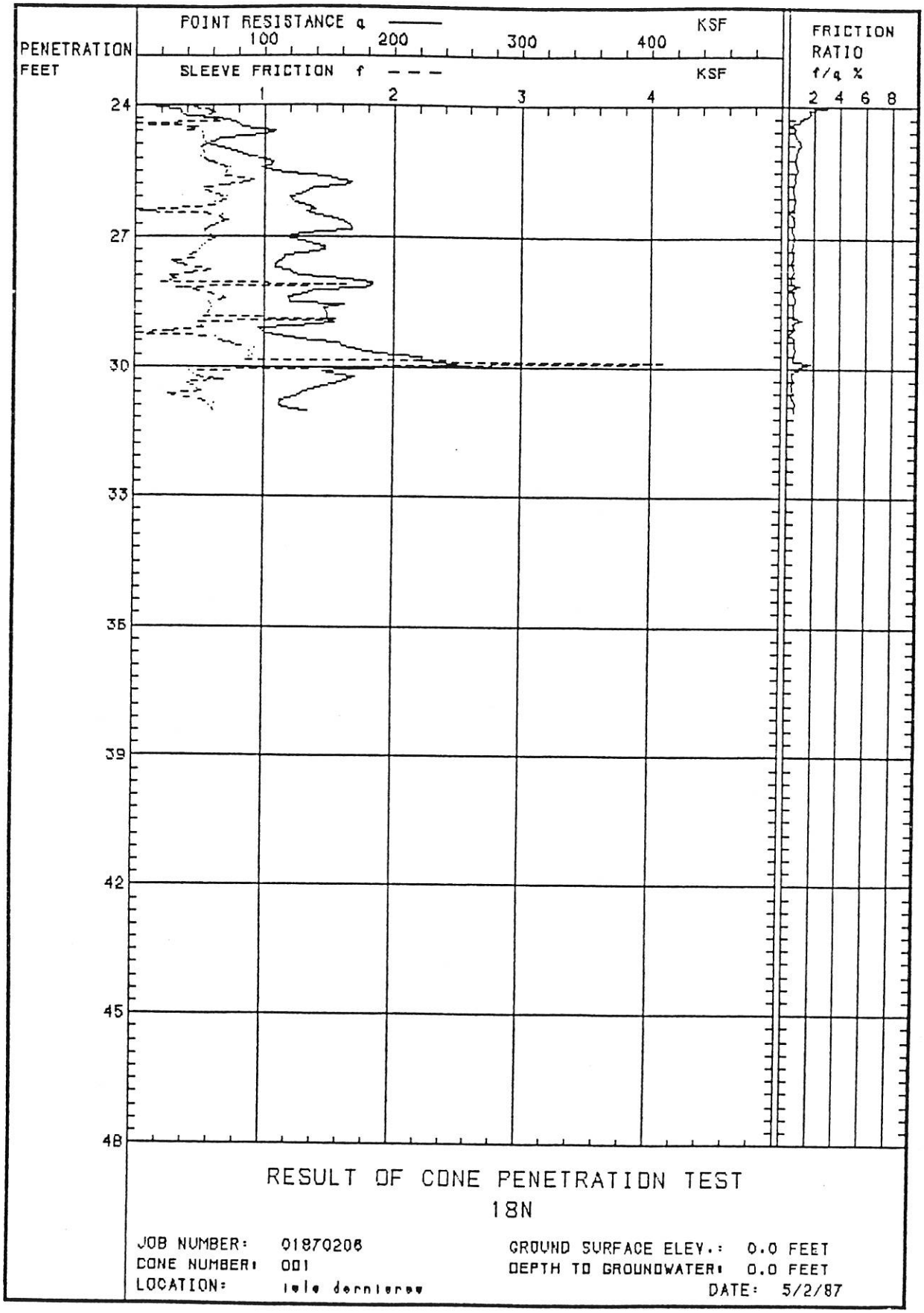


RESULT OF CONE PENETRATION TEST

18N

JOB NUMBER: 01870206
CONE NUMBER: 001
LOCATION: Isle dernieres

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/2/87



RESULT OF CONE PENETRATION TEST

18N

JOB NUMBER: 01870206
CONE NUMBER: 001
LOCATION: Isle dernieres

GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/2/87

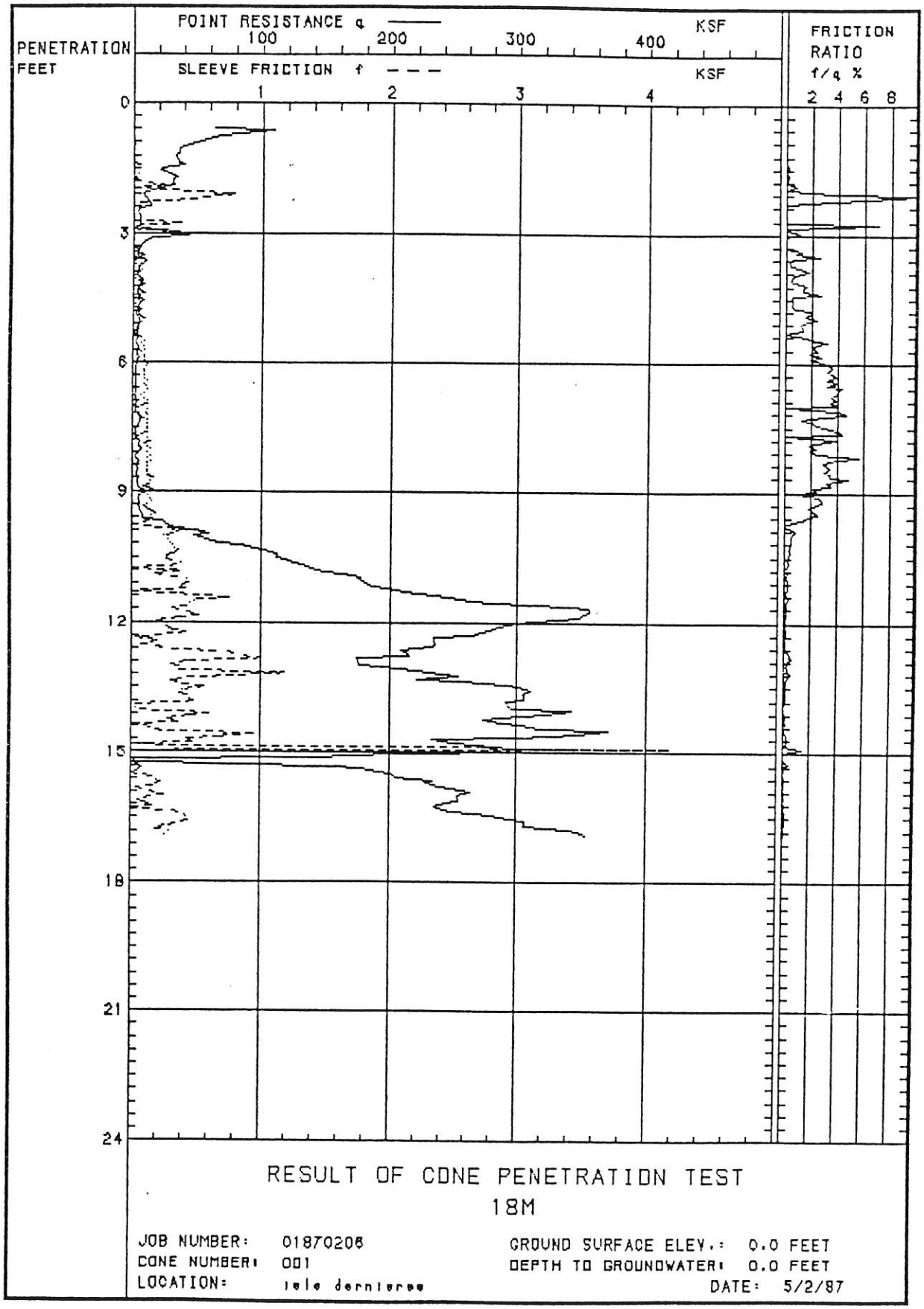
MCCLELLAND ENGINEERS, INC. ** PROGRAM 1605.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 18N
CONE NO. : 001
DATE : 05/02/87

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	70.96	.17	.23	SILTY SAND TO SANDY SILT	SM-ML	.03	11			100+	42	.50+
.80	66.38	.20	.31	SILTY SAND TO SANDY SILT	SM-ML	.04	10			100+	42	.50+
1.00	55.60	.00	.01	SILTY SAND TO SANDY SILT	SM-ML	.05	8			88	40	.50+
1.20	30.77	.02	.07	SANDY SILT TO CLAYEY SILT	ML-MH	.06	5	2.275	13.5	69	38	.50+
1.40	10.08	.02	.20	SENSITIVE FINE GRAINED	OL-CH	.04	2	.744	13.5			
1.60	18.38	.05	.25	SENSITIVE FINE GRAINED	OL-CH	.05	4	1.358	13.5			
1.80	79.43	.15	.19	SAND TO SILTY SAND	SM-SP	.11	9			99	42	.50+
2.00	120.27	.30	.25	SAND TO SILTY SAND	SM-SP	.12	14			100+	42	.50+
2.20	113.88	.30	.26	SAND TO SILTY SAND	SM-SP	.13	13			100+	42	.50+
2.40	100.17	.26	.26	SAND TO SILTY SAND	SM-SP	.14	11			100+	42	.50+
2.60	100.72	.22	.22	SAND TO SILTY SAND	SM-SP	.16	12			100+	42	.50+
2.80	117.72	.29	.25	SAND TO SILTY SAND	SM-SP	.17	14			100+	42	.50+
3.00	86.61	.23	.27	SAND TO SILTY SAND	SM-SP	.18	10			93	42	.50+
3.20	81.90	.07	.09	SAND TO SILTY SAND	SM-SP	.19	9			90	41	.50+
3.40	87.73	.21	.24	SAND TO SILTY SAND	SM-SP	.20	10			92	41	.50+
3.60	91.02	.21	.23	SAND TO SILTY SAND	SM-SP	.22	10			92	42	.50+
3.80	61.73	.33	.53	SILTY SAND TO SANDY SILT	SM-ML	.21	9			78	39	.50+
4.00	64.20	.14	.21	SILTY SAND TO SANDY SILT	SM-ML	.22	10			78	39	.50+
4.20	81.35	.06	.08	SAND TO SILTY SAND	SM-SP	.25	9			84	41	.50+
4.40	88.79	.26	.29	SAND TO SILTY SAND	SM-SP	.26	10			87	41	.50+
4.60	78.99	.23	.29	SAND TO SILTY SAND	SM-SP	.28	9			82	40	.50+
4.80	44.73	.23	.52	SILTY SAND TO SANDY SILT	SM-ML	.26	7			66	37	.41
5.00	64.19	.25	.39	SILTY SAND TO SANDY SILT	SM-ML	.27	10			75	39	.50+
5.20	67.31	.33	.49	SILTY SAND TO SANDY SILT	SM-ML	.29	10			76	39	.50+
5.40	64.43	.21	.33	SILTY SAND TO SANDY SILT	SM-ML	.30	10			74	38	.50+
5.60	75.50	.21	.28	SAND TO SILTY SAND	SM-SP	.34	9			77	40	.50+
5.80	67.63	.26	.39	SILTY SAND TO SANDY SILT	SM-ML	.32	10			74	38	.50+
6.00	75.27	.26	.34	SILTY SAND TO SANDY SILT	SM-ML	.33	12			77	39	.50+
6.20	59.71	.31	.52	SILTY SAND TO SANDY SILT	SM-ML	.34	9			69	38	.50+
6.40	66.39	.24	.35	SILTY SAND TO SANDY SILT	SM-ML	.35	10			72	38	.50+
6.60	45.51	.40	.88	SANDY SILT TO CLAYEY SILT	ML-MH	.33	8	3.346	13.5	63	37	.29
6.80	40.07	.39	.97	SANDY SILT TO CLAYEY SILT	ML-MH	.34	7	2.943	13.5	60	37	.22
7.00	45.30	.26	.57	SILTY SAND TO SANDY SILT	SM-ML	.38	7			61	37	.23
7.20	41.93	.37	.89	SANDY SILT TO CLAYEY SILT	ML-MH	.36	8	3.079	13.5	60	37	.22
7.40	29.86	.28	.94	SANDY SILT TO CLAYEY SILT	ML-MH	.37	5	2.184	13.5	50	35	.16
7.60	8.12	.21	2.61	CLAY	CH	.30	3	.579	13.5			
7.80	2.95	.25	8.51	ORGANIC MATERIAL	OL-OH	.23	1	.201	13.5			
8.00	2.46	.26	10.47	ORGANIC MATERIAL	OL-OH	.24	1	.164	13.5			
8.20	1.91	.26	13.78	ORGANIC MATERIAL	OL-OH	.25	1	.123	13.5			
8.40	4.41	.23	5.13	CLAY	CH	.34	2	.302	13.5			
8.60	6.38	.23	3.57	CLAY	CH	.34	3	.447	13.5			
8.80	15.48	.33	2.12	SILTY CLAY TO CLAY	CL-CH	.35	4	1.121	13.5			
9.00	26.05	.18	.67	SANDY SILT TO CLAYEY SILT	ML-MH	.45	4	1.897	13.5	43	34	.14
9.20	46.71	.36	.78	SILTY SAND TO SANDY SILT	SM-ML	.51	7			57	36	.19
9.40	51.05	.36	.71	SILTY SAND TO SANDY SILT	SM-ML	.52	8			59	36	.21

9.60	55.10	.23	.42	SILTY SAND TO SANDY SILT	SM-ML	.53	8			61	37	.22
9.80	74.23	.42	.57	SILTY SAND TO SANDY SILT	SM-ML	.54	11			68	38	.42
10.00	86.35	.39	.46	SAND TO SILTY SAND	SM-SP	.60	10			70	39	.50+
10.20	89.55	.30	.34	SAND TO SILTY SAND	SM-SP	.61	10			71	39	.50+
10.40	70.85	.58	.82	SILTY SAND TO SANDY SILT	SM-ML	.57	11			65	37	.33
10.60	61.57	.72	1.16	SILTY SAND TO SANDY SILT	SM-ML	.58	9			62	37	.24
10.80	120.53	.21	.17	SAND TO SILTY SAND	SM-SP	.65	14			90	40	.50+
11.00	87.29	.25	.28	SAND TO SILTY SAND	SM-SP	.66	10			69	39	.45
11.20	58.29	.31	.54	SILTY SAND TO SANDY SILT	SM-ML	.62	9			60	36	.21
11.40	44.43	.53	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	.57	8	3.249	13.5	52	35	.17
11.60	69.97	.53	.76	SILTY SAND TO SANDY SILT	SM-ML	.64	11			63	37	.27
11.80	105.29	.84	.80	SAND TO SILTY SAND	SM-SP	.71	12			73	39	.50+
12.00	127.51	.35	.27	SAND TO SILTY SAND	SM-SP	.72	15			80	40	.50+
12.20	163.45	.17	.10	SAND	SW-SP	.79	15			86	43	.50+
12.40	156.06	.41	.26	SAND TO SILTY SAND	SM-SP	.74	18			86	41	.50+
12.60	148.77	.41	.28	SAND TO SILTY SAND	SM-SP	.76	17			84	41	.50+
12.80	209.66	.61	.29	SAND	SW-SP	.83	20			94	44	.50+
13.00	202.94	.42	.21	SAND	SW-SP	.84	19			92	44	.50+
13.20	169.23	1.02	.60	SAND TO SILTY SAND	SM-SP	.79	20			87	41	.50+
13.40	160.92	.42	.26	SAND TO SILTY SAND	SM-SP	.80	19			85	41	.50+
13.60	173.07	.37	.21	SAND	SW-SP	.88	16			85	43	.50+
13.80	167.66	.71	.42	SAND TO SILTY SAND	SM-SP	.83	20			86	41	.50+
14.00	172.99	.64	.37	SAND TO SILTY SAND	SM-SP	.84	20			86	41	.50+
14.20	159.64	.63	.40	SAND TO SILTY SAND	SM-SP	.85	19			83	41	.50+
14.40	121.55	.61	.51	SAND TO SILTY SAND	SM-SP	.86	14			74	39	.50+
14.60	60.35	.33	.54	SILTY SAND TO SANDY SILT	SM-ML	.80	9			53	35	.18
14.80	43.27	.31	.72	SANDY SILT TO CLAYEY SILT	ML-MH	.74	8	3.150	13.5	44	34	.15
15.00	47.12	.52	1.10	SANDY SILT TO CLAYEY SILT	ML-MH	.75	9	3.435	13.5	46	35	.16
15.20	74.68	.77	1.03	SILTY SAND TO SANDY SILT	SM-ML	.84	11			60	36	.22
15.40	116.76	.31	.26	SAND TO SILTY SAND	SM-SP	.92	13			71	39	.50+
15.60	123.86	.46	.37	SAND TO SILTY SAND	SM-SP	.94	14			72	39	.50+
15.80	68.33	.35	.51	SILTY SAND TO SANDY SILT	SM-ML	.87	10			55	36	.19
16.00	57.12	.31	.54	SILTY SAND TO SANDY SILT	SM-ML	.88	9			48	35	.17
16.20	49.54	.64	1.30	SANDY SILT TO CLAYEY SILT	ML-MH	.81	9	3.609	13.5	46	34	.16
16.40	46.83	.31	.67	SILTY SAND TO SANDY SILT	SM-ML	.90	7			42	34	.15
16.60	44.31	.35	.79	SANDY SILT TO CLAYEY SILT	ML-MH	.83	8	3.221	13.5	42	34	.15
16.80	17.51	.35	2.00	CLAYEY SILT TO SILTY CLAY	MH-CL	.76	4	1.241	13.5			
17.00	62.84	.28	.44	SILTY SAND TO SANDY SILT	SM-ML	.93	10			50	35	.17
17.20	82.99	.77	.93	SILTY SAND TO SANDY SILT	SM-ML	.95	13			60	37	.23
17.40	83.49	.21	.26	SAND TO SILTY SAND	SM-SP	1.04	9			58	38	.21
17.60	82.91	.18	.22	SAND TO SILTY SAND	SM-SP	1.06	9			57	38	.20
17.80	64.95	.40	.62	SILTY SAND TO SANDY SILT	SM-ML	.98	10			50	35	.17
18.00	61.54	.49	.79	SILTY SAND TO SANDY SILT	SM-ML	.99	9			48	35	.17
18.20	54.80	.50	.92	SILTY SAND TO SANDY SILT	SM-ML	1.00	8			44	34	.16
18.40	74.15	.46	.62	SILTY SAND TO SANDY SILT	SM-ML	1.01	11			54	36	.19
18.60	59.54	.43	.73	SILTY SAND TO SANDY SILT	SM-ML	1.02	9			46	34	.16
18.80	47.58	.34	.71	SILTY SAND TO SANDY SILT	SM-ML	1.03	7			39	34	.14
19.00	65.18	.41	.63	SILTY SAND TO SANDY SILT	SM-ML	1.04	10			48	35	.17
19.20	106.52	.39	.36	SAND TO SILTY SAND	SM-SP	1.15	12			63	38	.27
19.40	134.18	.16	.12	SAND TO SILTY SAND	SM-SP	1.16	16			70	39	.50+
19.60	136.22	.52	.38	SAND TO SILTY SAND	SM-SP	1.18	16			70	39	.50+
19.80	146.89	.53	.36	SAND TO SILTY SAND	SM-SP	1.19	17			73	39	.50+
20.00	109.42	.82	.75	SAND TO SILTY SAND	SM-SP	1.20	13			63	38	.27
20.20	61.14	.34	.55	SILTY SAND TO SANDY SILT	SM-ML	1.11	9			45	34	.16
20.40	77.11	.49	.64	SILTY SAND TO SANDY SILT	SM-ML	1.12	12			52	35	.18
20.60	126.46	.84	.66	SAND TO SILTY SAND	SM-SP	1.24	15			66	39	.37
20.80	118.35	.51	.43	SAND TO SILTY SAND	SM-SP	1.25	14			64	38	.30
21.00	81.81	.18	.22	SAND TO SILTY SAND	SM-SP	1.26	9			51	37	.18
21.20	73.97	.50	.67	SILTY SAND TO SANDY SILT	SM-ML	1.17	11			50	35	.18
21.40	108.65	.42	.38	SAND TO SILTY SAND	SM-SP	1.28	13			61	38	.25

21.60	86.14	.60	.70	SILTY SAND TO SANDY SILT	SM-ML	1.19	13			55	36	.20
21.80	161.11	.00	.00	SAND	SW-SP	1.42	15			71	42	.23
22.00	142.83	.58	.40	SAND TO SILTY SAND	SM-SP	1.32	17			69	39	.46
22.20	96.55	.00	.00	SAND TO SILTY SAND	SM-SP	1.33	11			56	38	.20
22.40	79.00	.00	.00	SAND TO SILTY SAND	SM-SP	1.34	9			48	37	.17
22.60	68.33	.00	.00	SAND TO SILTY SAND	SM-SP	1.36	8			43	36	.16
22.80	64.51	.03	.04	SILTY SAND TO SANDY SILT	SM-ML	1.25	10			43	34	.16
23.00	47.86	.73	1.53	SANDY SILT TO CLAYEY SILT	ML-MH	1.15	9	3.460	13.5	36	33	.14
23.20	16.46	.34	2.09	SILTY CLAY TO CLAY	CL-CH	.93	5	1.151	13.5			
23.40	3.48	.36	10.34	ORGANIC MATERIAL	OL-OH	.70	1	.206	13.5			
23.60	2.90	.38	13.02	ORGANIC MATERIAL	OL-OH	.71	1	.162	13.5			
23.80	9.13	.82	8.94	ORGANIC MATERIAL	OL-OH	.71	4	.623	13.5			
24.00	14.18	.55	3.86	CLAY	CH	.96	6	.979	13.5			
24.20	37.56	.57	1.51	SANDY SILT TO CLAYEY SILT	ML-MH	1.21	7	2.692	13.5	27	32	.12
24.40	78.17	.61	.78	SILTY SAND TO SANDY SILT	SM-ML	1.34	12			48	35	.17
24.60	107.77	.46	.43	SAND TO SILTY SAND	SM-SP	1.48	12			57	38	.21
24.80	63.43	.54	.84	SILTY SAND TO SANDY SILT	SM-ML	1.36	10			41	34	.15
25.00	71.26	.53	.75	SILTY SAND TO SANDY SILT	SM-ML	1.38	11			44	34	.16
25.20	94.02	.52	.55	SAND TO SILTY SAND	SM-SP	1.51	11			51	37	.18
25.40	101.48	.66	.65	SAND TO SILTY SAND	SM-SP	1.52	12			54	37	.19
25.60	132.75	.70	.53	SAND TO SILTY SAND	SM-SP	1.54	15			63	38	.28
25.80	165.14	.58	.35	SAND TO SILTY SAND	SM-SP	1.55	19			70	39	.50+
26.00	130.71	.69	.53	SAND TO SILTY SAND	SM-SP	1.56	15			62	38	.27
26.20	122.95	.64	.52	SAND TO SILTY SAND	SM-SP	1.57	14			60	38	.24
26.40	136.51	.63	.46	SAND TO SILTY SAND	SM-SP	1.58	16			63	38	.29
26.60	154.75	.68	.44	SAND TO SILTY SAND	SM-SP	1.60	18			67	39	.39
26.80	167.48	1.13	.68	SAND TO SILTY SAND	SM-SP	1.61	20			69	39	.50
27.00	120.80	.55	.46	SAND TO SILTY SAND	SM-SP	1.62	14			59	38	.23
27.20	143.25	.57	.40	SAND TO SILTY SAND	SM-SP	1.63	17			64	38	.30
27.40	124.02	.45	.36	SAND TO SILTY SAND	SM-SP	1.64	14			60	38	.23
27.60	110.53	.32	.29	SAND TO SILTY SAND	SM-SP	1.66	13			55	37	.20
27.80	121.06	.51	.42	SAND TO SILTY SAND	SM-SP	1.67	14			58	38	.22
28.00	173.77	.26	.15	SAND	SW-SP	1.82	16			68	41	.19
28.20	158.94	1.20	.75	SAND TO SILTY SAND	SM-SP	1.69	19			66	39	.37
28.40	118.91	1.12	.94	SAND TO SILTY SAND	SM-SP	1.70	14			57	38	.21
28.60	154.55	.55	.36	SAND TO SILTY SAND	SM-SP	1.72	18			65	39	.34
28.80	149.06	.80	.54	SAND TO SILTY SAND	SM-SP	1.73	17			64	38	.30
29.00	140.09	.62	.44	SAND TO SILTY SAND	SM-SP	1.74	16			62	38	.26
29.20	100.04	.14	.14	SAND TO SILTY SAND	SM-SP	1.75	11			50	37	.18
29.40	147.87	.68	.46	SAND TO SILTY SAND	SM-SP	1.76	17			63	38	.29
29.60	172.46	.91	.53	SAND TO SILTY SAND	SM-SP	1.78	20			68	39	.43
29.80	222.14	1.69	.76	SAND TO SILTY SAND	SM-SP	1.79	26			77	40	.50+
30.00	210.53	.56	.27	SAND	SW-SP	1.95	20			73	42	.25
30.20	164.16	.51	.31	SAND TO SILTY SAND	SM-SP	1.81	19			66	39	.36
30.40	150.47	.43	.29	SAND TO SILTY SAND	SM-SP	1.82	18			63	38	.29
30.60	129.21	.42	.33	SAND TO SILTY SAND	SM-SP	1.84	15			58	38	.22
30.80	112.23	.37	.33	SAND TO SILTY SAND	SM-SP	1.85	13			52	37	.19
31.00	127.15	.60	.48	SAND TO SILTY SAND	SM-SP	1.86	15			57	38	.21



RESULT OF CONE PENETRATION TEST

18M

JOB NUMBER: 01870206
CONE NUMBER: 001
LOCATION: Isle dernieres

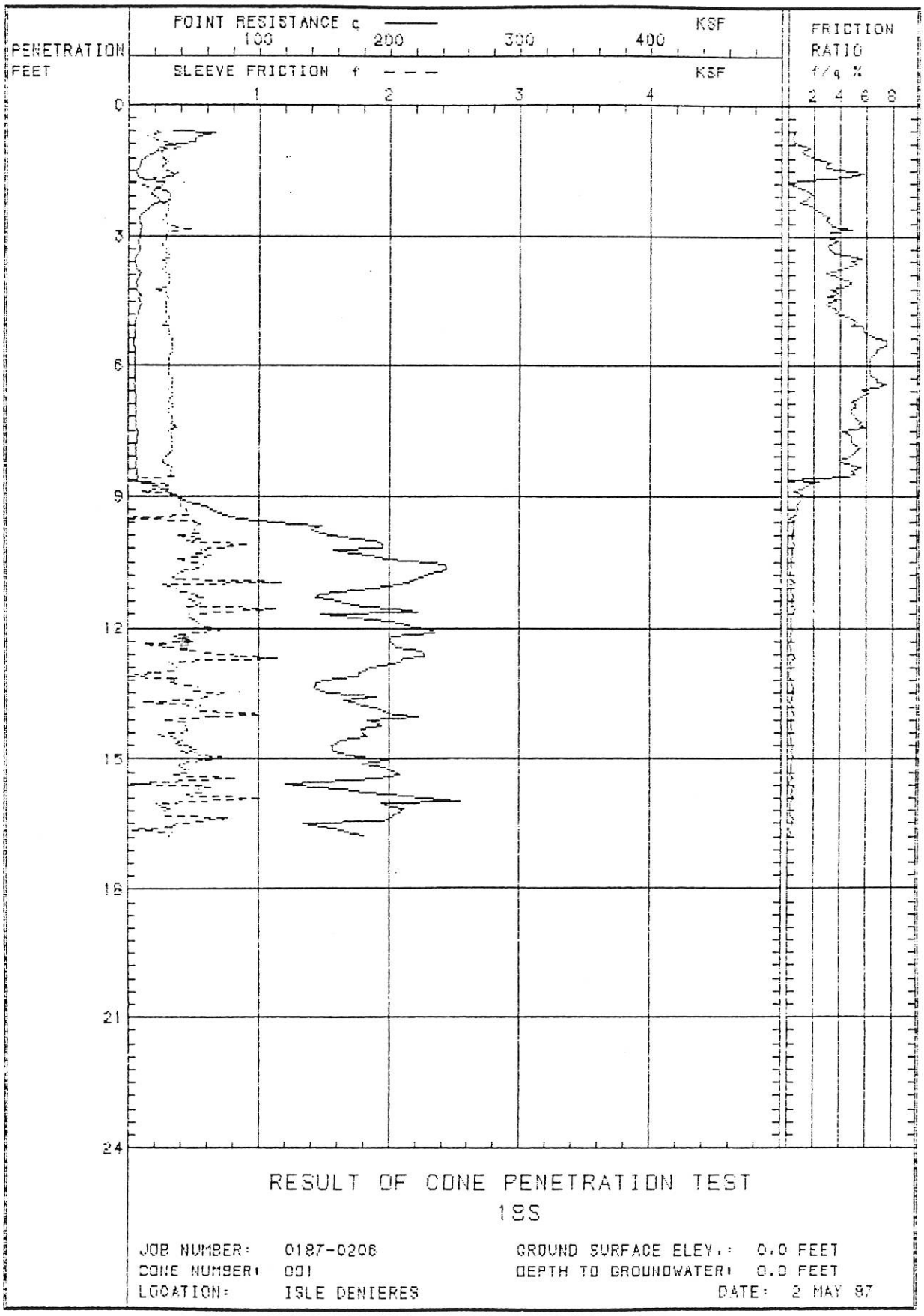
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/2/87

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

PROJECT NO. : 01870206
BORING NO. : 18M
CONE NO. : 001
DATE : 05/02/87

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	85.84	.00	.00	SAND TO SILTY SAND	SM-SP	.04	10			100+	42	.50+
.80	63.71	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.04	10			99	42	.50+
1.00	40.34	.02	.04	SILTY SAND TO SANDY SILT	SM-ML	.05	6			76	39	.50+
1.20	34.68	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.07	5			71	38	.50+
1.40	37.88	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.08	6			72	38	.50+
1.60	24.10	.02	.07	SANDY SILT TO CLAYEY SILT	ML-MH	.08	4	1.779	13.5	63	37	.50+
1.80	31.30	.11	.35	SANDY SILT TO CLAYEY SILT	ML-MH	.09	5	2.312	13.5	67	37	.50+
2.00	16.00	.06	.36	SENSITIVE FINE GRAINED	OL-CH	.06	3	1.181	13.5			
2.20	10.33	.49	4.79	CLAY	CH	.09	4	.759	13.5			
2.40	8.87	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.07	2	.652	13.5			
2.60	4.43	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.08	1	.322	13.5			
2.80	5.17	.19	3.69	CLAY	CH	.11	2	.374	13.5			
3.00	39.09	.17	.45	SANDY SILT TO CLAYEY SILT	ML-MH	.15	7	2.885	13.5	68	38	.50+
3.20	8.61	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.10	2	.631	13.5			
3.40	3.45	.03	.95	SENSITIVE FINE GRAINED	OL-CH	.10	0	.248	13.5			
3.60	6.87	.02	.27	SENSITIVE FINE GRAINED	OL-CH	.11	1	.501	13.5			
3.80	4.18	.06	1.40	SENSITIVE FINE GRAINED	OL-CH	.11	1	.301	13.5			
4.00	4.91	.02	.37	SENSITIVE FINE GRAINED	OL-CH	.12	1	.355	13.5			
4.20	5.66	.07	1.25	SENSITIVE FINE GRAINED	OL-CH	.13	1	.410	13.5			
4.40	3.44	.02	.68	SENSITIVE FINE GRAINED	OL-CH	.13	0	.245	13.5			
4.60	7.14	.03	.46	SENSITIVE FINE GRAINED	OL-CH	.14	1	.519	13.5			
4.80	2.95	.06	1.94	SENSITIVE FINE GRAINED	OL-CH	.14	0	.208	13.5			
5.00	4.67	.08	1.74	SENSITIVE FINE GRAINED	OL-CH	.15	1	.335	13.5			
5.20	3.44	.03	1.00	SENSITIVE FINE GRAINED	OL-CH	.16	0	.244	13.5			
5.40	3.44	.06	1.67	SENSITIVE FINE GRAINED	OL-CH	.16	0	.243	13.5			
5.60	3.44	.08	2.36	SENSITIVE FINE GRAINED	OL-CH	.17	0	.242	13.5			
5.80	3.57	.09	2.61	CLAY	CH	.23	1	.247	13.5			
6.00	3.44	.11	3.07	CLAY	CH	.24	1	.237	13.5			
6.20	2.83	.09	3.32	CLAY	CH	.25	1	.191	13.5			
6.40	2.95	.11	3.59	CLAY	CH	.26	1	.200	13.5			
6.60	2.70	.11	3.97	ORGANIC MATERIAL	OL-OH	.20	1	.186	13.5			
6.80	2.21	.08	3.68	ORGANIC MATERIAL	OL-OH	.20	1	.149	13.5			
7.00	2.95	.06	2.01	SENSITIVE FINE GRAINED	OL-CH	.21	0	.203	13.5			
7.20	3.19	.11	3.59	CLAY	CH	.29	1	.215	13.5			
7.40	5.42	.12	2.17	SENSITIVE FINE GRAINED	OL-CH	.22	1	.385	13.5			
7.60	2.83	.09	3.14	CLAY	CH	.30	1	.187	13.5			
7.80	4.41	.13	2.90	CLAY	CH	.31	2	.304	13.5			
8.00	6.14	.12	1.94	SENSITIVE FINE GRAINED	OL-CH	.24	1	.437	13.5			
8.20	2.70	.13	4.76	ORGANIC MATERIAL	OL-OH	.25	1	.182	13.5			
8.40	3.69	.12	3.17	CLAY	CH	.34	1	.249	13.5			
8.60	3.44	.13	3.75	CLAY	CH	.34	1	.230	13.5			
8.80	4.18	.14	3.34	CLAY	CH	.35	2	.284	13.5			
9.00	9.56	.14	1.47	SENSITIVE FINE GRAINED	OL-CH	.27	2	.688	13.5			
9.20	5.16	.15	2.82	CLAY	CH	.37	2	.355	13.5			
9.40	5.53	.16	2.91	CLAY	CH	.38	2	.381	13.5			

9.60	8.48	.14	1.61	SENSITIVE FINE GRAINED	OL-CH	.29	2	.607	13.5			
9.80	30.71	.09	.30	SANDY SILT TO CLAYEY SILT	ML-MH	.49	5	2.238	13.5	45	34	.15
10.00	54.56	.54	.98	SILTY SAND TO SANDY SILT	SM-ML	.55	8			60	36	.21
10.20	75.88	.31	.41	SILTY SAND TO SANDY SILT	SM-ML	.56	12			68	38	.41
10.40	107.65	.27	.26	SAND TO SILTY SAND	SM-SP	.62	12			77	40	.50+
10.60	121.58	.37	.31	SAND TO SILTY SAND	SM-SP	.64	14			81	40	.50+
10.80	143.57	.18	.13	SAND TO SILTY SAND	SM-SP	.65	17			86	41	.50+
11.00	176.49	.11	.06	SAND	SW-SP	.71	16			91	43	.50+
11.20	192.49	.41	.21	SAND	SW-SP	.73	18			94	44	.50+
11.40	234.21	.38	.16	SAND	SW-SP	.74	22			100+	44	.50+
11.60	309.42	.44	.14	SAND	SW-SP	.75	29			100+	44	.50+
11.80	352.03	.24	.07	SAND	SW-SP	.77	33			100+	44	.50+
12.00	307.22	.41	.13	SAND	SW-SP	.78	29			100+	44	.50+
12.20	275.42	.26	.09	SAND	SW-SP	.79	26			100+	44	.50+
12.40	234.77	.30	.13	SAND	SW-SP	.81	22			100+	44	.50+
12.60	221.10	.25	.11	SAND	SW-SP	.82	21			96	44	.50+
12.80	195.31	1.00	.51	SAND	SW-SP	.83	18			91	43	.50+
13.00	184.32	.34	.19	SAND	SW-SP	.84	17			89	43	.50+
13.20	241.55	1.10	.46	SAND	SW-SP	.86	23			99	44	.50+
13.40	273.48	.59	.22	SAND	SW-SP	.87	26			100+	44	.50+
13.60	307.76	.39	.13	SAND	SW-SP	.88	29			100+	44	.50+
13.80	298.38	.38	.13	SAND	SW-SP	.90	28			100+	44	.50+
14.00	318.05	.24	.08	SAND	SW-SP	.91	30			100+	44	.50+
14.20	289.08	.96	.33	SAND	SW-SP	.92	27			100+	44	.50+
14.40	310.50	.07	.02	SAND	SW-SP	.94	29			100+	44	.50+
14.60	324.92	.84	.26	SAND	SW-SP	.95	31			100+	44	.50+
14.80	259.12	.28	.11	SAND	SW-SP	.96	24			98	44	.50+
15.00	256.93	.00	.00	SAND	SW-SP	.97	24			97	44	.50+
15.20	2.21	.00	.22	SENSITIVE FINE GRAINED	OL-CH	.46	0	.130	13.5			
15.40	185.07	.06	.03	SAND	SW-SP	1.00	17			85	43	.50+
15.60	218.82	.16	.07	SAND	SW-SP	1.01	20			90	43	.50+
15.80	243.46	.10	.04	SAND	SW-SP	1.03	23			94	44	.50+
16.00	253.59	.21	.08	SAND	SW-SP	1.04	24			95	44	.50+
16.20	240.06	.14	.06	SAND	SW-SP	1.05	22			92	44	.50+
16.40	264.77	.37	.14	SAND	SW-SP	1.07	25			96	44	.50+
16.60	306.23	.45	.15	SAND	SW-SP	1.08	29			100+	44	.50+
16.80	343.04	.21	.06	SAND	SW-SP	1.09	32			100+	44	.50+



RESULT OF CONE PENETRATION TEST

18S

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

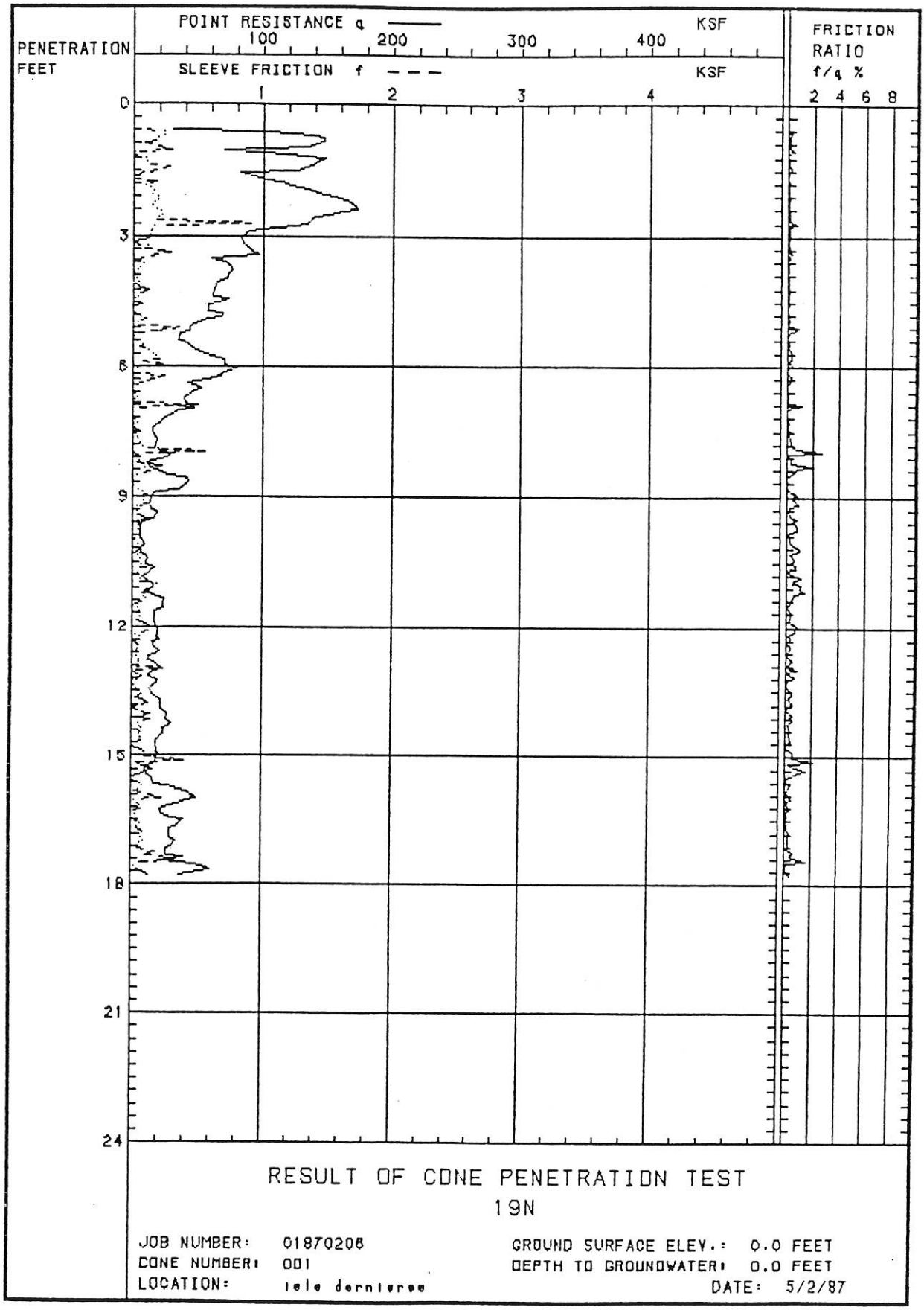
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 18S
CONE NO. : 001
DATE : 05/02/87

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	50.17	.23	.46	SILTY SAND TO SANDY SILT	SM-ML	.03	8			87	40	.50+
.80	51.16	.22	.44	SILTY SAND TO SANDY SILT	SM-ML	.04	8			86	40	.50+
1.00	22.38	.36	1.60	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	5	1.655	13.5			
1.20	13.04	.26	1.97	SILTY CLAY TO CLAY	CL-CH	.05	4	.962	13.5			
1.40	8.85	.26	2.93	CLAY	CH	.06	4	.652	13.5			
1.60	6.64	.34	5.17	CLAY	CH	.06	3	.487	13.5			
1.80	26.94	.08	.29	SANDY SILT TO CLAYEY SILT	ML-MH	.09	5	1.989	13.5	64	37	.50+
2.00	17.34	.32	1.86	CLAYEY SILT TO SILTY CLAY	MH-CL	.09	4	1.278	13.5			
2.20	23.86	.27	1.15	SANDY SILT TO CLAYEY SILT	ML-MH	.11	4	1.759	13.5	61	37	.39
2.40	13.53	.31	2.26	SILTY CLAY TO CLAY	CL-CH	.10	4	.995	13.5			
2.60	8.85	.27	3.03	CLAY	CH	.10	4	.648	13.5			
2.80	9.72	.32	3.32	CLAY	CH	.11	4	.711	13.5			
3.00	8.85	.28	3.19	CLAY	CH	.12	4	.647	13.5			
3.20	8.12	.26	3.17	CLAY	CH	.13	3	.592	13.5			
3.40	7.38	.30	4.01	CLAY	CH	.14	3	.537	13.5			
3.60	5.41	.27	5.01	CLAY	CH	.14	2	.390	13.5			
3.80	8.11	.25	3.04	CLAY	CH	.15	3	.589	13.5			
4.00	7.01	.31	4.38	CLAY	CH	.16	3	.508	13.5			
4.20	6.64	.25	3.69	CLAY	CH	.17	3	.480	13.5			
4.40	8.86	.31	3.45	CLAY	CH	.18	4	.643	13.5			
4.60	9.11	.28	3.10	CLAY	CH	.18	4	.661	13.5			
4.80	7.38	.30	4.00	CLAY	CH	.19	3	.533	13.5			
5.00	5.41	.27	5.03	CLAY	CH	.20	2	.386	13.5			
5.20	5.41	.31	5.70	CLAY	CH	.21	2	.385	13.5			
5.40	4.68	.33	7.12	ORGANIC MATERIAL	OL-OH	.16	2	.334	13.5			
5.60	4.67	.33	7.12	ORGANIC MATERIAL	OL-OH	.17	2	.334	13.5			
5.80	4.92	.32	6.53	ORGANIC MATERIAL	OL-OH	.17	2	.352	13.5			
6.00	4.92	.31	6.27	ORGANIC MATERIAL	OL-OH	.18	2	.351	13.5			
6.20	4.92	.31	6.27	ORGANIC MATERIAL	OL-OH	.19	2	.351	13.5			
6.40	4.68	.33	7.11	ORGANIC MATERIAL	OL-OH	.19	2	.332	13.5			
6.60	5.41	.32	5.91	CLAY	CH	.26	2	.381	13.5			
6.80	6.15	.35	5.61	CLAY	CH	.27	2	.435	13.5			
7.00	6.40	.32	4.99	CLAY	CH	.28	3	.453	13.5			
7.20	6.40	.33	5.19	CLAY	CH	.29	3	.452	13.5			
7.40	6.27	.37	5.85	CLAY	CH	.30	3	.443	13.5			
7.60	7.14	.33	4.64	CLAY	CH	.30	3	.506	13.5			
7.80	6.64	.33	4.99	CLAY	CH	.31	3	.469	13.5			
8.00	6.40	.33	5.18	CLAY	CH	.32	3	.450	13.5			
8.20	6.64	.27	4.10	CLAY	CH	.33	3	.468	13.5			
8.40	6.39	.33	5.18	CLAY	CH	.34	3	.448	13.5			
8.60	7.39	.18	2.44	CLAY	CH	.34	3	.522	13.5			
8.80	24.20	.26	1.08	SANDY SILT TO CLAYEY SILT	ML-MH	.44	4	1.760	13.5	41	34	.14
9.00	34.15	.38	1.11	SANDY SILT TO CLAYEY SILT	ML-MH	.45	6	2.497	13.5	49	35	.16
9.20	55.53	.20	.35	SILTY SAND TO SANDY SILT	SM-ML	.51	8			62	37	.24
9.40	69.80	.46	.66	SILTY SAND TO SANDY SILT	SM-ML	.52	11			67	37	.38

9.60	113.44	.25	.22	SAND TO SILTY SAND	SM-SP	.58	13	81	40	.50+
9.80	144.76	.53	.36	SAND TO SILTY SAND	SM-SP	.59	17	88	41	.50+
10.00	181.16	.50	.28	SAND	SW-SP	.65	17	95	44	.50+
10.20	177.00	1.15	.65	SAND TO SILTY SAND	SM-SP	.61	21	95	42	.50+
10.40	192.01	.51	.27	SAND	SW-SP	.68	18	96	44	.50+
10.60	243.26	.56	.23	SAND	SW-SP	.69	23	100+	44	.50+
10.80	228.36	.42	.18	SAND	SW-SP	.70	21	100+	44	.50+
11.00	211.34	1.16	.55	SAND	SW-SP	.71	20	98	44	.50+
11.20	154.95	.51	.33	SAND TO SILTY SAND	SM-SP	.67	18	88	41	.50+
11.40	160.86	.55	.34	SAND TO SILTY SAND	SM-SP	.68	19	89	41	.50+
11.60	213.61	1.04	.49	SAND	SW-SP	.75	20	97	44	.50+
11.80	187.20	.68	.36	SAND	SW-SP	.77	17	91	44	.50+
12.00	224.24	.32	.14	SAND	SW-SP	.78	21	98	44	.50+
12.20	201.76	.59	.29	SAND	SW-SP	.79	19	93	44	.50+
12.40	204.50	.43	.21	SAND	SW-SP	.81	19	93	44	.50+
12.60	226.77	.64	.28	SAND	SW-SP	.82	21	97	44	.50+
12.80	205.79	.43	.21	SAND	SW-SP	.83	19	93	44	.50+
13.00	178.99	.36	.20	SAND	SW-SP	.84	17	87	43	.50+
13.20	152.78	.25	.16	SAND TO SILTY SAND	SM-SP	.79	18	84	41	.50+
13.40	145.81	.49	.33	SAND TO SILTY SAND	SM-SP	.80	17	82	40	.50+
13.60	177.96	.75	.42	SAND TO SILTY SAND	SM-SP	.82	21	88	41	.50+
13.80	184.88	.53	.29	SAND	SW-SP	.90	17	87	43	.50+
14.00	213.56	.84	.39	SAND	SW-SP	.91	20	92	44	.50+
14.20	191.92	.57	.30	SAND	SW-SP	.92	18	88	43	.50+
14.40	179.90	.35	.19	SAND	SW-SP	.94	17	85	43	.50+
14.60	161.82	.25	.15	SAND	SW-SP	.95	15	82	43	.50+
14.80	157.41	.47	.30	SAND TO SILTY SAND	SM-SP	.89	18	82	40	.50+
15.00	192.69	.75	.39	SAND	SW-SP	.97	18	86	43	.50+
15.20	195.37	.51	.26	SAND	SW-SP	.99	18	87	43	.50+
15.40	200.41	.28	.14	SAND	SW-SP	1.00	19	87	43	.50+
15.60	131.71	.86	.65	SAND TO SILTY SAND	SM-SP	.94	15	75	40	.50+
15.80	190.66	.51	.27	SAND	SW-SP	1.03	18	85	43	.50+
16.00	225.03	1.26	.56	SAND	SW-SP	1.04	21	90	43	.50+
16.20	209.86	.32	.15	SAND	SW-SP	1.05	20	87	43	.50+
16.40	199.32	.76	.38	SAND	SW-SP	1.07	19	85	43	.50+
16.60	156.56	.23	.15	SAND	SW-SP	1.08	14	78	42	.37



RESULT OF CONE PENETRATION TEST

19N

JOB NUMBER: 01870206
CONE NUMBER: 001
LOCATION: Isle dernieres

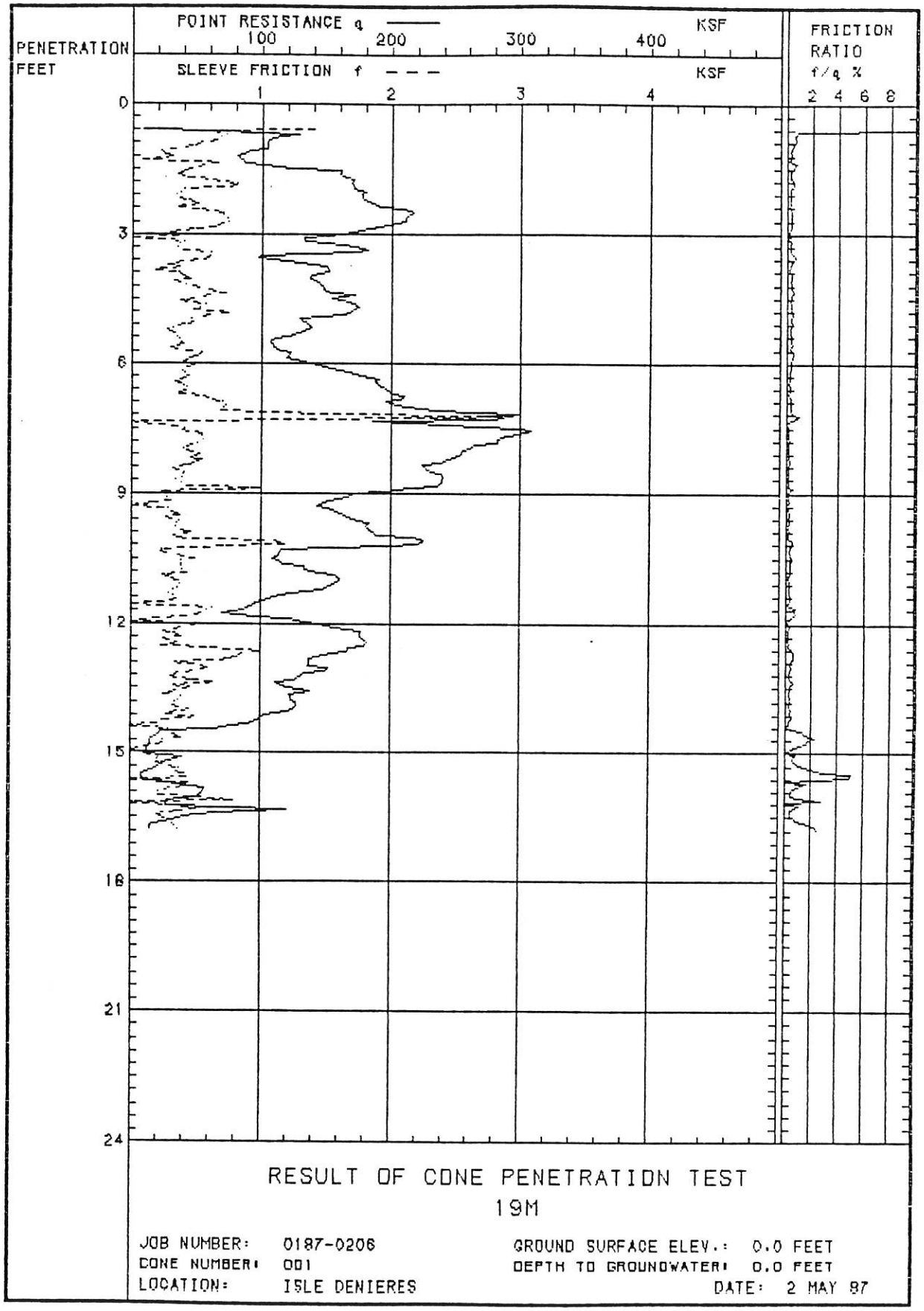
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/2/87

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

PROJECT NO. : 01870206
BORING NO. : 19N
CONE NO. : 001
DATE : 05/02/87

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	66.90	.12	.17	SILTY SAND TO SANDY SILT	SM-ML	.03	10			100+	42	.50+
.80	146.84	.18	.12	SAND TO SILTY SAND	SM-SP	.05	17			100+	42	.50+
1.00	102.47	.00	.00	SAND TO SILTY SAND	SM-SP	.06	12			100+	42	.50+
1.20	140.69	.05	.03	SAND TO SILTY SAND	SM-SP	.07	16			100+	42	.50+
1.40	136.27	.06	.05	SAND TO SILTY SAND	SM-SP	.08	16			100+	42	.50+
1.60	86.88	.17	.19	SAND TO SILTY SAND	SM-SP	.10	10			100+	42	.50+
1.80	117.81	.13	.11	SAND TO SILTY SAND	SM-SP	.11	14			100+	42	.50+
2.00	142.53	.16	.11	SAND TO SILTY SAND	SM-SP	.12	17			100+	42	.50+
2.20	165.28	.17	.10	SAND	SW-SP	.14	15			100+	44	.50+
2.40	167.52	.25	.15	SAND	SW-SP	.16	16			100+	44	.50+
2.60	138.73	.19	.13	SAND TO SILTY SAND	SM-SP	.16	16			100+	42	.50+
2.80	111.47	.15	.14	SAND TO SILTY SAND	SM-SP	.17	13			100+	42	.50+
3.00	84.13	.11	.13	SAND TO SILTY SAND	SM-SP	.18	10			92	42	.50+
3.20	85.35	.05	.06	SAND TO SILTY SAND	SM-SP	.19	10			91	41	.50+
3.40	95.43	.24	.25	SAND TO SILTY SAND	SM-SP	.20	11			96	42	.50+
3.60	69.59	.12	.17	SILTY SAND TO SANDY SILT	SM-ML	.20	11			82	40	.50+
3.80	75.52	.02	.03	SAND TO SILTY SAND	SM-SP	.23	9			83	41	.50+
4.00	68.52	.02	.03	SAND TO SILTY SAND	SM-SP	.24	8			79	40	.50+
4.20	61.99	.07	.11	SILTY SAND TO SANDY SILT	SM-ML	.23	9			76	39	.50+
4.40	67.11	.12	.18	SILTY SAND TO SANDY SILT	SM-ML	.24	10			78	39	.50+
4.60	57.43	.05	.09	SILTY SAND TO SANDY SILT	SM-ML	.25	9			73	38	.50+
4.80	68.14	.12	.17	SILTY SAND TO SANDY SILT	SM-ML	.26	10			77	39	.50+
5.00	47.62	.05	.11	SILTY SAND TO SANDY SILT	SM-ML	.27	7			67	37	.46
5.20	39.87	.01	.02	SILTY SAND TO SANDY SILT	SM-ML	.29	6			62	37	.27
5.40	36.38	.02	.05	SILTY SAND TO SANDY SILT	SM-ML	.30	5			60	36	.22
5.60	46.72	.08	.17	SILTY SAND TO SANDY SILT	SM-ML	.31	7			65	37	.34
5.80	65.64	.14	.21	SILTY SAND TO SANDY SILT	SM-ML	.32	10			73	38	.50+
6.00	74.49	.13	.18	SAND TO SILTY SAND	SM-SP	.36	8			75	40	.50+
6.20	67.64	.00	.00	SAND TO SILTY SAND	SM-SP	.37	8			72	39	.50+
6.40	44.68	.18	.41	SILTY SAND TO SANDY SILT	SM-ML	.35	7			62	37	.25
6.60	45.76	.06	.12	SILTY SAND TO SANDY SILT	SM-ML	.36	7			62	37	.25
6.80	39.72	.01	.04	SILTY SAND TO SANDY SILT	SM-ML	.37	6			58	36	.20
7.00	41.13	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.38	6			59	36	.21
7.20	24.12	.08	.35	SANDY SILT TO CLAYEY SILT	ML-MH	.36	4	1.760	13.5	45	34	.15
7.40	16.25	.01	.05	SENSITIVE FINE GRAINED	OL-CH	.22	3	1.187	13.5			
7.60	16.23	.02	.12	SENSITIVE FINE GRAINED	OL-CH	.23	3	1.185	13.5			
7.80	17.34	.07	.42	SENSITIVE FINE GRAINED	OL-CH	.23	4	1.267	13.5			
8.00	25.77	.29	1.11	SANDY SILT TO CLAYEY SILT	ML-MH	.40	4	1.880	13.5	45	34	.15
8.20	13.06	.10	.76	SENSITIVE FINE GRAINED	OL-CH	.25	3	.949	13.5			
8.40	17.66	.11	.65	SENSITIVE FINE GRAINED	OL-CH	.25	4	1.289	13.5			
8.60	41.06	.06	.14	SILTY SAND TO SANDY SILT	SM-ML	.47	6			54	36	.18
8.80	37.53	.05	.12	SILTY SAND TO SANDY SILT	SM-ML	.48	5			50	35	.17
9.00	14.76	.06	.38	SENSITIVE FINE GRAINED	OL-CH	.27	3	1.074	13.5			
9.20	12.78	.09	.70	SENSITIVE FINE GRAINED	OL-CH	.28	3	.927	13.5			
9.40	17.96	.04	.20	SENSITIVE FINE GRAINED	OL-CH	.28	4	1.309	13.5			

9.60	8.89	.06	.62	SENSITIVE FINE GRAINED	OL-CH	.29	2	.637	13.5			
9.80	5.90	.01	.18	SENSITIVE FINE GRAINED	OL-CH	.29	1	.415	13.5			
10.00	7.12	.05	.66	SENSITIVE FINE GRAINED	OL-CH	.30	1	.505	13.5			
10.20	6.77	.05	.79	SENSITIVE FINE GRAINED	OL-CH	.31	1	.479	13.5			
10.40	11.06	.05	.46	SENSITIVE FINE GRAINED	OL-CH	.31	2	.796	13.5			
10.60	13.48	.07	.49	SENSITIVE FINE GRAINED	OL-CH	.32	3	.975	13.5			
10.80	9.88	.05	.53	SENSITIVE FINE GRAINED	OL-CH	.32	2	.708	13.5			
11.00	14.48	.04	.29	SENSITIVE FINE GRAINED	OL-CH	.33	3	1.048	13.5			
11.20	11.46	.17	1.49	SENSITIVE FINE GRAINED	OL-CH	.34	2	.824	13.5			
11.40	23.98	.08	.32	SANDY SILT TO CLAYEY SILT	ML-MH	.57	4	1.734	13.5	32	33	.13
11.60	20.72	.08	.37	SANDY SILT TO CLAYEY SILT	ML-MH	.58	3	1.492	13.5	26	32	.12
11.80	17.03	.04	.25	SENSITIVE FINE GRAINED	OL-CH	.35	4	1.235	13.5			
12.00	18.19	.13	.70	CLAYEY SILT TO SILTY CLAY	MH-CL	.54	4	1.308	13.5			
12.20	18.94	.08	.40	SENSITIVE FINE GRAINED	OL-CH	.37	4	1.376	13.5			
12.40	15.49	.03	.20	SENSITIVE FINE GRAINED	OL-CH	.37	3	1.120	13.5			
12.60	18.61	.04	.20	SENSITIVE FINE GRAINED	OL-CH	.38	4	1.350	13.5			
12.80	14.22	.05	.38	SENSITIVE FINE GRAINED	OL-CH	.38	3	1.025	13.5			
13.00	20.23	.09	.46	SANDY SILT TO CLAYEY SILT	ML-MH	.65	3	1.450	13.5	23	31	.12
13.20	15.68	.05	.29	SENSITIVE FINE GRAINED	OL-CH	.40	3	1.132	13.5			
13.40	15.04	.05	.33	SENSITIVE FINE GRAINED	OL-CH	.40	3	1.084	13.5			
13.60	16.57	.07	.40	SENSITIVE FINE GRAINED	OL-CH	.41	3	1.197	13.5			
13.80	21.65	.09	.44	SANDY SILT TO CLAYEY SILT	ML-MH	.69	4	1.552	13.5	23	31	.12
14.00	26.31	.10	.37	SANDY SILT TO CLAYEY SILT	ML-MH	.70	5	1.897	13.5	29	32	.13
14.20	28.24	.10	.35	SANDY SILT TO CLAYEY SILT	ML-MH	.71	5	2.039	13.5	31	32	.13
14.40	23.85	.07	.29	SANDY SILT TO CLAYEY SILT	ML-MH	.72	4	1.714	13.5	25	32	.12
14.60	19.83	.07	.37	SANDY SILT TO CLAYEY SILT	ML-MH	.73	3	1.415	13.5	20	31	.11
14.80	18.93	.03	.13	SENSITIVE FINE GRAINED	OL-CH	.44	4	1.370	13.5			
15.00	20.22	.07	.37	SANDY SILT TO CLAYEY SILT	ML-MH	.75	3	1.442	13.5	20	31	.11
15.20	16.06	.05	.32	SENSITIVE FINE GRAINED	OL-CH	.46	3	1.156	13.5			
15.40	11.43	.04	.37	SENSITIVE FINE GRAINED	OL-CH	.46	2	.812	13.5			
15.60	16.59	.05	.30	SENSITIVE FINE GRAINED	OL-CH	.47	3	1.194	13.5			
15.80	38.79	.30	.79	SANDY SILT TO CLAYEY SILT	ML-MH	.79	7	2.815	13.5	40	34	.14
16.00	46.08	.19	.41	SILTY SAND TO SANDY SILT	SM-ML	.88	7			42	34	.15
16.20	25.42	.08	.30	SANDY SILT TO CLAYEY SILT	ML-MH	.81	4	1.823	13.5	24	31	.12
16.40	26.72	.19	.72	SANDY SILT TO CLAYEY SILT	ML-MH	.82	5	1.919	13.5	25	32	.12
16.60	35.82	.03	.10	SILTY SAND TO SANDY SILT	SM-ML	.91	5			32	33	.13
16.80	29.26	.08	.27	SANDY SILT TO CLAYEY SILT	ML-MH	.84	5	2.105	13.5	28	32	.12
17.00	33.60	.09	.28	SANDY SILT TO CLAYEY SILT	ML-MH	.85	6	2.426	13.5	32	33	.13
17.20	26.94	.05	.18	SANDY SILT TO CLAYEY SILT	ML-MH	.86	5	1.932	13.5	25	32	.12
17.40	30.62	.05	.17	SANDY SILT TO CLAYEY SILT	ML-MH	.87	5	2.204	13.5	28	32	.13
17.60	57.48	.03	.06	SILTY SAND TO SANDY SILT	SM-ML	.97	9			46	35	.16



RESULT OF CONE PENETRATION TEST

19M

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

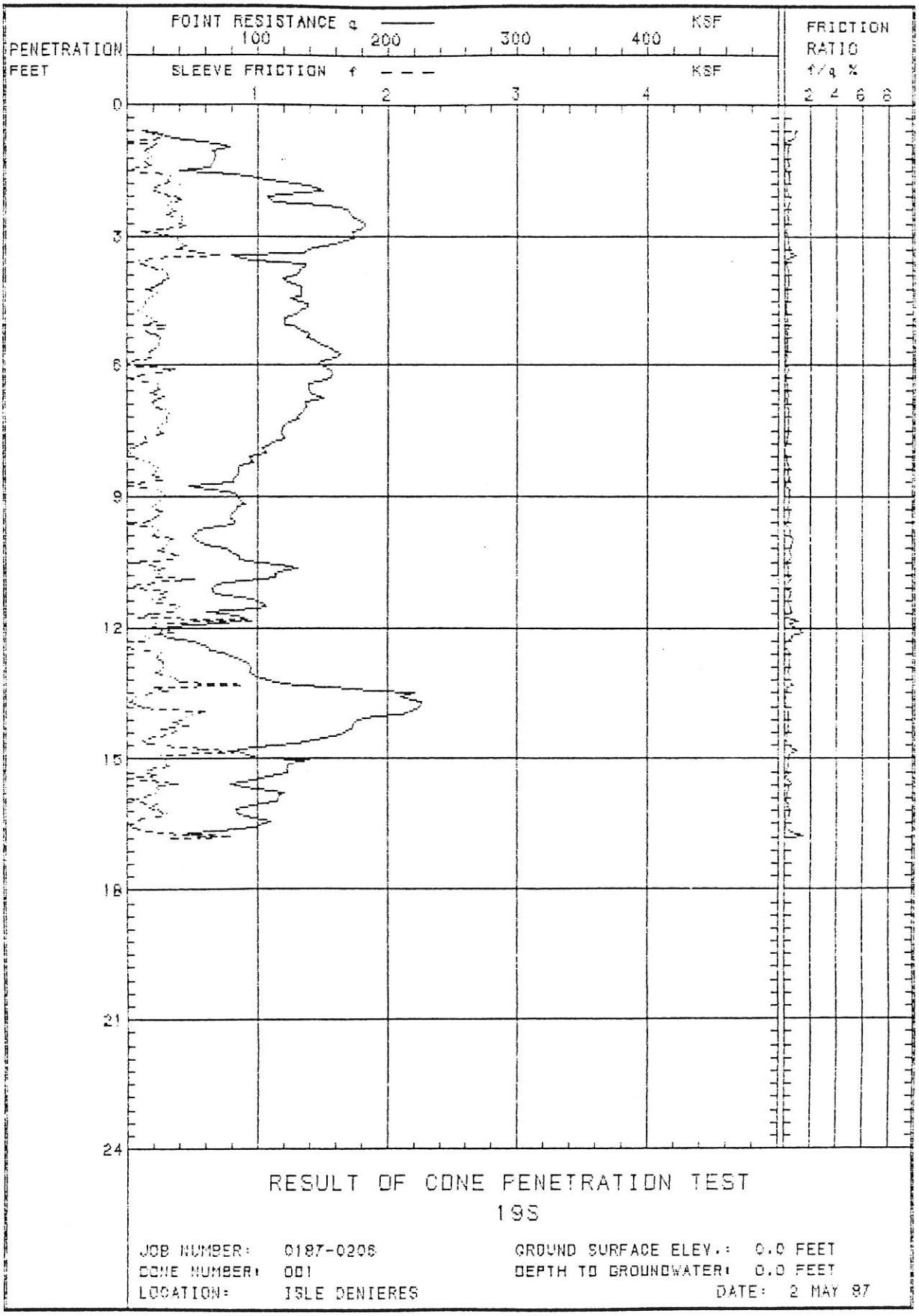
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 97

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

PROJECT NO. : 01870206
BORING NO. : 19M
CONE NO. : 001
DATE : 05/02/87

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	38.12	1.01	2.65	CLAYEY SILT TO SILTY CLAY	MH-CL	.03	9	2.822	13.5			
.80	110.20	.67	.60	SAND TO SILTY SAND	SM-SP	.05	13			100+	42	.50+
1.00	104.54	.46	.44	SAND TO SILTY SAND	SM-SP	.06	12			100+	42	.50+
1.20	83.57	.32	.38	SAND TO SILTY SAND	SM-SP	.07	10			100+	42	.50+
1.40	95.18	.61	.64	SAND TO SILTY SAND	SM-SP	.08	11			100+	42	.50+
1.60	160.49	.38	.24	SAND TO SILTY SAND	SM-SP	.10	19			100+	42	.50+
1.80	170.46	.58	.34	SAND TO SILTY SAND	SM-SP	.11	20			100+	42	.50+
2.00	175.86	.11	.06	SAND	SW-SP	.13	16			100+	44	.50+
2.20	178.88	.37	.21	SAND	SW-SP	.14	17			100+	44	.50+
2.40	201.17	.18	.09	SAND	SW-SP	.16	19			100+	44	.50+
2.60	212.52	.73	.34	SAND	SW-SP	.17	20			100+	44	.50+
2.80	198.03	.67	.34	SAND	SW-SP	.18	18			100+	44	.50+
3.00	161.64	.22	.14	SAND	SW-SP	.20	15			100+	44	.50+
3.20	142.38	.38	.27	SAND TO SILTY SAND	SM-SP	.19	17			100+	42	.50+
3.40	177.36	.38	.22	SAND	SW-SP	.22	16			100+	44	.50+
3.60	108.36	.41	.38	SAND TO SILTY SAND	SM-SP	.22	12			100+	42	.50+
3.80	151.27	.31	.20	SAND TO SILTY SAND	SM-SP	.23	18			100+	42	.50+
4.00	138.42	.25	.18	SAND TO SILTY SAND	SM-SP	.24	16			100+	42	.50+
4.20	146.10	.44	.30	SAND TO SILTY SAND	SM-SP	.25	17			100+	42	.50+
4.40	162.78	.67	.41	SAND TO SILTY SAND	SM-SP	.26	19			100+	42	.50+
4.60	166.92	.58	.35	SAND TO SILTY SAND	SM-SP	.28	19			100+	42	.50+
4.80	169.73	.61	.36	SAND TO SILTY SAND	SM-SP	.29	20			100+	42	.50+
5.00	131.15	.66	.50	SAND TO SILTY SAND	SM-SP	.30	15			100+	42	.50+
5.20	137.01	.30	.22	SAND TO SILTY SAND	SM-SP	.31	16			100+	42	.50+
5.40	115.77	.39	.34	SAND TO SILTY SAND	SM-SP	.32	13			94	42	.50+
5.60	109.05	.32	.30	SAND TO SILTY SAND	SM-SP	.34	13			90	41	.50+
5.80	121.64	.52	.43	SAND TO SILTY SAND	SM-SP	.35	14			94	42	.50+
6.00	138.18	.48	.34	SAND TO SILTY SAND	SM-SP	.36	16			99	42	.50+
6.20	164.27	.40	.25	SAND	SW-SP	.40	15			100+	44	.50+
6.40	189.53	.47	.25	SAND	SW-SP	.42	18			100+	44	.50+
6.60	195.52	.42	.21	SAND	SW-SP	.43	18			100+	44	.50+
6.80	209.08	.53	.26	SAND	SW-SP	.44	20			100+	44	.50+
7.00	208.42	.18	.09	SAND	SW-SP	.45	19			100+	44	.50+
7.20	293.73	2.10	.72	SAND	SW-SP	.47	28			100+	44	.50+
7.40	214.07	1.82	.85	SAND TO SILTY SAND	SM-SP	.44	25			100+	42	.50+
7.60	303.08	.47	.15	SAND	SW-SP	.49	29			100+	44	.50+
7.80	282.13	1.30	.46	SAND	SW-SP	.51	27			100+	44	.50+
8.00	258.04	.44	.17	SAND	SW-SP	.52	24			100+	44	.50+
8.20	246.24	.40	.16	SAND	SW-SP	.53	23			100+	44	.50+
8.40	225.97	.46	.20	SAND	SW-SP	.55	21			100+	44	.50+
8.60	239.57	.42	.17	SAND	SW-SP	.56	22			100+	44	.50+
8.80	237.63	1.66	.70	SAND	SW-SP	.57	22			100+	44	.50+
9.00	183.64	.24	.13	SAND	SW-SP	.58	17			99	44	.50+
9.20	150.69	.23	.15	SAND TO SILTY SAND	SM-SP	.55	18			91	41	.50+
9.40	154.66	.23	.15	SAND TO SILTY SAND	SM-SP	.56	18			92	41	.50+

9.60	170.89	.32	.19	SAND	SW-SP	.62	16			93	44	.50+
9.80	182.24	.37	.20	SAND	SW-SP	.64	17			95	44	.50+
10.00	204.19	.36	.17	SAND	SW-SP	.65	19			100+	44	.50+
10.20	210.48	1.23	.58	SAND	SW-SP	.66	20			100+	44	.50+
10.40	114.63	.36	.32	SAND TO SILTY SAND	SM-SP	.62	13			80	40	.50+
10.60	115.94	.37	.32	SAND TO SILTY SAND	SM-SP	.64	13			80	40	.50+
10.80	139.50	.35	.25	SAND TO SILTY SAND	SM-SP	.65	16			85	41	.50+
11.00	161.35	.34	.21	SAND	SW-SP	.71	15			83	43	.50+
11.20	148.84	.58	.39	SAND TO SILTY SAND	SM-SP	.67	17			86	41	.50+
11.40	110.95	.34	.31	SAND TO SILTY SAND	SM-SP	.68	13			76	40	.50+
11.60	92.30	.16	.18	SAND TO SILTY SAND	SM-SP	.70	11			69	39	.48
11.80	83.10	.74	.89	SILTY SAND TO SANDY SILT	SM-ML	.65	13			68	38	.40
12.00	139.86	.19	.14	SAND TO SILTY SAND	SM-SP	.72	16			83	40	.50+
12.20	177.35	.29	.16	SAND	SW-SP	.79	16			88	43	.50+
12.40	180.64	.37	.20	SAND	SW-SP	.81	17			89	43	.50+
12.60	167.52	1.06	.63	SAND TO SILTY SAND	SM-SP	.76	20			88	41	.50+
12.80	140.87	.63	.45	SAND TO SILTY SAND	SM-SP	.77	16			82	40	.50+
13.00	144.97	.48	.33	SAND TO SILTY SAND	SM-SP	.78	17			82	40	.50+
13.20	132.62	.78	.59	SAND TO SILTY SAND	SM-SP	.79	15			79	40	.50+
13.40	114.33	.58	.51	SAND TO SILTY SAND	SM-SP	.80	13			73	39	.50+
13.60	130.52	.53	.41	SAND TO SILTY SAND	SM-SP	.82	15			78	40	.50+
13.80	125.90	.36	.28	SAND TO SILTY SAND	SM-SP	.83	15			76	40	.50+
14.00	122.54	.45	.37	SAND TO SILTY SAND	SM-SP	.84	14			75	40	.50+
14.20	99.40	.32	.32	SAND TO SILTY SAND	SM-SP	.85	11			67	39	.39
14.40	71.47	.14	.20	SILTY SAND TO SANDY SILT	SM-ML	.79	11			60	36	.22
14.60	19.48	.36	1.84	CLAYEY SILT TO SILTY CLAY	MH-CL	.66	4	1.394	13.5			
14.80	15.01	.27	1.80	CLAYEY SILT TO SILTY CLAY	MH-CL	.67	3	1.062	13.5			
15.00	13.03	.10	.77	SENSITIVE FINE GRAINED	OL-CH	.45	3	.932	13.5			
15.20	29.39	.25	.85	SANDY SILT TO CLAYEY SILT	ML-MH	.76	5	2.120	13.5	30	32	.13
15.40	15.82	.37	2.31	SILTY CLAY TO CLAY	CL-CH	.62	5	1.126	13.5			
15.60	10.78	.22	2.05	SILTY CLAY TO CLAY	CL-CH	.62	3	.752	13.5			
15.80	51.77	.58	1.11	SANDY SILT TO CLAYEY SILT	ML-MH	.79	9	3.776	13.5	48	35	.17
16.00	52.05	.20	.39	SILTY SAND TO SANDY SILT	SM-ML	.88	8			45	34	.16
16.20	28.17	.43	1.53	SANDY SILT TO CLAYEY SILT	ML-MH	.81	5	2.026	13.5	27	32	.12
16.40	70.20	.59	.84	SILTY SAND TO SANDY SILT	SM-ML	.90	11			55	36	.19
16.60	25.51	.32	1.27	SANDY SILT TO CLAYEY SILT	ML-MH	.83	4	1.828	13.5	24	31	.12



RESULT OF CONE PENETRATION TEST

19S

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

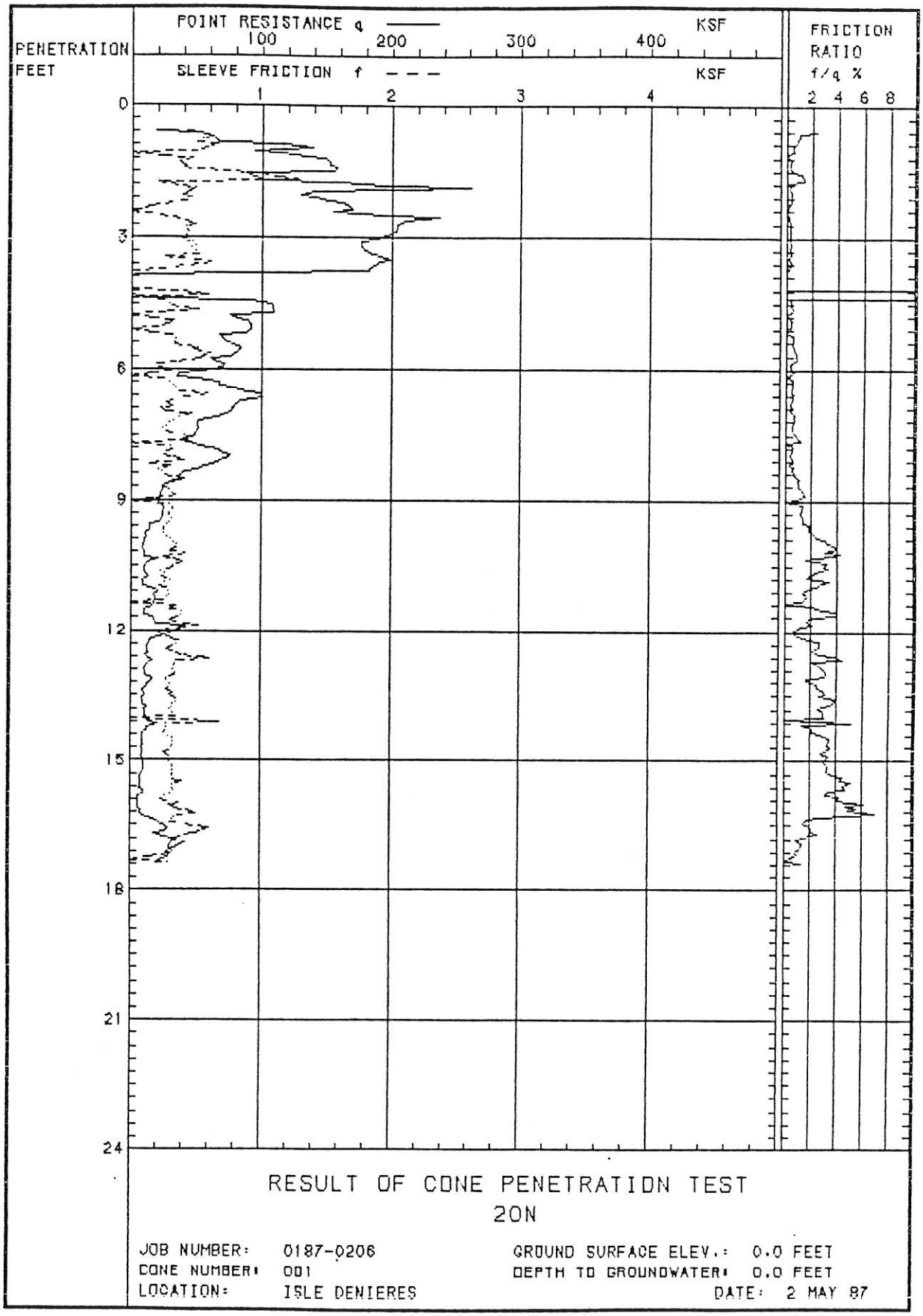
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 19S
CONE NO. : 001
DATE : 05/02/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	15.99	.14	.87	SENSITIVE FINE GRAINED	OL-CH	.02	3	1.183	13.5			
.80	45.74	.13	.28	SILTY SAND TO SANDY SILT	SM-ML	.04	7			80	39	.50+
1.00	71.83	.38	.53	SILTY SAND TO SANDY SILT	SM-ML	.05	11			100+	42	.50+
1.20	67.40	.17	.25	SILTY SAND TO SANDY SILT	SM-ML	.07	10			97	42	.50+
1.40	64.44	.16	.24	SILTY SAND TO SANDY SILT	SM-ML	.08	10			93	41	.50+
1.60	79.30	.30	.38	SAND TO SILTY SAND	SM-SP	.10	9			100+	42	.50+
1.80	128.87	.29	.23	SAND TO SILTY SAND	SM-SP	.11	15			100+	42	.50+
2.00	134.58	.21	.16	SAND TO SILTY SAND	SM-SP	.12	16			100+	42	.50+
2.20	111.11	.33	.30	SAND TO SILTY SAND	SM-SP	.13	13			100+	42	.50+
2.40	169.96	.34	.20	SAND	SW-SP	.16	16			100+	44	.50+
2.60	175.61	.42	.24	SAND	SW-SP	.17	16			100+	44	.50+
2.80	180.79	.29	.16	SAND	SW-SP	.18	17			100+	44	.50+
3.00	174.14	.32	.18	SAND	SW-SP	.20	16			100+	44	.50+
3.20	154.98	.44	.29	SAND TO SILTY SAND	SM-SP	.19	18			100+	42	.50+
3.40	108.22	.27	.25	SAND TO SILTY SAND	SM-SP	.20	12			100+	42	.50+
3.60	116.49	.10	.08	SAND TO SILTY SAND	SM-SP	.22	13			100+	42	.50+
3.80	132.21	.29	.22	SAND TO SILTY SAND	SM-SP	.23	15			100+	42	.50+
4.00	121.31	.36	.30	SAND TO SILTY SAND	SM-SP	.24	14			100+	42	.50+
4.20	134.18	.25	.19	SAND TO SILTY SAND	SM-SP	.25	16			100+	42	.50+
4.40	129.40	.27	.21	SAND TO SILTY SAND	SM-SP	.26	15			100+	42	.50+
4.60	138.48	.14	.10	SAND TO SILTY SAND	SM-SP	.28	16			100+	42	.50+
4.80	128.91	1.09	.85	SAND TO SILTY SAND	SM-SP	.29	15			100+	42	.50+
5.00	121.51	.14	.12	SAND TO SILTY SAND	SM-SP	.30	14			98	42	.50+
5.20	132.81	.14	.11	SAND TO SILTY SAND	SM-SP	.31	15			100+	42	.50+
5.40	140.25	.16	.11	SAND TO SILTY SAND	SM-SP	.32	16			100+	42	.50+
5.60	152.72	.23	.15	SAND TO SILTY SAND	SM-SP	.34	18			100+	42	.50+
5.80	162.84	.32	.20	SAND	SW-SP	.38	15			100+	44	.50+
6.00	148.67	.09	.06	SAND TO SILTY SAND	SM-SP	.36	17			100+	42	.50+
6.20	157.67	.23	.15	SAND	SW-SP	.40	15			100+	44	.50+
6.40	143.93	.18	.12	SAND TO SILTY SAND	SM-SP	.38	17			99	42	.50+
6.60	139.95	.22	.16	SAND TO SILTY SAND	SM-SP	.40	16			97	42	.50+
6.80	144.08	.45	.31	SAND TO SILTY SAND	SM-SP	.41	17			98	42	.50+
7.00	136.89	.24	.18	SAND TO SILTY SAND	SM-SP	.42	16			94	42	.50+
7.20	131.59	.27	.21	SAND TO SILTY SAND	SM-SP	.43	15			92	42	.50+
7.40	120.48	.24	.20	SAND TO SILTY SAND	SM-SP	.44	14			88	41	.50+
7.60	119.29	.21	.18	SAND TO SILTY SAND	SM-SP	.46	14			87	41	.50+
7.80	109.79	.05	.04	SAND TO SILTY SAND	SM-SP	.47	13			84	41	.50+
8.00	106.25	.02	.02	SAND TO SILTY SAND	SM-SP	.48	12			82	40	.50+
8.20	96.04	.17	.18	SAND TO SILTY SAND	SM-SP	.49	11			78	40	.50+
8.40	85.01	.21	.25	SAND TO SILTY SAND	SM-SP	.50	10			73	39	.50+
8.60	82.17	.20	.25	SAND TO SILTY SAND	SM-SP	.52	9			72	39	.50+
8.80	55.06	.27	.49	SILTY SAND TO SANDY SILT	SM-ML	.48	8			62	37	.25
9.00	84.37	.27	.32	SAND TO SILTY SAND	SM-SP	.54	10			72	39	.50+
9.20	87.73	.24	.27	SAND TO SILTY SAND	SM-SP	.55	10			73	39	.50+
9.40	81.20	.25	.31	SAND TO SILTY SAND	SM-SP	.56	9			70	39	.50+

9.60	82.40	.09	.11	SAND TO SILTY SAND	SM-SP	.58	9			70	39	.50+
9.80	54.12	.22	.41	SILTY SAND TO SANDY SILT	SM-ML	.54	8			60	36	.22
10.00	52.75	.32	.60	SILTY SAND TO SANDY SILT	SM-ML	.55	8			59	36	.21
10.20	77.09	.30	.39	SILTY SAND TO SANDY SILT	SM-ML	.56	12			68	38	.44
10.40	86.09	.37	.43	SAND TO SILTY SAND	SM-SP	.62	10			69	39	.49
10.60	124.36	.77	.62	SAND TO SILTY SAND	SM-SP	.64	14			82	40	.50+
10.80	113.88	.23	.21	SAND TO SILTY SAND	SM-SP	.65	13			78	40	.50+
11.00	72.86	.18	.25	SILTY SAND TO SANDY SILT	SM-ML	.60	11			65	37	.32
11.20	67.14	.19	.28	SILTY SAND TO SANDY SILT	SM-ML	.62	10			63	37	.26
11.40	99.81	.21	.21	SAND TO SILTY SAND	SM-SP	.68	11			72	39	.50+
11.60	80.89	.49	.60	SILTY SAND TO SANDY SILT	SM-ML	.64	12			67	37	.38
11.80	89.31	.51	.57	SAND TO SILTY SAND	SM-SP	.71	10			68	39	.41
12.00	30.53	.22	.72	SANDY SILT TO CLAYEY SILT	ML-MH	.60	5	2.217	13.5	40	34	.14
12.20	29.98	.22	.72	SANDY SILT TO CLAYEY SILT	ML-MH	.61	5	2.176	13.5	39	34	.14
12.40	58.71	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.68	9			57	36	.20
12.60	76.70	.25	.33	SILTY SAND TO SANDY SILT	SM-ML	.69	12			64	37	.29
12.80	91.96	.29	.32	SAND TO SILTY SAND	SM-SP	.77	11			67	39	.38
13.00	94.58	.24	.25	SAND TO SILTY SAND	SM-SP	.78	11			68	39	.40
13.20	108.62	.39	.36	SAND TO SILTY SAND	SM-SP	.79	13			72	39	.50+
13.40	172.34	.27	.15	SAND	SW-SP	.87	16			85	42	.50+
13.60	214.40	.05	.02	SAND	SW-SP	.88	20			93	44	.50+
13.80	225.19	.12	.05	SAND	SW-SP	.90	21			94	44	.50+
14.00	201.42	1.20	.60	SAND TO SILTY SAND	SM-SP	.84	24			92	41	.50+
14.20	174.72	.45	.26	SAND	SW-SP	.92	16			84	43	.50+
14.40	166.82	.20	.12	SAND	SW-SP	.94	15			83	43	.50+
14.60	138.01	.18	.13	SAND TO SILTY SAND	SM-SP	.88	16			78	40	.50+
14.80	85.37	.52	.61	SILTY SAND TO SANDY SILT	SM-ML	.81	13			64	37	.28
15.00	120.09	.49	.41	SAND TO SILTY SAND	SM-SP	.90	14			72	39	.50+
15.20	123.49	.20	.16	SAND TO SILTY SAND	SM-SP	.91	14			73	39	.50+
15.40	109.12	.12	.11	SAND TO SILTY SAND	SM-SP	.92	13			68	39	.43
15.60	84.37	.41	.49	SAND TO SILTY SAND	SM-SP	.94	10			61	38	.23
15.80	119.23	.23	.19	SAND TO SILTY SAND	SM-SP	.95	14			71	39	.50+
16.00	108.99	.04	.04	SAND TO SILTY SAND	SM-SP	.96	13			67	39	.40
16.20	83.87	.32	.38	SAND TO SILTY SAND	SM-SP	.97	10			60	38	.22
16.40	103.39	.09	.09	SAND TO SILTY SAND	SM-SP	.98	12			65	39	.33
16.60	84.71	.18	.21	SAND TO SILTY SAND	SM-SP	1.00	10			60	38	.22
16.80	60.64	.31	.51	SILTY SAND TO SANDY SILT	SM-ML	.92	9			49	35	.17



RESULT OF CONE PENETRATION TEST

2ON

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

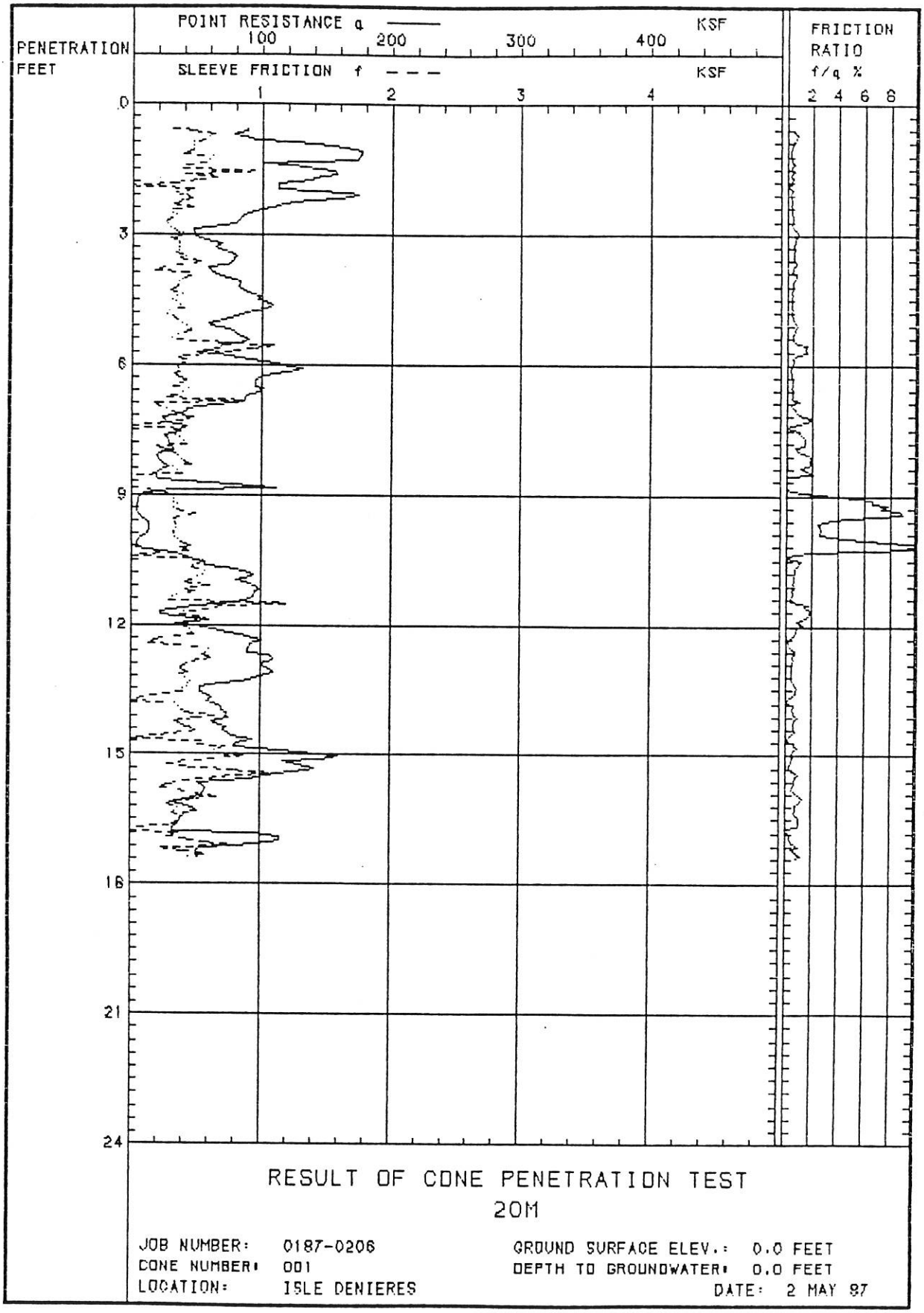
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 20N
CONE NO. : 001
DATE : 05/02/87

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	34.92	.38	1.09	SANDY SILT TO CLAYEY SILT	ML-MH	.03	6	2.585	13.5	74	38	.50+
.80	65.55	.53	.81	SILTY SAND TO SANDY SILT	SM-ML	.04	10			100+	42	.50+
1.00	117.10	.62	.53	SAND TO SILTY SAND	SM-SP	.06	14			100+	42	.50+
1.20	141.92	.36	.25	SAND TO SILTY SAND	SM-SP	.07	16			100+	42	.50+
1.40	155.20	.36	.23	SAND TO SILTY SAND	SM-SP	.08	18			100+	42	.50+
1.60	90.88	.61	.67	SILTY SAND TO SANDY SILT	SM-ML	.09	14			100+	42	.50+
1.80	177.31	.22	.12	SAND	SW-SP	.12	16			100+	44	.50+
2.00	135.91	.48	.35	SAND TO SILTY SAND	SM-SP	.12	16			100+	42	.50+
2.20	157.16	.37	.23	SAND TO SILTY SAND	SM-SP	.13	18			100+	42	.50+
2.40	162.73	.12	.07	SAND	SW-SP	.16	15			100+	44	.50+
2.60	223.99	.45	.20	SAND	SW-SP	.17	21			100+	44	.50+
2.80	203.94	.75	.37	SAND	SW-SP	.18	19			100+	44	.50+
3.00	192.61	.41	.21	SAND	SW-SP	.20	18			100+	44	.50+
3.20	176.60	.48	.27	SAND	SW-SP	.21	16			100+	44	.50+
3.40	188.40	.51	.27	SAND	SW-SP	.22	18			100+	44	.50+
3.60	189.16	.50	.26	SAND	SW-SP	.23	18			100+	44	.50+
3.80	93.66	.00	.00	SAND TO SILTY SAND	SM-SP	.23	11			92	42	.50+
4.00	.00	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.12	0	-.009	13.5			
4.20	.00	.20	999.00	ORGANIC MATERIAL	OL-OH	.13	1	-.009	13.5			
4.40	50.93	.13	.26	SILTY SAND TO SANDY SILT	SM-ML	.24	8			70	38	.50+
4.60	108.23	.27	.25	SAND TO SILTY SAND	SM-SP	.28	12			95	42	.50+
4.80	78.93	.42	.53	SILTY SAND TO SANDY SILT	SM-ML	.26	12			83	40	.50+
5.00	91.50	.25	.27	SAND TO SILTY SAND	SM-SP	.30	10			86	41	.50+
5.20	78.04	.40	.51	SILTY SAND TO SANDY SILT	SM-ML	.29	12			81	39	.50+
5.40	76.23	.34	.44	SILTY SAND TO SANDY SILT	SM-ML	.30	12			80	39	.50+
5.60	81.92	.37	.46	SAND TO SILTY SAND	SM-SP	.34	9			80	40	.50+
5.80	63.68	.45	.71	SILTY SAND TO SANDY SILT	SM-ML	.32	10			72	38	.50+
6.00	61.56	.26	.42	SILTY SAND TO SANDY SILT	SM-ML	.33	9			71	38	.50+
6.20	43.10	.07	.17	SILTY SAND TO SANDY SILT	SM-ML	.34	6			62	37	.25
6.40	73.25	.34	.46	SILTY SAND TO SANDY SILT	SM-ML	.35	11			75	39	.50+
6.60	100.10	.53	.53	SAND TO SILTY SAND	SM-SP	.40	11			84	41	.50+
6.80	80.57	.37	.46	SILTY SAND TO SANDY SILT	SM-ML	.37	12			77	39	.50+
7.00	75.04	.27	.36	SILTY SAND TO SANDY SILT	SM-ML	.38	11			74	38	.50+
7.20	51.54	.43	.83	SILTY SAND TO SANDY SILT	SM-ML	.40	8			63	37	.28
7.40	50.92	.26	.51	SILTY SAND TO SANDY SILT	SM-ML	.41	8			63	37	.27
7.60	41.86	.41	.99	SANDY SILT TO CLAYEY SILT	ML-MH	.39	8	3.072	13.5	60	36	.21
7.80	60.18	.31	.51	SILTY SAND TO SANDY SILT	SM-ML	.43	9			66	37	.36
8.00	75.51	.27	.35	SILTY SAND TO SANDY SILT	SM-ML	.44	12			72	39	.50+
8.20	59.32	.33	.55	SILTY SAND TO SANDY SILT	SM-ML	.45	9			65	37	.32
8.40	39.87	.27	.68	SANDY SILT TO CLAYEY SILT	ML-MH	.42	7	2.922	13.5	56	36	.19
8.60	31.54	.48	1.53	SANDY SILT TO CLAYEY SILT	ML-MH	.43	6	2.304	13.5	48	35	.16
8.80	23.38	.29	1.26	CLAYEY SILT TO SILTY CLAY	MH-CL	.40	5	1.702	13.5			
9.00	20.79	.09	.42	SANDY SILT TO CLAYEY SILT	ML-MH	.45	3	1.507	13.5	36	33	.13
9.20	25.09	.32	1.26	SANDY SILT TO CLAYEY SILT	ML-MH	.46	4	1.824	13.5	41	34	.14
9.40	23.86	.30	1.26	CLAYEY SILT TO SILTY CLAY	MH-CL	.42	5	1.736	13.5			

9.60	14.27	.28	1.99	SILTY CLAY TO CLAY	CL-CH	.38	4	1.028	13.5			
9.80	11.56	.27	2.32	SILTY CLAY TO CLAY	CL-CH	.39	3	.827	13.5			
10.00	9.60	.33	3.49	CLAY	CH	.40	4	.681	13.5			
10.20	9.84	.36	3.65	CLAY	CH	.41	4	.699	13.5			
10.40	16.54	.34	2.07	CLAYEY SILT TO SILTY CLAY	MH-CL	.47	3	1.191	13.5			
10.60	10.08	.28	2.76	CLAY	CH	.42	4	.715	13.5			
10.80	11.35	.27	2.36	SILTY CLAY TO CLAY	CL-CH	.43	3	.809	13.5			
11.00	12.25	.25	2.02	SILTY CLAY TO CLAY	CL-CH	.44	3	.875	13.5			
11.20	17.95	.30	1.65	CLAYEY SILT TO SILTY CLAY	MH-CL	.50	4	1.292	13.5			
11.40	17.23	.33	1.89	CLAYEY SILT TO SILTY CLAY	MH-CL	.51	4	1.238	13.5			
11.60	9.84	.35	3.53	CLAY	CH	.46	4	.694	13.5			
11.80	18.56	.32	1.75	CLAYEY SILT TO SILTY CLAY	MH-CL	.53	4	1.335	13.5			
12.00	35.58	.28	.80	SANDY SILT TO CLAYEY SILT	ML-MH	.60	6	2.591	13.5	44	34	.15
12.20	15.77	.30	1.89	CLAYEY SILT TO SILTY CLAY	MH-CL	.55	3	1.127	13.5			
12.40	12.54	.32	2.55	SILTY CLAY TO CLAY	CL-CH	.50	4	.892	13.5			
12.60	12.64	.40	3.18	CLAY	CH	.50	6	.899	13.5			
12.80	12.31	.33	2.69	SILTY CLAY TO CLAY	CL-CH	.51	3	.874	13.5			
13.00	11.13	.34	3.09	CLAY	CH	.52	5	.786	13.5			
13.20	14.81	.28	1.90	SILTY CLAY TO CLAY	CL-CH	.53	4	1.058	13.5			
13.40	10.01	.32	3.23	CLAY	CH	.54	4	.702	13.5			
13.60	9.10	.35	3.86	CLAY	CH	.54	4	.633	13.5			
13.80	11.45	.31	2.71	CLAY	CH	.55	5	.808	13.5			
14.00	12.52	.18	1.42	SENSITIVE FINE GRAINED	OL-CH	.42	2	.896	13.5			
14.20	16.81	.31	1.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.64	4	1.198	13.5			
14.40	9.35	.30	3.24	CLAY	CH	.58	4	.650	13.5			
14.60	9.71	.33	3.38	CLAY	CH	.58	4	.676	13.5			
14.80	9.23	.30	3.30	CLAY	CH	.59	4	.640	13.5			
15.00	9.84	.30	3.09	CLAY	CH	.60	4	.684	13.5			
15.20	10.08	.33	3.30	CLAY	CH	.61	4	.702	13.5			
15.40	7.62	.33	4.33	CLAY	CH	.62	3	.519	13.5			
15.60	7.14	.33	4.60	CLAY	CH	.62	3	.483	13.5			
15.80	8.16	.33	4.07	CLAY	CH	.63	3	.557	13.5			
16.00	6.27	.29	4.58	CLAY	CH	.64	3	.417	13.5			
16.20	8.13	.41	5.03	CLAY	CH	.65	3	.555	13.5			
16.40	20.12	.33	1.64	CLAYEY SILT TO SILTY CLAY	MH-CL	.74	4	1.436	13.5			
16.60	27.82	.49	1.75	CLAYEY SILT TO SILTY CLAY	MH-CL	.75	6	2.006	13.5			
16.80	29.67	.35	1.19	SANDY SILT TO CLAYEY SILT	ML-MH	.84	5	2.136	13.5	28	32	.13
17.00	30.01	.36	1.19	SANDY SILT TO CLAYEY SILT	ML-MH	.85	5	2.160	13.5	28	32	.13
17.20	30.27	.40	1.32	SANDY SILT TO CLAYEY SILT	ML-MH	.86	5	2.179	13.5	28	32	.13



RESULT OF CONE PENETRATION TEST

20M

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

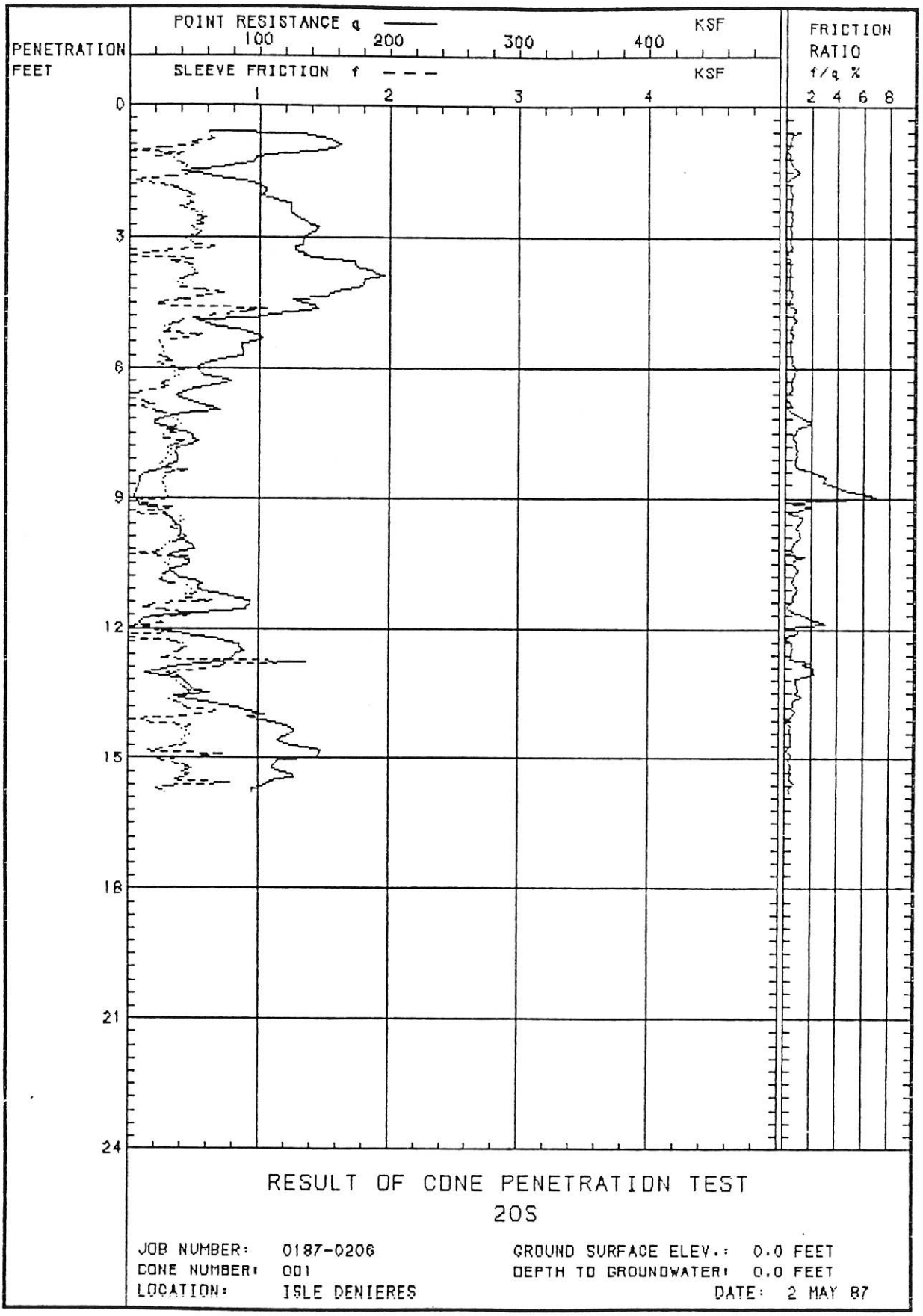
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 20M
CONE NO. : 001
DATE : 05/02/87

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	88.69	.38	.42	SAND TO SILTY SAND	SM-SP	.04	10			100+	42	.50+
.80	90.90	.58	.64	SAND TO SILTY SAND	SM-SP	.05	10			100+	42	.50+
1.00	163.70	.47	.29	SAND TO SILTY SAND	SM-SP	.06	19			100+	42	.50+
1.20	176.00	.20	.11	SAND	SW-SP	.08	16			100+	44	.50+
1.40	111.67	.57	.51	SAND TO SILTY SAND	SM-SP	.08	13			100+	42	.50+
1.60	157.06	.67	.43	SAND TO SILTY SAND	SM-SP	.10	18			100+	42	.50+
1.80	126.47	.68	.54	SAND TO SILTY SAND	SM-SP	.11	15			100+	42	.50+
2.00	139.79	.40	.29	SAND TO SILTY SAND	SM-SP	.12	16			100+	42	.50+
2.20	149.22	.45	.30	SAND TO SILTY SAND	SM-SP	.13	17			100+	42	.50+
2.40	104.56	.35	.34	SAND TO SILTY SAND	SM-SP	.14	12			100+	42	.50+
2.60	85.00	.32	.38	SAND TO SILTY SAND	SM-SP	.16	10			95	42	.50+
2.80	69.54	.31	.44	SILTY SAND TO SANDY SILT	SM-ML	.15	11			86	40	.50+
3.00	48.35	.36	.75	SILTY SAND TO SANDY SILT	SM-ML	.17	7			73	38	.50+
3.20	65.80	.36	.54	SILTY SAND TO SANDY SILT	SM-ML	.18	10			82	40	.50+
3.40	73.05	.35	.48	SILTY SAND TO SANDY SILT	SM-ML	.19	11			85	40	.50+
3.60	77.87	.31	.40	SILTY SAND TO SANDY SILT	SM-ML	.20	12			87	40	.50+
3.80	59.59	.43	.72	SILTY SAND TO SANDY SILT	SM-ML	.21	9			76	39	.50+
4.00	74.15	.42	.56	SILTY SAND TO SANDY SILT	SM-ML	.22	11			83	40	.50+
4.20	82.29	.17	.21	SAND TO SILTY SAND	SM-SP	.25	9			85	41	.50+
4.40	96.04	.38	.40	SAND TO SILTY SAND	SM-SP	.26	11			90	41	.50+
4.60	105.89	.10	.10	SAND TO SILTY SAND	SM-SP	.28	12			94	42	.50+
4.80	89.21	.31	.34	SAND TO SILTY SAND	SM-SP	.29	10			85	41	.50+
5.00	65.60	.37	.57	SILTY SAND TO SANDY SILT	SM-ML	.27	10			76	39	.50+
5.20	76.87	.43	.56	SILTY SAND TO SANDY SILT	SM-ML	.29	12			80	39	.50+
5.40	89.66	.33	.36	SAND TO SILTY SAND	SM-SP	.32	10			94	41	.50+
5.60	68.77	.87	1.27	SILTY SAND TO SANDY SILT	SM-ML	.31	10			75	39	.50+
5.80	74.84	.52	.70	SILTY SAND TO SANDY SILT	SM-ML	.32	11			78	39	.50+
6.00	116.93	.38	.32	SAND TO SILTY SAND	SM-SP	.36	14			92	41	.50+
6.20	115.30	.36	.32	SAND TO SILTY SAND	SM-SP	.37	13			90	41	.50+
6.40	95.08	.39	.42	SAND TO SILTY SAND	SM-SP	.38	11			82	40	.50+
6.60	100.02	.54	.54	SAND TO SILTY SAND	SM-SP	.40	11			84	41	.50+
6.80	87.52	.73	.84	SILTY SAND TO SANDY SILT	SM-ML	.37	13			80	39	.50+
7.00	47.16	.27	.57	SILTY SAND TO SANDY SILT	SM-ML	.38	7			62	37	.25
7.20	28.35	.44	1.54	SANDY SILT TO CLAYEY SILT	ML-MH	.36	5	2.073	13.5	49	35	.16
7.40	35.23	.13	.36	SANDY SILT TO CLAYEY SILT	ML-MH	.37	6	2.582	13.5	55	36	.18
7.60	31.32	.62	1.99	CLAYEY SILT TO SILTY CLAY	MH-CL	.34	7	2.295	13.5			
7.80	28.91	.35	1.22	SANDY SILT TO CLAYEY SILT	ML-MH	.39	5	2.112	13.5	48	35	.16
8.00	28.47	.40	1.40	SANDY SILT TO CLAYEY SILT	ML-MH	.40	5	2.079	13.5	47	35	.16
8.20	21.83	.39	1.80	CLAYEY SILT TO SILTY CLAY	MH-CL	.37	5	1.590	13.5			
8.40	25.51	.23	.90	SANDY SILT TO CLAYEY SILT	ML-MH	.42	4	1.859	13.5	43	34	.15
8.60	19.57	.10	.50	SANDY SILT TO CLAYEY SILT	ML-MH	.43	3	1.417	13.5	35	33	.13
8.80	94.49	.00	.00	SAND TO SILTY SAND	SM-SP	.53	11			76	40	.50+
9.00	9.50	.28	2.90	CLAY	CH	.36	4	.677	13.5			
9.20	4.81	.34	7.12	ORGANIC MATERIAL	OL-OH	.28	2	.336	13.5			
9.40	4.80	.42	8.81	ORGANIC MATERIAL	OL-OH	.28	2	.335	13.5			

9.60	11.42	.32	2.84	CLAY	CH	.38	5	.817	13.5			
9.80	13.05	.33	2.55	SILTY CLAY TO CLAY	CL-CH	.39	4	.938	13.5			
10.00	6.67	.34	5.15	CLAY	CH	.40	3	.464	13.5			
10.20	3.33	.42	12.57	ORGANIC MATERIAL	OL-OH	.31	1	.224	13.5			
10.40	37.96	.14	.38	SANDY SILT TO CLAYEY SILT	ML-MH	.52	7	2.774	13.5	49	35	.17
10.60	56.71	.52	.91	SILTY SAND TO SANDY SILT	SM-ML	.58	9			60	36	.21
10.80	90.84	.56	.62	SAND TO SILTY SAND	SM-SP	.65	10			70	39	.50+
11.00	84.45	.50	.60	SILTY SAND TO SANDY SILT	SM-ML	.60	13			69	38	.50
11.20	97.08	.46	.47	SAND TO SILTY SAND	SM-SP	.67	11			72	39	.50+
11.40	91.69	.68	.75	SILTY SAND TO SANDY SILT	SM-ML	.63	14			71	38	.50+
11.60	40.38	.65	1.62	SANDY SILT TO CLAYEY SILT	ML-MH	.58	7	2.948	13.5	48	35	.16
11.80	35.09	.32	.91	SANDY SILT TO CLAYEY SILT	ML-MH	.59	6	2.555	13.5	44	34	.15
12.00	41.70	.55	1.33	SANDY SILT TO CLAYEY SILT	ML-MH	.60	7	3.045	13.5	48	35	.16
12.20	79.75	.48	.60	SILTY SAND TO SANDY SILT	SM-ML	.67	12			66	37	.33
12.40	96.65	.12	.12	SAND TO SILTY SAND	SM-SP	.74	11			69	39	.48
12.60	90.16	.59	.65	SILTY SAND TO SANDY SILT	SM-ML	.69	14			69	38	.45
12.80	110.09	.56	.51	SAND TO SILTY SAND	SM-SP	.77	13			73	39	.50+
13.00	105.56	.42	.40	SAND TO SILTY SAND	SM-SP	.78	12			71	39	.50+
13.20	99.84	.38	.38	SAND TO SILTY SAND	SM-SP	.79	11			69	39	.46
13.40	61.67	.44	.71	SILTY SAND TO SANDY SILT	SM-ML	.74	9			56	36	.20
13.60	56.88	.38	.67	SILTY SAND TO SANDY SILT	SM-ML	.75	9			53	35	.18
13.80	61.57	.22	.36	SILTY SAND TO SANDY SILT	SM-ML	.76	9			55	36	.19
14.00	72.41	.41	.57	SILTY SAND TO SANDY SILT	SM-ML	.77	11			61	37	.23
14.20	69.64	.75	1.08	SILTY SAND TO SANDY SILT	SM-ML	.78	11			60	36	.21
14.40	72.73	.44	.60	SILTY SAND TO SANDY SILT	SM-ML	.79	11			60	37	.22
14.60	86.31	.15	.17	SAND TO SILTY SAND	SM-SP	.88	10			63	38	.26
14.80	79.83	.63	.79	SILTY SAND TO SANDY SILT	SM-ML	.81	12			62	37	.25
15.00	152.46	.49	.32	SAND TO SILTY SAND	SM-SP	.90	18			81	40	.50+
15.20	123.42	.65	.53	SAND TO SILTY SAND	SM-SP	.91	14			73	39	.50+
15.40	125.12	.94	.75	SAND TO SILTY SAND	SM-SP	.92	14			73	39	.50+
15.60	72.30	.44	.60	SILTY SAND TO SANDY SILT	SM-ML	.86	11			58	36	.21
15.80	58.08	.30	.52	SILTY SAND TO SANDY SILT	SM-ML	.87	9			49	35	.17
16.00	46.70	.74	1.59	SANDY SILT TO CLAYEY SILT	ML-MH	.80	8	3.400	13.5	44	34	.16
16.20	43.64	.36	.82	SANDY SILT TO CLAYEY SILT	ML-MH	.81	8	3.172	13.5	42	34	.15
16.40	41.35	.49	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	.82	7	3.002	13.5	41	34	.15
16.60	36.82	.29	.78	SANDY SILT TO CLAYEY SILT	ML-MH	.83	7	2.666	13.5	36	33	.14
16.80	63.07	.18	.29	SILTY SAND TO SANDY SILT	SM-ML	.92	10			50	35	.18
17.00	112.13	.45	.40	SAND TO SILTY SAND	SM-SP	1.02	13			67	39	.38
17.20	52.82	.32	.61	SILTY SAND TO SANDY SILT	SM-ML	.95	8			44	34	.16



RESULT OF CONE PENETRATION TEST

20S

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

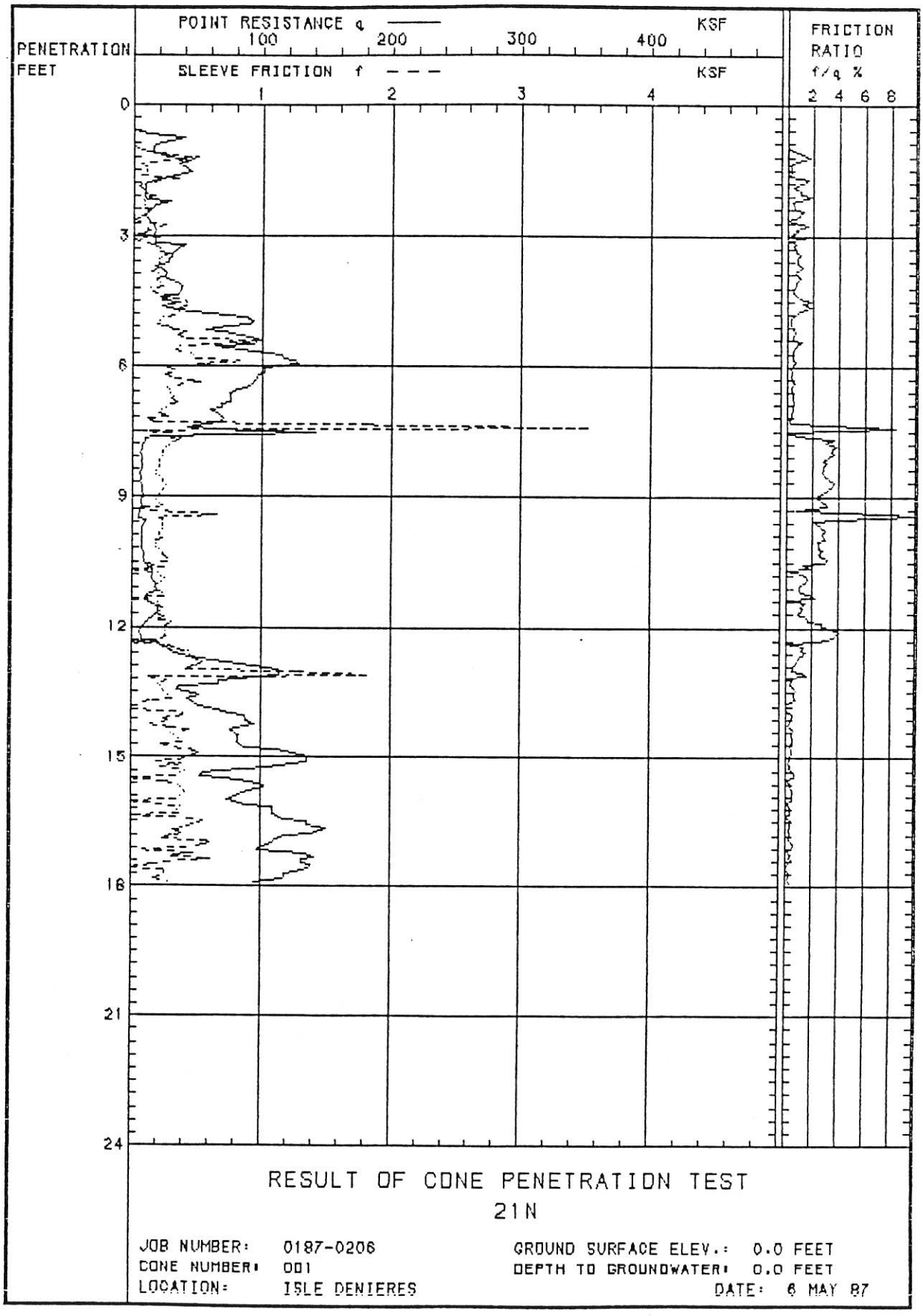
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 2 MAY 87

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

PROJECT NO. : 0187-206
BORING NO. : 205
CONE NO. : 001
DATE : 05/02/87

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	97.15	.62	.64	SAND TO SILTY SAND	SM-SP	.04	11			100+	42	.50+
.80	156.93	.62	.39	SAND TO SILTY SAND	SM-SP	.05	18			100+	42	.50+
1.00	148.57	.00	.00	SAND	SW-SP	.06	14			100+	44	.50+
1.20	97.89	.27	.28	SAND TO SILTY SAND	SM-SP	.07	11			100+	42	.50+
1.40	73.30	.38	.52	SILTY SAND TO SANDY SILT	SM-ML	.08	11			100+	42	.50+
1.60	59.88	.37	.62	SILTY SAND TO SANDY SILT	SM-ML	.09	9			87	40	.50+
1.80	98.14	.23	.24	SAND TO SILTY SAND	SM-SP	.11	11			100+	42	.50+
2.00	103.31	.43	.41	SAND TO SILTY SAND	SM-SP	.12	12			100+	42	.50+
2.20	120.51	.55	.46	SAND TO SILTY SAND	SM-SP	.13	14			100+	42	.50+
2.40	124.46	.36	.29	SAND TO SILTY SAND	SM-SP	.14	14			100+	42	.50+
2.60	133.30	.56	.42	SAND TO SILTY SAND	SM-SP	.16	15			100+	42	.50+
2.80	144.88	.40	.28	SAND TO SILTY SAND	SM-SP	.17	17			100+	42	.50+
3.00	134.85	.50	.37	SAND TO SILTY SAND	SM-SP	.18	16			100+	42	.50+
3.20	130.87	.58	.44	SAND TO SILTY SAND	SM-SP	.19	15			100+	42	.50+
3.40	135.41	.12	.09	SAND TO SILTY SAND	SM-SP	.20	16			100+	42	.50+
3.60	173.65	.40	.23	SAND	SW-SP	.23	16			100+	44	.50+
3.80	188.40	.55	.29	SAND	SW-SP	.25	18			100+	44	.50+
4.00	180.60	.45	.25	SAND	SW-SP	.26	17			100+	44	.50+
4.20	170.98	.48	.28	SAND	SW-SP	.27	16			100+	44	.50+
4.40	139.29	.73	.53	SAND TO SILTY SAND	SM-SP	.26	16			100+	42	.50+
4.60	143.39	.64	.45	SAND TO SILTY SAND	SM-SP	.28	17			100+	42	.50+
4.80	102.61	.33	.32	SAND TO SILTY SAND	SM-SP	.29	12			91	41	.50+
5.00	64.29	.31	.48	SILTY SAND TO SANDY SILT	SM-ML	.27	10			75	39	.50+
5.20	95.67	.42	.43	SAND TO SILTY SAND	SM-SP	.31	11			87	41	.50+
5.40	92.15	.34	.37	SAND TO SILTY SAND	SM-SP	.32	11			85	41	.50+
5.60	87.35	.27	.31	SAND TO SILTY SAND	SM-SP	.34	10			82	40	.50+
5.80	71.63	.29	.41	SILTY SAND TO SANDY SILT	SM-ML	.32	11			76	39	.50+
6.00	53.13	.35	.66	SILTY SAND TO SANDY SILT	SM-ML	.33	8			67	37	.44
6.20	63.16	.34	.54	SILTY SAND TO SANDY SILT	SM-ML	.34	10			71	38	.50+
6.40	63.50	.30	.48	SILTY SAND TO SANDY SILT	SM-ML	.35	10			71	38	.50+
6.60	39.63	.23	.57	SANDY SILT TO CLAYEY SILT	ML-MH	.33	7	2.911	13.5	60	37	.22
6.80	52.11	.64	1.23	SANDY SILT TO CLAYEY SILT	ML-MH	.34	9	3.835	13.5	66	37	.38
7.00	61.34	.21	.35	SILTY SAND TO SANDY SILT	SM-ML	.38	9			68	38	.49
7.20	22.90	.47	2.04	CLAYEY SILT TO SILTY CLAY	MH-CL	.32	5	1.672	13.5			
7.40	31.20	.32	1.03	SANDY SILT TO CLAYEY SILT	ML-MH	.37	5	2.284	13.5	51	35	.17
7.60	49.19	.27	.54	SILTY SAND TO SANDY SILT	SM-ML	.42	7			62	37	.24
7.80	42.99	.52	1.20	SANDY SILT TO CLAYEY SILT	ML-MH	.39	8	3.155	13.5	60	36	.21
8.00	37.13	.32	.85	SANDY SILT TO CLAYEY SILT	ML-MH	.40	7	2.721	13.5	55	36	.18
8.20	34.71	.33	.94	SANDY SILT TO CLAYEY SILT	ML-MH	.41	6	2.541	13.5	52	35	.17
8.40	18.27	.37	2.00	CLAYEY SILT TO SILTY CLAY	MH-CL	.38	4	1.325	13.5			
8.60	8.85	.27	3.07	CLAY	CH	.34	4	.630	13.5			
8.80	6.40	.28	4.44	CLAY	CH	.35	3	.448	13.5			
9.00	4.67	.31	6.55	ORGANIC MATERIAL	OL-OH	.27	2	.326	13.5			
9.20	14.43	.54	3.74	CLAY	CH	.37	6	1.042	13.5			
9.40	29.87	.15	.52	SANDY SILT TO CLAYEY SILT	ML-MH	.47	5	2.178	13.5	45	34	.15

9.60	36.13	.37	1.02	SANDY SILT TO CLAYEY SILT	ML-MH	.48	6	2.640	13.5	49	35	.17
9.80	39.85	.45	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	.49	7	2.915	13.5	52	35	.17
10.00	43.94	.35	.79	SANDY SILT TO CLAYEY SILT	ML-MH	.50	8	3.218	13.5	55	36	.19
10.20	45.94	.20	.43	SILTY SAND TO SANDY SILT	SM-ML	.56	7			53	36	.18
10.40	39.49	.39	1.00	SANDY SILT TO CLAYEY SILT	ML-MH	.52	7	2.886	13.5	50	35	.17
10.60	39.20	.33	.85	SANDY SILT TO CLAYEY SILT	ML-MH	.53	7	2.864	13.5	49	35	.17
10.80	38.10	.28	.73	SANDY SILT TO CLAYEY SILT	ML-MH	.54	7	2.782	13.5	48	35	.16
11.00	54.88	.38	.69	SILTY SAND TO SANDY SILT	SM-ML	.60	8			58	36	.20
11.20	69.40	.51	.73	SILTY SAND TO SANDY SILT	SM-ML	.62	11			64	37	.28
11.40	93.96	.43	.46	SAND TO SILTY SAND	SM-SP	.68	11			70	39	.50+
11.60	71.65	.50	.69	SILTY SAND TO SANDY SILT	SM-ML	.64	11			64	37	.28
11.80	10.86	.24	2.24	SILTY CLAY TO CLAY	CL-CH	.47	3	.769	13.5			
12.00	17.14	.36	2.13	CLAYEY SILT TO SILTY CLAY	MH-CL	.54	4	1.230	13.5			
12.20	59.15	.10	.16	SILTY SAND TO SANDY SILT	SM-ML	.67	9			58	36	.20
12.40	85.10	.44	.52	SAND TO SILTY SAND	SM-SP	.74	10			66	39	.33
12.60	82.17	.37	.45	SAND TO SILTY SAND	SM-SP	.76	9			64	38	.29
12.80	64.12	1.06	1.66	SANDY SILT TO CLAYEY SILT	ML-MH	.64	12	4.702	13.5	61	37	.23
13.00	18.67	.58	3.13	SILTY CLAY TO CLAY	CL-CH	.52	5	1.344	13.5			
13.20	42.27	.36	.84	SANDY SILT TO CLAYEY SILT	ML-MH	.66	8	3.082	13.5	46	35	.16
13.40	50.03	.37	.75	SILTY SAND TO SANDY SILT	SM-ML	.74	7			49	35	.17
13.60	41.51	.42	1.00	SANDY SILT TO CLAYEY SILT	ML-MH	.68	7	3.025	13.5	45	34	.16
13.80	77.86	.43	.55	SILTY SAND TO SANDY SILT	SM-ML	.76	12			63	37	.26
14.00	98.89	.70	.70	SAND TO SILTY SAND	SM-SP	.84	11			67	39	.39
14.20	116.50	.32	.27	SAND TO SILTY SAND	SM-SP	.85	13			73	39	.50+
14.40	126.22	.41	.32	SAND TO SILTY SAND	SM-SP	.86	15			75	40	.50+
14.60	118.19	.45	.38	SAND TO SILTY SAND	SM-SP	.88	14			72	39	.50+
14.80	146.30	.18	.12	SAND TO SILTY SAND	SM-SP	.89	17			80	40	.50+
15.00	131.31	1.07	.82	SAND TO SILTY SAND	SM-SP	.90	15			76	40	.50+
15.20	111.56	.45	.40	SAND TO SILTY SAND	SM-SP	.91	13			69	39	.48
15.40	126.91	.44	.35	SAND TO SILTY SAND	SM-SP	.92	15			74	39	.50+
15.60	105.52	.41	.39	SAND TO SILTY SAND	SM-SP	.94	12			67	39	.38



RESULT OF CONE PENETRATION TEST

21N

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

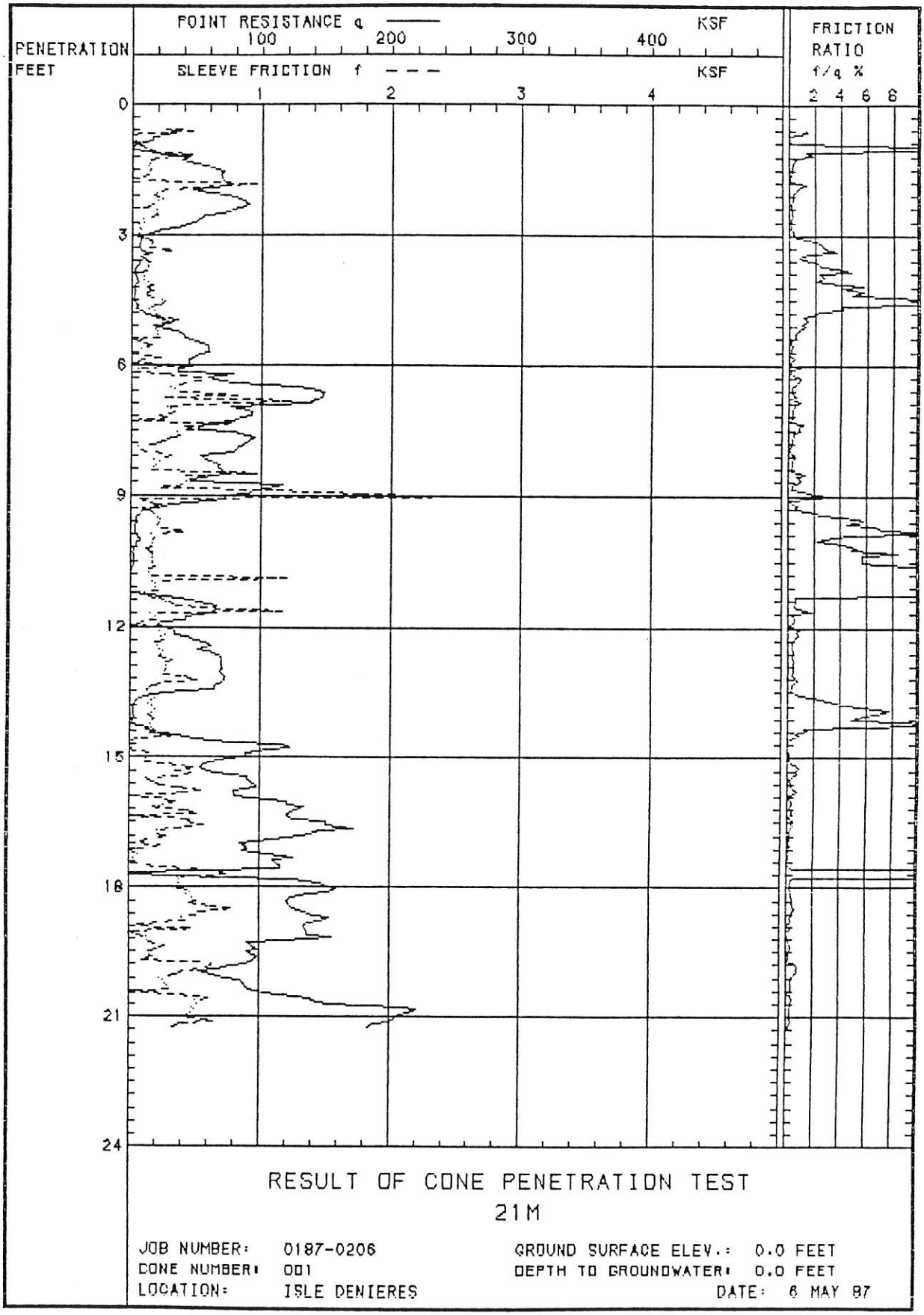
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 21N
CONE NO. : 001
DATE : 05/05/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	3.94	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.02	0	.290	13.5			
.80	34.93	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.04	5			73	38	.50+
1.00	15.25	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.03	3	1.127	13.5			
1.20	24.84	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.06	4	1.836	13.5	65	37	.50+
1.40	37.32	.17	.46	SANDY SILT TO CLAYEY SILT	ML-MH	.07	7	2.759	13.5	72	39	.50+
1.60	39.36	.03	.07	SILTY SAND TO SANDY SILT	SM-ML	.09	6			72	39	.50+
1.80	11.81	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.05	2	.871	13.5			
2.00	9.10	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.06	2	.679	13.5			
2.20	19.65	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.07	4	1.451	13.5			
2.40	12.92	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.07	3	.952	13.5			
2.60	10.57	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.08	2	.777	13.5			
2.80	16.23	.01	.04	SENSITIVE FINE GRAINED	OL-CH	.08	3	1.196	13.5			
3.00	15.50	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.09	3	1.111	13.5			
3.20	28.98	.01	.04	SANDY SILT TO CLAYEY SILT	ML-MH	.16	5	2.135	13.5	62	37	.33
3.40	31.24	.04	.11	SANDY SILT TO CLAYEY SILT	ML-MH	.17	5	2.302	13.5	63	37	.36
3.60	27.55	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.18	5	2.027	13.5	60	36	.25
3.80	23.29	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.19	4	1.711	13.5	55	36	.19
4.00	26.92	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.20	5	1.979	13.5	59	36	.21
4.20	38.00	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.23	6			64	37	.34
4.40	29.31	.03	.09	SANDY SILT TO CLAYEY SILT	ML-MH	.22	5	2.155	13.5	59	36	.22
4.60	29.81	.31	1.04	SANDY SILT TO CLAYEY SILT	ML-MH	.23	5	2.191	13.5	59	36	.22
4.80	59.68	.10	.17	SILTY SAND TO SANDY SILT	SM-ML	.26	9			73	38	.50+
5.00	92.25	.00	.00	SAND TO SILTY SAND	SM-SP	.30	11			86	41	.50+
5.20	63.29	.08	.13	SILTY SAND TO SANDY SILT	SM-ML	.29	10			74	39	.50+
5.40	96.42	.13	.13	SAND TO SILTY SAND	SM-SP	.32	11			86	41	.50+
5.60	74.27	.59	.79	SILTY SAND TO SANDY SILT	SM-ML	.31	11			78	39	.50+
5.80	116.09	.24	.20	SAND TO SILTY SAND	SM-SP	.35	13			92	42	.50+
6.00	114.98	.71	.62	SAND TO SILTY SAND	SM-SP	.36	13			91	41	.50+
6.20	99.64	.04	.04	SAND TO SILTY SAND	SM-SP	.37	11			85	41	.50+
6.40	93.23	.35	.37	SAND TO SILTY SAND	SM-SP	.38	11			82	40	.50+
6.60	78.49	.05	.06	SAND TO SILTY SAND	SM-SP	.40	9			75	40	.50+
6.80	76.25	.08	.11	SAND TO SILTY SAND	SM-SP	.41	9			74	40	.50+
7.00	64.86	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.38	10			70	39	.50+
7.20	69.61	.02	.03	SAND TO SILTY SAND	SM-SP	.43	8			70	39	.50+
7.40	49.76	1.77	3.56	CLAYEY SILT TO SILTY CLAY	MH-CL	.33	11	3.661	13.5			
7.60	79.39	.05	.06	SAND TO SILTY SAND	SM-SP	.46	9			73	39	.50+
7.80	8.87	.03	.37	SENSITIVE FINE GRAINED	OL-CH	.23	2	.640	13.5			
8.00	6.64	.00	.07	SENSITIVE FINE GRAINED	OL-CH	.24	1	.474	13.5			
8.20	7.14	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.25	1	.510	13.5			
8.40	7.14	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.25	1	.519	13.5			
8.60	6.89	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.26	1	.491	13.5			
8.80	7.62	.02	.24	SENSITIVE FINE GRAINED	OL-CH	.26	1	.545	13.5			
9.00	8.97	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.27	2	.645	13.5			
9.20	7.13	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.28	1	.508	13.5			
9.40	5.66	2.59	45.81	ORGANIC MATERIAL	OL-OH	.28	2	.398	13.5			

9.60	10.34	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.29	2	.745	13.5			
9.80	7.75	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.29	1	.552	13.5			
10.00	7.87	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.30	1	.561	13.5			
10.20	7.38	.06	.77	SENSITIVE FINE GRAINED	OL-CH	.31	1	.524	13.5			
10.40	8.98	.03	.32	SENSITIVE FINE GRAINED	OL-CH	.31	2	.642	13.5			
10.60	11.78	.00	.04	SENSITIVE FINE GRAINED	OL-CH	.32	2	.849	13.5			
10.80	15.51	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.32	3	1.175	13.5			
11.00	17.45	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.33	4	1.268	13.5			
11.20	17.02	.04	.25	SENSITIVE FINE GRAINED	OL-CH	.34	4	1.236	13.5			
11.40	12.78	.00	.02	SENSITIVE FINE GRAINED	OL-CH	.34	3	.921	13.5			
11.60	20.17	.01	.07	SENSITIVE FINE GRAINED	OL-CH	.35	4	1.468	13.5			
11.80	14.30	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.35	3	1.033	13.5			
12.00	8.38	.01	.11	SENSITIVE FINE GRAINED	OL-CH	.36	2	.594	13.5			
12.20	7.13	.03	.37	SENSITIVE FINE GRAINED	OL-CH	.37	1	.501	13.5			
12.40	21.39	.02	.10	SANDY SILT TO CLAYEY SILT	ML-MH	.62	4	1.538	13.5	25	32	.12
12.60	34.36	.21	.60	SANDY SILT TO CLAYEY SILT	ML-MH	.63	6	2.499	13.5	42	34	.15
12.80	68.02	.29	.43	SILTY SAND TO SANDY SILT	SM-ML	.70	10			61	37	.23
13.00	113.76	1.84	1.62	SILTY SAND TO SANDY SILT	SM-ML	.71	18			76	39	.50+
13.20	82.44	.02	.02	SAND TO SILTY SAND	SM-SP	.79	9			63	38	.28
13.40	36.18	.38	1.04	SANDY SILT TO CLAYEY SILT	ML-MH	.67	6	2.630	13.5	42	34	.15
13.60	48.30	.08	.16	SILTY SAND TO SANDY SILT	SM-ML	.75	7			47	35	.16
13.80	51.37	.34	.65	SILTY SAND TO SANDY SILT	SM-ML	.76	8			49	35	.17
14.00	82.41	.12	.15	SAND TO SILTY SAND	SM-SP	.84	9			62	38	.25
14.20	91.92	.02	.03	SAND TO SILTY SAND	SM-SP	.85	11			65	39	.31
14.40	78.43	.19	.24	SAND TO SILTY SAND	SM-SP	.86	9			61	38	.23
14.60	82.40	.11	.13	SAND TO SILTY SAND	SM-SP	.88	9			62	38	.24
14.80	99.33	1.14	1.15	SILTY SAND TO SANDY SILT	SM-ML	.81	15			69	38	.43
15.00	137.02	.17	.13	SAND TO SILTY SAND	SM-SP	.90	16			77	40	.50+
15.20	115.08	.08	.07	SAND TO SILTY SAND	SM-SP	.91	13			70	39	.50+
15.40	55.00	.04	.08	SILTY SAND TO SANDY SILT	SM-ML	.85	8			49	35	.17
15.60	97.28	.02	.02	SAND TO SILTY SAND	SM-SP	.94	11			65	39	.31
15.80	88.61	.17	.20	SAND TO SILTY SAND	SM-SP	.95	10			62	38	.25
16.00	77.52	.46	.59	SILTY SAND TO SANDY SILT	SM-ML	.88	12			60	36	.22
16.20	109.70	.14	.13	SAND TO SILTY SAND	SM-SP	.97	13			67	39	.39
16.40	115.55	.09	.08	SAND TO SILTY SAND	SM-SP	.98	13			69	39	.45
16.60	143.70	2.11	1.47	SILTY SAND TO SANDY SILT	SM-ML	.91	22			79	39	.50+
16.80	130.38	.19	.14	SAND TO SILTY SAND	SM-SP	1.01	15			72	39	.50+
17.00	107.28	.32	.29	SAND TO SILTY SAND	SM-SP	1.02	12			66	39	.31
17.20	115.88	.12	.10	SAND TO SILTY SAND	SM-SP	1.03	13			69	39	.41
17.40	131.84	.23	.17	SAND TO SILTY SAND	SM-SP	1.04	15			72	39	.50+
17.60	133.07	.00	.00	SAND TO SILTY SAND	SM-SP	1.06	15			72	39	.50+
17.80	117.84	.00	.00	SAND TO SILTY SAND	SM-SP	1.07	14			68	39	.40



RESULT OF CONE PENETRATION TEST

21M

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

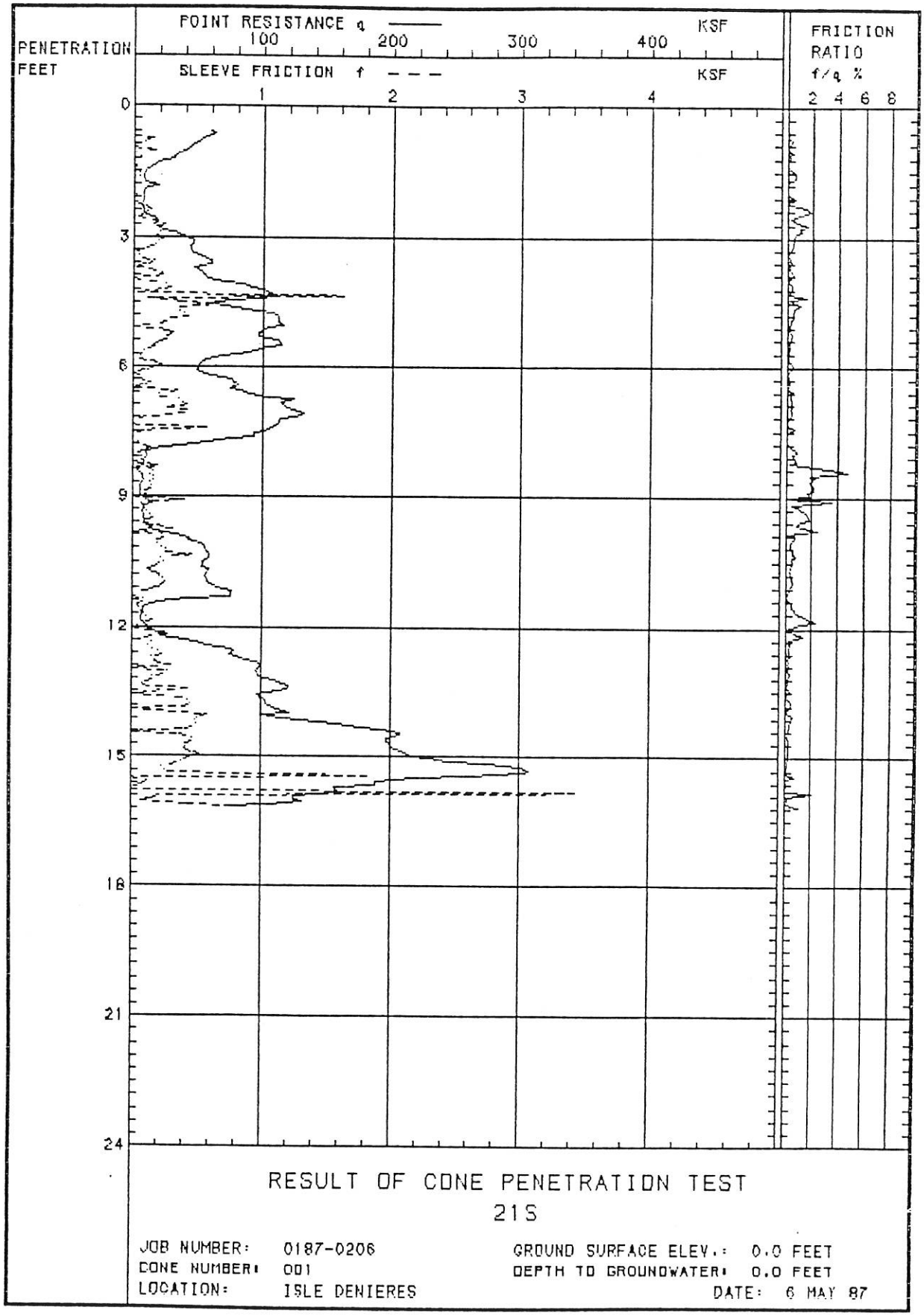
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 21M
CONE NO. : 001
DATE : 05/05/87

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	.40	1.34	SANDY SILT TO CLAYEY SILT	ML-MH	.03	5	2.221	13.5	70	38	.50+
.80	16.23	.01	.07	SENSITIVE FINE GRAINED	OL-CH	.02	3	1.201	13.5			
1.00	.74	.10	14.13	ORGANIC MATERIAL	OL-OH	.03	1	.052	13.5			
1.20	34.92	.41	1.16	SANDY SILT TO CLAYEY SILT	ML-MH	.06	6	2.582	13.5	71	38	.50+
1.40	53.49	.21	.39	SILTY SAND TO SANDY SILT	SM-ML	.08	8			83	40	.50+
1.60	69.86	.12	.17	SILTY SAND TO SANDY SILT	SM-ML	.09	11			95	41	.50+
1.80	72.56	.09	.12	SAND TO SILTY SAND	SM-SP	.11	8			94	42	.50+
2.00	53.48	.78	1.47	SANDY SILT TO CLAYEY SILT	ML-MH	.10	10	3.954	13.5	81	39	.50+
2.20	84.86	.17	.19	SAND TO SILTY SAND	SM-SP	.13	10			99	42	.50+
2.40	80.81	.19	.23	SAND TO SILTY SAND	SM-SP	.14	9			94	42	.50+
2.60	54.86	.17	.31	SILTY SAND TO SANDY SILT	SM-ML	.14	8			78	39	.50+
2.80	39.12	.10	.25	SILTY SAND TO SANDY SILT	SM-ML	.15	6			68	38	.50+
3.00	11.08	.05	.43	SENSITIVE FINE GRAINED	OL-CH	.09	2	.814	13.5			
3.20	6.40	.16	2.45	CLAY	CH	.13	3	.464	13.5			
3.40	10.08	.15	1.53	SENSITIVE FINE GRAINED	OL-CH	.10	2	.739	13.5			
3.60	7.38	.12	1.58	SENSITIVE FINE GRAINED	OL-CH	.11	1	.539	13.5			
3.80	2.95	.11	3.60	CLAY	CH	.15	1	.208	13.5			
4.00	3.93	.09	2.36	SENSITIVE FINE GRAINED	OL-CH	.12	0	.282	13.5			
4.20	2.95	.17	5.63	ORGANIC MATERIAL	OL-OH	.13	1	.209	13.5			
4.40	1.97	.12	6.04	ORGANIC MATERIAL	OL-OH	.13	1	.136	13.5			
4.60	3.19	.20	6.39	ORGANIC MATERIAL	OL-OH	.14	1	.226	13.5			
4.80	9.64	.20	2.12	SILTY CLAY TO CLAY	CL-CH	.19	3	.700	13.5			
5.00	27.53	.32	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.25	5	2.021	13.5	55	36	.19
5.20	30.28	.24	.80	SANDY SILT TO CLAYEY SILT	ML-MH	.26	5	2.224	13.5	57	36	.20
5.40	43.52	.12	.27	SILTY SAND TO SANDY SILT	SM-ML	.30	6			64	37	.31
5.60	59.03	.34	.57	SILTY SAND TO SANDY SILT	SM-ML	.31	9			71	38	.50+
5.80	50.19	.03	.05	SILTY SAND TO SANDY SILT	SM-ML	.32	8			66	37	.39
6.00	45.49	.21	.46	SILTY SAND TO SANDY SILT	SM-ML	.33	7			63	37	.29
6.20	57.37	.15	.25	SILTY SAND TO SANDY SILT	SM-ML	.34	9			69	38	.50+
6.40	74.61	1.95	2.62	SANDY SILT TO CLAYEY SILT	ML-MH	.32	14	5.503	13.5	77	39	.50+
6.60	142.98	.36	.25	SAND TO SILTY SAND	SM-SP	.40	17			93	42	.50+
6.80	142.70	.20	.14	SAND TO SILTY SAND	SM-SP	.41	17			97	42	.50+
7.00	81.07	1.02	1.26	SILTY SAND TO SANDY SILT	SM-ML	.38	12			77	39	.50+
7.20	89.32	.25	.28	SAND TO SILTY SAND	SM-SP	.43	10			78	40	.50+
7.40	59.10	.59	1.00	SILTY SAND TO SANDY SILT	SM-ML	.41	9			66	37	.38
7.60	84.31	.36	.43	SAND TO SILTY SAND	SM-SP	.46	10			75	40	.50+
7.80	88.57	.25	.29	SAND TO SILTY SAND	SM-SP	.47	10			76	40	.50+
8.00	79.94	.09	.11	SAND TO SILTY SAND	SM-SP	.48	9			72	39	.50+
8.20	59.13	.72	1.22	SANDY SILT TO CLAYEY SILT	ML-MH	.41	11	4.350	13.5	66	37	.33
8.40	68.67	.40	.58	SILTY SAND TO SANDY SILT	SM-ML	.46	10			68	38	.47
8.60	54.46	.43	.80	SILTY SAND TO SANDY SILT	SM-ML	.47	8			62	37	.25
8.80	111.12	.58	.52	SAND TO SILTY SAND	SM-SP	.53	13			82	40	.50+
9.00	81.28	2.10	2.59	SANDY SILT TO CLAYEY SILT	ML-MH	.45	15	5.988	13.5	74	38	.50+
9.20	38.47	.20	.52	SANDY SILT TO CLAYEY SILT	ML-MH	.46	7	2.816	13.5	52	35	.18
9.40	8.38	.16	1.97	CLAY	CH	.38	4	.593	13.5			

9.60	4.42	.20	4.63	CLAY	CH	.38	2	.299	13.5			
9.80	3.38	.36	10.69	ORGANIC MATERIAL	OL-OH	.29	1	.229	13.5			
10.00	7.37	.17	2.28	CLAY	CH	.40	3	.516	13.5			
10.20	2.83	.13	4.59	ORGANIC MATERIAL	OL-OH	.31	1	.187	13.5			
10.40	2.95	.17	5.63	ORGANIC MATERIAL	OL-OH	.31	1	.196	13.5			
10.60	2.10	.16	7.73	ORGANIC MATERIAL	OL-OH	.32	1	.132	13.5			
10.80	.00	.16	999.00	ORGANIC MATERIAL	OL-OH	.32	1	-.024	13.5			
11.00	.00	.18	999.00	ORGANIC MATERIAL	OL-OH	.33	1	-.024	13.5			
11.20	.24	.16	67.91	ORGANIC MATERIAL	OL-OH	.34	1	-.007	13.5			
11.40	45.38	.15	.34	SILTY SAND TO SANDY SILT	SM-ML	.63	7			50	35	.17
11.60	65.80	.96	1.46	SANDY SILT TO CLAYEY SILT	ML-MH	.58	12	4.831	13.5	63	37	.27
11.80	42.31	.20	.47	SILTY SAND TO SANDY SILT	SM-ML	.65	6			47	35	.16
12.00	24.11	.23	.95	SANDY SILT TO CLAYEY SILT	ML-MH	.60	4	1.741	13.5	30	32	.13
12.20	38.53	.25	.66	SANDY SILT TO CLAYEY SILT	ML-MH	.61	7	2.809	13.5	45	34	.16
12.40	59.97	.58	.97	SILTY SAND TO SANDY SILT	SM-ML	.68	9			58	36	.20
12.60	63.88	.26	.41	SILTY SAND TO SANDY SILT	SM-ML	.69	10			60	36	.21
12.80	70.35	.26	.37	SILTY SAND TO SANDY SILT	SM-ML	.70	11			62	37	.24
13.00	69.99	.27	.39	SILTY SAND TO SANDY SILT	SM-ML	.71	11			61	37	.23
13.20	72.82	.47	.64	SILTY SAND TO SANDY SILT	SM-ML	.73	11			62	37	.24
13.40	64.94	.18	.27	SILTY SAND TO SANDY SILT	SM-ML	.74	10			59	36	.21
13.60	12.40	.18	1.42	SENSITIVE FINE GRAINED	OL-CH	.41	2	.888	13.5			
13.80	3.20	.16	4.89	ORGANIC MATERIAL	OL-OH	.41	1	.207	13.5			
14.00	2.46	.15	6.30	ORGANIC MATERIAL	OL-OH	.42	1	.151	13.5			
14.20	1.73	.17	9.79	ORGANIC MATERIAL	OL-OH	.43	1	.096	13.5			
14.40	18.20	.22	1.22	CLAYEY SILT TO SILTY CLAY	MH-CL	.65	4	1.300	13.5			
14.60	63.90	.03	.05	SILTY SAND TO SANDY SILT	SM-ML	.80	10			55	36	.19
14.80	115.55	.05	.04	SAND TO SILTY SAND	SM-SP	.89	13			71	39	.50+
15.00	82.77	.17	.20	SAND TO SILTY SAND	SM-SP	.90	9			61	38	.24
15.20	56.00	.40	.71	SILTY SAND TO SANDY SILT	SM-ML	.84	8			49	35	.17
15.40	78.43	.43	.54	SILTY SAND TO SANDY SILT	SM-ML	.85	12			61	37	.23
15.60	94.89	.54	.57	SAND TO SILTY SAND	SM-SP	.94	11			64	38	.27
15.80	80.12	.25	.32	SAND TO SILTY SAND	SM-SP	.95	9			59	38	.21
16.00	113.97	.32	.28	SAND TO SILTY SAND	SM-SP	.96	13			69	39	.46
16.20	131.06	.26	.20	SAND TO SILTY SAND	SM-SP	.97	15			73	39	.50+
16.40	123.43	.23	.19	SAND TO SILTY SAND	SM-SP	.98	14			71	39	.50+
16.60	161.82	.42	.26	SAND TO SILTY SAND	SM-SP	1.00	19			81	40	.50+
16.80	135.92	.33	.24	SAND TO SILTY SAND	SM-SP	1.01	16			74	40	.50+
17.00	86.92	.12	.13	SAND TO SILTY SAND	SM-SP	1.02	10			60	38	.22
17.20	96.66	.30	.31	SAND TO SILTY SAND	SM-SP	1.03	11			63	38	.26
17.40	111.63	.04	.03	SAND TO SILTY SAND	SM-SP	1.04	13			66	39	.36
17.60	59.55	.59	.99	SILTY SAND TO SANDY SILT	SM-ML	.97	9			47	35	.17
17.80	98.69	.36	.36	SAND TO SILTY SAND	SM-SP	1.07	11			62	38	.23
18.00	155.98	1.09	.70	SAND TO SILTY SAND	SM-SP	1.08	18			78	40	.50+
18.20	131.91	.46	.35	SAND TO SILTY SAND	SM-SP	1.09	15			71	39	.50+
18.40	122.84	.56	.45	SAND TO SILTY SAND	SM-SP	1.10	14			68	39	.43
18.60	138.13	.59	.43	SAND TO SILTY SAND	SM-SP	1.12	16			72	39	.50+
18.80	142.06	.45	.32	SAND TO SILTY SAND	SM-SP	1.13	17			73	39	.50+
19.00	136.43	.12	.09	SAND TO SILTY SAND	SM-SP	1.14	16			71	39	.50+
19.20	138.50	.19	.13	SAND TO SILTY SAND	SM-SP	1.15	16			71	39	.50+
19.40	96.86	.34	.35	SAND TO SILTY SAND	SM-SP	1.16	11			60	38	.23
19.60	96.85	.21	.22	SAND TO SILTY SAND	SM-SP	1.18	11			60	38	.23
19.80	84.78	.38	.44	SAND TO SILTY SAND	SM-SP	1.19	10			54	37	.19
20.00	58.45	.43	.74	SILTY SAND TO SANDY SILT	SM-ML	1.10	9			43	34	.16
20.20	86.80	.21	.24	SAND TO SILTY SAND	SM-SP	1.21	10			55	37	.19
20.40	97.84	.33	.34	SAND TO SILTY SAND	SM-SP	1.22	11			60	38	.22
20.60	140.20	.56	.40	SAND TO SILTY SAND	SM-SP	1.24	16			70	39	.50+
20.80	215.81	.48	.22	SAND	SW-SP	1.35	20			83	43	.50+
21.00	206.05	.53	.26	SAND	SW-SP	1.37	19			81	43	.50+
21.20	186.01	.36	.20	SAND	SW-SP	1.38	17			78	42	.37



RESULT OF CONE PENETRATION TEST

21S

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

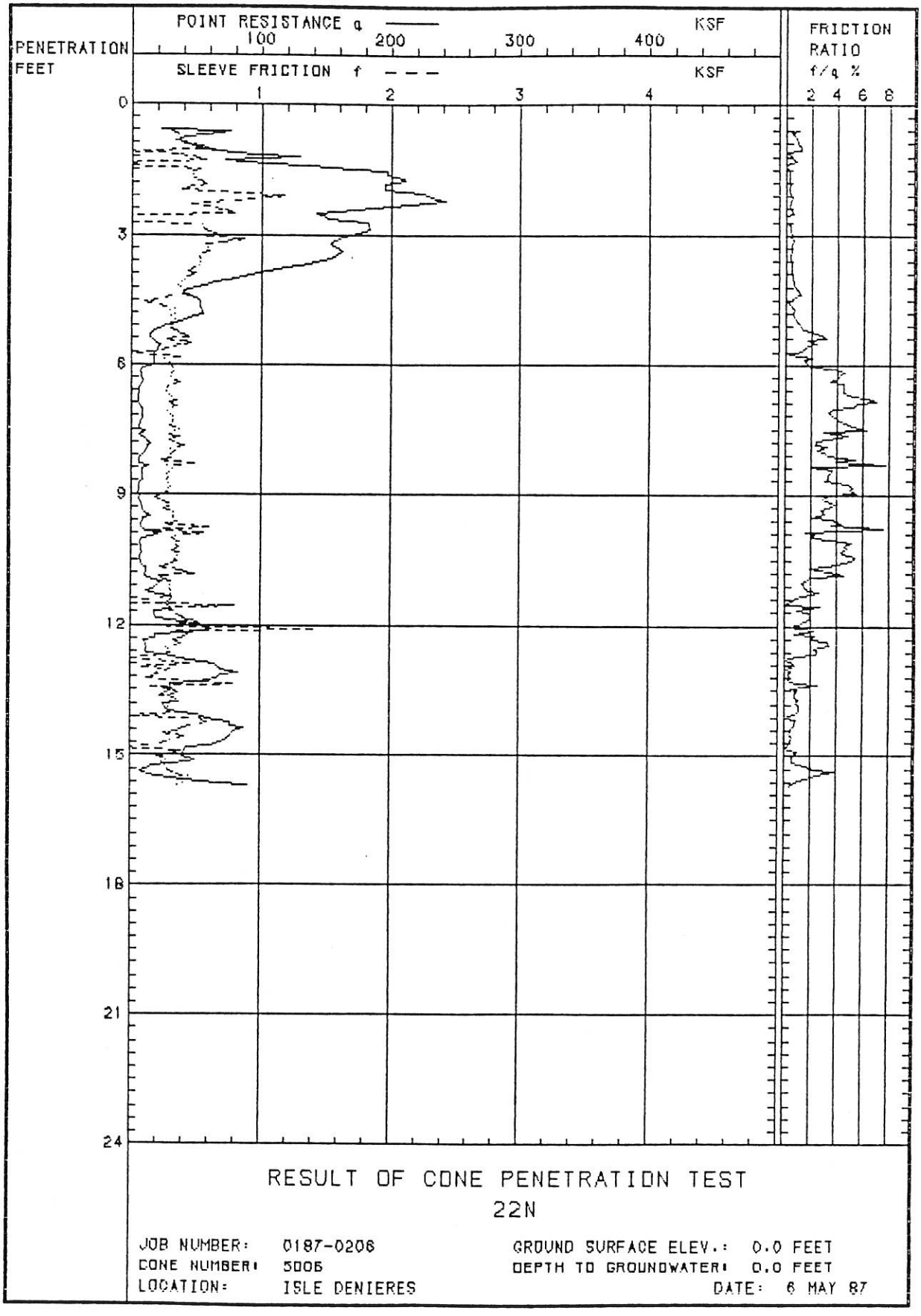
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 21S
CONE NO. : 001
DATE : 05/05/87

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	60.75	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.03	9			98	42	.50+
.80	51.16	.12	.23	SILTY SAND TO SANDY SILT	SM-ML	.04	8			86	40	.50+
1.00	41.20	.01	.01	SILTY SAND TO SANDY SILT	SM-ML	.05	6			76	39	.50+
1.20	30.99	.05	.16	SANDY SILT TO CLAYEY SILT	ML-MH	.06	5	2.291	13.5	69	38	.50+
1.40	14.27	.01	.09	SENSITIVE FINE GRAINED	OL-CH	.04	3	1.054	13.5			
1.60	7.87	.07	.86	SENSITIVE FINE GRAINED	OL-CH	.05	1	.580	13.5			
1.80	14.26	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.05	3	1.052	13.5			
2.00	7.38	.01	.12	SENSITIVE FINE GRAINED	OL-CH	.06	1	.542	13.5			
2.20	7.13	.01	.12	SENSITIVE FINE GRAINED	OL-CH	.07	1	.524	13.5			
2.40	7.38	.12	1.64	SENSITIVE FINE GRAINED	OL-CH	.07	1	.541	13.5			
2.60	16.97	.06	.37	SENSITIVE FINE GRAINED	OL-CH	.08	4	1.251	13.5			
2.80	20.04	.24	1.17	CLAYEY SILT TO SILTY CLAY	MH-CL	.13	4	1.475	13.5			
3.00	41.06	.20	.49	SILTY SAND TO SANDY SILT	SM-ML	.17	6			69	38	.50+
3.20	44.77	.16	.35	SILTY SAND TO SANDY SILT	SM-ML	.18	7			70	39	.50+
3.40	48.44	.02	.03	SILTY SAND TO SANDY SILT	SM-ML	.19	7			72	38	.50+
3.60	60.02	.15	.25	SILTY SAND TO SANDY SILT	SM-ML	.20	9			77	39	.50+
3.80	51.89	.21	.41	SILTY SAND TO SANDY SILT	SM-ML	.21	8			72	38	.50+
4.00	63.67	.04	.06	SILTY SAND TO SANDY SILT	SM-ML	.22	10			78	39	.50+
4.20	95.66	.22	.23	SAND TO SILTY SAND	SM-SP	.25	11			81	41	.50+
4.40	103.11	.88	.85	SAND TO SILTY SAND	SM-SP	.26	12			93	42	.50+
4.60	70.79	.55	.78	SILTY SAND TO SANDY SILT	SM-ML	.25	11			80	39	.50+
4.80	110.18	.42	.38	SAND TO SILTY SAND	SM-SP	.29	13			94	42	.50+
5.00	113.87	1.30	1.14	SILTY SAND TO SANDY SILT	SM-ML	.27	18			97	42	.50+
5.20	98.58	.29	.30	SAND TO SILTY SAND	SM-SP	.31	11			88	41	.50+
5.40	111.91	.26	.24	SAND TO SILTY SAND	SM-SP	.32	13			92	42	.50+
5.60	99.41	.10	.10	SAND TO SILTY SAND	SM-SP	.34	11			87	41	.50+
5.80	62.77	.10	.16	SILTY SAND TO SANDY SILT	SM-ML	.32	10			72	38	.50+
6.00	50.80	.19	.37	SILTY SAND TO SANDY SILT	SM-ML	.33	8			66	37	.38
6.20	58.15	.06	.11	SILTY SAND TO SANDY SILT	SM-ML	.34	9			69	38	.50+
6.40	79.43	.11	.14	SAND TO SILTY SAND	SM-SP	.38	9			76	40	.50+
6.60	86.36	.22	.26	SAND TO SILTY SAND	SM-SP	.40	10			79	40	.50+
6.80	119.59	.18	.15	SAND TO SILTY SAND	SM-SP	.41	14			96	41	.50+
7.00	121.73	.42	.34	SAND TO SILTY SAND	SM-SP	.42	14			90	41	.50+
7.20	119.85	.19	.16	SAND TO SILTY SAND	SM-SP	.43	14			88	41	.50+
7.40	109.73	.02	.02	SAND TO SILTY SAND	SM-SP	.44	13			85	41	.50+
7.60	93.47	.00	.00	SAND TO SILTY SAND	SM-SP	.46	11			79	40	.50+
7.80	47.34	.09	.19	SILTY SAND TO SANDY SILT	SM-ML	.43	7			61	37	.22
8.00	10.09	.06	.63	SENSITIVE FINE GRAINED	OL-CH	.24	2	.729	13.5			
8.20	8.61	.04	.50	SENSITIVE FINE GRAINED	OL-CH	.25	2	.620	13.5			
8.40	3.44	.14	4.00	CLAY	CH	.34	1	.239	13.5			
8.60	8.11	.16	2.00	CLAY	CH	.34	3	.575	13.5			
8.80	6.40	.14	2.18	CLAY	CH	.35	3	.448	13.5			
9.00	6.39	.06	.87	SENSITIVE FINE GRAINED	OL-CH	.27	1	.453	13.5			
9.20	11.85	.09	.77	SENSITIVE FINE GRAINED	OL-CH	.28	2	.857	13.5			
9.40	7.93	.13	1.69	SENSITIVE FINE GRAINED	OL-CH	.28	1	.586	13.5			

9.60	9.96	.10	1.04	SENSITIVE FINE GRAINED	OL-CH	.29	2	.716	13.5			
9.80	18.13	.29	1.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.44	4	1.310	13.5			
10.00	43.78	.22	.50	SILTY SAND TO SANDY SILT	SM-ML	.55	6			52	35	.18
10.20	56.08	.26	.47	SILTY SAND TO SANDY SILT	SM-ML	.56	8			60	36	.22
10.40	59.52	.34	.57	SILTY SAND TO SANDY SILT	SM-ML	.57	9			61	37	.23
10.60	53.87	.23	.42	SILTY SAND TO SANDY SILT	SM-ML	.58	8			58	36	.20
10.80	56.83	.19	.33	SILTY SAND TO SANDY SILT	SM-ML	.59	9			60	36	.21
11.00	59.01	.25	.42	SILTY SAND TO SANDY SILT	SM-ML	.60	9			60	35	.22
11.20	76.50	.10	.13	SAND TO SILTY SAND	SM-SP	.67	9			65	38	.30
11.40	32.17	.09	.27	SANDY SILT TO CLAYEY SILT	ML-MH	.57	6	2.341	13.5	42	34	.15
11.60	8.60	.06	.65	SENSITIVE FINE GRAINED	OL-CH	.35	2	.612	13.5			
11.80	6.89	.14	1.97	SENSITIVE FINE GRAINED	OL-CH	.35	1	.484	13.5			
12.00	11.56	.06	.49	SENSITIVE FINE GRAINED	OL-CH	.36	2	.830	13.5			
12.20	21.65	.20	.92	SANDY SILT TO CLAYEY SILT	ML-MH	.61	4	1.558	13.5	26	32	.12
12.40	53.30	.10	.18	SILTY SAND TO SANDY SILT	SM-ML	.68	8			53	35	.18
12.60	76.90	.19	.25	SAND TO SILTY SAND	SM-SP	.76	9			63	38	.26
12.80	91.66	.18	.19	SAND TO SILTY SAND	SM-SP	.77	10			67	39	.38
13.00	96.67	.13	.14	SAND TO SILTY SAND	SM-SP	.78	11			68	39	.43
13.20	103.19	.16	.15	SAND TO SILTY SAND	SM-SP	.79	12			70	39	.50+
13.40	121.03	.05	.04	SAND TO SILTY SAND	SM-SP	.80	14			75	40	.50+
13.60	98.66	.53	.53	SAND TO SILTY SAND	SM-SP	.82	11			68	39	.42
13.80	104.51	.45	.43	SAND TO SILTY SAND	SM-SP	.83	12			69	39	.43
14.00	111.64	.37	.33	SAND TO SILTY SAND	SM-SP	.84	13			71	39	.50+
14.20	144.09	.50	.35	SAND TO SILTY SAND	SM-SP	.85	17			80	40	.50+
14.40	200.31	.20	.10	SAND	SW-SP	.94	19			89	43	.50+
14.60	196.77	.47	.24	SAND	SW-SP	.95	18			88	43	.50+
14.80	202.86	.39	.19	SAND	SW-SP	.96	19			89	43	.50+
15.00	223.06	.51	.23	SAND	SW-SP	.97	21			92	44	.50+
15.20	287.75	.30	.10	SAND	SW-SP	.99	27			100+	44	.50+
15.40	282.35	.22	.08	SAND	SW-SP	1.00	27			100+	44	.50+
15.60	188.90	.10	.05	SAND	SW-SP	1.01	18			85	43	.50+
15.80	159.58	1.67	1.05	SAND TO SILTY SAND	SM-SP	.95	19			81	40	.50+
16.00	128.81	.13	.10	SAND TO SILTY SAND	SM-SP	.96	15			73	39	.50+



RESULT OF CONE PENETRATION TEST

22N

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

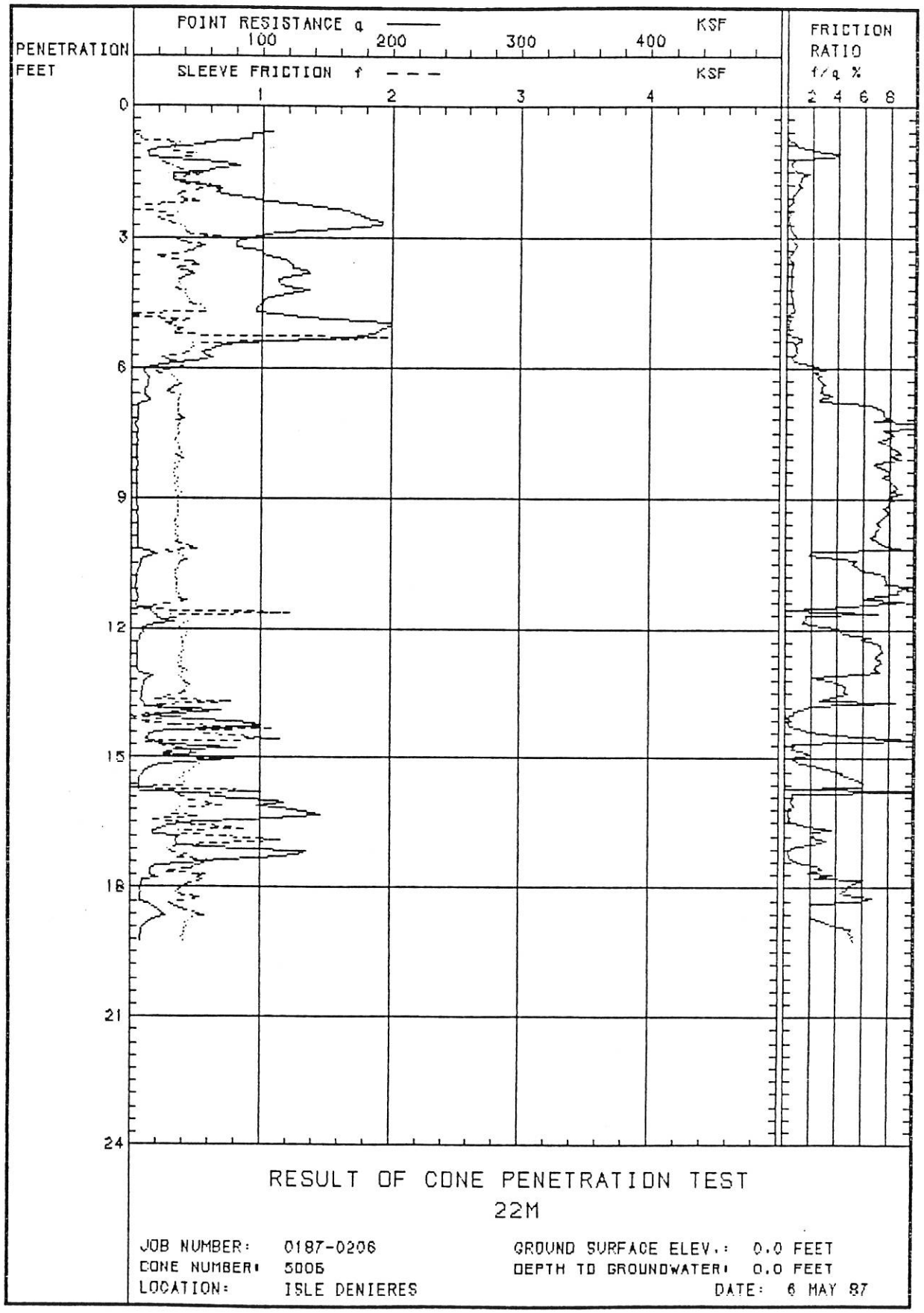
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 22 N
CONE NO. : 5006
DATE : 05/04/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	49.96	.26	.53	SILTY SAND TO SANDY SILT	SM-ML	.03	7			87	40	.50+
.80	38.07	.40	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	.04	7	2.817	13.5	75	39	.50+
1.00	51.52	.59	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	.05	9	3.812	13.5	85	40	.50+
1.20	112.82	.52	.46	SAND TO SILTY SAND	SM-SP	.07	13			100+	42	.50+
1.40	120.02	.09	.08	SAND TO SILTY SAND	SM-SP	.08	14			100+	42	.50+
1.60	196.99	.47	.24	SAND	SW-SP	.10	18			100+	44	.50+
1.80	203.64	.48	.24	SAND	SW-SP	.12	19			100+	44	.50+
2.00	209.87	.58	.28	SAND	SW-SP	.13	20			100+	44	.50+
2.20	238.10	3.87	1.62	SILTY SAND TO SANDY SILT	SM-ML	.12	38			100+	42	.50+
2.40	180.51	.64	.35	SAND	SW-SP	.16	17			100+	44	.50+
2.60	149.89	.20	.13	SAND TO SILTY SAND	SM-SP	.16	17			100+	42	.50+
2.80	183.12	.41	.23	SAND	SW-SP	.18	17			100+	44	.50+
3.00	169.64	.61	.36	SAND TO SILTY SAND	SM-SP	.18	20			100+	42	.50+
3.20	154.20	3.66	2.38	SANDY SILT TO CLAYEY SILT	ML-MH	.16	29	11.410	13.5	100+	42	.50+
3.40	161.44	.58	.36	SAND TO SILTY SAND	SM-SP	.20	19			100+	42	.50+
3.60	147.77	.39	.26	SAND TO SILTY SAND	SM-SP	.22	17			100+	42	.50+
3.80	112.21	.46	.41	SAND TO SILTY SAND	SM-SP	.23	13			100+	42	.50+
4.00	80.24	.42	.53	SILTY SAND TO SANDY SILT	SM-ML	.22	12			86	40	.50+
4.20	53.64	.36	.68	SILTY SAND TO SANDY SILT	SM-ML	.23	8			72	38	.50+
4.40	42.54	.43	1.02	SANDY SILT TO CLAYEY SILT	ML-MH	.22	8	3.134	13.5	66	37	.50+
4.60	52.65	.16	.30	SILTY SAND TO SANDY SILT	SM-ML	.25	8			70	38	.50+
4.80	54.98	.33	.61	SILTY SAND TO SANDY SILT	SM-ML	.26	8			71	38	.50+
5.00	37.44	.34	.90	SANDY SILT TO CLAYEY SILT	ML-MH	.25	7	2.755	13.5	62	37	.29
5.20	20.10	.32	1.60	CLAYEY SILT TO SILTY CLAY	MH-CL	.23	4	1.471	13.5			
5.40	15.41	.45	2.90	SILTY CLAY TO CLAY	CL-CH	.22	4	1.125	13.5			
5.60	21.41	.37	1.73	CLAYEY SILT TO SILTY CLAY	MH-CL	.25	5	1.567	13.5			
5.80	17.93	.09	.52	SENSITIVE FINE GRAINED	OL-CH	.17	4	1.315	13.5			
6.00	16.63	.30	1.80	CLAYEY SILT TO SILTY CLAY	MH-CL	.27	3	1.212	13.5			
6.20	7.23	.32	4.46	CLAY	CH	.25	3	.517	13.5			
6.40	8.97	.35	3.94	CLAY	CH	.26	4	.646	13.5			
6.60	6.10	.30	4.87	CLAY	CH	.26	2	.432	13.5			
6.80	5.02	.33	6.62	ORGANIC MATERIAL	OL-OH	.20	2	.357	13.5			
7.00	7.52	.29	3.91	CLAY	CH	.28	3	.536	13.5			
7.20	8.37	.31	3.69	CLAY	CH	.29	4	.598	13.5			
7.40	6.34	.31	4.87	CLAY	CH	.30	3	.448	13.5			
7.60	8.57	.43	5.01	CLAY	CH	.30	4	.613	13.5			
7.80	13.37	.31	2.29	SILTY CLAY TO CLAY	CL-CH	.31	4	.967	13.5			
8.00	11.60	.36	3.11	CLAY	CH	.32	5	.835	13.5			
8.20	5.86	.27	4.63	CLAY	CH	.33	2	.409	13.5			
8.40	11.15	.30	2.67	CLAY	CH	.34	5	.801	13.5			
8.60	8.54	.28	3.26	CLAY	CH	.34	4	.607	13.5			
8.80	5.86	.29	5.02	CLAY	CH	.35	2	.408	13.5			
9.00	6.09	.26	4.21	CLAY	CH	.36	2	.424	13.5			
9.20	7.29	.28	3.91	CLAY	CH	.37	3	.513	13.5			
9.40	9.67	.29	2.96	CLAY	CH	.38	4	.689	13.5			

9.60	8.73	.31	3.60	CLAY	CH	.38	4	.618	13.5			
9.80	9.66	.39	4.06	CLAY	CH	.39	4	.686	13.5			
10.00	12.49	.33	2.63	SILTY CLAY TO CLAY	CL-CH	.40	3	.895	13.5			
10.20	7.65	.36	4.72	CLAY	CH	.41	3	.536	13.5			
10.40	7.54	.30	3.94	CLAY	CH	.42	3	.528	13.5			
10.60	8.30	.30	3.66	CLAY	CH	.42	3	.583	13.5			
10.80	11.12	.43	3.83	CLAY	CH	.43	5	.792	13.5			
11.00	20.62	.40	1.94	CLAYEY SILT TO SILTY CLAY	MH-CL	.49	4	1.491	13.5			
11.20	14.63	.35	2.36	SILTY CLAY TO CLAY	CL-CH	.45	4	1.050	13.5			
11.40	31.56	.42	1.34	SANDY SILT TO CLAYEY SILT	ML-MH	.57	6	2.296	13.5	42	34	.14
11.60	30.64	.21	.67	SANDY SILT TO CLAYEY SILT	ML-MH	.58	5	2.226	13.5	41	34	.14
11.80	19.23	.38	1.97	CLAYEY SILT TO SILTY CLAY	MH-CL	.53	4	1.385	13.5			
12.00	52.83	.75	1.42	SANDY SILT TO CLAYEY SILT	ML-MH	.60	10	3.869	13.5	56	36	.19
12.20	32.14	.39	1.22	SANDY SILT TO CLAYEY SILT	ML-MH	.61	6	2.335	13.5	41	34	.14
12.40	10.99	.32	2.94	CLAY	CH	.50	5	.777	13.5			
12.60	12.31	.29	2.33	SILTY CLAY TO CLAY	CL-CH	.50	3	.874	13.5			
12.80	42.73	.11	.25	SILTY SAND TO SANDY SILT	SM-ML	.70	6			45	34	.16
13.00	69.01	.35	.51	SILTY SAND TO SANDY SILT	SM-ML	.71	11			61	37	.23
13.20	68.41	.17	.25	SILTY SAND TO SANDY SILT	SM-ML	.73	10			60	37	.22
13.40	31.02	.68	2.18	CLAYEY SILT TO SILTY CLAY	MH-CL	.60	7	2.253	13.5			
13.60	33.30	.32	.95	SANDY SILT TO CLAYEY SILT	ML-MH	.68	6	2.416	13.5	39	34	.14
13.80	31.44	.24	.78	SANDY SILT TO CLAYEY SILT	ML-MH	.69	6	2.278	13.5	36	33	.14
14.00	35.02	.30	.86	SANDY SILT TO CLAYEY SILT	ML-MH	.70	6	2.543	13.5	40	34	.14
14.20	67.23	.56	.83	SILTY SAND TO SANDY SILT	SM-ML	.78	10			58	36	.21
14.40	83.94	.32	.38	SAND TO SILTY SAND	SM-SP	.86	10			62	38	.25
14.60	75.46	.37	.49	SILTY SAND TO SANDY SILT	SM-ML	.80	12			61	37	.23
14.80	52.67	.09	.18	SILTY SAND TO SANDY SILT	SM-ML	.81	8			48	35	.17
15.00	40.16	.25	.63	SANDY SILT TO CLAYEY SILT	ML-MH	.75	7	2.919	13.5	42	34	.15
15.20	31.28	.21	.66	SANDY SILT TO CLAYEY SILT	ML-MH	.76	5	2.261	13.5	33	33	.13
15.40	10.77	.36	3.33	CLAY	CH	.62	5	.752	13.5			
15.60	54.56	.44	.80	SILTY SAND TO SANDY SILT	SM-ML	.86	8			47	35	.17



RESULT OF CONE PENETRATION TEST

22M

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

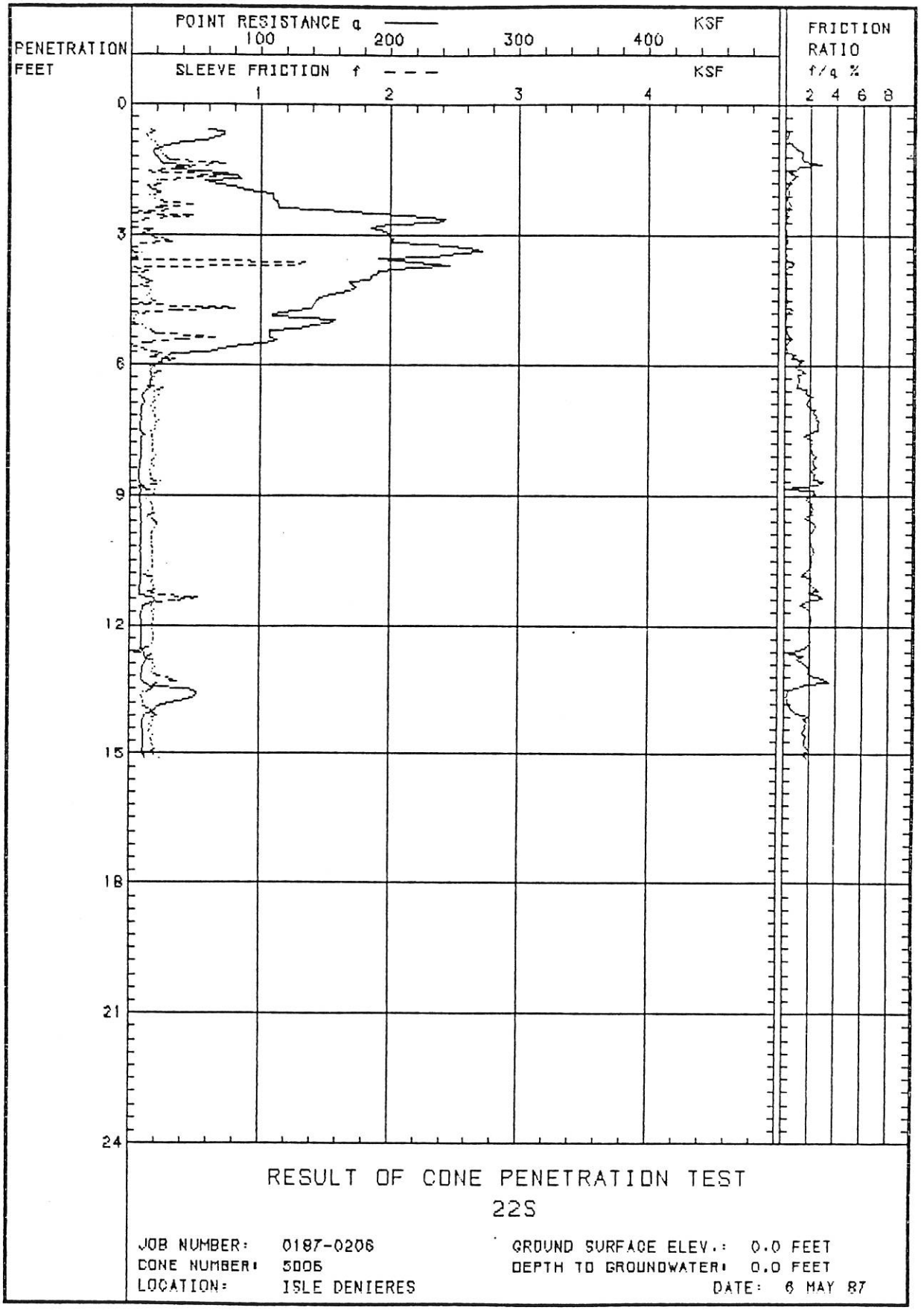
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 22M
CONE NO. : 5006
DATE : 05/04/87

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	99.93	.00	.00	SAND TO SILTY SAND	SM-SP	.04	11			100+	42	.50+
.80	73.52	.21	.29	SILTY SAND TO SANDY SILT	SM-ML	.04	11			100+	42	.50+
1.00	15.90	.35	2.17	SILTY CLAY TO CLAY	CL-CH	.04	5	1.175	13.5			
1.20	20.19	.32	1.61	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	4	1.492	13.5			
1.40	74.00	.30	.40	SILTY SAND TO SANDY SILT	SM-ML	.08	11			100+	42	.50+
1.60	31.29	.34	1.10	SANDY SILT TO CLAYEY SILT	ML-MH	.08	5	2.312	13.5	68	38	.50+
1.80	54.26	.48	.89	SILTY SAND TO SANDY SILT	SM-ML	.10	8			81	39	.50+
2.00	71.35	.58	.81	SILTY SAND TO SANDY SILT	SM-ML	.11	11			93	41	.50+
2.20	112.34	.38	.34	SAND TO SILTY SAND	SM-SP	.13	13			100+	42	.50+
2.40	167.70	.17	.10	SAND	SW-SP	.16	16			100+	44	.50+
2.60	185.85	.24	.13	SAND	SW-SP	.17	17			100+	44	.50+
2.80	159.28	1.34	.84	SAND TO SILTY SAND	SM-SP	.17	19			100+	42	.50+
3.00	91.80	.40	.43	SAND TO SILTY SAND	SM-SP	.18	10			96	42	.50+
3.20	79.85	.87	1.10	SILTY SAND TO SANDY SILT	SM-ML	.18	12			90	41	.50+
3.40	102.38	.26	.25	SAND TO SILTY SAND	SM-SP	.20	12			99	42	.50+
3.60	121.92	.48	.40	SAND TO SILTY SAND	SM-SP	.22	14			100+	42	.50+
3.80	135.78	.38	.28	SAND TO SILTY SAND	SM-SP	.23	16			100+	42	.50+
4.00	113.49	.36	.32	SAND TO SILTY SAND	SM-SP	.24	13			100+	42	.50+
4.20	131.40	.31	.24	SAND TO SILTY SAND	SM-SP	.25	15			100+	42	.50+
4.40	104.55	.46	.44	SAND TO SILTY SAND	SM-SP	.26	12			94	42	.50+
4.60	97.91	.54	.55	SAND TO SILTY SAND	SM-SP	.28	11			90	41	.50+
4.80	122.21	.00	.00	SAND TO SILTY SAND	SM-SP	.29	14			99	42	.50+
5.00	200.10	.35	.18	SAND	SW-SP	.32	19			100+	44	.50+
5.20	188.69	.35	.19	SAND	SW-SP	.34	18			100+	44	.50+
5.40	98.50	.88	.89	SILTY SAND TO SANDY SILT	SM-ML	.30	15			89	40	.50+
5.60	59.33	.46	.77	SILTY SAND TO SANDY SILT	SM-ML	.31	9			71	38	.50+
5.80	55.58	.28	.50	SILTY SAND TO SANDY SILT	SM-ML	.32	8			68	38	.50+
6.00	12.94	.42	3.27	CLAY	CH	.24	6	.941	13.5			
6.20	12.63	.41	3.27	CLAY	CH	.25	6	.917	13.5			
6.40	12.52	.41	3.31	CLAY	CH	.26	5	.909	13.5			
6.60	10.46	.35	3.39	CLAY	CH	.26	5	.755	13.5			
6.80	9.84	.36	3.63	CLAY	CH	.27	4	.709	13.5			
7.00	4.78	.36	7.48	ORGANIC MATERIAL	OL-OH	.21	2	.339	13.5			
7.20	5.02	.38	7.47	ORGANIC MATERIAL	OL-OH	.22	2	.356	13.5			
7.40	3.94	.36	9.13	ORGANIC MATERIAL	OL-OH	.22	1	.275	13.5			
7.60	4.42	.35	7.98	ORGANIC MATERIAL	OL-OH	.23	2	.311	13.5			
7.80	4.54	.37	8.04	ORGANIC MATERIAL	OL-OH	.23	2	.319	13.5			
8.00	4.30	.36	8.45	ORGANIC MATERIAL	OL-OH	.24	2	.301	13.5			
8.20	5.14	.33	6.35	ORGANIC MATERIAL	OL-OH	.25	2	.363	13.5			
8.40	4.19	.33	7.90	ORGANIC MATERIAL	OL-OH	.25	2	.291	13.5			
8.60	4.42	.24	5.40	ORGANIC MATERIAL	OL-OH	.26	2	.309	13.5			
8.80	4.24	.34	8.13	ORGANIC MATERIAL	OL-OH	.26	2	.295	13.5			
9.00	4.42	.36	8.24	ORGANIC MATERIAL	OL-OH	.27	2	.308	13.5			
9.20	4.66	.36	7.70	ORGANIC MATERIAL	OL-OH	.28	2	.325	13.5			
9.40	4.66	.36	7.69	ORGANIC MATERIAL	OL-OH	.28	2	.324	13.5			

9.60	4.78	.31	6.45	ORGANIC MATERIAL	OL-OH	.29	2	.333	13.5			
9.80	5.02	.35	6.95	ORGANIC MATERIAL	OL-OH	.29	2	.350	13.5			
10.00	4.90	.35	7.15	ORGANIC MATERIAL	OL-OH	.30	2	.341	13.5			
10.20	9.09	.47	5.21	CLAY	CH	.41	4	.643	13.5			
10.40	10.80	.42	3.90	CLAY	CH	.42	5	.769	13.5			
10.60	6.46	.33	5.05	CLAY	CH	.42	3	.447	13.5			
10.80	4.54	.35	7.65	ORGANIC MATERIAL	OL-OH	.32	2	.312	13.5			
11.00	4.07	.35	8.57	ORGANIC MATERIAL	OL-OH	.33	1	.277	13.5			
11.20	4.59	.36	7.80	ORGANIC MATERIAL	OL-OH	.34	2	.315	13.5			
11.40	4.66	.37	7.90	ORGANIC MATERIAL	OL-OH	.34	2	.320	13.5			
11.60	15.70	.08	.49	SENSITIVE FINE GRAINED	OL-CH	.35	3	1.137	13.5			
11.80	26.66	.38	1.41	SANDY SILT TO CLAYEY SILT	ML-MH	.59	5	1.931	13.5	35	33	.13
12.00	9.44	.39	4.14	CLAY	CH	.48	4	.664	13.5			
12.20	6.57	.41	6.19	CLAY	CH	.49	3	.451	13.5			
12.40	5.50	.40	7.30	ORGANIC MATERIAL	OL-OH	.37	2	.380	13.5			
12.60	5.50	.34	6.22	ORGANIC MATERIAL	OL-OH	.38	2	.379	13.5			
12.80	5.26	.38	7.19	ORGANIC MATERIAL	OL-OH	.38	2	.361	13.5			
13.00	6.45	.50	7.71	ORGANIC MATERIAL	OL-OH	.39	3	.449	13.5			
13.20	12.23	.40	3.30	CLAY	CH	.53	5	.867	13.5			
13.40	9.32	.42	4.47	CLAY	CH	.54	4	.651	13.5			
13.60	7.84	.52	6.61	CLAY	CH	.54	3	.540	13.5			
13.80	11.00	.20	1.85	SILTY CLAY TO CLAY	CL-CH	.55	3	.774	13.5			
14.00	25.08	.28	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	.70	4	1.806	13.5	27	32	.12
14.20	91.73	.22	.24	SAND TO SILTY SAND	SM-SP	.85	10			65	39	.31
14.40	22.15	.55	2.48	CLAYEY SILT TO SILTY CLAY	MH-CL	.65	5	1.593	13.5			
14.60	16.33	.93	5.67	CLAY	CH	.58	7	1.166	13.5			
14.80	59.92	.54	.89	SILTY SAND TO SANDY SILT	SM-ML	.81	9			52	35	.18
15.00	66.49	.61	.92	SILTY SAND TO SANDY SILT	SM-ML	.82	10			56	36	.20
15.20	19.58	.51	2.62	SILTY CLAY TO CLAY	CL-CH	.61	6	1.405	13.5			
15.40	8.87	.41	4.67	CLAY	CH	.62	4	.611	13.5			
15.60	6.93	.41	5.96	CLAY	CH	.62	3	.467	13.5			
15.80	33.91	.69	2.04	CLAYEY SILT TO SILTY CLAY	MH-CL	.71	8	2.459	13.5			
16.00	114.90	.41	.36	SAND TO SILTY SAND	SM-SP	.96	13			69	39	.47
16.20	124.55	.38	.31	SAND TO SILTY SAND	SM-SP	.97	14			72	39	.50+
16.40	109.21	.35	.32	SAND TO SILTY SAND	SM-SP	.98	13			67	39	.38
16.60	27.21	.50	1.83	CLAYEY SILT TO SILTY CLAY	MH-CL	.75	6	1.960	13.5			
16.80	27.84	.42	1.50	SANDY SILT TO CLAYEY SILT	ML-MH	.84	5	2.000	13.5	26	32	.12
17.00	36.63	.58	1.58	SANDY SILT TO CLAYEY SILT	ML-MH	.85	7	2.650	13.5	35	33	.14
17.20	132.76	.37	.28	SAND TO SILTY SAND	SM-SP	1.03	15			72	39	.50+
17.40	57.39	.46	.81	SILTY SAND TO SANDY SILT	SM-ML	.96	9			46	35	.16
17.60	15.45	.46	2.98	SILTY CLAY TO CLAY	CL-CH	.70	4	1.092	13.5			
17.80	15.95	.54	3.38	CLAY	CH	.71	7	1.128	13.5			
18.00	7.95	.37	4.71	CLAY	CH	.72	3	.535	13.5			
18.20	7.89	.45	5.72	CLAY	CH	.73	3	.530	13.5			
18.40	15.92	.33	2.05	SILTY CLAY TO CLAY	CL-CH	.74	5	1.125	13.5			
18.60	25.94	.53	2.05	CLAYEY SILT TO SILTY CLAY	MH-CL	.84	6	1.860	13.5			
18.80	13.89	.37	2.63	SILTY CLAY TO CLAY	CL-CH	.75	4	.973	13.5			
19.00	8.24	.42	5.07	CLAY	CH	.76	3	.554	13.5			
19.20	7.65	.40	5.26	CLAY	CH	.77	3	.510	13.5			



RESULT OF CONE PENETRATION TEST

22S

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

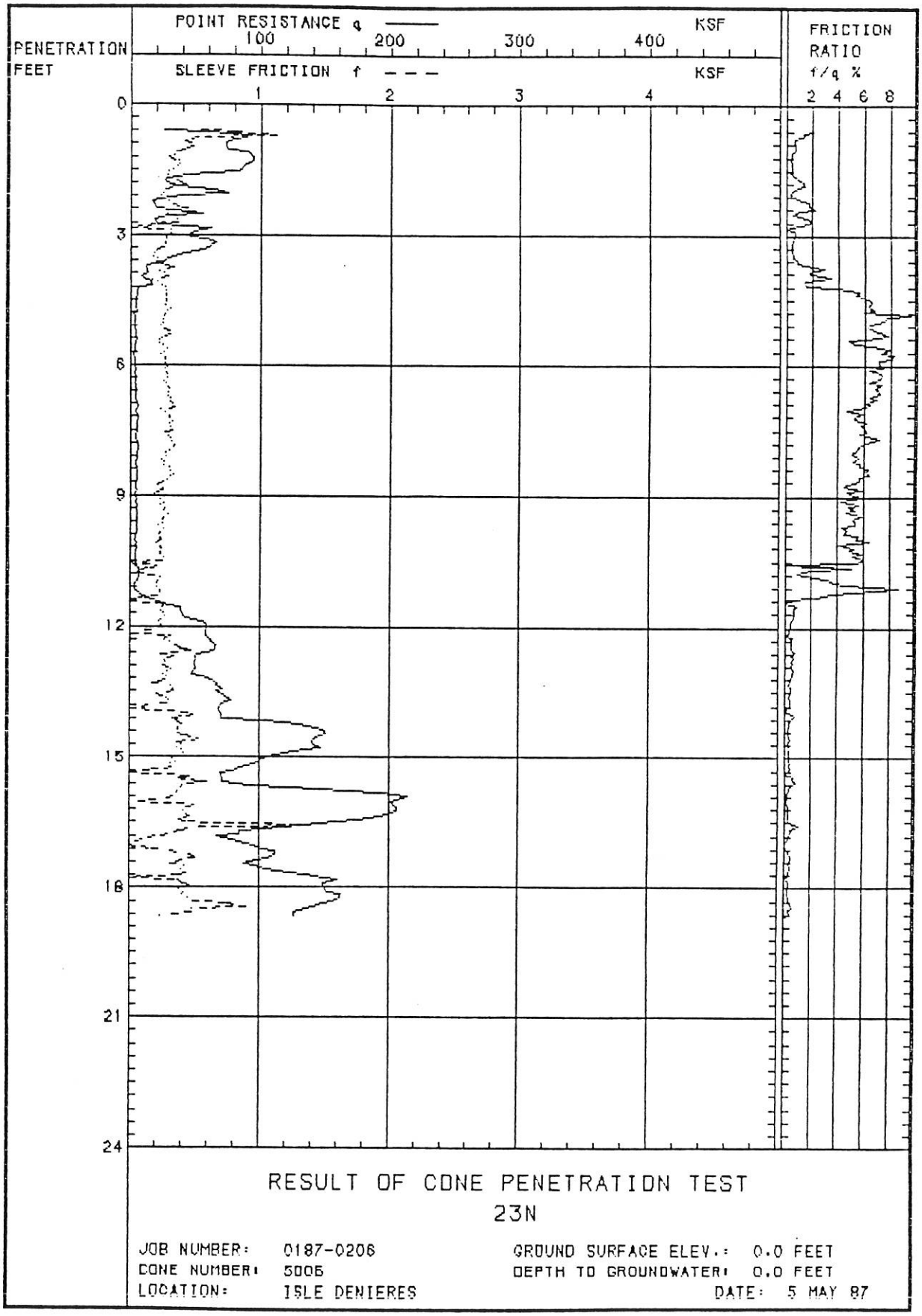
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 6 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 22S
CONE NO. : 5006
DATE : 05/04/87

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	65.74	.17	.26	SILTY SAND TO SANDY SILT	SM-ML	.03	10			100+	42	.50+
.80	62.28	.14	.22	SILTY SAND TO SANDY SILT	SM-ML	.04	9			97	42	.50+
1.00	23.49	.22	.92	SANDY SILT TO CLAYEY SILT	ML-MH	.05	4	1.736	13.5	64	37	.50+
1.20	19.38	.25	1.29	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	4	1.431	13.5			
1.40	34.89	.68	1.94	SANDY SILT TO CLAYEY SILT	ML-MH	.07	6	2.579	13.5	71	38	.50+
1.60	68.47	.34	.50	SILTY SAND TO SANDY SILT	SM-ML	.09	10			94	41	.50+
1.80	62.33	.63	1.02	SILTY SAND TO SANDY SILT	SM-ML	.10	9			88	40	.50+
2.00	98.95	.20	.20	SAND TO SILTY SAND	SM-SP	.12	11			100+	42	.50+
2.20	110.80	.24	.22	SAND TO SILTY SAND	SM-SP	.13	13			100+	42	.50+
2.40	130.48	.24	.18	SAND TO SILTY SAND	SM-SP	.14	15			100+	42	.50+
2.60	227.42	.31	.13	SAND	SW-SP	.17	21			100+	44	.50+
2.80	192.35	.09	.05	SAND	SW-SP	.18	18			100+	44	.50+
3.00	199.14	.13	.06	SAND	SW-SP	.20	19			100+	44	.50+
3.20	215.40	.24	.11	SAND	SW-SP	.21	20			100+	44	.50+
3.40	262.29	.04	.02	SAND	SW-SP	.22	25			100+	44	.50+
3.60	204.70	1.23	.60	SAND TO SILTY SAND	SM-SP	.22	24			100+	42	.50+
3.80	204.83	.08	.04	SAND	SW-SP	.25	19			100+	44	.50+
4.00	185.04	.51	.28	SAND	SW-SP	.26	17			100+	44	.50+
4.20	172.24	.14	.08	SAND	SW-SP	.27	16			100+	44	.50+
4.40	152.42	.14	.09	SAND TO SILTY SAND	SM-SP	.26	18			100+	42	.50+
4.60	141.71	.34	.24	SAND TO SILTY SAND	SM-SP	.28	16			100+	42	.50+
4.80	117.79	.20	.17	SAND TO SILTY SAND	SM-SP	.29	14			98	42	.50+
5.00	155.53	2.59	1.66	SILTY SAND TO SANDY SILT	SM-ML	.27	24			100+	42	.50+
5.20	118.18	.16	.14	SAND TO SILTY SAND	SM-SP	.31	14			96	42	.50+
5.40	110.19	.41	.38	SAND TO SILTY SAND	SM-SP	.32	13			92	41	.50+
5.60	78.54	.10	.12	SAND TO SILTY SAND	SM-SP	.34	9			78	40	.50+
5.80	29.96	.23	.78	SANDY SILT TO CLAYEY SILT	ML-MH	.29	5	2.197	13.5	55	36	.18
6.00	21.30	.45	2.10	CLAYEY SILT TO SILTY CLAY	MH-CL	.27	5	1.558	13.5			
6.20	15.48	.22	1.44	CLAYEY SILT TO SILTY CLAY	MH-CL	.28	3	1.126	13.5			
6.40	15.24	.19	1.25	CLAYEY SILT TO SILTY CLAY	MH-CL	.29	3	1.108	13.5			
6.60	13.52	.22	1.64	SILTY CLAY TO CLAY	CL-CH	.26	4	.982	13.5			
6.80	10.27	.19	1.83	SILTY CLAY TO CLAY	CL-CH	.27	3	.741	13.5			
7.00	8.13	.16	2.01	CLAY	CH	.28	3	.581	13.5			
7.20	7.89	.19	2.43	CLAY	CH	.29	3	.563	13.5			
7.40	7.65	.19	2.48	CLAY	CH	.30	3	.545	13.5			
7.60	9.42	.16	1.73	SENSITIVE FINE GRAINED	OL-CH	.23	2	.681	13.5			
7.80	8.25	.18	2.22	CLAY	CH	.31	3	.588	13.5			
8.00	8.37	.18	2.12	CLAY	CH	.32	4	.596	13.5			
8.20	7.89	.18	2.24	CLAY	CH	.33	3	.560	13.5			
8.40	7.29	.17	2.29	CLAY	CH	.34	3	.515	13.5			
8.60	6.93	.16	2.28	CLAY	CH	.34	3	.488	13.5			
8.80	8.13	.11	1.33	SENSITIVE FINE GRAINED	OL-CH	.26	1	.583	13.5			
9.00	7.53	.17	2.20	CLAY	CH	.36	3	.531	13.5			
9.20	7.76	.16	2.11	CLAY	CH	.37	3	.548	13.5			
9.40	8.43	.17	1.99	CLAY	CH	.38	4	.596	13.5			

9.60	8.96	.19	2.12	CLAY	CH	.38	4	.636	13.5			
9.80	8.37	.18	2.12	CLAY	CH	.39	4	.591	13.5			
10.00	8.37	.17	2.02	CLAY	CH	.40	4	.590	13.5			
10.20	8.01	.17	2.18	CLAY	CH	.41	3	.563	13.5			
10.40	8.19	.18	2.19	CLAY	CH	.42	3	.576	13.5			
10.60	8.61	.18	2.07	CLAY	CH	.42	4	.606	13.5			
10.80	8.73	.05	.62	SENSITIVE FINE GRAINED	OL-CH	.32	2	.623	13.5			
11.00	8.85	.18	1.99	SILTY CLAY TO CLAY	CL-CH	.44	2	.623	13.5			
11.20	7.53	.17	2.31	CLAY	CH	.45	3	.525	13.5			
11.40	18.86	.44	2.34	SILTY CLAY TO CLAY	CL-CH	.46	6	1.363	13.5			
11.60	10.04	.18	1.77	SILTY CLAY TO CLAY	CL-CH	.46	3	.709	13.5			
11.80	8.85	.22	2.43	CLAY	CH	.47	4	.620	13.5			
12.00	9.08	.18	1.95	SILTY CLAY TO CLAY	CL-CH	.48	2	.637	13.5			
12.20	9.32	.17	1.78	SENSITIVE FINE GRAINED	OL-CH	.37	2	.664	13.5			
12.40	9.15	.18	1.96	SILTY CLAY TO CLAY	CL-CH	.50	2	.641	13.5			
12.60	10.62	.11	1.05	SENSITIVE FINE GRAINED	OL-CH	.38	2	.759	13.5			
12.80	13.14	.15	1.18	SENSITIVE FINE GRAINED	OL-CH	.38	3	.945	13.5			
13.00	10.04	.19	1.92	SILTY CLAY TO CLAY	CL-CH	.52	3	.705	13.5			
13.20	9.56	.28	2.96	CLAY	CH	.53	4	.669	13.5			
13.40	15.15	.22	1.47	CLAYEY SILT TO SILTY CLAY	MH-CL	.60	3	1.078	13.5			
13.60	51.52	.10	.20	SILTY SAND TO SANDY SILT	SM-ML	.75	8			49	35	.17
13.80	35.35	.11	.31	SANDY SILT TO CLAYEY SILT	ML-MH	.69	6	2.568	13.5	40	34	.14
14.00	18.97	.15	.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.63	4	1.358	13.5			
14.20	11.01	.18	1.63	SENSITIVE FINE GRAINED	OL-CH	.43	2	.784	13.5			
14.40	10.64	.17	1.57	SENSITIVE FINE GRAINED	OL-CH	.43	2	.756	13.5			



RESULT OF CONE PENETRATION TEST

23N

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

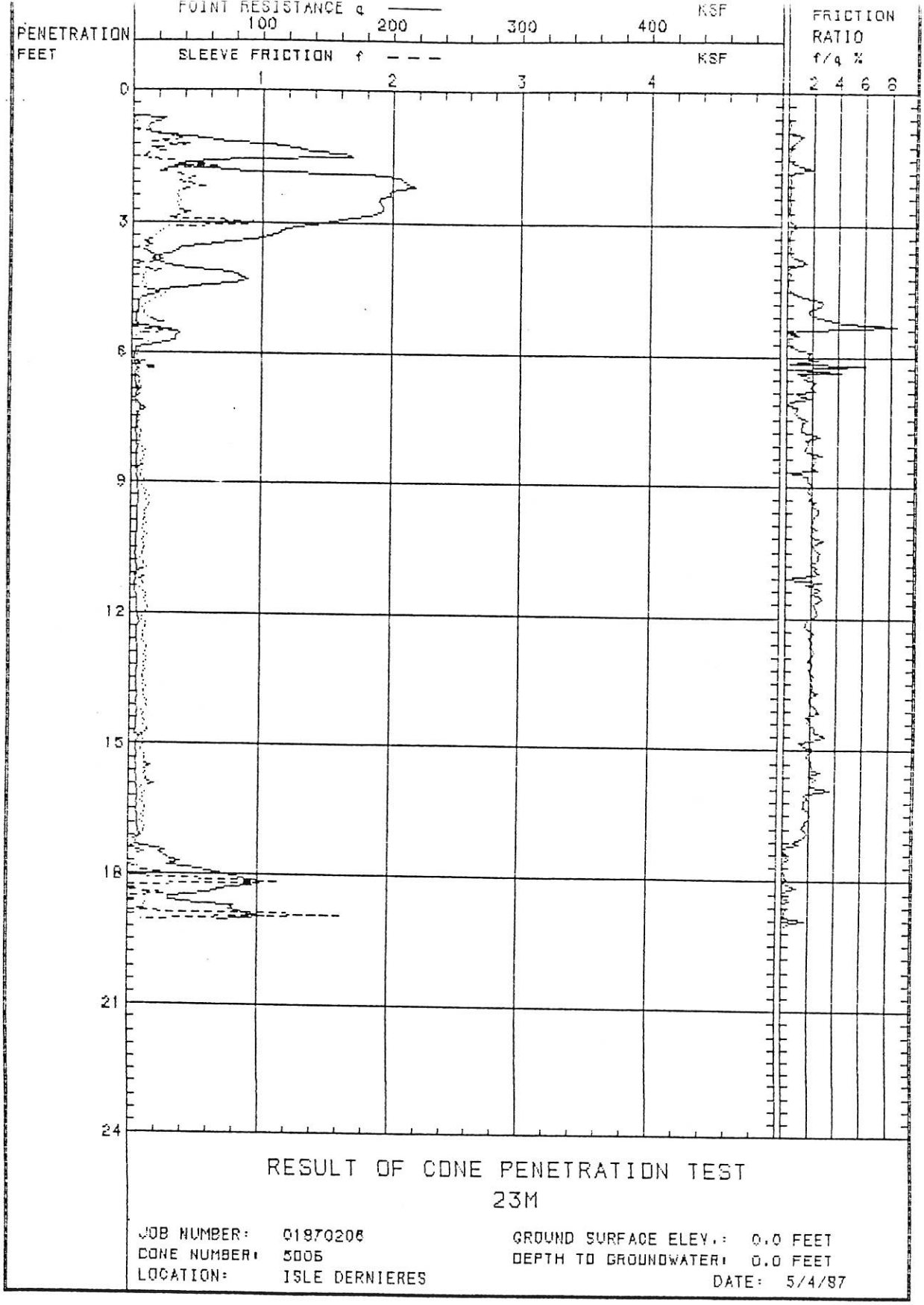
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 23N
CONE NO. : 5006
DATE : 05/04/87

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	42.55	.69	1.62	SANDY SILT TO CLAYEY SILT	ML-MH	.03	8	3.150	13.5	79	39	.50+
.80	81.17	.47	.58	SILTY SAND TO SANDY SILT	SM-ML	.04	12			100+	42	.50+
1.00	74.11	1.04	1.40	SILTY SAND TO SANDY SILT	SM-ML	.05	11			100+	42	.50+
1.20	93.29	.31	.33	SAND TO SILTY SAND	SM-SP	.07	11			100+	42	.50+
1.40	87.98	.37	.42	SAND TO SILTY SAND	SM-SP	.08	10			100+	42	.50+
1.60	62.91	.29	.47	SILTY SAND TO SANDY SILT	SM-ML	.09	10			90	41	.50+
1.80	28.82	.36	1.26	SANDY SILT TO CLAYEY SILT	ML-MH	.09	5	2.128	13.5	65	37	.50+
2.00	70.03	.21	.30	SILTY SAND TO SANDY SILT	SM-ML	.11	11			92	41	.50+
2.20	20.04	.27	1.36	CLAYEY SILT TO SILTY CLAY	MH-CL	.10	4	1.477	13.5			
2.40	26.52	.32	1.19	SANDY SILT TO CLAYEY SILT	ML-MH	.12	5	1.955	13.5	62	37	.45
2.60	23.80	.30	1.28	CLAYEY SILT TO SILTY CLAY	MH-CL	.12	5	1.755	13.5			
2.80	42.00	.08	.18	SILTY SAND TO SANDY SILT	SM-ML	.15	6			70	38	.50+
3.00	45.90	.29	.64	SILTY SAND TO SANDY SILT	SM-ML	.17	7			71	38	.50+
3.20	64.67	.26	.41	SILTY SAND TO SANDY SILT	SM-ML	.18	10			81	39	.50+
3.40	45.86	.26	.57	SILTY SAND TO SANDY SILT	SM-ML	.19	7			70	38	.50+
3.60	27.38	.26	.93	SANDY SILT TO CLAYEY SILT	ML-MH	.18	5	2.015	13.5	60	36	.24
3.80	12.07	.22	1.83	SILTY CLAY TO CLAY	CL-CH	.15	3	.883	13.5			
4.00	10.45	.27	2.60	CLAY	CH	.16	5	.762	13.5			
4.20	11.86	.26	2.16	SILTY CLAY TO CLAY	CL-CH	.17	3	.866	13.5			
4.40	5.02	.28	5.59	CLAY	CH	.18	2	.359	13.5			
4.60	4.30	.27	6.37	ORGANIC MATERIAL	OL-OH	.14	2	.309	13.5			
4.80	3.83	.28	7.25	ORGANIC MATERIAL	OL-OH	.14	1	.273	13.5			
5.00	3.58	.25	6.93	ORGANIC MATERIAL	OL-OH	.15	1	.254	13.5			
5.20	4.06	.28	6.92	ORGANIC MATERIAL	OL-OH	.16	1	.289	13.5			
5.40	4.42	.24	5.35	ORGANIC MATERIAL	OL-OH	.16	2	.315	13.5			
5.60	3.71	.27	7.19	ORGANIC MATERIAL	OL-OH	.17	1	.262	13.5			
5.80	3.11	.25	8.17	ORGANIC MATERIAL	OL-OH	.17	1	.217	13.5			
6.00	3.83	.28	7.21	ORGANIC MATERIAL	OL-OH	.18	1	.270	13.5			
6.20	3.83	.24	6.15	ORGANIC MATERIAL	OL-OH	.19	1	.270	13.5			
6.40	3.95	.27	6.83	ORGANIC MATERIAL	OL-OH	.19	1	.278	13.5			
6.60	4.18	.30	7.10	ORGANIC MATERIAL	OL-OH	.20	2	.295	13.5			
6.80	4.78	.31	6.50	ORGANIC MATERIAL	OL-OH	.20	2	.339	13.5			
7.00	5.62	.29	5.16	CLAY	CH	.28	2	.396	13.5			
7.20	5.74	.30	5.24	CLAY	CH	.29	2	.404	13.5			
7.40	5.26	.31	5.83	CLAY	CH	.30	2	.368	13.5			
7.60	4.54	.22	4.86	CLAY	CH	.30	2	.314	13.5			
7.80	5.73	.34	5.85	CLAY	CH	.31	2	.402	13.5			
8.00	5.62	.29	5.17	CLAY	CH	.32	2	.393	13.5			
8.20	4.66	.25	5.39	CLAY	CH	.33	2	.321	13.5			
8.40	4.90	.31	6.24	ORGANIC MATERIAL	OL-OH	.25	2	.344	13.5			
8.60	5.26	.24	4.57	CLAY	CH	.34	2	.364	13.5			
8.80	4.48	.25	5.60	ORGANIC MATERIAL	OL-OH	.26	2	.313	13.5			
9.00	3.59	.20	5.57	ORGANIC MATERIAL	OL-OH	.27	1	.246	13.5			
9.20	4.66	.26	5.56	ORGANIC MATERIAL	OL-OH	.28	2	.325	13.5			

9.40	5.26	.27	5.19	CLAY	CH	.38	2	.362	13.5			
9.60	4.78	.21	4.42	CLAY	CH	.38	2	.326	13.5			
9.80	5.38	.25	4.60	CLAY	CH	.39	2	.370	13.5			
10.00	4.07	.24	5.91	ORGANIC MATERIAL	OL-OH	.30	1	.279	13.5			
10.20	4.78	.24	5.05	CLAY	CH	.41	2	.324	13.5			
10.40	4.42	.25	5.58	ORGANIC MATERIAL	OL-OH	.31	2	.305	13.5			
10.60	4.06	.10	2.50	CLAY	CH	.42	1	.270	13.5			
10.80	6.81	.10	1.50	SENSITIVE FINE GRAINED	OL-CH	.32	1	.491	13.5			
11.00	5.21	.19	3.56	CLAY	CH	.44	2	.353	13.5			
11.20	5.42	.23	4.16	CLAY	CH	.45	2	.368	13.5			
11.40	17.75	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.34	4	1.289	13.5			
11.60	39.68	.50	1.26	SANDY SILT TO CLAYEY SILT	ML-MH	.58	7	2.897	13.5	48	35	.16
11.80	44.65	.26	.57	SILTY SAND TO SANDY SILT	SM-ML	.65	7			48	35	.17
12.00	59.53	.30	.50	SILTY SAND TO SANDY SILT	SM-ML	.66	9			58	36	.20
12.20	58.33	.28	.48	SILTY SAND TO SANDY SILT	SM-ML	.67	9			57	35	.20
12.40	64.99	.34	.53	SILTY SAND TO SANDY SILT	SM-ML	.68	10			60	37	.22
12.60	59.29	.36	.61	SILTY SAND TO SANDY SILT	SM-ML	.69	9			57	36	.20
12.80	50.81	.27	.53	SILTY SAND TO SANDY SILT	SM-ML	.70	8			50	35	.17
13.00	50.22	.89	1.78	SANDY SILT TO CLAYEY SILT	ML-MH	.65	9	3.672	13.5	52	35	.18
13.20	59.75	.27	.46	SILTY SAND TO SANDY SILT	SM-ML	.73	9			56	36	.19
13.40	69.17	.28	.40	SILTY SAND TO SANDY SILT	SM-ML	.74	11			60	37	.22
13.60	73.80	.30	.41	SILTY SAND TO SANDY SILT	SM-ML	.75	11			62	37	.24
13.80	70.66	.32	.45	SILTY SAND TO SANDY SILT	SM-ML	.76	11			60	37	.22
14.00	70.48	.46	.65	SILTY SAND TO SANDY SILT	SM-ML	.77	11			60	36	.22
14.20	118.07	.38	.32	SAND TO SILTY SAND	SM-SP	.85	14			73	39	.50+
14.40	150.94	.36	.24	SAND TO SILTY SAND	SM-SP	.86	18			81	40	.50+
14.60	141.77	.45	.32	SAND TO SILTY SAND	SM-SP	.88	16			79	40	.50+
14.80	141.54	.29	.20	SAND TO SILTY SAND	SM-SP	.89	16			79	40	.50+
15.00	104.67	.38	.36	SAND TO SILTY SAND	SM-SP	.90	12			68	39	.40
15.20	90.83	.32	.36	SAND TO SILTY SAND	SM-SP	.91	10			63	38	.27
15.40	70.33	.09	.13	SAND TO SILTY SAND	SM-SP	.92	8			55	37	.19
15.60	82.70	.51	.61	SILTY SAND TO SANDY SILT	SM-ML	.86	13			62	37	.25
15.80	181.04	.44	.24	SAND	SW-SP	1.03	17			83	43	.50+
16.00	203.79	.29	.14	SAND	SW-SP	1.04	19			87	43	.50+
16.20	205.84	.43	.21	SAND	SW-SP	1.05	19			87	43	.50+
16.40	184.70	.47	.25	SAND	SW-SP	1.07	17			83	43	.50+
16.60	119.18	.94	.79	SAND TO SILTY SAND	SM-SP	1.00	14			70	39	.49
16.80	76.83	.15	.20	SAND TO SILTY SAND	SM-SP	1.01	9			56	37	.20
17.00	93.34	.04	.05	SAND TO SILTY SAND	SM-SP	1.02	11			62	38	.25
17.20	112.84	.69	.61	SAND TO SILTY SAND	SM-SP	1.03	13			67	39	.33
17.40	93.73	.53	.57	SAND TO SILTY SAND	SM-SP	1.04	11			61	38	.24
17.60	114.40	.42	.37	SAND TO SILTY SAND	SM-SP	1.06	13			67	39	.38
17.80	155.48	.18	.12	SAND	SW-SP	1.16	14			75	42	.30
18.00	150.23	.46	.30	SAND TO SILTY SAND	SM-SP	1.08	17			76	40	.50+
18.20	163.53	2.63	1.61	SILTY SAND TO SANDY SILT	SM-ML	1.00	26			81	39	.50+
18.40	145.99	.80	.55	SAND TO SILTY SAND	SM-SP	1.10	17			74	40	.50+
18.60	126.71	.37	.29	SAND TO SILTY SAND	SM-SP	1.12	15			69	39	.46



RESULT OF CONE PENETRATION TEST

23M

JOB NUMBER: 01870206
CONE NUMBER: 5006
LOCATION: ISLE DERNIERES

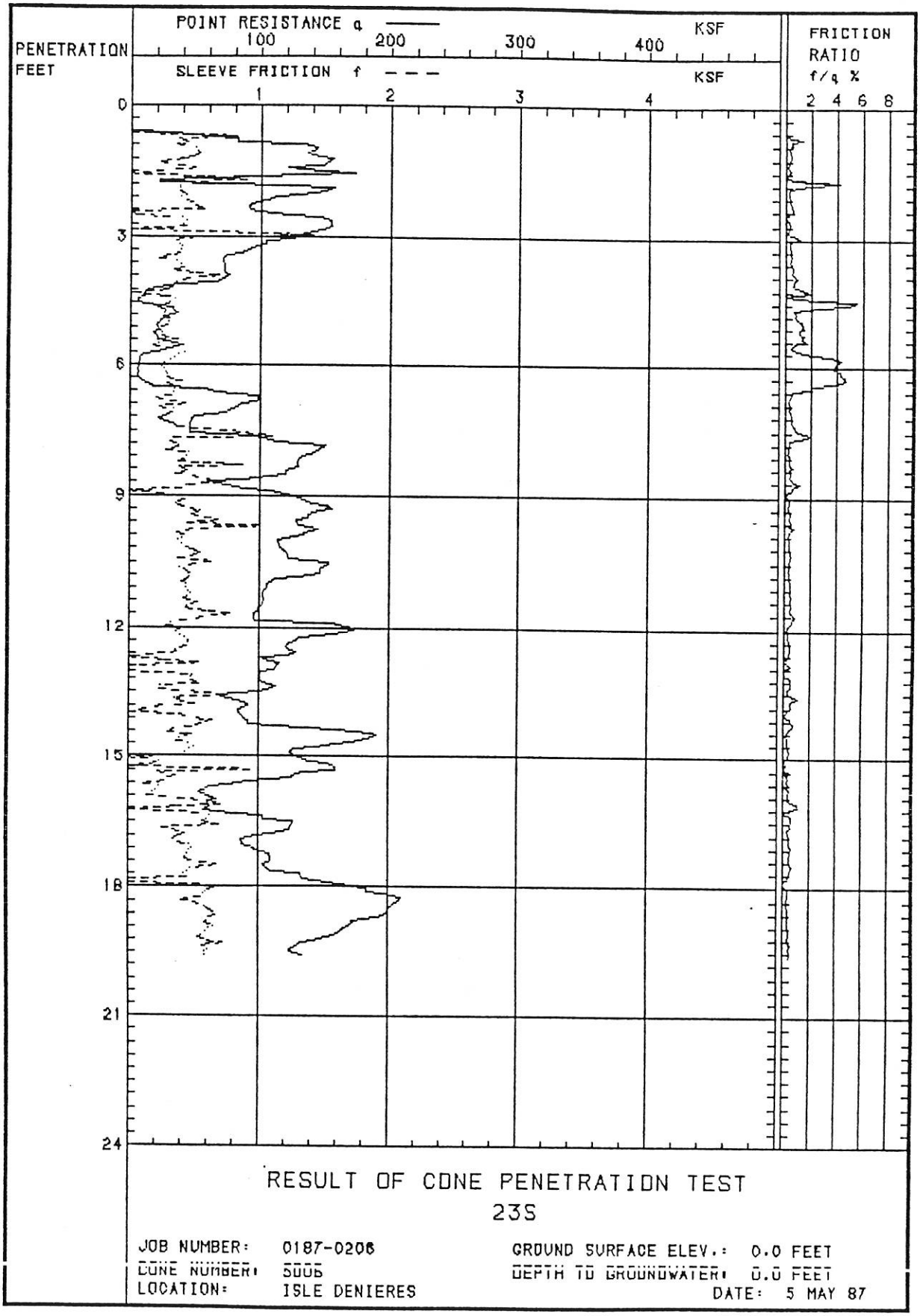
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/4/87

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

PROJECT NO. : 01870206
BORING NO. : 23M
CONE NO. : 5006
DATE : 05/04/87

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	12.67	.00	.03	SENSITIVE FINE GRAINED	OL-CH	.02	3	.937	13.5			
.80	12.67	.02	.13	SENSITIVE FINE GRAINED	OL-CH	.02	3	.937	13.5			
1.00	28.08	.29	1.03	SANDY SILT TO CLAYEY SILT	ML-MH	.05	5	2.076	13.5	67	39	.50+
1.20	89.39	.29	.32	SAND TO SILTY SAND	SM-SP	.07	10			100+	42	.50+
1.40	150.59	.13	.09	SAND TO SILTY SAND	SM-SP	.08	18			100+	42	.50+
1.60	64.61	.26	.40	SILTY SAND TO SANDY SILT	SM-ML	.09	10			91	41	.50+
1.80	74.85	.24	.32	SILTY SAND TO SANDY SILT	SM-ML	.10	11			97	42	.50+
2.00	207.27	.46	.22	SAND	SW-SP	.13	19			100+	44	.50+
2.20	210.99	.50	.23	SAND	SW-SP	.14	20			100+	44	.50+
2.40	195.09	.16	.08	SAND	SW-SP	.16	18			100+	44	.50+
2.60	191.67	.35	.18	SAND	SW-SP	.17	19			100+	44	.50+
2.80	186.60	.50	.27	SAND	SW-SP	.18	17			100+	44	.50+
3.00	146.82	.74	.50	SAND TO SILTY SAND	SM-SP	.18	17			100+	42	.50+
3.20	114.75	.22	.20	SAND TO SILTY SAND	SM-SP	.19	13			100+	42	.50+
3.40	84.97	.15	.18	SAND TO SILTY SAND	SM-SP	.20	10			90	41	.50+
3.60	36.59	.07	.19	SILTY SAND TO SANDY SILT	SM-ML	.20	5			64	37	.41
3.80	16.38	.19	1.14	CLAYEY SILT TO SILTY CLAY	MH-CL	.17	3	1.201	13.5			
4.00	34.86	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.22	5			62	37	.30
4.20	81.52	.10	.12	SAND TO SILTY SAND	SM-SP	.25	9			85	41	.50+
4.40	68.67	.08	.12	SILTY SAND TO SANDY SILT	SM-ML	.24	10			79	39	.50+
4.60	20.44	.20	.97	CLAYEY SILT TO SILTY CLAY	MH-CL	.21	4	1.499	13.5			
4.80	5.86	.25	4.32	CLAY	CH	.19	2	.420	13.5			
5.00	4.78	.09	1.81	SENSITIVE FINE GRAINED	OL-CH	.15	1	.343	13.5			
5.20	3.11	.13	4.11	CLAY	CH	.21	1	.215	13.5			
5.40	12.51	.05	.39	SENSITIVE FINE GRAINED	OL-CH	.16	2	.914	13.5			
5.60	35.28	.05	.15	SILTY SAND TO SANDY SILT	SM-ML	.31	5			59	36	.21
5.80	19.78	.12	.61	SANDY SILT TO CLAYEY SILT	ML-MH	.29	3	1.444	13.5	45	34	.15
6.00	2.75	.05	1.67	SENSITIVE FINE GRAINED	OL-CH	.18	0	.191	13.5			
6.20	1.67	.05	3.12	ORGANIC MATERIAL	OL-OH	.19	1	.110	13.5			
6.40	4.89	.11	2.26	CLAY	CH	.26	2	.344	13.5			
6.60	2.75	.05	1.74	SENSITIVE FINE GRAINED	OL-CH	.20	0	.189	13.5			
6.80	3.34	.07	2.03	SENSITIVE FINE GRAINED	OL-CH	.20	0	.233	13.5			
7.00	3.83	.06	1.49	SENSITIVE FINE GRAINED	OL-CH	.21	0	.268	13.5			
7.20	4.18	.02	.45	SENSITIVE FINE GRAINED	OL-CH	.22	1	.293	13.5			
7.40	7.92	.06	.70	SENSITIVE FINE GRAINED	OL-CH	.22	1	.570	13.5			
7.60	4.54	.06	1.23	SENSITIVE FINE GRAINED	OL-CH	.23	1	.320	13.5			
7.80	3.83	.06	1.45	SENSITIVE FINE GRAINED	OL-CH	.23	0	.266	13.5			
8.00	4.31	.07	1.57	SENSITIVE FINE GRAINED	OL-CH	.24	1	.301	13.5			
8.20	4.65	.04	.90	SENSITIVE FINE GRAINED	OL-CH	.25	1	.327	13.5			
8.40	4.42	.09	2.10	SENSITIVE FINE GRAINED	OL-CH	.25	1	.309	13.5			
8.60	4.19	.09	2.12	SENSITIVE FINE GRAINED	OL-CH	.26	1	.291	13.5			
8.80	5.03	.08	1.64	SENSITIVE FINE GRAINED	OL-CH	.26	1	.353	13.5			
9.00	5.02	.09	1.85	SENSITIVE FINE GRAINED	OL-CH	.27	1	.352	13.5			
9.20	5.61	.06	1.04	SENSITIVE FINE GRAINED	OL-CH	.28	1	.395	13.5			
9.40	6.10	.13	2.15	CLAY	CH	.38	2	.424	13.5			

9.60	5.14	.07	1.34	SENSITIVE FINE GRAINED	OL-CH	.29	1	.360	13.5				
9.80	5.38	.11	2.04	SENSITIVE FINE GRAINED	OL-CH	.29	1	.377	13.5				
10.00	4.90	.11	2.27	CLAY	CH	.40	2	.334	13.5				
10.20	4.42	.14	3.20	CLAY	CH	.41	2	.298	13.5				
10.40	4.42	.10	2.16	SENSITIVE FINE GRAINED	OL-CH	.31	1	.304	13.5				
10.60	3.83	.10	2.52	CLAY	CH	.42	1	.252	13.5				
10.80	4.06	.09	2.17	SENSITIVE FINE GRAINED	OL-CH	.32	0	.277	13.5				
11.00	4.78	.11	2.36	CLAY	CH	.44	2	.322	13.5				
11.20	4.18	.09	2.18	SENSITIVE FINE GRAINED	OL-CH	.34	1	.285	13.5				
11.40	3.83	.09	2.37	SENSITIVE FINE GRAINED	OL-CH	.34	0	.258	13.5				
11.60	4.54	.12	2.66	CLAY	CH	.46	2	.302	13.5				
11.80	5.38	.13	2.34	CLAY	CH	.47	2	.363	13.5				
12.00	5.38	.06	1.13	SENSITIVE FINE GRAINED	OL-CH	.36	1	.372	13.5				
12.20	6.99	.11	1.62	SENSITIVE FINE GRAINED	OL-CH	.37	1	.490	13.5				
12.40	5.50	.11	2.02	SENSITIVE FINE GRAINED	OL-CH	.37	1	.380	13.5				
12.60	4.90	.10	1.99	SENSITIVE FINE GRAINED	OL-CH	.38	1	.335	13.5				
12.80	5.85	.13	2.21	CLAY	CH	.51	2	.396	13.5				
13.00	6.22	.12	1.90	SENSITIVE FINE GRAINED	OL-CH	.39	1	.432	13.5				
13.20	5.86	.11	1.86	SENSITIVE FINE GRAINED	OL-CH	.40	1	.405	13.5				
13.40	5.14	.10	2.03	SENSITIVE FINE GRAINED	OL-CH	.40	1	.351	13.5				
13.60	5.02	.11	2.29	CLAY	CH	.54	2	.332	13.5				
13.80	5.49	.11	1.97	SENSITIVE FINE GRAINED	OL-CH	.41	1	.376	13.5				
14.00	5.50	.18	3.19	CLAY	CH	.56	2	.366	13.5				
14.20	5.49	.11	2.08	SENSITIVE FINE GRAINED	OL-CH	.43	1	.375	13.5				
14.40	5.39	.06	1.03	SENSITIVE FINE GRAINED	OL-CH	.43	1	.367	13.5				
14.60	4.90	.13	2.67	CLAY	CH	.58	2	.320	13.5				
14.80	6.65	.10	1.44	SENSITIVE FINE GRAINED	OL-CH	.44	1	.459	13.5				
15.00	5.14	.11	2.22	CLAY	CH	.60	2	.336	13.5				
15.20	5.62	.11	1.92	SENSITIVE FINE GRAINED	OL-CH	.46	1	.382	13.5				
15.40	5.50	.20	3.71	CLAY	CH	.62	2	.362	13.5				
15.60	5.75	.12	2.17	CLAY	CH	.62	2	.380	13.5				
15.80	6.22	.13	2.10	CLAY	CH	.63	2	.414	13.5				
16.00	5.85	.10	1.71	SENSITIVE FINE GRAINED	OL-CH	.48	1	.398	13.5				
16.20	6.81	.11	1.57	SENSITIVE FINE GRAINED	OL-CH	.49	1	.468	13.5				
16.40	6.33	.07	1.05	SENSITIVE FINE GRAINED	OL-CH	.49	1	.433	13.5				
16.60	6.33	.11	1.75	SENSITIVE FINE GRAINED	OL-CH	.50	1	.432	13.5				
16.80	6.58	.10	1.53	SENSITIVE FINE GRAINED	OL-CH	.50	1	.450	13.5				
17.00	7.47	.12	1.58	SENSITIVE FINE GRAINED	OL-CH	.51	1	.515	13.5				
17.20	6.35	.04	.70	SENSITIVE FINE GRAINED	OL-CH	.52	1	.432	13.5				
17.40	20.00	.04	.19	SENSITIVE FINE GRAINED	OL-CH	.52	4	1.443	13.5				
17.60	30.42	.03	.10	SANDY SILT TO CLAYEY SILT	ML-MH	.88	5	2.188	13.5	28	32	,	.12
17.80	37.62	.02	.06	SILTY SAND TO SANDY SILT	SM-ML	.98	6			32	33		.13
18.00	78.31	.17	.21	SAND TO SILTY SAND	SM-SP	1.08	9			54	37		.19
18.20	99.25	.59	.59	SAND TO SILTY SAND	SM-SP	1.09	11			62	38		.26
18.40	59.42	.01	.02	SILTY SAND TO SANDY SILT	SM-ML	1.01	9			46	35		.16
18.60	42.59	.07	.17	SILTY SAND TO SANDY SILT	SM-ML	1.02	6			35	33		.14
18.80	81.62	.50	.61	SILTY SAND TO SANDY SILT	SM-ML	1.03	13			57	36		.20
19.00	88.13	.41	.47	SAND TO SILTY SAND	SM-SP	1.14	10			57	38		.21



RESULT OF CONE PENETRATION TEST

23S

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

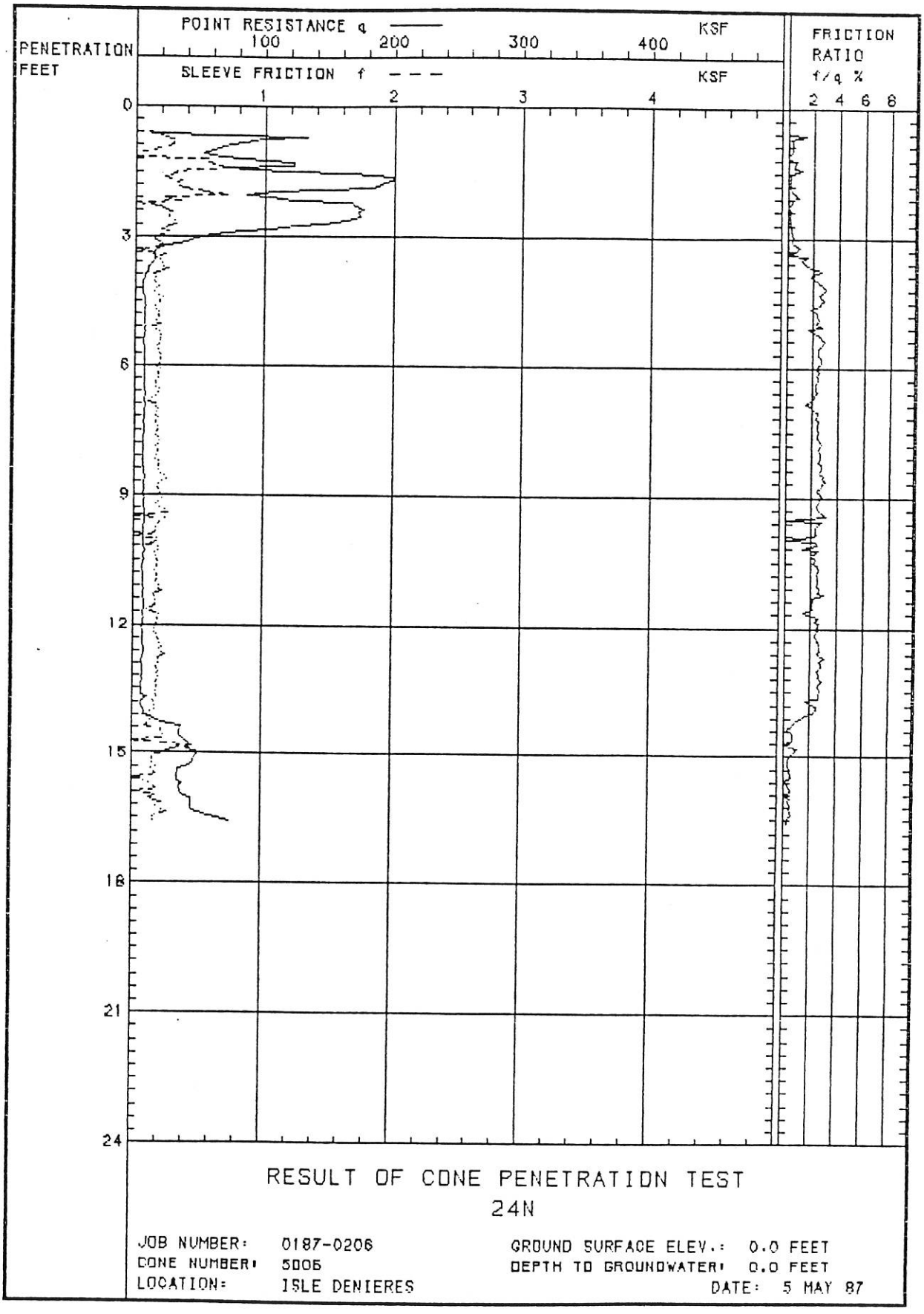
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 23S
CONE NO. : 5006
DATE : 05/04/87

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	16.85	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.02	4	1.247	13.5			
.80	81.52	.40	.49	SILTY SAND TO SANDY SILT	SM-ML	.04	13			100+	42	.50+
1.00	142.13	.50	.35	SAND TO SILTY SAND	SM-SP	.06	17			100+	42	.50+
1.20	150.85	.44	.29	SAND TO SILTY SAND	SM-SP	.07	18			100+	42	.50+
1.40	134.13	.54	.40	SAND TO SILTY SAND	SM-SP	.08	16			100+	42	.50+
1.60	135.07	.22	.16	SAND TO SILTY SAND	SM-SP	.10	16			100+	42	.50+
1.80	70.19	.38	.55	SILTY SAND TO SANDY SILT	SM-ML	.10	11			94	41	.50+
2.00	140.53	.38	.27	SAND TO SILTY SAND	SM-SP	.12	16			100+	42	.50+
2.20	101.50	.45	.45	SAND TO SILTY SAND	SM-SP	.13	12			100+	42	.50+
2.40	95.14	.28	.30	SAND TO SILTY SAND	SM-SP	.14	11			100+	42	.50+
2.60	150.48	.41	.27	SAND TO SILTY SAND	SM-SP	.16	18			100+	42	.50+
2.80	151.46	.21	.14	SAND TO SILTY SAND	SM-SP	.17	18			100+	42	.50+
3.00	127.91	.90	.71	SAND TO SILTY SAND	SM-SP	.18	15			100+	42	.50+
3.20	100.90	.41	.41	SAND TO SILTY SAND	SM-SP	.19	12			100+	42	.50+
3.40	79.45	.34	.43	SILTY SAND TO SANDY SILT	SM-ML	.19	12			8[illegible]	40	.50+
3.60	71.41	.32	.45	SILTY SAND TO SANDY SILT	SM-ML	.20	11			83	40	.50+
3.80	72.20	.23	.32	SILTY SAND TO SANDY SILT	SM-ML	.21	11			83	40	.50+
4.00	68.27	.43	.63	SILTY SAND TO SANDY SILT	SM-ML	.22	10			80	39	.50+
4.20	17.71	.30	1.68	CLAYEY SILT TO SILTY CLAY	MH-CL	.19	4	1.298	13.5			
4.40	8.50	.30	3.48	CLAY	CH	.18	4	.617	13.5			
4.60	22.17	.25	1.14	CLAYEY SILT TO SILTY CLAY	MH-CL	.21	5	1.627	13.5			
4.80	32.42	.23	.70	SANDY SILT TO CLAYEY SILT	ML-MH	.24	6	2.384	13.5	60	36	.23
5.00	21.40	.30	1.41	CLAYEY SILT TO SILTY CLAY	MH-CL	.22	5	1.569	13.5			
5.20	20.10	.24	1.21	CLAYEY SILT TO SILTY CLAY	MH-CL	.23	4	1.471	13.5			
5.40	21.88	.29	1.33	CLAYEY SILT TO SILTY CLAY	MH-CL	.24	5	1.602	13.5			
5.60	36.38	.23	.62	SANDY SILT TO CLAYEY SILT	ML-MH	.28	6	2.674	13.5	61	37	.23
5.80	9.34	.27	2.85	CLAY	CH	.23	4	.674	13.5			
6.00	6.70	.25	3.77	CLAY	CH	.24	3	.478	13.5			
6.20	6.34	.24	3.76	CLAY	CH	.25	3	.451	13.5			
6.40	11.94	.28	2.37	SILTY CLAY TO CLAY	CL-CH	.26	3	.865	13.5			
6.60	61.64	.77	1.24	SANDY SILT TO CLAYEY SILT	ML-MH	.33	11	4.541	13.5	71	38	.50+
6.80	98.14	.40	.40	SAND TO SILTY SAND	SM-SP	.41	11			82	40	.50+
7.00	80.41	.36	.44	SILTY SAND TO SANDY SILT	SM-ML	.38	12			77	39	.50+
7.20	49.33	.32	.64	SILTY SAND TO SANDY SILT	SM-ML	.40	7			62	37	.26
7.40	45.90	.32	.70	SILTY SAND TO SANDY SILT	SM-ML	.41	7			61	37	.22
7.60	70.38	.63	.90	SILTY SAND TO SANDY SILT	SM-ML	.42	11			71	38	.50+
7.80	131.51	.34	.26	SAND TO SILTY SAND	SM-SP	.47	15			90	41	.50+
8.00	143.45	.36	.25	SAND TO SILTY SAND	SM-SP	.48	17			93	42	.50+
8.20	129.87	.53	.41	SAND TO SILTY SAND	SM-SP	.49	15			88	41	.50+
8.40	125.45	.42	.33	SAND TO SILTY SAND	SM-SP	.50	15			87	41	.50+
8.60	97.78	.67	.68	SAND TO SILTY SAND	SM-SP	.52	11			78	40	.50+
8.80	81.28	.43	.53	SILTY SAND TO SANDY SILT	SM-ML	.48	12			73	38	.50+
9.00	123.66	1.73	1.40	SILTY SAND TO SANDY SILT	SM-ML	.49	19			86	40	.50+
9.20	145.99	.37	.25	SAND TO SILTY SAND	SM-SP	.55	17			90	41	.50+
9.40	142.07	.83	.59	SAND TO SILTY SAND	SM-SP	.56	17			89	41	.50+

9.60	128.94	.57	.44	SAND TO SILTY SAND	SM-SP	.58	15	85	41	.50+
9.80	140.05	.43	.31	SAND TO SILTY SAND	SM-SP	.59	16	87	41	.50+
10.00	117.07	.44	.38	SAND TO SILTY SAND	SM-SP	.60	14	81	40	.50+
10.20	117.24	.46	.39	SAND TO SILTY SAND	SM-SP	.61	14	81	40	.50+
10.40	122.46	.42	.34	SAND TO SILTY SAND	SM-SP	.62	14	82	40	.50+
10.60	151.49	.45	.29	SAND TO SILTY SAND	SM-SP	.64	18	88	41	.50+
10.80	139.14	.36	.26	SAND TO SILTY SAND	SM-SP	.65	16	85	41	.50+
11.00	107.67	.44	.41	SAND TO SILTY SAND	SM-SP	.66	12	76	40	.50+
11.20	103.29	.48	.46	SAND TO SILTY SAND	SM-SP	.67	12	74	40	.50+
11.40	102.87	.43	.41	SAND TO SILTY SAND	SM-SP	.68	12	73	39	.50+
11.60	99.45	.43	.43	SAND TO SILTY SAND	SM-SP	.70	11	72	39	.50+
11.80	96.40	1.02	1.06	SILTY SAND TO SANDY SILT	SM-ML	.65	15	72	38	.50+
12.00	171.09	.38	.22	SAND	SW-SP	.78	16	88	43	.50+
12.20	139.62	.52	.37	SAND TO SILTY SAND	SM-SP	.73	16	82	40	.50+
12.40	122.61	.46	.37	SAND TO SILTY SAND	SM-SP	.74	14	78	40	.50+
12.60	125.68	.55	.44	SAND TO SILTY SAND	SM-SP	.76	15	78	40	.50+
12.80	112.53	.40	.36	SAND TO SILTY SAND	SM-SP	.77	13	74	40	.50+
13.00	106.37	.43	.40	SAND TO SILTY SAND	SM-SP	.78	12	71	39	.50+
13.20	101.36	.49	.48	SAND TO SILTY SAND	SM-SP	.79	12	69	39	.49
13.40	110.63	.24	.22	SAND TO SILTY SAND	SM-SP	.80	13	72	39	.50+
13.60	72.24	.64	.89	SILTY SAND TO SANDY SILT	SM-ML	.75	11	61	37	.23
13.80	91.81	.39	.42	SAND TO SILTY SAND	SM-SP	.83	10	66	39	.33
14.00	85.62	.13	.15	SAND TO SILTY SAND	SM-SP	.84	10	63	38	.27
14.20	91.56	.42	.46	SAND TO SILTY SAND	SM-SP	.85	10	65	39	.31
14.40	173.95	.35	.20	SAND	SW-SP	.94	16	84	43	.50+
14.60	178.23	.38	.21	SAND	SW-SP	.95	17	85	43	.50+
14.80	136.51	.52	.38	SAND TO SILTY SAND	SM-SP	.89	16	77	40	.50+
15.00	130.98	.12	.09	SAND TO SILTY SAND	SM-SP	.90	15	75	40	.50+
15.20	156.41	.11	.07	SAND	SW-SP	.99	14	80	42	.47
15.40	130.39	.30	.23	SAND TO SILTY SAND	SM-SP	.92	15	75	40	.50+
15.60	84.68	.20	.24	SAND TO SILTY SAND	SM-SP	.94	10	61	38	.23
15.80	56.46	.43	.76	SILTY SAND TO SANDY SILT	SM-ML	.87	9	48	35	.17
16.00	64.57	.25	.38	SILTY SAND TO SANDY SILT	SM-ML	.88	10	53	35	.18
16.20	60.66	.11	.18	SILTY SAND TO SANDY SILT	SM-ML	.89	9	50	35	.17
16.40	103.52	.61	.59	SAND TO SILTY SAND	SM-SP	.98	12	65	39	.33
16.60	125.05	.34	.27	SAND TO SILTY SAND	SM-SP	1.00	14	71	39	.50+
16.80	104.68	.41	.40	SAND TO SILTY SAND	SM-SP	1.01	12	65	39	.32
17.00	87.67	.43	.50	SAND TO SILTY SAND	SM-SP	1.02	10	60	38	.23
17.20	102.64	.31	.30	SAND TO SILTY SAND	SM-SP	1.03	12	64	38	.30
17.40	108.79	.48	.44	SAND TO SILTY SAND	SM-SP	1.04	13	66	39	.33
17.60	108.26	.39	.36	SAND TO SILTY SAND	SM-SP	1.06	12	65	39	.32
17.80	134.05	.11	.08	SAND TO SILTY SAND	SM-SP	1.07	16	72	39	.50+
18.00	178.07	.61	.34	SAND	SW-SP	1.17	17	80	42	.49
18.20	203.62	.73	.36	SAND	SW-SP	1.18	19	84	43	.50+
18.40	204.56	.57	.28	SAND	SW-SP	1.20	19	84	43	.50+
18.60	198.10	.66	.33	SAND	SW-SP	1.21	18	83	43	.50+
18.80	173.08	.62	.36	SAND TO SILTY SAND	SM-SP	1.13	20	80	40	.50+
19.00	165.37	.61	.37	SAND TO SILTY SAND	SM-SP	1.14	19	78	40	.50+
19.20	147.88	.58	.39	SAND TO SILTY SAND	SM-SP	1.15	17	74	39	.50+
19.40	126.89	.59	.46	SAND TO SILTY SAND	SM-SP	1.16	15	69	39	.42



RESULT OF CONE PENETRATION TEST

24N

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

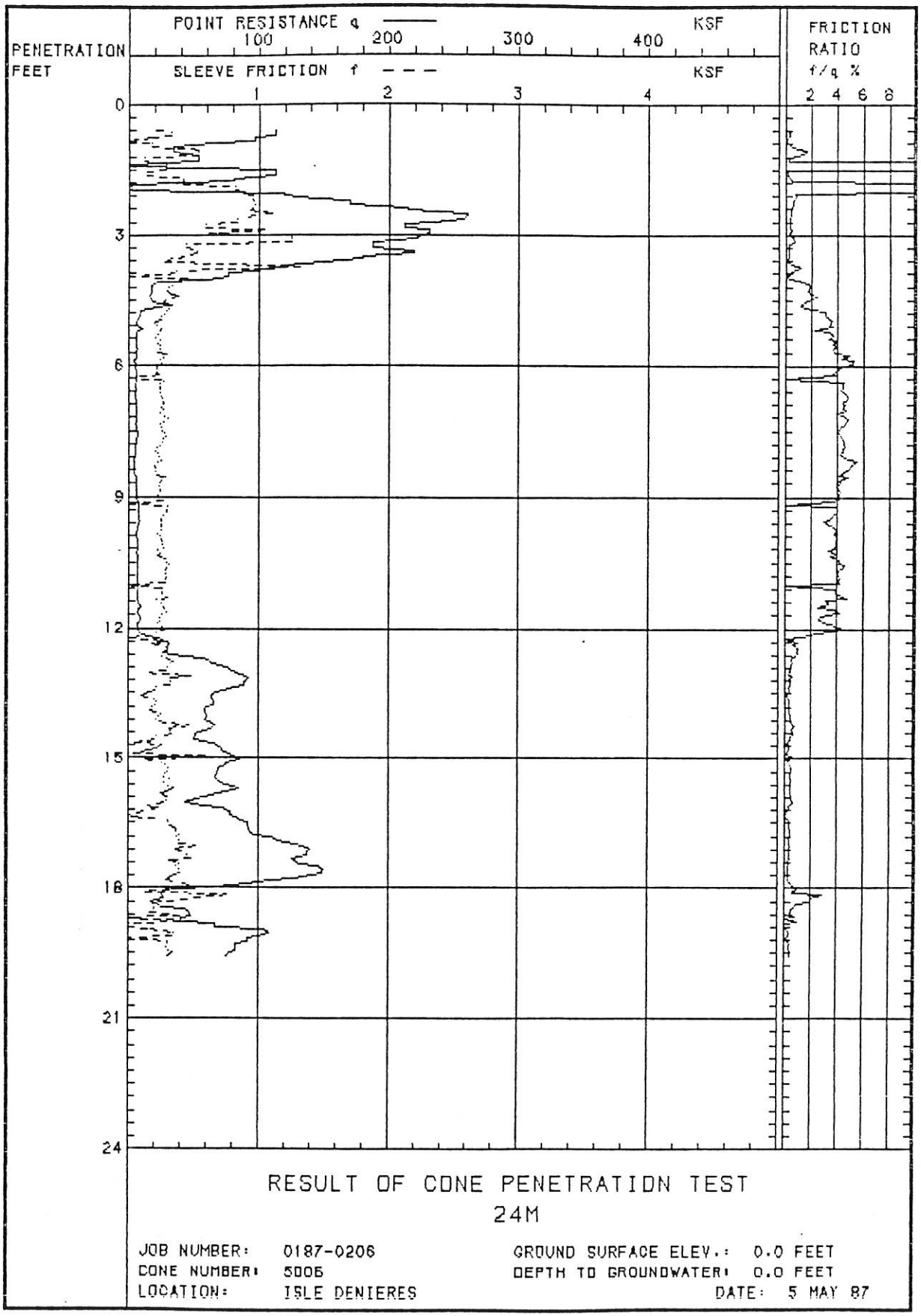
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 24N
CONE NO. : 5006
DATE : 05/04/87

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	12.19	.27	2.21	SILTY CLAY TO CLAY	CL-CH	.02	3	.901	13.5			
.80	91.77	.37	.40	SAND TO SILTY SAND	SM-SP	.05	10			100+	42	.50+
1.00	60.13	.29	.49	SILTY SAND TO SANDY SILT	SM-ML	.05	9			93	41	.50+
1.20	74.64	.42	.56	SILTY SAND TO SANDY SILT	SM-ML	.07	11			100+	42	.50+
1.40	95.01	.50	.53	SAND TO SILTY SAND	SM-SP	.08	11			100+	42	.50+
1.60	183.58	.27	.15	SAND	SW-SP	.10	17			100+	44	.50+
1.80	190.30	.30	.16	SAND	SW-SP	.12	18			100+	44	.50+
2.00	96.73	.46	.47	SAND TO SILTY SAND	SM-SP	.12	11			100+	42	.50+
2.20	144.70	.19	.13	SAND TO SILTY SAND	SM-SP	.13	17			100+	42	.50+
2.40	175.12	.32	.18	SAND	SW-SP	.16	16			100+	44	.50+
2.60	168.80	.28	.17	SAND	SW-SP	.17	16			100+	44	.50+
2.80	114.90	.30	.26	SAND TO SILTY SAND	SM-SP	.17	13			100+	42	.50+
3.00	53.10	.19	.35	SILTY SAND TO SANDY SILT	SM-ML	.17	8			76	39	.50+
3.20	28.83	.24	.83	SANDY SILT TO CLAYEY SILT	ML-MH	.16	5	2.124	13.5	62	37	.32
3.40	14.73	.21	1.41	CLAYEY SILT TO SILTY CLAY	MH-CL	.15	3	1.080	13.5			
3.60	14.71	.20	1.38	CLAYEY SILT TO SILTY CLAY	MH-CL	.16	3	1.077	13.5			
3.80	9.92	.23	2.29	SILTY CLAY TO CLAY	CL-CH	.15	3	.724	13.5			
4.00	6.70	.16	2.35	CLAY	CH	.16	3	.484	13.5			
4.20	6.10	.18	2.94	CLAY	CH	.17	2	.439	13.5			
4.40	7.17	.20	2.77	CLAY	CH	.18	3	.518	13.5			
4.60	8.12	.18	2.17	CLAY	CH	.18	3	.588	13.5			
4.80	7.77	.18	2.34	CLAY	CH	.19	3	.561	13.5			
5.00	7.53	.19	2.47	CLAY	CH	.20	3	.543	13.5			
5.20	8.01	.22	2.69	CLAY	CH	.21	3	.578	13.5			
5.40	7.17	.20	2.85	CLAY	CH	.22	3	.515	13.5			
5.60	7.65	.14	1.84	SENSITIVE FINE GRAINED	OL-CH	.17	1	.554	13.5			
5.80	7.71	.20	2.60	CLAY	CH	.23	3	.554	13.5			
6.00	7.89	.19	2.36	CLAY	CH	.24	3	.567	13.5			
6.20	7.77	.18	2.34	CLAY	CH	.25	3	.557	13.5			
6.40	7.65	.21	2.68	CLAY	CH	.26	3	.548	13.5			
6.60	8.19	.18	2.18	CLAY	CH	.26	3	.587	13.5			
6.80	7.53	.12	1.63	SENSITIVE FINE GRAINED	OL-CH	.20	1	.543	13.5			
7.00	8.13	.18	2.17	CLAY	CH	.29	3	.582	13.5			
7.20	7.53	.17	2.27	CLAY	CH	.29	3	.537	13.5			
7.40	7.41	.18	2.38	CLAY	CH	.30	3	.527	13.5			
7.60	7.29	.15	2.02	CLAY	CH	.30	3	.518	13.5			
7.80	7.17	.19	2.64	CLAY	CH	.31	3	.508	13.5			
8.00	6.93	.18	2.65	CLAY	CH	.32	3	.490	13.5			
8.20	6.99	.18	2.53	CLAY	CH	.33	3	.494	13.5			
8.40	7.29	.19	2.64	CLAY	CH	.34	3	.515	13.5			
8.60	8.13	.19	2.31	CLAY	CH	.34	3	.577	13.5			
8.80	7.41	.19	2.54	CLAY	CH	.35	3	.523	13.5			
9.00	7.53	.17	2.25	CLAY	CH	.36	3	.531	13.5			
9.20	7.65	.19	2.45	CLAY	CH	.37	3	.540	13.5			
9.40	8.73	.26	2.94	CLAY	CH	.38	4	.619	13.5			

9.60	8.61	.23	2.62	CLAY	CH	.38	4	.609	13.5			
9.80	7.65	.18	2.36	CLAY	CH	.39	3	.538	13.5			
10.00	7.89	.09	1.14	SENSITIVE FINE GRAINED	OL-CH	.30	1	.562	13.5			
10.20	7.41	.14	1.95	SENSITIVE FINE GRAINED	OL-CH	.31	1	.526	13.5			
10.40	7.89	.15	1.85	SENSITIVE FINE GRAINED	OL-CH	.31	1	.562	13.5			
10.60	7.48	.18	2.45	CLAY	CH	.42	3	.522	13.5			
10.80	7.29	.18	2.42	CLAY	CH	.43	3	.508	13.5			
11.00	7.47	.19	2.50	CLAY	CH	.44	3	.521	13.5			
11.20	7.89	.21	2.72	CLAY	CH	.45	3	.551	13.5			
11.40	8.00	.26	3.21	CLAY	CH	.46	3	.559	13.5			
11.60	8.25	.13	1.58	SENSITIVE FINE GRAINED	OL-CH	.35	1	.585	13.5			
11.80	8.12	.20	2.45	CLAY	CH	.47	3	.567	13.5			
12.00	7.18	.18	2.54	CLAY	CH	.48	3	.496	13.5			
12.20	7.53	.18	2.33	CLAY	CH	.49	3	.522	13.5			
12.40	7.77	.30	3.86	CLAY	CH	.50	3	.539	13.5			
12.60	8.49	.22	2.59	CLAY	CH	.50	4	.591	13.5			
12.80	7.42	.17	2.30	CLAY	CH	.51	3	.511	13.5			
13.00	7.35	.20	2.67	CLAY	CH	.52	3	.506	13.5			
13.20	7.29	.20	2.73	CLAY	CH	.53	3	.501	13.5			
13.40	7.17	.19	2.59	CLAY	CH	.54	3	.492	13.5			
13.60	6.93	.18	2.62	CLAY	CH	.54	3	.473	13.5			
13.80	7.18	.16	2.20	CLAY	CH	.55	3	.491	13.5			
14.00	8.95	.18	2.01	SILTY CLAY TO CLAY	CL-CH	.56	2	.622	13.5			
14.20	16.65	.15	.92	CLAYEY SILT TO SILTY CLAY	MH-CL	.64	3	1.186	13.5			
14.40	38.02	.13	.35	SILTY SAND TO SANDY SILT	SM-ML	.79	6			39	34	.14
14.60	37.86	.24	.64	SANDY SILT TO CLAYEY SILT	ML-MH	.73	7	2.751	13.5	41	34	.15
14.80	43.76	.35	.80	SANDY SILT TO CLAYEY SILT	ML-MH	.74	8	3.187	13.5	44	34	.16
15.00	51.86	.16	.32	SILTY SAND TO SANDY SILT	SM-ML	.82	8			47	35	.16
15.20	47.46	.36	.76	SILTY SAND TO SANDY SILT	SM-ML	.84	7			44	34	.16
15.40	36.10	.16	.43	SANDY SILT TO CLAYEY SILT	ML-MH	.77	6	2.617	13.5	38	33	.14
15.60	35.38	.20	.56	SANDY SILT TO CLAYEY SILT	ML-MH	.78	6	2.563	13.5	36	33	.14
15.80	37.02	.14	.37	SANDY SILT TO CLAYEY SILT	ML-MH	.79	7	2.684	13.5	38	33	.14
16.00	43.32	.16	.37	SILTY SAND TO SANDY SILT	SM-ML	.88	6			40	34	.15
16.20	46.13	.23	.50	SILTY SAND TO SANDY SILT	SM-ML	.89	7			42	34	.15
16.40	55.79	.25	.45	SILTY SAND TO SANDY SILT	SM-ML	.90	8			47	35	.16



RESULT OF CONE PENETRATION TEST

24M

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

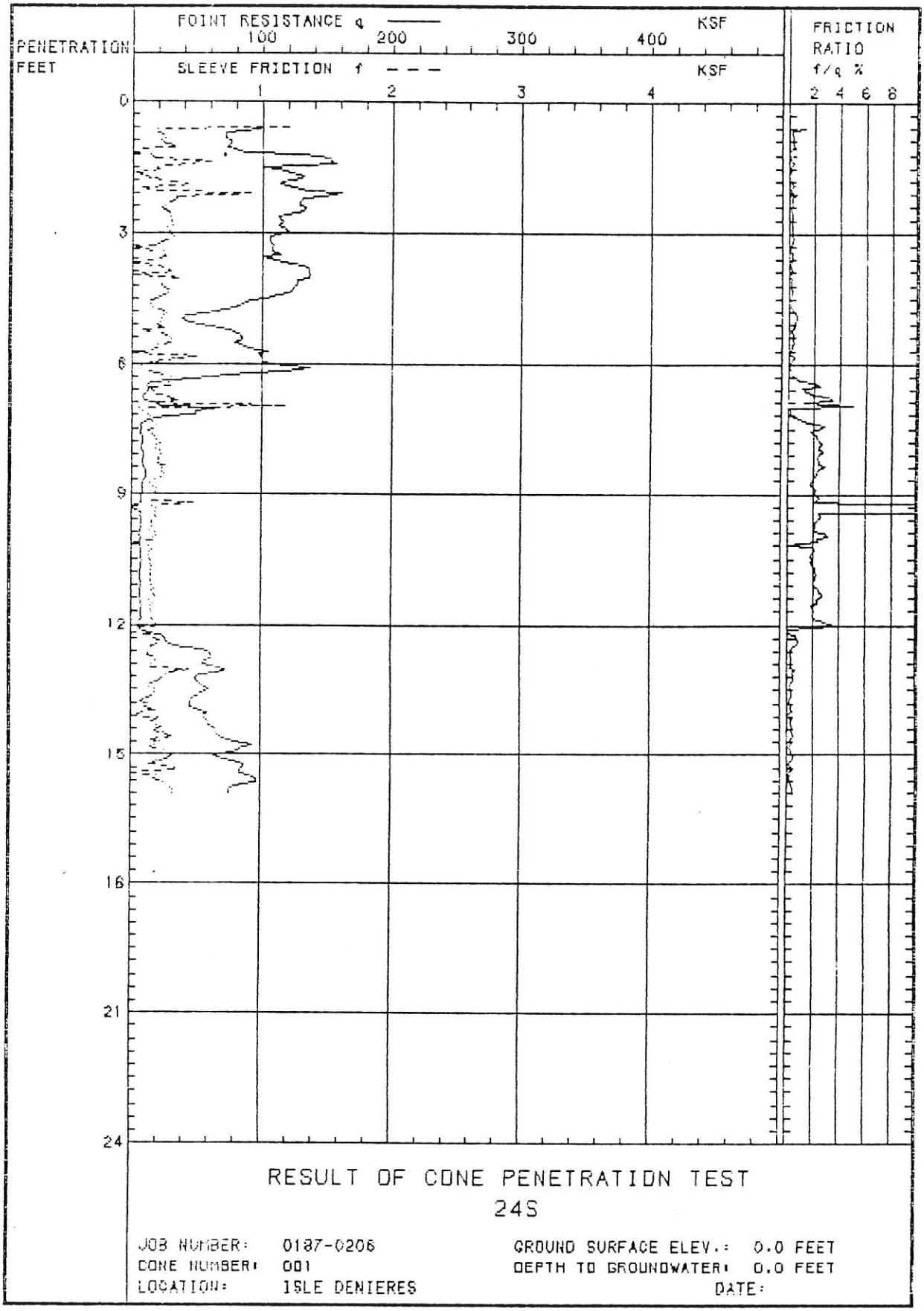
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 24M
CONE NO. : 5006
DATE : 05/04/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	112.84	.27	.24	SAND TO SILTY SAND	SM-SP	.04	13			100+	42	.50+
.80	97.30	.11	.11	SAND TO SILTY SAND	SM-SP	.05	11			100+	42	.50+
1.00	34.19	.36	1.04	SANDY SILT TO CLAYEY SILT	ML-MH	.05	6	2.529	13.5	72	38	.50+
1.20	53.79	.33	.61	SILTY SAND TO SANDY SILT	SM-ML	.07	8			85	40	.50+
1.40	.00	.29	999.00	ORGANIC MATERIAL	OL-OH	.04	1	-.003	13.5			
1.60	112.60	.14	.12	SAND TO SILTY SAND	SM-SP	.10	13			100+	42	.50+
1.80	41.55	.42	1.01	SANDY SILT TO CLAYEY SILT	ML-MH	.09	7	3.071	13.5	74	38	.50+
2.00	60.71	.55	.91	SILTY SAND TO SANDY SILT	SM-ML	.11	9			85	40	.50+
2.20	157.33	.24	.15	SAND	SW-SP	.14	15			100+	44	.50+
2.40	214.92	.95	.44	SAND	SW-SP	.16	20			100+	44	.50+
2.60	259.15	.90	.35	SAND	SW-SP	.17	24			100+	44	.50+
2.80	212.29	.59	.28	SAND	SW-SP	.18	20			100+	44	.50+
3.00	226.65	.93	.41	SAND	SW-SP	.20	21			100+	44	.50+
3.20	187.91	.85	.45	SAND	SW-SP	.21	18			100+	44	.50+
3.40	219.22	.53	.24	SAND	SW-SP	.22	21			100+	44	.50+
3.60	165.32	.49	.30	SAND TO SILTY SAND	SM-SP	.22	19			100+	42	.50+
3.80	104.75	.85	.81	SAND TO SILTY SAND	SM-SP	.23	12			98	42	.50+
4.00	69.01	.26	.37	SILTY SAND TO SANDY SILT	SM-ML	.22	11			81	39	.50+
4.20	17.45	.32	1.85	CLAYEY SILT TO SILTY CLAY	MH-CL	.19	4	1.279	13.5			
4.40	16.62	.24	1.45	CLAYEY SILT TO SILTY CLAY	MH-CL	.20	3	1.216	13.5			
4.60	24.35	.30	1.24	CLAYEY SILT TO SILTY CLAY	MH-CL	.21	5	1.788	13.5			
4.80	9.21	.28	3.07	CLAY	CH	.19	4	.668	13.5			
5.00	6.52	.22	3.34	CLAY	CH	.20	3	.468	13.5			
5.20	9.22	.25	2.68	CLAY	CH	.21	4	.667	13.5			
5.40	6.22	.21	3.43	CLAY	CH	.22	2	.444	13.5			
5.60	6.45	.24	3.76	CLAY	CH	.22	3	.461	13.5			
5.80	6.10	.21	3.46	CLAY	CH	.23	2	.434	13.5			
6.00	5.11	.24	4.72	CLAY	CH	.24	2	.361	13.5			
6.20	5.98	.23	3.77	CLAY	CH	.25	2	.424	13.5			
6.40	5.74	.25	4.44	CLAY	CH	.26	2	.406	13.5			
6.60	5.50	.24	4.44	CLAY	CH	.26	2	.388	13.5			
6.80	5.74	.19	3.31	CLAY	CH	.27	2	.405	13.5			
7.00	5.74	.26	4.52	CLAY	CH	.28	2	.404	13.5			
7.20	6.09	.29	4.73	CLAY	CH	.29	2	.430	13.5			
7.40	5.61	.25	4.39	CLAY	CH	.30	2	.394	13.5			
7.60	6.69	.28	4.21	CLAY	CH	.30	3	.473	13.5			
7.80	5.56	.25	4.46	CLAY	CH	.31	2	.389	13.5			
8.00	5.02	.22	4.33	CLAY	CH	.32	2	.348	13.5			
8.20	4.42	.25	5.76	ORGANIC MATERIAL	OL-OH	.25	2	.309	13.5			
8.40	4.42	.21	4.68	CLAY	CH	.34	2	.303	13.5			
8.60	6.09	.27	4.45	CLAY	CH	.34	2	.426	13.5			
8.80	5.92	.23	3.96	CLAY	CH	.35	2	.412	13.5			
9.00	5.97	.25	4.17	CLAY	CH	.36	2	.416	13.5			
9.20	7.89	.15	1.91	SENSITIVE FINE GRAINED	OL-CH	.28	1	.564	13.5			
9.40	7.41	.28	3.81	CLAY	CH	.38	3	.521	13.5			

9.60	7.90	.19	2.35	CLAY	CH	.38	3	.556	13.5				
9.80	6.34	.24	3.72	CLAY	CH	.39	3	.440	13.5				
10.00	6.57	.26	3.91	CLAY	CH	.40	3	.457	13.5				
10.20	6.93	.25	3.57	CLAY	CH	.41	3	.483	13.5				
10.40	6.69	.26	3.83	CLAY	CH	.42	3	.465	13.5				
10.60	6.69	.36	5.31	CLAY	CH	.42	3	.464	13.5				
10.80	6.93	.29	4.24	CLAY	CH	.43	3	.482	13.5				
11.00	6.69	.14	2.17	CLAY	CH	.44	3	.463	13.5				
11.20	6.58	.26	4.00	CLAY	CH	.45	3	.454	13.5				
11.40	7.17	.23	3.27	CLAY	CH	.46	3	.497	13.5				
11.60	7.12	.28	3.93	CLAY	CH	.46	3	.493	13.5				
11.80	8.85	.24	2.72	CLAY	CH	.47	4	.621	13.5				
12.00	6.45	.28	4.30	CLAY	CH	.48	3	.443	13.5				
12.20	18.68	.09	.49	SENSITIVE FINE GRAINED	OL-CH	.37	4	1.357	13.5				
12.40	31.10	.24	.78	SANDY SILT TO CLAYEY SILT	ML-MH	.62	5	2.257	13.5	40	34	.14	
12.60	34.82	.27	.78	SANDY SILT TO CLAYEY SILT	ML-MH	.63	6	2.532	13.5	42	34	.15	
12.80	64.53	.23	.35	SILTY SAND TO SANDY SILT	SM-ML	.70	10			60	36	.21	
13.00	81.90	.20	.25	SAND TO SILTY SAND	SM-SP	.78	9			64	38	.28	
13.20	91.24	.33	.36	SAND TO SILTY SAND	SM-SP	.79	10			66	39	.35	
13.40	78.02	.24	.31	SAND TO SILTY SAND	SM-SP	.80	9			62	38	.24	
13.60	64.66	.21	.32	SILTY SAND TO SANDY SILT	SM-ML	.75	10			58	36	.20	
13.80	62.93	1.03	1.64	SANDY SILT TO CLAYEY SILT	ML-MH	.69	12	4.611	13.5	59	36	.21	
14.00	60.71	.30	.49	SILTY SAND TO SANDY SILT	SM-ML	.77	9			54	36	.19	
14.20	64.75	.42	.65	SILTY SAND TO SANDY SILT	SM-ML	.78	10			57	36	.20	
14.40	55.53	.18	.32	SILTY SAND TO SANDY SILT	SM-ML	.79	8			50	35	.17	
14.60	58.18	.13	.22	SILTY SAND TO SANDY SILT	SM-ML	.80	9			52	35	.18	
14.80	71.72	.12	.16	SAND TO SILTY SAND	SM-SP	.89	8			57	39	.20	
15.00	84.96	.42	.49	SAND TO SILTY SAND	SM-SP	.90	10			62	38	.25	
15.20	72.08	.31	.43	SILTY SAND TO SANDY SILT	SM-ML	.84	11			59	36	.21	
15.40	67.56	.30	.44	SILTY SAND TO SANDY SILT	SM-ML	.85	10			56	36	.19	
15.60	76.03	.29	.38	SILTY SAND TO SANDY SILT	SM-ML	.86	12			60	36	.22	
15.80	71.91	.13	.18	SAND TO SILTY SAND	SM-SP	.95	8			55	37	.19	
16.00	46.30	.31	.67	SILTY SAND TO SANDY SILT	SM-ML	.88	7			42	34	.15	
16.20	75.22	1.61	2.14	SANDY SILT TO CLAYEY SILT	ML-MH	.81	14	5.512	13.5	61	37	.23	
16.40	84.76	.22	.26	SAND TO SILTY SAND	SM-SP	.98	10			60	38	.22	
16.60	92.39	.33	.36	SAND TO SILTY SAND	SM-SP	1.00	11			62	38	.25	
16.80	102.99	.39	.37	SAND TO SILTY SAND	SM-SP	1.01	12			65	39	.31	
17.00	131.40	.45	.35	SAND TO SILTY SAND	SM-SP	1.02	15			72	39	.50+	
17.20	137.46	.87	.64	SAND TO SILTY SAND	SM-SP	1.03	16			74	39	.50+	
17.40	129.78	.42	.32	SAND TO SILTY SAND	SM-SP	1.04	15			71	39	.50+	
17.60	150.15	.40	.27	SAND TO SILTY SAND	SM-SP	1.06	17			77	40	.50+	
17.80	118.76	.34	.28	SAND TO SILTY SAND	SM-SP	1.07	14			68	39	.41	
18.00	52.90	.48	.90	SILTY SAND TO SANDY SILT	SM-ML	.99	8			43	34	.15	
18.20	27.17	1.06	3.92	SILTY CLAY TO CLAY	CL-CH	.73	8	1.959	13.5				
18.40	24.18	.43	1.76	CLAYEY SILT TO SILTY CLAY	MH-CL	.83	5	1.730	13.5				
18.60	47.49	.35	.74	SILTY SAND TO SANDY SILT	SM-ML	1.02	7			39	34	.14	
18.80	53.67	.21	.40	SILTY SAND TO SANDY SILT	SM-ML	1.03	8			42	34	.15	
19.00	106.82	.26	.25	SAND TO SILTY SAND	SM-SP	1.14	12			63	38	.28	
19.20	91.81	.15	.16	SAND TO SILTY SAND	SM-SP	1.15	10			59	38	.21	
19.40	82.71	.30	.36	SAND TO SILTY SAND	SM-SP	1.16	9			54	37	.19	



RESULT OF CONE PENETRATION TEST

24S

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

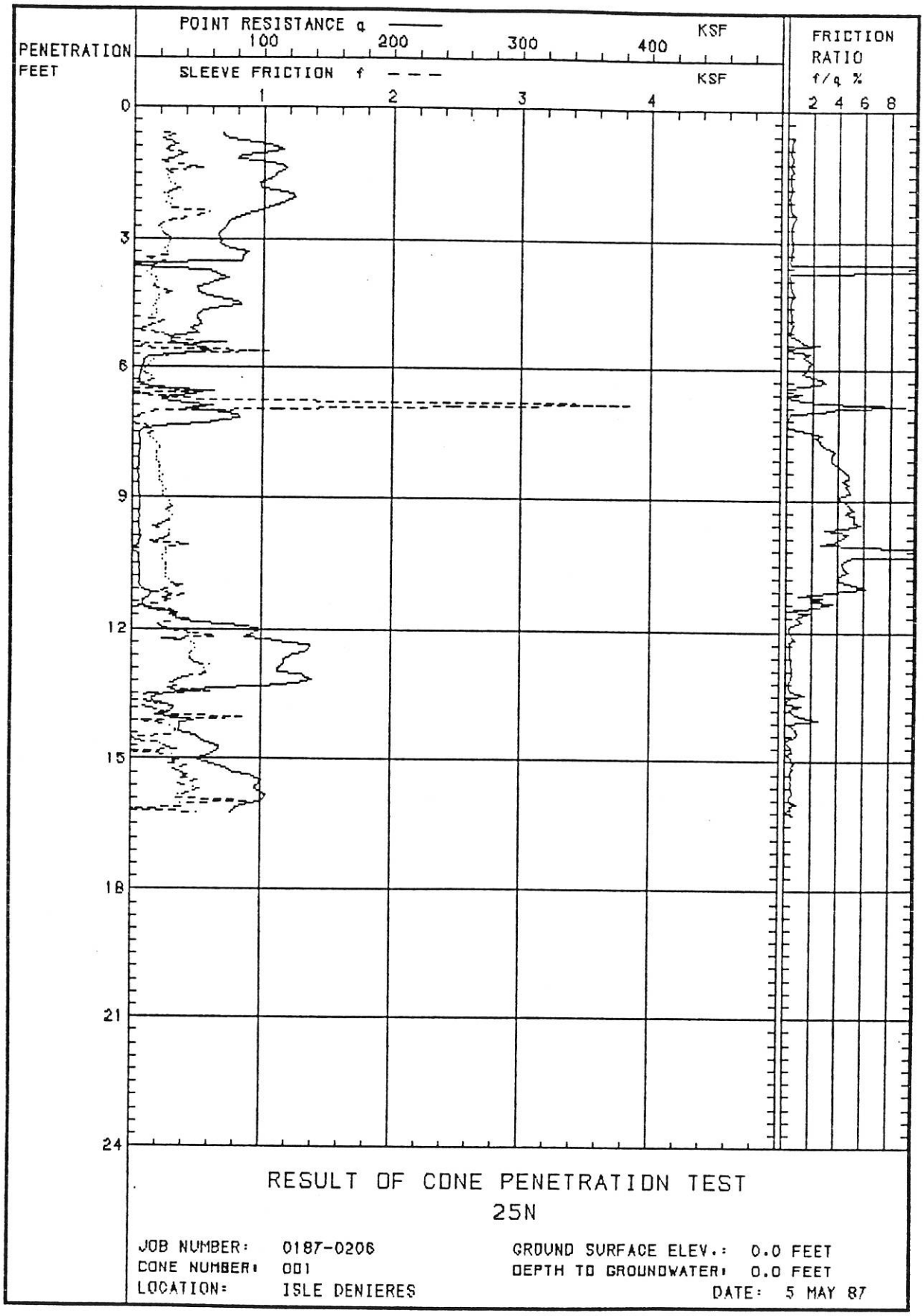
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE:

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

PROJECT NO. : 01870206
BORING NO. : 24S
CONE NO. : 5006
DATE : 05/04/87

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	98.50	.46	.47	SAND TO SILTY SAND	SM-SP	.04	11			100+	42	.50+
.80	71.48	.00	.00	SAND TO SILTY SAND	SM-SP	.05	8			100+	42	.50+
1.00	74.17	.00	.00	SAND TO SILTY SAND	SM-SP	.06	8			100+	42	.50+
1.20	108.51	.00	.00	SAND TO SILTY SAND	SM-SP	.07	12			100+	42	.50+
1.40	154.79	.45	.29	SAND TO SILTY SAND	SM-SP	.08	18			100+	42	.50+
1.60	117.04	.10	.08	SAND TO SILTY SAND	SM-SP	.10	14			100+	42	.50+
1.80	122.77	1.75	1.42	SILTY SAND TO SANDY SILT	SM-ML	.10	19			100+	42	.50+
2.00	129.20	.00	.00	SAND TO SILTY SAND	SM-SP	.12	15			100+	42	.50+
2.20	139.51	.07	.05	SAND TO SILTY SAND	SM-SP	.13	16			100+	42	.50+
2.40	131.00	.00	.00	SAND TO SILTY SAND	SM-SP	.14	15			100+	42	.50+
2.60	119.19	.02	.02	SAND TO SILTY SAND	SM-SP	.16	14			100+	42	.50+
2.80	114.10	.03	.02	SAND TO SILTY SAND	SM-SP	.17	13			100+	42	.50+
3.00	116.32	1.23	1.06	SILTY SAND TO SANDY SILT	SM-ML	.17	18			100+	42	.50+
3.20	106.12	.01	.01	SAND TO SILTY SAND	SM-SP	.19	12			100+	42	.50+
3.40	108.00	.00	.00	SAND TO SILTY SAND	SM-SP	.20	12			100+	42	.50+
3.60	105.88	.08	.08	SAND TO SILTY SAND	SM-SP	.22	12			100+	42	.50+
3.80	134.47	.01	.01	SAND TO SILTY SAND	SM-SP	.23	16			100+	42	.50+
4.00	136.63	.04	.03	SAND TO SILTY SAND	SM-SP	.24	16			100+	42	.50+
4.20	126.11	.01	.01	SAND TO SILTY SAND	SM-SP	.25	15			100+	42	.50+
4.40	116.57	.02	.02	SAND TO SILTY SAND	SM-SP	.26	13			99	42	.50+
4.60	88.05	.00	.00	SAND TO SILTY SAND	SM-SP	.28	10			86	41	.50+
4.80	64.23	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.26	10			76	39	.50+
5.00	41.99	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.27	6			64	37	.32
5.20	72.17	.00	.00	SAND TO SILTY SAND	SM-SP	.31	8			77	40	.50+
5.40	84.87	.04	.05	SAND TO SILTY SAND	SM-SP	.32	10			82	40	.50+
5.60	87.27	.01	.01	SAND TO SILTY SAND	SM-SP	.34	10			82	40	.50+
5.80	98.67	.11	.11	SAND TO SILTY SAND	SM-SP	.35	11			86	41	.50+
6.00	109.66	.00	.00	SAND TO SILTY SAND	SM-SP	.36	13			89	41	.50+
6.20	104.83	.00	.00	SAND TO SILTY SAND	SM-SP	.37	12			87	41	.50+
6.40	23.15	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.32	4	1.691	13.5	47	35	.15
6.60	12.67	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.20	3	.924	13.5			
6.80	9.67	.12	1.19	SENSITIVE FINE GRAINED	OL-CH	.20	2	.701	13.5			
7.00	45.92	.46	1.00	SANDY SILT TO CLAYEY SILT	ML-MH	.35	8	3.375	13.5	63	37	.27
7.20	37.53	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.40	5			55	36	.19
7.40	8.68	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.22	2	.627	13.5			
7.60	7.17	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.23	1	.514	13.5			
7.80	8.13	.16	1.99	CLAY	CH	.31	3	.579	13.5			
8.00	8.01	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.24	1	.575	13.5			
8.20	8.85	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.25	2	.637	13.5			
8.40	9.38	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.25	2	.676	13.5			
8.60	11.24	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.26	2	.813	13.5			
8.80	8.43	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.26	2	.605	13.5			
9.00	8.37	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.27	2	.600	13.5			
9.20	8.12	.11	1.31	SENSITIVE FINE GRAINED	OL-CH	.28	1	.581	13.5			
9.40	3.77	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.28	0	.259	13.5			

9.60	7.53	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.29	1	.537	13.5			
9.80	7.29	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.29	1	.518	13.5			
10.00	6.80	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.30	1	.482	13.5			
10.20	7.17	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.31	1	.509	13.5			
10.40	7.65	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.31	1	.544	13.5			
10.60	8.13	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.32	1	.579	13.5			
10.80	6.82	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.32	1	.481	13.5			
11.00	7.17	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.33	1	.507	13.5			
11.20	7.00	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.34	1	.493	13.5			
11.40	6.70	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.34	1	.471	13.5			
11.60	7.89	.02	.21	SENSITIVE FINE GRAINED	OL-CH	.35	1	.559	13.5			
11.80	8.18	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.35	1	.580	13.5			
12.00	5.86	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.36	1	.407	13.5			
12.20	18.45	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.37	4	1.339	13.5			
12.40	28.07	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.62	5	2.033	13.5	35	33	.13
12.60	58.76	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.69	9			56	36	.20
12.80	59.58	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.70	9			56	36	.20
13.00	70.47	.00	.00	SAND TO SILTY SAND	SM-SP	.78	8			60	38	.22
13.20	51.29	.19	.36	SILTY SAND TO SANDY SILT	SM-ML	.73	8			50	35	.17
13.40	55.90	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.74	8			53	35	.18
13.60	52.87	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.75	8			50	35	.17
13.80	46.23	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.76	7			45	34	.16
14.00	56.49	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.77	9			52	35	.18
14.20	58.97	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.78	9			53	35	.18
14.40	65.44	.00	.00	SILTY SAND TO SANDY SILT	SM-ML	.79	10			57	36	.20
14.60	71.47	.04	.05	SAND TO SILTY SAND	SM-SP	.88	8			57	38	.20
14.80	90.33	.00	.00	SAND TO SILTY SAND	SM-SP	.89	10			64	38	.28
15.00	67.91	.07	.10	SILTY SAND TO SANDY SILT	SM-ML	.82	10			57	36	.20
15.20	83.58	.14	.16	SAND TO SILTY SAND	SM-SP	.91	10			61	38	.24
15.40	84.15	.04	.04	SAND TO SILTY SAND	SM-SP	.92	10			61	38	.24
15.60	97.06	.00	.00	SAND TO SILTY SAND	SM-SP	.94	11			65	38	.30
15.80	75.11	.05	.06	SAND TO SILTY SAND	SM-SP	.95	8			57	38	.20



RESULT OF CONE PENETRATION TEST

25N

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

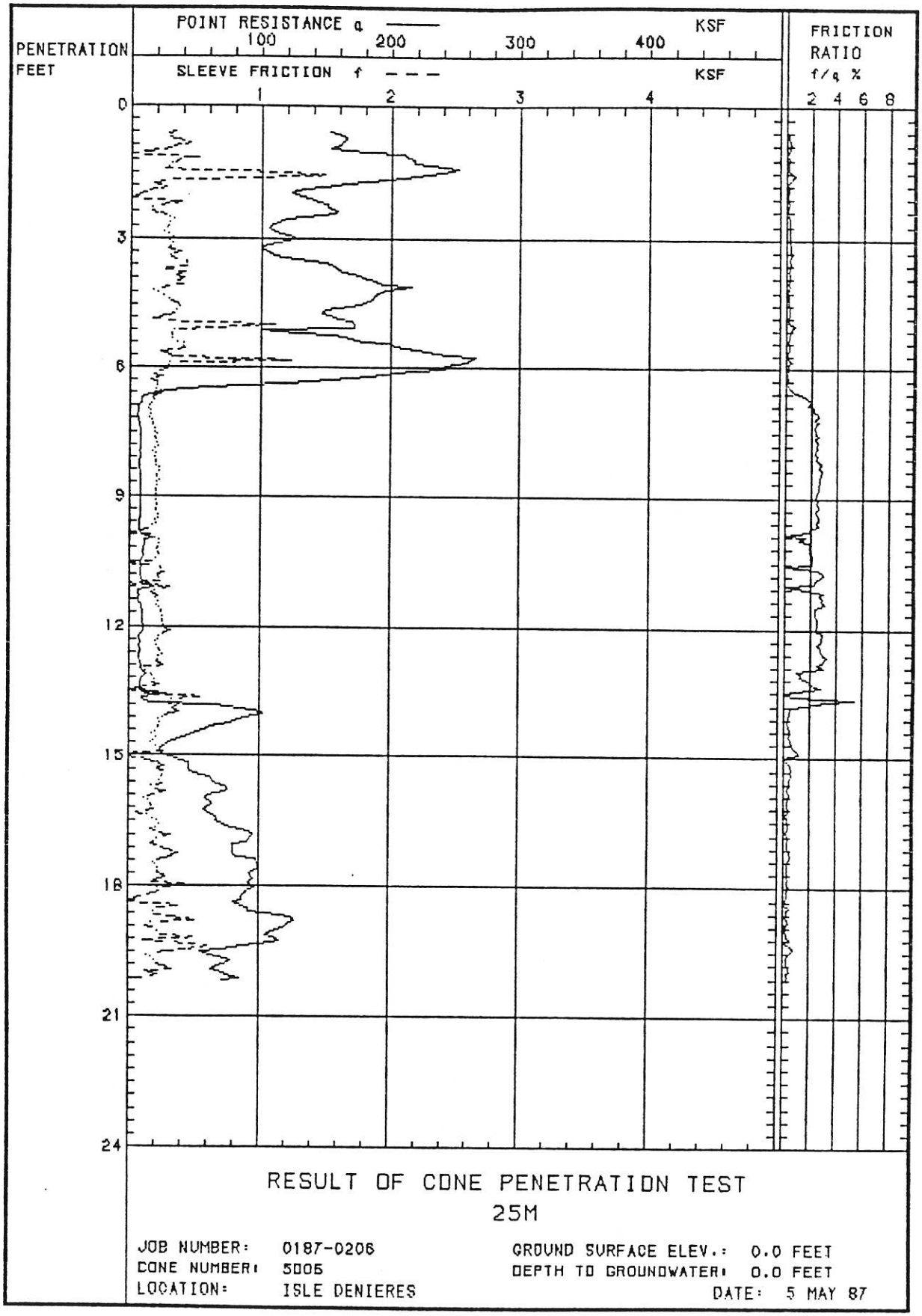
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 25n
CONE NO. : 001
DATE : 05/04/87

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	68.38	.27	.39	SILTY SAND TO SANDY SILT	SM-ML	.03	10			100+	42	.50+
.80	94.20	.21	.22	SAND TO SILTY SAND	SM-SP	.05	11			100+	42	.50+
1.00	107.00	.32	.30	SAND TO SILTY SAND	SM-SP	.06	12			100+	42	.50+
1.20	88.54	.37	.42	SAND TO SILTY SAND	SM-SP	.07	10			100+	42	.50+
1.40	116.84	.39	.33	SAND TO SILTY SAND	SM-SP	.08	13			100+	42	.50+
1.60	106.75	.75	.70	SAND TO SILTY SAND	SM-SP	.10	12			100+	42	.50+
1.80	98.02	.33	.33	SAND TO SILTY SAND	SM-SP	.11	11			100+	42	.50+
2.00	123.72	.37	.30	SAND TO SILTY SAND	SM-SP	.12	14			100+	42	.50+
2.20	112.78	.28	.25	SAND TO SILTY SAND	SM-SP	.13	13			100+	42	.50+
2.40	90.28	.56	.62	SAND TO SILTY SAND	SM-SP	.14	10			100+	42	.50+
2.60	74.04	.25	.34	SILTY SAND TO SANDY SILT	SM-ML	.14	11			90	41	.50+
2.80	68.38	.25	.36	SILTY SAND TO SANDY SILT	SM-ML	.15	10			86	40	.50+
3.00	66.90	.30	.45	SILTY SAND TO SANDY SILT	SM-ML	.17	10			84	40	.50+
3.20	73.41	.25	.34	SILTY SAND TO SANDY SILT	SM-ML	.18	11			86	40	.50+
3.40	84.37	.26	.31	SAND TO SILTY SAND	SM-SP	.20	10			90	41	.50+
3.60	.25	.16	66.79	ORGANIC MATERIAL	OL-OH	.11	1	.010	13.5			
3.80	64.92	.12	.18	SILTY SAND TO SANDY SILT	SM-ML	.21	10			79	39	.50+
4.00	60.53	.18	.30	SILTY SAND TO SANDY SILT	SM-ML	.22	9			76	39	.50+
4.20	50.05	.27	.55	SILTY SAND TO SANDY SILT	SM-ML	.23	7			70	38	.50+
4.40	76.47	.14	.19	SAND TO SILTY SAND	SM-SP	.26	9			81	40	.50+
4.60	61.91	.17	.28	SILTY SAND TO SANDY SILT	SM-ML	.25	9			75	39	.50+
4.80	49.69	.13	.27	SILTY SAND TO SANDY SILT	SM-ML	.26	7			68	38	.50+
5.00	48.36	.28	.57	SILTY SAND TO SANDY SILT	SM-ML	.27	7			67	37	.49
5.20	41.39	.26	.62	SANDY SILT TO CLAYEY SILT	ML-MH	.26	7	3.047	13.5	64	37	.34
5.40	29.15	.60	2.05	CLAYEY SILT TO SILTY CLAY	MH-CL	.24	6	2.141	13.5			
5.60	57.30	.53	.92	SILTY SAND TO SANDY SILT	SM-ML	.31	9			70	38	.50+
5.80	10.59	.17	1.64	SENSITIVE FINE GRAINED	OL-CH	.17	2	.772	13.5			
6.00	7.01	.10	1.47	SENSITIVE FINE GRAINED	OL-CH	.18	1	.506	13.5			
6.20	5.66	.13	2.25	CLAY	CH	.25	2	.401	13.5			
6.40	5.90	.08	1.40	SENSITIVE FINE GRAINED	OL-CH	.19	1	.423	13.5			
6.60	51.21	.32	.62	SILTY SAND TO SANDY SILT	SM-ML	.36	8			65	37	.32
6.80	32.25	2.20	6.81	CLAY	CH	.27	15	2.369	13.5			
7.00	51.00	2.90	5.69	CLAY	CH	.28	24	3.757	13.5			
7.20	76.56	.00	.00	SAND TO SILTY SAND	SM-SP	.43	9			73	39	.50+
7.40	20.91	.10	.50	SANDY SILT TO CLAYEY SILT	ML-MH	.37	4	1.521	13.5	42	34	.14
7.60	5.41	.13	2.34	CLAY	CH	.30	2	.378	13.5			
7.80	6.15	.21	3.45	CLAY	CH	.31	2	.433	13.5			
8.00	5.41	.19	3.47	CLAY	CH	.32	2	.377	13.5			
8.20	4.92	.17	3.39	CLAY	CH	.33	2	.340	13.5			
8.40	4.55	.21	4.67	CLAY	CH	.34	2	.312	13.5			
8.60	4.68	.21	4.54	CLAY	CH	.34	2	.321	13.5			
8.80	5.04	.24	4.68	CLAY	CH	.35	2	.347	13.5			
9.00	5.90	.25	4.19	CLAY	CH	.36	2	.411	13.5			
9.20	5.90	.25	4.24	CLAY	CH	.37	2	.410	13.5			
9.40	5.65	.30	5.24	CLAY	CH	.38	2	.391	13.5			

9.60	4.92	.23	4.62	CLAY	CH	.38	2	.336	13.5			
9.80	6.15	.25	4.11	CLAY	CH	.39	2	.426	13.5			
10.00	5.91	.19	3.23	CLAY	CH	.40	2	.408	13.5			
10.20	.24	.26	107.22	ORGANIC MATERIAL	OL-OH	.31	1	-.005	13.5			
10.40	5.16	.24	4.56	CLAY	CH	.42	2	.352	13.5			
10.60	5.66	.21	3.76	CLAY	CH	.42	2	.388	13.5			
10.80	6.40	.26	4.06	CLAY	CH	.43	3	.442	13.5			
11.00	5.90	.35	5.93	CLAY	CH	.44	2	.404	13.5			
11.20	15.27	.18	1.15	CLAYEY SILT TO SILTY CLAY	MH-CL	.50	3	1.093	13.5			
11.40	8.36	.25	3.04	CLAY	CH	.46	4	.586	13.5			
11.60	24.43	.32	1.30	CLAYEY SILT TO SILTY CLAY	MH-CL	.52	5	1.771	13.5			
11.80	41.93	.37	.88	SANDY SILT TO CLAYEY SILT	ML-MH	.59	8	3.062	13.5	49	35	.17
12.00	98.36	.19	.19	SAND TO SILTY SAND	SM-SP	.72	11			71	37	.50+
12.20	96.15	.59	.62	SAND TO SILTY SAND	SM-SP	.73	11			70	39	.49
12.40	137.26	.49	.35	SAND TO SILTY SAND	SM-SP	.74	16			82	40	.50+
12.60	123.26	.45	.36	SAND TO SILTY SAND	SM-SP	.76	14			78	40	.50+
12.80	117.33	.56	.48	SAND TO SILTY SAND	SM-SP	.77	14			75	40	.50+
13.00	121.83	.40	.33	SAND TO SILTY SAND	SM-SP	.78	14			76	40	.50+
13.20	133.68	.34	.25	SAND TO SILTY SAND	SM-SP	.79	16			80	40	.50+
13.40	51.87	.45	.86	SILTY SAND TO SANDY SILT	SM-ML	.74	8			50	35	.17
13.60	15.98	.00	.02	SENSITIVE FINE GRAINED	OL-CH	.41	3	1.154	13.5			
13.80	32.47	.12	.38	SANDY SILT TO CLAYEY SILT	ML-MH	.69	6	2.354	13.5	37	33	.14
14.00	25.92	.26	1.01	SANDY SILT TO CLAYEY SILT	ML-MH	.70	4	1.868	13.5	28	32	.12
14.20	37.39	.33	.88	SANDY SILT TO CLAYEY SILT	ML-MH	.71	7	2.717	13.5	41	34	.15
14.40	43.40	.33	.75	SANDY SILT TO CLAYEY SILT	ML-MH	.72	8	3.161	13.5	45	34	.16
14.60	58.45	.14	.24	SILTY SAND TO SANDY SILT	SM-ML	.80	9			52	35	.18
14.80	66.43	.18	.27	SILTY SAND TO SANDY SILT	SM-ML	.81	10			56	36	.20
15.00	51.65	.34	.66	SILTY SAND TO SANDY SILT	SM-ML	.82	8			47	35	.16
15.20	71.97	.38	.53	SILTY SAND TO SANDY SILT	SM-ML	.84	11			59	36	.21
15.40	94.28	.46	.49	SAND TO SILTY SAND	SM-SP	.92	11			64	38	.29
15.60	97.68	.43	.44	SAND TO SILTY SAND	SM-SP	.94	11			65	39	.31
15.80	102.77	.36	.35	SAND TO SILTY SAND	SM-SP	.95	12			66	39	.34
16.00	96.27	.64	.67	SAND TO SILTY SAND	SM-SP	.96	11			64	38	.29
16.20	79.01	.25	.32	SAND TO SILTY SAND	SM-SP	.97	9			58	38	.21



RESULT OF CONE PENETRATION TEST

25M

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

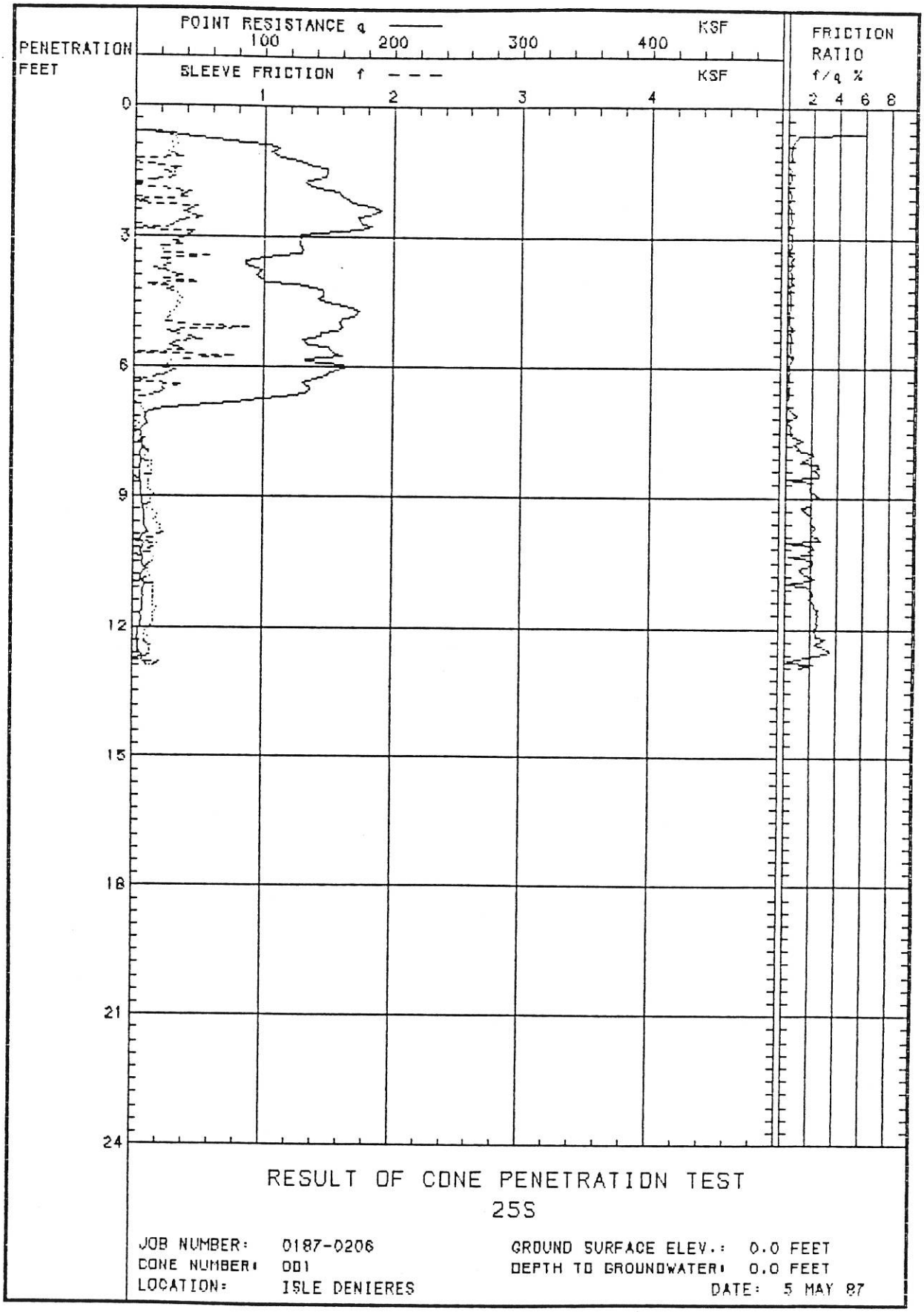
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 25M
CONE NO. : 5006
DATE : 05/04/87

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	156.23	.32	.20	SAND TO SILTY SAND	SM-SP	.04	18			100+	42	.50+
.80	163.88	.38	.23	SAND	SW-SP	.05	15			100+	44	.50+
1.00	167.54	.21	.12	SAND	SW-SP	.06	16			100+	44	.50+
1.20	215.70	.29	.13	SAND	SW-SP	.08	20			100+	44	.50+
1.40	246.95	.41	.17	SAND	SW-SP	.09	23			100+	44	.50+
1.60	219.36	.90	.41	SAND	SW-SP	.10	21			100+	44	.50+
1.80	158.04	.26	.16	SAND	SW-SP	.12	15			100+	44	.50+
2.00	127.33	.23	.18	SAND TO SILTY SAND	SM-SP	.12	15			100+	42	.50+
2.20	147.67	.21	.14	SAND TO SILTY SAND	SM-SP	.13	17			100+	42	.50+
2.40	158.26	.19	.12	SAND	SW-SP	.16	15			100+	44	.50+
2.60	116.55	.29	.25	SAND TO SILTY SAND	SM-SP	.16	13			100+	42	.50+
2.80	108.80	.29	.26	SAND TO SILTY SAND	SM-SP	.17	13			100+	42	.50+
3.00	123.60	.30	.25	SAND TO SILTY SAND	SM-SP	.18	14			100+	42	.50+
3.20	101.31	.35	.34	SAND TO SILTY SAND	SM-SP	.19	12			100+	42	.50+
3.40	113.90	.31	.27	SAND TO SILTY SAND	SM-SP	.20	13			100+	42	.50+
3.60	153.70	.34	.22	SAND TO SILTY SAND	SM-SP	.22	18			100+	42	.50+
3.80	170.42	.38	.23	SAND	SW-SP	.25	16			100+	44	.50+
4.00	191.00	.19	.10	SAND	SW-SP	.26	18			100+	44	.50+
4.20	195.60	.35	.18	SAND	SW-SP	.27	18			100+	44	.50+
4.40	185.10	.29	.16	SAND	SW-SP	.29	17			100+	44	.50+
4.60	159.70	.41	.25	SAND TO SILTY SAND	SM-SP	.28	19			100+	42	.50+
4.80	156.73	.22	.14	SAND	SW-SP	.31	15			100+	44	.50+
5.00	172.01	.99	.58	SAND TO SILTY SAND	SM-SP	.30	20			100+	42	.50+
5.20	142.47	.52	.37	SAND TO SILTY SAND	SM-SP	.31	17			100+	42	.50+
5.40	188.67	.38	.20	SAND	SW-SP	.35	18			100+	44	.50+
5.60	220.06	.39	.18	SAND	SW-SP	.36	21			100+	44	.50+
5.80	263.83	.79	.30	SAND	SW-SP	.38	25			100+	44	.50+
6.00	241.93	.22	.09	SAND	SW-SP	.39	23			100+	44	.50+
6.20	189.39	.22	.11	SAND	SW-SP	.40	18			100+	44	.50+
6.40	103.32	.26	.26	SAND TO SILTY SAND	SM-SP	.38	12			85	41	.50+
6.60	22.59	.23	1.00	SANDY SILT TO CLAYEY SILT	ML-MH	.33	4	1.649	13.5	46	34	.15
6.80	9.56	.16	1.68	SENSITIVE FINE GRAINED	OL-CH	.20	2	.693	13.5			
7.00	6.78	.16	2.40	CLAY	CH	.28	3	.492	13.5			
7.20	6.69	.16	2.37	CLAY	CH	.29	3	.475	13.5			
7.40	8.01	.18	2.28	CLAY	CH	.30	3	.571	13.5			
7.60	8.37	.20	2.42	CLAY	CH	.30	4	.597	13.5			
7.80	8.61	.17	2.01	CLAY	CH	.31	4	.614	13.5			
8.00	8.01	.19	2.40	CLAY	CH	.32	3	.569	13.5			
8.20	7.41	.17	2.26	CLAY	CH	.33	3	.525	13.5			
8.40	8.07	.22	2.72	CLAY	CH	.34	3	.573	13.5			
8.60	8.25	.22	2.66	CLAY	CH	.34	3	.585	13.5			
8.80	8.13	.23	2.86	CLAY	CH	.35	3	.576	13.5			
9.00	8.61	.21	2.41	CLAY	CH	.36	4	.611	13.5			
9.20	8.25	.24	2.89	CLAY	CH	.37	3	.584	13.5			
9.40	8.43	.21	2.51	CLAY	CH	.38	4	.596	13.5			

9.60	7.89	.20	2.51	CLAY	CH	.38	3	.556	13.5				
9.80	8.24	.15	1.76	SENSITIVE FINE GRAINED	OL-CH	.29	1	.589	13.5				
10.00	15.10	.22	1.44	CLAYEY SILT TO SILTY CLAY	MH-CL	.45	3	1.085	13.5				
10.20	11.06	.22	1.98	SILTY CLAY TO CLAY	CL-CH	.41	3	.789	13.5				
10.40	10.29	.21	2.07	SILTY CLAY TO CLAY	CL-CH	.42	3	.731	13.5				
10.60	9.08	.12	1.27	SENSITIVE FINE GRAINED	OL-CH	.32	2	.649	13.5				
10.80	8.61	.24	2.82	CLAY	CH	.43	4	.606	13.5				
11.00	12.40	.25	2.02	SILTY CLAY TO CLAY	CL-CH	.44	3	.886	13.5				
11.20	6.45	.18	2.83	CLAY	CH	.45	3	.445	13.5				
11.40	7.17	.21	2.93	CLAY	CH	.46	3	.497	13.5				
11.60	10.03	.25	2.53	CLAY	CH	.46	4	.709	13.5				
11.80	10.28	.25	2.46	CLAY	CH	.47	4	.727	13.5				
12.00	10.99	.26	2.36	SILTY CLAY TO CLAY	CL-CH	.48	3	.779	13.5				
12.20	8.50	.24	2.86	CLAY	CH	.49	4	.593	13.5				
12.40	8.01	.21	2.60	CLAY	CH	.50	3	.557	13.5				
12.60	7.95	.24	2.96	CLAY	CH	.50	3	.552	13.5				
12.80	7.88	.22	2.78	CLAY	CH	.51	3	.546	13.5				
13.00	9.91	.16	1.59	SENSITIVE FINE GRAINED	OL-CH	.39	2	.706	13.5				
13.20	10.66	.18	1.73	SILTY CLAY TO CLAY	CL-CH	.53	3	.750	13.5				
13.40	8.25	.16	1.93	CLAY	CH	.54	3	.571	13.5				
13.60	19.55	.36	1.84	CLAYEY SILT TO SILTY CLAY	MH-CL	.61	4	1.403	13.5				
13.80	40.74	.33	.81	SANDY SILT TO CLAYEY SILT	ML-MH	.69	7	2.967	13.5	44	34	.15	
14.00	102.32	.28	.28	SAND TO SILTY SAND	SM-SP	.84	12			68	39	.44	
14.20	80.96	.26	.32	SAND TO SILTY SAND	SM-SP	.85	9			62	38	.24	
14.40	56.74	.15	.26	SILTY SAND TO SANDY SILT	SM-ML	.79	9			51	35	.18	
14.60	38.09	.18	.47	SANDY SILT TO CLAYEY SILT	ML-MH	.73	7	2.768	13.5	41	34	.15	
14.80	25.98	.21	.81	SANDY SILT TO CLAYEY SILT	ML-MH	.74	4	1.869	13.5	27	32	.12	
15.00	30.22	.03	.11	SANDY SILT TO CLAYEY SILT	ML-MH	.75	5	2.183	13.5	32	33	.13	
15.20	45.66	.22	.49	SILTY SAND TO SANDY SILT	SM-ML	.84	7			43	34	.15	
15.40	51.06	.38	.75	SILTY SAND TO SANDY SILT	SM-ML	.85	8			46	34	.16	
15.60	65.78	.26	.40	SILTY SAND TO SANDY SILT	SM-ML	.86	10			54	36	.17	
15.80	75.21	.25	.33	SILTY SAND TO SANDY SILT	SM-ML	.87	12			60	36	.21	
16.00	60.15	.13	.21	SILTY SAND TO SANDY SILT	SM-ML	.88	9			50	35	.17	
16.20	60.17	.24	.40	SILTY SAND TO SANDY SILT	SM-ML	.89	9			50	35	.17	
16.40	66.31	.13	.20	SILTY SAND TO SANDY SILT	SM-ML	.90	10			53	35	.18	
16.60	76.04	.21	.28	SAND TO SILTY SAND	SM-SP	1.00	9			55	37	.20	
16.80	95.39	.28	.29	SAND TO SILTY SAND	SM-SP	1.01	11			63	33	.26	
17.00	85.48	.22	.26	SAND TO SILTY SAND	SM-SP	1.02	10			60	38	.22	
17.20	80.09	.34	.43	SILTY SAND TO SANDY SILT	SM-ML	.95	12			59	36	.22	
17.40	98.00	.26	.27	SAND TO SILTY SAND	SM-SP	1.04	11			63	38	.26	
17.60	97.73	.26	.27	SAND TO SILTY SAND	SM-SP	1.06	11			62	38	.26	
17.80	95.25	.31	.33	SAND TO SILTY SAND	SM-SP	1.07	11			61	38	.24	
18.00	95.77	.28	.29	SAND TO SILTY SAND	SM-SP	1.08	11			61	38	.24	
18.20	88.38	.33	.38	SAND TO SILTY SAND	SM-SP	1.09	10			59	38	.21	
18.40	83.90	.20	.24	SAND TO SILTY SAND	SM-SP	1.10	10			56	38	.20	
18.60	104.02	.20	.19	SAND TO SILTY SAND	SM-SP	1.12	12			63	38	.27	
18.80	126.16	.42	.33	SAND TO SILTY SAND	SM-SP	1.13	15			69	39	.44	
19.00	114.75	.24	.21	SAND TO SILTY SAND	SM-SP	1.14	13			65	39	.33	
19.20	113.24	.18	.16	SAND TO SILTY SAND	SM-SP	1.15	13			65	39	.31	
19.40	80.02	.53	.67	SILTY SAND TO SANDY SILT	SM-ML	1.07	12			55	36	.20	
19.60	65.88	.21	.31	SILTY SAND TO SANDY SILT	SM-ML	1.08	10			48	35	.17	
19.80	71.43	.25	.34	SILTY SAND TO SANDY SILT	SM-ML	1.09	11			50	35	.18	
20.00	72.18	.20	.27	SILTY SAND TO SANDY SILT	SM-ML	1.10	11			50	35	.18	



RESULT OF CONE PENETRATION TEST

25S

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

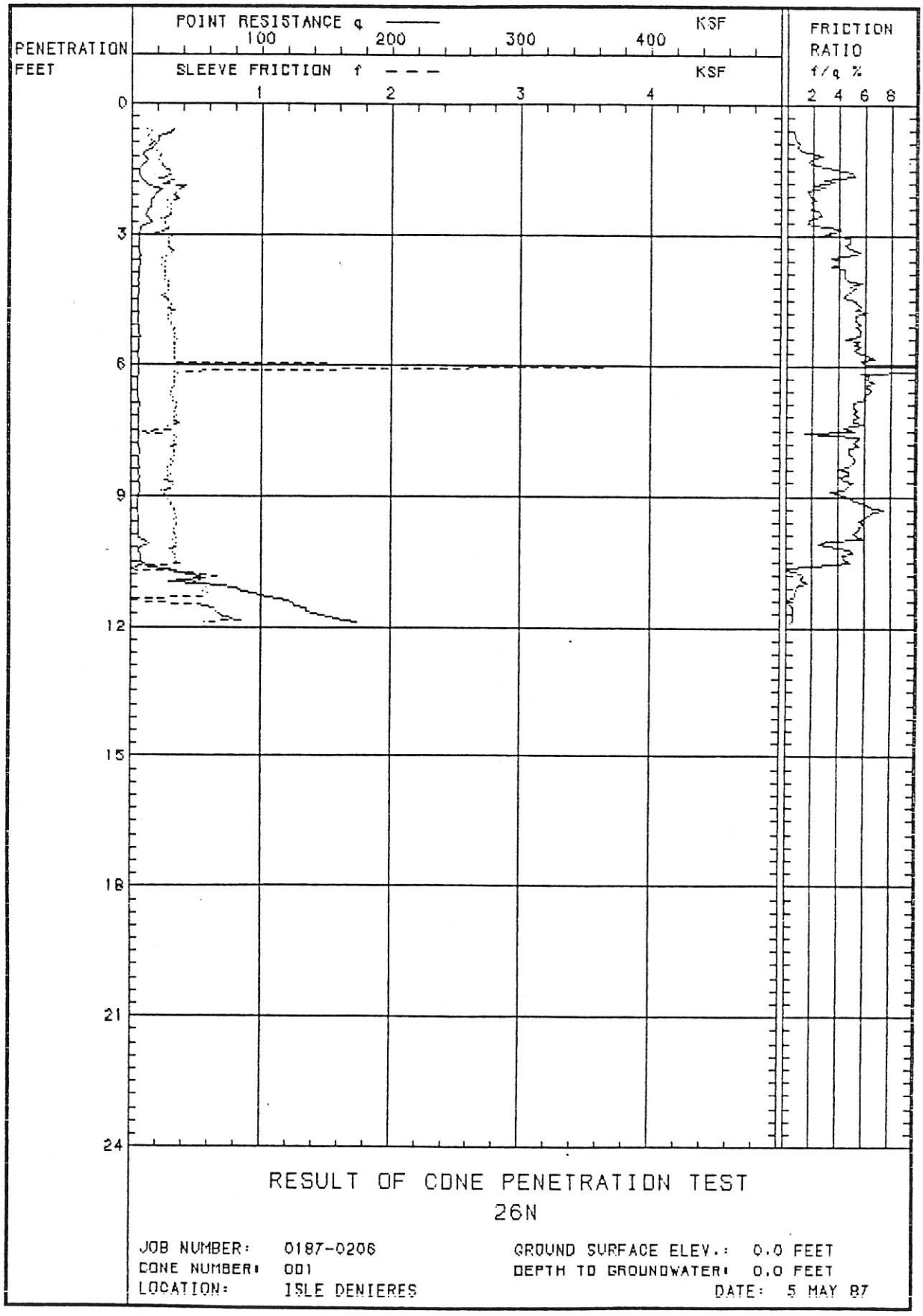
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 25S
CONE NO. : 001
DATE : 05/04/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	15.25	.21	1.35	CLAYEY SILT TO SILTY CLAY	MH-CL	.03	3	1.127	13.5			
.80	73.54	.30	.41	SILTY SAND TO SANDY SILT	SM-ML	.04	11			100+	42	.50+
1.00	108.35	.35	.32	SAND TO SILTY SAND	SM-SP	.06	12			100+	42	.50+
1.20	116.83	.18	.16	SAND TO SILTY SAND	SM-SP	.07	13			100+	42	.50+
1.40	143.88	.20	.14	SAND TO SILTY SAND	SM-SP	.08	17			100+	42	.50+
1.60	148.56	1.14	.77	SAND TO SILTY SAND	SM-SP	.10	17			100+	42	.50+
1.80	134.57	.19	.14	SAND TO SILTY SAND	SM-SP	.11	16			100+	42	.50+
2.00	158.89	.43	.27	SAND TO SILTY SAND	SM-SP	.12	19			100+	42	.50+
2.20	167.75	.04	.02	SAND	SW-SP	.14	16			100+	44	.50+
2.40	190.14	3.66	1.93	SILTY SAND TO SANDY SILT	SM-ML	.13	30			100+	42	.50+
2.60	173.53	.46	.27	SAND	SW-SP	.17	16			100+	44	.50+
2.80	179.32	.15	.08	SAND	SW-SP	.18	17			100+	44	.50+
3.00	128.39	.35	.27	SAND TO SILTY SAND	SM-SP	.18	15			100+	42	.50+
3.20	128.64	.28	.22	SAND TO SILTY SAND	SM-SP	.19	15			100+	42	.50+
3.40	120.32	.23	.19	SAND TO SILTY SAND	SM-SP	.20	14			100+	42	.50+
3.60	86.09	.26	.31	SAND TO SILTY SAND	SM-SP	.22	10			90	41	.50+
3.80	97.65	.14	.14	SAND TO SILTY SAND	SM-SP	.23	11			94	42	.50+
4.00	100.41	.42	.42	SAND TO SILTY SAND	SM-SP	.24	12			94	42	.50+
4.20	141.90	.28	.20	SAND TO SILTY SAND	SM-SP	.25	16			100+	42	.50+
4.40	144.15	.39	.27	SAND TO SILTY SAND	SM-SP	.26	17			100+	42	.50+
4.60	161.81	.34	.21	SAND	SW-SP	.30	15			100+	44	.50+
4.80	171.94	.45	.26	SAND	SW-SP	.31	16			100+	44	.50+
5.00	159.51	.49	.30	SAND TO SILTY SAND	SM-SP	.30	19			100+	42	.50+
5.20	150.58	.13	.09	SAND TO SILTY SAND	SM-SP	.31	18			100+	42	.50+
5.40	131.09	.33	.25	SAND TO SILTY SAND	SM-SP	.32	15			100+	42	.50+
5.60	151.01	.35	.23	SAND TO SILTY SAND	SM-SP	.34	18			100+	42	.50+
5.80	147.20	.61	.41	SAND TO SILTY SAND	SM-SP	.35	17			100+	42	.50+
6.00	162.33	.24	.15	SAND	SW-SP	.39	15			100+	44	.50+
6.20	149.55	.19	.13	SAND TO SILTY SAND	SM-SP	.37	17			100+	42	.50+
6.40	131.33	.05	.04	SAND TO SILTY SAND	SM-SP	.38	15			95	42	.50+
6.60	133.82	.21	.16	SAND TO SILTY SAND	SM-SP	.40	16			95	42	.50+
6.80	87.90	.01	.02	SAND TO SILTY SAND	SM-SP	.41	10			79	40	.50+
7.00	21.69	.08	.35	SANDY SILT TO CLAYEY SILT	ML-MH	.35	4	1.581	13.5	44	34	.14
7.20	9.23	.02	.24	SENSITIVE FINE GRAINED	OL-CH	.22	2	.668	13.5			
7.40	9.12	.03	.34	SENSITIVE FINE GRAINED	OL-CH	.22	2	.659	13.5			
7.60	5.90	.02	.37	SENSITIVE FINE GRAINED	OL-CH	.23	1	.420	13.5			
7.80	6.89	.07	1.06	SENSITIVE FINE GRAINED	OL-CH	.23	1	.493	13.5			
8.00	5.66	.12	2.04	SENSITIVE FINE GRAINED	OL-CH	.24	1	.401	13.5			
8.20	5.78	.09	1.47	SENSITIVE FINE GRAINED	OL-CH	.25	1	.410	13.5			
8.40	5.41	.13	2.36	CLAY	CH	.34	2	.376	13.5			
8.60	5.41	.06	1.05	SENSITIVE FINE GRAINED	OL-CH	.26	1	.382	13.5			
8.80	5.90	.11	1.94	SENSITIVE FINE GRAINED	OL-CH	.26	1	.418	13.5			
9.00	6.64	.20	3.00	CLAY	CH	.36	3	.465	13.5			
9.20	7.25	.10	1.39	SENSITIVE FINE GRAINED	OL-CH	.28	1	.517	13.5			
9.40	8.85	.19	2.10	CLAY	CH	.38	4	.628	13.5			

9.60	8.48	.17	2.03	CLAY	CH	.38	4	.600	13.5
9.80	11.06	.23	2.06	SILTY CLAY TO CLAY	CL-CH	.39	3	.790	13.5
10.00	5.90	.08	1.38	SENSITIVE FINE GRAINED	OL-CH	.30	1	.415	13.5
10.20	6.89	.14	2.01	SENSITIVE FINE GRAINED	OL-CH	.31	1	.488	13.5
10.40	7.37	.09	1.21	SENSITIVE FINE GRAINED	OL-CH	.31	1	.523	13.5
10.60	7.61	.13	1.72	SENSITIVE FINE GRAINED	OL-CH	.32	1	.540	13.5
10.80	6.65	.13	1.90	SENSITIVE FINE GRAINED	OL-CH	.32	1	.469	13.5
11.00	8.59	.08	.93	SENSITIVE FINE GRAINED	OL-CH	.33	2	.612	13.5
11.20	7.38	.16	2.18	CLAY	CH	.45	3	.513	13.5
11.40	7.63	.13	1.71	SENSITIVE FINE GRAINED	OL-CH	.34	1	.540	13.5
11.60	7.38	.31	4.21	CLAY	CH	.46	3	.512	13.5
11.80	6.76	.16	2.41	CLAY	CH	.47	3	.466	13.5
12.00	5.66	.13	2.28	CLAY	CH	.48	2	.394	13.5
12.20	3.81	.09	2.44	CLAY	CH	.49	1	.246	13.5
12.40	4.18	.12	2.78	CLAY	CH	.50	2	.273	13.5
12.60	6.12	.30	4.92	CLAY	CH	.50	2	.416	13.5
12.80	7.97	.03	.41	SENSITIVE FINE GRAINED	OL-CH	.38	1	.562	13.5



RESULT OF CONE PENETRATION TEST

26N

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

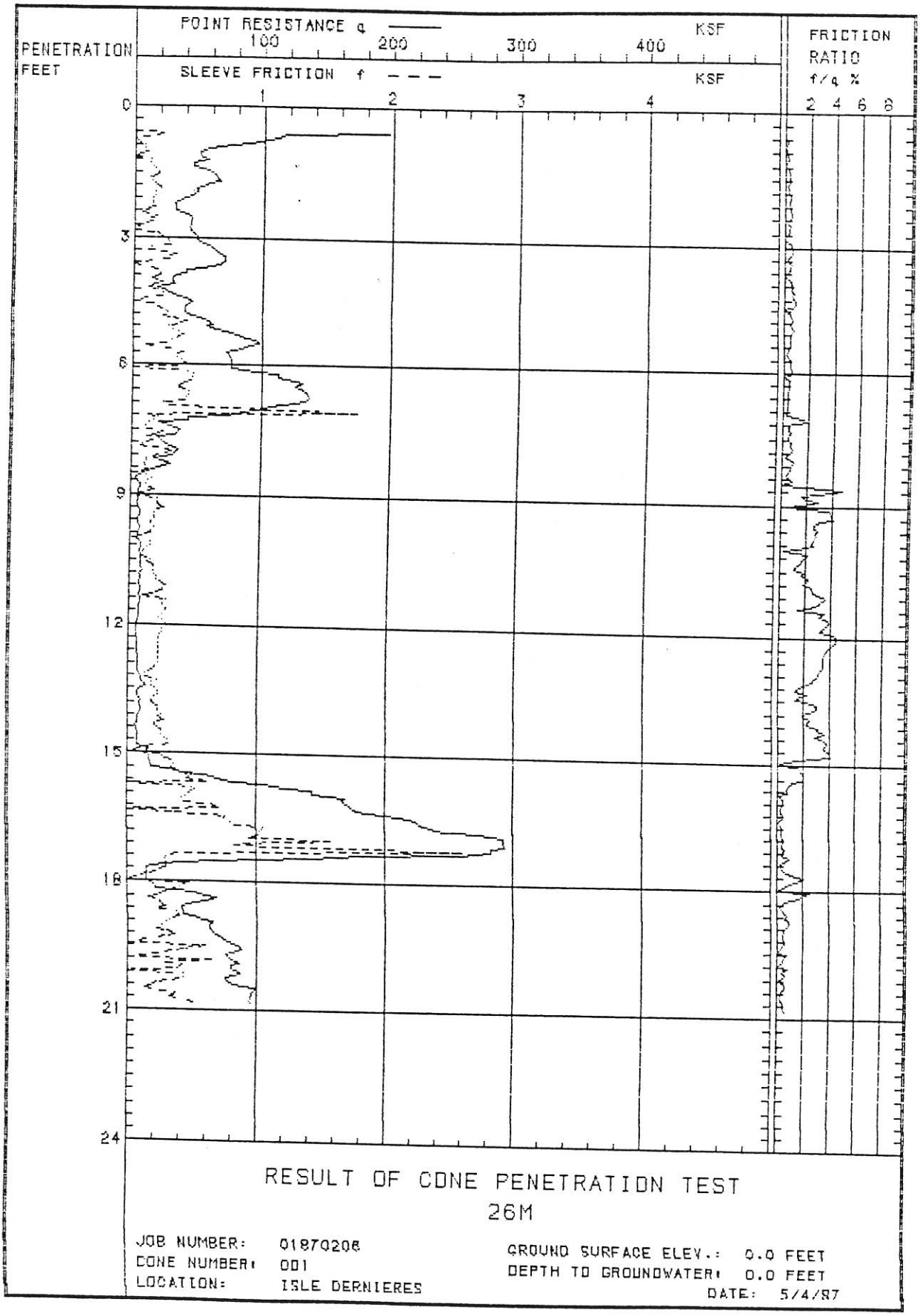
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 26N
CONE NO. : 001
DATE : 05/04/87

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	32.22	.14	.42	SANDY SILT TO CLAYEY SILT	ML-MH	.03	6	2.385	13.5	72	38	.50+
.80	20.91	.14	.67	SANDY SILT TO CLAYEY SILT	ML-MH	.04	4	1.546	13.5	63	37	.50+
1.00	16.48	.17	1.00	CLAYEY SILT TO SILTY CLAY	MH-CL	.05	3	1.217	13.5			
1.20	9.47	.22	2.37	CLAY	CH	.05	4	.698	13.5			
1.40	9.10	.23	2.52	CLAY	CH	.06	4	.670	13.5			
1.60	5.90	.28	4.79	CLAY	CH	.06	2	.433	13.5			
1.80	10.33	.28	2.75	CLAY	CH	.07	4	.760	13.5			
2.00	21.40	.33	1.53	CLAYEY SILT TO SILTY CLAY	MH-CL	.09	5	1.579	13.5			
2.20	15.99	.29	1.80	CLAYEY SILT TO SILTY CLAY	MH-CL	.10	3	1.177	13.5			
2.40	14.02	.29	2.07	SILTY CLAY TO CLAY	CL-CH	.10	4	1.032	13.5			
2.60	12.54	.29	2.30	SILTY CLAY TO CLAY	CL-CH	.10	4	.921	13.5			
2.80	10.10	.27	2.68	CLAY	CH	.11	4	.740	13.5			
3.00	6.40	.25	3.87	CLAY	CH	.12	3	.465	13.5			
3.20	6.15	.28	4.61	CLAY	CH	.13	2	.446	13.5			
3.40	5.90	.30	5.02	CLAY	CH	.14	2	.427	13.5			
3.60	6.33	.26	4.15	CLAY	CH	.14	3	.458	13.5			
3.80	5.90	.26	4.40	CLAY	CH	.15	2	.426	13.5			
4.00	5.66	.27	4.71	CLAY	CH	.16	2	.407	13.5			
4.20	5.66	.28	5.01	CLAY	CH	.17	2	.407	13.5			
4.40	5.66	.26	4.61	CLAY	CH	.18	2	.406	13.5			
4.60	5.41	.30	5.47	CLAY	CH	.18	2	.387	13.5			
4.80	5.66	.38	6.74	ORGANIC MATERIAL	OL-OH	.14	2	.408	13.5			
5.00	5.41	.30	5.58	CLAY	CH	.20	2	.386	13.5			
5.20	5.90	.33	5.61	CLAY	CH	.21	2	.422	13.5			
5.40	6.89	.34	4.99	CLAY	CH	.22	3	.494	13.5			
5.60	6.15	.33	5.40	CLAY	CH	.22	2	.439	13.5			
5.80	5.17	.33	6.42	ORGANIC MATERIAL	OL-OH	.17	2	.370	13.5			
6.00	5.90	1.98	33.53	ORGANIC MATERIAL	OL-OH	.18	2	.424	13.5			
6.20	5.78	.33	5.75	CLAY	CH	.25	2	.410	13.5			
6.40	5.16	.33	6.44	ORGANIC MATERIAL	OL-OH	.19	2	.368	13.5			
6.60	4.92	.31	6.30	ORGANIC MATERIAL	OL-OH	.20	2	.350	13.5			
6.80	5.90	.33	5.61	CLAY	CH	.27	2	.417	13.5			
7.00	6.64	.32	4.84	CLAY	CH	.28	3	.471	13.5			
7.20	6.40	.33	5.18	CLAY	CH	.29	3	.452	13.5			
7.40	6.40	.33	5.19	CLAY	CH	.30	3	.452	13.5			
7.60	6.15	.21	3.41	CLAY	CH	.30	2	.433	13.5			
7.80	6.40	.34	5.36	CLAY	CH	.31	3	.451	13.5			
8.00	6.89	.33	4.81	CLAY	CH	.32	3	.486	13.5			
8.20	6.15	.32	5.19	CLAY	CH	.33	2	.431	13.5			
8.40	6.40	.28	4.42	CLAY	CH	.34	3	.449	13.5			
8.60	6.40	.27	4.24	CLAY	CH	.34	3	.449	13.5			
8.80	6.89	.32	4.64	CLAY	CH	.35	3	.484	13.5			
9.00	5.90	.27	4.64	CLAY	CH	.36	2	.411	13.5			
9.20	4.92	.31	6.28	ORGANIC MATERIAL	OL-OH	.28	2	.344	13.5			
9.40	5.16	.32	6.23	ORGANIC MATERIAL	OL-OH	.28	2	.361	13.5			

9.60	5.90	.36	6.03	CLAY	CH	.38	2	.409	13.5			
9.80	6.15	.33	5.40	CLAY	CH	.39	2	.426	13.5			
10.00	7.96	.35	4.40	CLAY	CH	.40	3	.560	13.5			
10.20	7.64	.33	4.33	CLAY	CH	.41	3	.536	13.5			
10.40	7.87	.33	4.23	CLAY	CH	.42	3	.552	13.5			
10.60	11.72	.09	.80	SENSITIVE FINE GRAINED	OL-CH	.32	2	.845	13.5			
10.80	45.62	.37	.82	SANDY SILT TO CLAYEY SILT	ML-MH	.54	8	3.339	13.5	54	36	.18
11.00	42.41	.70	1.66	SANDY SILT TO CLAYEY SILT	ML-MH	.55	8	3.101	13.5	51	35	.17
11.20	90.69	.58	.64	SAND TO SILTY SAND	SM-SP	.67	10			69	39	.49
11.40	119.21	.06	.05	SAND TO SILTY SAND	SM-SP	.68	14			79	40	.50+
11.60	135.28	.65	.48	SAND TO SILTY SAND	SM-SP	.70	16			82	40	.50+
11.80	158.30	.80	.50	SAND TO SILTY SAND	SM-SP	.71	18			87	41	.50+



RESULT OF CONE PENETRATION TEST

26M

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

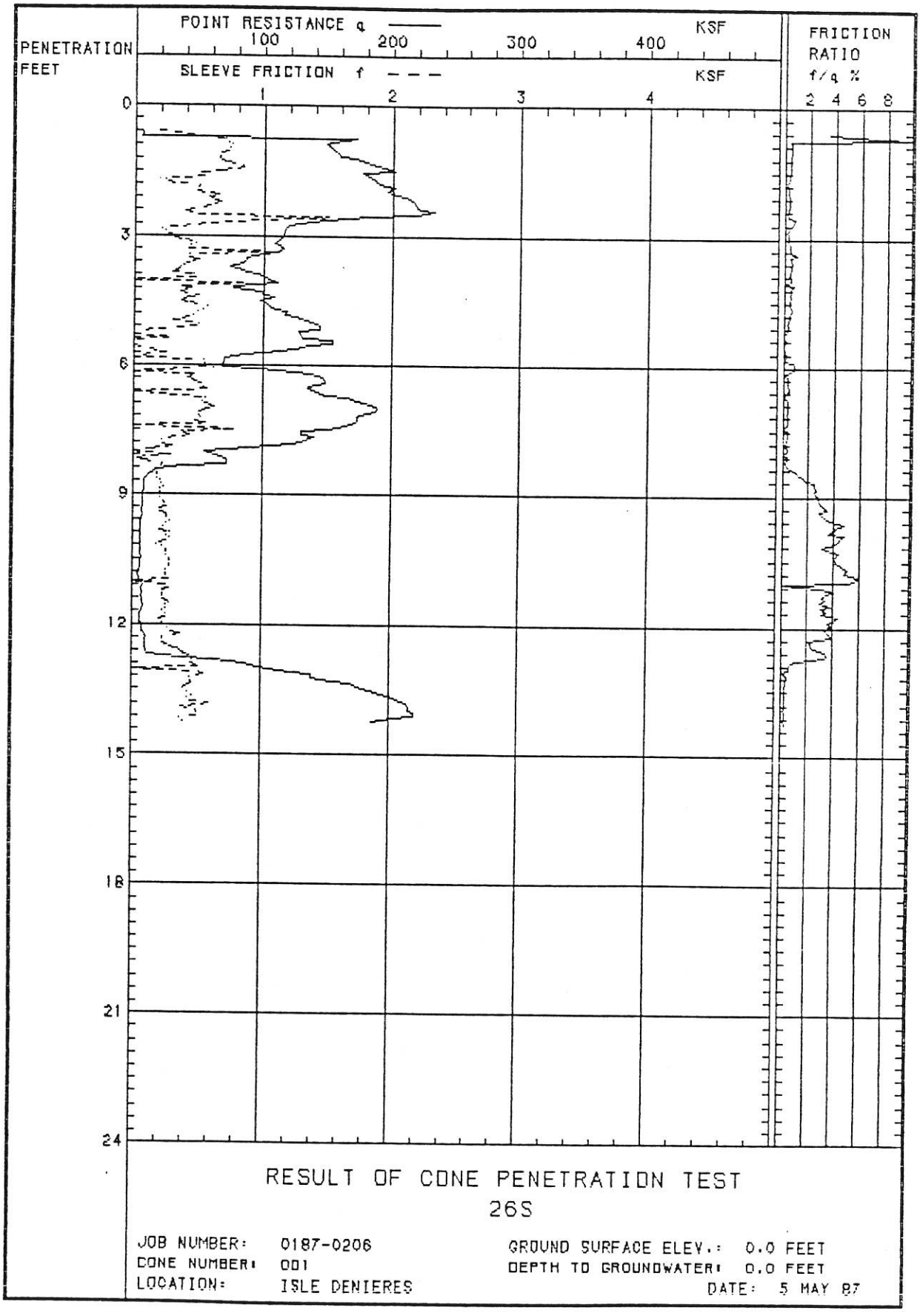
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5/4/87

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

PROJECT NO. : 01870206
BORING NO. : 26M
CONE NO. : 001
DATE : 05/04/87

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	157.18	.11	.07	SAND	SW-SP	.04	15			100+	44	.50+
.80	97.04	.02	.02	SAND TO SILTY SAND	SM-SP	.05	11			100+	42	.50+
1.00	54.12	.09	.16	SILTY SAND TO SANDY SILT	SM-ML	.05	8			87	40	.50+
1.20	54.11	.06	.12	SILTY SAND TO SANDY SILT	SM-ML	.07	8			85	40	.50+
1.40	48.94	.15	.31	SILTY SAND TO SANDY SILT	SM-ML	.08	7			79	39	.50+
1.60	62.84	.13	.21	SILTY SAND TO SANDY SILT	SM-ML	.09	10			89	41	.50+
1.80	55.47	.16	.29	SILTY SAND TO SANDY SILT	SM-ML	.10	8			82	40	.50+
2.00	46.74	.16	.34	SILTY SAND TO SANDY SILT	SM-ML	.11	7			76	39	.50+
2.20	32.72	.15	.47	SANDY SILT TO CLAYEY SILT	ML-MH	.11	6	2.415	13.5	67	37	.50+
2.40	34.43	.08	.24	SANDY SILT TO CLAYEY SILT	ML-MH	.12	6	2.541	13.5	67	37	.50+
2.60	43.78	.19	.44	SILTY SAND TO SANDY SILT	SM-ML	.14	6			71	38	.50+
2.80	43.04	.10	.24	SILTY SAND TO SANDY SILT	SM-ML	.15	6			70	38	.50+
3.00	48.70	.24	.49	SILTY SAND TO SANDY SILT	SM-ML	.17	7			73	38	.50+
3.20	58.53	.24	.41	SILTY SAND TO SANDY SILT	SM-ML	.18	9			78	39	.50+
3.40	67.88	.30	.44	SILTY SAND TO SANDY SILT	SM-ML	.19	10			82	40	.50+
3.60	68.39	.00	.00	SAND TO SILTY SAND	SM-SP	.22	8			81	40	.50+
3.80	41.32	.20	.49	SILTY SAND TO SANDY SILT	SM-ML	.21	6			66	37	.50+
4.00	30.01	.09	.31	SANDY SILT TO CLAYEY SILT	ML-MH	.20	5	2.208	13.5	61	37	.25
4.20	21.02	.24	1.15	CLAYEY SILT TO SILTY CLAY	MH-CL	.19	5	1.543	13.5			
4.40	38.11	.11	.30	SILTY SAND TO SANDY SILT	SM-ML	.24	6			63	37	.31
4.60	41.33	.14	.33	SILTY SAND TO SANDY SILT	SM-ML	.25	6			64	37	.36
4.80	42.53	.25	.59	SILTY SAND TO SANDY SILT	SM-ML	.26	6			64	37	.36
5.00	59.76	.31	.52	SILTY SAND TO SANDY SILT	SM-ML	.27	9			73	38	.50+
5.20	68.04	.37	.55	SILTY SAND TO SANDY SILT	SM-ML	.29	10			76	39	.50+
5.40	91.72	.28	.31	SAND TO SILTY SAND	SM-SP	.32	10			84	41	.50+
5.60	87.47	.40	.46	SAND TO SILTY SAND	SM-SP	.34	10			82	40	.50+
5.80	74.40	.35	.48	SILTY SAND TO SANDY SILT	SM-ML	.32	11			77	39	.50+
6.00	76.25	.31	.41	SILTY SAND TO SANDY SILT	SM-ML	.33	12			78	39	.50+
6.20	104.71	.45	.43	SAND TO SILTY SAND	SM-SP	.37	12			86	41	.50+
6.40	128.61	.36	.28	SAND TO SILTY SAND	SM-SP	.38	15			94	42	.50+
6.60	132.31	.43	.32	SAND TO SILTY SAND	SM-SP	.40	15			95	42	.50+
6.80	135.78	.41	.31	SAND TO SILTY SAND	SM-SP	.41	16			95	42	.50+
7.00	105.04	.60	.57	SAND TO SILTY SAND	SM-SP	.42	12			84	41	.50+
7.20	58.94	.16	.28	SILTY SAND TO SANDY SILT	SM-ML	.40	9			67	37	.40
7.40	25.29	.13	.51	SANDY SILT TO CLAYEY SILT	ML-MH	.37	4	1.846	13.5	46	34	.15
7.60	34.69	.22	.65	SANDY SILT TO CLAYEY SILT	ML-MH	.38	6	2.542	13.5	54	36	.18
7.80	24.46	.13	.55	SANDY SILT TO CLAYEY SILT	ML-MH	.39	4	1.783	13.5	44	34	.15
8.00	35.92	.19	.53	SANDY SILT TO CLAYEY SILT	ML-MH	.40	6	2.631	13.5	53	36	.18
8.20	21.06	.21	.98	CLAYEY SILT TO SILTY CLAY	MH-CL	.37	5	1.532	13.5			
8.40	21.21	.12	.59	SANDY SILT TO CLAYEY SILT	ML-MH	.42	4	1.540	13.5	40	34	.13
8.60	5.19	.14	2.69	CLAY	CH	.34	2	.359	13.5			
8.80	7.38	.13	1.72	SENSITIVE FINE GRAINED	OL-CH	.26	1	.527	13.5			
9.00	5.90	.05	.78	SENSITIVE FINE GRAINED	OL-CH	.27	1	.417	13.5			
9.20	5.41	.21	3.89	CLAY	CH	.37	2	.374	13.5			
9.40	7.13	.20	2.79	CLAY	CH	.38	3	.500	13.5			

9.60	6.27	.18	2.89	CLAY	CH	.38	3	.436	13.5			
9.80	7.14	.18	2.45	CLAY	CH	.39	3	.500	13.5			
10.00	6.40	.10	1.62	SENSITIVE FINE GRAINED	OL-CH	.30	1	.451	13.5			
10.20	8.36	.15	1.79	SENSITIVE FINE GRAINED	OL-CH	.31	2	.597	13.5			
10.40	8.11	.04	.54	SENSITIVE FINE GRAINED	OL-CH	.31	1	.578	13.5			
10.60	8.36	.16	1.91	SILTY CLAY TO CLAY	CL-CH	.42	2	.588	13.5			
10.80	9.12	.20	2.17	CLAY	CH	.43	4	.644	13.5			
11.00	8.00	.23	2.84	CLAY	CH	.44	3	.560	13.5			
11.20	8.36	.26	3.08	CLAY	CH	.45	4	.586	13.5			
11.40	7.99	.15	1.86	SENSITIVE FINE GRAINED	OL-CH	.34	1	.567	13.5			
11.60	7.38	.27	3.66	CLAY	CH	.46	3	.512	13.5			
11.80	7.38	.20	2.74	CLAY	CH	.47	3	.512	13.5			
12.00	6.15	.27	4.41	CLAY	CH	.48	2	.420	13.5			
12.20	6.40	.19	2.98	CLAY	CH	.49	3	.438	13.5			
12.40	6.76	.23	3.47	CLAY	CH	.50	3	.464	13.5			
12.60	6.89	.23	3.40	CLAY	CH	.50	3	.473	13.5			
12.80	7.50	.23	3.12	CLAY	CH	.51	3	.518	13.5			
13.00	7.87	.21	2.66	CLAY	CH	.52	3	.545	13.5			
13.20	9.33	.14	1.45	SENSITIVE FINE GRAINED	OL-CH	.40	2	.662	13.5			
13.40	12.51	.18	1.48	SENSITIVE FINE GRAINED	OL-CH	.40	2	.897	13.5			
13.60	7.87	.23	2.96	CLAY	CH	.54	3	.543	13.5			
13.80	9.72	.20	2.02	SILTY CLAY TO CLAY	CL-CH	.55	3	.679	13.5			
14.00	10.33	.23	2.26	SILTY CLAY TO CLAY	CL-CH	.56	3	.724	13.5			
14.20	7.87	.26	3.28	CLAY	CH	.57	3	.541	13.5			
14.40	6.64	.23	3.52	CLAY	CH	.58	3	.449	13.5			
14.60	7.50	.27	3.60	CLAY	CH	.58	3	.512	13.5			
14.80	7.63	.26	3.46	CLAY	CH	.59	3	.521	13.5			
15.00	14.99	.07	.45	SENSITIVE FINE GRAINED	OL-CH	.45	3	1.077	13.5			
15.20	17.46	.35	1.98	CLAYEY SILT TO SILTY CLAY	MH-CL	.68	4	1.243	13.5			
15.40	37.52	.39	1.03	SANDY SILT TO CLAYEY SILT	ML-MH	.77	7	2.722	13.5	39	34	.14
15.60	75.13	.54	.71	SILTY SAND TO SANDY SILT	SM-ML	.86	11			60	36	.22
15.80	133.07	.51	.38	SAND TO SILTY SAND	SM-SP	.95	15			75	40	.50+
16.00	168.14	.44	.26	SAND	SW-SP	1.04	16			81	42	.50+
16.20	174.11	.68	.39	SAND TO SILTY SAND	SM-SP	.97	20			83	41	.50+
16.40	210.08	.42	.20	SAND	SW-SP	1.07	20			87	43	.50+
16.60	231.59	.82	.35	SAND	SW-SP	1.08	22			90	43	.50+
16.80	262.70	2.56	.97	SAND TO SILTY SAND	SM-SP	1.01	31			97	42	.50+
17.00	292.21	1.44	.49	SAND	SW-SP	1.10	27			99	44	.50+
17.20	282.86	1.70	.60	SAND	SW-SP	1.12	27			97	44	.50+
17.40	162.99	.37	.23	SAND	SW-SP	1.13	15			78	42	.38
17.60	30.53	.25	.83	SANDY SILT TO CLAYEY SILT	ML-MH	.88	5	2.196	13.5	28	32	.12
17.80	15.12	.19	1.27	CLAYEY SILT TO SILTY CLAY	MH-CL	.80	3	1.061	13.5			
18.00	16.93	.10	.59	SENSITIVE FINE GRAINED	OL-CH	.54	4	1.214	13.5			
18.20	36.74	.34	.93	SANDY SILT TO CLAYEY SILT	ML-MH	.91	7	2.654	13.5	33	33	.13
18.40	65.17	.19	.29	SILTY SAND TO SANDY SILT	SM-ML	1.01	10			49	35	.17
18.60	42.55	.28	.65	SANDY SILT TO CLAYEY SILT	ML-MH	.93	8	3.083	13.5	38	33	.14
18.80	47.37	.27	.57	SILTY SAND TO SANDY SILT	SM-ML	1.03	7			39	33	.14
19.00	65.22	.31	.47	SILTY SAND TO SANDY SILT	SM-ML	1.04	10			48	35	.17
19.20	66.69	.36	.55	SILTY SAND TO SANDY SILT	SM-ML	1.06	10			49	35	.17
19.40	77.88	.20	.26	SAND TO SILTY SAND	SM-SP	1.16	9			52	37	.18
19.60	86.88	.20	.23	SAND TO SILTY SAND	SM-SP	1.18	10			56	38	.20
19.80	79.17	.52	.66	SILTY SAND TO SANDY SILT	SM-ML	1.09	12			54	36	.19
20.00	80.19	.39	.49	SILTY SAND TO SANDY SILT	SM-ML	1.10	12			54	36	.19
20.20	81.83	.44	.53	SILTY SAND TO SANDY SILT	SM-ML	1.11	13			55	36	.20
20.40	83.24	.12	.14	SAND TO SILTY SAND	SM-SP	1.22	9			53	37	.19
20.60	96.81	.31	.32	SAND TO SILTY SAND	SM-SP	1.24	11			59	39	.22
20.80	94.69	.49	.52	SAND TO SILTY SAND	SM-SP	1.25	11			57	38	.21



RESULT OF CONE PENETRATION TEST

26S

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

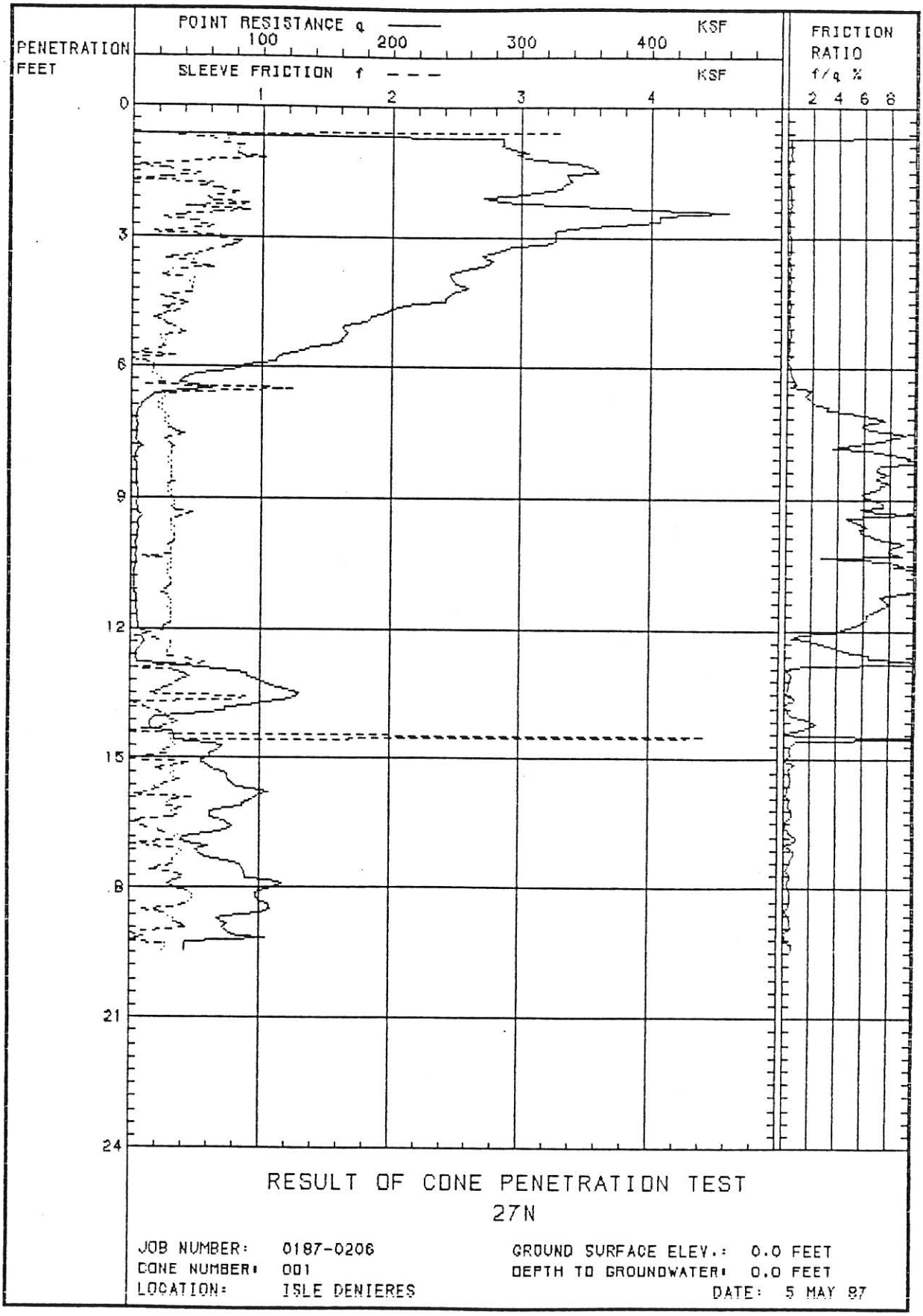
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 26S
CONE NO. : 001
DATE : 05/04/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	5.66	.25	4.36	CLAY	CH	.02	2	.417	13.5			
.80	162.83	.77	.47	SAND TO SILTY SAND	SM-SP	.05	19			100+	42	.50+
1.00	153.42	.84	.55	SAND TO SILTY SAND	SM-SP	.06	18			100+	42	.50+
1.20	165.53	.66	.40	SAND TO SILTY SAND	SM-SP	.07	19			100+	42	.50+
1.40	190.87	.73	.39	SAND	SW-SP	.09	18			100+	44	.50+
1.60	179.86	.58	.32	SAND	SW-SP	.10	17			100+	44	.50+
1.80	190.37	.25	.13	SAND	SW-SP	.12	18			100+	44	.50+
2.00	199.53	.67	.34	SAND	SW-SP	.13	19			100+	44	.50+
2.20	216.20	2.23	1.03	SAND TO SILTY SAND	SM-SP	.13	25			100+	42	.50+
2.40	226.76	.42	.19	SAND	SW-SP	.16	21			100+	44	.50+
2.60	165.59	.93	.56	SAND TO SILTY SAND	SM-SP	.16	19			100+	42	.50+
2.80	118.32	.30	.26	SAND TO SILTY SAND	SM-SP	.17	14			100+	42	.50+
3.00	114.62	.39	.34	SAND TO SILTY SAND	SM-SP	.18	13			100+	42	.50+
3.20	110.06	.46	.42	SAND TO SILTY SAND	SM-SP	.19	13			100+	42	.50+
3.40	105.30	.74	.71	SAND TO SILTY SAND	SM-SP	.20	12			100+	42	.50+
3.60	85.36	.44	.52	SAND TO SILTY SAND	SM-SP	.22	10			89	41	.50+
3.80	83.49	.34	.40	SAND TO SILTY SAND	SM-SP	.23	9			87	41	.50+
4.00	104.28	.24	.23	SAND TO SILTY SAND	SM-SP	.24	12			96	42	.50+
4.20	77.23	.41	.52	SILTY SAND TO SANDY SILT	SM-ML	.23	12			84	40	.50+
4.40	104.27	.38	.37	SAND TO SILTY SAND	SM-SP	.26	12			94	42	.50+
4.60	102.56	.56	.55	SAND TO SILTY SAND	SM-SP	.28	12			92	42	.50+
4.80	117.70	.48	.41	SAND TO SILTY SAND	SM-SP	.29	14			97	42	.50+
5.00	137.71	.40	.29	SAND TO SILTY SAND	SM-SP	.30	16			100+	42	.50+
5.20	136.45	.36	.26	SAND TO SILTY SAND	SM-SP	.31	16			100+	42	.50+
5.40	142.57	.14	.10	SAND TO SILTY SAND	SM-SP	.32	17			100+	42	.50+
5.60	130.65	.11	.09	SAND TO SILTY SAND	SM-SP	.34	15			98	42	.50+
5.80	78.40	.06	.08	SAND TO SILTY SAND	SM-SP	.35	9			78	40	.50+
6.00	69.36	.52	.75	SILTY SAND TO SANDY SILT	SM-ML	.33	11			74	38	.50+
6.20	131.29	.23	.18	SAND TO SILTY SAND	SM-SP	.37	15			96	42	.50+
6.40	149.06	.52	.35	SAND TO SILTY SAND	SM-SP	.38	17			100+	42	.50+
6.60	138.51	1.01	.73	SAND TO SILTY SAND	SM-SP	.40	16			97	42	.50+
6.80	169.93	.56	.33	SAND	SW-SP	.44	16			100+	44	.50+
7.00	188.65	.41	.22	SAND	SW-SP	.45	18			100+	44	.50+
7.20	175.20	.50	.29	SAND	SW-SP	.47	16			100+	44	.50+
7.40	169.02	.28	.17	SAND	SW-SP	.48	16			100+	44	.50+
7.60	130.36	.41	.31	SAND TO SILTY SAND	SM-SP	.46	15			90	41	.50+
7.80	129.18	.22	.17	SAND TO SILTY SAND	SM-SP	.47	15			89	41	.50+
8.00	64.43	.36	.55	SILTY SAND TO SANDY SILT	SM-ML	.44	10			67	38	.42
8.20	72.31	.06	.08	SAND TO SILTY SAND	SM-SP	.49	8			69	39	.48
8.40	29.15	.34	1.15	SANDY SILT TO CLAYEY SILT	ML-MH	.42	5	2.128	13.5	47	35	.16
8.60	11.08	.18	1.67	SILTY CLAY TO CLAY	CL-CH	.34	3	.795	13.5			
8.80	8.85	.38	4.34	CLAY	CH	.35	4	.630	13.5			
9.00	7.63	.21	2.75	CLAY	CH	.36	3	.538	13.5			
9.20	7.87	.24	3.02	CLAY	CH	.37	3	.556	13.5			
9.40	7.01	.22	3.18	CLAY	CH	.38	3	.492	13.5			

9.60	6.40	.27	4.24	CLAY	CH	.38	3	.446	13.5				
9.80	5.90	.25	4.19	CLAY	CH	.39	2	.408	13.5				
10.00	6.15	.27	4.41	CLAY	CH	.40	2	.426	13.5				
10.20	6.15	.31	5.02	CLAY	CH	.41	2	.425	13.5				
10.40	6.27	.26	4.13	CLAY	CH	.42	3	.434	13.5				
10.60	6.15	.27	4.46	CLAY	CH	.42	2	.424	13.5				
10.80	4.93	.26	5.29	CLAY	CH	.43	2	.333	13.5				
11.00	5.41	.14	2.64	CLAY	CH	.44	2	.368	13.5				
11.20	6.89	.26	3.76	CLAY	CH	.45	3	.477	13.5				
11.40	7.37	.23	3.17	CLAY	CH	.46	3	.512	13.5				
11.60	7.88	.26	3.29	CLAY	CH	.46	3	.549	13.5				
11.80	6.14	.26	4.22	CLAY	CH	.47	2	.420	13.5				
12.00	6.87	.26	3.77	CLAY	CH	.48	3	.473	13.5				
12.20	8.72	.29	3.28	CLAY	CH	.49	4	.610	13.5				
12.40	9.84	.22	2.28	SILTY CLAY TO CLAY	CL-CH	.50	3	.692	13.5				
12.60	10.69	.36	3.39	CLAY	CH	.50	5	.755	13.5				
12.80	50.91	2.33	4.58	CLAY	CH	.51	24	3.733	13.5				
13.00	101.61	.12	.12	SAND TO SILTY SAND	SM-SP	.78	12			70	39	.50+	
13.20	139.71	.51	.36	SAND TO SILTY SAND	SM-SP	.79	16			81	40	.50+	
13.40	172.87	.45	.26	SAND	SW-SP	.87	16			85	43	.50+	
13.60	193.97	.37	.19	SAND	SW-SP	.88	18			89	43	.50+	
13.80	211.48	.53	.25	SAND	SW-SP	.90	20			92	44	.50+	
14.00	217.14	.32	.15	SAND	SW-SP	.91	20			92	44	.50+	
14.20	195.22	.43	.22	SAND	SW-SP	.92	18			88	43	.50+	



RESULT OF CONE PENETRATION TEST

27N

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

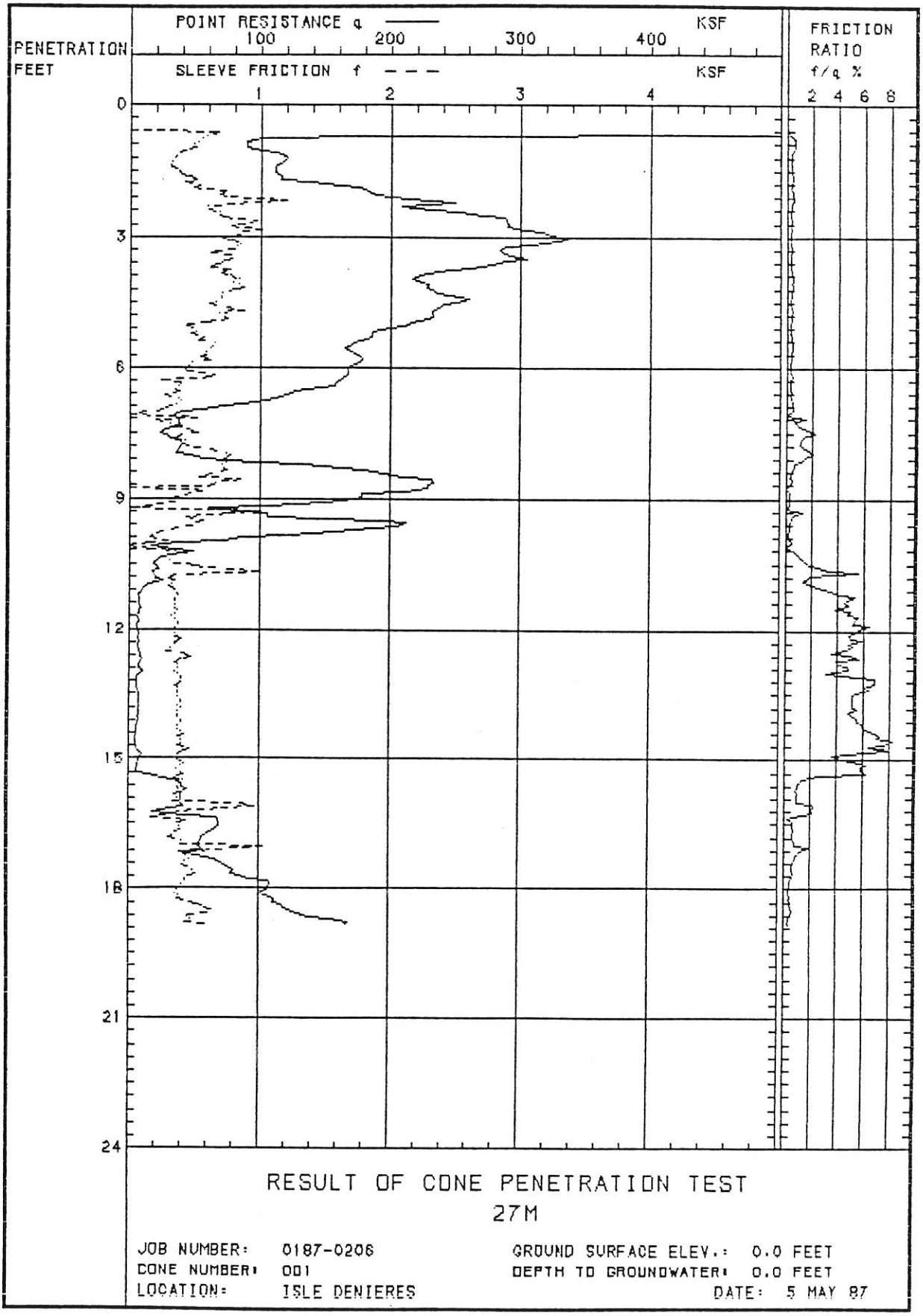
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 27N
CONE NO. : 001
DATE : 05/05/87

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	.98	1.77	179.88	ORGANIC MATERIAL	OL-OH	.02	1	.072	13.5			
.80	285.20	.77	.27	SAND	SW-SP	.05	27			100+	44	.50+
1.00	299.34	4.07	1.36	SAND TO SILTY SAND	SM-SP	.06	35			100+	42	.50+
1.20	307.95	.69	.23	SAND	SW-SP	.09	29			100+	44	.50+
1.40	355.05	.13	.04	SAND	SW-SP	.09	34			100+	44	.50+
1.60	335.87	.79	.24	SAND	SW-SP	.10	32			100+	44	.50+
1.80	333.29	.39	.12	SAND	SW-SP	.12	31			100+	44	.50+
2.00	301.95	.76	.25	SAND	SW-SP	.13	28			100+	44	.50+
2.20	291.94	.82	.28	SAND	SW-SP	.14	27			100+	44	.50+
2.40	444.42	.77	.17	GRAVELLY SAND TO SAND	SW-GW	.16	35			100+	46	.50+
2.60	406.34	.59	.14	SAND	SW-SP	.17	39			100+	44	.50+
2.80	338.98	.31	.09	SAND	SW-SP	.18	32			100+	44	.50+
3.00	326.40	.55	.17	SAND	SW-SP	.20	31			100+	44	.50+
3.20	305.79	.83	.27	SAND	SW-SP	.21	29			100+	44	.50+
3.40	273.65	.43	.16	SAND	SW-SP	.22	26			100+	44	.50+
3.60	276.47	.46	.17	SAND	SW-SP	.23	26			100+	44	.50+
3.80	250.66	.30	.12	SAND	SW-SP	.25	24			100+	44	.50+
4.00	247.74	.39	.16	SAND	SW-SP	.26	23			100+	44	.50+
4.20	257.53	.40	.16	SAND	SW-SP	.27	24			100+	44	.50+
4.40	242.28	.33	.14	SAND	SW-SP	.29	23			100+	44	.50+
4.60	212.07	.33	.16	SAND	SW-SP	.30	20			100+	44	.50+
4.80	191.27	.41	.22	SAND	SW-SP	.31	18			100+	44	.50+
5.00	173.22	.28	.16	SAND	SW-SP	.32	16			100+	44	.50+
5.20	164.73	.39	.24	SAND	SW-SP	.34	15			100+	44	.50+
5.40	161.60	.25	.15	SAND	SW-SP	.35	15			100+	44	.50+
5.60	135.06	.43	.32	SAND TO SILTY SAND	SM-SP	.34	16			100+	42	.50+
5.80	112.79	.00	.00	SAND TO SILTY SAND	SM-SP	.35	13			91	41	.50+
6.00	85.37	.19	.22	SAND TO SILTY SAND	SM-SP	.36	10			80	40	.50+
6.20	48.23	.18	.37	SILTY SAND TO SANDY SILT	SM-ML	.34	7			64	37	.31
6.40	42.80	.44	1.02	SANDY SILT TO CLAYEY SILT	ML-MH	.32	8	3.147	13.5	62	37	.26
6.60	29.13	.27	.94	SANDY SILT TO CLAYEY SILT	ML-MH	.33	5	2.133	13.5	52	35	.17
6.80	10.84	.22	2.05	SILTY CLAY TO CLAY	CL-CH	.27	3	.783	13.5			
7.00	5.91	.24	4.04	CLAY	CH	.28	2	.417	13.5			
7.20	3.69	.26	7.06	ORGANIC MATERIAL	OL-OH	.22	1	.257	13.5			
7.40	4.68	.29	6.10	ORGANIC MATERIAL	OL-OH	.22	2	.330	13.5			
7.60	4.18	.37	8.82	ORGANIC MATERIAL	OL-OH	.23	2	.293	13.5			
7.80	7.36	.31	4.20	CLAY	CH	.31	3	.522	13.5			
8.00	3.69	.30	8.13	ORGANIC MATERIAL	OL-OH	.24	1	.256	13.5			
8.20	3.19	.30	9.32	ORGANIC MATERIAL	OL-OH	.25	1	.218	13.5			
8.40	4.18	.31	7.38	ORGANIC MATERIAL	OL-OH	.25	2	.291	13.5			
8.60	4.31	.30	7.04	ORGANIC MATERIAL	OL-OH	.26	2	.300	13.5			
8.80	4.42	.30	6.70	ORGANIC MATERIAL	OL-OH	.26	2	.308	13.5			
9.00	4.92	.32	6.52	ORGANIC MATERIAL	OL-OH	.27	2	.344	13.5			
9.20	4.91	.32	6.53	ORGANIC MATERIAL	OL-OH	.28	2	.343	13.5			
9.40	6.62	.42	6.31	CLAY	CH	.38	3	.462	13.5			

9.60	5.17	.31	5.96	ORGANIC MATERIAL	OL-OH	.29	2	.362	13.5			
9.80	5.17	.32	6.21	ORGANIC MATERIAL	OL-OH	.29	2	.361	13.5			
10.00	3.81	.32	8.44	ORGANIC MATERIAL	OL-OH	.30	1	.260	13.5			
10.20	3.94	.31	7.87	ORGANIC MATERIAL	OL-OH	.31	1	.269	13.5			
10.40	3.69	.20	5.42	ORGANIC MATERIAL	OL-OH	.31	1	.250	13.5			
10.60	3.20	.30	9.32	ORGANIC MATERIAL	OL-OH	.32	1	.214	13.5			
10.80	2.70	.31	11.50	ORGANIC MATERIAL	OL-OH	.32	1	.176	13.5			
11.00	2.58	.31	12.01	ORGANIC MATERIAL	OL-OH	.33	1	.167	13.5			
11.20	3.44	.26	7.59	ORGANIC MATERIAL	OL-OH	.34	1	.230	13.5			
11.40	3.94	.30	7.71	ORGANIC MATERIAL	OL-OH	.34	1	.266	13.5			
11.60	4.67	.31	6.61	ORGANIC MATERIAL	OL-OH	.35	2	.320	13.5			
11.80	5.16	.30	5.78	CLAY	CH	.47	2	.347	13.5			
12.00	5.90	.27	4.53	CLAY	CH	.49	2	.402	13.5			
12.20	8.35	.10	1.25	SENSITIVE FINE GRAINED	OL-CH	.37	1	.591	13.5			
12.40	8.38	.31	3.68	CLAY	CH	.50	4	.584	13.5			
12.60	4.43	.30	6.72	ORGANIC MATERIAL	OL-OH	.39	2	.300	13.5			
12.80	17.11	.44	2.55	SILTY CLAY TO CLAY	CL-CH	.51	5	1.229	13.5			
13.00	85.50	.34	.40	SAND TO SILTY SAND	SM-SP	.73	10			65	39	.31
13.20	99.31	.38	.39	SAND TO SILTY SAND	SM-SP	.79	11			69	39	.45
13.40	119.44	.25	.21	SAND TO SILTY SAND	SM-SP	.80	14			75	40	.50+
13.60	122.59	.84	.69	SAND TO SILTY SAND	SM-SP	.82	14			75	40	.50+
13.80	82.57	.10	.13	SAND TO SILTY SAND	SM-SP	.83	9			63	38	.26
14.00	32.22	.28	.85	SANDY SILT TO CLAYEY SILT	ML-MH	.70	6	2.335	13.5	37	33	.14
14.20	15.00	.36	2.38	SILTY CLAY TO CLAY	CL-CH	.57	4	1.069	13.5			
14.40	32.83	1.08	3.30	SILTY CLAY TO CLAY	CL-CH	.58	10	2.389	13.5			
14.60	47.66	.42	.88	SANDY SILT TO CLAYEY SILT	ML-MH	.73	9	3.477	13.5	47	35	.16
14.80	68.16	.28	.41	SILTY SAND TO SANDY SILT	SM-ML	.81	10			57	36	.20
15.00	58.36	.04	.06	SILTY SAND TO SANDY SILT	SM-ML	.82	9			51	35	.18
15.20	61.46	.29	.47	SILTY SAND TO SANDY SILT	SM-ML	.84	9			52	35	.18
15.40	75.27	.33	.44	SILTY SAND TO SANDY SILT	SM-ML	.85	12			60	36	.22
15.60	80.14	.50	.63	SILTY SAND TO SANDY SILT	SM-ML	.86	12			61	37	.24
15.80	103.63	.39	.38	SAND TO SILTY SAND	SM-SP	.95	12			66	39	.35
16.00	88.85	1.25	1.41	SILTY SAND TO SANDY SILT	SM-ML	.88	14			63	37	.28
16.20	67.91	.32	.47	SILTY SAND TO SANDY SILT	SM-ML	.89	10			54	36	.19
16.40	67.02	.19	.28	SILTY SAND TO SANDY SILT	SM-ML	.90	10			53	36	.19
16.60	77.17	.15	.19	SAND TO SILTY SAND	SM-SP	1.00	9			56	38	.20
16.80	45.43	.41	.91	SANDY SILT TO CLAYEY SILT	ML-MH	.84	8	3.303	13.5	42	34	.15
17.00	55.44	.27	.49	SILTY SAND TO SANDY SILT	SM-ML	.93	8			46	34	.16
17.20	53.96	.37	.69	SILTY SAND TO SANDY SILT	SM-ML	.95	8			45	34	.16
17.40	79.32	.33	.42	SILTY SAND TO SANDY SILT	SM-ML	.96	12			59	36	.21
17.60	88.04	.22	.25	SAND TO SILTY SAND	SM-SP	1.06	10			60	38	.22
17.80	98.87	1.39	1.41	SILTY SAND TO SANDY SILT	SM-ML	.98	15			64	37	.30
18.00	108.43	.37	.34	SAND TO SILTY SAND	SM-SP	1.08	12			65	39	.31
18.20	97.64	.48	.49	SAND TO SILTY SAND	SM-SP	1.09	11			62	39	.25
18.40	107.23	.35	.33	SAND TO SILTY SAND	SM-SP	1.10	12			64	38	.29
18.60	87.69	.33	.37	SAND TO SILTY SAND	SM-SP	1.12	10			58	39	.21
18.80	74.04	.39	.53	SILTY SAND TO SANDY SILT	SM-ML	1.03	11			53	36	.19
19.00	75.54	.08	.10	SAND TO SILTY SAND	SM-SP	1.14	9			51	37	.19
19.20	75.15	.00	.00	SAND TO SILTY SAND	SM-SP	1.15	8			51	37	.18
19.40	42.80	.26	.61	SILTY SAND TO SANDY SILT	SM-ML	1.07	6			34	33	.14



RESULT OF CONE PENETRATION TEST

27M

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

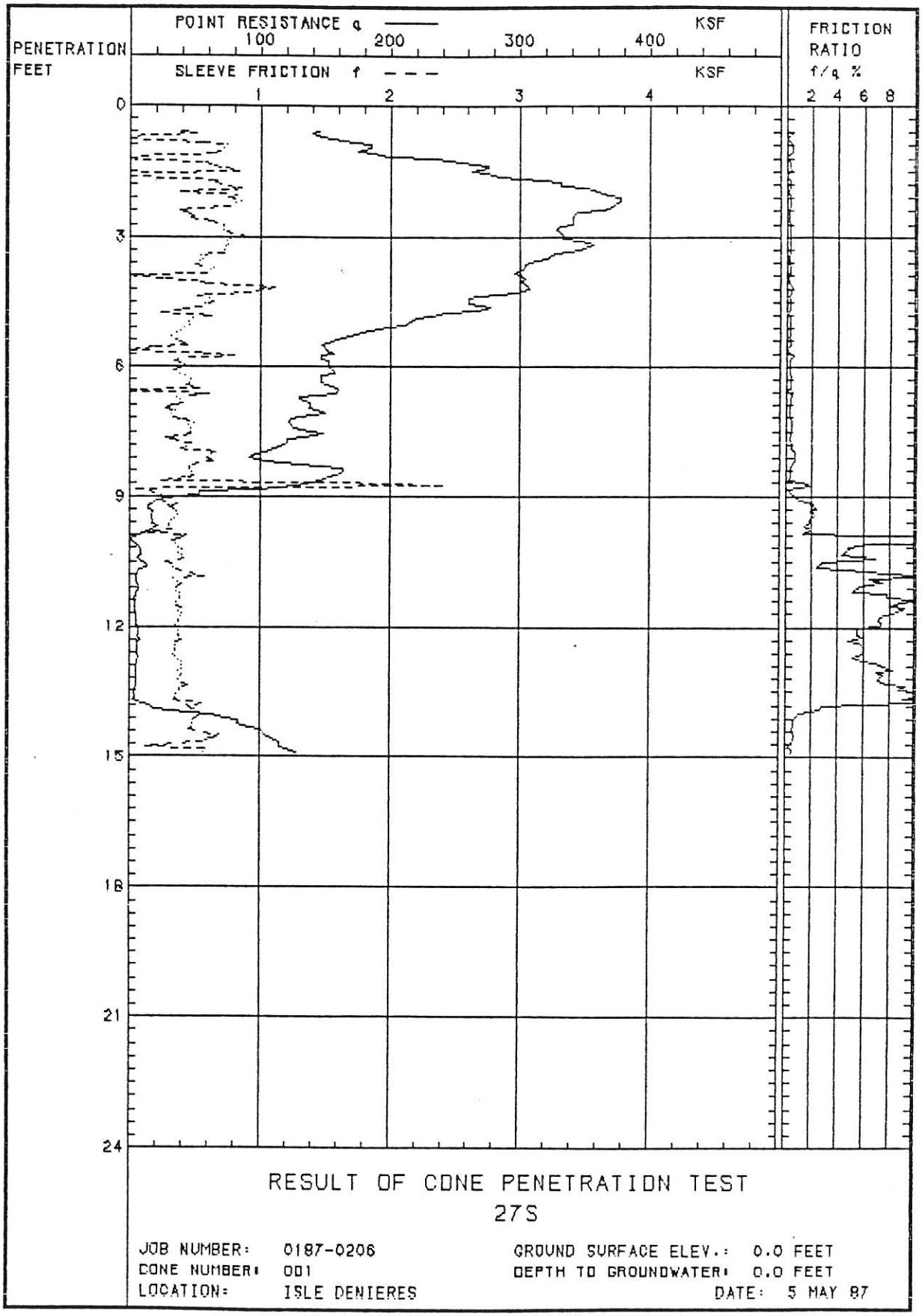
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 27M.
CONE NO. : 001
DATE : 05/05/87

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	910.08	.34	.04	GRAVELLY SAND TO SAND	SW-GW	.04	72			100+	46	.50+
.80	95.19	.49	.51	SAND TO SILTY SAND	SM-SP	.05	11			100+	42	.50+
1.00	95.43	.46	.49	SAND TO SILTY SAND	SM-SP	.06	11			100+	42	.50+
1.20	119.29	.35	.29	SAND TO SILTY SAND	SM-SP	.07	14			100+	42	.50+
1.40	111.92	.34	.30	SAND TO SILTY SAND	SM-SP	.08	13			100+	42	.50+
1.60	113.63	.29	.25	SAND TO SILTY SAND	SM-SP	.10	13			100+	42	.50+
1.80	149.77	.53	.35	SAND TO SILTY SAND	SM-SP	.11	17			100+	42	.50+
2.00	185.94	.71	.38	SAND	SW-SP	.13	17			100+	44	.50+
2.20	239.55	.98	.41	SAND	SW-SP	.14	22			100+	44	.50+
2.40	241.82	.79	.33	SAND	SW-SP	.16	23			100+	44	.50+
2.60	288.52	.85	.29	SAND	SW-SP	.17	27			100+	44	.50+
2.80	296.37	.80	.27	SAND	SW-SP	.18	28			100+	44	.50+
3.00	329.82	.78	.24	SAND	SW-SP	.20	31			100+	44	.50+
3.20	298.52	.83	.28	SAND	SW-SP	.21	28			100+	44	.50+
3.40	289.65	.77	.26	SAND	SW-SP	.22	27			100+	44	.50+
3.60	283.13	.54	.19	SAND	SW-SP	.23	27			100+	44	.50+
3.80	237.65	.73	.31	SAND	SW-SP	.25	22			100+	44	.50+
4.00	220.37	.81	.37	SAND	SW-SP	.26	21			100+	44	.50+
4.20	229.84	.77	.33	SAND	SW-SP	.27	22			100+	44	.50+
4.40	256.77	1.21	.47	SAND	SW-SP	.29	24			100+	44	.50+
4.60	239.22	.68	.28	SAND	SW-SP	.30	22			100+	44	.50+
4.80	232.56	.76	.33	SAND	SW-SP	.31	22			100+	44	.50+
5.00	214.01	.87	.41	SAND	SW-SP	.32	20			100+	44	.50+
5.20	186.45	.49	.26	SAND	SW-SP	.34	17			100+	44	.50+
5.40	175.15	.41	.24	SAND	SW-SP	.35	16			100+	44	.50+
5.60	167.73	.66	.39	SAND TO SILTY SAND	SM-SP	.34	20			100+	42	.50+
5.80	178.08	.58	.33	SAND	SW-SP	.38	17			100+	44	.50+
6.00	168.49	.36	.21	SAND	SW-SP	.39	16			100+	44	.50+
6.20	166.53	.63	.38	SAND TO SILTY SAND	SM-SP	.37	19			100+	42	.50+
6.40	157.91	.39	.24	SAND TO SILTY SAND	SM-SP	.38	18			100+	42	.50+
6.60	124.07	.32	.26	SAND TO SILTY SAND	SM-SP	.40	14			92	41	.50+
6.80	96.25	.37	.38	SAND TO SILTY SAND	SM-SP	.41	11			82	40	.50+
7.00	48.17	.28	.58	SILTY SAND TO SANDY SILT	SM-ML	.38	7			62	37	.26
7.20	36.89	.15	.42	SANDY SILT TO CLAYEY SILT	ML-MH	.36	7	2.706	13.5	57	36	.19
7.40	34.25	.35	1.03	SANDY SILT TO CLAYEY SILT	ML-MH	.37	6	2.510	13.5	54	36	.18
7.60	29.19	.36	1.24	SANDY SILT TO CLAYEY SILT	ML-MH	.38	5	2.134	13.5	49	35	.16
7.80	39.36	.43	1.09	SANDY SILT TO CLAYEY SILT	ML-MH	.39	7	2.887	13.5	57	38	.20
8.00	41.27	.70	1.69	SANDY SILT TO CLAYEY SILT	ML-MH	.40	7	3.027	13.5	58	38	.20
8.20	114.66	.73	.63	SAND TO SILTY SAND	SM-SP	.49	13			84	41	.50+
8.40	187.58	.70	.37	SAND	SW-SP	.55	17			100+	44	.50+
8.60	232.67	.76	.33	SAND	SW-SP	.56	22			100+	44	.50+
8.80	221.48	.28	.13	SAND	SW-SP	.57	21			100+	44	.50+
9.00	176.39	.34	.19	SAND	SW-SP	.58	16			96	44	.50+
9.20	84.43	.30	.35	SAND TO SILTY SAND	SM-SP	.55	10			71	39	.50+
9.40	105.77	.59	.56	SAND TO SILTY SAND	SM-SP	.56	12			79	40	.50+

9.60	209.13	.50	.24	SAND	SW-SP	.62	20			100+	44	.50+
9.80	140.45	.24	.17	SAND TO SILTY SAND	SM-SP	.59	16			87	41	.50+
10.00	55.34	.31	.56	SILTY SAND TO SANDY SILT	SM-ML	.55	8			60	36	.22
10.20	41.08	.22	.54	SILTY SAND TO SANDY SILT	SM-ML	.56	6			49	35	.17
10.40	23.61	.34	1.45	CLAYEY SILT TO SILTY CLAY	MH-CL	.47	5	1.714	13.5			
10.60	21.63	.32	1.49	CLAYEY SILT TO SILTY CLAY	MH-CL	.48	5	1.567	13.5			
10.80	19.54	.47	2.43	SILTY CLAY TO CLAY	CL-CH	.43	6	1.416	13.5			
11.00	14.30	.32	2.21	SILTY CLAY TO CLAY	CL-CH	.44	4	1.026	13.5			
11.20	8.01	.39	4.90	CLAY	CH	.45	3	.580	13.5			
11.40	7.63	.35	4.64	CLAY	CH	.46	3	.531	13.5			
11.60	7.38	.38	5.20	CLAY	CH	.46	3	.512	13.5			
11.80	7.00	.38	5.38	CLAY	CH	.47	3	.484	13.5			
12.00	6.40	.36	5.59	CLAY	CH	.48	3	.438	13.5			
12.20	7.01	.39	5.57	CLAY	CH	.49	3	.483	13.5			
12.40	6.89	.38	5.49	CLAY	CH	.50	3	.473	13.5			
12.60	8.24	.42	5.16	CLAY	CH	.50	3	.573	13.5			
12.80	8.37	.36	4.35	CLAY	CH	.51	4	.582	13.5			
13.00	10.11	.38	3.76	CLAY	CH	.52	4	.710	13.5			
13.20	5.90	.40	6.84	ORGANIC MATERIAL	OL-OH	.40	2	.408	13.5			
13.40	6.39	.38	5.93	CLAY	CH	.54	3	.433	13.5			
13.60	7.62	.39	5.12	CLAY	CH	.54	3	.524	13.5			
13.80	7.38	.39	5.29	CLAY	CH	.55	3	.506	13.5			
14.00	7.14	.38	5.31	CLAY	CH	.56	3	.487	13.5			
14.20	6.65	.39	5.90	CLAY	CH	.57	3	.450	13.5			
14.40	5.90	.41	6.89	ORGANIC MATERIAL	OL-OH	.43	2	.405	13.5			
14.60	5.16	.40	7.83	ORGANIC MATERIAL	OL-OH	.44	2	.350	13.5			
14.80	6.38	.45	7.07	ORGANIC MATERIAL	OL-OH	.44	3	.449	13.5			
15.00	8.13	.38	4.66	CLAY	CH	.60	3	.558	13.5			
15.20	6.65	.39	5.83	CLAY	CH	.61	3	.447	13.5			
15.40	20.56	.43	2.07	CLAYEY SILT TO SILTY CLAY	MH-CL	.69	4	1.472	13.5			
15.60	41.32	.38	.93	SANDY SILT TO CLAYEY SILT	ML-MH	.78	7	3.003	13.5	42	34	.15
15.80	40.59	.39	.97	SANDY SILT TO CLAYEY SILT	ML-MH	.79	7	2.948	13.5	41	34	.15
16.00	39.84	.60	1.50	SANDY SILT TO CLAYEY SILT	ML-MH	.80	7	2.891	13.5	40	34	.14
16.20	25.74	.40	1.56	CLAYEY SILT TO SILTY CLAY	MH-CL	.73	6	1.883	13.5			
16.40	68.25	.23	.33	SILTY SAND TO SANDY SILT	SM-ML	.90	10			54	36	.19
16.60	67.92	.49	.73	SILTY SAND TO SANDY SILT	SM-ML	.91	10			54	36	.19
16.80	57.59	.44	.76	SILTY SAND TO SANDY SILT	SM-ML	.92	9			47	35	.17
17.00	53.62	.38	.72	SILTY SAND TO SANDY SILT	SM-ML	.93	8			45	34	.16
17.20	45.52	.91	2.00	SANDY SILT TO CLAYEY SILT	ML-MH	.86	8	3.308	13.5	42	34	.15
17.40	70.78	.42	.60	SILTY SAND TO SANDY SILT	SM-ML	.96	11			54	36	.19
17.60	79.72	.50	.62	SILTY SAND TO SANDY SILT	SM-ML	.97	12			58	36	.21
17.80	99.66	.43	.44	SAND TO SILTY SAND	SM-SP	1.07	11			63	38	.26
18.00	107.24	.56	.52	SAND TO SILTY SAND	SM-SP	1.08	12			64	38	.30
18.20	108.64	.37	.34	SAND TO SILTY SAND	SM-SP	1.09	13			65	38	.31
18.40	118.29	.53	.45	SAND TO SILTY SAND	SM-SP	1.10	14			67	39	.38
18.60	134.19	.50	.37	SAND TO SILTY SAND	SM-SP	1.12	16			71	39	.50+
18.80	168.75	.51	.30	SAND	SW-SP	1.22	16			77	42	.35



RESULT OF CONE PENETRATION TEST

27S

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

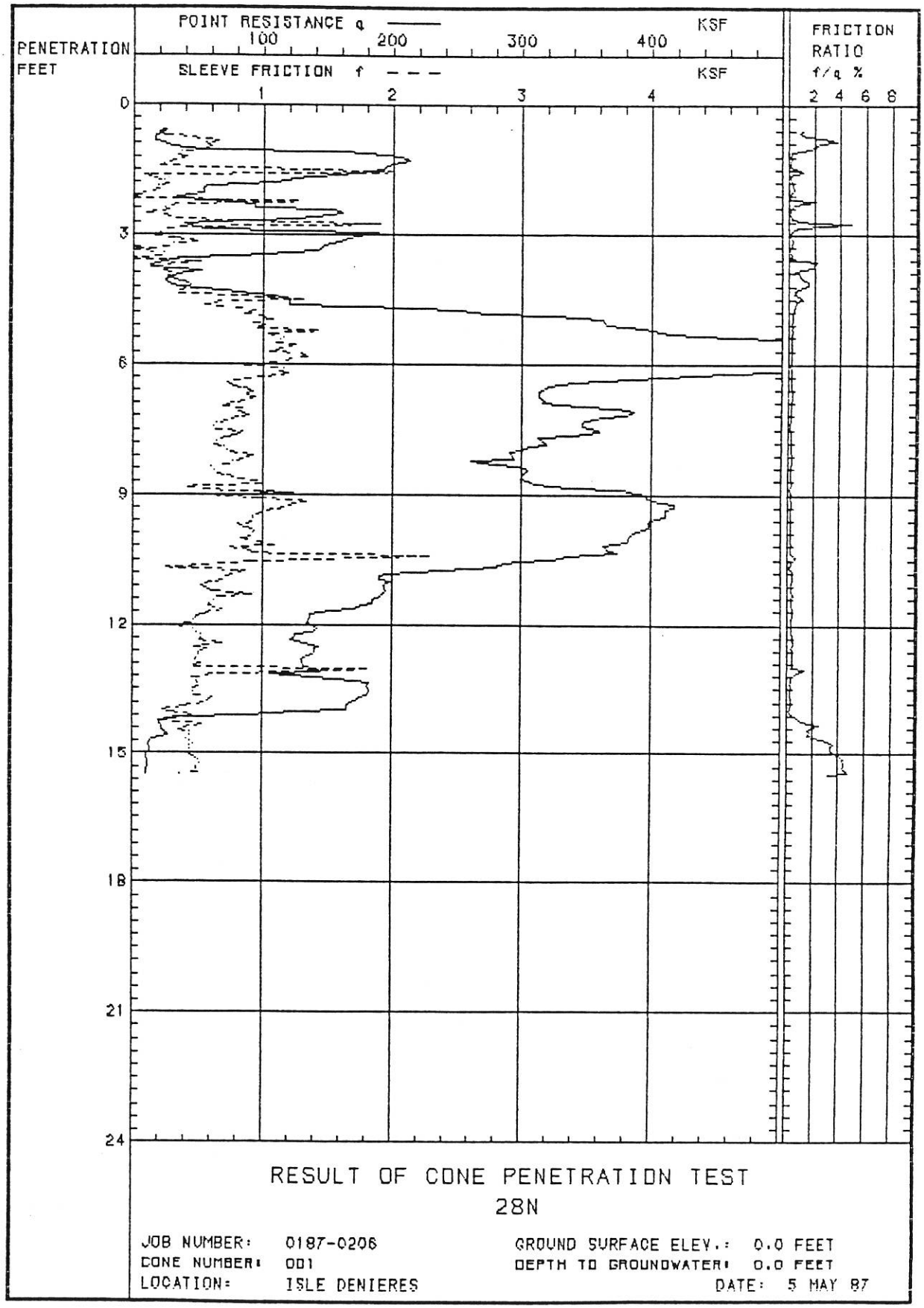
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 27S
CONE NO. : 001
DATE : 05/05/87

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	143.03	.42	.29	SAND TO SILTY SAND	SM-SP	.04	17			100+	42	.50+
.80	163.81	.28	.17	SAND	SW-SP	.05	15			100+	44	.50+
1.00	180.42	.86	.48	SAND TO SILTY SAND	SM-SP	.06	21			100+	42	.50+
1.20	217.17	.00	.00	SAND	SW-SP	.08	20			100+	44	.50+
1.40	275.48	1.22	.44	SAND	SW-SP	.09	26			100+	44	.50+
1.60	279.04	.09	.03	SAND	SW-SP	.10	26			100+	44	.50+
1.80	331.56	1.18	.36	SAND	SW-SP	.12	31			100+	44	.50+
2.00	363.90	.83	.23	SAND	SW-SP	.13	34			100+	44	.50+
2.20	376.09	.83	.22	SAND	SW-SP	.14	36			100+	44	.50+
2.40	354.22	.67	.19	SAND	SW-SP	.16	33			100+	44	.50+
2.60	340.60	.60	.18	SAND	SW-SP	.17	32			100+	44	.50+
2.80	329.60	.48	.14	SAND	SW-SP	.18	31			100+	44	.50+
3.00	333.04	.82	.25	SAND	SW-SP	.20	31			100+	44	.50+
3.20	354.69	.65	.18	SAND	SW-SP	.21	33			100+	44	.50+
3.40	326.04	.64	.20	SAND	SW-SP	.22	31			100+	44	.50+
3.60	308.22	.54	.17	SAND	SW-SP	.23	29			100+	44	.50+
3.80	298.74	.59	.20	SAND	SW-SP	.25	29			100+	44	.50+
4.00	302.30	.27	.09	SAND	SW-SP	.26	28			100+	44	.50+
4.20	306.96	1.06	.35	SAND	SW-SP	.27	29			100+	44	.50+
4.40	264.93	.56	.21	SAND	SW-SP	.29	25			100+	44	.50+
4.60	268.54	.57	.21	SAND	SW-SP	.30	25			100+	44	.50+
4.80	237.39	.30	.13	SAND	SW-SP	.31	22			100+	44	.50+
5.00	213.76	.46	.21	SAND	SW-SP	.32	20			100+	44	.50+
5.20	182.04	.69	.38	SAND	SW-SP	.34	17			100+	44	.50+
5.40	157.93	.41	.26	SAND TO SILTY SAND	SM-SP	.32	18			100+	42	.50+
5.60	150.52	.11	.07	SAND TO SILTY SAND	SM-SP	.34	18			100+	42	.50+
5.80	147.09	.59	.40	SAND TO SILTY SAND	SM-SP	.35	17			100+	42	.50+
6.00	152.99	.40	.26	SAND TO SILTY SAND	SM-SP	.36	18			100+	42	.50+
6.20	152.30	.33	.22	SAND TO SILTY SAND	SM-SP	.37	18			100+	42	.50+
6.40	148.79	.45	.30	SAND TO SILTY SAND	SM-SP	.38	17			100+	42	.50+
6.60	159.64	.30	.19	SAND	SW-SP	.43	15			100+	44	.50+
6.80	134.01	.40	.30	SAND TO SILTY SAND	SM-SP	.41	16			94	42	.50+
7.00	140.79	.31	.22	SAND TO SILTY SAND	SM-SP	.42	16			96	42	.50+
7.20	127.45	.42	.33	SAND TO SILTY SAND	SM-SP	.43	15			91	41	.50+
7.40	124.27	.46	.37	SAND TO SILTY SAND	SM-SP	.44	14			89	41	.50+
7.60	142.12	.44	.31	SAND TO SILTY SAND	SM-SP	.46	17			96	42	.50+
7.80	118.34	.46	.39	SAND TO SILTY SAND	SM-SP	.47	14			85	41	.50+
8.00	100.39	.80	.79	SAND TO SILTY SAND	SM-SP	.48	12			80	40	.50+
8.20	110.80	.59	.54	SAND TO SILTY SAND	SM-SP	.49	13			83	41	.50+
8.40	163.81	.70	.43	SAND TO SILTY SAND	SM-SP	.50	19			97	42	.50+
8.60	149.83	.31	.21	SAND TO SILTY SAND	SM-SP	.52	17			93	42	.50+
8.80	114.07	1.98	1.74	SILTY SAND TO SANDY SILT	SM-ML	.48	18			84	40	.50+
9.00	45.49	.24	.53	SILTY SAND TO SANDY SILT	SM-ML	.49	7			56	36	.19
9.20	15.89	.28	1.76	CLAYEY SILT TO SILTY CLAY	MH-CL	.41	3	1.146	13.5			
9.40	17.72	.34	1.93	CLAYEY SILT TO SILTY CLAY	MH-CL	.42	4	1.281	13.5			

9.60	17.47	.31	1.76	CLAYEY SILT TO SILTY CLAY	MH-CL	.43	4	1.262	13.5				
9.80	13.82	.24	1.73	SILTY CLAY TO CLAY	CL-CH	.39	4	.994	13.5				
10.00	.98	.36	36.14	ORGANIC MATERIAL	OL-OH	.30	1	.051	13.5				
10.20	7.99	.37	4.68	CLAY	CH	.41	3	.562	13.5				
10.40	7.77	.34	4.35	CLAY	CH	.42	3	.545	13.5				
10.60	13.02	.33	2.54	SILTY CLAY TO CLAY	CL-CH	.42	4	.933	13.5				
10.80	5.66	.47	8.24	ORGANIC MATERIAL	OL-OH	.32	2	.395	13.5				
11.00	5.65	.40	7.17	ORGANIC MATERIAL	OL-OH	.33	2	.394	13.5				
11.20	5.92	.36	6.08	CLAY	CH	.45	2	.405	13.5				
11.40	3.87	.38	9.71	ORGANIC MATERIAL	OL-OH	.34	1	.261	13.5				
11.60	4.43	.39	8.87	ORGANIC MATERIAL	OL-OH	.35	2	.302	13.5				
11.80	5.41	.52	9.59	ORGANIC MATERIAL	OL-OH	.35	2	.375	13.5				
12.00	5.89	.37	6.23	ORGANIC MATERIAL	OL-OH	.36	2	.409	13.5				
12.20	6.65	.38	5.70	CLAY	CH	.47	3	.456	13.5				
12.40	6.15	.36	5.78	CLAY	CH	.50	2	.419	13.5				
12.60	5.90	.34	5.82	CLAY	CH	.50	2	.400	13.5				
12.80	6.15	.39	6.28	CLAY	CH	.51	2	.418	13.5				
13.00	5.16	.39	7.61	ORGANIC MATERIAL	OL-OH	.39	2	.353	13.5				
13.20	5.41	.39	7.28	ORGANIC MATERIAL	OL-OH	.40	2	.371	13.5				
13.40	4.68	.42	8.95	ORGANIC MATERIAL	OL-OH	.40	2	.317	13.5				
13.60	3.68	.37	10.11	ORGANIC MATERIAL	OL-OH	.41	1	.243	13.5				
13.80	12.48	.42	3.34	CLAY	CH	.55	5	.884	13.5				
14.00	54.43	.53	.98	SILTY SAND TO SANDY SILT	SM-ML	.77	8			50	35	.17	
14.20	83.15	.47	.56	SILTY SAND TO SANDY SILT	SM-ML	.78	13			64	37	.29	
14.40	101.94	.52	.51	SAND TO SILTY SAND	SM-SP	.86	12			68	39	.41	
14.60	112.22	.60	.54	SAND TO SILTY SAND	SM-SP	.89	13			71	39	.50+	
14.80	118.01	.35	.30	SAND TO SILTY SAND	SM-SP	.89	14			72	39	.50+	



RESULT OF CONE PENETRATION TEST

28N

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

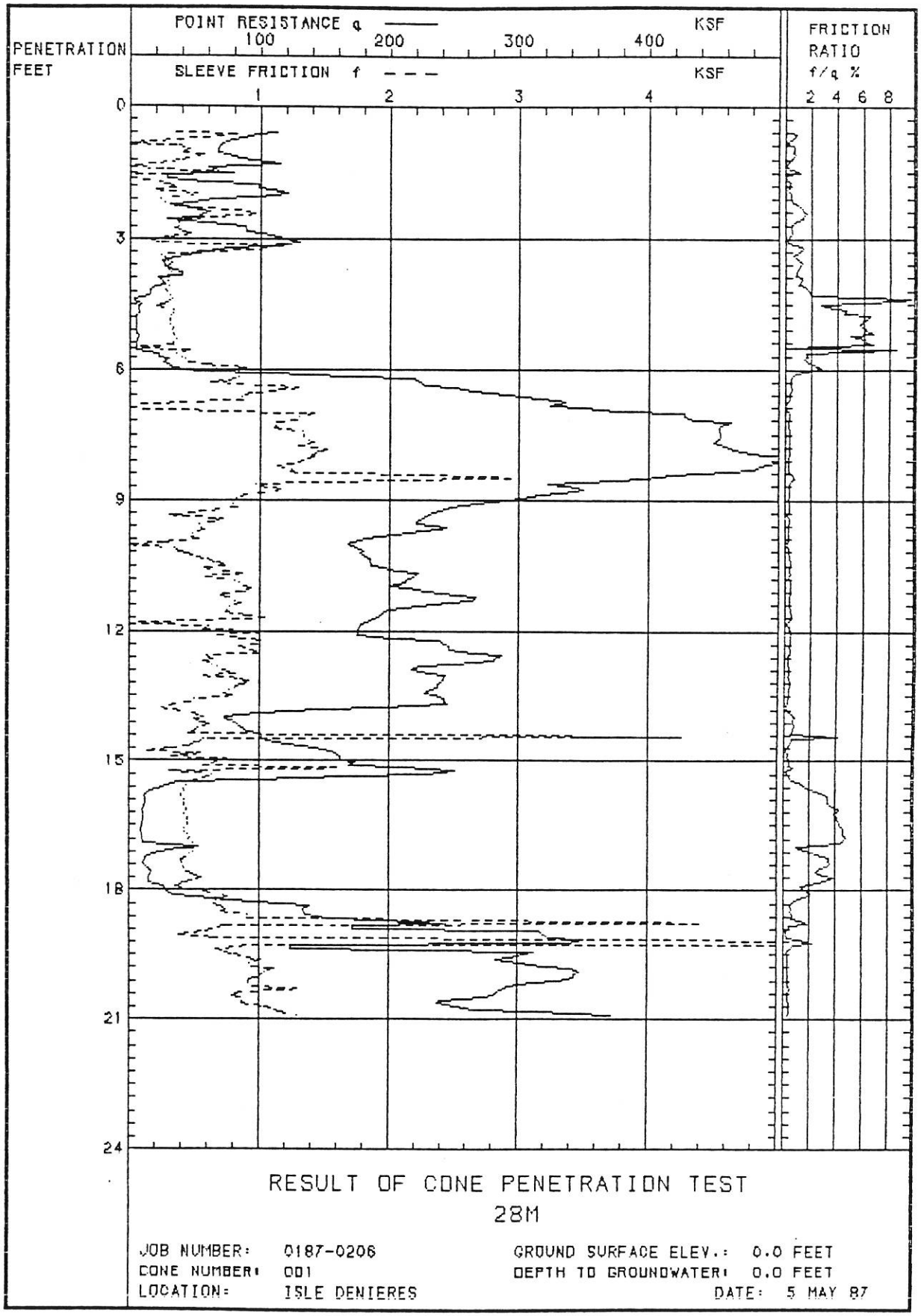
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : D01870206
BORING NO. : 28N
CONE NO. : 001
DATE : 05/05/87

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	23.86	.23	.94	SANDY SILT TO CLAYEY SILT	ML-MH	.03	4	1.765	13.5	66	37	.50+
.80	16.97	.46	2.68	SILTY CLAY TO CLAY	CL-CH	.03	5	1.255	13.5			
1.00	40.82	.58	1.41	SANDY SILT TO CLAYEY SILT	ML-MH	.05	7	3.020	13.5	75	39	.50+
1.20	200.46	.17	.09	SAND	SW-SP	.08	19			100+	43	.50+
1.40	198.19	.60	.30	SAND	SW-SP	.09	18			100+	44	.50+
1.60	170.72	1.04	.61	SAND TO SILTY SAND	SM-SP	.10	20			100+	42	.50+
1.80	104.81	.23	.22	SAND TO SILTY SAND	SM-SP	.11	12			100+	42	.50+
2.00	53.87	.15	.27	SILTY SAND TO SANDY SILT	SM-ML	.11	8			80	39	.50+
2.20	45.96	.09	.19	SILTY SAND TO SANDY SILT	SM-ML	.12	7			74	38	.50+
2.40	124.37	.26	.21	SAND TO SILTY SAND	SM-SP	.14	14			100+	42	.50+
2.60	139.51	.22	.16	SAND TO SILTY SAND	SM-SP	.16	16			100+	42	.50+
2.80	43.46	.37	.86	SANDY SILT TO CLAYEY SILT	ML-MH	.14	8	3.209	13.5	71	38	.50+
3.00	180.81	.76	.42	SAND TO SILTY SAND	SM-SP	.18	21			100+	42	.50+
3.20	155.83	.44	.28	SAND TO SILTY SAND	SM-SP	.19	18			100+	42	.50+
3.40	132.13	.12	.09	SAND TO SILTY SAND	SM-SP	.20	15			100+	42	.50+
3.60	31.02	.26	.83	SANDY SILT TO CLAYEY SILT	ML-MH	.18	5	2.295	13.5	62	37	.31
3.80	32.86	.23	.71	SANDY SILT TO CLAYEY SILT	ML-MH	.19	6	2.420	13.5	63	37	.33
4.00	28.30	.28	.97	SANDY SILT TO CLAYEY SILT	ML-MH	.20	5	2.082	13.5	60	35	.23
4.20	32.95	.41	1.25	SANDY SILT TO CLAYEY SILT	ML-MH	.21	6	2.425	13.5	62	37	.28
4.40	101.30	.30	.29	SAND TO SILTY SAND	SM-SP	.26	12			93	42	.50+
4.60	120.03	.74	.62	SAND TO SILTY SAND	SM-SP	.28	14			100+	42	.50+
4.80	261.89	.90	.34	SAND	SW-SP	.31	25			100+	44	.50+
5.00	363.04	1.06	.29	SAND	SW-SP	.32	34			100+	44	.50+
5.20	396.97	1.19	.30	SAND	SW-SP	.34	38			100+	44	.50+
5.40	485.85	1.22	.25	GRAVELLY SAND TO SAND	SW-GW	.35	38			100+	46	.50+
5.60	518.17	1.37	.26	GRAVELLY SAND TO SAND	SW-GW	.36	41			100+	46	.50+
5.80	523.88	.81	.15	GRAVELLY SAND TO SAND	SW-GW	.38	41			100+	46	.50+
6.00	531.56	1.14	.21	GRAVELLY SAND TO SAND	SW-GW	.39	42			100+	46	.50+
6.20	477.58	1.16	.24	GRAVELLY SAND TO SAND	SW-GW	.40	38			100+	45	.50+
6.40	351.33	.81	.23	SAND	SW-SP	.42	33			100+	44	.50+
6.60	315.84	.84	.27	SAND	SW-SP	.43	30			100+	44	.50+
6.80	315.06	.98	.31	SAND	SW-SP	.44	30			100+	44	.50+
7.00	358.48	.85	.24	SAND	SW-SP	.45	34			100+	44	.50+
7.20	371.50	.85	.23	SAND	SW-SP	.47	35			100+	44	.50+
7.40	346.32	.63	.18	SAND	SW-SP	.48	33			100+	44	.50+
7.60	349.87	.66	.19	SAND	SW-SP	.49	33			100+	44	.50+
7.80	317.09	.68	.21	SAND	SW-SP	.51	30			100+	44	.50+
8.00	295.21	.75	.26	SAND	SW-SP	.52	28			100+	44	.50+
8.20	277.40	.75	.27	SAND	SW-SP	.53	26			100+	44	.50+
8.40	301.51	.72	.24	SAND	SW-SP	.55	29			100+	44	.50+
8.60	299.84	.77	.26	SAND	SW-SP	.56	28			100+	44	.50+
8.80	322.79	.71	.22	SAND	SW-SP	.57	30			100+	44	.50+
9.00	392.26	1.16	.29	SAND	SW-SP	.59	37			100+	44	.50+
9.20	412.29	.88	.21	SAND	SW-SP	.60	39			100+	44	.50+

9.40	410.76	1.42	.35	SAND	SW-SP	.61	39			100+	44	.50+
9.60	400.85	.92	.23	SAND	SW-SP	.62	38			100+	44	.50+
9.80	394.10	1.02	.26	SAND	SW-SP	.64	37			100+	44	.50+
10.00	382.36	.93	.24	SAND	SW-SP	.65	36			100+	44	.50+
10.20	364.02	1.05	.29	SAND	SW-SP	.66	34			100+	44	.50+
10.40	354.97	1.59	.45	SAND	SW-SP	.68	34			100+	44	.50+
10.60	288.89	4.70	1.63	SAND TO SILTY SAND	SM-SP	.64	34			100+	42	.50+
10.80	217.77	.64	.29	SAND	SW-SP	.70	20			100+	44	.50+
11.00	194.49	.53	.27	SAND	SW-SP	.71	18			95	44	.50+
11.20	194.99	.63	.32	SAND	SW-SP	.73	18			94	44	.50+
11.40	187.97	.50	.27	SAND	SW-SP	.74	18			92	44	.50+
11.60	174.69	.67	.38	SAND TO SILTY SAND	SM-SP	.70	20			91	41	.50+
11.80	137.25	.41	.30	SAND TO SILTY SAND	SM-SP	.71	16			83	40	.50+
12.00	136.72	.46	.33	SAND TO SILTY SAND	SM-SP	.72	16			82	40	.50+
12.20	132.45	1.13	.85	SAND TO SILTY SAND	SM-SP	.73	15			81	40	.50+
12.40	127.31	.59	.47	SAND TO SILTY SAND	SM-SP	.74	15			79	40	.50+
12.60	140.20	.51	.36	SAND TO SILTY SAND	SM-SP	.76	16			82	40	.50+
12.80	131.74	.48	.36	SAND TO SILTY SAND	SM-SP	.77	15			80	40	.50+
13.00	136.19	.42	.31	SAND TO SILTY SAND	SM-SP	.78	16			80	40	.50+
13.20	121.93	1.48	1.21	SILTY SAND TO SANDY SILT	SM-ML	.73	19			78	39	.50+
13.40	181.90	.50	.28	SAND	SW-SP	.87	17			87	43	.50+
13.60	181.78	.45	.25	SAND	SW-SP	.88	17			87	43	.50+
13.80	170.24	.56	.33	SAND	SW-SP	.90	16			84	43	.50+
14.00	146.50	.29	.20	SAND TO SILTY SAND	SM-SP	.84	17			81	40	.50+
14.20	30.46	.36	1.18	SANDY SILT TO CLAYEY SILT	ML-MH	.71	5	2.204	13.5	34	33	.13
14.40	22.63	.49	2.18	CLAYEY SILT TO SILTY CLAY	MH-CL	.65	5	1.628	13.5			
14.60	22.02	.43	1.97	CLAYEY SILT TO SILTY CLAY	MH-CL	.66	5	1.583	13.5			
14.80	12.91	.46	3.60	CLAY	CH	.59	6	.912	13.5			
15.00	11.82	.45	3.78	CLAY	CH	.60	5	.831	13.5			
15.20	11.81	.49	4.13	CLAY	CH	.61	5	.830	13.5			
15.40	11.07	.50	4.54	CLAY	CH	.62	5	.775	13.5			



RESULT OF CONE PENETRATION TEST

28M

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

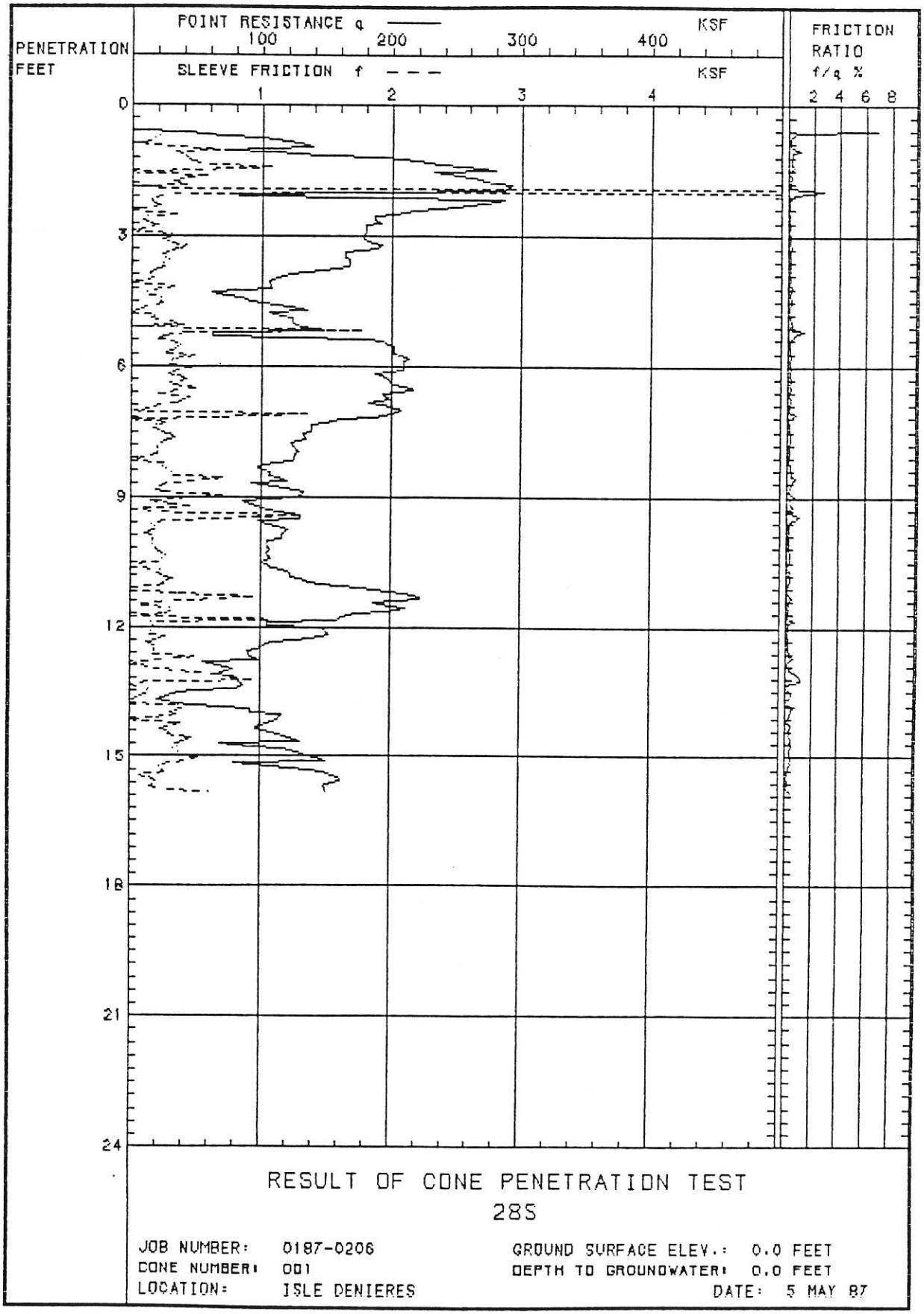
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 28M
CONE NO. : 001
DATE : 05/05/87

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	105.52	.59	.56	SAND TO SILTY SAND	SM-SP	.04	12			100+	42	.50+
.80	75.27	.03	.05	SAND TO SILTY SAND	SM-SP	.05	9			100+	42	.50+
1.00	67.39	.43	.65	SILTY SAND TO SANDY SILT	SM-ML	.05	10			100+	42	.50+
1.20	89.77	.38	.43	SAND TO SILTY SAND	SM-SP	.07	10			100+	42	.50+
1.40	62.53	.42	.67	SILTY SAND TO SANDY SILT	SM-ML	.09	9			91	41	.50+
1.60	28.29	.00	.00	SANDY SILT TO CLAYEY SILT	ML-MH	.08	5	2.089	13.5	66	37	.50+
1.80	98.39	.34	.35	SAND TO SILTY SAND	SM-SP	.11	11			100+	42	.50+
2.00	109.97	.56	.51	SAND TO SILTY SAND	SM-SP	.12	13			100+	42	.50+
2.20	41.22	.37	.89	SANDY SILT TO CLAYEY SILT	ML-MH	.11	7	3.045	13.5	72	38	.50+
2.40	59.53	.93	1.56	SANDY SILT TO CLAYEY SILT	ML-MH	.12	11	4.401	13.5	83	40	.50+
2.60	43.49	.64	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	.13	8	3.212	13.5	72	38	.50+
2.80	88.92	.22	.25	SAND TO SILTY SAND	SM-SP	.17	10			96	42	.50+
3.00	119.52	.25	.21	SAND TO SILTY SAND	SM-SP	.18	14			100+	42	.50+
3.20	91.31	1.11	1.22	SILTY SAND TO SANDY SILT	SM-ML	.18	14			97	42	.50+
3.40	38.88	.25	.65	SANDY SILT TO CLAYEY SILT	ML-MH	.17	7	2.868	13.5	67	37	.50+
3.60	26.32	.28	1.07	SANDY SILT TO CLAYEY SILT	ML-MH	.18	5	1.936	13.5	59	36	.23
3.80	40.09	.32	.80	SANDY SILT TO CLAYEY SILT	ML-MH	.19	7	2.956	13.5	67	37	.50+
4.00	26.49	.28	1.08	SANDY SILT TO CLAYEY SILT	ML-MH	.20	5	1.918	13.5	58	36	.21
4.20	15.74	.28	1.78	CLAYEY SILT TO SILTY CLAY	MH-CL	.19	3	1.152	13.5			
4.40	3.44	.32	9.23	ORGANIC MATERIAL	OL-OH	.13	1	.245	13.5			
4.60	7.01	.24	3.43	CLAY	CH	.18	3	.506	13.5			
4.80	4.92	.32	6.52	ORGANIC MATERIAL	OL-OH	.14	2	.354	13.5			
5.00	5.41	.32	5.92	CLAY	CH	.20	2	.386	13.5			
5.20	5.90	.34	5.85	CLAY	CH	.21	2	.421	13.5			
5.40	5.17	.34	6.55	ORGANIC MATERIAL	OL-OH	.16	2	.371	13.5			
5.60	13.95	.41	2.94	SILTY CLAY TO CLAY	CL-CH	.22	4	1.017	13.5			
5.80	28.18	.48	1.70	CLAYEY SILT TO SILTY CLAY	MH-CL	.26	6	2.068	13.5			
6.00	43.44	.87	1.99	SANDY SILT TO CLAYEY SILT	ML-MH	.30	8	3.196	13.5	63	37	.30
6.20	194.35	.85	.44	SAND	SW-SP	.40	18			100+	44	.50+
6.40	238.98	.91	.38	SAND	SW-SP	.42	22			100+	44	.50+
6.60	290.49	.92	.32	SAND	SW-SP	.43	27			100+	44	.50+
6.80	329.65	.45	.14	SAND	SW-SP	.44	31			100+	44	.50+
7.00	401.17	1.06	.26	SAND	SW-SP	.45	38			100+	44	.50+
7.20	448.75	1.09	.24	GRAVELLY SAND TO SAND	SW-GW	.47	35			100+	46	.50+
7.40	453.90	1.24	.27	GRAVELLY SAND TO SAND	SW-GW	.48	36			100+	46	.50+
7.60	453.45	1.36	.30	SAND	SW-SP	.49	43			100+	44	.50+
7.80	461.51	1.49	.32	SAND	SW-SP	.51	44			100+	44	.50+
8.00	511.35	1.41	.28	GRAVELLY SAND TO SAND	SW-GW	.52	40			100+	46	.50+
8.20	488.58	1.27	.26	GRAVELLY SAND TO SAND	SW-GW	.53	39			100+	46	.50+
8.40	439.55	1.76	.40	SAND	SW-SP	.55	42			100+	44	.50+
8.60	348.98	2.95	.85	SAND	SW-SP	.56	33			100+	44	.50+
8.80	341.99	1.73	.51	SAND	SW-SP	.57	32			100+	44	.50+
9.00	296.72	.82	.28	SAND	SW-SP	.58	28			100+	44	.50+
9.20	246.24	.76	.31	SAND	SW-SP	.60	23			100+	44	.50+
9.40	228.78	.39	.17	SAND	SW-SP	.61	21			100+	44	.50+

9.60	233.01	1.92	.83	SAND TO SILTY SAND	SM-SP	.58	27			100+	42	.50+
9.80	204.44	.50	.24	SAND	SW-SP	.64	19			100+	44	.50+
10.00	170.35	.53	.31	SAND	SW-SP	.65	16			92	44	.50+
10.20	179.09	.65	.36	SAND	SW-SP	.66	17			94	44	.50+
10.40	185.58	.64	.34	SAND	SW-SP	.68	17			94	44	.50+
10.60	200.63	.72	.36	SAND	SW-SP	.69	19			97	43	.50+
10.80	216.50	.51	.24	SAND	SW-SP	.70	20			100+	44	.50+
11.00	207.42	.96	.46	SAND	SW-SP	.71	19			98	44	.50+
11.20	259.62	.74	.28	SAND	SW-SP	.73	24			100+	44	.50+
11.40	235.21	.86	.37	SAND	SW-SP	.74	22			100+	44	.50+
11.60	194.82	.82	.42	SAND	SW-SP	.75	18			93	44	.50+
11.80	182.68	.27	.15	SAND	SW-SP	.77	17			90	43	.50+
12.00	176.11	.79	.45	SAND TO SILTY SAND	SM-SP	.72	21			91	41	.50+
12.20	220.30	.95	.43	SAND	SW-SP	.79	21			97	44	.50+
12.40	246.46	.89	.36	SAND	SW-SP	.81	23			100+	44	.50+
12.60	284.14	.62	.22	SAND	SW-SP	.82	27			100+	44	.50+
12.80	238.09	.66	.28	SAND	SW-SP	.83	22			99	44	.50+
13.00	237.29	.63	.26	SAND	SW-SP	.84	22			98	44	.50+
13.20	240.10	1.74	.72	SAND	SW-SP	.86	23			99	44	.50+
13.40	230.40	.75	.32	SAND	SW-SP	.87	22			96	44	.50+
13.60	242.52	.49	.20	SAND	SW-SP	.88	23			98	44	.50+
13.80	172.04	.31	.18	SAND	SW-SP	.90	16			85	43	.50+
14.00	73.30	.54	.74	SILTY SAND TO SANDY SILT	SM-ML	.77	11			61	37	.23
14.20	84.94	.59	.69	SILTY SAND TO SANDY SILT	SM-ML	.78	13			65	37	.30
14.40	101.33	2.32	2.29	SANDY SILT TO CLAYEY SILT	ML-MH	.72	19	7.452	13.5	72	38	.50+
14.60	121.78	.76	.62	SAND TO SILTY SAND	SM-SP	.88	14			73	39	.50+
14.80	156.88	.19	.12	SAND	SW-SP	.96	15			81	42	.50+
15.00	168.36	.70	.42	SAND TO SILTY SAND	SM-SP	.90	20			84	41	.50+
15.20	230.38	.59	.26	SAND	SW-SP	.99	22			93	44	.50+
15.40	132.93	.42	.32	SAND TO SILTY SAND	SM-SP	.92	15			75	40	.50+
15.60	25.80	.43	1.65	CLAYEY SILT TO SILTY CLAY	MH-CL	.70	6	1.859	13.5			
15.80	12.31	.40	3.24	CLAY	CH	.63	5	.865	13.5			
16.00	12.06	.42	3.52	CLAY	CH	.64	5	.846	13.5			
16.20	10.57	.44	4.13	CLAY	CH	.65	5	.735	13.5			
16.40	10.58	.45	4.24	CLAY	CH	.66	5	.735	13.5			
16.60	9.35	.42	4.54	CLAY	CH	.66	4	.643	13.5			
16.80	9.84	.47	4.73	CLAY	CH	.67	4	.679	13.5			
17.00	45.68	.52	1.14	SANDY SILT TO CLAYEY SILT	ML-MH	.85	8	3.321	13.5	42	34	.15
17.20	15.56	.46	2.95	SILTY CLAY TO CLAY	CL-CH	.69	4	1.102	13.5			
17.40	11.79	.41	3.50	CLAY	CH	.70	5	.822	13.5			
17.60	16.99	.47	2.79	SILTY CLAY TO CLAY	CL-CH	.70	5	1.206	13.5			
17.80	15.12	.43	2.85	SILTY CLAY TO CLAY	CL-CH	.71	4	1.068	13.5			
18.00	28.76	.52	1.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.81	6	2.070	13.5			
18.20	64.12	.72	1.12	SILTY SAND TO SANDY SILT	SM-ML	1.00	10			49	35	.17
18.40	136.60	.65	.48	SAND TO SILTY SAND	SM-SP	1.10	16			72	39	.50+
18.60	144.40	.91	.63	SAND TO SILTY SAND	SM-SP	1.12	17			74	39	.50+
18.80	210.06	2.61	1.24	SAND TO SILTY SAND	SM-SP	1.13	25			86	41	.50+
19.00	317.24	.58	.18	SAND	SW-SP	1.23	30			99	44	.50+
19.20	344.76	5.82	1.69	SAND TO SILTY SAND	SM-SP	1.15	41			100+	42	.50+
19.40	215.52	.81	.37	SAND	SW-SP	1.26	20			81	43	.50+
19.60	288.92	.96	.33	SAND	SW-SP	1.27	27			94	44	.50+
19.80	330.01	1.03	.31	SAND	SW-SP	1.29	31			100+	44	.50+
20.00	343.37	3.64	1.06	SAND	SW-SP	1.30	32			100+	44	.50+
20.20	302.21	.94	.31	SAND	SW-SP	1.31	28			95	44	.50+
20.40	282.65	.83	.29	SAND	SW-SP	1.33	27			92	44	.50+
20.60	239.75	.95	.40	SAND	SW-SP	1.34	22			86	43	.50+
20.80	288.81	1.14	.39	SAND	SW-SP	1.35	27			93	44	.50+



RESULT OF CONE PENETRATION TEST

28S

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

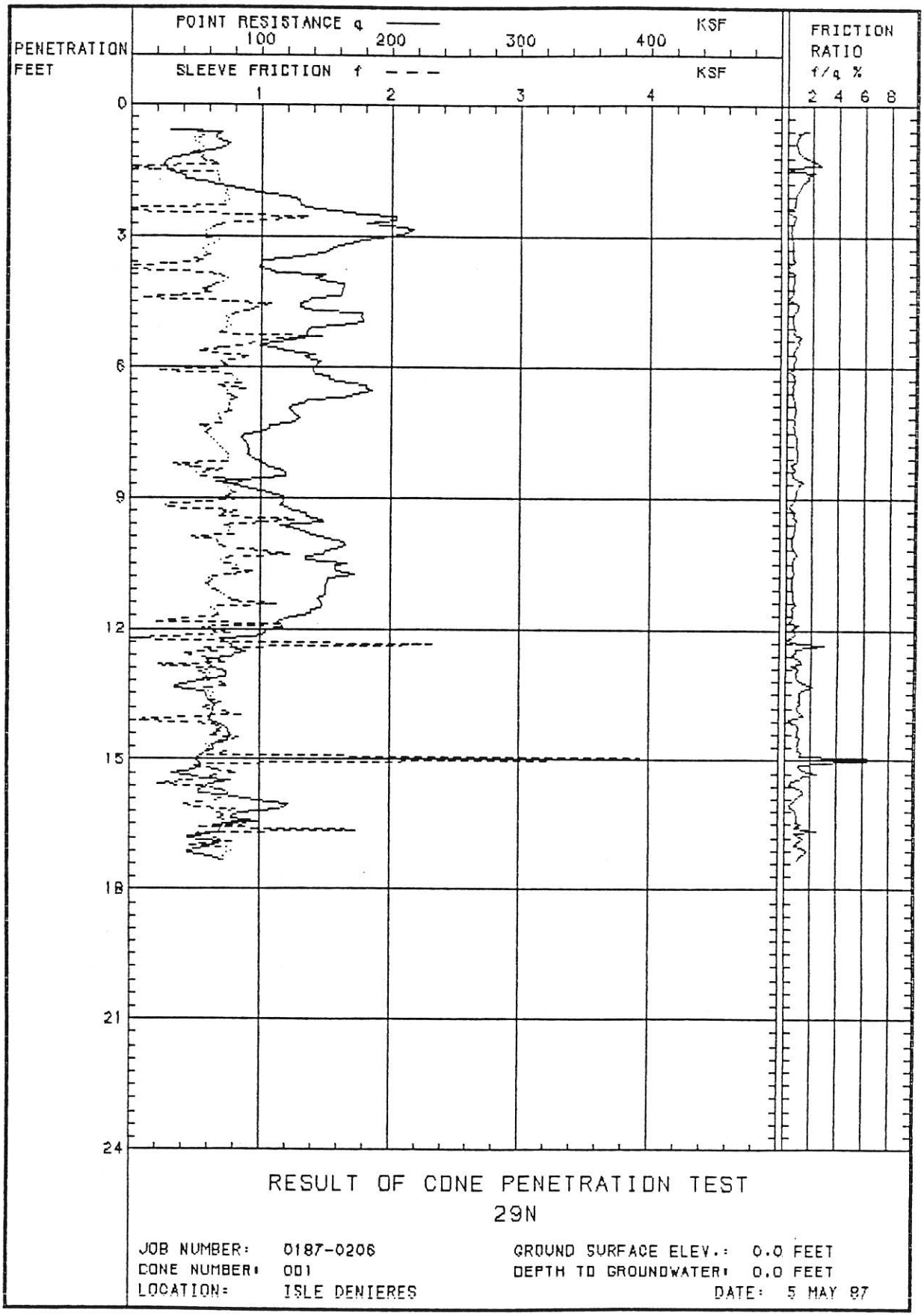
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 28S
CONE NO. : 001
DATE : 05/05/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	22.38	.21	.95	SANDY SILT TO CLAYEY SILT	ML-MH	.03	4	1.656	13.5	65	37	.50+
.80	109.45	.56	.51	SAND TO SILTY SAND	SM-SP	.05	13			100+	42	.50+
1.00	104.56	.08	.08	SAND TO SILTY SAND	SM-SP	.06	12			100+	42	.50+
1.20	169.45	.41	.24	SAND	SW-SP	.08	16			100+	44	.50+
1.40	245.71	.83	.34	SAND	SW-SP	.09	23			100+	44	.50+
1.60	241.52	.10	.04	SAND	SW-SP	.10	23			100+	44	.50+
1.80	280.87	.37	.13	SAND	SW-SP	.12	26			100+	44	.50+
2.00	183.97	4.05	2.20	SILTY SAND TO SANDY SILT	SM-ML	.11	29			100+	42	.50+
2.20	283.61	.15	.05	SAND	SW-SP	.14	27			100+	44	.50+
2.40	227.55	.09	.04	SAND	SW-SP	.16	21			100+	44	.50+
2.60	187.43	.10	.05	SAND	SW-SP	.17	17			100+	44	.50+
2.80	180.05	.15	.08	SAND	SW-SP	.18	17			100+	44	.50+
3.00	178.94	.22	.12	SAND	SW-SP	.20	17			100+	44	.50+
3.20	188.89	.16	.08	SAND	SW-SP	.21	18			100+	44	.50+
3.40	164.31	.35	.21	SAND	SW-SP	.22	15			100+	44	.50+
3.60	167.87	.24	.14	SAND	SW-SP	.23	16			100+	44	.50+
3.80	146.41	.23	.16	SAND TO SILTY SAND	SM-SP	.23	17			100+	42	.50+
4.00	108.98	.09	.08	SAND TO SILTY SAND	SM-SP	.24	13			99	42	.50+
4.20	107.24	.49	.46	SAND TO SILTY SAND	SM-SP	.25	12			96	42	.50+
4.40	78.55	.27	.34	SAND TO SILTY SAND	SM-SP	.26	9			82	40	.50+
4.60	111.36	.12	.11	SAND TO SILTY SAND	SM-SP	.28	13			96	42	.50+
4.80	110.53	.11	.10	SAND TO SILTY SAND	SM-SP	.29	13			96	42	.50+
5.00	124.94	.35	.28	SAND TO SILTY SAND	SM-SP	.30	14			99	42	.50+
5.20	105.82	1.10	1.04	SILTY SAND TO SANDY SILT	SM-ML	.29	16			93	41	.50+
5.40	187.37	.26	.14	SAND	SW-SP	.35	17			100+	44	.50+
5.60	202.18	.51	.25	SAND	SW-SP	.36	19			100+	44	.50+
5.80	210.83	.35	.16	SAND	SW-SP	.38	20			100+	44	.50+
6.00	209.56	.38	.18	SAND	SW-SP	.39	20			100+	44	.50+
6.20	190.36	.41	.22	SAND	SW-SP	.40	18			100+	44	.50+
6.40	200.70	.36	.18	SAND	SW-SP	.42	19			100+	44	.50+
6.60	205.49	.53	.26	SAND	SW-SP	.43	19			100+	44	.50+
6.80	191.32	.58	.30	SAND	SW-SP	.44	18			100+	44	.50+
7.00	206.11	.08	.04	SAND	SW-SP	.45	19			100+	44	.50+
7.20	174.77	.00	.00	SAND	SW-SP	.47	16			100+	44	.50+
7.40	138.23	.18	.13	SAND TO SILTY SAND	SM-SP	.44	16			93	42	.50+
7.60	132.57	.31	.24	SAND TO SILTY SAND	SM-SP	.46	15			91	41	.50+
7.80	123.71	.27	.22	SAND TO SILTY SAND	SM-SP	.47	14			88	41	.50+
8.00	127.18	.19	.15	SAND TO SILTY SAND	SM-SP	.48	15			89	41	.50+
8.20	117.77	.06	.05	SAND TO SILTY SAND	SM-SP	.49	14			85	41	.50+
8.40	102.02	.29	.28	SAND TO SILTY SAND	SM-SP	.50	12			80	40	.50+
8.60	116.30	.57	.49	SAND TO SILTY SAND	SM-SP	.52	13			84	41	.50+
8.80	117.83	.31	.26	SAND TO SILTY SAND	SM-SP	.53	14			84	41	.50+
9.00	129.16	.60	.47	SAND TO SILTY SAND	SM-SP	.54	15			86	41	.50+
9.20	94.17	.51	.54	SAND TO SILTY SAND	SM-SP	.55	11			75	40	.50+
9.40	122.14	.17	.14	SAND TO SILTY SAND	SM-SP	.56	14			83	41	.50+

9.60	101.47	.98	.97	SILTY SAND TO SANDY SILT	SM-ML	.53	16			77	38	.50+
9.80	119.56	.15	.13	SAND TO SILTY SAND	SM-SP	.59	14			82	40	.50+
10.00	110.76	.20	.18	SAND TO SILTY SAND	SM-SP	.60	13			79	40	.50+
10.20	106.06	.19	.18	SAND TO SILTY SAND	SM-SP	.61	12			77	40	.50+
10.40	106.49	.33	.31	SAND TO SILTY SAND	SM-SP	.62	12			77	40	.50+
10.60	106.53	.04	.04	SAND TO SILTY SAND	SM-SP	.64	12			76	40	.50+
10.80	122.49	.27	.22	SAND TO SILTY SAND	SM-SP	.65	14			81	40	.50+
11.00	141.98	.28	.19	SAND TO SILTY SAND	SM-SP	.66	17			85	41	.50+
11.20	205.03	.19	.09	SAND	SW-SP	.73	19			97	44	.50+
11.40	205.31	1.16	.56	SAND	SW-SP	.74	19			96	44	.50+
11.60	205.01	.31	.15	SAND	SW-SP	.75	19			96	44	.50+
11.80	161.38	.52	.32	SAND TO SILTY SAND	SM-SP	.71	19			88	41	.50+
12.00	126.06	.19	.15	SAND TO SILTY SAND	SM-SP	.72	15			80	40	.50+
12.20	149.60	.12	.08	SAND TO SILTY SAND	SM-SP	.73	17			85	41	.50+
12.40	105.57	.23	.22	SAND TO SILTY SAND	SM-SP	.74	12			72	39	.50+
12.60	90.88	.15	.17	SAND TO SILTY SAND	SM-SP	.76	10			67	39	.38
12.80	77.76	.66	.85	SILTY SAND TO SANDY SILT	SM-ML	.70	12			64	37	.29
13.00	76.31	.29	.38	SILTY SAND TO SANDY SILT	SM-ML	.71	12			63	37	.27
13.20	79.13	.86	1.08	SILTY SAND TO SANDY SILT	SM-ML	.73	12			64	37	.29
13.40	84.41	.07	.08	SAND TO SILTY SAND	SM-SP	.80	10			64	38	.28
13.60	28.83	.10	.33	SANDY SILT TO CLAYEY SILT	ML-MH	.68	5	2.085	13.5	33	33	.13
13.80	41.55	.28	.67	SANDY SILT TO CLAYEY SILT	ML-MH	.69	7	3.027	13.5	45	34	.16
14.00	104.78	.33	.32	SAND TO SILTY SAND	SM-SP	.84	12			69	39	.47
14.20	109.54	.07	.06	SAND TO SILTY SAND	SM-SP	.85	13			70	39	.50+
14.40	102.45	.27	.26	SAND TO SILTY SAND	SM-SP	.86	12			68	39	.41
14.60	126.82	.38	.30	SAND TO SILTY SAND	SM-SP	.88	15			75	40	.50+
14.80	105.26	.38	.36	SAND TO SILTY SAND	SM-SP	.89	12			68	39	.42
15.00	139.87	.23	.16	SAND TO SILTY SAND	SM-SP	.90	16			78	40	.50+
15.20	94.07	.41	.43	SAND TO SILTY SAND	SM-SP	.91	11			64	38	.30
15.40	152.18	.17	.11	SAND TO SILTY SAND	SM-SP	.92	18			80	40	.50+
15.60	156.93	.22	.14	SAND	SW-SP	1.01	15			80	42	.44
15.80	150.92	.52	.34	SAND TO SILTY SAND	SM-SP	.95	18			80	40	.50+



RESULT OF CONE PENETRATION TEST

29N

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

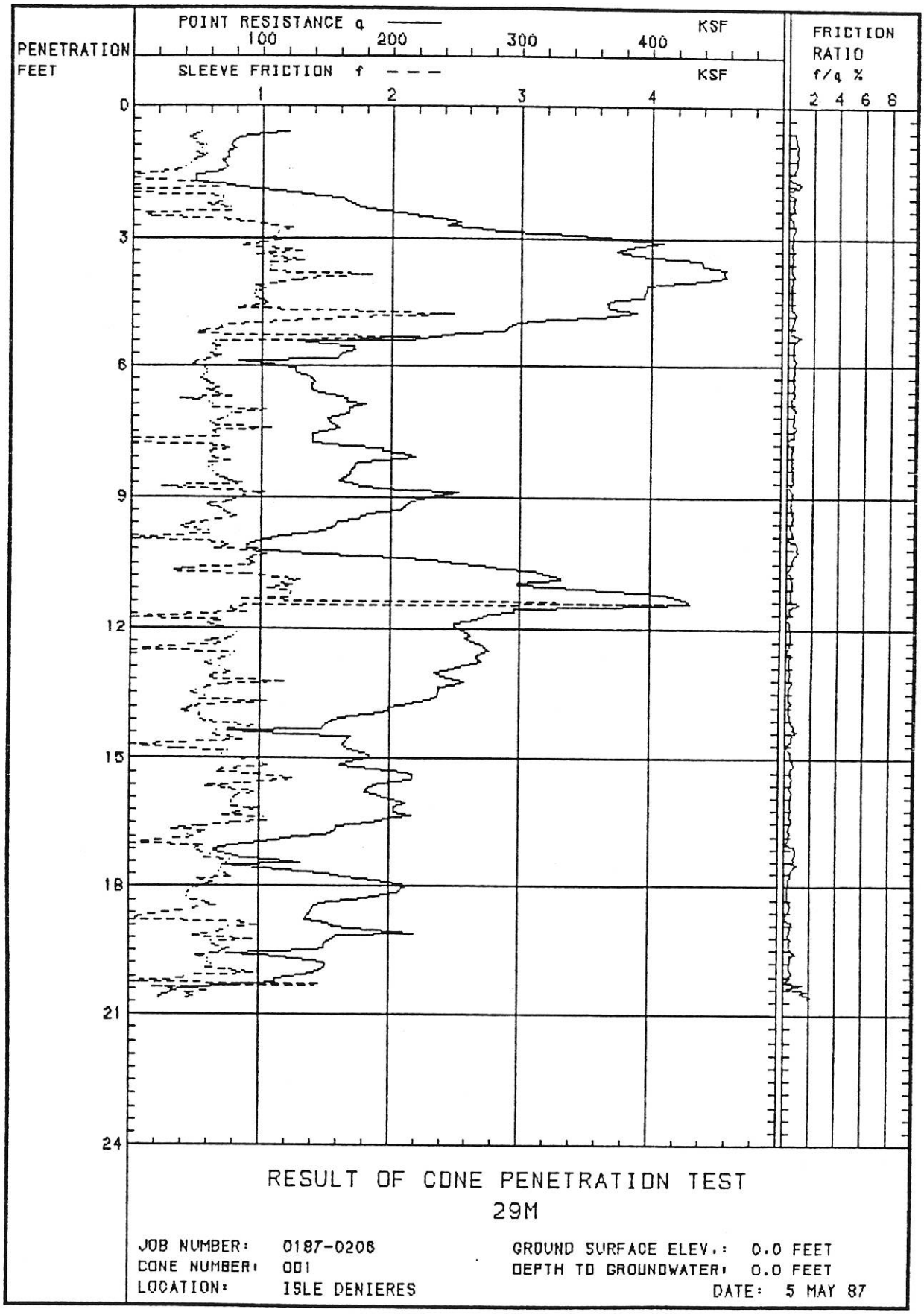
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 29N
CONE NO. : 001
DATE : 05/05/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	49.93	.54	1.09	SANDY SILT TO CLAYEY SILT	ML-MH	.03	9	3.696	13.5	87	40	.50+
.80	68.13	.49	.72	SILTY SAND TO SANDY SILT	SM-ML	.04	10			100+	42	.50+
1.00	67.15	.54	.80	SILTY SAND TO SANDY SILT	SM-ML	.05	10			99	42	.50+
1.20	38.01	.52	1.36	SANDY SILT TO CLAYEY SILT	ML-MH	.06	7	2.811	13.5	74	38	.50+
1.40	25.95	.55	2.12	CLAYEY SILT TO SILTY CLAY	MH-CL	.06	6	1.917	13.5			
1.60	36.39	.67	1.83	SANDY SILT TO CLAYEY SILT	ML-MH	.08	6	2.690	13.5	71	38	.50+
1.80	60.99	.69	1.13	SILTY SAND TO SANDY SILT	SM-ML	.10	9			87	40	.50+
2.00	98.37	.73	.74	SAND TO SILTY SAND	SM-SP	.12	11			100+	42	.50+
2.20	129.50	.75	.58	SAND TO SILTY SAND	SM-SP	.13	15			100+	42	.50+
2.40	149.77	.00	.00	SAND	SW-SP	.15	14			100+	44	.50+
2.60	203.66	1.27	.62	SAND TO SILTY SAND	SM-SP	.16	24			100+	42	.50+
2.80	207.93	.77	.37	SAND	SW-SP	.18	19			100+	44	.50+
3.00	198.77	.57	.29	SAND	SW-SP	.20	19			100+	44	.50+
3.20	164.32	.61	.37	SAND TO SILTY SAND	SM-SP	.19	19			100+	42	.50+
3.40	143.67	.57	.40	SAND TO SILTY SAND	SM-SP	.20	17			100+	42	.50+
3.60	100.11	.57	.56	SAND TO SILTY SAND	SM-SP	.22	11			97	42	.50+
3.80	108.76	.51	.47	SAND TO SILTY SAND	SM-SP	.23	13			100+	42	.50+
4.00	147.18	.91	.62	SAND TO SILTY SAND	SM-SP	.24	17			100+	42	.50+
4.20	163.08	.59	.36	SAND TO SILTY SAND	SM-SP	.25	19			100+	42	.50+
4.40	150.35	.71	.47	SAND TO SILTY SAND	SM-SP	.26	18			100+	42	.50+
4.60	130.36	1.03	.79	SAND TO SILTY SAND	SM-SP	.28	15			100+	42	.50+
4.80	177.71	.83	.47	SAND TO SILTY SAND	SM-SP	.29	21			100+	42	.50+
5.00	169.53	.88	.52	SAND TO SILTY SAND	SM-SP	.30	20			100+	42	.50+
5.20	135.90	.92	.68	SAND TO SILTY SAND	SM-SP	.31	16			100+	42	.50+
5.40	117.14	.66	.57	SAND TO SILTY SAND	SM-SP	.32	14			94	42	.50+
5.60	114.89	.57	.49	SAND TO SILTY SAND	SM-SP	.34	13			92	42	.50+
5.80	136.49	.85	.63	SAND TO SILTY SAND	SM-SP	.35	16			100+	42	.50+
6.00	141.69	.68	.48	SAND TO SILTY SAND	SM-SP	.36	16			100+	42	.50+
6.20	147.04	.78	.53	SAND TO SILTY SAND	SM-SP	.37	17			100+	42	.50+
6.40	174.83	.77	.44	SAND TO SILTY SAND	SM-SP	.38	20			100+	42	.50+
6.60	179.12	.75	.42	SAND TO SILTY SAND	SM-SP	.40	21			100+	42	.50+
6.80	134.80	1.69	1.25	SILTY SAND TO SANDY SILT	SM-ML	.37	21			97	42	.50+
7.00	123.28	.74	.60	SAND TO SILTY SAND	SM-SP	.42	14			90	41	.50+
7.20	129.63	.69	.53	SAND TO SILTY SAND	SM-SP	.43	15			91	41	.50+
7.40	106.75	.58	.54	SAND TO SILTY SAND	SM-SP	.44	12			84	41	.50+
7.60	86.84	.61	.71	SILTY SAND TO SANDY SILT	SM-ML	.42	13			78	39	.50+
7.80	89.53	.68	.76	SILTY SAND TO SANDY SILT	SM-ML	.43	14			79	39	.50+
8.00	90.64	.74	.82	SILTY SAND TO SANDY SILT	SM-ML	.44	14			79	39	.50+
8.20	101.44	.69	.68	SAND TO SILTY SAND	SM-SP	.49	12			80	40	.50+
8.40	117.05	.61	.52	SAND TO SILTY SAND	SM-SP	.50	14			84	41	.50+
8.60	84.59	.74	.88	SILTY SAND TO SANDY SILT	SM-ML	.47	13			74	38	.50+
8.80	93.87	.76	.81	SILTY SAND TO SANDY SILT	SM-ML	.48	14			78	39	.50+
9.00	118.06	.72	.61	SAND TO SILTY SAND	SM-SP	.54	14			83	41	.50+
9.20	117.35	.66	.57	SAND TO SILTY SAND	SM-SP	.55	14			83	40	.50+
9.40	135.28	.71	.53	SAND TO SILTY SAND	SM-SP	.56	16			87	41	.50+

9.60	132.07	1.57	1.19	SILTY SAND TO SANDY SILT	SM-ML	.53	21			87	49	.50+
9.80	136.70	.78	.57	SAND TO SILTY SAND	SM-SP	.59	16			86	41	.50+
10.00	161.06	1.10	.68	SAND TO SILTY SAND	SM-SP	.60	19			92	41	.50+
10.20	154.40	.17	.11	SAND	SW-SP	.66	14			83	43	.50+
10.40	135.28	.75	.55	SAND TO SILTY SAND	SM-SP	.62	16			85	41	.50+
10.60	157.66	.80	.51	SAND TO SILTY SAND	SM-SP	.64	18			90	41	.50+
10.80	163.35	.99	.61	SAND TO SILTY SAND	SM-SP	.65	19			90	41	.50+
11.00	150.54	.61	.41	SAND TO SILTY SAND	SM-SP	.66	18			87	41	.50+
11.20	150.53	.73	.49	SAND TO SILTY SAND	SM-SP	.67	18			87	41	.50+
11.40	146.83	1.04	.71	SAND TO SILTY SAND	SM-SP	.68	17			85	41	.50+
11.60	139.22	.66	.47	SAND TO SILTY SAND	SM-SP	.70	16			83	41	.50+
11.80	116.57	.63	.54	SAND TO SILTY SAND	SM-SP	.71	13			77	40	.50+
12.00	111.30	.58	.53	SAND TO SILTY SAND	SM-SP	.72	13			75	40	.50+
12.20	83.00	.91	1.10	SILTY SAND TO SANDY SILT	SM-ML	.67	13			67	37	.37
12.40	78.71	1.47	1.87	SANDY SILT TO CLAYEY SILT	ML-MH	.62	15	5.784	13.5	67	37	.37
12.60	79.73	.68	.85	SILTY SAND TO SANDY SILT	SM-ML	.69	12			65	37	.31
12.80	59.80	.50	.84	SILTY SAND TO SANDY SILT	SM-ML	.70	9			57	36	.20
13.00	74.77	.58	.77	SILTY SAND TO SANDY SILT	SM-ML	.71	11			63	37	.26
13.20	55.35	.61	1.11	SANDY SILT TO CLAYEY SILT	ML-MH	.66	10	4.051	13.5	55	36	.19
13.40	45.54	.61	1.34	SANDY SILT TO CLAYEY SILT	ML-MH	.67	8	3.324	13.5	49	35	.17
13.60	60.37	.62	1.03	SILTY SAND TO SANDY SILT	SM-ML	.75	9			55	36	.19
13.80	65.45	.59	.91	SILTY SAND TO SANDY SILT	SM-ML	.76	10			58	36	.20
14.00	62.49	.65	1.04	SILTY SAND TO SANDY SILT	SM-ML	.77	9			56	36	.19
14.20	69.43	.54	.78	SILTY SAND TO SANDY SILT	SM-ML	.78	11			60	36	.21
14.40	76.96	.67	.87	SILTY SAND TO SANDY SILT	SM-ML	.79	12			62	37	.24
14.60	69.86	.95	1.37	SILTY SAND TO SANDY SILT	SM-ML	.80	11			59	36	.21
14.80	62.29	.67	1.08	SILTY SAND TO SANDY SILT	SM-ML	.81	9			54	36	.19
15.00	52.14	2.49	4.78	CLAY	CH	.60	24	3.818	13.5			
15.20	51.80	.68	1.32	SANDY SILT TO CLAYEY SILT	ML-MH	.76	9	3.781	13.5	49	35	.17
15.40	50.90	.65	1.28	SANDY SILT TO CLAYEY SILT	ML-MH	.77	9	3.713	13.5	48	35	.17
15.60	59.94	1.76	2.93	CLAYEY SILT TO SILTY CLAY	MH-CL	.70	14	4.388	13.5			
15.80	62.39	.75	1.20	SILTY SAND TO SANDY SILT	SM-ML	.87	9			52	35	.18
16.00	114.94	.62	.54	SAND TO SILTY SAND	SM-SP	.96	13			69	39	.47
16.20	100.23	.75	.75	SAND TO SILTY SAND	SM-SP	.97	12			65	39	.31
16.40	88.06	1.21	1.38	SILTY SAND TO SANDY SILT	SM-ML	.90	14			63	37	.26
16.60	70.06	1.45	2.06	SANDY SILT TO CLAYEY SILT	ML-MH	.83	13	5.128	13.5	58	36	.20
16.80	45.26	.67	1.49	SANDY SILT TO CLAYEY SILT	ML-MH	.84	8	3.290	13.5	42	34	.15
17.00	62.55	.76	1.22	SILTY SAND TO SANDY SILT	SM-ML	.93	9			50	35	.17
17.20	53.65	.67	1.25	SANDY SILT TO CLAYEY SILT	ML-MH	.86	10	3.910	13.5	47	35	.16



RESULT OF CONE PENETRATION TEST

29M

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

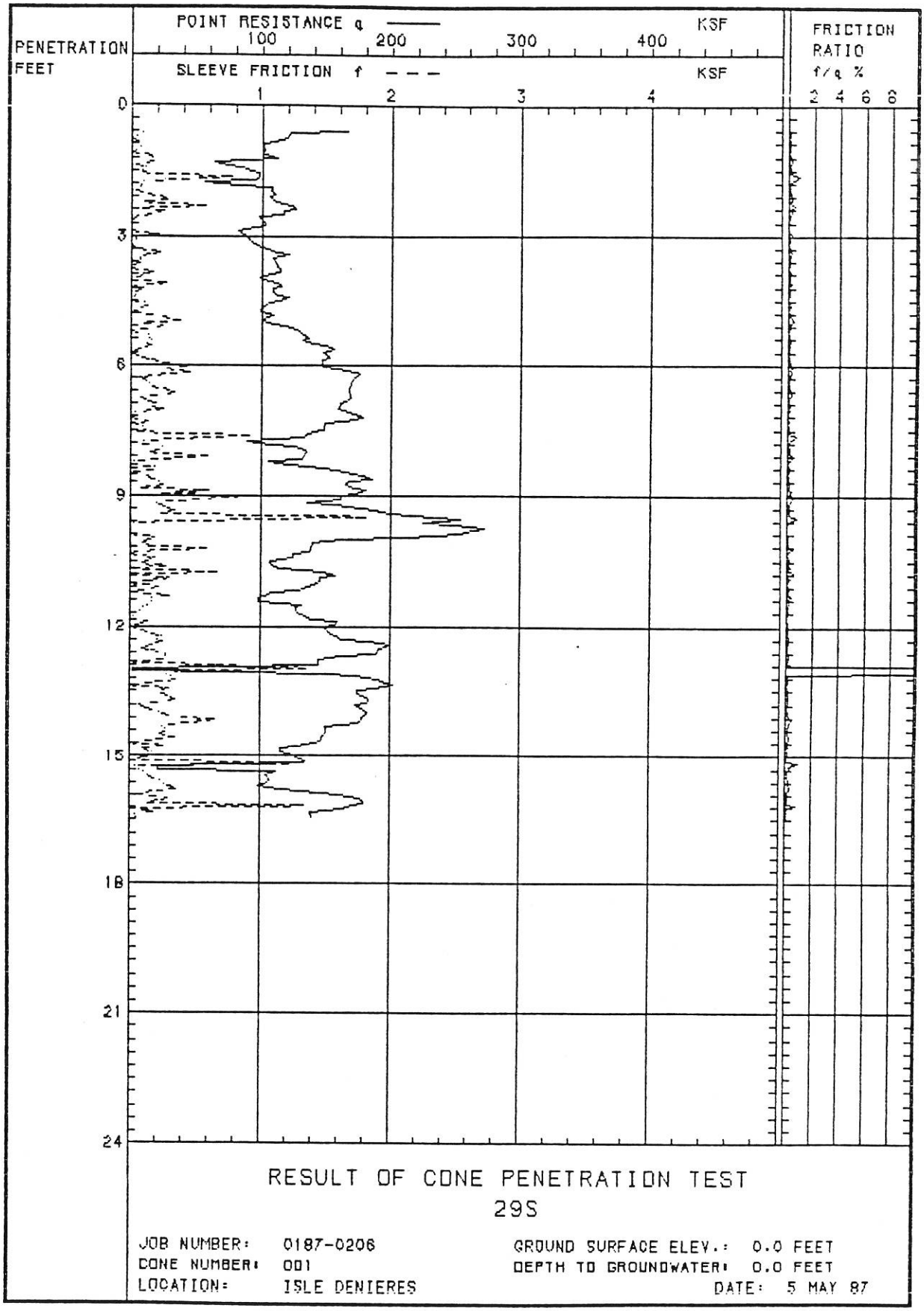
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 29M
CONE NO. : 001
DATE : 05/05/87

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	111.06	.51	.46	SAND TO SILTY SAND	SM-SP	.04	13			100+	42	.50+
.80	78.46	.48	.62	SILTY SAND TO SANDY SILT	SM-ML	.04	12			100+	42	.50+
1.00	76.01	.59	.77	SILTY SAND TO SANDY SILT	SM-ML	.05	12			100+	42	.50+
1.20	71.70	.59	.83	SILTY SAND TO SANDY SILT	SM-ML	.07	11			100+	42	.50+
1.40	71.82	.38	.53	SILTY SAND TO SANDY SILT	SM-ML	.08	11			99	42	.50+
1.60	48.21	.50	1.03	SANDY SILT TO CLAYEY SILT	ML-MH	.08	9	3.565	13.5	79	39	.50+
1.80	75.01	.51	.68	SILTY SAND TO SANDY SILT	SM-ML	.10	11			97	42	.50+
2.00	134.52	.35	.26	SAND TO SILTY SAND	SM-SP	.12	16			100+	42	.50+
2.20	168.48	.70	.42	SAND TO SILTY SAND	SM-SP	.13	20			100+	42	.50+
2.40	199.95	.43	.22	SAND	SW-SP	.16	19			100+	44	.50+
2.60	245.45	.89	.36	SAND	SW-SP	.17	23			100+	44	.50+
2.80	274.40	1.15	.42	SAND	SW-SP	.18	26			100+	44	.50+
3.00	376.27	1.11	.30	SAND	SW-SP	.20	36			100+	44	.50+
3.20	386.12	1.17	.30	SAND	SW-SP	.21	36			100+	44	.50+
3.40	394.38	.74	.19	SAND	SW-SP	.22	37			100+	44	.50+
3.60	439.29	1.13	.26	SAND	SW-SP	.23	42			100+	44	.50+
3.80	455.90	.95	.21	GRAVELLY SAND TO SAND	SW-GW	.25	36			100+	45	.50+
4.00	425.24	1.02	.24	SAND	SW-SP	.26	40			100+	44	.50+
4.20	395.73	.97	.24	SAND	SW-SP	.27	37			100+	44	.50+
4.40	383.52	.85	.22	SAND	SW-SP	.29	36			100+	44	.50+
4.60	366.98	.86	.23	SAND	SW-SP	.30	35			100+	44	.50+
4.80	370.49	2.11	.57	SAND	SW-SP	.31	35			100+	44	.50+
5.00	294.32	.80	.27	SAND	SW-SP	.32	28			100+	44	.50+
5.20	270.68	.51	.19	SAND	SW-SP	.34	25			100+	44	.50+
5.40	171.39	3.09	1.80	SILTY SAND TO SANDY SILT	SM-ML	.30	27			100+	42	.50+
5.60	171.44	.69	.40	SAND TO SILTY SAND	SM-SP	.34	20			100+	42	.50+
5.80	159.52	.72	.45	SAND TO SILTY SAND	SM-SP	.35	19			100+	42	.50+
6.00	115.02	.58	.50	SAND TO SILTY SAND	SM-SP	.36	13			91	41	.50+
6.20	130.09	.56	.43	SAND TO SILTY SAND	SM-SP	.37	15			95	42	.50+
6.40	139.72	.55	.39	SAND TO SILTY SAND	SM-SP	.38	16			98	42	.50+
6.60	141.89	.61	.43	SAND TO SILTY SAND	SM-SP	.40	16			98	42	.50+
6.80	166.27	.48	.29	SAND	SW-SP	.44	15			100+	44	.50+
7.00	168.24	.83	.49	SAND TO SILTY SAND	SM-SP	.42	20			100+	42	.50+
7.20	154.38	.52	.34	SAND TO SILTY SAND	SM-SP	.43	18			99	42	.50+
7.40	157.64	.85	.54	SAND TO SILTY SAND	SM-SP	.44	18			99	42	.50+
7.60	139.22	1.27	.91	SAND TO SILTY SAND	SM-SP	.46	16			93	42	.50+
7.80	152.84	.34	.23	SAND TO SILTY SAND	SM-SP	.47	18			96	42	.50+
8.00	201.11	1.39	.69	SAND TO SILTY SAND	SM-SP	.48	24			100+	42	.50+
8.20	185.71	.60	.32	SAND	SW-SP	.53	17			100+	44	.50+
8.40	170.23	.61	.36	SAND TO SILTY SAND	SM-SP	.50	20			97	42	.50+
8.60	162.36	.72	.44	SAND TO SILTY SAND	SM-SP	.52	19			96	42	.50+
8.80	193.85	.43	.22	SAND	SW-SP	.57	18			100+	44	.50+
9.00	233.23	.72	.31	SAND	SW-SP	.58	22			100+	44	.50+
9.20	212.10	.66	.31	SAND	SW-SP	.60	20			100+	44	.50+
9.40	184.82	.51	.28	SAND	SW-SP	.61	17			97	44	.50+

9.60	158.59	.60	.38	SAND TO SILTY SAND	SM-SP	.58	18			92	42	.50+
9.80	140.80	.60	.43	SAND TO SILTY SAND	SM-SP	.59	16			87	41	.50+
10.00	101.64	.18	.18	SAND TO SILTY SAND	SM-SP	.60	12			75	40	.50+
10.20	98.01	.79	.81	SILTY SAND TO SANDY SILT	SM-ML	.56	15			76	39	.50+
10.40	206.48	1.56	.76	SAND TO SILTY SAND	SM-SP	.62	24			100+	42	.50+
10.60	277.33	.65	.23	SAND	SW-SP	.69	26			100+	44	.50+
10.80	325.57	.99	.30	SAND	SW-SP	.70	31			100+	44	.50+
11.00	298.11	1.20	.40	SAND	SW-SP	.71	28			100+	44	.50+
11.20	401.50	7.28	1.81	SAND TO SILTY SAND	SM-SP	.67	48			100+	42	.50+
11.40	428.56	5.19	1.21	SAND	SW-SP	.74	41			100+	44	.50+
11.60	295.65	.83	.28	SAND	SW-SP	.75	28			100+	44	.50+
11.80	265.00	.16	.06	SAND	SW-SP	.77	25			100+	44	.50+
12.00	250.62	.74	.30	SAND	SW-SP	.78	24			100+	44	.50+
12.20	260.03	.75	.29	SAND	SW-SP	.79	24			100+	44	.50+
12.40	270.03	.35	.13	SAND	SW-SP	.81	25			100+	44	.50+
12.60	268.64	.58	.21	SAND	SW-SP	.82	25			100+	44	.50+
12.80	267.90	.60	.22	SAND	SW-SP	.83	25			100+	44	.50+
13.00	238.54	.74	.31	SAND	SW-SP	.84	22			99	44	.50+
13.20	251.26	.90	.36	SAND	SW-SP	.86	24			100+	44	.50+
13.40	237.60	.83	.35	SAND	SW-SP	.87	22			98	44	.50+
13.60	233.49	.56	.24	SAND	SW-SP	.88	22			96	44	.50+
13.80	204.50	.61	.30	SAND	SW-SP	.90	19			91	43	.50+
14.00	177.25	.50	.28	SAND	SW-SP	.91	16			85	43	.50+
14.20	152.06	.52	.34	SAND TO SILTY SAND	SM-SP	.85	18			82	40	.50+
14.40	98.31	.90	.92	SILTY SAND TO SANDY SILT	SM-ML	.79	15			69	38	.44
14.60	166.04	.65	.39	SAND TO SILTY SAND	SM-SP	.88	19			91	41	.50+
14.80	171.51	.56	.33	SAND	SW-SP	.96	16			83	43	.50+
15.00	179.90	.86	.48	SAND TO SILTY SAND	SM-SP	.90	21			86	41	.50+
15.20	174.72	.97	.55	SAND TO SILTY SAND	SM-SP	.91	20			85	41	.50+
15.40	217.93	1.10	.51	SAND	SW-SP	1.00	20			90	43	.50+
15.60	188.99	.95	.50	SAND TO SILTY SAND	SM-SP	.94	22			87	41	.50+
15.80	185.13	.92	.50	SAND TO SILTY SAND	SM-SP	.95	22			86	41	.50+
16.00	210.00	.71	.34	SAND	SW-SP	1.04	20			88	43	.50+
16.20	203.72	.76	.37	SAND	SW-SP	1.05	19			86	43	.50+
16.40	198.64	.23	.11	SAND	SW-SP	1.07	19			85	43	.50+
16.60	159.09	.68	.42	SAND TO SILTY SAND	SM-SP	1.00	19			80	40	.50+
16.80	140.47	.48	.34	SAND TO SILTY SAND	SM-SP	1.01	16			75	40	.50+
17.00	85.40	.12	.15	SAND TO SILTY SAND	SM-SP	1.02	10			60	38	.22
17.20	70.93	.57	.81	SILTY SAND TO SANDY SILT	SM-ML	.95	11			54	36	.19
17.40	121.74	.69	.56	SAND TO SILTY SAND	SM-SP	1.04	14			69	39	.47
17.60	117.48	.73	.63	SAND TO SILTY SAND	SM-SP	1.06	14			68	39	.41
17.80	171.25	.66	.39	SAND TO SILTY SAND	SM-SP	1.07	20			81	40	.50+
18.00	213.34	.69	.32	SAND	SW-SP	1.17	20			86	43	.50+
18.20	198.47	.55	.28	SAND	SW-SP	1.18	19			83	43	.50+
18.40	148.96	.66	.45	SAND TO SILTY SAND	SM-SP	1.10	17			75	40	.50+
18.60	139.36	.31	.22	SAND TO SILTY SAND	SM-SP	1.12	16			72	39	.50+
18.80	140.73	.56	.40	SAND TO SILTY SAND	SM-SP	1.13	16			72	39	.50+
19.00	171.75	.75	.44	SAND TO SILTY SAND	SM-SP	1.14	20			80	40	.50+
19.20	158.44	.53	.33	SAND TO SILTY SAND	SM-SP	1.15	18			76	40	.50+
19.40	150.04	.53	.36	SAND TO SILTY SAND	SM-SP	1.16	17			74	40	.50+
19.60	88.35	.69	.78	SILTY SAND TO SANDY SILT	SM-ML	1.08	14			59	36	.22
19.80	150.52	.63	.42	SAND TO SILTY SAND	SM-SP	1.19	18			73	39	.50+
20.00	144.97	.87	.60	SAND TO SILTY SAND	SM-SP	1.20	17			72	39	.50+
20.20	113.14	.22	.19	SAND TO SILTY SAND	SM-SP	1.21	13			64	38	.29
20.40	43.09	.39	.91	SANDY SILT TO CLAYEY SILT	ML-MH	1.02	8	3.116	13.5	36	33	.14
20.60	23.37	.47	2.00	CLAYEY SILT TO SILTY CLAY	MH-CL	.93	5	1.663	13.5			



RESULT OF CONE PENETRATION TEST

29S

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

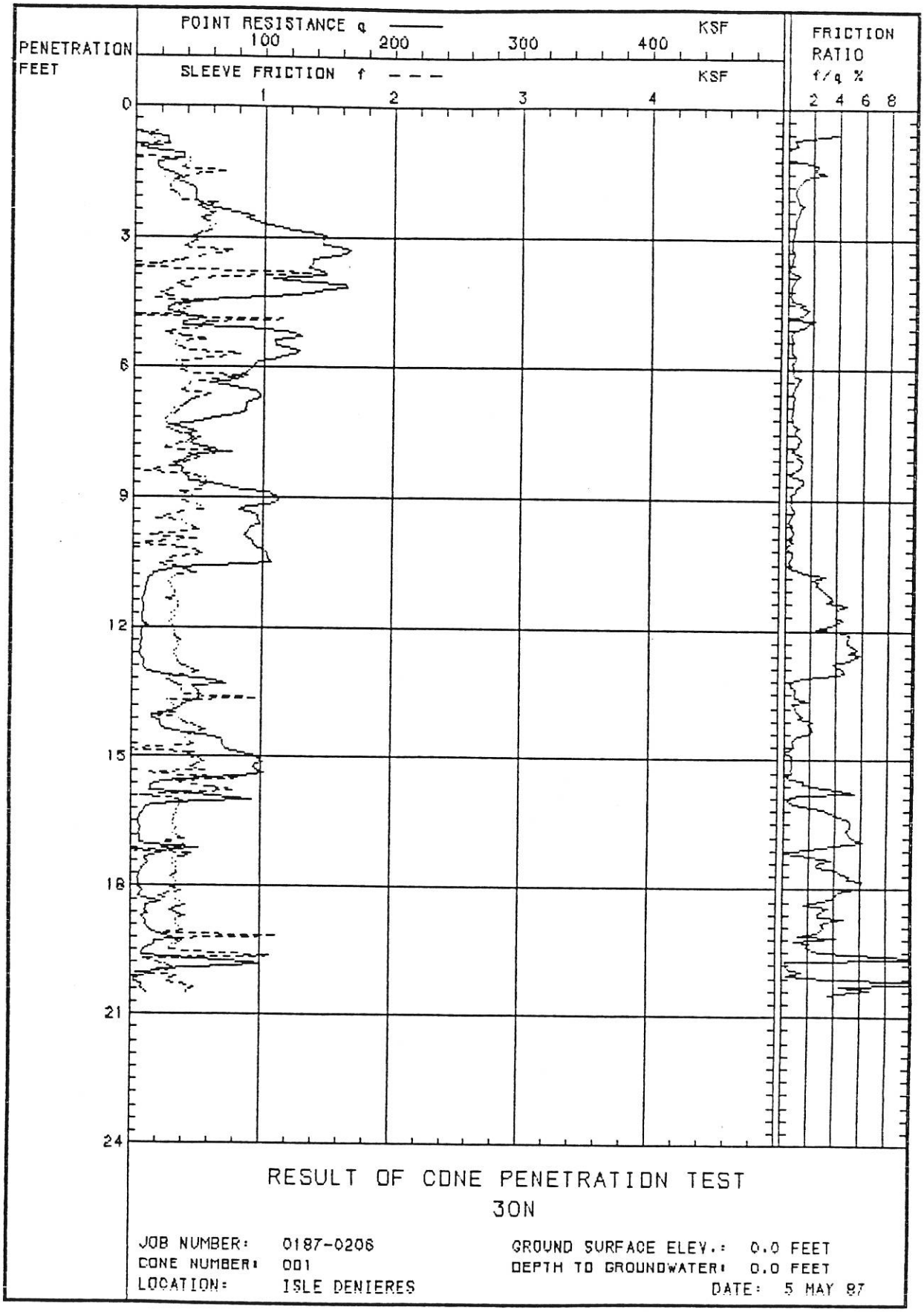
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 295
CONE NO. : 001
DATE : 05/05/87

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	143.89	.07	.05	SAND TO SILTY SAND	SM-SP	.04	17			100+	42	.50+
.80	114.62	.01	.01	SAND TO SILTY SAND	SM-SP	.05	13			100+	42	.50+
1.00	101.83	.07	.07	SAND TO SILTY SAND	SM-SP	.06	12			100+	42	.50+
1.20	109.27	.24	.22	SAND TO SILTY SAND	SM-SP	.07	13			100+	42	.50+
1.40	78.95	.12	.15	SAND TO SILTY SAND	SM-SP	.08	9			100+	42	.50+
1.60	97.40	.04	.04	SAND TO SILTY SAND	SM-SP	.10	11			100+	42	.50+
1.80	68.97	.59	.86	SILTY SAND TO SANDY SILT	SM-ML	.10	11			93	41	.50+
2.00	108.71	.00	.00	SAND TO SILTY SAND	SM-SP	.12	13			100+	42	.50+
2.20	109.88	.11	.10	SAND TO SILTY SAND	SM-SP	.13	13			100+	42	.50+
2.40	121.77	.04	.04	SAND TO SILTY SAND	SM-SP	.14	14			100+	42	.50+
2.60	99.12	.15	.16	SAND TO SILTY SAND	SM-SP	.16	11			100+	42	.50+
2.80	95.46	.08	.08	SAND TO SILTY SAND	SM-SP	.17	11			100+	42	.50+
3.00	88.42	.03	.03	SAND TO SILTY SAND	SM-SP	.18	10			94	42	.50+
3.20	95.19	.00	.00	SAND TO SILTY SAND	SM-SP	.19	11			97	42	.50+
3.40	116.57	.19	.16	SAND TO SILTY SAND	SM-SP	.20	13			100+	42	.50+
3.60	110.50	.11	.10	SAND TO SILTY SAND	SM-SP	.22	13			100+	42	.50+
3.80	114.38	.02	.01	SAND TO SILTY SAND	SM-SP	.23	13			100+	42	.50+
4.00	101.93	.19	.19	SAND TO SILTY SAND	SM-SP	.24	12			95	42	.50+
4.20	111.93	.06	.05	SAND TO SILTY SAND	SM-SP	.25	13			98	42	.50+
4.40	116.56	.53	.46	SAND TO SILTY SAND	SM-SP	.26	13			99	42	.50+
4.60	104.30	.12	.11	SAND TO SILTY SAND	SM-SP	.28	12			93	42	.50+
4.80	104.26	.22	.21	SAND TO SILTY SAND	SM-SP	.29	12			92	41	.50+
5.00	105.43	.18	.17	SAND TO SILTY SAND	SM-SP	.30	12			91	41	.50+
5.20	127.90	.10	.08	SAND TO SILTY SAND	SM-SP	.31	15			99	42	.50+
5.40	134.32	.24	.18	SAND TO SILTY SAND	SM-SP	.32	16			100+	42	.50+
5.60	152.72	.18	.12	SAND TO SILTY SAND	SM-SP	.34	18			100+	42	.50+
5.80	151.26	.01	.01	SAND	SW-SP	.38	14			100+	44	.50+
6.00	147.70	.35	.24	SAND TO SILTY SAND	SM-SP	.36	17			100+	42	.50+
6.20	174.62	.50	.29	SAND	SW-SP	.40	16			100+	44	.50+
6.40	170.21	.12	.07	SAND	SW-SP	.42	16			100+	44	.50+
6.60	167.75	.30	.18	SAND	SW-SP	.43	16			100+	44	.50+
6.80	167.52	.10	.06	SAND	SW-SP	.44	16			100+	44	.50+
7.00	160.13	.24	.15	SAND	SW-SP	.45	15			100+	44	.50+
7.20	177.57	1.04	.58	SAND TO SILTY SAND	SM-SP	.43	21			100+	42	.50+
7.40	149.06	.05	.04	SAND TO SILTY SAND	SM-SP	.44	17			97	42	.50+
7.60	137.52	.03	.02	SAND TO SILTY SAND	SM-SP	.46	16			93	42	.50+
7.80	98.53	.76	.77	SAND TO SILTY SAND	SM-SP	.47	11			80	40	.50+
8.00	135.03	.18	.14	SAND TO SILTY SAND	SM-SP	.48	16			90	41	.50+
8.20	119.20	.78	.66	SAND TO SILTY SAND	SM-SP	.49	14			85	41	.50+
8.40	147.69	.18	.12	SAND TO SILTY SAND	SM-SP	.50	17			93	42	.50+
8.60	182.46	.12	.07	SAND	SW-SP	.56	17			99	44	.50+
8.80	169.08	.28	.16	SAND	SW-SP	.57	16			95	44	.50+
9.00	167.57	.12	.07	SAND	SW-SP	.58	16			94	44	.50+
9.20	146.65	.70	.48	SAND TO SILTY SAND	SM-SP	.55	17			90	41	.50+
9.40	193.50	.29	.15	SAND	SW-SP	.61	18			99	44	.50+

9.60	239.52	2.55	1.07	SAND TO SILTY SAND	SM-SP	.59	28			100+	42	.50+
9.80	264.76	.00	.00	SAND	SW-SP	.64	25			100+	44	.50+
10.00	187.78	.24	.13	SAND	SW-SP	.63	17			96	44	.50+
10.20	139.04	.50	.36	SAND TO SILTY SAND	SM-SP	.61	16			86	41	.50+
10.40	125.44	.10	.08	SAND TO SILTY SAND	SM-SP	.62	15			82	40	.50+
10.60	109.30	.07	.06	SAND TO SILTY SAND	SM-SP	.64	13			77	40	.50+
10.80	153.17	.34	.22	SAND TO SILTY SAND	SM-SP	.65	18			89	41	.50+
11.00	145.14	1.12	.77	SAND TO SILTY SAND	SM-SP	.66	17			86	41	.50+
11.20	119.47	.07	.06	SAND TO SILTY SAND	SM-SP	.67	14			79	40	.50+
11.40	98.63	.10	.11	SAND TO SILTY SAND	SM-SP	.68	11			72	39	.50+
11.60	127.10	.10	.08	SAND TO SILTY SAND	SM-SP	.70	15			81	40	.50+
11.80	136.83	.01	.01	SAND TO SILTY SAND	SM-SP	.71	16			82	40	.50+
12.00	153.92	.22	.14	SAND TO SILTY SAND	SM-SP	.72	18			86	41	.50+
12.20	156.52	.18	.11	SAND	SW-SP	.79	14			84	42	.50+
12.40	192.45	.14	.08	SAND	SW-SP	.81	18			91	43	.50+
12.60	190.58	.27	.14	SAND	SW-SP	.82	18			90	43	.50+
12.80	145.12	.13	.09	SAND TO SILTY SAND	SM-SP	.77	17			83	40	.50+
13.00	2.46	.89	36.13	ORGANIC MATERIAL	OL-OH	.39	1	.153	13.5			
13.20	182.10	.33	.18	SAND	SW-SP	.86	17			87	43	.50+
13.40	196.42	.06	.03	SAND	SW-SP	.87	18			90	43	.50+
13.60	178.75	.28	.16	SAND	SW-SP	.88	17			86	43	.50+
13.80	178.29	.32	.18	SAND	SW-SP	.90	17			86	43	.50+
14.00	182.76	.24	.13	SAND	SW-SP	.91	17			86	43	.50+
14.20	177.62	.46	.26	SAND	SW-SP	.92	17			85	43	.50+
14.40	151.14	.36	.24	SAND TO SILTY SAND	SM-SP	.86	18			81	40	.50+
14.60	147.35	.20	.13	SAND TO SILTY SAND	SM-SP	.88	17			81	40	.50+
14.80	122.88	.08	.06	SAND TO SILTY SAND	SM-SP	.89	14			73	39	.50+
15.00	126.66	.15	.12	SAND TO SILTY SAND	SM-SP	.90	15			74	40	.50+
15.20	79.48	.70	.89	SILTY SAND TO SANDY SILT	SM-ML	.84	12			62	37	.24
15.40	108.57	.15	.14	SAND TO SILTY SAND	SM-SP	.92	13			68	39	.43
15.60	105.81	.23	.21	SAND TO SILTY SAND	SM-SP	.94	12			67	39	.38
15.80	123.65	.22	.18	SAND TO SILTY SAND	SM-SP	.95	14			72	39	.50+
16.00	178.30	.22	.12	SAND	SW-SP	1.04	17			83	43	.50+
16.20	167.73	.04	.02	SAND	SW-SP	1.05	16			81	42	.50+
16.40	139.94	.05	.03	SAND TO SILTY SAND	SM-SP	.98	16			76	40	.50+



RESULT OF CONE PENETRATION TEST

30N

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

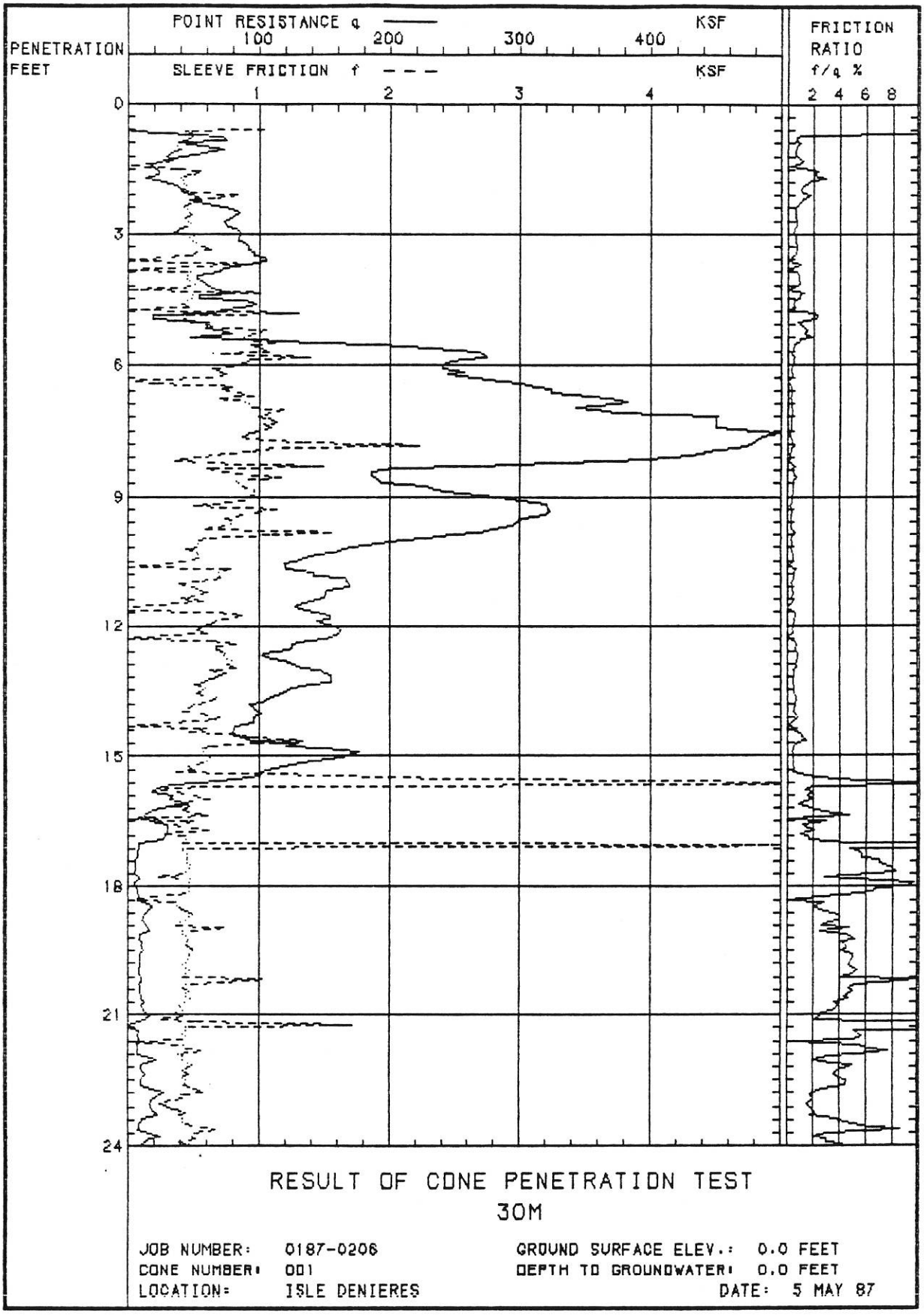
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 30N
CONE NO. : 001
DATE : 05/05/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	4.43	.15	3.29	CLAY	CH	.02	2	.326	13.5			
.80	25.58	.17	.65	SANDY SILT TO CLAYEY SILT	ML-MH	.04	4	1.892	13.5	66	37	.50+
1.00	12.66	.00	.00	SENSITIVE FINE GRAINED	OL-CH	.03	3	.936	13.5			
1.20	37.39	.21	.56	SANDY SILT TO CLAYEY SILT	ML-MH	.06	7	2.765	13.5	73	38	.50+
1.40	17.71	.30	1.69	CLAYEY SILT TO SILTY CLAY	MH-CL	.06	4	1.307	13.5			
1.60	31.48	.31	.99	SANDY SILT TO CLAYEY SILT	ML-MH	.08	6	2.326	13.5	68	38	.50+
1.80	39.47	.28	.72	SANDY SILT TO CLAYEY SILT	ML-MH	.09	7	2.917	13.5	72	38	.50+
2.00	46.98	.27	.57	SILTY SAND TO SANDY SILT	SM-ML	.11	7			76	39	.50+
2.20	48.51	.51	1.05	SANDY SILT TO CLAYEY SILT	ML-MH	.11	9	3.585	13.5	77	39	.50+
2.40	73.53	.40	.55	SILTY SAND TO SANDY SILT	SM-ML	.13	11			91	41	.50+
2.60	90.32	.63	.70	SILTY SAND TO SANDY SILT	SM-ML	.14	14			100+	42	.50+
2.80	116.08	.59	.50	SAND TO SILTY SAND	SM-SP	.17	13			100+	42	.50+
3.00	147.21	.46	.31	SAND TO SILTY SAND	SM-SP	.18	17			100+	42	.50+
3.20	151.24	.40	.26	SAND TO SILTY SAND	SM-SP	.19	18			100+	42	.50+
3.40	159.65	.41	.26	SAND TO SILTY SAND	SM-SP	.20	19			100+	42	.50+
3.60	137.37	.44	.32	SAND TO SILTY SAND	SM-SP	.22	16			100+	42	.50+
3.80	144.24	.17	.12	SAND TO SILTY SAND	SM-SP	.23	17			100+	42	.50+
4.00	121.07	1.06	.88	SAND TO SILTY SAND	SM-SP	.24	14			100+	42	.50+
4.20	156.24	.36	.23	SAND TO SILTY SAND	SM-SP	.25	18			100+	42	.50+
4.40	89.63	.23	.26	SAND TO SILTY SAND	SM-SP	.26	10			87	41	.50+
4.60	29.78	.37	1.24	SANDY SILT TO CLAYEY SILT	ML-MH	.23	5	2.189	13.5	59	36	.22
4.80	38.58	.19	.50	SANDY SILT TO CLAYEY SILT	ML-MH	.24	7	2.840	13.5	63	37	.33
5.00	37.88	.53	1.39	SANDY SILT TO CLAYEY SILT	ML-MH	.25	7	2.787	13.5	63	37	.29
5.20	118.53	.28	.24	SAND TO SILTY SAND	SM-SP	.31	14			95	42	.50+
5.40	108.84	.50	.46	SAND TO SILTY SAND	SM-SP	.32	13			91	41	.50+
5.60	122.21	.39	.32	SAND TO SILTY SAND	SM-SP	.34	14			95	42	.50+
5.80	111.21	.44	.39	SAND TO SILTY SAND	SM-SP	.35	13			90	41	.50+
6.00	92.06	.43	.47	SAND TO SILTY SAND	SM-SP	.36	11			83	40	.50+
6.20	83.41	.38	.45	SAND TO SILTY SAND	SM-SP	.37	9			79	40	.50+
6.40	64.57	.74	1.15	SILTY SAND TO SANDY SILT	SM-ML	.35	10			71	38	.50+
6.60	95.66	.48	.50	SAND TO SILTY SAND	SM-SP	.40	11			82	40	.50+
6.80	90.42	.41	.45	SAND TO SILTY SAND	SM-SP	.41	10			80	40	.50+
7.00	86.33	.33	.39	SAND TO SILTY SAND	SM-SP	.42	10			78	40	.50+
7.20	60.29	.33	.54	SILTY SAND TO SANDY SILT	SM-ML	.40	9			67	37	.43
7.40	33.40	.27	.82	SANDY SILT TO CLAYEY SILT	ML-MH	.37	6	2.447	13.5	53	35	.18
7.60	42.53	.45	1.06	SANDY SILT TO CLAYEY SILT	ML-MH	.38	8	3.122	13.5	60	36	.22
7.80	47.91	.40	.83	SANDY SILT TO CLAYEY SILT	ML-MH	.39	9	3.520	13.5	62	37	.25
8.00	58.37	.59	1.02	SILTY SAND TO SANDY SILT	SM-ML	.44	9			65	37	.32
8.20	34.85	.54	1.54	SANDY SILT TO CLAYEY SILT	ML-MH	.41	6	2.551	13.5	52	35	.17
8.40	37.64	.26	.68	SANDY SILT TO CLAYEY SILT	ML-MH	.42	7	2.757	13.5	54	36	.18
8.60	42.80	.56	1.31	SANDY SILT TO CLAYEY SILT	ML-MH	.43	8	3.138	13.5	58	36	.20
8.80	78.14	.54	.69	SILTY SAND TO SANDY SILT	SM-ML	.48	12			71	38	.50+
9.00	110.42	.43	.39	SAND TO SILTY SAND	SM-SP	.54	13			81	40	.50+
9.20	96.90	.39	.41	SAND TO SILTY SAND	SM-SP	.55	11			76	40	.50+
9.40	92.71	.60	.65	SAND TO SILTY SAND	SM-SP	.56	11			74	40	.50+

9.60	97.03	.47	.49	SAND TO SILTY SAND	SM-SP	.58	11			75	40	.50+
9.80	88.80	.56	.63	SILTY SAND TO SANDY SILT	SM-ML	.54	14			73	38	.50+
10.00	90.80	.49	.55	SAND TO SILTY SAND	SM-SP	.60	10			72	39	.50+
10.20	98.72	.34	.35	SAND TO SILTY SAND	SM-SP	.61	11			74	40	.50+
10.40	103.79	.36	.35	SAND TO SILTY SAND	SM-SP	.62	12			76	40	.50+
10.60	60.20	.29	.48	SILTY SAND TO SANDY SILT	SM-ML	.58	9			61	37	.23
10.80	15.50	.41	2.66	SILTY CLAY TO CLAY	CL-CH	.43	4	1.116	13.5			
11.00	11.32	.33	2.91	CLAY	CH	.44	5	.806	13.5			
11.20	9.60	.32	3.37	CLAY	CH	.45	4	.678	13.5			
11.40	7.63	.30	3.99	CLAY	CH	.46	3	.531	13.5			
11.60	8.61	.34	3.97	CLAY	CH	.46	4	.604	13.5			
11.80	7.62	.32	4.15	CLAY	CH	.47	3	.530	13.5			
12.00	10.37	.35	3.35	CLAY	CH	.48	4	.733	13.5			
12.20	6.82	.33	4.85	CLAY	CH	.49	3	.469	13.5			
12.40	6.65	.33	5.03	CLAY	CH	.50	3	.456	13.5			
12.60	5.96	.35	5.80	CLAY	CH	.50	2	.404	13.5			
12.80	9.23	.36	3.95	CLAY	CH	.51	4	.645	13.5			
13.00	11.29	.46	4.11	CLAY	CH	.52	5	.798	13.5			
13.20	50.66	.28	.56	SILTY SAND TO SANDY SILT	SM-ML	.73	8			50	35	.17
13.40	48.31	.39	.80	SILTY SAND TO SANDY SILT	SM-ML	.74	7			48	35	.16
13.60	52.02	.81	1.55	SANDY SILT TO CLAYEY SILT	ML-MH	.68	9	3.803	13.5	52	35	.18
13.80	39.35	.31	.78	SANDY SILT TO CLAYEY SILT	ML-MH	.69	7	2.864	13.5	43	34	.15
14.00	20.75	.22	1.05	CLAYEY SILT TO SILTY CLAY	MH-CL	.63	4	1.491	13.5			
14.20	21.65	.42	1.95	CLAYEY SILT TO SILTY CLAY	MH-CL	.64	5	1.536	13.5			
14.40	34.78	.54	1.56	SANDY SILT TO CLAYEY SILT	ML-MH	.72	6	2.523	13.5	39	33	.14
14.60	69.84	.48	.69	SILTY SAND TO SANDY SILT	SM-ML	.80	11			59	36	.21
14.80	72.18	.12	.17	SAND TO SILTY SAND	SM-SP	.89	8			57	38	.20
15.00	97.40	.48	.49	SAND TO SILTY SAND	SM-SP	.90	11			66	39	.33
15.20	95.34	.61	.64	SAND TO SILTY SAND	SM-SP	.91	11			65	38	.30
15.40	94.64	.25	.26	SAND TO SILTY SAND	SM-SP	.92	11			64	38	.29
15.60	19.54	.41	2.08	CLAYEY SILT TO SILTY CLAY	MH-CL	.70	4	1.395	13.5			
15.80	26.04	.61	2.35	CLAYEY SILT TO SILTY CLAY	MH-CL	.71	6	1.876	13.5			
16.00	74.02	.37	.50	SILTY SAND TO SANDY SILT	SM-ML	.88	11			58	36	.21
16.20	10.85	.36	3.32	CLAY	CH	.65	5	.755	13.5			
16.40	6.65	.33	4.98	CLAY	CH	.66	3	.444	13.5			
16.60	6.88	.34	4.99	CLAY	CH	.66	3	.460	13.5			
16.80	6.52	.35	5.42	CLAY	CH	.67	3	.433	13.5			
17.00	10.00	.33	3.35	CLAY	CH	.68	4	.691	13.5			
17.20	25.93	.23	.89	SANDY SILT TO CLAYEY SILT	ML-MH	.86	4	1.857	13.5	24	31	.12
17.40	12.51	.34	2.71	SILTY CLAY TO CLAY	CL-CH	.70	3	.875	13.5			
17.60	8.12	.35	4.27	CLAY	CH	.70	3	.550	13.5			
17.80	5.79	.34	5.83	CLAY	CH	.71	2	.376	13.5			
18.00	6.40	.34	5.36	CLAY	CH	.72	3	.420	13.5			
18.20	6.66	.45	6.71	ORGANIC MATERIAL	OL-OH	.55	3	.453	13.5			
18.40	17.87	.41	2.30	SILTY CLAY TO CLAY	CL-CH	.74	5	1.269	13.5			
18.60	12.27	.36	2.90	CLAY	CH	.74	5	.854	13.5			
18.80	11.05	.39	3.52	CLAY	CH	.75	5	.763	13.5			
19.00	13.75	.39	2.87	SILTY CLAY TO CLAY	CL-CH	.76	4	.962	13.5			
19.20	30.87	.73	2.36	CLAYEY SILT TO SILTY CLAY	MH-CL	.86	7	2.222	13.5			
19.40	15.57	.32	2.03	SILTY CLAY TO CLAY	CL-CH	.78	4	1.096	13.5			
19.60	8.85	.70	7.86	ORGANIC MATERIAL	OL-OH	.57	4	.612	13.5			
19.80	95.80	.23	.24	SAND TO SILTY SAND	SM-SP	1.19	11			60	38	.22
20.00	18.57	.19	1.03	CLAYEY SILT TO SILTY CLAY	MH-CL	.90	4	1.309	13.5			
20.20	2.95	.29	9.96	ORGANIC MATERIAL	OL-OH	.61	1	.174	13.5			
20.40	8.57	.48	5.61	CLAY	CH	.82	4	.575	13.5			

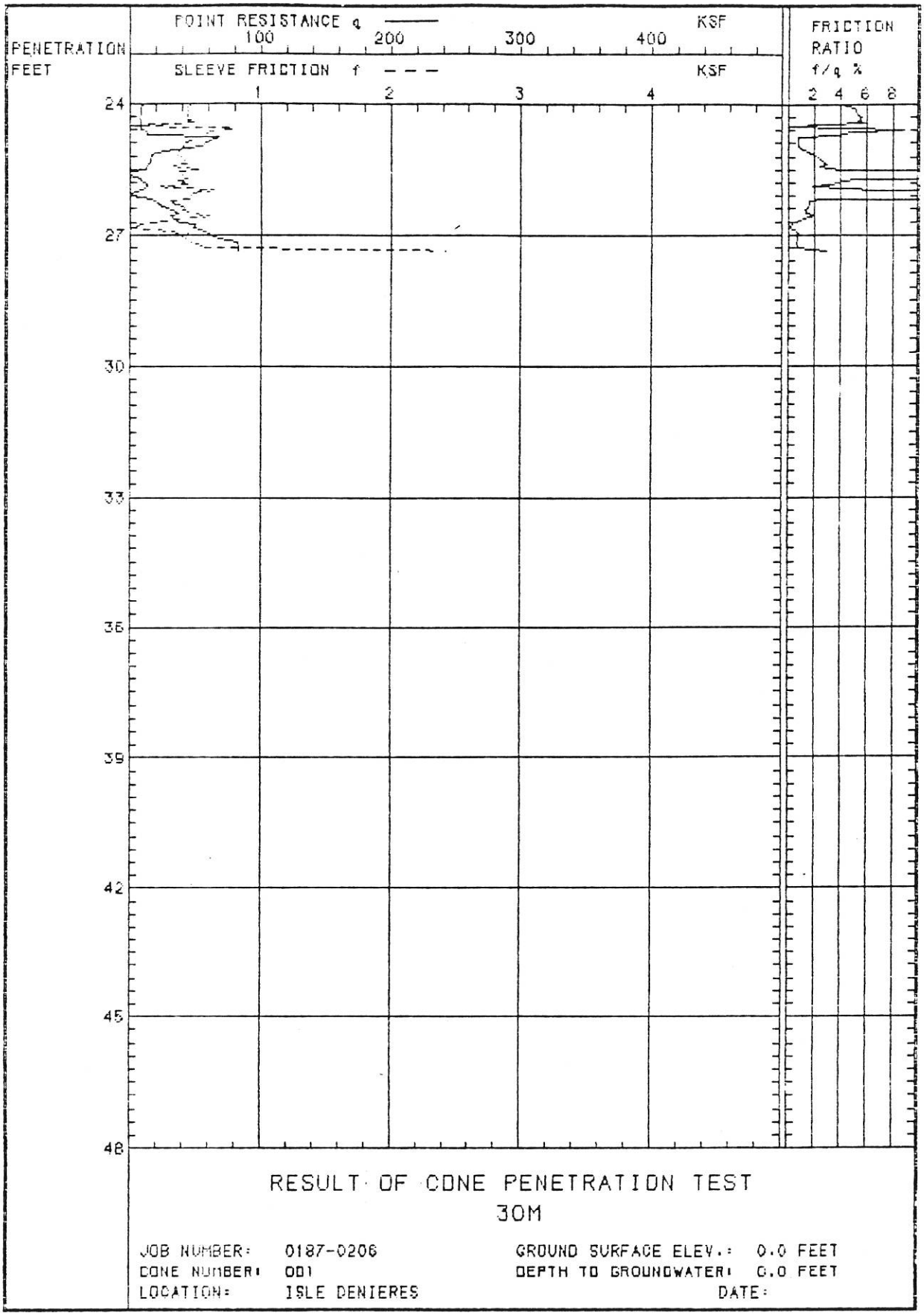


RESULT OF CONE PENETRATION TEST

30M

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



RESULT OF CONE PENETRATION TEST

30M

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

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

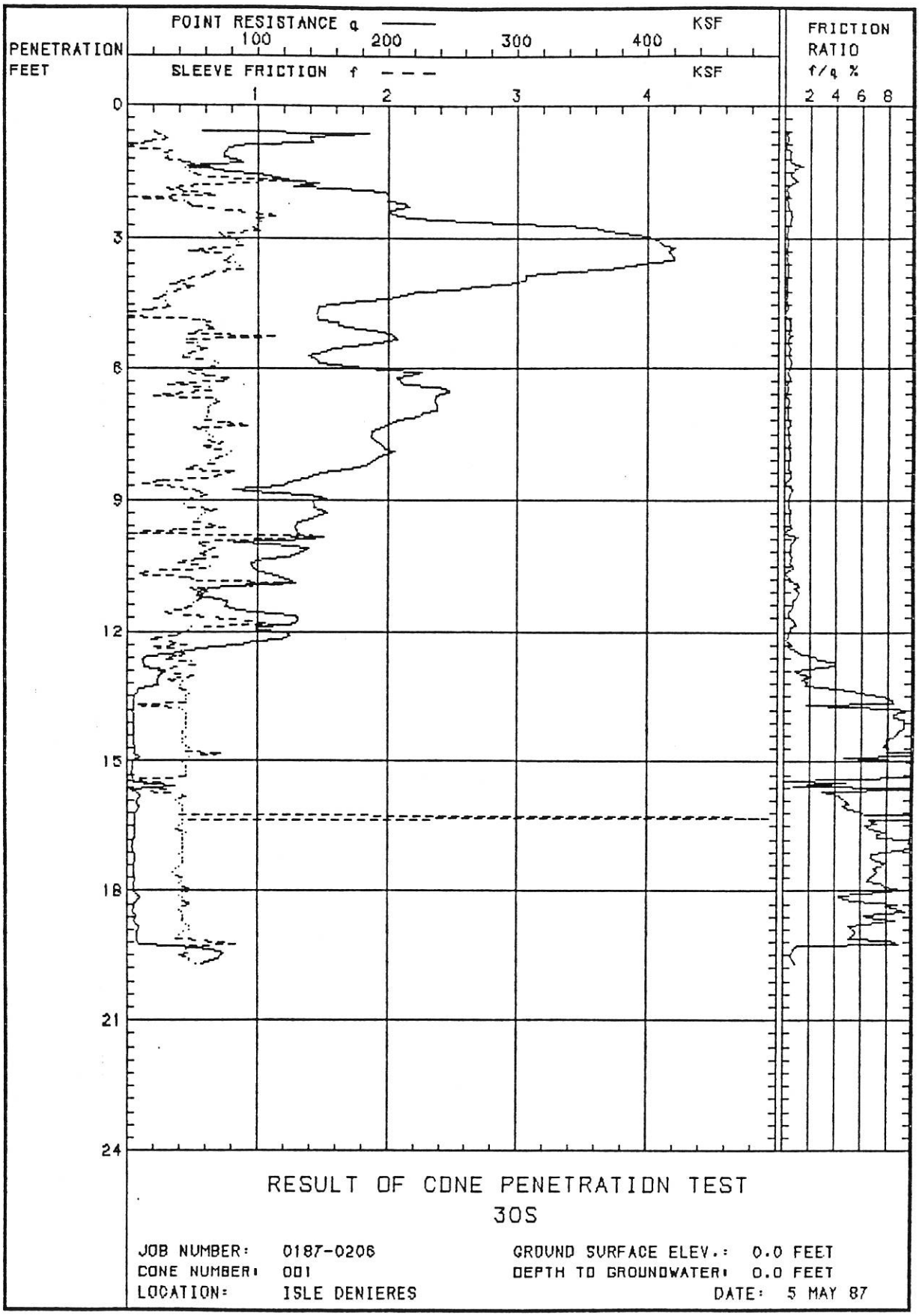
MCCLELLAND ENGINEERS, INC. ** PROGRAM 16D5.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 30M
CONE NO. : 001
DATE : 05/05/87

DEPTH (FT)	POINT RESIST. (KSF)	SLEEVE FRICTION (KSF)	FRIC. RATIO (%)	SOIL BEHAVIOR TYPES		EFF. V. STRESS (KSF)	EQUIV. "N"	UND. SHEAR STRENGTH (KSF)	CONE FACTOR	RELATIVE DENSITY (%)	FRICTION ANGLE	STRESS RATIO
.60	2.21	.74	33.30	ORGANIC MATERIAL	OL-OH	.02	1	.163	13.5			
.80	73.79	.43	.58	SILTY SAND TO SANDY SILT	SM-ML	.04	11			100+	42	.50+
1.00	65.24	.41	.63	SILTY SAND TO SANDY SILT	SM-ML	.05	10			97	42	.50+
1.20	46.49	.32	.69	SILTY SAND TO SANDY SILT	SM-ML	.07	7			79	39	.50+
1.40	18.82	.39	2.07	CLAYEY SILT TO SILTY CLAY	MH-CL	.06	4	1.389	13.5			
1.60	23.61	.55	2.32	CLAYEY SILT TO SILTY CLAY	MH-CL	.07	5	1.744	13.5			
1.80	27.05	.43	1.57	CLAYEY SILT TO SILTY CLAY	MH-CL	.08	6	1.998	13.5			
2.00	41.44	.47	1.13	SANDY SILT TO CLAYEY SILT	ML-MH	.10	7	3.062	13.5	73	38	.50+
2.20	51.05	1.01	1.98	SANDY SILT TO CLAYEY SILT	ML-MH	.11	9	3.773	13.5	78	39	.50+
2.40	75.99	.44	.58	SILTY SAND TO SANDY SILT	SM-ML	.13	12			93	41	.50+
2.60	80.81	.48	.59	SILTY SAND TO SANDY SILT	SM-ML	.14	12			95	41	.50+
2.80	75.26	.46	.62	SILTY SAND TO SANDY SILT	SM-ML	.15	12			90	41	.50+
3.00	85.35	.38	.45	SAND TO SILTY SAND	SM-SP	.18	10			93	42	.50+
3.20	86.82	.50	.58	SILTY SAND TO SANDY SILT	SM-ML	.18	13			94	41	.50+
3.40	94.20	.58	.62	SAND TO SILTY SAND	SM-SP	.20	11			95	42	.50+
3.60	105.03	.22	.21	SAND TO SILTY SAND	SM-SP	.22	12			99	42	.50+
3.80	74.80	.23	.31	SILTY SAND TO SANDY SILT	SM-ML	.21	11			84	40	.50+
4.00	52.64	.45	.86	SILTY SAND TO SANDY SILT	SM-ML	.22	8			72	38	.50+
4.20	60.75	.50	.82	SILTY SAND TO SANDY SILT	SM-ML	.23	9			76	39	.50+
4.40	67.47	.75	1.12	SILTY SAND TO SANDY SILT	SM-ML	.24	10			78	39	.50+
4.60	93.44	.43	.46	SAND TO SILTY SAND	SM-SP	.28	11			88	41	.50+
4.80	69.38	.65	.93	SILTY SAND TO SANDY SILT	SM-ML	.26	11			78	39	.50+
5.00	40.44	.43	1.05	SANDY SILT TO CLAYEY SILT	ML-MH	.25	7	2.977	13.5	64	37	.34
5.20	64.72	.69	1.07	SILTY SAND TO SANDY SILT	SM-ML	.29	10			75	39	.50+
5.40	71.34	1.12	1.57	SANDY SILT TO CLAYEY SILT	ML-MH	.27	13	5.265	13.5	79	39	.50+
5.60	211.13	.82	.39	SAND	SW-SP	.36	20			100+	44	.50+
5.80	273.13	1.31	.48	SAND	SW-SP	.38	26			100+	44	.50+
6.00	241.55	.85	.35	SAND	SW-SP	.39	23			100+	44	.50+
6.20	250.94	.86	.34	SAND	SW-SP	.40	24			100+	44	.50+
6.40	292.63	.14	.05	SAND	SW-SP	.42	28			100+	44	.50+
6.60	324.18	1.21	.37	SAND	SW-SP	.43	31			100+	44	.50+
6.80	375.16	.91	.24	SAND	SW-SP	.44	35			100+	44	.50+
7.00	349.94	.71	.20	SAND	SW-SP	.45	33			100+	44	.50+
7.20	450.86	.98	.22	GRAVELLY SAND TO SAND	SW-GW	.47	35			100+	46	.50+
7.40	449.75	1.11	.25	GRAVELLY SAND TO SAND	SW-GW	.48	35			100+	46	.50+
7.60	492.49	1.42	.29	GRAVELLY SAND TO SAND	SW-GW	.49	39			100+	46	.50+
7.80	475.99	1.78	.37	SAND	SW-SP	.51	45			100+	44	.50+
8.00	440.77	2.83	.64	SAND	SW-SP	.52	42			100+	44	.50+
8.20	349.41	.60	.17	SAND	SW-SP	.53	33			100+	44	.50+
8.40	194.91	.66	.34	SAND	SW-SP	.55	18			100+	44	.50+
8.60	189.99	1.06	.56	SAND TO SILTY SAND	SM-SP	.52	22			100+	42	.50+
8.80	231.41	.85	.37	SAND	SW-SP	.57	22			100+	44	.50+
9.00	276.86	.94	.34	SAND	SW-SP	.58	26			100+	44	.50+
9.20	320.25	.69	.22	SAND	SW-SP	.60	30			100+	44	.50+
9.40	320.77	.62	.19	SAND	SW-SP	.61	30			100+	44	.50+

9.60	298.19	.80	.27	SAND	SW-SP	.62	28			100+	44	.50+
9.80	274.33	1.07	.39	SAND	SW-SP	.64	26			100+	44	.50+
10.00	219.78	.56	.26	SAND	SW-SP	.65	21			100+	44	.50+
10.20	168.66	.53	.31	SAND	SW-SP	.66	16			91	43	.50+
10.40	139.78	.65	.47	SAND TO SILTY SAND	SM-SP	.62	16			86	41	.50+
10.60	119.90	.45	.38	SAND TO SILTY SAND	SM-SP	.64	14			81	40	.50+
10.80	142.17	.59	.41	SAND TO SILTY SAND	SM-SP	.65	17			85	41	.50+
11.00	167.98	.47	.28	SAND	SW-SP	.71	16			89	43	.50+
11.20	152.02	.85	.56	SAND TO SILTY SAND	SM-SP	.67	18			87	41	.50+
11.40	145.20	.49	.34	SAND TO SILTY SAND	SM-SP	.68	17			85	41	.50+
11.60	131.96	.46	.35	SAND TO SILTY SAND	SM-SP	.70	15			82	40	.50+
11.80	154.47	.71	.46	SAND TO SILTY SAND	SM-SP	.71	18			86	41	.50+
12.00	155.33	.64	.41	SAND TO SILTY SAND	SM-SP	.72	18			86	41	.50+
12.20	159.90	.31	.19	SAND	SW-SP	.79	15			85	43	.50+
12.40	131.84	.62	.47	SAND TO SILTY SAND	SM-SP	.74	15			80	40	.50+
12.60	113.33	.71	.62	SAND TO SILTY SAND	SM-SP	.76	13			74	40	.50+
12.80	114.77	1.09	.95	SAND TO SILTY SAND	SM-SP	.77	13			75	40	.50+
13.00	139.58	.73	.52	SAND TO SILTY SAND	SM-SP	.78	16			81	40	.50+
13.20	155.45	2.31	1.49	SILTY SAND TO SANDY SILT	SM-ML	.73	24			86	40	.50+
13.40	133.70	.59	.44	SAND TO SILTY SAND	SM-SP	.80	16			79	40	.50+
13.60	113.47	.60	.53	SAND TO SILTY SAND	SM-SP	.82	13			73	39	.50+
13.80	98.50	.62	.63	SAND TO SILTY SAND	SM-SP	.83	11			68	39	.40
14.00	100.31	.42	.42	SAND TO SILTY SAND	SM-SP	.84	12			68	39	.41
14.20	95.93	.62	.64	SAND TO SILTY SAND	SM-SP	.85	11			66	39	.35
14.40	80.56	.50	.62	SILTY SAND TO SANDY SILT	SM-ML	.79	12			63	37	.26
14.60	91.19	1.13	1.24	SILTY SAND TO SANDY SILT	SM-ML	.80	14			66	37	.34
14.80	135.10	1.01	.75	SAND TO SILTY SAND	SM-SP	.89	16			77	40	.50+
15.00	165.83	.62	.37	SAND TO SILTY SAND	SM-SP	.90	19			83	41	.50+
15.20	126.33	.56	.44	SAND TO SILTY SAND	SM-SP	.91	15			74	39	.50+
15.40	101.84	.92	.91	SILTY SAND TO SANDY SILT	SM-ML	.85	16			68	38	.42
15.60	52.56	4.90	9.31	CLAY	CH	.62	25	3.847	13.5			
15.80	18.95	.31	1.66	CLAYEY SILT TO SILTY CLAY	MH-CL	.71	4	1.351	13.5			
16.00	34.97	.57	1.62	SANDY SILT TO CLAYEY SILT	ML-MH	.80	6	2.531	13.5	35	33	.14
16.20	26.35	.40	1.53	CLAYEY SILT TO SILTY CLAY	MH-CL	.73	6	1.898	13.5			
16.40	13.75	.58	4.23	CLAY	CH	.66	6	.970	13.5			
16.60	30.50	.43	1.40	SANDY SILT TO CLAYEY SILT	ML-MH	.83	5	2.198	13.5	29	32	.13
16.80	29.04	.49	1.69	CLAYEY SILT TO SILTY CLAY	MH-CL	.76	6	2.095	13.5			
17.00	8.85	3.06	34.59	ORGANIC MATERIAL	OL-OH	.51	4	.618	13.5			
17.20	7.87	.44	5.53	CLAY	CH	.69	3	.532	13.5			
17.40	6.40	.45	7.10	ORGANIC MATERIAL	OL-OH	.52	3	.435	13.5			
17.60	5.66	.46	8.11	ORGANIC MATERIAL	OL-OH	.53	2	.380	13.5			
17.80	8.84	.35	3.96	CLAY	CH	.71	4	.602	13.5			
18.00	5.88	.46	7.81	ORGANIC MATERIAL	OL-OH	.54	2	.395	13.5			
18.20	8.35	.39	4.68	CLAY	CH	.73	3	.565	13.5			
18.40	15.42	.31	2.03	SILTY CLAY TO CLAY	CL-CH	.74	4	1.088	13.5			
18.60	13.81	.47	3.38	CLAY	CH	.74	6	.968	13.5			
18.80	12.03	.42	3.52	CLAY	CH	.75	5	.836	13.5			
19.00	16.09	.41	2.53	SILTY CLAY TO CLAY	CL-CH	.76	5	1.136	13.5			
19.20	9.11	.47	5.15	CLAY	CH	.77	4	.618	13.5			
19.40	10.50	.48	4.61	CLAY	CH	.78	5	.721	13.5			
19.60	9.35	.47	5.02	CLAY	CH	.78	4	.634	13.5			
19.80	9.23	.45	4.83	CLAY	CH	.79	4	.625	13.5			
20.00	8.85	.49	5.56	CLAY	CH	.80	4	.597	13.5			
20.20	10.33	1.32	12.74	ORGANIC MATERIAL	OL-OH	.61	4	.720	13.5			
20.40	9.16	.61	6.68	CLAY	CH	.82	4	.618	13.5			
20.60	10.33	.43	4.11	CLAY	CH	.82	4	.704	13.5			
20.80	10.50	.47	4.44	CLAY	CH	.83	5	.716	13.5			
21.00	15.82	.42	2.66	SILTY CLAY TO CLAY	CL-CH	.84	5	1.110	13.5			
21.20	4.55	1.11	24.30	ORGANIC MATERIAL	OL-OH	.64	2	.290	13.5			
21.40	8.38	.43	5.19	CLAY	CH	.86	4	.557	13.5			

21.60	8.12	.24	2.91	CLAY	CH	.86	3	.538	13.5			
21.80	7.38	.50	6.82	CLAY	CH	.87	3	.482	13.5			
22.00	17.33	.42	2.42	SILTY CLAY TO CLAY	CL-CH	.88	5	1.219	13.5			
22.20	10.08	.47	4.71	CLAY	CH	.89	4	.681	13.5			
22.40	12.09	.45	3.69	CLAY	CH	.90	5	.829	13.5			
22.60	9.84	.42	4.24	CLAY	CH	.90	4	.662	13.5			
22.80	26.00	.55	2.10	CLAYEY SILT TO SILTY CLAY	MH-CL	1.03	6	1.850	13.5			
23.00	17.12	.42	2.45	SILTY CLAY TO CLAY	CL-CH	.92	5	1.200	13.5			
23.20	19.64	.37	1.88	CLAYEY SILT TO SILTY CLAY	MH-CL	1.04	4	1.378	13.5			
23.40	10.60	.42	3.98	CLAY	CH	.94	5	.716	13.5			
23.60	8.38	.59	7.09	CLAY	CH	.94	4	.551	13.5			
23.80	21.29	.50	2.36	CLAYEY SILT TO SILTY CLAY	MH-CL	1.07	5	1.498	13.5			
24.00	10.84	.45	4.15	CLAY	CH	.96	5	.732	13.5			
24.20	8.49	.45	5.26	CLAY	CH	.97	4	.557	13.5			
24.40	8.36	.47	5.61	CLAY	CH	.98	4	.547	13.5			
24.60	10.99	.71	6.45	CLAY	CH	.98	5	.741	13.5			
24.80	65.06	.52	.80	SILTY SAND TO SANDY SILT	SM-ML	1.36	10			42	34	.15
25.00	45.14	.40	.88	SANDY SILT TO CLAYEY SILT	ML-MH	1.25	8	3.251	13.5	32	33	.13
25.20	16.98	.38	2.23	SILTY CLAY TO CLAY	CL-CH	1.01	5	1.183	13.5			
25.40	14.41	.35	2.46	SILTY CLAY TO CLAY	CL-CH	1.02	4	.992	13.5			
25.60	.49	.39	78.37	ORGANIC MATERIAL	OL-OH	.77	1	-.020	13.5			
25.80	10.99	.41	3.70	CLAY	CH	1.03	5	.737	13.5			
26.00	5.32	.57	10.69	ORGANIC MATERIAL	OL-OH	.78	2	.336	13.5			
26.20	18.52	.48	2.60	SILTY CLAY TO CLAY	CL-CH	1.05	5	1.294	13.5			
26.40	30.66	.44	1.42	SANDY SILT TO CLAYEY SILT	ML-MH	1.32	5	2.173	13.5	21	31	.11
26.60	32.77	.57	1.73	SANDY SILT TO CLAYEY SILT	ML-MH	1.33	6	2.329	13.5	22	31	.12
26.80	49.35	.12	.24	SILTY SAND TO SANDY SILT	SM-ML	1.47	7			31	32	.13
27.00	62.14	.44	.71	SILTY SAND TO SANDY SILT	SM-ML	1.49	9			39	33	.15
27.20	81.90	.49	.60	SILTY SAND TO SANDY SILT	SM-ML	1.50	13			47	35	.17



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30S

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LOCATION: ISLE DENIERES

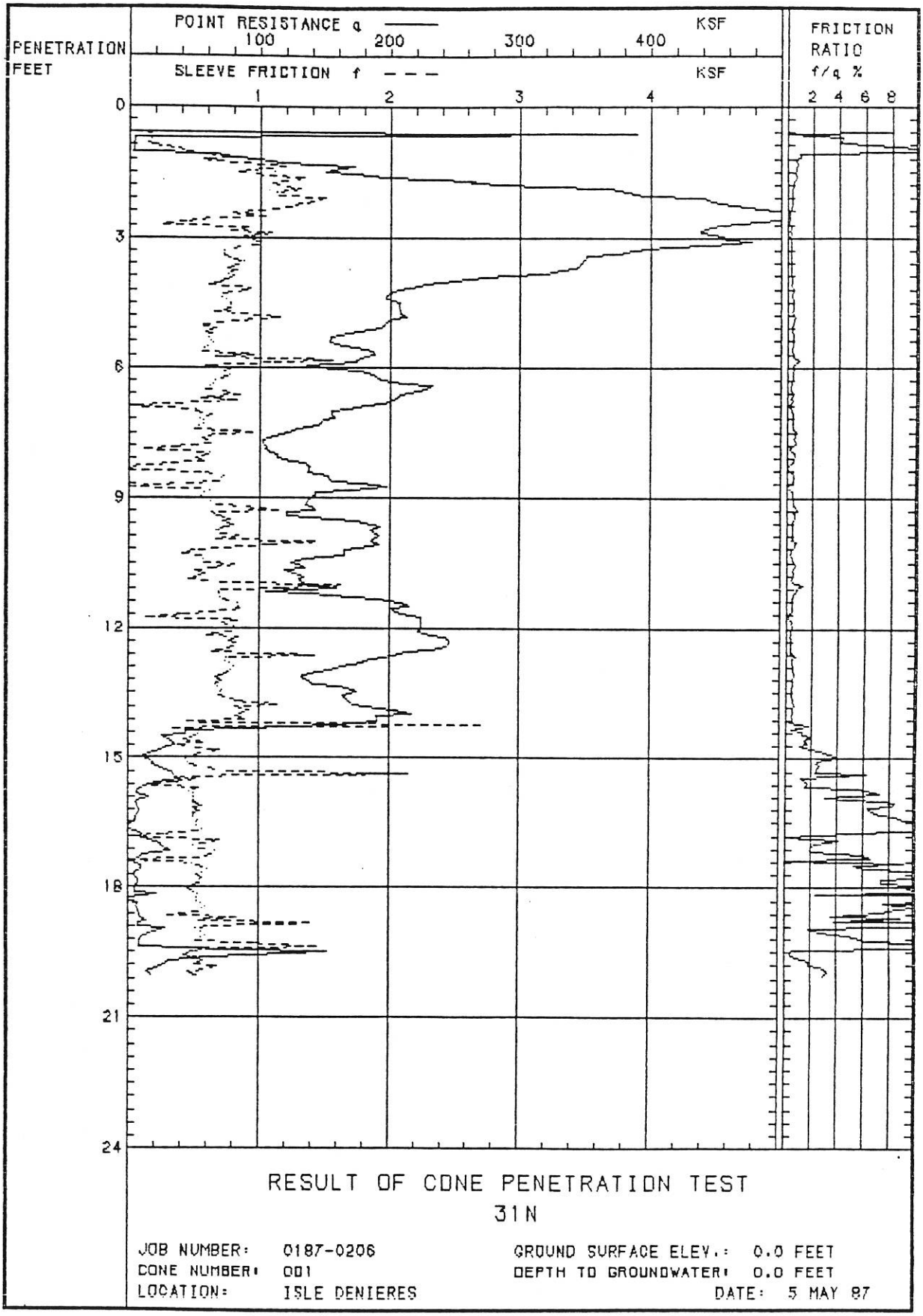
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 305
CONE NO. : 001
DATE : 05/05/87

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	121.74	.21	.17	SAND TO SILTY SAND	SM-SP	.04	14			100+	42	.50+
.80	141.92	.30	.21	SAND TO SILTY SAND	SM-SP	.05	16			100+	42	.50+
1.00	76.71	.27	.35	SILTY SAND TO SANDY SILT	SM-ML	.05	12			100+	42	.50+
1.20	78.95	.25	.32	SAND TO SILTY SAND	SM-SP	.07	9			100+	42	.50+
1.40	53.73	.39	.73	SILTY SAND TO SANDY SILT	SM-ML	.08	8			84	40	.50+
1.60	106.98	.56	.53	SAND TO SILTY SAND	SM-SP	.10	12			100+	42	.50+
1.80	137.02	1.47	1.07	SAND TO SILTY SAND	SM-SP	.11	16			100+	42	.50+
2.00	199.23	.56	.28	SAND	SW-SP	.13	19			100+	44	.50+
2.20	206.10	.45	.22	SAND	SW-SP	.14	19			100+	44	.50+
2.40	201.33	.84	.41	SAND	SW-SP	.16	19			100+	44	.50+
2.60	240.48	1.01	.42	SAND	SW-SP	.17	23			100+	44	.50+
2.80	363.27	.90	.25	SAND	SW-SP	.18	34			100+	44	.50+
3.00	403.37	.87	.21	SAND	SW-SP	.20	38			100+	44	.50+
3.20	416.65	1.09	.26	SAND	SW-SP	.21	39			100+	44	.50+
3.40	419.06	.81	.19	SAND	SW-SP	.22	40			100+	44	.50+
3.60	395.31	.84	.21	SAND	SW-SP	.23	37			100+	44	.50+
3.80	322.17	.69	.21	SAND	SW-SP	.25	30			100+	44	.50+
4.00	298.40	.38	.13	SAND	SW-SP	.26	28			100+	44	.50+
4.20	237.56	.60	.25	SAND	SW-SP	.27	22			100+	44	.50+
4.40	190.93	.24	.13	SAND	SW-SP	.29	18			100+	44	.50+
4.60	146.72	.38	.26	SAND TO SILTY SAND	SM-SP	.28	17			100+	42	.50+
4.80	146.72	.43	.30	SAND TO SILTY SAND	SM-SP	.29	17			100+	42	.50+
5.00	169.91	.63	.37	SAND TO SILTY SAND	SM-SP	.30	20			100+	42	.50+
5.20	203.04	.46	.23	SAND	SW-SP	.34	19			100+	44	.50+
5.40	193.82	.49	.25	SAND	SW-SP	.35	18			100+	44	.50+
5.60	155.23	.61	.40	SAND TO SILTY SAND	SM-SP	.34	18			100+	42	.50+
5.80	144.55	.64	.44	SAND TO SILTY SAND	SM-SP	.35	17			100+	42	.50+
6.00	184.37	.63	.34	SAND	SW-SP	.39	17			100+	44	.50+
6.20	211.94	.70	.33	SAND	SW-SP	.40	20			100+	44	.50+
6.40	225.19	.47	.21	SAND	SW-SP	.42	21			100+	44	.50+
6.60	241.95	.67	.28	SAND	SW-SP	.43	23			100+	44	.50+
6.80	236.86	.67	.28	SAND	SW-SP	.44	22			100+	44	.50+
7.00	232.74	.71	.30	SAND	SW-SP	.45	22			100+	44	.50+
7.20	206.39	.75	.36	SAND	SW-SP	.47	19			100+	44	.50+
7.40	192.14	.56	.29	SAND	SW-SP	.48	18			100+	44	.50+
7.60	188.15	.67	.36	SAND	SW-SP	.49	18			100+	44	.50+
7.80	197.25	.63	.32	SAND	SW-SP	.51	18			100+	44	.50+
8.00	196.31	.66	.34	SAND	SW-SP	.52	18			100+	44	.50+
8.20	184.01	.60	.33	SAND	SW-SP	.53	17			100+	44	.50+
8.40	151.11	.58	.38	SAND TO SILTY SAND	SM-SP	.50	18			94	42	.50+
8.60	125.37	.25	.20	SAND TO SILTY SAND	SM-SP	.52	15			86	41	.50+
8.80	95.49	.88	.92	SILTY SAND TO SANDY SILT	SM-ML	.48	15			78	39	.50+
9.00	148.14	.65	.44	SAND TO SILTY SAND	SM-SP	.54	17			91	41	.50+
9.20	146.07	.50	.34	SAND TO SILTY SAND	SM-SP	.55	17			90	41	.50+
9.40	145.16	.49	.34	SAND TO SILTY SAND	SM-SP	.56	17			89	41	.50+

9.60	129.51	.72	.55	SAND TO SILTY SAND	SM-SP	.58	15			85	41	.50+	
9.80	134.50	.74	.55	SAND TO SILTY SAND	SM-SP	.59	16			86	41	.50+	
10.00	96.15	1.51	1.57	SILTY SAND TO SANDY SILT	SM-ML	.55	15			76	39	.50+	
10.20	132.85	.58	.44	SAND TO SILTY SAND	SM-SP	.61	15			84	41	.50+	
10.40	100.68	.79	.78	SAND TO SILTY SAND	SM-SP	.62	12			75	40	.50+	
10.60	99.58	.38	.39	SAND TO SILTY SAND	SM-SP	.64	11			74	40	.50+	
10.80	122.67	.50	.41	SAND TO SILTY SAND	SM-SP	.65	14			91	40	.50+	
11.00	72.19	.69	.96	SILTY SAND TO SANDY SILT	SM-ML	.60	11			65	37	.31	
11.20	58.47	.56	.95	SILTY SAND TO SANDY SILT	SM-ML	.62	9			60	36	.21	
11.40	76.15	.47	.62	SILTY SAND TO SANDY SILT	SM-ML	.63	12			66	37	.33	
11.60	112.64	.36	.32	SAND TO SILTY SAND	SM-SP	.70	13			76	40	.50+	
11.80	127.95	1.02	.80	SAND TO SILTY SAND	SM-SP	.71	15			80	40	.50+	
12.00	110.73	.45	.40	SAND TO SILTY SAND	SM-SP	.72	13			75	40	.50+	
12.20	108.41	.26	.24	SAND TO SILTY SAND	SM-SP	.73	12			74	39	.50+	
12.40	57.61	.43	.75	SILTY SAND TO SANDY SILT	SM-ML	.68	9			56	36	.19	
12.60	13.81	.40	2.90	SILTY CLAY TO CLAY	CL-CH	.50	4	.986	13.5				
12.80	13.28	.47	3.55	CLAY	CH	.51	6	.946	13.5				
13.00	25.85	.44	1.71	CLAYEY SILT TO SILTY CLAY	MH-CL	.58	6	1.871	13.5				
13.20	23.84	.45	1.89	CLAYEY SILT TO SILTY CLAY	MH-CL	.59	5	1.722	13.5				
13.40	8.01	.46	5.72	CLAY	CH	.59	3	.553	13.5				
13.60	5.41	.45	8.37	ORGANIC MATERIAL	OL-OH	.41	2	.371	13.5				
13.80	4.68	.42	8.90	ORGANIC MATERIAL	OL-OH	.41	2	.316	13.5				
14.00	5.17	.45	8.77	ORGANIC MATERIAL	OL-OH	.42	2	.352	13.5				
14.20	4.92	.45	9.21	ORGANIC MATERIAL	OL-OH	.43	2	.333	13.5				
14.40	5.16	.44	8.53	ORGANIC MATERIAL	OL-OH	.43	2	.350	13.5				
14.60	5.65	.47	8.25	ORGANIC MATERIAL	OL-OH	.44	2	.386	13.5				
14.80	5.54	.66	11.85	ORGANIC MATERIAL	OL-OH	.44	2	.377	13.5				
15.00	4.68	.44	9.44	ORGANIC MATERIAL	OL-OH	.45	2	.313	13.5				
15.20	3.83	.47	12.37	ORGANIC MATERIAL	OL-OH	.46	1	.250	13.5				
15.40	4.42	.23	5.24	CLAY	CH	.62	2	.281	13.5				
15.60	20.07	.24	1.19	CLAYEY SILT TO SILTY CLAY	MH-CL	.70	4	1.435	13.5				
15.80	10.08	.44	4.35	CLAY	CH	.63	4	.700	13.5				
16.00	8.59	.40	4.60	CLAY	CH	.64	4	.589	13.5				
16.20	6.90	.42	6.03	CLAY	CH	.65	3	.463	13.5				
16.40	6.16	.44	7.16	ORGANIC MATERIAL	OL-OH	.49	2	.419	13.5				
16.60	5.72	.44	7.66	ORGANIC MATERIAL	OL-OH	.50	2	.397	13.5				
16.80	5.18	.42	8.12	ORGANIC MATERIAL	OL-OH	.50	2	.347	13.5				
17.00	3.74	.43	11.49	ORGANIC MATERIAL	OL-OH	.51	1	.239	13.5				
17.20	6.14	.42	6.77	ORGANIC MATERIAL	OL-OH	.52	2	.417	13.5				
17.40	5.41	.42	7.71	ORGANIC MATERIAL	OL-OH	.52	2	.362	13.5				
17.60	5.16	.37	7.12	ORGANIC MATERIAL	OL-OH	.53	2	.343	13.5				
17.80	5.92	.42	7.11	ORGANIC MATERIAL	OL-OH	.53	2	.399	13.5				
18.00	5.41	.46	8.54	ORGANIC MATERIAL	OL-OH	.54	2	.361	13.5				
18.20	8.88	.43	4.82	CLAY	CH	.73	4	.604	13.5				
18.40	4.93	.42	8.45	ORGANIC MATERIAL	OL-OH	.55	2	.324	13.5				
18.60	6.41	.43	6.68	ORGANIC MATERIAL	OL-OH	.56	3	.433	13.5				
18.80	8.21	.46	5.62	CLAY	CH	.75	3	.552	13.5				
19.00	7.63	.46	6.00	CLAY	CH	.76	3	.509	13.5				
19.20	8.34	.64	7.64	ORGANIC MATERIAL	OL-OH	.58	3	.575	13.5				
19.40	69.73	.67	.96	SILTY SAND TO SANDY SILT	SM-ML	1.07	11			50	33	.18	
19.60	67.47	.48	.71	SILTY SAND TO SANDY SILT	SM-ML	1.08	10			49	35	.17	



RESULT OF CONE PENETRATION TEST

31N

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

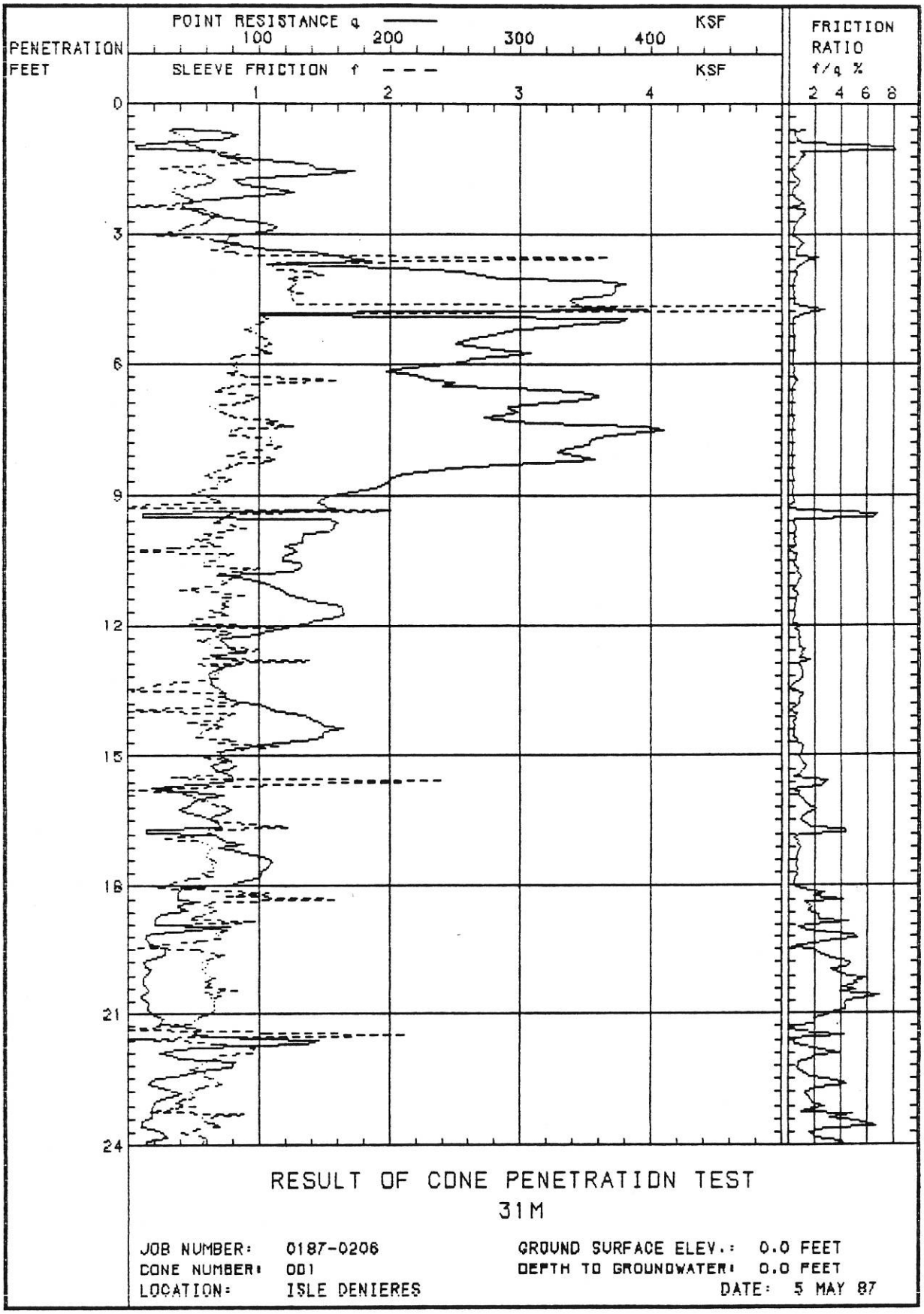
GROUND SURFACE ELEV.: 0.0 FEET
DEPTH TO GROUNDWATER: 0.0 FEET
DATE: 5 MAY 87

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

PROJECT NO. : 01870206
BORING NO. : 31N
CONE NO. : 001
DATE : 05/05/87

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	195.02	.14	.07	SAND	SW-SP	.04	18			100+	44	.50+
.80	3.69	.15	4.16	CLAY	CH	.05	1	.271	13.5			
1.00	3.20	.40	12.66	ORGANIC MATERIAL	OL-OH	.03	1	.235	13.5			
1.20	89.40	.64	.72	SILTY SAND TO SANDY SILT	SM-ML	.07	14			100+	42	.50+
1.40	167.51	1.10	.66	SAND TO SILTY SAND	SM-SP	.08	20			100+	42	.50+
1.60	184.46	.47	.26	SAND	SW-SP	.10	17			100+	44	.50+
1.80	288.65	1.10	.38	SAND	SW-SP	.12	27			100+	44	.50+
2.00	388.12	1.19	.31	SAND	SW-SP	.13	37			100+	44	.50+
2.20	450.36	3.27	.73	SAND	SW-SP	.14	43			100+	44	.50+
2.40	511.57	.91	.18	GRAVELLY SAND TO SAND	SW-GW	.16	40			100+	46	.50+
2.60	501.83	.57	.11	GRAVELLY SAND TO SAND	SW-GW	.17	40			100+	46	.50+
2.80	441.96	.72	.16	GRAVELLY SAND TO SAND	SW-GW	.18	35			100+	46	.50+
3.00	456.27	1.31	.29	GRAVELLY SAND TO SAND	SW-GW	.20	36			100+	46	.50+
3.20	429.03	.89	.21	GRAVELLY SAND TO SAND	SW-GW	.21	34			100+	46	.50+
3.40	363.10	.77	.21	SAND	SW-SP	.22	34			100+	44	.50+
3.60	347.07	.85	.24	SAND	SW-SP	.23	33			100+	44	.50+
3.80	325.69	.79	.24	SAND	SW-SP	.25	31			100+	44	.50+
4.00	249.96	.81	.33	SAND	SW-SP	.26	23			100+	44	.50+
4.20	211.56	.91	.43	SAND	SW-SP	.27	20			100+	44	.50+
4.40	197.27	1.69	.86	SAND TO SILTY SAND	SM-SP	.26	23			100+	42	.50+
4.60	207.23	.78	.38	SAND	SW-SP	.30	19			100+	44	.50+
4.80	210.53	1.00	.48	SAND	SW-SP	.31	20			100+	44	.50+
5.00	196.17	.71	.36	SAND	SW-SP	.32	18			100+	44	.50+
5.20	172.94	.61	.35	SAND	SW-SP	.34	16			100+	44	.50+
5.40	153.48	.69	.45	SAND TO SILTY SAND	SM-SP	.32	18			100+	42	.50+
5.60	180.74	.57	.32	SAND	SW-SP	.36	17			100+	44	.50+
5.80	178.11	.50	.28	SAND	SW-SP	.38	17			100+	44	.50+
6.00	146.51	1.40	.95	SAND TO SILTY SAND	SM-SP	.36	17			100+	42	.50+
6.20	187.91	.76	.40	SAND	SW-SP	.40	18			100+	44	.50+
6.40	221.51	.93	.42	SAND	SW-SP	.42	21			100+	44	.50+
6.60	215.04	.78	.36	SAND	SW-SP	.43	20			100+	44	.50+
6.80	199.51	.42	.21	SAND	SW-SP	.44	19			100+	44	.50+
7.00	162.03	.38	.24	SAND	SW-SP	.45	15			100+	44	.50+
7.20	153.28	.56	.36	SAND TO SILTY SAND	SM-SP	.43	18			99	42	.50+
7.40	137.20	.66	.48	SAND TO SILTY SAND	SM-SP	.44	16			93	42	.50+
7.60	111.72	.61	.54	SAND TO SILTY SAND	SM-SP	.46	13			85	41	.50+
7.80	104.03	.56	.53	SAND TO SILTY SAND	SM-SP	.47	12			82	40	.50+
8.00	111.21	.62	.56	SAND TO SILTY SAND	SM-SP	.48	13			83	41	.50+
8.20	129.32	.58	.45	SAND TO SILTY SAND	SM-SP	.49	15			88	41	.50+
8.40	137.50	.44	.32	SAND TO SILTY SAND	SM-SP	.50	16			90	41	.50+
8.60	153.96	.70	.45	SAND TO SILTY SAND	SM-SP	.52	18			94	42	.50+
8.80	184.28	.14	.08	SAND	SW-SP	.57	17			97	44	.50+
9.00	141.21	.54	.39	SAND TO SILTY SAND	SM-SP	.54	15			89	41	.50+
9.20	137.04	.52	.38	SAND TO SILTY SAND	SM-SP	.55	16			88	41	.50+
9.40	121.51	.66	.54	SAND TO SILTY SAND	SM-SP	.56	14			83	41	.50+

9.60	179.97	.83	.46	SAND TO SILTY SAND	SM-SP	.58	21			98	42	.50+	
9.80	186.97	.80	.43	SAND	SW-SP	.64	17			97	44	.50+	
10.00	186.69	1.05	.56	SAND TO SILTY SAND	SM-SP	.60	22			98	42	.50+	
10.20	171.40	.63	.37	SAND TO SILTY SAND	SM-SP	.61	20			94	42	.50+	
10.40	150.51	.54	.36	SAND TO SILTY SAND	SM-SP	.62	18			98	41	.50+	
10.60	132.53	.92	.69	SAND TO SILTY SAND	SM-SP	.64	15			84	41	.50+	
10.80	130.98	.69	.52	SAND TO SILTY SAND	SM-SP	.65	15			83	40	.50+	
11.00	134.64	.47	.35	SAND TO SILTY SAND	SM-SP	.66	16			83	41	.50+	
11.20	121.49	1.40	1.15	SILTY SAND TO SANDY SILT	SM-ML	.62	19			82	39	.50+	
11.40	199.83	.78	.39	SAND	SW-SP	.74	19			95	44	.50+	
11.60	203.26	.81	.40	SAND	SW-SP	.75	19			95	44	.50+	
11.80	224.44	.28	.12	SAND	SW-SP	.77	21			99	44	.50+	
12.00	225.30	.84	.37	SAND	SW-SP	.78	21			99	44	.50+	
12.20	237.27	.82	.35	SAND	SW-SP	.79	22			100+	44	.50+	
12.40	245.73	.61	.25	SAND	SW-SP	.81	23			100+	44	.50+	
12.60	208.48	1.02	.49	SAND	SW-SP	.82	19			94	44	.50+	
12.80	180.54	.79	.44	SAND TO SILTY SAND	SM-SP	.77	21			90	41	.50+	
13.00	149.76	.77	.51	SAND TO SILTY SAND	SM-SP	.78	17			83	41	.50+	
13.20	135.27	.71	.52	SAND TO SILTY SAND	SM-SP	.79	16			80	40	.50+	
13.40	167.64	.67	.40	SAND TO SILTY SAND	SM-SP	.80	20			86	41	.50+	
13.60	165.88	.79	.48	SAND TO SILTY SAND	SM-SP	.82	19			86	41	.50+	
13.80	177.00	.98	.56	SAND TO SILTY SAND	SM-SP	.83	21			87	41	.50+	
14.00	204.44	1.00	.49	SAND	SW-SP	.91	19			90	43	.50+	
14.20	175.71	1.55	.88	SAND TO SILTY SAND	SM-SP	.83	21			86	41	.50+	
14.40	44.27	.60	1.35	SANDY SILT TO CLAYEY SILT	ML-MH	.72	8	3.226	13.5	45	34	.16	
14.60	33.10	.58	1.76	SANDY SILT TO CLAYEY SILT	ML-MH	.73	6	2.397	13.5	36	33	.14	
14.80	26.32	.49	1.86	CLAYEY SILT TO SILTY CLAY	MH-CL	.67	6	1.901	13.5				
15.00	12.24	.63	5.18	CLAY	CH	.60	5	.863	13.5				
15.20	21.69	.55	2.52	CLAYEY SILT TO SILTY CLAY	MH-CL	.68	5	1.556	13.5				
15.40	35.40	.50	1.42	SANDY SILT TO CLAYEY SILT	ML-MH	.77	6	2.565	13.5	37	33	.14	
15.60	17.32	.45	2.60	SILTY CLAY TO CLAY	CL-CH	.62	5	1.237	13.5				
15.80	6.89	.48	7.01	ORGANIC MATERIAL	OL-OH	.47	3	.475	13.5				
16.00	6.41	.53	8.27	ORGANIC MATERIAL	OL-OH	.48	3	.439	13.5				
16.20	8.11	.52	6.45	CLAY	CH	.65	3	.553	13.5				
16.40	5.90	.52	8.79	ORGANIC MATERIAL	OL-OH	.49	2	.401	13.5				
16.60	.24	.55	226.72	ORGANIC MATERIAL	OL-OH	.50	1	-.019	13.5				
16.80	9.88	.35	3.53	CLAY	CH	.67	4	.682	13.5				
17.00	25.09	.49	1.97	CLAYEY SILT TO SILTY CLAY	MH-CL	.76	6	1.802	13.5				
17.20	22.17	.66	2.96	SILTY CLAY TO CLAY	CL-CH	.69	7	1.591	13.5				
17.40	5.41	.24	4.47	CLAY	CH	.70	2	.349	13.5				
17.60	7.68	.61	7.99	ORGANIC MATERIAL	OL-OH	.53	3	.530	13.5				
17.80	6.56	.57	8.70	ORGANIC MATERIAL	OL-OH	.53	3	.446	13.5				
18.00	4.92	.48	9.80	ORGANIC MATERIAL	OL-OH	.54	2	.324	13.5				
18.20	11.36	.53	4.64	CLAY	CH	.73	5	.788	13.5				
18.40	6.66	.55	8.19	ORGANIC MATERIAL	OL-OH	.55	3	.453	13.5				
18.60	7.86	.62	7.84	ORGANIC MATERIAL	OL-OH	.56	3	.541	13.5				
18.80	11.16	.96	8.60	CLAY	CH	.75	5	.771	13.5				
19.00	24.47	.74	3.02	SILTY CLAY TO CLAY	CL-CH	.76	7	1.756	13.5				
19.20	9.37	.54	5.77	CLAY	CH	.77	4	.638	13.5				
19.40	43.50	1.42	3.26	CLAYEY SILT TO SILTY CLAY	MH-CL	.87	10	3.157	13.5				
19.60	78.16	.47	.60	SILTY SAND TO SANDY SILT	SM-ML	1.08	12			54	36	.19	
19.80	26.86	.53	1.97	CLAYEY SILT TO SILTY CLAY	MH-CL	.89	6	1.924	13.5				
20.00	12.23	.61	4.98	CLAY	CH	.80	5	.847	13.5				

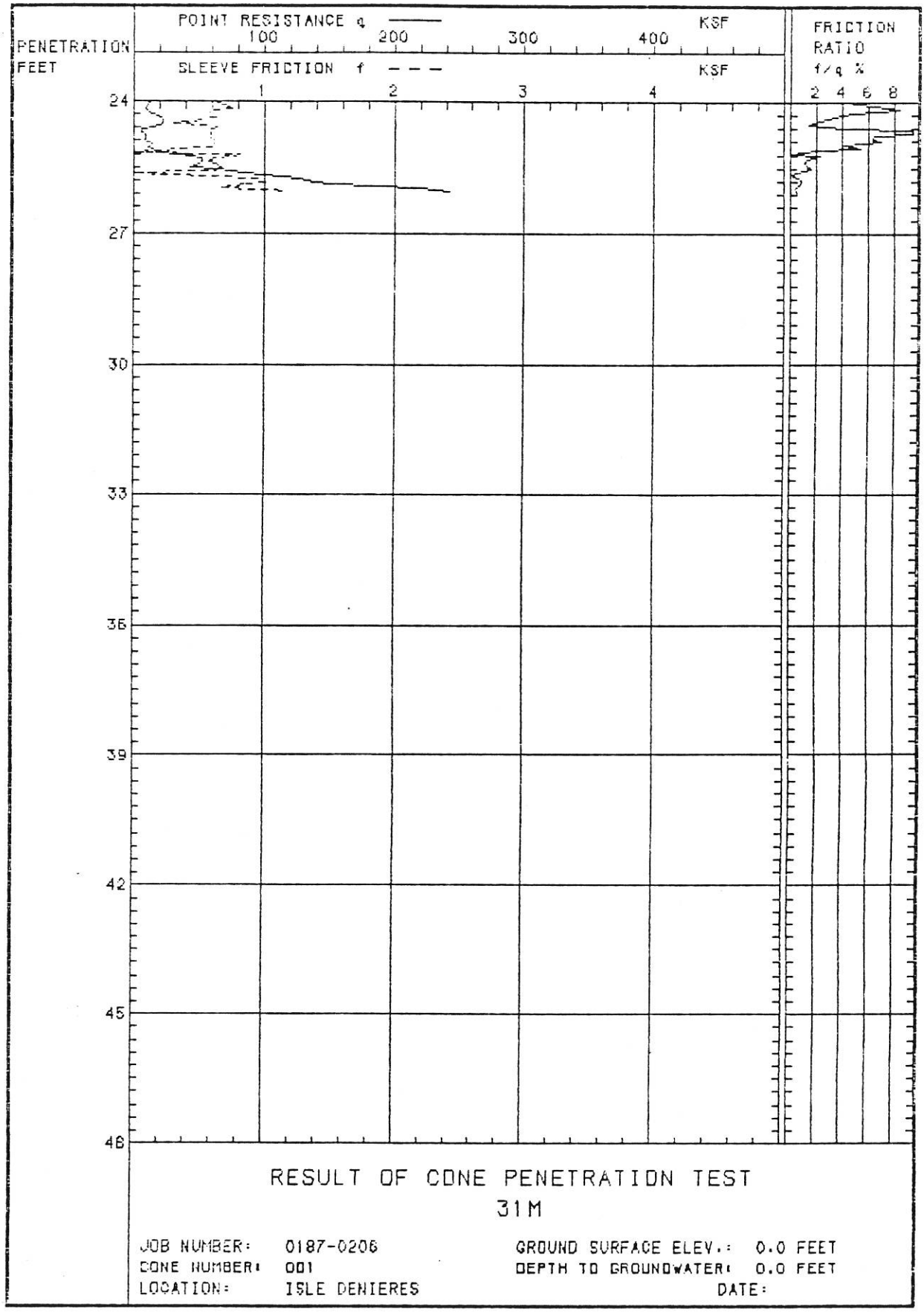


RESULT OF CONE PENETRATION TEST

31M

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



RESULT OF CONE PENETRATION TEST

31M

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

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

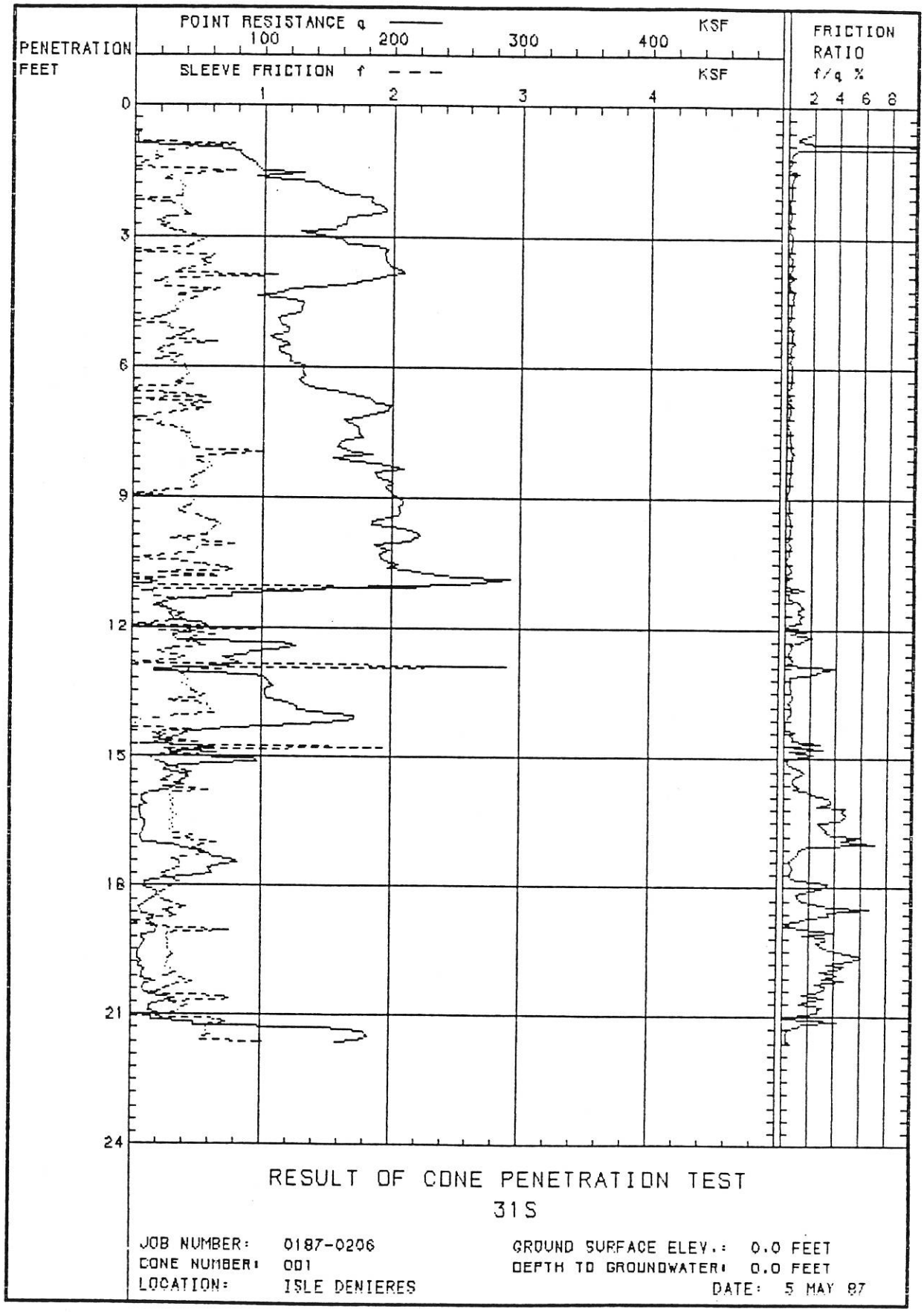
MCCLELLAND ENGINEERS, INC. ** PROGRAM 1605.6-4 **
LAND CONE TEST DATA INTERPRETATION PROGRAM

PROJECT NO. : 01870206
BORING NO. : 31M
CONE NO. : 001
DATE : 05/05/87

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	50.61	.37	.74	SILTY SAND TO SANDY SILT	SM-ML	.03	8			87	40	.50+
.80	75.71	.46	.60	SILTY SAND TO SANDY SILT	SM-ML	.04	12			100+	42	.50+
1.00	6.59	.47	7.07	ORGANIC MATERIAL	OL-OH	.03	3	.486	13.5			
1.20	70.41	.70	.99	SILTY SAND TO SANDY SILT	SM-ML	.07	11			100+	42	.50+
1.40	137.56	.76	.56	SAND TO SILTY SAND	SM-SP	.08	16			100+	42	.50+
1.60	162.06	.42	.26	SAND TO SILTY SAND	SM-SP	.10	19			100+	42	.50+
1.80	82.71	.65	.79	SILTY SAND TO SANDY SILT	SM-ML	.10	13			100+	42	.50+
2.00	119.71	.35	.29	SAND TO SILTY SAND	SM-SP	.12	14			100+	42	.50+
2.20	70.69	.46	.65	SILTY SAND TO SANDY SILT	SM-ML	.12	11			91	41	.50+
2.40	43.97	.28	.63	SILTY SAND TO SANDY SILT	SM-ML	.13	7			72	38	.50+
2.60	66.57	1.08	1.62	SANDY SILT TO CLAYEY SILT	ML-MH	.13	12	4.922	13.5	87	40	.50+
2.80	108.52	.48	.44	SAND TO SILTY SAND	SM-SP	.17	12			100+	42	.50+
3.00	91.25	.41	.45	SAND TO SILTY SAND	SM-SP	.18	10			96	42	.50+
3.20	74.23	.81	1.10	SILTY SAND TO SANDY SILT	SM-ML	.18	11			87	40	.50+
3.40	125.08	.71	.57	SAND TO SILTY SAND	SM-SP	.20	14			100+	42	.50+
3.60	176.01	3.40	1.93	SILTY SAND TO SANDY SILT	SM-ML	.20	28			100+	42	.50+
3.80	199.27	1.79	.90	SAND TO SILTY SAND	SM-SP	.23	23			100+	42	.50+
4.00	276.87	1.36	.49	SAND	SW-SP	.26	26			100+	44	.50+
4.20	376.67	1.31	.35	SAND	SW-SP	.27	36			100+	44	.50+
4.40	370.62	.93	.25	SAND	SW-SP	.29	35			100+	44	.50+
4.60	340.26	1.00	.29	SAND	SW-SP	.30	32			100+	44	.50+
4.80	250.31	6.03	2.41	SILTY SAND TO SANDY SILT	SM-ML	.26	39			100+	42	.50+
5.00	378.51	1.05	.28	SAND	SW-SP	.32	36			100+	44	.50+
5.20	310.82	.93	.30	SAND	SW-SP	.34	29			100+	44	.50+
5.40	267.35	.89	.33	SAND	SW-SP	.35	25			100+	44	.50+
5.60	260.77	.91	.35	SAND	SW-SP	.36	24			100+	44	.50+
5.80	296.92	1.02	.34	SAND	SW-SP	.38	28			100+	44	.50+
6.00	244.54	1.08	.44	SAND	SW-SP	.39	23			100+	44	.50+
6.20	204.41	.82	.40	SAND	SW-SP	.40	19			100+	44	.50+
6.40	241.17	1.36	.57	SAND	SW-SP	.42	23			100+	44	.50+
6.60	318.42	.79	.25	SAND	SW-SP	.43	30			100+	44	.50+
6.80	349.32	.96	.27	SAND	SW-SP	.44	33			100+	44	.50+
7.00	290.68	.66	.23	SAND	SW-SP	.45	27			100+	44	.50+
7.20	278.94	.82	.29	SAND	SW-SP	.47	26			100+	44	.50+
7.40	353.46	1.16	.33	SAND	SW-SP	.48	33			100+	44	.50+
7.60	381.60	.52	.14	SAND	SW-SP	.49	36			100+	44	.50+
7.80	352.66	1.08	.31	SAND	SW-SP	.51	33			100+	44	.50+
8.00	330.05	1.15	.35	SAND	SW-SP	.52	31			100+	44	.50+
8.20	348.34	1.10	.31	SAND	SW-SP	.53	33			100+	44	.50+
8.40	249.51	.60	.24	SAND	SW-SP	.55	23			100+	44	.50+
8.60	203.34	.77	.38	SAND	SW-SP	.56	19			100+	44	.50+
8.80	192.82	.59	.31	SAND	SW-SP	.57	18			100+	44	.50+
9.00	160.30	.61	.38	SAND TO SILTY SAND	SM-SP	.54	19			95	42	.50+
9.20	147.13	.53	.36	SAND TO SILTY SAND	SM-SP	.55	17			90	41	.50+
9.40	89.03	1.42	1.59	SILTY SAND TO SANDY SILT	SM-ML	.52	14			74	38	.50+

9.60	157.32	.69	.44	SAND TO SILTY SAND	SM-SP	.58	18			92	42	.50+
9.80	155.67	.77	.50	SAND TO SILTY SAND	SM-SP	.59	18			91	41	.50+
10.00	133.51	.61	.46	SAND TO SILTY SAND	SM-SP	.60	15			85	41	.50+
10.20	122.65	.53	.43	SAND TO SILTY SAND	SM-SP	.61	14			82	40	.50+
10.40	121.62	.53	.43	SAND TO SILTY SAND	SM-SP	.62	14			81	40	.50+
10.60	132.52	.59	.44	SAND TO SILTY SAND	SM-SP	.64	15			84	41	.50+
10.80	100.22	1.28	1.28	SILTY SAND TO SANDY SILT	SM-ML	.59	16			76	39	.50+
11.00	100.74	.74	.74	SAND TO SILTY SAND	SM-SP	.66	12			73	39	.50+
11.20	118.99	1.07	.90	SAND TO SILTY SAND	SM-SP	.67	14			79	40	.50+
11.40	135.41	.80	.59	SAND TO SILTY SAND	SM-SP	.68	16			83	40	.50+
11.60	164.24	.70	.43	SAND TO SILTY SAND	SM-SP	.70	19			89	41	.50+
11.80	160.29	.70	.44	SAND TO SILTY SAND	SM-SP	.71	19			88	41	.50+
12.00	131.88	.84	.64	SAND TO SILTY SAND	SM-SP	.72	15			81	40	.50+
12.20	100.79	.80	.79	SAND TO SILTY SAND	SM-SP	.73	12			71	39	.50+
12.40	72.87	.71	.97	SILTY SAND TO SANDY SILT	SM-ML	.68	11			63	37	.27
12.60	84.71	.95	1.13	SILTY SAND TO SANDY SILT	SM-ML	.69	13			67	37	.37
12.80	79.17	1.28	1.61	SILTY SAND TO SANDY SILT	SM-ML	.70	12			65	37	.30
13.00	70.29	.67	.95	SILTY SAND TO SANDY SILT	SM-ML	.71	11			61	37	.24
13.20	62.35	.70	1.13	SILTY SAND TO SANDY SILT	SM-ML	.73	9			57	36	.20
13.40	65.71	.19	.29	SILTY SAND TO SANDY SILT	SM-ML	.74	10			59	36	.21
13.60	74.21	.56	.75	SILTY SAND TO SANDY SILT	SM-ML	.75	11			62	37	.24
13.80	93.02	.77	.83	SILTY SAND TO SANDY SILT	SM-ML	.76	14			68	38	.40
14.00	120.34	.17	.15	SAND TO SILTY SAND	SM-SP	.84	14			74	40	.50+
14.20	143.51	.60	.42	SAND TO SILTY SAND	SM-SP	.85	17			80	40	.50+
14.40	157.89	.88	.56	SAND TO SILTY SAND	SM-SP	.86	18			83	40	.50+
14.60	142.27	.67	.47	SAND TO SILTY SAND	SM-SP	.88	17			80	40	.50+
14.80	93.34	1.11	1.19	SILTY SAND TO SANDY SILT	SM-ML	.81	14			66	37	.35
15.00	71.69	.73	1.02	SILTY SAND TO SANDY SILT	SM-ML	.82	11			59	36	.21
15.20	67.81	.88	1.30	SILTY SAND TO SANDY SILT	SM-ML	.84	10			56	36	.20
15.40	74.63	.67	.89	SILTY SAND TO SANDY SILT	SM-ML	.85	11			60	36	.22
15.60	68.61	2.46	3.58	CLAYEY SILT TO SILTY CLAY	MH-CL	.70	16	5.030	13.5			
15.80	34.70	1.11	3.21	CLAYEY SILT TO SILTY CLAY	MH-CL	.71	8	2.517	13.5			
16.00	53.85	.54	1.01	SILTY SAND TO SANDY SILT	SM-ML	.88	8			46	35	.16
16.20	43.46	.67	1.54	SANDY SILT TO CLAYEY SILT	ML-MH	.81	8	3.159	13.5	42	34	.15
16.40	57.91	.68	1.17	SANDY SILT TO CLAYEY SILT	ML-MH	.82	11	4.229	13.5	51	35	.18
16.60	71.00	1.07	1.51	SANDY SILT TO CLAYEY SILT	ML-MH	.83	13	5.198	13.5	59	36	.21
16.80	40.13	.59	1.47	SANDY SILT TO CLAYEY SILT	ML-MH	.84	7	2.911	13.5	39	34	.14
17.00	82.18	.69	.83	SILTY SAND TO SANDY SILT	SM-ML	.93	13			60	37	.22
17.20	83.58	.56	.67	SILTY SAND TO SANDY SILT	SM-ML	.95	13			60	37	.23
17.40	108.37	.65	.60	SAND TO SILTY SAND	SM-SP	1.04	12			65	39	.33
17.60	104.79	.60	.58	SAND TO SILTY SAND	SM-SP	1.06	12			64	38	.30
17.80	100.09	.57	.57	SAND TO SILTY SAND	SM-SP	1.07	11			63	38	.27
18.00	59.96	.67	1.12	SILTY SAND TO SANDY SILT	SM-ML	.99	9			47	35	.17
18.20	38.81	.92	2.36	CLAYEY SILT TO SILTY CLAY	MH-CL	.82	9	2.814	13.5			
18.40	46.90	.63	1.34	SANDY SILT TO CLAYEY SILT	ML-MH	.92	8	3.406	13.5	41	34	.15
18.60	36.38	.62	1.71	SANDY SILT TO CLAYEY SILT	ML-MH	.93	6	2.626	13.5	32	33	.13
18.80	21.10	.65	3.06	SILTY CLAY TO CLAY	CL-CH	.75	6	1.507	13.5			
19.00	64.79	.67	1.04	SILTY SAND TO SANDY SILT	SM-ML	1.04	10			48	35	.17
19.20	13.85	.58	4.22	CLAY	CH	.77	6	.969	13.5			
19.40	22.17	.62	2.81	SILTY CLAY TO CLAY	CL-CH	.78	7	1.585	13.5			
19.60	28.48	.66	2.31	CLAYEY SILT TO SILTY CLAY	MH-CL	.88	6	2.044	13.5			
19.80	12.60	.58	4.61	CLAY	CH	.79	6	.875	13.5			
20.00	16.70	.58	3.48	CLAY	CH	.80	7	1.178	13.5			
20.20	11.69	.61	5.25	CLAY	CH	.81	5	.806	13.5			
20.40	15.17	.71	4.68	CLAY	CH	.82	7	1.063	13.5			
20.60	10.28	.68	6.58	CLAY	CH	.82	4	.700	13.5			
20.80	15.45	1.62	10.49	CLAY	CH	.83	7	1.083	13.5			
21.00	18.85	.60	3.20	SILTY CLAY TO CLAY	CL-CH	.84	6	1.334	13.5			
21.20	25.06	.50	1.98	CLAYEY SILT TO SILTY CLAY	MH-CL	.95	6	1.786	13.5			
21.40	54.48	.51	.94	SILTY SAND TO SANDY SILT	SM-ML	1.18	8			40	34	.15

21.60	121.55	.87	.71	SAND TO SILTY SAND	SM-SP	1.30	14			64	38	.30
21.80	46.17	.98	2.09	SANDY SILT TO CLAYEY SILT	ML-MH	1.09	8	3.339	13.5	36	33	.14
22.00	36.22	.75	2.07	CLAYEY SILT TO SILTY CLAY	MH-CL	.99	8	2.610	13.5			
22.20	80.15	.65	.81	SILTY SAND TO SANDY SILT	SM-ML	1.22	12			51	35	.18
22.40	42.68	.57	1.34	SANDY SILT TO CLAYEY SILT	ML-MH	1.12	8	3.079	13.5	33	33	.13
22.60	16.62	.63	3.82	CLAY	CH	.90	7	1.164	13.5			
22.80	37.97	.56	1.48	SANDY SILT TO CLAYEY SILT	ML-MH	1.14	7	2.728	13.5	28	32	.13
23.00	23.29	.41	1.75	CLAYEY SILT TO SILTY CLAY	MH-CL	1.04	5	1.649	13.5			
23.20	18.15	.51	2.80	SILTY CLAY TO CLAY	CL-CH	.93	5	1.276	13.5			
23.40	14.82	.58	3.94	CLAY	CH	.94	7	1.028	13.5			
23.60	14.38	.55	3.85	CLAY	CH	.94	6	.995	13.5			
23.80	29.06	.54	1.87	CLAYEY SILT TO SILTY CLAY	MH-CL	1.07	6	2.074	13.5			
24.00	13.75	.61	4.41	CLAY	CH	.96	6	.948	13.5			
24.20	10.53	.65	6.15	CLAY	CH	.97	5	.708	13.5			
24.40	22.20	.55	2.50	CLAYEY SILT TO SILTY CLAY	MH-CL	1.10	5	1.563	13.5			
24.60	11.18	.62	5.57	CLAY	CH	.98	5	.755	13.5			
24.80	9.29	.59	6.39	CLAY	CH	.99	4	.615	13.5			
25.00	13.04	.69	5.30	CLAY	CH	1.00	6	.892	13.5			
25.20	26.44	.15	.58	SANDY SILT TO CLAYEY SILT	ML-MH	1.26	5	1.865	13.5	18	31	.11
25.40	51.87	.54	1.05	SANDY SILT TO CLAYEY SILT	ML-MH	1.27	9	3.748	13.5	36	33	.14
25.60	74.34	.16	.22	SAND TO SILTY SAND	SM-SP	1.54	8			43	36	.16
25.80	132.67	.76	.57	SAND TO SILTY SAND	SM-SP	1.55	15			63	38	.28
26.00	230.71	.90	.39	SAND	SW-SP	1.69	22			80	42	.50



RESULT OF CONE PENETRATION TEST

31S

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. : 31S
CONE NO. : 001
DATE : 05/05/87

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	2.71	.05	1.68	SENSITIVE FINE GRAINED	OL-CH	.02	0	.199	13.5			
.80	2.95	.04	1.46	SENSITIVE FINE GRAINED	OL-CH	.02	0	.217	13.5			
1.00	72.55	.07	.10	SAND TO SILTY SAND	SM-SP	.06	8			100+	42	.50+
1.20	84.18	.19	.23	SAND TO SILTY SAND	SM-SP	.07	10			100+	42	.50+
1.40	94.82	.04	.04	SAND TO SILTY SAND	SM-SP	.08	11			100+	42	.50+
1.60	112.68	1.23	1.09	SILTY SAND TO SANDY SILT	SM-ML	.09	17			100+	42	.50+
1.80	143.40	.87	.60	SAND TO SILTY SAND	SM-SP	.11	17			100+	42	.50+
2.00	159.38	.85	.53	SAND TO SILTY SAND	SM-SP	.12	19			100+	42	.50+
2.20	183.12	.29	.16	SAND	SW-SP	.14	17			100+	44	.50+
2.40	194.31	.49	.25	SAND	SW-SP	.16	18			100+	44	.50+
2.60	164.31	.22	.13	SAND	SW-SP	.17	15			100+	44	.50+
2.80	155.45	.70	.45	SAND TO SILTY SAND	SM-SP	.17	18			100+	42	.50+
3.00	151.24	.50	.33	SAND TO SILTY SAND	SM-SP	.18	18			100+	42	.50+
3.20	175.57	.45	.26	SAND	SW-SP	.21	16			100+	44	.50+
3.40	193.70	.14	.07	SAND	SW-SP	.22	18			100+	44	.50+
3.60	196.03	.55	.28	SAND	SW-SP	.23	18			100+	44	.50+
3.80	207.34	.16	.08	SAND	SW-SP	.25	19			100+	44	.50+
4.00	180.09	.21	.12	SAND	SW-SP	.26	17			100+	44	.50+
4.20	131.40	.19	.15	SAND TO SILTY SAND	SM-SP	.25	15			100+	42	.50+
4.40	103.93	.68	.65	SAND TO SILTY SAND	SM-SP	.26	12			94	42	.50+
4.60	130.37	.29	.22	SAND TO SILTY SAND	SM-SP	.28	15			100+	42	.50+
4.80	122.04	.32	.26	SAND TO SILTY SAND	SM-SP	.29	14			99	42	.50+
5.00	113.63	.24	.22	SAND TO SILTY SAND	SM-SP	.30	13			95	42	.50+
5.20	118.80	.49	.41	SAND TO SILTY SAND	SM-SP	.31	14			96	42	.50+
5.40	113.68	.60	.53	SAND TO SILTY SAND	SM-SP	.32	13			93	42	.50+
5.60	112.16	.21	.18	SAND TO SILTY SAND	SM-SP	.34	13			91	41	.50+
5.80	121.26	.38	.31	SAND TO SILTY SAND	SM-SP	.35	14			94	42	.50+
6.00	131.72	.40	.30	SAND TO SILTY SAND	SM-SP	.36	15			97	42	.50+
6.20	132.08	.44	.33	SAND TO SILTY SAND	SM-SP	.37	15			96	42	.50+
6.40	130.91	.44	.34	SAND TO SILTY SAND	SM-SP	.38	15			95	42	.50+
6.60	161.79	.65	.40	SAND TO SILTY SAND	SM-SP	.40	19			100+	42	.50+
6.80	185.69	.59	.32	SAND	SW-SP	.44	17			100+	44	.50+
7.00	197.27	.48	.24	SAND	SW-SP	.45	18			100+	44	.50+
7.20	169.17	.05	.03	SAND	SW-SP	.47	16			100+	44	.50+
7.40	172.90	.28	.16	SAND	SW-SP	.48	16			100+	44	.50+
7.60	176.10	.29	.16	SAND	SW-SP	.49	16			100+	44	.50+
7.80	158.93	.46	.29	SAND TO SILTY SAND	SM-SP	.47	19			98	42	.50+
8.00	177.25	.83	.47	SAND TO SILTY SAND	SM-SP	.48	21			100+	42	.50+
8.20	180.13	.69	.38	SAND	SW-SP	.53	17			100+	44	.50+
8.40	198.63	.59	.30	SAND	SW-SP	.55	19			100+	44	.50+
8.60	195.23	1.78	.91	SAND TO SILTY SAND	SM-SP	.52	23			100+	42	.50+
8.80	196.39	.46	.23	SAND	SW-SP	.57	18			100+	44	.50+
9.00	203.88	.10	.05	SAND	SW-SP	.58	19			100+	44	.50+
9.20	207.25	.42	.20	SAND	SW-SP	.60	19			100+	44	.50+
9.40	206.13	.42	.20	SAND	SW-SP	.61	19			100+	44	.50+

9.60	184.72	.47	.26	SAND	SW-SP	.62	17			97	44	.50+
9.80	218.38	.59	.27	SAND	SW-SP	.64	20			100+	44	.50+
10.00	215.72	.35	.16	SAND	SW-SP	.65	20			100+	44	.50+
10.20	195.75	.60	.30	SAND	SW-SP	.66	18			97	44	.50+
10.40	191.60	.12	.06	SAND	SW-SP	.68	18			96	44	.50+
10.60	201.02	.75	.37	SAND	SW-SP	.69	19			97	44	.50+
10.80	238.65	.42	.18	SAND	SW-SP	.70	22			100+	44	.50+
11.00	262.30	.10	.04	SAND	SW-SP	.71	25			100+	44	.50+
11.20	100.49	.12	.12	SAND TO SILTY SAND	SM-SP	.67	12			73	39	.50+
11.40	32.09	.28	.88	SANDY SILT TO CLAYEY SILT	ML-MH	.57	6	2.335	13.5	42	34	.15
11.60	28.96	.24	.83	SANDY SILT TO CLAYEY SILT	ML-MH	.58	5	2.102	13.5	40	34	.14
11.80	31.83	.41	1.27	SANDY SILT TO CLAYEY SILT	ML-MH	.59	6	2.314	13.5	41	34	.14
12.00	56.00	.05	.09	SILTY SAND TO SANDY SILT	SM-ML	.66	8			56	36	.19
12.20	31.48	.57	1.82	CLAYEY SILT TO SILTY CLAY	MH-CL	.55	7	2.291	13.5			
12.40	120.91	.42	.35	SAND TO SILTY SAND	SM-SP	.74	14			77	40	.50+
12.60	89.57	.34	.38	SAND TO SILTY SAND	SM-SP	.76	10			67	39	.35
12.80	79.75	.10	.13	SAND TO SILTY SAND	SM-SP	.77	9			63	38	.27
13.00	17.71	.44	2.51	SILTY CLAY TO CLAY	CL-CH	.52	5	1.273	13.5			
13.20	103.27	.42	.41	SAND TO SILTY SAND	SM-SP	.79	12			70	39	.50+
13.40	106.33	.46	.43	SAND TO SILTY SAND	SM-SP	.80	12			71	39	.50+
13.60	103.78	.53	.51	SAND TO SILTY SAND	SM-SP	.82	12			70	39	.49
13.80	125.40	.59	.47	SAND TO SILTY SAND	SM-SP	.83	15			76	40	.50+
14.00	163.15	.50	.31	SAND TO SILTY SAND	SM-SP	.84	19			84	41	.50+
14.20	147.94	.16	.11	SAND TO SILTY SAND	SM-SP	.85	17			81	40	.50+
14.40	49.77	.12	.25	SILTY SAND TO SANDY SILT	SM-ML	.79	7			47	35	.16
14.60	24.72	.35	1.40	CLAYEY SILT TO SILTY CLAY	MH-CL	.66	5	1.783	13.5			
14.80	63.69	1.12	1.76	SANDY SILT TO CLAYEY SILT	ML-MH	.74	12	4.663	13.5	58	36	.20
15.00	61.28	.18	.30	SILTY SAND TO SANDY SILT	SM-ML	.82	9			53	35	.18
15.20	45.15	.36	.79	SANDY SILT TO CLAYEY SILT	ML-MH	.76	8	3.288	13.5	45	34	.16
15.40	39.43	.34	.87	SANDY SILT TO CLAYEY SILT	ML-MH	.77	7	2.864	13.5	41	34	.15
15.60	36.80	.24	.65	SANDY SILT TO CLAYEY SILT	ML-MH	.78	7	2.668	13.5	38	33	.14
15.80	22.29	.46	2.08	CLAYEY SILT TO SILTY CLAY	MH-CL	.71	5	1.598	13.5			
16.00	8.61	.32	3.68	CLAY	CH	.64	4	.591	13.5			
16.20	6.89	.33	4.80	CLAY	CH	.65	3	.462	13.5			
16.40	7.38	.34	4.60	CLAY	CH	.66	3	.498	13.5			
16.60	10.34	.31	3.00	CLAY	CH	.66	4	.717	13.5			
16.80	8.37	.40	4.78	CLAY	CH	.67	4	.571	13.5			
17.00	20.14	.47	2.34	CLAYEY SILT TO SILTY CLAY	MH-CL	.76	4	1.435	13.5			
17.20	54.11	.54	.99	SILTY SAND TO SANDY SILT	SM-ML	.95	8			45	34	.16
17.40	79.86	.35	.44	SILTY SAND TO SANDY SILT	SM-ML	.96	12			59	36	.21
17.60	59.87	.34	.58	SILTY SAND TO SANDY SILT	SM-ML	.97	9			47	35	.17
17.80	35.38	.28	.79	SANDY SILT TO CLAYEY SILT	ML-MH	.89	6	2.555	13.5	32	33	.13
18.00	10.46	.32	3.02	CLAY	CH	.72	5	.721	13.5			
18.20	20.17	.23	1.14	CLAYEY SILT TO SILTY CLAY	MH-CL	.82	4	1.433	13.5			
18.40	11.23	.24	2.13	SILTY CLAY TO CLAY	CL-CH	.74	3	.777	13.5			
18.60	7.86	.32	4.03	CLAY	CH	.74	3	.527	13.5			
18.80	14.55	.09	.62	SENSITIVE FINE GRAINED	OL-CH	.56	3	1.036	13.5			
19.00	20.18	.26	1.27	CLAYEY SILT TO SILTY CLAY	MH-CL	.86	4	1.432	13.5			
19.20	8.36	.29	3.50	CLAY	CH	.77	4	.563	13.5			
19.40	8.63	.28	3.29	CLAY	CH	.78	4	.582	13.5			
19.60	5.41	.32	5.89	CLAY	CH	.78	2	.343	13.5			
19.80	7.17	.28	3.92	CLAY	CH	.79	3	.472	13.5			
20.00	9.63	.26	2.67	CLAY	CH	.80	4	.654	13.5			
20.20	13.36	.42	3.16	CLAY	CH	.81	6	.930	13.5			
20.40	9.35	.34	3.63	CLAY	CH	.82	4	.632	13.5			
20.60	28.36	.60	2.13	CLAYEY SILT TO SILTY CLAY	MH-CL	.93	6	2.032	13.5			
20.80	14.27	.42	2.93	SILTY CLAY TO CLAY	CL-CH	.83	4	.995	13.5			
21.00	18.29	.18	.98	CLAYEY SILT TO SILTY CLAY	MH-CL	.95	4	1.285	13.5			
21.20	48.70	.66	1.36	SANDY SILT TO CLAYEY SILT	ML-MH	1.06	9	3.529	13.5	39	34	.14
21.40	181.25	.58	.32	SAND	SW-SP	1.39	17			76	42	.33

21.60	167.03	.78	.46	SAND TO SILTY SAND	SM-SP	1.30	20			75	40	.50+

SECTION II

Form 109-2.U2 (87) Job No. :

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	
1	S	0.5									1
1	M	0.5									0
1	N	0.5									0
2	S	0.5									0
2	M	0.5									
2	N	0.5									0
3	S	0.5									0
3	M	0.5									0
3	N	0.5									1
4	S	0.5									1
4	M	0.5									0
4	N	0.5	73	32	107					0.09	
5	S	0.5									0
5	M	0.5									0
6	S	0.5									1
6	M	0.5									0
6	N	0.5	69	29	54					0.14	
7	S	0.5									0
7	M	0.5									1
7	N	0.5	76	31	67					0.15	

LEGEND:

U-Unconfined Compression
VR-Remolded Miniature Vane

McCLELLAND ENGINEERS

Form 109-2.02 (87) Job No. :

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	
8	S	0.5									0
8	M	0.5									
8	N	0.5	49	31	45					0.17	
9	S	0.5									0
9	M	0.5									0
9	N	0.5			62					0.13	
10	S	0.5			61					0.06	
10	M	0.5									2
10	N	0.5	115	34	99					0.14	
11	S	0.5									6
11	M	0.5									0
11	N	0.5	91	45	92					0.13	
12	S	0.5	38	25	42					0.10	
12	M	0.5	52	28	57					0.14	
12	N	0.5	94	39	84					0.12	
13	S	0.5									
13	M	0.5									0
14	S	0.5									0
14	M	0.5									0
14	N	0.5	85	33	92					0.10	

LEGEND:

U-Unconfined Compression
VR-Remolded Miniature Vane

McCLELLAND ENGINEERS

Form 109-2.02 (87) Job No. :

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	C	VR	
15	S	0.5									
15	M	0.5									0
15	N	0.5	48	39	68					0.19	
16	S	0.5									0
16	M	0.5									0
16	N	0.5	83	42	152					0.08	
17	S	0.5									4
17	M	0.5									0
17	N	0.5	73	42	84					0.11	
18	S	0.5									1
18	M	0.5									1
18	N	0.5									0
19	S	0.5									0
19	M	0.5									0
19	N	0.5									0
20	S	0.5									0
20	M	0.5									0
20	N	0.5									0
21	S	0.5									0
21	M	0.5									1
21	N	0.5									0

LEGEND:

U-Unconfined Compression
VR-Remolded Miniature Vane

McCLELLAND ENGINEERS

Form 109-2.02 (87) Job No. :

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	C	VR	
22	S	0.5									
22	M	0.5									0
22	N	0.5									0
23	S	0.5									0
23	M	0.5									0
23	N	0.5									1
24	S	0.5									0
24	M	0.5									0
24	N	0.5									1
25	S	0.5									
25	M	0.5									0
25	N	0.5									0
26	S	0.5									0
26	M	0.5									0
26	N	0.5									1
27	S	0.5									0
27	M	0.5									2
27	N	0.5									1
28	S	0.5									0
28	M	0.5									2
28	N	0.5									7

LEGEND:

U-Unconfined Compression

VR-Remolded Miniature Vane

McCLELLAND ENGINEERS

Form 109-2.02 (87) JOB No. :

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	C	VR	
29	S	0.5									0
29	M	0.5									0
29	N	0.5									0
30	S	0.5									0
30	M	0.5									0
30	N	0.5									
31	S	0.5									0
31	M	0.5									0
31	N	0.5									0

LEGEND:

U-Unconfined Compression
VR-Remolded Miniature Vane

McCLELLAND ENGINEERS

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: 1 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: 249.13

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.03	2.000	-1.00	100.0	0.0	
20	0.22	0.850	0.23	99.9	0.1	
40	0.93	0.425	1.23	99.6	0.4	
70	68.16	0.212	2.24	72.6	27.4	
100	210.64	0.150	2.74	15.4	84.6	
200	248.72	0.075	3.74	0.2	99.8	
PAN	248.92			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.340
16	1.668
25	2.087
50	2.407
75	2.635
84	2.731
95	3.320

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.125
15	0.148
30	0.167
60	0.199
85	0.323
90	0.360

POORLY GRADED Cu= 1.596
Cc= 1.119

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 1 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: BROWN FINE SAND

TESTED BY: RG DATE:5-29-87

CHECKED BY: DC DATE:5-30-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 205.46

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	0.14	2.000	-1.00	99.9	0.1	
16	0.38	1.180	-0.24	99.8	0.2	
20	0.69	0.850	0.23	99.7	0.3	
40	1.75	0.425	1.23	99.1	0.9	
70	39.69	0.212	2.24	80.7	19.3	
100	170.51	0.150	2.74	17.0	83.0	
200	205.22	0.075	3.74	0.1	99.9	
PAN	205.38			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.375
16	1.950
25	2.274
50	2.448
75	2.659
84	2.777
95	3.350

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.120
15	0.142
30	0.163
60	0.193
85	0.272
90	0.332

POORLY GRADED Cu= 1.601 Cc= 1.150

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 1 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND
TESTED BY: RG DATE:5-29-87
CHECKED BY: DC DATE:5-30-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 168.05

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.56	4.750	-2.25	99.1	0.9	
10	2.94	2.000	-1.00	98.3	1.7	
16	3.67	1.180	-0.24	97.8	2.2	
20	4.13	0.850	0.23	97.5	2.5	
40	5.42	0.425	1.23	96.8	3.2	
70	31.94	0.212	2.24	81.0	19.0	
100	137.01	0.150	2.74	18.5	81.5	
200	167.15	0.075	3.74	0.5	99.5	
PAN	167.30			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.302
16	1.935
25	2.276
50	2.455
75	2.672
84	2.832
95	3.397

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.116
15	0.136
30	0.162
60	0.192
85	0.277
90	0.346

POORLY GRADED Cu= 1.654 Cc= 1.177

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 2 SAMPLE NO: N PENETRATION, ft: NA

MATERIAL: BROWN FINE TO MEDIUM SAND W/SHELL FRAGS

TESTED BY: RG DATE:5-29-87

CHECKED BY: DC DATE:5-30-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 200.47

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	2.63	4.750	-2.25	98.7	1.3	
10	8.37	2.000	-1.00	95.8	4.2	
16	17.98	1.180	-0.24	91.0	9.0	
20	29.86	0.850	0.23	85.1	14.9	
40	66.18	0.425	1.23	67.0	33.0	
70	177.72	0.212	2.24	11.3	88.7	
100	199.77	0.150	2.74	0.3	99.7	
200	200.21	0.075	3.74	0.1	99.9	
PAN	200.23			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	-0.950
16	0.263
25	0.590
50	1.433
75	1.864
84	2.093
95	2.496

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.205
15	0.230
30	0.296
60	0.403
85	0.848
90	1.138

POORLY GRADED Cu= 1.969 Cc= 1.057

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 2 SAMPLE NO: S PENETRATION, ft: NA
MATERIAL: DARK GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: RG DATE:5-29-87
CHECKED BY: DC DATE:5-30-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 161.24

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.97	4.750	-2.25	98.8	1.2	
10	4.01	2.000	-1.00	97.5	2.5	
16	6.35	1.180	-0.24	96.1	3.9	
20	8.95	0.850	0.23	94.4	5.6	
40	14.87	0.425	1.23	90.8	9.2	
70	81.82	0.212	2.24	49.3	50.7	
100	157.79	0.150	2.74	2.1	97.9	
200	160.83	0.075	3.74	0.3	99.7	
PAN	161.02			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	0.011
16	1.334
25	1.491
50	2.205
75	2.464
84	2.563
95	2.699

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.161
15	0.168
30	0.188
60	0.278
85	0.401
90	0.422

POORLY GRADED Cu= 1.726 Cc= 0.788

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 3 SAMPLE NO: N PENETRATION, ft: NA

MATERIAL: BROWN FINE SAND W/SHELL FRAGMENTS

TESTED BY: RG DATE:5-29-87

CHECKED BY: DC DATE:5-30-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 203.33

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.42	4.750	-2.25	99.3	0.7	
10	1.76	2.000	-1.00	99.1	0.9	
16	2.42	1.180	-0.24	98.8	1.2	
20	3.50	0.850	0.23	98.3	1.7	
40	7.80	0.425	1.23	96.2	3.8	
70	71.14	0.212	2.24	65.0	35.0	
100	174.90	0.150	2.74	14.0	86.0	
200	202.34	0.075	3.74	0.5	99.5	
PAN	202.52			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.256
16	1.499
25	1.775
50	2.361
75	2.607
84	2.712
95	3.300

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.129
15	0.151
30	0.170
60	0.206
85	0.360
90	0.390

POORLY GRADED

Cu= 1.597

Cc= 1.090

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 3 SAMPLE NO: M PENETRATION, ft: NA
MATERIAL: BROWN FINE SAND
TESTED BY: DC DATE:5-29-87
CHECKED BY: DC DATE:5-30-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 199.56

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.09	4.750	-2.25	100.0	0.0	
10	0.63	2.000	-1.00	99.7	0.3	
16	1.17	1.180	-0.24	99.4	0.6	
20	1.62	0.850	0.23	99.2	0.8	
40	2.45	0.425	1.23	98.8	1.2	
70	41.46	0.212	2.24	79.2	20.8	
100	162.24	0.150	2.74	18.7	81.3	
200	198.85	0.075	3.74	0.4	99.6	
PAN	199.42			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.354
16	1.865
25	2.266
50	2.449
75	2.672
84	2.839
95	3.392

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.116
15	0.136
30	0.162
60	0.193
85	0.286
90	0.342

POORLY GRADED Cu= 1.665 Cc= 1.174

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 3 SAMPLE NO: S PENETRATION, ft: NA
MATERIAL: GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:5-29-87
CHECKED BY: DC DATE:5-30-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 188.30

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.32	4.750	-2.25	99.8	0.2	
10	1.81	2.000	-1.00	99.0	1.0	
16	3.44	1.180	-0.24	98.2	1.8	
20	4.74	0.850	0.23	97.5	2.5	
40	8.13	0.425	1.23	95.7	4.3	
70	69.48	0.212	2.24	63.1	36.9	
100	167.43	0.150	2.74	11.1	88.9	
200	188.11	0.075	3.74	0.1	99.9	
PAN	188.12			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.247
16	1.474
25	1.726
50	2.342
75	2.578
84	2.678
95	3.184

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.143
15	0.155
30	0.174
60	0.209
85	0.366
90	0.395

POORLY GRADED Cu= 1.457 Cc= 1.009

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 4 SAMPLE NO: M PENETRATION, ft: NA
MATERIAL: BROWN & LIGHT BROWN FINE SAND
TESTED BY: DC DATE:5-29-87
CHECKED BY: DC DATE:5-30-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 189.94

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	0.09	2.000	-1.00	100.0	0.0	
16	0.23	1.180	-0.24	99.9	0.1	
20	0.46	0.850	0.23	99.8	0.2	
40	1.08	0.425	1.23	99.4	0.6	
70	34.65	0.212	2.24	81.8	18.2	
100	146.86	0.150	2.74	22.7	77.3	
200	189.26	0.075	3.74	0.4	99.6	
PAN	189.59			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.394
16	2.026
25	2.284
50	2.476
75	2.712
84	2.956
95	3.447

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.109
15	0.126
30	0.158
60	0.190
85	0.260
90	0.324

POORLY GRADED Cu= 1.745 Cc= 1.207

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 4 SAMPLE NO: S PENETRATION, ft: NA
MATERIAL: GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:5-29-87
CHECKED BY: DC DATE:5-30-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 202.13

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	2.95	4.750	-2.25	98.5	1.5	
10	4.32	2.000	-1.00	97.9	2.1	
16	5.76	1.180	-0.24	97.2	2.8	
20	7.25	0.850	0.23	96.4	3.6	
40	10.44	0.425	1.23	94.8	5.2	
70	55.83	0.212	2.24	72.4	27.6	
100	157.57	0.150	2.74	22.0	78.0	
200	200.74	0.075	3.74	0.7	99.3	
PAN	200.89			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.016
16	1.577
25	2.041
50	2.430
75	2.700
84	2.943
95	3.454

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.109
15	0.127
30	0.160
60	0.198
85	0.344
90	0.387

POORLY GRADED Cu= 1.807 Cc= 1.192

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 5 SAMPLE NO: M PENETRATION, ft: NA
MATERIAL: BROWN FINE SAND
TESTED BY: DC DATE:5-29-87
CHECKED BY: DC DATE:5-30-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 164.88

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.06	2.000	-1.00	100.0	0.0	
16	0.09	1.180	-0.24	99.9	0.1	
20	0.20	0.850	0.23	99.9	0.1	
40	1.52	0.425	1.23	99.1	0.9	
70	48.67	0.212	2.24	70.5	29.5	
100	147.73	0.150	2.74	10.4	89.6	
200	164.75	0.075	3.74	0.1	99.9	
PAN	164.87			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.321
16	1.618
25	1.980
50	2.382
75	2.592
84	2.679
95	3.154

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.147
15	0.155
30	0.171
60	0.202
85	0.333
90	0.368

POORLY GRADED Cu= 1.370
Cc= 0.986

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 5 SAMPLE NO: S PENETRATION, ft: NA
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:5-29-87
CHECKED BY: DC DATE:5-30-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 166.37

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	2.96	4.750	-2.25	98.2	1.8	
10	4.40	2.000	-1.00	97.4	2.6	
16	6.20	1.180	-0.24	96.3	3.7	
20	8.04	0.850	0.23	95.2	4.8	
40	12.19	0.425	1.23	92.7	7.3	
70	69.64	0.212	2.24	58.1	41.9	
100	154.83	0.150	2.74	6.9	93.1	
200	166.06	0.075	3.74	0.2	99.8	
PAN	166.08			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	0.266
16	1.394
25	1.604
50	2.302
75	2.532
84	2.629
95	2.946

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.154
15	0.160
30	0.179
60	0.227
85	0.386
90	0.412

POORLY GRADED Cu= 1.471 Cc= 0.919

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 6 SAMPLE NO: M PENETRATION, ft: NA
MATERIAL: BROWN FINE SAND
TESTED BY: DC DATE:5-29-87
CHECKED BY: DC DATE:5-30-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 178.83

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	0.10	2.000	-1.00	99.9	0.1	
16	0.40	1.180	-0.24	99.8	0.2	
20	0.89	0.850	0.23	99.5	0.5	
40	6.09	0.425	1.23	96.6	3.4	
70	52.44	0.212	2.24	70.7	29.3	
100	147.08	0.150	2.74	17.8	82.2	
200	178.18	0.075	3.74	0.4	99.6	
PAN	178.44			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.270
16	1.581
25	1.968
50	2.405
75	2.653
84	2.806
95	3.376

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.118
15	0.139
30	0.165
60	0.200
85	0.342
90	0.380

POORLY GRADED Cu= 1.694 Cc= 1.153

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 6 SAMPLE NO: S PENETRATION, ft: NA
MATERIAL: GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: RG DATE:5-29-87
CHECKED BY: DC DATE:5-30-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 157.48

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.02	2.000	-1.00	100.0	0.0	
16	0.24	1.180	-0.24	99.8	0.2	
20	0.79	0.850	0.23	99.5	0.5	
40	2.47	0.425	1.23	98.4	1.6	
70	52.01	0.212	2.24	67.0	33.0	
100	146.67	0.150	2.74	6.9	93.1	
200	156.31	0.075	3.74	0.7	99.3	
PAN	156.70			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.300
16	1.557
25	1.852
50	2.356
75	2.559
84	2.644
95	2.960

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.153
15	0.159
30	0.175
60	0.205
85	0.346
90	0.377

POORLY GRADED Cu= 1.337 Cc= 0.971

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 7 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: BROWN FINE SAND
TESTED BY: DC DATE:5-29-87
CHECKED BY: DC DATE:5-30-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 148.20

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	
16	0.71	1.180	-0.24	99.5	0.5	
20	1.38	0.850	0.23	99.1	0.9	
40	4.33	0.425	1.23	97.1	2.9	
70	58.44	0.212	2.24	60.6	39.4	
100	136.65	0.150	2.74	7.8	92.2	
200	147.43	0.075	3.74	0.5	99.5	
PAN	147.65			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.268
16	1.474
25	1.694
50	2.320
75	2.546
84	2.642
95	3.027

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.153
15	0.159
30	0.177
60	0.211
85	0.365
90	0.391

POORLY GRADED Cu= 1.384 Cc= 0.972

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 7 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: GRAY FINE SAND

TESTED BY: DC DATE:5-29-87

CHECKED BY: DC DATE:5-30-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 157.19

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	0.02	2.000	-1.00	100.0	0.0	
16	0.17	1.180	-0.24	99.9	0.1	
20	0.68	0.850	0.23	99.6	0.4	
40	3.43	0.425	1.23	97.8	2.2	
70	34.38	0.212	2.24	78.1	21.9	
100	122.72	0.150	2.74	21.9	78.1	
200	156.86	0.075	3.74	0.2	99.8	
PAN	156.98			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.321
16	1.800
25	2.260
50	2.457
75	2.702
84	2.935
95	3.431

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.110
15	0.127
30	0.159
60	0.193
85	0.299
90	0.352

POORLY GRADED Cu= 1.747 Cc= 1.194

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 8 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:5-29-87
CHECKED BY: DC DATE:5-30-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 180.05

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	99.8	0.2	
10	0.84	2.000	-1.00	99.5	0.5	
16	1.31	1.180	-0.24	99.3	0.7	
20	1.93	0.850	0.23	98.9	1.1	
40	3.89	0.425	1.23	97.8	2.2	
70	36.29	0.212	2.24	79.8	20.2	
100	156.19	0.150	2.74	13.3	86.7	
200	179.68	0.075	3.74	0.2	99.8	
PAN	179.79			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.331
16	1.882
25	2.267
50	2.432
75	2.629
84	2.711
95	3.264

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.132
15	0.152
30	0.166
60	0.194
85	0.284
90	0.345

POORLY GRADED Cu= 1.468 Cc= 1.076

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-28-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 9 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:5-29-87

CHECKED BY: DC DATE:5-30-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 157.99

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	14.74	4.750	-2.25	90.7	9.3	
10	17.43	2.000	-1.00	89.0	11.0	
16	18.62	1.180	-0.24	88.2	11.8	
20	19.28	0.850	0.23	87.8	12.2	
40	20.38	0.425	1.23	87.1	12.9	
70	55.43	0.212	2.24	64.9	35.1	
100	140.82	0.150	2.74	10.9	89.1	
200	157.71	0.075	3.74	0.2	99.8	
PAN	157.83			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	#N/A
16	1.319
25	1.636
50	2.353
75	2.581
84	2.678
95	3.179

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.144
15	0.155
30	0.173
60	0.207
85	0.409
90	4.533

POORLY GRADED Cu= 1.432 Cc= 1.003

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-29-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 9 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: RG DATE:5-30-87

CHECKED BY: DC DATE:6-1-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 166.25

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.47	4.750	-2.25	99.7	0.3	
10	1.37	2.000	-1.00	99.2	0.8	
16	2.44	1.180	-0.24	98.5	1.5	
20	3.63	0.850	0.23	97.8	2.2	
40	6.71	0.425	1.23	96.0	4.0	
70	42.68	0.212	2.24	74.3	25.7	
100	127.79	0.150	2.74	23.1	76.9	
200	166.17	0.075	3.74	0.0	100.0	
PAN	166.24			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.260
16	1.643
25	2.181
50	2.445
75	2.714
84	2.964
95	3.439

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.109
15	0.125
30	0.159
60	0.196
85	0.330
90	0.376

POORLY GRADED Cu= 1.795 Cc= 1.185

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-29-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 10 SAMPLE NO: M PENETRATION, ft: SURFACE

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

TESTED BY: DC DATE:5-30-87

CHECKED BY: DC DATE:6-1-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 152.02

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.08	4.750	-2.25	99.9	0.1	
10	1.00	2.000	-1.00	99.3	0.7	
16	2.66	1.180	-0.24	98.3	1.7	
20	4.27	0.850	0.23	97.2	2.8	
40	8.36	0.425	1.23	94.5	5.5	
70	44.47	0.212	2.24	70.7	29.3	
100	133.49	0.150	2.74	12.2	87.8	
200	149.74	0.075	3.74	1.5	98.5	
PAN	151.56			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	0.885
16	1.542
25	1.951
50	2.388
75	2.605
84	2.696
95	3.307

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.136
15	0.153
30	0.170
60	0.201
85	0.352
90	0.392

POORLY GRADED Cu= 1.484 Cc= 1.056

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-29-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 11 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:5-30-87
CHECKED BY: DC DATE:6-1-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 172.27

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.76	4.750	-2.25	99.6	0.4	
10	2.62	2.000	-1.00	98.5	1.5	
16	3.89	1.180	-0.24	97.7	2.3	
20	4.94	0.850	0.23	97.1	2.9	
40	7.43	0.425	1.23	95.7	4.3	
70	31.97	0.212	2.24	81.4	18.6	
100	128.76	0.150	2.74	25.3	74.7	
200	171.66	0.075	3.74	0.4	99.6	
PAN	172.30			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.263
16	1.950
25	2.284
50	2.487
75	2.744
84	3.016
95	3.474

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.106
15	0.121
30	0.156
60	0.189
85	0.276
90	0.352

POORLY GRADED Cu= 1.793 Cc= 1.210

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-29-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 11 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY & DARK GRAY FINE SAND W/SHELL FRAGMENTS & ROOTS
TESTED BY: DC DATE:5-30-87
CHECKED BY: DC DATE:6-1-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 159.58

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	99.3	0.7	
10	5.57	2.000	-1.00	96.5	3.5	
16	8.67	1.180	-0.24	94.6	5.4	
20	11.49	0.850	0.23	92.8	7.2	
40	17.05	0.425	1.23	89.3	10.7	
70	37.91	0.212	2.24	76.2	23.8	
100	110.52	0.150	2.74	30.7	69.3	
200	149.25	0.075	3.74	6.5	93.5	
PAN	159.39			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	-0.616
16	1.513
25	2.249
50	2.496
75	2.906
84	3.238
95	#N/A

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.087
15	0.103
30	0.148
60	0.191
85	0.366
90	0.548

POORLY GRADED Cu= 2.201 Cc= 1.321

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-29-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 13 SAMPLE NO: M PENETRATION, ft: NA

MATERIAL: BROWN & OLIVE GRAY FINE SAND

TESTED BY: RG DATE:5-30-87

CHECKED BY: DC DATE:6-1-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 172.76

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	0.25	2.000	-1.00	99.9	0.1	
16	0.60	1.180	-0.24	99.7	0.3	
20	1.53	0.850	0.23	99.1	0.9	
40	4.97	0.425	1.23	97.1	2.9	
70	43.47	0.212	2.24	74.8	25.2	
100	138.21	0.150	2.74	20.0	80.0	
200	172.05	0.075	3.74	0.4	99.6	
PAN	172.73			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.291
16	1.678
25	2.224
50	2.434
75	2.680
84	2.881
95	3.415

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.113
15	0.132
30	0.162
60	0.196
85	0.322
90	0.368

POORLY GRADED Cu= 1.730 Cc= 1.181

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-29-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 14 SAMPLE NO: M PENETRATION, ft: NA

MATERIAL: LIGHT BROWN & GRAY FINE SAND

TESTED BY: DC DATE:5-30-87

CHECKED BY: DC DATE:6-1-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 176.55

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.02	2.000	-1.00	100.0	0.0	
16	0.10	1.180	-0.24	99.9	0.1	
20	0.15	0.850	0.23	99.9	0.1	
40	0.48	0.425	1.23	99.7	0.3	
70	33.64	0.212	2.24	80.9	19.1	
100	139.76	0.150	2.74	20.8	79.2	
200	176.16	0.075	3.74	0.2	99.8	
PAN	176.50			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.394
16	1.974
25	2.278
50	2.464
75	2.693
84	2.905
95	3.418

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.112
15	0.130
30	0.160
60	0.191
85	0.268
90	0.328

POORLY GRADED Cu= 1.706 Cc= 1.193

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-29-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 14 SAMPLE NO: S PENETRATION, ft: NA

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

TESTED BY: RG DATE:5-30-87

CHECKED BY: DC DATE:6-1-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 215.92

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.55	4.750	-2.25	99.3	0.7	
10	6.31	2.000	-1.00	97.1	2.9	
16	10.57	1.180	-0.24	95.1	4.9	
20	13.74	0.850	0.23	93.6	6.4	
40	19.89	0.425	1.23	90.8	9.2	
70	49.60	0.212	2.24	77.0	23.0	
100	145.34	0.150	2.74	32.7	67.3	
200	215.15	0.075	3.74	0.4	99.6	
PAN	215.46			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	-0.218
16	1.587
25	2.256
50	2.512
75	2.907
84	3.147
95	3.529

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.099
15	0.111
30	0.144
60	0.189
85	0.348
90	0.415

POORLY GRADED Cu= 1.916 Cc= 1.113

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-29-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 15 SAMPLE NO: M PENETRATION, ft: NA

MATERIAL: BROWN FINE SAND W/ROOTS

TESTED BY: DC DATE:5-30-87

CHECKED BY: DC DATE:6-1-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 145.82

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	
16	0.00	1.180	-0.24	100.0	0.0	
20	0.04	0.850	0.23	100.0	0.0	
40	0.07	0.425	1.23	100.0	0.0	
70	15.82	0.212	2.24	89.2	10.8	
100	109.91	0.150	2.74	24.6	75.4	
200	145.52	0.075	3.74	0.2	99.8	
PAN	145.61			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.556
16	2.270
25	2.328
50	2.511
75	2.733
84	3.000
95	3.461

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.107
15	0.122
30	0.156
60	0.185
85	0.208
90	0.233

POORLY GRADED Cu= 1.735 Cc= 1.225

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-29-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 16 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: LIGHT BROWN FINE SAND
TESTED BY: DC DATE:5-30-87
CHECKED BY: DC DATE:6-1-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 141.20

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	
16	0.20	1.180	-0.24	99.9	0.1	
20	0.42	0.850	0.23	99.7	0.3	
40	1.21	0.425	1.23	99.1	0.9	
70	38.50	0.212	2.24	72.7	27.3	
100	126.20	0.150	2.74	10.6	89.4	
200	140.77	0.075	3.74	0.3	99.7	
PAN	141.06			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.330
16	1.663
25	2.089
50	2.394
75	2.598
84	2.683
95	3.175

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.146
15	0.155
30	0.170
60	0.200
85	0.324
90	0.362

POORLY GRADED Cu= 1.371 Cc= 0.995

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: 16 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE 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: 272.13

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.28	4.750	-2.25	99.9	0.1	
10	3.63	2.000	-1.00	98.7	1.3	
20	8.28	0.850	0.23	97.0	3.0	
40	12.05	0.425	1.23	95.6	4.4	
70	63.05	0.212	2.24	76.8	23.2	
100	230.20	0.150	2.74	15.4	84.6	
200	271.85	0.075	3.74	0.1	99.9	
PAN	272.22			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.252
16	1.708
25	2.250
50	2.427
75	2.641
84	2.731
95	3.316

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.125
15	0.148
30	0.166
60	0.196
85	0.318
90	0.372

POORLY GRADED Cu= 1.568 Cc= 1.120

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 17 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:6-1-87
CHECKED BY: DC DATE:6-2-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 127.32

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	3.85	4.750	-2.25	97.0	3.0	
10	10.39	2.000	-1.00	91.8	8.2	
16	15.11	1.180	-0.24	88.1	11.9	
20	17.33	0.850	0.23	86.4	13.6	
40	20.83	0.425	1.23	83.6	16.4	
70	37.19	0.212	2.24	70.8	29.2	
100	100.99	0.150	2.74	20.7	79.3	
200	127.23	0.075	3.74	0.1	99.9	
PAN	127.37			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	-2.183
16	0.970
25	1.767
50	2.416
75	2.683
84	2.899
95	3.409

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.113
15	0.131
30	0.162
60	0.199
85	0.685
90	1.763

POORLY GRADED Cu= 1.768 Cc= 1.171

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 17 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY & DARK GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: RG DATE:6-1-87
CHECKED BY: DC DATE:6-2-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 210.86

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.82	4.750	-2.25	99.1	0.9	
10	5.51	2.000	-1.00	97.4	2.6	
16	8.09	1.180	-0.24	96.2	3.8	
20	10.15	0.850	0.23	95.2	4.8	
40	14.97	0.425	1.23	92.9	7.1	
70	31.04	0.212	2.24	85.3	14.7	
100	104.19	0.150	2.74	50.6	49.4	
200	202.39	0.075	3.74	4.0	96.0	
PAN	210.68			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	0.273
16	2.252
25	2.362
50	2.745
75	3.179
84	3.387
95	3.704

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.085
15	0.094
30	0.118
60	0.168
85	0.212
90	0.356

POORLY GRADED Cu= 1.964 Cc= 0.979

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 18 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:6-1-87

CHECKED BY: DC DATE:6-2-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 167.01

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.91	4.750	-2.25	99.5	0.5	
10	2.82	2.000	-1.00	98.3	1.7	
16	4.74	1.180	-0.24	97.2	2.8	
20	6.38	0.850	0.23	96.2	3.8	
40	9.38	0.425	1.23	94.4	5.6	
70	30.76	0.212	2.24	81.6	18.4	
100	133.64	0.150	2.74	20.0	80.0	
200	166.83	0.075	3.74	0.1	99.9	
PAN	166.90			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	0.688
16	1.938
25	2.281
50	2.463
75	2.686
84	2.879
95	3.400

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.114
15	0.132
30	0.161
60	0.191
85	0.280
90	0.363

POORLY GRADED

Cu= 1.679

Cc= 1.185

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 18 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:6-1-87
CHECKED BY: DC DATE:6-2-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 175.18

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	2.42	4.750	-2.25	98.6	1.4	
10	5.28	2.000	-1.00	97.0	3.0	
16	6.74	1.180	-0.24	96.2	3.8	
20	8.00	0.850	0.23	95.4	4.6	
40	11.73	0.425	1.23	93.3	6.7	
70	33.71	0.212	2.24	80.8	19.2	
100	124.27	0.150	2.74	29.1	70.9	
200	173.84	0.075	3.74	0.8	99.2	
PAN	175.00			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	0.338
16	1.848
25	2.283
50	2.505
75	2.837
84	3.096
95	3.521

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.101
15	0.114
30	0.151
60	0.188
85	0.296
90	0.378

POORLY GRADED Cu= 1.864 Cc= 1.204

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 18 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE TO MEDIUM SAND W/MANY SHELL FRAGMENTS
TESTED BY: DC DATE:6-1-87
CHECKED BY: DC DATE:6-2-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 174.62

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	25.76	4.750	-2.25	85.2	14.8	
10	48.30	2.000	-1.00	72.3	27.7	
16	68.32	1.180	-0.24	60.9	39.1	
20	82.32	0.850	0.23	52.9	47.1	
40	107.91	0.425	1.23	38.2	61.8	
70	142.05	0.212	2.24	18.7	81.3	
100	159.02	0.150	2.74	8.9	91.1	
200	173.58	0.075	3.74	0.6	99.4	
PAN	174.56			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	#N/A
16	-2.234
25	-2.024
50	0.333
75	1.770
84	2.352
95	3.105

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.157
15	0.190
30	0.348
60	1.154
85	4.742
90	#N/A

POORLY GRADED Cu= 7.339 Cc= 0.667

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 19 SAMPLE NO: N PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:6-1-87
CHECKED BY: DC DATE:6-2-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 218.03

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	0.51	2.000	-1.00	99.8	0.2	
16	1.29	1.180	-0.24	99.4	0.6	
20	2.79	0.850	0.23	98.7	1.3	
40	7.42	0.425	1.23	96.6	3.4	
70	51.71	0.212	2.24	76.3	23.7	
100	174.94	0.150	2.74	19.8	80.2	
200	217.33	0.075	3.74	0.3	99.7	
PAN	217.87			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.281
16	1.710
25	2.247
50	2.440
75	2.679
84	2.873
95	3.407

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.114
15	0.133
30	0.162
60	0.195
85	0.316
90	0.367

POORLY GRADED Cu= 1.711 Cc= 1.179

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 19 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND
TESTED BY: RG DATE:6-1-87
CHECKED BY: DC DATE:6-2-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 151.15

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.03	2.000	-1.00	100.0	0.0	
16	0.06	1.180	-0.24	100.0	0.0	
20	0.08	0.850	0.23	99.9	0.1	
40	0.17	0.425	1.23	99.9	0.1	
70	8.35	0.212	2.24	94.5	5.5	
100	94.88	0.150	2.74	37.2	62.8	
200	151.01	0.075	3.74	0.1	99.9	
PAN	151.17			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	2.072
16	2.313
25	2.382
50	2.603
75	2.980
84	3.201
95	3.545

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.096
15	0.107
30	0.136
60	0.176
85	0.202
90	0.207

POORLY GRADED Cu= 1.825
Cc= 1.099

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 19 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: RG DATE:6-1-87

CHECKED BY: DC DATE:6-2-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 189.41

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	0.00	2.000	-1.00	100.0	0.0	
16	0.20	1.180	-0.24	99.9	0.1	
20	0.89	0.850	0.23	99.5	0.5	
40	3.02	0.425	1.23	98.4	1.6	
70	18.17	0.212	2.24	90.4	9.6	
100	118.14	0.150	2.74	37.6	62.4	
200	189.31	0.075	3.74	0.1	99.9	
PAN	189.42			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.528
16	2.287
25	2.360
50	2.596
75	2.986
84	3.205
95	3.545

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.096
15	0.106
30	0.136
60	0.177
85	0.206
90	0.212

POORLY GRADED Cu= 1.845 Cc= 1.081

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 20 SAMPLE NO: N PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: RG DATE:6-1-87
CHECKED BY: DC DATE:6-2-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 171.16

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	1.98	4.750	-2.25	98.8	1.2	
10	3.01	2.000	-1.00	98.2	1.8	
16	4.65	1.180	-0.24	97.3	2.7	
20	6.85	0.850	0.23	96.0	4.0	
40	12.32	0.425	1.23	92.8	7.2	
70	60.73	0.212	2.24	64.5	35.5	
100	147.56	0.150	2.74	13.8	86.2	
200	170.85	0.075	3.74	0.2	99.8	
PAN	171.11			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	0.404
16	1.438
25	1.720
50	2.357
75	2.604
84	2.709
95	3.278

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.130
15	0.152
30	0.171
60	0.207
85	0.376
90	0.408

POORLY GRADED Cu= 1.586 Cc= 1.082

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 20 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND
TESTED BY: RG DATE:6-1-87
CHECKED BY: DC DATE:6-2-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 175.85

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	0.02	2.000	-1.00	100.0	0.0	
16	0.15	1.180	-0.24	99.9	0.1	
20	0.51	0.850	0.23	99.7	0.3	
40	3.28	0.425	1.23	98.1	1.9	
70	29.69	0.212	2.24	83.1	16.9	
100	118.72	0.150	2.74	32.5	67.5	
200	175.38	0.075	3.74	0.3	99.7	
PAN	175.98			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.365
16	2.134
25	2.303
50	2.536
75	2.903
84	3.143
95	3.525

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.099
15	0.111
30	0.145
60	0.185
85	0.245
90	0.323

POORLY GRADED Cu= 1.866 Cc= 1.143

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 20 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND
TESTED BY: RG DATE:6-1-87
CHECKED BY: DC DATE:6-2-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 199.29

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	
16	0.08	1.180	-0.24	100.0	0.0	
20	0.28	0.850	0.23	99.9	0.1	
40	1.06	0.425	1.23	99.5	0.5	
70	21.97	0.212	2.24	89.0	11.0	
100	138.88	0.150	2.74	30.3	69.7	
200	199.06	0.075	3.74	0.1	99.9	
PAN	199.20			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.528
16	2.272
25	2.336
50	2.541
75	2.860
84	3.107
95	3.506

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.101
15	0.114
30	0.149
60	0.182
85	0.208
90	0.238

POORLY GRADED Cu= 1.807
Cc= 1.209

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 21 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: RG DATE:6-1-87

CHECKED BY: DC DATE:6-2-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 177.08

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.03	2.000	-1.00	100.0	0.0	
16	0.16	1.180	-0.24	99.9	0.1	
20	0.53	0.850	0.23	99.7	0.3	
40	2.45	0.425	1.23	98.6	1.4	
70	53.40	0.212	2.24	69.8	30.2	
100	156.39	0.150	2.74	11.7	88.3	
200	176.93	0.075	3.74	0.1	99.9	
PAN	177.02			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.310
16	1.601
25	1.951
50	2.382
75	2.599
84	2.690
95	3.206

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.140
15	0.154
30	0.170
60	0.202
85	0.337
90	0.371

POORLY GRADED Cu= 1.445 Cc= 1.028

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 21 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: GRAY FINE SAND
TESTED BY: RG DATE:6-1-87
CHECKED BY: DC DATE:6-2-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 203.15

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.04	4.750	-2.25	100.0	0.0	
10	0.20	2.000	-1.00	99.9	0.1	
16	0.64	1.180	-0.24	99.7	0.3	
20	1.02	0.850	0.23	99.5	0.5	
40	2.10	0.425	1.23	99.0	1.0	
70	42.37	0.212	2.24	79.1	20.9	
100	153.95	0.150	2.74	24.2	75.8	
200	202.09	0.075	3.74	0.5	99.5	
PAN	202.99			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.359
16	1.865
25	2.268
50	2.472
75	2.728
84	2.995
95	3.471

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.107
15	0.122
30	0.157
60	0.191
85	0.286
90	0.341

POORLY GRADED Cu= 1.796 Cc= 1.208

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 21 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: RG DATE:6-1-87

CHECKED BY: DC DATE:6-2-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 198.57

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	
16	0.26	1.180	-0.24	99.9	0.1	
20	0.70	0.850	0.23	99.6	0.4	
40	2.24	0.425	1.23	98.9	1.1	
70	37.56	0.212	2.24	81.1	18.9	
100	148.80	0.150	2.74	25.1	74.9	
200	198.41	0.075	3.74	0.1	99.9	
PAN	198.59			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.371
16	1.972
25	2.282
50	2.484
75	2.739
84	3.009
95	3.461

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.106
15	0.121
30	0.156
60	0.190
85	0.269
90	0.332

POORLY GRADED Cu= 1.784 Cc= 1.204

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 22 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: RG DATE:6-1-87

CHECKED BY: DC DATE:6-2-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 147.80

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.31	4.750	-2.25	99.8	0.2	
10	1.26	2.000	-1.00	99.1	0.9	
16	1.91	1.180	-0.24	98.7	1.3	
20	2.71	0.850	0.23	98.2	1.8	
40	4.99	0.425	1.23	96.6	3.4	
70	31.62	0.212	2.24	78.6	21.4	
100	113.78	0.150	2.74	23.0	77.0	
200	147.75	0.075	3.74	0.0	100.0	
PAN	147.82			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.288
16	1.799
25	2.264
50	2.464
75	2.714
84	2.961
95	3.437

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.109
15	0.125
30	0.158
60	0.192
85	0.300
90	0.358

POORLY GRADED Cu= 1.761 Cc= 1.195

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 22 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:6-1-87
CHECKED BY: DC DATE:6-2-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 164.10

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.41	4.750	-2.25	99.8	0.2	
10	0.41	2.000	-1.00	99.8	0.2	
16	0.44	1.180	-0.24	99.7	0.3	
20	0.60	0.850	0.23	99.6	0.4	
40	1.69	0.425	1.23	99.0	1.0	
70	32.04	0.212	2.24	80.5	19.5	
100	138.24	0.150	2.74	15.8	84.2	
200	163.98	0.075	3.74	0.1	99.9	
PAN	164.08			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.369
16	1.935
25	2.272
50	2.443
75	2.649
84	2.735
95	3.322

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.124
15	0.147
30	0.164
60	0.193
85	0.275
90	0.335

POORLY GRADED Cu= 1.560 Cc= 1.128

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLES DERNIERS JOB NO: 1087-1328
CORE NO: 22 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:5-30-87
CHECKED BY: DC DATE:6-1-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 183.74

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	2.41	4.750	-2.25	98.7	1.3	
10	2.35	2.000	-1.00	98.7	1.3	
20	2.59	0.850	0.23	98.6	1.4	
40	2.93	0.425	1.23	98.4	1.6	
70	4.43	0.212	2.24	97.6	2.4	
100	133.60	0.150	2.74	27.3	72.7	
200	183.51	0.075	3.74	0.1	99.9	
PAN	183.70			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	2.252
16	2.317
25	2.373
50	2.548
75	2.794
84	3.054
95	3.483

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.104
15	0.118
30	0.153
60	0.180
85	0.202
90	0.206

POORLY GRADED Cu= 1.734 Cc= 1.246

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 23 SAMPLE NO: N PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY & GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:6-1-87
CHECKED BY: DC DATE:6-2-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 245.84

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	0.80	2.000	-1.00	99.7	0.3	
16	1.62	1.180	-0.24	99.3	0.7	
20	3.37	0.850	0.23	98.6	1.4	
40	17.03	0.425	1.23	93.1	6.9	
70	78.83	0.212	2.24	67.9	32.1	
100	212.75	0.150	2.74	13.5	86.5	
200	244.67	0.075	3.74	0.5	99.5	
PAN	245.61			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	0.684
16	1.476
25	1.821
50	2.377
75	2.609
84	2.707
95	3.285

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.131
15	0.152
30	0.170
60	0.204
85	0.367
90	0.404

POORLY GRADED Cu= 1.551 Cc= 1.079

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 5-30-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 23 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: DC DATE:6-1-87

CHECKED BY: DC DATE:6-2-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 194.38

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	
16	0.18	1.180	-0.24	99.9	0.1	
20	0.81	0.850	0.23	99.6	0.4	
40	4.32	0.425	1.23	97.8	2.2	
70	40.30	0.212	2.24	79.3	20.7	
100	139.46	0.150	2.74	28.3	71.7	
200	194.11	0.075	3.74	0.1	99.9	
PAN	194.41			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.326
16	1.851
25	2.271
50	2.494
75	2.817
84	3.072
95	3.491

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.103
15	0.116
30	0.152
60	0.190
85	0.290
90	0.348

POORLY GRADED Cu= 1.844 Cc= 1.190

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 23 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND
TESTED BY: DC DATE:6-2-87
CHECKED BY: DC DATE:6-3-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 190.38

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	
16	0.11	1.180	-0.24	99.9	0.1	
20	0.20	0.850	0.23	99.9	0.1	
40	0.65	0.425	1.23	99.7	0.3	
70	24.46	0.212	2.24	87.2	12.8	
100	119.16	0.150	2.74	37.4	62.6	
200	190.04	0.075	3.74	0.2	99.8	
PAN	190.13			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.485
16	2.263
25	2.339
50	2.586
75	2.984
84	3.205
95	3.548

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.096
15	0.106
30	0.136
60	0.179
85	0.209
90	0.270

POORLY GRADED Cu= 1.866 Cc= 1.075

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 24 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS

TESTED BY: DC DATE:6-2-87

CHECKED BY: DC DATE:6-3-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 248.05

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	0.25	2.000	-1.00	99.9	0.1	
16	0.74	1.180	-0.24	99.7	0.3	
20	1.99	0.850	0.23	99.2	0.8	
40	10.35	0.425	1.23	95.8	4.2	
70	80.71	0.212	2.24	67.5	32.5	
100	192.40	0.150	2.74	22.4	77.6	
200	246.84	0.075	3.74	0.5	99.5	
PAN	247.59			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.251
16	1.521
25	1.839
50	2.404
75	2.701
84	2.951
95	3.450

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.109
15	0.126
30	0.161
60	0.202
85	0.355
90	0.389

POORLY GRADED Cu= 1.854 Cc= 1.175

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 24 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND
TESTED BY: DC DATE:6-2-87
CHECKED BY: DC DATE:6-3-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 110.59

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	
16	0.02	1.180	-0.24	100.0	0.0	
20	0.03	0.850	0.23	100.0	0.0	
40	0.31	0.425	1.23	99.7	0.3	
70	24.85	0.212	2.24	77.5	22.5	
100	87.68	0.150	2.74	20.7	79.3	
200	110.48	0.075	3.74	0.1	99.9	
PAN	110.49			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.367
16	1.808
25	2.256
50	2.450
75	2.690
84	2.900
95	3.411

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.113
15	0.130
30	0.161
60	0.194
85	0.296
90	0.344

POORLY GRADED Cu= 1.721 Cc= 1.184

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 24 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: DC DATE:6-2-87

CHECKED BY: DC DATE:6-3-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 171.78

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	0.02	2.000	-1.00	100.0	0.0	
16	0.10	1.180	-0.24	99.9	0.1	
20	0.24	0.850	0.23	99.9	0.1	
40	1.15	0.425	1.23	99.3	0.7	
70	27.05	0.212	2.24	84.3	15.7	
100	114.54	0.150	2.74	33.3	66.7	
200	171.50	0.075	3.74	0.2	99.8	
PAN	171.57			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.420
16	2.240
25	2.312
50	2.545
75	2.917
84	3.153
95	3.526

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.099
15	0.110
30	0.143
60	0.184
85	0.225
90	0.306

POORLY GRADED Cu= 1.861 Cc= 1.130

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: 25 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: 257.49

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.34	4.750	-2.25	99.9	0.1	
10	0.97	2.000	-1.00	99.6	0.4	
20	3.10	0.850	0.23	98.8	1.2	
40	6.85	0.425	1.23	97.3	2.7	
70	75.37	0.212	2.24	70.7	29.3	
100	222.27	0.150	2.74	13.7	86.3	
200	257.25	0.075	3.74	0.1	99.9	
PAN	257.47			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.287
16	1.594
25	1.977
50	2.392
75	2.617
84	2.711
95	3.271

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.131
15	0.152
30	0.169
60	0.201
85	0.339
90	0.376

POORLY GRADED

Cu= 1.535

Cc= 1.081

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: 25 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND
TESTED BY: DC DATE:11-18-87
CHECKED BY: DC DATE:11-18-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 230.67

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	0.01	0.850	0.23	100.0	0.0	
40	0.18	0.425	1.23	99.9	0.1	
70	37.32	0.212	2.24	83.8	16.2	
100	172.87	0.150	2.74	25.1	74.9	
200	230.61	0.075	3.74	0.0	100.0	
PAN	230.69			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.434
16	2.217
25	2.299
50	2.495
75	2.738
84	3.008
95	3.458

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.106
15	0.121
30	0.156
60	0.188
85	0.232
90	0.306

POORLY GRADED Cu= 1.765 Cc= 1.210

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 26 SAMPLE NO: N PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND
TESTED BY: DC DATE:6-2-87
CHECKED BY: DC DATE:6-3-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 213.83

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.48	4.750	-2.25	99.8	0.2	
10	0.48	2.000	-1.00	99.8	0.2	
16	0.56	1.180	-0.24	99.7	0.3	
20	1.13	0.850	0.23	99.5	0.5	
40	1.40	0.425	1.23	99.3	0.7	
70	14.06	0.212	2.24	93.4	6.6	
100	167.22	0.150	2.74	21.8	78.2	
200	211.42	0.075	3.74	1.1	98.9	
PAN	213.50			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.839
16	2.291
25	2.345
50	2.511
75	2.709
84	2.941
95	3.473

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.109
15	0.127
30	0.158
60	0.184
85	0.205
90	0.209

POORLY GRADED Cu= 1.693 Cc= 1.239

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 26 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: LIGHT BROWN FINE SAND
TESTED BY: DC DATE:6-2-87
CHECKED BY: DC DATE:6-3-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 195.64

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	
16	0.00	1.180	-0.24	100.0	0.0	
20	0.05	0.850	0.23	100.0	0.0	
40	0.08	0.425	1.23	100.0	0.0	
70	14.22	0.212	2.24	92.7	7.3	
100	122.50	0.150	2.74	37.4	62.6	
200	195.36	0.075	3.74	0.1	99.9	
PAN	195.40			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.782
16	2.302
25	2.373
50	2.600
75	2.983
84	3.204
95	3.547

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.096
15	0.106
30	0.136
60	0.176
85	0.204
90	0.209

POORLY GRADED Cu= 1.835 Cc= 1.092

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 26 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: DC DATE:6-2-87

CHECKED BY: DC DATE:6-3-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 281.21

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	
16	0.24	1.180	-0.24	99.9	0.1	
20	0.40	0.850	0.23	99.9	0.1	
40	0.89	0.425	1.23	99.7	0.3	
70	34.87	0.212	2.24	87.6	12.4	
100	217.70	0.150	2.74	22.6	77.4	
200	280.95	0.075	3.74	0.1	99.9	
PAN	281.07			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.497
16	2.260
25	2.317
50	2.496
75	2.713
84	2.951
95	3.434

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.110
15	0.126
30	0.158
60	0.187
85	0.210
90	0.263

POORLY GRADED Cu= 1.703 Cc= 1.212

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 27 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: DC DATE:6-2-87

CHECKED BY: DC DATE:6-3-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 181.42

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.26	4.750	-2.25	99.9	0.1	
10	0.43	2.000	-1.00	99.8	0.2	
16	0.75	1.180	-0.24	99.6	0.4	
20	0.95	0.850	0.23	99.5	0.5	
40	4.40	0.425	1.23	97.6	2.4	
70	33.87	0.212	2.24	81.3	18.7	
100	115.20	0.150	2.74	36.5	63.5	
200	179.70	0.075	3.74	0.9	99.1	
PAN	181.00			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.331
16	1.972
25	2.295
50	2.560
75	2.976
84	3.206
95	3.569

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.095
15	0.106
30	0.137
60	0.184
85	0.270
90	0.338

POORLY GRADED Cu= 1.925 Cc= 1.075

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 27 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: DC DATE:6-2-87

CHECKED BY: DC DATE:6-3-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 210.10

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	3.96	4.750	-2.25	98.1	1.9	
10	5.09	2.000	-1.00	97.6	2.4	
16	6.09	1.180	-0.24	97.1	2.9	
20	7.43	0.850	0.23	96.5	3.5	
40	10.20	0.425	1.23	95.1	4.9	
70	35.54	0.212	2.24	83.1	16.9	
100	155.31	0.150	2.74	26.1	73.9	
200	206.66	0.075	3.74	1.6	98.4	
PAN	209.88			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.241
16	2.105
25	2.295
50	2.497
75	2.767
84	3.051
95	3.538

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.102
15	0.118
30	0.155
60	0.188
85	0.254
90	0.346

POORLY GRADED Cu= 1.840 Cc= 1.244

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 27 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: DC DATE:6-2-87

CHECKED BY: DC DATE:6-3-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 286.95

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	0.00	2.000	-1.00	100.0	0.0	
16	0.11	1.180	-0.24	100.0	0.0	
20	0.61	0.850	0.23	99.8	0.2	
40	3.82	0.425	1.23	98.7	1.3	
70	40.84	0.212	2.24	85.8	14.2	
100	227.68	0.150	2.74	20.7	79.3	
200	286.69	0.075	3.74	0.1	99.9	
PAN	286.92			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.418
16	2.249
25	2.305
50	2.482
75	2.695
84	2.898
95	3.409

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.113
15	0.131
30	0.159
60	0.189
85	0.211
90	0.294

POORLY GRADED Cu= 1.672 Cc= 1.196

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 28 SAMPLE NO: N PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/CL LUMPS
TESTED BY: DC DATE:6-2-87
CHECKED BY: DC DATE:6-3-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 223.15

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.84	4.750	-2.25	99.6	0.4	
10	3.67	2.000	-1.00	98.4	1.6	
16	5.92	1.180	-0.24	97.3	2.7	
20	6.87	0.850	0.23	96.9	3.1	
40	9.10	0.425	1.23	95.9	4.1	
70	49.51	0.212	2.24	77.8	22.2	
100	143.74	0.150	2.74	35.6	64.4	
200	207.85	0.075	3.74	6.9	93.1	
PAN	222.38			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.264
16	1.751
25	2.264
50	2.538
75	3.013
84	3.318
95	#N/A

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.084
15	0.098
30	0.136
60	0.187
85	0.309
90	0.366

POORLY GRADED Cu= 2.229 Cc= 1.187

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 28 SAMPLE NO: M PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND W/SHELL FRAGMENTS
TESTED BY: DC DATE:6-2-87
CHECKED BY: DC DATE:6-3-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 208.23

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.96	4.750	-2.25	99.5	0.5	
10	4.18	2.000	-1.00	98.0	2.0	
16	7.62	1.180	-0.24	96.3	3.7	
20	11.31	0.850	0.23	94.6	5.4	
40	18.97	0.425	1.23	90.9	9.1	
70	56.61	0.212	2.24	72.8	27.2	
100	135.27	0.150	2.74	35.0	65.0	
200	203.27	0.075	3.74	2.4	97.6	
PAN	208.20			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	0.065
16	1.492
25	2.035
50	2.509
75	2.962
84	3.213
95	3.617

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.094
15	0.106
30	0.139
60	0.192
85	0.366
90	0.417

POORLY GRADED Cu= 2.049 Cc= 1.078

McCLELLAND ENGINEERS, INC., WESTLAKE OFFICE PROGRAM NAME: GSMECH.MP
GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328
BORING NO: 28 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND
TESTED BY: DC DATE:6-2-87
CHECKED BY: DC DATE:6-3-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 284.92

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	
16	0.09	1.180	-0.24	100.0	0.0	
20	0.40	0.850	0.23	99.9	0.1	
40	2.09	0.425	1.23	99.3	0.7	
70	42.85	0.212	2.24	85.0	15.0	
100	233.34	0.150	2.74	18.1	81.9	
200	284.60	0.075	3.74	0.1	99.9	
PAN	284.74			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.428
16	2.244
25	2.298
50	2.468
75	2.673
84	2.817
95	3.370

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.118
15	0.138
30	0.162
60	0.190
85	0.213
90	0.299

POORLY GRADED Cu= 1.612 Cc= 1.169

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 29 SAMPLE NO: N PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND W/SMALL ROOTS

TESTED BY: DC DATE:6-2-87

CHECKED BY: DC DATE:6-3-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 237.45

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	
16	0.24	1.180	-0.24	99.9	0.1	
20	0.58	0.850	0.23	99.8	0.2	
40	3.23	0.425	1.23	98.6	1.4	
70	38.04	0.212	2.24	84.0	16.0	
100	148.78	0.150	2.74	37.3	62.7	
200	236.68	0.075	3.74	0.3	99.7	
PAN	237.07			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.392
16	2.235
25	2.317
50	2.576
75	2.984
84	3.206
95	3.553

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.096
15	0.106
30	0.136
60	0.181
85	0.231
90	0.312

POORLY GRADED Cu= 1.890 Cc= 1.066

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

GRAIN SIZE ANALYSIS--MECHANICAL METHOD

TEST DATE: 6-1-87 JOB NAME: ISLE DERNIERS JOB NO: 1087-1328

BORING NO: 29 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: BROWN FINE SAND W/SMALL ROOTS

TESTED BY: DC DATE:6-2-87

CHECKED BY: DC DATE:6-3-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 216.52

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	
16	0.16	1.180	-0.24	99.9	0.1	
20	0.37	0.850	0.23	99.8	0.2	
40	0.98	0.425	1.23	99.5	0.5	
70	30.32	0.212	2.24	86.0	14.0	
100	171.74	0.150	2.74	20.7	79.3	
200	216.11	0.075	3.74	0.2	99.8	
PAN	216.37			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.456
16	2.250
25	2.306
50	2.483
75	2.695
84	2.900
95	3.414

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.113
15	0.130
30	0.159
60	0.188
85	0.211
90	0.286

POORLY GRADED Cu= 1.674 Cc= 1.199

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: 29 SAMPLE NO: S PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND
TESTED BY: DC DATE:6-3-87
CHECKED BY: DC DATE:6-4-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 230.64

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	0.39	0.850	0.23	99.8	0.2	
40	1.38	0.425	1.23	99.4	0.6	
70	23.66	0.212	2.24	89.7	10.3	
100	176.13	0.150	2.74	23.6	76.4	
200	230.21	0.075	3.74	0.2	99.8	
PAN	230.27			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.554
16	2.273
25	2.330
50	2.508
75	2.724
84	2.977
95	3.450

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.108
15	0.124
30	0.156
60	0.185
85	0.208
90	0.219

POORLY GRADED Cu= 1.715 Cc= 1.223

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: 30 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: LIGHT BROWN FINE SAND W/WEEDS & SMALL ROOTS

TESTED BY: DC DATE:6-3-87

CHECKED BY: DC DATE:6-4-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 143.57

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.14	4.750	-2.25	99.9	0.1	
10	0.18	2.000	-1.00	99.9	0.1	
20	0.38	0.850	0.23	99.7	0.3	
40	0.50	0.425	1.23	99.7	0.3	
70	12.04	0.212	2.24	91.6	8.4	
100	93.11	0.150	2.74	35.1	64.9	
200	143.04	0.075	3.74	0.4	99.6	
PAN	143.56			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.668
16	2.292
25	2.361
50	2.580
75	2.950
84	3.180
95	3.543

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.097
15	0.108
30	0.140
60	0.178
85	0.205
90	0.210

POORLY GRADED Cu= 1.837 Cc= 1.126

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: 30 SAMPLE NO: S PENETRATION, ft: SURFACE

MATERIAL: OLIVE GRAY FINE SAND

TESTED BY: DC DATE:6-3-87

CHECKED BY: DC DATE:6-4-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 242.68

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	1.02	0.425	1.23	99.6	0.4	
70	20.94	0.212	2.24	91.4	8.6	
100	167.91	0.150	2.74	30.8	69.2	
200	242.22	0.075	3.74	0.2	99.8	
PAN	242.35			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.648
16	2.287
25	2.350
50	2.551
75	2.871
84	3.116
95	3.512

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.100
15	0.113
30	0.148
60	0.181
85	0.206
90	0.211

POORLY GRADED Cu= 1.801 Cc= 1.207

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: 31 SAMPLE NO: N PENETRATION, ft: SURFACE
MATERIAL: OLIVE GRAY FINE SAND
TESTED BY: DC DATE:6-3-87
CHECKED BY: DC DATE:6-4-87
DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 216.81

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	0.09	0.850	0.23	100.0	0.0	
40	0.21	0.425	1.23	99.9	0.1	
70	19.38	0.212	2.24	91.1	8.9	
100	157.12	0.150	2.74	27.5	72.5	
200	216.59	0.075	3.74	0.1	99.9	
PAN	216.76			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.644
16	2.283
25	2.343
50	2.532
75	2.800
84	3.059
95	3.484

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.104
15	0.117
30	0.153
60	0.183
85	0.206
90	0.211

POORLY GRADED Cu= 1.765 Cc= 1.230

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: 31 SAMPLE NO: M PENETRATION, ft: SURFACE

MATERIAL: LIGHT BROWN FINE SAND

TESTED BY: DC DATE:6-3-87

CHECKED BY: DC DATE:6-4-87

DRY MASS OF SOIL BEFORE TEST (TOTAL SAMPLE), gms: 204.18

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	0.01	0.850	0.23	100.0	0.0	
40	0.07	0.425	1.23	100.0	0.0	
70	19.24	0.212	2.24	90.6	9.4	
100	149.18	0.150	2.74	26.9	73.1	
200	204.03	0.075	3.74	0.1	99.9	
PAN	204.08			#N/A	#N/A	

PARAMETERS

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.620
16	2.279
25	2.339
50	2.527
75	2.786
84	3.047
95	3.478

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.104
15	0.118
30	0.153
60	0.183
85	0.207
90	0.211

POORLY GRADED Cu= 1.759 Cc= 1.228

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: 31 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: 224.20

SIEVE SIZE OR NO.	CUM WT RETAINED, gms	DIAMETER, mm	DIAMETER, PHI UNITS	PERCENT FINER	PERCENT COARSER	COMMENTS
4	0.00	4.750	-2.25	100.0	0.0	
10	0.06	2.000	-1.00	100.0	0.0	
20	0.81	0.850	0.23	99.6	0.4	
40	2.65	0.425	1.23	98.8	1.2	
70	34.58	0.212	2.24	84.6	15.4	
100	153.96	0.150	2.74	31.3	68.7	
200	223.87	0.075	3.74	0.1	99.9	
PAN	224.08			#N/A	#N/A	

| PARAMETERS |

COASTAL

D PERCENTILE COARSER	SIZE, PHI UNITS
5	1.406
16	2.242
25	2.311
50	2.533
75	2.881
84	3.124
95	3.514

GEOTECHNICAL

D PERCENTILE FINER	SIZE, mm
10	0.100
15	0.112
30	0.147
60	0.184
85	0.220
90	0.306

POORLY GRADED Cu= 1.842 Cc= 1.171