SFUND RECORDS CTR
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FINAL GROUNDWATER REMEDIAL INVESTIGATION REPORT

DEL AMO STUDY AREA
LOS ANGELES, CALIFORNIA

Volume III
Appendices E, F, G, H, I and J

FOR

SHELL OIL COMPANY

AND

THE DOW CHEMICAL COMPANY

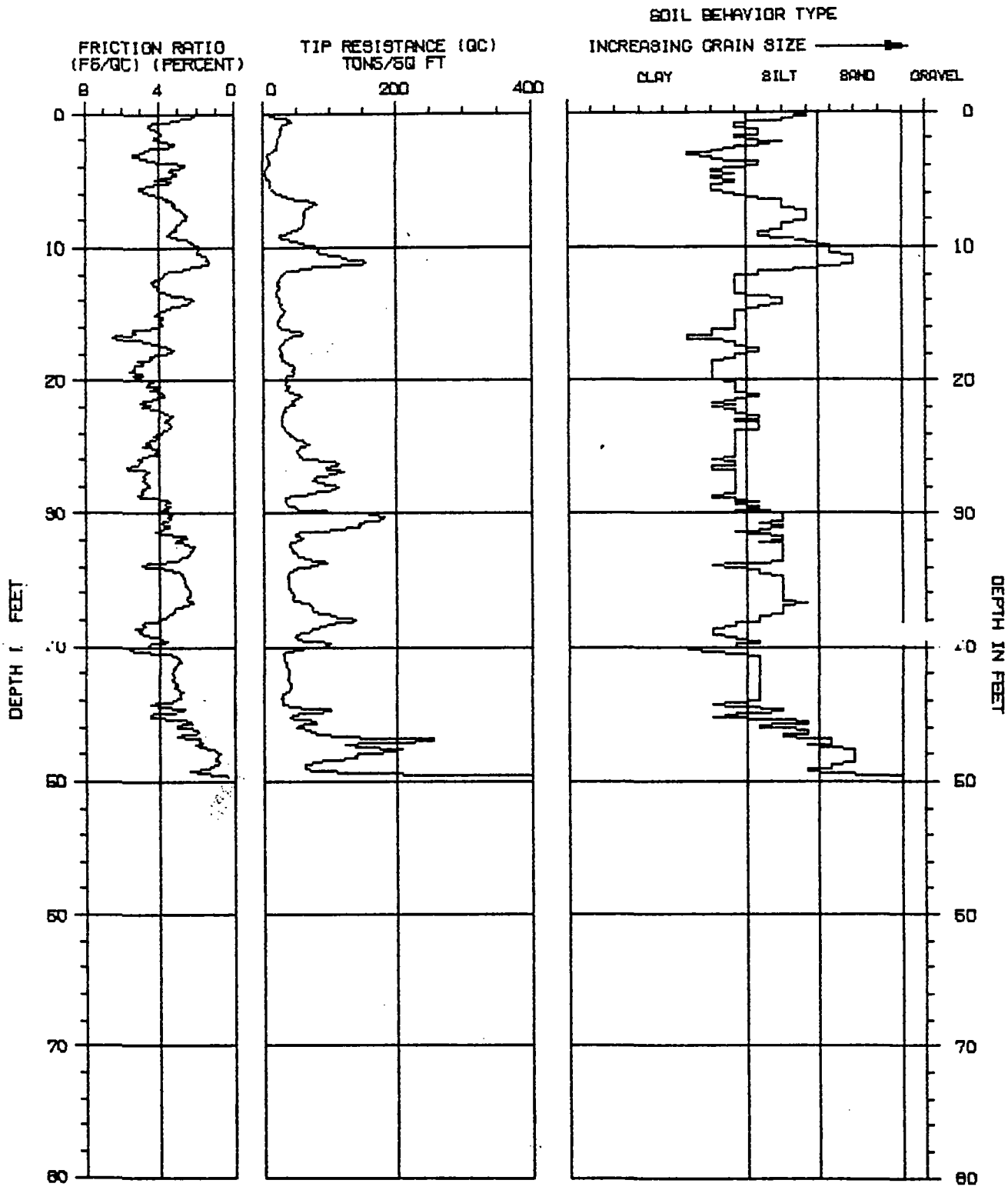
PREPARED BY:

DAMES & MOORE

MAY 15, 1998

APPENDIX E

CONE PENETROMETER LOGS



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 40.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPL-0001

PROJECT NAME : O&M/SHELL PIT AREA

LOCATION : TORRANCE CA

PROJECT NUMBER : 93-380-01113

DATE : 09-09-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPL-0001
PROJECT : D&M/SHELL PIT AREA
LOCATION : TORRANCE CA
DATE : 09-09-1992

PROJECT NO : 93-380-01113
INSTRUMENT : F15CKE097
SYSTEM : SYSTEM#3
OPERATOR : KC/EC

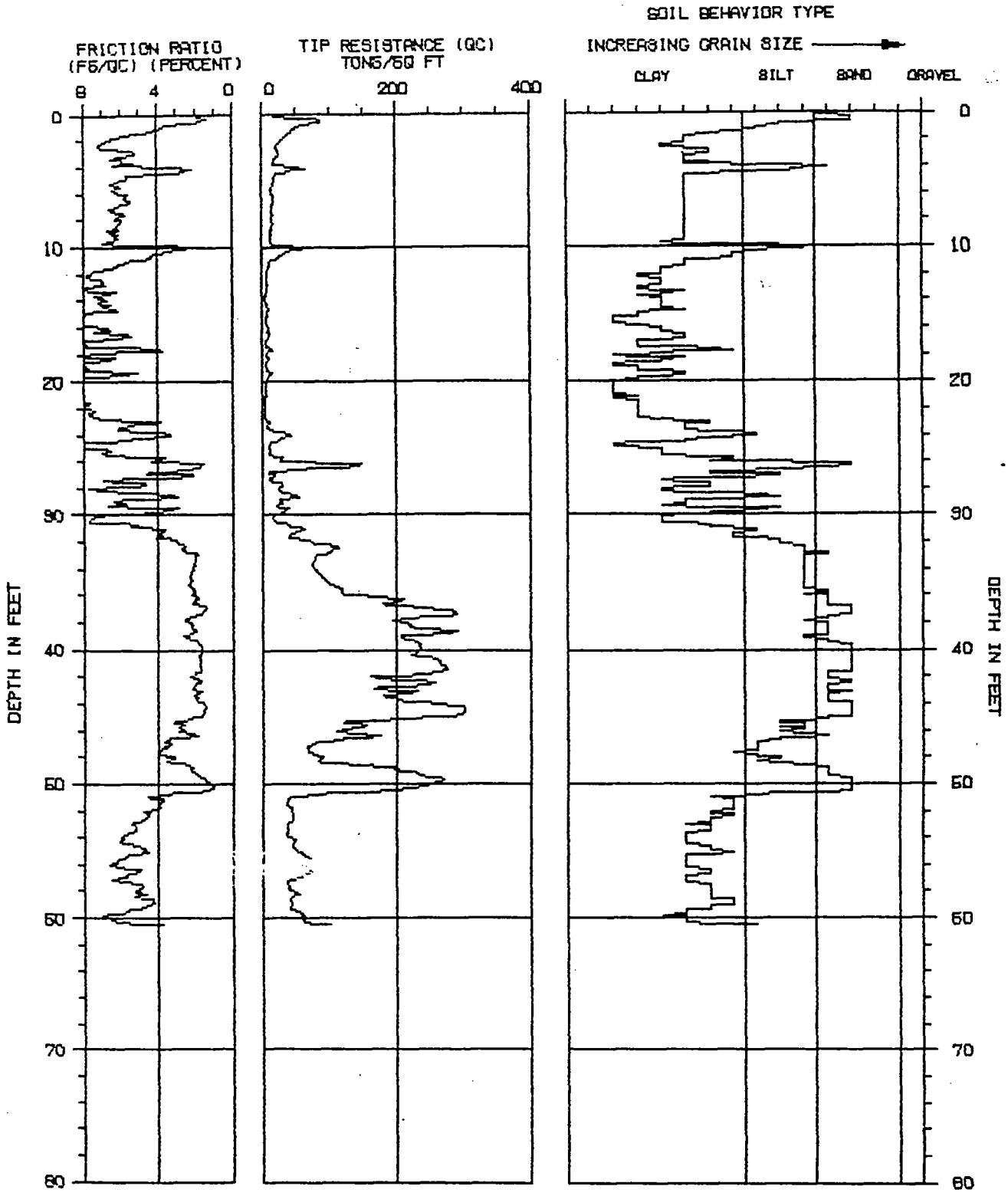
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	NA	
1.0	28.6	64.7	4.55	NA	*SANDY CLAY to SILTY CLAY
2.0	22.4	43.8	4.16	NA	CLAYEY SILT to SILTY CLAY
3.0	11.1	19.9	5.18	NA	CLAYEY SILT to SILTY CLAY
4.0	8.7	14.5	2.63	NA	SANDY SILT to CLAYEY SILT
5.0	7.9	12.3	3.90	NA	CLAYEY SILT to SILTY CLAY
6.0	21.4	31.7	4.51	NA	CLAYEY SILT to SILTY CLAY
7.0	72.5	102.5	3.24	NA	*CLAYEY SAND to SANDY CLAY
8.0	61.3	83.1	2.68	NA	SILTY SAND to SANDY SILT
9.0	33.1	43.2	3.50	NA	SANDY SILT to CLAYEY SILT
10.0	81.4	102.6	1.87	NA	SILTY SAND to SANDY SILT
11.0	147.8	180.1	1.38	NA	SAN[illegible]
12.0	29.1	34.3	3.78	NA	SANDY SILT t[illegible] CLAYEY SILT
13.0	24.4	28.0	4.10	NA	CLAYEY SILT to SILTY CLAY
14.0	24.0	26.7	2.21	NA	SANDY SILT to CLAYEY SILT
15.0	30.0	32.6	4.20	NA	CLAYEY SILT to SILTY CLAY
16.0	25.4	26.8	4.13	NA	CLAYEY SILT to SILTY CLAY
17.0	33.0	34.0	5.24	NA	*SANDY CLAY to SILTY CLAY
18.0	27.4	27.6	3.80	NA	CLAYEY SILT to SILTY CLAY
19.0	46.7	45.8	5.38	NA	*SANDY CLAY to SILTY CLAY
20.0	31.8	30.5	4.64	NA	CLAYEY SILT to SILTY CLAY
21.0	48.0	45.0	3.84	NA	SANDY SILT to CLAYEY SILT
22.0	36.7	33.6	4.98	NA	*SANDY CLAY to SILTY CLAY
23.0	29.0	26.0	3.60	NA	CLAYEY SILT to SILTY CLAY
24.0	38.4	33.8	3.90	NA	CLAYEY SILT to SILTY CLAY
25.0	61.2	52.7	4.90	NA	*SANDY CLAY to SILTY CLAY
26.0	74.1	62.6	5.15	NA	*SANDY CLAY to SILTY CLAY
27.0	115.8	95.9	4.55	NA	*SANDY CLAY to SILTY CLAY
28.0	111.7	90.7	4.55	NA	*SANDY CLAY to SILTY CLAY
29.0	34.3	27.4	3.67	NA	CLAYEY SILT to SILTY CLAY
30.0	148.0	115.8	3.17	NA	*CLAYEY SAND to SANDY CLAY
31.0	145.0	111.4	3.50	NA	*CLAYEY SAND to SANDY CLAY
32.0	54.3	41.0	3.02	NA	SANDY SILT to CLAYEY SILT
33.0	47.8	35.4	2.38	NA	SANDY SILT to CLAYEY SILT
34.0	65.1	47.4	4.68	NA	*SANDY CLAY to SILTY CLAY
35.0	37.9	27.1	2.67	NA	SANDY SILT to CLAYEY SILT
36.0	43.0	30.2	2.39	NA	SANDY SILT to CLAYEY SILT
37.0	72.1	49.9	2.94	NA	SANDY SILT to CLAYEY SILT
38.0	137.4	93.4	4.00	NA	*CLAYEY SAND to SANDY CLAY
39.0	56.5	37.7	5.08	NA	*SANDY CLAY to SILTY CLAY
40.0	86.2	56.7	4.72	NA	*SANDY CLAY to SILTY CLAY

NA = NOT APPLICABLE
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 40.0 FT

SOUNDING : CPL-0001

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
41.0	30.8	20.1	2.96	NA	SANDY SILT to CLAYEY SILT
42.0	36.8	23.9	3.39	NA	SANDY SILT to CLAYEY SILT
43.0	40.1	25.8	3.26	NA	SANDY SILT to CLAYEY SILT
44.0	27.8	17.8	3.18	NA	SANDY SILT to CLAYEY SILT
45.0	57.5	36.5	4.28	NA	CLAYEY SILT to SILTY CLAY
46.0	48.6	30.6	3.13	NA	SANDY SILT to CLAYEY SILT
47.0	253.9	158.9	1.88	NA	SILTY SAND to SANDY SILT
48.0	143.1	89.0	.80	NA	SAND to SILTY SAND
49.0	60.5	37.4	1.42	NA	SILTY SAND to SANDY SILT

NA = NOT APPLICABLE
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 40.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 40.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPL-0002

PROJECT NAME : D&M/SHELL PIT AREA

LOCATION : TORRANCE CA

PROJECT NUMBER : 93-380-01113

DATE : 09-09-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPL-0002
PROJECT : D&M/SHELL PIT AREA
LOCATION : TORRANCE CA
DATE : 09-09-1992

PROJECT NO : 93-380-01113
INSTRUMENT : F15CKE097
SYSTEM : SYSTEM#3
OPERATOR : KC/EC

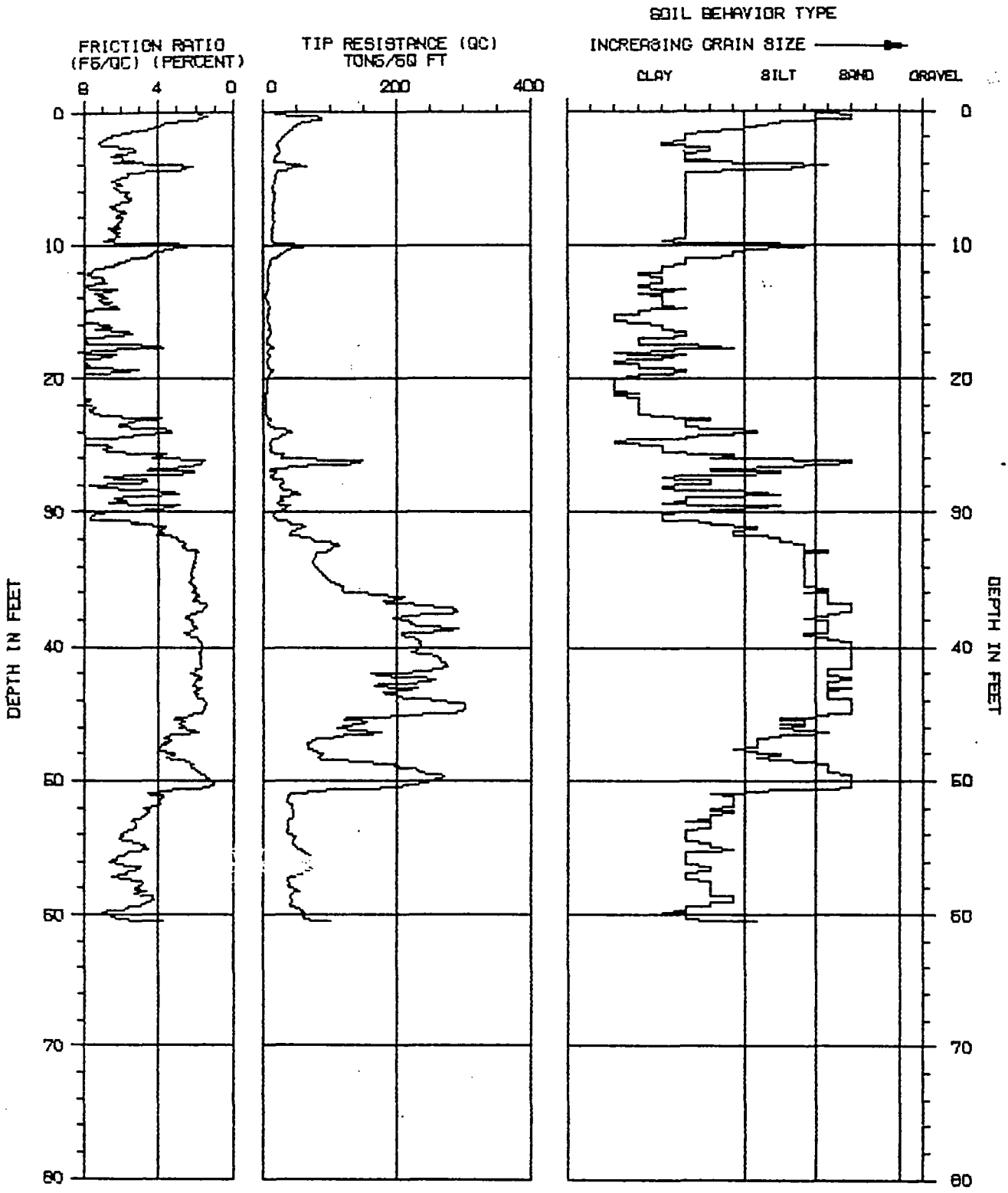
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
1.0	54.1	122.2	3.79	NA	*CLAYEY SAND to SANDY CLAY
2.0	30.4	59.6	6.66	NA	*SANDY CLAY to SILTY CLAY
3.0	26.6	47.5	5.24	NA	*SANDY CLAY to SILTY CLAY
4.0	46.5	77.0	3.17	NA	SANDY SILT to CLAYEY SILT
5.0	18.8	29.3	5.92	NA	*SANDY CLAY to SILTY CLAY
6.0	15.5	23.0	6.01	NA	SILTY CLAY TO CLAY
7.0	15.4	21.8	6.22	NA	SILTY CLAY TO CLAY
8.0	15.5	21.1	5.97	NA	SILTY CLAY TO CLAY
9.0	14.5	18.9	6.10	NA	SILTY CLAY TO CLAY
10.0	58.2	73.3	2.44	NA	SILTY SAND to SANDY SILT
11.0	14.7	17.9	5.35	NA	SILTY CLAY TO CLAY
12.0	8.0	9.5	7.59	NA	SILTY CLAY TO CLAY
13.0	8.6	9.8	7.77	NA	CLAY TO ORGANIC CLAY
14.0	4.6	5.1	6.91	NA	SILTY CLAY TO CLAY
15.0	8.1	8.7	8.09	NA	CLAY TO ORGANIC CLAY
16.0	9.4	10.0	6.73	NA	SILTY CLAY TO CLAY
17.0	6.7	6.9	8.39	NA	CLAY TO ORGANIC CLAY
18.0	6.6	6.6	8.89	NA	CLAY TO ORGANIC CLAY
19.0	7.9	7.7	7.76	NA	CLAY TO ORGANIC CLAY
20.0	7.5	7.2	9.92	NA	CLAY TO ORGANIC CLAY
21.0	5.4	5.0	8.75	NA	ORGANIC MATERIAL
22.0	4.5	4.1	8.19	NA	ORGANIC MATERIAL
23.0	11.2	10.1	3.85	NA	CLAYEY SILT to SILTY CLAY
24.0	42.1	37.0	3.31	NA	SANDY SILT to CLAYEY SILT
25.0	10.6	9.1	8.07	NA	CLAY TO ORGANIC CLAY
26.0	49.1	41.5	3.75	NA	SANDY SILT to CLAYEY SILT
27.0	18.2	15.0	2.14	NA	SANDY SILT to CLAYEY SILT
28.0	24.1	19.6	7.34	NA	*SANDY CLAY to SILTY CLAY
29.0	25.4	20.3	6.37	NA	SILTY CLAY TO CLAY
30.0	19.3	15.1	6.42	NA	SILTY CLAY TO CLAY
31.0	63.0	48.4	3.92	NA	SANDY SILT to CLAYEY SILT
32.0	72.4	54.6	3.03	NA	SANDY SILT to CLAYEY SILT
33.0	78.9	58.5	2.04	NA	SILTY SAND to SANDY SILT
34.0	77.9	56.8	2.09	NA	SILTY SAND to SANDY SILT
35.0	97.1	69.5	2.27	NA	SILTY SAND to SANDY SILT
36.0	141.2	99.3	2.08	NA	SILTY SAND to SANDY SILT
37.0	265.1	183.3	1.52	NA	SAND to SILTY SAND
38.0	212.6	144.6	2.29	NA	SILTY SAND to SANDY SILT
39.0	207.5	138.8	2.63	NA	SILTY SAND to SANDY SILT
40.0	234.4	154.1	1.69	NA	SAND to SILTY SAND
41.0	263.4	172.0	1.80	NA	SAND to SILTY SAND

NA = NOT APPLICABLE
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 40.0 FT

SOUNDING : CPL-0002

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
42.0	160.9	104.3	2.28	NA	SILTY SAND to SANDY SILT
43.0	203.8	131.2	1.91	NA	SILTY SAND to SANDY SILT
44.0	263.0	168.1	1.57	NA	SAND to SILTY SAND
45.0	259.1	164.4	2.02	NA	SILTY SAND to SANDY SILT
46.0	109.4	69.0	2.87	NA	SANDY SILT to CLAYEY SILT
47.0	74.9	46.9	3.35	NA	SANDY SILT to CLAYEY SILT
48.0	88.7	55.2	3.16	NA	SANDY SILT to CLAYEY SILT
49.0	206.8	127.6	2.25	NA	SILTY SAND to SANDY SILT
50.0	251.3	154.1	1.23	NA	SAND to SILTY SAND
51.0	42.4	25.8	4.59	NA	CLAYEY SILT to SILTY CLAY
52.0	43.4	26.2	4.63	NA	CLAYEY SILT to SILTY CLAY
53.0	37.8	22.7	5.39	NA	SILTY CLAY TO CLAY
54.0	41.2	24.5	6.05	NA	*SANDY CLAY to SILTY CLAY
55.0	53.7	31.8	4.54	NA	CLAYEY SILT to SILTY CLAY
56.0	60.8	35.8	6.63	NA	*SANDY CLAY to SILTY CLAY
57.0	54.4	31.8	5.89	NA	*SANDY CLAY to SILTY CLAY
58.0	41.6	24.1	5.24	NA	CLAYEY SILT to SILTY CLAY
59.0	42.8	24.7	4.40	NA	CLAYEY SILT to SILTY CLAY
60.0	62.3	35.7	6.65	NA	*SANDY CLAY to SILTY CLAY

NA = NOT APPLICABLE
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 40.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 40.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPL-0002

PROJECT NAME : D&M/SHELL PIT AREA

LOCATION : TORRANCE CA

PROJECT NUMBER : 93-380-01113

DATE : 09-09-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPL-0002
PROJECT : D&M/SHELL PIT AREA
LOCATION : TORRANCE CA
DATE : 09-09-1992

PROJECT NO : 93-380-01113
INSTRUMENT : F15CKE097
SYSTEM : SYSTEM#3
OPERATOR : KC/EC

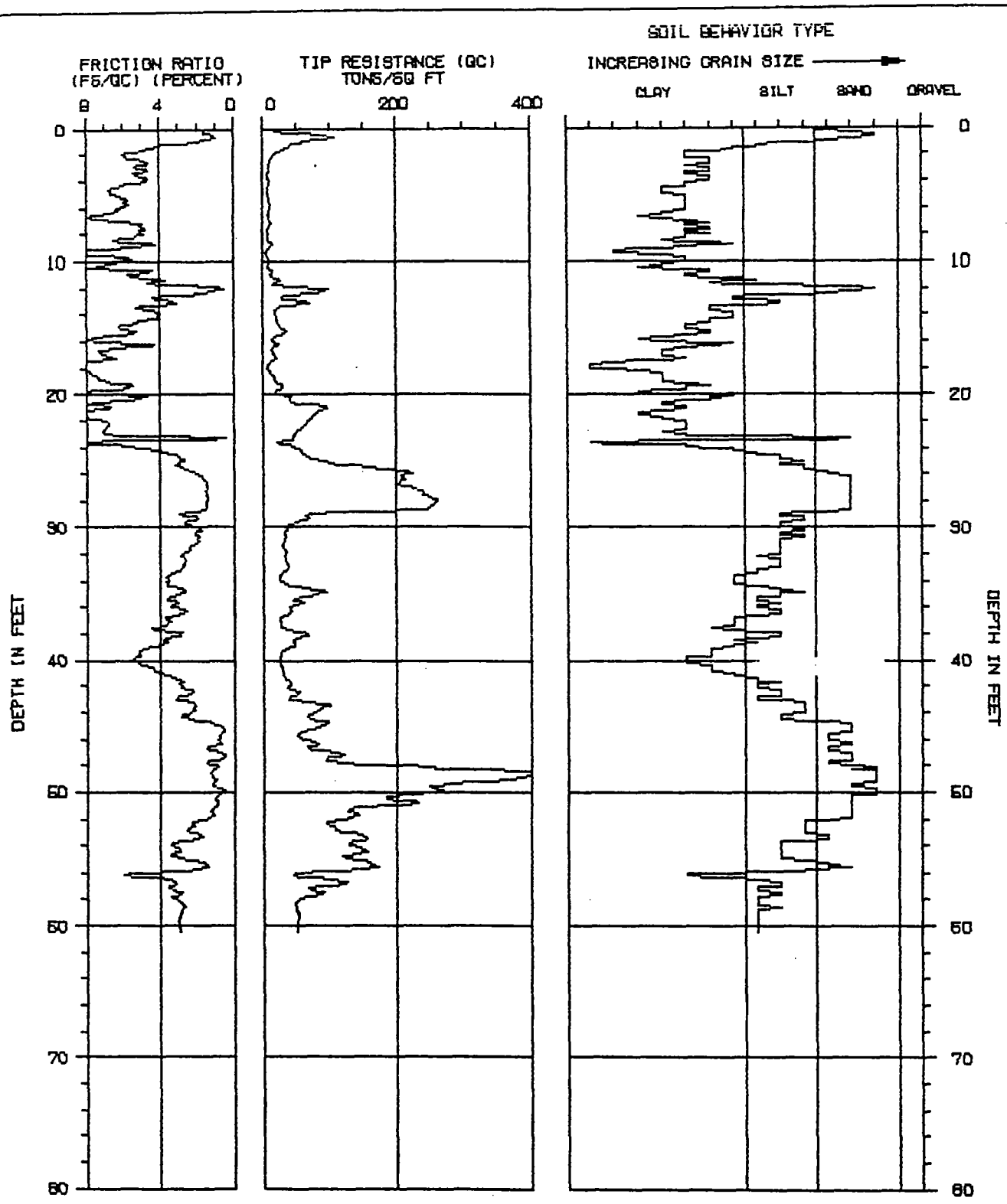
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
1.0	54.1	122.2	3.79	NA	*CLAYEY SAND to SANDY CLAY
2.0	30.4	59.6	6.66	NA	*SANDY CLAY to SILTY CLAY
3.0	26.6	47.5	5.24	NA	*SANDY CLAY to SILTY CLAY
4.0	46.5	77.0	3.17	NA	SANDY SILT to CLAYEY SILT
5.0	18.8	29.3	5.92	NA	*SANDY CLAY to SILTY CLAY
6.0	15.5	23.0	6.01	NA	SILTY CLAY TO CLAY
7.0	15.4	21.8	6.22	NA	SILTY CLAY TO CLAY
8.0	15.5	21.1	5.97	NA	SILTY CLAY TO CLAY
9.0	14.5	18.9	6.10	NA	SILTY CLAY TO CLAY
10.0	58.2	73.3	2.44	NA	SILTY SAND to SANDY SILT
11.0	14.7	17.9	5.35	NA	SILTY CLAY TO CLAY
12.0	8.0	9.5	7.59	NA	SILTY CLAY TO CLAY
13.0	8.6	9.8	7.77	NA	CLAY TO ORGANIC CLAY
14.0	4.6	5.1	6.91	NA	SILTY CLAY TO CLAY
15.0	8.1	8.7	8.09	NA	CLAY TO ORGANIC CLAY
16.0	9.4	10.0	6.73	NA	SILTY CLAY TO CLAY
17.0	6.7	6.9	8.39	NA	CLAY TO ORGANIC CLAY
18.0	6.6	6.6	8.89	NA	CLAY TO ORGANIC CLAY
19.0	7.9	7.7	7.76	NA	CLAY TO ORGANIC CLAY
20.0	7.5	7.2	9.92	NA	CLAY TO ORGANIC CLAY
21.0	5.4	5.0	8.75	NA	ORGANIC MATERIAL
22.0	4.5	4.1	8.19	NA	ORGANIC MATERIAL
23.0	11.2	10.1	3.85	NA	CLAYEY SILT to SILTY CLAY
24.0	42.1	37.0	3.31	NA	SANDY SILT to CLAYEY SILT
25.0	10.6	9.1	8.07	NA	CLAY TO ORGANIC CLAY
26.0	49.1	41.5	3.75	NA	SANDY SILT to CLAYEY SILT
27.0	18.2	15.0	2.14	NA	SANDY SILT to CLAYEY SILT
28.0	24.1	19.6	7.34	NA	*SANDY CLAY to SILTY CLAY
29.0	25.4	20.3	6.37	NA	SILTY CLAY TO CLAY
30.0	19.3	15.1	6.42	NA	SILTY CLAY TO CLAY
31.0	63.0	48.4	3.92	NA	SANDY SILT to CLAYEY SILT
32.0	72.4	54.6	3.03	NA	SANDY SILT to CLAYEY SILT
33.0	78.9	58.5	2.04	NA	SILTY SAND to SANDY SILT
34.0	77.9	56.8	2.09	NA	SILTY SAND to SANDY SILT
35.0	97.1	69.5	2.27	NA	SILTY SAND to SANDY SILT
36.0	141.2	99.3	2.08	NA	SILTY SAND to SANDY SILT
37.0	265.1	183.3	1.52	NA	SAND to SILTY SAND
38.0	212.6	144.6	2.29	NA	SILTY SAND to SANDY SILT
39.0	207.5	138.8	2.63	NA	SILTY SAND to SANDY SILT
40.0	234.4	154.1	1.69	NA	SAND to SILTY SAND
41.0	263.4	172.0	1.80	NA	SAND to SILTY SAND

NA = NOT APPLICABLE
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 40.0 FT

SOUNDING : CPL-0003

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
41.0	53.6	34.7	4.99	NA	*SANDY CLAY to SILTY CLAY
42.0	43.9	27.9	7.13	NA	*SANDY CLAY to SILTY CLAY
43.0	59.4	37.2	3.09	NA	SANDY SILT to CLAYEY SILT
44.0	29.1	17.9	3.27	NA	SANDY SILT to CLAYEY SILT
45.0	17.6	10.7	6.33	NA	SILTY CLAY TO CLAY
46.0	69.1	41.2	.90	NA	SILTY SAND to SANDY SILT
47.0	52.9	31.1	1.22	NA	SILTY SAND to SANDY SILT
48.0	51.0	29.5	4.10	NA	CLAYEY SILT to SILTY CLAY
49.0	342.7	195.2	.89	NA	SAND to SILTY SAND
50.0	80.2	45.0	1.51	NA	SILTY SAND to SANDY SILT
51.0	160.2	88.4	.67	NA	SAND to SILTY SAND
52.0	64.9	35.3	1.45	NA	SILTY SAND to SANDY SILT
53.0	48.3	25.8	2.65	NA	SANDY SILT to CLAYEY SILT
54.0	89.3	47.1	2.82	NA	SANDY SILT to CLAYEY SILT
55.0	160.4	83.3	1.23	NA	SAND to SILTY SAND
56.0	137.1	70.1	1.37	NA	SILTY SAND to SANDY SILT
57.0	116.8	58.8	2.74	NA	SANDY SILT to CLAYEY SILT
58.0	71.8	35.6	4.75	NA	*SANDY CLAY to SILTY CLAY
59.0	57.1	27.9	4.59	NA	CLAYEY SILT toOSILTY CLAY
60.0	42.4	20.4	4.14	NA	[illegible] SILTY CLAY

NA = NOT APPLICABLE
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 60.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 80.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPL-0004

PROJECT NAME : O&M/SHELL PIT AREA

LOCATION : TORRANCE CA

PROJECT NUMBER : 93-380-01113

DATE : 09-14-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPL-0004
PROJECT : D&M/SHELL PIT AREA
LOCATION : TORRANCE CA
DATE : 09-14-1992

PROJECT NO : 93-380-01113
INSTRUMENT : F15CKE097
SYSTEM : SYSTEM#3
OPERATOR : KC/RN

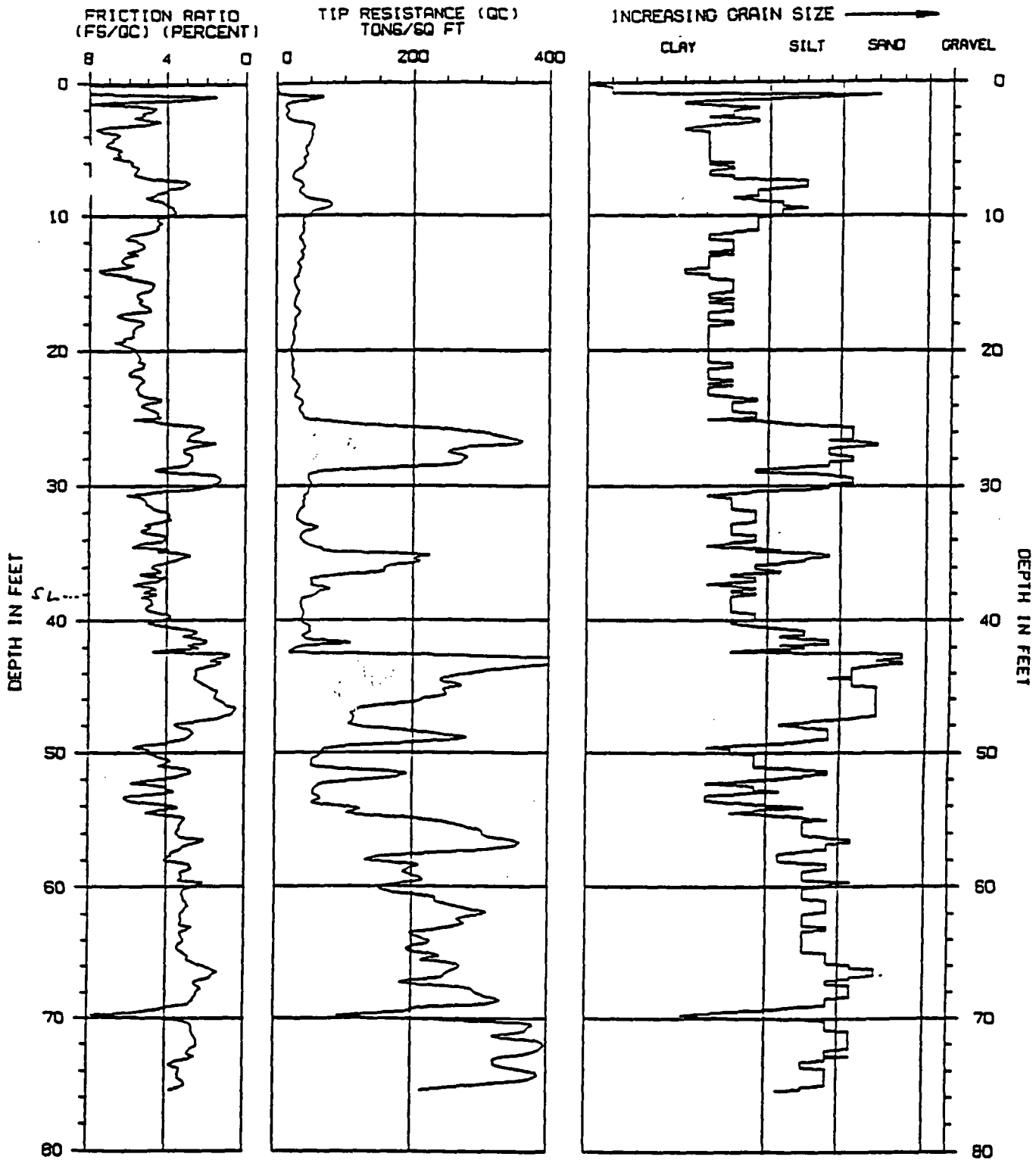
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	NA	
1.0	65.8	148.8	2.01	NA	SILTY SAND to SANDY SILT
2.0	17.3	33.9	6.04	NA	*SANDY CLAY to SILTY CLAY
3.0	10.1	18.0	5.13	NA	CLAYEY SILT to SILTY CLAY
4.0	10.6	17.6	4.66	NA	CLAYEY SILT to SILTY CLAY
5.0	8.1	12.6	6.65	NA	SILTY CLAY TO CLAY
6.0	11.6	17.2	6.24	NA	SILTY CLAY TO CLAY
7.0	10.9	15.4	6.20	NA	SILTY CLAY TO CLAY
8.0	7.8	10.6	5.19	NA	SILTY CLAY TO CLAY
9.0	9.1	11.8	6.90	NA	SILTY CLAY TO CLAY
10.0	9.9	12.4	6.08	NA	SILTY CLAY TO CLAY
11.0	11.9	14.5	5.75	NA	[illegible] CLAY TO CLAY
12.0	89.5	105.7	.49	NA	SAND toOSILTY SAND
13.0	58.7	67.3	3.45	NA	SANDY SILT to CLAYEY SILT
14.0	19.6	21.9	3.96	NA	CLAYEY SILT to SILTY CLAY
15.0	28.2	30.6	6.13	NA	*SANDY CLAY to SILTY CLAY
16.0	14.7	15.5	7.25	NA	SILTY CLAY TO CLAY
17.0	17.2	17.7	7.02	NA	SILTY CLAY TO CLAY
18.0	6.9	7.0	11.29	NA	CLAY TO ORGANIC CLAY
19.0	19.4	19.0	6.89	NA	SILTY CLAY TO CLAY
20.0	26.6	25.5	6.69	NA	*SANDY CLAY to SILTY CLAY
21.0	95.8	89.8	6.77	NA	*SANDY CLAY to SILTY CLAY
22.0	68.8	63.1	7.05	NA	*SANDY CLAY to SILTY CLAY
23.0	47.1	42.3	6.77	NA	*SANDY CLAY toOSILTY CLAY
24.0	50.8	44.7	5.01	NA	*SANDY CLAY to SILTY CLAY
25.0	86.0	74.1	2.72	NA	SILTY SAND to SANDY SILT
26.0	213.9	180.7	2.01	NA	SILTY SAND to SANDY SILT
27.0	217.7	180.3	1.46	NA	SAND to SILTY SAND
28.0	260.3	211.5	1.47	NA	SAND to SILTY SAND
29.0	75.1	59.9	2.95	NA	SANDY SILT to CLAYEY SILT
30.0	35.1	27.4	2.03	NA	SANDY SILT to CLAYEY SILT
31.0	31.2	23.9	1.94	NA	SANDY SILT to CLAYEY SILT
32.0	34.0	25.6	2.77	NA	SANDY SILT to CLAYEY SILT
33.0	36.6	27.1	2.77	NA	SANDY SILT to CLAYEY SILT
34.0	26.1	19.0	3.55	NA	CLAYEY SILT to SILTY CLAY
35.0	77.4	55.4	3.12	NA	SANDY SILT to CLAYEY SILT
36.0	39.0	27.4	3.20	NA	SANDY SILT to CLAYEY SILT
37.0	25.3	17.5	3.44	NA	CLAYEY SILT to SILTY CLAY
38.0	65.2	44.4	2.97	NA	SANDY SILT to CLAYEY SILT
39.0	41.9	28.0	4.52	NA	CLAYEY SILT to SILTY CLAY
40.0	24.1	15.8	5.55	NA	SILTY CLAY TO CLAY

NA = NOT APPLICABLE
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 60.0 FT

SOUNDING : CPL-0004

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
41.0	29.7	19.2	4.02	NA	CLAYEY SILT to SILTY CLAY
42.0	37.6	23.9	2.84	NA	SANDY SILT to CLAYEY SILT
43.0	38.0	23.8	3.18	NA	SANDY SILT to CLAYEY SILT
44.0	76.9	47.4	2.36	NA	SILTY SAND to SANDY SILT
45.0	87.1	52.8	.81	NA	SAND toOSILTY SAND
46.0	59.3	35.4	.85	NA	SILTY SAND to SANDY SILT
47.0	110.3	64.8	.78	NA	SAND to SILTY SAND
48.0	205.3	118.7	1.05	NA	SAND to SILTY SAND
49.0	370.5	211.0	1.06	NA	SAND to SILTY SAND
50.0	248.5	139.3	.63	NA	SAND to SILTY SAND
51.0	180.9	99.9	.94	NA	SAND to SILTY SAND
52.0	120.1	65.3	1.58	NA	SILTY SAND to SANDY SILT
53.0	118.3	63.4	2.37	NA	SILTY SAND to SANDY SILT
54.0	133.7	70.5	3.37	NA	SANDY SILT to CLAYEY SILT
55.0	139.1	72.2	2.48	NA	SILTY SAND to SANDY SILT
56.0	61.7	31.5	4.46	NA	CLAYEY SILT to SILTY CLAY
57.0	82.8	41.7	3.54	NA	SANDY SILT to CLAYEY SILT
58.0	54.5	27.0	3.26	NA	SANDY SILT to CLAYEY SILT
59.0	51.0	24.9	2.90	NA	SANDY SILT to CLAYEY SILT
60.0	49.0	23.6	3.09		SANDY SILT to CLAYEY SILT

NA = NOT APPLICABLE
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 60.0 FT



CPT SOUNDING ADJACENT TO WELL MW-21

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 67.5 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPL-0005

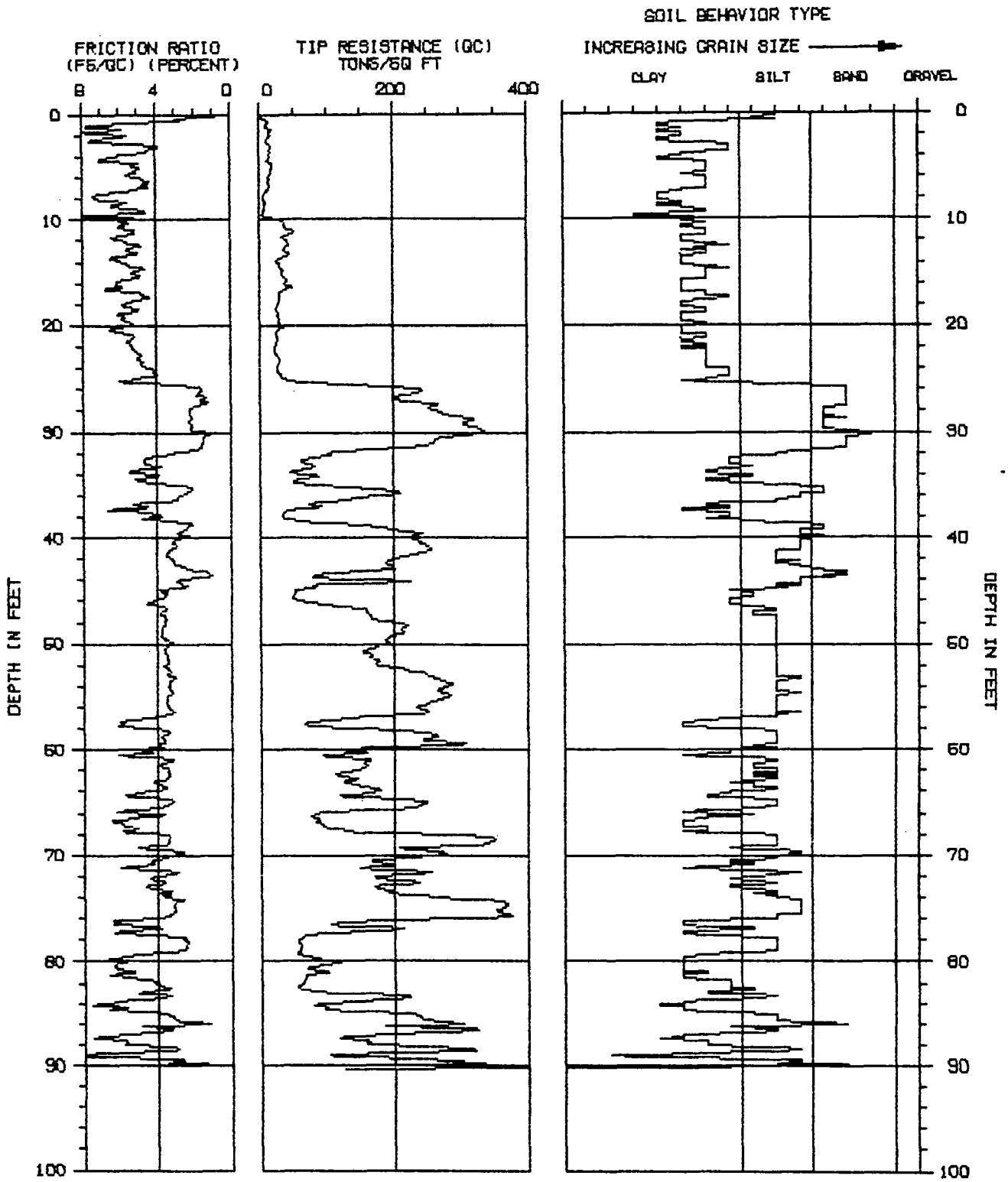
PROJECT NAME : O&M/MW-20 NAPL

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-01102

DATE : 09-22-1992

THE EARTH TECHNOLOGY CORPORATION



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 80.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPL-0006

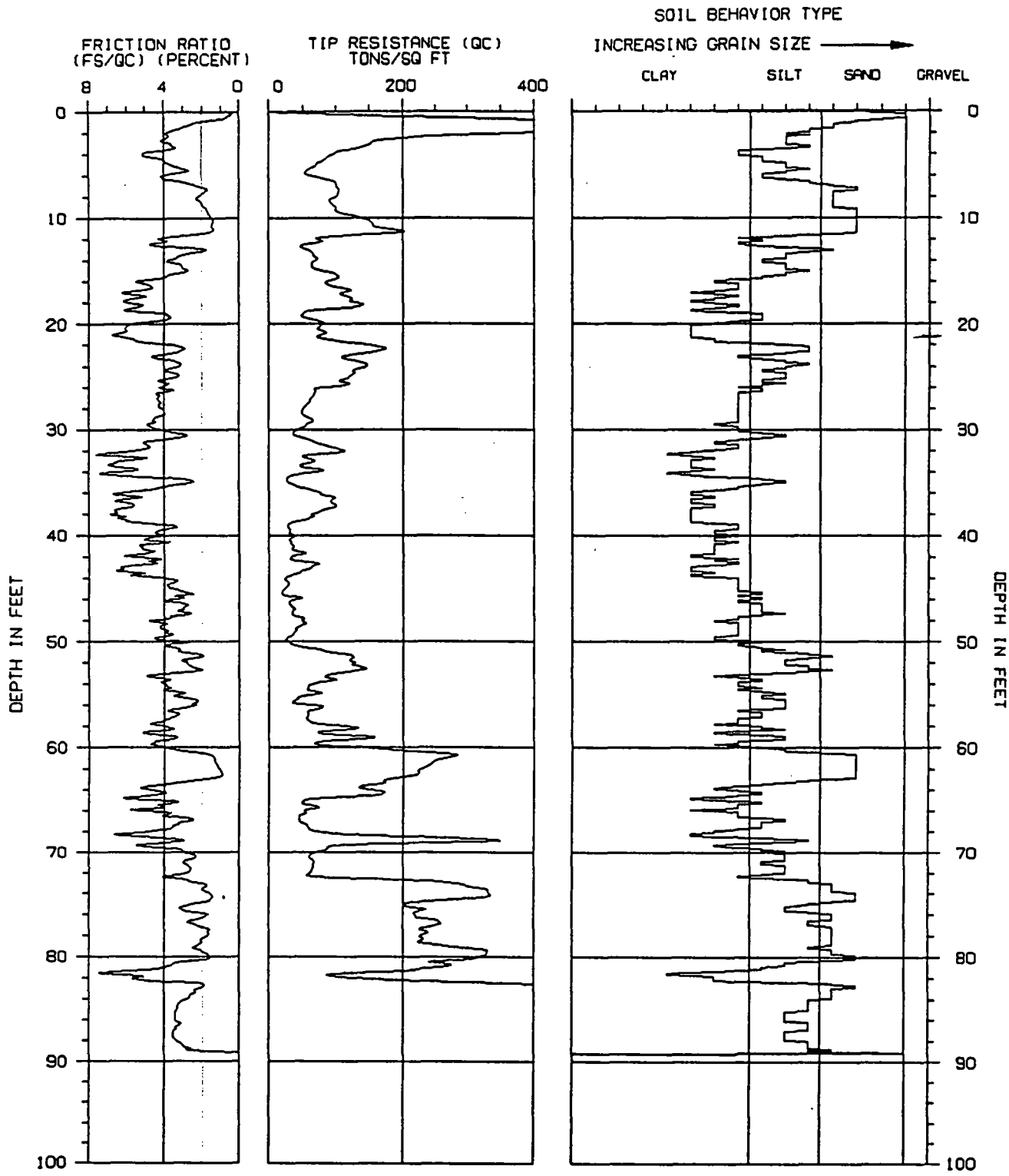
PROJECT NAME : O&M/MW-20 NAPL

LOCATION : TORRANCE CA

PROJECT NUMBER : 93-380-01102

DATE : 09-23-1992

THE EARTH TECHNOLOGY CORPORATION



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

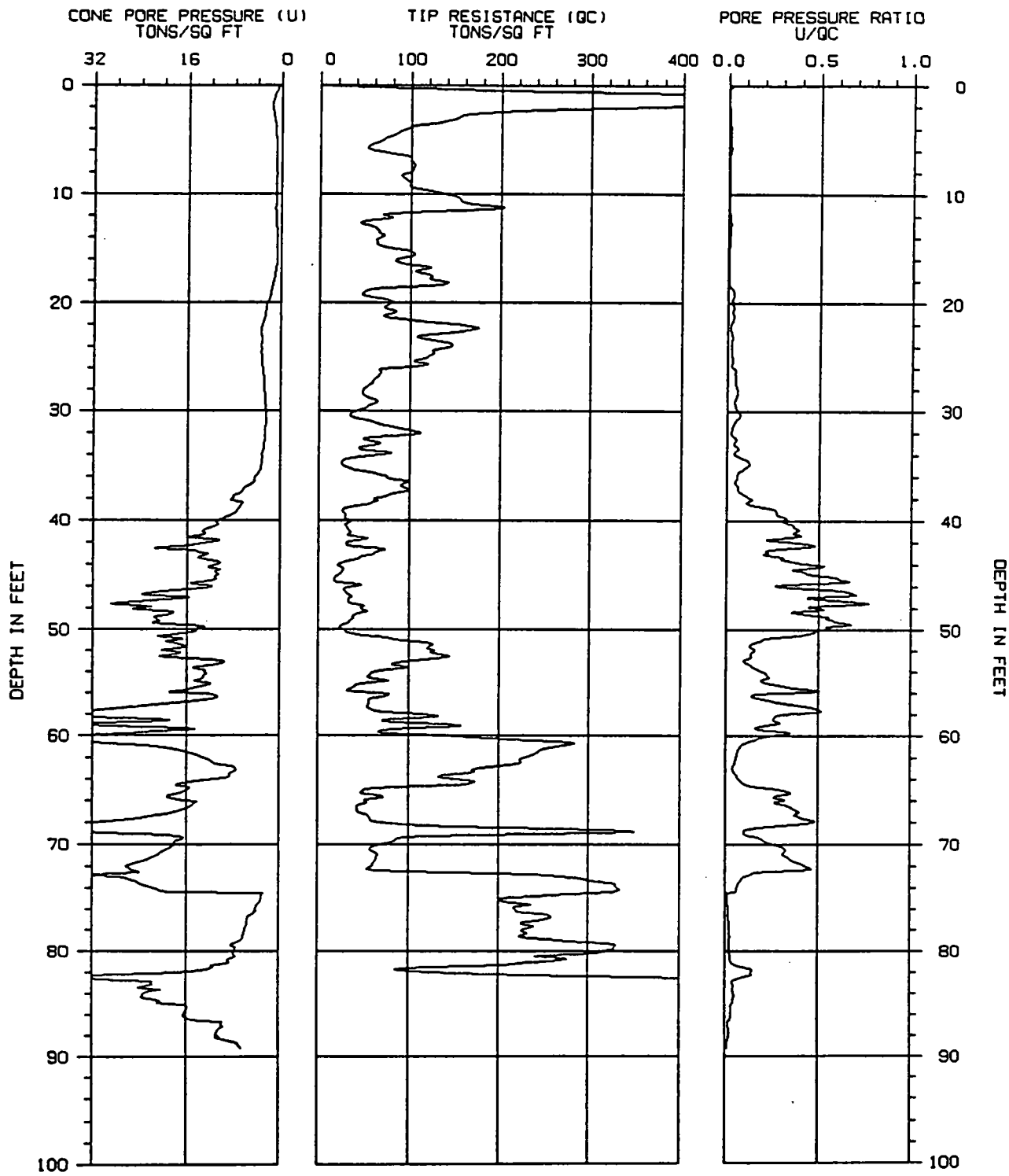
CONE PENETRATION TEST

SOUNDING NUMBER: CPL0007

PROJECT NAME : D&M/HYDROGEO.INVEST. LOCATION : CARSON

PROJECT NUMBER : 93-380-01104 DATE : 12-08-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST SOUNDING NUMBER: CPL0007

PROJECT NAME : D&M/HYDROGEO.INVEST. LOCATION : CARSON

PROJECT NUMBER : 93-380-01104 DATE : 12-08-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING	: CPL0007	PROJECT NO	: 93-380-01104
PROJECT	: D&M/HYDROGEO.INVEST.	INSTRUMENT	: F15CKE098
LOCATION	: CARSON	SYSTEM	: C4/R4/I4/L1
DATE	: 12-08-1992	OPERATOR	: EC/DH

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	192.2	492.1	.73	.68	SANDY GRAVEL to SAND
1.0	467.3	*****	2.17	1.28	*SAND to SILTY SAND
1.5	527.7	*****	3.11	1.53	*SILTY SAND to CLAYEY SAND
2.0	373.5	731.6	3.88	1.63	*SILTY SAND to CLAYEY SAND
2.5	199.5	371.4	3.89	1.46	*CLAYEY SAND to SANDY CLAY
3.0	153.8	274.2	3.64	1.32	*CLAYEY SAND to SANDY CLAY
3.5	126.0	216.1	3.72	1.12	*CLAYEY SAND to SANDY CLAY
4.0	96.7	160.3	5.11	1.07	*SANDY CLAY to SILTY CLAY
4.5	83.2	133.6	4.05	1.01	*CLAYEY SAND to SANDY CLAY
5.0	69.5	108.4	3.55	.94	*CLAYEY SAND to SANDY CLAY
5.5	56.0	85.1	2.70	.87	SILTY SAND to SANDY SILT
6.0	59.9	88.7	4.15	.86	*CLAYEY SAND to SANDY CLAY
6.5	93.9	135.8	3.31	.87	*CLAYEY SAND to SANDY CLAY
7.0	100.2	141.7	2.00	.80	SILTY SAND to SANDY SILT
7.5	103.0	142.6	1.88	.81	SILTY SAND to SANDY SILT
8.0	99.3	134.7	2.23	.80	SILTY SAND to SANDY SILT
8.5	91.0	121.1	2.05	.80	SILTY SAND to SANDY SILT
9.0	100.1	130.7	1.80	.80	SILTY SAND to SANDY SILT
9.5	107.8	138.2	1.68	.82	SAND to SILTY SAND
10.0	137.0	172.6	1.49	.83	SAND to SILTY SAND
10.5	154.8	191.7	1.44	.87	SAND to SILTY SAND
11.0	181.1	220.6	1.36	.93	SAND to SILTY SAND
11.5	154.9	185.8	2.29	.97	SILTY SAND to SANDY SILT
12.0	71.8	84.7	4.15	.87	*CLAYEY SAND to SANDY CLAY
12.5	51.1	59.5	4.74	.81	*SANDY CLAY to SILTY CLAY
13.0	59.5	68.2	1.85	.81	SILTY SAND to SANDY SILT
13.5	65.1	73.5	3.16	.75	SANDY SILT to CLAYEY SILT
14.0	68.2	75.9	3.85	.72	*CLAYEY SAND to SANDY CLAY
14.5	62.6	68.7	3.08	.69	SANDY SILT to CLAYEY SILT
15.0	84.0	91.0	2.82	.69	SILTY SAND to SANDY SILT
15.5	104.9	112.2	3.89	.68	*CLAYEY SAND to SANDY CLAY
16.0	85.7	90.5	5.50	.63	*SANDY CLAY to SILTY CLAY
16.5	106.1	110.6	4.57	.78	*SANDY CLAY to SILTY CLAY
17.0	108.5	111.7	6.22	.88	*SANDY CLAY to SILTY CLAY
17.5	122.6	124.6	5.42	1.09	*SANDY CLAY to SILTY CLAY
18.0	130.5	131.1	5.87	1.27	*SANDY CLAY to SILTY CLAY
18.5	95.8	95.1	5.89	1.52	*SANDY CLAY to SILTY CLAY
19.0	49.0	48.0	3.86	1.75	SANDY SILT to CLAYEY SILT
19.5	59.2	57.4	3.74	1.89	SANDY SILT to CLAYEY SILT
20.0	80.7	77.3	5.74	2.39	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0007

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	73.8	69.9	6.02	2.53	*SANDY CLAY to SILTY CLAY
21.0	76.8	72.0	6.76	2.59	*SANDY CLAY to SILTY CLAY
21.5	90.8	84.2	5.54	2.84	*SANDY CLAY to SILTY CLAY
22.0	150.7	138.2	3.56	3.16	*CLAYEY SAND to SANDY CLAY
22.5	164.5	149.3	3.10	3.41	*SILTY SAND to CLAYEY SAND
23.0	114.3	102.6	4.55	3.34	*SANDY CLAY to SILTY CLAY
23.5	126.1	112.1	3.52	3.22	*CLAYEY SAND to SANDY CLAY
24.0	145.7	128.2	3.21	3.29	*CLAYEY SAND to SANDY CLAY
24.5	125.5	109.2	3.84	3.30	*CLAYEY SAND to SANDY CLAY
25.0	119.6	103.1	3.24	3.27	*CLAYEY SAND to SANDY CLAY
25.5	105.1	89.7	4.24	3.19	*CLAYEY SAND to SANDY CLAY
26.0	82.3	69.5	4.27	3.07	*SANDY CLAY to SILTY CLAY
26.5	67.9	56.8	4.20	2.94	*SANDY CLAY to SILTY CLAY
27.0	62.7	52.0	4.35	2.89	*SANDY CLAY to SILTY CLAY
27.5	58.9	48.3	4.19	2.83	*SANDY CLAY to SILTY CLAY
28.0	49.5	40.2	4.13	2.76	CLAYEY SILT to SILTY CLAY
28.5	48.8	39.3	3.95	2.71	CLAYEY SILT to SILTY CLAY
29.0	61.3	48.8	4.53	2.71	*SANDY CLAY to SILTY CLAY
29.5	56.5	44.6	4.88	2.62	*SANDY CLAY to SILTY CLAY
30.0	42.1	32.9	4.10	2.54	CLAYEY SILT to SILTY CLAY
30.5	35.2	27.3	2.82	2.51	SANDY SILT to CLAYEY SILT
31.0	58.4	44.9	4.22	2.55	*SANDY CLAY to SILTY CLAY
31.5	81.2	61.8	4.86	2.57	*SANDY CLAY to SILTY CLAY
32.0	112.8	85.1	5.71	2.67	*SANDY CLAY to SILTY CLAY
32.5	50.4	37.7	6.80	2.62	*SANDY CLAY to SILTY CLAY
33.0	68.1	50.4	6.37	2.82	*SANDY CLAY to SILTY CLAY
33.5	46.0	33.8	6.58	2.88	*SANDY CLAY to SILTY CLAY
34.0	68.2	49.6	6.61	3.12	*SANDY CLAY to SILTY CLAY
34.5	28.1	20.2	5.26	3.12	CLAYEY SILT to SILTY CLAY
35.0	26.8	19.2	2.43	3.26	SANDY SILT to CLAYEY SILT
35.5	48.8	34.6	4.30	3.56	CLAYEY SILT to SILTY CLAY
36.0	75.7	53.2	6.37	4.19	*SANDY CLAY to SILTY CLAY
36.5	98.9	69.0	5.52	4.50	*SANDY CLAY to SILTY CLAY
37.0	92.9	64.3	5.88	5.87	*SANDY CLAY to SILTY CLAY
37.5	83.8	57.5	6.53	6.98	*SANDY CLAY to SILTY CLAY
38.0	61.5	41.8	6.87	8.15	*SANDY CLAY to SILTY CLAY
38.5	57.2	38.5	6.14	6.61	*SANDY CLAY to SILTY CLAY
39.0	28.1	18.8	4.18	7.20	CLAYEY SILT to SILTY CLAY
39.5	30.5	20.3	4.28	8.57	CLAYEY SILT to SILTY CLAY
40.0	35.2	23.1	4.03	10.61	CLAYEY SILT to SILTY CLAY
40.5	30.1	19.6	4.59	11.04	CLAYEY SILT to SILTY CLAY
41.0	36.0	23.3	5.21	13.51	CLAYEY SILT to SILTY CLAY
41.5	46.4	29.8	4.63	15.73	CLAYEY SILT to SILTY CLAY
42.0	31.2	19.8	5.50	12.16	SILTY CLAY TO CLAY
42.5	56.8	35.8	4.52	20.62	CLAYEY SILT to SILTY CLAY
43.0	61.2	38.3	6.21	12.39	*SANDY CLAY to SILTY CLAY
43.5	44.0	27.4	5.04	13.06	CLAYEY SILT to SILTY CLAY
44.0	22.5	13.8	3.92	10.80	CLAYEY SILT to SILTY CLAY
44.5	28.5	17.4	3.51	10.35	CLAYEY SILT to SILTY CLAY
45.0	21.0	12.8	3.36	11.15	CLAYEY SILT to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0007

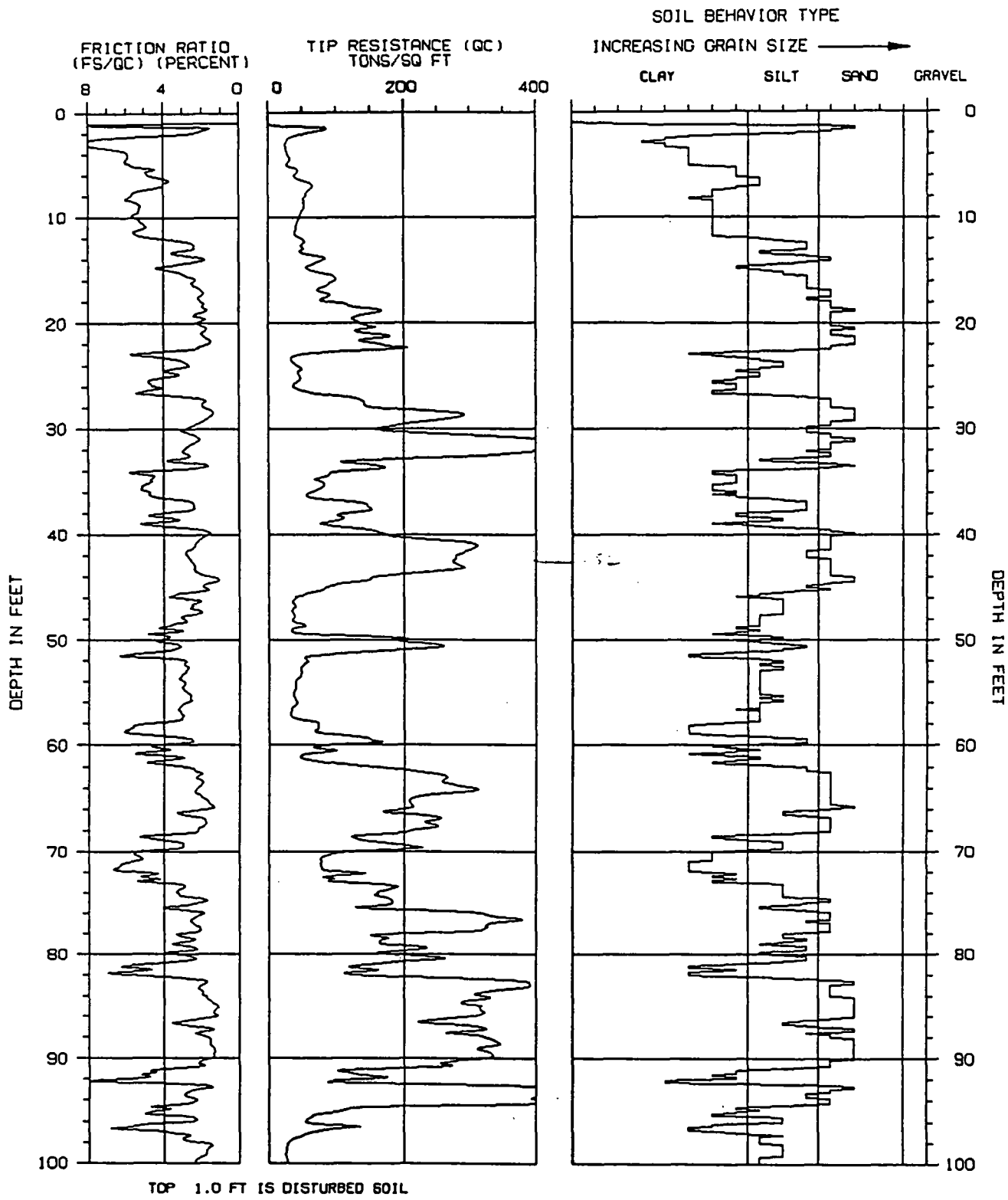
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	18.4	11.1	2.47	12.23	SANDY SILT to CLAYEY SILT
46.0	40.2	24.0	3.44	11.64	SANDY SILT to CLAYEY SILT
46.5	30.2	17.9	2.83	19.98	SANDY SILT to CLAYEY SILT
47.0	35.6	20.9	3.26	15.62	SANDY SILT to CLAYEY SILT
47.5	35.1	20.5	3.16	27.05	SANDY SILT to CLAYEY SILT
48.0	46.6	26.9	4.81	23.71	CLAYEY SILT to SILTY CLAY
48.5	45.1	25.9	4.24	18.17	CLAYEY SILT to SILTY CLAY
49.0	37.3	21.3	3.98	21.18	CLAYEY SILT to SILTY CLAY
49.5	29.1	16.4	4.13	19.68	CLAYEY SILT to SILTY CLAY
50.0	28.4	15.9	2.85	14.75	SANDY SILT to CLAYEY SILT
50.5	49.0	27.3	3.60	19.27	SANDY SILT to CLAYEY SILT
51.0	93.5	51.6	2.88	18.19	SANDY SILT to CLAYEY SILT
51.5	126.0	69.1	2.27	16.58	SILTY SAND to SANDY SILT
52.0	128.8	70.0	2.80	20.27	SANDY SILT to CLAYEY SILT
52.5	145.7	78.6	2.22	20.65	SILTY SAND to SANDY SILT
53.0	95.2	51.0	4.01	9.50	*CLAYEY SAND to SANDY CLAY
53.5	96.2	51.1	3.81	13.75	SANDY SILT to CLAYEY SILT
54.0	64.6	34.1	3.92	13.10	CLAYEY SILT to SILTY CLAY
54.5	56.3	29.4	4.07	13.14	CLAYEY SILT to SILTY CLAY
55.0	58.2	30.2	3.38	12.71	SANDY SILT to CLAYEY SILT
55.5	39.7	20.5	2.26	14.44	SANDY SILT to CLAYEY SILT
56.0	63.5	32.5	2.29	18.87	SANDY SILT to CLAYEY SILT
56.5	57.3	29.1	3.80	11.69	CLAYEY SILT to SILTY CLAY
57.0	56.4	28.4	3.39	19.75	SANDY SILT to CLAYEY SILT
57.5	58.1	29.1	4.02	28.73	CLAYEY SILT to SILTY CLAY
58.0	118.3	58.7	3.89	35.95	*CLAYEY SAND to SANDY CLAY
58.5	71.2	35.0	5.10	18.76	*SANDY CLAY to SILTY CLAY
59.0	157.4	76.9	3.33	34.84	SANDY SILT to CLAYEY SILT
59.5	72.1	35.0	4.56	16.46	CLAYEY SILT to SILTY CLAY
60.0	139.4	67.1	3.91	33.69	*CLAYEY SAND to SANDY CLAY
60.5	262.0	125.2	2.01	34.05	SILTY SAND to SANDY SILT
61.0	264.9	125.7	1.37	21.37	SAND to SILTY SAND
61.5	244.2	115.0	1.27	16.24	SAND to SILTY SAND
62.0	228.0	106.5	1.10	13.07	SAND to SILTY SAND
62.5	224.4	104.1	.92	11.38	SAND to SILTY SAND
63.0	180.4	83.0	1.78	7.56	SILTY SAND to SANDY SILT
63.5	166.6	76.1	3.68	8.42	*CLAYEY SAND to SANDY CLAY
64.0	150.7	68.4	4.65	11.06	*SANDY CLAY to SILTY CLAY
64.5	167.2	75.2	4.51	17.53	*SANDY CLAY to SILTY CLAY
65.0	54.5	24.4	4.77	15.59	CLAYEY SILT to SILTY CLAY
65.5	54.9	24.5	4.38	17.98	CLAYEY SILT to SILTY CLAY
66.0	51.2	22.7	5.28	16.25	CLAYEY SILT to SILTY CLAY
66.5	44.1	19.5	4.10	15.05	CLAYEY SILT to SILTY CLAY
67.0	44.2	19.5	2.54	17.31	SANDY SILT to CLAYEY SILT
67.5	56.3	24.7	3.53	22.22	SANDY SILT to CLAYEY SILT
68.0	68.9	30.2	4.80	32.34	CLAYEY SILT to SILTY CLAY
68.5	203.3	88.8	5.30	36.03	*SANDY CLAY to SILTY CLAY
69.0	310.7	135.2	3.28	30.95	*CLAYEY SAND to SANDY CLAY
69.5	85.8	37.2	4.39	16.65	CLAYEY SILT to SILTY CLAY
70.0	68.4	29.6	3.03	17.97	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0007

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	58.3	25.2	2.37	19.28	SANDY SILT to CLAYEY SILT
71.0	66.5	28.6	3.00	20.78	SANDY SILT to CLAYEY SILT
71.5	63.4	27.2	2.63	23.41	SANDY SILT to CLAYEY SILT
72.0	60.1	25.7	2.81	26.20	SANDY SILT to CLAYEY SILT
72.5	96.5	41.1	3.68	24.07	SANDY SILT to CLAYEY SILT
73.0	266.5	113.1	2.49	27.73	SILTY SAND to SANDY SILT
73.5	322.9	136.5	1.98	24.25	SILTY SAND to SANDY SILT
74.0	331.5	139.7	1.63	21.59	SAND to SILTY SAND
74.5	302.7	127.1	1.51	2.74	SAND to SILTY SAND
75.0	203.2	85.1	2.27	3.06	SILTY SAND to SANDY SILT
75.5	236.3	98.6	3.13	3.69	*CLAYEY SAND to SANDY CLAY
76.0	218.6	91.0	1.69	4.11	SILTY SAND to SANDY SILT
76.5	246.1	102.1	2.27	4.51	SILTY SAND to SANDY SILT
77.0	253.9	105.0	2.37	5.42	SILTY SAND to SANDY SILT
77.5	231.0	95.2	1.65	5.56	SILTY SAND to SANDY SILT
78.0	226.1	92.9	1.72	5.86	SILTY SAND to SANDY SILT
78.5	227.2	93.0	2.08	6.14	SILTY SAND to SANDY SILT
79.0	275.9	112.6	2.36	6.83	SILTY SAND to SANDY SILT
79.5	329.6	134.0	2.02	8.13	SILTY SAND to SANDY SILT
80.0	317.4	128.7	1.64	7.76	SAND to SILTY SAND
80.5	240.5	97.2	3.06	7.48	*CLAYEY SAND to SANDY CLAY
81.0	234.1	94.3	4.17	8.56	*CLAYEY SAND to SANDY CLAY
81.5	123.8	49.7	7.48	11.42	*SANDY CLAY to SILTY CLAY
82.0	124.8	49.9	5.61	17.76	*SANDY CLAY to SILTY CLAY
82.5	363.7	145.5	2.24	35.92	SILTY SAND to SANDY SILT
83.0	515.1	206.0	2.25	21.92	*SILTY SAND to CLAYEY SAND
83.5	512.8	205.1	2.51	22.92	*SILTY SAND to CLAYEY SAND
84.0	480.7	192.3	2.80	23.17	*SILTY SAND to CLAYEY SAND
84.5	455.5	182.2	3.27	22.18	*SILTY SAND to CLAYEY SAND
85.0	452.2	180.9	3.37	15.94	*CLAYEY SAND to SANDY CLAY
85.5	453.8	181.5	3.41	15.89	*CLAYEY SAND to SANDY CLAY
86.0	459.0	183.6	3.42	16.42	*CLAYEY SAND to SANDY CLAY
86.5	488.2	195.3	3.19	13.75	*SILTY SAND to CLAYEY SAND
87.0	487.4	195.0	3.46	9.94	*CLAYEY SAND to SANDY CLAY
87.5	464.9	186.0	3.51	10.63	*CLAYEY SAND to SANDY CLAY
88.0	466.2	186.5	3.38	10.75	*CLAYEY SAND to SANDY CLAY
88.5	539.8	215.9	3.00	8.26	*SILTY SAND to CLAYEY SAND
89.0	486.5	194.6	1.53	6.67	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 66.0 FT

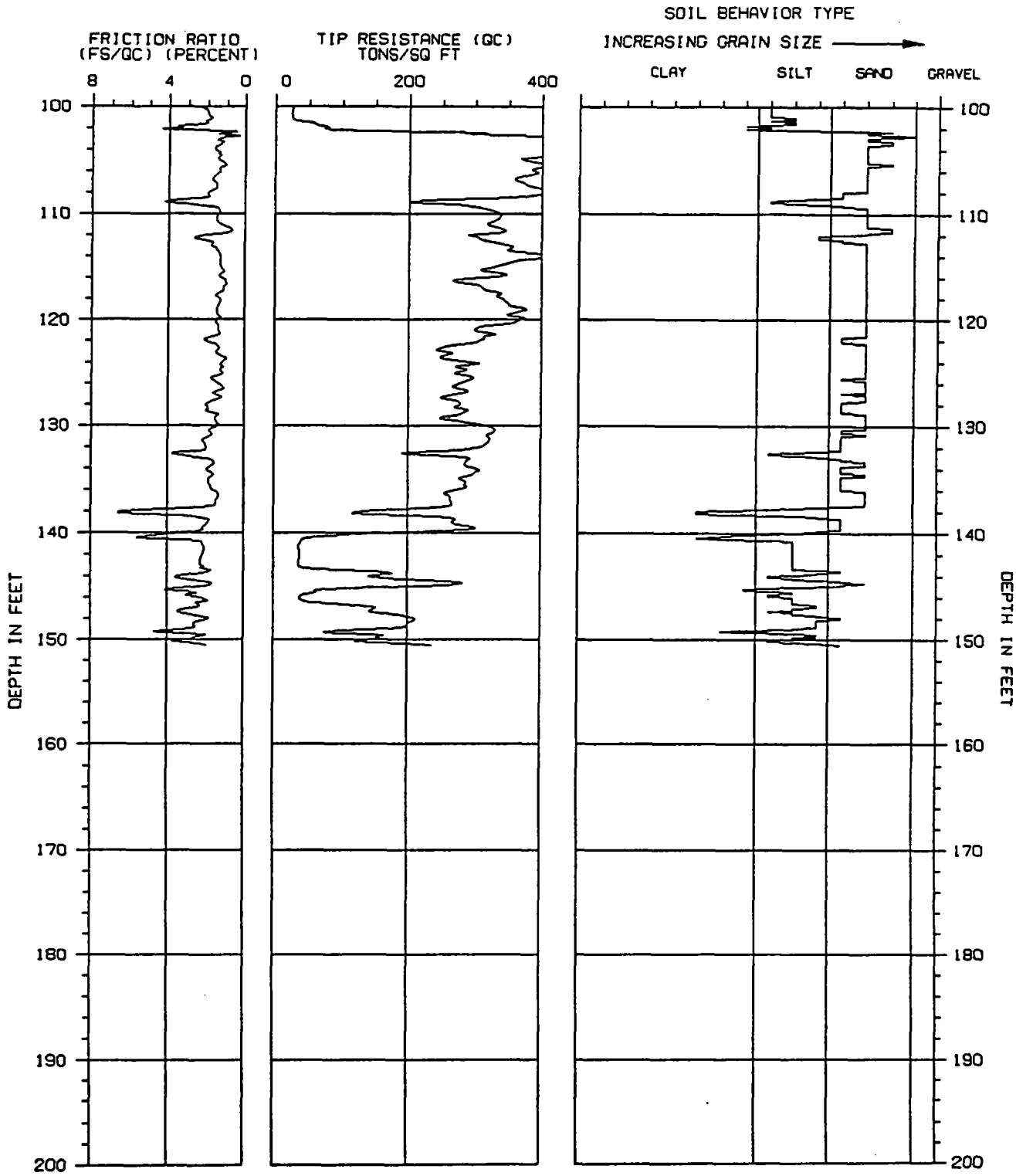
CONE PENETRATION TEST

SOUNDING NUMBER: CPL0008 (1 OF 2)

PROJECT NAME : D&M/HYDROGEO.INVEST. LOCATION : CARSON

PROJECT NUMBER : 93-380-01104 DATE : 12-09-1992

THE EARTH TECHNOLOGY CORPORATION



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 66.0 FT

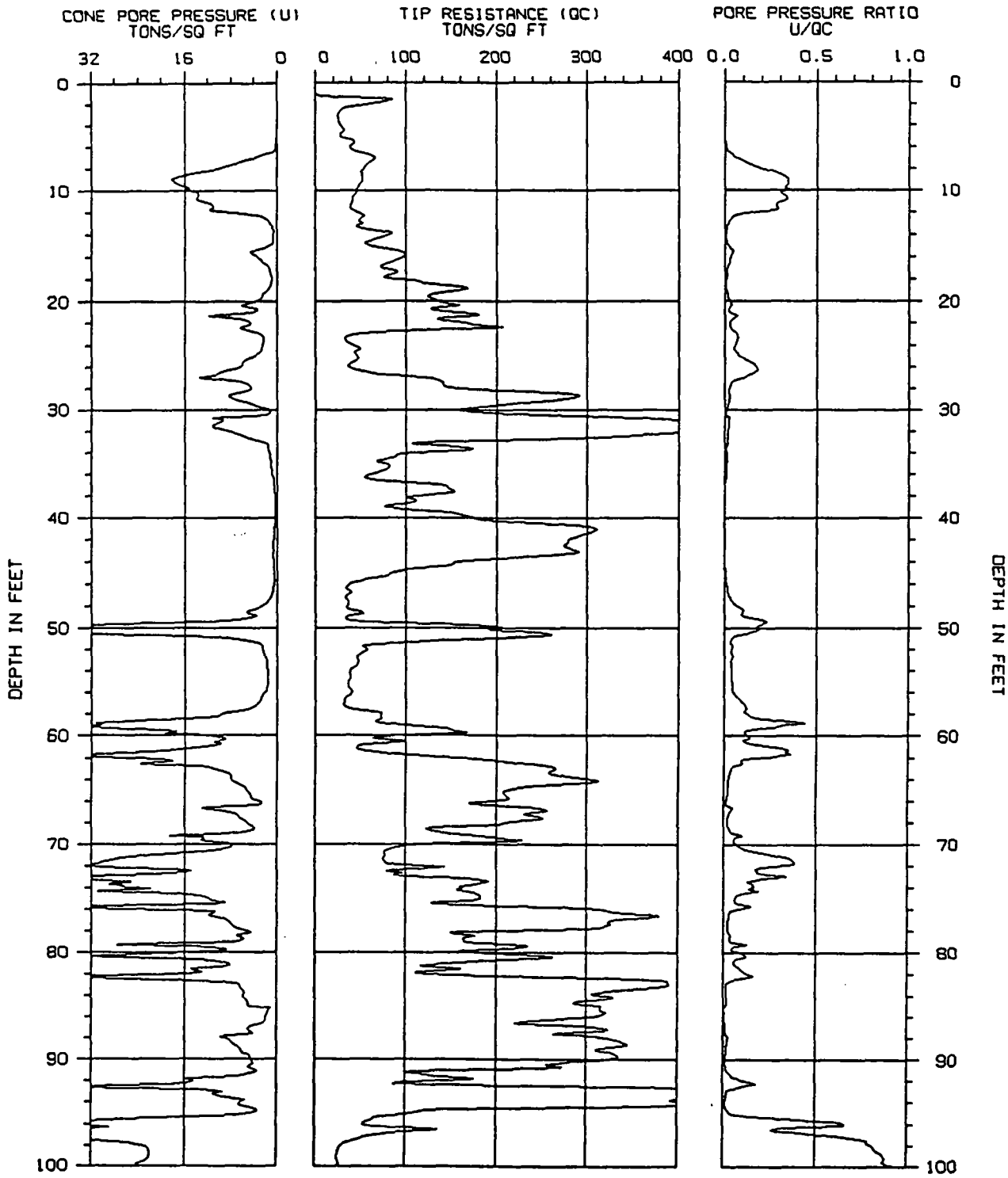
CONE PENETRATION TEST

SOUNDING NUMBER: CPL0008 (2 OF 2)

PROJECT NAME : D&M/HYDROGEO.INVEST. LOCATION : CARSON

PROJECT NUMBER : 93-380-01104 DATE : 12-09-1992

THE EARTH TECHNOLOGY CORPORATION



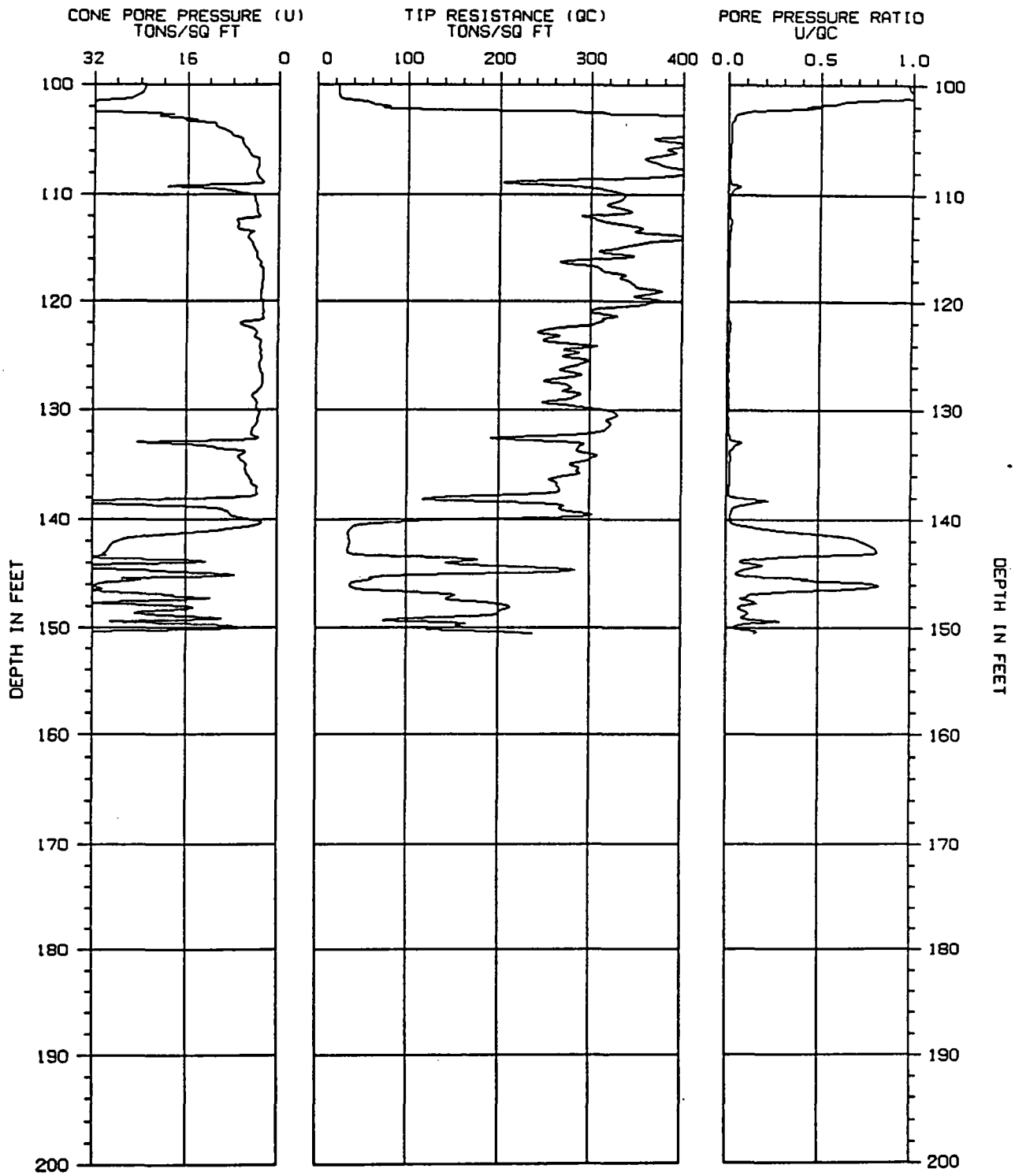
TOP 1.0 FT IS DISTURBED SOIL

CONE PENETRATION TEST SOUNDING NUMBER: CPL0008 (1 OF 2)

PROJECT NAME : D&M/HYDROGEO.INVEST. LOCATION : CARSON

PROJECT NUMBER : 93-380-01104 DATE : 12-09-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPL0008 (2 OF 2)

PROJECT NAME : D&M/HYDROGEO.INVEST.

LOCATION : CARSON

PROJECT NUMBER : 93-380-01104

DATE : 12-09-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPL0008
PROJECT : D&M/HYDROGEO.INVEST.
LOCATION : CARSON
DATE : 12-09-1992

PROJECT NO : 93-380-01104
INSTRUMENT : F15CKE098
SYSTEM : C4/R4/I4/L1
OPERATOR : EC/DH

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	.0	.0	.00	.00	
1.0	.0	.0	.00	.00	
1.5	85.6	178.4	1.65	.06	SAND to SILTY SAND
2.0	55.5	108.7	2.87	-.02	SILTY SAND to SANDY SILT
2.5	29.3	54.5	7.47	-.09	*SANDY CLAY to SILTY CLAY
3.0	24.9	44.3	8.40	-.11	*SANDY CLAY to SILTY CLAY
3.5	26.0	44.6	6.51	.02	*SANDY CLAY to SILTY CLAY
4.0	28.4	47.0	5.89	.04	*SANDY CLAY to SILTY CLAY
4.5	32.6	52.3	6.03	.07	*SANDY CLAY to SILTY CLAY
5.0	27.8	43.3	5.71	.09	*SANDY CLAY to SILTY CLAY
5.5	43.9	66.8	4.86	.23	*SANDY CLAY to SILTY CLAY
6.0	37.9	56.2	4.74	.35	*SANDY CLAY to SILTY CLAY
6.5	51.2	74.1	3.70	.90	*CLAYEY SAND to SANDY CLAY
7.0	66.3	93.7	4.18	4.39	*CLAYEY SAND to SANDY CLAY
7.5	58.1	80.5	5.43	7.35	*SANDY CLAY to SILTY CLAY
8.0	53.8	73.0	5.77	10.22	*SANDY CLAY to SILTY CLAY
8.5	52.1	69.3	5.67	15.38	*SANDY CLAY to SILTY CLAY
9.0	52.3	68.3	5.30	18.01	*SANDY CLAY to SILTY CLAY
9.5	48.7	62.5	5.36	16.54	*SANDY CLAY to SILTY CLAY
10.0	45.5	57.4	5.57	15.39	*SANDY CLAY to SILTY CLAY
10.5	42.4	52.5	5.18	13.66	*SANDY CLAY to SILTY CLAY
11.0	41.0	49.9	5.10	12.44	*SANDY CLAY to SILTY CLAY
11.5	39.0	46.8	5.54	11.00	*SANDY CLAY to SILTY CLAY
12.0	47.9	56.6	4.10	7.63	*CLAYEY SAND to SANDY CLAY
12.5	51.5	59.9	2.44	2.08	SILTY SAND to SANDY SILT
13.0	50.8	58.3	2.57	1.18	SILTY SAND to SANDY SILT
13.5	59.6	67.3	3.17	.66	SANDY SILT to CLAYEY SILT
14.0	82.1	91.4	1.85	.70	SILTY SAND to SANDY SILT
14.5	61.1	67.1	3.64	.66	*CLAYEY SAND to SANDY CLAY
15.0	64.3	69.6	3.60	1.62	*CLAYEY SAND to SANDY CLAY
15.5	94.8	101.4	2.82	4.54	SILTY SAND to SANDY SILT
16.0	98.4	103.8	2.37	3.34	SILTY SAND to SANDY SILT
16.5	81.0	84.4	2.31	2.31	SILTY SAND to SANDY SILT
17.0	77.1	79.3	1.93	1.33	SILTY SAND to SANDY SILT
17.5	86.9	88.3	2.16	1.14	SILTY SAND to SANDY SILT
18.0	88.8	89.2	2.03	.93	SILTY SAND to SANDY SILT
18.5	143.6	142.5	1.88	1.12	SILTY SAND to SANDY SILT
19.0	156.0	153.0	2.12	1.73	SILTY SAND to SANDY SILT
19.5	124.1	120.4	1.84	2.55	SILTY SAND to SANDY SILT
20.0	133.9	128.4	2.26	3.64	SILTY SAND to SANDY SILT

TOP 1.0 FT IS DISTURBED SOIL
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0008

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	139.9	132.6	1.77	4.46	SAND to SILTY SAND
21.0	159.3	149.4	2.03	4.67	SILTY SAND to SANDY SILT
21.5	146.3	135.6	1.68	8.63	SAND to SILTY SAND
22.0	164.3	150.7	1.72	4.59	SAND to SILTY SAND
22.5	156.1	141.6	2.99	5.89	*SILTY SAND to CLAYEY SAND
23.0	44.2	39.7	5.58	3.03	*SANDY CLAY to SILTY CLAY
23.5	33.7	29.9	3.14	2.36	SANDY SILT to CLAYEY SILT
24.0	42.2	37.1	2.65	2.48	SANDY SILT to CLAYEY SILT
24.5	46.6	40.6	3.96	2.69	CLAYEY SILT to SILTY CLAY
25.0	47.2	40.6	3.39	3.79	SANDY SILT to CLAYEY SILT
25.5	45.2	38.5	4.81	5.61	*SANDY CLAY to SILTY CLAY
26.0	37.0	31.3	4.28	6.45	CLAYEY SILT to SILTY CLAY
26.5	58.7	49.1	5.17	9.54	*SANDY CLAY to SILTY CLAY
27.0	117.5	97.3	2.76	13.39	SILTY SAND to SANDY SILT
27.5	140.7	115.4	1.83	5.86	SILTY SAND to SANDY SILT
28.0	157.7	128.1	1.82	4.40	SILTY SAND to SANDY SILT
28.5	278.6	224.2	1.40	7.48	SAND to SILTY SAND
29.0	277.1	220.9	1.69	7.58	SAND to SILTY SAND
29.5	216.2	170.7	2.12	4.46	SILTY SAND to SANDY SILT
30.0	157.6	123.3	2.79	1.38	*SILTY SAND to CLAYEY SAND
30.5	251.8	195.2	2.59	1.96	*SILTY SAND to CLAYEY SAND
31.0	408.4	313.8	2.11	9.44	*SAND to SILTY SAND
31.5	492.2	374.7	2.51	11.13	*SILTY SAND to CLAYEY SAND
32.0	432.6	326.4	2.92	8.21	*SILTY SAND to CLAYEY SAND
32.5	339.5	253.8	2.63	5.74	*SILTY SAND to CLAYEY SAND
33.0	146.6	108.6	3.81	2.99	*CLAYEY SAND to SANDY CLAY
33.5	164.3	120.7	1.64	1.60	SAND to SILTY SAND
34.0	110.0	80.1	5.18	1.38	*SANDY CLAY to SILTY CLAY
34.5	85.5	61.7	4.47	1.20	*SANDY CLAY to SILTY CLAY
35.0	75.8	54.3	4.59	1.08	*SANDY CLAY to SILTY CLAY
35.5	79.4	56.3	5.13	.96	*SANDY CLAY to SILTY CLAY
36.0	62.0	43.6	4.71	.82	*SANDY CLAY to SILTY CLAY
36.5	61.5	42.9	4.32	.56	*SANDY CLAY to SILTY CLAY
37.0	134.8	93.2	2.45	.52	SILTY SAND to SANDY SILT
37.5	152.0	104.2	2.39	.47	SILTY SAND to SANDY SILT
38.0	112.2	76.3	4.30	.39	*SANDY CLAY to SILTY CLAY
38.5	111.7	75.3	3.36	.36	SANDY SILT to CLAYEY SILT
39.0	76.9	51.4	5.24	.30	*SANDY CLAY to SILTY CLAY
39.5	148.0	98.2	2.06	.33	SILTY SAND to SANDY SILT
40.0	174.4	114.7	1.66	.32	SAND to SILTY SAND
40.5	241.7	157.6	2.14	.38	SILTY SAND to SANDY SILT
41.0	310.6	200.9	2.35	.47	*SILTY SAND to CLAYEY SAND
41.5	294.8	189.1	2.77	.54	*SILTY SAND to CLAYEY SAND
42.0	279.3	177.7	2.76	.61	*SILTY SAND to CLAYEY SAND
42.5	274.7	173.4	2.56	.66	*SILTY SAND to CLAYEY SAND
43.0	290.6	182.0	2.34	.60	SILTY SAND to SANDY SILT
43.5	237.7	147.7	2.31	.64	SILTY SAND to SANDY SILT
44.0	156.6	96.5	1.46	.60	SAND to SILTY SAND
44.5	129.2	79.0	1.29	.57	SAND to SILTY SAND
45.0	83.1	50.4	1.77	.50	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0008

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	58.5	35.2	2.99	.45	SANDY SILT to CLAYEY SILT
46.0	39.4	23.5	3.21	.54	SANDY SILT to CLAYEY SILT
46.5	35.2	20.8	2.36	.71	SANDY SILT to CLAYEY SILT
47.0	35.6	20.9	2.41	.95	SANDY SILT to CLAYEY SILT
47.5	36.9	21.5	2.38	1.51	SANDY SILT to CLAYEY SILT
48.0	35.5	20.5	2.94	2.48	SANDY SILT to CLAYEY SILT
48.5	51.6	29.6	3.52	5.14	SANDY SILT to CLAYEY SILT
49.0	33.9	19.3	3.11	4.66	SANDY SILT to CLAYEY SILT
49.5	90.3	51.0	4.21	19.68	*SANDY CLAY to SILTY CLAY
50.0	198.4	111.3	4.31	35.97	*CLAYEY SAND to SANDY CLAY
50.5	260.9	145.1	3.16	31.75	*SILTY SAND to CLAYEY SAND
51.0	173.2	95.6	3.70	7.08	*CLAYEY SAND to SANDY CLAY
51.5	68.0	37.3	6.34	2.75	*SANDY CLAY to SILTY CLAY
52.0	57.7	31.4	2.82	2.43	SANDY SILT to CLAYEY SILT
52.5	47.7	25.7	2.73	2.16	SANDY SILT to CLAYEY SILT
53.0	48.0	25.7	2.83	1.82	SANDY SILT to CLAYEY SILT
53.5	46.0	24.4	3.11	1.76	SANDY SILT to CLAYEY SILT
54.0	39.1	20.6	2.97	1.66	SANDY SILT to CLAYEY SILT
54.5	38.7	20.2	3.03	1.63	SANDY SILT to CLAYEY SILT
55.0	37.0	19.2	2.81	1.63	SANDY SILT to CLAYEY SILT
55.5	37.1	19.1	2.62	1.70	SANDY SILT to CLAYEY SILT
56.0	41.5	21.2	2.79	1.99	SANDY SILT to CLAYEY SILT
56.5	33.3	16.9	3.22	2.68	SANDY SILT to CLAYEY SILT
57.0	31.6	15.9	3.09	3.32	SANDY SILT to CLAYEY SILT
57.5	37.9	18.9	3.04	4.61	SANDY SILT to CLAYEY SILT
58.0	73.2	36.3	4.90	9.36	*SANDY CLAY to SILTY CLAY
58.5	71.1	35.0	5.92	20.52	*SANDY CLAY to SILTY CLAY
59.0	98.5	48.1	5.00	30.31	*SANDY CLAY to SILTY CLAY
59.5	149.6	72.6	2.51	19.42	SILTY SAND to SANDY SILT
60.0	93.6	45.0	4.26	11.70	*SANDY CLAY to SILTY CLAY
60.5	99.6	47.6	4.07	10.81	*SANDY CLAY to SILTY CLAY
61.0	47.3	22.4	3.64	12.49	CLAYEY SILT to SILTY CLAY
61.5	67.4	31.7	4.18	22.03	CLAYEY SILT to SILTY CLAY
62.0	159.4	74.5	2.77	24.71	SILTY SAND to SANDY SILT
62.5	223.5	103.6	2.17	23.03	SILTY SAND to SANDY SILT
63.0	265.7	122.3	2.29	11.26	SILTY SAND to SANDY SILT
63.5	258.3	118.0	1.95	8.50	SILTY SAND to SANDY SILT
64.0	307.8	139.6	2.23	7.97	SILTY SAND to SANDY SILT
64.5	264.0	118.8	2.30	6.47	SILTY SAND to SANDY SILT
65.0	213.4	95.3	1.94	5.23	SILTY SAND to SANDY SILT
65.5	209.6	93.3	1.62	4.56	SILTY SAND to SANDY SILT
66.0	197.1	87.5	1.86	2.76	SILTY SAND to SANDY SILT
66.5	214.4	94.8	3.05	6.62	SANDY SILT to CLAYEY SILT
67.0	252.9	111.5	1.85	9.22	SILTY SAND to SANDY SILT
67.5	246.3	108.3	1.84	6.58	SILTY SAND to SANDY SILT
68.0	209.3	91.7	2.18	5.13	SILTY SAND to SANDY SILT
68.5	130.5	57.0	4.99	3.86	*SANDY CLAY to SILTY CLAY
69.0	141.5	61.6	3.78	6.66	*CLAYEY SAND to SANDY CLAY
69.5	214.5	93.1	2.95	12.65	SANDY SILT to CLAYEY SILT
70.0	117.9	51.0	5.48	8.04	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0008

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	81.0	34.9	5.34	9.69	*SANDY CLAY to SILTY CLAY
71.0	77.8	33.4	5.69	20.77	*SANDY CLAY to SILTY CLAY
71.5	77.1	33.0	6.47	29.34	*SANDY CLAY to SILTY CLAY
72.0	120.1	51.3	5.01	32.87	*SANDY CLAY to SILTY CLAY
72.5	79.4	33.8	5.20	14.86	*SANDY CLAY to SILTY CLAY
73.0	97.5	41.3	5.09	33.40	*SANDY CLAY to SILTY CLAY
73.5	185.6	78.5	2.99	25.19	SANDY SILT to CLAYEY SILT
74.0	159.9	67.4	3.31	25.74	SANDY SILT to CLAYEY SILT
74.5	174.0	73.1	2.30	22.60	SILTY SAND to SANDY SILT
75.0	181.9	76.2	2.10	12.04	SILTY SAND to SANDY SILT
75.5	132.1	55.2	4.05	11.61	*CLAYEY SAND to SANDY CLAY
76.0	315.0	131.1	1.88	26.97	SILTY SAND to SANDY SILT
76.5	362.8	150.5	2.40	11.53	SILTY SAND to SANDY SILT
77.0	332.7	137.5	2.45	8.80	SILTY SAND to SANDY SILT
77.5	321.4	132.4	2.09	7.54	SILTY SAND to SANDY SILT
78.0	203.9	83.7	3.07	5.21	SANDY SILT to CLAYEY SILT
78.5	176.5	72.3	2.48	6.87	SILTY SAND to SANDY SILT
79.0	165.4	67.5	3.60	7.30	*CLAYEY SAND to SANDY CLAY
79.5	229.4	93.3	2.23	11.57	SILTY SAND to SANDY SILT
80.0	173.6	70.4	3.61	15.44	*CLAYEY SAND to SANDY CLAY
80.5	261.1	105.5	2.30	28.66	SILTY SAND to SANDY SILT
81.0	143.7	57.9	5.53	8.39	*SANDY CLAY to SILTY CLAY
81.5	161.5	64.8	4.64	14.84	*SANDY CLAY to SILTY CLAY
82.0	124.9	50.0	5.89	15.96	*SANDY CLAY to SILTY CLAY
82.5	357.3	142.9	2.08	27.35	SILTY SAND to SANDY SILT
83.0	390.7	156.3	2.04	6.43	SILTY SAND to SANDY SILT
83.5	333.2	133.3	2.02	5.85	SILTY SAND to SANDY SILT
84.0	320.6	128.2	1.83	5.83	SILTY SAND to SANDY SILT
84.5	291.3	116.5	1.54	5.11	SAND to SILTY SAND
85.0	314.6	125.9	1.18	4.70	SAND to SILTY SAND
85.5	319.5	127.8	1.36	1.52	SAND to SILTY SAND
86.0	305.6	122.2	1.20	1.89	SAND to SILTY SAND
86.5	221.4	88.6	3.23	2.34	*CLAYEY SAND to SANDY CLAY
87.0	315.1	126.0	2.15	4.81	SILTY SAND to SANDY SILT
87.5	272.9	109.2	2.07	4.34	SILTY SAND to SANDY SILT
88.0	321.8	128.7	1.76	9.31	SILTY SAND to SANDY SILT
88.5	345.3	138.1	1.58	7.54	SAND to SILTY SAND
89.0	310.8	124.3	1.37	6.33	SAND to SILTY SAND
89.5	331.3	132.5	1.35	5.58	SAND to SILTY SAND
90.0	324.0	129.6	1.45	4.61	SAND to SILTY SAND
90.5	258.8	103.5	2.11	4.40	SILTY SAND to SANDY SILT
91.0	146.8	58.7	3.83	3.51	*CLAYEY SAND to SANDY CLAY
91.5	127.0	50.8	5.02	5.91	*SANDY CLAY to SILTY CLAY
92.0	139.1	55.6	5.78	14.60	*SANDY CLAY to SILTY CLAY
92.5	349.4	139.7	1.96	33.77	SILTY SAND to SANDY SILT
93.0	468.8	187.5	2.45	9.48	*SILTY SAND to CLAYEY SAND
93.5	461.0	184.4	2.92	9.46	*SILTY SAND to CLAYEY SAND
94.0	420.6	168.2	2.28	6.26	SILTY SAND to SANDY SILT
94.5	211.3	84.5	4.17	4.32	*CLAYEY SAND to SANDY CLAY
95.0	107.0	42.8	4.38	4.58	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0008

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
95.5	65.1	26.0	3.29	21.85	SANDY SILT to CLAYEY SILT
96.0	54.2	21.7	2.45	35.90	SANDY SILT to CLAYEY SILT
96.5	135.8	54.3	5.78	35.57	*SANDY CLAY to SILTY CLAY
97.0	68.8	27.5	3.90	35.98	CLAYEY SILT to SILTY CLAY
97.5	45.4	18.2	2.80	35.13	SANDY SILT to CLAYEY SILT
98.0	28.8	11.5	2.08	23.19	SANDY SILT to CLAYEY SILT
98.5	26.4	10.5	1.65	22.00	SANDY SILT to CLAYEY SILT
99.0	25.3	10.1	1.77	22.05	SANDY SILT to CLAYEY SILT
99.5	25.6	10.3	2.09	22.52	SANDY SILT to CLAYEY SILT
100.0	24.9	10.0	2.40	23.46	SANDY SILT to CLAYEY SILT
100.5	23.9	9.5	2.01	23.43	SANDY SILT to CLAYEY SILT
101.0	24.4	9.8	1.89	24.46	SANDY SILT to CLAYEY SILT
101.5	53.9	21.6	1.97	34.78	SANDY SILT to CLAYEY SILT
102.0	79.7	31.9	3.38	33.76	SANDY SILT to CLAYEY SILT
102.5	314.2	125.7	1.03	32.41	SAND to SILTY SAND
103.0	485.3	194.1	1.27	17.92	SAND to SILTY SAND
103.5	581.0	232.4	1.32	11.06	SAND to SILTY SAND
104.0	520.9	208.4	1.63	9.80	SAND to SILTY SAND
104.5	447.9	179.2	1.36	8.29	SAND to SILTY SAND
105.0	374.1	149.6	1.36	6.37	SAND to SILTY SAND
105.5	405.3	162.1	1.10	6.07	SAND to SILTY SAND
106.0	387.0	154.8	1.37	5.28	SAND to SILTY SAND
106.5	374.0	149.6	1.61	4.77	SAND to SILTY SAND
107.0	369.1	147.6	1.58	3.56	SAND to SILTY SAND
107.5	388.4	155.4	1.49	3.68	SAND to SILTY SAND
108.0	414.6	165.8	1.92	3.87	SILTY SAND to SANDY SILT
108.5	353.6	141.4	2.05	3.46	SILTY SAND to SANDY SILT
109.0	234.6	93.8	3.32	7.30	*CLAYEY SAND to SANDY CLAY
109.5	312.5	125.0	1.38	10.01	SAND to SILTY SAND
110.0	336.4	134.6	1.42	4.60	SAND to SILTY SAND
110.5	334.7	133.9	1.50	4.07	SAND to SILTY SAND
111.0	319.0	127.6	1.23	3.72	SAND to SILTY SAND
111.5	342.6	137.0	.71	3.68	SAND to SILTY SAND
112.0	289.7	115.9	2.05	3.13	SILTY SAND to SANDY SILT
112.5	311.6	124.7	2.13	7.06	SILTY SAND to SANDY SILT
113.0	354.3	141.7	1.76	7.16	SAND to SILTY SAND
113.5	350.6	140.3	1.43	4.57	SAND to SILTY SAND
114.0	422.3	168.9	1.31	5.28	SAND to SILTY SAND
114.5	355.6	142.2	1.30	4.51	SAND to SILTY SAND
115.0	327.7	131.1	1.26	4.16	SAND to SILTY SAND
115.5	328.1	131.3	1.12	3.76	SAND to SILTY SAND
116.0	311.4	124.6	1.30	3.50	SAND to SILTY SAND
116.5	288.3	115.3	.98	3.11	SAND to SILTY SAND
117.0	311.8	124.7	1.13	2.63	SAND to SILTY SAND
117.5	338.7	135.5	1.42	2.71	SAND to SILTY SAND
118.0	339.3	135.7	1.34	2.72	SAND to SILTY SAND
118.5	349.3	139.7	1.39	2.78	SAND to SILTY SAND
119.0	378.1	151.2	1.46	3.00	SAND to SILTY SAND
119.5	347.8	139.1	1.44	2.94	SAND to SILTY SAND
120.0	372.2	148.9	1.44	2.50	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0008

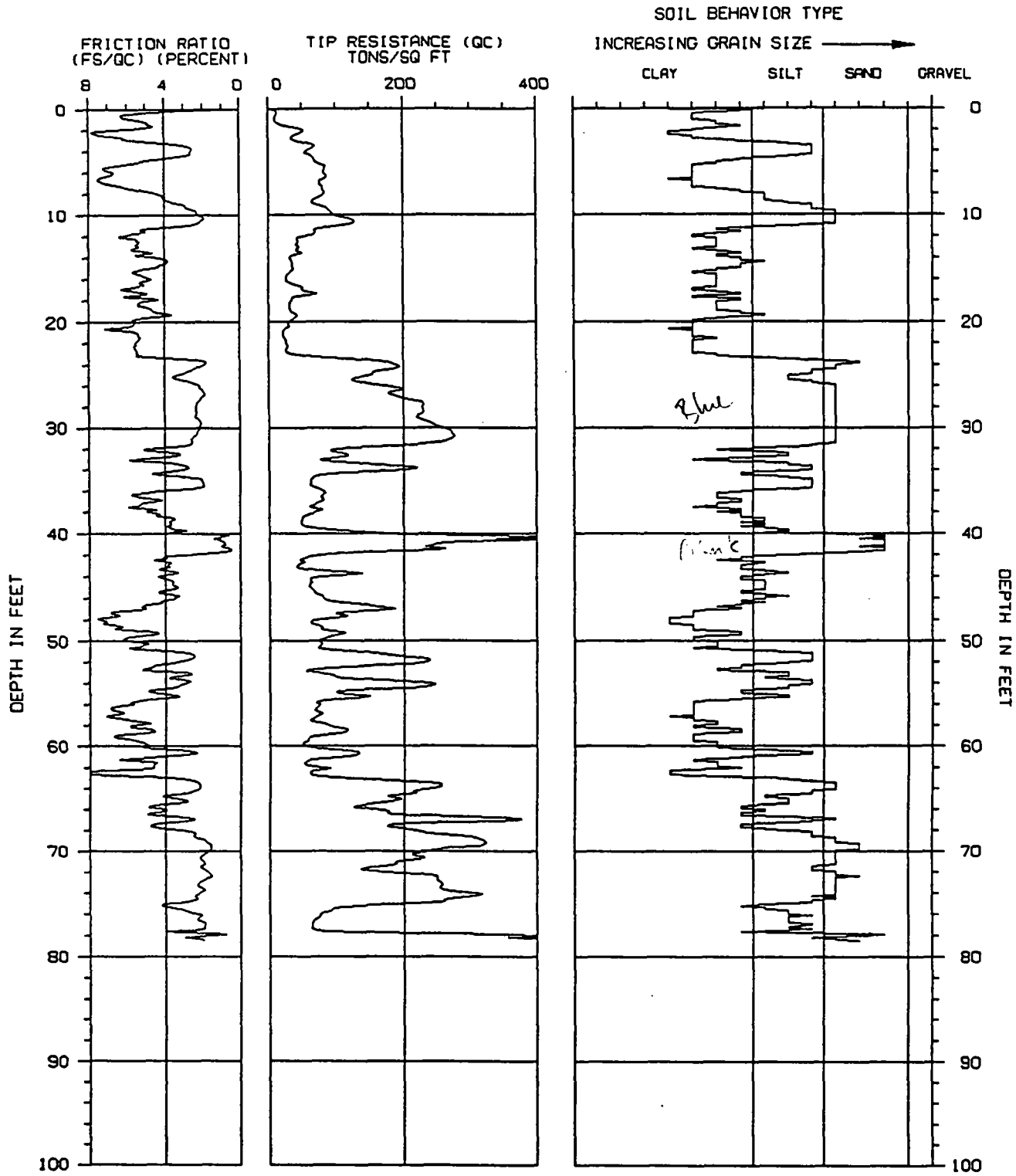
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
120.5	320.4	128.2	1.38	2.61	SAND to SILTY SAND
121.0	299.8	119.9	1.39	2.56	SAND to SILTY SAND
121.5	321.5	128.6	1.47	2.61	SAND to SILTY SAND
122.0	306.9	122.8	2.09	6.55	SILTY SAND to SANDY SILT
122.5	258.0	103.2	1.39	4.40	SAND to SILTY SAND
123.0	249.1	99.7	1.50	3.70	SAND to SILTY SAND
123.5	250.3	100.1	1.22	3.59	SAND to SILTY SAND
124.0	292.2	116.9	1.18	3.07	SAND to SILTY SAND
124.5	270.9	108.4	1.14	2.90	SAND to SILTY SAND
125.0	273.3	109.3	1.18	2.89	SAND to SILTY SAND
125.5	297.8	119.1	1.70	2.96	SAND to SILTY SAND
126.0	279.4	111.7	1.42	3.15	SAND to SILTY SAND
126.5	273.6	109.4	1.07	3.00	SAND to SILTY SAND
127.0	280.3	112.1	1.67	2.72	SILTY SAND to SANDY SILT
127.5	250.9	100.4	1.30	2.61	SAND to SILTY SAND
128.0	279.2	111.7	2.06	3.02	SILTY SAND to SANDY SILT
128.5	289.0	115.6	1.96	3.88	SILTY SAND to SANDY SILT
129.0	279.0	111.6	1.37	4.12	SAND to SILTY SAND
129.5	257.0	102.8	1.56	3.63	SAND to SILTY SAND
130.0	316.1	126.4	1.34	3.80	SAND to SILTY SAND
130.5	330.9	132.4	1.86	3.31	SILTY SAND to SANDY SILT
131.0	317.4	126.9	1.78	3.47	SILTY SAND to SANDY SILT
131.5	321.4	128.6	2.21	3.98	SILTY SAND to SANDY SILT
132.0	311.1	124.4	1.96	4.54	SILTY SAND to SANDY SILT
132.5	207.4	83.0	3.15	3.68	SANDY SILT to CLAYEY SILT
133.0	284.1	113.6	2.55	24.27	SILTY SAND to SANDY SILT
133.5	286.3	114.5	1.59	10.39	SAND to SILTY SAND
134.0	301.6	120.6	1.92	5.99	SILTY SAND to SANDY SILT
134.5	299.9	120.0	1.67	6.64	SAND to SILTY SAND
135.0	277.9	111.2	1.85	5.53	SILTY SAND to SANDY SILT
135.5	284.3	113.7	1.82	5.64	SILTY SAND to SANDY SILT
136.0	272.7	109.1	1.70	5.18	SILTY SAND to SANDY SILT
136.5	259.3	103.7	1.36	4.64	SAND to SILTY SAND
137.0	264.1	105.6	1.48	3.70	SAND to SILTY SAND
137.5	260.7	104.3	1.74	3.64	SILTY SAND to SANDY SILT
138.0	134.8	53.9	6.32	9.09	*SANDY CLAY to SILTY CLAY
138.5	240.8	96.3	2.72	35.84	SILTY SAND to SANDY SILT
139.0	266.8	106.7	1.89	11.06	SILTY SAND to SANDY SILT
139.5	302.7	121.1	2.21	8.15	SILTY SAND to SANDY SILT
140.0	155.5	62.2	3.24	4.71	SANDY SILT to CLAYEY SILT
140.5	50.0	20.0	5.60	3.30	SILTY CLAY TO CLAY
141.0	37.5	15.0	2.22	10.70	SANDY SILT to CLAYEY SILT
141.5	37.1	14.9	2.09	22.56	SANDY SILT to CLAYEY SILT
142.0	38.0	15.2	2.19	27.53	SANDY SILT to CLAYEY SILT
142.5	36.8	14.7	2.30	28.84	SANDY SILT to CLAYEY SILT
143.0	36.3	14.5	2.19	29.68	SANDY SILT to CLAYEY SILT
143.5	141.4	56.5	1.77	35.07	SILTY SAND to SANDY SILT
144.0	143.3	57.3	3.48	15.55	SANDY SILT to CLAYEY SILT
144.5	255.4	102.1	2.21	35.66	SILTY SAND to SANDY SILT
145.0	157.5	63.0	2.82	9.00	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0008

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
145.5	62.5	25.0	2.51	25.27	SANDY SILT to CLAYEY SILT
146.0	38.6	15.4	2.24	31.01	SANDY SILT to CLAYEY SILT
146.5	56.1	22.4	2.50	32.58	SANDY SILT to CLAYEY SILT
147.0	151.6	60.6	2.87	18.43	SANDY SILT to CLAYEY SILT
147.5	167.9	67.2	3.15	25.81	SANDY SILT to CLAYEY SILT
148.0	212.3	84.9	1.81	16.11	SILTY SAND to SANDY SILT
148.5	200.9	80.4	2.64	22.98	SILTY SAND to SANDY SILT
149.0	136.6	54.6	3.30	12.00	SANDY SILT to CLAYEY SILT
149.5	148.2	59.3	2.00	24.39	SILTY SAND to SANDY SILT
150.0	152.4	61.0	2.84	6.88	SANDY SILT to CLAYEY SILT
150.5	237.1	94.8	1.94	36.04	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPL0009

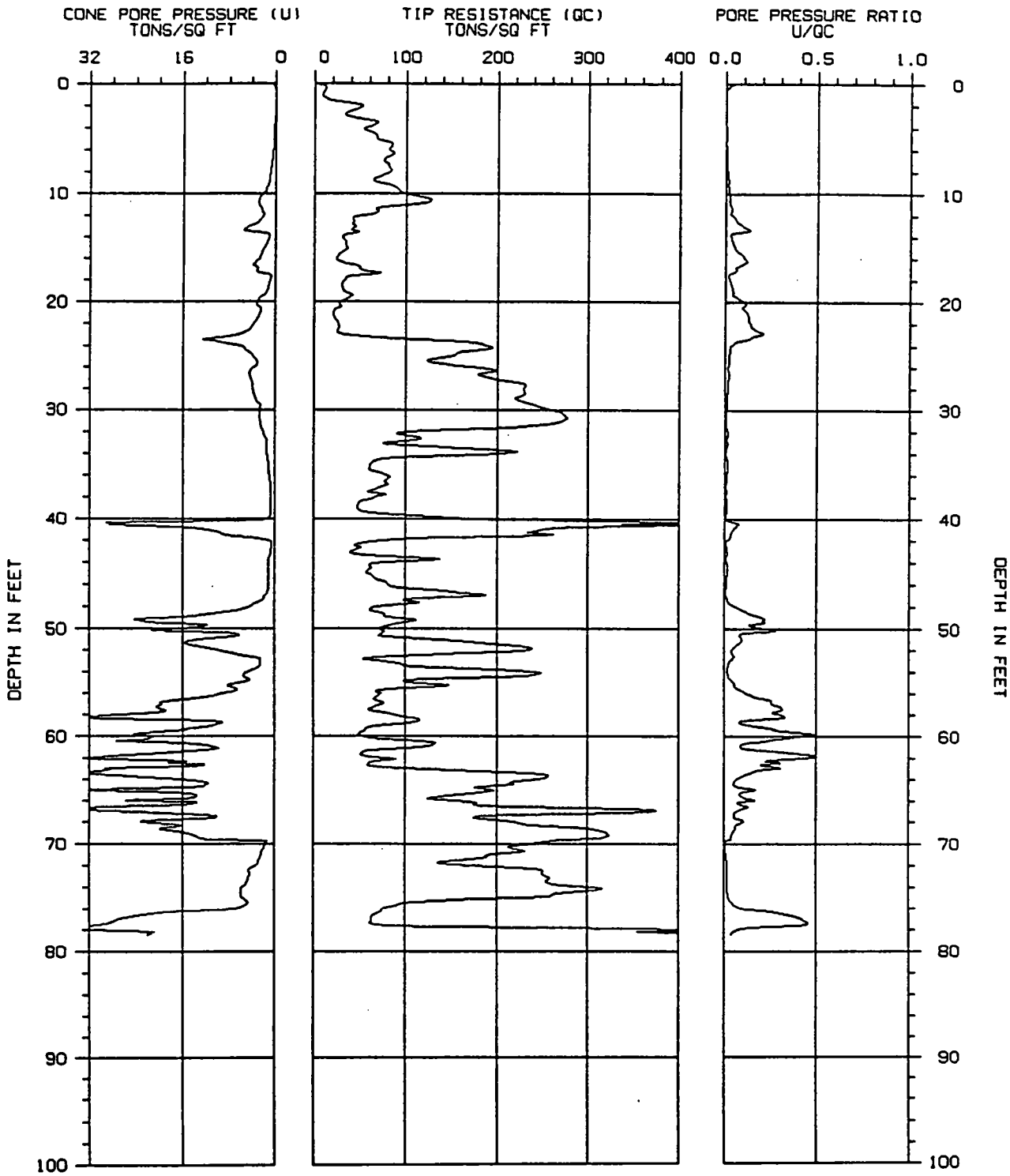
PROJECT NAME : D&M/HYDROGEO.INVEST.

LOCATION : CARSON

PROJECT NUMBER : 93-380-01104

DATE : 12-09-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPL0009

PROJECT NAME : D&M/HYDROGEO.INVEST.

LOCATION : CARSON

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THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPL0009
PROJECT : D&M/HYDROGEO.INVEST.
LOCATION : CARSON
DATE : 12-09-1992

PROJECT NO : 93-380-01104
INSTRUMENT : F15CKE098
SYSTEM : C4/R4/I4/L1
OPERATOR : EC/DH

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	12.4	31.7	5.96	.13	*SANDY CLAY to SILTY CLAY
1.0	9.4	21.3	5.71	-.25	SILTY CLAY TO CLAY
1.5	18.6	38.8	4.81	-.20	*SANDY CLAY to SILTY CLAY
2.0	52.2	102.2	6.73	.05	*SANDY CLAY to SILTY CLAY
2.5	40.3	75.1	7.39	.08	*SANDY CLAY to SILTY CLAY
3.0	37.1	66.1	5.76	.09	*SANDY CLAY to SILTY CLAY
3.5	68.7	117.9	2.88	.23	*SILTY SAND to CLAYEY SAND
4.0	55.7	92.4	2.61	.29	SILTY SAND to SANDY SILT
4.5	64.5	103.7	3.30	.32	*CLAYEY SAND to SANDY CLAY
5.0	69.6	108.7	5.40	.34	*SANDY CLAY to SILTY CLAY
5.5	84.4	128.2	7.06	.39	*SANDY CLAY to SILTY CLAY
6.0	81.9	121.3	6.65	.45	*SANDY CLAY to SILTY CLAY
6.5	85.1	123.1	7.37	.57	*SANDY CLAY to SILTY CLAY
7.0	76.4	108.0	6.99	.65	*SANDY CLAY to SILTY CLAY
7.5	81.3	112.5	5.75	.78	*SANDY CLAY to SILTY CLAY
8.0	82.1	111.4	4.43	.90	*CLAYEY SAND to SANDY CLAY
8.5	70.8	94.2	4.05	1.01	*CLAYEY SAND to SANDY CLAY
9.0	73.8	96.3	2.93	1.17	SILTY SAND to SANDY SILT
9.5	89.9	115.3	2.47	1.59	SILTY SAND to SANDY SILT
10.0	97.2	122.5	2.25	2.16	SILTY SAND to SANDY SILT
10.5	126.2	156.3	2.00	2.88	SILTY SAND to SANDY SILT
11.0	100.4	122.3	3.15	2.75	*CLAYEY SAND to SANDY CLAY
11.5	69.0	82.8	5.04	2.28	*SANDY CLAY to SILTY CLAY
12.0	52.3	61.7	6.39	2.06	*SANDY CLAY to SILTY CLAY
12.5	43.2	50.2	5.33	2.76	*SANDY CLAY to SILTY CLAY
13.0	45.8	52.4	5.44	4.71	*SANDY CLAY to SILTY CLAY
13.5	49.0	55.3	4.67	3.59	*SANDY CLAY to SILTY CLAY
14.0	31.1	34.7	4.32	1.06	CLAYEY SILT to SILTY CLAY
14.5	34.8	38.3	3.96	1.45	CLAYEY SILT to SILTY CLAY
15.0	36.9	40.0	4.96	1.97	*SANDY CLAY to SILTY CLAY
15.5	28.7	30.7	5.37	2.38	*SANDY CLAY to SILTY CLAY
16.0	25.3	26.7	4.70	2.73	CLAYEY SILT to SILTY CLAY
16.5	42.5	44.3	5.08	3.82	*SANDY CLAY to SILTY CLAY
17.0	51.0	52.5	5.93	3.13	*SANDY CLAY to SILTY CLAY
17.5	57.2	58.1	5.49	.95	*SANDY CLAY to SILTY CLAY
18.0	34.3	34.5	4.59	.90	CLAYEY SILT to SILTY CLAY
18.5	30.8	30.6	5.13	1.16	*SANDY CLAY to SILTY CLAY
19.0	32.9	32.3	4.61	1.46	CLAYEY SILT to SILTY CLAY
19.5	40.7	39.5	4.49	2.35	*SANDY CLAY to SILTY CLAY
20.0	29.9	28.6	5.63	3.08	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0009

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	27.5	26.1	6.56	2.52	*SANDY CLAY to SILTY CLAY
21.0	21.2	19.8	5.48	2.62	SILTY CLAY TO CLAY
21.5	22.9	21.3	5.30	3.03	CLAYEY SILT to SILTY CLAY
22.0	26.6	24.4	5.55	3.67	SILTY CLAY TO CLAY
22.5	26.6	24.1	5.53	4.38	SILTY CLAY TO CLAY
23.0	33.6	30.2	5.38	6.32	*SANDY CLAY to SILTY CLAY
23.5	114.8	102.0	3.11	12.65	*CLAYEY SAND to SANDY CLAY
24.0	186.6	164.1	1.95	5.96	SILTY SAND to SANDY SILT
24.5	173.7	151.2	2.59	4.89	*SILTY SAND to CLAYEY SAND
25.0	152.8	131.7	3.33	3.83	*CLAYEY SAND to SANDY CLAY
25.5	123.7	105.5	3.15	3.13	*CLAYEY SAND to SANDY CLAY
26.0	170.2	143.7	2.18	3.54	SILTY SAND to SANDY SILT
26.5	192.6	161.1	1.99	4.35	SILTY SAND to SANDY SILT
27.0	188.0	155.7	1.95	4.28	SILTY SAND to SANDY SILT
27.5	219.6	180.1	2.20	3.96	SILTY SAND to SANDY SILT
28.0	228.3	185.5	2.34	3.87	SILTY SAND to SANDY SILT
28.5	230.8	185.7	2.31	3.64	SILTY SAND to SANDY SILT
29.0	218.9	174.6	2.39	3.36	SILTY SAND to SANDY SILT
29.5	236.4	186.7	2.13	2.60	SILTY SAND to SANDY SILT
30.0	259.3	202.9	2.19	2.61	SILTY SAND to SANDY SILT
30.5	273.1	211.8	2.30	2.62	*SILTY SAND to CLAYEY SAND
31.0	273.5	210.1	2.58	2.59	*SILTY SAND to CLAYEY SAND
31.5	239.2	182.1	2.60	2.45	*SILTY SAND to CLAYEY SAND
32.0	103.4	78.0	4.91	2.00	*SANDY CLAY to SILTY CLAY
32.5	112.6	84.2	3.19	1.72	SANDY SILT to CLAYEY SILT
33.0	85.1	63.1	5.11	1.40	*SANDY CLAY to SILTY CLAY
33.5	159.1	116.9	3.11	1.34	*CLAYEY SAND to SANDY CLAY
34.0	201.6	146.8	3.10	1.38	*SILTY SAND to CLAYEY SAND
34.5	77.4	55.8	4.29	1.20	*SANDY CLAY to SILTY CLAY
35.0	62.2	44.5	2.07	1.12	SILTY SAND to SANDY SILT
35.5	61.5	43.6	1.95	1.05	SILTY SAND to SANDY SILT
36.0	78.7	55.3	4.31	.96	*SANDY CLAY to SILTY CLAY
36.5	79.6	55.5	5.56	.82	*SANDY CLAY to SILTY CLAY
37.0	79.2	54.7	4.25	.75	*SANDY CLAY to SILTY CLAY
37.5	59.6	40.9	5.94	.71	*SANDY CLAY to SILTY CLAY
38.0	67.0	45.5	4.99	.68	*SANDY CLAY to SILTY CLAY
38.5	50.1	33.7	3.84	.69	CLAYEY SILT to SILTY CLAY
39.0	48.1	32.1	3.78	.66	CLAYEY SILT to SILTY CLAY
39.5	74.3	49.3	3.72	.69	SANDY SILT to CLAYEY SILT
40.0	166.9	109.8	2.69	1.30	SILTY SAND to SANDY SILT
40.5	337.5	220.1	1.46	27.05	SAND to SILTY SAND
41.0	244.1	157.9	.82	11.77	SAND to SILTY SAND
41.5	251.3	161.2	.51	8.49	SAND to SILTY SAND
42.0	75.8	48.3	3.00	1.02	SANDY SILT to CLAYEY SILT
42.5	45.2	28.5	4.61	.49	CLAYEY SILT to SILTY CLAY
43.0	40.7	25.5	3.83	.66	CLAYEY SILT to SILTY CLAY
43.5	103.5	64.3	3.62	.91	*CLAYEY SAND to SANDY CLAY
44.0	78.3	48.2	4.35	1.07	*SANDY CLAY to SILTY CLAY
44.5	63.2	38.6	3.61	1.05	SANDY SILT to CLAYEY SILT
45.0	61.0	37.0	3.34	1.02	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0009

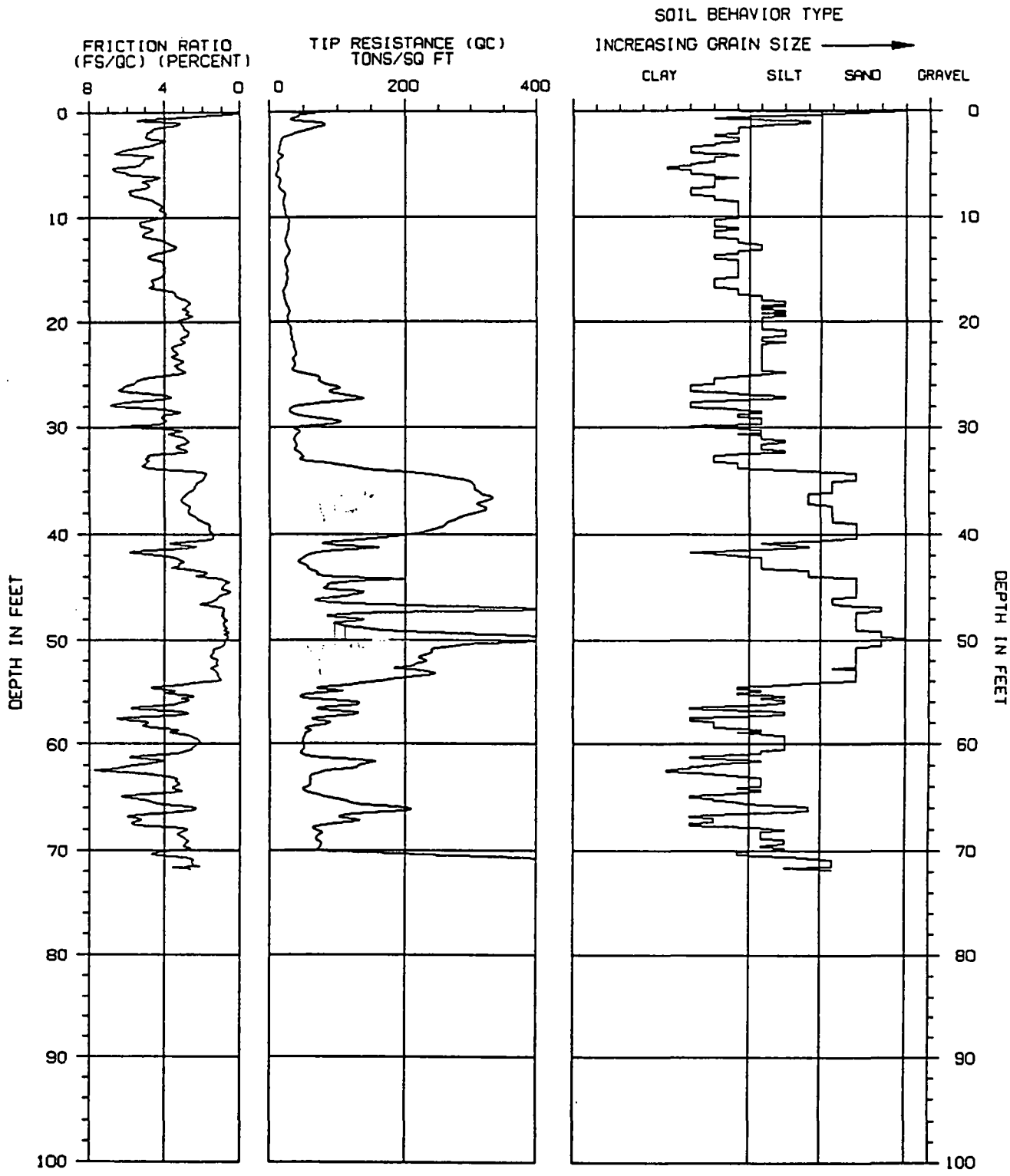
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	67.7	40.7	4.32	1.02	CLAYEY SILT to SILTY CLAY
46.0	81.0	48.4	3.47	.99	SANDY SILT to CLAYEY SILT
46.5	129.0	76.4	4.41	1.14	*SANDY CLAY to SILTY CLAY
47.0	177.2	104.1	5.40	1.84	*SANDY CLAY to SILTY CLAY
47.5	107.9	62.9	6.59	2.43	*SANDY CLAY to SILTY CLAY
48.0	68.7	39.7	7.48	4.23	*SANDY CLAY to SILTY CLAY
48.5	69.6	40.0	6.76	8.59	*SANDY CLAY to SILTY CLAY
49.0	92.7	52.8	5.20	20.44	*SANDY CLAY to SILTY CLAY
49.5	92.7	52.4	5.40	19.04	*SANDY CLAY to SILTY CLAY
50.0	71.8	40.3	6.05	16.10	*SANDY CLAY to SILTY CLAY
50.5	73.6	40.9	5.44	6.23	*SANDY CLAY to SILTY CLAY
51.0	138.8	76.7	3.29	13.46	SANDY SILT to CLAYEY SILT
51.5	208.9	114.4	2.51	14.71	SILTY SAND to SANDY SILT
52.0	236.0	128.3	3.38	10.13	*CLAYEY SAND to SANDY CLAY
52.5	88.4	47.7	4.82	4.93	*SANDY CLAY to SILTY CLAY
53.0	75.4	40.3	2.66	2.44	SANDY SILT to CLAYEY SILT
53.5	107.1	56.9	3.78	2.62	*CLAYEY SAND to SANDY CLAY
54.0	238.0	125.5	2.92	4.51	*SILTY SAND to CLAYEY SAND
54.5	161.1	84.3	4.29	4.95	*CLAYEY SAND to SANDY CLAY
55.0	114.2	59.3	3.87	6.46	*CLAYEY SAND to SANDY CLAY
55.5	100.6	51.8	4.81	6.92	*SANDY CLAY to SILTY CLAY
56.0	74.7	38.2	5.71	8.98	*SANDY CLAY to SILTY CLAY
56.5	65.4	33.2	6.85	15.51	*SANDY CLAY to SILTY CLAY
57.0	74.0	37.3	6.97	19.47	*SANDY CLAY to SILTY CLAY
57.5	60.2	30.1	5.76	19.31	*SANDY CLAY to SILTY CLAY
58.0	87.3	43.3	5.87	27.12	*SANDY CLAY to SILTY CLAY
58.5	115.3	56.8	4.61	11.17	*SANDY CLAY to SILTY CLAY
59.0	68.0	33.2	6.72	11.06	*SANDY CLAY to SILTY CLAY
59.5	56.3	27.3	5.51	17.79	*SANDY CLAY to SILTY CLAY
60.0	53.2	25.6	5.09	20.99	CLAYEY SILT to SILTY CLAY
60.5	128.8	61.5	2.57	20.97	SILTY SAND to SANDY SILT
61.0	114.6	54.3	4.28	10.28	*SANDY CLAY to SILTY CLAY
61.5	54.6	25.7	4.85	17.47	CLAYEY SILT to SILTY CLAY
62.0	79.9	37.3	4.66	34.64	*SANDY CLAY to SILTY CLAY
62.5	60.0	27.8	8.02	18.40	*SANDY CLAY to SILTY CLAY
63.0	96.2	44.3	3.93	29.30	SANDY SILT to CLAYEY SILT
63.5	234.0	106.9	2.31	33.49	SILTY SAND to SANDY SILT
64.0	244.8	111.0	2.19	16.35	SILTY SAND to SANDY SILT
64.5	218.5	98.3	2.93	11.87	SILTY SAND to SANDY SILT
65.0	191.3	85.4	3.62	33.05	*CLAYEY SAND to SANDY CLAY
65.5	159.7	71.1	3.47	13.61	*CLAYEY SAND to SANDY CLAY
66.0	154.7	68.6	4.06	25.73	*CLAYEY SAND to SANDY CLAY
66.5	182.7	80.8	4.94	20.83	*SANDY CLAY to SILTY CLAY
67.0	376.3	165.9	2.48	29.18	*SILTY SAND to CLAYEY SAND
67.5	183.6	80.7	4.64	10.18	*SANDY CLAY to SILTY CLAY
68.0	218.8	95.8	3.27	23.06	*CLAYEY SAND to SANDY CLAY
68.5	280.4	122.4	2.53	17.72	SILTY SAND to SANDY SILT
69.0	319.6	139.1	1.92	15.90	SILTY SAND to SANDY SILT
69.5	314.4	136.4	1.54	12.87	SAND to SILTY SAND
70.0	237.1	102.5	1.72	1.59	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0009

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	220.4	95.0	2.08	1.95	SILTY SAND to SANDY SILT
71.0	195.7	84.1	2.04	2.31	SILTY SAND to SANDY SILT
71.5	155.2	66.5	2.22	2.87	SILTY SAND to SANDY SILT
72.0	171.5	73.2	1.78	3.20	SILTY SAND to SANDY SILT
72.5	251.3	106.9	1.63	4.59	SILTY SAND to SANDY SILT
73.0	253.5	107.5	2.15	4.41	SILTY SAND to SANDY SILT
73.5	254.2	107.5	2.16	4.82	SILTY SAND to SANDY SILT
74.0	304.9	128.5	2.17	5.60	SILTY SAND to SANDY SILT
74.5	278.7	117.1	2.34	5.81	SILTY SAND to SANDY SILT
75.0	226.4	94.8	3.46	5.73	*CLAYEY SAND to SANDY CLAY
75.5	94.2	39.3	3.25	4.72	SANDY SILT to CLAYEY SILT
76.0	75.6	31.5	2.28	7.00	SANDY SILT to CLAYEY SILT
76.5	68.7	28.5	2.35	21.49	SANDY SILT to CLAYEY SILT
77.0	63.5	26.3	1.94	26.82	SILTY SAND to SANDY SILT
77.5	68.3	28.1	2.84	30.75	SANDY SILT to CLAYEY SILT
78.0	425.6	174.8	1.61	33.62	SAND to SILTY SAND
78.5	572.8	234.5	1.97	21.94	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPL0010A

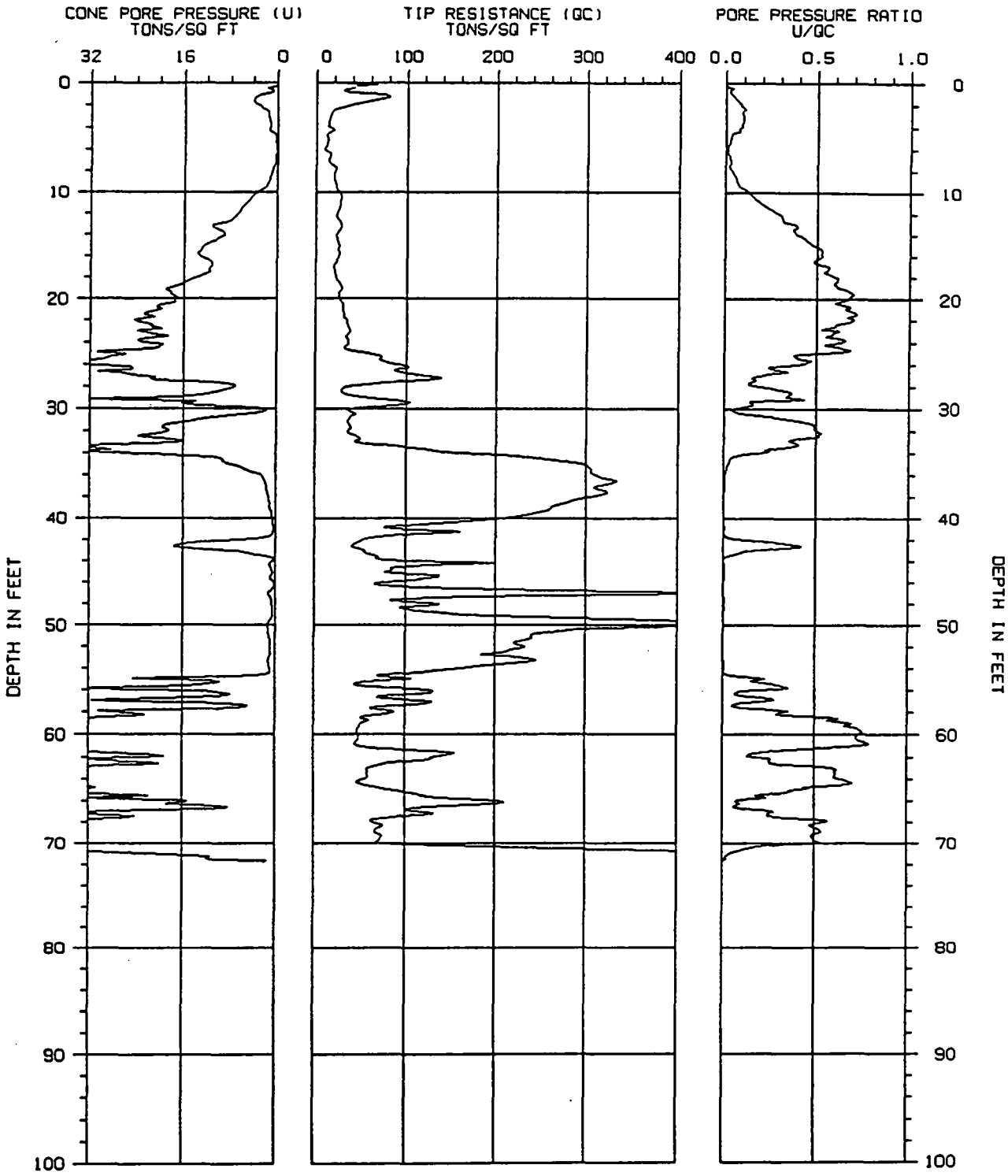
PROJECT NAME : D&M/HYDROGEO.INVEST.

LOCATION : CARSON

PROJECT NUMBER : 93-380-01104

DATE : 12-10-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPL0010A

PROJECT NAME : D&M/HYDROGEO.INVEST.

LOCATION : CARSON

PROJECT NUMBER : 93-380-01104

DATE : 12-10-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPL0010A
PROJECT : D&M/HYDROGEO.INVEST.
LOCATION : CARSON
DATE : 12-10-1992

PROJECT NO : 93-380-01104
INSTRUMENT : F15CKE098
SYSTEM : C4/R4/I4/L1
OPERATOR : EC/DH

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	41.6	106.4	2.90	1.68	SILTY SAND to SANDY SILT
1.0	56.1	126.9	3.55	1.58	*CLAYEY SAND to SANDY CLAY
1.5	66.0	137.4	4.51	4.12	*CLAYEY SAND to SANDY CLAY
2.0	38.3	75.1	4.95	3.24	*SANDY CLAY to SILTY CLAY
2.5	19.2	35.8	4.96	1.90	*SANDY CLAY to SILTY CLAY
3.0	15.5	27.6	4.38	1.52	CLAYEY SILT to SILTY CLAY
3.5	13.9	23.8	5.90	1.30	SILTY CLAY TO CLAY
4.0	14.8	24.6	6.16	1.24	*SANDY CLAY to SILTY CLAY
4.5	14.8	23.7	5.11	.63	CLAYEY SILT to SILTY CLAY
5.0	13.1	20.4	5.34	.37	SILTY CLAY TO CLAY
5.5	12.1	18.3	6.72	.22	SILTY CLAY TO CLAY
6.0	9.0	13.3	5.66	.14	SILTY CLAY TO CLAY
6.5	16.3	23.5	4.79	.33	CLAYEY SILT to SILTY CLAY
7.0	13.4	18.9	4.81	.41	CLAYEY SILT to SILTY CLAY
7.5	19.0	26.3	5.94	.49	*SANDY CLAY to SILTY CLAY
8.0	22.0	29.9	5.54	.85	*SANDY CLAY to SILTY CLAY
8.5	20.3	27.1	4.57	1.12	CLAYEY SILT to SILTY CLAY
9.0	21.7	28.3	4.08	1.45	CLAYEY SILT to SILTY CLAY
9.5	22.3	28.6	3.97	1.90	CLAYEY SILT to SILTY CLAY
10.0	26.0	32.8	3.98	3.29	CLAYEY SILT to SILTY CLAY
10.5	28.4	35.2	5.31	4.44	*SANDY CLAY to SILTY CLAY
11.0	27.5	33.5	4.68	5.37	CLAYEY SILT to SILTY CLAY
11.5	25.9	31.0	5.08	6.13	*SANDY CLAY to SILTY CLAY
12.0	23.4	27.6	4.59	6.65	CLAYEY SILT to SILTY CLAY
12.5	24.8	28.8	3.81	7.69	CLAYEY SILT to SILTY CLAY
13.0	28.4	32.5	3.57	10.77	SANDY SILT to CLAYEY SILT
13.5	26.8	30.3	4.59	9.85	CLAYEY SILT to SILTY CLAY
14.0	23.1	25.7	4.52	9.04	CLAYEY SILT to SILTY CLAY
14.5	24.0	26.3	4.04	10.65	CLAYEY SILT to SILTY CLAY
15.0	26.0	28.2	4.01	12.58	CLAYEY SILT to SILTY CLAY
15.5	25.0	26.8	4.08	13.18	CLAYEY SILT to SILTY CLAY
16.0	25.4	26.8	4.67	13.35	CLAYEY SILT to SILTY CLAY
16.5	23.7	24.7	4.67	11.41	CLAYEY SILT to SILTY CLAY
17.0	20.1	20.6	3.64	11.39	CLAYEY SILT to SILTY CLAY
17.5	21.3	21.6	3.38	11.50	SANDY SILT to CLAYEY SILT
18.0	22.5	22.6	2.78	13.62	SANDY SILT to CLAYEY SILT
18.5	26.9	26.7	2.83	15.95	SANDY SILT to CLAYEY SILT
19.0	29.3	28.7	2.71	18.56	SANDY SILT to CLAYEY SILT
19.5	26.2	25.4	2.60	18.18	SANDY SILT to CLAYEY SILT
20.0	25.7	24.7	3.24	17.45	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0010A

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	30.8	29.2	2.98	19.74	SANDY SILT to CLAYEY SILT
21.0	30.2	28.4	2.73	20.01	SANDY SILT to CLAYEY SILT
21.5	31.5	29.2	3.09	22.43	SANDY SILT to CLAYEY SILT
22.0	34.6	31.7	2.95	24.21	SANDY SILT to CLAYEY SILT
22.5	35.7	32.4	3.60	21.62	SANDY SILT to CLAYEY SILT
23.0	38.2	34.3	3.33	23.69	SANDY SILT to CLAYEY SILT
23.5	34.0	30.2	3.40	18.70	SANDY SILT to CLAYEY SILT
24.0	36.3	31.9	3.33	22.86	SANDY SILT to CLAYEY SILT
24.5	31.8	27.7	3.19	20.17	SANDY SILT to CLAYEY SILT
25.0	55.4	47.8	3.44	29.27	SANDY SILT to CLAYEY SILT
25.5	71.5	61.0	5.25	28.97	*SANDY CLAY to SILTY CLAY
26.0	90.0	76.0	6.00	35.62	*SANDY CLAY to SILTY CLAY
26.5	88.3	73.9	6.43	24.89	*SANDY CLAY to SILTY CLAY
27.0	113.4	94.0	3.96	24.86	*CLAYEY SAND to SANDY CLAY
27.5	118.8	97.4	4.80	20.70	*SANDY CLAY to SILTY CLAY
28.0	35.9	29.2	6.50	7.12	*SANDY CLAY to SILTY CLAY
28.5	28.8	23.2	3.42	10.30	SANDY SILT to CLAYEY SILT
29.0	51.0	40.7	4.05	17.02	CLAYEY SILT to SILTY CLAY
29.5	104.2	82.3	3.88	14.59	*CLAYEY SAND to SANDY CLAY
30.0	39.6	31.0	5.95	2.11	*SANDY CLAY to SILTY CLAY
30.5	44.4	34.4	3.27	5.86	SANDY SILT to CLAYEY SILT
31.0	37.0	28.4	3.07	13.24	SANDY SILT to CLAYEY SILT
31.5	38.1	29.0	2.74	18.70	SANDY SILT to CLAYEY SILT
32.0	36.2	27.3	3.24	18.40	SANDY SILT to CLAYEY SILT
32.5	45.7	34.2	3.83	23.57	CLAYEY SILT to SILTY CLAY
33.0	43.9	32.5	5.03	15.98	*SANDY CLAY to SILTY CLAY
33.5	104.5	76.7	5.08	34.04	*SANDY CLAY to SILTY CLAY
34.0	159.5	116.2	3.44	28.75	*CLAYEY SAND to SANDY CLAY
34.5	246.5	177.9	1.81	9.63	SAND to SILTY SAND
35.0	293.1	209.7	2.01	8.37	SAND to SILTY SAND
35.5	305.8	217.0	2.41	5.16	*SILTY SAND to CLAYEY SAND
36.0	310.9	218.7	2.63	2.50	*SILTY SAND to CLAYEY SAND
36.5	331.9	231.4	2.97	2.00	*SILTY SAND to CLAYEY SAND
37.0	316.5	218.9	3.07	1.66	*SILTY SAND to CLAYEY SAND
37.5	323.0	221.5	2.66	1.49	*SILTY SAND to CLAYEY SAND
38.0	305.9	207.9	2.68	1.29	*SILTY SAND to CLAYEY SAND
38.5	280.7	189.2	2.29	1.15	SILTY SAND to SANDY SILT
39.0	261.8	175.0	1.81	1.05	SAND to SILTY SAND
39.5	243.0	161.1	1.68	.68	SAND to SILTY SAND
40.0	208.2	136.9	1.49	.62	SAND to SILTY SAND
40.5	134.3	87.6	1.63	.50	SILTY SAND to SANDY SILT
41.0	101.2	65.5	2.98	.38	SANDY SILT to CLAYEY SILT
41.5	94.9	60.9	4.94	.65	*SANDY CLAY to SILTY CLAY
42.0	52.6	33.4	4.38	6.14	CLAYEY SILT to SILTY CLAY
42.5	43.0	27.1	3.20	16.72	SANDY SILT to CLAYEY SILT
43.0	55.5	34.7	3.39	6.59	SANDY SILT to CLAYEY SILT
43.5	68.4	42.5	1.93	1.81	SILTY SAND to SANDY SILT
44.0	101.9	62.8	2.12	.36	SILTY SAND to SANDY SILT
44.5	107.9	66.0	.63	.91	SAND to SILTY SAND
45.0	77.0	46.7	.99	.50	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0010A

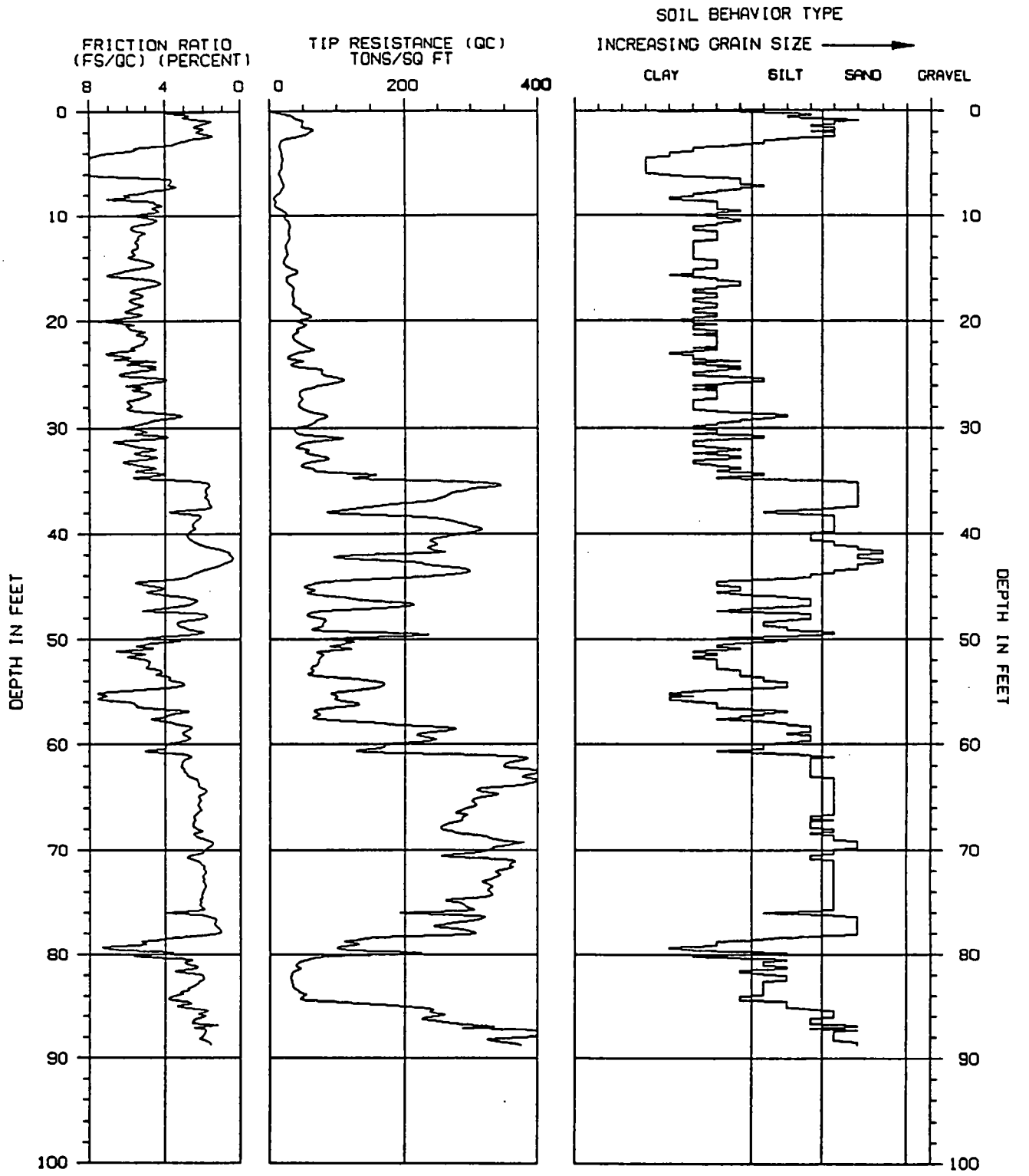
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	136.3	82.0	.59	.86	SAND to SILTY SAND
46.0	77.5	46.2	1.22	.30	SILTY SAND to SANDY SILT
46.5	116.2	68.8	1.92	.33	SILTY SAND to SANDY SILT
47.0	444.2	261.0	.91	1.24	SAND to SILTY SAND
47.5	108.5	63.3	.88	.79	SAND to SILTY SAND
48.0	137.8	79.7	.75	.62	SAND to SILTY SAND
48.5	101.1	58.0	.86	.51	SAND to SILTY SAND
49.0	167.5	95.4	.87	.53	SAND to SILTY SAND
49.5	382.9	216.3	.74	.91	SAND to SILTY SAND
50.0	518.6	290.7	.79	1.41	SAND to SILTY SAND
50.5	273.2	152.0	.90	1.22	SAND to SILTY SAND
51.0	240.1	132.5	1.46	1.05	SAND to SILTY SAND
51.5	225.6	123.6	1.54	.92	SAND to SILTY SAND
52.0	232.6	126.5	1.19	.90	SAND to SILTY SAND
52.5	206.2	111.3	1.28	.83	SAND to SILTY SAND
53.0	234.0	125.3	1.30	1.07	SAND to SILTY SAND
53.5	218.8	116.2	1.18	1.14	SAND to SILTY SAND
54.0	161.6	85.2	1.23	.97	SAND to SILTY SAND
54.5	76.0	39.8	4.51	1.87	*SANDY CLAY to SILTY CLAY
55.0	96.1	49.9	3.60	18.53	SANDY SILT to CLAYEY SILT
55.5	44.5	23.0	2.46	13.31	SANDY SILT to CLAYEY SILT
56.0	125.9	64.4	2.91	23.87	SANDY SILT to CLAYEY SILT
56.5	73.0	37.1	5.73	10.40	*SANDY CLAY to SILTY CLAY
57.0	130.2	65.6	2.78	27.11	SANDY SILT to CLAYEY SILT
57.5	71.9	35.9	5.84	4.90	*SANDY CLAY to SILTY CLAY
58.0	87.5	43.4	4.86	27.76	*SANDY CLAY to SILTY CLAY
58.5	51.7	25.5	4.03	32.51	CLAYEY SILT to SILTY CLAY
59.0	51.4	25.1	3.45	35.90	SANDY SILT to CLAYEY SILT
59.5	48.7	23.6	2.38	35.93	SANDY SILT to CLAYEY SILT
60.0	48.8	23.5	2.25	35.97	SANDY SILT to CLAYEY SILT
60.5	48.7	23.3	2.57	35.97	SANDY SILT to CLAYEY SILT
61.0	48.5	23.0	4.05	35.92	CLAYEY SILT to SILTY CLAY
61.5	126.5	59.5	4.51	35.25	*SANDY CLAY to SILTY CLAY
62.0	128.9	60.2	5.69	23.44	*SANDY CLAY to SILTY CLAY
62.5	83.2	38.6	7.73	21.84	*SANDY CLAY to SILTY CLAY
63.0	60.1	27.6	4.39	35.54	CLAYEY SILT to SILTY CLAY
63.5	58.5	26.7	3.43	35.97	SANDY SILT to CLAYEY SILT
64.0	55.1	25.0	3.48	35.58	SANDY SILT to CLAYEY SILT
64.5	52.5	23.6	3.12	35.79	SANDY SILT to CLAYEY SILT
65.0	80.5	36.0	6.29	33.76	*SANDY CLAY to SILTY CLAY
65.5	114.3	50.9	4.81	24.87	*SANDY CLAY to SILTY CLAY
66.0	202.4	89.8	2.38	15.09	SILTY SAND to SANDY SILT
66.5	147.4	65.2	3.82	10.17	*CLAYEY SAND to SANDY CLAY
67.0	108.7	47.9	5.57	29.13	*SANDY CLAY to SILTY CLAY
67.5	96.9	42.6	5.76	23.99	*SANDY CLAY to SILTY CLAY
68.0	64.6	28.3	2.80	35.90	SANDY SILT to CLAYEY SILT
68.5	72.7	31.7	3.30	35.97	SANDY SILT to CLAYEY SILT
69.0	67.3	29.3	2.87	35.97	SANDY SILT to CLAYEY SILT
69.5	73.0	31.7	3.01	35.97	SANDY SILT to CLAYEY SILT
70.0	71.8	31.1	3.25	35.97	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0010A

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	269.3	116.1	4.30	35.97	*CLAYEY SAND to SANDY CLAY
71.0	504.8	216.9	2.48	21.97	*SILTY SAND to CLAYEY SAND
71.5	657.7	281.7	2.17	11.35	*SILTY SAND to CLAYEY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 66.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPL0011

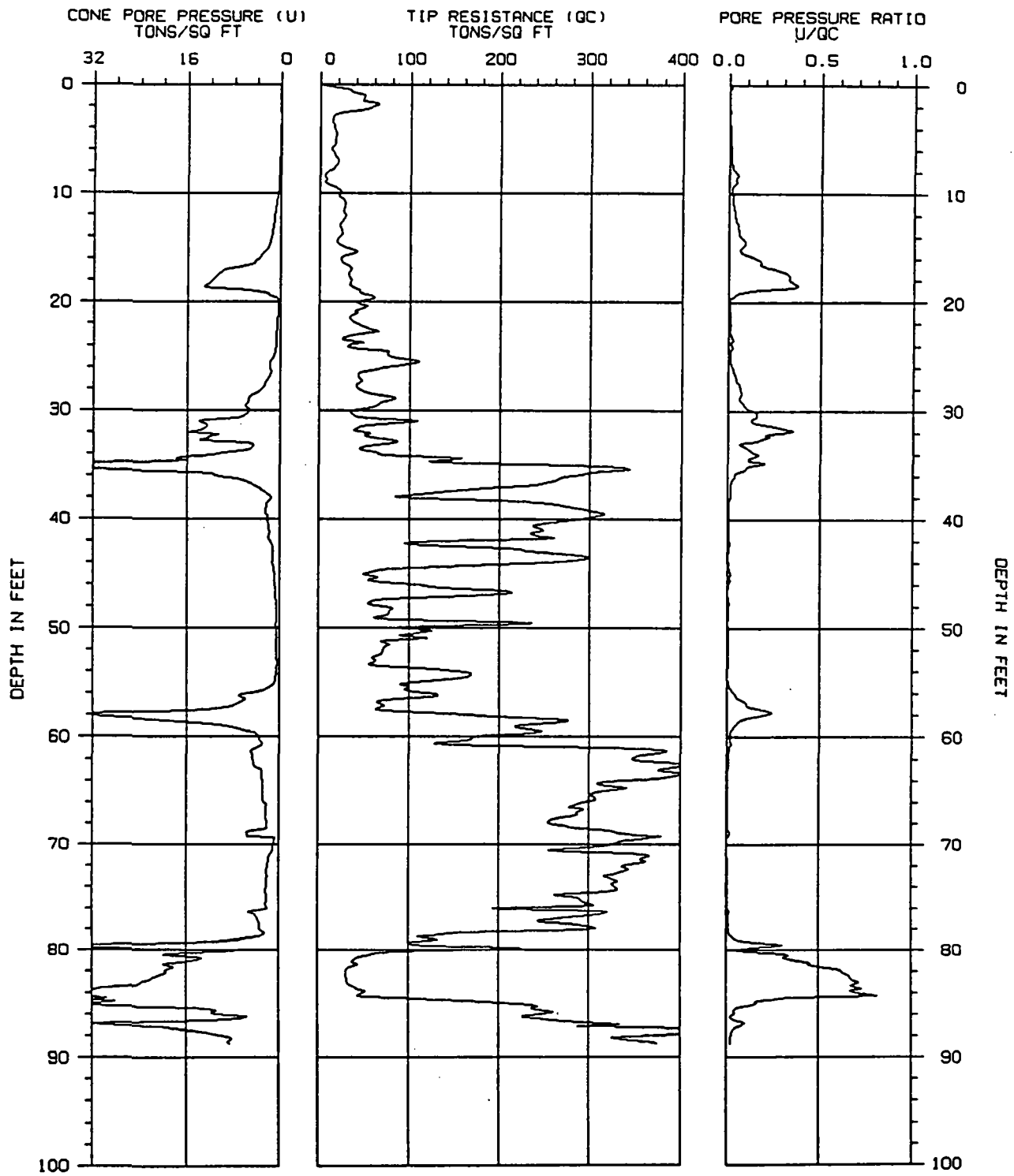
PROJECT NAME : D&M/HYDROGEO.INVEST.

LOCATION : CARSON

PROJECT NUMBER : 93-380-01104

DATE : 12-10-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPL0011

PROJECT NAME : D&M/HYDROGEO.INVEST.

LOCATION : CARSON

PROJECT NUMBER : 93-380-01104

DATE : 12-10-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPL0011
PROJECT : D&M/HYDROGEO.INVEST.
LOCATION : CARSON
DATE : 12-10-1992

PROJECT NO : 93-380-01104
INSTRUMENT : F15CKE098
SYSTEM : C4/R4/I4/L1
OPERATOR : EC/DH

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	33.8	86.5	2.80	.14	SILTY SAND to SANDY SILT
1.0	49.2	111.2	1.55	.20	SAND to SILTY SAND
1.5	47.4	98.7	2.45	.21	SILTY SAND to SANDY SILT
2.0	59.0	115.5	2.38	.23	SILTY SAND to SANDY SILT
2.5	35.4	65.8	1.80	.19	SILTY SAND to SANDY SILT
3.0	15.3	27.3	3.26	.04	SANDY SILT to CLAYEY SILT
3.5	14.0	23.9	5.64	.05	SILTY CLAY TO CLAY
4.0	16.4	27.2	6.93	.12	*SANDY CLAY to SILTY CLAY
4.5	18.0	29.0	8.29	.15	*SANDY CLAY to SILTY CLAY
5.0	17.4	27.2	9.27	.17	*SANDY CLAY to SILTY CLAY
5.5	16.8	25.5	8.50	.17	*SANDY CLAY to SILTY CLAY
6.0	12.9	19.1	8.60	.19	*SANDY CLAY to SILTY CLAY
6.5	16.4	23.7	3.82	.21	CLAYEY SILT to SILTY CLAY
7.0	20.4	28.9	3.86	.30	CLAYEY SILT to SILTY CLAY
7.5	17.1	23.7	4.21	.31	CLAYEY SILT to SILTY CLAY
8.0	9.4	12.8	6.26	.32	SILTY CLAY TO CLAY
8.5	6.4	8.5	6.56	.30	SILTY CLAY TO CLAY
9.0	6.8	8.8	4.15	.29	CLAYEY SILT to SILTY CLAY
9.5	19.1	24.5	4.38	.33	CLAYEY SILT to SILTY CLAY
10.0	23.0	29.0	5.62	.51	*SANDY CLAY to SILTY CLAY
10.5	24.8	30.8	4.42	.61	CLAYEY SILT to SILTY CLAY
11.0	28.6	34.9	5.75	.76	*SANDY CLAY to SILTY CLAY
11.5	27.1	32.5	5.42	.86	*SANDY CLAY to SILTY CLAY
12.0	28.8	34.1	5.42	1.00	*SANDY CLAY to SILTY CLAY
12.5	26.0	30.2	5.59	1.12	*SANDY CLAY to SILTY CLAY
13.0	22.9	26.3	5.45	1.21	*SANDY CLAY to SILTY CLAY
13.5	24.9	28.1	5.75	1.42	*SANDY CLAY to SILTY CLAY
14.0	22.7	25.3	5.95	1.57	*SANDY CLAY to SILTY CLAY
14.5	20.0	22.0	4.64	1.79	CLAYEY SILT to SILTY CLAY
15.0	30.8	33.4	5.51	2.16	*SANDY CLAY to SILTY CLAY
15.5	39.1	41.8	6.67	3.00	*SANDY CLAY to SILTY CLAY
16.0	23.9	25.2	5.35	3.66	CLAYEY SILT to SILTY CLAY
16.5	29.1	30.4	4.32	5.08	CLAYEY SILT to SILTY CLAY
17.0	35.3	36.3	5.62	9.49	*SANDY CLAY to SILTY CLAY
17.5	32.7	33.2	5.27	10.79	*SANDY CLAY to SILTY CLAY
18.0	35.3	35.5	5.89	11.76	*SANDY CLAY to SILTY CLAY
18.5	34.7	34.5	5.16	13.04	*SANDY CLAY to SILTY CLAY
19.0	45.0	44.1	6.03	4.41	*SANDY CLAY to SILTY CLAY
19.5	60.0	58.2	5.33	1.64	*SANDY CLAY to SILTY CLAY
20.0	41.9	40.2	7.31	.35	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0011

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	50.4	47.8	5.99	.42	*SANDY CLAY to SILTY CLAY
21.0	42.6	39.9	5.10	.43	*SANDY CLAY to SILTY CLAY
21.5	33.6	31.1	5.03	.44	*SANDY CLAY to SILTY CLAY
22.0	41.3	37.9	5.14	.49	*SANDY CLAY to SILTY CLAY
22.5	57.4	52.1	5.80	.57	*SANDY CLAY to SILTY CLAY
23.0	39.9	35.8	7.14	.68	*SANDY CLAY to SILTY CLAY
23.5	26.2	23.3	6.10	.72	*SANDY CLAY to SILTY CLAY
24.0	31.1	27.3	6.03	.72	*SANDY CLAY to SILTY CLAY
24.5	76.6	66.7	4.46	.97	*SANDY CLAY to SILTY CLAY
25.0	78.3	67.5	6.47	1.14	*SANDY CLAY to SILTY CLAY
25.5	109.9	93.8	3.91	1.66	*CLAYEY SAND to SANDY CLAY
26.0	71.0	60.0	6.06	1.84	*SANDY CLAY to SILTY CLAY
26.5	46.2	38.6	5.59	1.53	*SANDY CLAY to SILTY CLAY
27.0	43.9	36.4	4.96	1.95	*SANDY CLAY to SILTY CLAY
27.5	45.0	36.9	6.05	2.54	*SANDY CLAY to SILTY CLAY
28.0	43.9	35.7	5.81	3.11	*SANDY CLAY to SILTY CLAY
28.5	60.6	48.7	4.95	4.34	*SANDY CLAY to SILTY CLAY
29.0	83.6	66.7	3.21	5.43	SANDY SILT to CLAYEY SILT
29.5	67.1	53.0	4.80	5.82	*SANDY CLAY to SILTY CLAY
30.0	37.9	29.7	6.33	5.32	*SANDY CLAY to SILTY CLAY
30.5	39.4	30.6	5.43	6.26	*SANDY CLAY to SILTY CLAY
31.0	108.6	83.4	4.14	13.93	*CLAYEY SAND to SANDY CLAY
31.5	47.5	36.2	6.31	12.53	*SANDY CLAY to SILTY CLAY
32.0	54.3	41.0	4.48	15.61	*SANDY CLAY to SILTY CLAY
32.5	59.7	44.6	5.53	12.43	*SANDY CLAY to SILTY CLAY
33.0	85.0	63.0	5.11	5.80	*SANDY CLAY to SILTY CLAY
33.5	44.8	32.9	5.42	5.07	*SANDY CLAY to SILTY CLAY
34.0	64.5	47.0	5.48	10.81	*SANDY CLAY to SILTY CLAY
34.5	155.3	112.1	4.44	17.85	*CLAYEY SAND to SANDY CLAY
35.0	231.5	165.7	2.89	34.98	*SILTY SAND to CLAYEY SAND
35.5	333.3	236.4	1.70	27.56	SAND to SILTY SAND
36.0	282.2	198.5	1.92	11.10	SAND to SILTY SAND
36.5	260.4	181.6	1.91	6.04	SAND to SILTY SAND
37.0	225.9	156.2	1.70	4.19	SAND to SILTY SAND
37.5	132.8	91.1	1.66	2.53	SILTY SAND to SANDY SILT
38.0	87.6	59.5	3.67	1.48	SANDY SILT to CLAYEY SILT
38.5	242.8	163.7	2.21	2.13	SILTY SAND to SANDY SILT
39.0	282.1	188.6	2.51	2.38	*SILTY SAND to CLAYEY SAND
39.5	316.2	209.6	2.42	2.47	*SILTY SAND to CLAYEY SAND
40.0	288.7	189.8	2.79	2.14	*SILTY SAND to CLAYEY SAND
40.5	243.6	158.9	2.72	1.98	*SILTY SAND to CLAYEY SAND
41.0	248.9	161.0	2.19	1.86	SILTY SAND to SANDY SILT
41.5	239.7	153.8	1.10	1.87	SAND to SILTY SAND
42.0	132.7	84.5	.64	1.59	SAND to SILTY SAND
42.5	146.2	92.3	.51	1.18	SAND to SILTY SAND
43.0	247.1	154.7	1.20	1.16	SAND to SILTY SAND
43.5	297.8	185.0	2.07	1.29	SILTY SAND to SANDY SILT
44.0	251.6	155.0	2.69	1.25	*SILTY SAND to CLAYEY SAND
44.5	105.6	64.6	4.42	1.05	*SANDY CLAY to SILTY CLAY
45.0	49.3	29.9	4.39	.93	CLAYEY SILT to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0011

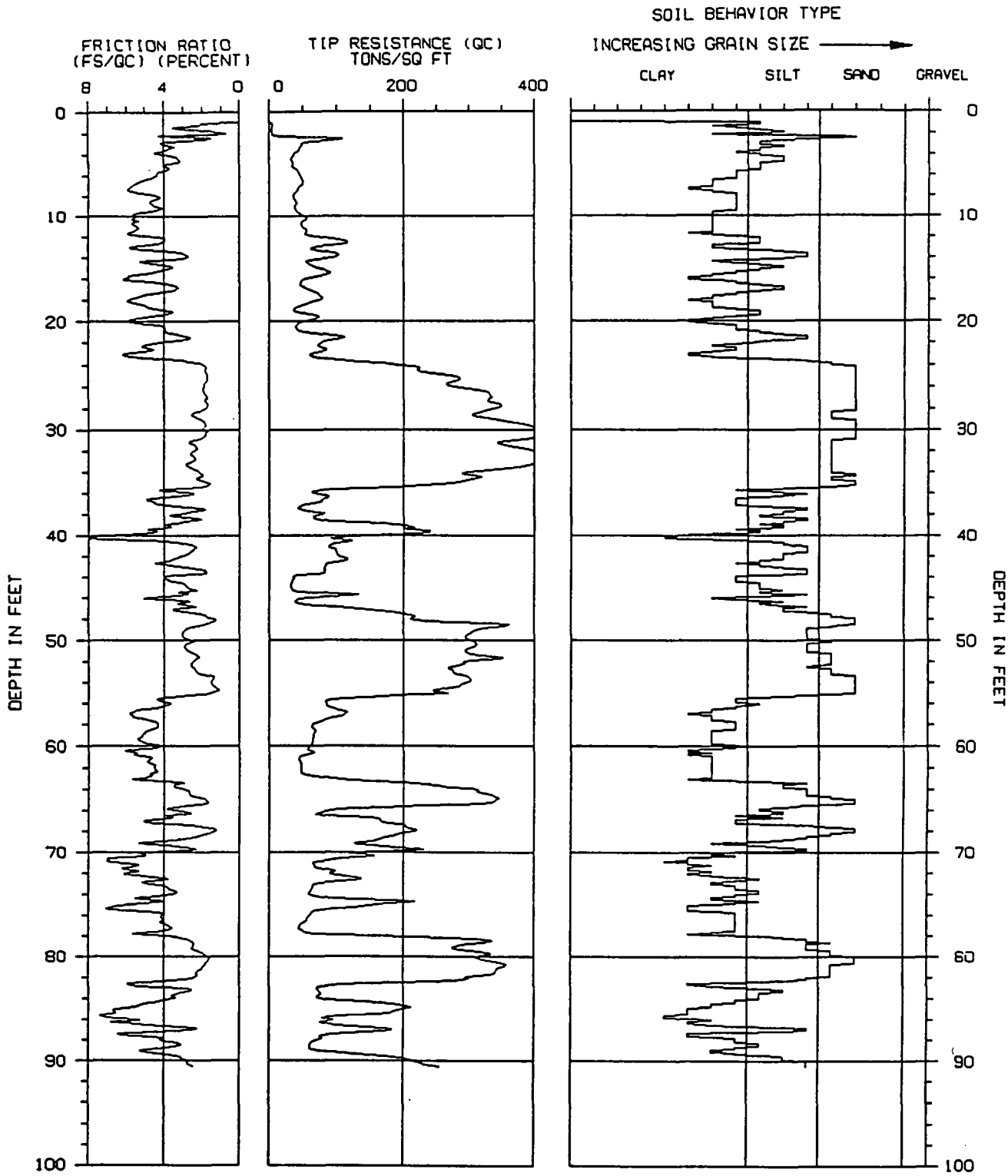
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	57.3	34.5	5.00	.89	*SANDY CLAY to SILTY CLAY
46.0	106.5	63.6	3.07	.87	SANDY SILT to CLAYEY SILT
46.5	182.7	108.2	2.39	.73	SILTY SAND to SANDY SILT
47.0	163.8	96.2	4.00	.72	*CLAYEY SAND to SANDY CLAY
47.5	58.9	34.4	2.58	.60	SANDY SILT to CLAYEY SILT
48.0	72.7	42.1	1.92	.58	SILTY SAND to SANDY SILT
48.5	78.3	44.9	3.37	.55	SANDY SILT to CLAYEY SILT
49.0	61.0	34.8	2.86	.50	SANDY SILT to CLAYEY SILT
49.5	236.2	133.5	2.42	.60	SILTY SAND to SANDY SILT
50.0	84.1	47.1	4.28	.60	*SANDY CLAY to SILTY CLAY
50.5	101.8	56.6	5.20	.60	*SANDY CLAY to SILTY CLAY
51.0	99.9	55.1	5.64	.55	*SANDY CLAY to SILTY CLAY
51.5	79.3	43.4	5.34	.51	*SANDY CLAY to SILTY CLAY
52.0	71.1	38.6	5.06	.49	*SANDY CLAY to SILTY CLAY
52.5	65.2	35.2	4.90	.47	*SANDY CLAY to SILTY CLAY
53.0	63.7	34.1	4.24	.44	CLAYEY SILT to SILTY CLAY
53.5	69.2	36.8	4.00	.44	CLAYEY SILT to SILTY CLAY
54.0	151.4	79.8	3.64	.51	*CLAYEY SAND to SANDY CLAY
54.5	163.1	85.3	3.49	.65	*CLAYEY SAND to SANDY CLAY
55.0	104.4	54.2	6.81	.83	*SANDY CLAY to SILTY CLAY
55.5	99.7	51.4	7.20	1.83	*SANDY CLAY to SILTY CLAY
56.0	117.7	60.2	6.07	4.95	*SANDY CLAY to SILTY CLAY
56.5	87.6	44.5	5.00	5.87	*SANDY CLAY to SILTY CLAY
57.0	70.3	35.4	3.34	7.48	SANDY SILT to CLAYEY SILT
57.5	63.5	31.7	4.31	12.54	CLAYEY SILT to SILTY CLAY
58.0	166.1	82.4	3.58	33.43	*CLAYEY SAND to SANDY CLAY
58.5	276.5	136.2	2.68	19.27	*SILTY SAND to CLAYEY SAND
59.0	218.0	106.5	3.05	9.30	*CLAYEY SAND to SANDY CLAY
59.5	247.6	120.1	2.75	5.59	SILTY SAND to SANDY SILT
60.0	170.3	82.0	3.94	3.58	*CLAYEY SAND to SANDY CLAY
60.5	132.5	63.3	4.75	3.10	*SANDY CLAY to SILTY CLAY
61.0	316.0	149.9	2.83	3.82	*SILTY SAND to CLAYEY SAND
61.5	377.3	177.6	2.99	4.73	*SILTY SAND to CLAYEY SAND
62.0	347.6	162.4	3.15	4.56	*SILTY SAND to CLAYEY SAND
62.5	408.6	189.5	3.02	4.38	*SILTY SAND to CLAYEY SAND
63.0	377.7	173.9	2.81	2.96	*SILTY SAND to CLAYEY SAND
63.5	400.1	182.8	2.29	3.03	SILTY SAND to SANDY SILT
64.0	337.7	153.1	2.21	2.87	SILTY SAND to SANDY SILT
64.5	318.6	143.4	1.89	2.83	SILTY SAND to SANDY SILT
65.0	317.7	141.9	2.23	2.89	SILTY SAND to SANDY SILT
65.5	302.7	134.8	2.19	2.78	SILTY SAND to SANDY SILT
66.0	293.2	130.1	2.21	2.71	SILTY SAND to SANDY SILT
66.5	277.4	122.7	2.33	2.29	SILTY SAND to SANDY SILT
67.0	285.7	126.0	2.49	2.29	SILTY SAND to SANDY SILT
67.5	268.3	117.9	2.54	2.24	SILTY SAND to SANDY SILT
68.0	255.5	111.9	2.34	2.17	SILTY SAND to SANDY SILT
68.5	289.9	126.6	2.51	2.21	SILTY SAND to SANDY SILT
69.0	334.4	145.6	1.99	5.57	SILTY SAND to SANDY SILT
69.5	356.1	154.5	1.57	.75	SAND to SILTY SAND
70.0	326.1	141.1	1.95	.98	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0011

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	262.3	113.1	2.57	1.08	SILTY SAND to SANDY SILT
71.0	359.8	154.6	2.47	1.54	SILTY SAND to SANDY SILT
71.5	359.1	153.8	2.01	1.80	SILTY SAND to SANDY SILT
72.0	337.8	144.2	1.88	1.97	SILTY SAND to SANDY SILT
72.5	341.1	145.2	2.03	2.10	SILTY SAND to SANDY SILT
73.0	316.4	134.2	2.05	2.02	SILTY SAND to SANDY SILT
73.5	332.1	140.4	1.91	2.13	SILTY SAND to SANDY SILT
74.0	328.3	138.3	2.03	2.19	SILTY SAND to SANDY SILT
74.5	319.6	134.3	2.06	2.23	SILTY SAND to SANDY SILT
75.0	278.3	116.5	2.09	2.19	SILTY SAND to SANDY SILT
75.5	297.0	124.0	2.03	2.22	SILTY SAND to SANDY SILT
76.0	193.3	80.4	3.92	1.95	*CLAYEY SAND to SANDY CLAY
76.5	319.0	132.3	1.52	4.47	SAND to SILTY SAND
77.0	274.1	113.3	1.40	3.80	SAND to SILTY SAND
77.5	276.6	114.0	1.17	3.44	SAND to SILTY SAND
78.0	307.4	126.2	1.20	3.31	SAND to SILTY SAND
78.5	140.4	57.5	3.83	2.55	*CLAYEY SAND to SANDY CLAY
79.0	132.1	53.9	5.01	7.36	*SANDY CLAY to SILTY CLAY
79.5	106.3	43.2	6.80	32.53	*SANDY CLAY to SILTY CLAY
80.0	173.7	70.4	4.51	11.13	*SANDY CLAY to SILTY CLAY
80.5	58.2	23.5	2.67	19.82	SANDY SILT to CLAYEY SILT
81.0	38.6	15.5	2.55	15.33	SANDY SILT to CLAYEY SILT
81.5	39.0	15.7	3.23	18.72	CLAYEY SILT to SILTY CLAY
82.0	31.4	12.6	2.02	19.61	SANDY SILT to CLAYEY SILT
82.5	31.4	12.6	2.05	20.93	SANDY SILT to CLAYEY SILT
83.0	33.0	13.2	2.46	23.61	SANDY SILT to CLAYEY SILT
83.5	42.2	16.9	2.91	30.10	SANDY SILT to CLAYEY SILT
84.0	50.1	20.0	3.48	35.26	CLAYEY SILT to SILTY CLAY
84.5	86.9	34.7	2.87	29.42	SANDY SILT to CLAYEY SILT
85.0	220.6	88.2	3.17	35.30	SANDY SILT to CLAYEY SILT
85.5	236.7	94.7	1.84	12.35	SILTY SAND to SANDY SILT
86.0	247.5	99.0	1.87	10.99	SILTY SAND to SANDY SILT
86.5	260.5	104.2	2.56	11.66	SILTY SAND to SANDY SILT
87.0	318.4	127.4	2.10	26.96	SILTY SAND to SANDY SILT
87.5	407.2	162.9	1.90	15.21	SILTY SAND to SANDY SILT
88.0	375.6	150.2	2.06	10.15	SILTY SAND to SANDY SILT
88.5	361.2	144.5	1.69	8.83	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT



TOP 1.0 FT IS DISTURBED SOIL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

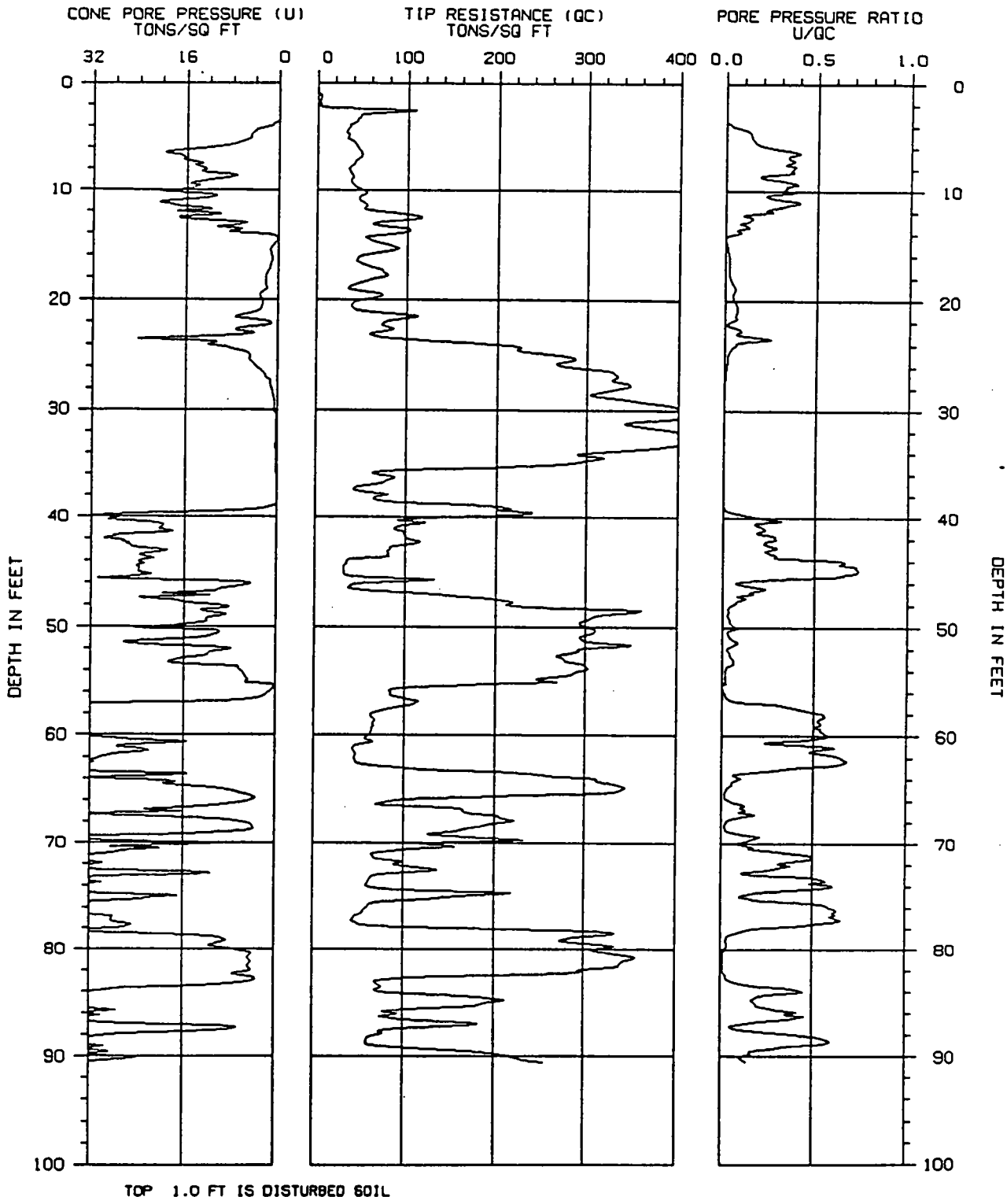
CONE PENETRATION TEST

SOUNDING NUMBER: CPL0012

PROJECT NAME : D&M/HYDROGEO.INVEST. LOCATION : CARSON

PROJECT NUMBER : 93-380-01104 DATE : 12-11-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST SOUNDING NUMBER: CPL0012

PROJECT NAME : D&M/HYDROGEO.INVEST. LOCATION : CARSON

PROJECT NUMBER : 93-380-01104 DATE : 12-11-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING	: CPL0012	PROJECT NO	: 93-380-01104
PROJECT	: D&M/HYDROGEO.INVEST.	INSTRUMENT	: F15CKE098
LOCATION	: CARSON	SYSTEM	: C4/R4/I4/L1
DATE	: 12-11-1992	OPERATOR	: EC/DH

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	.0	.0	.00	.00	
1.0	.0	.0	.00	.00	
1.5	3.4	7.0	3.21	-1.17	SILTY CLAY to CLAY
2.0	3.3	6.4	.69	-1.16	SANDY SILT to CLAYEY SILT
2.5	109.4	203.7	1.51	-.78	SAND to SILTY SAND
3.0	47.6	84.8	4.14	-1.11	*CLAYEY SAND to SANDY CLAY
3.5	44.3	76.0	3.85	-.09	*CLAYEY SAND to SANDY CLAY
4.0	36.5	60.4	4.03	1.67	*CLAYEY SAND to SANDY CLAY
4.5	32.5	52.1	3.18	4.16	SANDY SILT to CLAYEY SILT
5.0	33.8	52.8	4.04	4.82	*CLAYEY SAND to SANDY CLAY
5.5	41.9	63.7	3.95	6.93	*CLAYEY SAND to SANDY CLAY
6.0	45.4	67.3	4.39	11.88	*SANDY CLAY to SILTY CLAY
6.5	49.2	71.1	5.14	19.68	*SANDY CLAY to SILTY CLAY
7.0	45.9	64.9	5.73	16.45	*SANDY CLAY to SILTY CLAY
7.5	41.0	56.8	5.77	13.21	*SANDY CLAY to SILTY CLAY
8.0	35.3	47.9	4.39	12.71	*SANDY CLAY to SILTY CLAY
8.5	38.8	51.6	4.63	9.53	*SANDY CLAY to SILTY CLAY
9.0	38.1	49.7	4.43	11.86	*SANDY CLAY to SILTY CLAY
9.5	41.2	52.8	4.69	13.80	*SANDY CLAY to SILTY CLAY
10.0	51.7	65.1	5.48	18.17	*SANDY CLAY to SILTY CLAY
10.5	50.3	62.2	5.32	11.03	*SANDY CLAY to SILTY CLAY
11.0	49.2	59.9	5.38	19.81	*SANDY CLAY to SILTY CLAY
11.5	55.4	66.5	5.69	16.58	*SANDY CLAY to SILTY CLAY
12.0	69.0	81.5	4.37	17.74	*SANDY CLAY to SILTY CLAY
12.5	116.0	134.9	4.05	17.18	*CLAYEY SAND to SANDY CLAY
13.0	66.4	76.1	5.82	5.44	*SANDY CLAY to SILTY CLAY
13.5	94.4	106.6	3.16	7.87	*CLAYEY SAND to SANDY CLAY
14.0	92.4	102.9	2.82	5.05	SILTY SAND to SANDY SILT
14.5	58.0	63.8	4.59	.06	*SANDY CLAY to SILTY CLAY
15.0	77.2	83.6	3.78	.77	*CLAYEY SAND to SANDY CLAY
15.5	89.6	95.8	4.99	1.33	*SANDY CLAY to SILTY CLAY
16.0	54.7	57.7	6.14	1.19	*SANDY CLAY to SILTY CLAY
16.5	45.2	47.1	3.59	1.15	SANDY SILT to CLAYEY SILT
17.0	59.4	61.1	3.45	1.41	SANDY SILT to CLAYEY SILT
17.5	73.5	74.7	5.07	1.78	*SANDY CLAY to SILTY CLAY
18.0	73.2	73.5	5.94	2.12	*SANDY CLAY to SILTY CLAY
18.5	45.9	45.6	4.94	2.16	*SANDY CLAY to SILTY CLAY
19.0	36.3	35.6	3.73	2.03	SANDY SILT to CLAYEY SILT
19.5	72.9	70.7	4.64	3.16	*SANDY CLAY to SILTY CLAY
20.0	52.5	50.3	5.94	2.74	*SANDY CLAY to SILTY CLAY

TOP 1.0 FT IS DISTURBED SOIL
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0012

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	39.6	37.5	3.95	2.75	CLAYEY SILT to SILTY CLAY
21.0	52.7	49.4	3.93	3.48	SANDY SILT to CLAYEY SILT
21.5	112.2	104.0	2.65	7.23	SILTY SAND to SANDY SILT
22.0	77.9	71.4	4.23	1.45	*CLAYEY SAND to SANDY CLAY
22.5	82.3	74.7	4.69	6.26	*SANDY CLAY to SILTY CLAY
23.0	62.4	56.0	6.07	4.03	*SANDY CLAY to SILTY CLAY
23.5	86.0	76.4	4.01	21.70	*CLAYEY SAND to SANDY CLAY
24.0	193.5	170.2	1.92	12.30	SAND to SILTY SAND
24.5	221.3	192.6	1.85	7.21	SAND to SILTY SAND
25.0	269.1	231.9	1.71	4.74	SAND to SILTY SAND
25.5	283.3	241.7	1.73	4.85	SAND to SILTY SAND
26.0	277.0	234.0	1.90	3.75	SAND to SILTY SAND
26.5	327.7	274.1	1.90	2.65	SAND to SILTY SAND
27.0	334.5	277.1	1.71	2.08	SAND to SILTY SAND
27.5	335.2	275.0	1.79	1.16	SAND to SILTY SAND
28.0	336.8	273.6	1.84	1.07	SAND to SILTY SAND
28.5	307.3	247.3	2.54	.80	*SILTY SAND to CLAYEY SAND
29.0	335.3	267.3	2.15	.61	*SILTY SAND to CLAYEY SAND
29.5	379.5	299.7	1.84	.50	SAND to SILTY SAND
30.0	413.4	323.5	1.91	.47	*SAND to SILTY SAND
30.5	404.2	313.4	1.82	.17	*SAND to SILTY SAND
31.0	371.7	285.6	2.34	.19	*SILTY SAND to CLAYEY SAND
31.5	354.8	270.1	2.38	.17	*SILTY SAND to CLAYEY SAND
32.0	403.4	304.4	2.41	.18	*SILTY SAND to CLAYEY SAND
32.5	413.4	309.1	2.48	.23	*SILTY SAND to CLAYEY SAND
33.0	442.5	328.0	2.44	.26	*SILTY SAND to CLAYEY SAND
33.5	376.7	276.7	2.70	.29	*SILTY SAND to CLAYEY SAND
34.0	298.7	217.5	2.16	.21	SILTY SAND to SANDY SILT
34.5	319.2	230.4	2.14	.23	*SILTY SAND to CLAYEY SAND
35.0	285.5	204.3	1.75	.21	SAND to SILTY SAND
35.5	138.3	98.1	2.90	.16	SILTY SAND to SANDY SILT
36.0	65.6	46.1	2.45	.08	SANDY SILT to CLAYEY SILT
36.5	84.3	58.8	4.55	.06	*SANDY CLAY to SILTY CLAY
37.0	66.1	45.7	4.46	-.03	*SANDY CLAY to SILTY CLAY
37.5	45.4	31.1	1.82	-.22	SILTY SAND to SANDY SILT
38.0	79.2	53.8	3.26	-.21	SANDY SILT to CLAYEY SILT
38.5	70.9	47.8	2.03	-.19	SILTY SAND to SANDY SILT
39.0	185.0	123.7	3.88	.43	*CLAYEY SAND to SANDY CLAY
39.5	240.4	159.4	4.36	11.57	*CLAYEY SAND to SANDY CLAY
40.0	147.6	97.1	7.17	30.40	*SANDY CLAY to SILTY CLAY
40.5	122.4	79.9	4.80	22.09	*SANDY CLAY to SILTY CLAY
41.0	88.2	57.1	2.36	20.24	SILTY SAND to SANDY SILT
41.5	98.2	63.0	2.63	22.65	SILTY SAND to SANDY SILT
42.0	102.4	65.2	3.10	29.79	SANDY SILT to CLAYEY SILT
42.5	108.1	68.3	3.78	25.82	*CLAYEY SAND to SANDY CLAY
43.0	82.1	51.4	2.88	18.86	SANDY SILT to CLAYEY SILT
43.5	81.5	50.6	1.79	23.51	SILTY SAND to SANDY SILT
44.0	35.5	21.9	3.94	23.41	CLAYEY SILT to SILTY CLAY
44.5	32.9	20.1	3.56	24.06	CLAYEY SILT to SILTY CLAY
45.0	32.6	19.8	2.74	23.68	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CPL0012

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	65.8	39.6	3.26	26.30	SANDY SILT to CLAYEY SILT
46.0	60.3	36.0	4.75	4.58	*SANDY CLAY to SILTY CLAY
46.5	38.7	22.9	3.07	9.14	SANDY SILT to CLAYEY SILT
47.0	133.3	78.3	3.43	16.53	*CLAYEY SAND to SANDY CLAY
47.5	201.0	117.2	2.17	18.45	SILTY SAND to SANDY SILT
48.0	211.0	122.0	1.46	10.40	SAND to SILTY SAND
48.5	361.5	207.5	1.83	13.16	SAND to SILTY SAND
49.0	310.0	176.5	2.87	10.30	*SILTY SAND to CLAYEY SAND
49.5	295.2	166.8	3.07	12.10	*SILTY SAND to CLAYEY SAND
50.0	299.6	168.0	2.59	21.44	*SILTY SAND to CLAYEY SAND
50.5	308.1	171.4	2.93	9.89	*SILTY SAND to CLAYEY SAND
51.0	293.6	162.1	2.71	14.42	*SILTY SAND to CLAYEY SAND
51.5	334.9	183.5	2.20	25.06	SILTY SAND to SANDY SILT
52.0	291.7	158.6	2.44	7.81	SILTY SAND to SANDY SILT
52.5	268.6	144.9	2.54	11.93	SILTY SAND to SANDY SILT
53.0	276.1	147.8	2.25	17.48	SILTY SAND to SANDY SILT
53.5	299.7	159.2	1.37	11.11	SAND to SILTY SAND
54.0	295.5	155.8	1.52	6.13	SAND to SILTY SAND
54.5	264.2	138.2	1.25	5.26	SAND to SILTY SAND
55.0	268.8	139.6	1.50	5.25	SAND to SILTY SAND
55.5	113.3	58.4	4.24	.38	*SANDY CLAY to SILTY CLAY
56.0	85.3	43.6	3.65	1.09	SANDY SILT to CLAYEY SILT
56.5	98.7	50.1	5.00	3.31	*SANDY CLAY to SILTY CLAY
57.0	112.3	56.6	5.80	31.26	*SANDY CLAY to SILTY CLAY
57.5	84.7	42.4	4.95	35.57	*SANDY CLAY to SILTY CLAY
58.0	63.9	31.7	4.33	35.58	CLAYEY SILT to SILTY CLAY
58.5	68.2	33.6	4.79	35.59	*SANDY CLAY to SILTY CLAY
59.0	66.3	32.4	5.17	35.29	*SANDY CLAY to SILTY CLAY
59.5	64.9	31.5	5.26	34.56	*SANDY CLAY to SILTY CLAY
60.0	61.4	29.6	4.10	35.61	CLAYEY SILT to SILTY CLAY
60.5	65.5	31.3	5.75	18.04	*SANDY CLAY to SILTY CLAY
61.0	45.5	21.6	4.80	27.16	CLAYEY SILT to SILTY CLAY
61.5	45.5	21.4	4.90	21.74	CLAYEY SILT to SILTY CLAY
62.0	46.1	21.5	4.54	30.34	CLAYEY SILT to SILTY CLAY
62.5	47.3	21.9	4.63	31.20	CLAYEY SILT to SILTY CLAY
63.0	95.5	43.9	5.01	35.64	*SANDY CLAY to SILTY CLAY
63.5	216.9	99.1	2.94	29.46	SILTY SAND to SANDY SILT
64.0	313.3	142.1	2.95	30.60	*SILTY SAND to CLAYEY SAND
64.5	331.3	149.1	2.65	19.38	*SILTY SAND to CLAYEY SAND
65.0	342.9	153.2	1.82	9.33	SAND to SILTY SAND
65.5	284.9	126.8	2.16	5.39	SILTY SAND to SANDY SILT
66.0	91.4	40.6	3.40	4.40	SANDY SILT to CLAYEY SILT
66.5	80.3	35.5	3.91	10.40	CLAYEY SILT to SILTY CLAY
67.0	165.5	73.0	4.90	21.06	*SANDY CLAY to SILTY CLAY
67.5	203.9	89.6	2.59	24.75	SILTY SAND to SANDY SILT
68.0	216.3	94.8	1.30	5.96	SAND to SILTY SAND
68.5	182.5	79.7	2.14	3.91	SILTY SAND to SANDY SILT
69.0	151.7	66.0	4.14	8.62	*CLAYEY SAND to SANDY CLAY
69.5	187.7	81.4	3.00	34.86	SANDY SILT to CLAYEY SILT
70.0	125.6	54.3	4.95	10.46	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

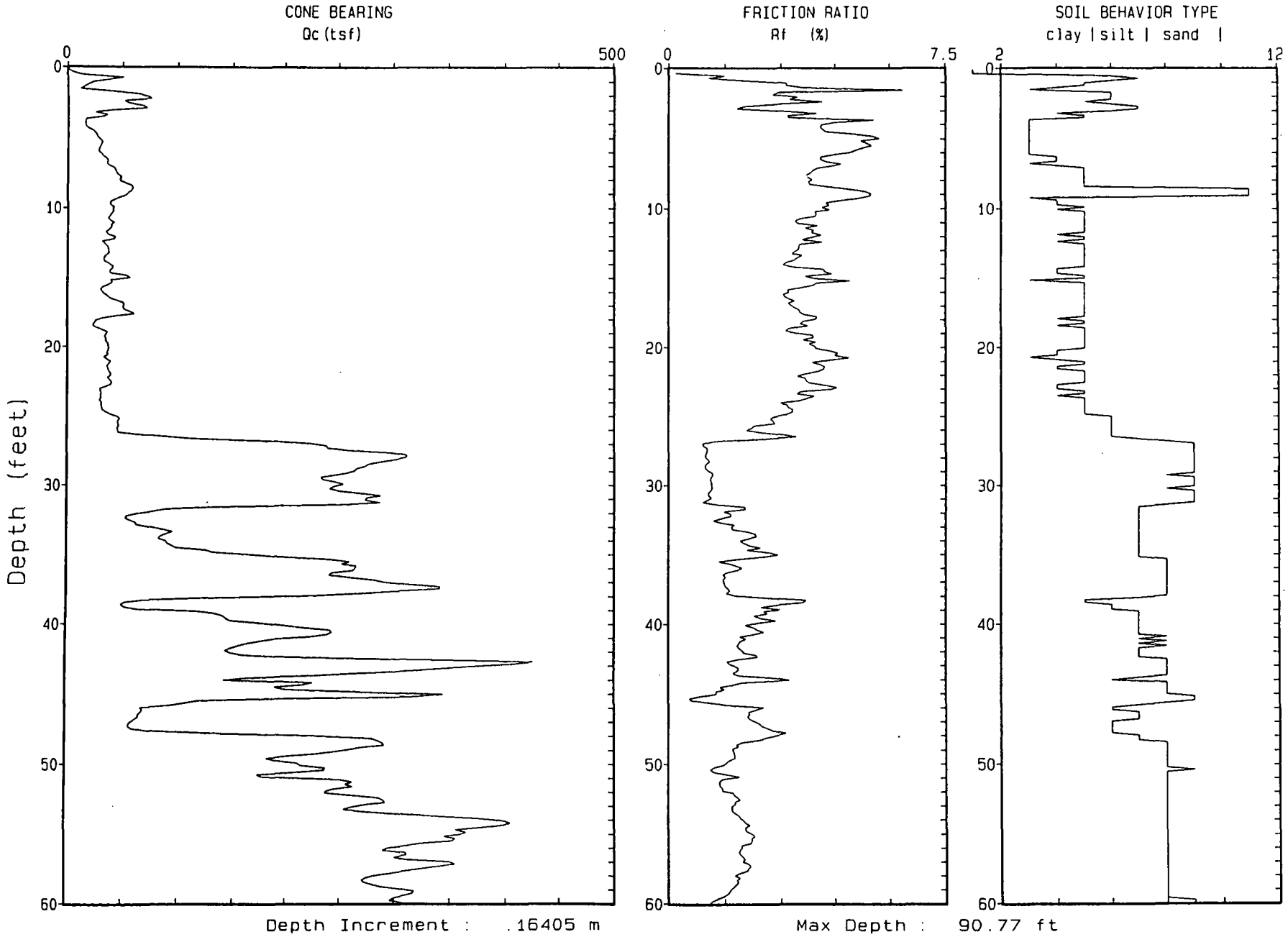
SOUNDING : CPL0012

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	130.4	56.2	5.91	20.09	*SANDY CLAY to SILTY CLAY
71.0	68.1	29.3	6.69	28.06	*SANDY CLAY to SILTY CLAY
71.5	71.8	30.7	6.26	34.38	*SANDY CLAY to SILTY CLAY
72.0	89.3	38.1	6.02	30.40	*SANDY CLAY to SILTY CLAY
72.5	135.6	57.7	4.02	35.45	*CLAYEY SAND to SANDY CLAY
73.0	75.1	31.9	5.06	14.36	*SANDY CLAY to SILTY CLAY
73.5	62.6	26.5	3.73	35.72	CLAYEY SILT to SILTY CLAY
74.0	58.6	24.7	3.65	35.71	CLAYEY SILT to SILTY CLAY
74.5	130.3	54.7	5.15	35.81	*SANDY CLAY to SILTY CLAY
75.0	161.1	67.4	5.84	16.78	*SANDY CLAY to SILTY CLAY
75.5	70.3	29.3	5.94	33.96	*SANDY CLAY to SILTY CLAY
76.0	60.0	25.0	4.11	35.83	CLAYEY SILT to SILTY CLAY
76.5	55.4	23.0	3.98	33.76	CLAYEY SILT to SILTY CLAY
77.0	45.8	18.9	3.82	28.00	CLAYEY SILT to SILTY CLAY
77.5	49.2	20.3	4.07	26.63	CLAYEY SILT to SILTY CLAY
78.0	155.5	63.9	3.78	27.42	*CLAYEY SAND to SANDY CLAY
78.5	334.6	137.0	2.69	26.93	*SILTY SAND to CLAYEY SAND
79.0	278.8	113.7	2.44	8.80	SILTY SAND to SANDY SILT
79.5	314.8	128.0	2.18	10.88	SILTY SAND to SANDY SILT
80.0	311.7	126.4	1.68	7.29	SAND to SILTY SAND
80.5	336.8	136.1	1.71	4.09	SAND to SILTY SAND
81.0	346.1	139.4	1.99	4.26	SILTY SAND to SANDY SILT
81.5	339.4	136.3	2.33	4.53	SILTY SAND to SANDY SILT
82.0	293.2	117.3	2.39	4.07	SILTY SAND to SANDY SILT
82.5	194.1	77.6	5.08	5.88	*SANDY CLAY to SILTY CLAY
83.0	69.6	27.8	2.88	4.36	SANDY SILT to CLAYEY SILT
83.5	76.5	30.6	3.25	18.17	SANDY SILT to CLAYEY SILT
84.0	73.6	29.4	3.47	33.21	SANDY SILT to CLAYEY SILT
84.5	181.9	72.8	5.08	35.94	*SANDY CLAY to SILTY CLAY
85.0	189.9	76.0	6.74	35.96	*SANDY CLAY to SILTY CLAY
85.5	128.3	51.3	7.31	34.26	*SANDY CLAY to SILTY CLAY
86.0	94.4	37.8	5.39	35.54	*SANDY CLAY to SILTY CLAY
86.5	97.5	39.0	4.99	35.88	*SANDY CLAY to SILTY CLAY
87.0	181.4	72.6	2.72	18.48	SILTY SAND to SANDY SILT
87.5	82.2	32.9	6.31	8.58	*SANDY CLAY to SILTY CLAY
88.0	72.1	28.8	4.23	28.72	CLAYEY SILT to SILTY CLAY
88.5	60.0	24.0	3.28	35.80	SANDY SILT to CLAYEY SILT
89.0	74.8	29.9	5.28	29.37	*SANDY CLAY to SILTY CLAY
89.5	170.2	68.1	3.42	28.69	SANDY SILT to CLAYEY SILT
90.0	215.6	86.2	2.77	26.66	SILTY SAND to SANDY SILT
90.5	255.5	102.2	2.47	36.03	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

DAMES & MOORE

PROJECT :	MW-20 AREA	CONTRACTOR :	GREGG IN SITU	FILE :	CPL0021.OUT
ELEVATION :	42.37 FT	GEOLOGIST :	CRAIG MAGNUSEN	DATE :	03/07/94

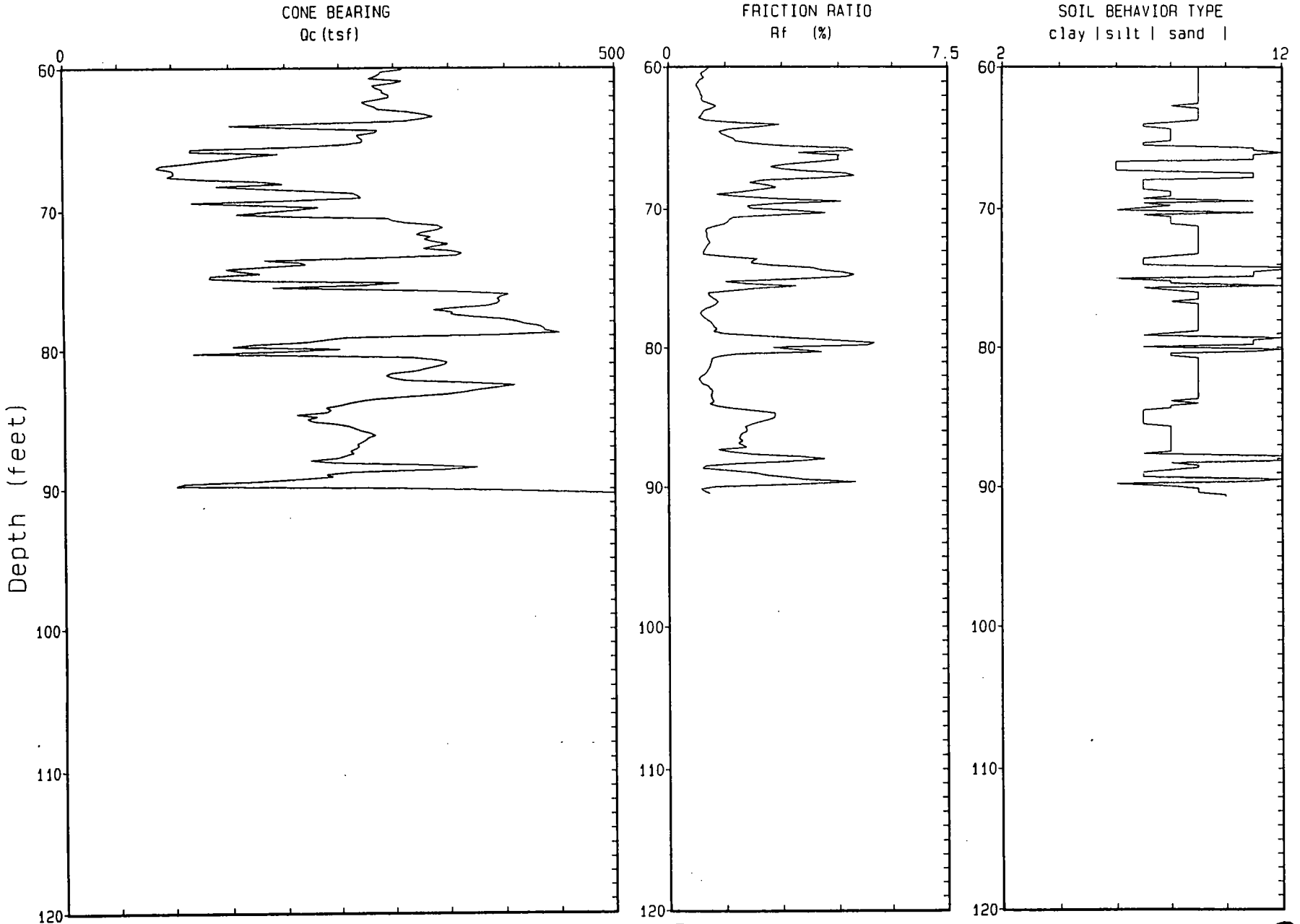


Depth Increment : .16405 m

Max Depth : 90.77 ft

DAMES & MOORE

PROJECT :	MW-20 AREA	CONTRACTOR :	GREGG IN SITU	FILE :	CPL0021.OUT
ELEVATION :	42.37 FT	GEOLOGIST :	CRAIG MAGNUSEN	DATE :	03/07/94



Depth Increment : .16405 m

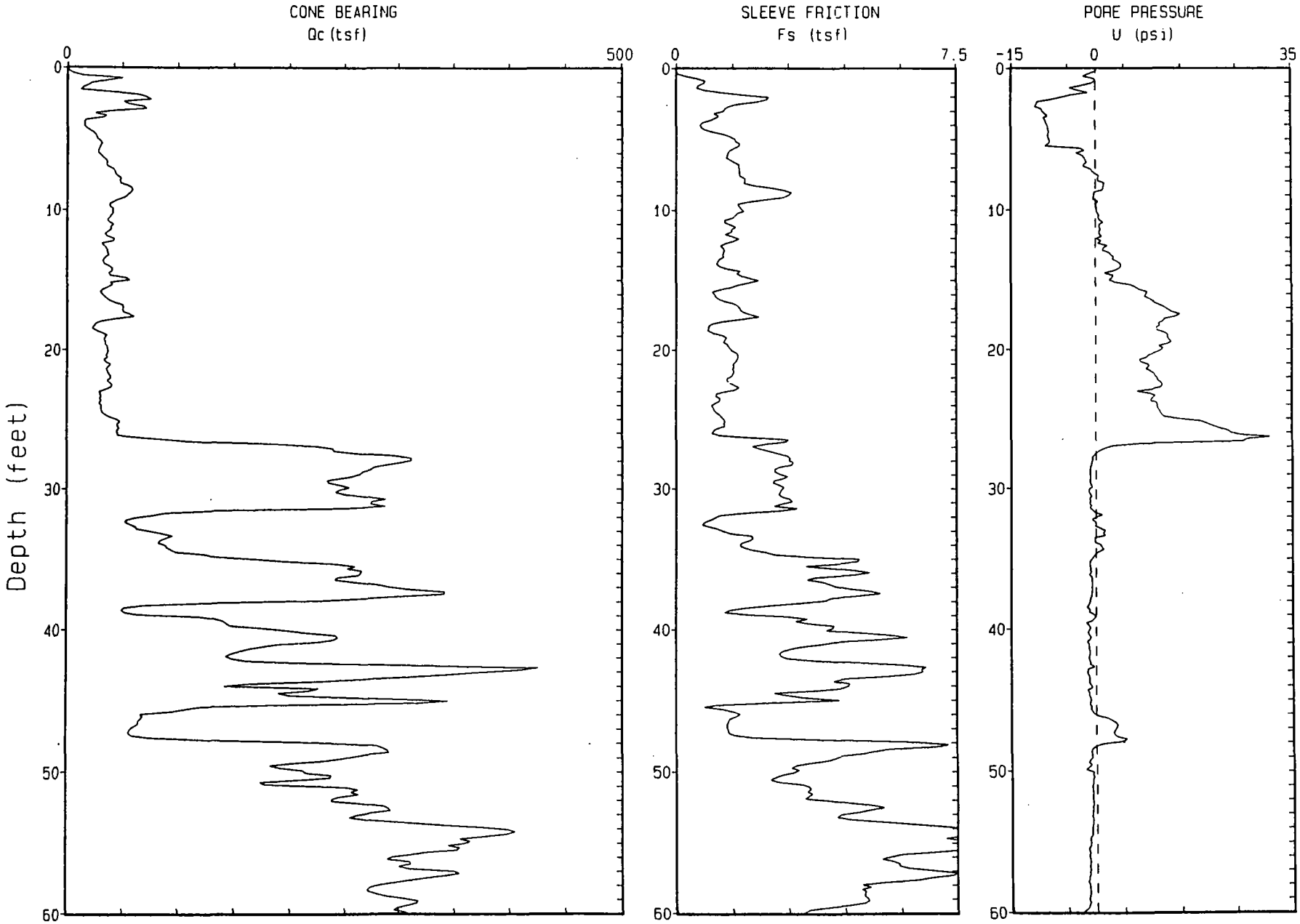
Max Depth : 90.77 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.37 FT

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0021.OUT
DATE : 03/07/94



Depth Increment : .16405 m

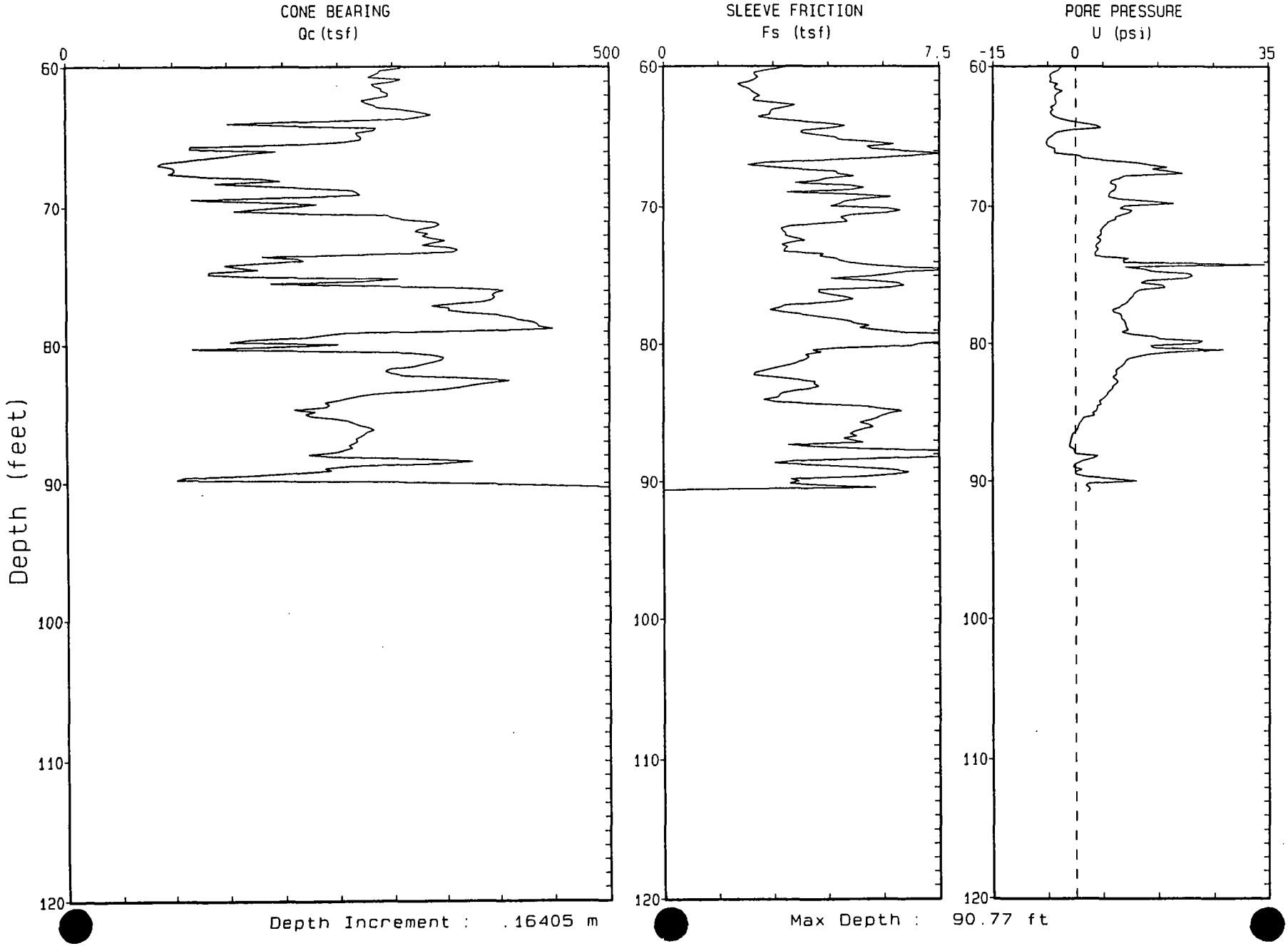
Max Depth : 90.77 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.37 FT

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0021.OUT
DATE : 03/07/94

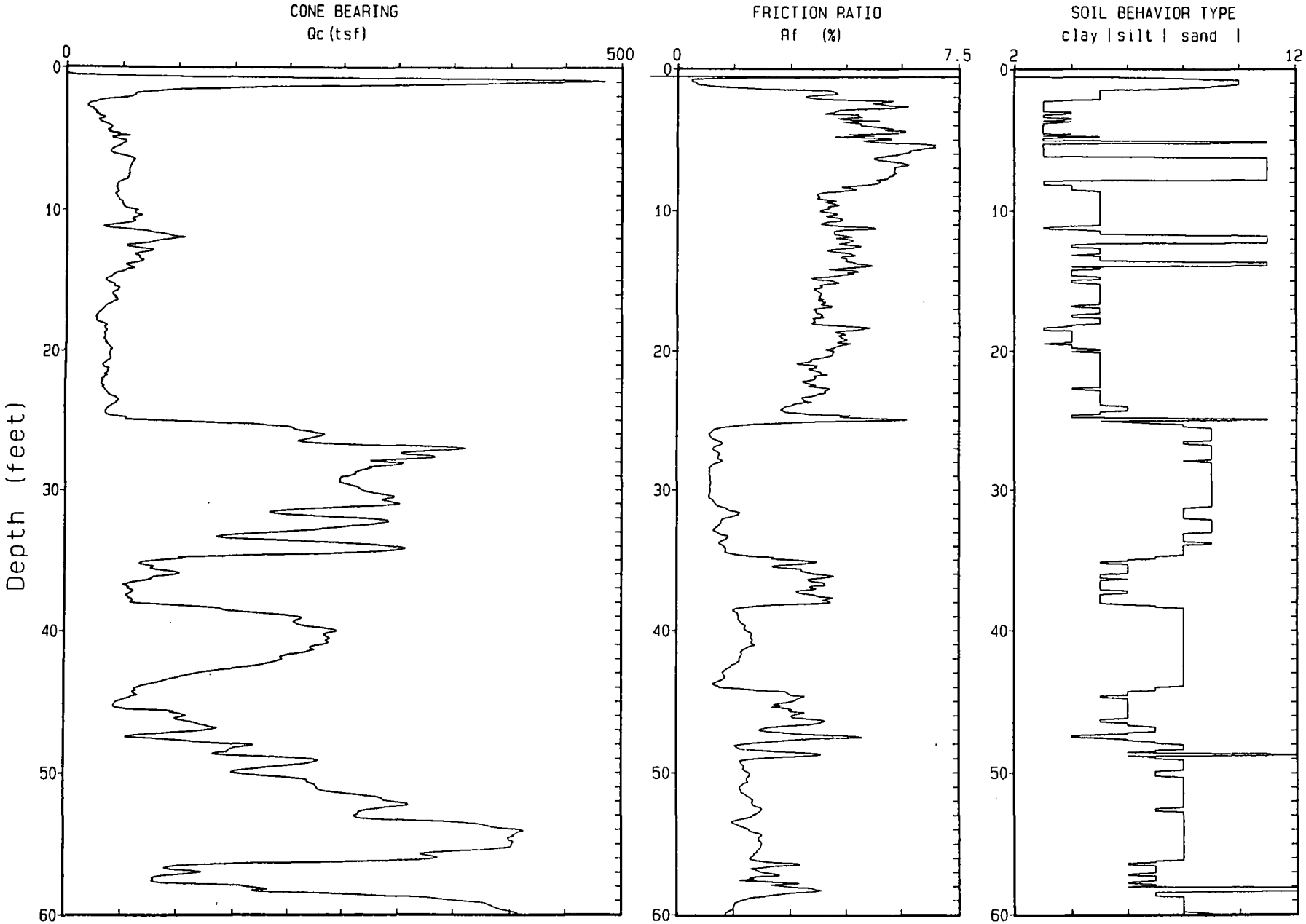


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.78 FT

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0022.OUT
DATE : 03/07/94



Depth Increment : .082025 m

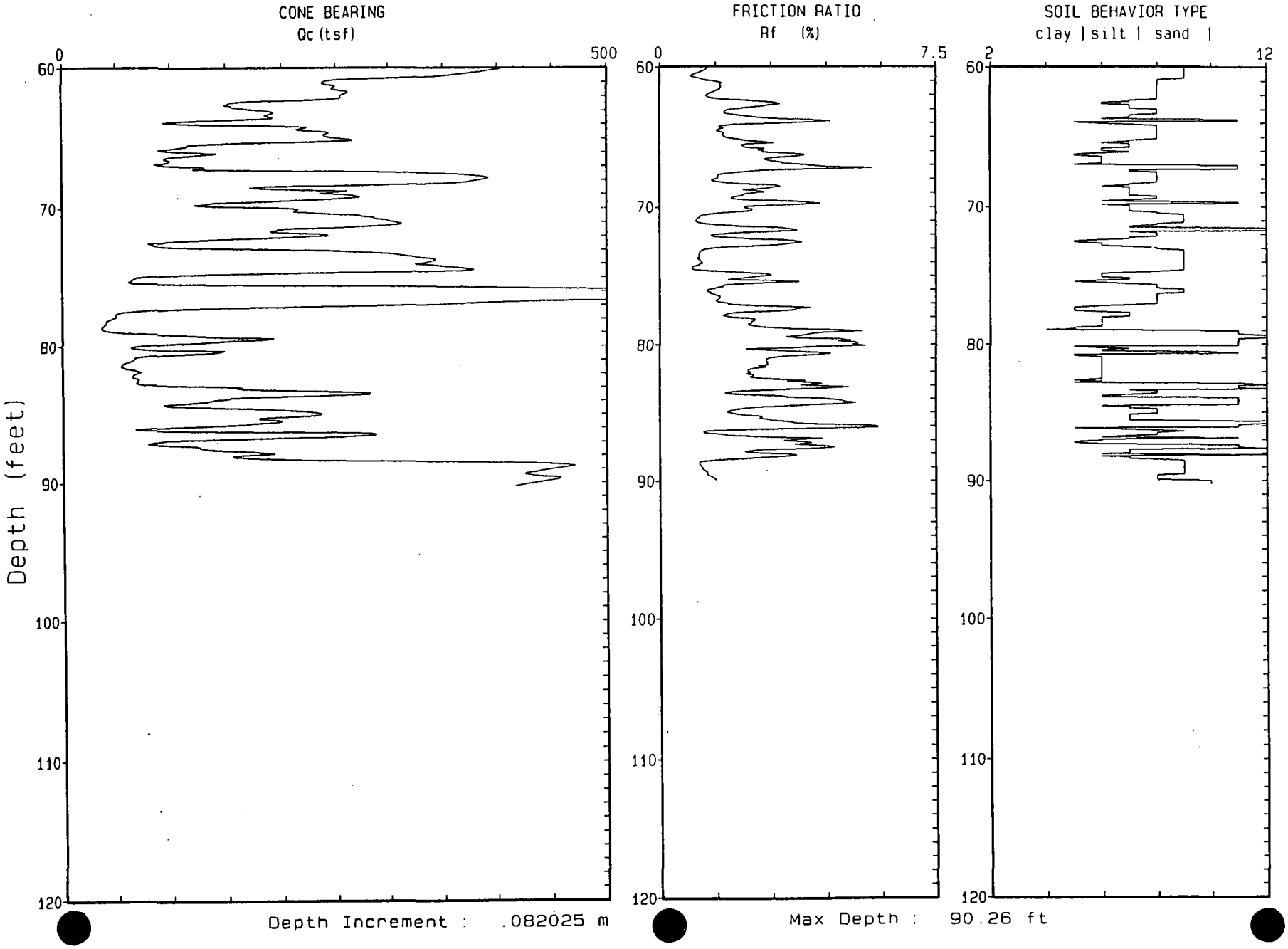
Max Depth : 90.26 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.78 FT

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0022.OUT
DATE : 03/07/94

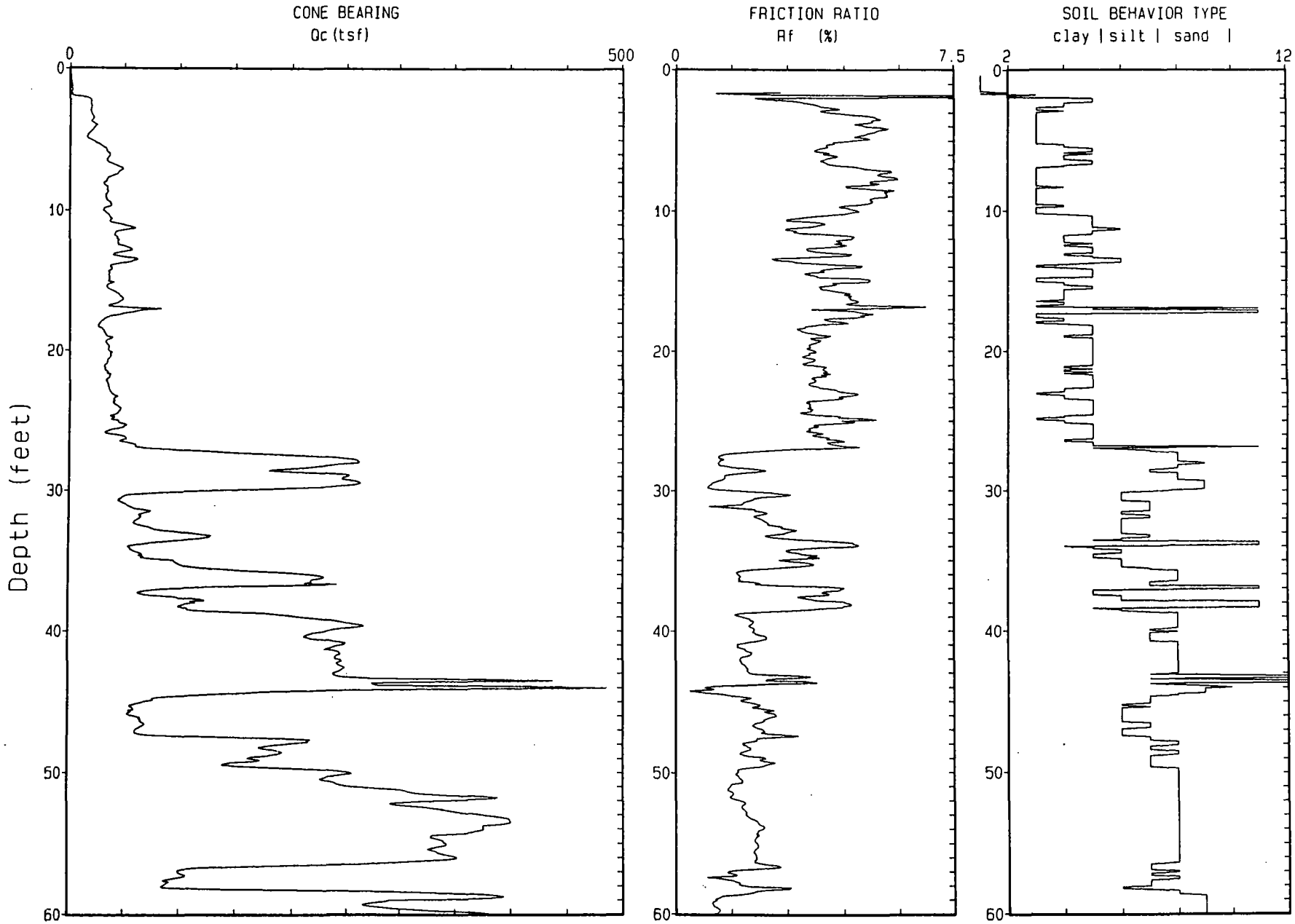


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.90 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0023.OUT
DATE : 03\08\94



Depth Increment : .082025 m

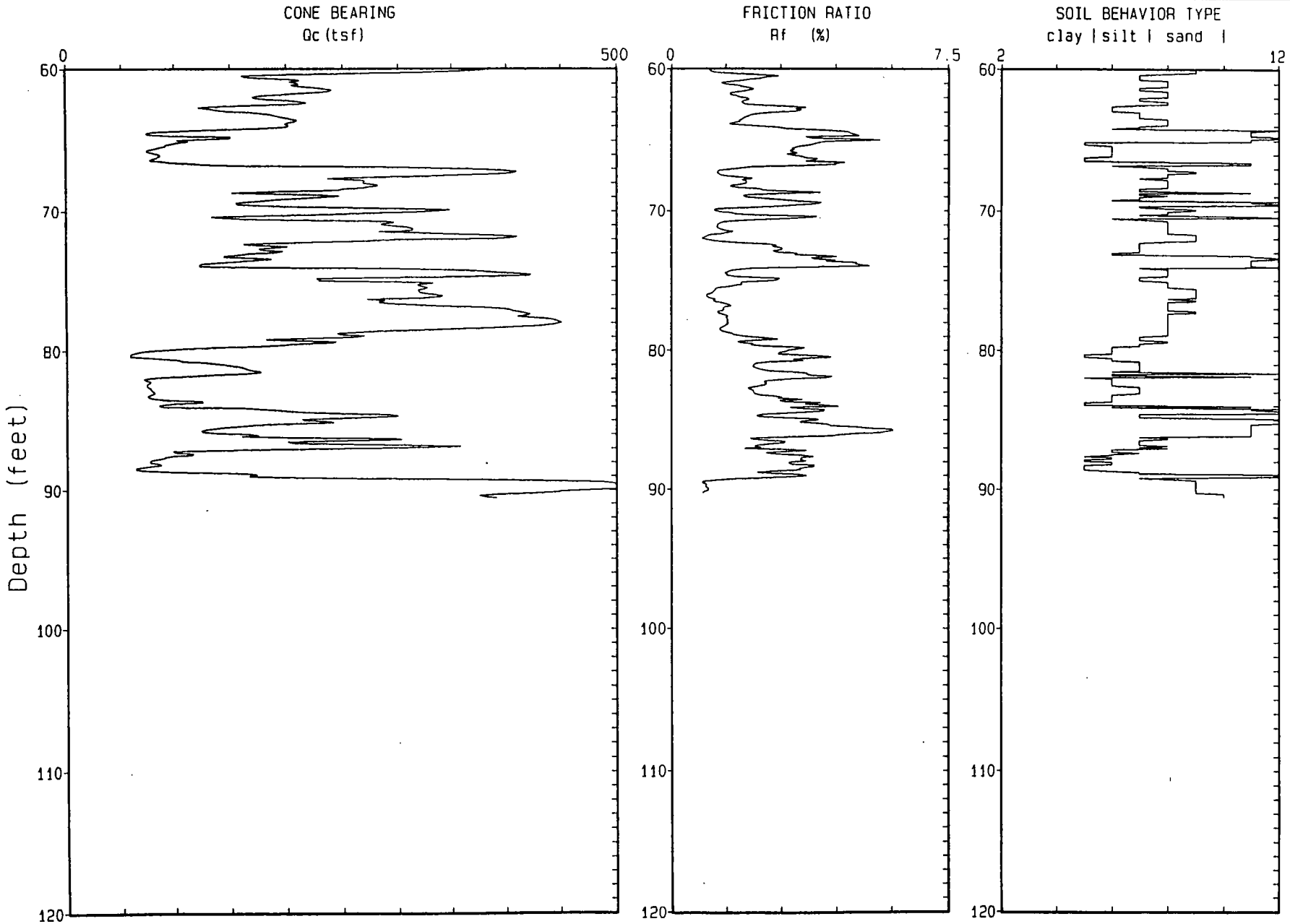
Max Depth : 90.59 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.90 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0023.OUT
DATE : 03\08\94

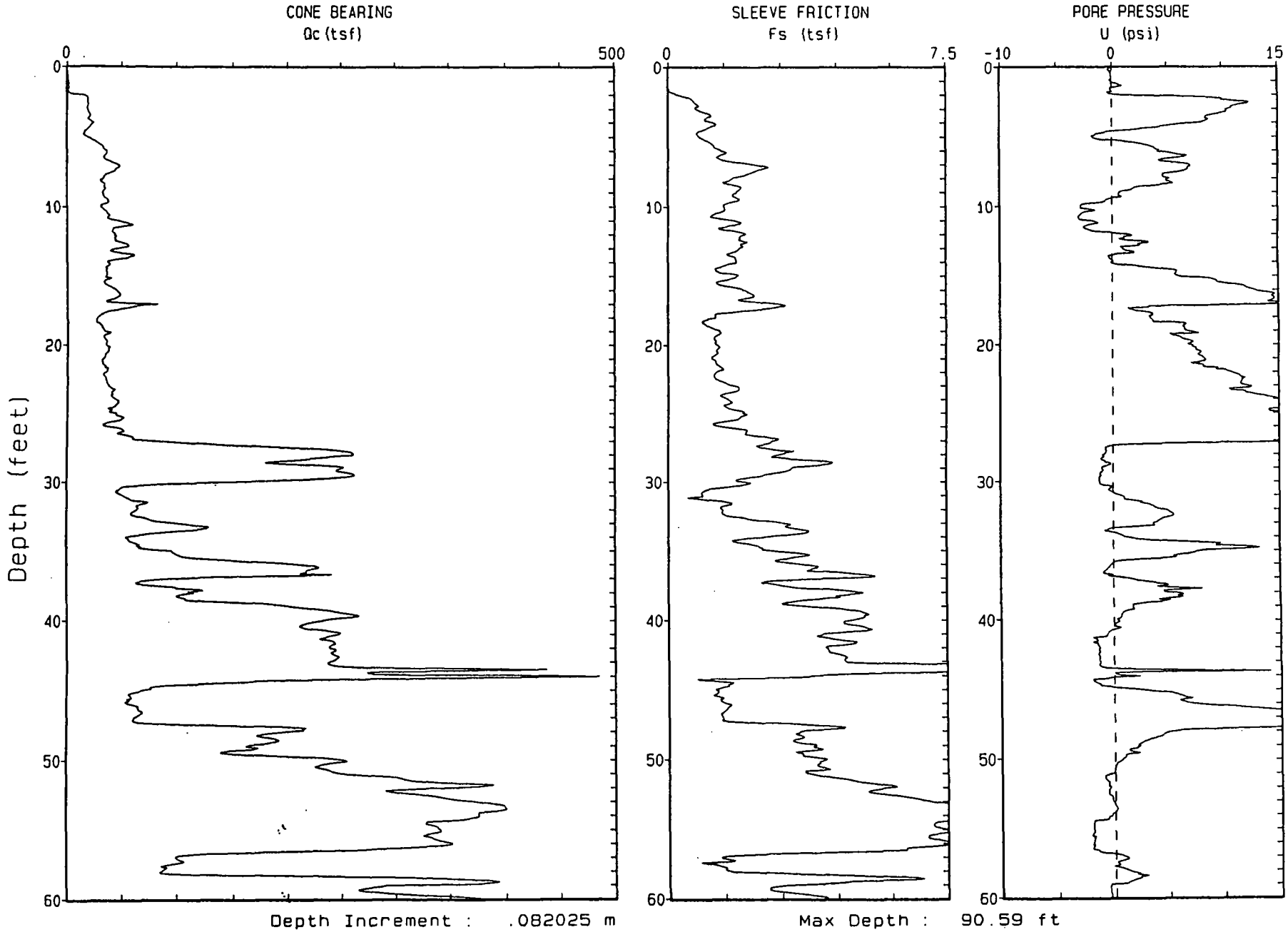


Depth Increment : .082025 m

Max Depth : 90.59 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.90 FT.
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN
FILE : CPL0023.OUT
DATE : 03\08\94



Depth Increment : .082025 m

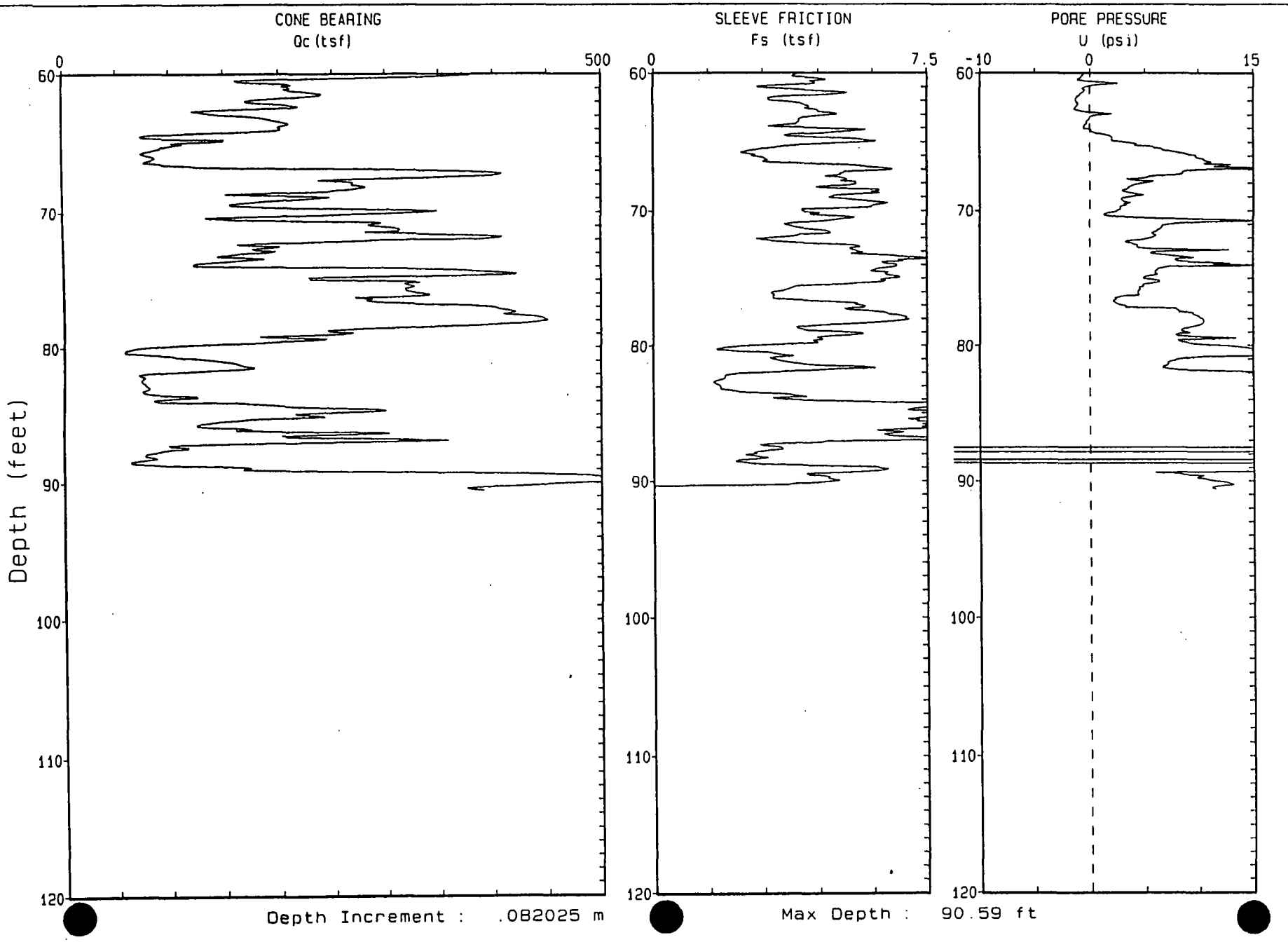
Max Depth : 90.59 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.90 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0023.OUT
DATE : 03\08\94

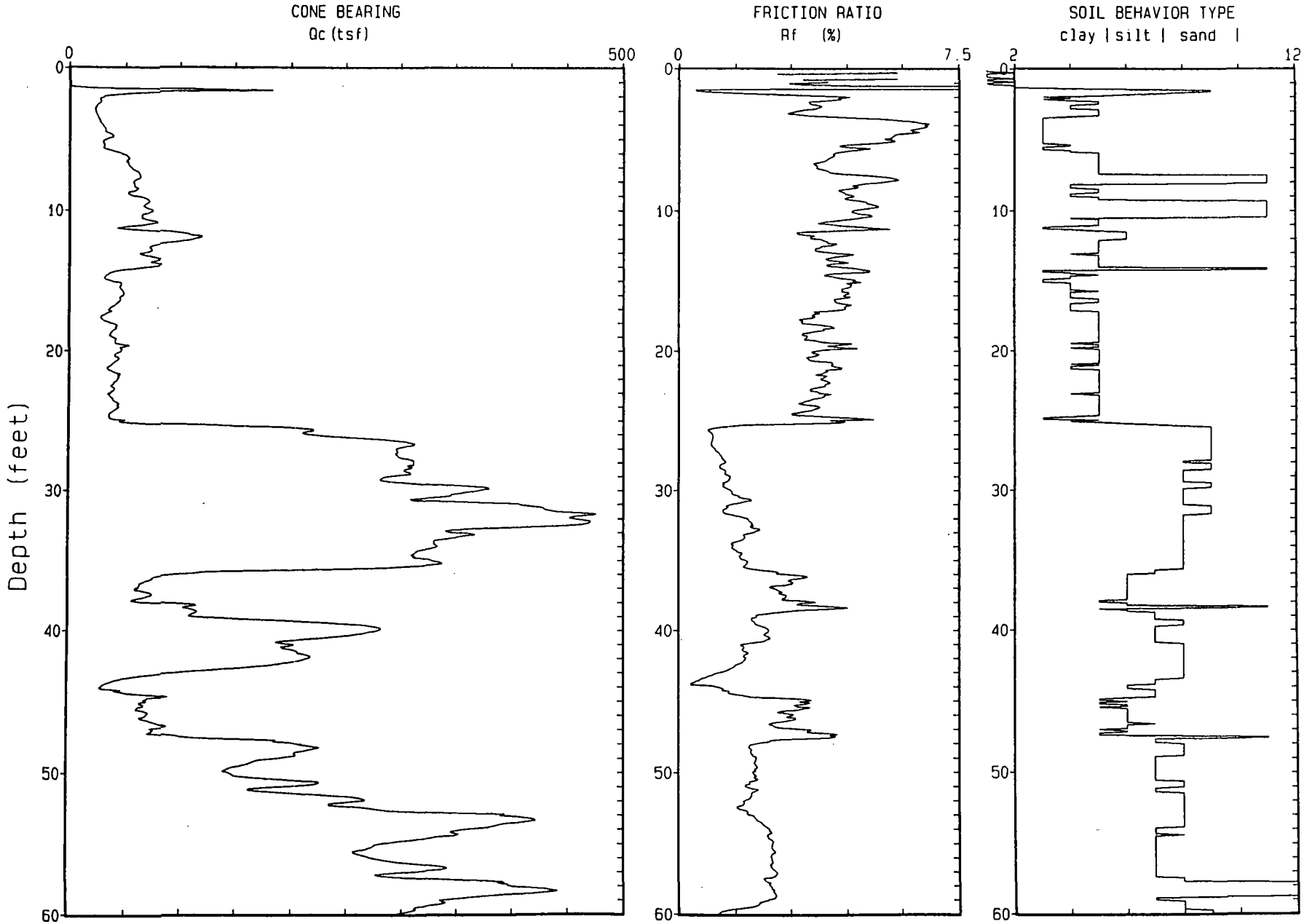


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.06 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0024.OUT
DATE : 03\08\94



Depth Increment : .082025 m

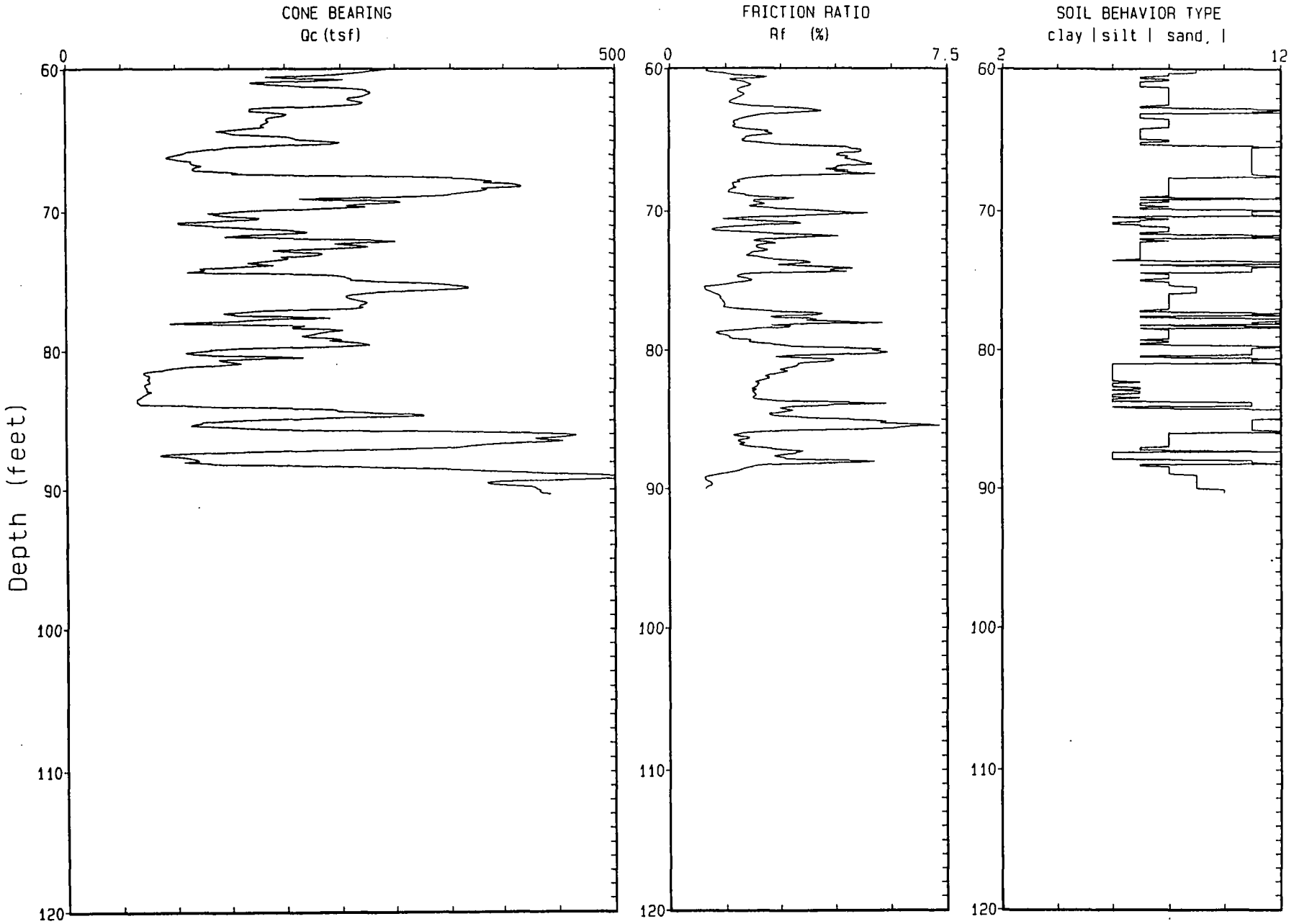
Max Depth : 90.34 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.06 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0024.OUT
DATE : 03\08\94

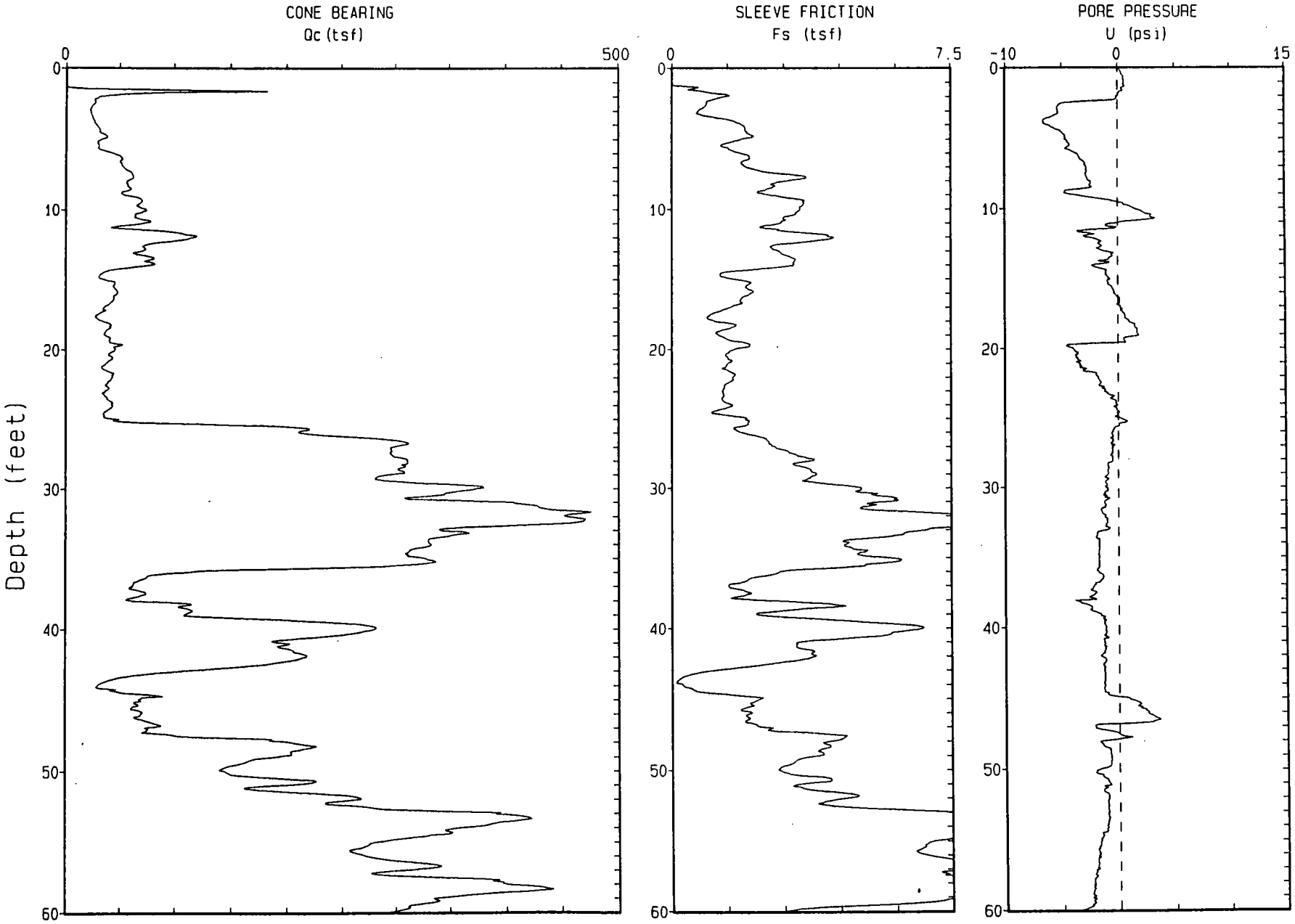


Depth Increment : .082025 m

Max Depth : 90.34 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.06 FT.
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN
FILE : CPL0024.OUT
DATE : 03\08\94



Depth Increment : .082025 m

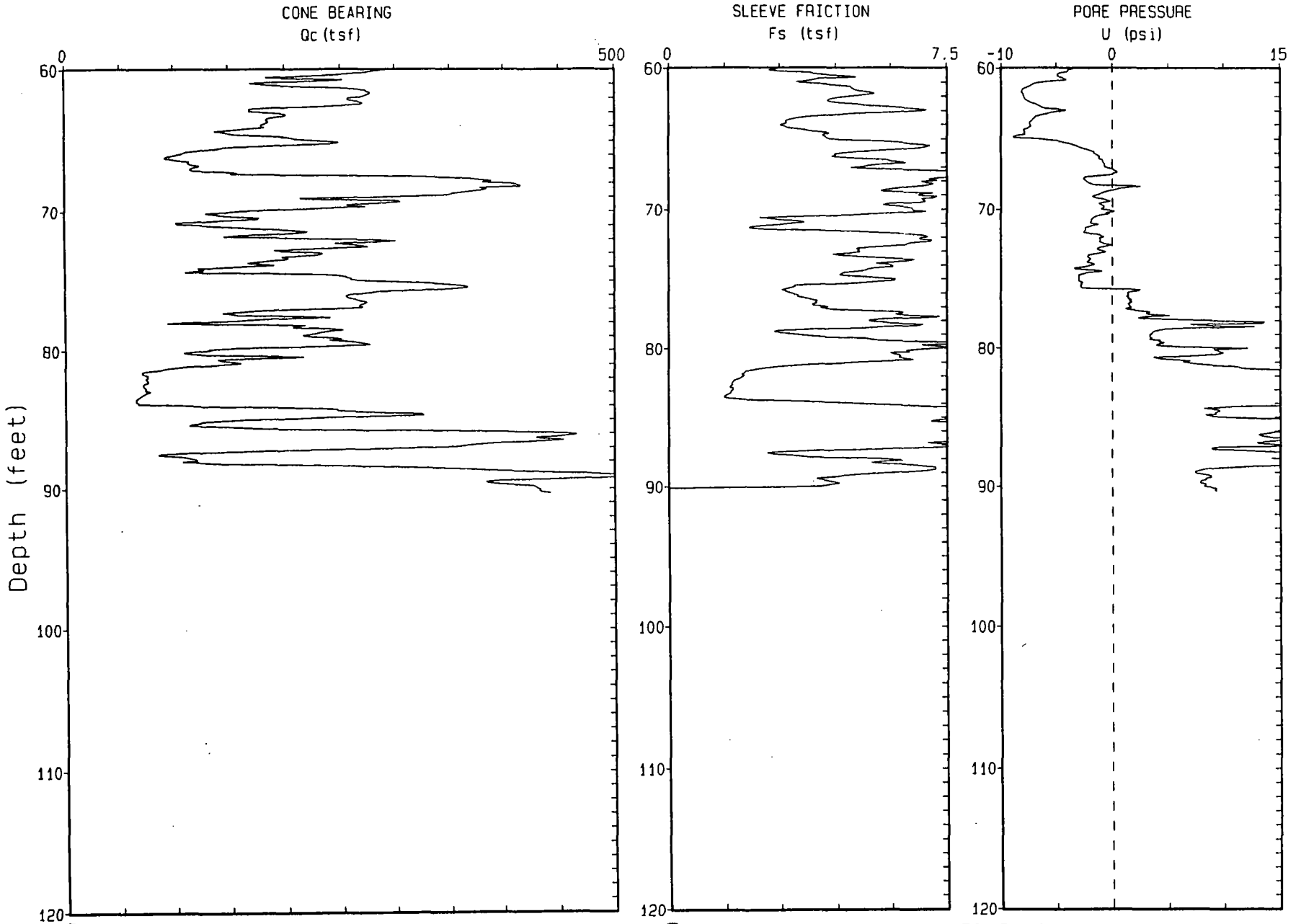
Max Depth : 90.34 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.06 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0024.OUT
DATE : 03\08\94



Depth Increment : .082025 m

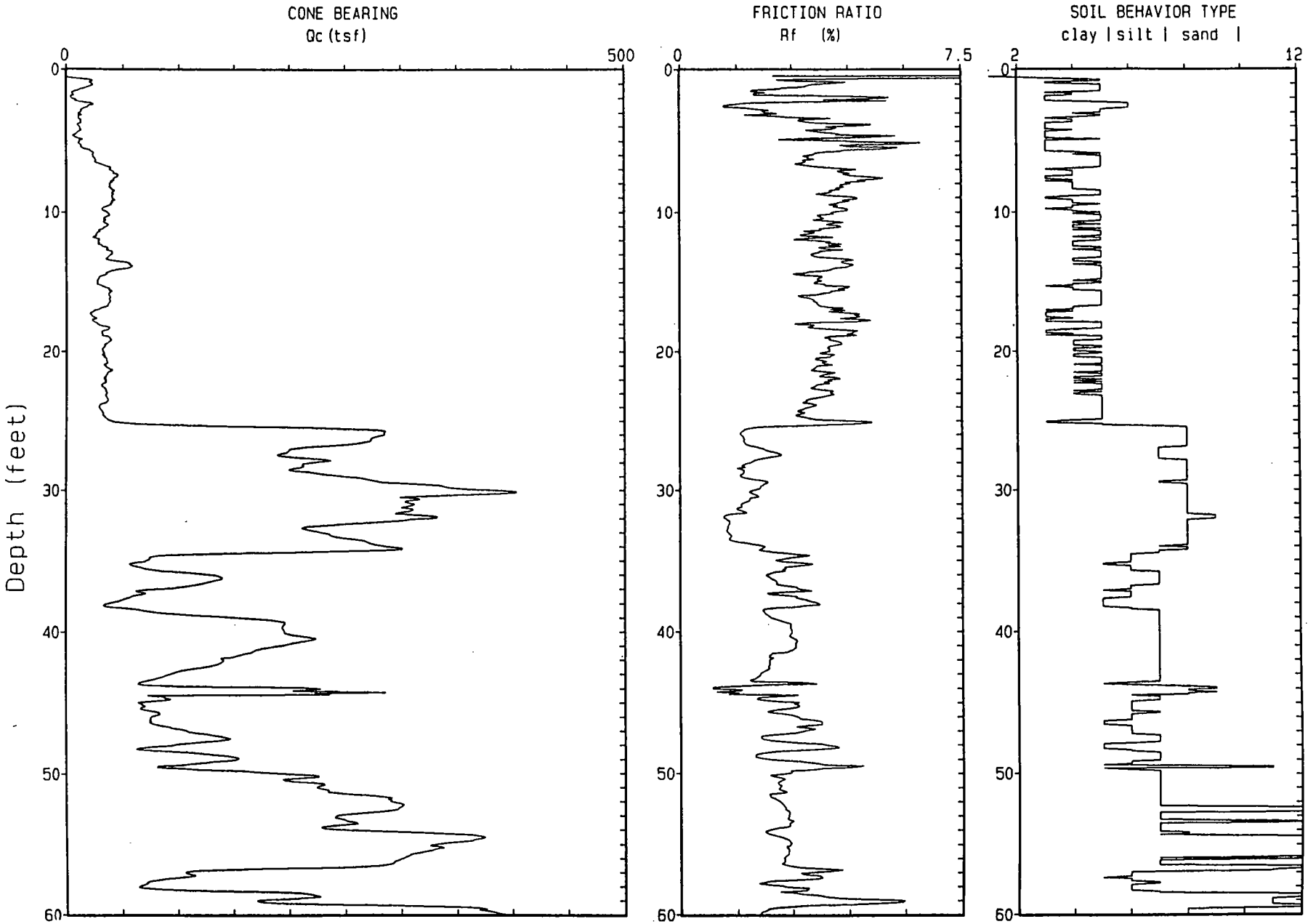
Max Depth : 90.34 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.17 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0025.OUT
DATE : 03\15\94



Depth Increment : .082025 m

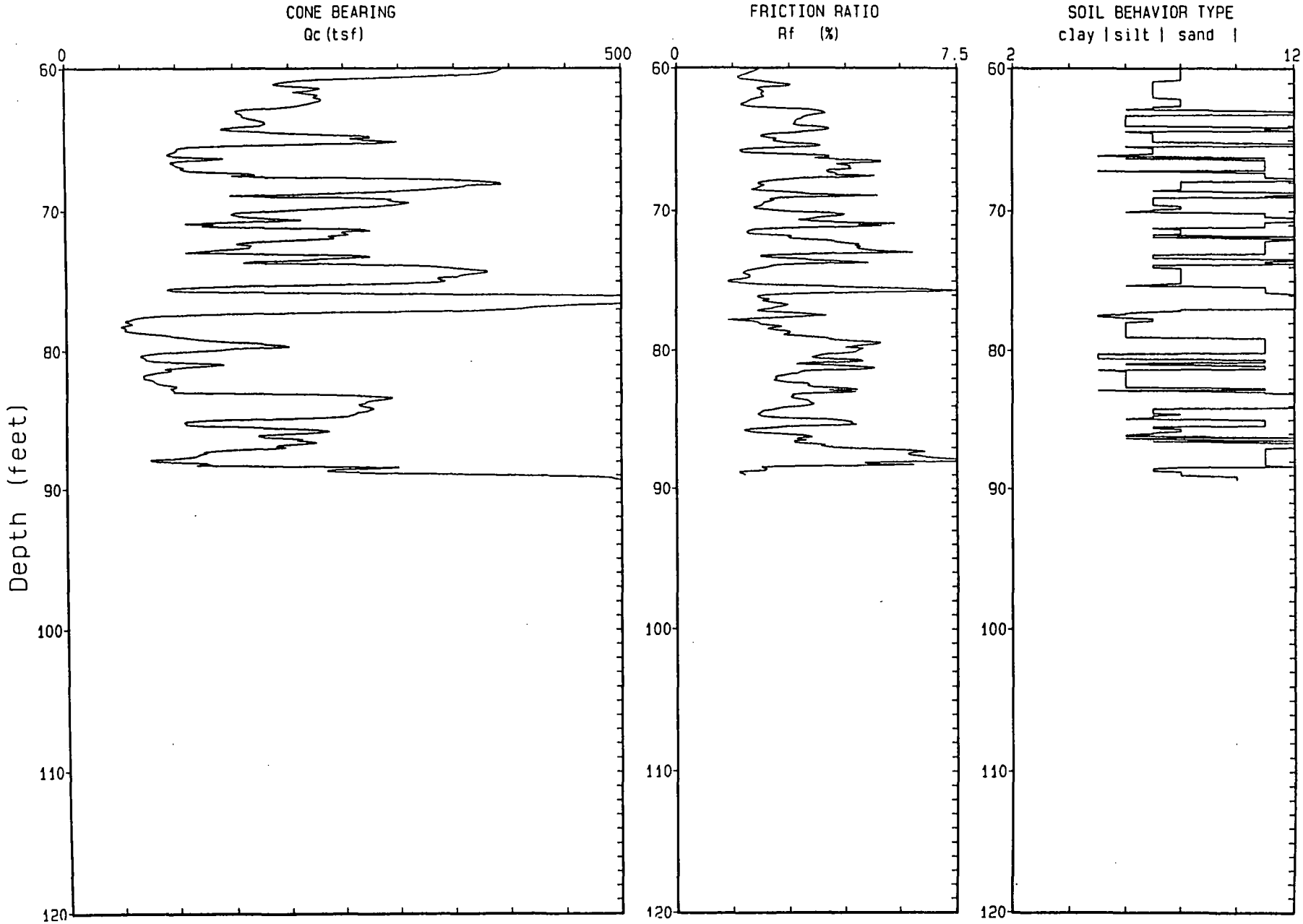
Max Depth : 89.36 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.17 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0025.OUT
DATE : 03\15\94



Depth Increment : .082025 m

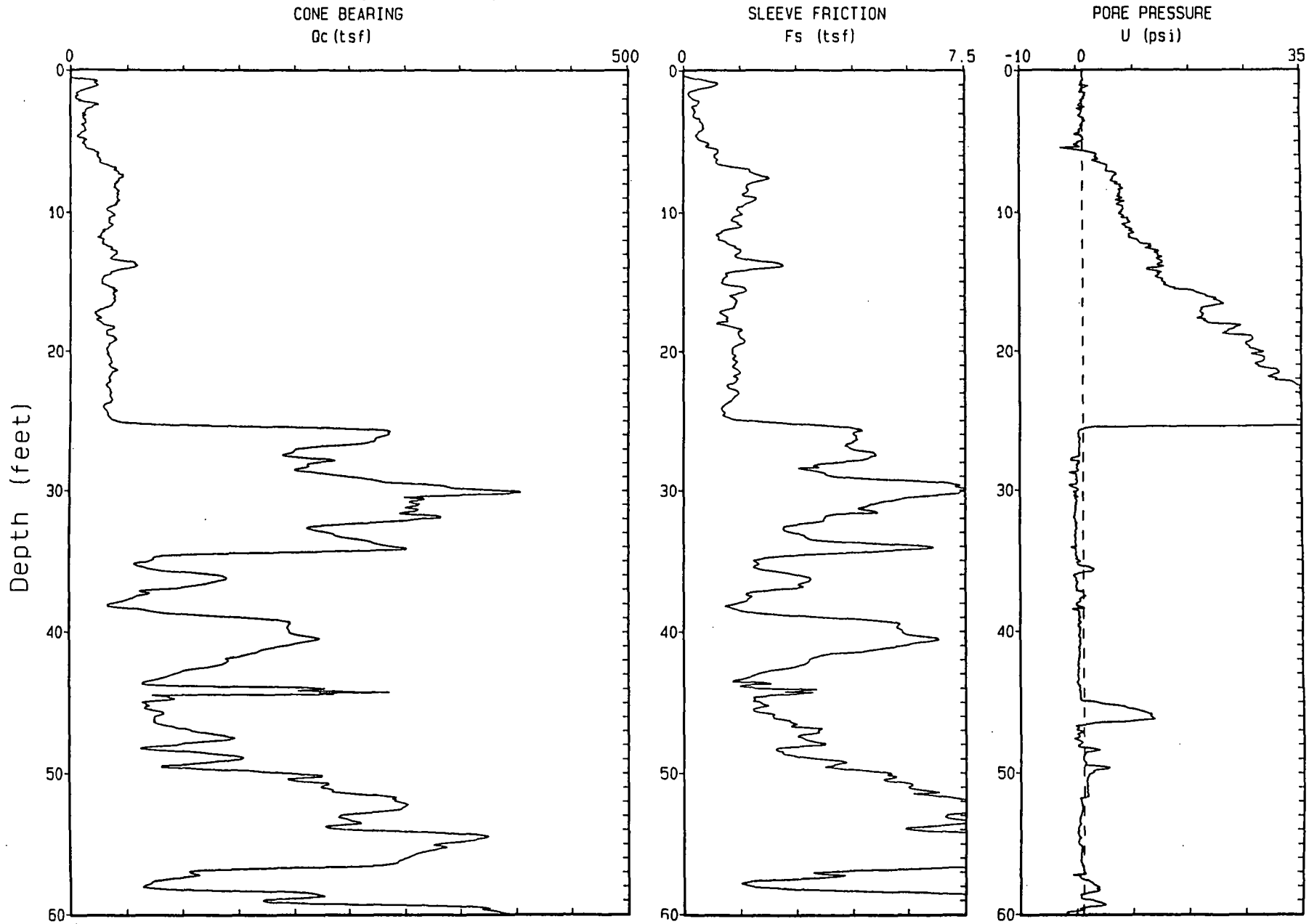
Max Depth : 89.36 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.17 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0025.OUT
DATE : 03\15\94



Depth Increment : .082025 m

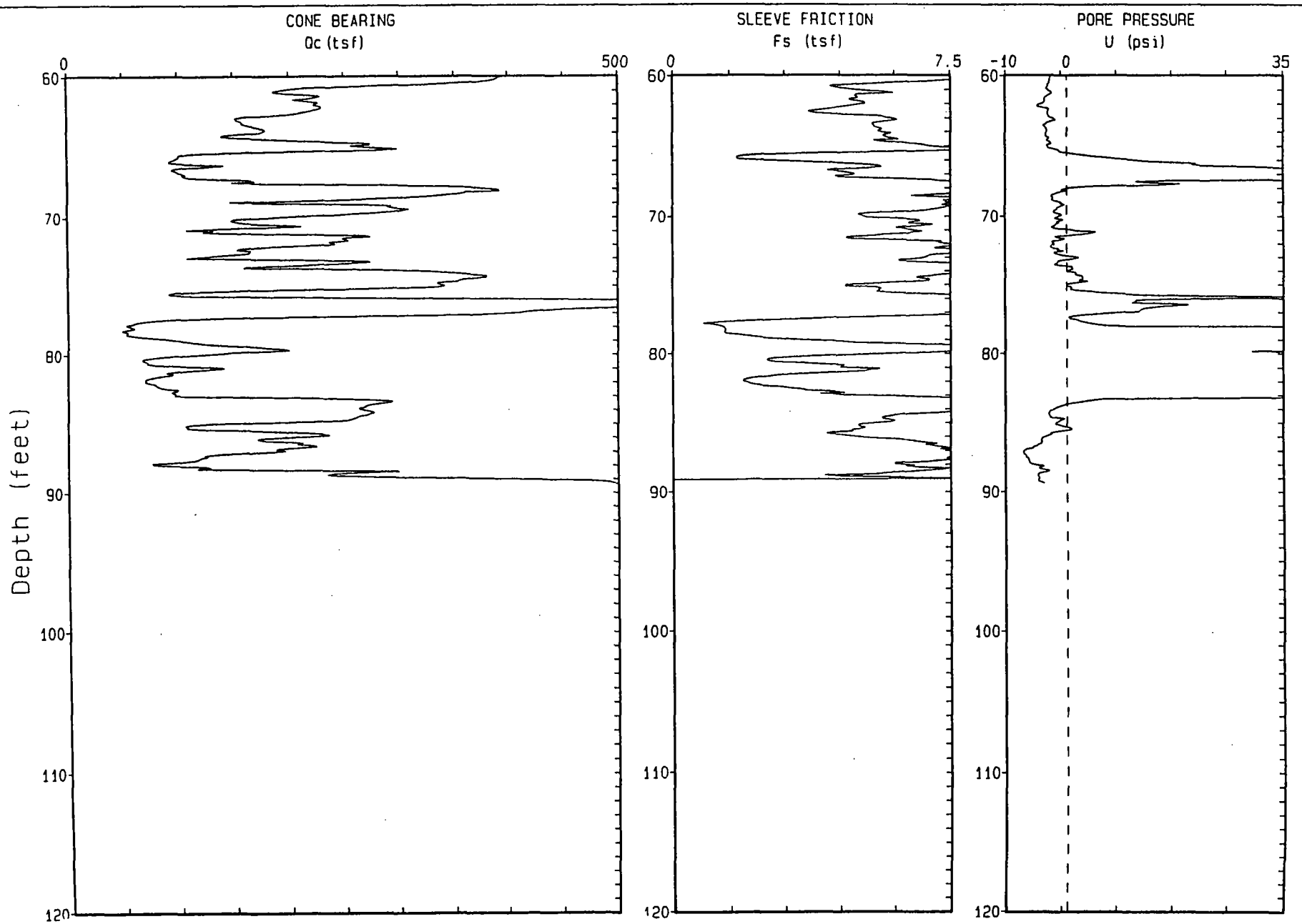
Max Depth : 89.36 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.17 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0025.OUT
DATE : 03\15\94



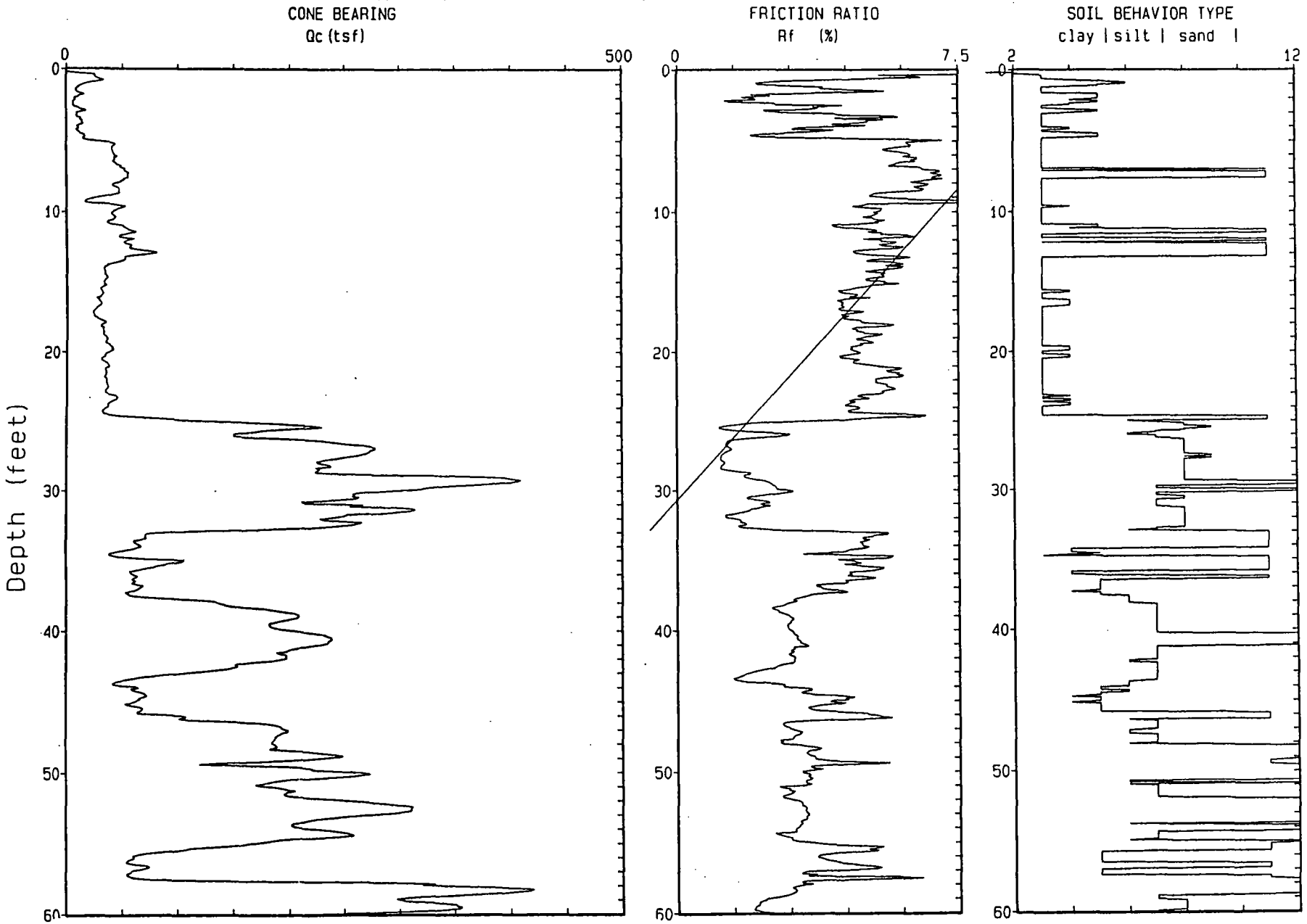
Depth Increment : .082025 m

Max Depth : 89.36 ft

DAMES & MOORE

PROJECT : MW-20 AREA | CONTRACTOR : GREGG IN SITU | FILE : CPL0026.OUT

ELEVATION : 41.30 FT. | GEOLOGIST : CRAIG MAGNUSEN | DATE : 03\15\94



Depth Increment : .082025 m

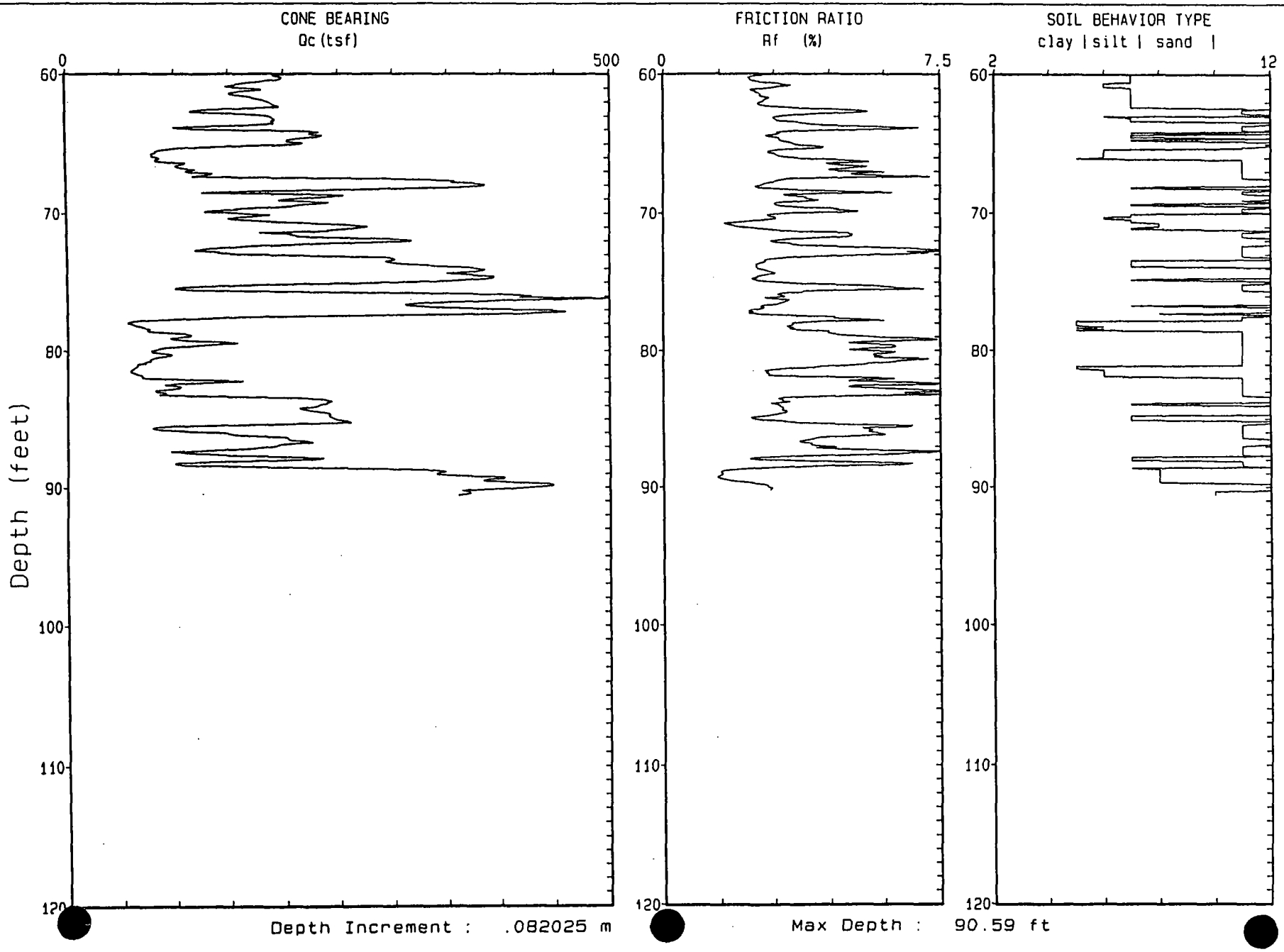
Max Depth : 90.59 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.30 FT.

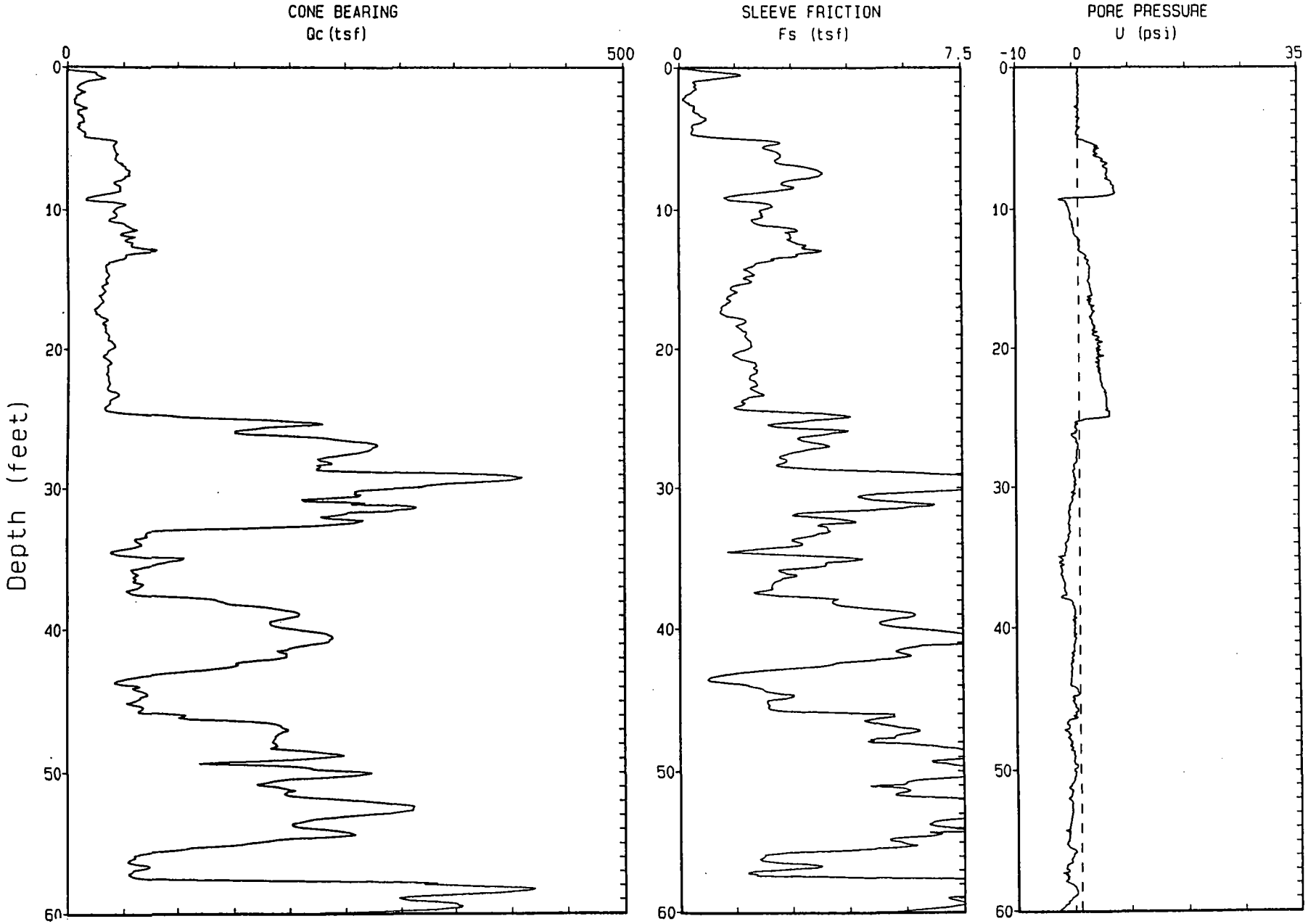
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0026.OUT
DATE : 03\15\94



DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.30 FT.
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN
FILE : CPL0026.OUT
DATE : 03\15\94



Depth Increment : .082025 m

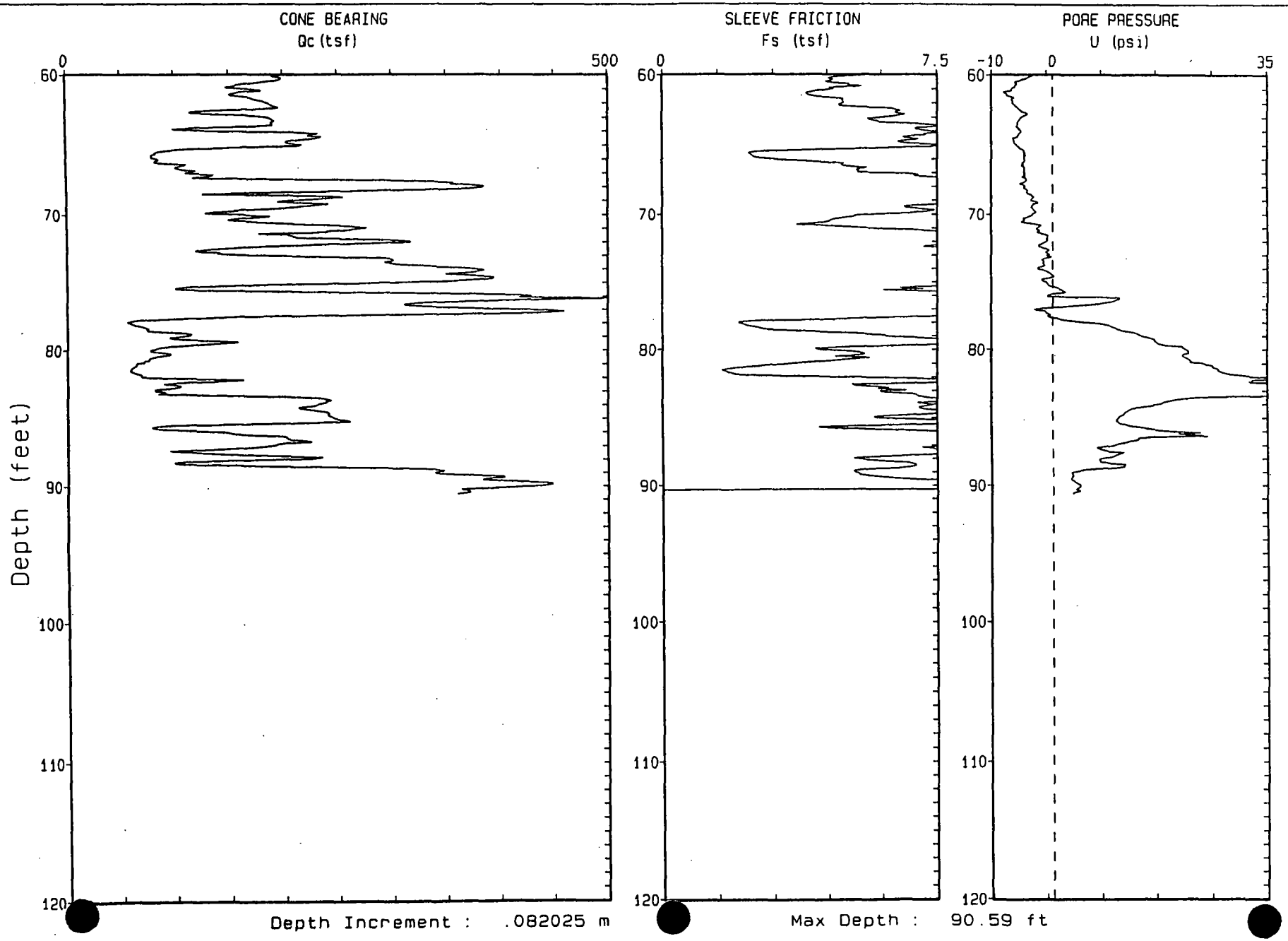
Max Depth : 90.59 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.30 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0026.OUT
DATE : 03\15\94

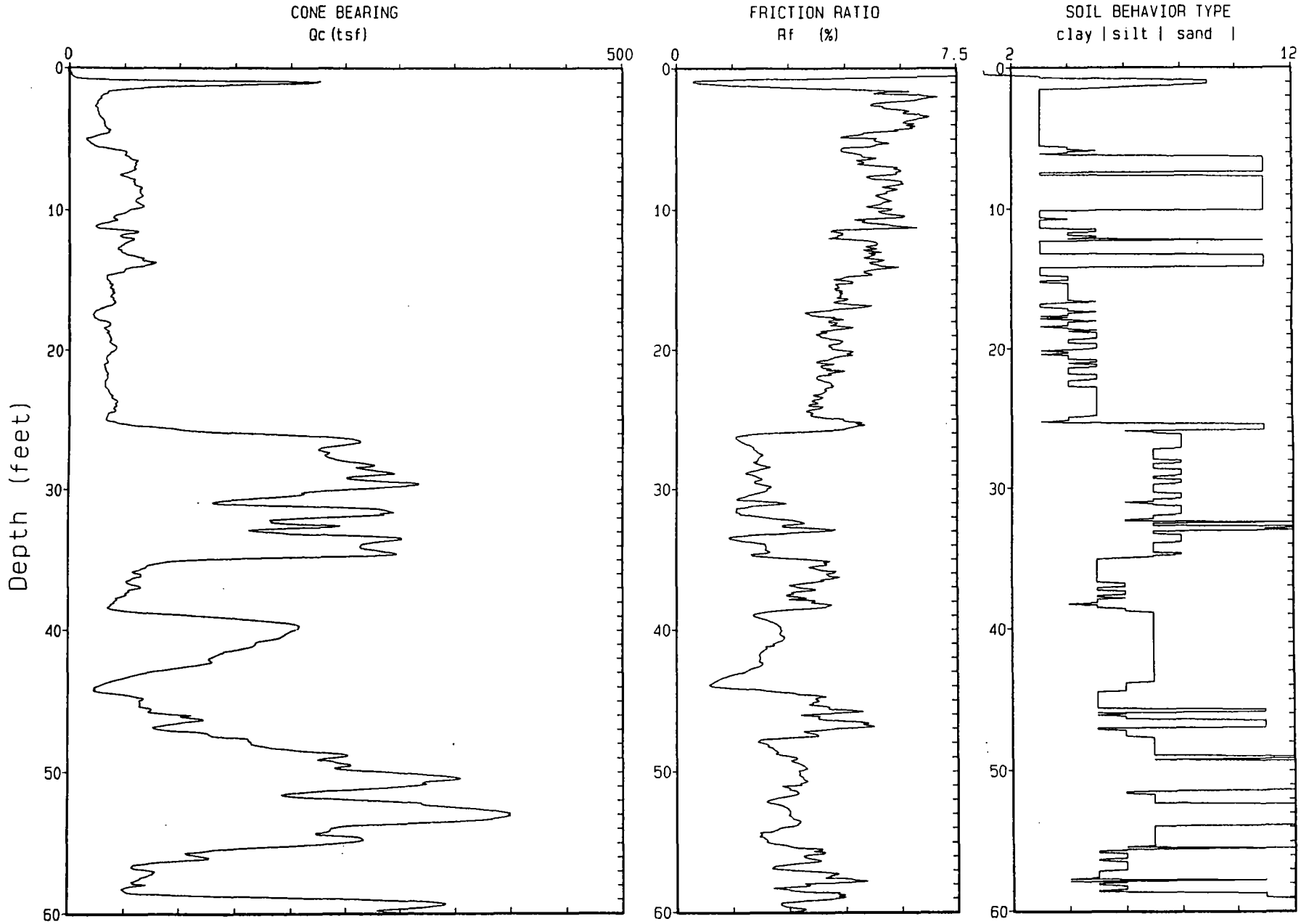


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.44

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0027.OUT
DATE : 03\16\94



Depth Increment : .082025 m

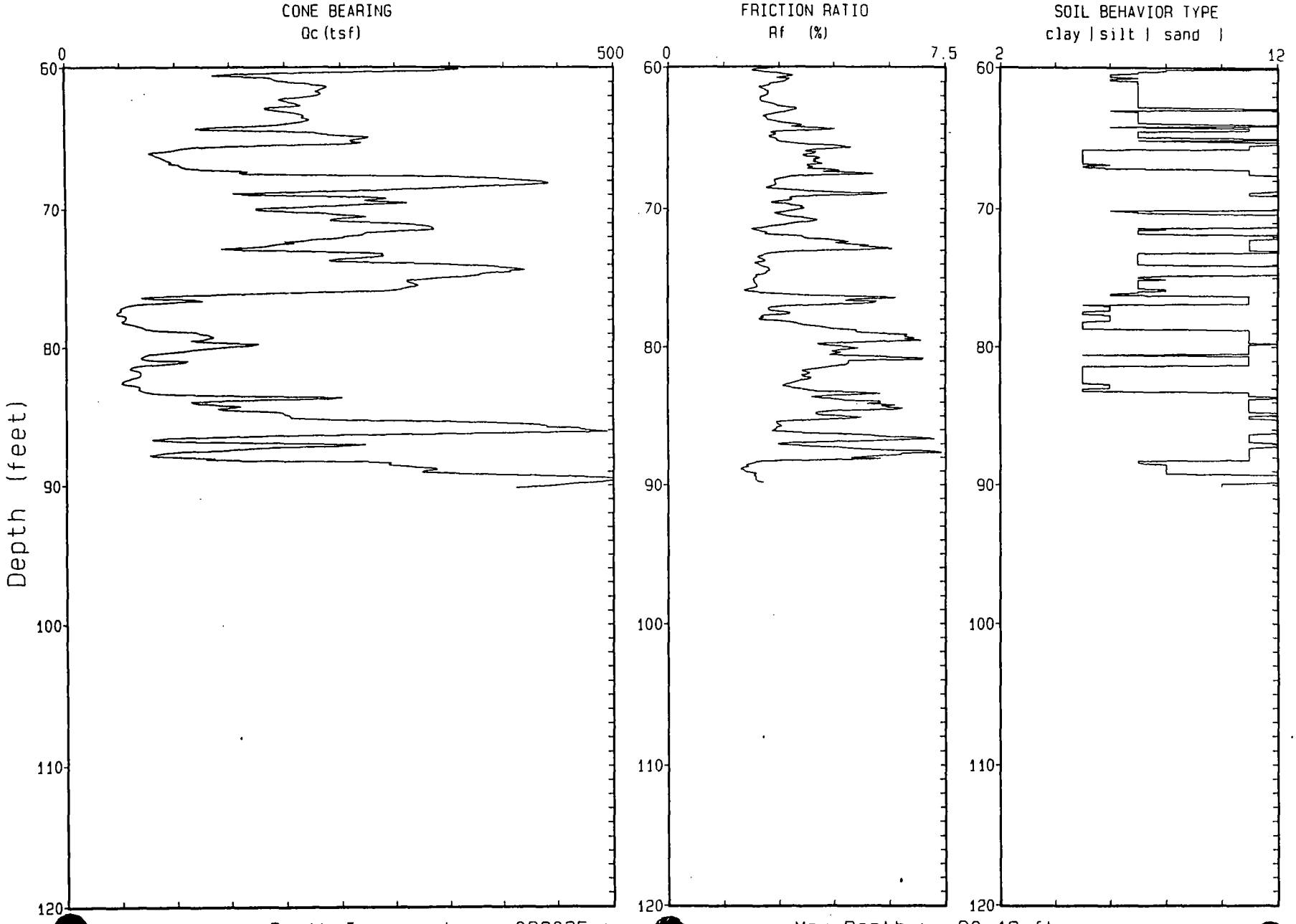
Max Depth : 90.18 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.44

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0027.OUT
DATE : 03\16\94



Depth Increment : .082025 m

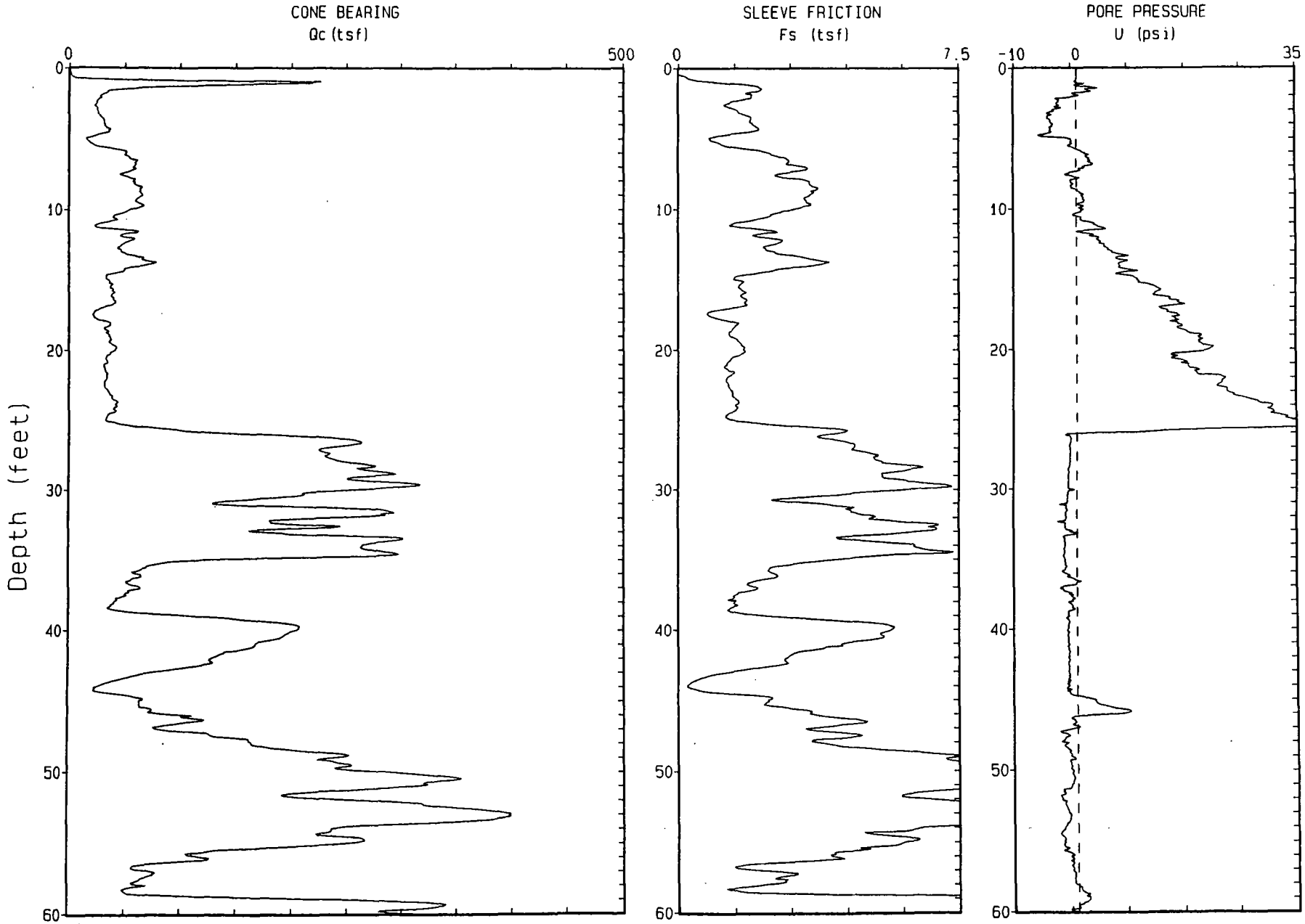
Max Depth : 90.18 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.44

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0027.OUT
DATE : 03\16\94



Depth Increment : .082025 m

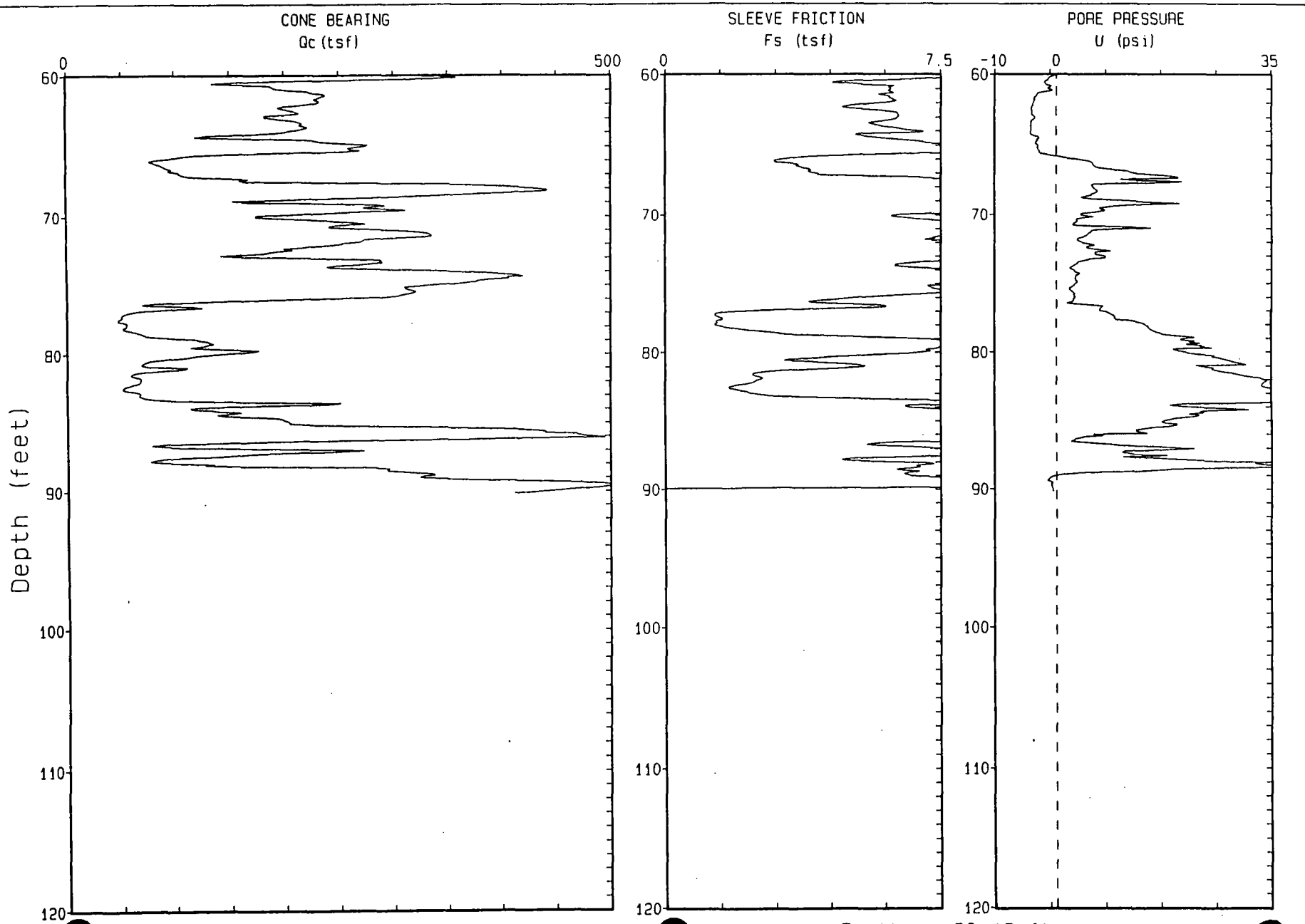
Max Depth : 90.18 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.44

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0027.OUT
DATE : 03\16\94



Depth Increment : .082025 m

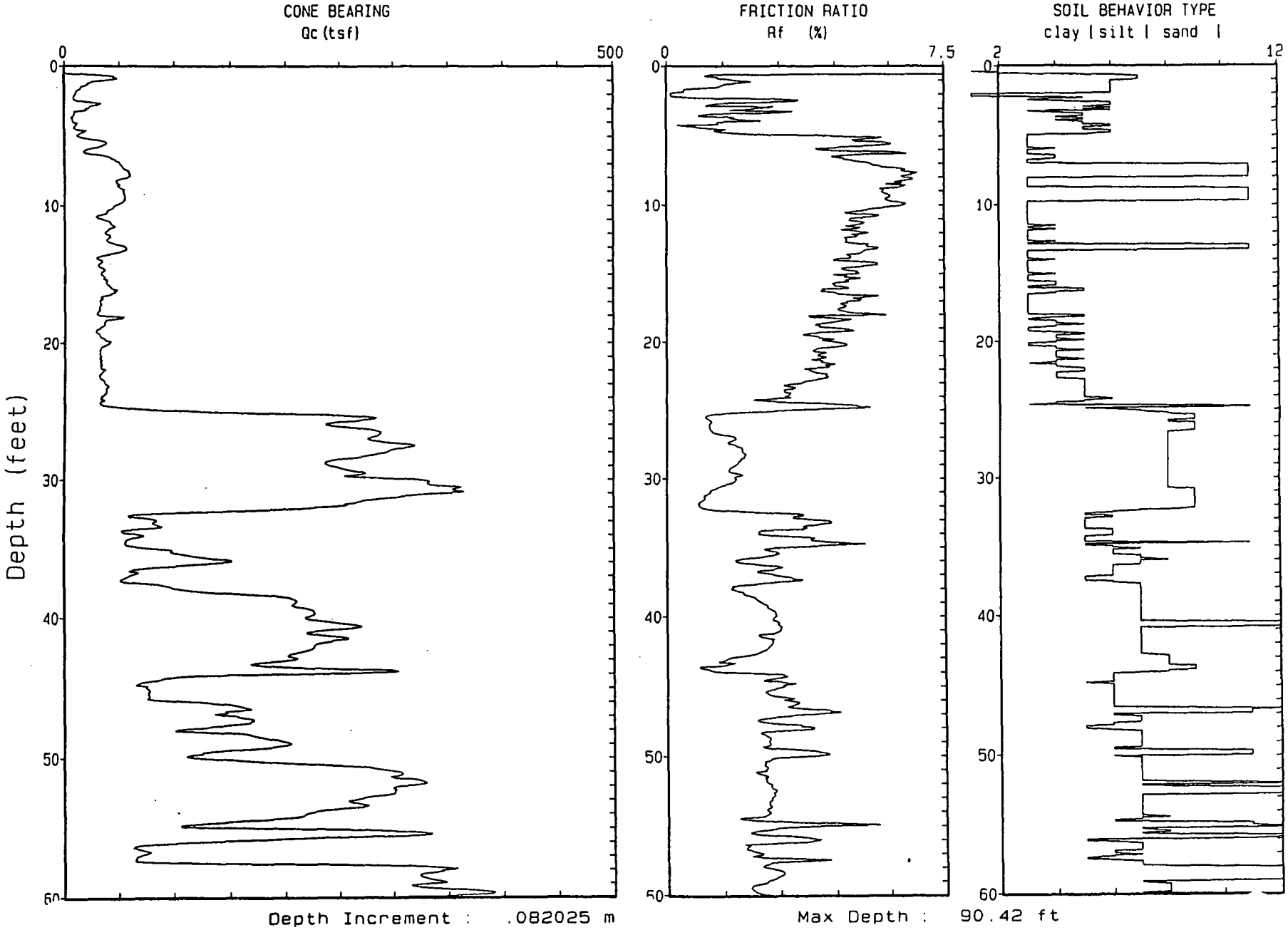
Max Depth : 90.18 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.12 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0028.OUT
DATE : 03\15\94

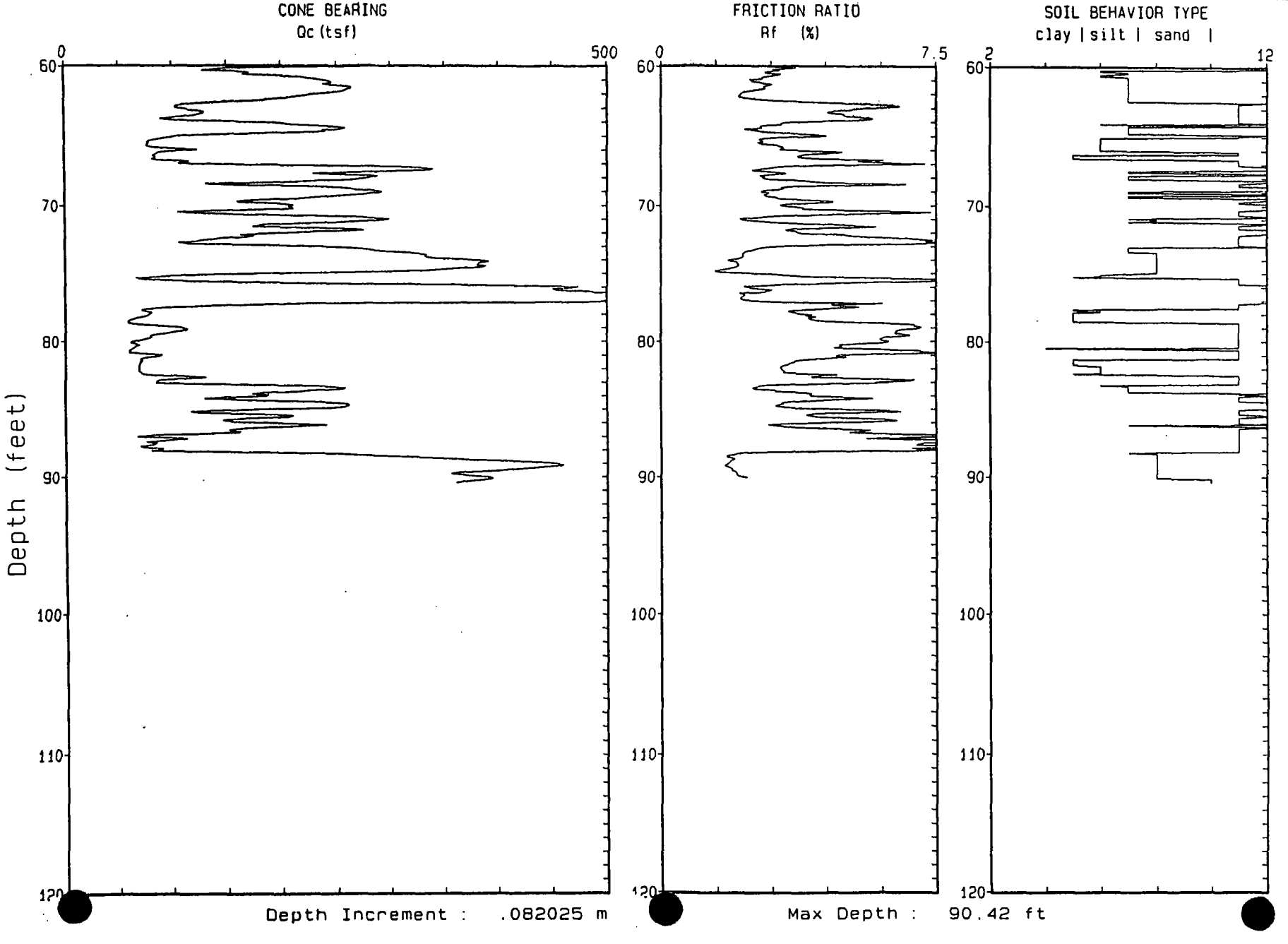


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.12 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0028.OUT
DATE : 03\15\94

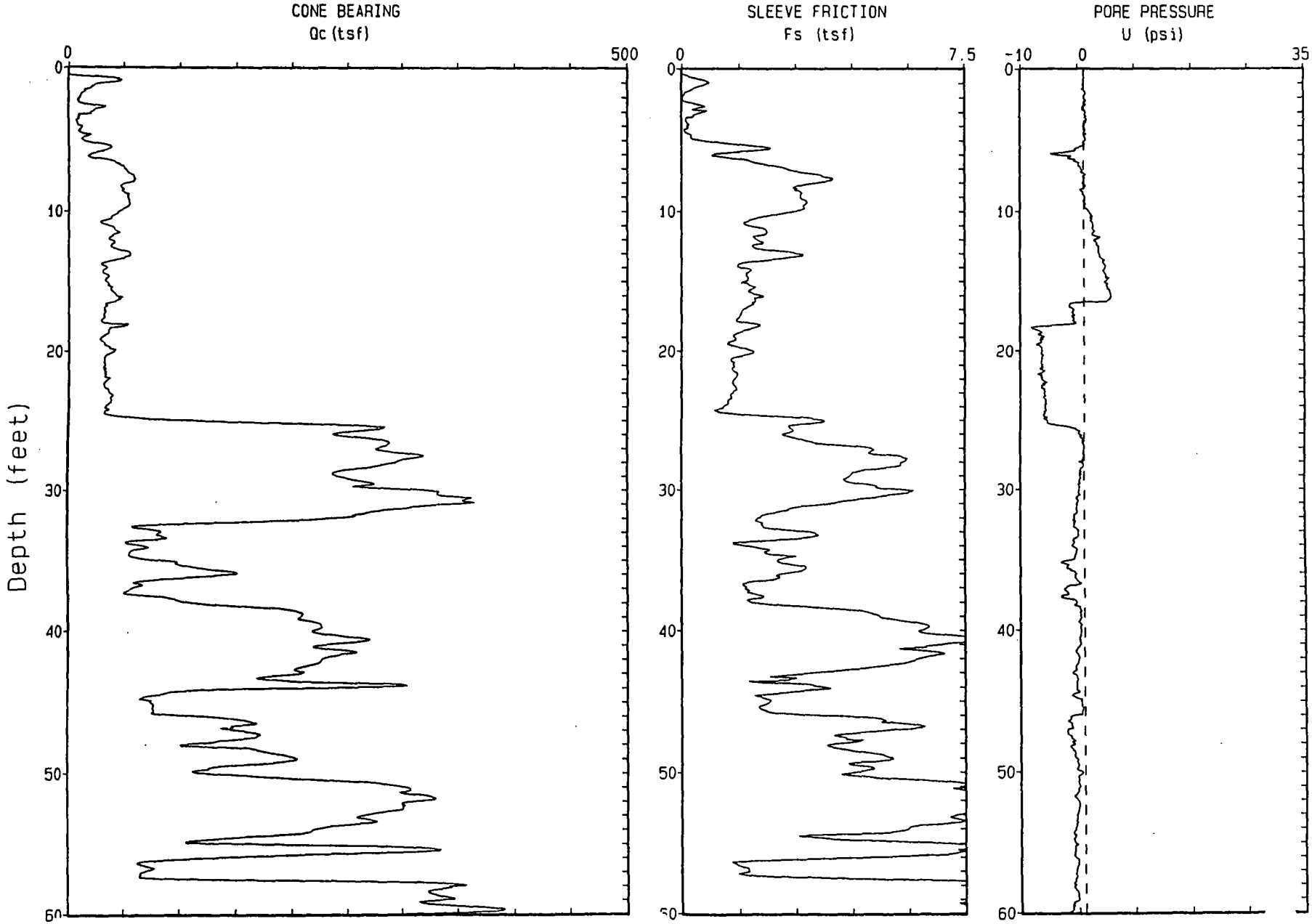


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.12 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0028.OUT
DATE : 03\15\94



Depth Increment : .082025 m

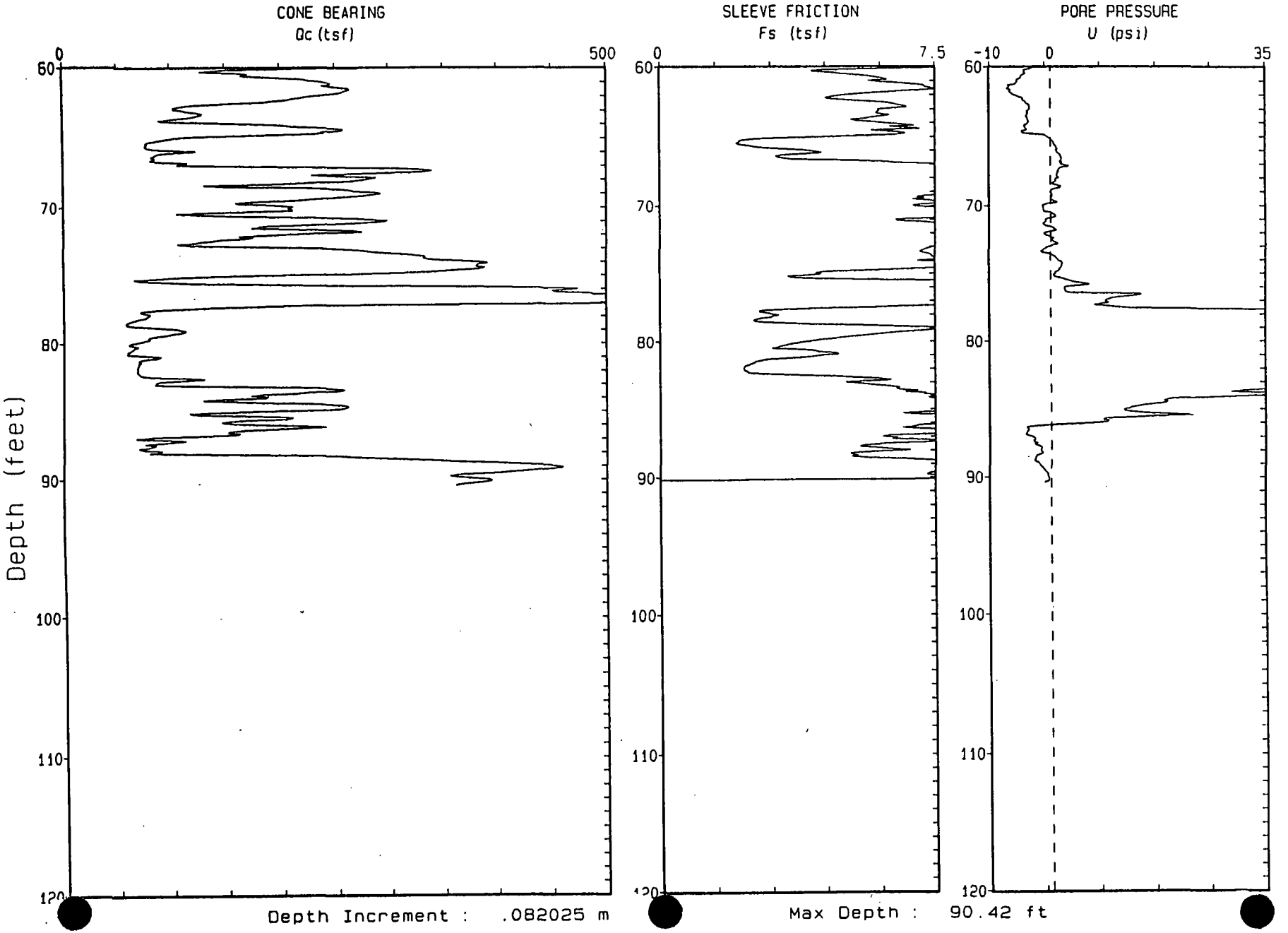
Max Depth : 90.42 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.12 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0028.OUT
DATE : 03\15\94

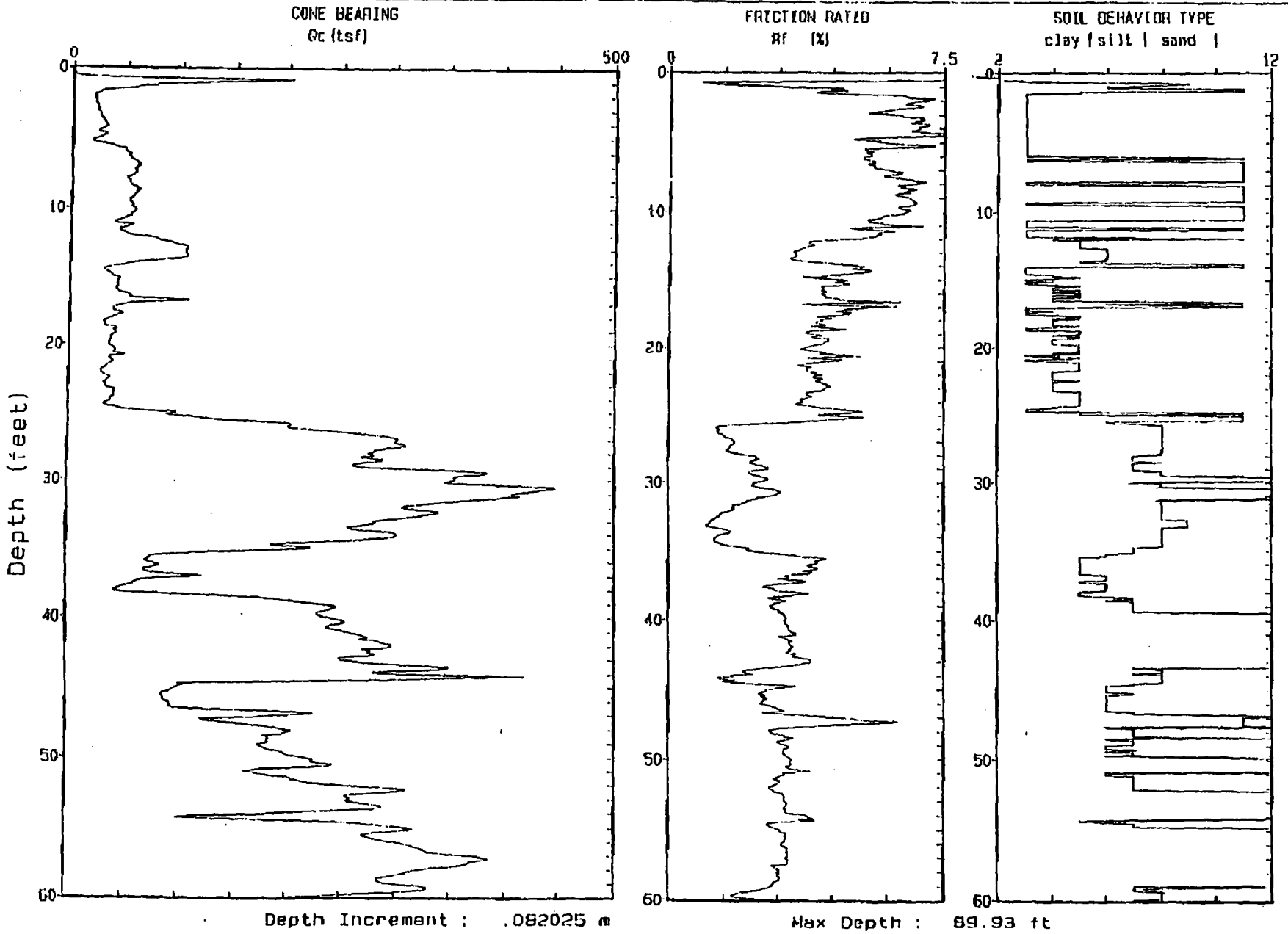


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.44 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0029.OUT
DATE : 03\16\94



Depth Increment : .082025 m

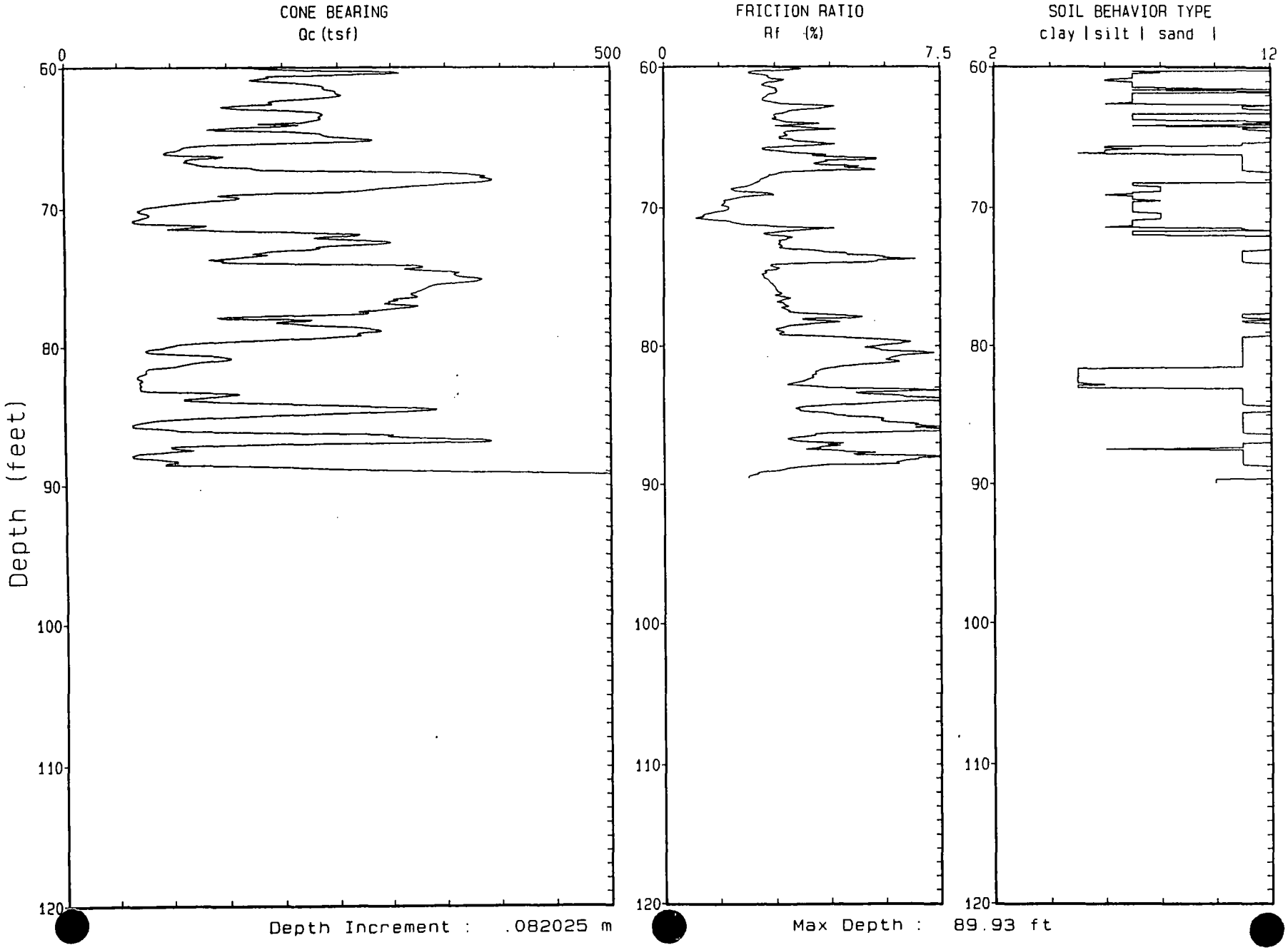
Max Depth : 89.93 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.44 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0029.OUT
DATE : 03\16\94

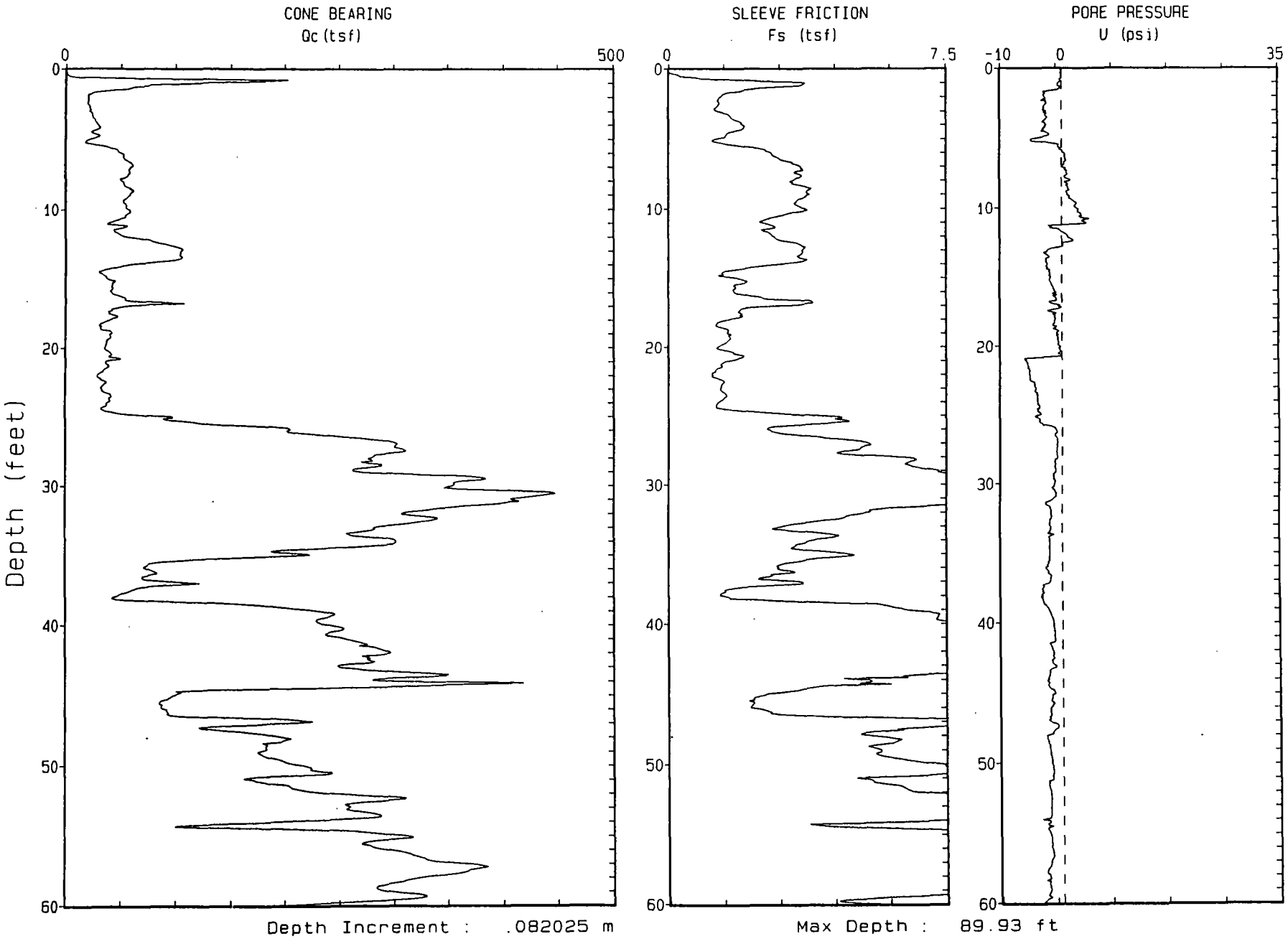


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.44 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0029.OUT
DATE : 03\16\94

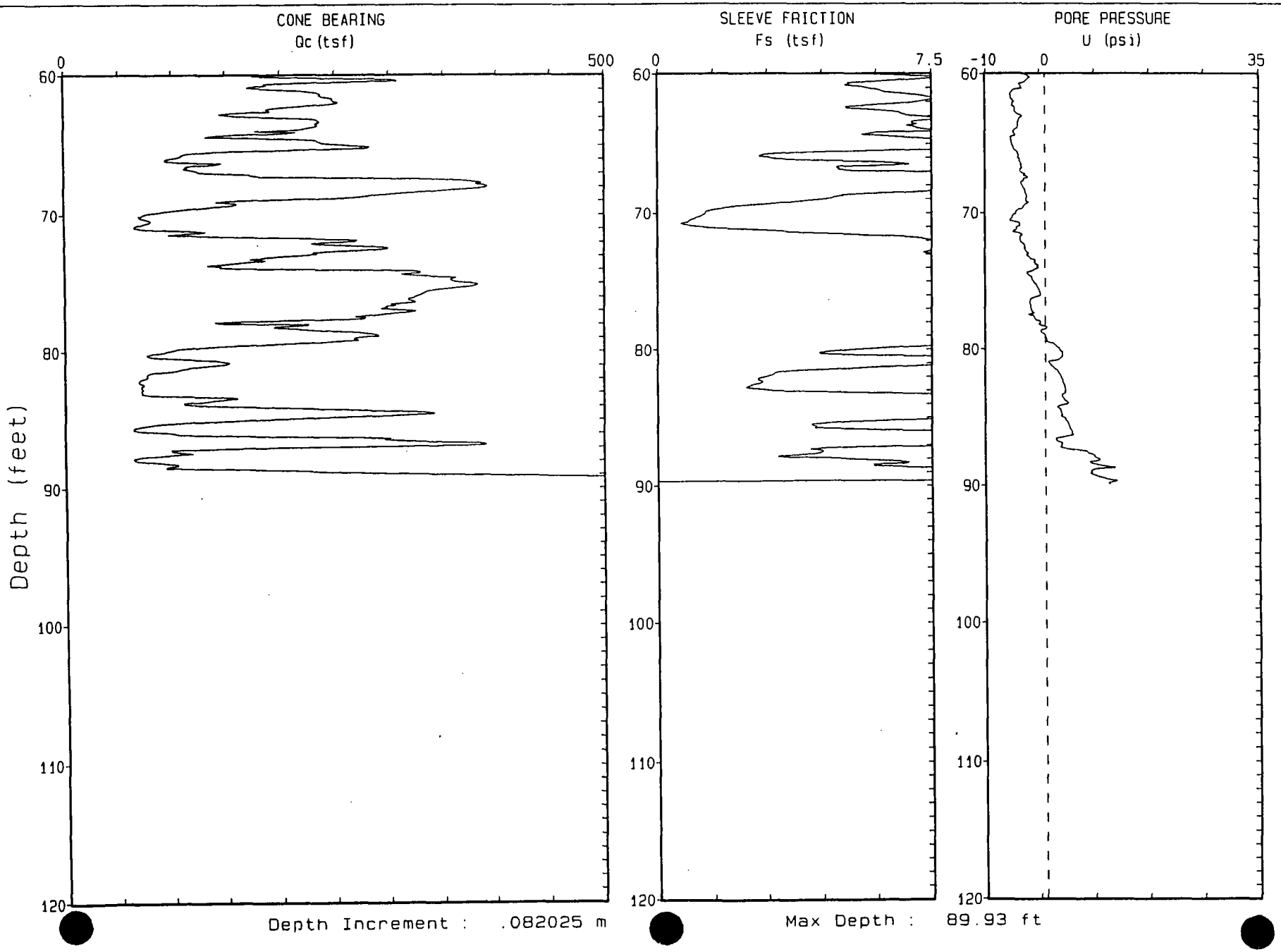


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.44 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0029.OUT
DATE : 03\16\94

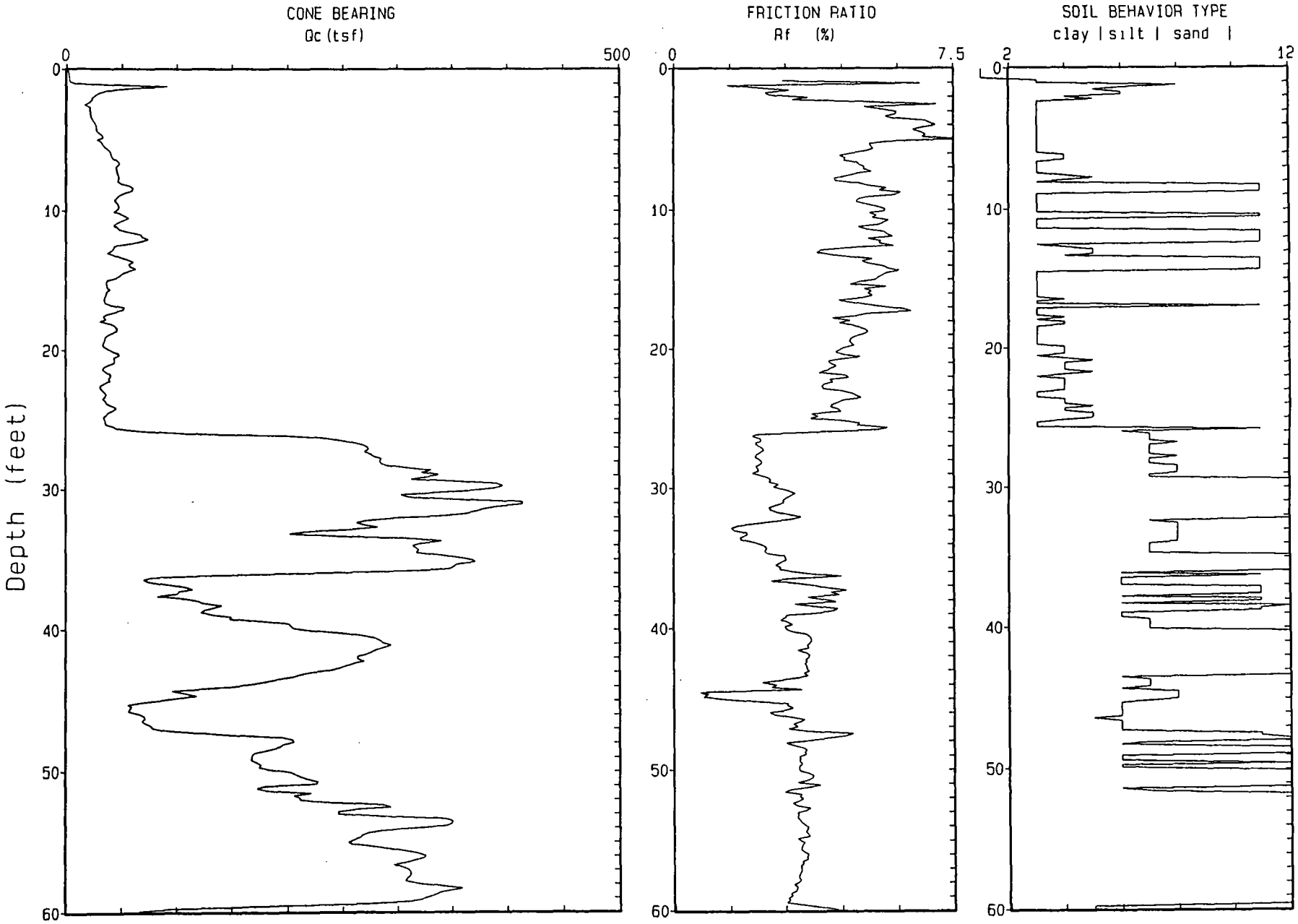


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.83

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0030.OUT
DATE : 03/18/94



Depth Increment : .16405 m

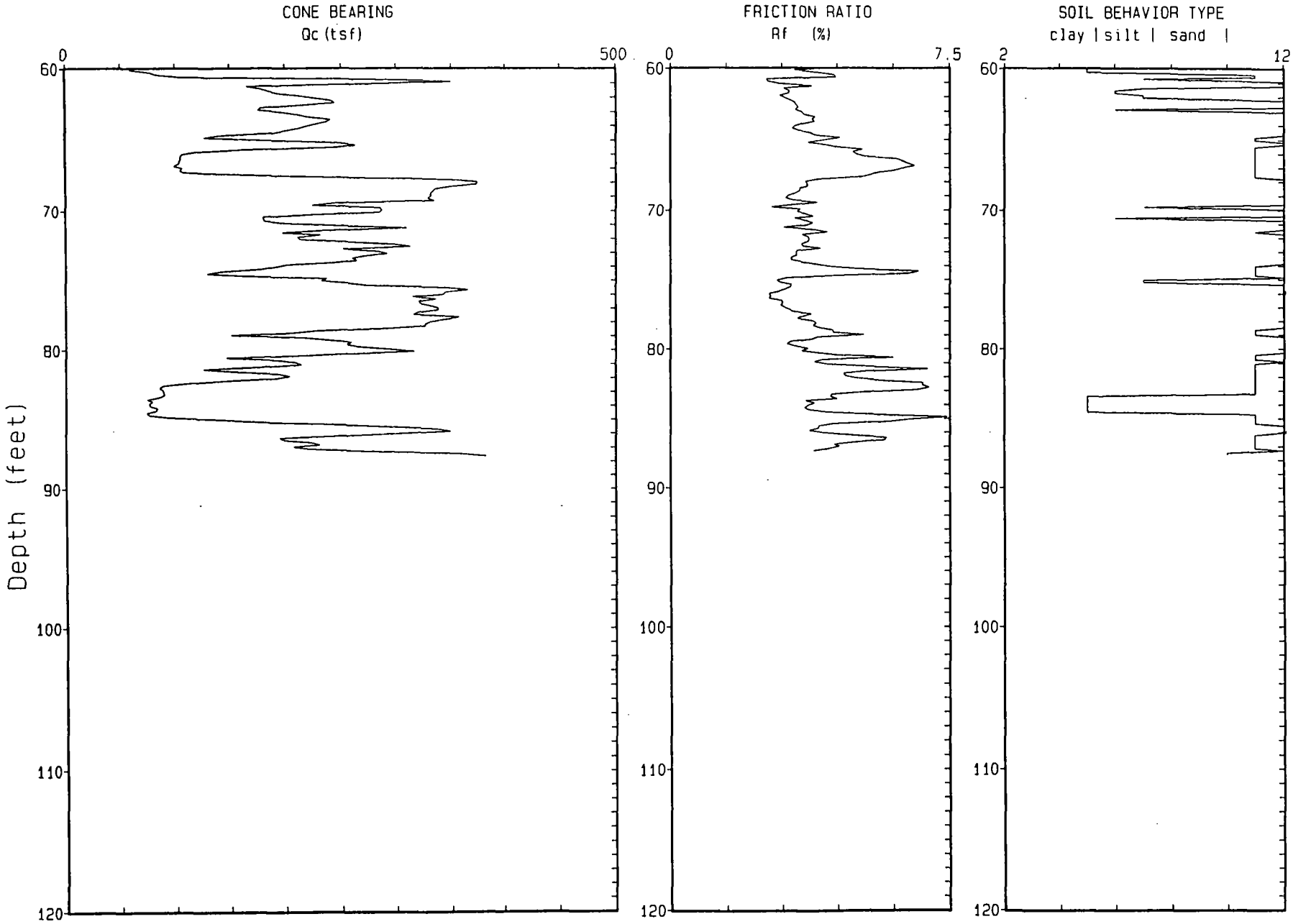
Max Depth : 87.65 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.83

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0030.OUT
DATE : 03/18/94



Depth Increment : .16405 m

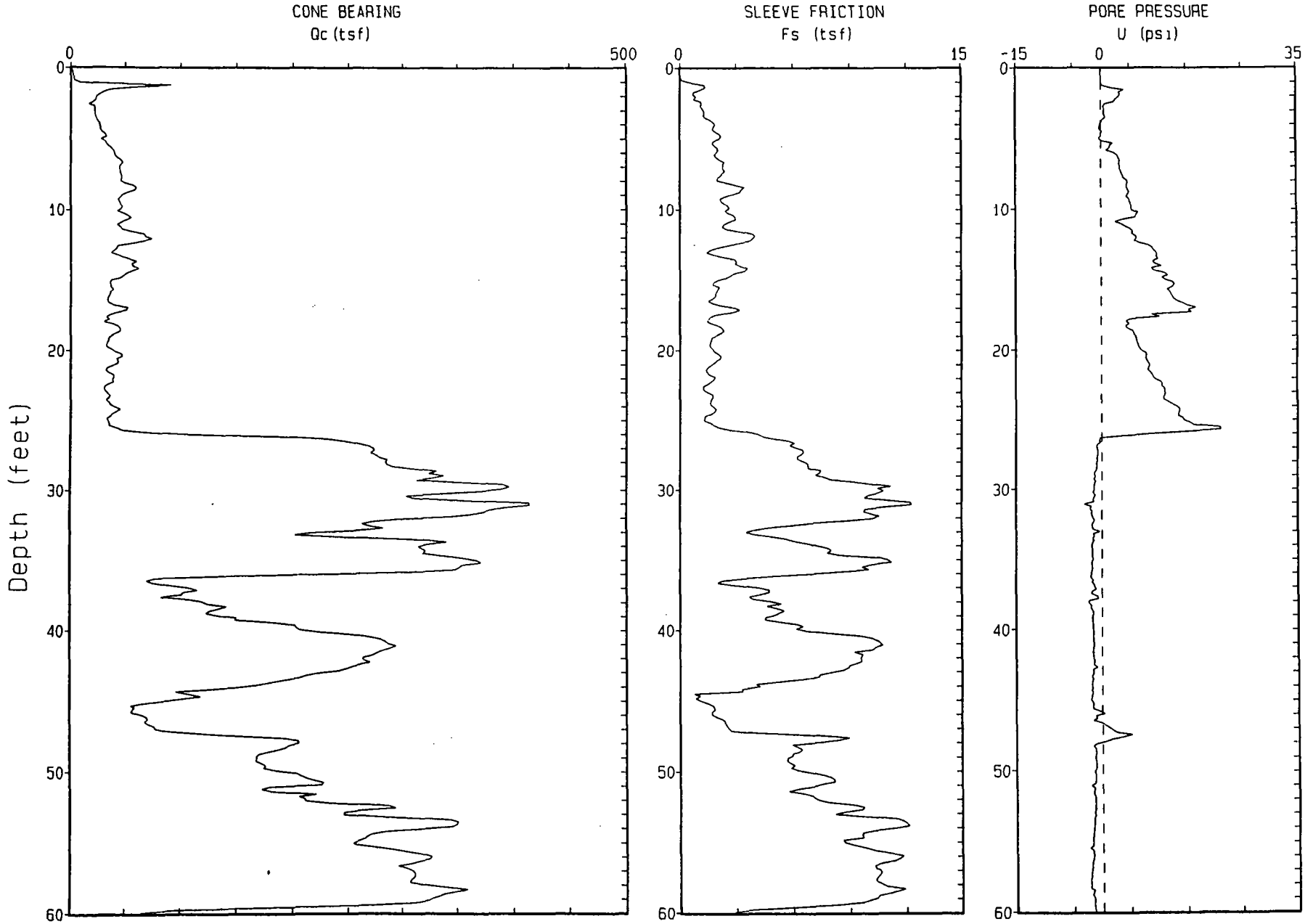
Max Depth : 87.65 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.83

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0030.OUT
DATE : 03/18/94



Depth Increment : .16405 m

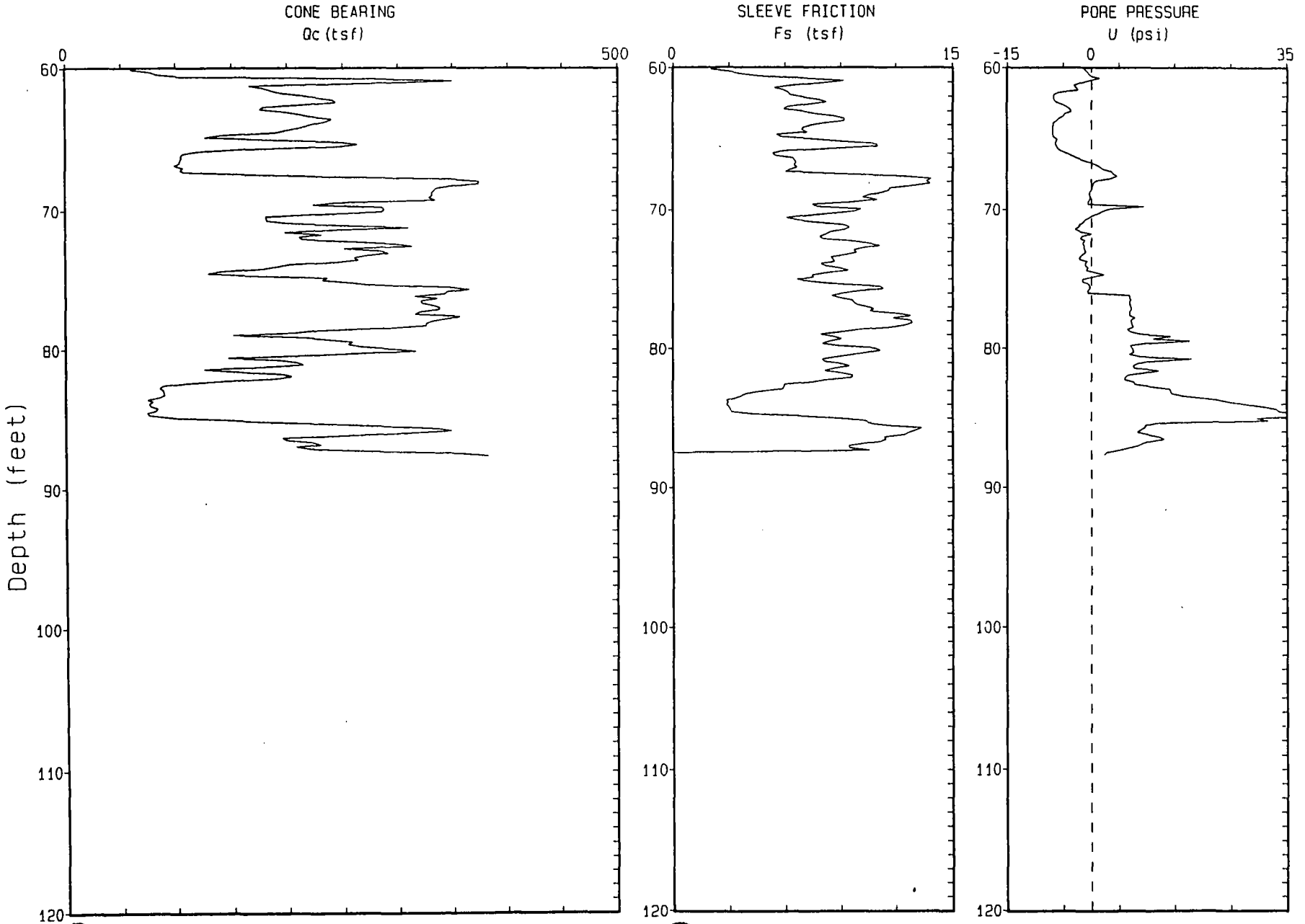
Max Depth : 87.65 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.83

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0030.OUT
DATE : 03/18/94



Depth Increment : .16405 m

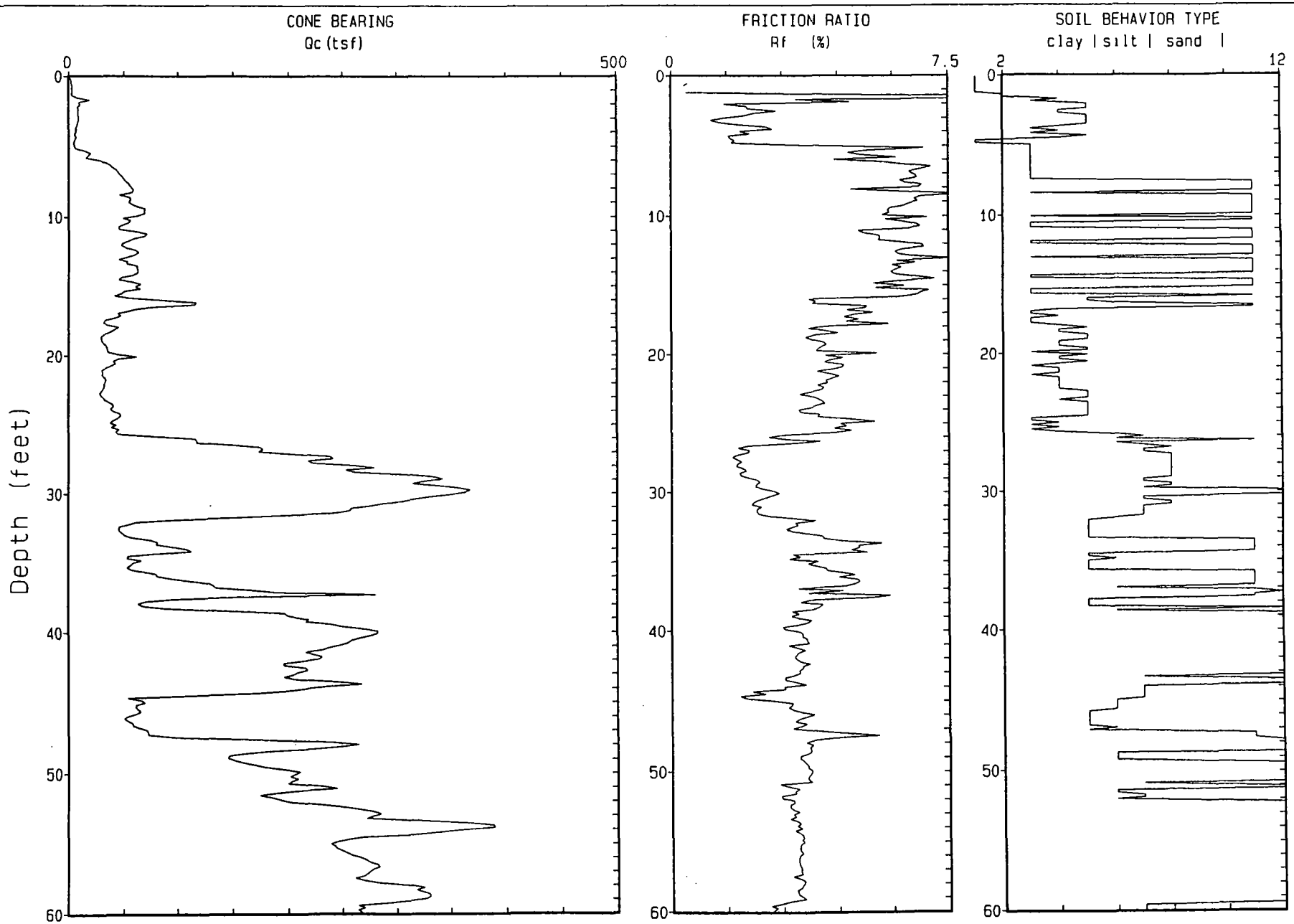
Max Depth : 87.65 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.66

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0031.OUT
DATE : 03/18/94



Depth Increment : .16405 m

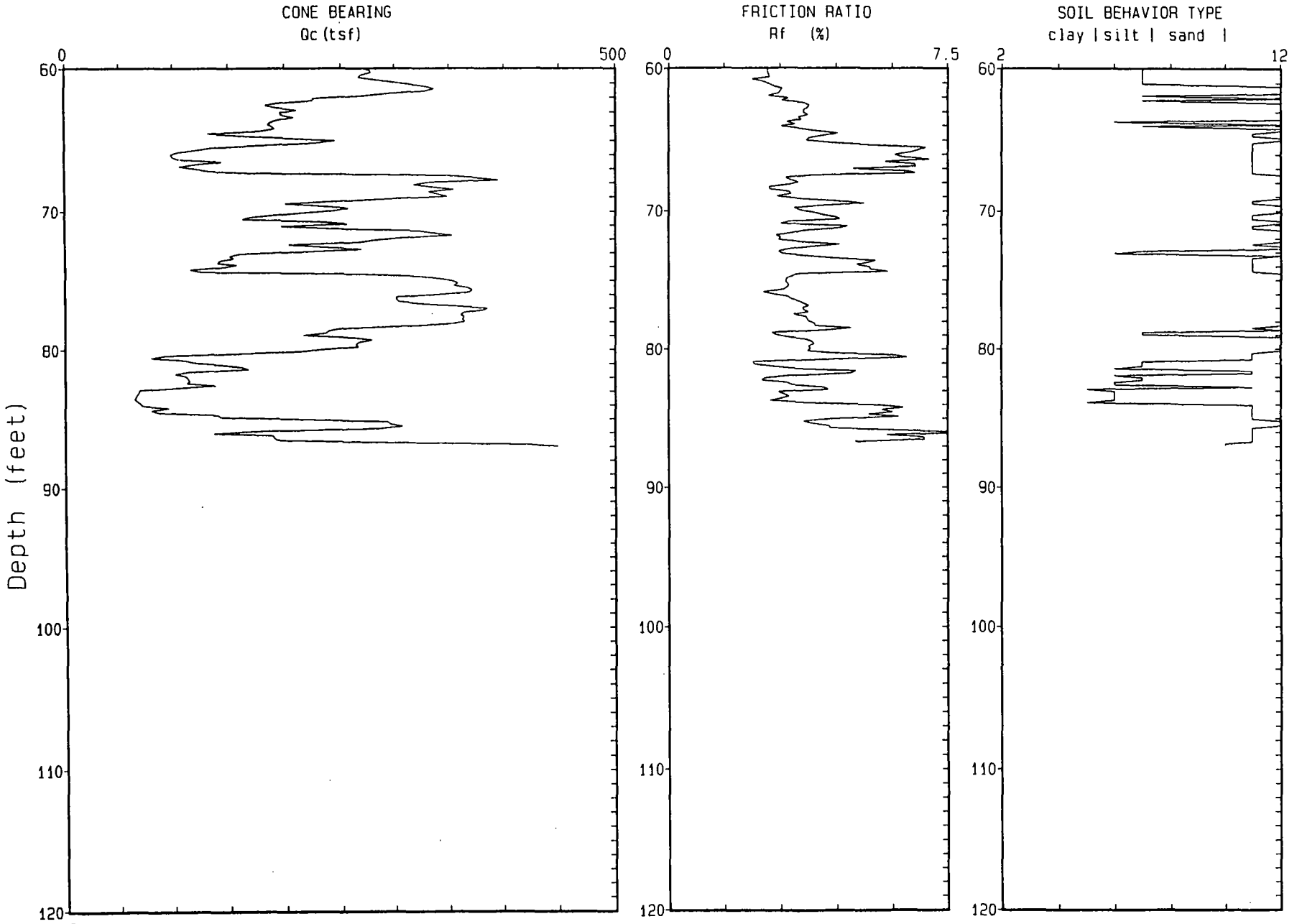
Max Depth : 87.00 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.66

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0031.OUT
DATE : 03/18/94

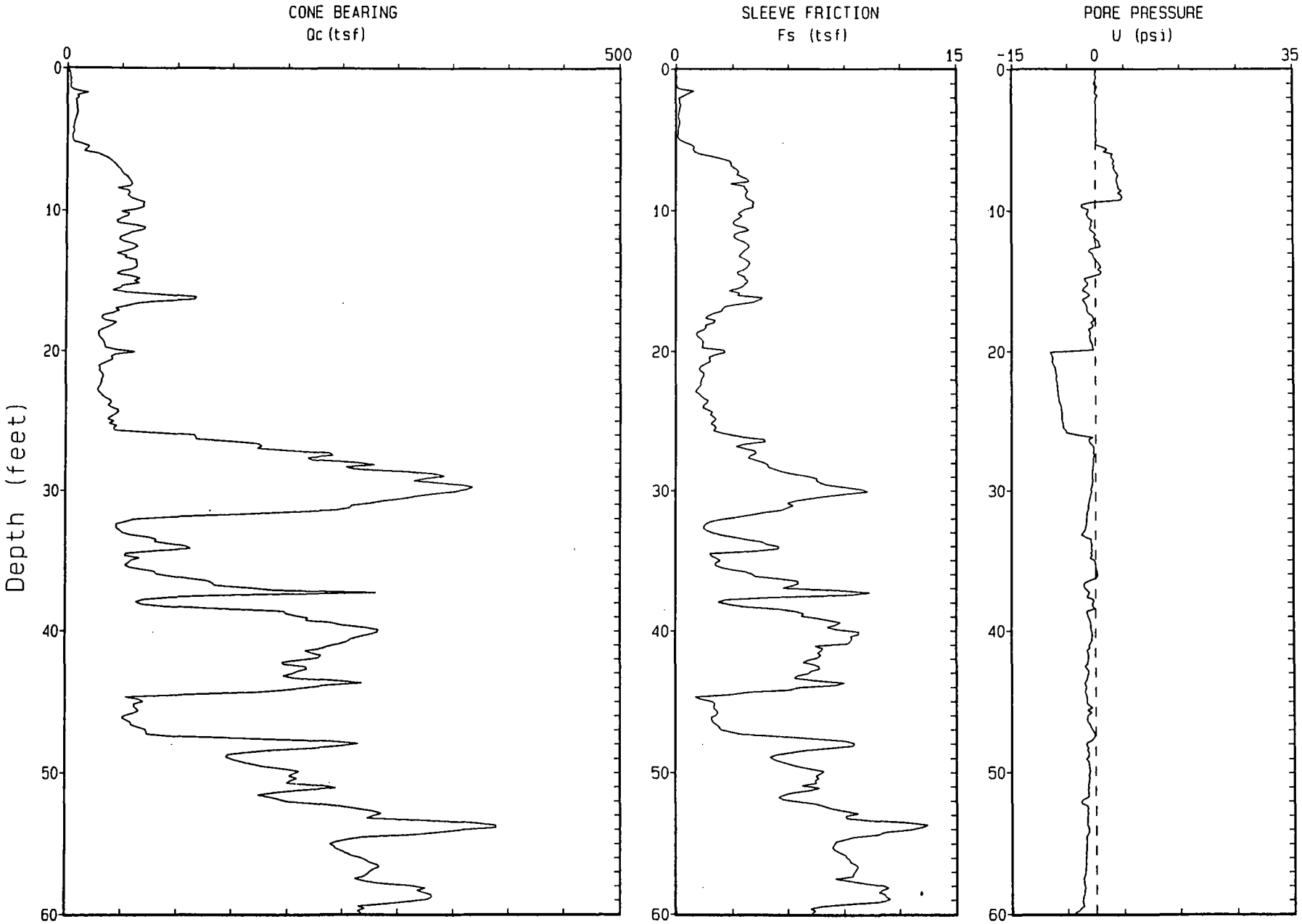


Depth Increment : .16405 m

Max Depth : 87.00 ft

DAMES & MOORE

PROJECT : MW-20 AREA
CONTRACTOR : GREGG IN SITU
FILE : CPL0031.OUT
ELEVATION : 41.66
GEOLOGIST : CRAIG MAGNUSEN
DATE : 03/18/94



Depth Increment : .16405 m

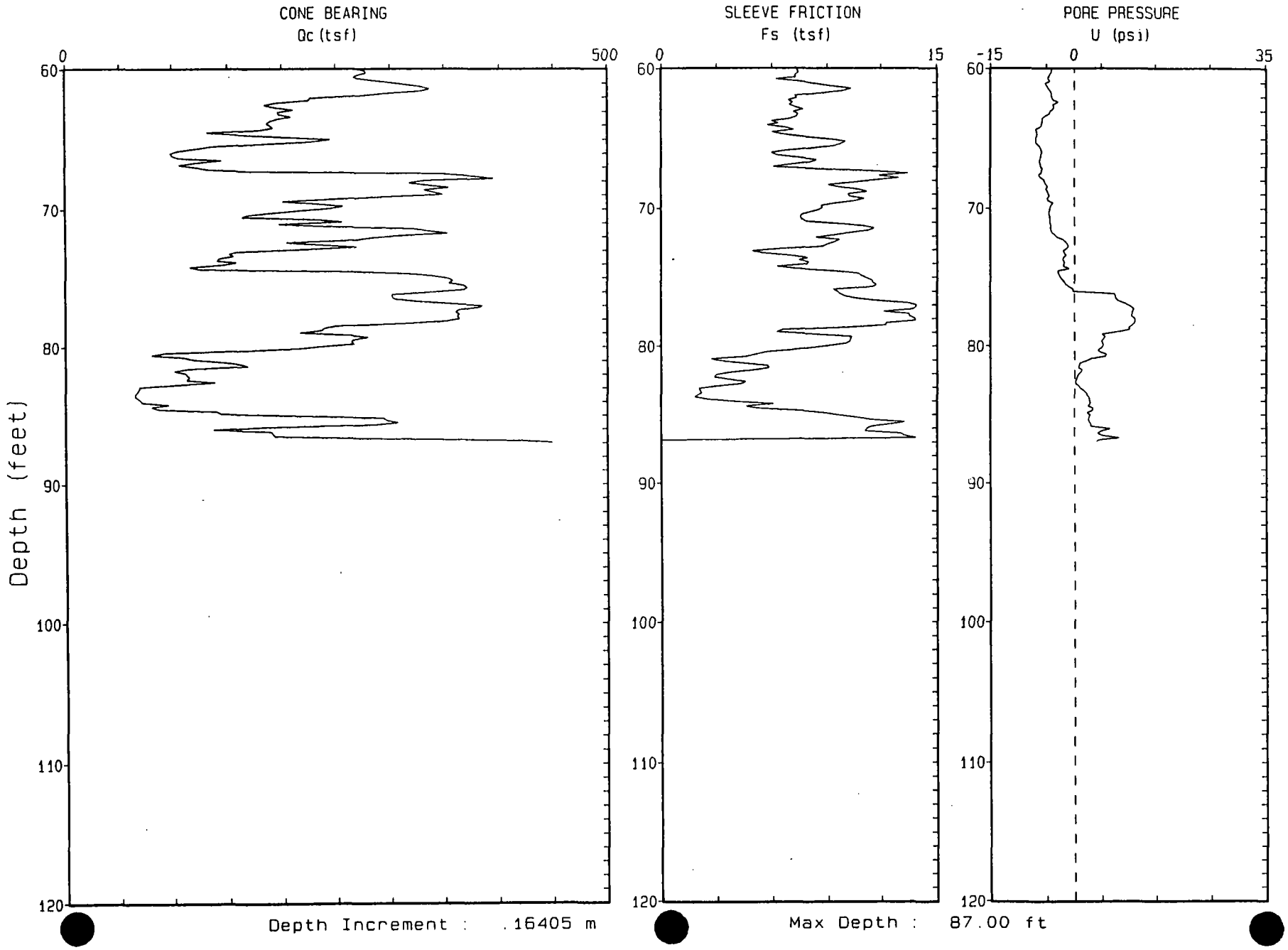
Max Depth : 87.00 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.66

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0031.OUT
DATE : 03/18/94

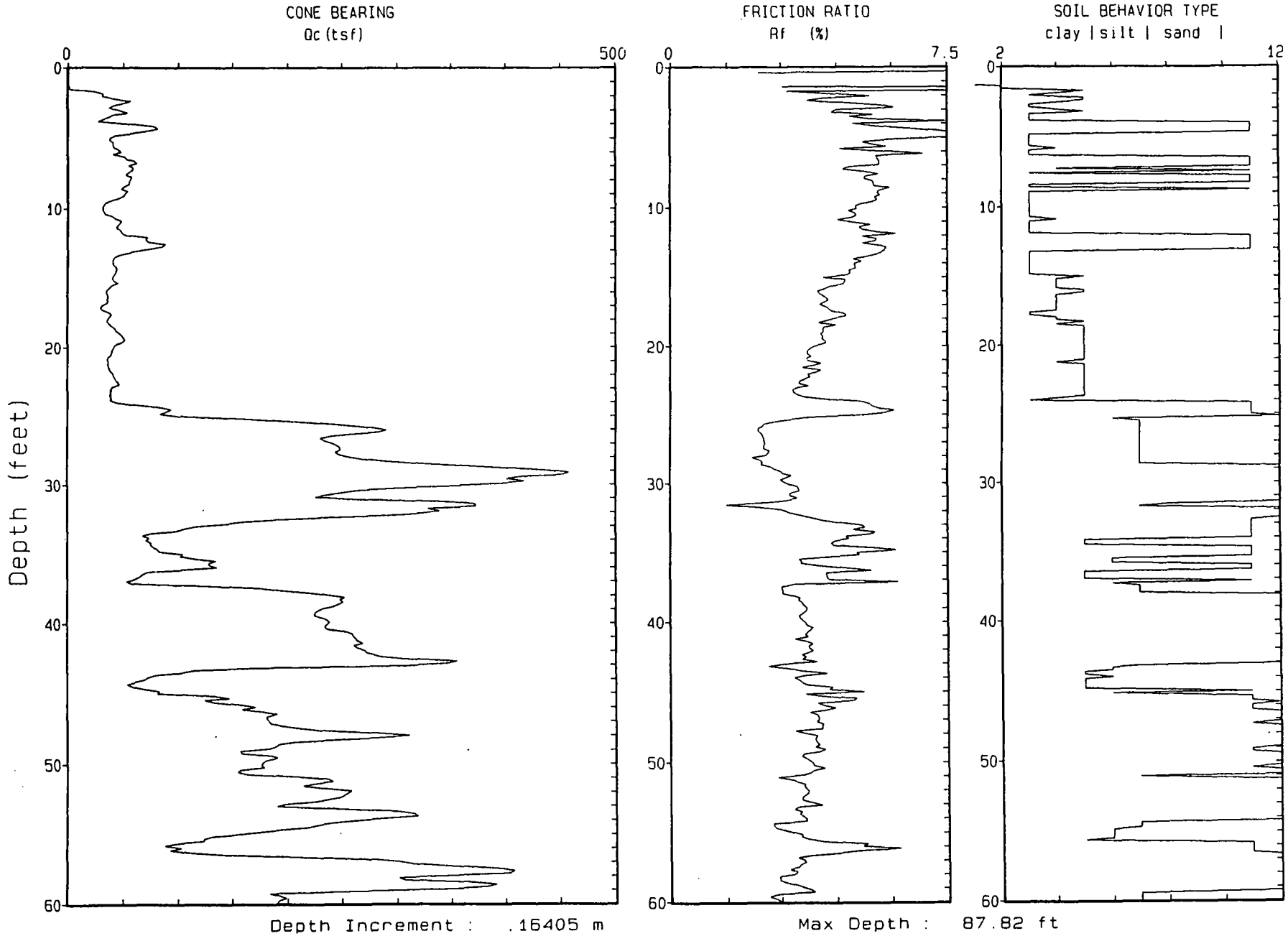


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.12

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0032.OUT
DATE : 03\21\94



Depth Increment : .16405 m

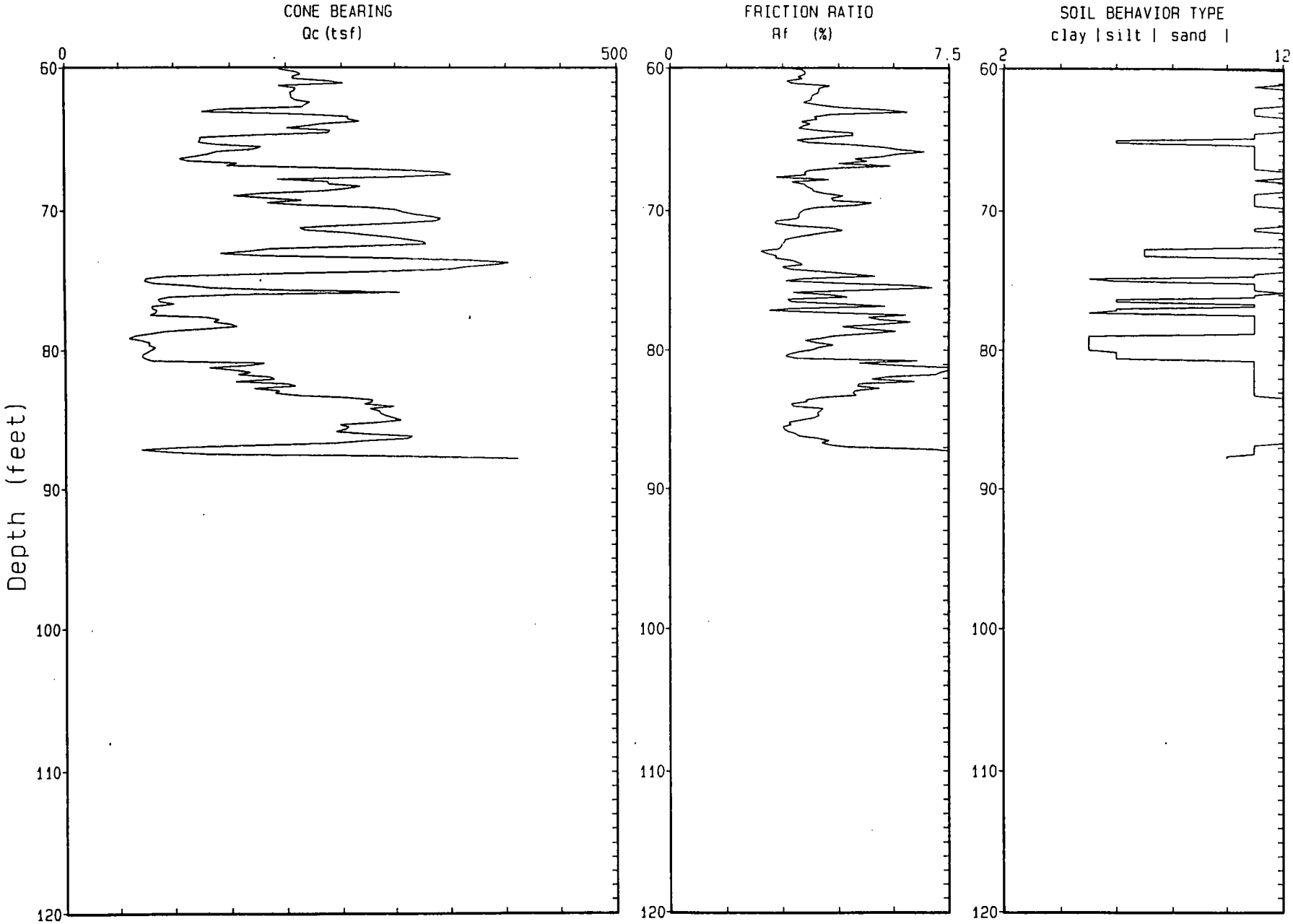
Max Depth : 87.82 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.12

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0032.OUT
DATE : 03\21\94



Depth Increment : .16405 m

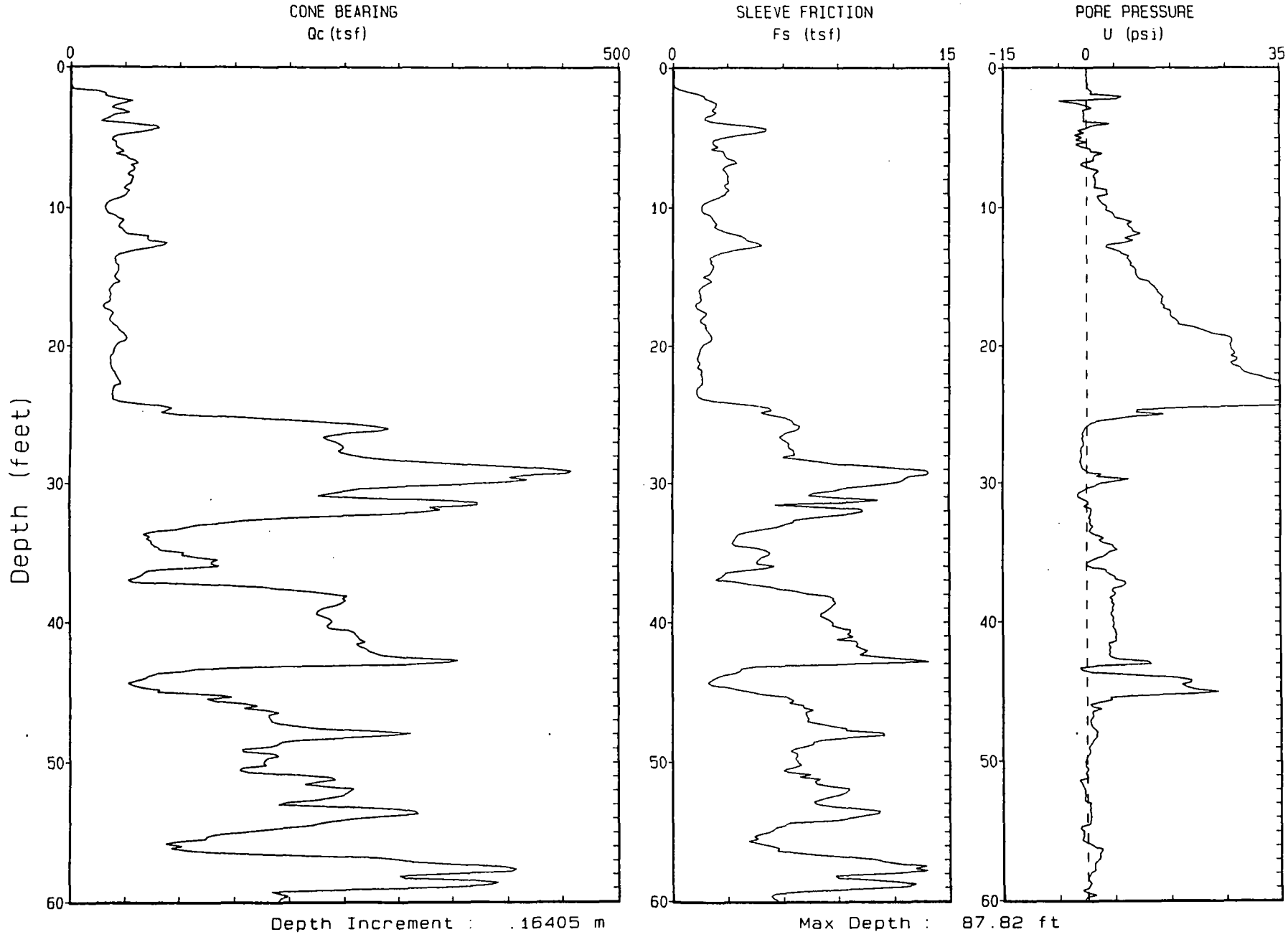
Max Depth : 87.82 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.12

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0032.OUT
DATE : 03\21\94



Depth Increment : .16405 m

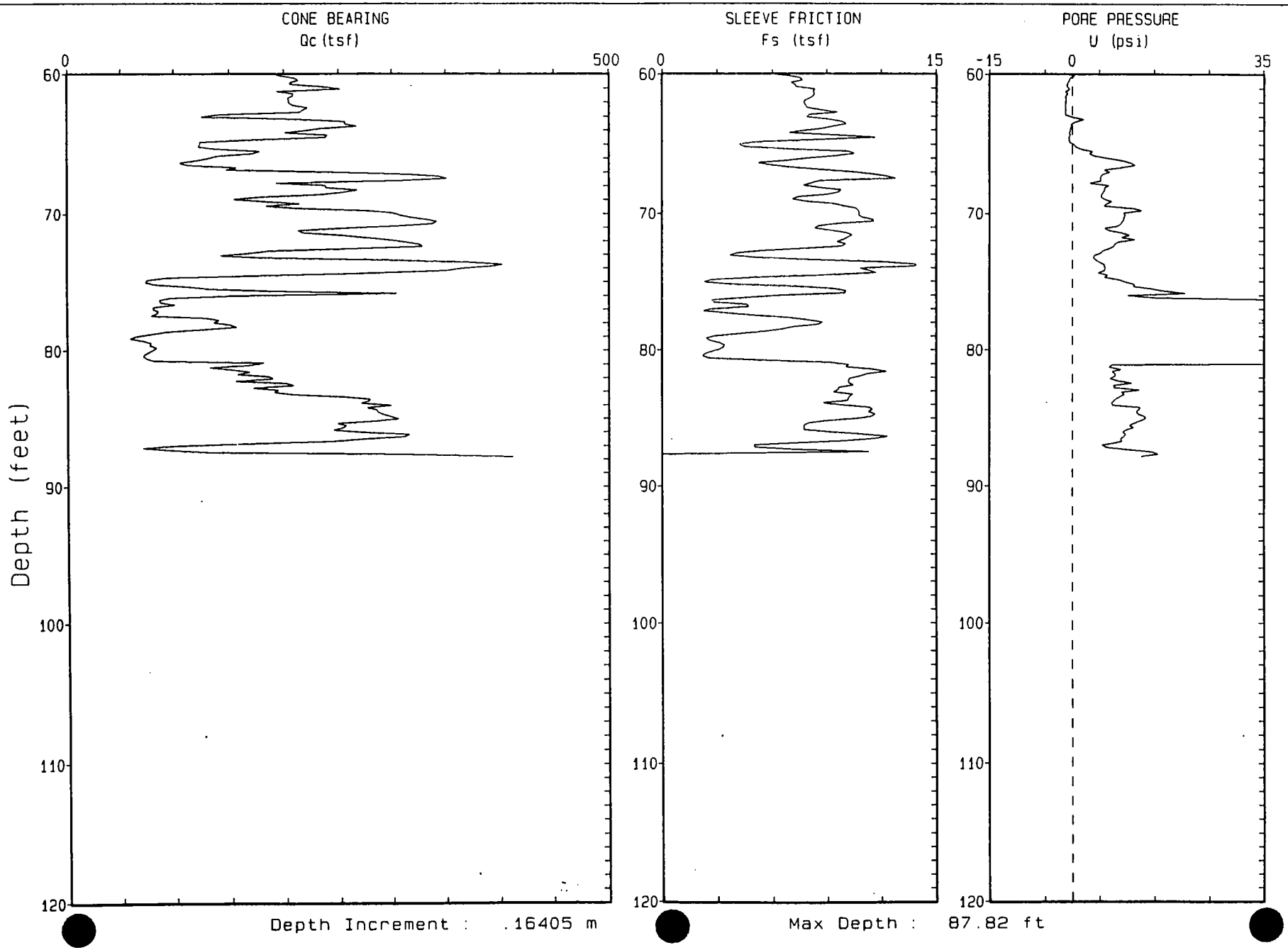
Max Depth : 87.82 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.12

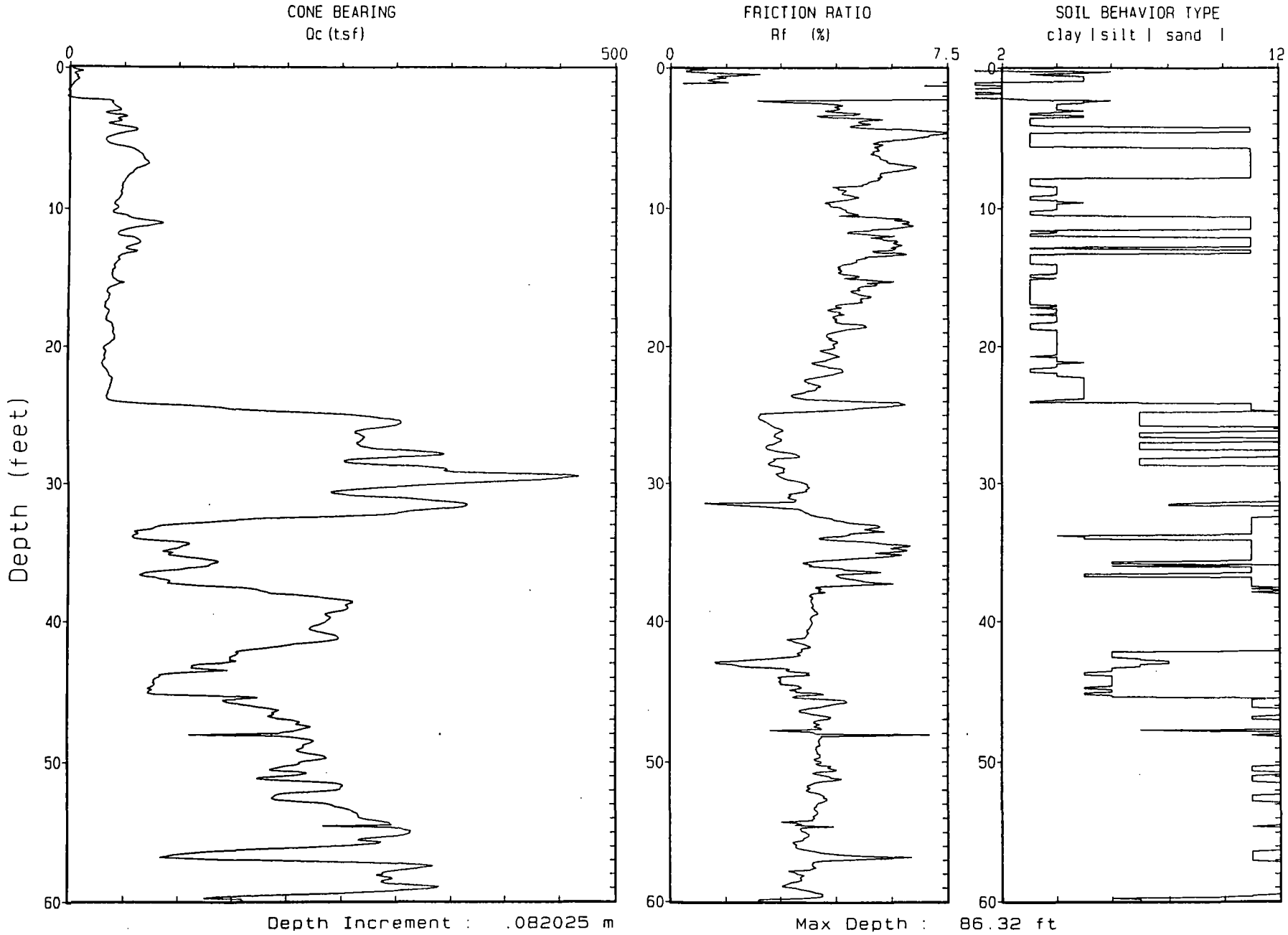
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0032.OUT
DATE : 03\21\94



DAMES & MOORE

PROJECT : MW-20 AREA
CONTRACTOR : GREGG IN SITU
FILE : CPL0033.OUT
ELEVATION : 40.99
GEOLOGIST : CRAIG MAGNUSEN
DATE : 03/21/94



Depth Increment : .082025 m

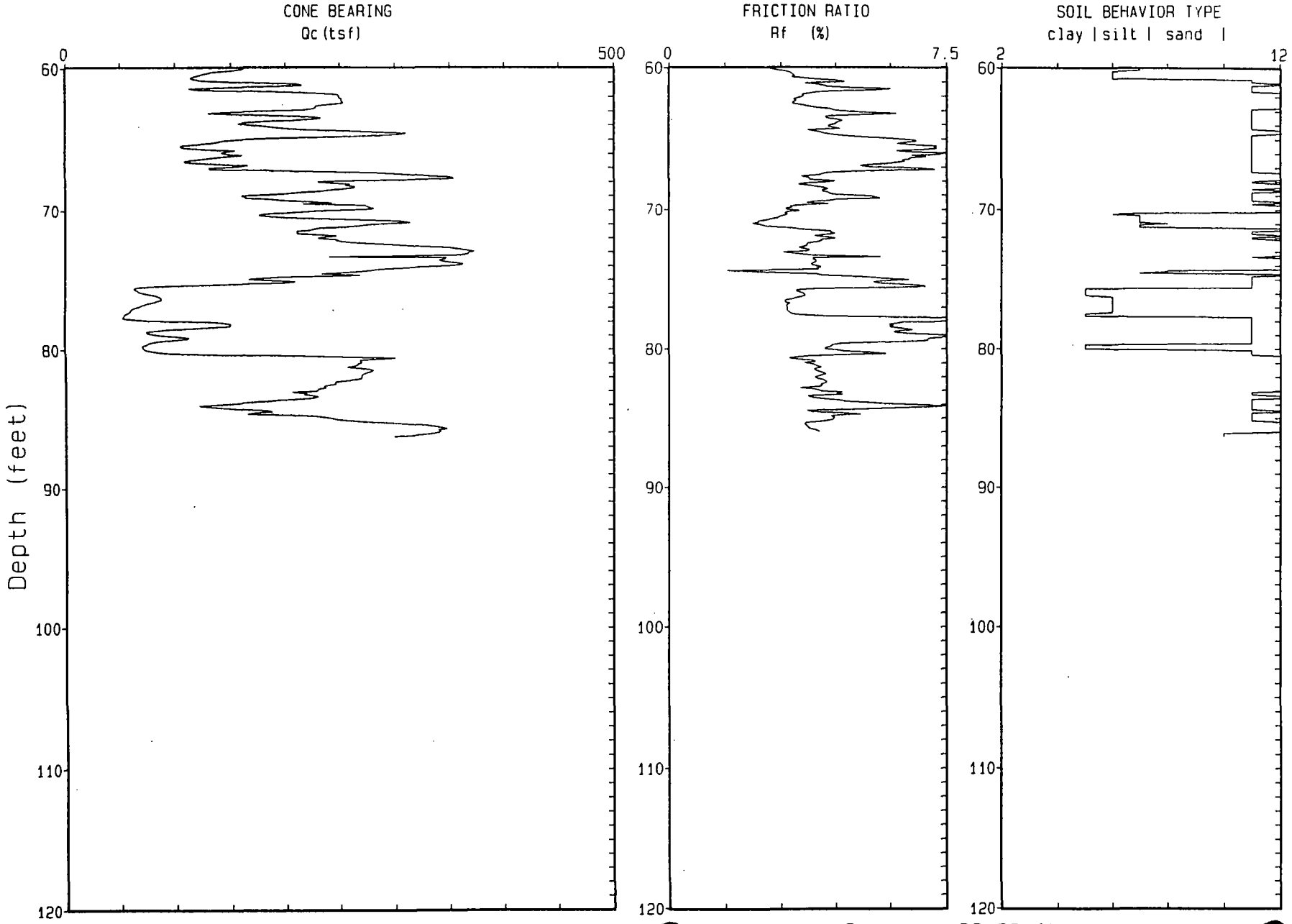
Max Depth : 86.32 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 40.99

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0033.OUT
DATE : 03/21/94



Depth Increment : .082025 m

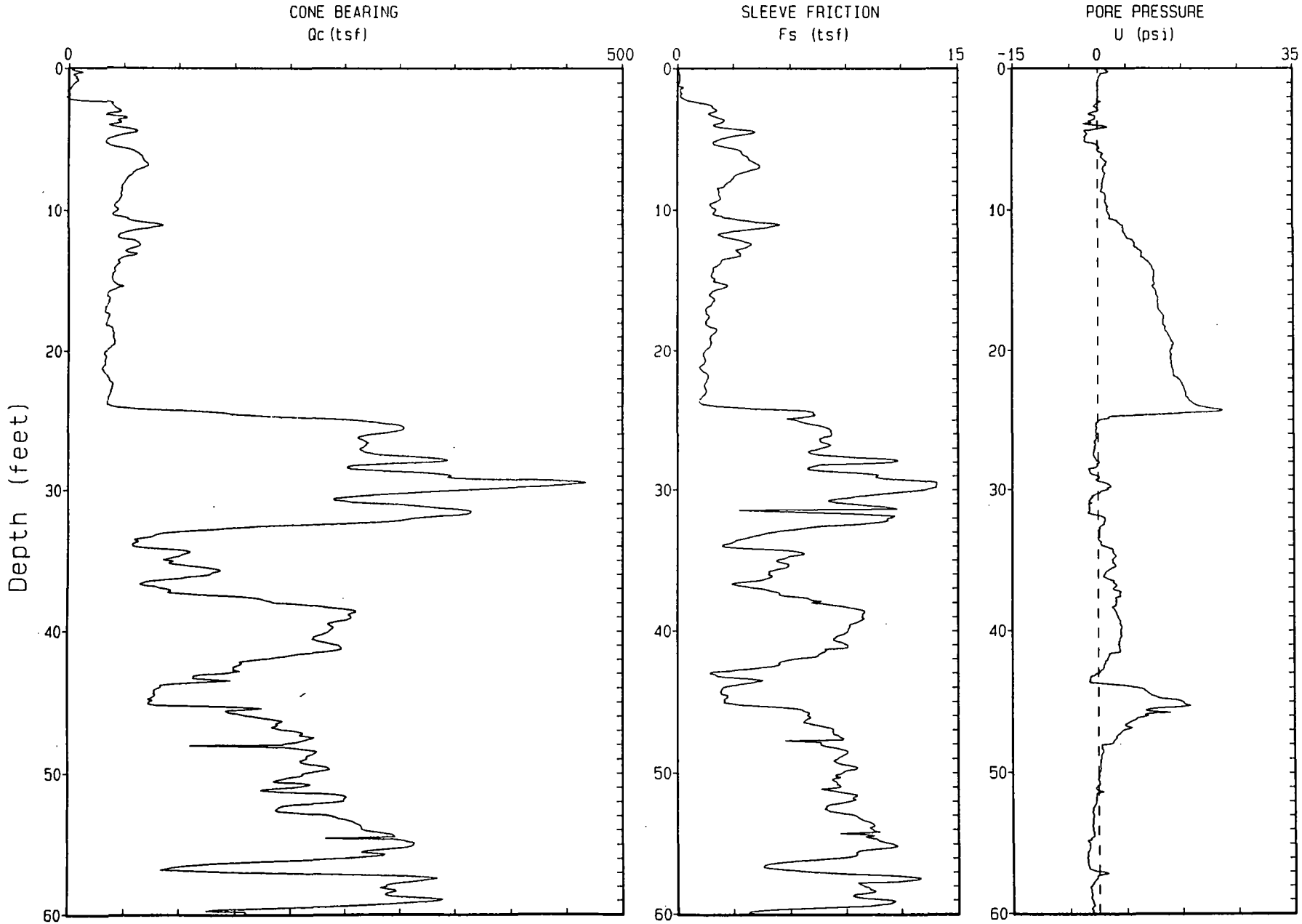
Max Depth : 86.32 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 40.99

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0033.OUT
DATE : 03/21/94



Depth Increment : .082025 m

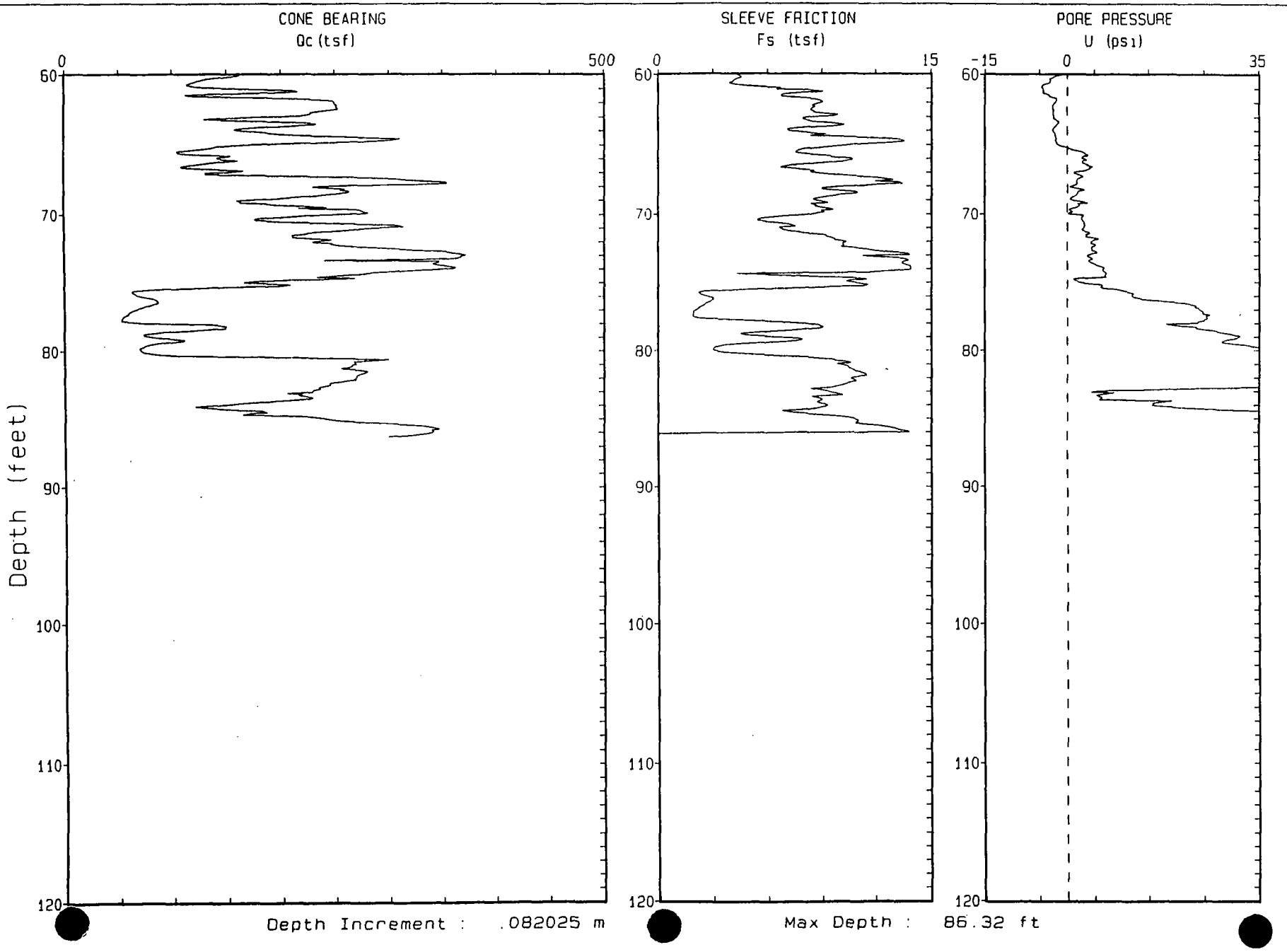
Max Depth : 86.32 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 40.99

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0033.OUT
DATE : 03/21/94

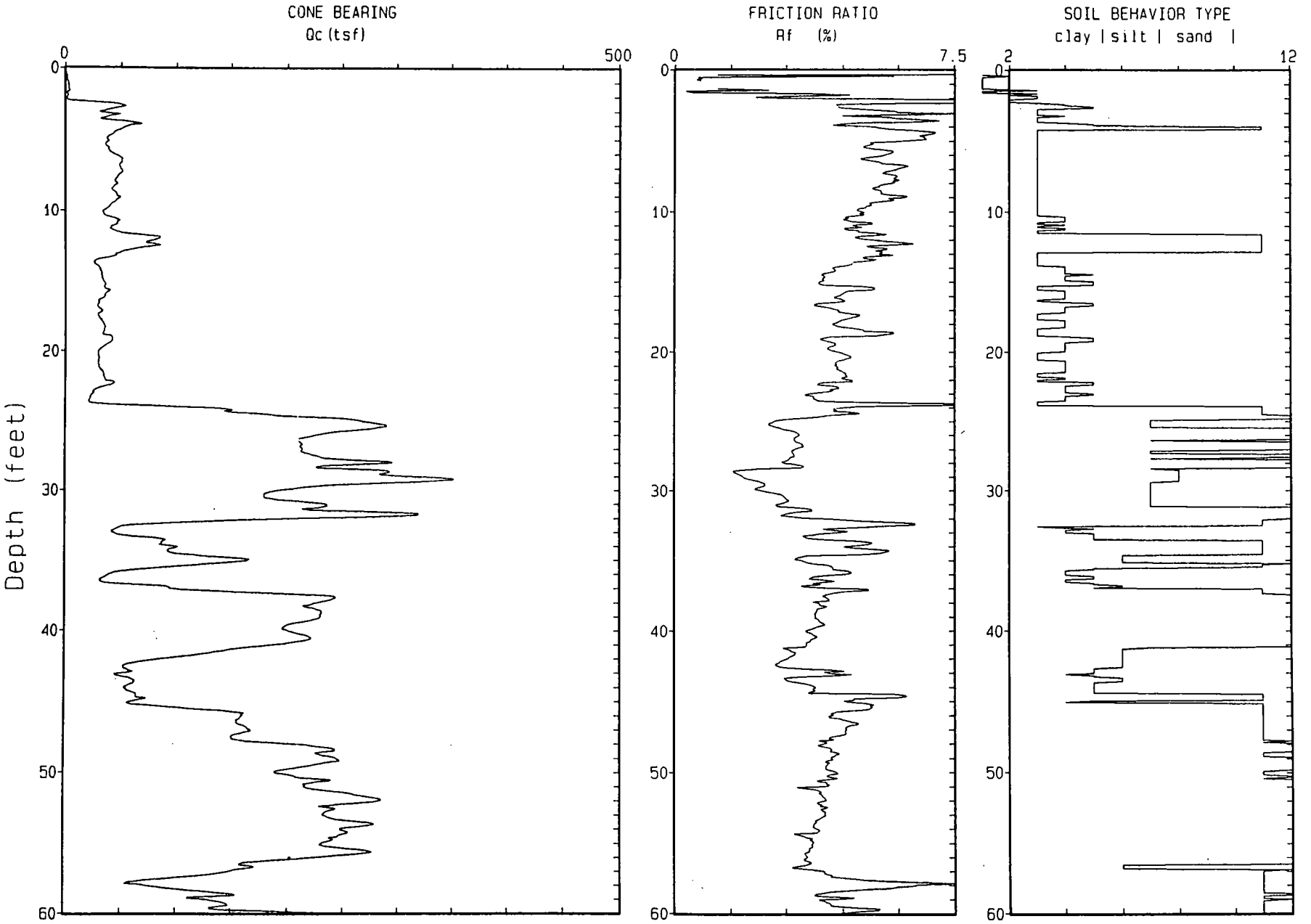


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 40.87

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0034.OUT
DATE : 03/21/94



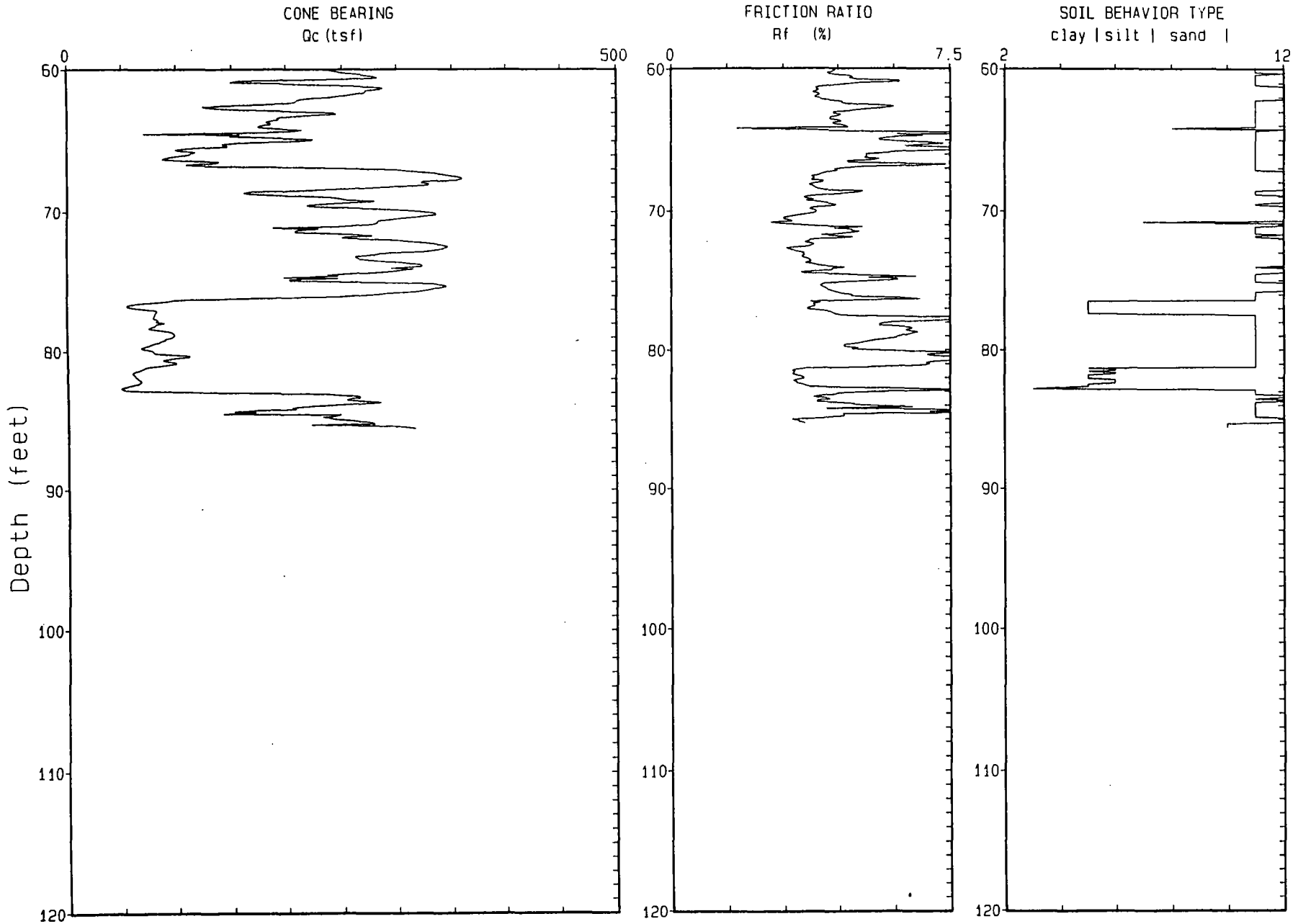
Depth Increment : .082025 m

Max Depth : 85.58 ft

DAMES & MOORE

PROJECT : MW-20 AREA | CONTRACTOR : GREGG IN SITU | FILE : CPL0034.OUT

ELEVATION : 40.87 | GEOLOGIST : CRAIG MAGNUSEN | DATE : 03/21/94



Depth Increment : .082025 m

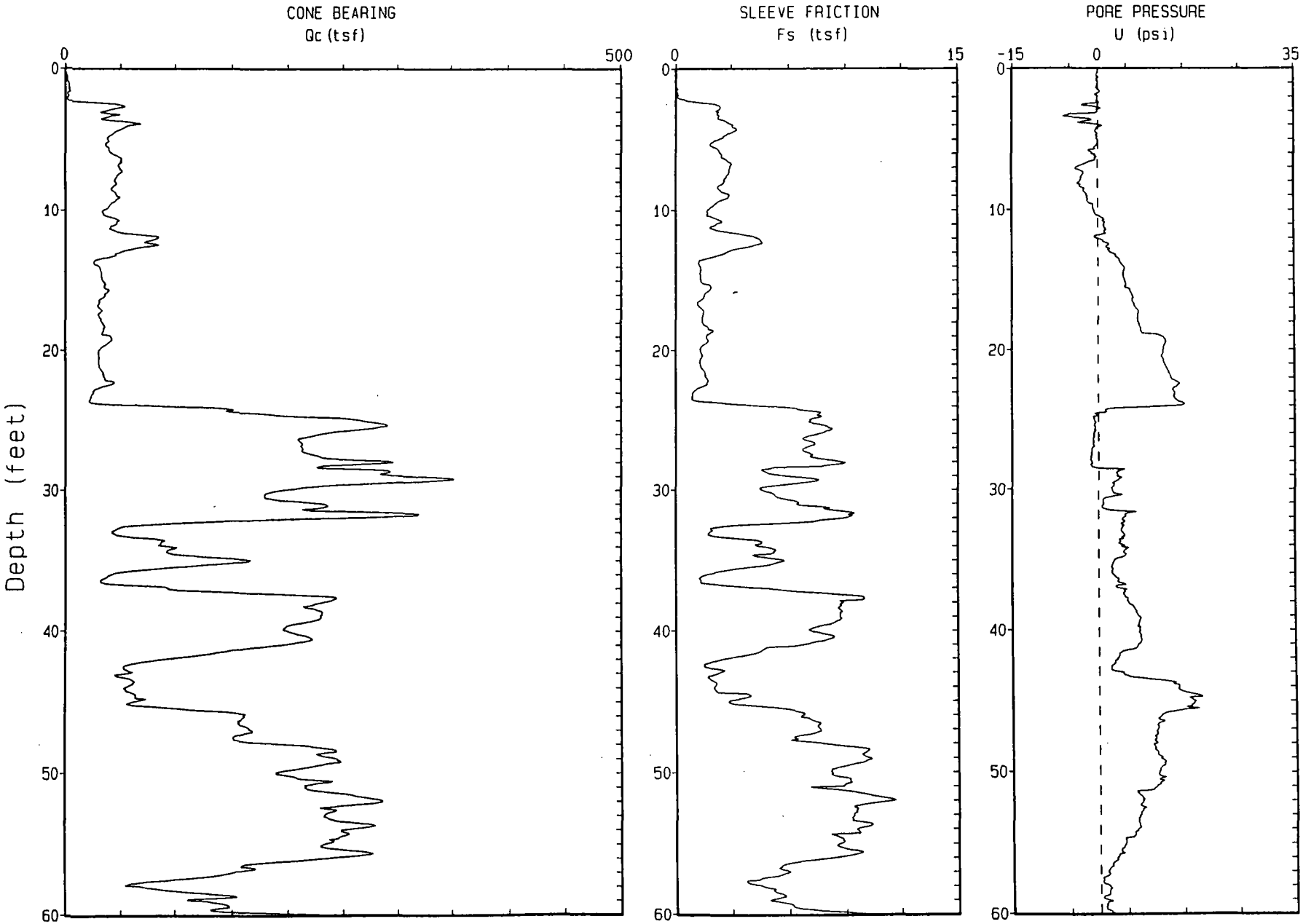
Max Depth : 85.58 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 40.87

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0034.OUT
DATE : 03/21/94



Depth Increment : .082025 m

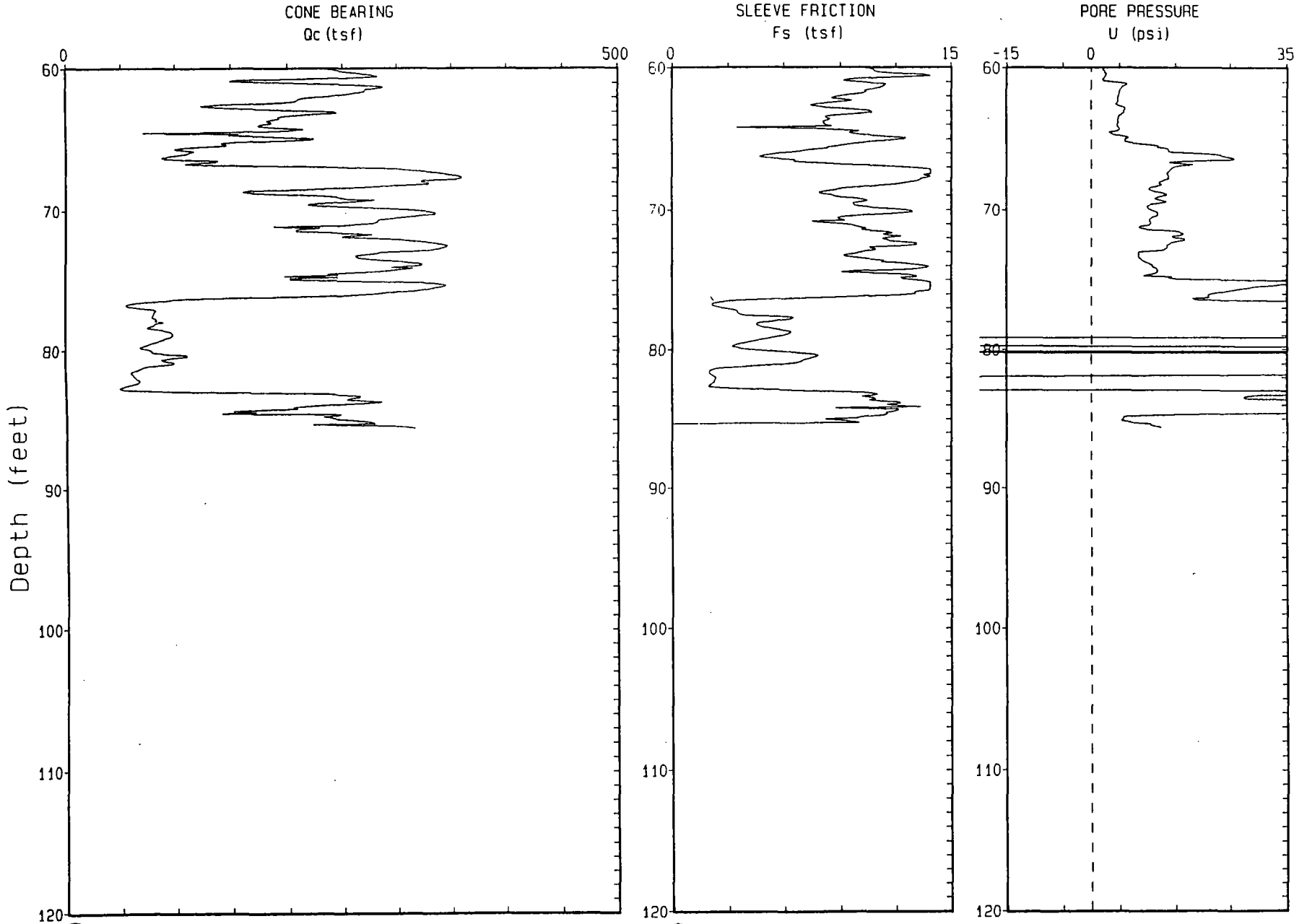
Max Depth : 85.58 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 40.87

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0034.OUT
DATE : 03/21/94



Depth Increment : .082025 m

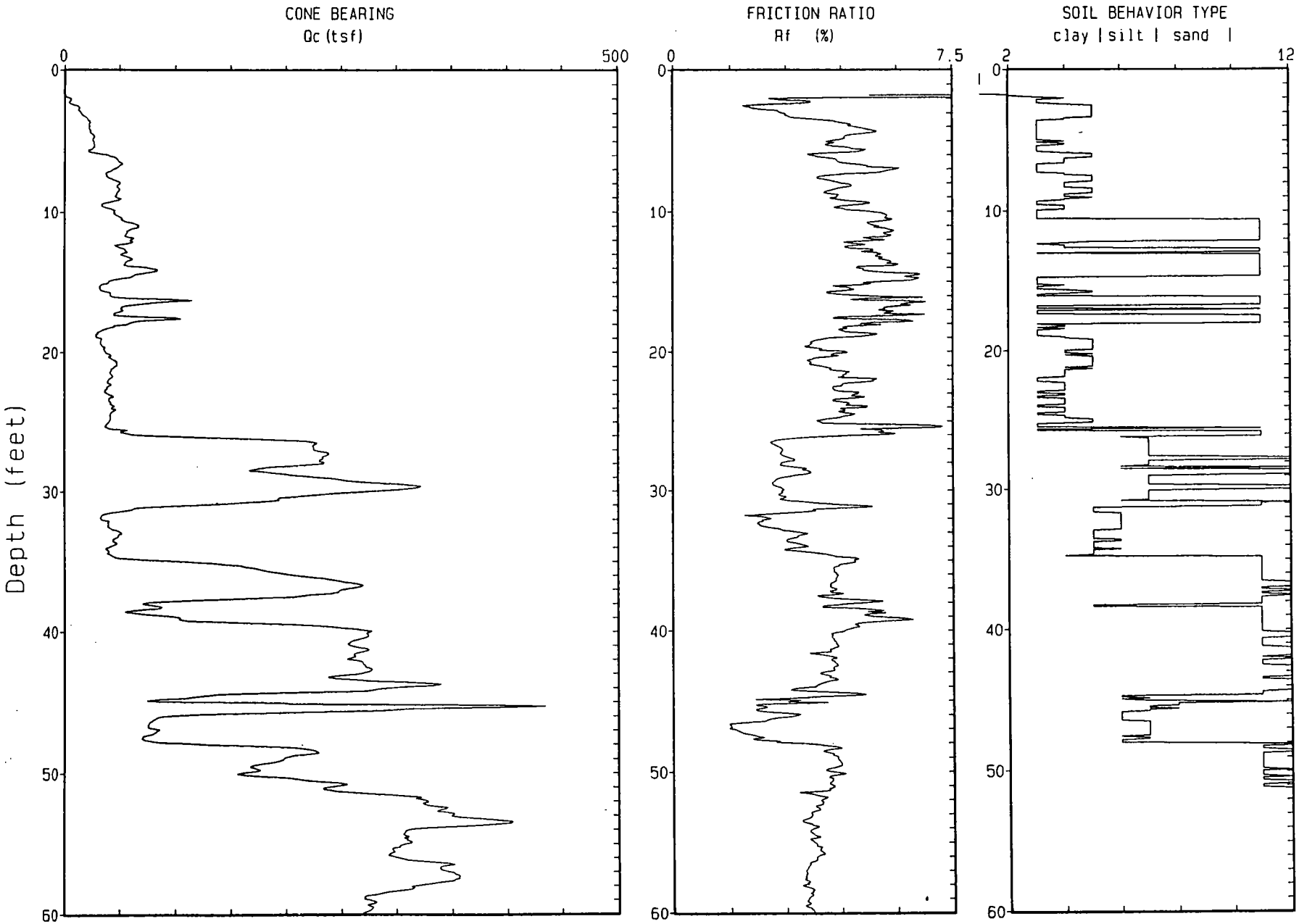
Max Depth : 85.58 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.82 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0035.OUT
DATE : 3\22\94



Depth Increment : .082025 m

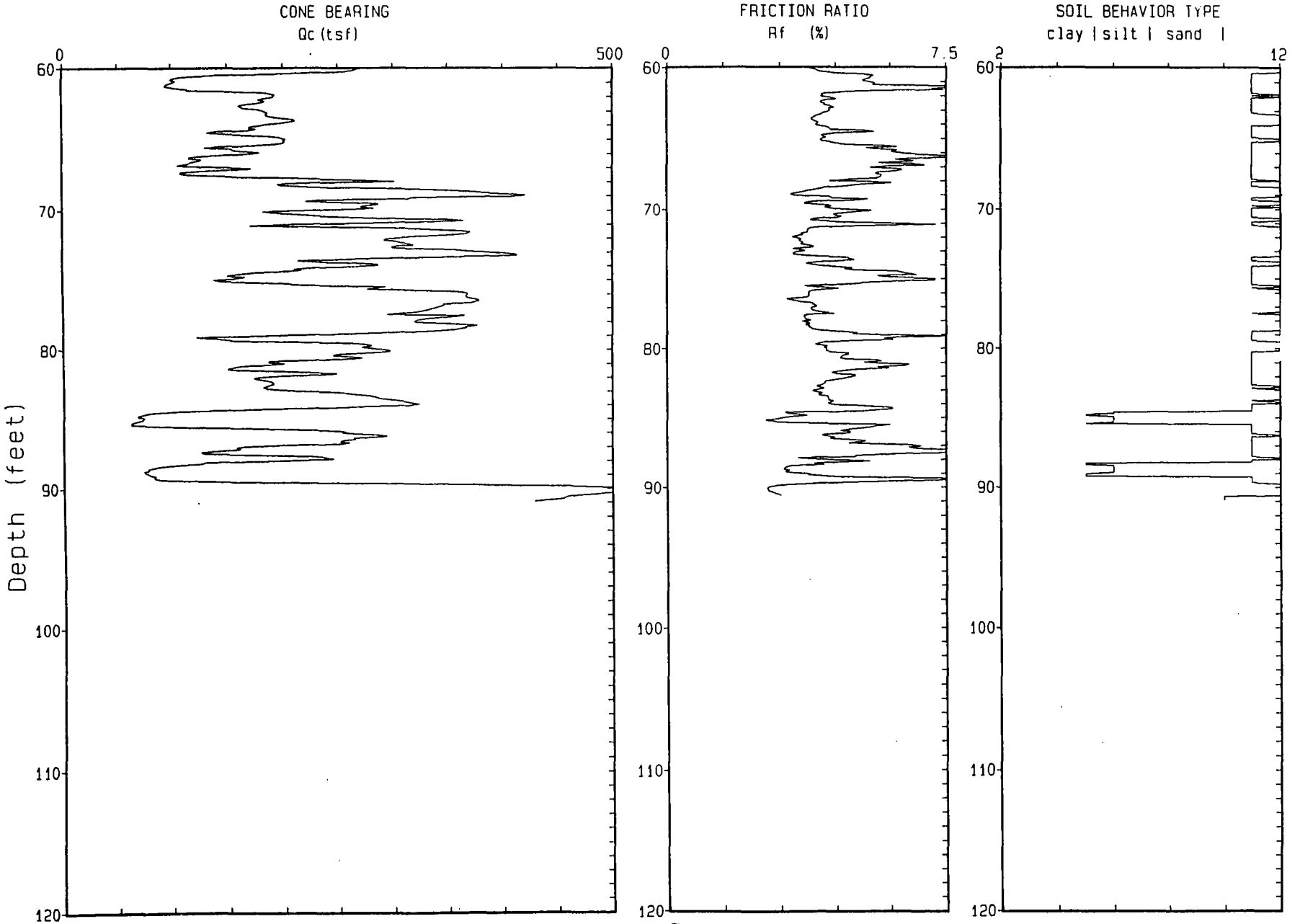
Max Depth : 90.91 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.82 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0035.OUT
DATE : 3\22\94

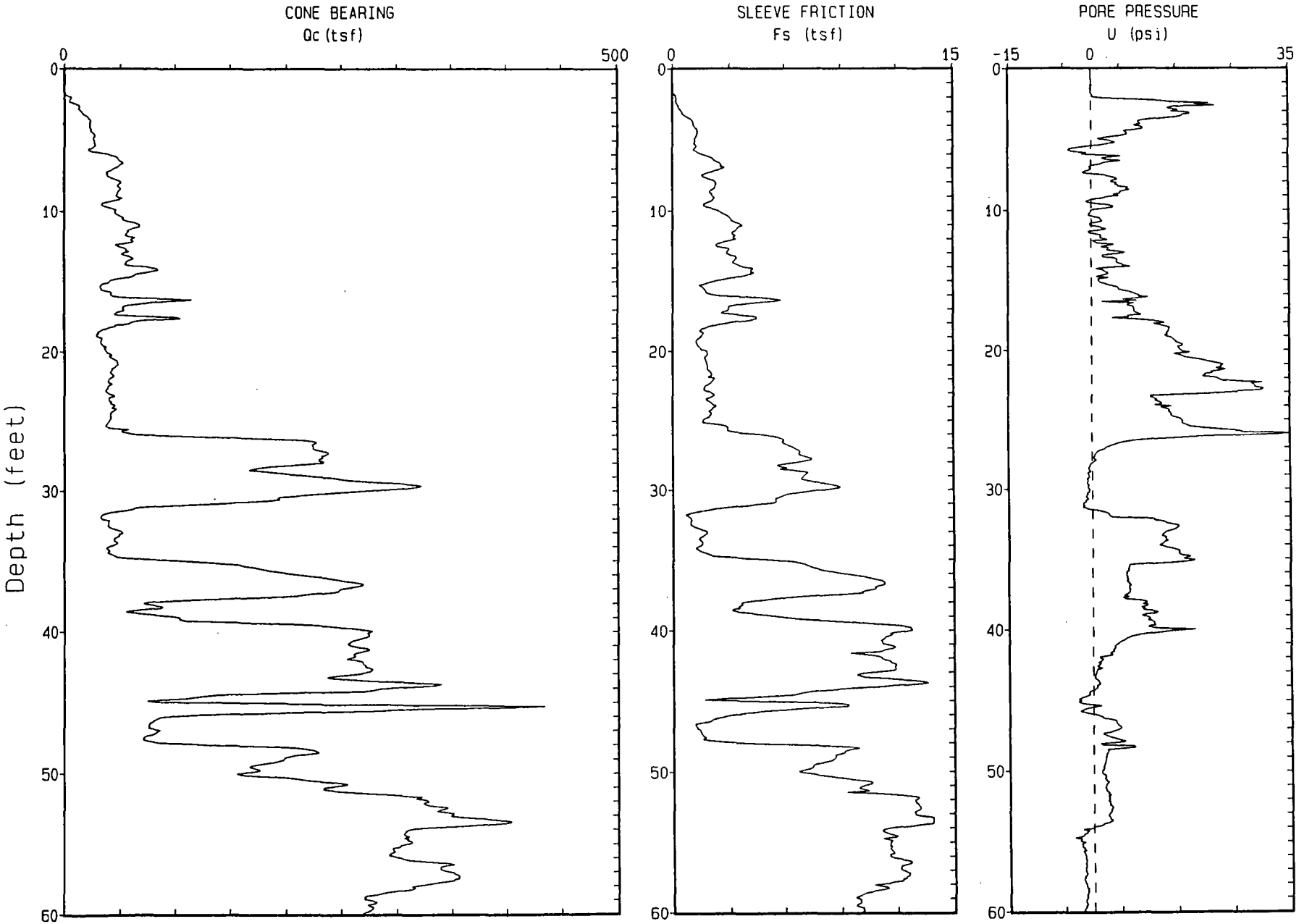


Depth Increment : .082025 m

Max Depth : 90.91 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.82 FT.
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN
FILE : CPL0035.OUT
DATE : 3\22\94

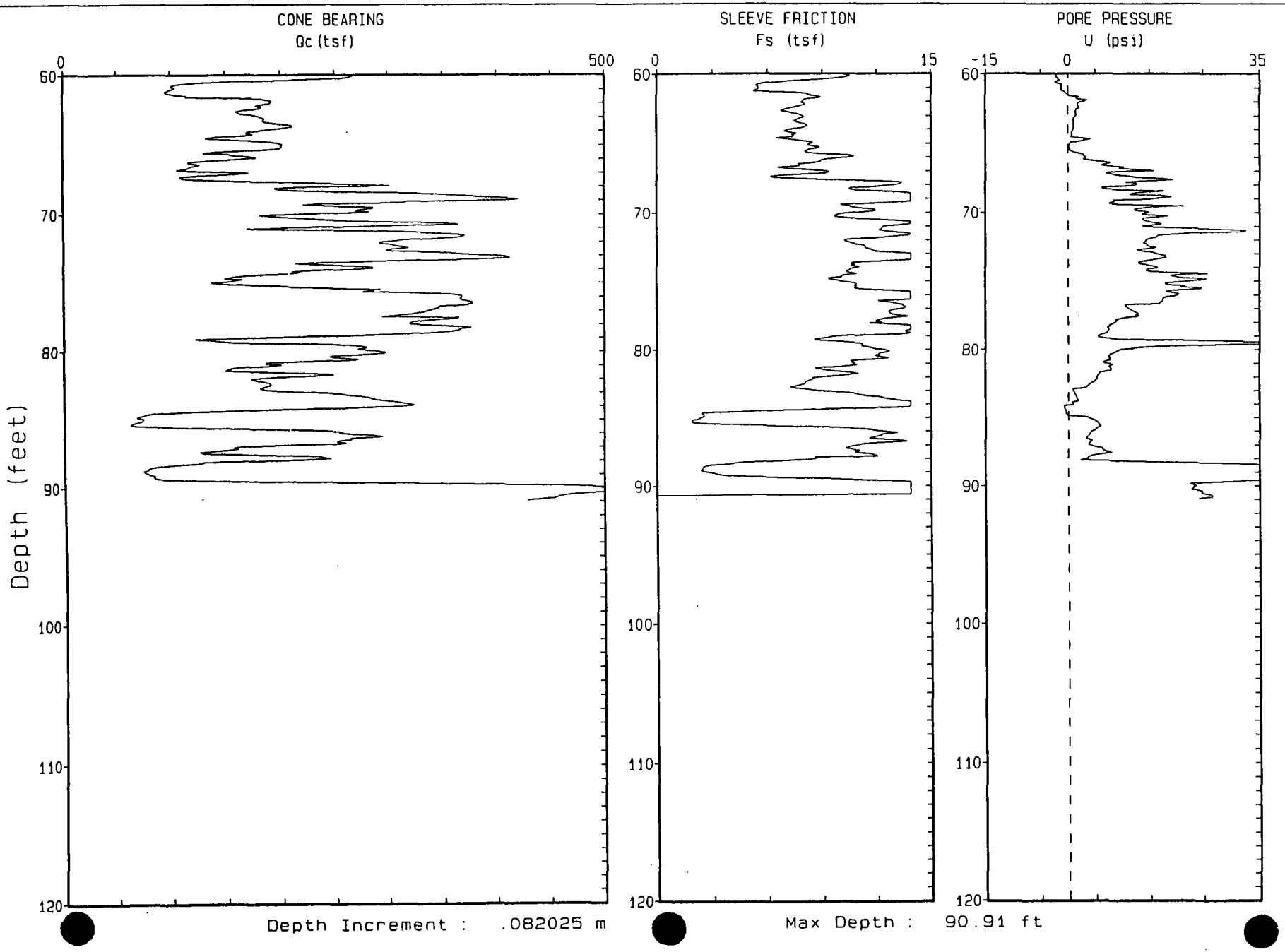


Depth Increment : .082025 m

Max Depth : 90.91 ft

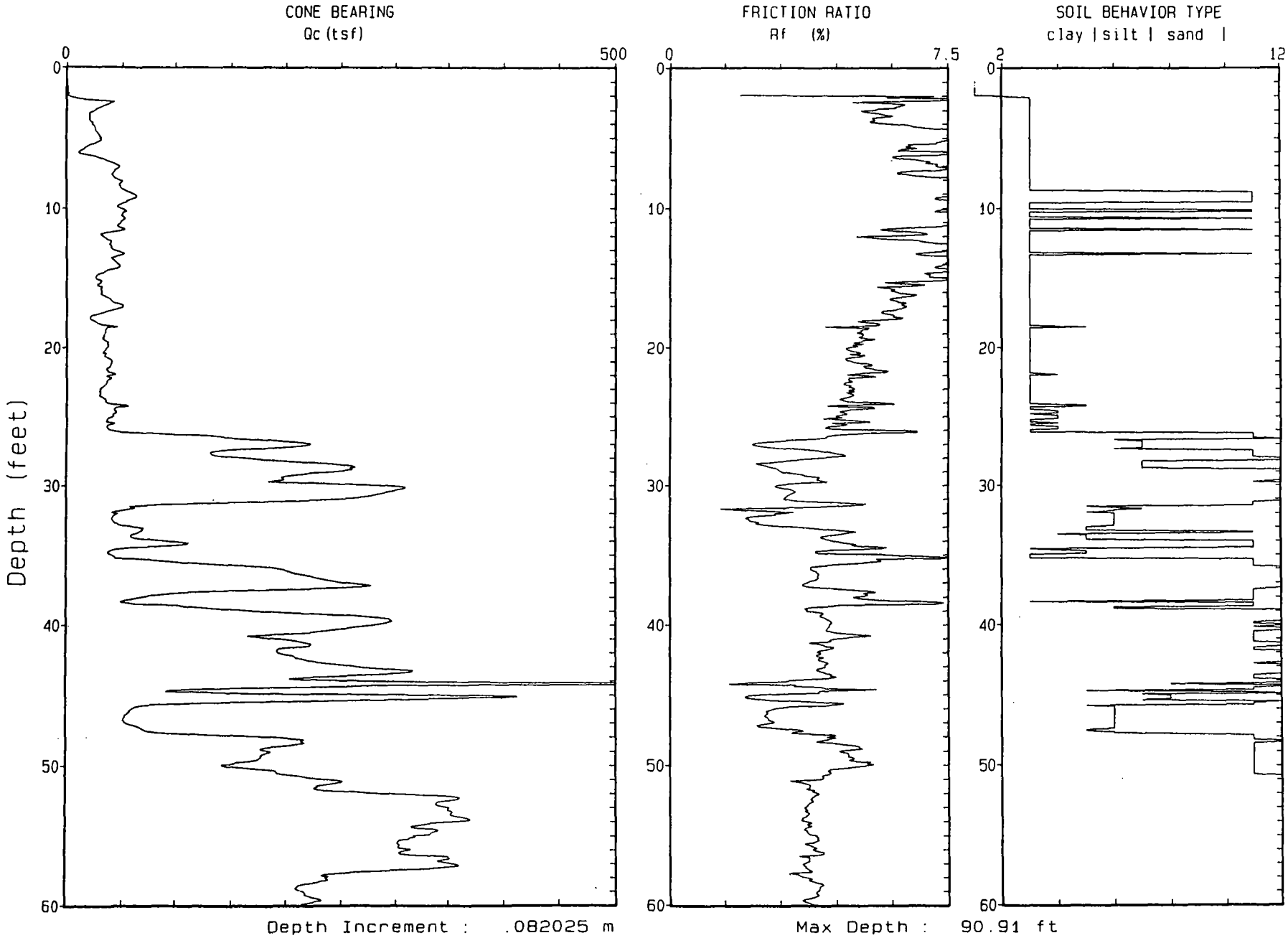
DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.82 FT.
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN
FILE : CPL0035.OUT
DATE : 3\22\94



DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.94 FT.
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN
FILE : CPL0036.OUT
DATE : 3\22\94



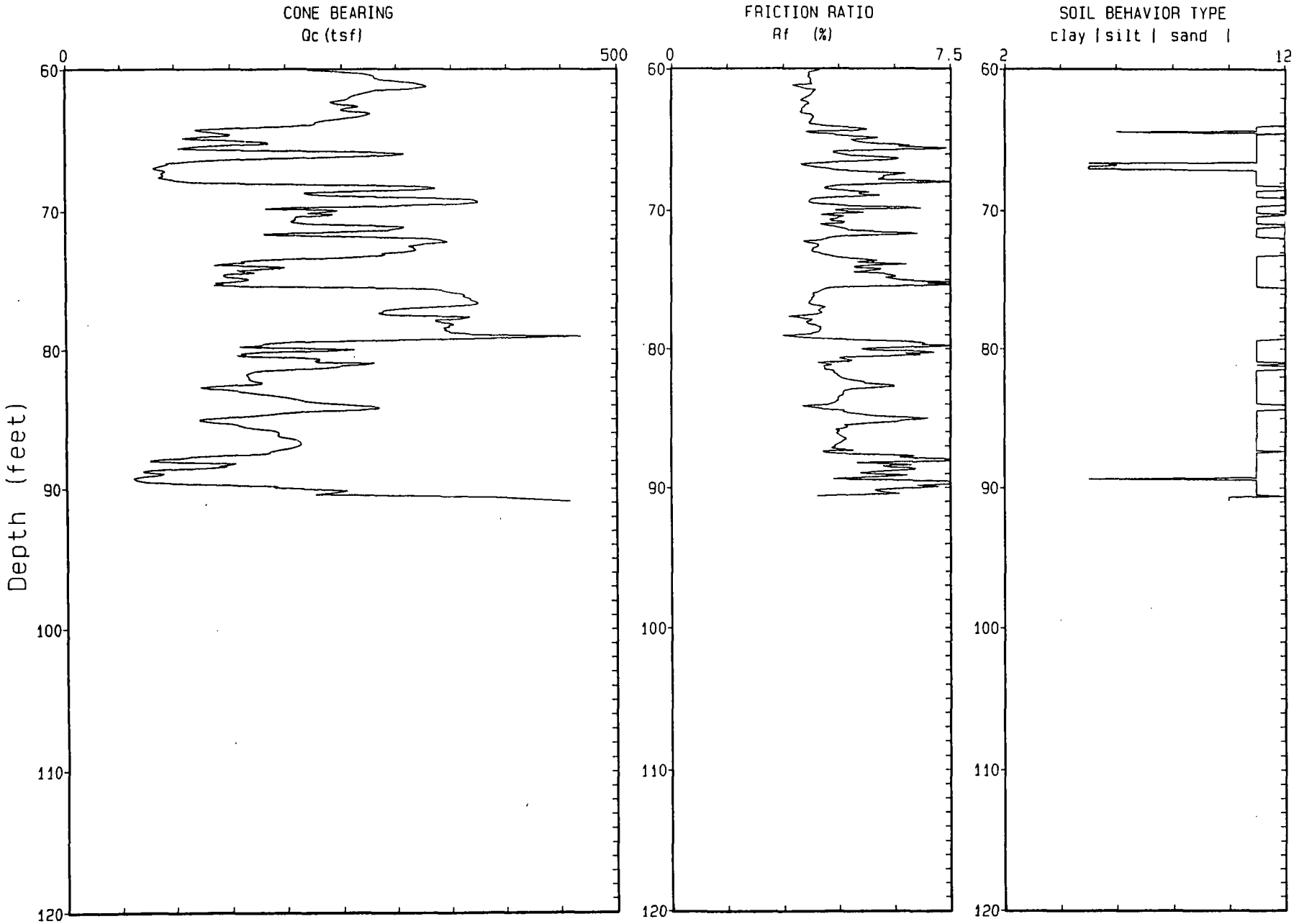
Depth Increment : .082025 m

Max Depth : 90.91 ft

DAMES & MOORE

PROJECT : MW-20 AREA | CONTRACTOR : GREGG IN SITU | FILE : CPL0036.OUT

ELEVATION : 41.94 FT. | GEOLOGIST : CRAIG MAGNUSEN | DATE : 3\22\94



Depth Increment : .082025 m

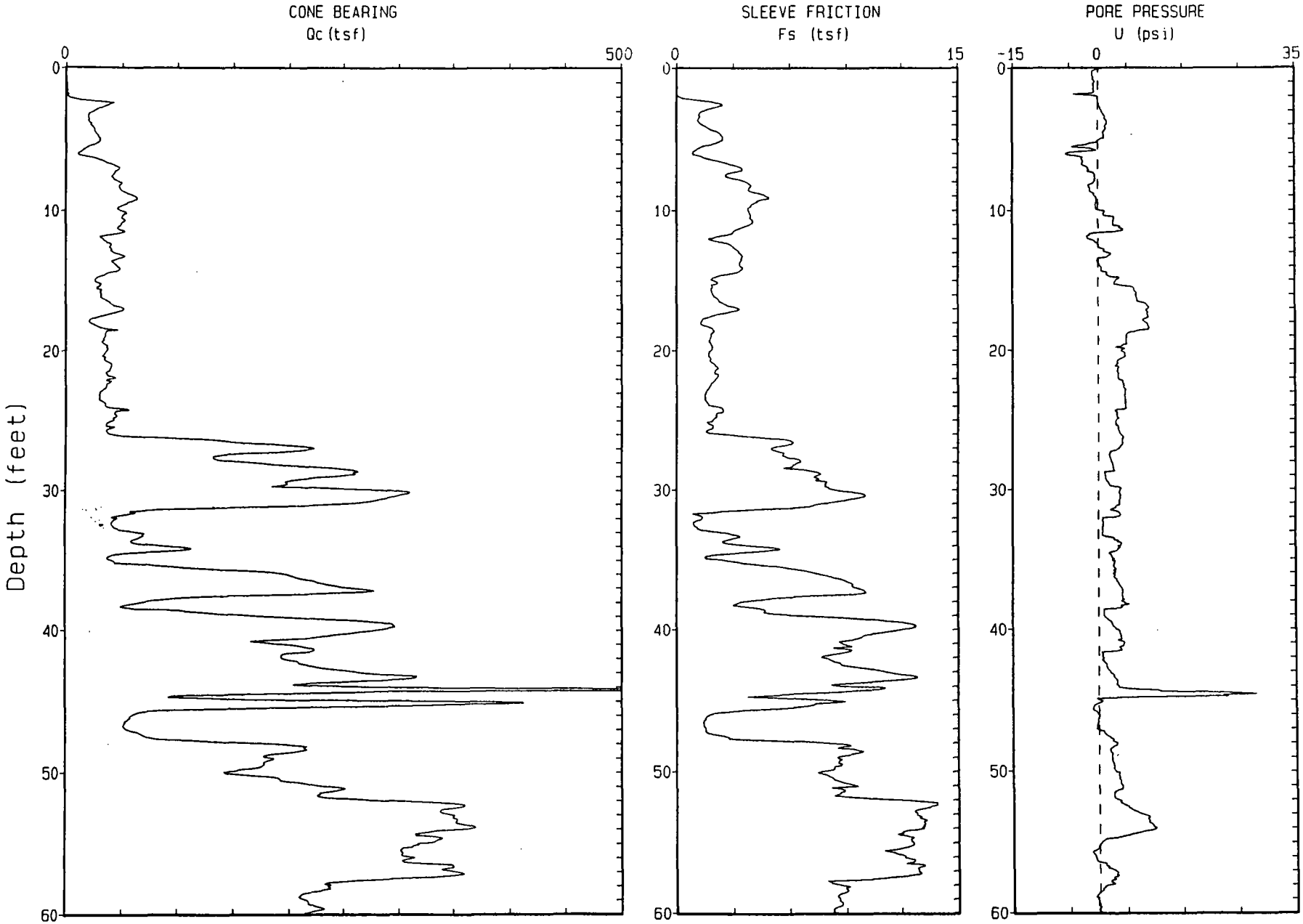
Max Depth : 90.91 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.94 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0036.OUT
DATE : 3\22\94



Depth Increment : .082025 m

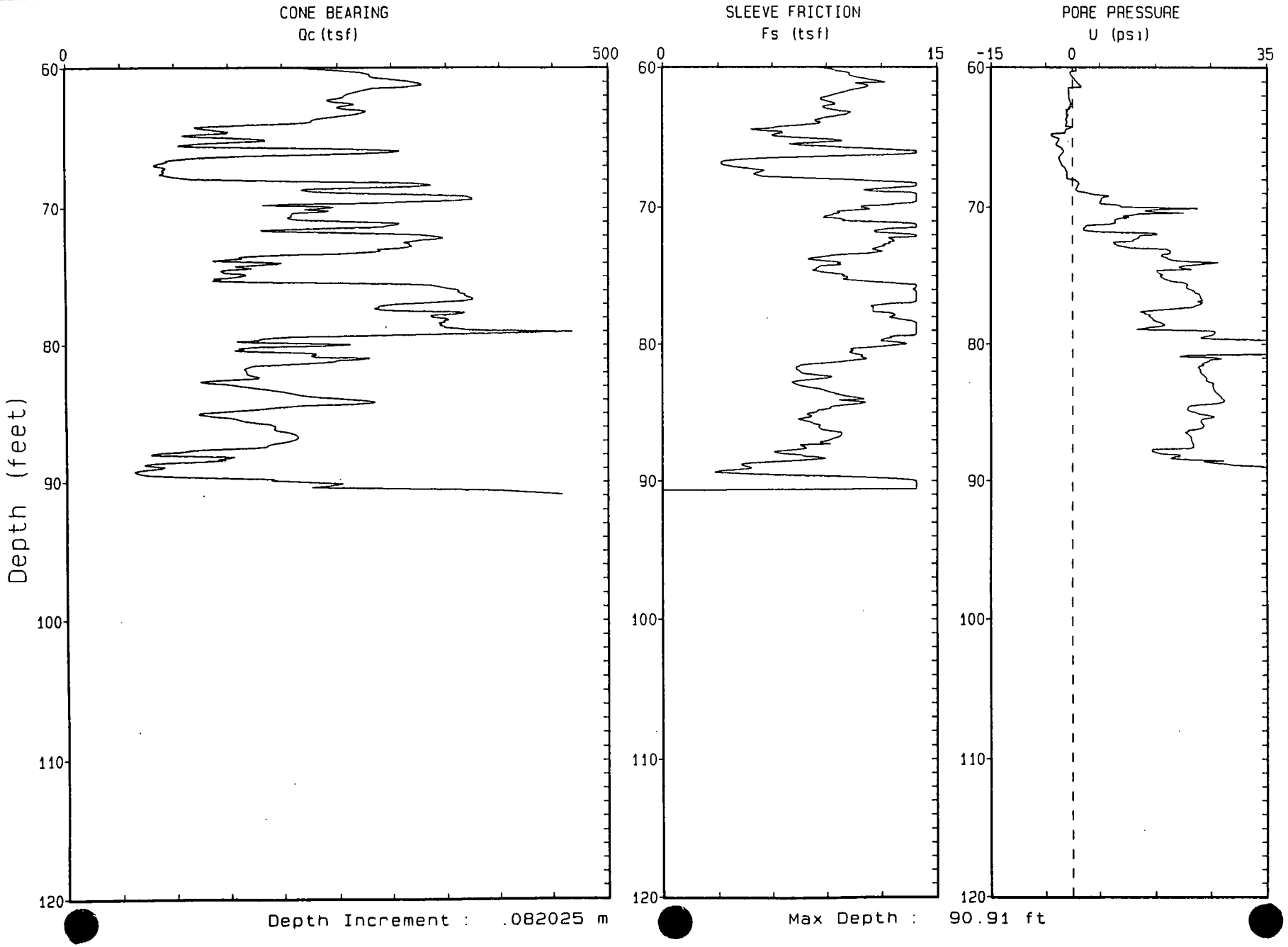
Max Depth : 90.91 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.94 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0036.OUT
DATE : 3\22\94

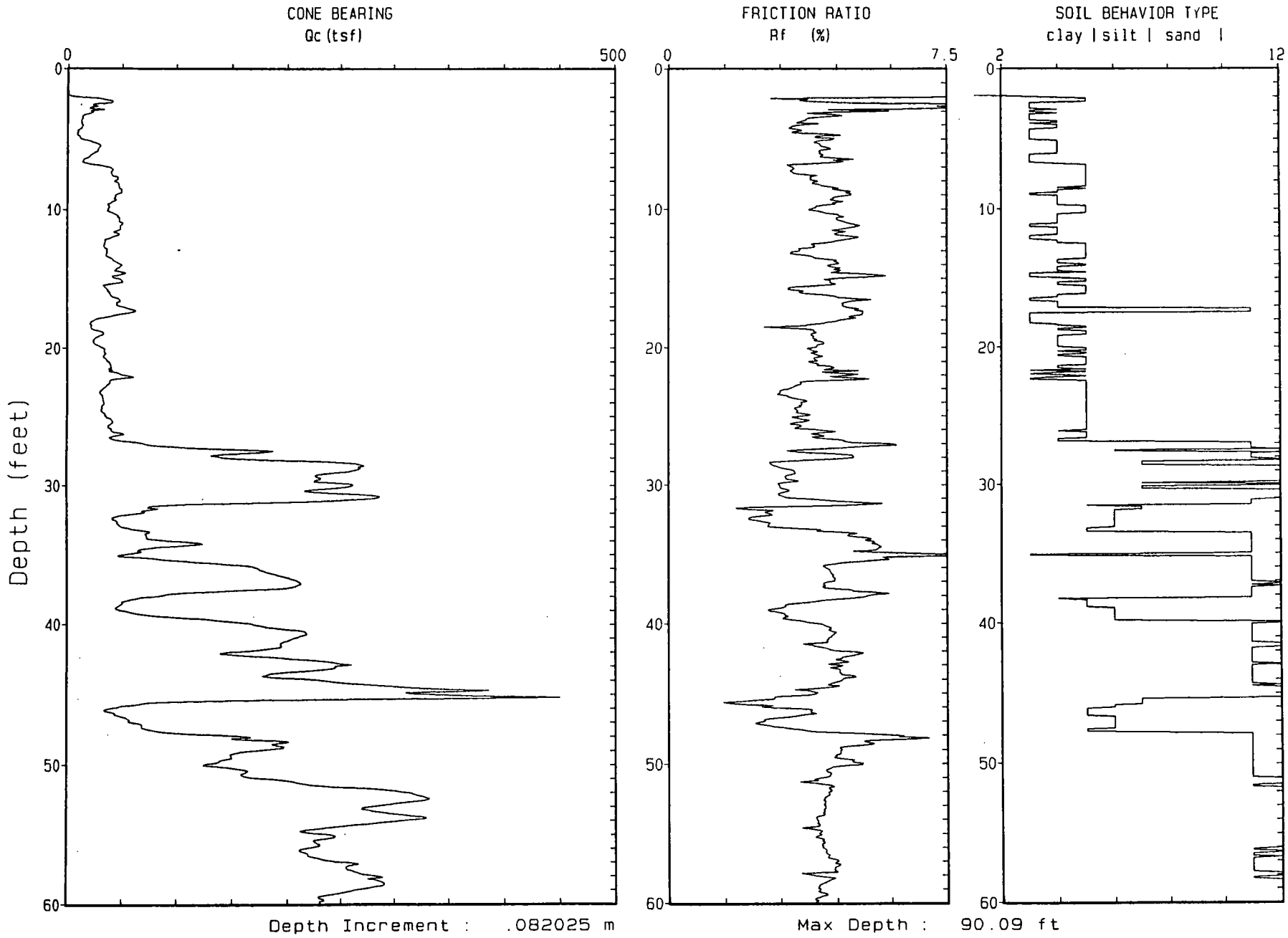


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.84

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0037.OUT
DATE : 3\23\94

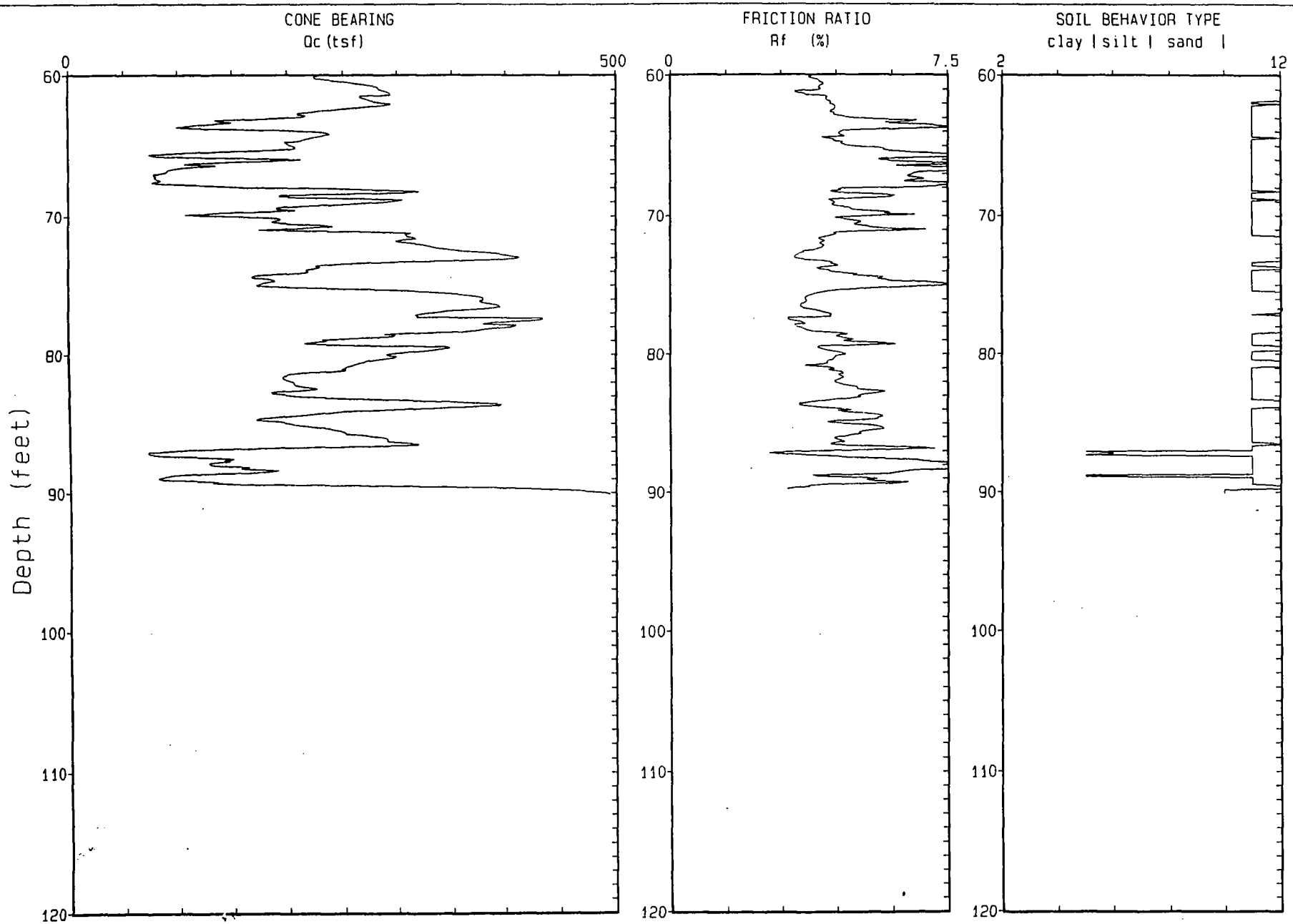


Depth Increment : .082025 m

Max Depth : 90.09 ft

DAMES & MOORE

PROJECT : MW-20 AREA
CONTRACTOR : GREGG IN SITU
FILE : CPL0037.OUT
ELEVATION : 41.84
GEOLOGIST : CRAIG MAGNUSEN
DATE : 3\23\94



Depth Increment : .082025 m

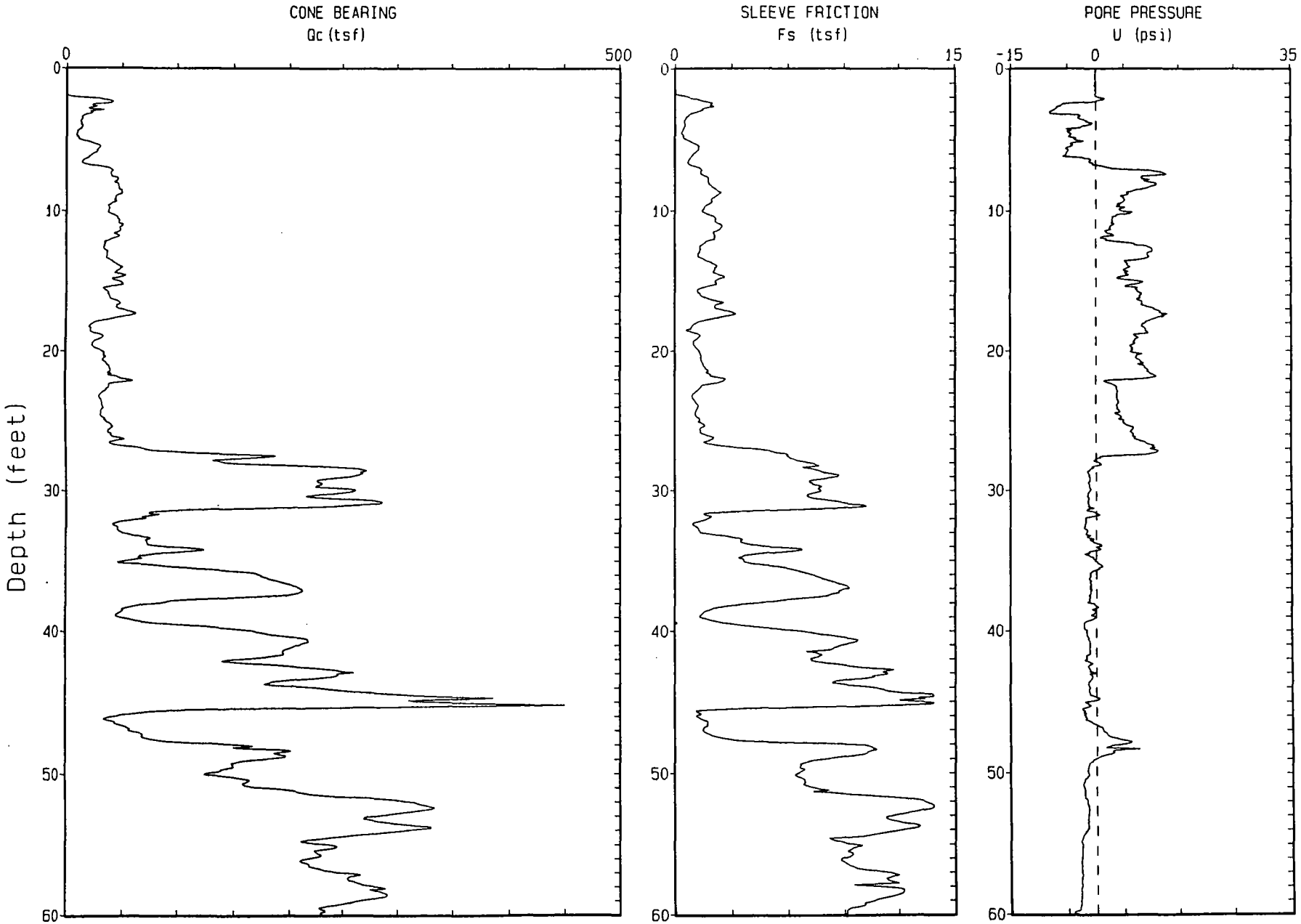
Max Depth : 90.09 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.84

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0037.OUT
DATE : 3\23\94

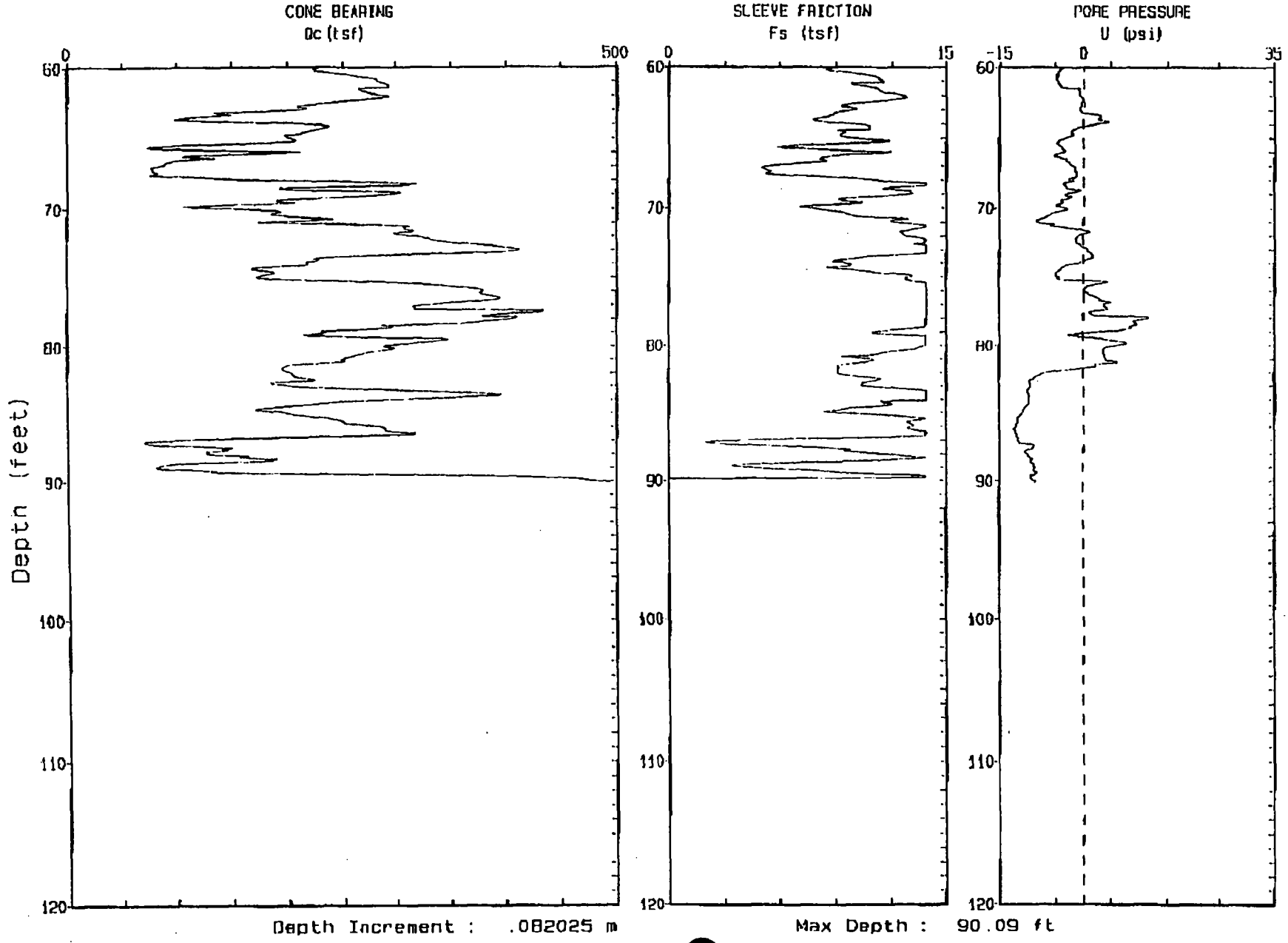


Depth Increment : .082025 m

Max Depth : 90.09 ft

DAMES & MOORE

PROJECT : MW-20 AREA
CONTRACTOR : GREGG IN SITU
FILE : CPL0037.OUT
ELEVATION : 41.84
GEOLOGIST : CRAIG MAGNUSEN
DATE : 3\23\94



Depth Increment : .082025 m

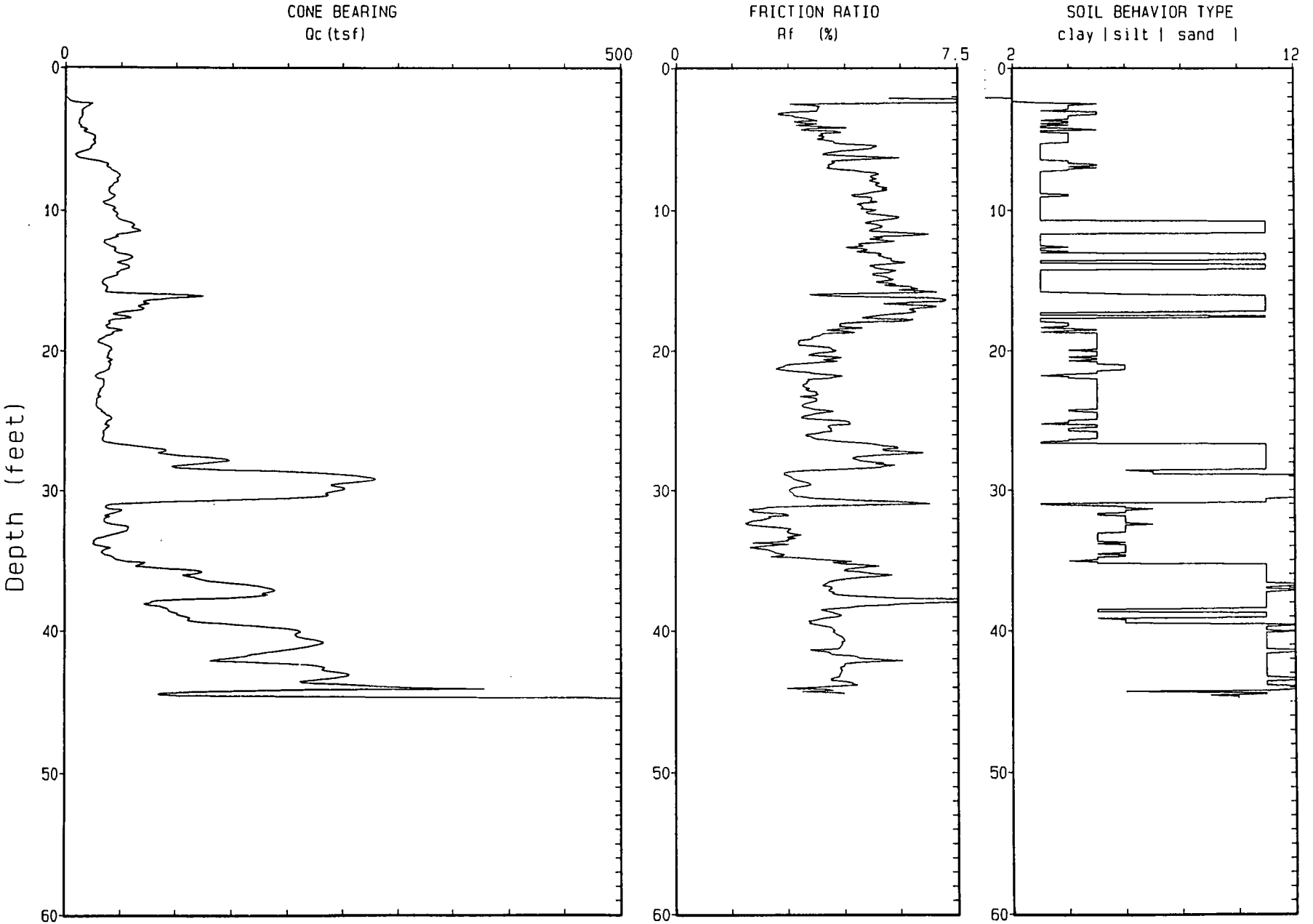
Max Depth : 90.09 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.43

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0038.OUT
DATE : 3\23\94



Depth Increment : .082025 m

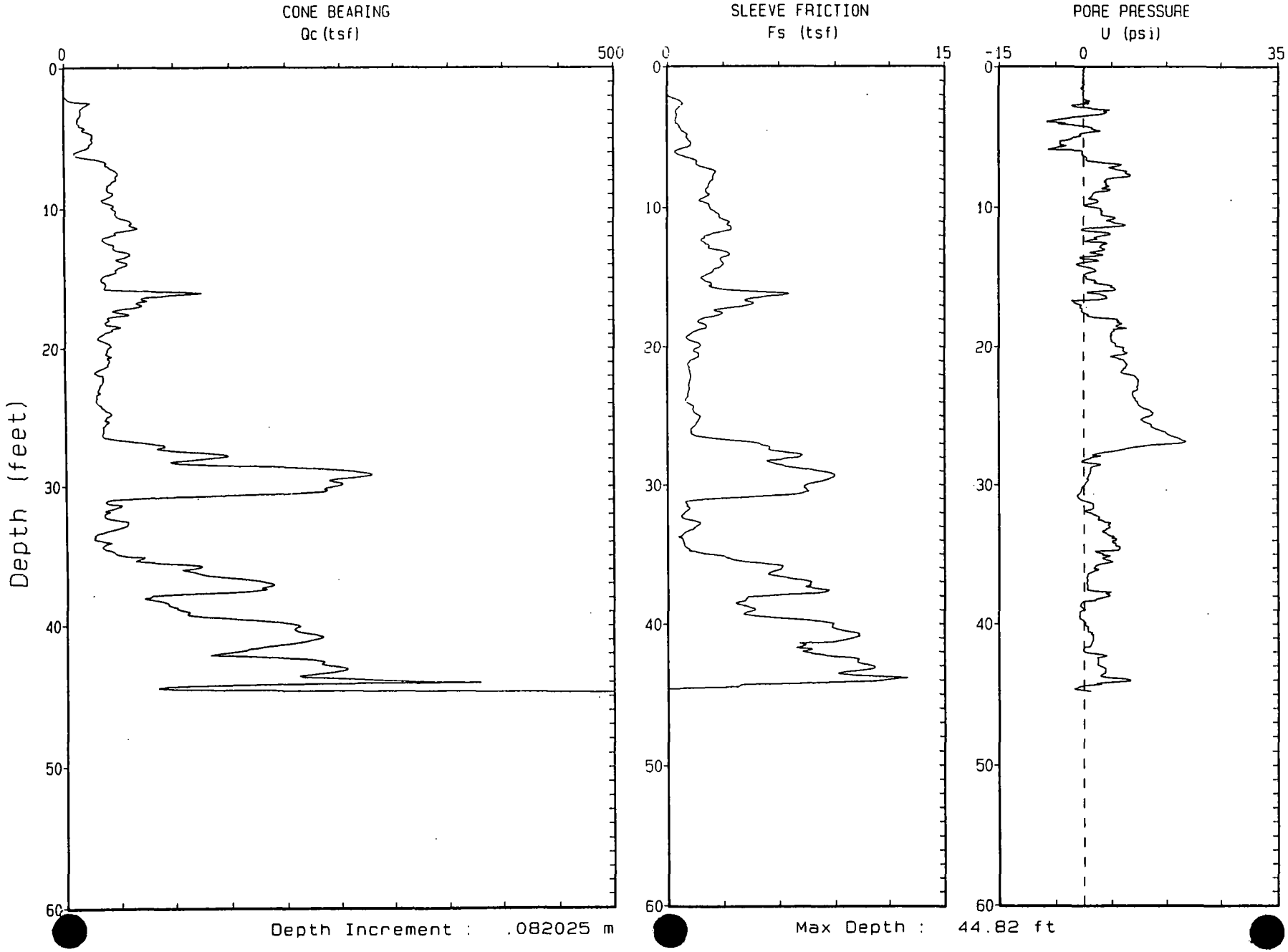
Max Depth : 44.82 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.43

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

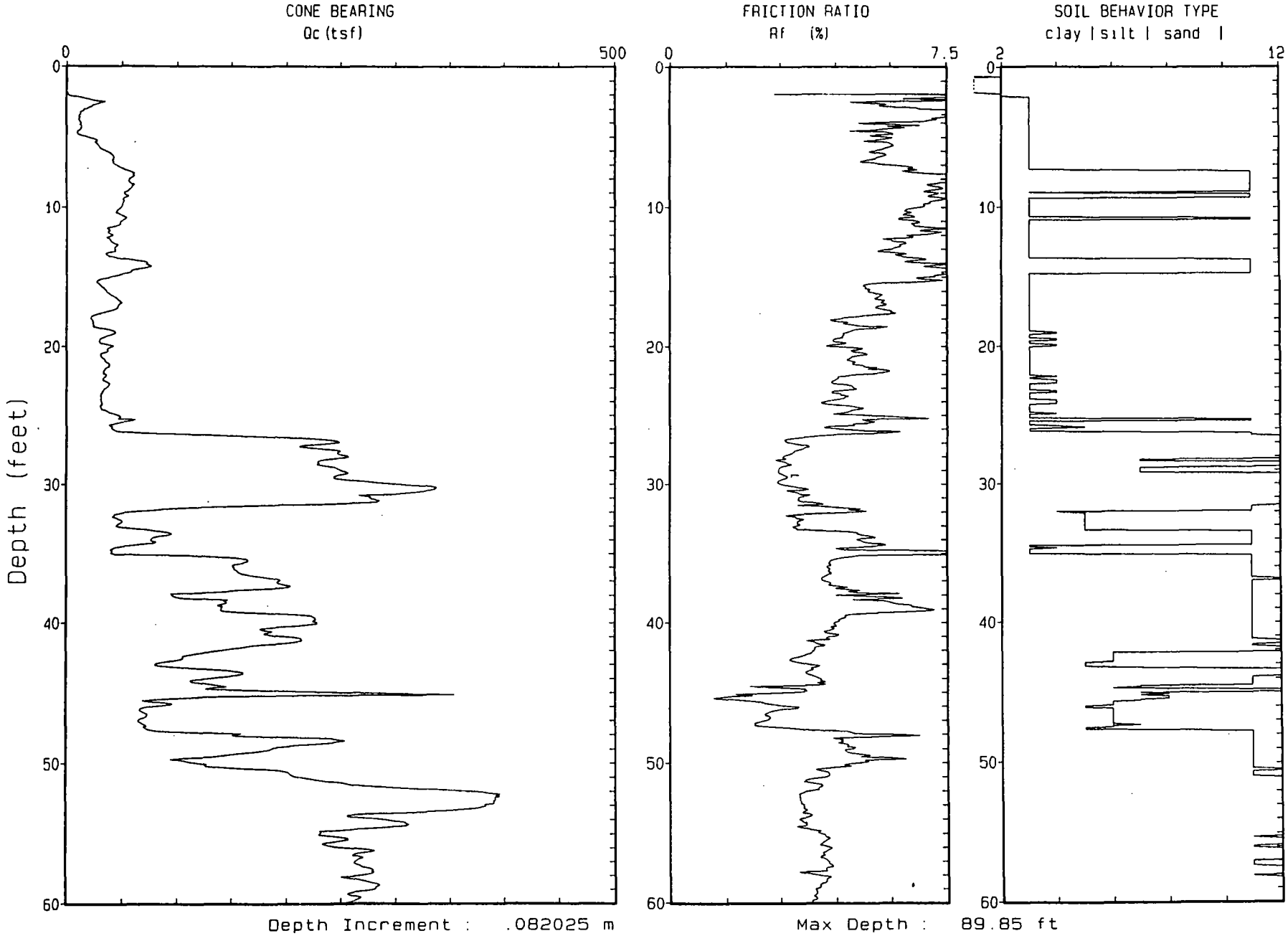
FILE : CPL0038.OUT
DATE : 3\23\94



DAMES & MOORE

PROJECT : MW-20 AREA | CONTRACTOR : GREGG IN SITU | FILE : CPL0039.OUT

ELEVATION : 41.81 FT. | GEOLOGIST : CRAIG MAGNUSEN | DATE : 3\23\94



Depth Increment : .082025 m

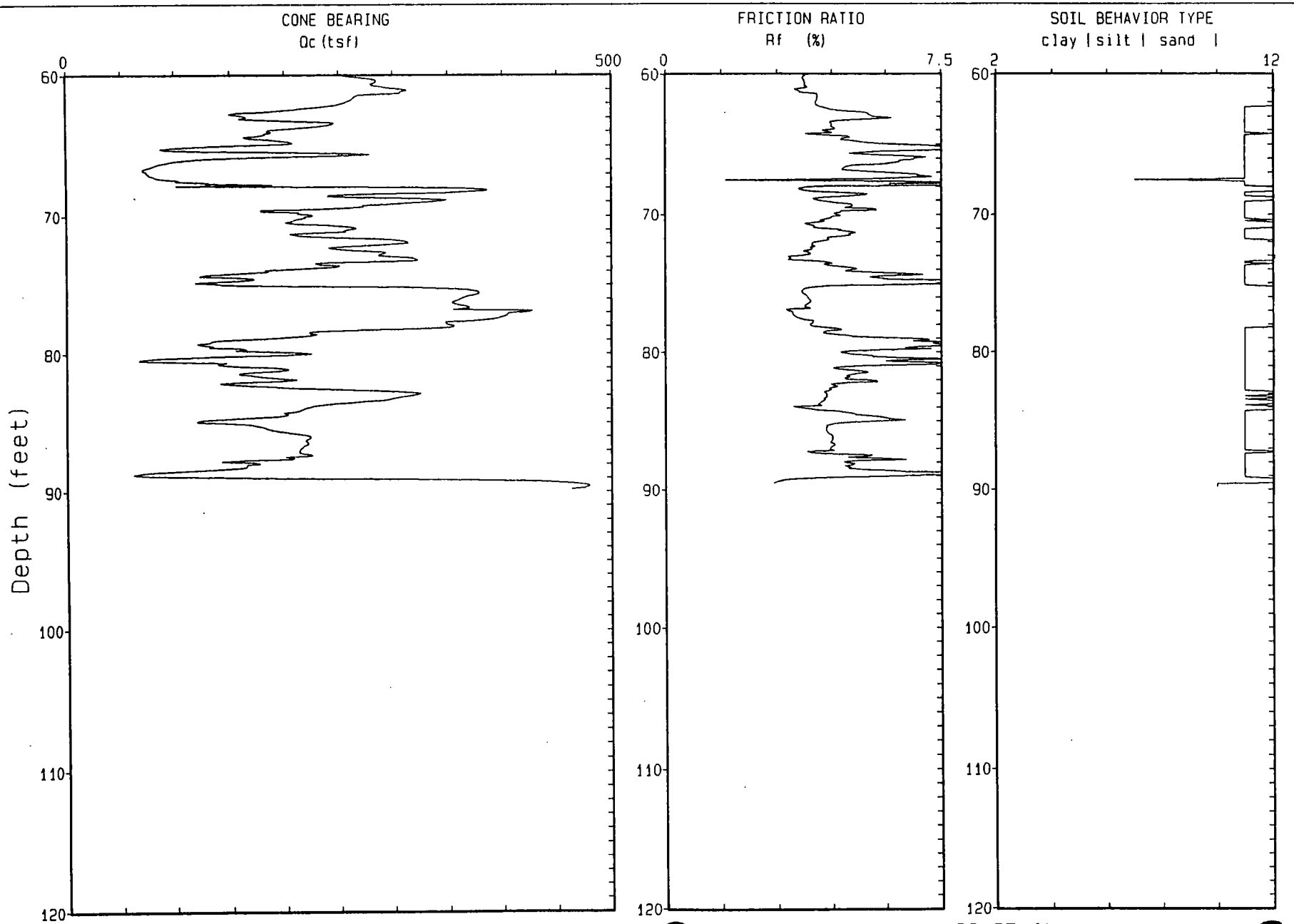
Max Depth : 89.85 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.81 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0039.OUT
DATE : 3\23\94



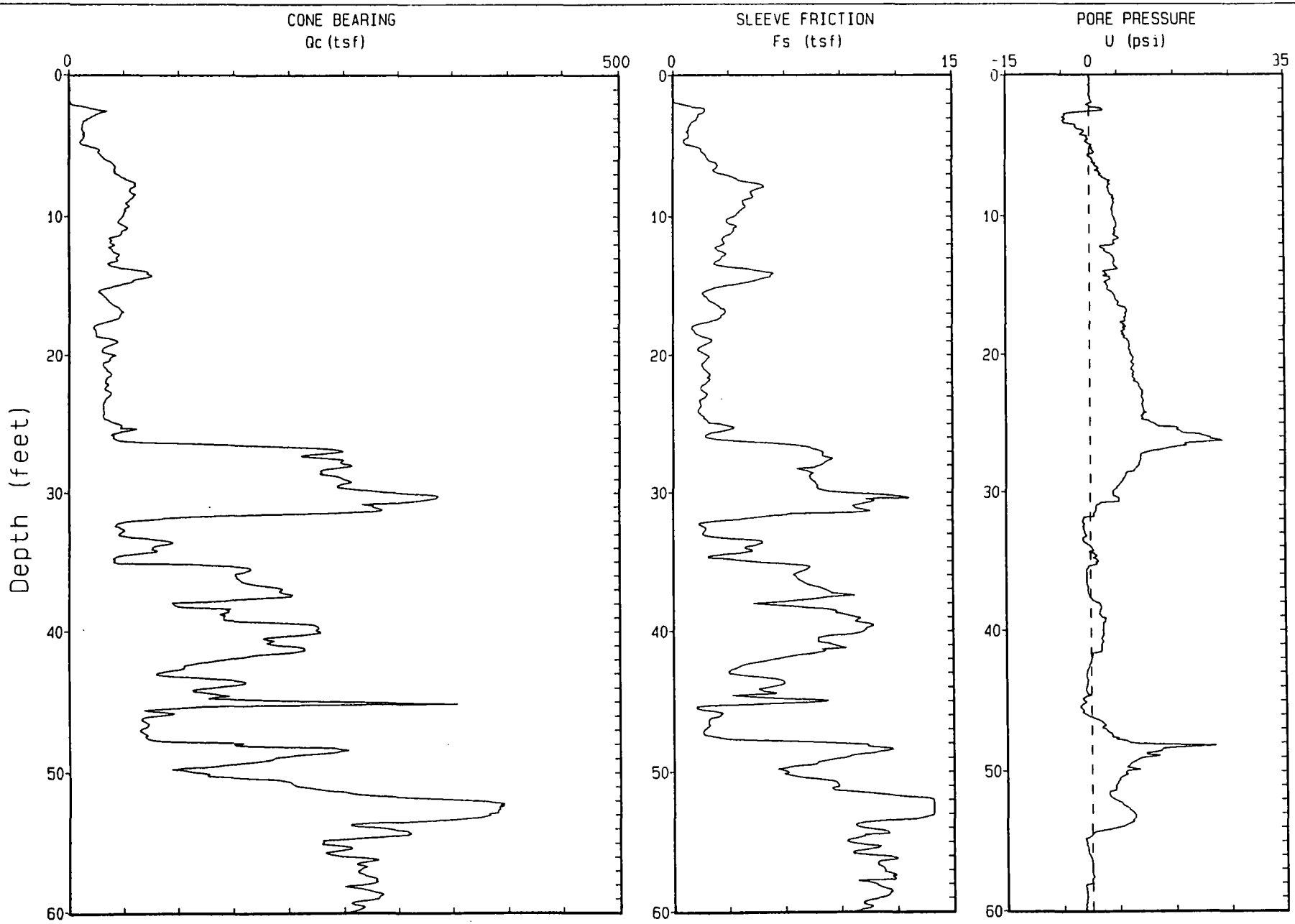
Depth Increment : .082025 m

Max Depth : 89.85 ft

DAMES & MOORE

PROJECT : MW-20 AREA | CONTRACTOR : GREGG IN SITU | FILE : CPL0039.OUT

ELEVATION : 41.81 FT. | GEOLOGIST : CRAIG MAGNUSEN | DATE : 3\23\94



Depth Increment : .082025 m

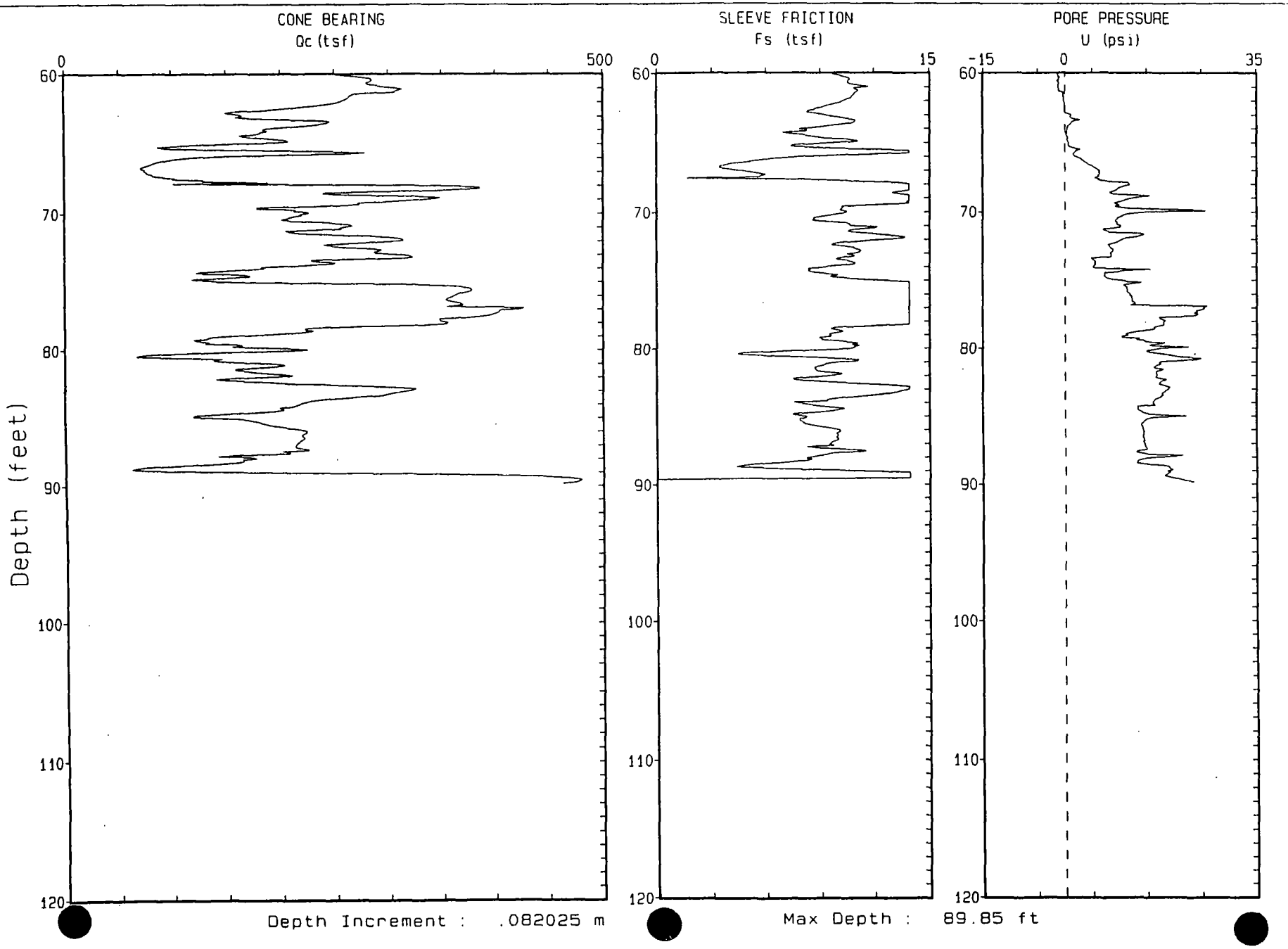
Max Depth : 89.85 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.81 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0039.OUT
DATE : 3\23\94

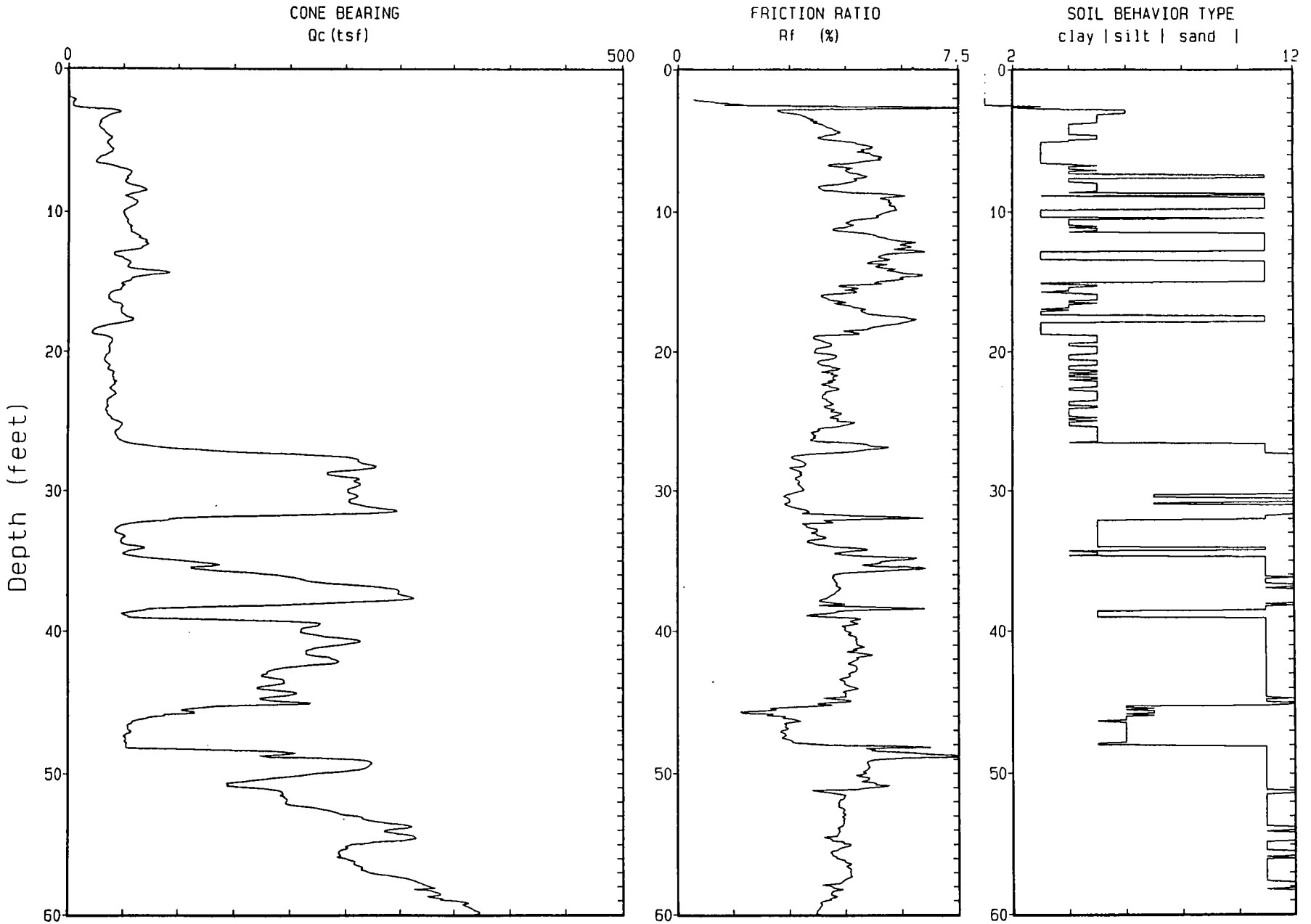


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.13 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0040.OUT
DATE : 3\23\94



Depth Increment : .082025 m

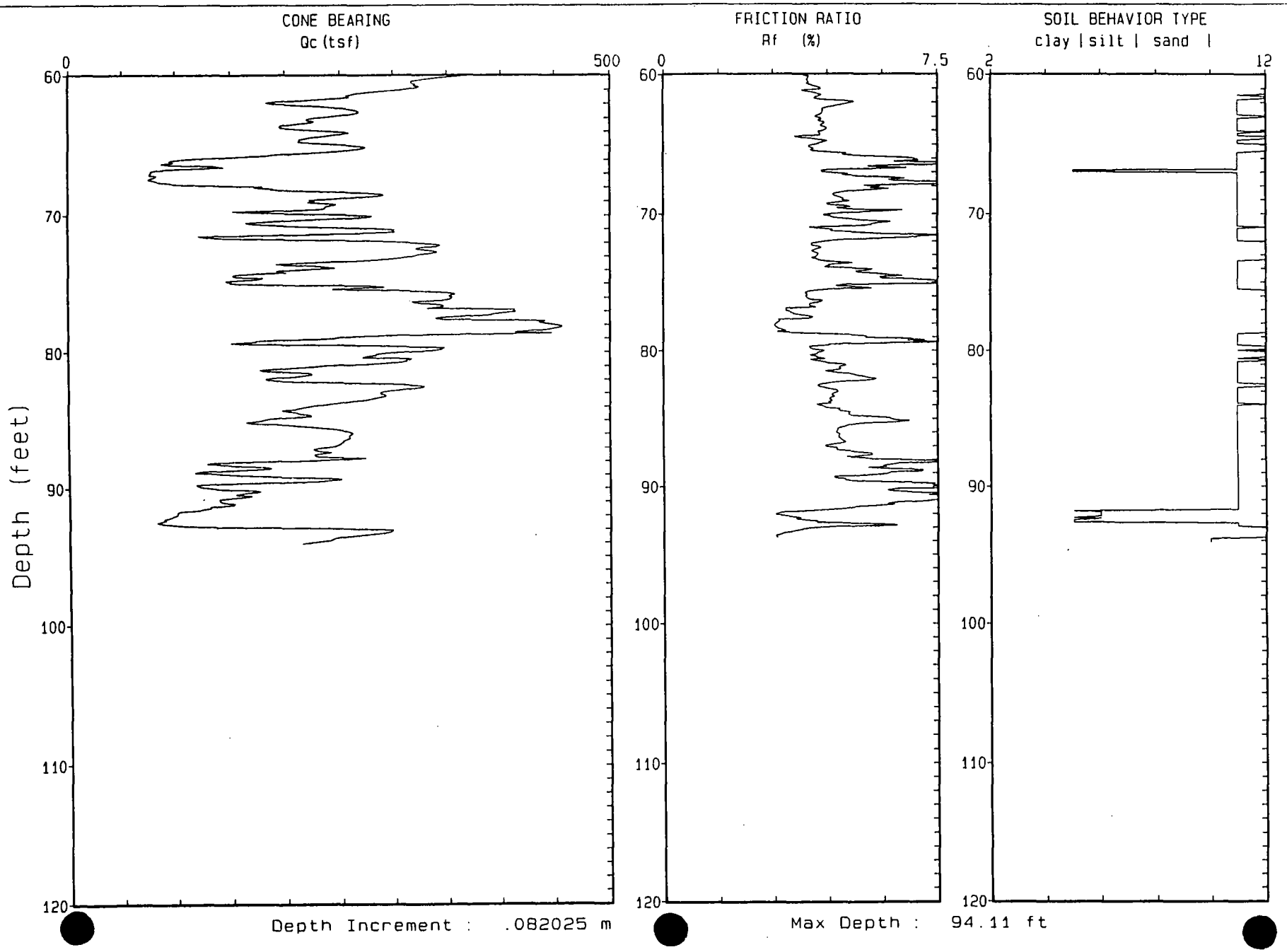
Max Depth : 94.11 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.13 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

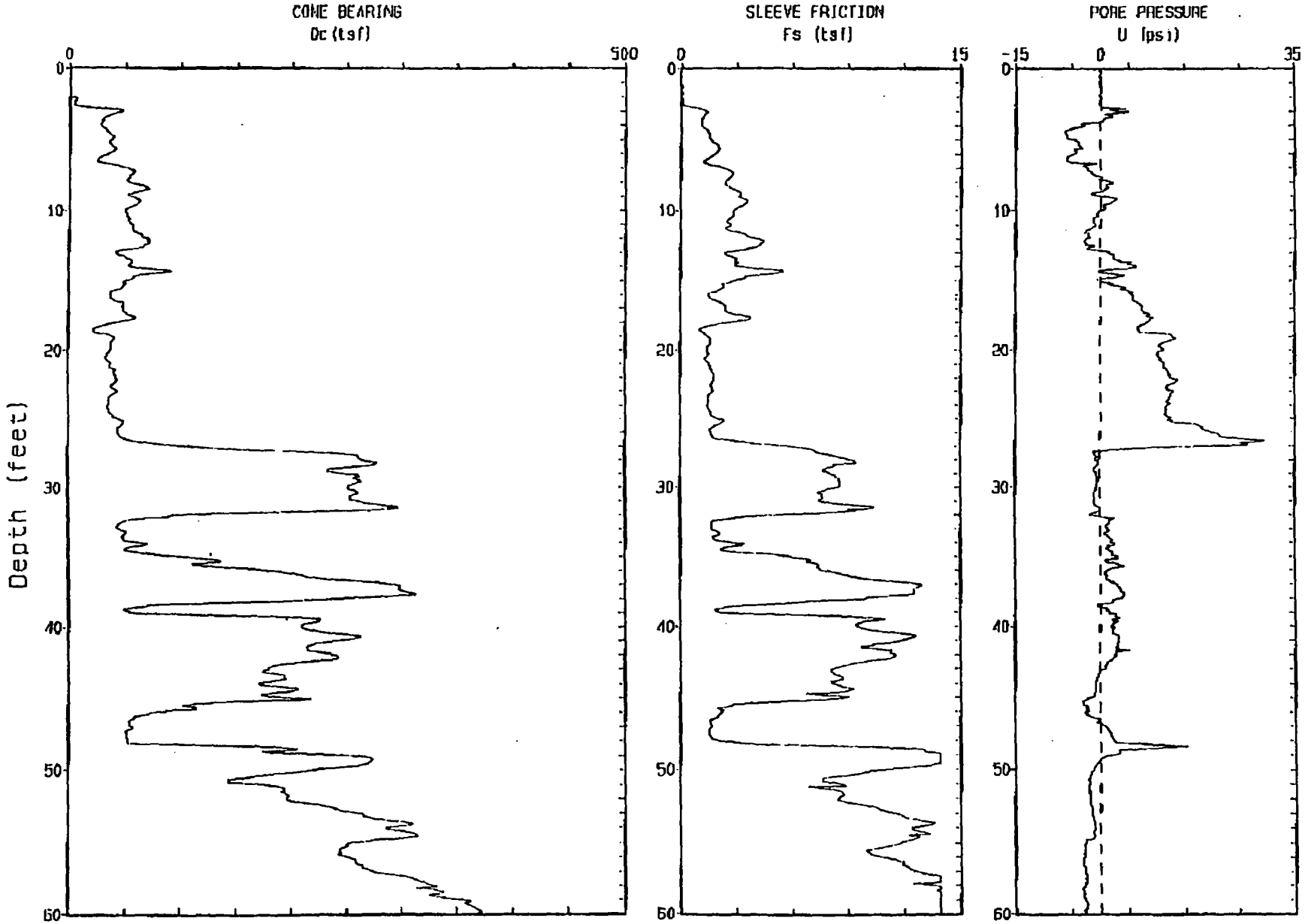
FILE : CPL0040.OUT
DATE : 3\23\94



DAMES & MOORE

PROJECT : MW-20 AREA | CONTRACTOR : GREGG IN SITU | FILE : CPL0040.OUT

ELEVATION : 42.13 FT. | GEOLOGIST : CRAIG MAGNUSEN | DATE : 3\23\94



Depth Increment : .082025 m

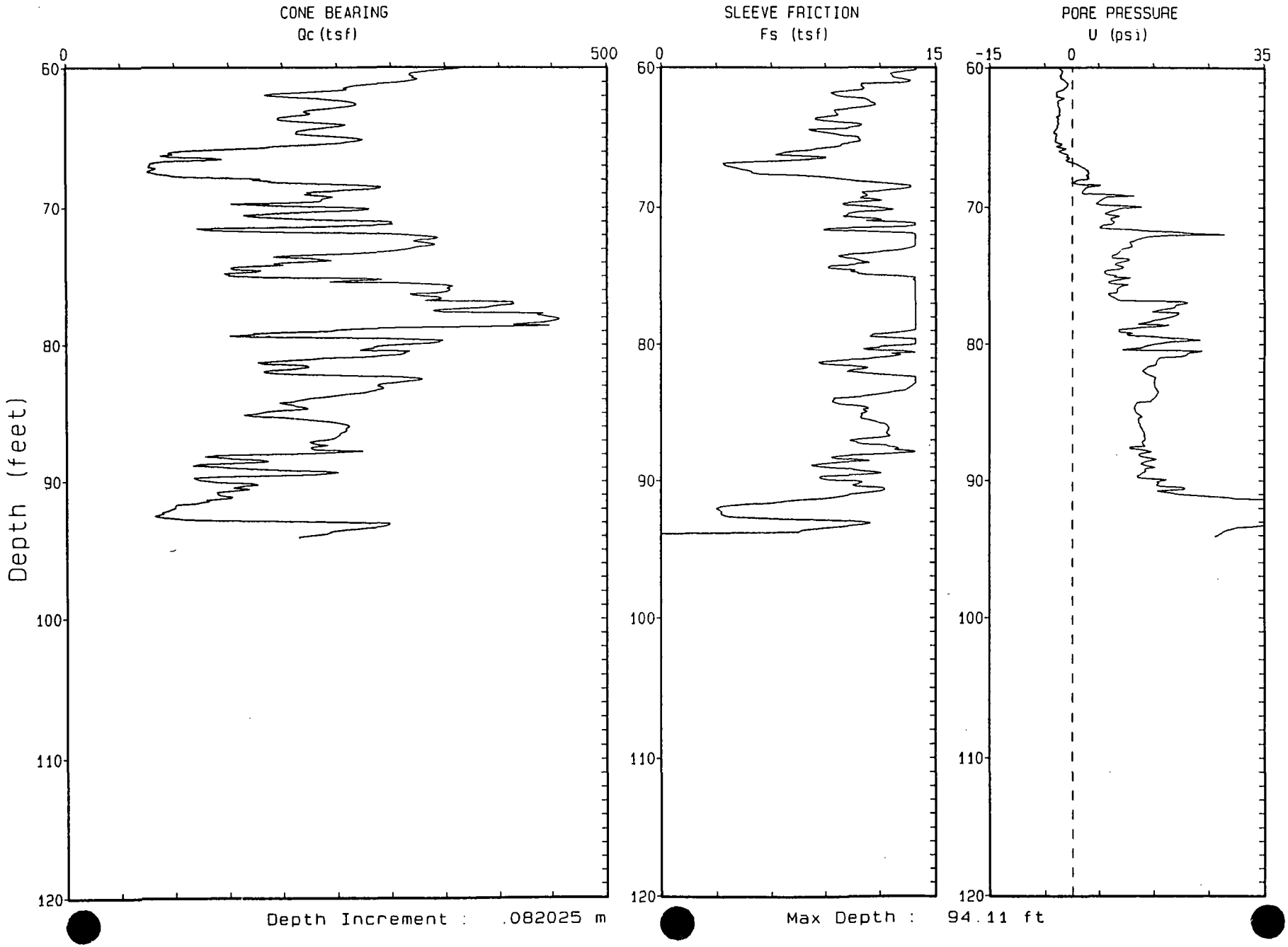
Max Depth : 94.11 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.13 FT.

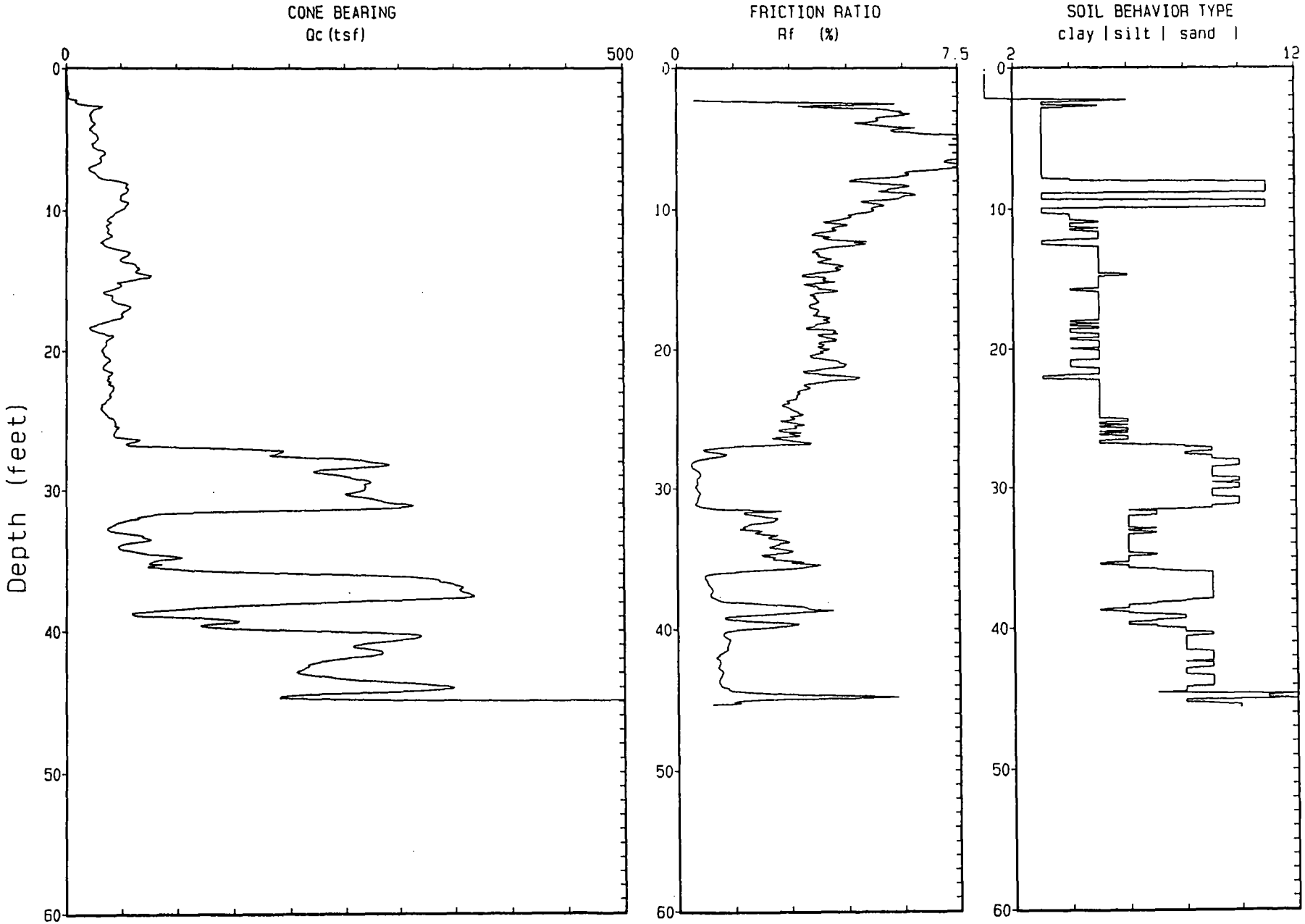
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0040.OUT
DATE : 3\23\94



DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.27 FT.
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN
FILE : CPL0041.OUT
DATE : 3\24\94



Depth Increment : .082025 m

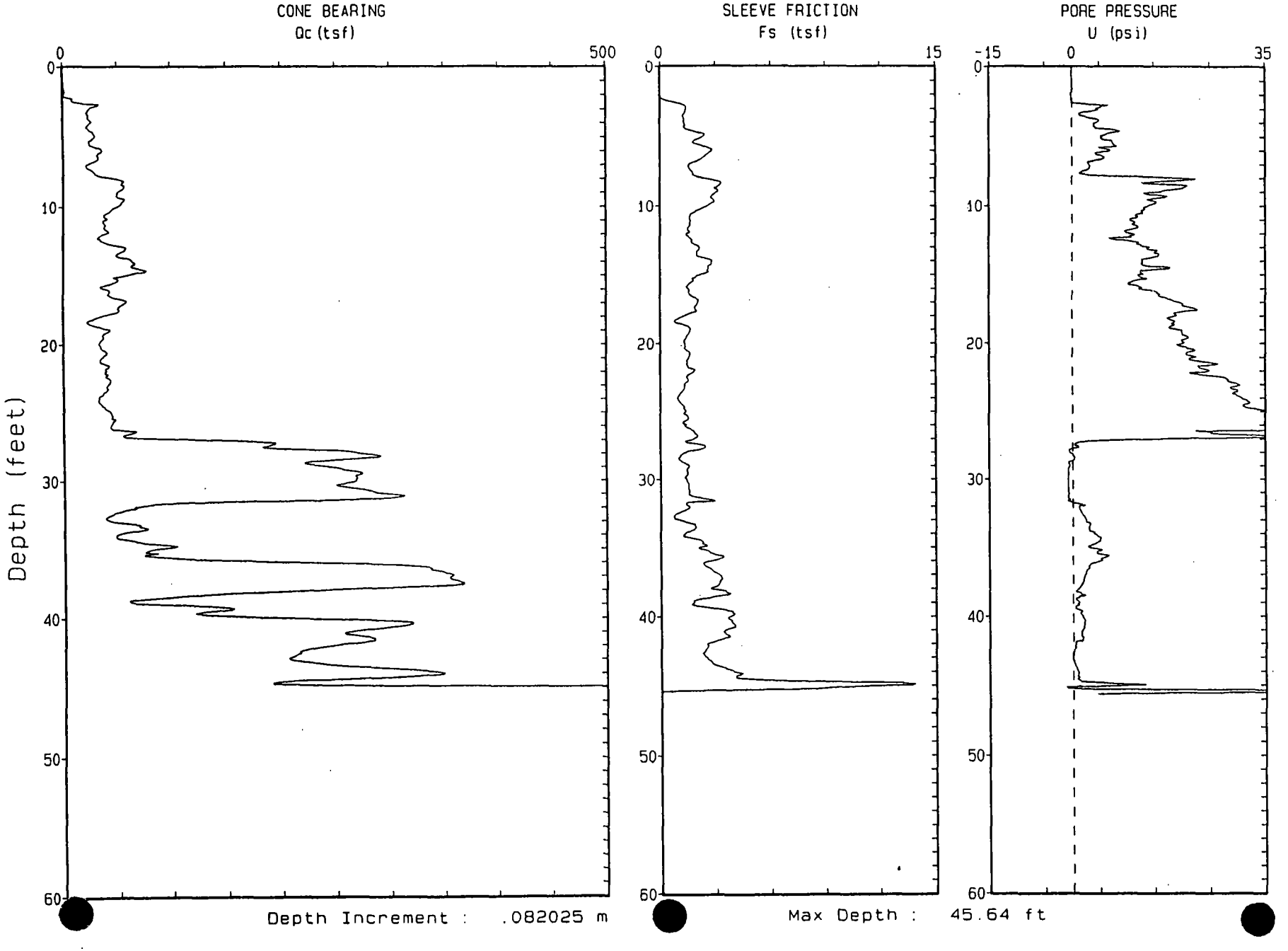
Max Depth : 45.64 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.27 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0041.OUT
DATE : 3\24\94

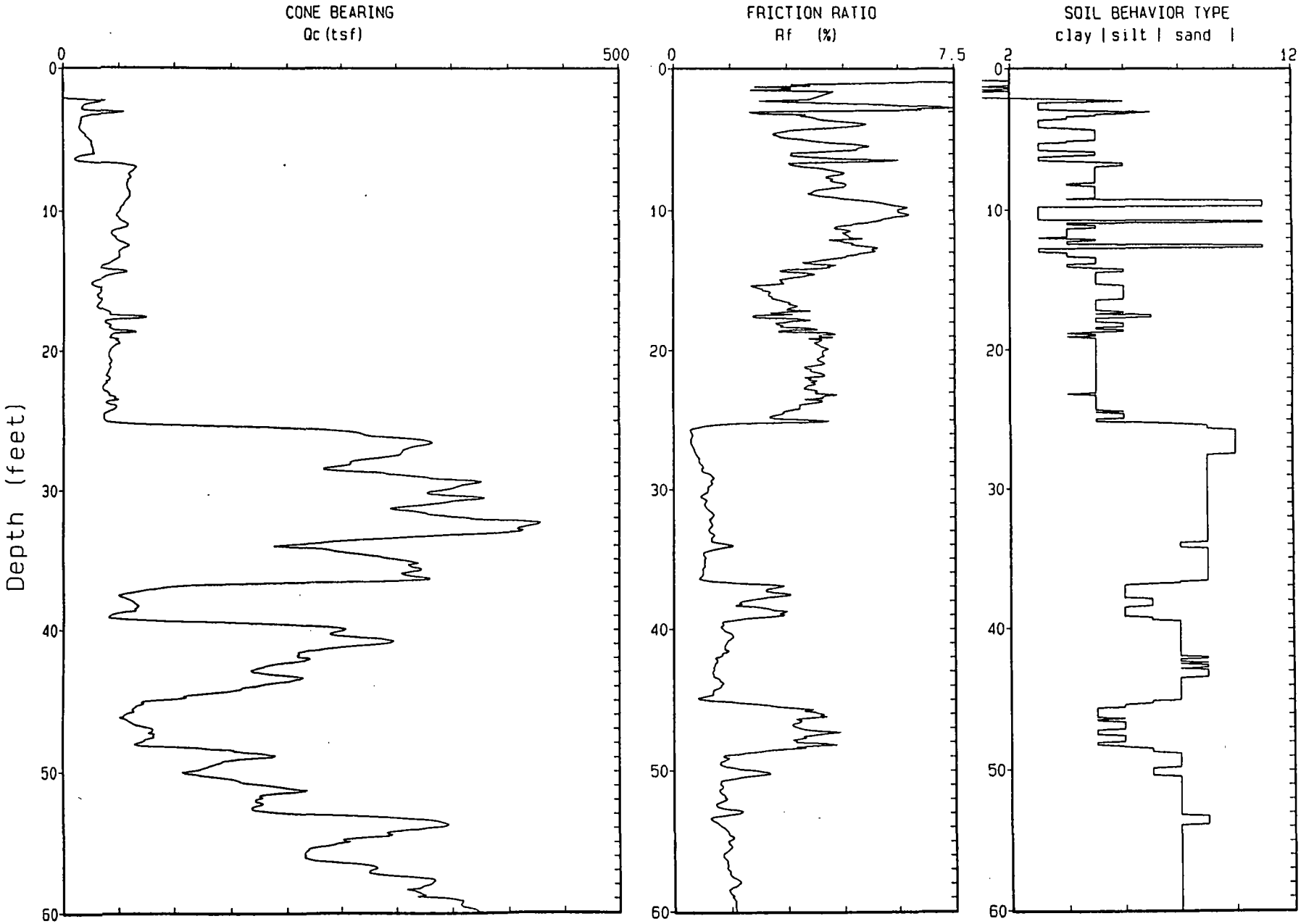


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.20 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0042.OUT
DATE : 3\24\94



Depth Increment : .082025 m

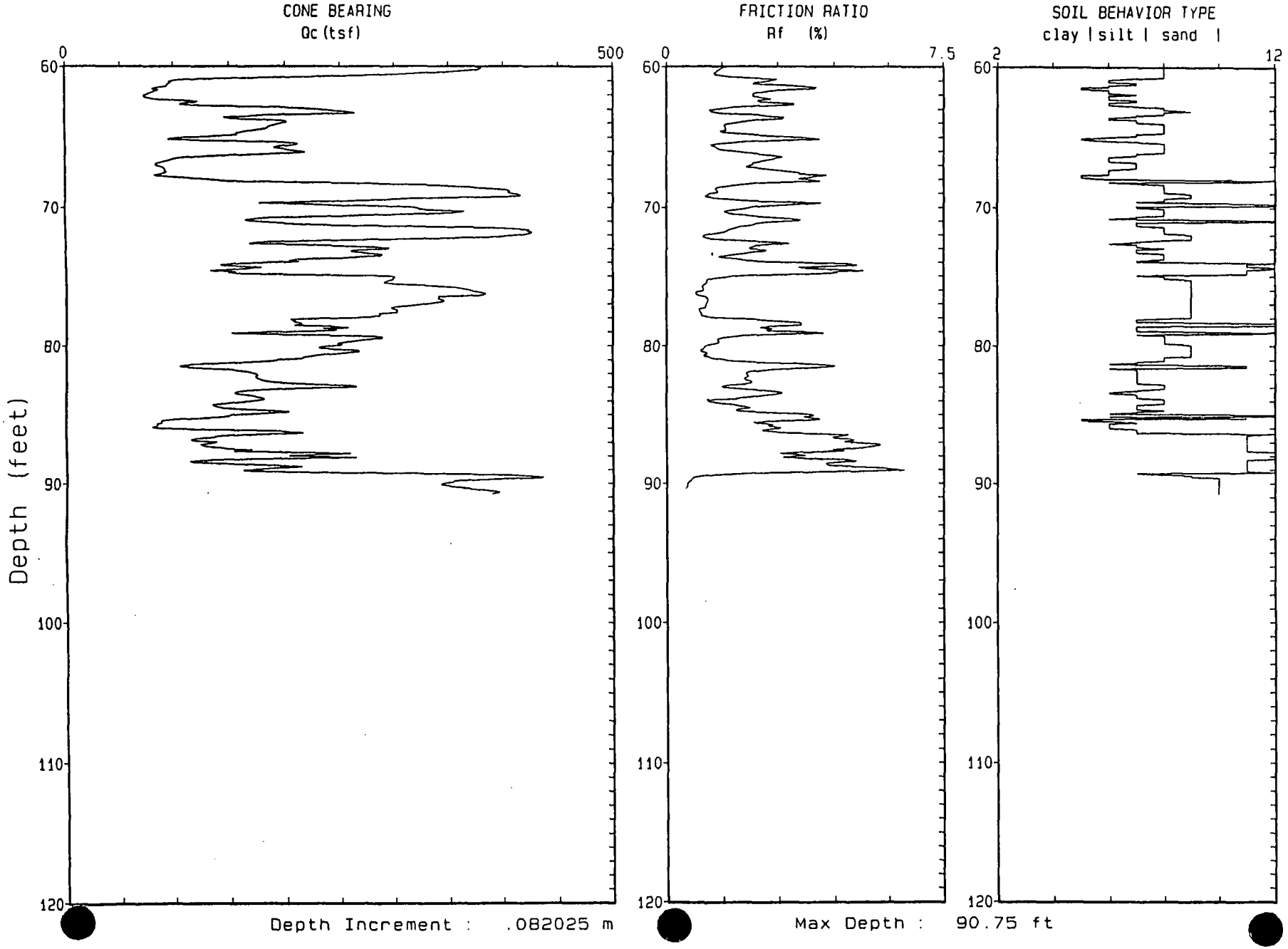
Max Depth : 90.75 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.20 FT.

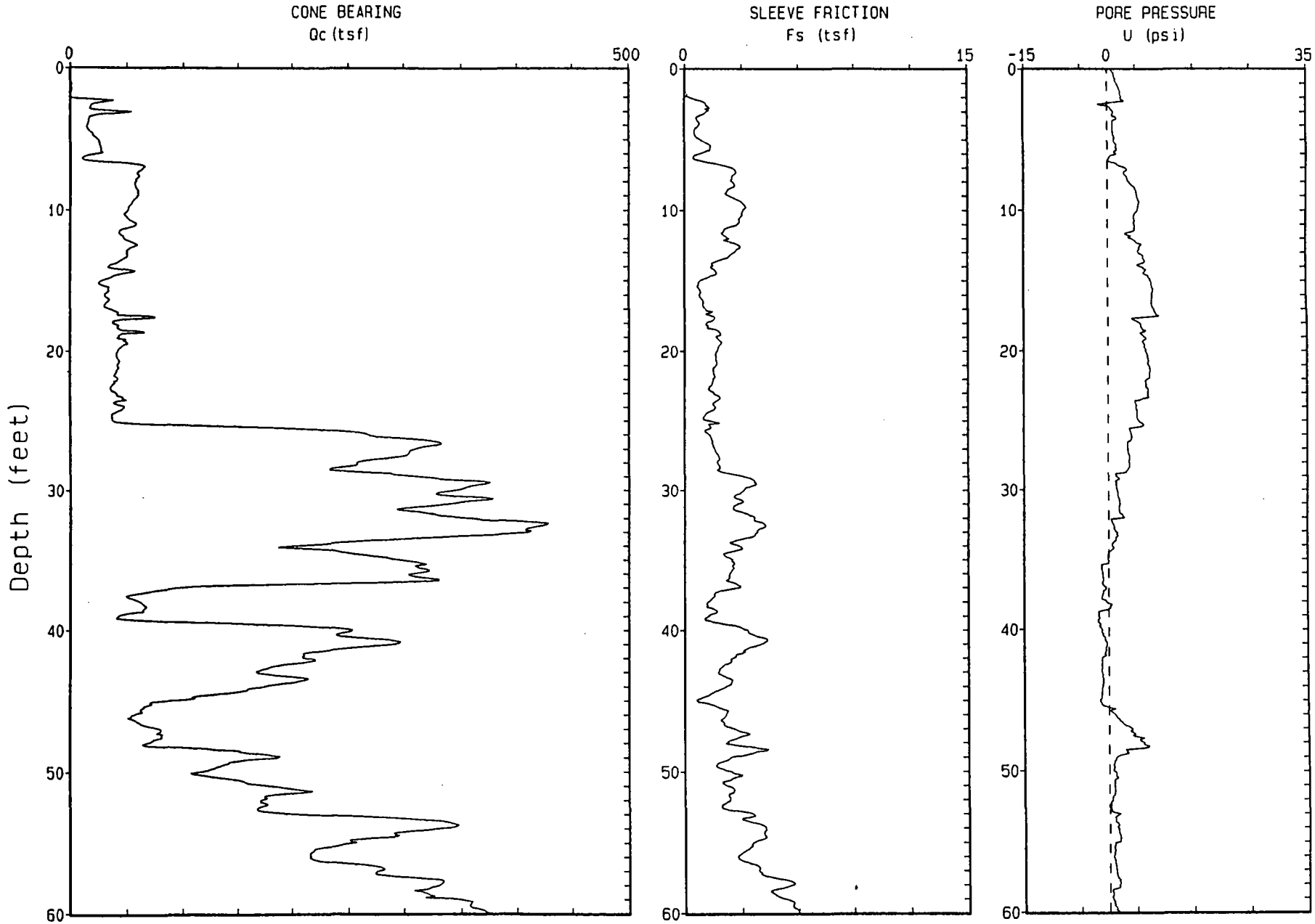
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0042.OUT
DATE : 3\24\94



DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.20 FT.
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN
FILE : CPL0042.OUT
DATE : 3\24\94



Depth Increment : .082025 m

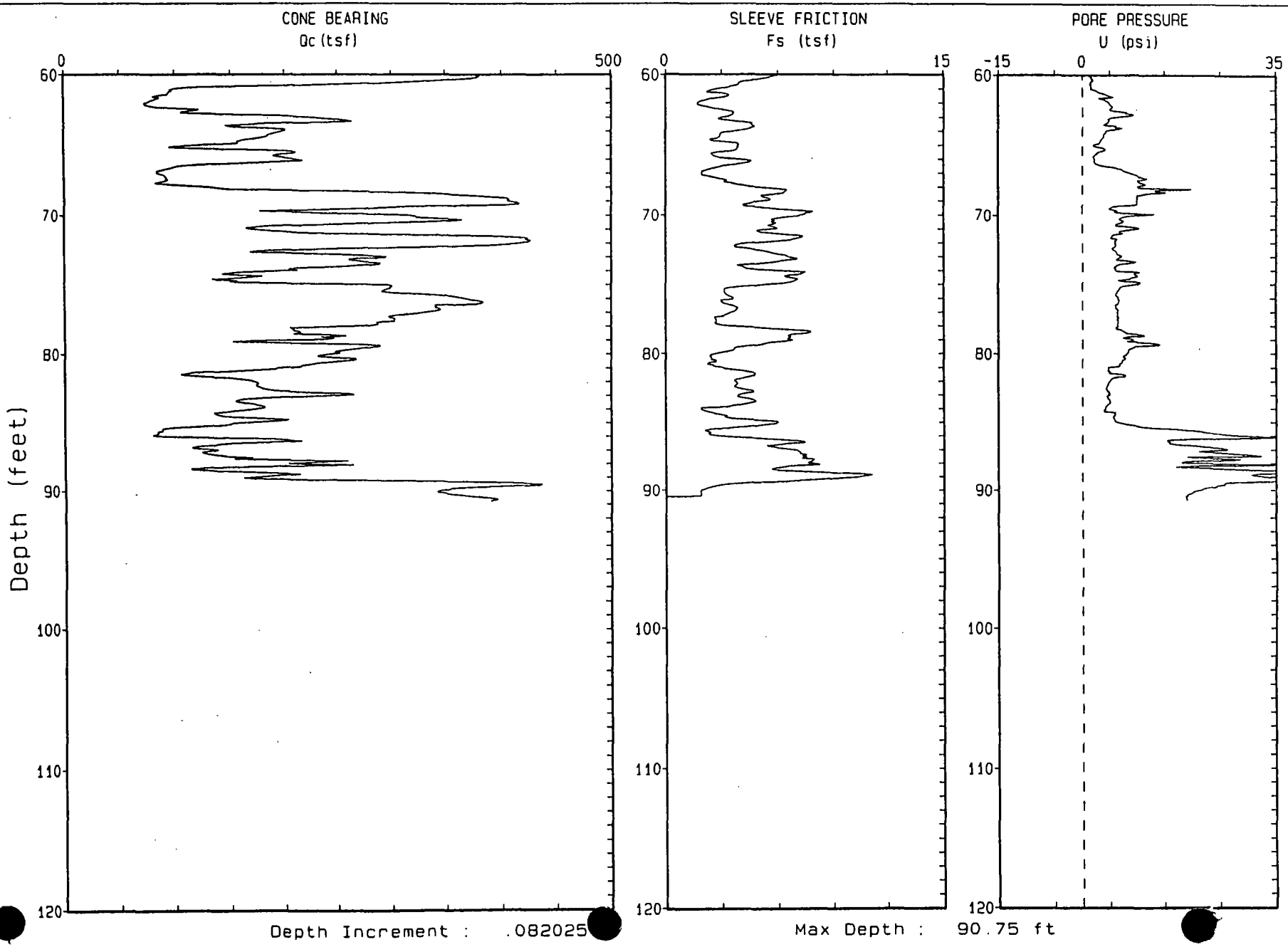
Max Depth : 90.75 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 42.20 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0042.OUT
DATE : 3\24\94

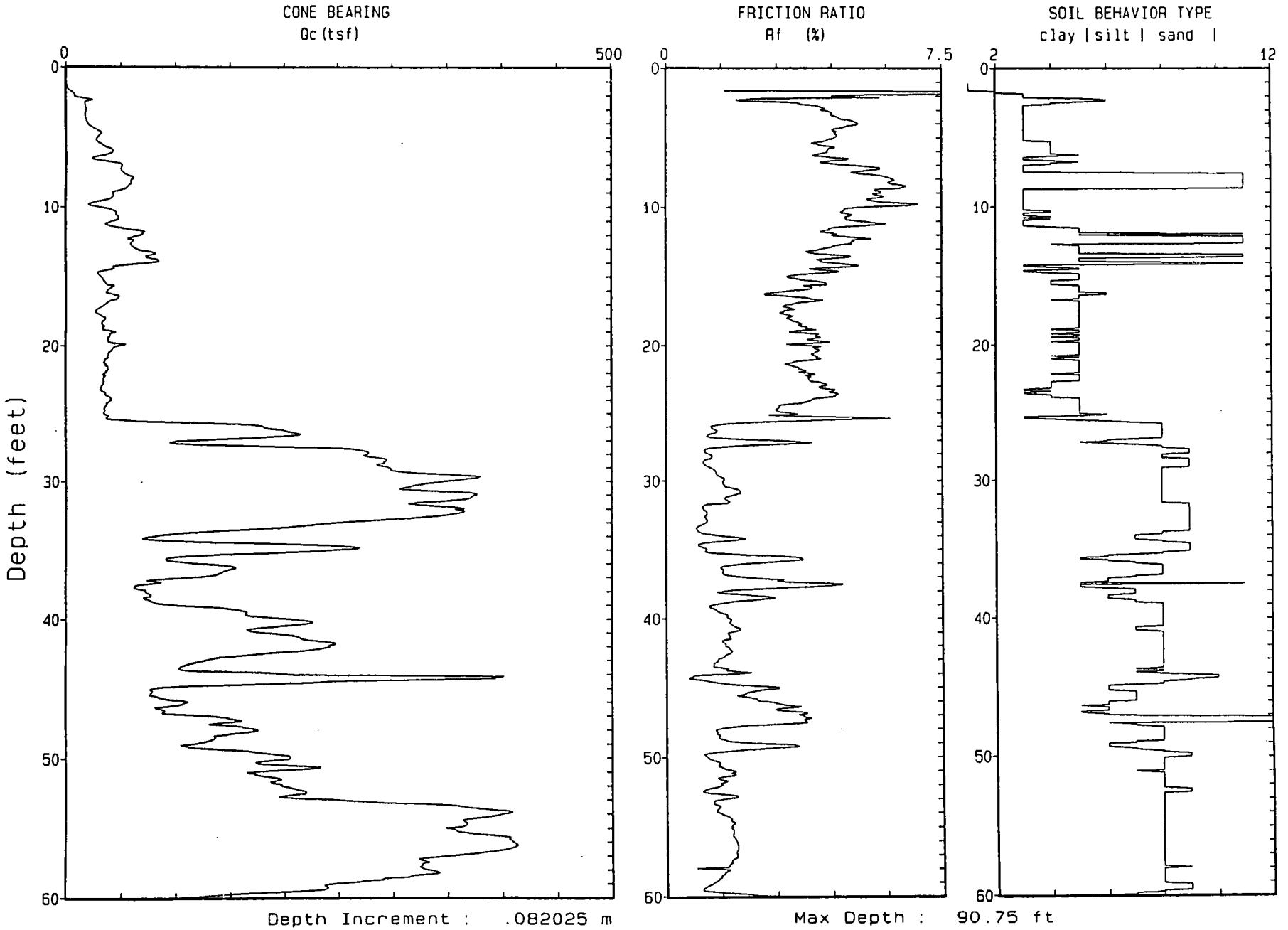


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.68 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0043.OUT
DATE : 3\24\94

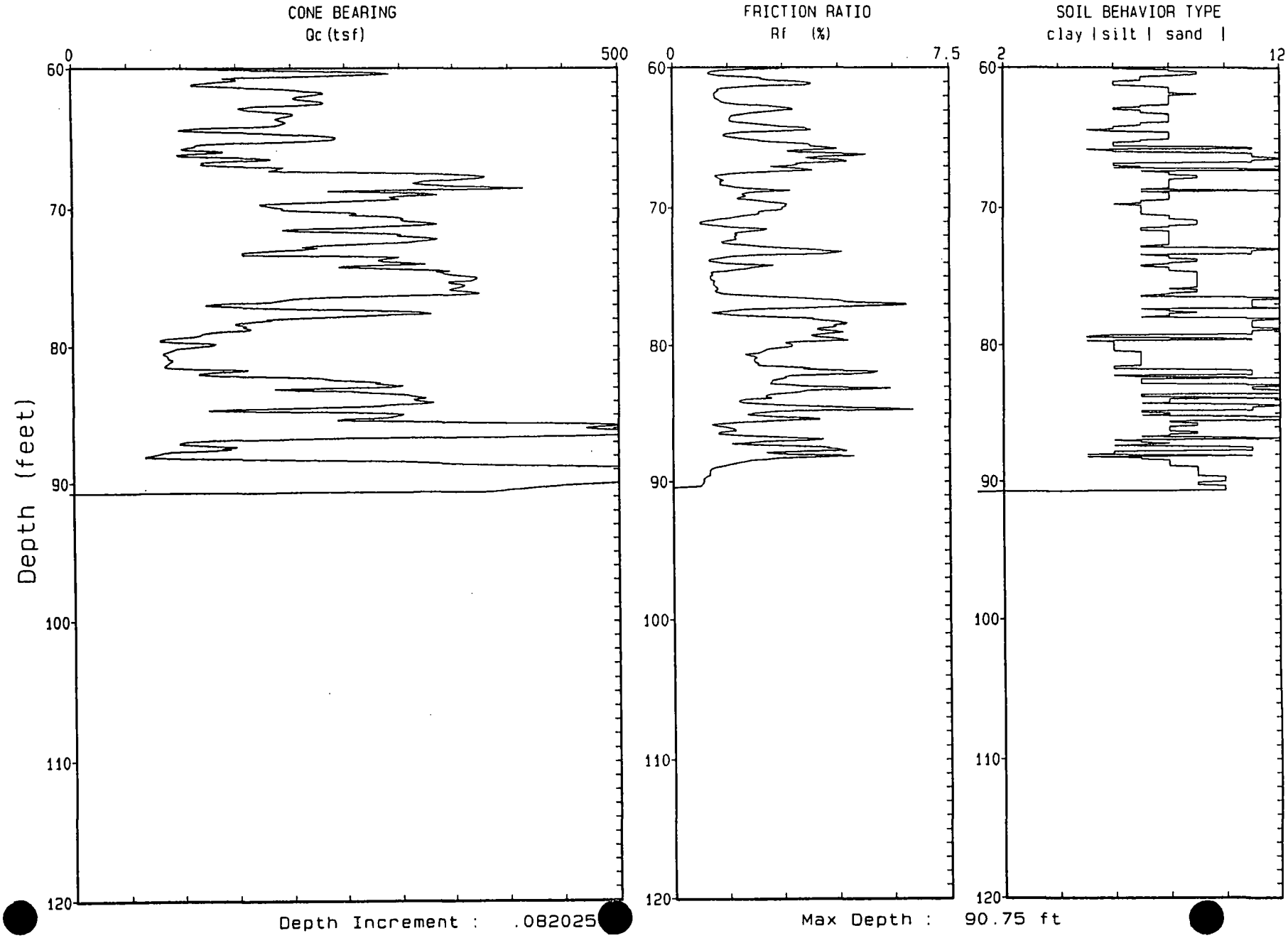


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.68 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0043.OUT
DATE : 3\24\94

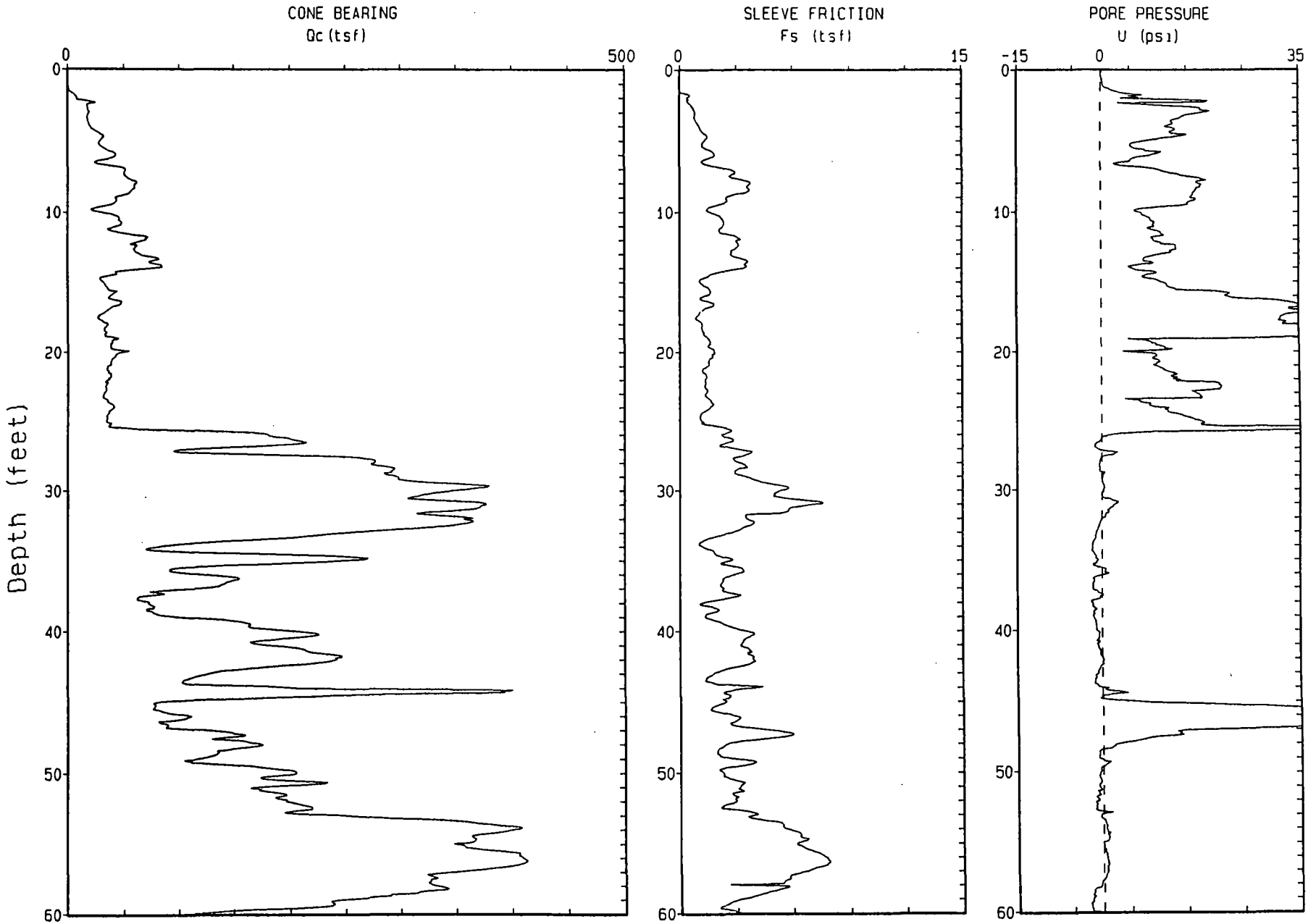


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.68 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0043.OUT
DATE : 3\24\94



Depth Increment : .082025 m

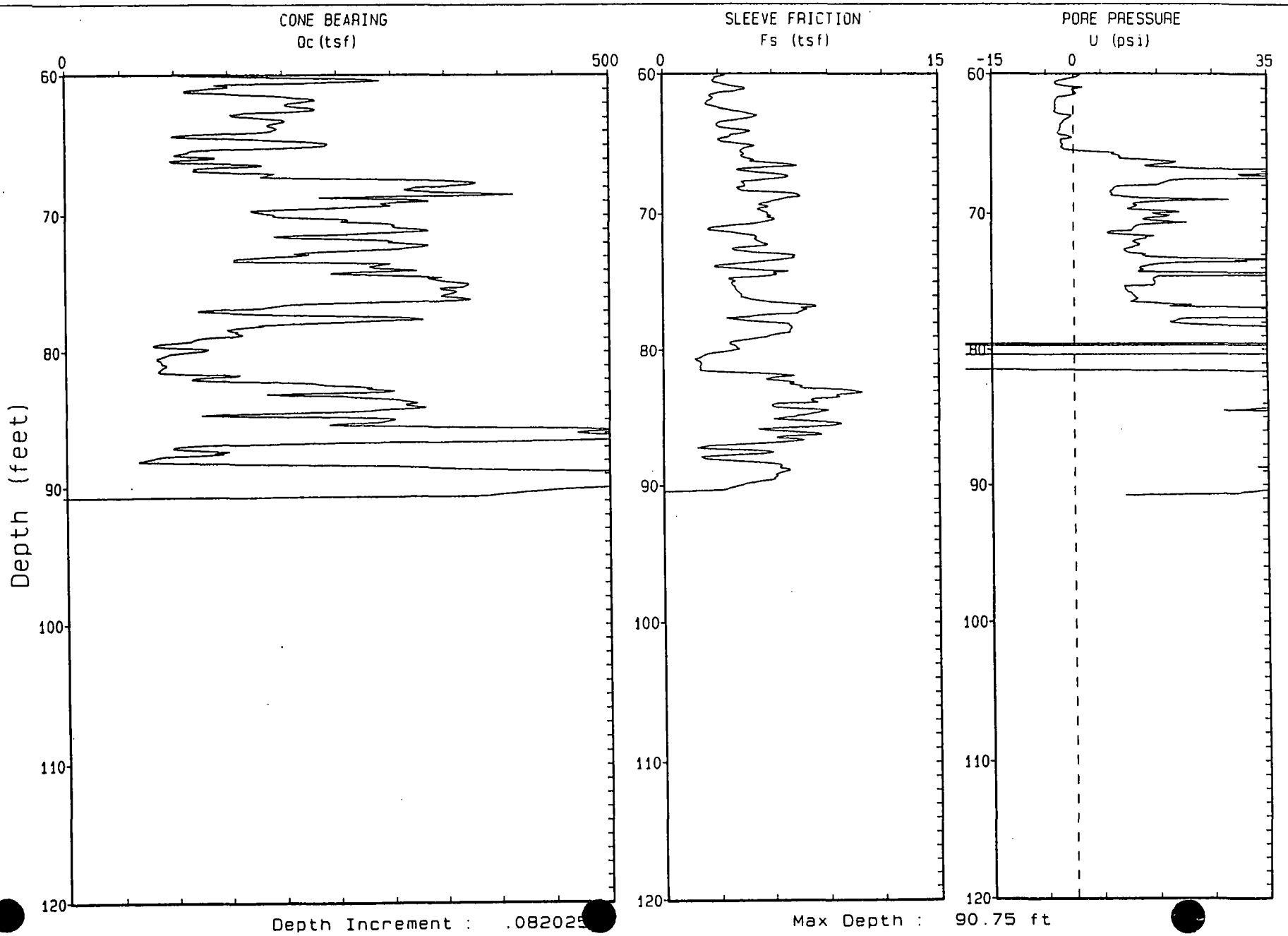
Max Depth : 90.75 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.68 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0043.OUT
DATE : 3\24\94

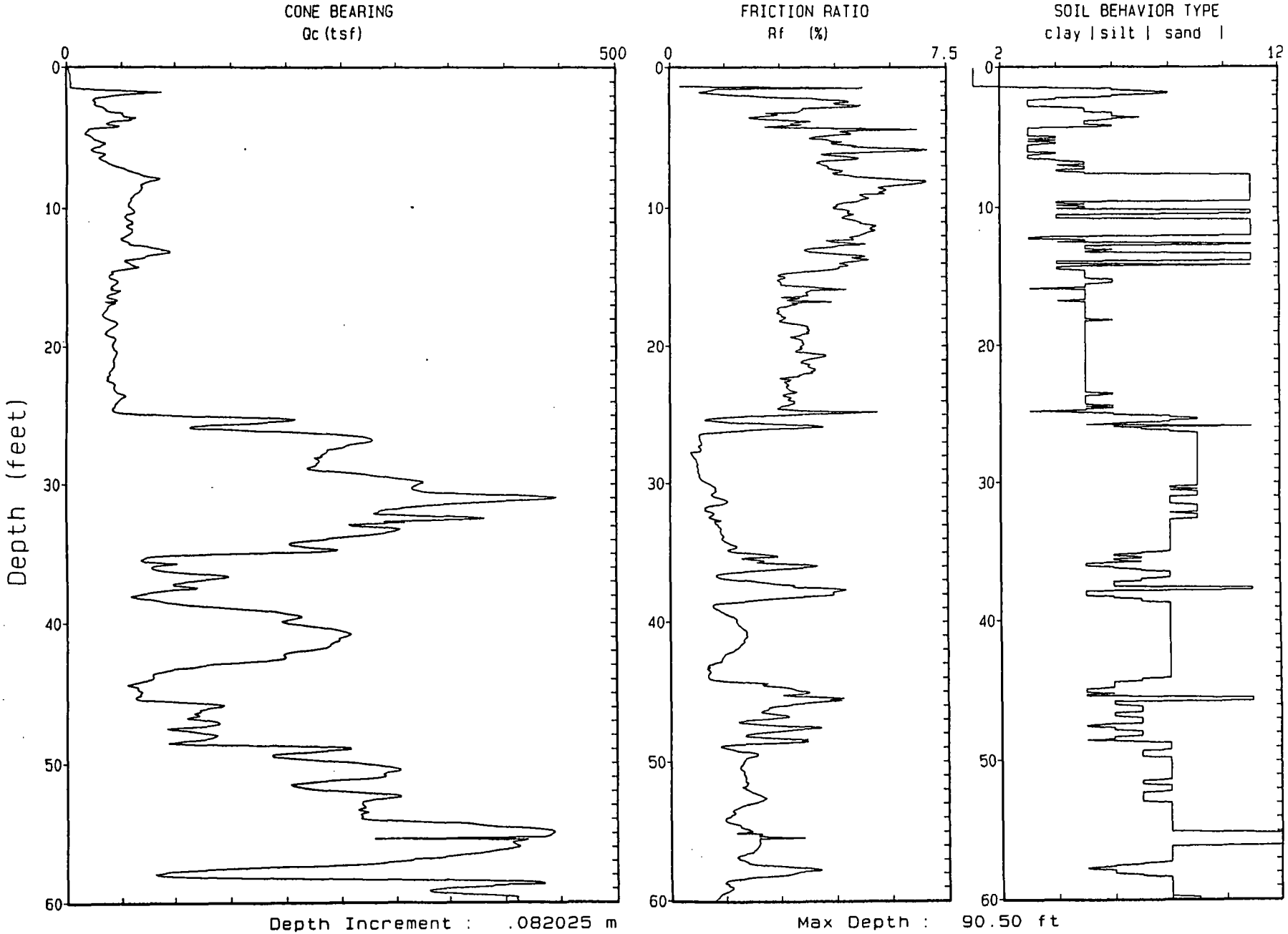


Depth Increment : .082025

Max Depth : 90.75 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.59 FT.
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN
FILE : CPL0044.OUT
DATE : 3\25\94



Depth Increment : .082025 m

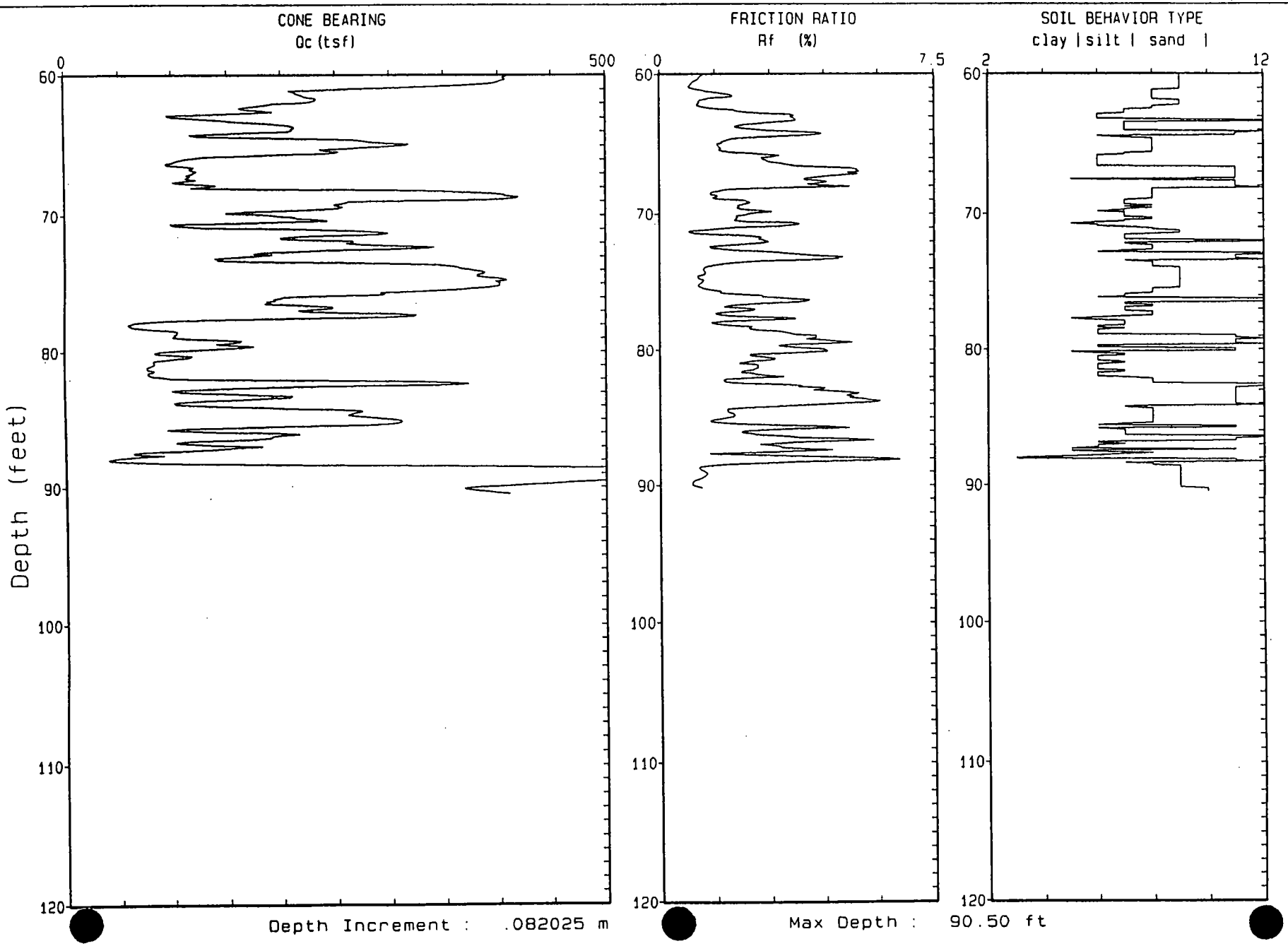
Max Depth : 90.50 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.59 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0044.OUT
DATE : 3\25\94

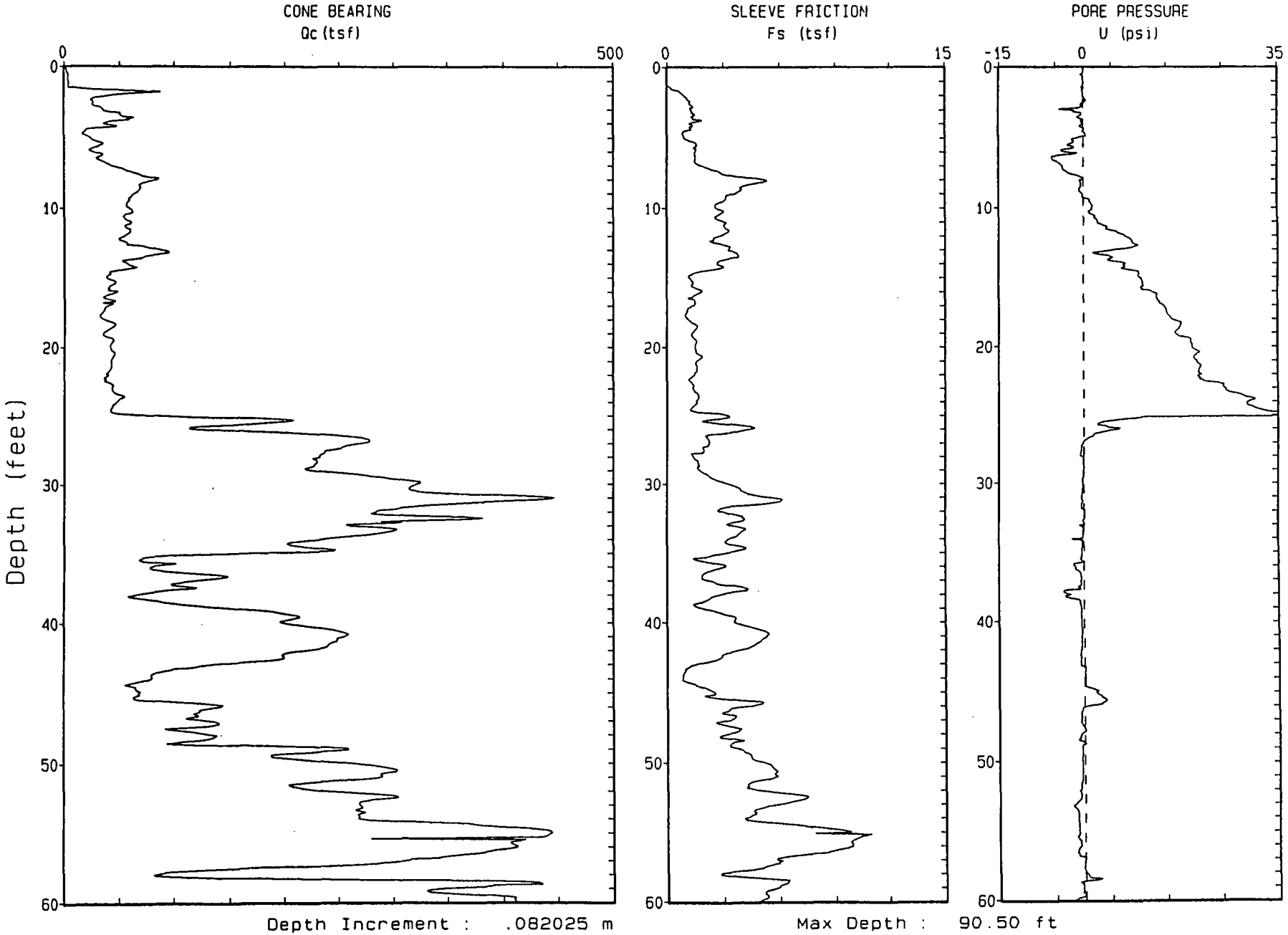


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.59 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0044.OUT
DATE : 3\25\94

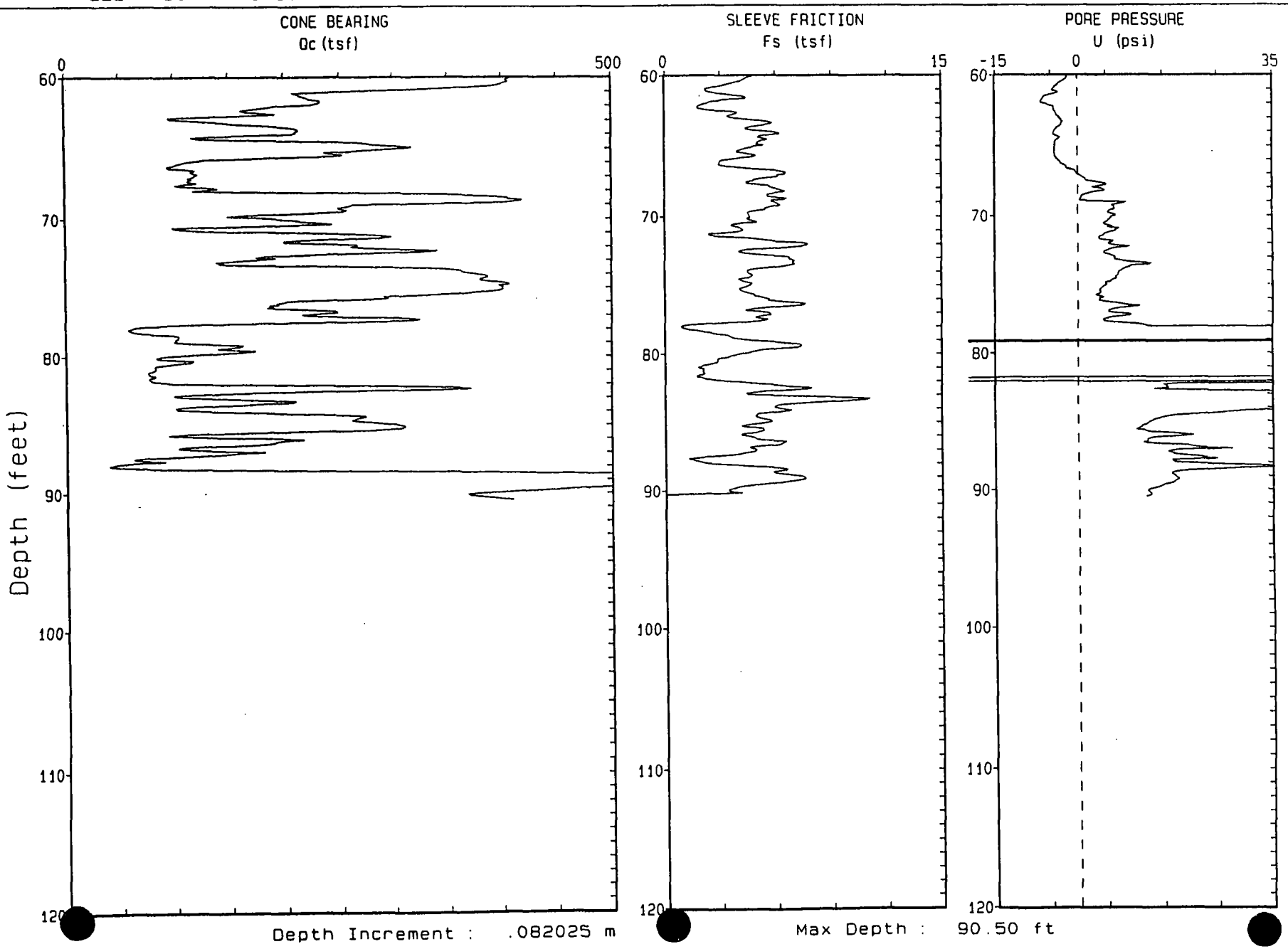


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.59 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0044.OUT
DATE : 3\25\94

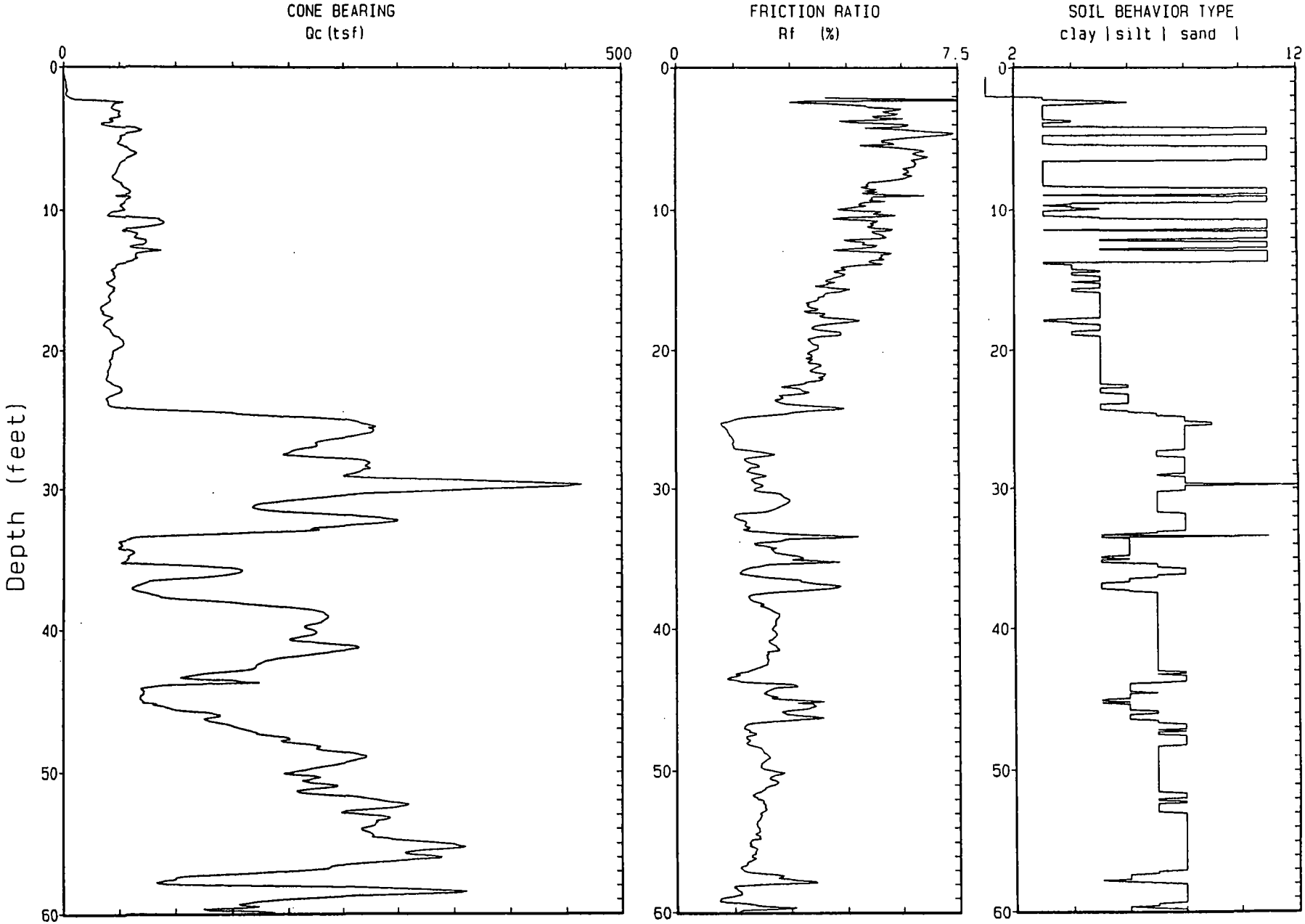


DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.09 FT.

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0045.OUT
DATE : 3\25\94



Depth Increment : .082025 m

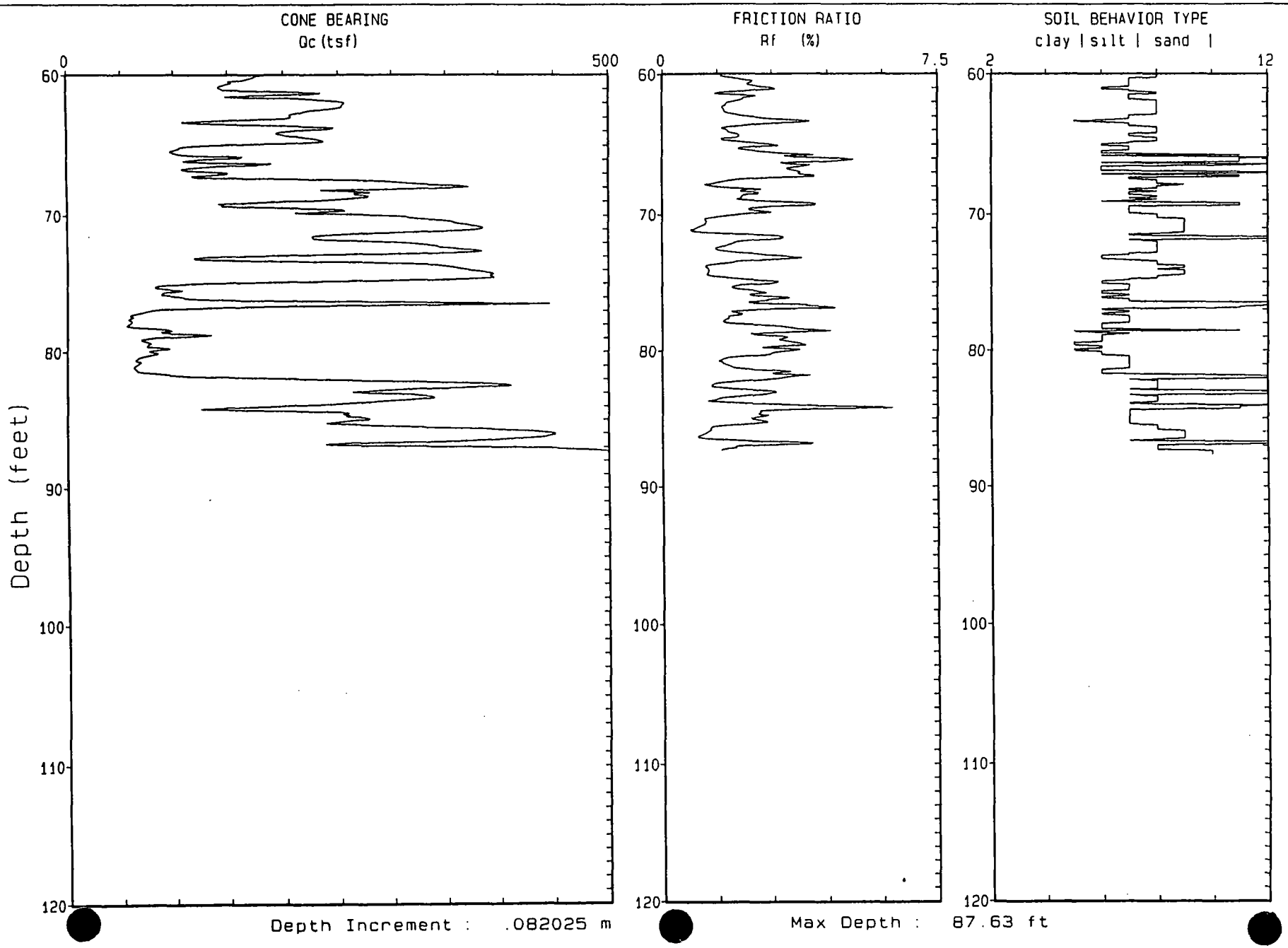
Max Depth : 87.63 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.09 FT.

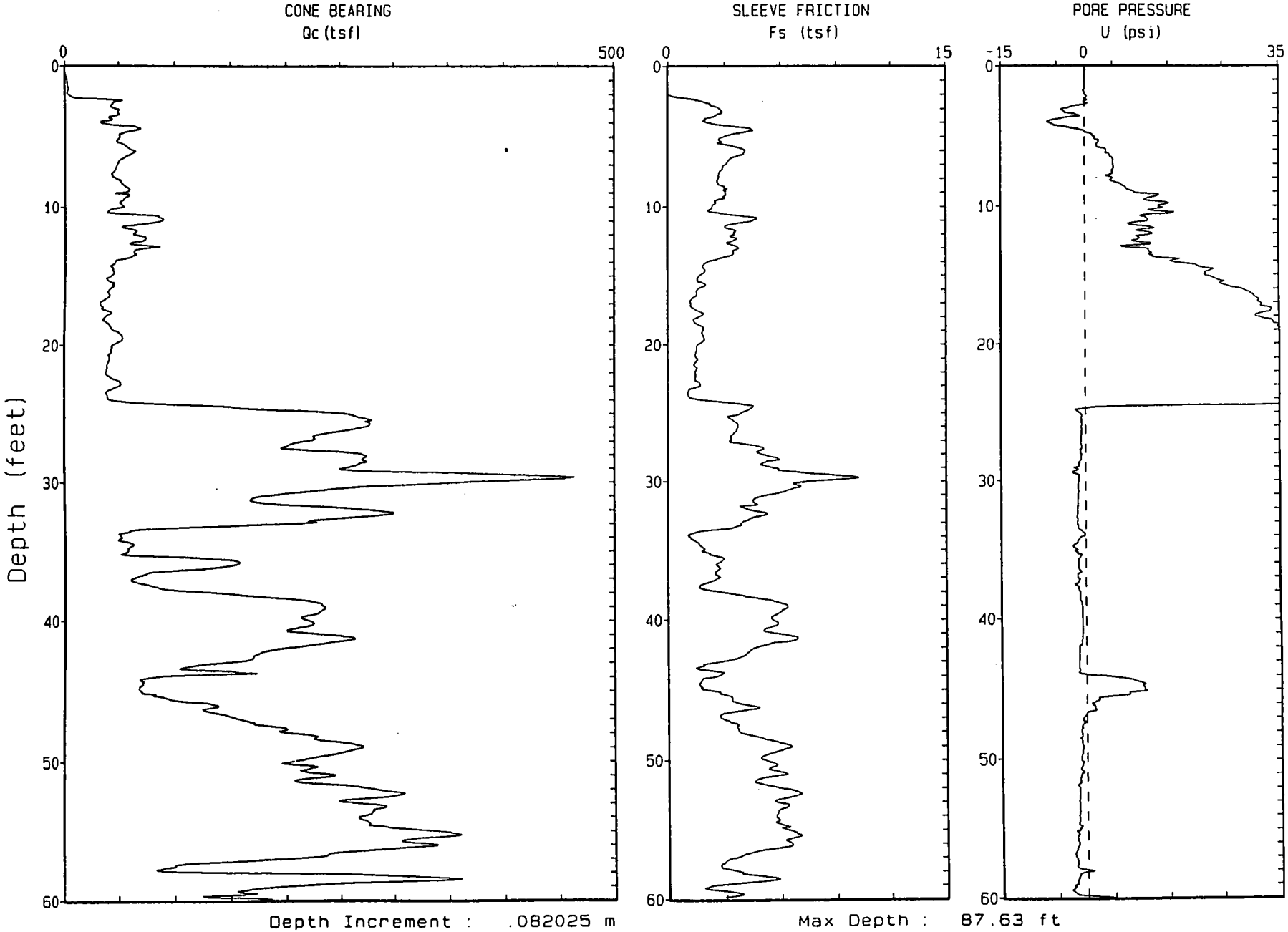
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0045.OUT
DATE : 3\25\94



DAMES & MOORE

PROJECT : MW-20 AREA
CONTRACTOR : GREGG IN SITU
FILE : CPL0045.OUT
ELEVATION : 41.09 FT.
GEOLOGIST : CRAIG MAGNUSEN
DATE : 3\25\94



Depth Increment : .082025 m

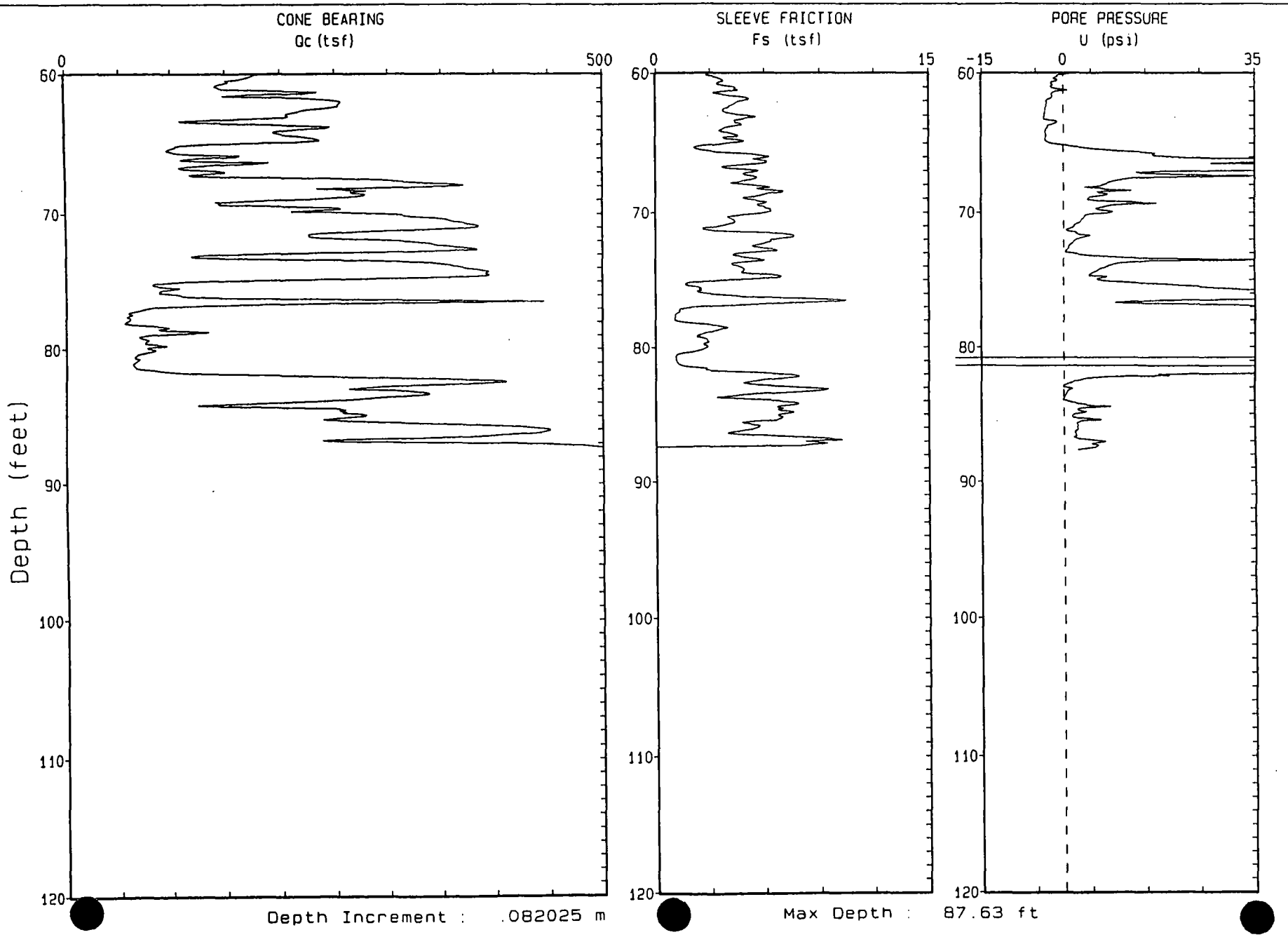
Max Depth : 87.63 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.09 FT.

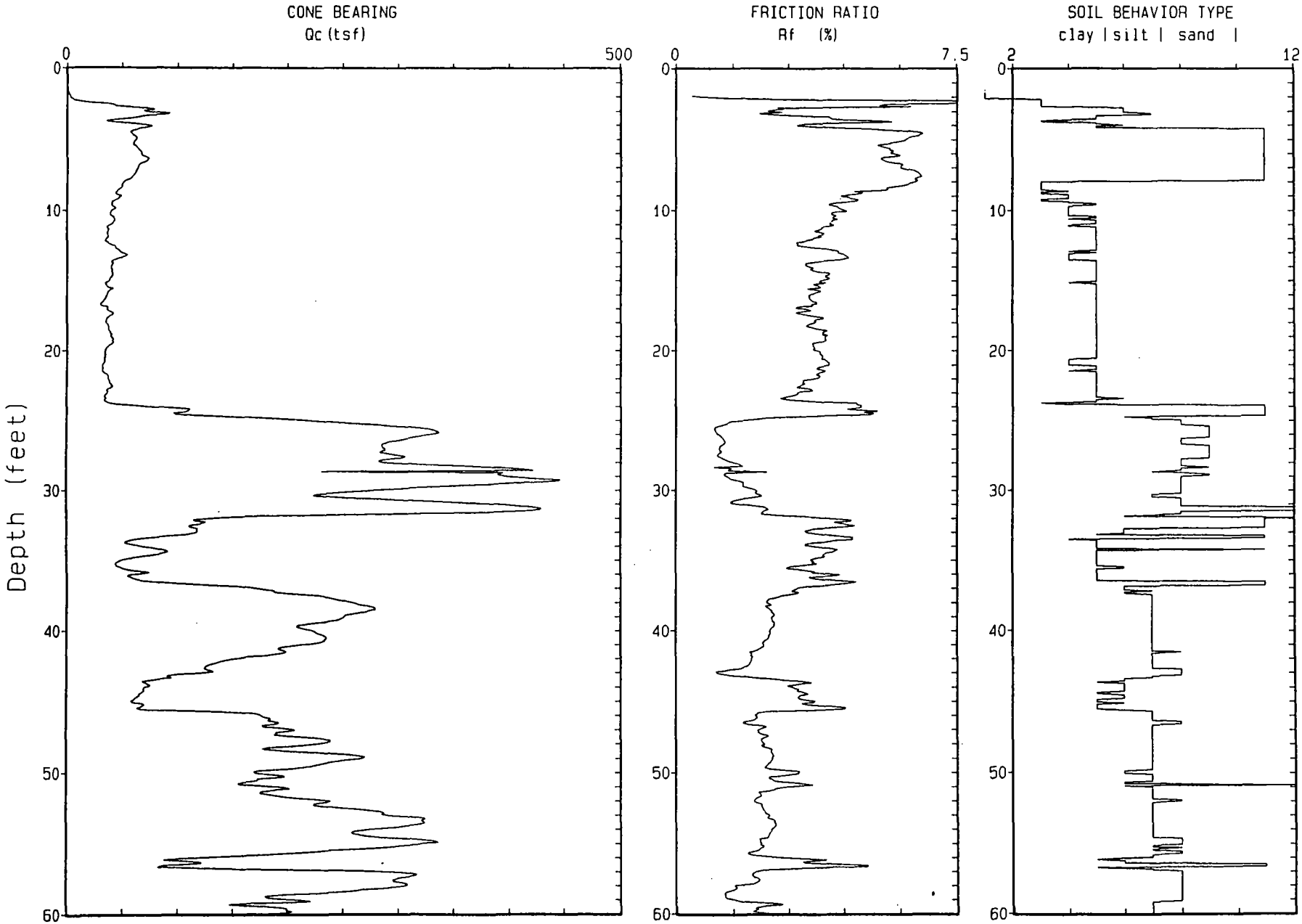
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0045.OUT
DATE : 3\25\94



DAMES & MOORE

PROJECT : MW-20 AREA
CONTRACTOR : GREGG IN SITU
FILE : CPL0046.OUT
ELEVATION : 40.95
GEOLOGIST : CRAIG MAGNUSEN
DATE : 03/28/94



Depth Increment : .082025 m

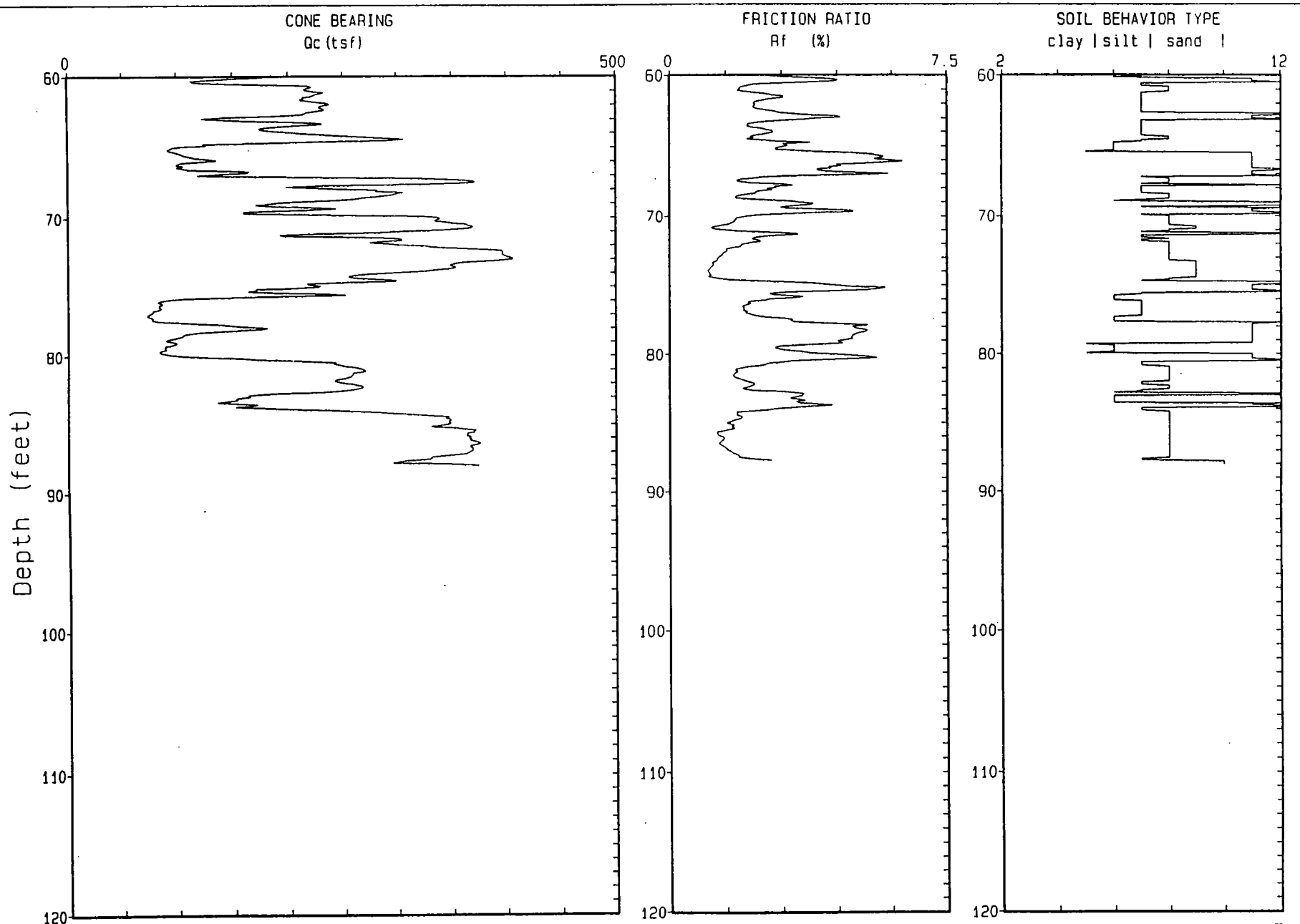
Max Depth : 88.04 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 40.95

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0046.OUT
DATE : 03/28/94



Depth Increment : .082025 m

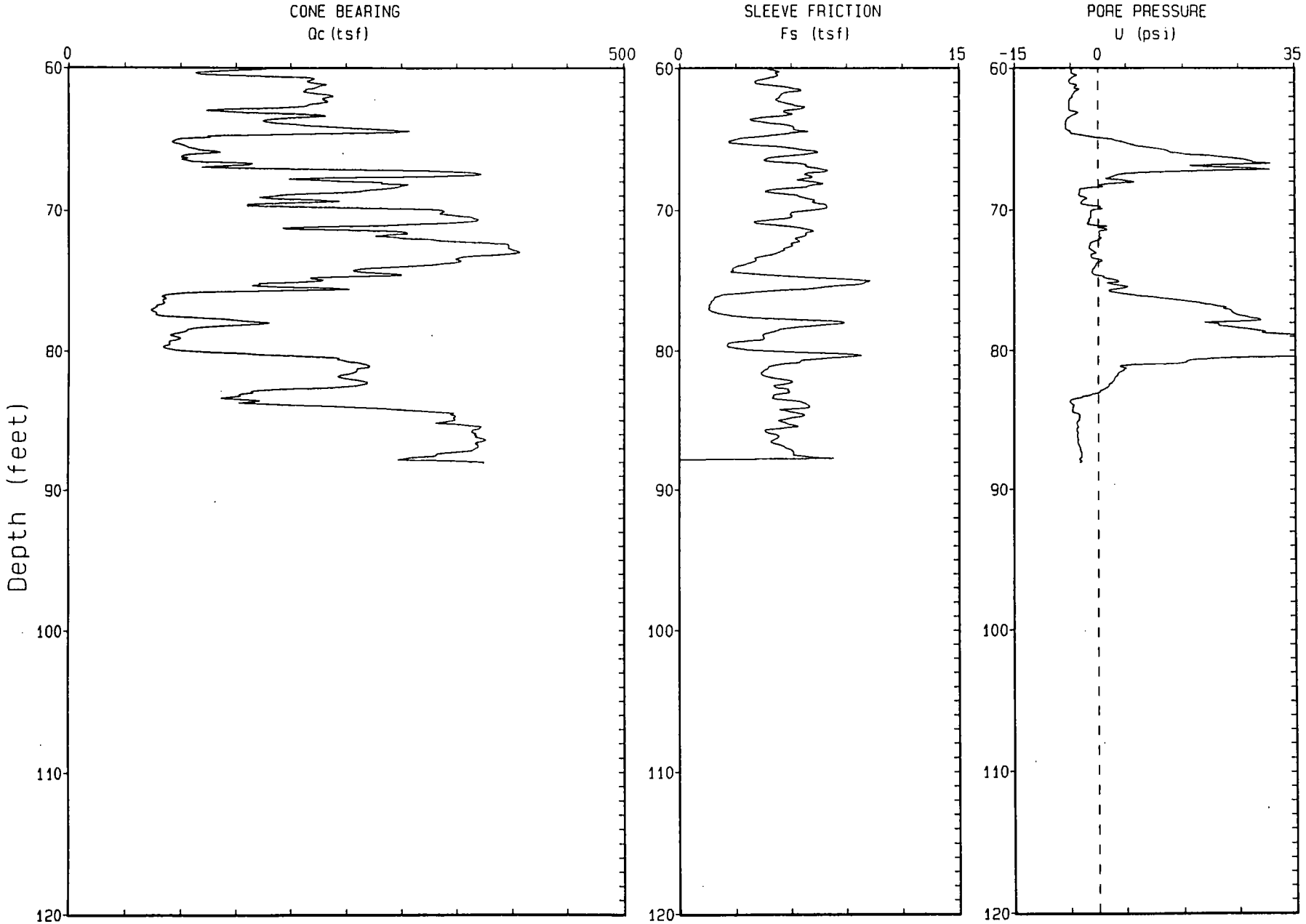
Max Depth : 88.04 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 40.95

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0046.OUT
DATE : 03/28/94

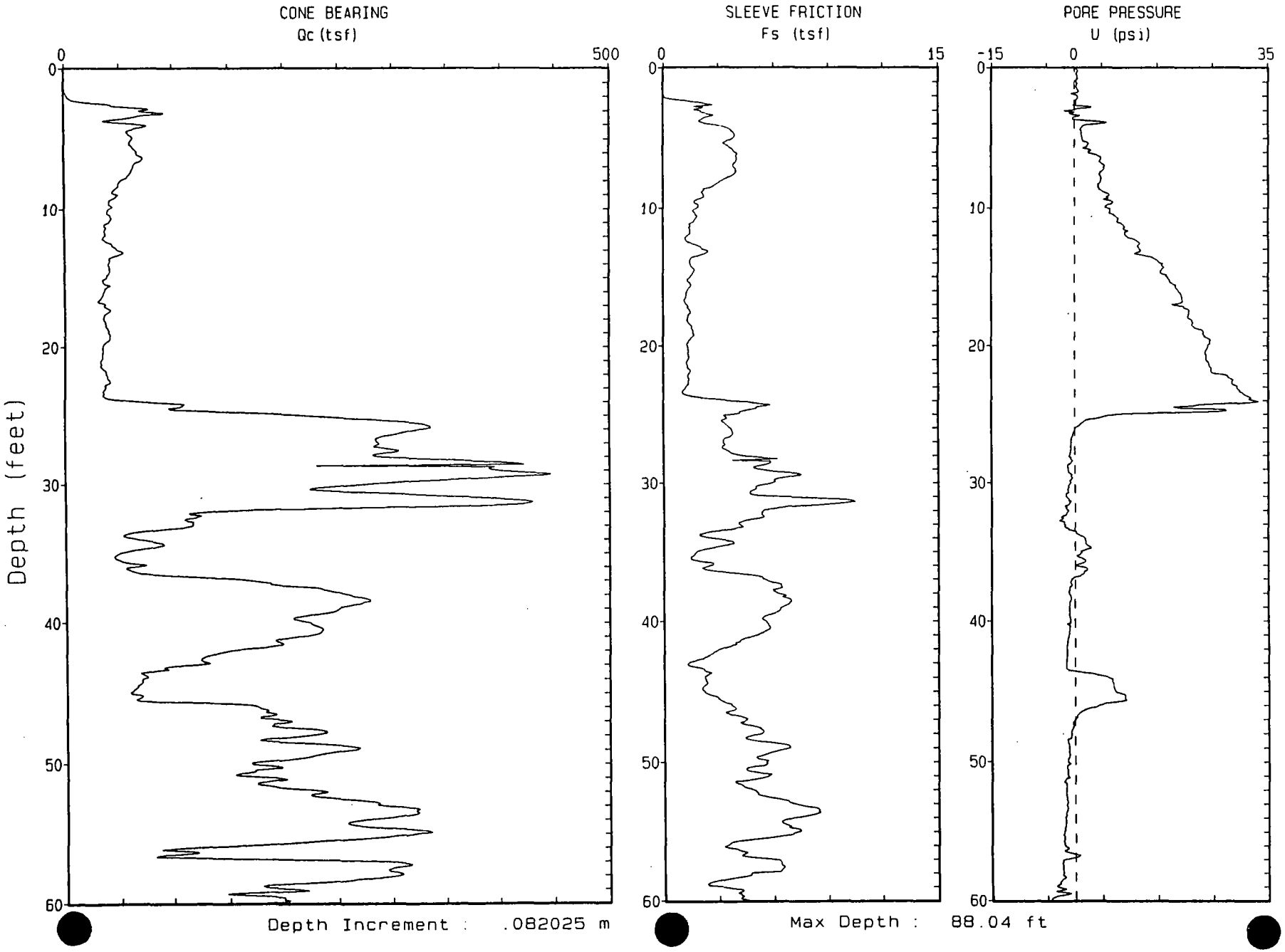


Depth Increment : .082025 m

Max Depth : 88.04 ft

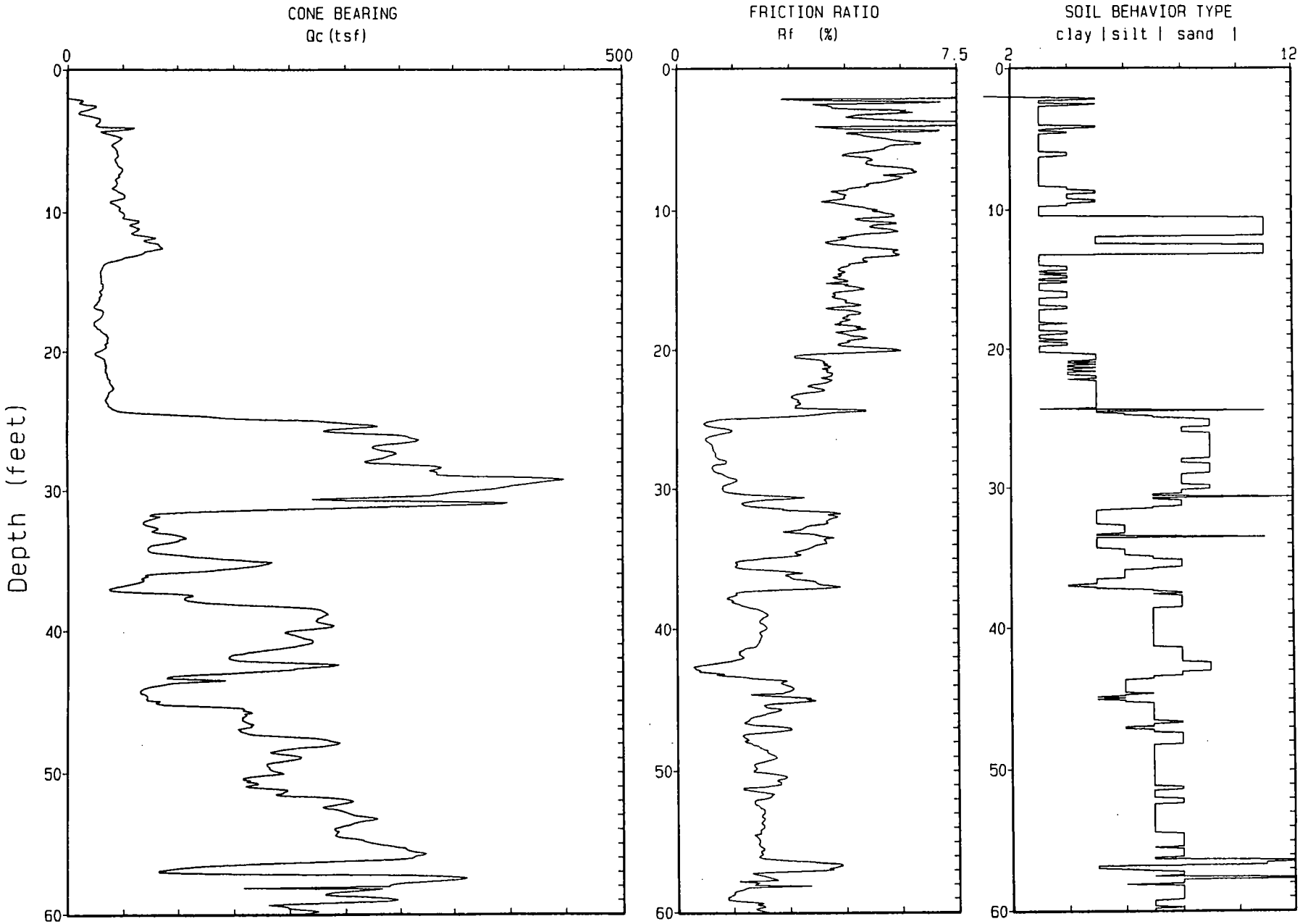
DAMES & MOORE

PROJECT :	MW-20 AREA	CONTRACTOR :	GREGG IN SITU	FILE :	CPL0046.OUT
ELEVATION :	40.95	GEOLOGIST :	CRAIG MAGNUSEN	DATE :	03/28/94



DAMES & MOORE

PROJECT :	MW-20 AREA	CONTRACTOR :	GREGG IN SITU	FILE :	CPL0047.OUT
ELEVATION :	41.10	GEOLOGIST :	CRAIG MAGNUSEN	DATE :	03/28/94



Depth Increment : .082025 m

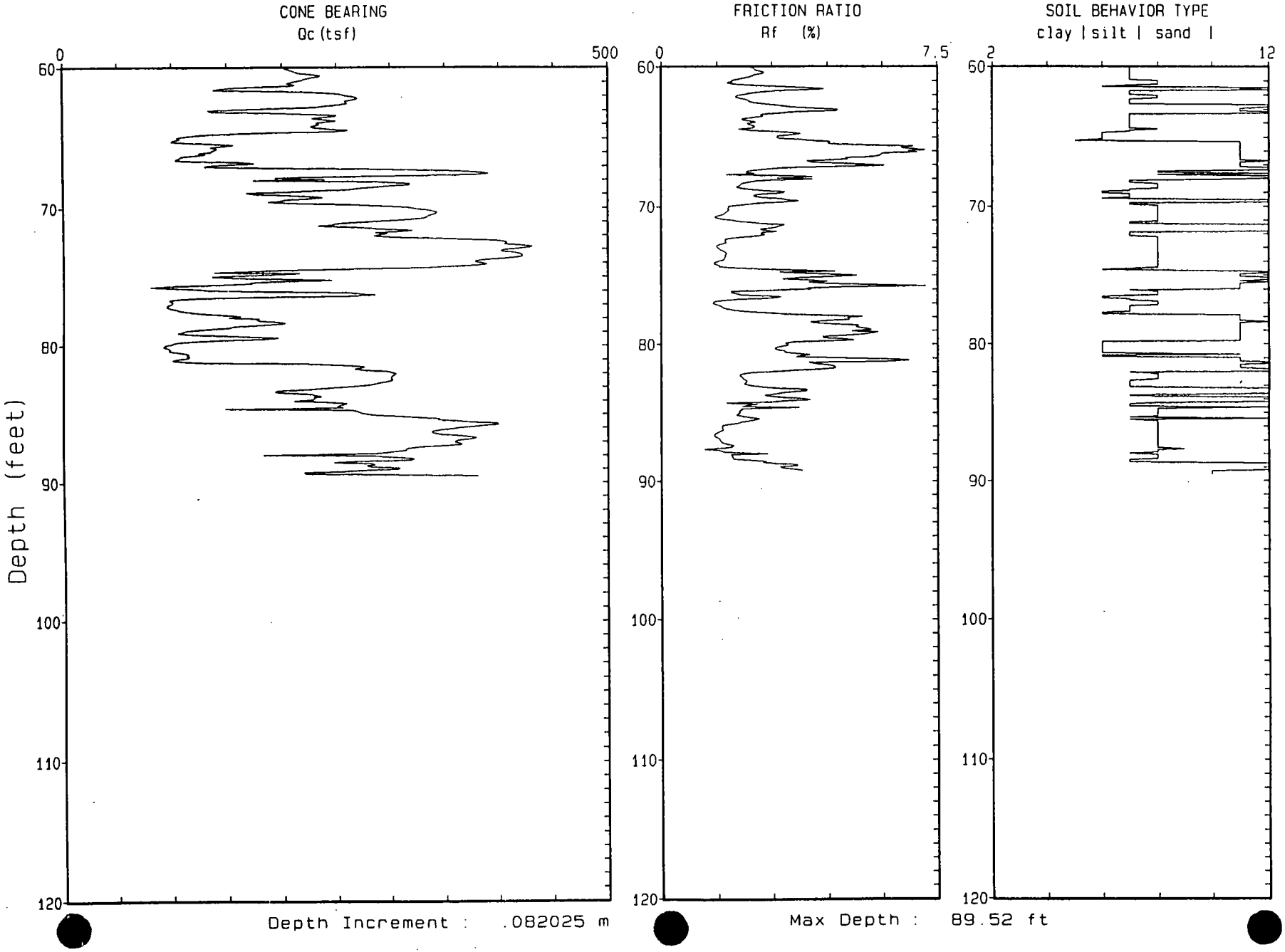
Max Depth : 89.52 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.10

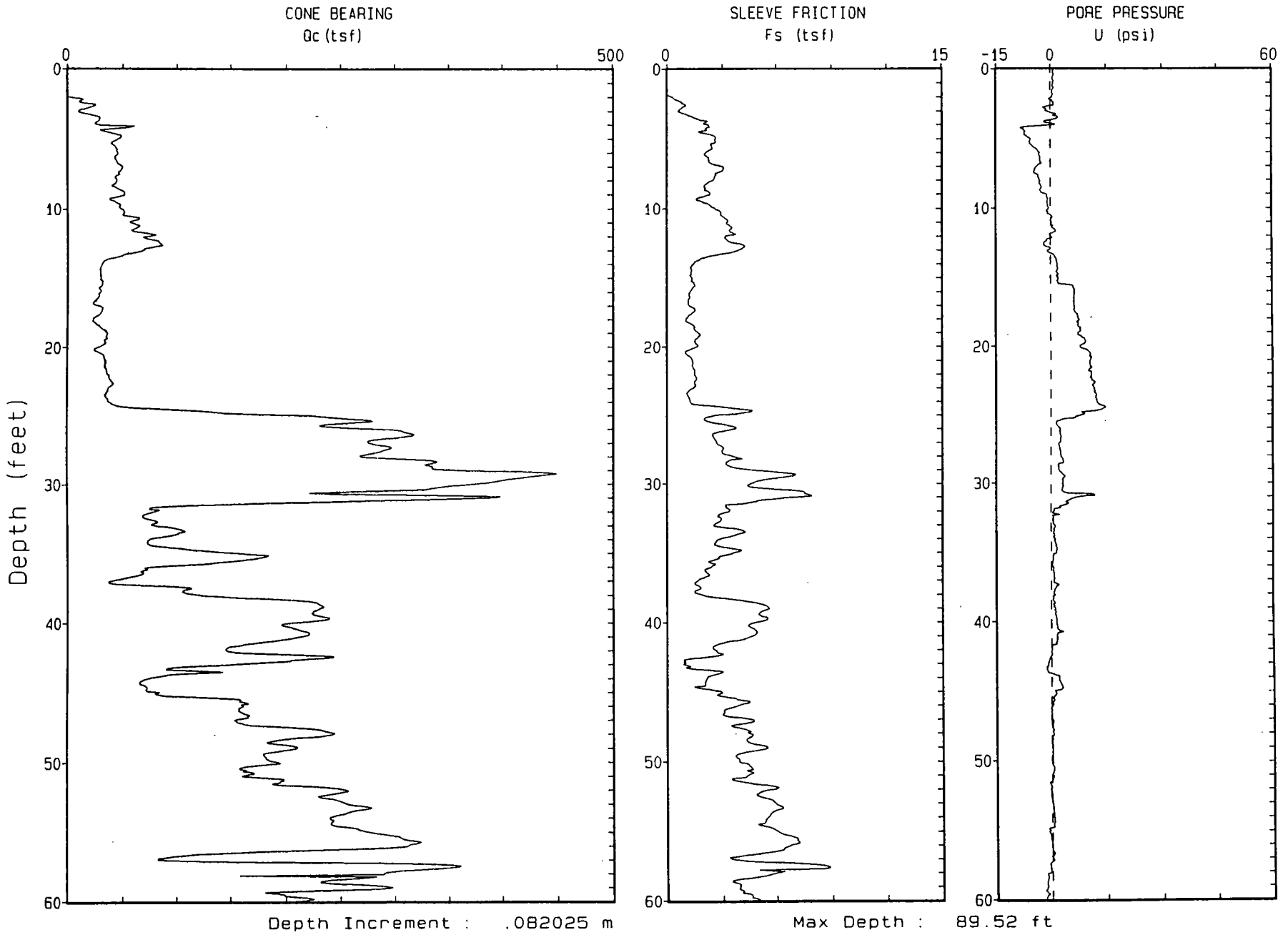
CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

FILE : CPL0047.OUT
DATE : 03/28/94



DAMES & MOORE

PROJECT : MW-20 AREA
CONTRACTOR : GREGG IN SITU
FILE : CPL0047.OUT
ELEVATION : 41.10
GEOLOGIST : CRAIG MAGNUSEN
DATE : 03/28/94



Depth Increment : .082025 m

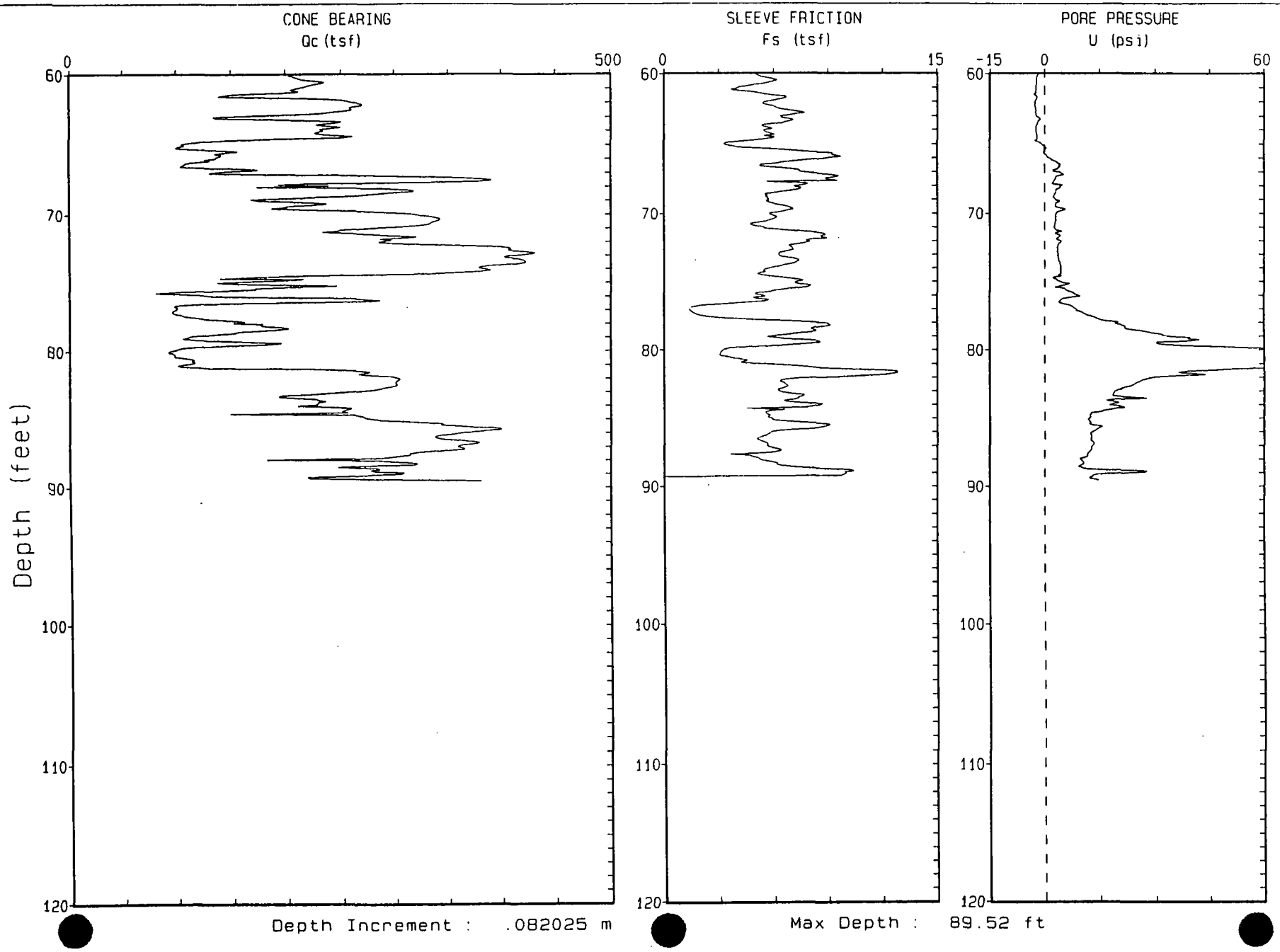
Max Depth : 89.52 ft

DAMES & MOORE

PROJECT : MW-20 AREA
ELEVATION : 41.10

CONTRACTOR : GREGG IN SITU
GEOLOGIST : CRAIG MAGNUSEN

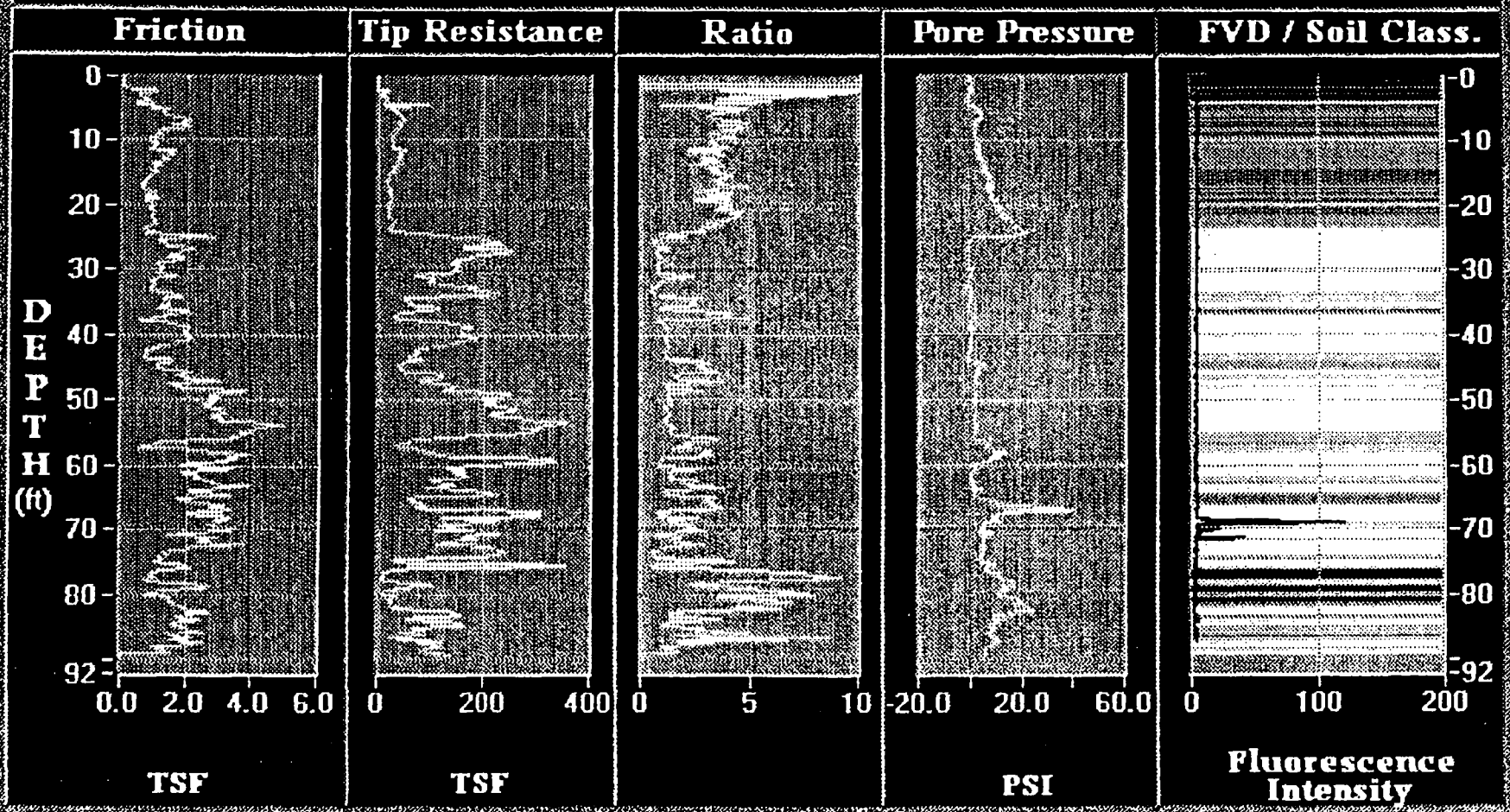
FILE : CPL0047.OUT
DATE : 03/28/94



Depth Increment : .082025 m

Max Depth : 89.52 ft

ROST LIF / CPT DATA



ROST ID: CPL0048

Emission λ: 400

Excitation λ: 290

Date: 1/23/95

Time: 10:32 A.M.

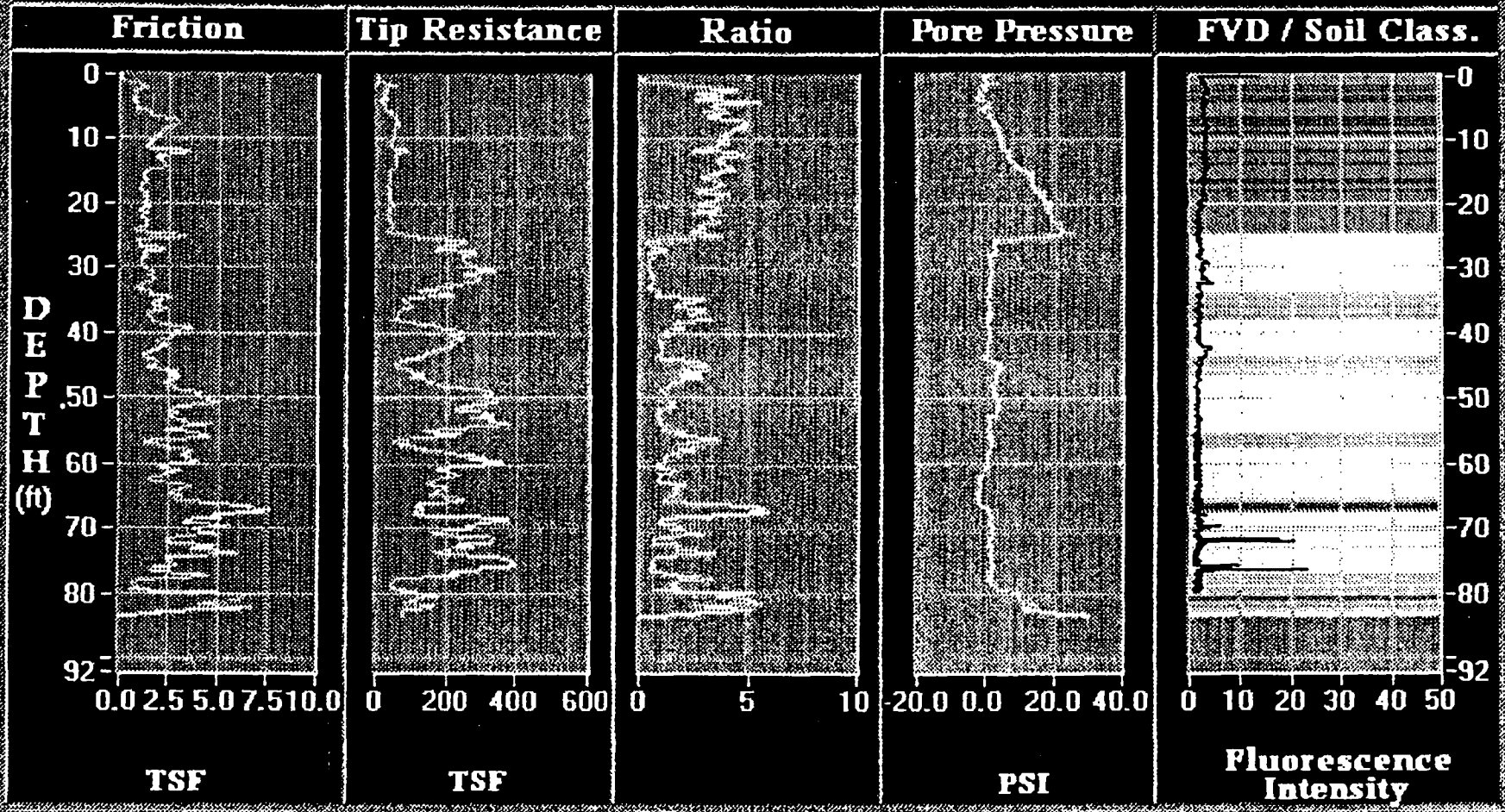
Max Fluorescence

@ Intensity: 119

@ Depth (ft): 69.06

Peat
Clay
Clayey Silt
Silt
Silty Sand
Sand
Unknown

ROST LIF / CPT DATA



ROST ID: CPL0049

Emission λ: 400

Excitation λ: 290

Date: 01/23/95

Time: 12:31 PM

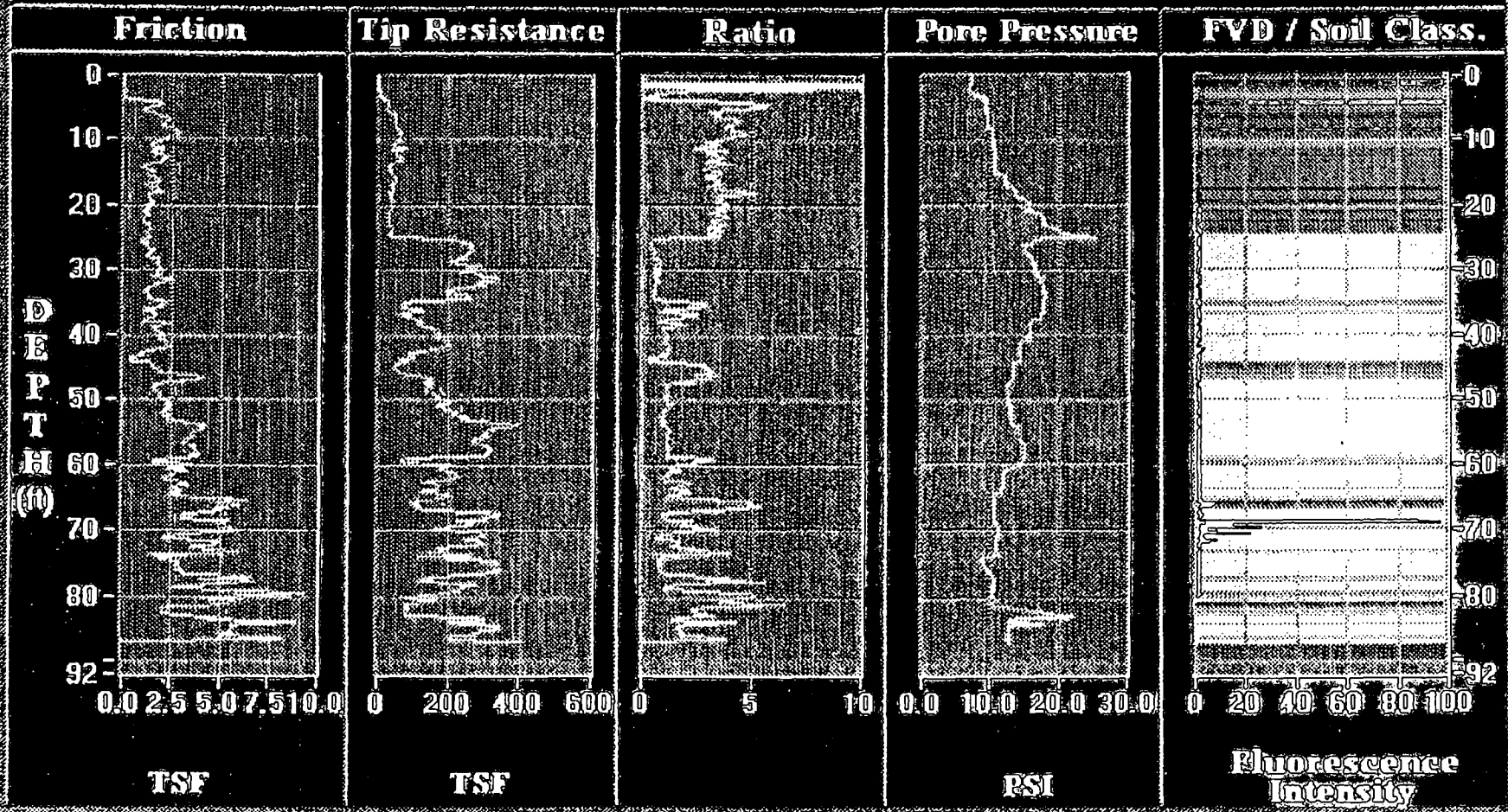
Max Fluorescence

@ Intensity: 23

@ Depth (ft): 76.51

Fast clay
Clay
Clayey silty
Silt
Sandy silt
Sand
Unknown

ROST LIF / CPT DATA



ROST ID: CPL0050

Emission λ: 400

Excitation λ: 290

Date: 01/23/95

Time: 03:02 PM

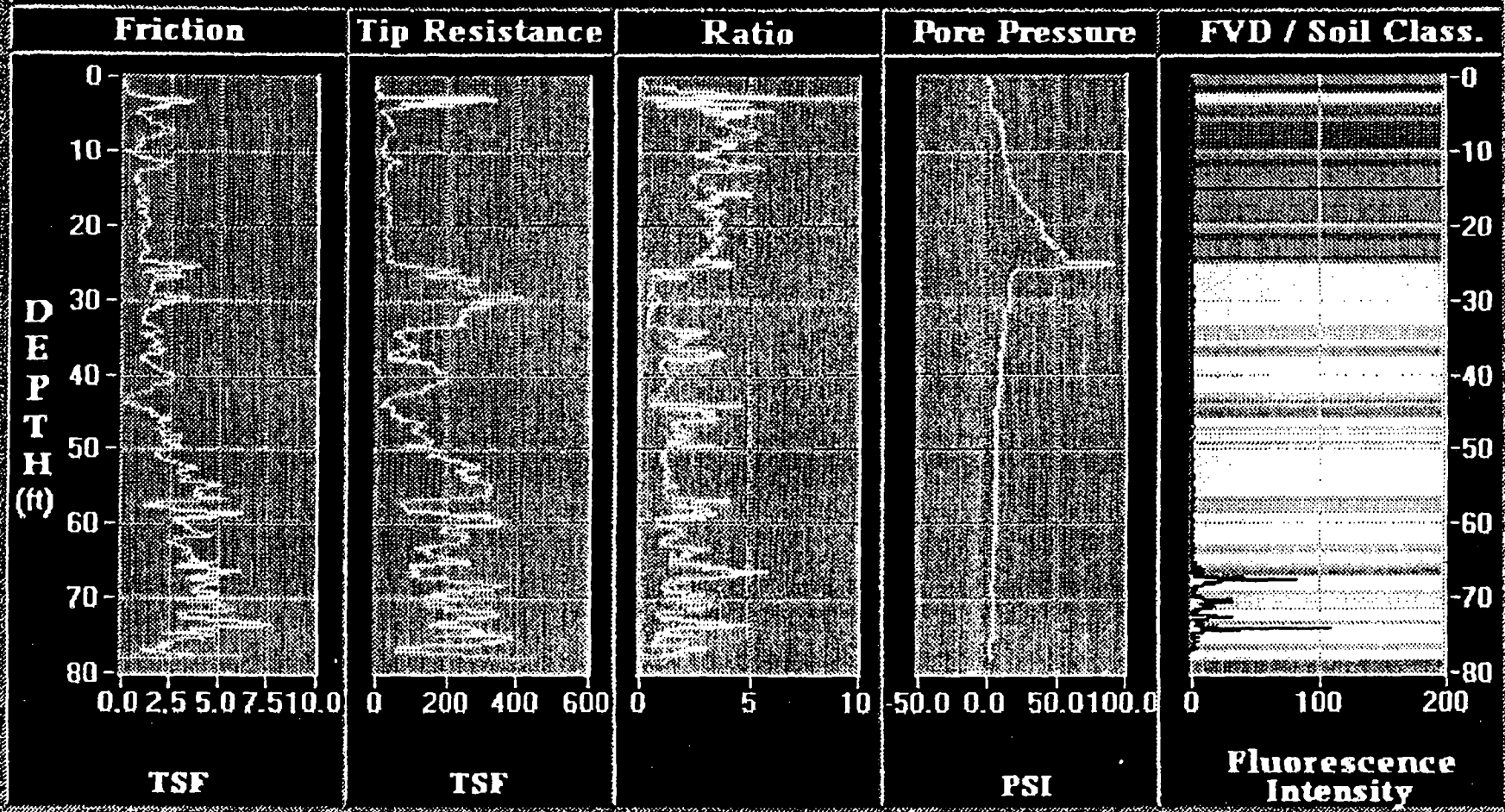
Max Fluorescence

@ Intensity: 97

@ Depth (ft): 68.83

Peat
Clay
Clayey & Silty
Silt
Silty Sand
Sand
Unknown

ROST LIF / CPT DATA



ROST ID: CPL0051

Emission λ: 320

Excitation λ: 266

Date: 01/23/95

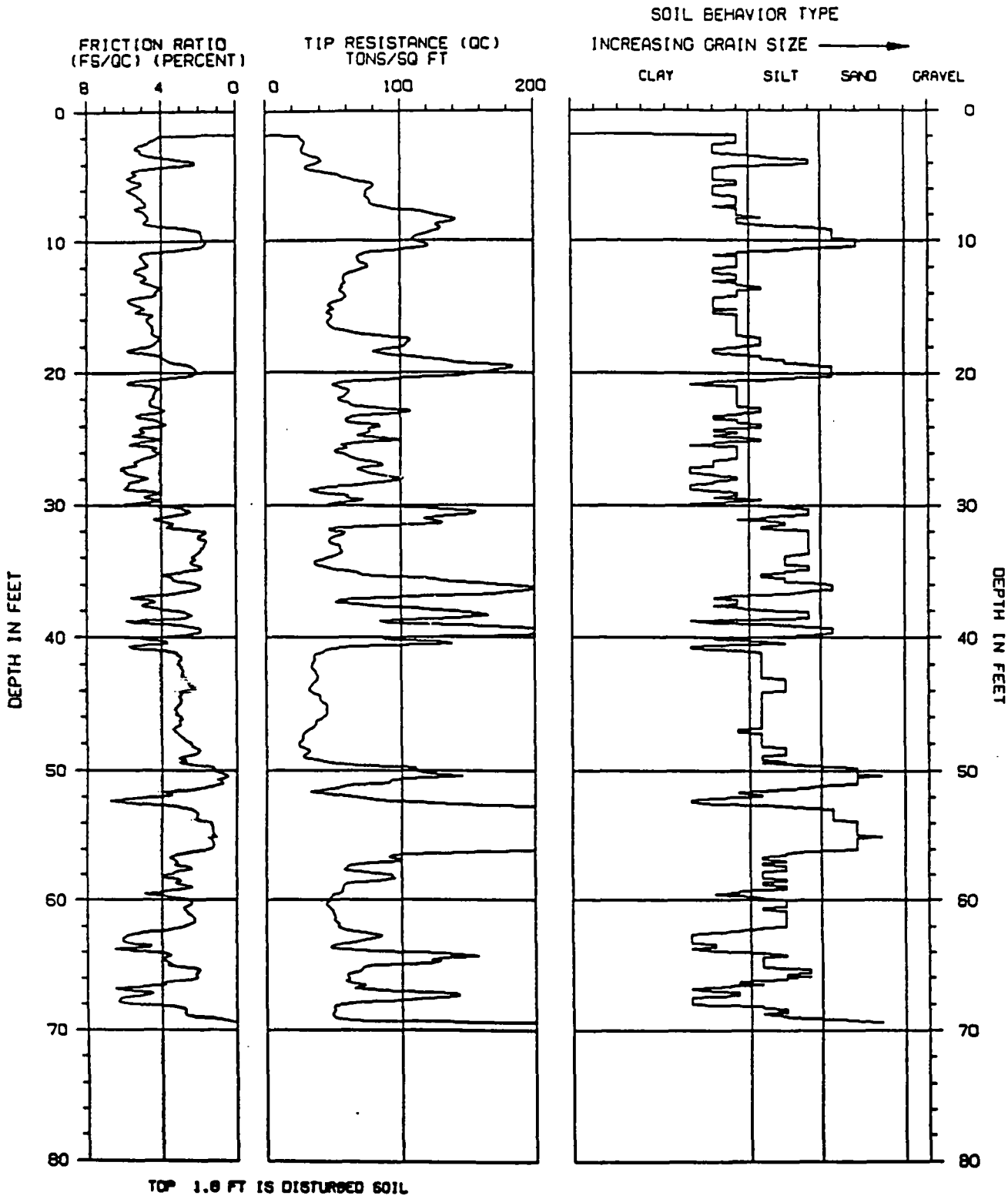
Time: 04:55 PM

Max Fluorescence

@ Intensity: 109

@ Depth (ft): 74.05

Peat
Clay
Clayey & Silty Silt
Silty Sand
Sand
Unknown



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 52.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-1

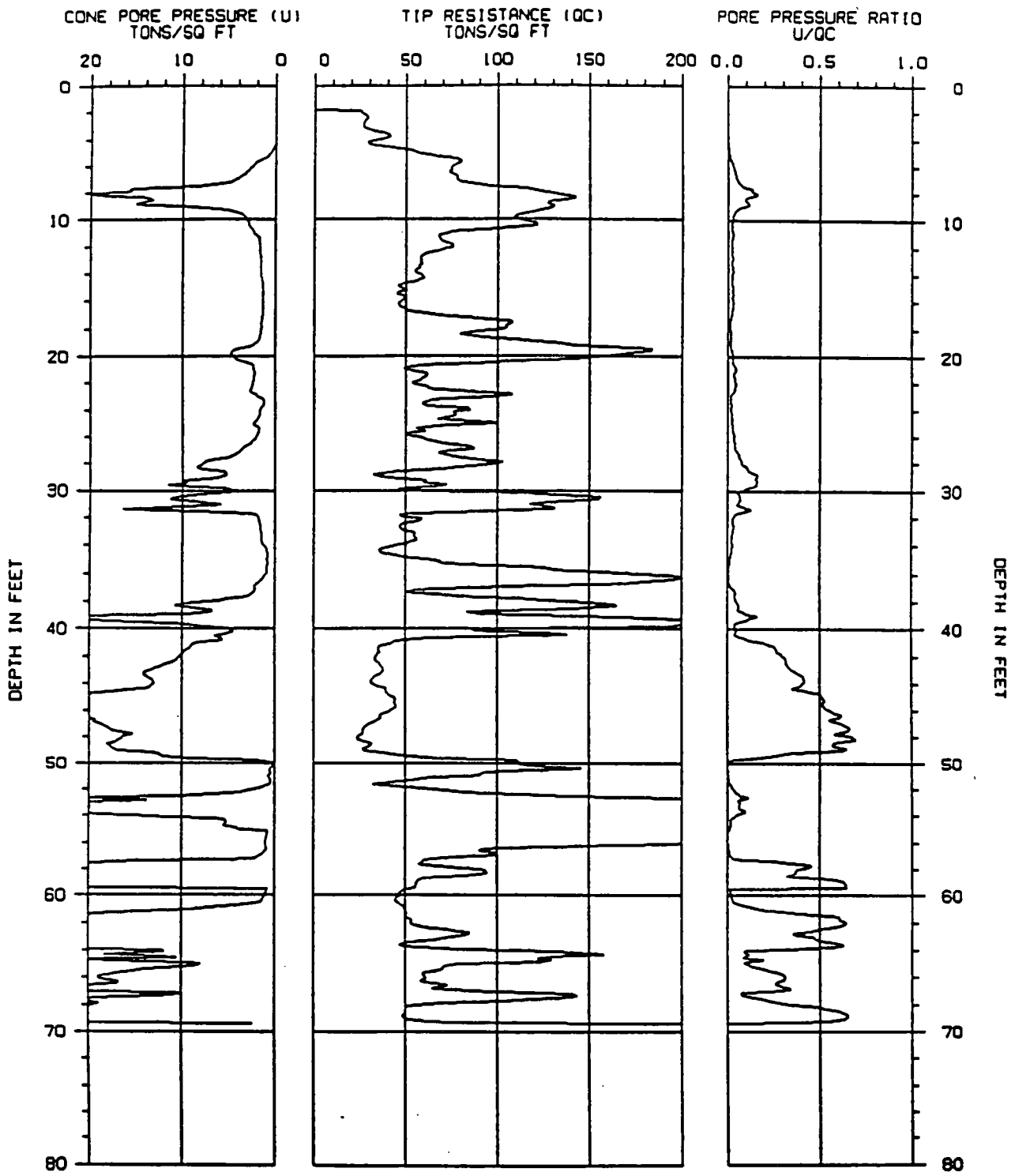
PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 05-11-1992

THE EARTH TECHNOLOGY CORPORATION



TOP 1.0 FT IS DISTURBED SOIL

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-1

PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 05-11-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-1
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 05-11-1992

PROJECT NO : 92-380-01109
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/EC

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	.0	.0	.00	.00	
1.0	.0	.0	.00	.00	
1.5	.0	.0	.00	.00	
2.0	25.7	50.3	4.19	.01	*SANDY CLAY to SILTY CLAY
2.5	28.9	53.8	4.87	.01	*SANDY CLAY to SILTY CLAY
3.0	26.7	47.6	5.15	.00	*SANDY CLAY to SILTY CLAY
3.5	36.9	63.3	4.15	.03	*CLAYEY SAND to SANDY CLAY
4.0	36.0	59.7	2.18	.02	SILTY SAND to SANDY SILT
4.5	33.5	53.8	5.51	.10	*SANDY CLAY to SILTY CLAY
5.0	55.5	86.7	5.69	.54	*SANDY CLAY to SILTY CLAY
5.5	77.3	117.4	5.08	1.45	*SANDY CLAY to SILTY CLAY
6.0	75.7	112.2	5.86	2.45	*SANDY CLAY to SILTY CLAY
6.5	73.6	106.5	5.28	3.17	*SANDY CLAY to SILTY CLAY
7.0	77.6	109.8	4.87	4.19	*SANDY CLAY to SILTY CLAY
7.5	95.8	132.7	5.32	8.27	*SANDY CLAY to SILTY CLAY
8.0	125.8	170.6	4.78	19.60	*SANDY CLAY to SILTY CLAY
8.5	136.9	182.1	4.99	13.15	*SANDY CLAY to SILTY CLAY
9.0	130.3	170.1	2.83	10.19	*SILTY SAND to CLAYEY SAND
9.5	115.5	148.0	1.87	3.91	SILTY SAND to SANDY SILT
10.0	110.9	139.7	1.69	2.99	SAND to SILTY SAND
10.5	116.1	143.8	2.10	2.76	SILTY SAND to SANDY SILT
11.0	71.5	87.1	5.08	2.24	*SANDY CLAY to SILTY CLAY
11.5	68.8	82.5	4.93	1.72	*SANDY CLAY to SILTY CLAY
12.0	75.5	89.1	4.93	1.68	*SANDY CLAY to SILTY CLAY
12.5	61.8	71.8	5.25	1.61	*SANDY CLAY to SILTY CLAY
13.0	58.4	66.9	5.02	1.55	*SANDY CLAY to SILTY CLAY
13.5	57.6	65.1	4.16	1.55	*CLAYEY SAND to SANDY CLAY
14.0	57.5	64.1	4.31	1.50	*SANDY CLAY to SILTY CLAY
14.5	56.3	61.8	5.80	1.43	*SANDY CLAY to SILTY CLAY
15.0	47.0	50.9	5.16	1.33	*SANDY CLAY to SILTY CLAY
15.5	45.7	48.9	5.05	1.31	*SANDY CLAY to SILTY CLAY
16.0	47.6	50.2	4.76	1.31	*SANDY CLAY to SILTY CLAY
16.5	48.7	50.8	4.46	1.32	*SANDY CLAY to SILTY CLAY
17.0	67.1	69.1	4.46	1.38	*SANDY CLAY to SILTY CLAY
17.5	107.5	109.3	4.13	1.50	*CLAYEY SAND to SANDY CLAY
18.0	103.5	103.9	4.58	1.55	*SANDY CLAY to SILTY CLAY
18.5	83.9	83.3	5.17	1.62	*SANDY CLAY to SILTY CLAY
19.0	128.7	126.2	3.79	2.01	*CLAYEY SAND to SANDY CLAY
19.5	183.8	178.2	2.45	4.15	*SILTY SAND to CLAYEY SAND
20.0	158.4	151.9	2.13	4.60	SILTY SAND to SANDY SILT

TOP 1.8 FT IS DISTURBED SOIL
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-1

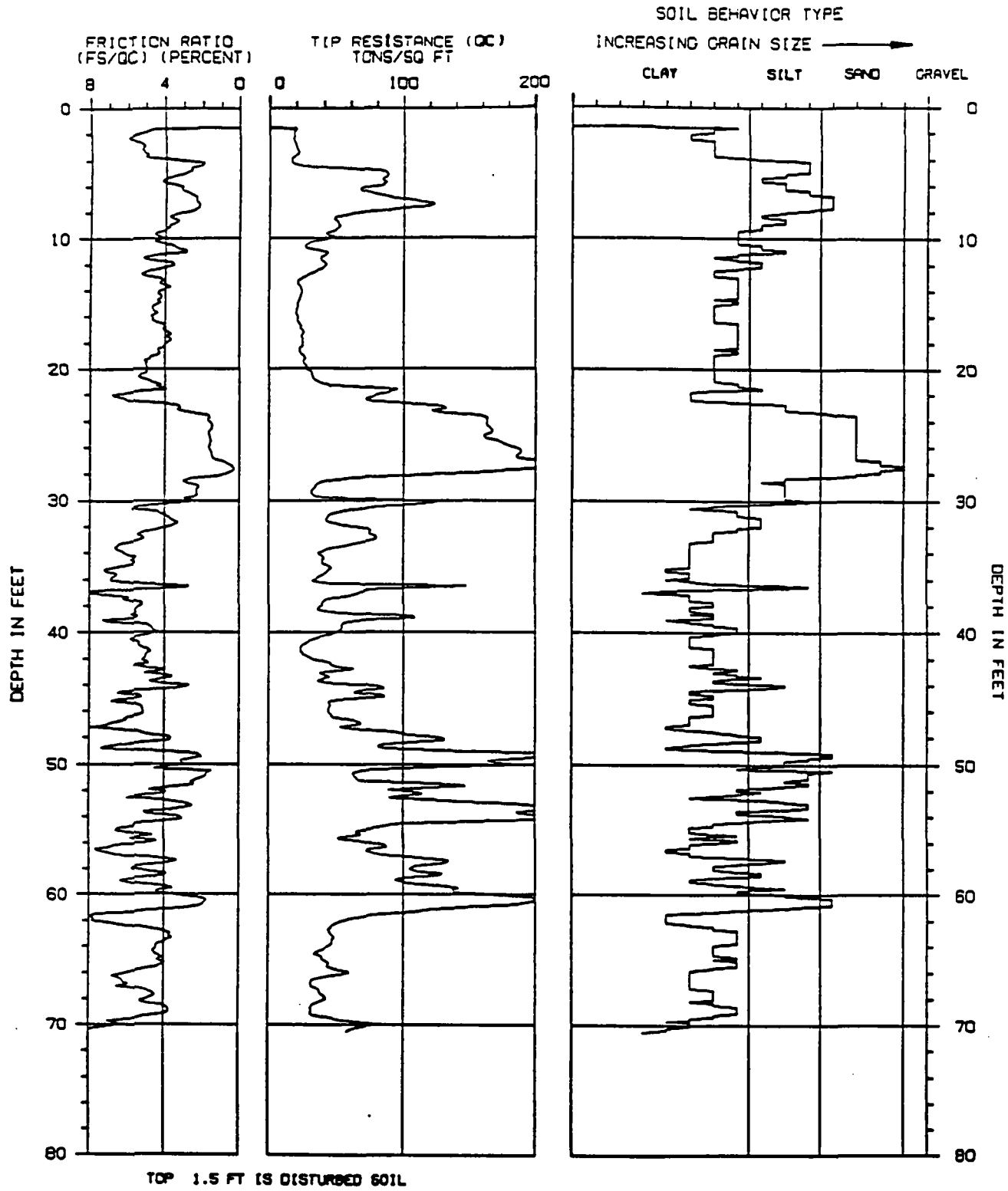
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	88.1	83.5	4.16	2.72	*CLAYEY SAND to SANDY CLAY
21.0	51.8	48.6	4.62	2.30	*SANDY CLAY to SILTY CLAY
21.5	61.3	56.9	4.31	2.29	*SANDY CLAY to SILTY CLAY
22.0	53.6	49.2	4.54	2.39	*SANDY CLAY to SILTY CLAY
22.5	66.8	60.7	4.57	2.64	*SANDY CLAY to SILTY CLAY
23.0	98.4	88.4	4.38	1.87	*SANDY CLAY to SILTY CLAY
23.5	59.3	52.7	4.54	1.24	*SANDY CLAY to SILTY CLAY
24.0	84.9	74.7	4.18	1.61	*CLAYEY SAND to SANDY CLAY
24.5	76.0	66.2	4.93	1.78	*SANDY CLAY to SILTY CLAY
25.0	99.6	85.9	4.07	2.36	*CLAYEY SAND to SANDY CLAY
25.5	58.7	50.1	4.84	1.72	*SANDY CLAY to SILTY CLAY
26.0	54.7	46.2	4.12	2.05	*SANDY CLAY to SILTY CLAY
26.5	69.8	58.4	5.11	2.70	*SANDY CLAY to SILTY CLAY
27.0	81.7	67.6	5.49	3.71	*SANDY CLAY to SILTY CLAY
27.5	76.3	62.6	5.82	4.87	*SANDY CLAY to SILTY CLAY
28.0	100.7	81.8	4.81	7.73	*SANDY CLAY to SILTY CLAY
28.5	59.0	47.5	5.76	6.62	*SANDY CLAY to SILTY CLAY
29.0	39.9	31.8	4.06	6.18	CLAYEY SILT to SILTY CLAY
29.5	64.4	50.9	4.70	10.02	*SANDY CLAY to SILTY CLAY
30.0	58.3	45.6	4.84	4.59	*SANDY CLAY to SILTY CLAY
30.5	156.1	121.0	2.41	10.84	SILTY SAND to SANDY SILT
31.0	117.0	89.9	4.31	5.93	*CLAYEY SAND to SANDY CLAY
31.5	108.1	82.3	3.39	11.99	*CLAYEY SAND to SANDY CLAY
32.0	54.5	41.1	1.71	1.76	SILTY SAND to SANDY SILT
32.5	47.4	35.4	2.04	1.59	SILTY SAND to SANDY SILT
33.0	52.5	38.9	1.71	1.51	SILTY SAND to SANDY SILT
33.5	56.4	41.4	1.97	1.45	SILTY SAND to SANDY SILT
34.0	44.7	32.5	2.40	1.23	SANDY SILT to CLAYEY SILT
34.5	36.7	26.5	2.26	.82	SANDY SILT to CLAYEY SILT
35.0	61.3	43.9	2.76	.84	SANDY SILT to CLAYEY SILT
35.5	114.6	81.3	3.43	.88	*CLAYEY SAND to SANDY CLAY
36.0	176.4	124.0	2.08	1.01	SILTY SAND to SANDY SILT
36.5	188.8	131.7	2.51	1.56	SILTY SAND to SANDY SILT
37.0	88.6	61.2	5.64	2.17	*SANDY CLAY to SILTY CLAY
37.5	66.7	45.8	4.83	2.70	*SANDY CLAY to SILTY CLAY
38.0	138.2	93.9	3.28	7.17	*CLAYEY SAND to SANDY CLAY
38.5	141.2	95.2	2.77	8.07	SILTY SAND to SANDY SILT
39.0	114.1	76.3	3.94	15.82	*CLAYEY SAND to SANDY CLAY
39.5	263.6	174.8	1.93	15.29	SILTY SAND to SANDY SILT
40.0	108.4	71.3	4.14	5.00	*CLAYEY SAND to SANDY CLAY
40.5	121.3	79.1	4.34	6.55	*SANDY CLAY to SILTY CLAY
41.0	43.4	28.1	3.85	8.17	CLAYEY SILT to SILTY CLAY
41.5	35.3	22.6	2.97	9.39	SANDY SILT to CLAYEY SILT
42.0	33.9	21.6	3.04	10.28	SANDY SILT to CLAYEY SILT
42.5	35.7	22.5	2.88	11.39	SANDY SILT to CLAYEY SILT
43.0	37.9	23.7	2.77	13.34	SANDY SILT to CLAYEY SILT
43.5	33.5	20.8	2.48	13.79	SANDY SILT to CLAYEY SILT
44.0	31.8	19.6	2.45	12.94	SANDY SILT to CLAYEY SILT
44.5	39.7	24.3	3.03	15.82	SANDY SILT to CLAYEY SILT
45.0	43.5	26.4	2.99	22.42	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-1

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	44.6	26.9	3.24	22.88	SANDY SILT to CLAYEY SILT
46.0	41.9	25.0	2.96	23.43	SANDY SILT to CLAYEY SILT
46.5	36.7	21.8	2.99	22.21	SANDY SILT to CLAYEY SILT
47.0	30.4	17.9	3.35	18.84	CLAYEY SILT to SILTY CLAY
47.5	26.7	15.5	2.96	17.31	SANDY SILT to CLAYEY SILT
48.0	24.1	13.9	2.43	16.36	SANDY SILT to CLAYEY SILT
48.5	31.7	18.2	1.99	18.09	SANDY SILT to CLAYEY SILT
49.0	27.2	15.5	2.99	16.88	SANDY SILT to CLAYEY SILT
49.5	53.1	30.0	2.86	12.09	SANDY SILT to CLAYEY SILT
50.0	111.7	62.6	1.22	.21	SAND to SILTY SAND
50.5	135.9	75.6	.50	.57	SAND to SILTY SAND
51.0	83.1	45.9	.76	.75	SAND to SILTY SAND
51.5	37.9	20.8	2.81	.39	SANDY SILT to CLAYEY SILT
52.0	64.4	35.0	4.38	2.25	CLAYEY SILT to SILTY CLAY
52.5	139.0	75.3	5.14	10.32	*SANDY CLAY to SILTY CLAY
53.0	312.3	168.7	2.30	20.69	SILTY SAND to SANDY SILT
53.5	317.6	171.0	2.16	24.86	SILTY SAND to SANDY SILT
54.0	335.7	180.1	1.32	15.39	SAND to SILTY SAND
54.5	297.9	159.3	1.28	5.22	SAND to SILTY SAND
55.0	347.8	185.3	1.09	3.83	SAND to SILTY SAND
55.5	281.7	149.6	1.27	.88	SAND to SILTY SAND
56.0	222.4	117.7	1.43	.99	SAND to SILTY SAND
56.5	92.4	48.8	3.24	.94	SANDY SILT to CLAYEY SILT
57.0	89.5	47.1	3.15	1.64	SANDY SILT to CLAYEY SILT
57.5	58.8	30.8	2.41	19.65	SANDY SILT to CLAYEY SILT
58.0	90.6	47.4	3.60	34.79	SANDY SILT to CLAYEY SILT
58.5	82.4	42.9	3.02	26.64	SANDY SILT to CLAYEY SILT
59.0	56.4	29.3	2.40	35.77	SANDY SILT to CLAYEY SILT
59.5	51.5	26.7	4.98	.81	CLAYEY SILT to SILTY CLAY
60.0	46.5	24.0	2.54	1.08	SANDY SILT to CLAYEY SILT
60.5	45.5	23.4	2.73	1.55	SANDY SILT to CLAYEY SILT
61.0	50.0	25.6	2.56	9.03	SANDY SILT to CLAYEY SILT
61.5	50.2	25.6	2.25	27.98	SANDY SILT to CLAYEY SILT
62.0	53.0	27.0	2.80	34.08	SANDY SILT to CLAYEY SILT
62.5	71.9	36.5	5.07	35.76	*SANDY CLAY to SILTY CLAY
63.0	74.8	37.8	6.13	33.52	*SANDY CLAY to SILTY CLAY
63.5	48.8	24.6	4.61	28.71	CLAYEY SILT to SILTY CLAY
64.0	109.6	55.0	4.29	12.27	*SANDY CLAY to SILTY CLAY
64.5	122.3	61.2	3.88	10.51	*CLAYEY SAND to SANDY CLAY
65.0	78.4	39.1	3.72	8.01	SANDY SILT to CLAYEY SILT
65.5	66.2	32.9	2.04	15.23	SILTY SAND to SANDY SILT
66.0	61.2	30.3	2.14	18.97	SANDY SILT to CLAYEY SILT
66.5	72.0	35.6	3.81	18.71	SANDY SILT to CLAYEY SILT
67.0	96.9	47.7	5.38	22.39	*SANDY CLAY to SILTY CLAY
67.5	131.2	64.4	5.99	19.24	*SANDY CLAY to SILTY CLAY
68.0	56.5	27.6	5.72	19.64	*SANDY CLAY to SILTY CLAY
68.5	50.0	24.4	2.74	29.90	SANDY SILT to CLAYEY SILT
69.0	50.1	24.4	2.11	32.06	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 52.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-2

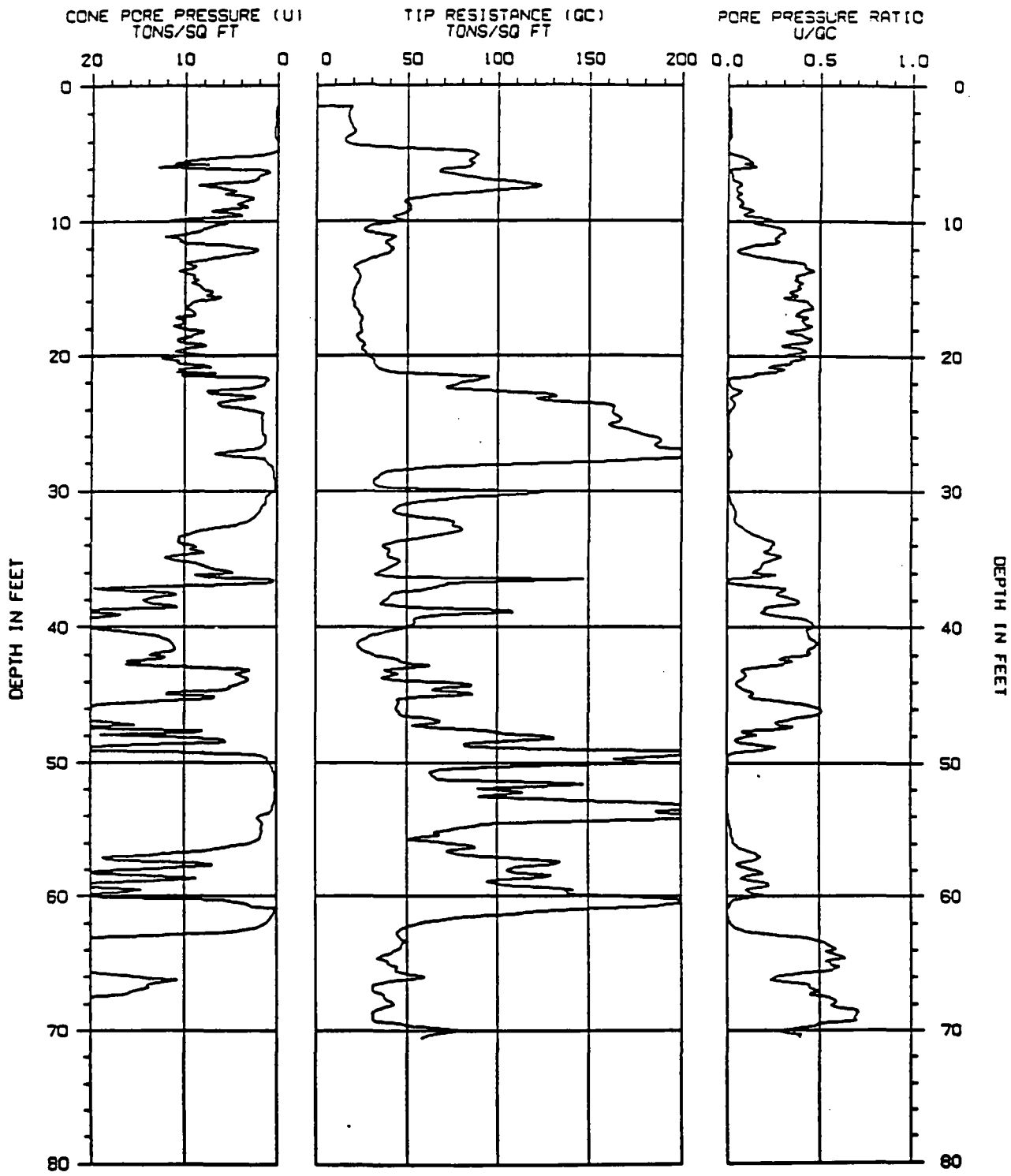
PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 05-12-1992

THE EARTH TECHNOLOGY CORPORATION



TOP 1.5 FT IS DISTURBED SOIL

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-2

PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 05-12-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-2
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 05-12-1992

PROJECT NO : 92-380-01109
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/EC

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	.0	.0	.00	.00	
1.0	.0	.0	.00	.00	
1.5	.0	.0	.00	.00	
2.0	17.9	35.1	5.55	.23	*SANDY CLAY to SILTY CLAY
2.5	17.9	33.4	5.70	.20	*SANDY CLAY to SILTY CLAY
3.0	19.8	35.3	5.22	.28	*SANDY CLAY to SILTY CLAY
3.5	20.7	35.5	4.99	.31	*SANDY CLAY to SILTY CLAY
4.0	15.9	26.4	3.16	-.02	SANDY SILT to CLAYEY SILT
4.5	34.2	54.9	2.42	.04	SILTY SAND to SANDY SILT
5.0	87.3	136.3	2.98	1.78	*SILTY SAND to CLAYEY SAND
5.5	83.6	127.0	4.18	9.92	*CLAYEY SAND to SANDY CLAY
6.0	80.6	119.5	3.10	8.03	*CLAYEY SAND to SANDY CLAY
6.5	74.5	107.7	2.80	1.68	SILTY SAND to SANDY SILT
7.0	99.8	141.2	2.37	3.74	SILTY SAND to SANDY SILT
7.5	120.5	166.8	2.21	5.71	SILTY SAND to SANDY SILT
8.0	70.7	95.9	3.06	4.75	SANDY SILT to CLAYEY SILT
8.5	47.8	63.6	3.45	3.79	SANDY SILT to CLAYEY SILT
9.0	51.8	67.6	3.78	4.65	*CLAYEY SAND to SANDY CLAY
9.5	44.5	57.0	4.36	3.84	*SANDY CLAY to SILTY CLAY
10.0	45.5	57.4	4.16	7.64	*SANDY CLAY to SILTY CLAY
10.5	27.0	33.4	3.59	7.84	SANDY SILT to CLAYEY SILT
11.0	40.3	49.1	2.90	10.98	SANDY SILT to CLAYEY SILT
11.5	37.8	45.4	5.18	10.63	*SANDY CLAY to SILTY CLAY
12.0	42.2	49.8	3.50	3.06	SANDY SILT to CLAYEY SILT
12.5	35.7	41.6	4.94	4.40	*SANDY CLAY to SILTY CLAY
13.0	26.2	30.0	4.40	9.26	CLAYEY SILT to SILTY CLAY
13.5	21.2	24.0	4.17	9.18	CLAYEY SILT to SILTY CLAY
14.0	23.9	26.7	4.29	9.13	CLAYEY SILT to SILTY CLAY
14.5	23.3	25.5	4.20	8.95	CLAYEY SILT to SILTY CLAY
15.0	21.2	23.0	4.36	8.35	CLAYEY SILT to SILTY CLAY
15.5	20.5	21.9	4.64	7.79	CLAYEY SILT to SILTY CLAY
16.0	20.8	22.0	4.74	9.01	CLAYEY SILT to SILTY CLAY
16.5	21.8	22.7	4.25	10.01	CLAYEY SILT to SILTY CLAY
17.0	24.3	25.0	4.05	8.97	CLAYEY SILT to SILTY CLAY
17.5	24.4	24.9	3.93	10.04	CLAYEY SILT to SILTY CLAY
18.0	24.6	24.7	3.96	10.10	CLAYEY SILT to SILTY CLAY
18.5	22.5	22.3	4.37	9.08	CLAYEY SILT to SILTY CLAY
19.0	25.0	24.5	4.67	10.48	CLAYEY SILT to SILTY CLAY
19.5	25.2	24.4	4.97	9.90	CLAYEY SILT to SILTY CLAY
20.0	27.3	26.2	5.02	9.97	CLAYEY SILT to SILTY CLAY

TOP 1.5 FT IS DISTURBED SOIL
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-2

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	31.4	29.8	5.41	10.83	*SANDY CLAY to SILTY CLAY
21.0	35.1	32.9	4.73	10.72	CLAYEY SILT to SILTY CLAY
21.5	83.3	77.2	3.96	10.35	*CLAYEY SAND to SANDY CLAY
22.0	79.3	72.8	6.85	1.18	*SANDY CLAY to SILTY CLAY
22.5	78.9	71.6	5.32	4.98	*SANDY CLAY to SILTY CLAY
23.0	131.9	118.5	3.29	2.94	*CLAYEY SAND to SANDY CLAY
23.5	147.3	130.9	1.88	6.38	SILTY SAND to SANDY SILT
24.0	163.3	143.6	1.66	3.39	SAND to SILTY SAND
24.5	165.1	143.7	1.53	1.60	SAND to SILTY SAND
25.0	163.2	140.6	1.66	1.58	SAND to SILTY SAND
25.5	170.2	145.2	1.58	1.54	SAND to SILTY SAND
26.0	183.2	154.7	1.64	1.19	SAND to SILTY SAND
26.5	187.2	156.5	1.52	1.30	SAND to SILTY SAND
27.0	210.3	174.2	1.01	2.68	SAND to SILTY SAND
27.5	225.5	185.0	.31	4.54	SANDY GRAVEL to SAND
28.0	129.5	105.2	.79	1.02	SAND to SILTY SAND
28.5	44.0	35.4	3.04	.39	SANDY SILT to CLAYEY SILT
29.0	33.9	27.0	2.21	.28	SANDY SILT to CLAYEY SILT
29.5	31.7	25.0	2.29	.22	SANDY SILT to CLAYEY SILT
30.0	109.1	85.3	2.49	.38	SILTY SAND to SANDY SILT
30.5	81.2	62.9	5.57	1.16	*SANDY CLAY to SILTY CLAY
31.0	47.1	36.2	4.21	1.29	CLAYEY SILT to SILTY CLAY
31.5	42.6	32.4	3.61	1.91	SANDY SILT to CLAYEY SILT
32.0	61.8	46.6	3.93	2.58	SANDY SILT to CLAYEY SILT
32.5	74.5	55.7	5.45	4.56	*SANDY CLAY to SILTY CLAY
33.0	78.0	57.8	5.39	8.60	*SANDY CLAY to SILTY CLAY
33.5	54.8	40.2	6.54	10.67	*SANDY CLAY to SILTY CLAY
34.0	36.9	26.9	6.18	9.00	*SANDY CLAY to SILTY CLAY
34.5	39.7	28.7	5.83	7.92	*SANDY CLAY to SILTY CLAY
35.0	44.1	31.6	6.23	11.60	*SANDY CLAY to SILTY CLAY
35.5	42.3	30.0	6.79	7.94	*SANDY CLAY to SILTY CLAY
36.0	34.2	24.1	6.89	4.78	*SANDY CLAY to SILTY CLAY
36.5	147.1	102.6	2.73	1.12	SILTY SAND to SANDY SILT
37.0	66.7	46.1	8.67	11.58	*SANDY CLAY to SILTY CLAY
37.5	43.1	29.5	6.25	11.67	*SANDY CLAY to SILTY CLAY
38.0	38.5	26.2	5.34	14.43	CLAYEY SILT to SILTY CLAY
38.5	51.5	34.7	5.54	10.75	*SANDY CLAY to SILTY CLAY
39.0	88.7	59.3	6.50	18.07	*SANDY CLAY to SILTY CLAY
39.5	53.6	35.6	4.81	23.61	*SANDY CLAY to SILTY CLAY
40.0	49.4	32.5	4.58	23.31	CLAYEY SILT to SILTY CLAY
40.5	32.9	21.5	5.83	14.49	SILTY CLAY TO CLAY
41.0	24.6	15.9	5.39	11.63	SILTY CLAY TO CLAY
41.5	23.7	15.2	4.85	11.02	CLAYEY SILT to SILTY CLAY
42.0	31.4	20.0	5.11	13.71	CLAYEY SILT to SILTY CLAY
42.5	45.8	28.9	5.65	16.16	*SANDY CLAY to SILTY CLAY
43.0	45.0	28.1	4.75	4.77	CLAYEY SILT to SILTY CLAY
43.5	42.1	26.1	4.06	4.17	CLAYEY SILT to SILTY CLAY
44.0	67.7	41.7	2.72	3.57	SANDY SILT to CLAYEY SILT
44.5	65.1	39.8	6.18	5.13	*SANDY CLAY to SILTY CLAY
45.0	74.6	45.2	5.59	8.99	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-2

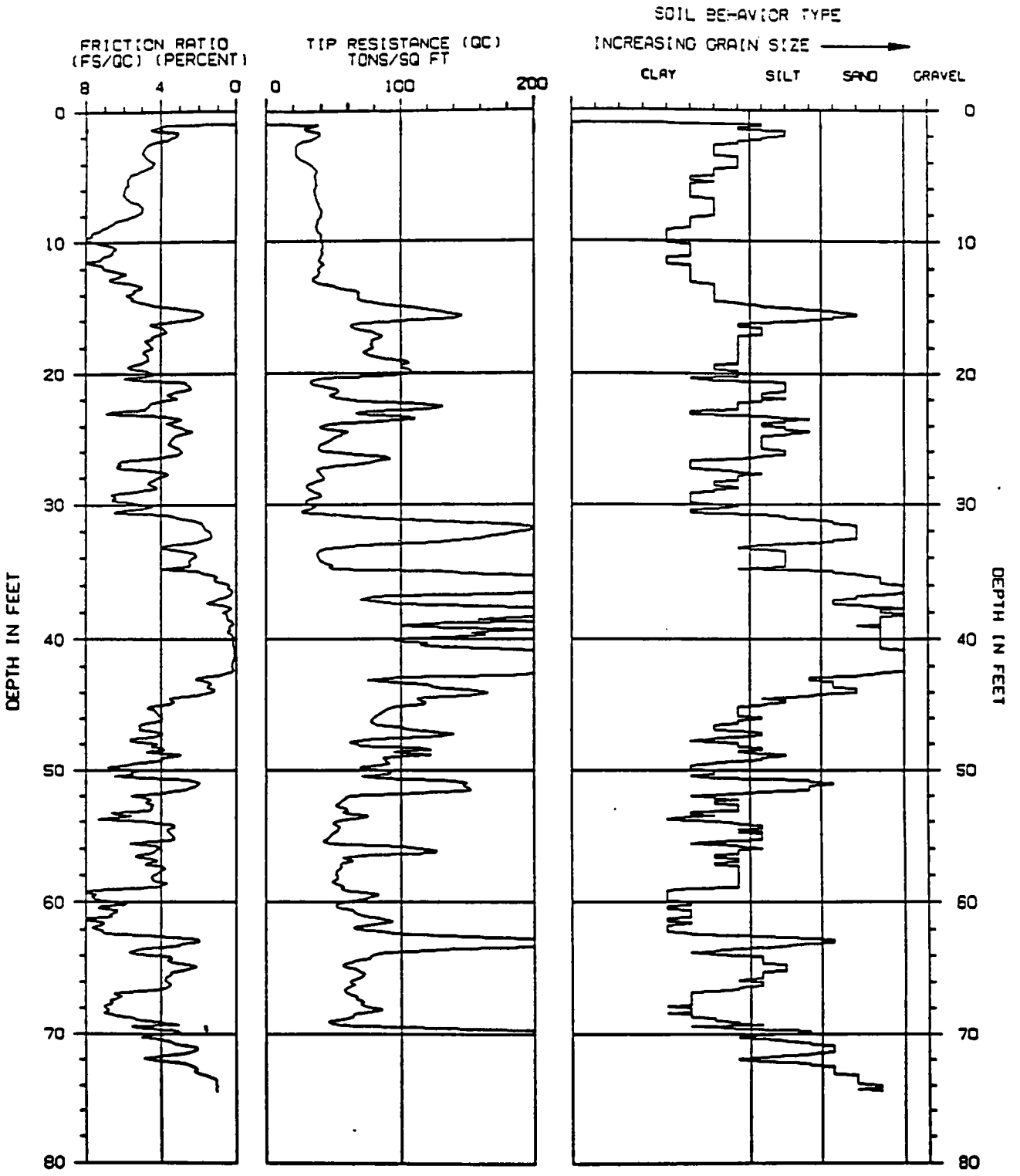
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	45.6	27.4	5.40	15.08	*SANDY CLAY to SILTY CLAY
46.0	44.0	26.3	5.15	22.19	CLAYEY SILT to SILTY CLAY
46.5	48.5	28.7	6.12	22.00	*SANDY CLAY to SILTY CLAY
47.0	67.9	39.9	6.98	17.96	*SANDY CLAY to SILTY CLAY
47.5	82.8	48.2	5.49	16.51	*SANDY CLAY to SILTY CLAY
48.0	125.0	72.3	3.67	15.05	*CLAYEY SAND to SANDY CLAY
48.5	86.7	49.8	6.31	6.66	*SANDY CLAY to SILTY CLAY
49.0	149.2	85.0	4.06	27.50	*CLAYEY SAND to SANDY CLAY
49.5	196.9	111.3	2.35	1.73	SILTY SAND to SANDY SILT
50.0	185.0	103.7	3.08	.92	*CLAYEY SAND to SANDY CLAY
50.5	68.9	38.3	1.49	.45	SILTY SAND to SANDY SILT
51.0	64.4	35.5	2.04	.20	SILTY SAND to SANDY SILT
51.5	138.6	75.9	2.46	.25	SILTY SAND to SANDY SILT
52.0	93.7	50.9	4.32	.16	*SANDY CLAY to SILTY CLAY
52.5	89.5	48.5	5.97	.19	*SANDY CLAY to SILTY CLAY
53.0	183.5	99.1	2.77	.29	SILTY SAND to SANDY SILT
53.5	200.5	107.9	4.49	.47	*SANDY CLAY to SILTY CLAY
54.0	232.5	124.7	3.15	1.92	*CLAYEY SAND to SANDY CLAY
54.5	102.2	54.6	5.58	1.56	*SANDY CLAY to SILTY CLAY
55.0	72.1	38.4	6.57	1.63	*SANDY CLAY to SILTY CLAY
55.5	59.7	31.7	5.15	1.79	*SANDY CLAY to SILTY CLAY
56.0	73.5	38.9	5.07	2.92	*SANDY CLAY to SILTY CLAY
56.5	73.9	39.0	7.67	7.27	*SANDY CLAY to SILTY CLAY
57.0	91.9	48.3	5.95	16.98	*SANDY CLAY to SILTY CLAY
57.5	132.1	69.3	3.78	7.09	*CLAYEY SAND to SANDY CLAY
58.0	104.9	54.8	5.73	15.94	*SANDY CLAY to SILTY CLAY
58.5	124.7	64.9	4.12	11.24	*CLAYEY SAND to SANDY CLAY
59.0	97.8	50.8	6.22	22.09	*SANDY CLAY to SILTY CLAY
59.5	141.3	73.1	3.57	14.63	*CLAYEY SAND to SANDY CLAY
60.0	163.8	84.4	3.57	29.69	*CLAYEY SAND to SANDY CLAY
60.5	199.5	102.6	1.83	3.76	SILTY SAND to SANDY SILT
61.0	133.5	68.4	3.11	.26	SANDY SILT to CLAYEY SILT
61.5	84.6	43.2	7.56	.52	*SANDY CLAY to SILTY CLAY
62.0	56.0	28.5	7.81	1.17	*SANDY CLAY to SILTY CLAY
62.5	46.1	23.4	5.34	3.41	CLAYEY SILT to SILTY CLAY
63.0	45.5	23.0	3.69	16.93	CLAYEY SILT to SILTY CLAY
63.5	47.3	23.8	3.89	25.31	CLAYEY SILT to SILTY CLAY
64.0	43.7	21.9	4.44	24.92	CLAYEY SILT to SILTY CLAY
64.5	34.4	17.2	4.48	21.76	CLAYEY SILT to SILTY CLAY
65.0	39.2	19.5	4.37	21.98	CLAYEY SILT to SILTY CLAY
65.5	43.4	21.6	4.31	24.51	CLAYEY SILT to SILTY CLAY
66.0	59.3	29.4	6.05	15.10	*SANDY CLAY to SILTY CLAY
66.5	32.9	16.2	6.25	13.65	SILTY CLAY TO CLAY
67.0	31.1	15.3	6.52	15.26	SILTY CLAY TO CLAY
67.5	37.4	18.3	4.78	20.43	CLAYEY SILT to SILTY CLAY
68.0	42.8	21.0	4.90	24.68	CLAYEY SILT to SILTY CLAY
68.5	32.5	15.8	4.11	22.95	CLAYEY SILT to SILTY CLAY
69.0	31.2	15.2	3.76	21.47	CLAYEY SILT to SILTY CLAY
69.5	46.0	22.3	5.45	22.84	SILTY CLAY TO CLAY
70.0	79.4	38.4	6.49	21.65	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-2

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	58.0	27.9	8.50	23.03	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT



TOP 1.0 FT IS DISTURBED SOIL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 62.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-3

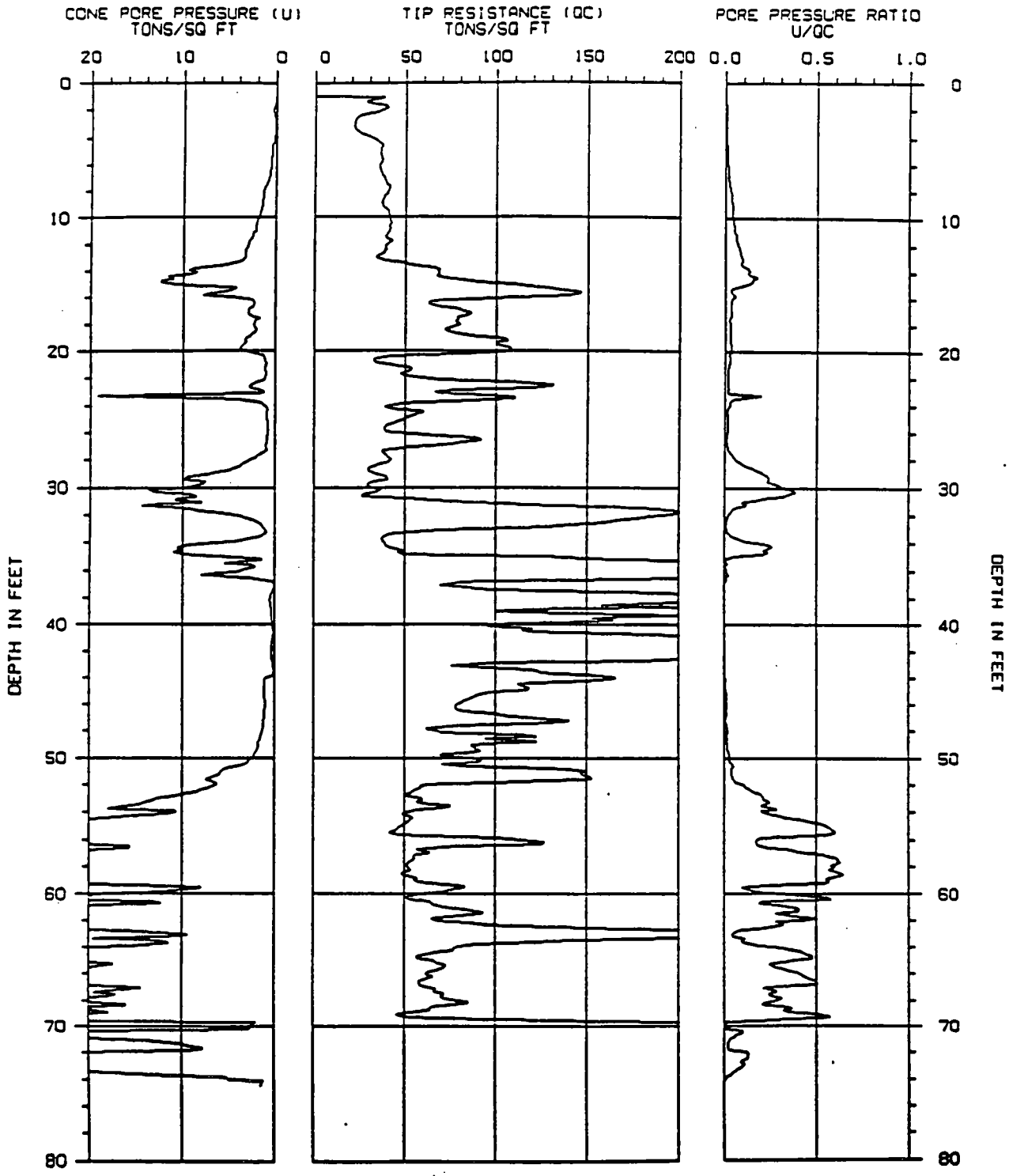
PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 05-12-1992

THE EARTH TECHNOLOGY CORPORATION



TOP 1.0 FT IS DISTURBED SOIL

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-3

PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 05-12-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING	: CPT-3	PROJECT NO	: 92-380-01109
PROJECT	: D&M/P-1 NAPL	INSTRUMENT	: F15CKE092
LOCATION	: TORRANCE CA.	SYSTEM	: SYSTEM#3
DATE	: 05-12-1992	OPERATOR	: KC/EC

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	.0	.0	.00	.00	
1.0	.0	.0	.00	.00	
1.5	29.3	61.1	4.25	.12	*SANDY CLAY to SILTY CLAY
2.0	37.5	73.4	3.38	.31	SANDY SILT to CLAYEY SILT
2.5	23.4	43.5	4.64	.18	*SANDY CLAY to SILTY CLAY
3.0	21.9	39.0	4.96	.11	*SANDY CLAY to SILTY CLAY
3.5	22.9	39.2	4.80	.14	*SANDY CLAY to SILTY CLAY
4.0	31.3	51.9	4.41	.22	*SANDY CLAY to SILTY CLAY
4.5	36.6	58.7	4.99	.39	*SANDY CLAY to SILTY CLAY
5.0	36.3	56.6	5.73	.46	*SANDY CLAY to SILTY CLAY
5.5	36.7	55.8	5.76	.51	*SANDY CLAY to SILTY CLAY
6.0	35.9	53.2	5.98	.57	*SANDY CLAY to SILTY CLAY
6.5	36.4	52.6	5.91	.64	*SANDY CLAY to SILTY CLAY
7.0	38.3	54.2	5.39	.76	*SANDY CLAY to SILTY CLAY
7.5	39.6	54.8	5.02	1.00	*SANDY CLAY to SILTY CLAY
8.0	40.6	55.1	5.40	1.31	*SANDY CLAY to SILTY CLAY
8.5	37.9	50.5	6.50	1.38	*SANDY CLAY to SILTY CLAY
9.0	37.3	48.7	7.14	1.47	*SANDY CLAY to SILTY CLAY
9.5	40.7	52.2	7.69	1.64	*SANDY CLAY to SILTY CLAY
10.0	41.6	52.4	7.57	1.84	*SANDY CLAY to SILTY CLAY
10.5	41.7	51.7	6.41	2.09	*SANDY CLAY to SILTY CLAY
11.0	41.0	50.0	6.99	2.15	*SANDY CLAY to SILTY CLAY
11.5	38.8	46.5	7.97	2.54	*SANDY CLAY to SILTY CLAY
12.0	39.9	47.1	7.05	2.92	*SANDY CLAY to SILTY CLAY
12.5	38.7	45.0	6.02	3.21	*SANDY CLAY to SILTY CLAY
13.0	34.3	39.3	6.41	3.23	*SANDY CLAY to SILTY CLAY
13.5	52.5	59.3	5.08	5.18	*SANDY CLAY to SILTY CLAY
14.0	68.0	75.7	5.86	8.85	*SANDY CLAY to SILTY CLAY
14.5	71.1	78.1	5.25	11.20	*SANDY CLAY to SILTY CLAY
15.0	108.6	117.7	3.24	10.78	*CLAYEY SAND to SANDY CLAY
15.5	141.8	151.6	1.76	5.21	SAND to SILTY SAND
16.0	109.2	115.2	3.04	4.68	*SILTY SAND to CLAYEY SAND
16.5	63.3	65.9	3.95	2.29	*CLAYEY SAND to SANDY CLAY
17.0	82.0	84.4	4.15	2.88	*CLAYEY SAND to SANDY CLAY
17.5	78.4	79.7	4.85	2.19	*SANDY CLAY to SILTY CLAY
18.0	79.8	80.2	4.43	2.28	*SANDY CLAY to SILTY CLAY
18.5	72.5	72.0	4.86	2.08	*SANDY CLAY to SILTY CLAY
19.0	98.9	97.0	4.75	3.03	*SANDY CLAY to SILTY CLAY
19.5	100.2	97.2	5.76	3.36	*SANDY CLAY to SILTY CLAY
20.0	108.4	103.9	4.44	3.41	*CLAYEY SAND to SANDY CLAY

TOP 1.0 FT IS DISTURBED SOIL
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-3

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	35.1	33.3	4.78	1.09	*SANDY CLAY to SILTY CLAY
21.0	41.3	38.7	2.48	.96	SANDY SILT to CLAYEY SILT
21.5	51.8	48.1	3.46	1.03	SANDY SILT to CLAYEY SILT
22.0	59.0	54.1	3.63	1.11	SANDY SILT to CLAYEY SILT
22.5	131.1	118.9	4.65	2.59	*SANDY CLAY to SILTY CLAY
23.0	66.0	59.3	6.94	1.25	*SANDY CLAY to SILTY CLAY
23.5	109.7	97.5	2.92	7.02	SILTY SAND to SANDY SILT
24.0	41.9	36.9	3.31	1.21	SANDY SILT to CLAYEY SILT
24.5	60.2	52.4	2.46	.92	SILTY SAND to SANDY SILT
25.0	49.5	42.7	3.40	.85	SANDY SILT to CLAYEY SILT
25.5	39.6	33.8	3.54	.75	SANDY SILT to CLAYEY SILT
26.0	43.4	36.6	2.89	.74	SANDY SILT to CLAYEY SILT
26.5	91.8	76.8	4.57	.93	*SANDY CLAY to SILTY CLAY
27.0	64.1	53.1	6.15	1.03	*SANDY CLAY to SILTY CLAY
27.5	38.2	31.3	4.12	1.45	CLAYEY SILT to SILTY CLAY
28.0	42.5	34.5	4.23	2.72	CLAYEY SILT to SILTY CLAY
28.5	31.1	25.0	4.58	4.05	CLAYEY SILT to SILTY CLAY
29.0	34.6	27.6	5.36	7.41	*SANDY CLAY to SILTY CLAY
29.5	37.4	29.5	6.40	8.82	*SANDY CLAY to SILTY CLAY
30.0	31.5	24.7	5.05	9.84	CLAYEY SILT to SILTY CLAY
30.5	26.6	20.6	6.34	9.19	SILTY CLAY TO CLAY
31.0	75.5	58.0	3.19	7.97	SANDY SILT to CLAYEY SILT
31.5	178.5	135.9	1.80	10.58	SILTY SAND to SANDY SILT
32.0	190.8	143.9	1.52	4.24	SAND to SILTY SAND
32.5	159.4	119.2	1.43	1.93	SAND to SILTY SAND
33.0	89.6	66.4	3.14	1.13	SANDY SILT to CLAYEY SILT
33.5	38.7	28.4	2.76	1.58	SANDY SILT to CLAYEY SILT
34.0	38.8	28.2	2.37	6.44	SANDY SILT to CLAYEY SILT
34.5	48.1	34.7	2.47	10.14	SANDY SILT to CLAYEY SILT
35.0	125.7	90.0	2.08	6.43	SILTY SAND to SANDY SILT
35.5	309.4	219.5	1.19	5.39	SAND to SILTY SAND
36.0	297.8	209.5	.39	3.76	SANDY GRAVEL to SAND
36.5	347.7	242.5	.22	5.21	SANDY GRAVEL to SAND
37.0	73.8	51.0	.97	.03	SAND to SILTY SAND
37.5	126.9	87.0	.83	.24	SAND to SILTY SAND
38.0	261.5	177.8	.76	.44	SAND to SILTY SAND
38.5	157.6	106.3	.49	.39	SAND to SILTY SAND
39.0	100.7	67.3	.37	.31	SAND to SILTY SAND
39.5	152.7	101.3	.44	.31	SAND to SILTY SAND
40.0	99.2	65.2	.15	.22	SAND to SILTY SAND
40.5	119.3	77.8	.19	.14	SAND to SILTY SAND
41.0	264.1	170.8	.11	.21	SANDY GRAVEL to SAND
41.5	433.2	277.9	.16	.36	SANDY GRAVEL to SAND
42.0	439.9	279.9	.26	.35	SANDY GRAVEL to SAND
42.5	240.1	151.6	.39	.29	SAND to SILTY SAND
43.0	81.7	51.2	2.21	.19	SILTY SAND to SANDY SILT
43.5	121.9	75.7	1.55	.15	SILTY SAND to SANDY SILT
44.0	165.4	101.9	1.43	.99	SAND to SILTY SAND
44.5	111.7	68.3	3.57	1.12	*CLAYEY SAND to SANDY CLAY
45.0	108.2	65.6	4.10	1.07	*CLAYEY SAND to SANDY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-3

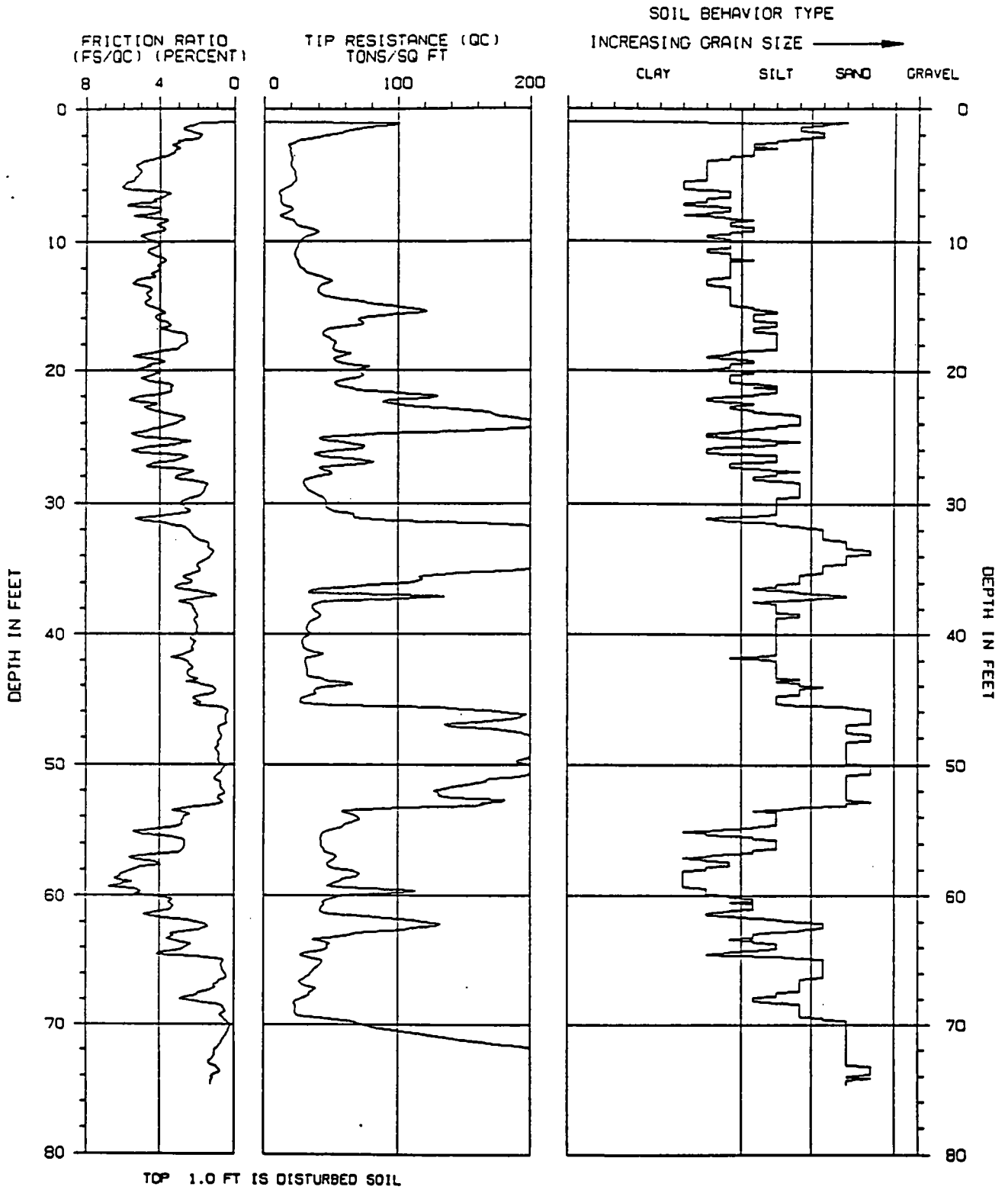
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	86.5	52.1	4.30	1.05	*SANDY CLAY to SILTY CLAY
46.0	79.1	47.2	3.94	1.04	SANDY SILT to CLAYEY SILT
46.5	82.3	48.7	5.16	1.08	*SANDY CLAY to SILTY CLAY
47.0	116.8	68.6	4.57	1.15	*SANDY CLAY to SILTY CLAY
47.5	97.5	56.8	5.03	1.24	*SANDY CLAY to SILTY CLAY
48.0	68.0	39.3	4.22	1.32	CLAYEY SILT to SILTY CLAY
48.5	103.4	59.3	4.41	1.55	*SANDY CLAY to SILTY CLAY
49.0	86.7	49.4	3.85	1.77	SANDY SILT to CLAYEY SILT
49.5	91.6	51.8	5.46	2.03	*SANDY CLAY to SILTY CLAY
50.0	86.1	48.3	5.28	2.49	*SANDY CLAY to SILTY CLAY
50.5	70.4	39.1	6.49	3.36	*SANDY CLAY to SILTY CLAY
51.0	149.4	82.5	1.98	5.75	SILTY SAND to SANDY SILT
51.5	152.8	83.7	2.75	7.20	SILTY SAND to SANDY SILT
52.0	62.8	34.2	5.58	6.37	*SANDY CLAY to SILTY CLAY
52.5	54.1	29.3	4.84	8.57	CLAYEY SILT to SILTY CLAY
53.0	59.6	32.2	4.49	12.60	CLAYEY SILT to SILTY CLAY
53.5	75.3	40.5	5.60	15.27	*SANDY CLAY to SILTY CLAY
54.0	52.3	28.1	4.95	10.69	CLAYEY SILT to SILTY CLAY
54.5	53.5	28.6	3.53	20.74	SANDY SILT to CLAYEY SILT
55.0	47.8	25.5	3.42	26.61	SANDY SILT to CLAYEY SILT
55.5	41.8	22.2	4.64	25.15	CLAYEY SILT to SILTY CLAY
56.0	113.7	60.2	4.12	20.37	*CLAYEY SAND to SANDY CLAY
56.5	79.7	42.0	5.20	15.57	*SANDY CLAY to SILTY CLAY
57.0	63.2	33.3	4.28	29.25	CLAYEY SILT to SILTY CLAY
57.5	54.7	28.7	3.81	33.90	CLAYEY SILT to SILTY CLAY
58.0	51.8	27.0	4.38	31.12	CLAYEY SILT to SILTY CLAY
58.5	48.6	25.3	4.17	31.13	CLAYEY SILT to SILTY CLAY
59.0	55.0	28.6	5.56	31.18	*SANDY CLAY to SILTY CLAY
59.5	82.7	42.8	7.52	8.00	*SANDY CLAY to SILTY CLAY
60.0	58.9	30.4	6.55	18.13	*SANDY CLAY to SILTY CLAY
60.5	57.2	29.4	7.03	25.28	*SANDY CLAY to SILTY CLAY
61.0	72.2	37.0	6.61	25.92	*SANDY CLAY to SILTY CLAY
61.5	91.8	46.9	7.15	25.69	*SANDY CLAY to SILTY CLAY
62.0	67.2	34.2	7.46	28.68	*SANDY CLAY to SILTY CLAY
62.5	132.4	67.2	4.88	35.09	*SANDY CLAY to SILTY CLAY
63.0	217.6	110.0	2.30	10.27	SILTY SAND to SANDY SILT
63.5	141.7	71.4	4.90	13.89	*SANDY CLAY to SILTY CLAY
64.0	77.6	39.0	4.44	19.73	*SANDY CLAY to SILTY CLAY
64.5	62.2	31.1	3.43	27.23	SANDY SILT to CLAYEY SILT
65.0	66.2	33.0	2.55	24.81	SANDY SILT to CLAYEY SILT
65.5	71.7	35.7	3.59	19.82	SANDY SILT to CLAYEY SILT
66.0	61.9	30.7	3.71	25.29	SANDY SILT to CLAYEY SILT
66.5	58.5	28.9	3.72	28.69	CLAYEY SILT to SILTY CLAY
67.0	63.5	31.3	6.40	14.42	*SANDY CLAY to SILTY CLAY
67.5	71.7	35.2	6.69	17.94	*SANDY CLAY to SILTY CLAY
68.0	78.7	38.5	6.96	22.21	*SANDY CLAY to SILTY CLAY
68.5	64.9	31.6	6.77	20.29	*SANDY CLAY to SILTY CLAY
69.0	47.4	23.1	4.89	19.95	CLAYEY SILT to SILTY CLAY
69.5	102.2	49.5	5.54	35.65	*SANDY CLAY to SILTY CLAY
70.0	374.1	180.7	3.47	2.51	*CLAYEY SAND to SANDY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-3

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	344.8	166.0	3.76	34.48	*CLAYEY SAND to SANDY CLAY
71.0	502.3	241.0	2.38	17.61	*SILTY SAND to CLAYEY SAND
71.5	412.7	197.4	2.78	9.11	*SILTY SAND to CLAYEY SAND
72.0	242.0	115.4	4.65	29.34	*SANDY CLAY to SILTY CLAY
72.5	296.2	140.8	2.36	34.77	SILTY SAND to SANDY SILT
73.0	328.5	155.6	2.17	34.48	SILTY SAND to SANDY SILT
73.5	350.2	165.3	1.17	17.98	SAND to SILTY SAND
74.0	378.9	178.3	1.01	4.86	SAND to SILTY SAND
74.5	380.6	178.5	1.03	1.42	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 52.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-4

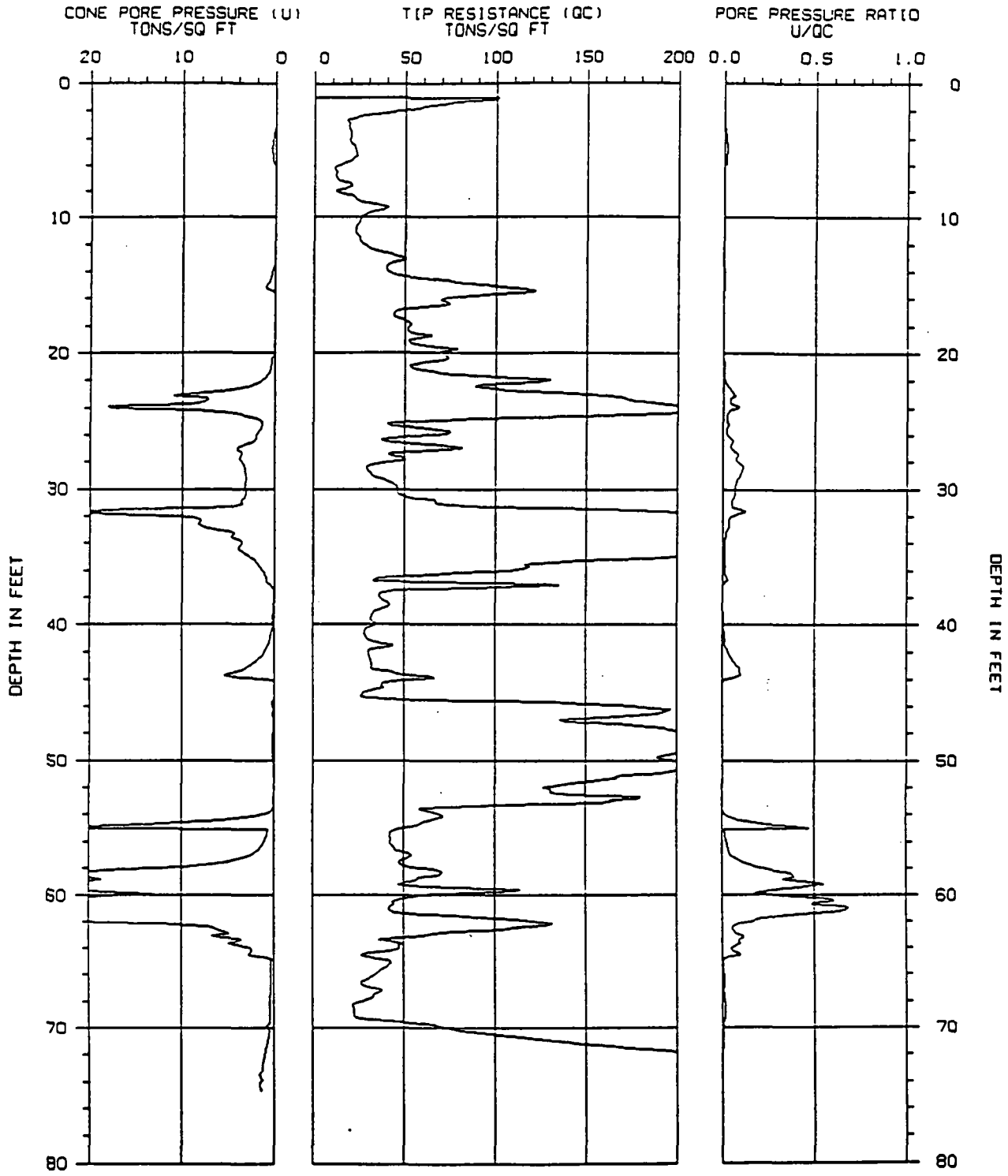
PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-0111

LOCATION : TORRANCE

DATE : 06-03-1992

THE EARTH TECHNOLOGY CORPORATION



TOP 1.0 FT IS DISTURBED SOIL

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-4

PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-0111

LOCATION : TORRANCE

DATE : 06-03-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-4
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE
DATE : 06-03-1992

PROJECT NO : 92-380-0111
INSTRUMENT : F15CKE091
SYSTEM : T2
OPERATOR : EC/KC

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	.0	.0	.00	.00	
1.0	.0	.0	.00	.00	
1.5	70.4	146.7	2.78	-.03	*SILTY SAND to CLAYEY SAND
2.0	46.5	91.1	1.75	-.03	SILTY SAND to SANDY SILT
2.5	22.9	42.5	2.96	-.02	SANDY SILT to CLAYEY SILT
3.0	18.9	33.7	3.19	-.02	SANDY SILT to CLAYEY SILT
3.5	20.1	34.4	3.87	.19	CLAYEY SILT to SILTY CLAY
4.0	19.7	32.7	5.14	.28	*SANDY CLAY to SILTY CLAY
4.5	21.6	34.7	5.07	.37	*SANDY CLAY to SILTY CLAY
5.0	23.2	36.1	5.28	.44	*SANDY CLAY to SILTY CLAY
5.5	21.4	32.6	5.86	.32	*SANDY CLAY to SILTY CLAY
6.0	13.3	19.8	5.39	.03	SILTY CLAY TO CLAY
6.5	12.4	18.0	3.68	-.35	CLAYEY SILT to SILTY CLAY
7.0	12.4	17.5	4.68	-.34	CLAYEY SILT to SILTY CLAY
7.5	21.0	29.1	3.96	-.29	CLAYEY SILT to SILTY CLAY
8.0	11.7	15.9	5.43	-.29	SILTY CLAY TO CLAY
8.5	22.7	30.2	3.82	-.30	CLAYEY SILT to SILTY CLAY
9.0	33.5	43.7	3.72	-.25	SANDY SILT to CLAYEY SILT
9.5	34.2	43.9	5.08	-.19	*SANDY CLAY to SILTY CLAY
10.0	26.0	32.7	4.24	-.19	CLAYEY SILT to SILTY CLAY
10.5	24.2	30.0	4.47	-.16	CLAYEY SILT to SILTY CLAY
11.0	22.7	27.6	4.33	-.14	CLAYEY SILT to SILTY CLAY
11.5	25.0	30.0	3.73	-.13	CLAYEY SILT to SILTY CLAY
12.0	27.4	32.4	4.01	-.10	CLAYEY SILT to SILTY CLAY
12.5	34.1	39.7	4.50	-.07	*SANDY CLAY to SILTY CLAY
13.0	49.8	57.1	5.34	-.05	*SANDY CLAY to SILTY CLAY
13.5	40.9	46.2	4.58	.05	*SANDY CLAY to SILTY CLAY
14.0	40.6	45.2	4.74	.28	*SANDY CLAY to SILTY CLAY
14.5	58.5	64.2	4.60	.45	*SANDY CLAY to SILTY CLAY
15.0	93.5	101.3	4.64	.92	*SANDY CLAY to SILTY CLAY
15.5	119.8	128.1	3.75	.22	*CLAYEY SAND to SANDY CLAY
16.0	72.9	77.0	4.23	-.09	*CLAYEY SAND to SANDY CLAY
16.5	72.5	75.6	3.45	-.08	*CLAYEY SAND to SANDY CLAY
17.0	44.4	45.7	3.31	-.10	SANDY SILT to CLAYEY SILT
17.5	47.6	48.3	2.60	-.09	SANDY SILT to CLAYEY SILT
18.0	53.1	53.3	2.72	-.07	SANDY SILT to CLAYEY SILT
18.5	52.4	52.0	3.76	-.04	SANDY SILT to CLAYEY SILT
19.0	54.8	53.7	5.12	.01	*SANDY CLAY to SILTY CLAY
19.5	59.5	57.7	4.27	.09	*SANDY CLAY to SILTY CLAY
20.0	71.0	68.1	4.55	.00	*SANDY CLAY to SILTY CLAY

TOP 1.0 FT IS DISTURBED SOIL
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-4

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	71.6	67.9	4.78	.32	*SANDY CLAY to SILTY CLAY
21.0	52.8	49.5	3.56	.42	SANDY SILT to CLAYEY SILT
21.5	69.3	64.3	3.39	.64	SANDY SILT to CLAYEY SILT
22.0	129.6	118.9	5.06	1.35	*SANDY CLAY to SILTY CLAY
22.5	93.0	84.4	4.18	3.13	*CLAYEY SAND to SANDY CLAY
23.0	150.1	134.7	4.40	9.83	*CLAYEY SAND to SANDY CLAY
23.5	178.1	158.3	2.88	7.57	*SILTY SAND to CLAYEY SAND
24.0	227.8	200.3	3.13	17.75	*SILTY SAND to CLAYEY SAND
24.5	172.1	149.8	4.54	3.82	*CLAYEY SAND to SANDY CLAY
25.0	55.5	47.8	5.13	1.41	*SANDY CLAY to SILTY CLAY
25.5	59.0	50.4	2.71	1.46	SANDY SILT to CLAYEY SILT
26.0	66.0	55.7	5.37	2.03	*SANDY CLAY to SILTY CLAY
26.5	43.7	36.6	2.49	2.31	SANDY SILT to CLAYEY SILT
27.0	80.4	66.6	4.30	3.95	*SANDY CLAY to SILTY CLAY
27.5	43.1	35.4	2.43	3.63	SANDY SILT to CLAYEY SILT
28.0	41.4	33.6	3.14	3.54	SANDY SILT to CLAYEY SILT
28.5	29.6	23.8	1.51	3.24	SILTY SAND to SANDY SILT
29.0	32.9	26.2	1.66	3.13	SILTY SAND to SANDY SILT
29.5	42.3	33.4	2.10	3.15	SILTY SAND to SANDY SILT
30.0	46.1	36.0	2.88	3.15	SANDY SILT to CLAYEY SILT
30.5	49.5	38.4	2.43	3.17	SANDY SILT to CLAYEY SILT
31.0	66.8	51.3	4.45	3.55	*SANDY CLAY to SILTY CLAY
31.5	160.0	121.8	3.71	15.75	*CLAYEY SAND to SANDY CLAY
32.0	221.3	167.0	2.48	10.91	*SILTY SAND to CLAYEY SAND
32.5	231.3	172.9	2.17	8.17	SILTY SAND to SANDY SILT
33.0	224.2	166.2	1.41	6.70	SAND to SILTY SAND
33.5	277.0	203.5	1.24	4.63	SAND to SILTY SAND
34.0	293.7	213.9	1.33	3.59	SAND to SILTY SAND
34.5	292.5	211.1	1.88	3.83	SAND to SILTY SAND
35.0	203.7	145.8	1.88	2.75	SILTY SAND to SANDY SILT
35.5	121.2	86.0	2.67	1.83	SILTY SAND to SANDY SILT
36.0	107.9	75.9	2.37	1.35	SILTY SAND to SANDY SILT
36.5	43.7	30.5	3.02	.96	SANDY SILT to CLAYEY SILT
37.0	126.3	87.3	.99	.65	SAND to SILTY SAND
37.5	44.7	30.6	3.01	.16	SANDY SILT to CLAYEY SILT
38.0	36.7	24.9	2.23	.14	SANDY SILT to CLAYEY SILT
38.5	42.3	28.5	1.97	.15	SILTY SAND to SANDY SILT
39.0	34.8	23.3	2.17	.16	SANDY SILT to CLAYEY SILT
39.5	31.7	21.0	2.02	.18	SANDY SILT to CLAYEY SILT
40.0	34.5	22.7	2.14	.22	SANDY SILT to CLAYEY SILT
40.5	28.2	18.4	2.16	.32	SANDY SILT to CLAYEY SILT
41.0	29.4	19.0	2.31	.45	SANDY SILT to CLAYEY SILT
41.5	43.8	28.1	2.70	.69	SANDY SILT to CLAYEY SILT
42.0	30.8	19.6	2.61	1.06	SANDY SILT to CLAYEY SILT
42.5	31.4	19.8	2.33	1.63	SANDY SILT to CLAYEY SILT
43.0	32.2	20.2	2.54	2.56	SANDY SILT to CLAYEY SILT
43.5	44.3	27.5	2.00	4.25	SILTY SAND to SANDY SILT
44.0	58.1	35.8	1.58	1.03	SILTY SAND to SANDY SILT
44.5	37.2	22.8	1.10	.05	SILTY SAND to SANDY SILT
45.0	27.2	16.5	2.26	.00	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-4

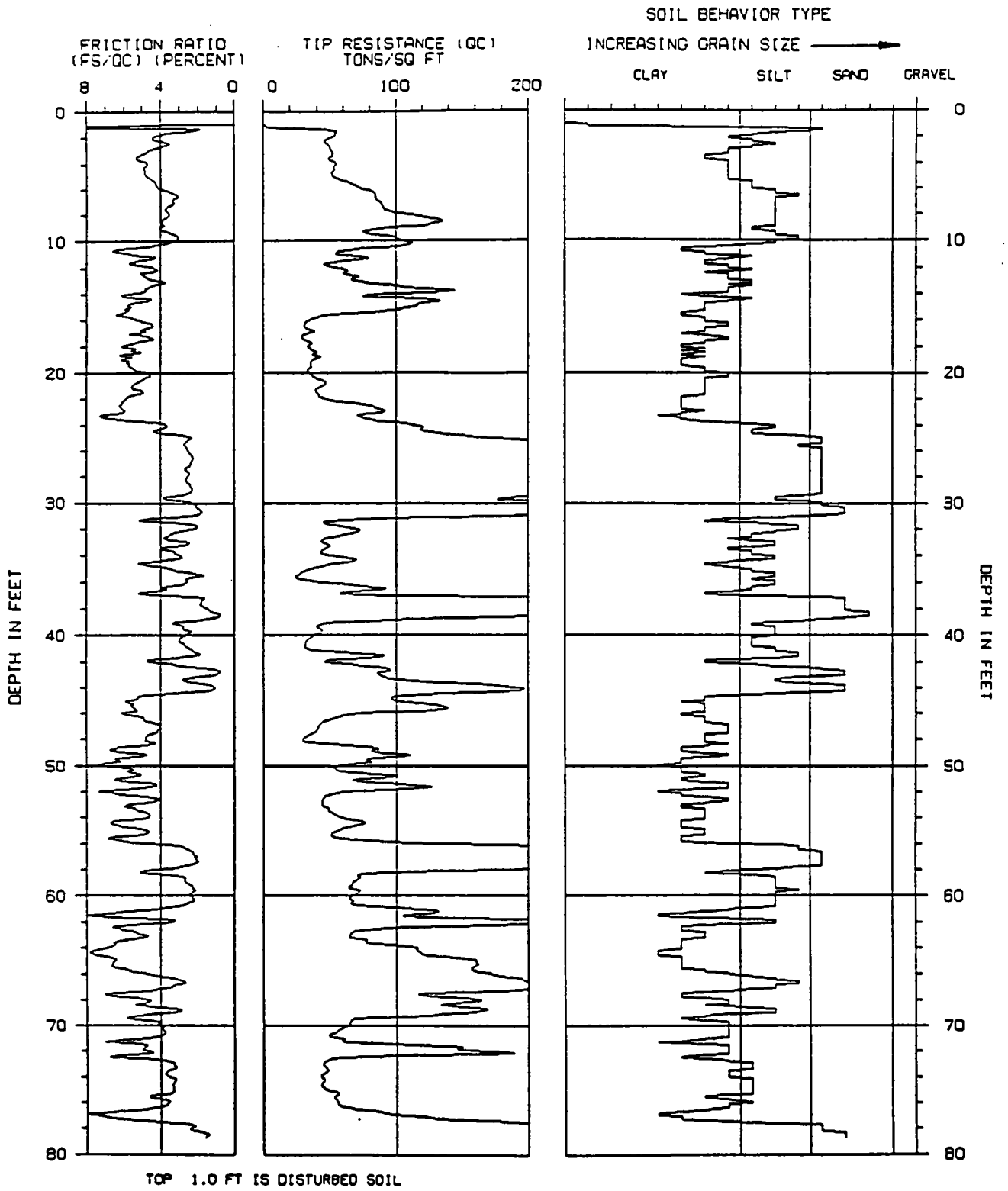
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	51.0	30.7	2.03	.05	SILTY SAND to SANDY SILT
46.0	175.1	104.5	.41	.18	SAND to SILTY SAND
46.5	189.1	112.0	.49	.17	SAND to SILTY SAND
47.0	135.3	79.5	.61	.13	SAND to SILTY SAND
47.5	185.2	107.9	.87	.13	SAND to SILTY SAND
48.0	236.4	136.7	.74	.19	SAND to SILTY SAND
48.5	213.9	122.7	.89	.23	SAND to SILTY SAND
49.0	209.0	119.0	.92	.23	SAND to SILTY SAND
49.5	198.8	112.4	.86	.21	SAND to SILTY SAND
50.0	203.3	114.0	.59	.18	SAND to SILTY SAND
50.5	209.4	116.5	.74	.12	SAND to SILTY SAND
51.0	182.9	101.0	1.09	.16	SAND to SILTY SAND
51.5	152.5	83.6	.77	-.01	SAND to SILTY SAND
52.0	126.7	68.9	.61	-.04	SAND to SILTY SAND
52.5	141.1	76.5	.93	-.02	SAND to SILTY SAND
53.0	165.7	89.5	.89	.10	SAND to SILTY SAND
53.5	59.0	31.8	3.36	.11	SANDY SILT to CLAYEY SILT
54.0	69.7	37.4	2.72	1.20	SANDY SILT to CLAYEY SILT
54.5	62.0	33.1	2.79	7.61	SANDY SILT to CLAYEY SILT
55.0	47.8	25.5	4.88	22.71	CLAYEY SILT to SILTY CLAY
55.5	42.2	22.4	3.40	.81	SANDY SILT to CLAYEY SILT
56.0	42.3	22.4	2.67	1.08	SANDY SILT to CLAYEY SILT
56.5	44.9	23.7	2.81	1.52	SANDY SILT to CLAYEY SILT
57.0	54.6	28.7	5.47	2.38	*SANDY CLAY to SILTY CLAY
57.5	47.3	24.8	4.01	4.99	CLAYEY SILT to SILTY CLAY
58.0	60.1	31.4	5.39	12.90	*SANDY CLAY to SILTY CLAY
58.5	69.1	36.0	6.15	26.72	*SANDY CLAY to SILTY CLAY
59.0	52.5	27.3	5.86	23.11	*SANDY CLAY to SILTY CLAY
59.5	97.7	50.5	5.24	33.12	*SANDY CLAY to SILTY CLAY
60.0	59.2	30.5	4.56	16.48	CLAYEY SILT to SILTY CLAY
60.5	43.5	22.4	3.59	24.10	CLAYEY SILT to SILTY CLAY
61.0	41.8	21.4	3.44	28.49	SANDY SILT to CLAYEY SILT
61.5	62.6	32.0	4.76	27.33	CLAYEY SILT to SILTY CLAY
62.0	120.0	61.1	2.12	20.80	SILTY SAND to SANDY SILT
62.5	110.4	56.0	1.67	6.48	SILTY SAND to SANDY SILT
63.0	64.7	32.7	3.39	5.56	SANDY SILT to CLAYEY SILT
63.5	41.6	20.9	3.16	3.82	SANDY SILT to CLAYEY SILT
64.0	48.0	24.1	2.68	2.59	SANDY SILT to CLAYEY SILT
64.5	26.8	13.4	4.16	2.77	CLAYEY SILT to SILTY CLAY
65.0	43.0	21.5	.61	.29	SILTY SAND to SANDY SILT
65.5	39.7	19.8	.70	.34	SILTY SAND to SANDY SILT
66.0	34.6	17.1	.51	.36	SILTY SAND to SANDY SILT
66.5	27.7	13.7	.85	.37	SILTY SAND to SANDY SILT
67.0	33.3	16.4	1.06	.38	SILTY SAND to SANDY SILT
67.5	33.6	16.5	1.89	.38	SANDY SILT to CLAYEY SILT
68.0	27.4	13.4	2.95	.40	SANDY SILT to CLAYEY SILT
68.5	23.1	11.2	.76	.43	SILTY SAND to SANDY SILT
69.0	22.7	11.0	.51	.45	SILTY SAND to SANDY SILT
69.5	42.1	20.4	.58	.45	SILTY SAND to SANDY SILT
70.0	73.0	35.3	.26	.65	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-4

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	101.3	48.8	.34	.54	SAND to SILTY SAND
71.0	132.8	63.7	.54	.69	SAND to SILTY SAND
71.5	172.6	82.5	.77	.83	SAND to SILTY SAND
72.0	215.2	102.6	1.07	.99	SAND to SILTY SAND
72.5	260.1	123.6	1.12	1.15	SAND to SILTY SAND
73.0	281.0	133.1	1.40	1.21	SAND to SILTY SAND
73.5	355.9	168.0	.93	1.61	SAND to SILTY SAND
74.0	399.2	187.9	1.25	1.41	SAND to SILTY SAND
74.5	410.7	192.7	1.29	1.43	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 52.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-5

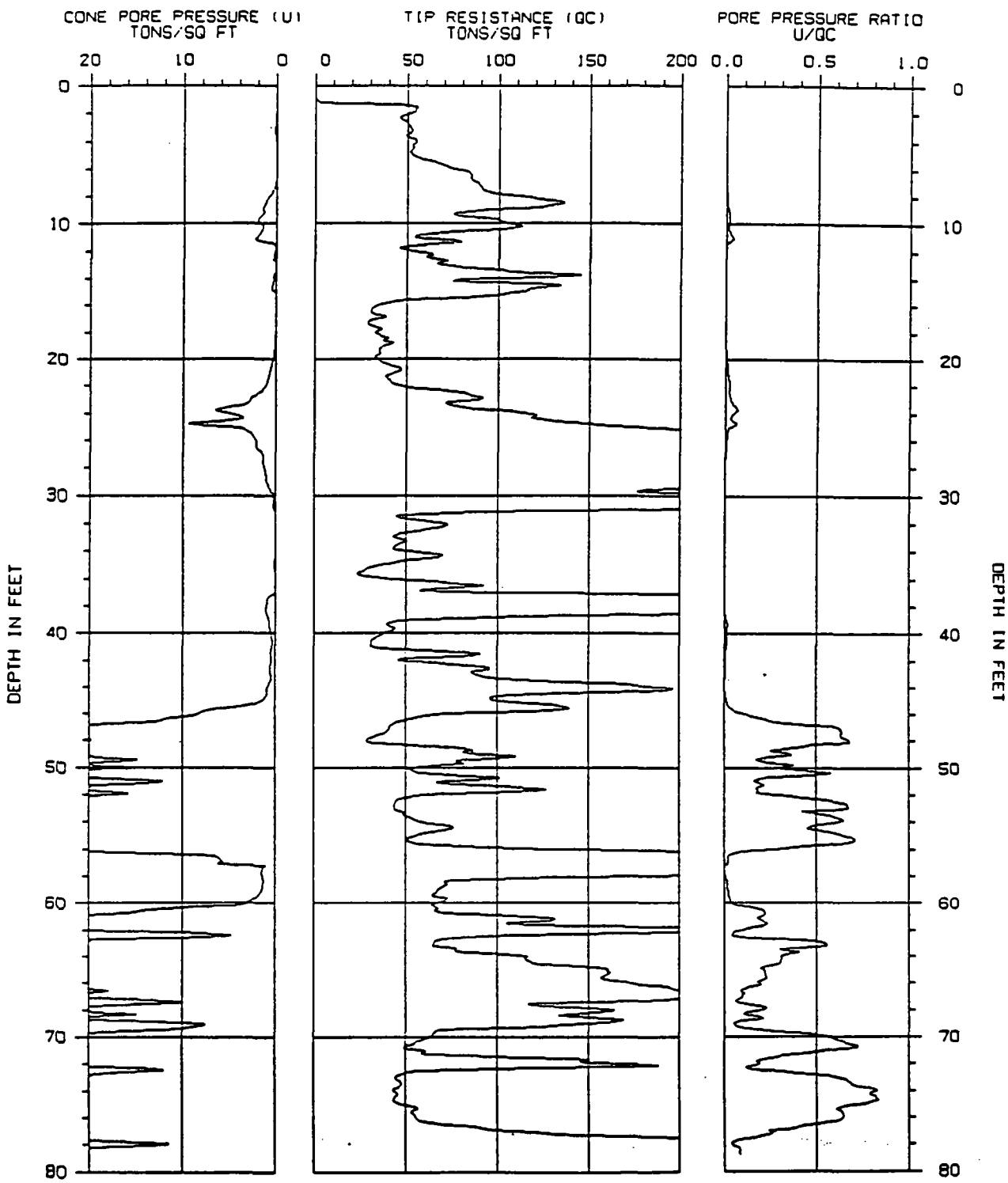
PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-0111

LOCATION : TORRANCE

DATE : 06-03-1992

THE EARTH TECHNOLOGY CORPORATION



TOP 1.0 FT IS DISTURBED SOIL

CONE PENETRATION TEST SOUNDING NUMBER: CPT-5

PROJECT NAME : D&M/P-1 NAPL	LOCATION : TORRANCE	THE EARTH TECHNOLOGY CORPORATION
PROJECT NUMBER : 92-380-0111	DATE : 06-03-1992	

CONE PENETRATION TEST

SOUNDING : CPT-5
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE
DATE : 06-03-1992

PROJECT NO : 92-380-0111
INSTRUMENT : F15CKE091
SYSTEM : T2
OPERATOR : EC/KC

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	.0	.0	.00	.00	
1.0	.0	.0	.00	.00	
1.5	54.7	114.0	2.29	.00	SILTY SAND to SANDY SILT
2.0	51.8	101.4	4.45	.06	*SANDY CLAY to SILTY CLAY
2.5	48.1	89.6	3.54	.14	*CLAYEY SAND to SANDY CLAY
3.0	51.6	92.0	4.72	.18	*SANDY CLAY to SILTY CLAY
3.5	50.4	86.5	5.31	.21	*SANDY CLAY to SILTY CLAY
4.0	55.1	91.3	4.69	.01	*SANDY CLAY to SILTY CLAY
4.5	53.4	85.7	4.86	-.11	*SANDY CLAY to SILTY CLAY
5.0	53.0	82.7	4.73	-.10	*SANDY CLAY to SILTY CLAY
5.5	64.5	97.9	4.28	-.05	*CLAYEY SAND to SANDY CLAY
6.0	75.2	111.4	3.94	-.01	*CLAYEY SAND to SANDY CLAY
6.5	85.0	122.9	3.08	-.17	*SILTY SAND to CLAYEY SAND
7.0	87.6	124.0	3.30	.07	*CLAYEY SAND to SANDY CLAY
7.5	91.0	126.0	3.73	.32	*CLAYEY SAND to SANDY CLAY
8.0	110.4	149.8	3.52	.75	*CLAYEY SAND to SANDY CLAY
8.5	135.3	180.0	3.90	1.17	*CLAYEY SAND to SANDY CLAY
9.0	93.5	122.0	4.11	1.41	*CLAYEY SAND to SANDY CLAY
9.5	83.0	106.4	3.23	1.78	*CLAYEY SAND to SANDY CLAY
10.0	105.1	132.4	3.34	1.79	*CLAYEY SAND to SANDY CLAY
10.5	88.2	109.2	5.58	1.55	*SANDY CLAY to SILTY CLAY
11.0	54.1	65.9	5.51	2.07	*SANDY CLAY to SILTY CLAY
11.5	62.6	75.0	5.32	.20	*SANDY CLAY to SILTY CLAY
12.0	53.2	62.8	4.33	.16	*SANDY CLAY to SILTY CLAY
12.5	60.5	70.4	5.03	.25	*SANDY CLAY to SILTY CLAY
13.0	68.7	78.7	4.02	.01	*CLAYEY SAND to SANDY CLAY
13.5	106.8	120.6	4.74	.00	*SANDY CLAY to SILTY CLAY
14.0	99.5	110.8	5.84	.27	*SANDY CLAY to SILTY CLAY
14.5	133.7	146.9	4.72	.35	*SANDY CLAY to SILTY CLAY
15.0	114.1	123.7	5.59	.13	*SANDY CLAY to SILTY CLAY
15.5	64.7	69.2	6.38	-.08	*SANDY CLAY to SILTY CLAY
16.0	35.1	37.1	5.20	-.08	*SANDY CLAY to SILTY CLAY
16.5	30.7	32.0	4.43	-.06	CLAYEY SILT to SILTY CLAY
17.0	32.7	33.7	5.71	-.01	*SANDY CLAY to SILTY CLAY
17.5	30.3	30.8	4.46	.02	CLAYEY SILT to SILTY CLAY
18.0	32.9	33.1	6.16	.04	*SANDY CLAY to SILTY CLAY
18.5	40.0	39.7	5.22	.08	*SANDY CLAY to SILTY CLAY
19.0	37.3	36.6	6.13	.15	*SANDY CLAY to SILTY CLAY
19.5	35.8	34.7	5.77	.20	*SANDY CLAY to SILTY CLAY
20.0	34.6	33.2	4.60	.27	CLAYEY SILT to SILTY CLAY

TOP 1.0 FT IS DISTURBED SOIL
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-5

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	42.1	39.9	4.96	.47	*SANDY CLAY to SILTY CLAY
21.0	44.3	41.5	5.54	.66	*SANDY CLAY to SILTY CLAY
21.5	40.4	37.4	4.92	.84	*SANDY CLAY to SILTY CLAY
22.0	46.9	43.0	5.88	1.10	*SANDY CLAY to SILTY CLAY
22.5	80.6	73.1	6.22	1.77	*SANDY CLAY to SILTY CLAY
23.0	89.5	80.4	6.05	2.73	*SANDY CLAY to SILTY CLAY
23.5	76.5	68.0	6.68	4.41	*SANDY CLAY to SILTY CLAY
24.0	112.8	99.2	3.68	5.01	*CLAYEY SAND to SANDY CLAY
24.5	122.7	106.8	4.40	4.22	*CLAYEY SAND to SANDY CLAY
25.0	175.1	150.9	2.32	5.37	SILTY SAND to SANDY SILT
25.5	223.5	190.7	2.72	2.71	*SILTY SAND to CLAYEY SAND
26.0	222.3	187.8	2.52	2.13	*SILTY SAND to CLAYEY SAND
26.5	272.1	227.6	2.25	2.05	*SILTY SAND to CLAYEY SAND
27.0	271.3	224.7	2.38	1.40	*SILTY SAND to CLAYEY SAND
27.5	293.6	240.8	2.67	1.31	*SILTY SAND to CLAYEY SAND
28.0	322.1	261.7	2.59	1.21	*SILTY SAND to CLAYEY SAND
28.5	345.7	278.2	2.53	1.04	*SILTY SAND to CLAYEY SAND
29.0	355.7	283.6	2.32	.96	*SILTY SAND to CLAYEY SAND
29.5	219.6	173.4	3.46	.65	*CLAYEY SAND to SANDY CLAY
30.0	266.1	208.2	2.28	.19	*SILTY SAND to CLAYEY SAND
30.5	305.4	236.8	1.95	.20	SAND to SILTY SAND
31.0	180.3	138.5	2.53	.14	SILTY SAND to SANDY SILT
31.5	44.5	33.9	3.47	-.04	SANDY SILT to CLAYEY SILT
32.0	72.2	54.5	2.36	-.06	SILTY SAND to SANDY SILT
32.5	56.8	42.5	3.57	-.12	SANDY SILT to CLAYEY SILT
33.0	43.7	32.4	2.49	-.15	SANDY SILT to CLAYEY SILT
33.5	45.8	33.6	3.96	.01	CLAYEY SILT to SILTY CLAY
34.0	51.8	37.7	2.93	.02	SANDY SILT to CLAYEY SILT
34.5	61.6	44.5	4.82	.05	*SANDY CLAY to SILTY CLAY
35.0	35.8	25.6	3.52	.06	SANDY SILT to CLAYEY SILT
35.5	25.0	17.7	1.68	.05	SANDY SILT to CLAYEY SILT
36.0	42.4	29.8	2.63	-.09	SANDY SILT to CLAYEY SILT
36.5	92.0	64.1	3.79	-.04	*CLAYEY SAND to SANDY CLAY
37.0	94.3	65.2	3.76	-.00	*CLAYEY SAND to SANDY CLAY
37.5	465.3	319.0	1.82	.89	*SAND to SILTY SAND
38.0	362.4	246.4	1.51	1.00	SAND to SILTY SAND
38.5	237.3	160.0	.81	.99	SAND to SILTY SAND
39.0	57.6	38.5	3.10	.72	SANDY SILT to CLAYEY SILT
39.5	42.3	28.0	2.82	.63	SANDY SILT to CLAYEY SILT
40.0	38.0	25.0	2.67	.46	SANDY SILT to CLAYEY SILT
40.5	31.2	20.4	2.98	.38	SANDY SILT to CLAYEY SILT
41.0	31.1	20.1	2.46	.38	SANDY SILT to CLAYEY SILT
41.5	90.7	58.2	1.96	.43	SILTY SAND to SANDY SILT
42.0	45.8	29.1	4.69	.42	CLAYEY SILT to SILTY CLAY
42.5	91.0	57.4	1.83	.56	SILTY SAND to SANDY SILT
43.0	86.7	54.3	1.01	.50	SAND to SILTY SAND
43.5	112.1	69.6	2.79	.45	SANDY SILT to CLAYEY SILT
44.0	190.0	117.1	1.08	.80	SAND to SILTY SAND
44.5	134.5	82.2	3.42	.91	*CLAYEY SAND to SANDY CLAY
45.0	97.9	59.4	5.53	1.38	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-5

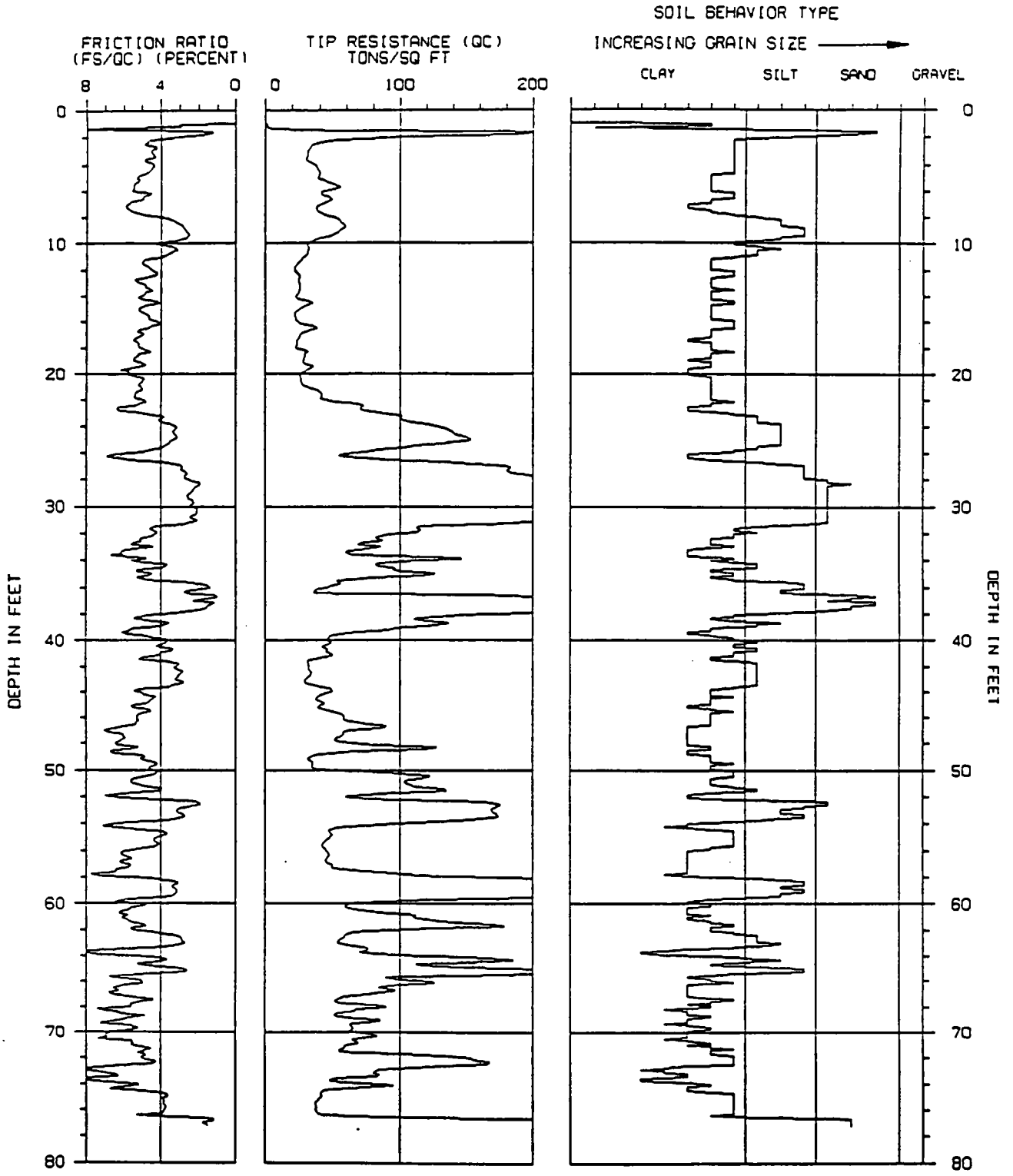
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	137.6	82.8	5.53	4.56	*SANDY CLAY to SILTY CLAY
46.0	71.2	42.5	6.13	8.23	*SANDY CLAY to SILTY CLAY
46.5	48.6	28.8	4.92	12.29	CLAYEY SILT to SILTY CLAY
47.0	41.3	24.3	4.04	25.53	CLAYEY SILT to SILTY CLAY
47.5	37.5	21.9	4.30	23.54	CLAYEY SILT to SILTY CLAY
48.0	29.2	16.9	4.80	19.75	CLAYEY SILT to SILTY CLAY
48.5	74.7	42.9	5.41	29.04	*SANDY CLAY to SILTY CLAY
49.0	90.7	51.7	5.67	33.20	*SANDY CLAY to SILTY CLAY
49.5	77.3	43.7	6.51	15.38	*SANDY CLAY to SILTY CLAY
50.0	53.5	30.0	7.18	13.93	*SANDY CLAY to SILTY CLAY
50.5	66.1	36.8	5.68	35.26	*SANDY CLAY to SILTY CLAY
51.0	73.2	40.4	6.47	12.03	*SANDY CLAY to SILTY CLAY
51.5	117.6	64.4	4.22	20.25	*SANDY CLAY to SILTY CLAY
52.0	60.7	33.0	7.35	17.53	*SANDY CLAY to SILTY CLAY
52.5	44.6	24.2	4.24	26.80	CLAYEY SILT to SILTY CLAY
53.0	44.1	23.8	5.72	29.57	SILTY CLAY TO CLAY
53.5	49.3	26.6	5.10	28.04	CLAYEY SILT to SILTY CLAY
54.0	57.9	31.1	4.66	35.94	CLAYEY SILT to SILTY CLAY
54.5	74.7	39.9	6.66	33.68	*SANDY CLAY to SILTY CLAY
55.0	55.7	29.7	4.70	36.00	CLAYEY SILT to SILTY CLAY
55.5	52.1	27.7	6.50	36.00	*SANDY CLAY to SILTY CLAY
56.0	128.2	67.9	4.93	36.00	*SANDY CLAY to SILTY CLAY
56.5	249.7	131.7	2.58	6.70	SILTY SAND to SANDY SILT
57.0	285.4	150.1	2.07	6.05	SILTY SAND to SANDY SILT
57.5	372.1	195.1	2.14	1.36	SILTY SAND to SANDY SILT
58.0	190.7	99.6	4.30	1.37	*CLAYEY SAND to SANDY CLAY
58.5	71.6	37.3	2.91	1.28	SANDY SILT to CLAYEY SILT
59.0	67.1	34.8	2.62	1.48	SANDY SILT to CLAYEY SILT
59.5	69.2	35.8	2.17	2.03	SILTY SAND to SANDY SILT
60.0	67.4	34.7	2.35	3.12	SANDY SILT to CLAYEY SILT
60.5	66.3	34.1	2.44	13.40	SANDY SILT to CLAYEY SILT
61.0	115.4	59.1	4.25	23.05	*SANDY CLAY to SILTY CLAY
61.5	105.0	53.6	7.89	23.22	*SANDY CLAY to SILTY CLAY
62.0	303.1	154.3	3.30	30.44	*CLAYEY SAND to SANDY CLAY
62.5	92.6	47.0	6.22	5.48	*SANDY CLAY to SILTY CLAY
63.0	65.7	33.2	4.96	35.53	*SANDY CLAY to SILTY CLAY
63.5	77.5	39.0	6.25	23.28	*SANDY CLAY to SILTY CLAY
64.0	116.3	58.4	6.90	35.97	*SANDY CLAY to SILTY CLAY
64.5	119.5	59.8	7.63	36.00	*SANDY CLAY to SILTY CLAY
65.0	160.8	80.2	6.47	34.90	*SANDY CLAY to SILTY CLAY
65.5	158.0	78.6	6.50	36.00	*SANDY CLAY to SILTY CLAY
66.0	172.2	85.4	4.65	33.57	*SANDY CLAY to SILTY CLAY
66.5	197.9	97.8	2.84	18.79	SILTY SAND to SANDY SILT
67.0	217.4	107.1	3.39	22.34	*CLAYEY SAND to SANDY CLAY
67.5	125.2	61.5	6.36	10.46	*SANDY CLAY to SILTY CLAY
68.0	164.1	80.3	4.72	34.57	*SANDY CLAY to SILTY CLAY
68.5	142.3	69.4	4.97	26.22	*SANDY CLAY to SILTY CLAY
69.0	148.9	72.4	3.40	7.79	SANDY SILT to CLAYEY SILT
69.5	68.3	33.1	5.75	12.68	*SANDY CLAY to SILTY CLAY
70.0	63.7	30.8	4.00	35.37	CLAYEY SILT to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-5

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	54.6	26.3	3.74	36.00	CLAYEY SILT to SILTY CLAY
71.0	58.8	28.2	4.70	33.27	CLAYEY SILT to SILTY CLAY
71.5	112.5	53.8	4.75	33.53	*SANDY CLAY to SILTY CLAY
72.0	174.1	83.0	4.63	33.79	*SANDY CLAY to SILTY CLAY
72.5	58.0	27.6	6.78	13.45	*SANDY CLAY to SILTY CLAY
73.0	44.8	21.2	3.28	26.78	SANDY SILT to CLAYEY SILT
73.5	48.2	22.7	3.50	33.05	CLAYEY SILT to SILTY CLAY
74.0	43.3	20.4	3.57	35.84	CLAYEY SILT to SILTY CLAY
74.5	43.8	20.5	3.32	36.00	SANDY SILT to CLAYEY SILT
75.0	47.2	22.1	3.30	36.00	SANDY SILT to CLAYEY SILT
75.5	53.6	25.0	4.60	33.48	CLAYEY SILT to SILTY CLAY
76.0	55.9	26.0	3.54	35.98	SANDY SILT to CLAYEY SILT
76.5	70.9	32.9	4.79	36.00	*SANDY CLAY to SILTY CLAY
77.0	108.2	49.9	7.65	26.31	*SANDY CLAY to SILTY CLAY
77.5	207.4	95.4	4.07	35.22	*CLAYEY SAND to SANDY CLAY
78.0	293.2	134.4	2.40	11.50	SILTY SAND to SANDY SILT
78.5	387.6	177.2	1.42	33.41	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT



TOP 1.0 FT IS DISTURBED SOIL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 52.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-6

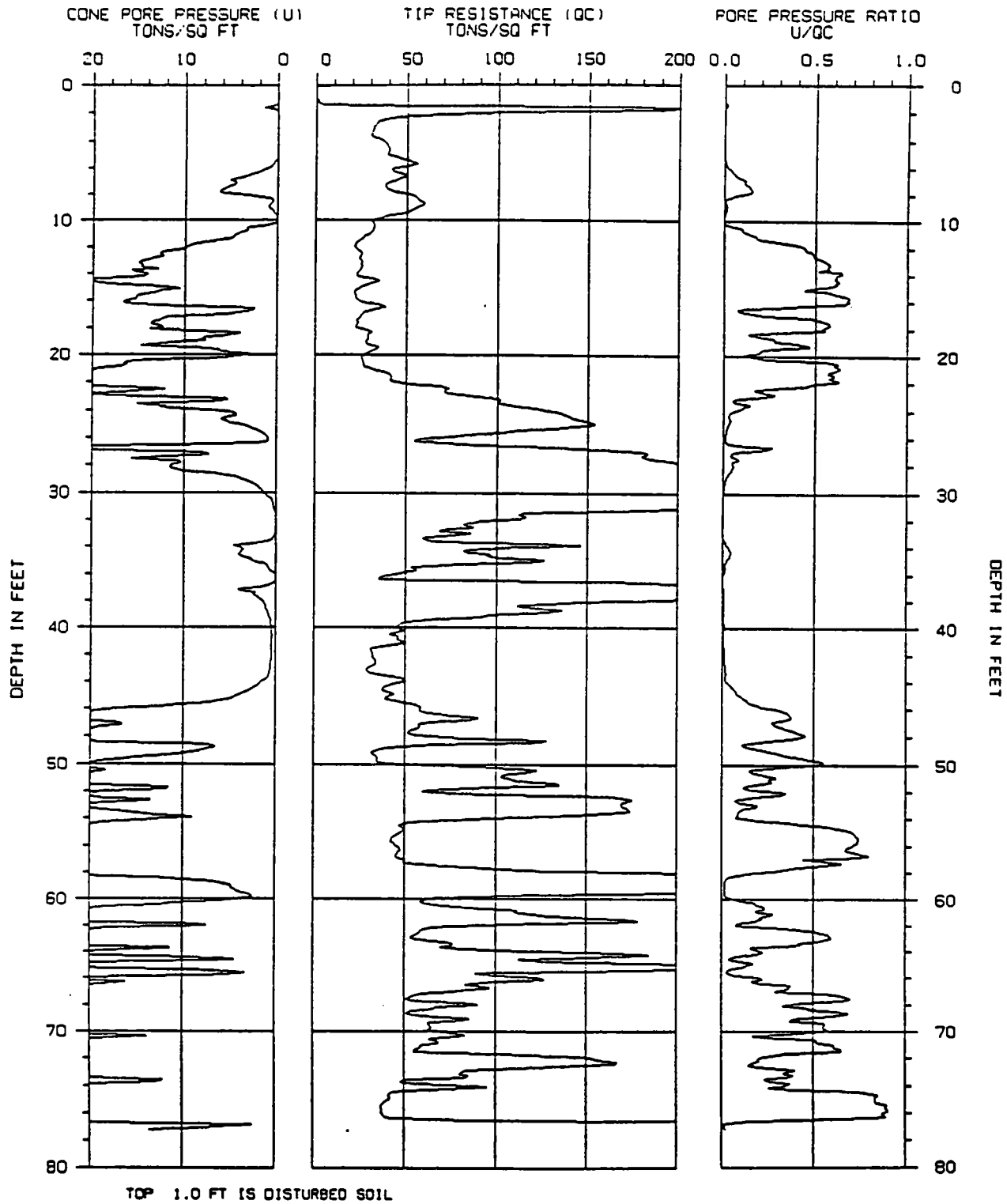
PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-0111

LOCATION : TORRANCE

DATE : 06-04-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-6

PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-0111

LOCATION : TORRANCE

DATE : 06-04-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-6
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE
DATE : 06-04-1992

PROJECT NO : 92-380-0111
INSTRUMENT : F15CKE091
SYSTEM : T2
OPERATOR : EC/KC

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	.0	.0	.00	.00	
1.0	.0	.0	.00	.00	
1.5	54.9	114.3	2.37	.76	SILTY SAND to SANDY SILT
2.0	104.1	204.0	3.17	-.06	*SILTY SAND to CLAYEY SAND
2.5	35.9	66.8	4.90	-.03	*SANDY CLAY to SILTY CLAY
3.0	31.7	56.4	4.52	-.22	*SANDY CLAY to SILTY CLAY
3.5	30.5	52.4	4.52	-.21	*SANDY CLAY to SILTY CLAY
4.0	37.2	61.7	4.37	-.13	*SANDY CLAY to SILTY CLAY
4.5	40.0	64.3	4.64	-.04	*SANDY CLAY to SILTY CLAY
5.0	38.8	60.6	5.33	.00	*SANDY CLAY to SILTY CLAY
5.5	51.0	77.5	5.47	.28	*SANDY CLAY to SILTY CLAY
6.0	43.5	64.5	5.56	.95	*SANDY CLAY to SILTY CLAY
6.5	48.0	69.5	4.96	2.77	*SANDY CLAY to SILTY CLAY
7.0	43.0	60.9	5.72	4.78	*SANDY CLAY to SILTY CLAY
7.5	38.9	53.8	5.62	5.66	*SANDY CLAY to SILTY CLAY
8.0	50.2	68.1	4.00	4.48	*CLAYEY SAND to SANDY CLAY
8.5	57.2	76.2	3.07	.42	SANDY SILT to CLAYEY SILT
9.0	55.9	72.9	2.68	.86	SILTY SAND to SANDY SILT
9.5	46.0	59.0	2.61	.26	SANDY SILT to CLAYEY SILT
10.0	31.3	39.4	4.31	.01	CLAYEY SILT to SILTY CLAY
10.5	32.2	39.9	3.18	2.83	SANDY SILT to CLAYEY SILT
11.0	29.5	36.0	3.95	4.37	CLAYEY SILT to SILTY CLAY
11.5	24.4	29.2	5.00	6.40	CLAYEY SILT to SILTY CLAY
12.0	22.0	25.9	4.51	9.73	CLAYEY SILT to SILTY CLAY
12.5	25.7	29.9	4.60	12.59	CLAYEY SILT to SILTY CLAY
13.0	25.2	28.9	5.07	13.91	CLAYEY SILT to SILTY CLAY
13.5	25.9	29.3	4.47	14.78	CLAYEY SILT to SILTY CLAY
14.0	22.7	25.3	5.08	14.10	CLAYEY SILT to SILTY CLAY
14.5	35.0	38.5	4.10	22.05	CLAYEY SILT to SILTY CLAY
15.0	25.3	27.4	5.20	12.13	CLAYEY SILT to SILTY CLAY
15.5	22.0	23.6	4.63	14.20	CLAYEY SILT to SILTY CLAY
16.0	23.8	25.1	4.16	16.28	CLAYEY SILT to SILTY CLAY
16.5	38.4	40.0	4.75	5.10	*SANDY CLAY to SILTY CLAY
17.0	25.9	26.6	5.00	5.59	CLAYEY SILT to SILTY CLAY
17.5	23.0	23.4	5.41	12.81	SILTY CLAY TO CLAY
18.0	23.0	23.1	5.09	12.31	CLAYEY SILT to SILTY CLAY
18.5	29.1	28.9	5.22	4.67	*SANDY CLAY to SILTY CLAY
19.0	27.9	27.4	5.49	9.42	*SANDY CLAY to SILTY CLAY
19.5	34.8	33.8	5.26	8.90	*SANDY CLAY to SILTY CLAY
20.0	26.0	24.9	5.88	3.26	*SANDY CLAY to SILTY CLAY

TOP 1.0 FT IS DISTURBED SOIL
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-6

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	26.2	24.8	5.02	16.20	CLAYEY SILT to SILTY CLAY
21.0	31.0	29.0	5.07	19.32	CLAYEY SILT to SILTY CLAY
21.5	41.6	38.5	5.41	24.99	*SANDY CLAY to SILTY CLAY
22.0	44.7	41.0	4.91	22.65	*SANDY CLAY to SILTY CLAY
22.5	71.8	65.1	6.16	12.11	*SANDY CLAY to SILTY CLAY
23.0	88.3	79.3	4.80	14.96	*SANDY CLAY to SILTY CLAY
23.5	99.9	88.8	4.15	11.97	*CLAYEY SAND to SANDY CLAY
24.0	126.5	111.2	3.26	7.37	*CLAYEY SAND to SANDY CLAY
24.5	140.1	122.0	3.34	5.21	*CLAYEY SAND to SANDY CLAY
25.0	153.7	132.5	3.30	4.30	*CLAYEY SAND to SANDY CLAY
25.5	111.7	95.3	3.82	2.00	*CLAYEY SAND to SANDY CLAY
26.0	66.7	56.3	5.57	.89	*SANDY CLAY to SILTY CLAY
26.5	89.1	74.5	5.70	11.68	*SANDY CLAY to SILTY CLAY
27.0	178.4	147.8	2.90	11.18	*SILTY SAND to CLAYEY SAND
27.5	184.8	151.6	2.60	15.58	*SILTY SAND to CLAYEY SAND
28.0	208.8	169.6	2.59	11.43	*SILTY SAND to CLAYEY SAND
28.5	247.6	199.2	2.12	8.60	SILTY SAND to SANDY SILT
29.0	253.8	202.3	2.46	3.76	*SILTY SAND to CLAYEY SAND
29.5	251.3	198.5	2.44	2.06	*SILTY SAND to CLAYEY SAND
30.0	259.7	203.2	2.38	1.31	*SILTY SAND to CLAYEY SAND
30.5	254.3	197.2	2.09	.44	SILTY SAND to SANDY SILT
31.0	236.1	181.4	2.10	.30	SILTY SAND to SANDY SILT
31.5	114.9	87.5	4.33	.03	*CLAYEY SAND to SANDY CLAY
32.0	101.6	76.6	4.28	-.07	*CLAYEY SAND to SANDY CLAY
32.5	87.1	65.1	5.08	-.11	*SANDY CLAY to SILTY CLAY
33.0	85.5	63.4	4.42	.07	*SANDY CLAY to SILTY CLAY
33.5	61.9	45.5	6.09	.58	*SANDY CLAY to SILTY CLAY
34.0	112.4	81.9	5.62	4.15	*SANDY CLAY to SILTY CLAY
34.5	94.4	68.2	4.04	3.98	*CLAYEY SAND to SANDY CLAY
35.0	126.0	90.2	4.47	2.81	*SANDY CLAY to SILTY CLAY
35.5	53.0	37.6	4.14	.84	CLAYEY SILT to SILTY CLAY
36.0	45.2	31.8	1.42	.01	SILTY SAND to SANDY SILT
36.5	62.8	43.8	2.28	-.05	SILTY SAND to SANDY SILT
37.0	271.6	187.8	2.29	1.62	SILTY SAND to SANDY SILT
37.5	391.7	268.5	1.59	2.45	SAND to SILTY SAND
38.0	168.2	114.4	4.05	1.46	*CLAYEY SAND to SANDY CLAY
38.5	119.7	80.7	4.41	1.08	*SANDY CLAY to SILTY CLAY
39.0	105.4	70.4	4.76	.77	*SANDY CLAY to SILTY CLAY
39.5	56.9	37.7	5.89	.55	*SANDY CLAY to SILTY CLAY
40.0	45.4	29.8	3.71	.47	CLAYEY SILT to SILTY CLAY
40.5	41.5	27.1	4.05	.39	CLAYEY SILT to SILTY CLAY
41.0	47.3	30.6	4.00	.40	CLAYEY SILT to SILTY CLAY
41.5	33.0	21.2	4.79	.40	CLAYEY SILT to SILTY CLAY
42.0	32.3	20.5	3.23	.44	SANDY SILT to CLAYEY SILT
42.5	34.1	21.6	2.87	.50	SANDY SILT to CLAYEY SILT
43.0	29.8	18.7	3.29	.59	SANDY SILT to CLAYEY SILT
43.5	35.3	22.0	3.35	.75	SANDY SILT to CLAYEY SILT
44.0	49.4	30.4	5.16	1.53	*SANDY CLAY to SILTY CLAY
44.5	37.9	23.2	4.40	2.48	CLAYEY SILT to SILTY CLAY
45.0	43.1	26.1	5.24	4.08	CLAYEY SILT to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-6

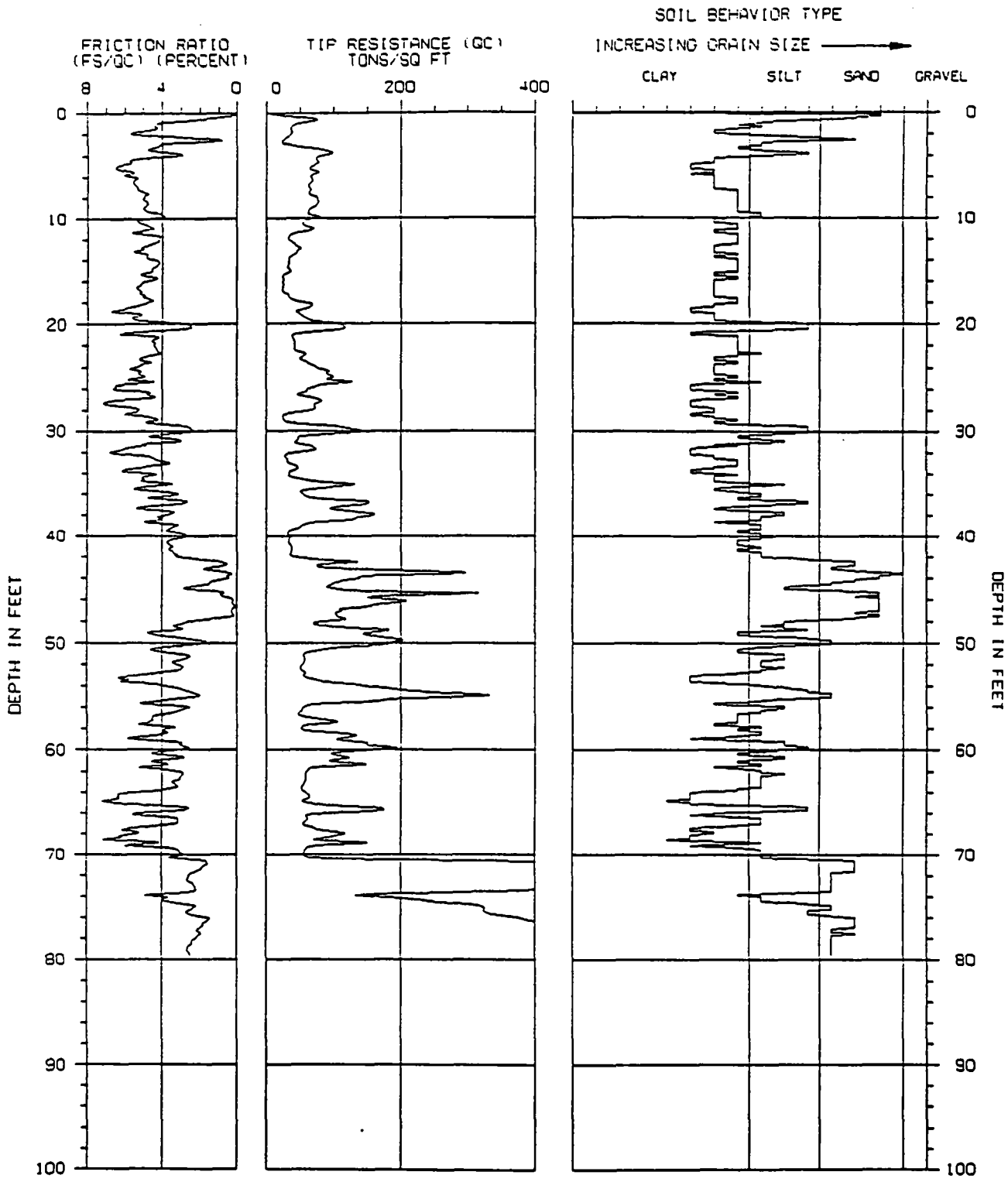
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	49.0	29.5	4.52	7.24	CLAYEY SILT to SILTY CLAY
46.0	58.2	34.7	5.28	17.10	*SANDY CLAY to SILTY CLAY
46.5	75.5	44.7	5.36	28.72	*SANDY CLAY to SILTY CLAY
47.0	63.5	37.3	7.05	17.26	*SANDY CLAY to SILTY CLAY
47.5	54.2	31.6	5.90	20.29	*SANDY CLAY to SILTY CLAY
48.0	64.5	37.3	6.43	27.96	*SANDY CLAY to SILTY CLAY
48.5	91.2	52.3	6.45	10.52	*SANDY CLAY to SILTY CLAY
49.0	33.6	19.1	4.87	8.36	CLAYEY SILT to SILTY CLAY
49.5	35.2	19.9	4.23	15.12	CLAYEY SILT to SILTY CLAY
50.0	50.4	28.2	4.32	24.23	CLAYEY SILT to SILTY CLAY
50.5	122.1	67.9	4.96	18.29	*SANDY CLAY to SILTY CLAY
51.0	105.3	58.1	5.46	31.34	*SANDY CLAY to SILTY CLAY
51.5	134.6	73.8	4.05	20.79	*CLAYEY SAND to SANDY CLAY
52.0	59.3	32.2	6.69	18.09	*SANDY CLAY to SILTY CLAY
52.5	172.3	93.4	1.95	18.40	SILTY SAND to SANDY SILT
53.0	169.1	91.3	3.16	33.34	*CLAYEY SAND to SANDY CLAY
53.5	170.8	91.9	2.88	15.97	SILTY SAND to SANDY SILT
54.0	96.4	51.7	6.37	12.02	*SANDY CLAY to SILTY CLAY
54.5	46.9	25.1	4.44	24.04	CLAYEY SILT to SILTY CLAY
55.0	48.0	25.6	4.23	34.33	CLAYEY SILT to SILTY CLAY
55.5	42.7	22.7	4.12	31.70	CLAYEY SILT to SILTY CLAY
56.0	45.3	24.0	5.75	32.12	SILTY CLAY TO CLAY
56.5	46.4	24.5	5.71	33.19	SILTY CLAY TO CLAY
57.0	48.7	25.6	5.84	21.73	*SANDY CLAY to SILTY CLAY
57.5	72.0	37.7	6.38	35.77	*SANDY CLAY to SILTY CLAY
58.0	183.8	96.0	5.68	35.97	*SANDY CLAY to SILTY CLAY
58.5	379.4	197.6	3.16	10.12	*SILTY SAND to CLAYEY SAND
59.0	281.3	146.0	3.14	4.79	*SILTY SAND to CLAYEY SAND
59.5	207.5	107.4	3.95	3.54	*CLAYEY SAND to SANDY CLAY
60.0	62.9	32.4	5.22	4.19	*SANDY CLAY to SILTY CLAY
60.5	71.4	36.7	5.78	15.62	*SANDY CLAY to SILTY CLAY
61.0	110.1	56.4	6.07	21.94	*SANDY CLAY to SILTY CLAY
61.5	152.6	77.9	5.40	34.42	*SANDY CLAY to SILTY CLAY
62.0	93.7	47.7	5.57	7.43	*SANDY CLAY to SILTY CLAY
62.5	58.5	29.7	3.13	29.58	SANDY SILT to CLAYEY SILT
63.0	53.6	27.1	2.74	31.83	SANDY SILT to CLAYEY SILT
63.5	76.5	38.6	5.87	32.73	*SANDY CLAY to SILTY CLAY
64.0	121.8	61.2	5.66	26.17	*SANDY CLAY to SILTY CLAY
64.5	135.7	68.0	4.54	6.56	*SANDY CLAY to SILTY CLAY
65.0	230.8	115.2	2.86	34.98	SILTY SAND to SANDY SILT
65.5	149.4	74.3	5.74	4.83	*SANDY CLAY to SILTY CLAY
66.0	123.0	61.0	5.04	26.27	*SANDY CLAY to SILTY CLAY
66.5	83.6	41.3	6.54	27.29	*SANDY CLAY to SILTY CLAY
67.0	76.4	37.6	6.67	22.17	*SANDY CLAY to SILTY CLAY
67.5	52.6	25.8	4.43	35.93	CLAYEY SILT to SILTY CLAY
68.0	89.7	43.9	5.58	33.17	*SANDY CLAY to SILTY CLAY
68.5	53.7	26.2	6.36	30.09	*SANDY CLAY to SILTY CLAY
69.0	83.8	40.7	5.95	35.97	*SANDY CLAY to SILTY CLAY
69.5	63.3	30.7	5.61	35.71	*SANDY CLAY to SILTY CLAY
70.0	65.9	31.8	6.60	35.97	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT

SOUNDING : CPT-6

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	65.6	31.6	7.38	20.83	*SANDY CLAY to SILTY CLAY
71.0	61.3	29.4	5.62	35.95	*SANDY CLAY to SILTY CLAY
71.5	55.3	26.5	4.94	35.97	CLAYEY SILT to SILTY CLAY
72.0	152.6	72.8	5.07	31.34	*SANDY CLAY to SILTY CLAY
72.5	149.8	71.2	5.04	21.66	*SANDY CLAY to SILTY CLAY
73.0	82.2	39.0	8.00	30.55	*SANDY CLAY to SILTY CLAY
73.5	68.3	32.2	7.14	17.09	*SANDY CLAY to SILTY CLAY
74.0	86.1	40.5	5.28	30.08	*SANDY CLAY to SILTY CLAY
74.5	44.1	20.7	5.60	32.25	SILTY CLAY TO CLAY
75.0	41.8	19.6	3.69	35.11	CLAYEY SILT to SILTY CLAY
75.5	37.2	17.4	3.87	33.59	CLAYEY SILT to SILTY CLAY
76.0	37.7	17.5	3.82	33.41	CLAYEY SILT to SILTY CLAY
76.5	88.6	41.0	3.36	35.94	SANDY SILT to CLAYEY SILT
77.0	461.4	213.0	1.77	6.29	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 52.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 54.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-7A

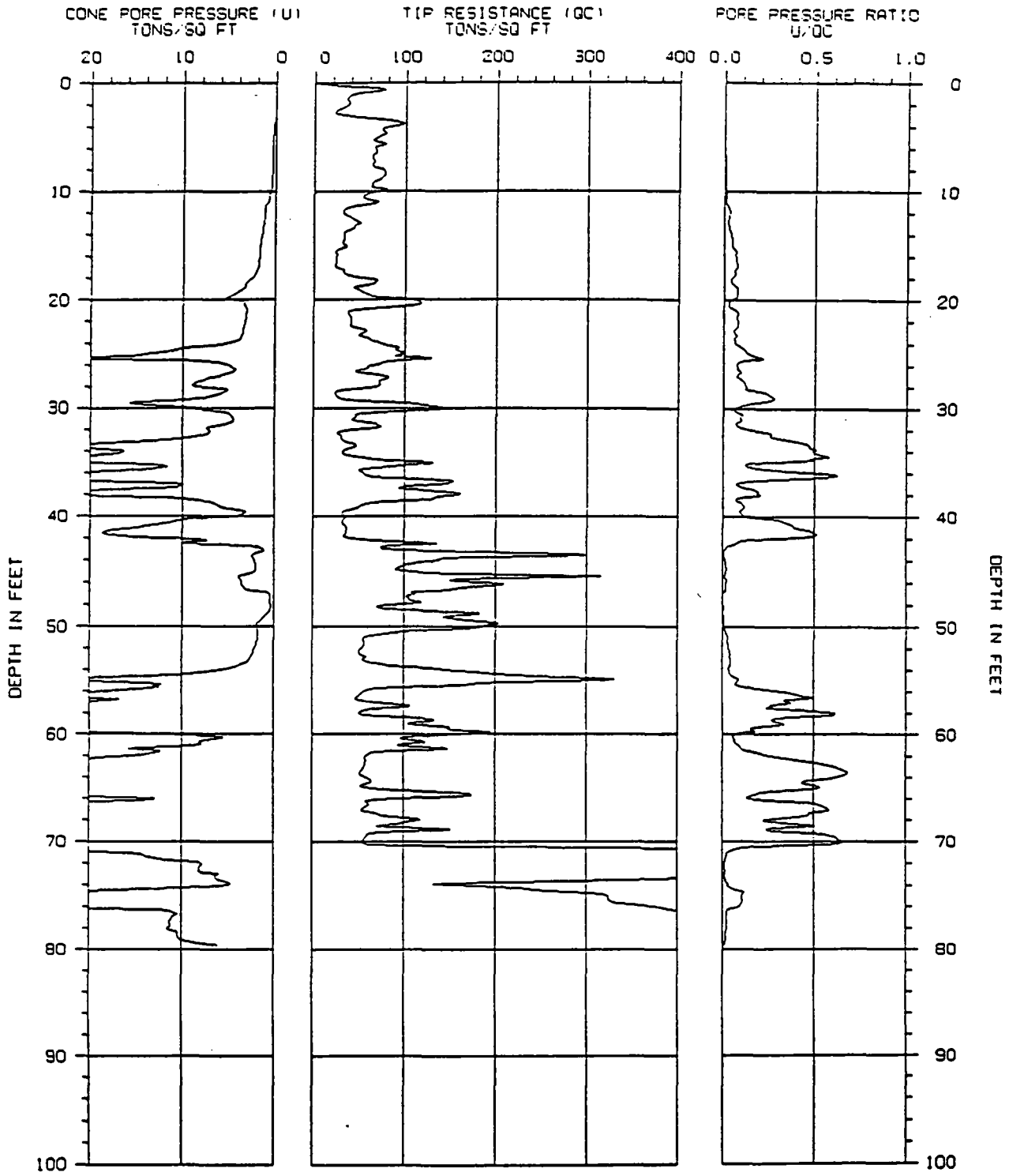
PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-14-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-7A

PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-14-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-7A
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 07-14-1992

PROJECT NO : 92-380-01111
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/MS

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	66.9	171.2	1.37	.03	SAND to SILTY SAND
1.0	48.7	110.0	4.22	.02	*CLAYEY SAND to SANDY CLAY
1.5	36.1	75.2	4.41	-.03	*SANDY CLAY to SILTY CLAY
2.0	36.8	72.1	5.56	-.03	*SANDY CLAY to SILTY CLAY
2.5	26.1	48.6	1.10	-.07	SILTY SAND to SANDY SILT
3.0	33.5	59.7	4.12	.02	*CLAYEY SAND to SANDY CLAY
3.5	88.8	152.4	4.57	.16	*CLAYEY SAND to SANDY CLAY
4.0	82.3	136.4	3.47	.23	*CLAYEY SAND to SANDY CLAY
4.5	76.6	123.0	5.77	.27	*SANDY CLAY to SILTY CLAY
5.0	67.8	105.8	6.50	.28	*SANDY CLAY to SILTY CLAY
5.5	77.0	117.0	5.57	.29	*SANDY CLAY to SILTY CLAY
6.0	66.6	98.6	5.44	.31	*SANDY CLAY to SILTY CLAY
6.5	67.3	97.4	5.56	.31	*SANDY CLAY to SILTY CLAY
7.0	64.9	91.7	5.32	.33	*SANDY CLAY to SILTY CLAY
7.5	63.4	87.8	4.86	.36	*SANDY CLAY to SILTY CLAY
8.0	76.3	103.5	4.97	.38	*SANDY CLAY to SILTY CLAY
8.5	77.1	102.5	4.78	.39	*SANDY CLAY to SILTY CLAY
9.0	67.5	88.1	5.01	.39	*SANDY CLAY to SILTY CLAY
9.5	62.6	80.2	4.08	.41	*CLAYEY SAND to SANDY CLAY
10.0	69.1	87.1	4.77	.64	*SANDY CLAY to SILTY CLAY
10.5	53.8	66.6	5.10	.67	*SANDY CLAY to SILTY CLAY
11.0	69.1	84.1	4.94	.77	*SANDY CLAY to SILTY CLAY
11.5	38.0	45.6	4.80	1.09	*SANDY CLAY to SILTY CLAY
12.0	32.4	38.3	4.21	1.09	CLAYEY SILT to SILTY CLAY
12.5	42.0	48.8	4.63	1.16	*SANDY CLAY to SILTY CLAY
13.0	48.7	55.7	5.27	1.25	*SANDY CLAY to SILTY CLAY
13.5	41.1	46.4	4.83	1.33	*SANDY CLAY to SILTY CLAY
14.0	33.8	37.6	4.26	1.41	CLAYEY SILT to SILTY CLAY
14.5	32.6	35.8	4.34	1.54	CLAYEY SILT to SILTY CLAY
15.0	36.1	39.1	4.53	1.62	*SANDY CLAY to SILTY CLAY
15.5	24.5	26.2	4.82	1.64	CLAYEY SILT to SILTY CLAY
16.0	25.1	26.5	4.92	1.69	CLAYEY SILT to SILTY CLAY
16.5	24.8	25.9	5.37	1.75	CLAYEY SILT to SILTY CLAY
17.0	25.2	26.0	5.10	1.82	CLAYEY SILT to SILTY CLAY
17.5	33.1	33.7	5.01	2.09	*SANDY CLAY to SILTY CLAY
18.0	52.7	52.9	4.81	2.41	*SANDY CLAY to SILTY CLAY
18.5	63.6	63.1	5.92	3.20	*SANDY CLAY to SILTY CLAY
19.0	47.9	46.9	5.34	3.49	*SANDY CLAY to SILTY CLAY
19.5	59.7	57.9	5.59	4.47	*SANDY CLAY to SILTY CLAY
20.0	106.2	101.8	2.72	4.66	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-7A

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	106.8	101.2	3.35	3.28	*CLAYEY SAND to SANDY CLAY
21.0	39.9	37.4	5.82	3.03	*SANDY CLAY to SILTY CLAY
21.5	40.2	37.3	4.56	3.07	*SANDY CLAY to SILTY CLAY
22.0	41.6	38.1	4.44	3.20	CLAYEY SILT to SILTY CLAY
22.5	44.4	40.3	4.27	3.35	CLAYEY SILT to SILTY CLAY
23.0	56.3	50.5	4.82	3.47	*SANDY CLAY to SILTY CLAY
23.5	57.1	50.8	4.85	3.65	*SANDY CLAY to SILTY CLAY
24.0	74.8	65.8	5.33	5.32	*SANDY CLAY to SILTY CLAY
24.5	90.8	79.1	5.30	10.20	*SANDY CLAY to SILTY CLAY
25.0	99.4	85.7	5.12	14.10	*SANDY CLAY to SILTY CLAY
25.5	117.3	100.0	4.86	22.01	*SANDY CLAY to SILTY CLAY
26.0	63.1	53.3	6.68	4.83	*SANDY CLAY to SILTY CLAY
26.5	47.6	39.8	4.87	4.31	*SANDY CLAY to SILTY CLAY
27.0	75.2	62.2	5.66	5.75	*SANDY CLAY to SILTY CLAY
27.5	71.9	59.0	7.10	7.79	*SANDY CLAY to SILTY CLAY
28.0	67.6	54.9	5.36	8.67	*SANDY CLAY to SILTY CLAY
28.5	24.4	19.7	5.30	5.41	SILTY CLAY TO CLAY
29.0	26.5	21.1	4.26	7.22	CLAYEY SILT to SILTY CLAY
29.5	76.0	60.0	3.21	14.87	SANDY SILT to CLAYEY SILT
30.0	142.6	111.6	2.37	9.13	SILTY SAND to SANDY SILT
30.5	53.2	41.2	4.74	5.11	*SANDY CLAY to SILTY CLAY
31.0	44.0	33.8	2.98	4.45	SANDY SILT to CLAYEY SILT
31.5	68.9	52.4	5.26	5.05	*SANDY CLAY to SILTY CLAY
32.0	45.1	34.1	6.83	7.18	*SANDY CLAY to SILTY CLAY
32.5	28.8	21.5	4.58	7.56	CLAYEY SILT to SILTY CLAY
33.0	32.6	24.1	3.64	11.76	CLAYEY SILT to SILTY CLAY
33.5	47.6	35.0	5.25	22.66	*SANDY CLAY to SILTY CLAY
34.0	33.3	24.3	4.68	16.29	CLAYEY SILT to SILTY CLAY
34.5	45.7	33.0	5.13	26.53	*SANDY CLAY to SILTY CLAY
35.0	111.9	80.1	3.79	31.08	*CLAYEY SAND to SANDY CLAY
35.5	68.1	48.3	5.53	12.56	*SANDY CLAY to SILTY CLAY
36.0	54.4	38.3	3.16	29.42	SANDY SILT to CLAYEY SILT
36.5	83.0	57.9	4.28	35.94	*SANDY CLAY to SILTY CLAY
37.0	148.3	102.6	3.06	10.83	*CLAYEY SAND to SANDY CLAY
37.5	105.4	72.3	4.56	18.10	*SANDY CLAY to SILTY CLAY
38.0	160.4	109.1	3.73	33.33	*CLAYEY SAND to SANDY CLAY
38.5	127.0	85.6	4.11	9.34	*CLAYEY SAND to SANDY CLAY
39.0	54.9	36.7	3.15	6.28	SANDY SILT to CLAYEY SILT
39.5	34.5	22.9	3.79	3.18	CLAYEY SILT to SILTY CLAY
40.0	34.5	22.7	2.69	4.09	SANDY SILT to CLAYEY SILT
40.5	32.8	21.4	3.66	10.83	CLAYEY SILT to SILTY CLAY
41.0	37.6	24.3	3.44	14.90	SANDY SILT to CLAYEY SILT
41.5	36.9	23.7	3.44	18.59	SANDY SILT to CLAYEY SILT
42.0	41.3	26.3	3.29	12.04	SANDY SILT to CLAYEY SILT
42.5	135.7	85.6	.83	10.13	SAND to SILTY SAND
43.0	96.1	60.2	1.69	1.08	SILTY SAND to SANDY SILT
43.5	296.9	184.4	.44	2.33	SANDY GRAVEL to SAND
44.0	137.7	84.8	.45	2.15	SAND to SILTY SAND
44.5	98.9	60.4	1.45	1.95	SILTY SAND to SANDY SILT
45.0	107.4	65.1	2.68	2.14	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-7A

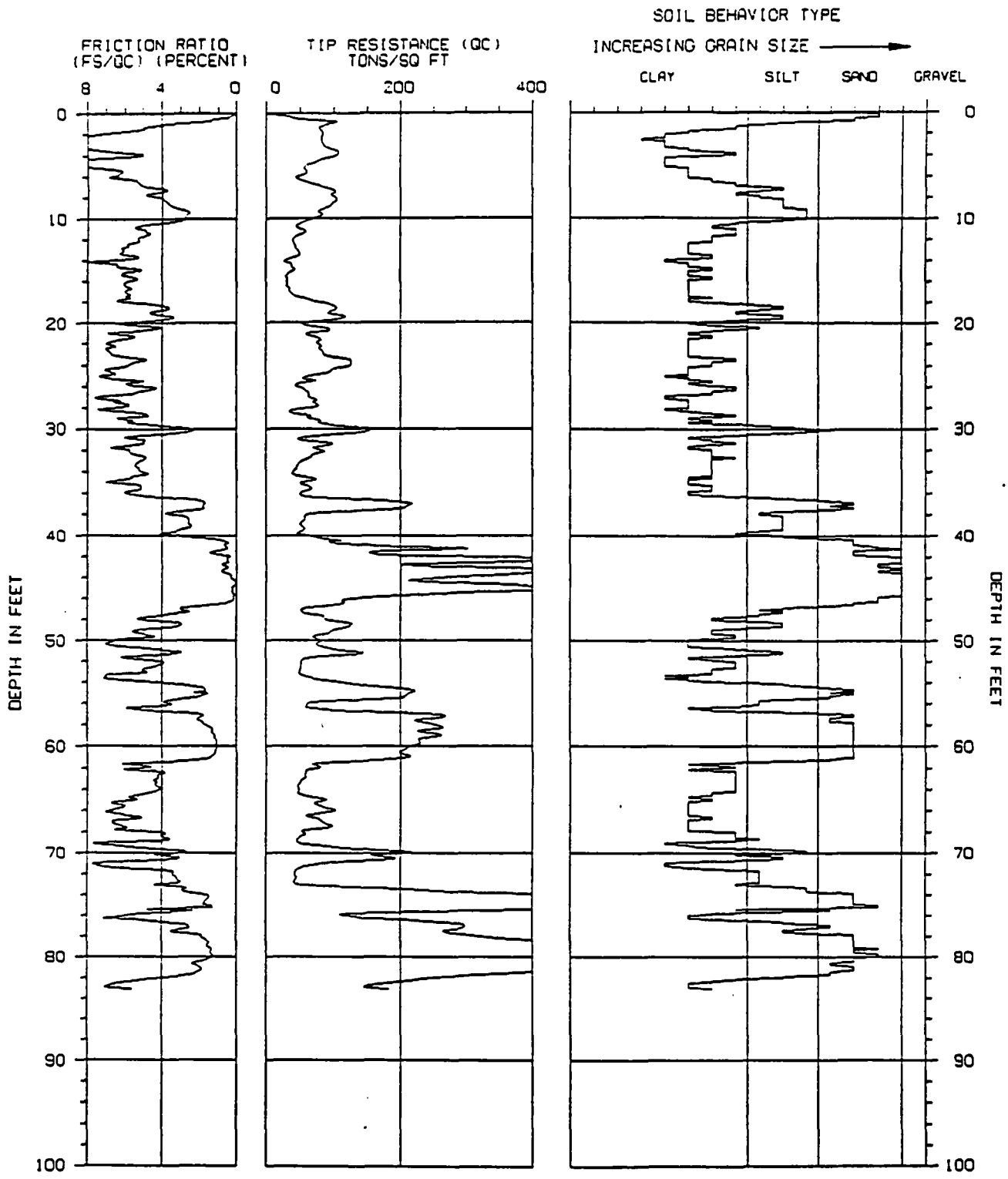
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	266.8	160.5	.90	3.92	SAND to SILTY SAND
46.0	183.0	109.2	.22	3.53	SAND to SILTY SAND
46.5	161.1	95.4	.16	3.25	SAND to SILTY SAND
47.0	112.9	66.3	.28	.43	SAND to SILTY SAND
47.5	104.6	61.0	.20	.41	SAND to SILTY SAND
48.0	84.1	48.6	2.53	.38	SANDY SILT to CLAYEY SILT
48.5	106.2	60.9	3.25	.41	SANDY SILT to CLAYEY SILT
49.0	148.4	84.5	4.83	.96	*SANDY CLAY to SILTY CLAY
49.5	181.8	102.7	2.94	1.52	SILTY SAND to SANDY SILT
50.0	184.8	103.6	1.82	1.88	SILTY SAND to SANDY SILT
50.5	88.6	49.3	4.57	1.75	*SANDY CLAY to SILTY CLAY
51.0	55.5	30.6	2.90	1.75	SANDY SILT to CLAYEY SILT
51.5	56.8	31.1	2.87	1.87	SANDY SILT to CLAYEY SILT
52.0	54.3	29.5	3.25	2.06	SANDY SILT to CLAYEY SILT
52.5	52.9	28.5	3.28	2.35	SANDY SILT to CLAYEY SILT
53.0	55.3	29.6	5.50	2.65	*SANDY CLAY to SILTY CLAY
53.5	77.9	41.4	6.21	3.68	*SANDY CLAY to SILTY CLAY
54.0	144.0	75.9	3.97	5.79	*CLAYEY SAND to SANDY CLAY
54.5	242.7	127.6	2.47	13.96	SILTY SAND to SANDY SILT
55.0	271.1	142.0	2.39	23.14	SILTY SAND to SANDY SILT
55.5	127.5	66.5	4.78	13.16	*SANDY CLAY to SILTY CLAY
56.0	56.9	29.6	2.52	18.41	SANDY SILT to CLAYEY SILT
56.5	47.9	24.8	3.61	23.66	CLAYEY SILT to SILTY CLAY
57.0	71.1	36.7	4.56	26.83	*SANDY CLAY to SILTY CLAY
57.5	87.7	45.2	4.89	20.90	*SANDY CLAY to SILTY CLAY
58.0	50.5	25.9	3.72	31.16	CLAYEY SILT to SILTY CLAY
58.5	130.5	66.8	4.04	35.93	*CLAYEY SAND to SANDY CLAY
59.0	105.0	53.6	5.35	35.65	*SANDY CLAY to SILTY CLAY
59.5	148.0	75.2	3.11	22.08	SANDY SILT to CLAYEY SILT
60.0	156.3	79.2	3.18	12.07	SANDY SILT to CLAYEY SILT
60.5	107.6	54.4	3.46	7.29	SANDY SILT to CLAYEY SILT
61.0	92.9	46.8	4.41	7.96	*SANDY CLAY to SILTY CLAY
61.5	120.6	60.5	4.14	13.82	*CLAYEY SAND to SANDY CLAY
62.0	59.6	29.8	3.12	15.62	SANDY SILT to CLAYEY SILT
62.5	58.7	29.3	3.00	25.89	SANDY SILT to CLAYEY SILT
63.0	56.9	28.3	3.45	33.93	SANDY SILT to CLAYEY SILT
63.5	53.3	26.4	3.15	35.92	SANDY SILT to CLAYEY SILT
64.0	58.1	28.7	5.48	35.93	*SANDY CLAY to SILTY CLAY
64.5	64.2	31.6	6.47	28.11	*SANDY CLAY to SILTY CLAY
65.0	57.6	28.3	6.91	30.71	*SANDY CLAY to SILTY CLAY
65.5	151.7	74.2	2.75	33.40	SILTY SAND to SANDY SILT
66.0	94.0	45.8	5.27	12.86	*SANDY CLAY to SILTY CLAY
66.5	61.6	29.9	3.28	31.11	SANDY SILT to CLAYEY SILT
67.0	55.3	26.8	3.14	31.92	SANDY SILT to CLAYEY SILT
67.5	71.7	34.6	5.66	34.42	*SANDY CLAY to SILTY CLAY
68.0	117.4	56.5	5.36	27.47	*SANDY CLAY to SILTY CLAY
68.5	78.4	37.6	6.74	35.77	*SANDY CLAY to SILTY CLAY
69.0	136.2	65.1	4.49	33.24	*SANDY CLAY to SILTY CLAY
69.5	58.7	27.9	3.15	35.25	SANDY SILT to CLAYEY SILT
70.0	55.6	26.4	2.83	35.93	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-7A

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	194.8	92.2	2.08	35.93	SILTY SAND to SANDY SILT
71.0	550.3	259.6	1.62	19.68	SAND to SILTY SAND
71.5	626.3	294.5	2.03	12.93	*SAND to SILTY SAND
72.0	574.1	269.1	2.55	7.84	*SILTY SAND to CLAYEY SAND
72.5	531.9	248.5	2.70	8.10	*SILTY SAND to CLAYEY SAND
73.0	463.9	216.0	2.33	6.03	*SILTY SAND to CLAYEY SAND
73.5	337.3	156.6	2.35	5.93	SILTY SAND to SANDY SILT
74.0	152.6	70.6	4.10	4.97	*CLAYEY SAND to SANDY CLAY
74.5	242.4	111.8	3.82	17.85	*CLAYEY SAND to SANDY CLAY
75.0	320.5	147.4	2.19	34.99	SILTY SAND to SANDY SILT
75.5	326.3	149.5	2.72	35.90	*SILTY SAND to CLAYEY SAND
76.0	373.7	170.7	1.68	35.14	SAND to SILTY SAND
76.5	411.0	187.1	1.71	11.10	SAND to SILTY SAND
77.0	456.4	207.1	1.94	11.01	SAND to SILTY SAND
77.5	435.3	196.9	1.93	11.26	SAND to SILTY SAND
78.0	481.3	217.0	2.18	11.48	SILTY SAND to SANDY SILT
78.5	519.7	233.5	2.39	10.41	*SILTY SAND to CLAYEY SAND
79.0	564.9	253.0	2.65	10.23	*SILTY SAND to CLAYEY SAND
79.5	612.5	273.5	2.49	6.46	*SILTY SAND to CLAYEY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 35.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-8

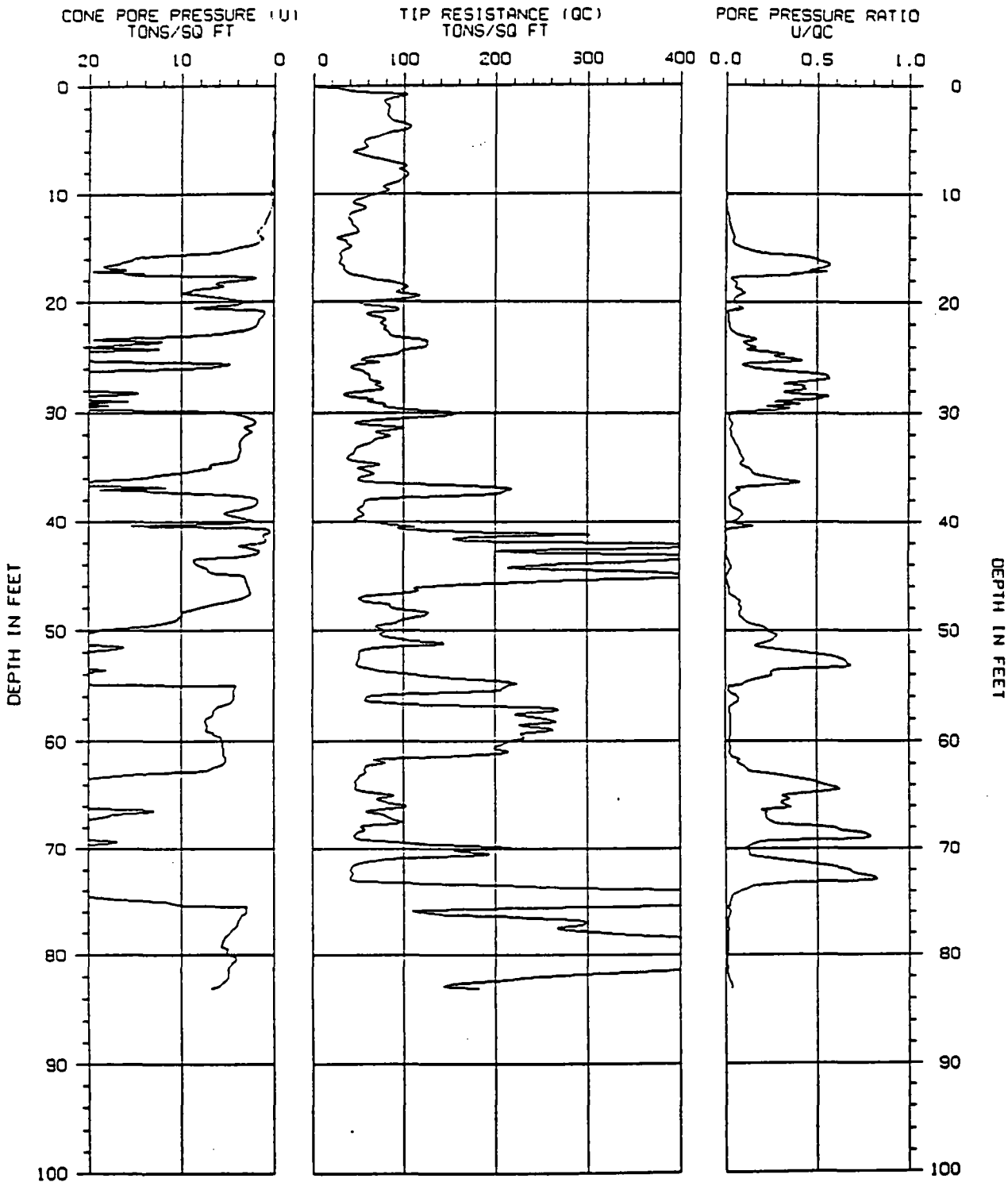
PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-0111

LOCATION : TORRANCE CA.

DATE : 06-16-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-8

PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-0111

LOCATION : TORRANCE CA.

DATE : 06-16-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-8
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 06-16-1992

PROJECT NO : 92-380-0111
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/RN

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	42.2	108.0	.55	.00	SAND to SILTY SAND
1.0	98.7	223.0	2.82	.04	*SILTY SAND to CLAYEY SAND
1.5	78.8	164.3	4.97	-.01	*SANDY CLAY to SILTY CLAY
2.0	83.5	163.6	7.38	.05	*HEAVILY O.C./CEMENT. MAT.
2.5	82.2	153.1	8.65	.02	*HEAVILY O.C./CEMENT. MAT.
3.0	84.6	150.9	8.30	.03	*HEAVILY O.C./CEMENT. MAT.
3.5	103.6	177.7	7.14	.11	*HEAVILY O.C./CEMENT. MAT.
4.0	103.5	171.6	5.30	.14	*SANDY CLAY to SILTY CLAY
4.5	77.5	124.5	8.30	.20	*SANDY CLAY to SILTY CLAY
5.0	56.8	88.6	8.25	.13	*SANDY CLAY to SILTY CLAY
5.5	60.3	91.5	6.14	.12	*SANDY CLAY to SILTY CLAY
6.0	44.4	65.8	6.91	.05	*SANDY CLAY to SILTY CLAY
6.5	59.0	85.4	5.27	.07	*SANDY CLAY to SILTY CLAY
7.0	88.1	124.6	4.20	.14	*CLAYEY SAND to SANDY CLAY
7.5	101.3	140.2	4.50	.09	*CLAYEY SAND to SANDY CLAY
8.0	103.3	140.1	4.09	.10	*CLAYEY SAND to SANDY CLAY
8.5	100.5	133.6	3.71	.13	*CLAYEY SAND to SANDY CLAY
9.0	86.2	112.5	3.13	.23	*CLAYEY SAND to SANDY CLAY
9.5	81.0	103.9	2.62	.25	SILTY SAND to SANDY SILT
10.0	70.2	88.4	2.67	.35	SILTY SAND to SANDY SILT
10.5	51.0	63.1	4.41	.25	*SANDY CLAY to SILTY CLAY
11.0	52.5	64.0	4.98	.24	*SANDY CLAY to SILTY CLAY
11.5	50.7	60.8	4.83	.42	*SANDY CLAY to SILTY CLAY
12.0	39.8	47.0	5.26	.65	*SANDY CLAY to SILTY CLAY
12.5	42.6	49.6	5.85	.90	*SANDY CLAY to SILTY CLAY
13.0	46.7	53.5	6.09	1.29	*SANDY CLAY to SILTY CLAY
13.5	49.8	56.3	5.58	1.79	*SANDY CLAY to SILTY CLAY
14.0	28.1	31.3	7.32	1.37	*SANDY CLAY to SILTY CLAY
14.5	37.3	41.0	6.44	1.78	*SANDY CLAY to SILTY CLAY
15.0	38.4	41.6	5.69	4.14	*SANDY CLAY to SILTY CLAY
15.5	29.6	31.6	5.67	7.75	*SANDY CLAY to SILTY CLAY
16.0	31.0	32.7	5.89	15.17	*SANDY CLAY to SILTY CLAY
16.5	31.1	32.4	5.82	17.68	*SANDY CLAY to SILTY CLAY
17.0	34.8	35.8	5.95	15.91	*SANDY CLAY to SILTY CLAY
17.5	45.9	46.6	5.91	14.77	*SANDY CLAY to SILTY CLAY
18.0	72.3	72.6	5.98	3.36	*SANDY CLAY to SILTY CLAY
18.5	104.6	103.8	3.66	5.42	*CLAYEY SAND to SANDY CLAY
19.0	93.0	91.2	4.68	8.84	*SANDY CLAY to SILTY CLAY
19.5	116.4	112.8	3.40	7.06	*CLAYEY SAND to SANDY CLAY
20.0	56.6	54.3	6.44	3.26	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-8

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	90.6	85.9	4.21	8.66	*CLAYEY SAND to SANDY CLAY
21.0	60.2	56.5	6.75	.99	*SANDY CLAY to SILTY CLAY
21.5	78.2	72.5	5.98	1.44	*SANDY CLAY to SILTY CLAY
22.0	74.2	68.0	7.06	1.74	*SANDY CLAY to SILTY CLAY
22.5	78.7	71.5	7.03	2.74	*SANDY CLAY to SILTY CLAY
23.0	84.4	75.8	6.72	7.51	*SANDY CLAY to SILTY CLAY
23.5	123.8	110.0	4.86	17.73	*SANDY CLAY to SILTY CLAY
24.0	124.5	109.5	5.88	20.93	*SANDY CLAY to SILTY CLAY
24.5	96.3	83.8	6.90	25.17	*SANDY CLAY to SILTY CLAY
25.0	65.5	56.4	7.42	20.36	*SANDY CLAY to SILTY CLAY
25.5	73.6	62.8	5.04	11.36	*SANDY CLAY to SILTY CLAY
26.0	45.0	38.0	4.62	10.09	*SANDY CLAY to SILTY CLAY
26.5	60.3	50.5	5.39	32.67	*SANDY CLAY to SILTY CLAY
27.0	62.0	51.4	7.46	32.87	*SANDY CLAY to SILTY CLAY
27.5	68.2	56.0	6.61	27.55	*SANDY CLAY to SILTY CLAY
28.0	63.8	51.8	6.75	20.68	*SANDY CLAY to SILTY CLAY
28.5	36.7	29.6	5.24	20.57	*SANDY CLAY to SILTY CLAY
29.0	59.3	47.3	6.44	15.77	*SANDY CLAY to SILTY CLAY
29.5	76.6	60.5	5.86	21.80	*SANDY CLAY to SILTY CLAY
30.0	155.6	121.7	2.42	4.68	SILTY SAND to SANDY SILT
30.5	106.5	82.6	4.16	2.74	*CLAYEY SAND to SANDY CLAY
31.0	47.3	36.3	5.02	1.94	*SANDY CLAY to SILTY CLAY
31.5	98.1	74.7	5.41	3.12	*SANDY CLAY to SILTY CLAY
32.0	82.2	62.0	5.78	2.95	*SANDY CLAY to SILTY CLAY
32.5	67.5	50.4	5.17	3.49	*SANDY CLAY to SILTY CLAY
33.0	55.1	40.8	5.11	3.69	*SANDY CLAY to SILTY CLAY
33.5	45.6	33.5	5.39	3.60	*SANDY CLAY to SILTY CLAY
34.0	38.7	28.2	5.15	3.75	CLAYEY SILT to SILTY CLAY
34.5	53.7	38.8	5.72	4.69	*SANDY CLAY to SILTY CLAY
35.0	53.1	38.0	7.03	6.72	*SANDY CLAY to SILTY CLAY
35.5	67.6	48.2	5.14	10.53	*SANDY CLAY to SILTY CLAY
36.0	49.8	35.3	5.99	14.45	*SANDY CLAY to SILTY CLAY
36.5	105.7	74.8	2.94	33.19	SANDY SILT to CLAYEY SILT
37.0	217.8	153.5	1.72	15.77	SAND to SILTY SAND
37.5	179.5	126.1	2.06	5.49	SILTY SAND to SANDY SILT
38.0	58.5	40.9	3.52	1.82	SANDY SILT to CLAYEY SILT
38.5	56.4	39.3	2.56	1.98	SANDY SILT to CLAYEY SILT
39.0	49.9	34.7	2.50	3.98	SANDY SILT to CLAYEY SILT
39.5	53.5	37.0	3.16	4.33	SANDY SILT to CLAYEY SILT
40.0	63.5	43.8	3.21	3.08	SANDY SILT to CLAYEY SILT
40.5	112.2	77.1	.70	11.71	SAND to SILTY SAND
41.0	201.1	137.7	.62	.49	SAND to SILTY SAND
41.5	161.0	109.8	1.27	1.07	SAND to SILTY SAND
42.0	367.2	249.5	.34	1.48	SANDY GRAVEL to SAND
42.5	381.6	258.3	.43	2.80	SANDY GRAVEL to SAND
43.0	371.2	250.4	.47	1.99	SANDY GRAVEL to SAND
43.5	432.5	290.7	.70	8.67	SANDY GRAVEL to SAND
44.0	254.6	170.5	.32	8.26	SANDY GRAVEL to SAND
44.5	278.8	186.0	.08	7.12	SANDY GRAVEL to SAND
45.0	466.1	309.9	.25	3.24	SANDY GRAVEL to SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-8

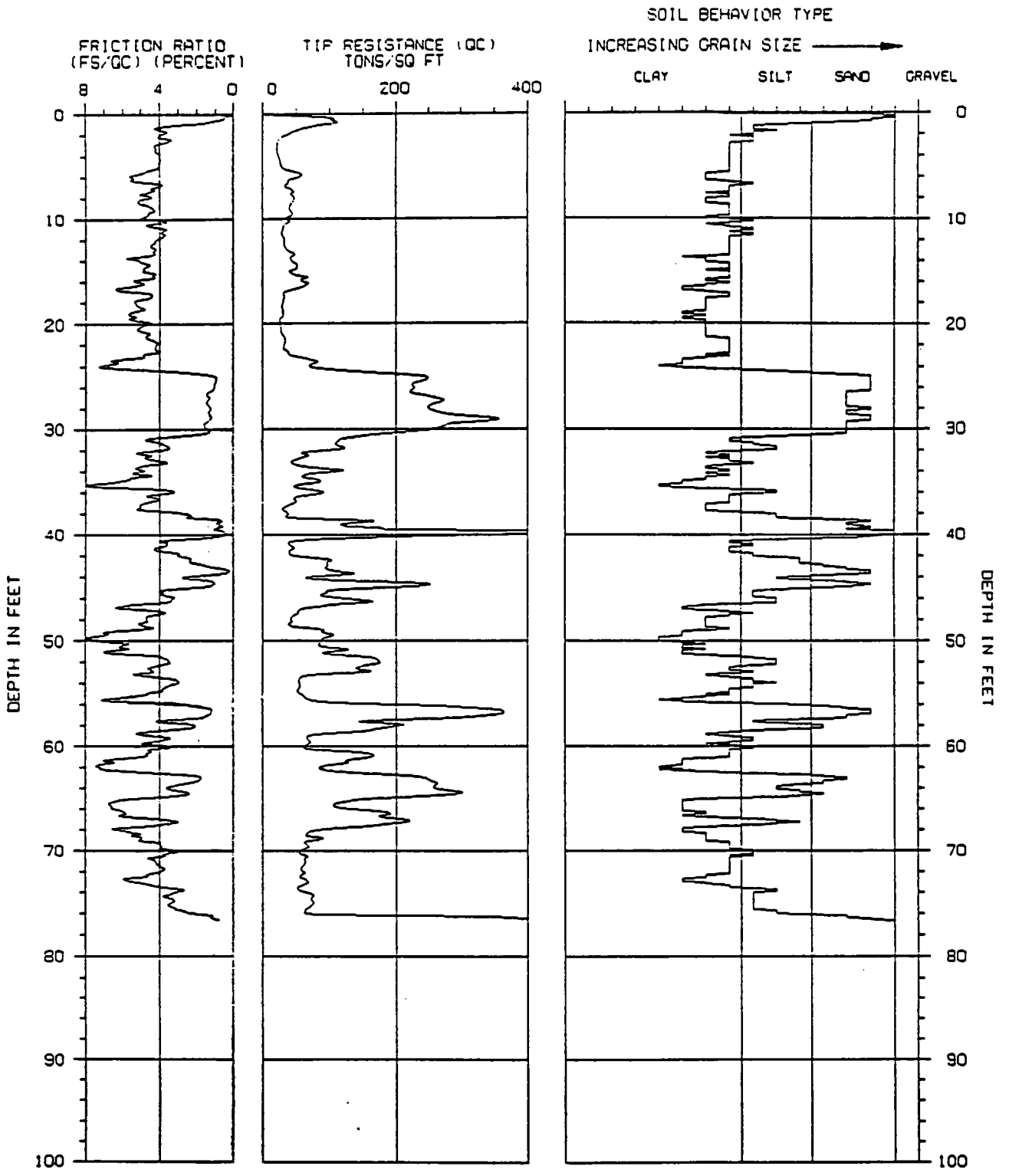
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	259.2	171.7	.18	2.99	SANDY GRAVEL to SAND
46.0	126.6	83.6	.16	2.79	SAND to SILTY SAND
46.5	115.0	75.7	.58	2.60	SAND to SILTY SAND
47.0	51.4	33.7	3.08	3.19	SANDY SILT to CLAYEY SILT
47.5	70.0	45.7	3.81	5.70	SANDY SILT to CLAYEY SILT
48.0	88.4	57.5	5.21	8.13	*SANDY CLAY to SILTY CLAY
48.5	126.5	82.0	2.97	9.94	SANDY SILT to CLAYEY SILT
49.0	99.0	64.0	5.42	10.38	*SANDY CLAY to SILTY CLAY
49.5	73.1	47.1	4.78	12.97	*SANDY CLAY to SILTY CLAY
50.0	79.0	50.7	6.59	19.19	*SANDY CLAY to SILTY CLAY
50.5	79.0	50.5	6.36	22.25	*SANDY CLAY to SILTY CLAY
51.0	126.7	80.7	3.25	28.62	SANDY SILT to CLAYEY SILT
51.5	81.0	51.4	5.70	16.19	*SANDY CLAY to SILTY CLAY
52.0	51.4	32.5	4.12	22.01	CLAYEY SILT to SILTY CLAY
52.5	50.9	32.1	4.63	32.32	CLAYEY SILT to SILTY CLAY
53.0	48.4	30.4	4.82	32.36	CLAYEY SILT to SILTY CLAY
53.5	66.0	41.3	7.00	19.85	*SANDY CLAY to SILTY CLAY
54.0	109.6	68.4	4.28	27.87	*SANDY CLAY to SILTY CLAY
54.5	198.8	123.6	1.75	25.32	SILTY SAND to SANDY SILT
55.0	213.2	132.1	1.56	4.13	SAND to SILTY SAND
55.5	190.5	117.6	2.69	4.34	SILTY SAND to SANDY SILT
56.0	61.7	37.9	3.51	4.28	SANDY SILT to CLAYEY SILT
56.5	86.2	52.9	5.28	4.65	*SANDY CLAY to SILTY CLAY
57.0	261.6	159.9	1.86	6.23	SAND to SILTY SAND
57.5	225.6	137.4	2.14	6.55	SILTY SAND to SANDY SILT
58.0	254.2	154.3	1.70	7.28	SAND to SILTY SAND
58.5	225.8	136.6	1.33	7.21	SAND to SILTY SAND
59.0	262.8	158.4	1.17	7.36	SAND to SILTY SAND
59.5	229.2	137.6	1.06	6.27	SAND to SILTY SAND
60.0	215.5	129.0	1.10	5.59	SAND to SILTY SAND
60.5	198.7	118.5	1.13	5.50	SAND to SILTY SAND
61.0	213.2	126.8	1.38	5.48	SAND to SILTY SAND
61.5	107.9	63.9	3.84	5.25	*CLAYEY SAND to SANDY CLAY
62.0	75.5	44.6	5.30	5.40	*SANDY CLAY to SILTY CLAY
62.5	58.0	34.1	3.87	6.74	CLAYEY SILT to SILTY CLAY
63.0	56.8	33.3	4.20	14.55	CLAYEY SILT to SILTY CLAY
63.5	49.2	28.8	4.39	20.49	CLAYEY SILT to SILTY CLAY
64.0	47.9	27.9	4.11	26.13	CLAYEY SILT to SILTY CLAY
64.5	50.3	29.2	4.99	30.03	CLAYEY SILT to SILTY CLAY
65.0	89.5	51.8	5.34	27.84	*SANDY CLAY to SILTY CLAY
65.5	73.6	42.4	6.27	24.63	*SANDY CLAY to SILTY CLAY
66.0	103.3	59.4	6.66	35.40	*SANDY CLAY to SILTY CLAY
66.5	58.5	33.5	5.88	12.98	*SANDY CLAY to SILTY CLAY
67.0	81.0	46.2	6.67	17.73	*SANDY CLAY to SILTY CLAY
67.5	98.3	55.9	6.19	24.21	*SANDY CLAY to SILTY CLAY
68.0	53.6	30.4	4.24	30.73	CLAYEY SILT to SILTY CLAY
68.5	49.0	27.7	4.03	35.95	CLAYEY SILT to SILTY CLAY
69.0	46.6	26.2	6.23	35.90	*SANDY CLAY to SILTY CLAY
69.5	113.4	63.7	5.22	17.95	*SANDY CLAY to SILTY CLAY
70.0	213.4	119.4	3.03	22.89	*SILTY SAND to CLAYEY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-8

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	193.1	107.6	3.07	25.08	*CLAYEY SAND to SANDY CLAY
71.0	83.5	46.4	7.65	22.33	*SANDY CLAY to SILTY CLAY
71.5	45.8	25.4	4.94	24.41	CLAYEY SILT to SILTY CLAY
72.0	42.0	23.2	3.44	28.30	SANDY SILT to CLAYEY SILT
72.5	43.2	23.8	3.16	32.49	SANDY SILT to CLAYEY SILT
73.0	43.8	24.0	4.11	34.92	CLAYEY SILT to SILTY CLAY
73.5	233.9	127.8	2.92	33.21	*SILTY SAND to CLAYEY SAND
74.0	457.7	249.3	1.60	35.96	SAND to SILTY SAND
74.5	576.3	312.9	1.61	21.00	SAND to SILTY SAND
75.0	510.0	275.9	1.83	14.77	SAND to SILTY SAND
75.5	316.6	170.7	2.34	2.91	SILTY SAND to SANDY SILT
76.0	116.2	62.5	5.96	2.98	*SANDY CLAY to SILTY CLAY
76.5	221.0	118.4	4.99	3.59	*SANDY CLAY to SILTY CLAY
77.0	297.4	158.8	2.58	3.91	*SILTY SAND to CLAYEY SAND
77.5	265.9	141.5	3.55	4.23	*CLAYEY SAND to SANDY CLAY
78.0	319.5	169.5	1.86	4.74	SAND to SILTY SAND
78.5	412.5	218.1	1.54	5.35	SAND to SILTY SAND
79.0	465.9	245.5	1.58	5.63	SAND to SILTY SAND
79.5	468.0	245.8	1.47	5.04	SAND to SILTY SAND
80.0	510.0	267.0	1.31	4.94	SAND to SILTY SAND
80.5	514.7	268.5	2.11	4.14	*SAND to SILTY SAND
81.0	454.1	236.1	1.93	4.79	SAND to SILTY SAND
81.5	378.4	196.1	2.19	4.88	SILTY SAND to SANDY SILT
82.0	250.0	129.2	3.85	4.84	*CLAYEY SAND to SANDY CLAY
82.5	182.1	93.8	6.27	5.33	*SANDY CLAY to SILTY CLAY
83.0	182.1	93.4	5.58	6.80	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 35.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-9

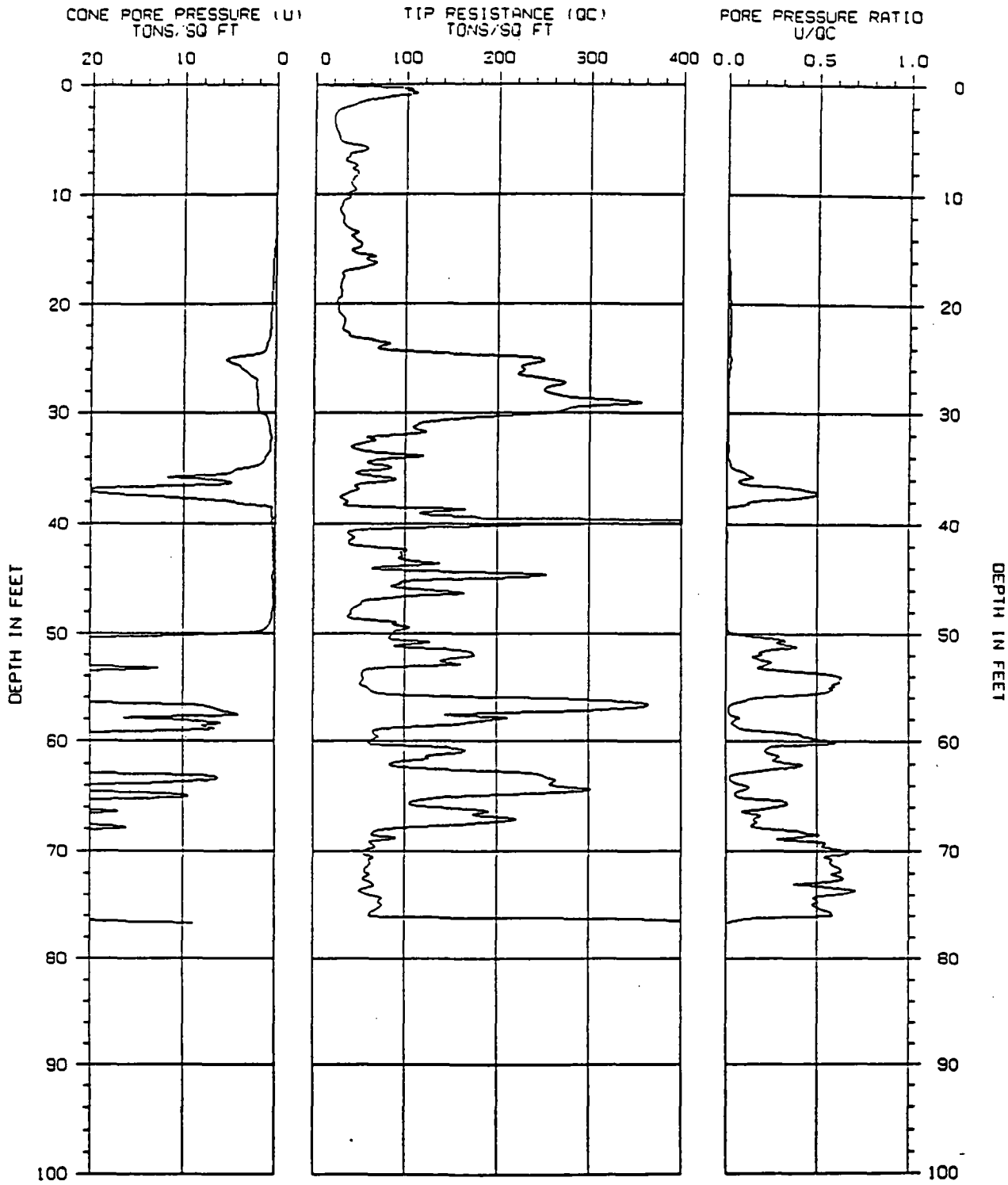
PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-0111

LOCATION : TORRANCE CA.

DATE : 06-16-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-9

PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-0111

LOCATION : TORRANCE CA.

DATE : 06-16-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-9
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 06-16-1992

PROJECT NO : 92-380-0111
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/RN

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	107.0	274.0	.56	.01	SANDY GRAVEL to SAND
1.0	98.0	221.4	2.38	-.01	*SILTY SAND to CLAYEY SAND
1.5	52.7	109.8	4.00	-.05	*CLAYEY SAND to SANDY CLAY
2.0	35.6	69.8	3.97	-.10	*CLAYEY SAND to SANDY CLAY
2.5	23.5	43.7	3.37	-.12	SANDY SILT to CLAYEY SILT
3.0	20.9	37.3	4.28	-.07	CLAYEY SILT to SILTY CLAY
3.5	21.7	37.3	4.21	-.10	CLAYEY SILT to SILTY CLAY
4.0	23.4	38.8	4.08	-.09	CLAYEY SILT to SILTY CLAY
4.5	26.2	42.1	3.99	-.14	CLAYEY SILT to SILTY CLAY
5.0	28.4	44.4	4.10	-.07	CLAYEY SILT to SILTY CLAY
5.5	48.8	74.1	4.81	.04	*SANDY CLAY to SILTY CLAY
6.0	54.7	81.0	5.53	.05	*SANDY CLAY to SILTY CLAY
6.5	38.1	55.1	4.67	.01	*SANDY CLAY to SILTY CLAY
7.0	37.7	53.3	4.56	.01	*SANDY CLAY to SILTY CLAY
7.5	43.9	60.7	4.84	-.05	*SANDY CLAY to SILTY CLAY
8.0	47.0	63.7	4.71	-.06	*SANDY CLAY to SILTY CLAY
8.5	43.0	57.2	5.11	-.07	*SANDY CLAY to SILTY CLAY
9.0	39.9	52.1	4.30	-.07	*SANDY CLAY to SILTY CLAY
9.5	44.6	57.2	4.60	-.08	*SANDY CLAY to SILTY CLAY
10.0	34.7	43.7	4.55	-.08	*SANDY CLAY to SILTY CLAY
10.5	34.0	42.1	4.69	-.09	*SANDY CLAY to SILTY CLAY
11.0	30.1	36.6	3.70	-.07	SANDY SILT to CLAYEY SILT
11.5	28.8	34.5	3.68	-.06	SANDY SILT to CLAYEY SILT
12.0	32.4	38.3	4.22	-.06	CLAYEY SILT to SILTY CLAY
12.5	31.7	36.9	4.51	-.05	CLAYEY SILT to SILTY CLAY
13.0	37.6	43.0	4.40	-.03	*SANDY CLAY to SILTY CLAY
13.5	47.2	53.3	4.70	-.01	*SANDY CLAY to SILTY CLAY
14.0	44.3	49.4	5.07	.05	*SANDY CLAY to SILTY CLAY
14.5	51.7	56.8	4.70	.14	*SANDY CLAY to SILTY CLAY
15.0	39.8	43.1	4.82	.19	*SANDY CLAY to SILTY CLAY
15.5	61.6	65.8	4.25	.24	*SANDY CLAY to SILTY CLAY
16.0	58.3	61.5	5.19	.31	*SANDY CLAY to SILTY CLAY
16.5	56.9	59.3	6.28	.35	*SANDY CLAY to SILTY CLAY
17.0	32.0	32.9	4.74	.38	CLAYEY SILT to SILTY CLAY
17.5	32.2	32.8	4.57	.38	CLAYEY SILT to SILTY CLAY
18.0	30.6	30.7	5.31	.38	*SANDY CLAY to SILTY CLAY
18.5	29.5	29.2	4.83	.38	CLAYEY SILT to SILTY CLAY
19.0	30.6	30.0	5.72	.40	*SANDY CLAY to SILTY CLAY
19.5	26.1	25.4	5.71	.40	*SANDY CLAY to SILTY CLAY
20.0	26.6	25.5	4.61	.42	CLAYEY SILT to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-9

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	27.0	25.6	5.22	.48	CLAYEY SILT to SILTY CLAY
21.0	30.1	28.3	4.63	.52	CLAYEY SILT to SILTY CLAY
21.5	33.5	31.1	4.45	.56	CLAYEY SILT to SILTY CLAY
22.0	32.5	29.8	4.22	.60	CLAYEY SILT to SILTY CLAY
22.5	34.9	31.7	4.07	.63	CLAYEY SILT to SILTY CLAY
23.0	41.5	37.3	4.85	.69	*SANDY CLAY to SILTY CLAY
23.5	73.9	65.7	6.67	.87	*SANDY CLAY to SILTY CLAY
24.0	69.0	60.7	7.31	1.06	*SANDY CLAY to SILTY CLAY
24.5	136.4	118.8	3.32	1.62	*CLAYEY SAND to SANDY CLAY
25.0	242.9	209.3	1.02	5.23	SAND to SILTY SAND
25.5	239.2	204.1	.97	4.67	SAND to SILTY SAND
26.0	228.6	193.1	1.05	3.61	SAND to SILTY SAND
26.5	221.0	184.8	1.34	2.85	SAND to SILTY SAND
27.0	257.4	213.2	1.32	1.99	SAND to SILTY SAND
27.5	266.5	218.6	1.48	2.11	SAND to SILTY SAND
28.0	250.0	203.1	1.23	2.02	SAND to SILTY SAND
28.5	271.6	218.6	1.35	1.95	SAND to SILTY SAND
29.0	350.8	279.7	1.22	2.01	SAND to SILTY SAND
29.5	291.2	230.0	1.56	1.95	SAND to SILTY SAND
30.0	260.1	203.5	1.42	1.76	SAND to SILTY SAND
30.5	165.7	128.5	1.94	.90	SILTY SAND to SANDY SILT
31.0	114.7	88.1	4.81	.77	*SANDY CLAY to SILTY CLAY
31.5	109.2	83.2	3.73	.65	*CLAYEY SAND to SANDY CLAY
32.0	93.5	70.5	4.02	.57	*CLAYEY SAND to SANDY CLAY
32.5	68.4	51.1	4.45	.50	*SANDY CLAY to SILTY CLAY
33.0	44.5	33.0	4.14	.52	CLAYEY SILT to SILTY CLAY
33.5	58.0	42.6	5.06	.60	*SANDY CLAY to SILTY CLAY
34.0	112.2	81.7	4.94	1.07	*SANDY CLAY to SILTY CLAY
34.5	57.7	41.6	4.83	1.38	*SANDY CLAY to SILTY CLAY
35.0	86.0	61.5	6.29	3.15	*SANDY CLAY to SILTY CLAY
35.5	48.2	34.4	6.51	5.51	*SANDY CLAY to SILTY CLAY
36.0	90.4	64.2	3.24	7.01	SANDY SILT to CLAYEY SILT
36.5	46.5	32.9	4.19	6.81	CLAYEY SILT to SILTY CLAY
37.0	48.6	34.3	4.68	21.22	*SANDY CLAY to SILTY CLAY
37.5	29.3	20.5	5.22	12.72	CLAYEY SILT to SILTY CLAY
38.0	38.3	26.8	2.59	4.59	SANDY SILT to CLAYEY SILT
38.5	61.5	42.9	1.76	.50	SILTY SAND to SANDY SILT
39.0	121.7	84.6	.92	.46	SAND to SILTY SAND
39.5	184.0	127.3	1.07	.25	SAND to SILTY SAND
40.0	331.2	228.4	.45	.47	SANDY GRAVEL to SAND
40.5	70.4	48.4	3.03	.27	SANDY SILT to CLAYEY SILT
41.0	41.3	28.2	3.65	.23	SANDY SILT to CLAYEY SILT
41.5	39.7	27.1	4.12	.20	CLAYEY SILT to SILTY CLAY
42.0	47.8	32.5	3.04	.17	SANDY SILT to CLAYEY SILT
42.5	101.0	68.4	2.39	.18	SILTY SAND to SANDY SILT
43.0	94.4	63.7	1.19	.17	SAND to SILTY SAND
43.5	123.4	83.0	.26	.16	SAND to SILTY SAND
44.0	64.8	43.4	2.80	.15	SANDY SILT to CLAYEY SILT
44.5	212.1	141.5	1.06	.21	SAND to SILTY SAND
45.0	143.9	95.7	2.75	.28	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-9

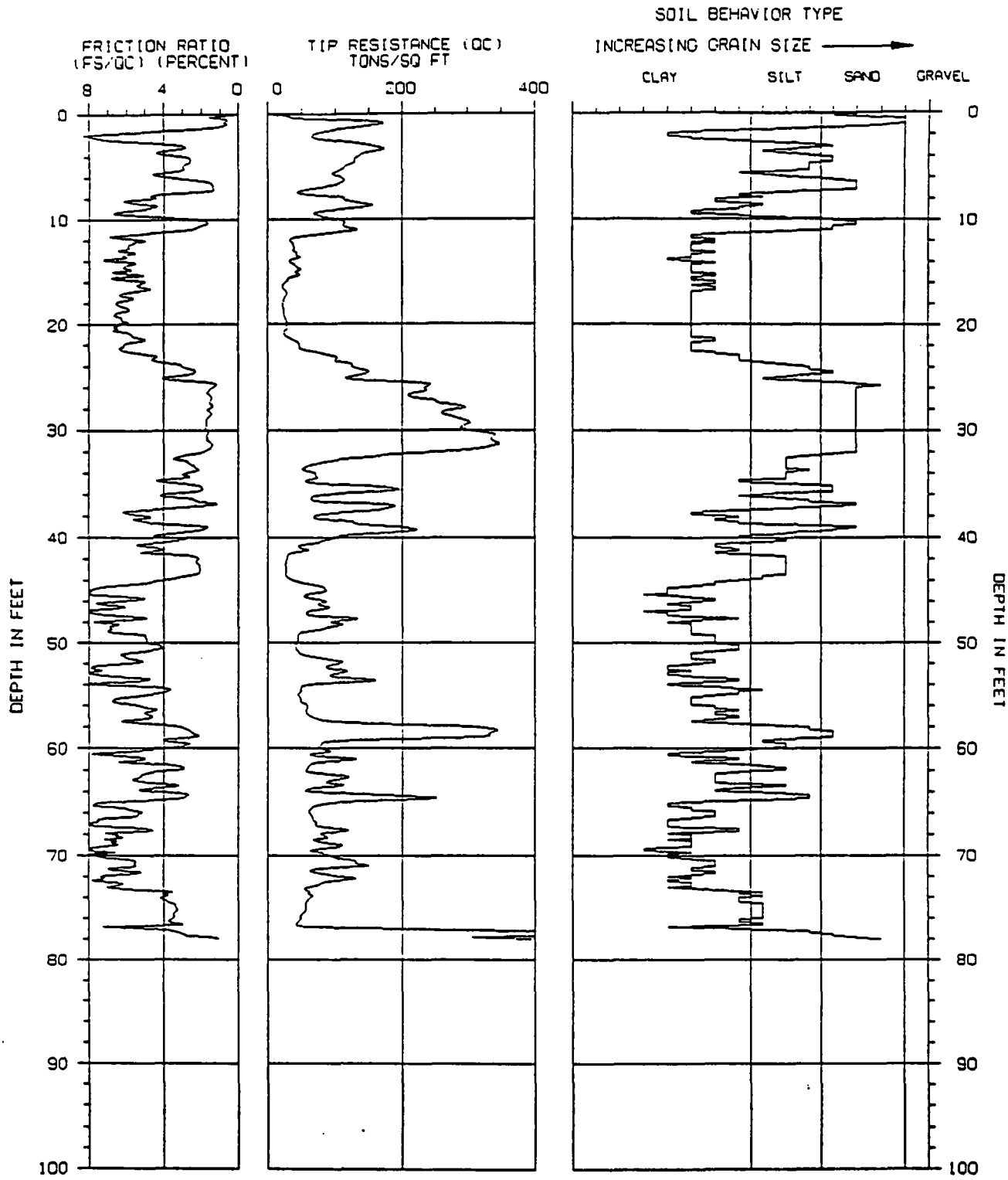
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	93.1	61.7	3.77	.25	*CLAYEY SAND to SANDY CLAY
46.0	124.5	82.2	3.26	.26	SANDY SILT to CLAYEY SILT
46.5	127.4	83.8	4.41	.24	*SANDY CLAY to SILTY CLAY
47.0	54.5	35.7	5.06	.20	*SANDY CLAY to SILTY CLAY
47.5	47.9	31.3	4.17	.23	CLAYEY SILT to SILTY CLAY
48.0	41.6	27.1	4.73	.28	CLAYEY SILT to SILTY CLAY
48.5	37.9	24.6	5.10	.35	CLAYEY SILT to SILTY CLAY
49.0	90.5	58.5	6.02	.56	*SANDY CLAY to SILTY CLAY
49.5	103.9	66.9	7.13	1.02	*SANDY CLAY to SILTY CLAY
50.0	87.5	56.2	7.43	5.22	*SANDY CLAY to SILTY CLAY
50.5	86.2	55.1	6.24	27.48	*SANDY CLAY to SILTY CLAY
51.0	100.0	63.7	7.02	33.74	*SANDY CLAY to SILTY CLAY
51.5	156.8	99.6	3.91	36.05	*CLAYEY SAND to SANDY CLAY
52.0	175.4	111.0	3.46	32.87	*CLAYEY SAND to SANDY CLAY
52.5	138.3	87.2	4.63	32.66	*SANDY CLAY to SILTY CLAY
53.0	120.4	75.7	4.69	23.64	*SANDY CLAY to SILTY CLAY
53.5	55.0	34.4	3.57	21.86	SANDY SILT to CLAYEY SILT
54.0	54.0	33.7	3.02	33.48	SANDY SILT to CLAYEY SILT
54.5	52.0	32.3	3.87	32.27	CLAYEY SILT to SILTY CLAY
55.0	58.8	36.5	4.64	32.92	*SANDY CLAY to SILTY CLAY
55.5	67.0	41.4	7.11	36.06	*SANDY CLAY to SILTY CLAY
56.0	204.6	125.9	2.61	36.07	SILTY SAND to SANDY SILT
56.5	363.1	222.7	1.16	15.04	SAND to SILTY SAND
57.0	330.7	202.1	1.40	6.42	SAND to SILTY SAND
57.5	156.8	95.5	4.04	4.15	*CLAYEY SAND to SANDY CLAY
58.0	201.0	122.0	2.09	11.88	SILTY SAND to SANDY SILT
58.5	145.8	88.2	4.37	7.95	*CLAYEY SAND to SANDY CLAY
59.0	66.3	40.0	4.13	10.61	CLAYEY SILT to SILTY CLAY
59.5	71.0	42.6	4.11	29.43	CLAYEY SILT to SILTY CLAY
60.0	61.7	36.9	3.37	35.68	SANDY SILT to CLAYEY SILT
60.5	142.1	84.8	4.41	34.67	*SANDY CLAY to SILTY CLAY
61.0	161.1	95.8	4.94	36.03	*SANDY CLAY to SILTY CLAY
61.5	125.7	74.5	6.80	36.08	*SANDY CLAY to SILTY CLAY
62.0	83.1	49.1	7.26	33.89	*SANDY CLAY to SILTY CLAY
62.5	133.8	78.7	4.85	36.08	*SANDY CLAY to SILTY CLAY
63.0	244.2	143.2	1.77	14.41	SAND to SILTY SAND
63.5	261.2	152.7	2.22	6.57	SILTY SAND to SANDY SILT
64.0	259.4	151.1	3.70	29.89	*CLAYEY SAND to SANDY CLAY
64.5	300.0	174.2	2.43	27.85	*SILTY SAND to CLAYEY SAND
65.0	176.5	102.1	4.62	9.45	*SANDY CLAY to SILTY CLAY
65.5	111.7	64.4	6.71	33.01	*SANDY CLAY to SILTY CLAY
66.0	130.9	75.2	6.61	36.08	*SANDY CLAY to SILTY CLAY
66.5	191.2	109.5	5.82	17.03	*SANDY CLAY to SILTY CLAY
67.0	206.2	117.7	4.29	35.89	*CLAYEY SAND to SANDY CLAY
67.5	183.2	104.2	3.65	31.68	*CLAYEY SAND to SANDY CLAY
68.0	81.8	46.4	6.42	17.44	*SANDY CLAY to SILTY CLAY
68.5	63.1	35.7	5.32	29.03	*SANDY CLAY to SILTY CLAY
69.0	81.2	45.7	5.08	22.81	*SANDY CLAY to SILTY CLAY
69.5	67.7	38.0	3.91	35.88	CLAYEY SILT to SILTY CLAY
70.0	56.3	31.5	3.08	36.09	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-9

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	66.3	37.0	3.70	36.09	SANDY SILT to CLAYEY SILT
71.0	62.7	34.9	4.26	36.09	CLAYEY SILT to SILTY CLAY
71.5	57.9	32.1	3.99	36.09	CLAYEY SILT to SILTY CLAY
72.0	60.5	33.4	3.95	36.09	CLAYEY SILT to SILTY CLAY
72.5	54.5	30.0	4.63	35.19	CLAYEY SILT to SILTY CLAY
73.0	67.4	37.0	5.67	25.02	*SANDY CLAY to SILTY CLAY
73.5	51.1	27.9	3.84	36.04	CLAYEY SILT to SILTY CLAY
74.0	62.3	34.0	3.14	36.10	SANDY SILT to CLAYEY SILT
74.5	72.6	39.4	3.69	36.10	SANDY SILT to CLAYEY SILT
75.0	76.0	41.1	3.33	36.10	SANDY SILT to CLAYEY SILT
75.5	66.2	35.7	3.18	36.10	SANDY SILT to CLAYEY SILT
76.0	61.6	33.1	2.48	36.10	SANDY SILT to CLAYEY SILT
76.5	426.0	228.2	1.13	18.85	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 35.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-10

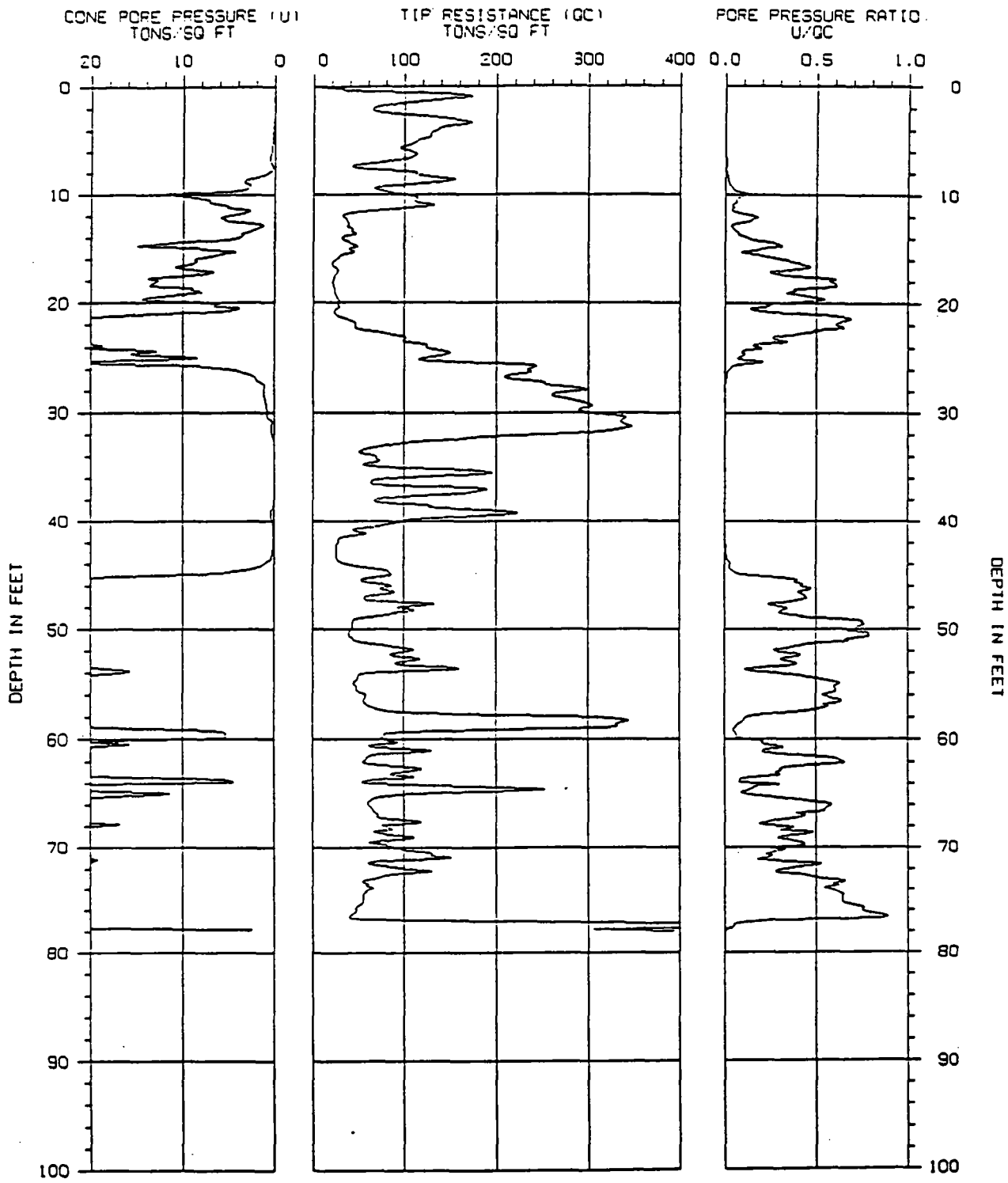
PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-0111

LOCATION : TORRANCE CA.

DATE : 06-17-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-10

PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-0111

LOCATION : TORRANCE CA.

DATE : 06-17-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-10
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 06-17-1992

PROJECT NO : 92-380-0111
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/RN

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	66.5	170.2	.71	.02	SAND to SILTY SAND
1.0	172.9	390.6	.61	.12	SANDY GRAVEL to SAND
1.5	95.3	198.5	3.51	.00	*CLAYEY SAND to SANDY CLAY
2.0	65.3	127.8	8.08	-.09	*SANDY CLAY to SILTY CLAY
2.5	87.5	162.9	6.74	-.10	*SANDY CLAY to SILTY CLAY
3.0	151.7	270.5	3.03	.07	*SILTY SAND to CLAYEY SAND
3.5	155.5	266.8	4.40	.15	*CLAYEY SAND to SANDY CLAY
4.0	135.9	225.3	2.83	.18	*SILTY SAND to CLAYEY SAND
4.5	129.5	208.0	2.60	.22	*SILTY SAND to CLAYEY SAND
5.0	113.1	176.5	2.95	.24	*SILTY SAND to CLAYEY SAND
5.5	96.8	147.1	4.34	.27	*CLAYEY SAND to SANDY CLAY
6.0	108.5	160.7	3.47	.37	*CLAYEY SAND to SANDY CLAY
6.5	109.3	158.1	1.53	.51	SAND to SILTY SAND
7.0	65.5	92.7	1.36	.44	SAND to SILTY SAND
7.5	48.0	66.5	4.14	.24	*CLAYEY SAND to SANDY CLAY
8.0	113.6	154.1	4.78	.80	*SANDY CLAY to SILTY CLAY
8.5	141.1	187.7	5.20	2.37	*SANDY CLAY to SILTY CLAY
9.0	107.7	140.7	5.34	2.65	*SANDY CLAY to SILTY CLAY
9.5	68.7	88.1	6.05	3.22	*SANDY CLAY to SILTY CLAY
10.0	101.6	128.0	2.40	11.61	SILTY SAND to SANDY SILT
10.5	112.0	138.8	1.76	7.09	SAND to SILTY SAND
11.0	132.3	161.1	3.05	5.07	*SILTY SAND to CLAYEY SAND
11.5	66.1	79.3	6.33	2.69	*SANDY CLAY to SILTY CLAY
12.0	32.4	38.2	5.01	5.32	*SANDY CLAY to SILTY CLAY
12.5	37.4	43.5	5.93	4.77	*SANDY CLAY to SILTY CLAY
13.0	38.4	44.0	6.16	1.53	*SANDY CLAY to SILTY CLAY
13.5	43.9	49.6	6.24	3.15	*SANDY CLAY to SILTY CLAY
14.0	31.4	35.0	6.44	3.94	*SANDY CLAY to SILTY CLAY
14.5	42.0	46.1	6.20	12.09	*SANDY CLAY to SILTY CLAY
15.0	39.4	42.7	6.80	7.78	*SANDY CLAY to SILTY CLAY
15.5	35.2	37.6	6.59	5.83	*SANDY CLAY to SILTY CLAY
16.0	26.2	27.6	5.07	8.74	CLAYEY SILT to SILTY CLAY
16.5	21.8	22.7	4.78	9.90	CLAYEY SILT to SILTY CLAY
17.0	27.7	28.5	6.16	8.15	*SANDY CLAY to SILTY CLAY
17.5	24.0	24.4	5.64	9.24	SILTY CLAY TO CLAY
18.0	22.3	22.4	6.56	12.59	*SANDY CLAY to SILTY CLAY
18.5	23.1	22.9	5.89	11.86	SILTY CLAY TO CLAY
19.0	24.0	23.5	6.57	8.00	*SANDY CLAY to SILTY CLAY
19.5	25.8	25.1	6.31	13.40	*SANDY CLAY to SILTY CLAY
20.0	27.4	26.2	6.42	8.28	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-10

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	26.8	25.4	6.78	3.74	*SANDY CLAY to SILTY CLAY
21.0	25.0	23.4	5.70	13.33	SILTY CLAY TO CLAY
21.5	37.1	34.4	5.04	25.06	*SANDY CLAY to SILTY CLAY
22.0	47.4	43.5	6.13	28.81	*SANDY CLAY to SILTY CLAY
22.5	59.6	54.1	6.16	30.15	*SANDY CLAY to SILTY CLAY
23.0	95.6	85.8	4.47	27.22	*SANDY CLAY to SILTY CLAY
23.5	98.4	87.4	4.54	33.41	*SANDY CLAY to SILTY CLAY
24.0	124.0	109.0	3.03	23.98	*CLAYEY SAND to SANDY CLAY
24.5	149.9	130.4	2.32	14.05	SILTY SAND to SANDY SILT
25.0	121.9	105.0	3.69	8.55	*CLAYEY SAND to SANDY CLAY
25.5	194.5	165.9	2.00	26.23	SILTY SAND to SANDY SILT
26.0	232.3	196.2	1.42	5.11	SAND to SILTY SAND
26.5	219.3	183.4	1.73	2.81	SAND to SILTY SAND
27.0	219.3	181.6	1.44	1.95	SAND to SILTY SAND
27.5	252.6	207.2	1.58	1.06	SAND to SILTY SAND
28.0	285.5	232.0	1.65	1.15	SAND to SILTY SAND
28.5	260.7	209.8	1.46	1.06	SAND to SILTY SAND
29.0	287.5	229.2	1.72	.98	SAND to SILTY SAND
29.5	301.5	238.1	1.70	.88	SAND to SILTY SAND
30.0	300.9	235.4	1.76	.77	SAND to SILTY SAND
30.5	340.2	263.8	1.72	.78	SAND to SILTY SAND
31.0	336.9	258.8	1.65	.27	SAND to SILTY SAND
31.5	336.2	256.0	1.45	.32	SAND to SILTY SAND
32.0	251.9	190.1	1.87	.26	SAND to SILTY SAND
32.5	154.7	115.7	3.22	.08	*CLAYEY SAND to SANDY CLAY
33.0	82.7	61.3	2.74	-.10	SANDY SILT to CLAYEY SILT
33.5	52.2	38.3	2.31	-.22	SANDY SILT to CLAYEY SILT
34.0	70.6	51.4	2.90	-.07	SANDY SILT to CLAYEY SILT
34.5	71.2	51.4	3.23	-.09	SANDY SILT to CLAYEY SILT
35.0	78.0	55.8	2.97	-.13	SANDY SILT to CLAYEY SILT
35.5	195.3	139.2	1.93	-.11	SILTY SAND to SANDY SILT
36.0	84.6	60.1	4.11	-.14	*CLAYEY SAND to SANDY CLAY
36.5	63.9	45.2	2.40	-.16	SILTY SAND to SANDY SILT
37.0	186.2	131.3	1.50	-.14	SAND to SILTY SAND
37.5	139.0	97.6	5.79	-.14	*SANDY CLAY to SILTY CLAY
38.0	68.3	47.8	4.74	-.08	*SANDY CLAY to SILTY CLAY
38.5	125.0	87.2	4.96	.04	*SANDY CLAY to SILTY CLAY
39.0	187.0	129.9	1.69	.29	SAND to SILTY SAND
39.5	178.4	123.5	3.13	.34	*CLAYEY SAND to SANDY CLAY
40.0	98.6	68.0	3.81	.25	*CLAYEY SAND to SANDY CLAY
40.5	72.8	50.0	4.33	.08	*SANDY CLAY to SILTY CLAY
41.0	52.5	36.0	4.19	.08	CLAYEY SILT to SILTY CLAY
41.5	30.9	21.1	4.21	.11	CLAYEY SILT to SILTY CLAY
42.0	28.2	19.1	2.16	.12	SANDY SILT to CLAYEY SILT
42.5	25.7	17.4	2.16	.15	SANDY SILT to CLAYEY SILT
43.0	25.8	17.4	2.09	.23	SANDY SILT to CLAYEY SILT
43.5	26.7	18.0	2.62	.36	SANDY SILT to CLAYEY SILT
44.0	36.7	24.6	4.20	1.14	CLAYEY SILT to SILTY CLAY
44.5	72.4	48.3	6.19	2.58	*SANDY CLAY to SILTY CLAY
45.0	84.2	56.0	7.91	12.71	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-10

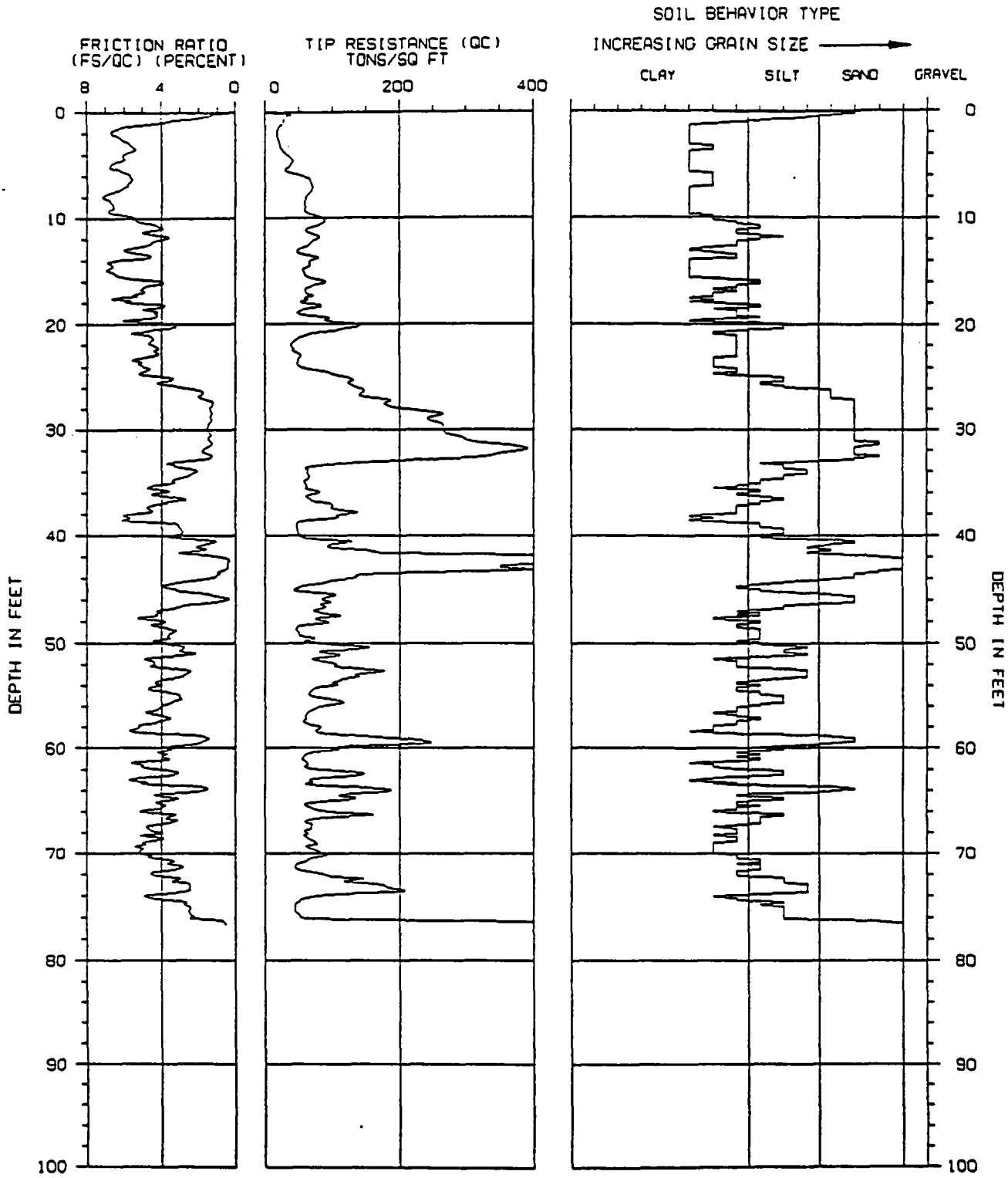
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	53.3	35.3	6.29	21.19	*SANDY CLAY to SILTY CLAY
46.0	86.9	57.3	6.23	35.81	*SANDY CLAY to SILTY CLAY
46.5	87.9	57.8	6.16	36.00	*SANDY CLAY to SILTY CLAY
47.0	57.0	37.4	8.28	25.08	*SANDY CLAY to SILTY CLAY
47.5	108.6	70.9	5.18	34.19	*SANDY CLAY to SILTY CLAY
48.0	92.2	60.0	7.73	31.07	*SANDY CLAY to SILTY CLAY
48.5	88.3	57.3	6.91	26.00	*SANDY CLAY to SILTY CLAY
49.0	46.6	30.1	6.68	29.32	*SANDY CLAY to SILTY CLAY
49.5	43.9	28.2	5.01	33.26	CLAYEY SILT to SILTY CLAY
50.0	42.1	27.0	5.00	30.92	CLAYEY SILT to SILTY CLAY
50.5	40.2	25.7	4.10	31.70	CLAYEY SILT to SILTY CLAY
51.0	46.3	29.5	6.13	31.50	*SANDY CLAY to SILTY CLAY
51.5	81.9	52.0	5.88	33.13	*SANDY CLAY to SILTY CLAY
52.0	104.8	66.3	5.97	29.03	*SANDY CLAY to SILTY CLAY
52.5	103.7	65.4	7.57	36.04	*SANDY CLAY to SILTY CLAY
53.0	92.9	58.4	7.70	36.08	*SANDY CLAY to SILTY CLAY
53.5	156.3	97.9	4.83	30.27	*SANDY CLAY to SILTY CLAY
54.0	60.0	37.4	7.90	16.74	*SANDY CLAY to SILTY CLAY
54.5	49.2	30.6	3.76	26.09	CLAYEY SILT to SILTY CLAY
55.0	45.3	28.1	5.15	28.28	CLAYEY SILT to SILTY CLAY
55.5	48.1	29.7	6.72	29.30	*SANDY CLAY to SILTY CLAY
56.0	58.7	36.1	5.47	31.20	*SANDY CLAY to SILTY CLAY
56.5	56.3	34.5	4.76	35.98	*SANDY CLAY to SILTY CLAY
57.0	63.2	38.6	4.60	35.65	*SANDY CLAY to SILTY CLAY
57.5	96.4	58.7	6.28	36.09	*SANDY CLAY to SILTY CLAY
58.0	310.6	188.5	3.15	36.09	*SILTY SAND to CLAYEY SAND
58.5	331.7	200.6	2.53	27.34	*SILTY SAND to CLAYEY SAND
59.0	267.2	161.0	2.84	14.42	*SILTY SAND to CLAYEY SAND
59.5	79.3	47.6	2.91	5.20	SANDY SILT to CLAYEY SILT
60.0	76.5	45.8	3.92	9.56	SANDY SILT to CLAYEY SILT
60.5	61.8	36.9	7.86	16.74	*SANDY CLAY to SILTY CLAY
61.0	130.6	77.6	5.04	28.38	*SANDY CLAY to SILTY CLAY
61.5	63.6	37.7	4.08	29.44	CLAYEY SILT to SILTY CLAY
62.0	54.9	32.4	3.47	36.08	SANDY SILT to CLAYEY SILT
62.5	106.7	62.8	5.26	36.10	*SANDY CLAY to SILTY CLAY
63.0	92.7	54.4	5.64	25.94	*SANDY CLAY to SILTY CLAY
63.5	110.4	64.5	3.19	15.94	SANDY SILT to CLAYEY SILT
64.0	66.3	38.6	4.29	12.81	CLAYEY SILT to SILTY CLAY
64.5	235.2	136.5	2.85	35.52	*SILTY SAND to CLAYEY SAND
65.0	110.8	64.1	6.56	11.41	*SANDY CLAY to SILTY CLAY
65.5	66.5	38.3	7.03	23.83	*SANDY CLAY to SILTY CLAY
66.0	61.4	35.3	5.19	35.86	*SANDY CLAY to SILTY CLAY
66.5	66.0	37.8	6.95	36.10	*SANDY CLAY to SILTY CLAY
67.0	70.9	40.5	8.10	31.31	*SANDY CLAY to SILTY CLAY
67.5	105.8	60.2	4.98	30.27	*SANDY CLAY to SILTY CLAY
68.0	80.4	45.6	6.62	26.01	*SANDY CLAY to SILTY CLAY
68.5	66.6	37.7	7.18	27.78	*SANDY CLAY to SILTY CLAY
69.0	107.3	60.4	6.48	36.10	*SANDY CLAY to SILTY CLAY
69.5	61.6	34.6	9.52	25.83	*SANDY CLAY to SILTY CLAY
70.0	91.8	51.4	7.95	20.01	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-10

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	127.5	71.1	5.63	34.82	*SANDY CLAY to SILTY CLAY
71.0	150.7	83.7	5.49	35.98	*SANDY CLAY to SILTY CLAY
71.5	63.6	35.2	5.43	33.76	*SANDY CLAY to SILTY CLAY
72.0	106.2	58.6	7.41	36.11	*SANDY CLAY to SILTY CLAY
72.5	87.4	48.1	7.56	34.82	*SANDY CLAY to SILTY CLAY
73.0	66.5	36.5	6.68	35.55	*SANDY CLAY to SILTY CLAY
73.5	60.7	33.2	3.52	36.11	SANDY SILT to CLAYEY SILT
74.0	62.7	34.2	4.16	36.12	CLAYEY SILT to SILTY CLAY
74.5	55.6	30.2	3.82	36.12	CLAYEY SILT to SILTY CLAY
75.0	56.0	30.3	3.38	36.12	SANDY SILT to CLAYEY SILT
75.5	51.6	27.8	3.45	36.12	SANDY SILT to CLAYEY SILT
76.0	48.3	26.0	3.52	36.12	SANDY SILT to CLAYEY SILT
76.5	41.9	22.4	3.41	36.12	SANDY SILT to CLAYEY SILT
77.0	133.4	71.2	5.51	36.12	*SANDY CLAY to SILTY CLAY
77.5	629.3	334.9	2.98	32.37	*SILTY SAND to CLAYEY SAND
78.0	393.7	208.8	1.08	2.87	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 35.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-11

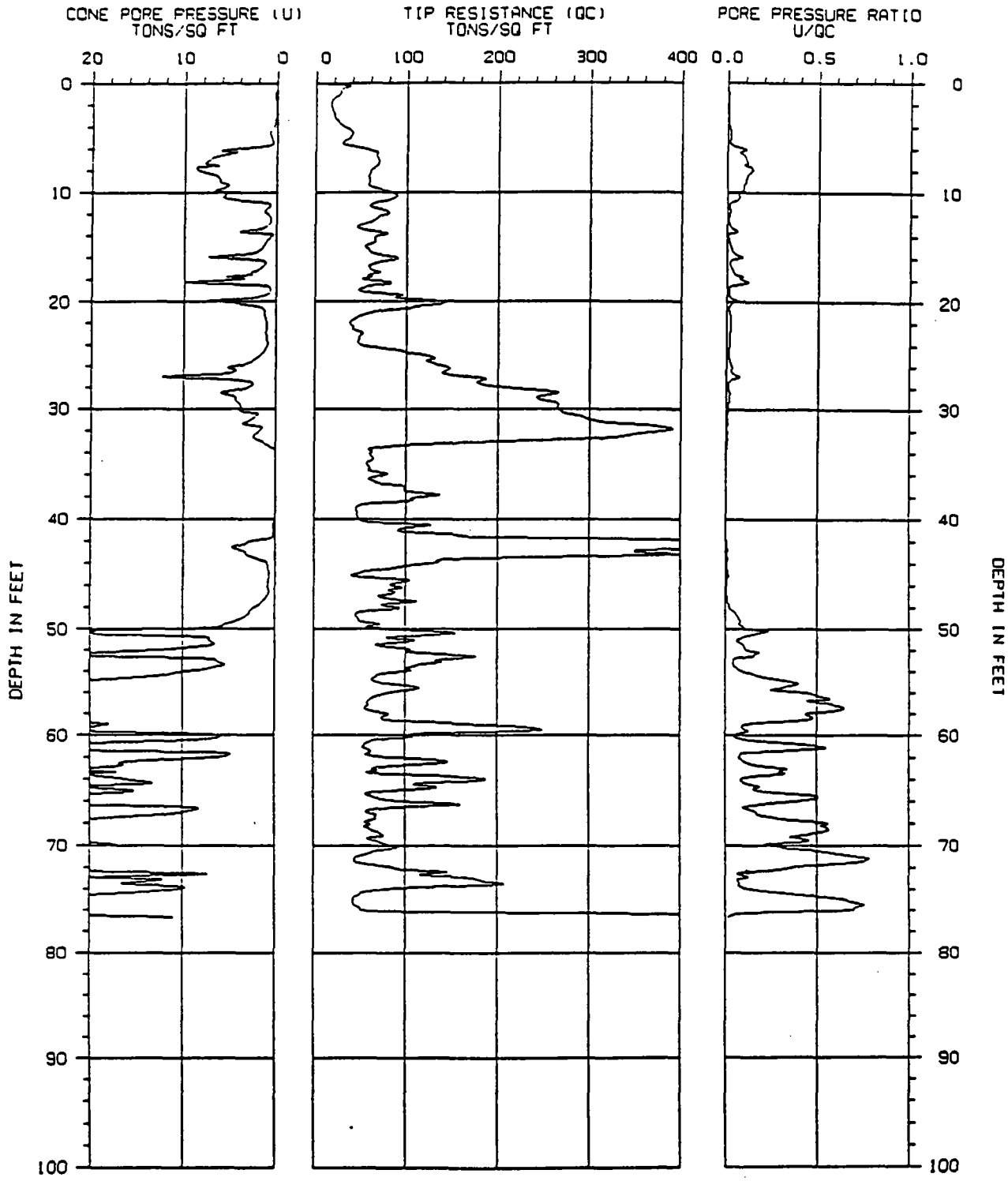
PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 06-29-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-11

PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 06-29-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-11
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 06-29-1992

PROJECT NO : 92-380-01109
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/RN

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	29.5	75.5	1.87	-.02	SILTY SAND to SANDY SILT
1.0	27.6	62.4	3.91	.23	*CLAYEY SAND to SANDY CLAY
1.5	18.6	38.7	6.24	.16	*SANDY CLAY to SILTY CLAY
2.0	17.2	33.7	6.70	.11	*SANDY CLAY to SILTY CLAY
2.5	18.5	34.5	6.20	.11	*SANDY CLAY to SILTY CLAY
3.0	20.9	37.2	5.69	.16	*SANDY CLAY to SILTY CLAY
3.5	25.3	43.4	5.46	.23	*SANDY CLAY to SILTY CLAY
4.0	32.0	53.0	6.07	.36	*SANDY CLAY to SILTY CLAY
4.5	40.2	64.6	6.09	.77	*SANDY CLAY to SILTY CLAY
5.0	36.6	57.1	6.76	.60	*SANDY CLAY to SILTY CLAY
5.5	29.1	44.2	6.20	.47	*SANDY CLAY to SILTY CLAY
6.0	55.1	81.6	5.67	5.03	*SANDY CLAY to SILTY CLAY
6.5	67.7	97.9	5.63	5.40	*SANDY CLAY to SILTY CLAY
7.0	69.6	98.5	5.98	7.36	*SANDY CLAY to SILTY CLAY
7.5	67.5	93.5	6.59	6.28	*SANDY CLAY to SILTY CLAY
8.0	60.6	82.2	7.22	8.38	*SANDY CLAY to SILTY CLAY
8.5	58.2	77.4	6.74	6.48	*SANDY CLAY to SILTY CLAY
9.0	59.7	77.9	6.59	6.20	*SANDY CLAY to SILTY CLAY
9.5	61.4	78.7	6.68	5.49	*SANDY CLAY to SILTY CLAY
10.0	83.7	105.4	5.44	5.40	*SANDY CLAY to SILTY CLAY
10.5	87.2	107.9	4.73	5.92	*SANDY CLAY to SILTY CLAY
11.0	62.4	76.0	4.02	.75	*CLAYEY SAND to SANDY CLAY
11.5	70.0	83.9	4.56	1.12	*SANDY CLAY to SILTY CLAY
12.0	77.3	91.3	3.97	.94	*CLAYEY SAND to SANDY CLAY
12.5	55.6	76.2	4.71	.61	*SANDY CLAY to SILTY CLAY
13.0	47.5	54.4	6.09	.96	*SANDY CLAY to SILTY CLAY
13.5	61.7	69.7	4.60	3.64	*SANDY CLAY to SILTY CLAY
14.0	69.1	76.9	6.57	.50	*SANDY CLAY to SILTY CLAY
14.5	65.9	72.4	6.61	1.10	*SANDY CLAY to SILTY CLAY
15.0	56.4	61.1	6.74	1.48	*SANDY CLAY to SILTY CLAY
15.5	61.0	65.2	6.23	2.34	*SANDY CLAY to SILTY CLAY
16.0	90.0	95.0	4.01	7.03	*CLAYEY SAND to SANDY CLAY
16.5	64.1	66.8	4.95	1.20	*SANDY CLAY to SILTY CLAY
17.0	60.4	62.2	5.06	1.87	*SANDY CLAY to SILTY CLAY
17.5	58.1	59.1	6.67	2.66	*SANDY CLAY to SILTY CLAY
18.0	52.1	52.4	5.60	4.24	*SANDY CLAY to SILTY CLAY
18.5	58.2	57.7	5.10	1.09	*SANDY CLAY to SILTY CLAY
19.0	49.2	48.3	4.28	.71	*SANDY CLAY to SILTY CLAY
19.5	91.7	89.0	5.42	1.57	*SANDY CLAY to SILTY CLAY
20.0	136.8	131.1	3.26	6.66	*CLAYEY SAND to SANDY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-11

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	108.1	102.5	4.62	1.65	*SANDY CLAY to SILTY CLAY
21.0	62.9	59.0	4.77	1.22	*SANDY CLAY to SILTY CLAY
21.5	46.1	42.8	4.49	1.15	*SANDY CLAY to SILTY CLAY
22.0	38.5	35.3	4.51	1.03	CLAYEY SILT to SILTY CLAY
22.5	41.3	37.5	4.44	1.00	CLAYEY SILT to SILTY CLAY
23.0	52.0	46.7	4.62	1.06	*SANDY CLAY to SILTY CLAY
23.5	48.9	43.5	5.30	.97	*SANDY CLAY to SILTY CLAY
24.0	50.4	44.3	4.96	.94	*SANDY CLAY to SILTY CLAY
24.5	92.4	80.4	5.07	1.20	*SANDY CLAY to SILTY CLAY
25.0	119.9	103.3	3.75	1.65	*CLAYEY SAND to SANDY CLAY
25.5	123.6	105.4	4.16	2.39	*CLAYEY SAND to SANDY CLAY
26.0	140.9	119.0	2.67	4.56	SILTY SAND to SANDY SILT
26.5	143.3	119.8	1.80	4.30	SILTY SAND to SANDY SILT
27.0	163.2	135.2	1.92	12.22	SILTY SAND to SANDY SILT
27.5	177.7	145.8	1.23	2.93	SAND to SILTY SAND
28.0	208.9	169.7	1.41	2.98	SAND to SILTY SAND
28.5	264.8	213.1	1.33	5.97	SAND to SILTY SAND
29.0	241.0	192.1	1.36	4.28	SAND to SILTY SAND
29.5	263.9	208.4	1.50	4.05	SAND to SILTY SAND
30.0	265.5	207.7	1.52	3.80	SAND to SILTY SAND
30.5	278.5	215.9	1.36	1.93	SAND to SILTY SAND
31.0	298.9	229.6	1.49	2.61	SAND to SILTY SAND
31.5	361.2	275.0	1.35	3.29	SAND to SILTY SAND
32.0	380.4	287.0	1.82	1.79	SAND to SILTY SAND
32.5	336.2	251.4	1.30	2.40	SAND to SILTY SAND
33.0	201.7	149.5	2.39	1.58	SILTY SAND to SANDY SILT
33.5	70.1	51.5	3.34	.58	SANDY SILT to CLAYEY SILT
34.0	62.1	45.2	2.12	-.20	SILTY SAND to SANDY SILT
34.5	64.4	46.5	2.75	-.25	SANDY SILT to CLAYEY SILT
35.0	56.6	40.5	3.39	-.31	SANDY SILT to CLAYEY SILT
35.5	59.4	42.3	4.81	-.32	*SANDY CLAY to SILTY CLAY
36.0	78.5	55.8	4.30	-.09	*SANDY CLAY to SILTY CLAY
36.5	61.1	43.2	2.99	-.05	SANDY SILT to CLAYEY SILT
37.0	93.2	65.7	3.77	.02	*CLAYEY SAND to SANDY CLAY
37.5	103.2	72.5	4.62	.00	*SANDY CLAY to SILTY CLAY
38.0	117.1	82.0	5.73	-.02	*SANDY CLAY to SILTY CLAY
38.5	83.7	58.4	5.85	-.07	*SANDY CLAY to SILTY CLAY
39.0	46.0	31.9	3.14	-.11	SANDY SILT to CLAYEY SILT
39.5	47.2	32.7	2.93	-.05	SANDY SILT to CLAYEY SILT
40.0	49.5	34.1	3.43	.03	SANDY SILT to CLAYEY SILT
40.5	123.0	84.5	1.18	.18	SAND to SILTY SAND
41.0	91.1	62.4	2.19	.17	SILTY SAND to SANDY SILT
41.5	157.6	107.5	2.75	.24	SILTY SAND to SANDY SILT
42.0	458.0	311.2	.85	2.82	SAND to SILTY SAND
42.5	493.0	333.8	.43	4.49	SANDY GRAVEL to SAND
43.0	374.2	252.5	.45	3.17	SANDY GRAVEL to SAND
43.5	175.7	118.1	.87	2.12	SAND to SILTY SAND
44.0	125.3	83.9	1.56	.86	SILTY SAND to SANDY SILT
44.5	80.0	53.4	3.44	.76	SANDY SILT to CLAYEY SILT
45.0	40.3	26.8	3.22	.68	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-11

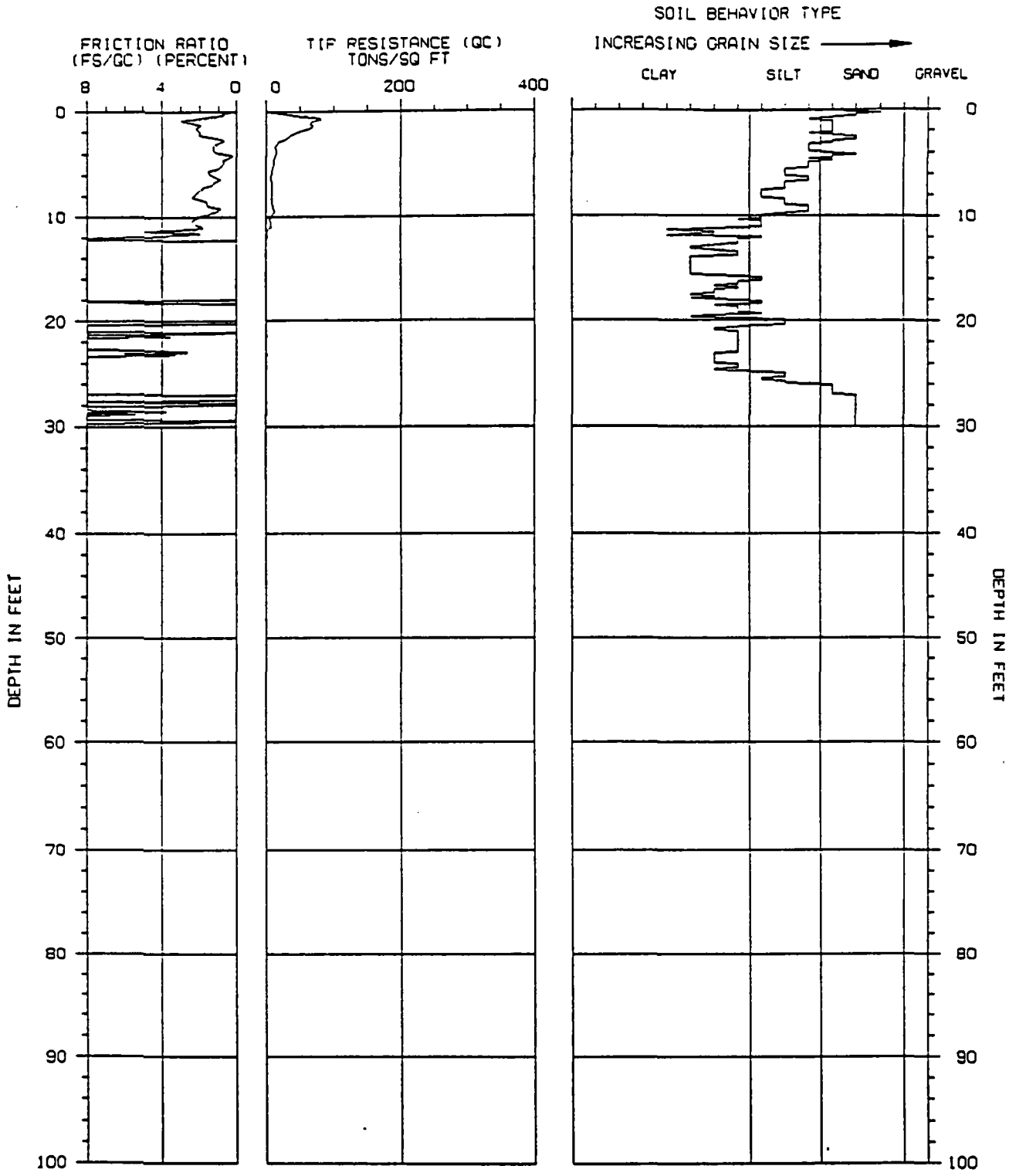
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	105.1	69.6	1.41	.77	SILTY SAND to SANDY SILT
46.0	84.5	55.8	.50	.73	SAND to SILTY SAND
46.5	82.5	54.2	2.76	.68	SANDY SILT to CLAYEY SILT
47.0	72.5	47.5	4.25	.92	*SANDY CLAY to SILTY CLAY
47.5	105.4	68.9	4.57	1.45	*SANDY CLAY to SILTY CLAY
48.0	93.2	60.7	3.82	2.22	*CLAYEY SAND to SANDY CLAY
48.5	47.3	30.7	3.95	2.80	CLAYEY SILT to SILTY CLAY
49.0	49.0	31.6	3.46	3.64	SANDY SILT to CLAYEY SILT
49.5	72.8	46.9	3.55	5.34	SANDY SILT to CLAYEY SILT
50.0	80.2	51.4	3.71	9.83	SANDY SILT to CLAYEY SILT
50.5	133.7	85.5	2.88	18.31	SANDY SILT to CLAYEY SILT
51.0	110.2	70.2	2.42	7.20	SILTY SAND to SANDY SILT
51.5	67.4	42.8	4.99	6.74	*SANDY CLAY to SILTY CLAY
52.0	105.5	66.8	4.39	12.64	*SANDY CLAY to SILTY CLAY
52.5	176.2	111.1	2.45	27.10	SILTY SAND to SANDY SILT
53.0	133.2	83.7	2.85	6.17	SANDY SILT to CLAYEY SILT
53.5	111.2	69.6	4.13	5.99	*CLAYEY SAND to SANDY CLAY
54.0	99.9	62.3	4.14	9.69	*CLAYEY SAND to SANDY CLAY
54.5	68.1	42.3	3.88	14.51	SANDY SILT to CLAYEY SILT
55.0	70.5	43.7	2.99	26.91	SANDY SILT to CLAYEY SILT
55.5	114.2	70.5	3.44	36.01	SANDY SILT to CLAYEY SILT
56.0	82.1	50.5	4.07	35.51	*SANDY CLAY to SILTY CLAY
56.5	62.6	38.4	4.90	36.03	*SANDY CLAY to SILTY CLAY
57.0	58.9	36.0	3.60	34.32	SANDY SILT to CLAYEY SILT
57.5	56.0	34.1	4.27	36.03	CLAYEY SILT to SILTY CLAY
58.0	82.0	49.8	5.20	35.59	*SANDY CLAY to SILTY CLAY
58.5	78.1	47.2	5.03	34.53	*SANDY CLAY to SILTY CLAY
59.0	186.5	112.4	1.56	18.47	SAND to SILTY SAND
59.5	248.2	149.1	1.95	29.35	SILTY SAND to SANDY SILT
60.0	108.3	64.8	3.79	5.93	*CLAYEY SAND to SANDY CLAY
60.5	63.5	37.9	3.71	12.09	SANDY SILT to CLAYEY SILT
61.0	54.3	32.3	3.57	28.74	SANDY SILT to CLAYEY SILT
61.5	63.1	37.4	5.34	17.66	*SANDY CLAY to SILTY CLAY
62.0	86.6	51.2	3.81	6.52	SANDY SILT to CLAYEY SILT
62.5	143.9	84.7	3.36	16.90	*CLAYEY SAND to SANDY CLAY
63.0	64.8	38.0	5.76	20.00	*SANDY CLAY to SILTY CLAY
63.5	60.0	35.1	4.43	19.83	CLAYEY SILT to SILTY CLAY
64.0	187.8	109.4	1.79	16.21	SILTY SAND to SANDY SILT
64.5	109.4	63.5	4.31	14.73	*SANDY CLAY to SILTY CLAY
65.0	102.2	59.1	3.78	16.11	*CLAYEY SAND to SANDY CLAY
65.5	58.5	33.7	3.78	26.00	SANDY SILT to CLAYEY SILT
66.0	94.4	54.2	5.18	36.03	*SANDY CLAY to SILTY CLAY
66.5	111.7	63.9	3.63	11.31	*CLAYEY SAND to SANDY CLAY
67.0	57.5	32.8	3.34	9.62	SANDY SILT to CLAYEY SILT
67.5	67.5	38.4	4.85	16.54	*SANDY CLAY to SILTY CLAY
68.0	60.8	34.4	3.93	34.20	CLAYEY SILT to SILTY CLAY
68.5	61.8	34.9	3.95	33.88	CLAYEY SILT to SILTY CLAY
69.0	73.9	41.6	5.09	34.81	*SANDY CLAY to SILTY CLAY
69.5	64.2	36.0	4.96	29.13	*SANDY CLAY to SILTY CLAY
70.0	83.1	46.5	5.24	21.45	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-11

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	66.8	37.3	4.30	33.01	CLAYEY SILT to SILTY CLAY
71.0	48.5	27.0	3.69	33.73	CLAYEY SILT to SILTY CLAY
71.5	47.8	26.5	3.35	33.42	SANDY SILT to CLAYEY SILT
72.0	87.6	48.3	4.56	31.61	*SANDY CLAY to SILTY CLAY
72.5	132.2	72.7	3.15	9.78	SANDY SILT to CLAYEY SILT
73.0	173.4	95.1	2.52	18.59	SILTY SAND to SANDY SILT
73.5	208.2	113.8	2.57	16.36	SILTY SAND to SANDY SILT
74.0	77.2	42.0	4.97	10.33	*SANDY CLAY to SILTY CLAY
74.5	51.6	28.0	3.13	18.17	SANDY SILT to CLAYEY SILT
75.0	43.4	23.5	2.56	27.00	SANDY SILT to CLAYEY SILT
75.5	45.1	24.3	2.52	33.97	SANDY SILT to CLAYEY SILT
76.0	51.7	27.8	2.31	36.05	SANDY SILT to CLAYEY SILT
76.5	516.2	276.6	.58	20.47	SANDY GRAVEL to SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 35.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-12

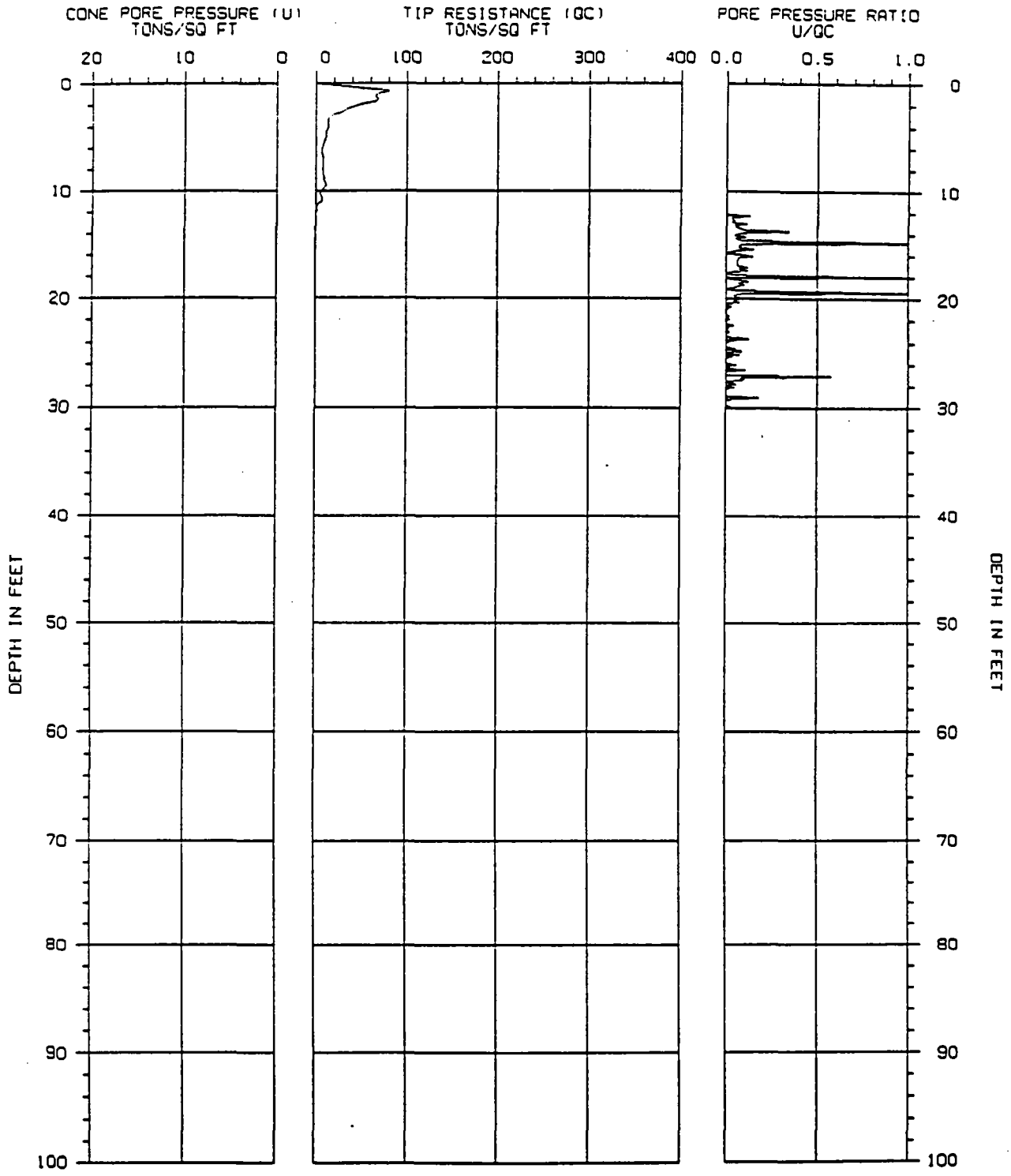
PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 06-29-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-12

PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 06-29-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-12
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 06-29-1992

PROJECT NO : 92-380-01109
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/RN

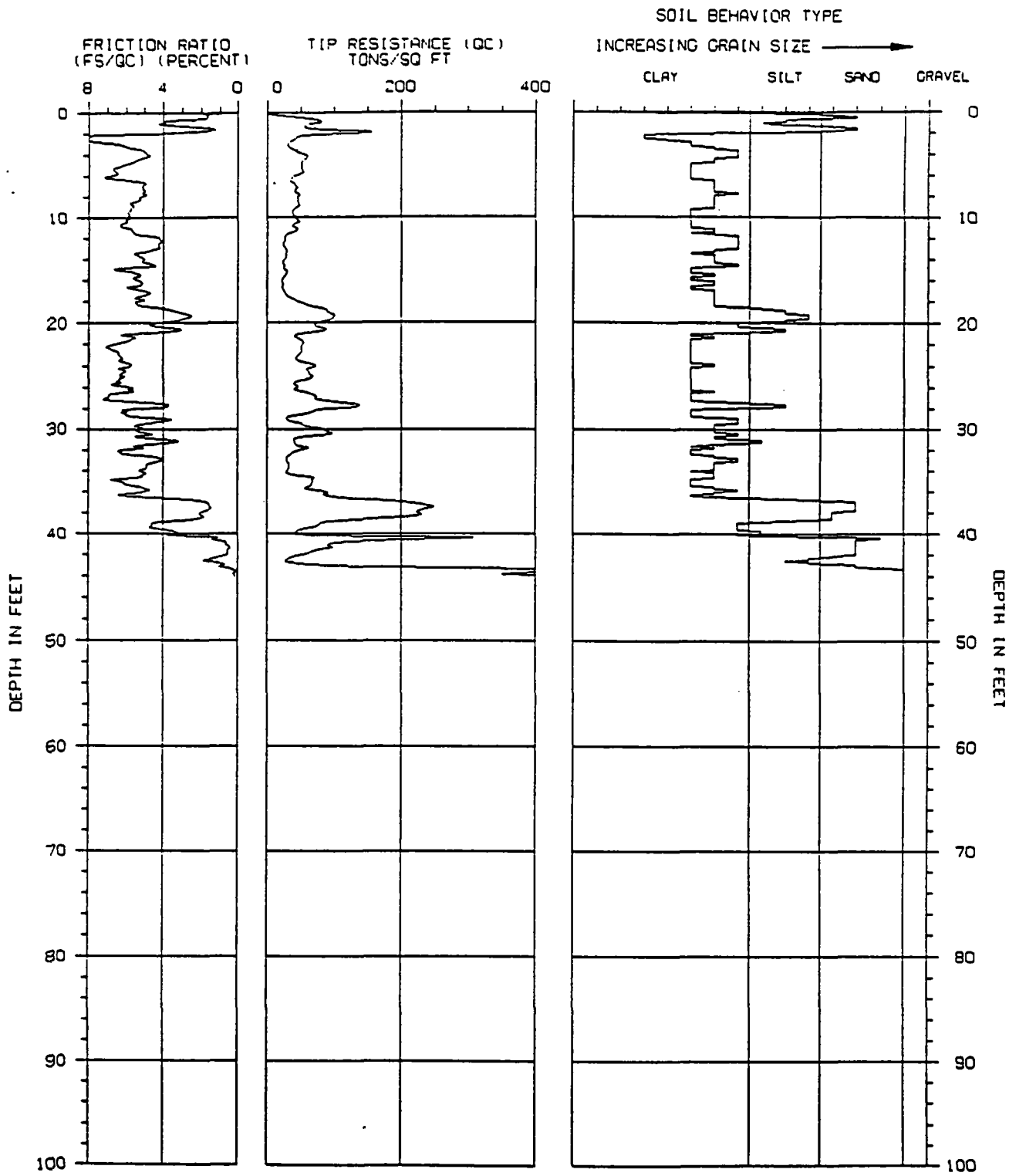
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	52.8	135.3	1.31	.02	SAND to SILTY SAND
1.0	69.5	157.0	2.89	.02	*SILTY SAND to CLAYEY SAND
1.5	67.7	141.1	2.15	.01	SILTY SAND to SANDY SILT
2.0	47.3	92.7	1.98	-.02	SILTY SAND to SANDY SILT
2.5	33.0	61.4	1.41	-.08	SILTY SAND to SANDY SILT
3.0	17.1	30.5	.85	-.06	SILTY SAND to SANDY SILT
3.5	13.8	23.7	1.27	-.04	SILTY SAND to SANDY SILT
4.0	13.5	22.3	.56	-.02	SILTY SAND to SANDY SILT
4.5	11.7	18.8	.57	-.07	SILTY SAND to SANDY SILT
5.0	10.8	16.9	.83	-.06	SILTY SAND to SANDY SILT
5.5	8.9	13.5	1.48	-.05	SANDY SILT to CLAYEY SILT
6.0	7.4	10.9	1.34	-.04	SANDY SILT to CLAYEY SILT
6.5	7.3	10.6	.95	-.04	SILTY SAND to SANDY SILT
7.0	8.2	11.5	1.57	-.04	SANDY SILT to CLAYEY SILT
7.5	8.6	11.9	2.09	-.02	SANDY SILT to CLAYEY SILT
8.0	7.7	10.5	2.34	-.04	SANDY SILT to CLAYEY SILT
8.5	8.6	11.5	1.73	-.03	SANDY SILT to CLAYEY SILT
9.0	9.8	12.8	1.34	-.02	SILTY SAND to SANDY SILT
9.5	11.7	15.0	1.18	-.03	SILTY SAND to SANDY SILT
10.0	6.9	8.7	2.03	-.04	SANDY SILT to CLAYEY SILT
10.5	6.5	8.0	2.36	-.01	SANDY SILT to CLAYEY SILT
11.0	6.1	7.4	1.84	-.01	SANDY SILT to CLAYEY SILT
11.5	1.5	1.8	2.54	-.02	SILTY CLAY to CLAY
12.0	.7	.8	7.44	-.01	*CLAYEY SAND to SANDY CLAY
12.5	-.3	.0	.00	-.01	
13.0	-.2	.0	.00	-.02	
13.5	-.1	.0	.00	-.01	
14.0	-.1	.0	.00	-.01	
14.5	-.1	.0	.00	-.01	
15.0	-.1	.0	.00	-.01	
15.5	-.1	.0	.00	-.01	
16.0	-.1	.0	.00	-.01	
16.5	-.1	.0	.00	-.01	
17.0	-.1	.0	.00	-.01	
17.5	-.1	.0	.00	-.01	
18.0	.0	.0	.00	-.01	
18.5	-.1	.0	.00	-.01	
19.0	-.1	.0	.00	-.00	
19.5	-.1	.0	.00	-.01	
20.0	-.1	.0	.00	-.01	

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-12

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	.0	.0	15.00	-.01	*SANDY CLAY to SILTY CLAY
21.0	.1	.1	10.57	-.01	*SANDY CLAY to SILTY CLAY
21.5	.2	.2	3.60	-.00	*SANDY CLAY to SILTY CLAY
22.0	.1	.1	10.56	-.01	CLAYEY SILT to SILTY CLAY
22.5	.1	.0	10.42	-.01	CLAYEY SILT to SILTY CLAY
23.0	.1	.1	2.68	.00	*SANDY CLAY to SILTY CLAY
23.5	.1	.1	11.13	-.00	*SANDY CLAY to SILTY CLAY
24.0	.0	.0	15.00	-.01	*SANDY CLAY to SILTY CLAY
24.5	.0	.0	15.00	.00	*SANDY CLAY to SILTY CLAY
25.0	.0	.0	15.00	-.00	*CLAYEY SAND to SANDY CLAY
25.5	.1	.1	14.79	-.01	*CLAYEY SAND to SANDY CLAY
26.0	.0	.0	15.00	.00	SILTY SAND to SANDY SILT
26.5	.0	.0	15.00	.00	SILTY SAND to SANDY SILT
27.0	.0	.0	15.00	-.01	SILTY SAND to SANDY SILT
27.5	-.0	.0	.00	-.00	
28.0	.0	.0	.00	.01	
28.5	.1	.1	7.58	-.01	SAND to SILTY SAND
29.0	.0	.0	15.00	-.00	SAND to SILTY SAND
29.5	-.0	.0	.00	.01	
30.0	.1	.1	8.21	-.01	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 35.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-12A

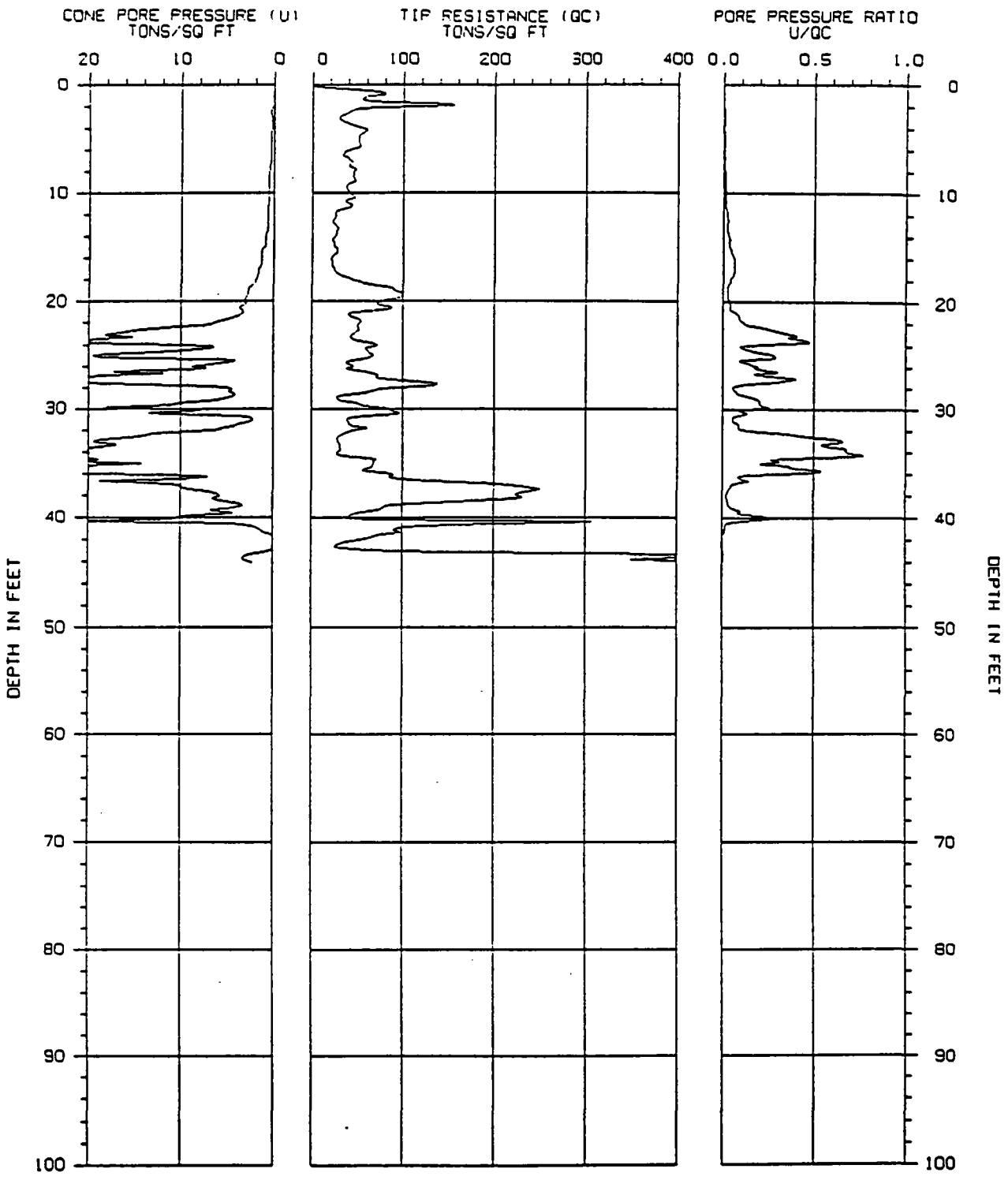
PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 06-30-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-12A

PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 06-30-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-12A
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 06-30-1992

PROJECT NO : 92-380-01109
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/RN

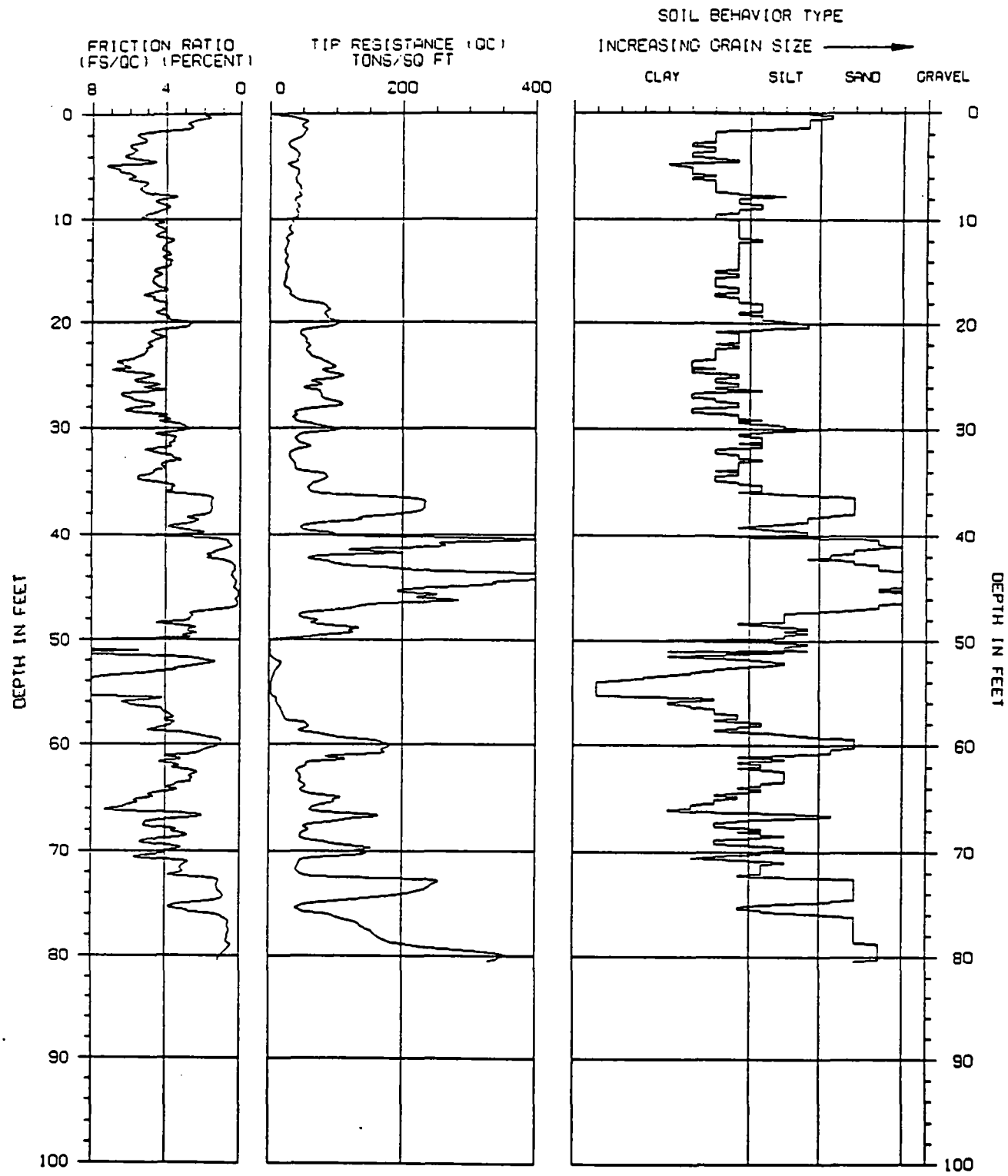
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	46.8	119.8	1.63	.01	SAND to SILTY SAND
1.0	79.5	179.7	3.89	.05	*CLAYEY SAND to SANDY CLAY
1.5	65.2	135.8	1.43	-.01	SAND to SILTY SAND
2.0	119.2	233.5	4.69	.09	*CLAYEY SAND to SANDY CLAY
2.5	42.4	78.9	8.92	.31	*SANDY CLAY to SILTY CLAY
3.0	30.0	53.4	6.38	.25	*SANDY CLAY to SILTY CLAY
3.5	39.6	67.9	5.07	.24	*SANDY CLAY to SILTY CLAY
4.0	57.2	94.9	4.77	.24	*SANDY CLAY to SILTY CLAY
4.5	54.4	87.4	5.46	.32	*SANDY CLAY to SILTY CLAY
5.0	51.5	80.3	6.28	.33	*SANDY CLAY to SILTY CLAY
5.5	53.1	80.6	6.60	.34	*SANDY CLAY to SILTY CLAY
6.0	41.0	60.7	6.99	.35	*SANDY CLAY to SILTY CLAY
6.5	33.8	48.8	5.55	.34	*SANDY CLAY to SILTY CLAY
7.0	43.8	62.0	5.14	.38	*SANDY CLAY to SILTY CLAY
7.5	40.7	56.3	5.13	.40	*SANDY CLAY to SILTY CLAY
8.0	45.9	62.3	5.31	.50	*SANDY CLAY to SILTY CLAY
8.5	45.1	60.0	5.54	.50	*SANDY CLAY to SILTY CLAY
9.0	44.1	57.5	5.71	.52	*SANDY CLAY to SILTY CLAY
9.5	37.6	48.2	5.94	.53	*SANDY CLAY to SILTY CLAY
10.0	41.3	52.0	5.76	.54	*SANDY CLAY to SILTY CLAY
10.5	46.6	57.8	5.97	.59	*SANDY CLAY to SILTY CLAY
11.0	43.0	52.4	5.83	.61	*SANDY CLAY to SILTY CLAY
11.5	33.6	40.3	5.63	.62	*SANDY CLAY to SILTY CLAY
12.0	26.3	31.1	4.22	.63	CLAYEY SILT to SILTY CLAY
12.5	23.3	27.1	4.26	.63	CLAYEY SILT to SILTY CLAY
13.0	26.8	30.7	4.45	.66	CLAYEY SILT to SILTY CLAY
13.5	27.3	30.8	5.59	.69	*SANDY CLAY to SILTY CLAY
14.0	26.1	29.1	5.02	.86	CLAYEY SILT to SILTY CLAY
14.5	24.4	26.8	4.46	.89	CLAYEY SILT to SILTY CLAY
15.0	26.2	28.4	6.43	1.00	*SANDY CLAY to SILTY CLAY
15.5	27.7	29.6	5.25	1.30	*SANDY CLAY to SILTY CLAY
16.0	22.0	23.3	5.38	1.33	SILTY CLAY TO CLAY
16.5	22.4	23.4	5.51	1.38	SILTY CLAY TO CLAY
17.0	24.8	25.6	5.02	1.62	CLAYEY SILT to SILTY CLAY
17.5	29.6	30.1	5.26	1.71	*SANDY CLAY to SILTY CLAY
18.0	44.0	44.2	5.34	1.90	*SANDY CLAY to SILTY CLAY
18.5	72.5	72.0	4.54	2.33	*SANDY CLAY to SILTY CLAY
19.0	91.1	89.4	3.14	2.70	SANDY SILT to CLAYEY SILT
19.5	99.5	96.5	2.70	2.86	SILTY SAND to SANDY SILT
20.0	76.1	72.9	4.29	3.11	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-12A

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	87.7	83.1	3.15	3.69	SANDY SILT to CLAYEY SILT
21.0	47.7	44.7	5.85	3.26	*SANDY CLAY to SILTY CLAY
21.5	46.1	42.8	5.69	4.24	*SANDY CLAY to SILTY CLAY
22.0	53.4	49.0	6.58	6.32	*SANDY CLAY to SILTY CLAY
22.5	51.5	46.7	6.72	12.85	*SANDY CLAY to SILTY CLAY
23.0	46.5	41.8	6.39	17.48	*SANDY CLAY to SILTY CLAY
23.5	44.8	39.8	6.38	19.21	*SANDY CLAY to SILTY CLAY
24.0	72.6	63.8	5.74	9.87	*SANDY CLAY to SILTY CLAY
24.5	61.2	53.2	6.03	9.47	*SANDY CLAY to SILTY CLAY
25.0	68.2	58.8	6.10	19.51	*SANDY CLAY to SILTY CLAY
25.5	44.7	38.1	6.54	4.14	*SANDY CLAY to SILTY CLAY
26.0	45.6	38.5	5.64	8.85	*SANDY CLAY to SILTY CLAY
26.5	57.5	48.1	6.01	17.28	*SANDY CLAY to SILTY CLAY
27.0	72.3	59.9	6.97	22.30	*SANDY CLAY to SILTY CLAY
27.5	112.3	92.2	4.89	33.75	*SANDY CLAY to SILTY CLAY
28.0	93.2	75.8	5.16	5.18	*SANDY CLAY to SILTY CLAY
28.5	58.8	47.3	6.10	4.66	*SANDY CLAY to SILTY CLAY
29.0	28.5	22.7	4.07	5.02	CLAYEY SILT to SILTY CLAY
29.5	50.4	39.8	4.68	10.34	*SANDY CLAY to SILTY CLAY
30.0	84.2	65.9	5.45	9.30	*SANDY CLAY to SILTY CLAY
30.5	93.7	72.7	4.58	11.35	*SANDY CLAY to SILTY CLAY
31.0	39.2	30.1	4.15	2.25	CLAYEY SILT to SILTY CLAY
31.5	41.6	31.7	4.80	3.78	CLAYEY SILT to SILTY CLAY
32.0	46.4	35.0	6.40	6.64	*SANDY CLAY to SILTY CLAY
32.5	33.1	24.8	5.38	13.76	CLAYEY SILT to SILTY CLAY
33.0	29.4	21.8	4.05	19.32	CLAYEY SILT to SILTY CLAY
33.5	31.5	23.2	4.86	18.57	CLAYEY SILT to SILTY CLAY
34.0	29.6	21.5	5.35	20.18	SILTY CLAY TO CLAY
34.5	48.5	35.0	5.19	26.54	*SANDY CLAY to SILTY CLAY
35.0	69.3	49.6	6.53	19.05	*SANDY CLAY to SILTY CLAY
35.5	61.6	43.9	5.30	26.39	*SANDY CLAY to SILTY CLAY
36.0	86.9	61.7	5.08	27.74	*SANDY CLAY to SILTY CLAY
36.5	98.5	69.7	5.66	9.79	*SANDY CLAY to SILTY CLAY
37.0	201.7	142.2	1.75	11.23	SAND to SILTY SAND
37.5	245.4	172.4	1.45	8.11	SAND to SILTY SAND
38.0	224.6	157.1	2.02	5.75	SILTY SAND to SANDY SILT
38.5	179.3	125.0	1.92	5.77	SILTY SAND to SANDY SILT
39.0	81.6	56.6	4.56	3.22	*SANDY CLAY to SILTY CLAY
39.5	57.1	39.5	4.43	4.82	*SANDY CLAY to SILTY CLAY
40.0	40.3	27.8	3.16	10.29	SANDY SILT to CLAYEY SILT
40.5	272.7	187.3	1.19	9.93	SAND to SILTY SAND
41.0	91.2	62.4	.68	1.49	SAND to SILTY SAND
41.5	78.4	53.4	.54	.20	SAND to SILTY SAND
42.0	53.4	36.3	.55	-.11	SAND to SILTY SAND
42.5	29.1	19.7	1.73	-.14	SILTY SAND to SANDY SILT
43.0	94.7	63.9	.84	.53	SAND to SILTY SAND
43.5	452.3	304.0	.14	3.11	SANDY GRAVEL to SAND
44.0	651.2	436.2	.19	2.55	SANDY GRAVEL to SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 35.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-12B

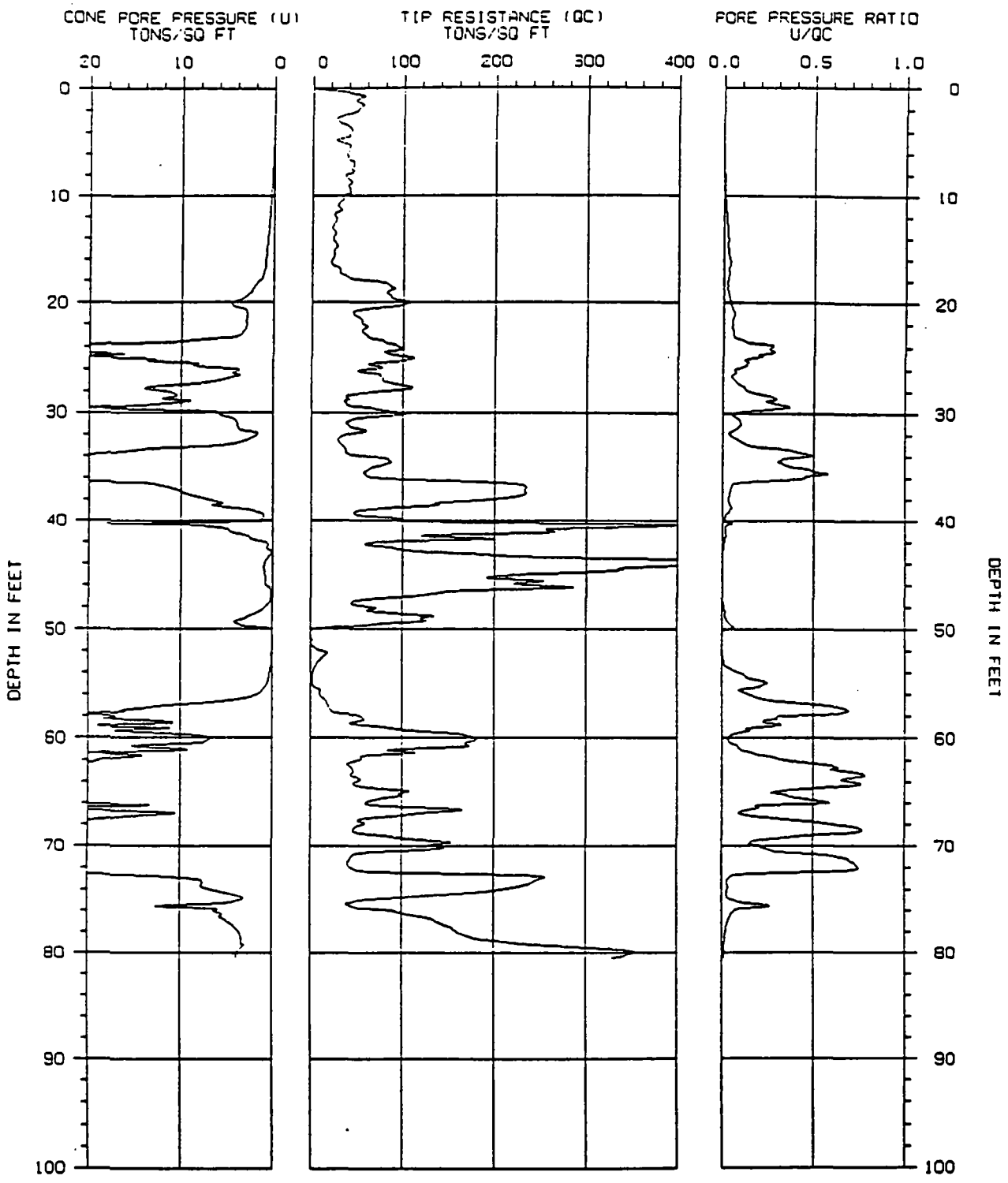
PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 06-30-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-12B

PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01109

LOCATION : TORRANCE CA.

DATE : 06-30-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-12B
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 06-30-1992

PROJECT NO : 92-380-01109
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/RN

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	42.9	110.0	1.76	.02	SILTY SAND to SANDY SILT
1.0	51.6	116.6	2.90	.02	*SILTY SAND to CLAYEY SAND
1.5	55.9	116.5	3.39	.04	*CLAYEY SAND to SANDY CLAY
2.0	50.3	98.5	5.58	-.01	*SANDY CLAY to SILTY CLAY
2.5	35.0	65.1	5.08	-.04	*SANDY CLAY to SILTY CLAY
3.0	28.3	50.5	6.01	-.05	*SANDY CLAY to SILTY CLAY
3.5	40.7	69.9	5.79	-.05	*SANDY CLAY to SILTY CLAY
4.0	42.3	70.2	6.22	.01	*SANDY CLAY to SILTY CLAY
4.5	38.4	61.7	4.59	.05	*SANDY CLAY to SILTY CLAY
5.0	36.3	56.6	6.87	.01	*SANDY CLAY to SILTY CLAY
5.5	42.0	63.9	6.14	.09	*SANDY CLAY to SILTY CLAY
6.0	38.4	56.9	6.11	.09	*SANDY CLAY to SILTY CLAY
6.5	39.2	56.7	5.05	.10	*SANDY CLAY to SILTY CLAY
7.0	46.0	65.1	5.49	.16	*SANDY CLAY to SILTY CLAY
7.5	43.7	60.6	4.77	.18	*SANDY CLAY to SILTY CLAY
8.0	37.4	50.7	4.17	.20	*SANDY CLAY to SILTY CLAY
8.5	40.3	53.6	4.33	.23	*SANDY CLAY to SILTY CLAY
9.0	39.7	51.9	4.21	.24	*SANDY CLAY to SILTY CLAY
9.5	41.4	53.1	5.12	.28	*SANDY CLAY to SILTY CLAY
10.0	35.6	44.8	4.87	.30	*SANDY CLAY to SILTY CLAY
10.5	33.2	41.1	4.68	.36	*SANDY CLAY to SILTY CLAY
11.0	29.4	35.8	4.03	.40	CLAYEY SILT to SILTY CLAY
11.5	30.2	36.2	4.52	.44	CLAYEY SILT to SILTY CLAY
12.0	25.8	30.5	3.58	.47	SANDY SILT to CLAYEY SILT
12.5	25.6	29.7	4.05	.51	CLAYEY SILT to SILTY CLAY
13.0	22.6	25.9	4.16	.55	CLAYEY SILT to SILTY CLAY
13.5	26.0	29.4	4.08	.59	CLAYEY SILT to SILTY CLAY
14.0	23.5	26.2	3.71	.65	CLAYEY SILT to SILTY CLAY
14.5	27.2	29.9	3.89	.71	CLAYEY SILT to SILTY CLAY
15.0	25.6	27.7	4.66	.76	CLAYEY SILT to SILTY CLAY
15.5	24.7	26.4	4.46	.80	CLAYEY SILT to SILTY CLAY
16.0	22.8	24.1	4.75	.84	CLAYEY SILT to SILTY CLAY
16.5	22.9	23.9	4.31	.88	CLAYEY SILT to SILTY CLAY
17.0	31.4	32.3	4.61	1.00	CLAYEY SILT to SILTY CLAY
17.5	36.1	36.7	4.67	1.13	*SANDY CLAY to SILTY CLAY
18.0	57.1	57.3	4.32	1.46	*SANDY CLAY to SILTY CLAY
18.5	85.7	85.1	4.22	2.09	*CLAYEY SAND to SANDY CLAY
19.0	83.5	81.9	4.59	2.36	*SANDY CLAY to SILTY CLAY
19.5	86.5	83.9	3.85	3.01	*CLAYEY SAND to SANDY CLAY
20.0	108.7	104.2	2.74	4.35	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-12B

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	68.1	64.6	3.66	3.51	*CLAYEY SAND to SANDY CLAY
21.0	46.3	43.4	4.63	2.88	*SANDY CLAY to SILTY CLAY
21.5	53.5	49.6	4.26	2.91	*SANDY CLAY to SILTY CLAY
22.0	55.7	51.1	5.01	2.92	*SANDY CLAY to SILTY CLAY
22.5	56.1	51.0	5.07	3.11	*SANDY CLAY to SILTY CLAY
23.0	60.8	54.6	5.16	3.59	*SANDY CLAY to SILTY CLAY
23.5	76.4	67.9	5.74	8.51	*SANDY CLAY to SILTY CLAY
24.0	94.7	83.3	6.31	25.80	*SANDY CLAY to SILTY CLAY
24.5	79.0	68.7	6.95	22.46	*SANDY CLAY to SILTY CLAY
25.0	110.4	95.1	4.72	19.08	*SANDY CLAY to SILTY CLAY
25.5	75.2	64.2	5.70	10.10	*SANDY CLAY to SILTY CLAY
26.0	66.5	56.2	4.67	4.11	*SANDY CLAY to SILTY CLAY
26.5	76.4	63.9	4.35	4.06	*SANDY CLAY to SILTY CLAY
27.0	77.6	64.2	6.34	5.31	*SANDY CLAY to SILTY CLAY
27.5	97.7	80.2	5.40	9.80	*SANDY CLAY to SILTY CLAY
28.0	80.2	65.2	5.53	11.85	*SANDY CLAY to SILTY CLAY
28.5	38.4	30.9	5.55	10.47	*SANDY CLAY to SILTY CLAY
29.0	35.5	28.3	4.41	9.03	CLAYEY SILT to SILTY CLAY
29.5	48.0	37.9	4.05	17.65	CLAYEY SILT to SILTY CLAY
30.0	99.2	77.6	2.76	5.58	SILTY SAND to SANDY SILT
30.5	52.5	40.7	4.37	4.51	*SANDY CLAY to SILTY CLAY
31.0	38.3	29.5	3.55	3.93	SANDY SILT to CLAYEY SILT
31.5	50.5	38.4	3.87	3.79	SANDY SILT to CLAYEY SILT
32.0	39.9	30.1	5.16	1.66	*SANDY CLAY to SILTY CLAY
32.5	29.7	22.2	3.83	2.64	CLAYEY SILT to SILTY CLAY
33.0	33.5	24.8	3.23	4.86	SANDY SILT to CLAYEY SILT
33.5	38.4	28.2	4.22	15.21	CLAYEY SILT to SILTY CLAY
34.0	53.5	39.0	4.72	24.79	*SANDY CLAY to SILTY CLAY
34.5	86.3	62.3	5.57	25.94	*SANDY CLAY to SILTY CLAY
35.0	74.8	53.5	4.57	27.43	*SANDY CLAY to SILTY CLAY
35.5	56.9	40.6	3.72	31.76	SANDY SILT to CLAYEY SILT
36.0	67.2	47.8	3.89	30.14	SANDY SILT to CLAYEY SILT
36.5	204.5	144.7	1.50	14.32	SAND to SILTY SAND
37.0	234.6	165.4	1.56	11.13	SAND to SILTY SAND
37.5	232.8	163.5	1.52	9.36	SAND to SILTY SAND
38.0	196.2	137.3	1.75	7.19	SAND to SILTY SAND
38.5	140.0	97.6	2.50	5.90	SILTY SAND to SANDY SILT
39.0	67.9	47.1	2.96	2.85	SANDY SILT to CLAYEY SILT
39.5	50.8	35.2	2.96	.98	SANDY SILT to CLAYEY SILT
40.0	87.6	60.4	3.88	1.19	*CLAYEY SAND to SANDY CLAY
40.5	394.5	271.0	.87	7.99	SAND to SILTY SAND
41.0	264.7	181.2	.42	4.61	SANDY GRAVEL to SAND
41.5	136.1	92.8	1.25	2.60	SAND to SILTY SAND
42.0	74.7	50.8	1.57	.85	SILTY SAND to SANDY SILT
42.5	86.8	58.8	.77	.70	SAND to SILTY SAND
43.0	166.9	112.6	.29	.03	SAND to SILTY SAND
43.5	334.8	225.0	.42	.52	SANDY GRAVEL to SAND
44.0	514.5	344.6	.41	.89	SANDY GRAVEL to SAND
44.5	334.3	223.1	.24	.94	SANDY GRAVEL to SAND
45.0	219.9	146.2	.34	.84	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-12B

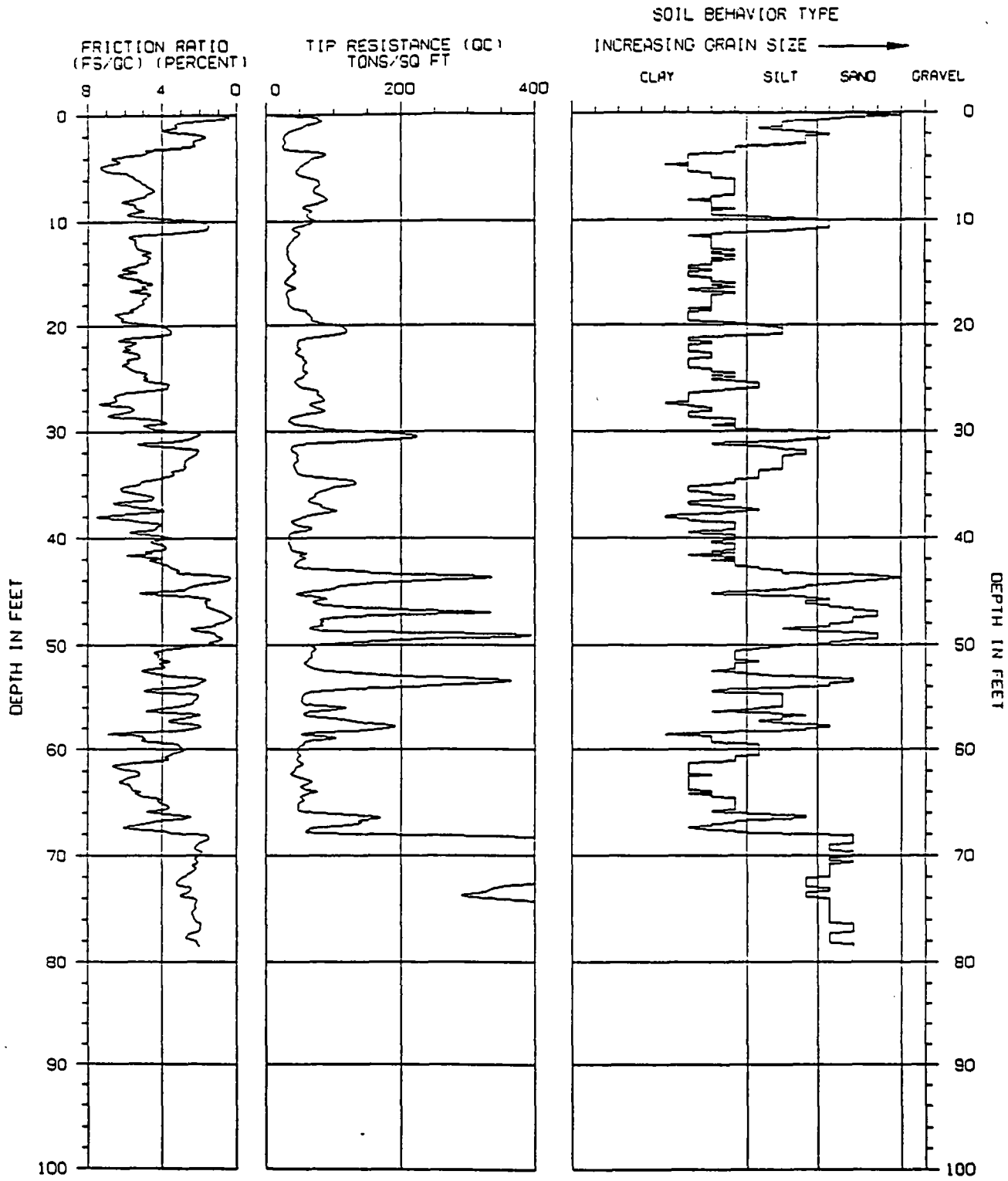
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	231.6	153.5	.13	.81	SANDY GRAVEL to SAND
46.0	235.8	155.7	.25	.78	SANDY GRAVEL to SAND
46.5	173.2	113.9	.16	.25	SAND to SILTY SAND
47.0	108.7	71.3	1.17	.20	SAND to SILTY SAND
47.5	45.8	29.9	2.63	.25	SANDY SILT to CLAYEY SILT
48.0	64.7	42.1	2.81	.76	SANDY SILT to CLAYEY SILT
48.5	75.6	49.0	3.83	1.62	SANDY SILT to CLAYEY SILT
49.0	118.9	76.8	2.81	2.99	SANDY SILT to CLAYEY SILT
49.5	78.5	50.5	3.12	3.76	SANDY SILT to CLAYEY SILT
50.0	3.2	2.1	8.31	.10	ORGANIC MATERIAL
50.5	.2	.1	15.00	-.08	SANDY SILT to CLAYEY SILT
51.0	2.3	1.5	5.43	-.08	SILTY CLAY TO CLAY
51.5	2.0	1.3	5.50	-.08	SILTY CLAY TO CLAY
52.0	11.7	7.4	1.83	.04	SANDY SILT to CLAYEY SILT
52.5	14.2	8.9	2.75	.09	SILTY CLAY to CLAY
53.0	8.3	5.2	4.41	.10	SILTY CLAY TO CLAY
53.5	5.2	3.2	7.33	.18	ORGANIC MATERIAL
54.0	3.3	2.0	10.89	.30	ORGANIC MATERIAL
54.5	2.5	1.5	13.76	.40	ORGANIC MATERIAL
55.0	2.5	1.5	15.00	.58	ORGANIC MATERIAL
55.5	9.0	5.6	5.19	.98	SILTY CLAY TO CLAY
56.0	10.7	6.6	6.40	1.57	SILTY CLAY TO CLAY
56.5	17.3	10.6	4.26	4.57	CLAYEY SILT to SILTY CLAY
57.0	19.9	12.2	3.94	11.44	CLAYEY SILT to SILTY CLAY
57.5	23.6	14.4	3.61	16.47	CLAYEY SILT to SILTY CLAY
58.0	55.2	33.5	3.63	17.03	SANDY SILT to CLAYEY SILT
58.5	48.1	29.1	4.66	10.88	CLAYEY SILT to SILTY CLAY
59.0	80.2	48.3	2.55	16.03	SANDY SILT to CLAYEY SILT
59.5	142.1	85.4	1.08	13.68	SAND to SILTY SAND
60.0	179.6	107.5	1.13	6.78	SAND to SILTY SAND
60.5	167.3	99.8	2.00	9.59	SILTY SAND to SANDY SILT
61.0	97.5	58.0	3.88	9.91	*CLAYEY SAND to SANDY CLAY
61.5	90.5	53.6	3.65	16.94	SANDY SILT to CLAYEY SILT
62.0	53.7	31.7	3.36	18.97	SANDY SILT to CLAYEY SILT
62.5	40.9	24.1	2.39	24.50	SANDY SILT to CLAYEY SILT
63.0	47.2	27.7	2.80	31.07	SANDY SILT to CLAYEY SILT
63.5	45.2	26.4	2.65	35.49	SANDY SILT to CLAYEY SILT
64.0	50.0	29.2	4.01	36.04	CLAYEY SILT to SILTY CLAY
64.5	56.7	32.9	4.61	33.39	CLAYEY SILT to SILTY CLAY
65.0	107.0	61.9	4.97	32.24	*SANDY CLAY to SILTY CLAY
65.5	91.8	52.9	5.57	33.92	*SANDY CLAY to SILTY CLAY
66.0	60.8	34.9	7.21	35.69	*SANDY CLAY to SILTY CLAY
66.5	140.7	80.6	2.53	28.71	SILTY SAND to SANDY SILT
67.0	118.9	67.9	3.68	10.51	*CLAYEY SAND to SANDY CLAY
67.5	59.7	34.0	5.20	17.36	*SANDY CLAY to SILTY CLAY
68.0	59.0	33.4	3.59	35.50	SANDY SILT to CLAYEY SILT
68.5	47.1	26.6	2.82	36.05	SANDY SILT to CLAYEY SILT
69.0	66.8	37.6	5.11	36.03	*SANDY CLAY to SILTY CLAY
69.5	134.5	75.5	3.42	22.71	*CLAYEY SAND to SANDY CLAY
70.0	133.4	74.6	3.99	32.57	*CLAYEY SAND to SANDY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT

SOUNDING : CPT-12B

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	93.2	52.0	5.61	25.68	*SANDY CLAY to SILTY CLAY
71.0	46.5	25.8	2.79	28.26	SANDY SILT to CLAYEY SILT
71.5	42.0	23.2	3.19	30.06	SANDY SILT to CLAYEY SILT
72.0	45.3	25.0	3.13	33.83	SANDY SILT to CLAYEY SILT
72.5	109.1	60.0	2.18	36.05	SILTY SAND to SANDY SILT
73.0	253.2	138.8	1.17	9.71	SAND to SILTY SAND
73.5	236.6	129.3	1.21	7.62	SAND to SILTY SAND
74.0	207.8	113.2	1.00	6.60	SAND to SILTY SAND
74.5	143.6	77.9	.95	4.19	SAND to SILTY SAND
75.0	64.2	34.7	2.94	3.26	SANDY SILT to CLAYEY SILT
75.5	42.8	23.1	3.28	11.00	SANDY SILT to CLAYEY SILT
76.0	89.3	48.0	1.42	6.38	SILTY SAND to SANDY SILT
76.5	112.3	60.2	.74	5.59	SAND to SILTY SAND
77.0	136.2	72.7	.64	4.98	SAND to SILTY SAND
77.5	152.1	81.0	.55	4.09	SAND to SILTY SAND
78.0	160.2	85.0	.65	3.60	SAND to SILTY SAND
78.5	173.4	91.7	.70	3.37	SAND to SILTY SAND
79.0	219.2	115.5	.49	3.43	SAND to SILTY SAND
79.5	301.9	158.6	.76	3.29	SAND to SILTY SAND
80.0	353.6	185.1	1.02	3.80	SAND to SILTY SAND
80.5	328.2	171.2	1.19	3.88	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 35.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 54.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-13

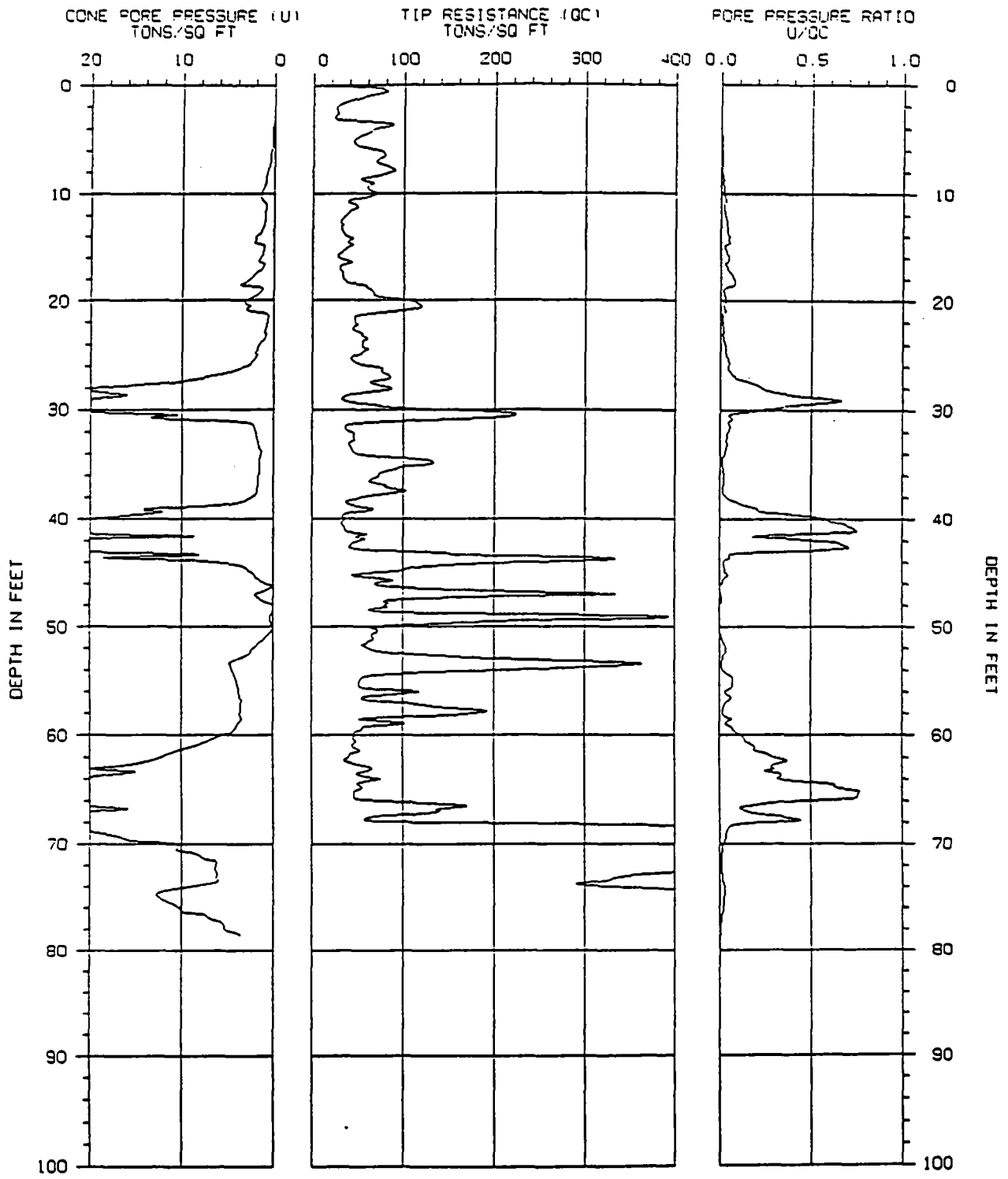
PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-15-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-13

PROJECT NAME : O&M/P-I NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-15-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-13
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 07-15-1992

PROJECT NO : 92-380-01111
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/MS

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	78.3	200.6	1.51	-.00	SAND to SILTY SAND
1.0	63.2	142.8	3.32	-.00	*CLAYEY SAND to SANDY CLAY
1.5	38.5	80.3	3.82	-.04	*CLAYEY SAND to SANDY CLAY
2.0	26.9	52.8	1.72	-.05	SILTY SAND to SANDY SILT
2.5	27.6	51.4	2.34	-.04	SILTY SAND to SANDY SILT
3.0	24.2	43.1	2.60	-.04	SANDY SILT to CLAYEY SILT
3.5	83.5	143.3	4.90	.12	*SANDY CLAY to SILTY CLAY
4.0	69.0	114.4	6.77	.22	*SANDY CLAY to SILTY CLAY
4.5	58.0	93.2	6.82	.25	*SANDY CLAY to SILTY CLAY
5.0	46.1	71.9	7.16	.25	*SANDY CLAY to SILTY CLAY
5.5	47.6	72.3	5.88	.25	*SANDY CLAY to SILTY CLAY
6.0	73.3	108.6	5.31	.37	*SANDY CLAY to SILTY CLAY
6.5	78.8	114.0	4.88	.44	*SANDY CLAY to SILTY CLAY
7.0	69.6	98.4	4.42	.48	*CLAYEY SAND to SANDY CLAY
7.5	82.9	114.8	4.85	.59	*SANDY CLAY to SILTY CLAY
8.0	86.0	116.6	5.99	.77	*SANDY CLAY to SILTY CLAY
8.5	60.8	80.9	5.51	.84	*SANDY CLAY to SILTY CLAY
9.0	66.8	87.2	5.17	.97	*SANDY CLAY to SILTY CLAY
9.5	60.4	77.4	5.29	1.21	*SANDY CLAY to SILTY CLAY
10.0	70.7	89.1	2.04	1.42	SILTY SAND to SANDY SILT
10.5	49.3	61.0	1.53	1.38	SILTY SAND to SANDY SILT
11.0	47.5	57.9	2.94	.90	SANDY SILT to CLAYEY SILT
11.5	44.0	52.8	5.82	.93	*SANDY CLAY to SILTY CLAY
12.0	37.1	43.8	5.39	.98	*SANDY CLAY to SILTY CLAY
12.5	31.2	36.2	5.41	1.02	*SANDY CLAY to SILTY CLAY
13.0	31.9	36.6	4.84	1.15	*SANDY CLAY to SILTY CLAY
13.5	33.4	37.7	4.66	1.32	*SANDY CLAY to SILTY CLAY
14.0	37.2	41.4	5.05	1.87	*SANDY CLAY to SILTY CLAY
14.5	39.2	43.0	6.17	2.06	*SANDY CLAY to SILTY CLAY
15.0	40.6	44.0	6.29	1.04	*SANDY CLAY to SILTY CLAY
15.5	32.4	34.6	5.37	1.17	*SANDY CLAY to SILTY CLAY
16.0	28.6	30.2	4.54	1.39	CLAYEY SILT to SILTY CLAY
16.5	40.4	42.1	5.34	1.07	*SANDY CLAY to SILTY CLAY
17.0	30.4	31.3	4.62	1.23	CLAYEY SILT to SILTY CLAY
17.5	33.2	33.8	5.06	2.01	*SANDY CLAY to SILTY CLAY
18.0	34.1	34.2	5.18	2.57	*SANDY CLAY to SILTY CLAY
18.5	52.4	52.0	5.65	3.78	*SANDY CLAY to SILTY CLAY
19.0	64.2	63.0	6.36	1.26	*SANDY CLAY to SILTY CLAY
19.5	67.3	65.3	6.23	1.81	*SANDY CLAY to SILTY CLAY
20.0	102.1	97.9	4.11	2.91	*CLAYEY SAND to SANDY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-13

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	119.8	113.5	3.54	2.59	*CLAYEY SAND to SANDY CLAY
21.0	87.7	82.2	4.72	2.42	*SANDY CLAY to SILTY CLAY
21.5	47.0	43.6	5.87	.59	*SANDY CLAY to SILTY CLAY
22.0	46.5	42.6	6.00	.70	*SANDY CLAY to SILTY CLAY
22.5	45.0	40.9	5.68	.85	*SANDY CLAY to SILTY CLAY
23.0	55.0	49.4	5.18	.96	*SANDY CLAY to SILTY CLAY
23.5	60.3	53.6	5.78	.99	*SANDY CLAY to SILTY CLAY
24.0	55.1	48.5	5.78	1.53	*SANDY CLAY to SILTY CLAY
24.5	60.9	53.0	4.80	1.75	*SANDY CLAY to SILTY CLAY
25.0	53.1	45.7	4.75	1.79	*SANDY CLAY to SILTY CLAY
25.5	43.8	37.3	3.81	2.06	SANDY SILT to CLAYEY SILT
26.0	62.8	53.1	4.09	2.87	*CLAYEY SAND to SANDY CLAY
26.5	75.3	63.0	6.40	4.35	*SANDY CLAY to SILTY CLAY
27.0	85.8	71.0	6.44	7.31	*SANDY CLAY to SILTY CLAY
27.5	63.7	52.3	7.21	10.05	*SANDY CLAY to SILTY CLAY
28.0	87.3	71.0	5.58	19.94	*SANDY CLAY to SILTY CLAY
28.5	51.4	41.3	6.94	17.35	*SANDY CLAY to SILTY CLAY
29.0	32.6	26.0	4.10	19.38	CLAYEY SILT to SILTY CLAY
29.5	53.5	42.3	5.00	26.17	*SANDY CLAY to SILTY CLAY
30.0	144.0	112.7	2.71	31.35	SILTY SAND to SANDY SILT
30.5	223.5	173.3	2.18	10.40	SILTY SAND to SANDY SILT
31.0	121.0	92.9	3.71	7.58	*CLAYEY SAND to SANDY CLAY
31.5	37.2	28.3	3.58	2.11	SANDY SILT to CLAYEY SILT
32.0	42.1	31.8	2.13	1.93	SILTY SAND to SANDY SILT
32.5	45.4	34.0	2.53	1.80	SANDY SILT to CLAYEY SILT
33.0	42.1	31.2	2.78	1.65	SANDY SILT to CLAYEY SILT
33.5	43.5	32.0	2.85	1.57	SANDY SILT to CLAYEY SILT
34.0	47.8	34.8	3.38	1.36	SANDY SILT to CLAYEY SILT
34.5	112.5	81.2	4.40	1.53	*SANDY CLAY to SILTY CLAY
35.0	130.2	93.1	5.25	1.56	*SANDY CLAY to SILTY CLAY
35.5	85.4	60.6	6.17	1.55	*SANDY CLAY to SILTY CLAY
36.0	73.4	51.6	4.69	1.62	*SANDY CLAY to SILTY CLAY
36.5	63.4	44.2	5.02	1.62	*SANDY CLAY to SILTY CLAY
37.0	82.2	56.9	5.69	1.69	*SANDY CLAY to SILTY CLAY
37.5	99.7	68.3	4.31	1.80	*SANDY CLAY to SILTY CLAY
38.0	55.7	37.9	7.58	2.28	*SANDY CLAY to SILTY CLAY
38.5	37.0	24.9	5.07	3.55	CLAYEY SILT to SILTY CLAY
39.0	57.5	38.4	4.37	10.93	CLAYEY SILT to SILTY CLAY
39.5	37.7	25.0	5.70	13.38	*SANDY CLAY to SILTY CLAY
40.0	35.9	23.6	3.60	20.50	CLAYEY SILT to SILTY CLAY
40.5	32.9	21.5	4.44	22.36	CLAYEY SILT to SILTY CLAY
41.0	36.8	23.8	3.87	27.36	CLAYEY SILT to SILTY CLAY
41.5	55.0	35.3	5.12	11.62	*SANDY CLAY to SILTY CLAY
42.0	52.4	33.3	4.49	29.48	CLAYEY SILT to SILTY CLAY
42.5	42.8	27.0	3.87	29.98	CLAYEY SILT to SILTY CLAY
43.0	114.5	71.7	3.10	30.33	SANDY SILT to CLAYEY SILT
43.5	288.1	179.0	1.06	17.04	SAND to SILTY SAND
44.0	237.3	146.2	.63	6.39	SAND to SILTY SAND
44.5	112.0	68.5	2.28	3.18	SILTY SAND to SANDY SILT
45.0	57.9	35.1	4.72	2.22	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-13

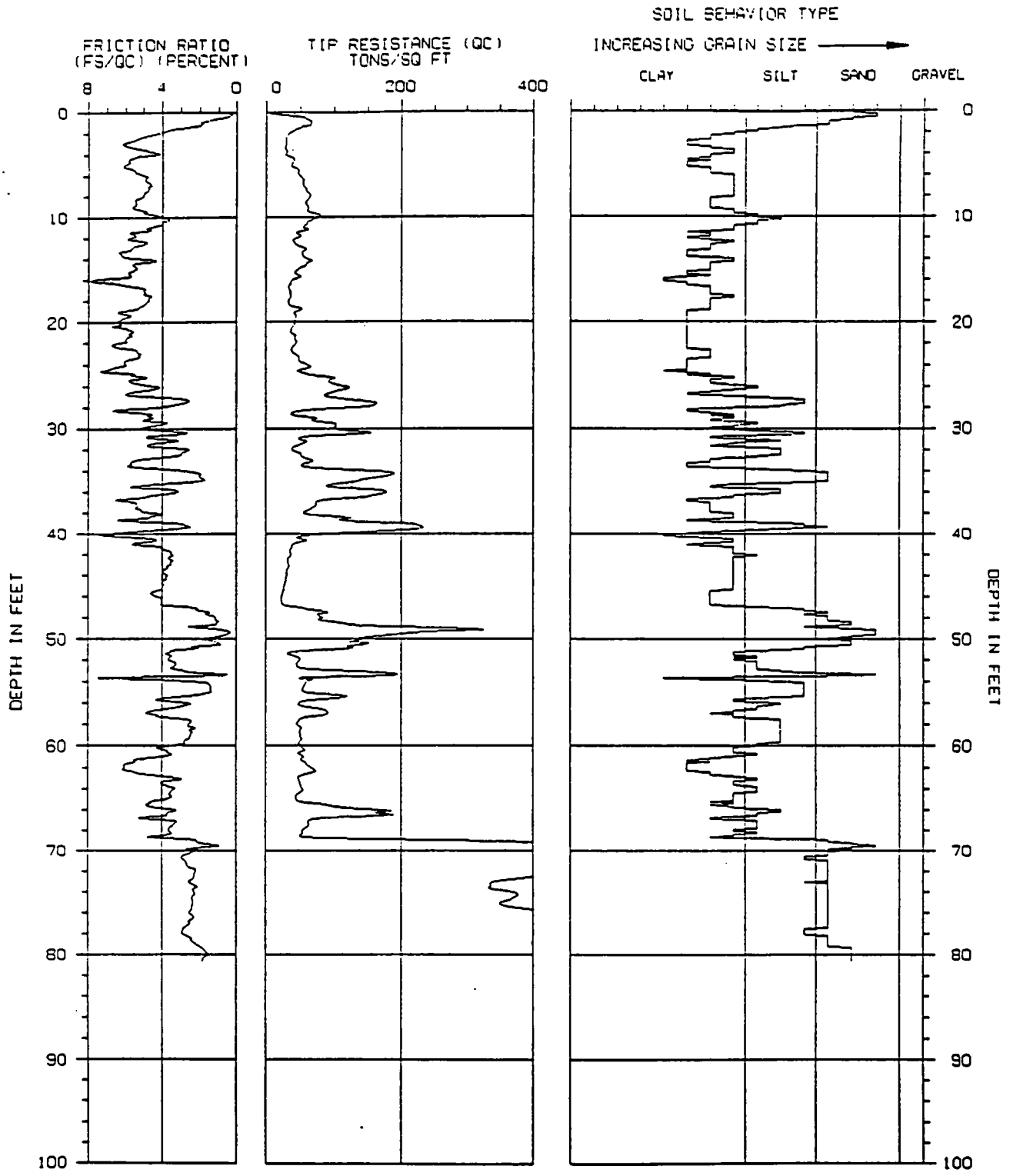
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	75.3	45.3	2.27	1.82	SILTY SAND to SANDY SILT
46.0	69.2	41.3	1.73	.84	SILTY SAND to SANDY SILT
46.5	123.3	73.0	1.63	.41	SILTY SAND to SANDY SILT
47.0	289.1	169.9	.63	2.06	SAND to SILTY SAND
47.5	86.2	50.3	.35	1.32	SAND to SILTY SAND
48.0	79.2	45.8	1.13	.04	SILTY SAND to SANDY SILT
48.5	62.8	36.0	2.51	.02	SANDY SILT to CLAYEY SILT
49.0	394.3	224.6	1.19	.36	SAND to SILTY SAND
49.5	200.2	113.1	.93	.30	SAND to SILTY SAND
50.0	68.9	38.6	1.74	.14	SILTY SAND to SANDY SILT
50.5	70.8	39.4	4.15	.32	CLAYEY SILT to SILTY CLAY
51.0	68.1	37.6	4.20	.90	CLAYEY SILT to SILTY CLAY
51.5	61.3	33.6	3.59	1.50	SANDY SILT to CLAYEY SILT
52.0	61.3	33.4	3.91	2.14	CLAYEY SILT to SILTY CLAY
52.5	114.4	61.7	4.86	2.68	*SANDY CLAY to SILTY CLAY
53.0	239.2	128.1	2.93	4.02	*SILTY SAND to CLAYEY SAND
53.5	348.2	185.0	1.87	4.57	SAND to SILTY SAND
54.0	212.9	112.2	2.92	4.47	*SILTY SAND to CLAYEY SAND
54.5	60.2	31.6	3.86	4.17	CLAYEY SILT to SILTY CLAY
55.0	53.0	27.8	2.12	3.98	SANDY SILT to CLAYEY SILT
55.5	52.8	27.6	2.37	3.84	SANDY SILT to CLAYEY SILT
56.0	117.5	61.1	3.65	3.82	SANDY SILT to CLAYEY SILT
56.5	54.8	28.4	2.73	3.65	SANDY SILT to CLAYEY SILT
57.0	99.0	51.2	2.89	3.49	SANDY SILT to CLAYEY SILT
57.5	150.7	77.7	2.95	3.50	SANDY SILT to CLAYEY SILT
58.0	177.4	91.1	2.22	3.60	SILTY SAND to SANDY SILT
58.5	51.2	26.2	6.92	3.45	*SANDY CLAY to SILTY CLAY
59.0	93.4	47.7	4.89	3.90	*SANDY CLAY to SILTY CLAY
59.5	55.3	28.1	3.17	4.22	SANDY SILT to CLAYEY SILT
60.0	46.7	23.7	2.87	5.58	SANDY SILT to CLAYEY SILT
60.5	49.4	24.9	3.55	7.03	SANDY SILT to CLAYEY SILT
61.0	45.3	22.8	3.71	8.55	CLAYEY SILT to SILTY CLAY
61.5	52.6	26.4	6.49	10.61	*SANDY CLAY to SILTY CLAY
62.0	40.6	20.3	5.57	12.21	SILTY CLAY TO CLAY
62.5	41.5	20.7	5.30	14.26	CLAYEY SILT to SILTY CLAY
63.0	65.9	32.7	6.23	18.91	*SANDY CLAY to SILTY CLAY
63.5	50.6	25.1	5.83	15.70	*SANDY CLAY to SILTY CLAY
64.0	75.4	37.2	5.20	24.16	*SANDY CLAY to SILTY CLAY
64.5	50.0	24.6	4.97	31.12	CLAYEY SILT to SILTY CLAY
65.0	51.2	25.1	4.22	35.96	CLAYEY SILT to SILTY CLAY
65.5	47.5	23.2	3.64	35.95	CLAYEY SILT to SILTY CLAY
66.0	76.7	37.4	4.37	35.92	CLAYEY SILT to SILTY CLAY
66.5	169.9	82.5	2.62	28.08	SILTY SAND to SANDY SILT
67.0	140.1	67.8	4.72	20.17	*SANDY CLAY to SILTY CLAY
67.5	67.6	32.6	6.07	22.22	*SANDY CLAY to SILTY CLAY
68.0	138.8	66.8	2.39	34.35	SILTY SAND to SANDY SILT
68.5	472.1	226.4	1.53	23.99	SAND to SILTY SAND
69.0	500.5	239.2	2.12	19.27	*SILTY SAND to CLAYEY SAND
69.5	488.3	232.6	2.15	16.33	*SILTY SAND to CLAYEY SAND
70.0	503.5	239.1	2.05	10.55	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-13

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	540.3	255.8	2.16	10.50	*SILTY SAND to CLAYEY SAND
71.0	556.1	262.4	2.41	8.31	*SILTY SAND to CLAYEY SAND
71.5	545.0	256.3	2.40	6.43	*SILTY SAND to CLAYEY SAND
72.0	532.6	249.7	2.83	6.24	*SILTY SAND to CLAYEY SAND
72.5	460.4	215.1	3.23	6.24	*SILTY SAND to CLAYEY SAND
73.0	347.9	162.0	2.61	6.14	*SILTY SAND to CLAYEY SAND
73.5	312.4	145.0	2.75	6.10	*SILTY SAND to CLAYEY SAND
74.0	326.8	151.2	2.39	9.04	SILTY SAND to SANDY SILT
74.5	431.2	198.9	2.20	12.05	SILTY SAND to SANDY SILT
75.0	464.1	213.3	2.22	12.49	*SILTY SAND to CLAYEY SAND
75.5	424.6	194.6	2.38	11.20	*SILTY SAND to CLAYEY SAND
76.0	409.2	186.9	2.26	10.21	SILTY SAND to SANDY SILT
76.5	470.6	214.2	1.95	9.28	SAND to SILTY SAND
77.0	515.3	233.8	1.96	6.97	SAND to SILTY SAND
77.5	560.1	253.3	2.67	5.41	*SILTY SAND to CLAYEY SAND
78.0	553.5	249.5	2.24	5.30	*SILTY SAND to CLAYEY SAND
78.5	587.4	264.0	2.07	3.72	*SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 54.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-14

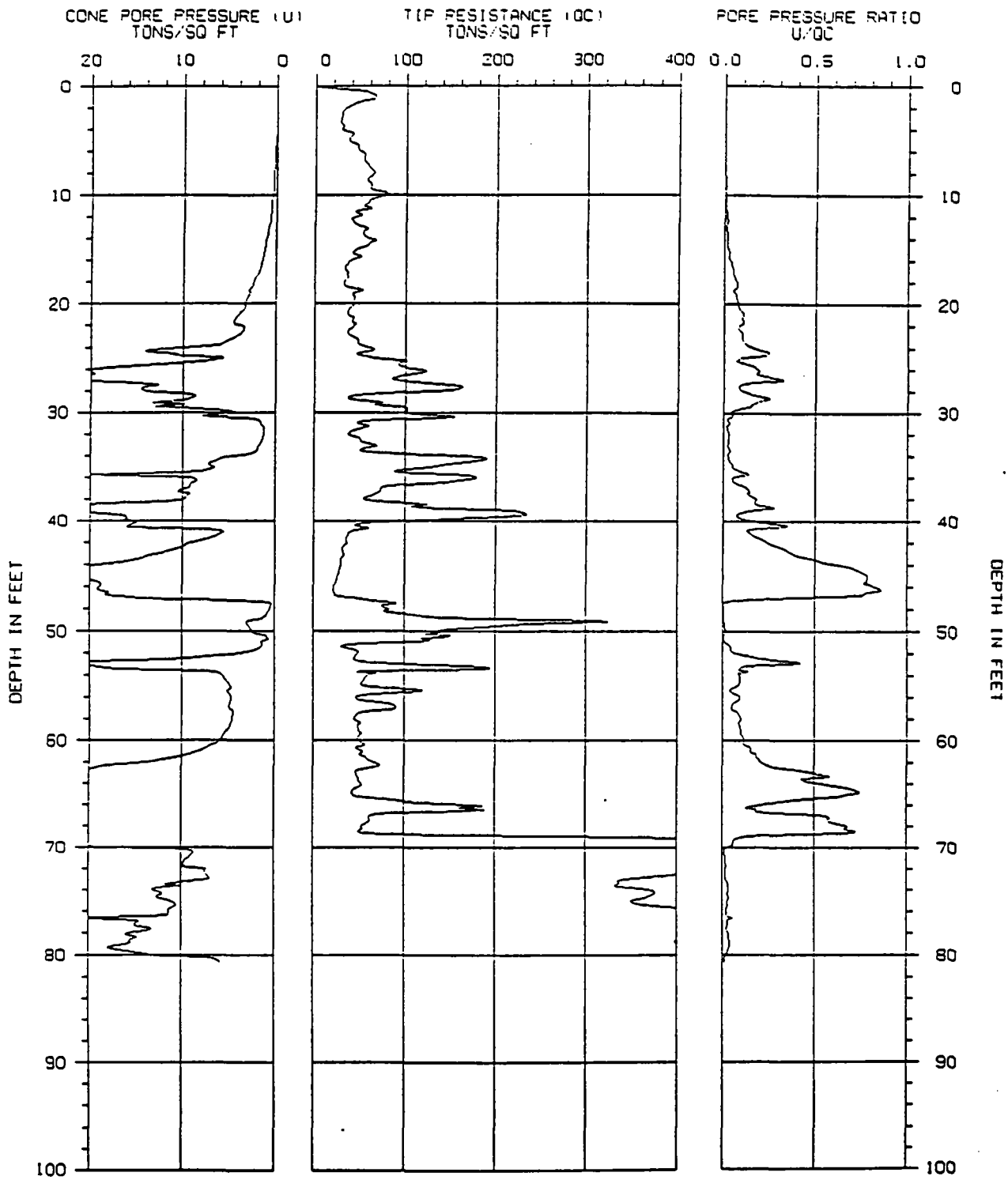
PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-17-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-14

PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-17-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-14
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 07-17-1992

PROJECT NO : 92-380-01111
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/MS

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	53.9	138.1	.57	-.00	SAND to SILTY SAND
1.0	65.6	148.2	2.01	.02	SILTY SAND to SANDY SILT
1.5	46.5	96.9	3.09	-.00	*CLAYEY SAND to SANDY CLAY
2.0	33.9	66.3	4.21	-.00	*CLAYEY SAND to SANDY CLAY
2.5	29.5	55.0	5.34	.00	*SANDY CLAY to SILTY CLAY
3.0	28.5	50.9	6.18	.01	*SANDY CLAY to SILTY CLAY
3.5	29.3	50.3	4.98	.01	*SANDY CLAY to SILTY CLAY
4.0	28.1	46.6	4.47	.00	*SANDY CLAY to SILTY CLAY
4.5	41.1	66.0	5.88	.05	*SANDY CLAY to SILTY CLAY
5.0	37.0	57.8	6.13	.11	*SANDY CLAY to SILTY CLAY
5.5	47.5	72.2	5.49	.19	*SANDY CLAY to SILTY CLAY
6.0	49.5	73.4	4.92	.21	*SANDY CLAY to SILTY CLAY
6.5	54.2	78.4	4.94	.23	*SANDY CLAY to SILTY CLAY
7.0	55.1	77.9	4.78	.25	*SANDY CLAY to SILTY CLAY
7.5	60.3	83.5	4.86	.26	*SANDY CLAY to SILTY CLAY
8.0	64.3	87.2	5.02	.29	*SANDY CLAY to SILTY CLAY
8.5	58.0	77.1	5.47	.29	*SANDY CLAY to SILTY CLAY
9.0	61.5	80.2	5.64	.30	*SANDY CLAY to SILTY CLAY
9.5	62.7	80.4	5.05	.29	*SANDY CLAY to SILTY CLAY
10.0	79.0	99.5	3.82	.44	*CLAYEY SAND to SANDY CLAY
10.5	59.7	73.9	4.07	.51	*CLAYEY SAND to SANDY CLAY
11.0	54.1	65.9	4.90	.53	*SANDY CLAY to SILTY CLAY
11.5	43.6	52.3	5.83	.55	*SANDY CLAY to SILTY CLAY
12.0	46.1	54.4	5.84	.62	*SANDY CLAY to SILTY CLAY
12.5	42.5	49.4	4.88	.68	*SANDY CLAY to SILTY CLAY
13.0	58.3	66.8	5.70	.83	*SANDY CLAY to SILTY CLAY
13.5	53.0	59.9	6.24	.91	*SANDY CLAY to SILTY CLAY
14.0	59.7	66.5	4.80	1.03	*SANDY CLAY to SILTY CLAY
14.5	58.8	64.6	5.64	1.14	*SANDY CLAY to SILTY CLAY
15.0	46.0	49.9	5.53	1.20	*SANDY CLAY to SILTY CLAY
15.5	45.2	48.3	5.83	1.33	*SANDY CLAY to SILTY CLAY
16.0	41.3	43.6	7.74	1.45	*SANDY CLAY to SILTY CLAY
16.5	34.1	35.6	5.95	1.60	*SANDY CLAY to SILTY CLAY
17.0	35.5	36.5	5.10	1.77	*SANDY CLAY to SILTY CLAY
17.5	36.7	37.3	4.60	2.13	*SANDY CLAY to SILTY CLAY
18.0	33.1	33.3	4.77	2.37	*SANDY CLAY to SILTY CLAY
18.5	39.1	38.8	5.24	2.63	*SANDY CLAY to SILTY CLAY
19.0	43.3	42.5	6.46	2.82	*SANDY CLAY to SILTY CLAY
19.5	44.0	42.7	5.86	3.07	*SANDY CLAY to SILTY CLAY
20.0	41.3	39.6	6.51	3.38	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-14

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	38.0	36.1	5.97	3.41	*SANDY CLAY to SILTY CLAY
21.0	36.6	34.3	5.74	4.01	*SANDY CLAY to SILTY CLAY
21.5	42.7	39.6	5.93	4.47	*SANDY CLAY to SILTY CLAY
22.0	43.9	40.3	6.46	3.76	*SANDY CLAY to SILTY CLAY
22.5	37.1	33.7	5.71	3.57	*SANDY CLAY to SILTY CLAY
23.0	41.2	37.0	5.19	4.28	*SANDY CLAY to SILTY CLAY
23.5	48.2	42.8	5.76	5.37	*SANDY CLAY to SILTY CLAY
24.0	60.5	53.2	5.95	10.01	*SANDY CLAY to SILTY CLAY
24.5	49.8	43.4	6.98	12.34	*SANDY CLAY to SILTY CLAY
25.0	64.6	55.6	5.79	5.60	*SANDY CLAY to SILTY CLAY
25.5	91.9	78.4	5.84	10.68	*SANDY CLAY to SILTY CLAY
26.0	116.4	98.3	4.37	22.02	*CLAYEY SAND to SANDY CLAY
26.5	100.8	84.3	5.38	20.48	*SANDY CLAY to SILTY CLAY
27.0	86.8	71.9	5.00	28.22	*SANDY CLAY to SILTY CLAY
27.5	150.1	123.1	2.57	12.62	SILTY SAND to SANDY SILT
28.0	130.7	106.2	4.26	14.05	*CLAYEY SAND to SANDY CLAY
28.5	39.4	31.7	5.48	8.70	*SANDY CLAY to SILTY CLAY
29.0	68.2	54.4	4.51	12.07	*SANDY CLAY to SILTY CLAY
29.5	93.2	73.6	3.76	12.95	*CLAYEY SAND to SANDY CLAY
30.0	101.7	79.6	5.12	5.05	*SANDY CLAY to SILTY CLAY
30.5	136.3	105.7	2.79	3.31	SILTY SAND to SANDY SILT
31.0	46.6	35.8	4.09	1.57	CLAYEY SILT to SILTY CLAY
31.5	52.4	39.9	4.63	1.22	*SANDY CLAY to SILTY CLAY
32.0	37.5	28.3	2.58	1.24	SANDY SILT to CLAYEY SILT
32.5	51.5	38.5	2.98	1.41	SANDY SILT to CLAYEY SILT
33.0	65.5	48.5	5.35	1.71	*SANDY CLAY to SILTY CLAY
33.5	50.4	37.0	5.94	1.99	*SANDY CLAY to SILTY CLAY
34.0	164.0	119.4	2.72	4.64	SILTY SAND to SANDY SILT
34.5	177.5	128.1	2.01	6.47	SILTY SAND to SANDY SILT
35.0	134.9	96.5	1.97	6.84	SILTY SAND to SANDY SILT
35.5	91.3	64.8	5.78	10.15	*SANDY CLAY to SILTY CLAY
36.0	178.6	125.6	3.14	9.24	*CLAYEY SAND to SANDY CLAY
36.5	145.5	101.5	4.97	8.90	*SANDY CLAY to SILTY CLAY
37.0	73.8	51.0	5.53	9.35	*SANDY CLAY to SILTY CLAY
37.5	66.6	45.7	5.49	9.22	*SANDY CLAY to SILTY CLAY
38.0	54.2	36.9	4.51	9.88	*SANDY CLAY to SILTY CLAY
38.5	124.5	83.9	4.83	22.31	*SANDY CLAY to SILTY CLAY
39.0	192.7	128.8	3.41	35.76	*CLAYEY SAND to SANDY CLAY
39.5	223.1	147.9	3.37	16.10	*CLAYEY SAND to SANDY CLAY
40.0	96.1	63.2	6.98	15.50	*SANDY CLAY to SILTY CLAY
40.5	47.6	31.1	4.61	15.96	CLAYEY SILT to SILTY CLAY
41.0	39.3	25.4	5.64	5.59	*SANDY CLAY to SILTY CLAY
41.5	36.2	23.2	3.93	6.85	CLAYEY SILT to SILTY CLAY
42.0	36.8	23.4	3.47	8.93	SANDY SILT to CLAYEY SILT
42.5	31.8	20.1	3.56	10.23	CLAYEY SILT to SILTY CLAY
43.0	33.2	20.8	3.68	12.83	CLAYEY SILT to SILTY CLAY
43.5	30.1	18.7	3.94	14.87	CLAYEY SILT to SILTY CLAY
44.0	30.7	18.9	3.72	19.01	CLAYEY SILT to SILTY CLAY
44.5	28.6	17.5	3.95	20.92	CLAYEY SILT to SILTY CLAY
45.0	26.5	16.1	4.00	20.75	CLAYEY SILT to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-14

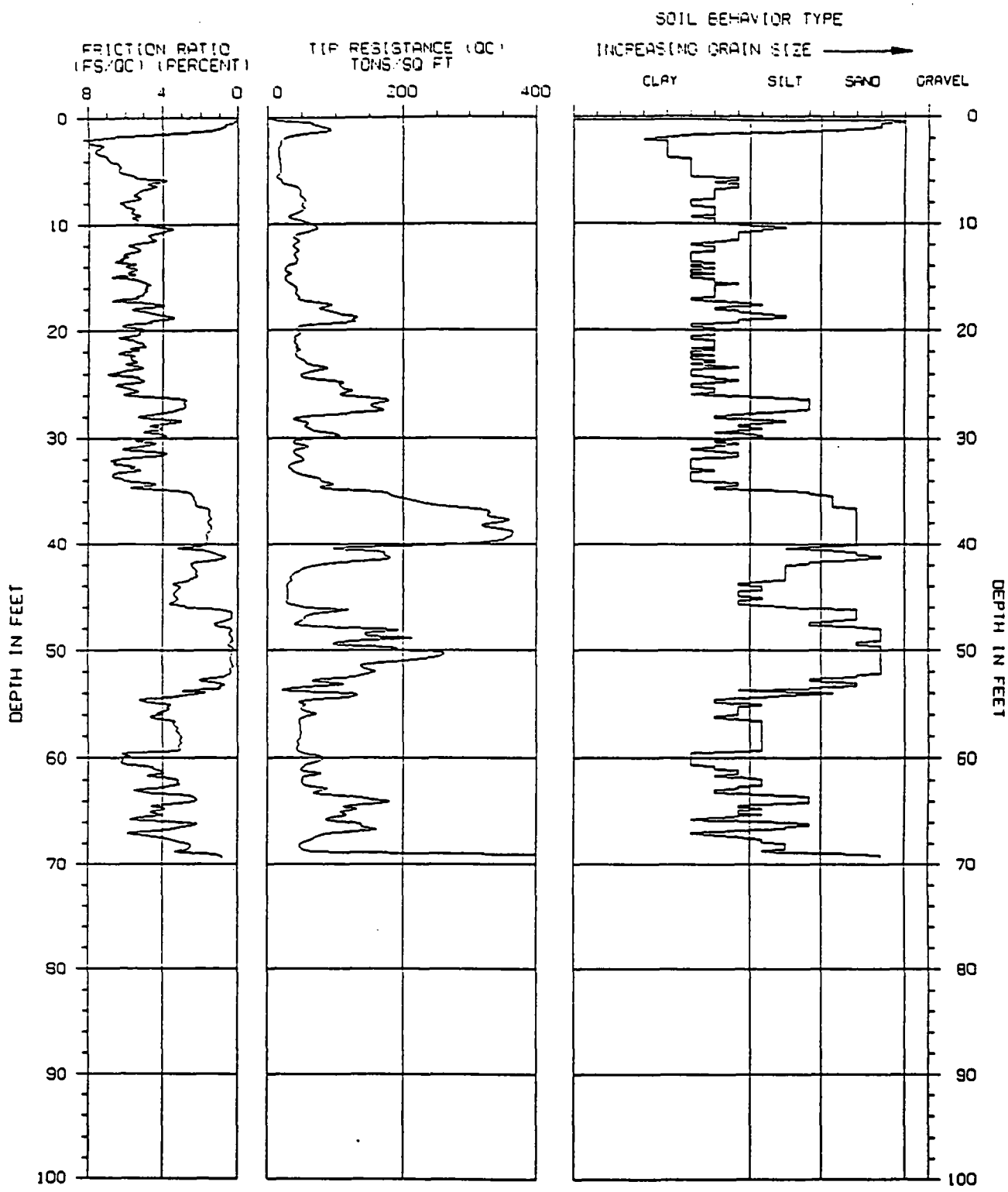
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	24.9	15.0	4.44	19.36	CLAYEY SILT to SILTY CLAY
46.0	22.7	13.6	4.36	18.86	CLAYEY SILT to SILTY CLAY
46.5	22.8	13.5	4.08	17.89	CLAYEY SILT to SILTY CLAY
47.0	51.7	30.4	2.24	14.72	SANDY SILT to CLAYEY SILT
47.5	91.0	53.1	1.44	.32	SILTY SAND to SANDY SILT
48.0	83.5	48.3	1.11	.51	SILTY SAND to SANDY SILT
48.5	109.5	62.9	1.07	.90	SAND to SILTY SAND
49.0	311.7	177.5	1.31	2.83	SAND to SILTY SAND
49.5	201.4	113.8	.43	2.78	SAND to SILTY SAND
50.0	134.5	75.4	2.02	2.31	SILTY SAND to SANDY SILT
50.5	142.9	79.5	.88	.73	SAND to SILTY SAND
51.0	84.2	46.5	3.05	1.43	SANDY SILT to CLAYEY SILT
51.5	35.4	19.4	3.62	1.58	CLAYEY SILT to SILTY CLAY
52.0	49.0	26.6	3.70	3.71	CLAYEY SILT to SILTY CLAY
52.5	44.7	24.1	3.37	11.80	SANDY SILT to CLAYEY SILT
53.0	132.6	71.0	2.79	30.63	SANDY SILT to CLAYEY SILT
53.5	135.0	71.7	2.71	12.51	SILTY SAND to SANDY SILT
54.0	60.0	31.6	2.50	5.68	SANDY SILT to CLAYEY SILT
54.5	54.6	28.7	1.38	5.11	SILTY SAND to SANDY SILT
55.0	63.7	33.3	1.51	4.68	SILTY SAND to SANDY SILT
55.5	102.1	53.3	3.77	5.05	SANDY SILT to CLAYEY SILT
56.0	47.5	24.7	2.63	4.66	SANDY SILT to CLAYEY SILT
56.5	80.9	42.0	3.85	4.81	SANDY SILT to CLAYEY SILT
57.0	90.0	46.5	4.53	4.81	*SANDY CLAY to SILTY CLAY
57.5	49.6	25.6	2.75	4.44	SANDY SILT to CLAYEY SILT
58.0	45.2	23.2	2.63	4.54	SANDY SILT to CLAYEY SILT
58.5	49.2	25.2	2.56	4.75	SANDY SILT to CLAYEY SILT
59.0	50.3	25.7	2.45	5.09	SANDY SILT to CLAYEY SILT
59.5	51.5	26.2	2.79	5.50	SANDY SILT to CLAYEY SILT
60.0	50.8	25.7	3.49	5.93	SANDY SILT to CLAYEY SILT
60.5	51.2	25.8	3.80	7.11	CLAYEY SILT to SILTY CLAY
61.0	55.2	27.8	4.05	8.35	CLAYEY SILT to SILTY CLAY
61.5	55.6	27.9	5.46	10.23	*SANDY CLAY to SILTY CLAY
62.0	66.5	33.3	6.03	13.97	*SANDY CLAY to SILTY CLAY
62.5	66.1	33.0	5.44	19.11	*SANDY CLAY to SILTY CLAY
63.0	46.6	23.2	3.20	22.46	SANDY SILT to CLAYEY SILT
63.5	49.9	24.7	4.11	26.93	CLAYEY SILT to SILTY CLAY
64.0	53.4	26.3	3.32	28.46	SANDY SILT to CLAYEY SILT
64.5	46.8	23.0	3.65	32.70	CLAYEY SILT to SILTY CLAY
65.0	44.1	21.6	3.66	31.00	CLAYEY SILT to SILTY CLAY
65.5	75.3	36.8	4.74	35.16	*SANDY CLAY to SILTY CLAY
66.0	172.9	84.3	3.26	35.71	*CLAYEY SAND to SANDY CLAY
66.5	188.6	91.6	3.73	34.58	*CLAYEY SAND to SANDY CLAY
67.0	65.6	31.7	4.29	33.85	CLAYEY SILT to SILTY CLAY
67.5	63.1	30.4	3.36	36.01	SANDY SILT to CLAYEY SILT
68.0	53.3	25.6	3.66	36.01	CLAYEY SILT to SILTY CLAY
68.5	49.8	23.9	3.86	36.01	CLAYEY SILT to SILTY CLAY
69.0	258.1	123.4	2.19	36.01	SILTY SAND to SANDY SILT
69.5	597.0	284.4	.94	36.01	SAND to SILTY SAND
70.0	628.9	298.6	2.14	18.89	*SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-14

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	604.7	286.2	2.88	8.69	*SILTY SAND to CLAYEY SAND
71.0	514.9	242.9	2.80	9.19	*SILTY SAND to CLAYEY SAND
71.5	458.0	215.4	2.64	9.71	*SILTY SAND to CLAYEY SAND
72.0	447.4	209.7	2.21	7.32	SILTY SAND to SANDY SILT
72.5	410.9	192.0	2.28	7.30	SILTY SAND to SANDY SILT
73.0	344.2	160.3	2.55	7.06	*SILTY SAND to CLAYEY SAND
73.5	334.1	155.1	2.11	11.25	SILTY SAND to SANDY SILT
74.0	368.9	170.7	2.28	13.11	SILTY SAND to SANDY SILT
74.5	373.4	172.2	2.38	12.12	SILTY SAND to SANDY SILT
75.0	352.8	162.2	2.35	11.58	SILTY SAND to SANDY SILT
75.5	375.3	172.0	2.41	10.57	SILTY SAND to SANDY SILT
76.0	448.9	205.0	2.55	11.35	*SILTY SAND to CLAYEY SAND
76.5	452.9	206.2	2.31	13.43	*SILTY SAND to CLAYEY SAND
77.0	519.9	235.9	2.54	14.48	*SILTY SAND to CLAYEY SAND
77.5	505.7	228.7	2.91	13.63	*SILTY SAND to CLAYEY SAND
78.0	475.0	214.2	2.94	15.61	*SILTY SAND to CLAYEY SAND
78.5	415.9	186.9	2.42	14.87	*SILTY SAND to CLAYEY SAND
79.0	410.8	184.0	2.16	16.00	SILTY SAND to SANDY SILT
79.5	502.0	224.2	1.77	16.70	SAND to SILTY SAND
80.0	526.2	234.2	1.56	13.43	SAND to SILTY SAND
80.5	536.0	237.8	1.84	6.05	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 54.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-15

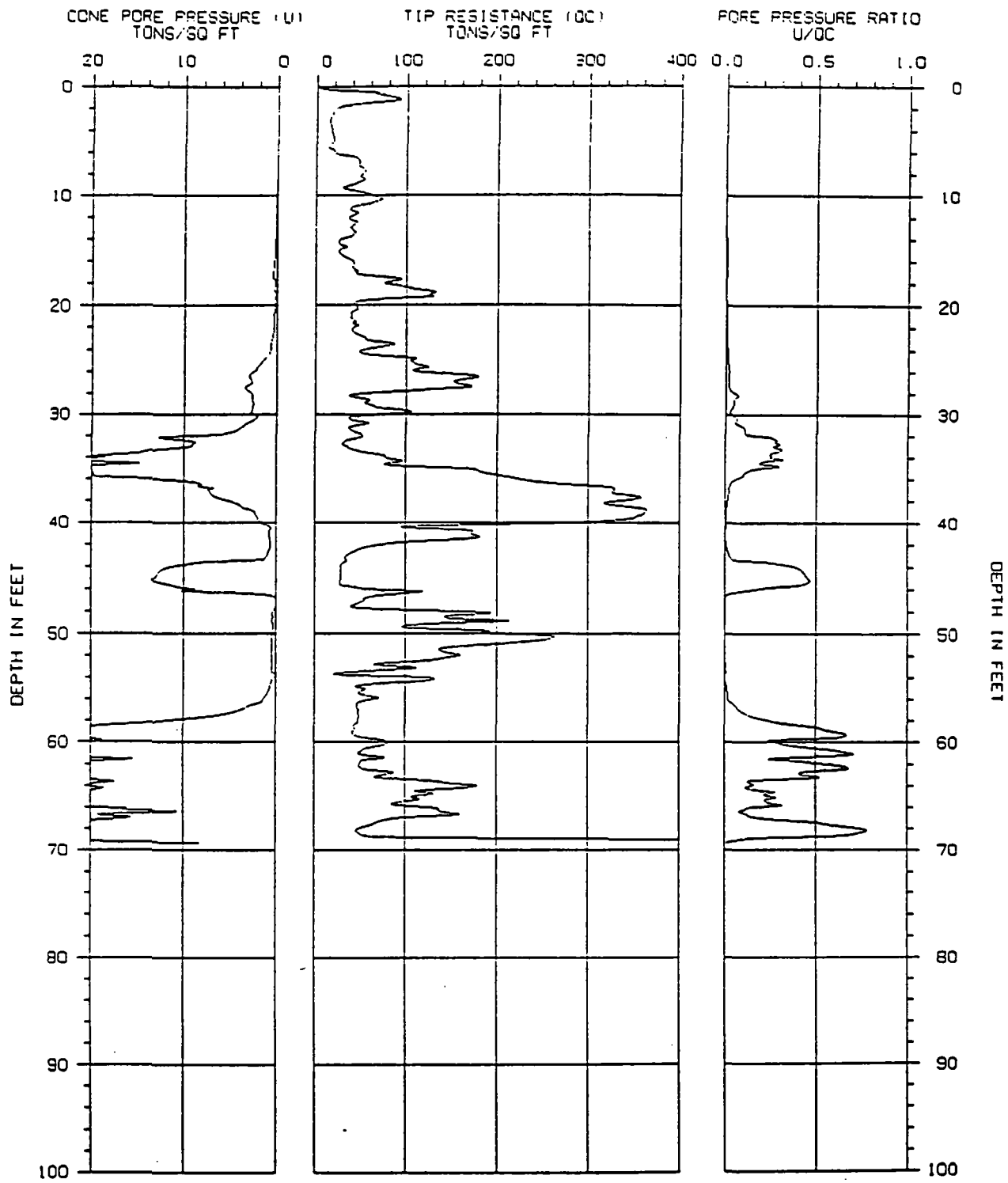
PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-20-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-15

PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-20-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING	: CPT-15	PROJECT NO	: 92-380-01111
PROJECT	: D&M/P-1 NAPL	INSTRUMENT	: F15CKE092
LOCATION	: TORRANCE CA.	SYSTEM	: SYSTEM#3
DATE	: 07-20-1992	OPERATOR	: KC/MS

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	58.9	150.8	.20	-.00	SANDY GRAVEL to SAND
1.0	82.7	186.9	.86	-.00	SAND to SILTY SAND
1.5	53.3	110.9	4.08	-.00	*CLAYEY SAND to SANDY CLAY
2.0	21.6	42.4	8.13	-.02	*SANDY CLAY to SILTY CLAY
2.5	18.7	34.9	7.51	-.16	*SANDY CLAY to SILTY CLAY
3.0	15.2	27.1	7.61	-.28	*SANDY CLAY to SILTY CLAY
3.5	16.0	27.4	7.04	-.28	*SANDY CLAY to SILTY CLAY
4.0	16.8	27.9	6.86	-.30	*SANDY CLAY to SILTY CLAY
4.5	18.7	30.1	6.31	-.31	*SANDY CLAY to SILTY CLAY
5.0	18.9	29.5	6.32	-.31	*SANDY CLAY to SILTY CLAY
5.5	13.3	20.2	5.55	-.30	SILTY CLAY TO CLAY
6.0	20.6	30.5	4.39	-.25	CLAYEY SILT to SILTY CLAY
6.5	43.2	62.5	4.52	-.16	*SANDY CLAY to SILTY CLAY
7.0	47.8	67.6	5.39	-.10	*SANDY CLAY to SILTY CLAY
7.5	52.0	72.0	5.16	-.06	*SANDY CLAY to SILTY CLAY
8.0	51.8	70.3	6.33	-.00	*SANDY CLAY to SILTY CLAY
8.5	53.7	71.5	5.62	.02	*SANDY CLAY to SILTY CLAY
9.0	39.4	51.5	5.42	.02	*SANDY CLAY to SILTY CLAY
9.5	39.7	50.9	5.34	.02	*SANDY CLAY to SILTY CLAY
10.0	62.3	78.5	5.25	.09	*SANDY CLAY to SILTY CLAY
10.5	71.6	88.7	3.48	.13	*CLAYEY SAND to SANDY CLAY
11.0	40.8	49.7	4.80	.14	*SANDY CLAY to SILTY CLAY
11.5	44.3	53.2	4.39	.14	*SANDY CLAY to SILTY CLAY
12.0	37.3	44.0	5.89	.15	*SANDY CLAY to SILTY CLAY
12.5	45.5	52.9	5.24	.14	*SANDY CLAY to SILTY CLAY
13.0	40.3	46.1	5.85	.16	*SANDY CLAY to SILTY CLAY
13.5	41.7	47.1	6.63	.14	*SANDY CLAY to SILTY CLAY
14.0	28.9	32.2	6.03	.18	*SANDY CLAY to SILTY CLAY
14.5	27.8	30.5	5.92	.21	*SANDY CLAY to SILTY CLAY
15.0	25.8	28.0	6.13	.25	*SANDY CLAY to SILTY CLAY
15.5	29.3	31.3	4.99	.25	*SANDY CLAY to SILTY CLAY
16.0	41.7	44.0	4.85	.32	*SANDY CLAY to SILTY CLAY
16.5	40.7	42.4	5.05	.37	*SANDY CLAY to SILTY CLAY
17.0	45.1	46.4	6.02	.41	*SANDY CLAY to SILTY CLAY
17.5	83.1	84.5	4.34	.50	*CLAYEY SAND to SANDY CLAY
18.0	74.9	75.2	5.72	.20	*SANDY CLAY to SILTY CLAY
18.5	109.4	108.6	4.10	.31	*CLAYEY SAND to SANDY CLAY
19.0	124.0	121.7	4.54	.07	*SANDY CLAY to SILTY CLAY
19.5	62.6	60.7	6.18	.25	*SANDY CLAY to SILTY CLAY
20.0	44.0	42.1	4.98	.27	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-15

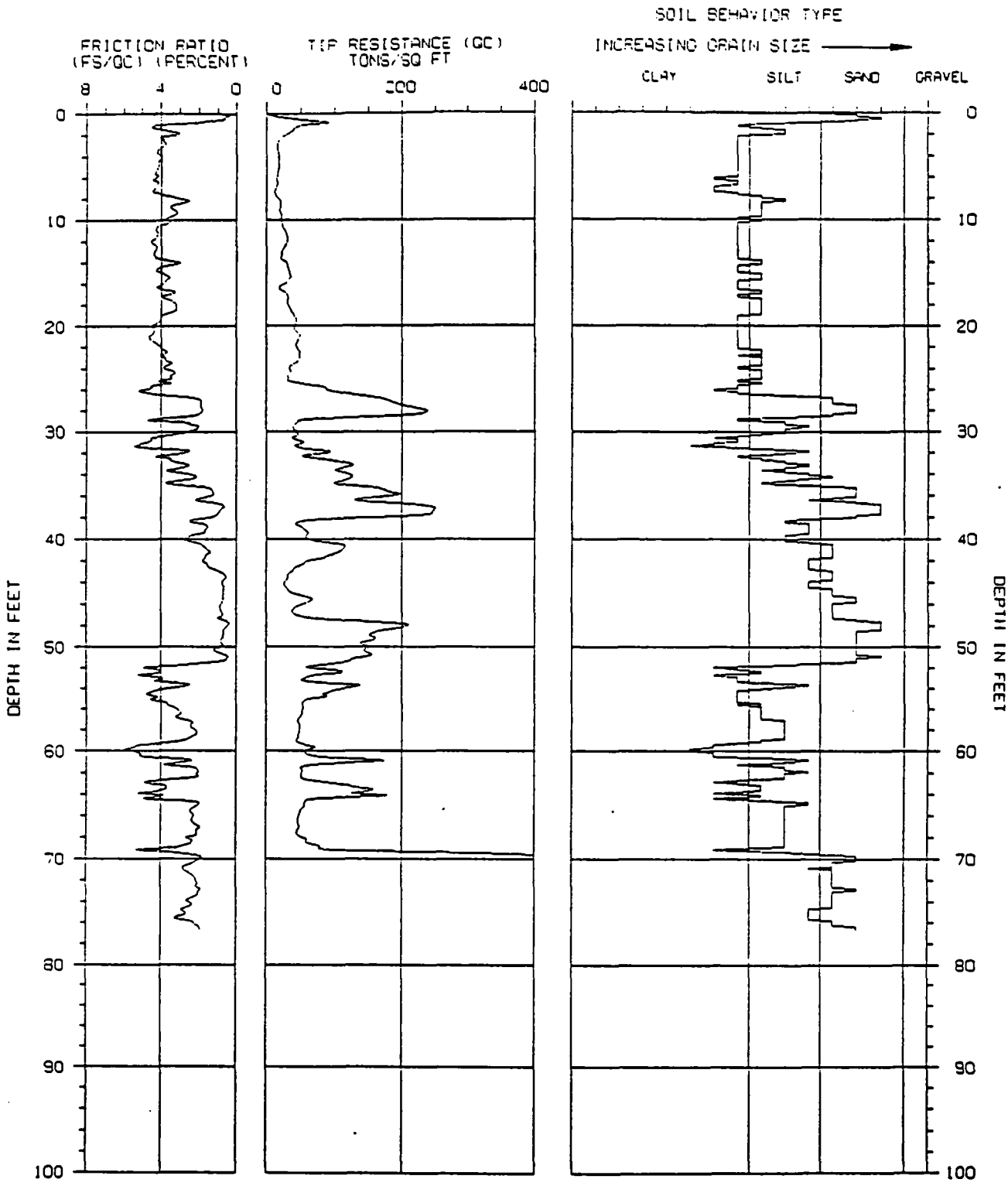
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	42.2	40.0	5.94	.27	*SANDY CLAY to SILTY CLAY
21.0	39.6	37.1	5.48	.31	*SANDY CLAY to SILTY CLAY
21.5	44.3	41.1	4.93	.34	*SANDY CLAY to SILTY CLAY
22.0	42.6	39.1	6.05	.34	*SANDY CLAY to SILTY CLAY
22.5	43.7	39.6	5.79	.39	*SANDY CLAY to SILTY CLAY
23.0	56.0	50.3	5.52	.49	*SANDY CLAY to SILTY CLAY
23.5	86.8	77.1	5.10	.69	*SANDY CLAY to SILTY CLAY
24.0	52.9	46.5	6.99	.69	*SANDY CLAY to SILTY CLAY
24.5	63.3	55.1	5.29	.88	*SANDY CLAY to SILTY CLAY
25.0	106.0	91.4	6.41	1.45	*SANDY CLAY to SILTY CLAY
25.5	114.5	97.7	5.68	1.90	*SANDY CLAY to SILTY CLAY
26.0	108.8	91.9	5.75	2.41	*SANDY CLAY to SILTY CLAY
26.5	178.9	149.6	2.75	3.03	*SILTY SAND to CLAYEY SAND
27.0	151.1	125.2	2.79	2.71	*SILTY SAND to CLAYEY SAND
27.5	171.3	140.5	3.33	3.45	*CLAYEY SAND to SANDY CLAY
28.0	53.9	43.8	5.33	2.72	*SANDY CLAY to SILTY CLAY
28.5	52.8	42.5	3.03	2.64	SANDY SILT to CLAYEY SILT
29.0	54.5	43.4	4.40	2.57	*SANDY CLAY to SILTY CLAY
29.5	78.4	61.9	5.03	2.65	*SANDY CLAY to SILTY CLAY
30.0	73.7	57.7	4.56	2.51	*SANDY CLAY to SILTY CLAY
30.5	38.6	29.9	4.39	2.42	CLAYEY SILT to SILTY CLAY
31.0	52.7	40.5	6.14	3.48	*SANDY CLAY to SILTY CLAY
31.5	39.7	30.2	3.80	4.24	CLAYEY SILT to SILTY CLAY
32.0	52.7	39.8	6.51	8.56	*SANDY CLAY to SILTY CLAY
32.5	34.0	25.5	6.49	9.26	*SANDY CLAY to SILTY CLAY
33.0	34.8	25.8	5.30	9.05	CLAYEY SILT to SILTY CLAY
33.5	52.0	38.2	6.72	14.40	*SANDY CLAY to SILTY CLAY
34.0	77.1	56.1	6.08	18.48	*SANDY CLAY to SILTY CLAY
34.5	89.5	64.6	4.73	17.23	*SANDY CLAY to SILTY CLAY
35.0	136.7	97.8	3.24	30.71	*CLAYEY SAND to SANDY CLAY
35.5	188.4	133.6	2.38	19.70	SILTY SAND to SANDY SILT
36.0	222.1	156.2	2.28	13.62	SILTY SAND to SANDY SILT
36.5	272.1	189.8	2.10	8.13	SILTY SAND to SANDY SILT
37.0	330.0	228.1	1.56	7.38	SAND to SILTY SAND
37.5	347.1	238.0	1.46	6.92	SAND to SILTY SAND
38.0	336.0	228.4	1.62	5.30	SAND to SILTY SAND
38.5	334.4	225.5	1.45	3.88	SAND to SILTY SAND
39.0	364.2	243.5	1.66	2.49	SAND to SILTY SAND
39.5	352.2	233.5	1.66	2.10	SAND to SILTY SAND
40.0	283.0	186.1	1.62	1.70	SAND to SILTY SAND
40.5	97.5	63.6	2.79	.60	SANDY SILT to CLAYEY SILT
41.0	171.3	110.8	1.01	.76	SAND to SILTY SAND
41.5	160.7	103.1	1.26	.69	SAND to SILTY SAND
42.0	73.8	47.0	2.48	.61	SANDY SILT to CLAYEY SILT
42.5	48.3	30.5	2.26	.75	SANDY SILT to CLAYEY SILT
43.0	35.1	22.0	2.15	1.04	SANDY SILT to CLAYEY SILT
43.5	35.0	21.8	2.71	7.17	SANDY SILT to CLAYEY SILT
44.0	29.2	18.0	3.11	11.34	SANDY SILT to CLAYEY SILT
44.5	29.1	17.8	3.34	12.65	CLAYEY SILT to SILTY CLAY
45.0	28.8	17.5	3.28	13.21	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-15

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	28.0	16.8	3.46	12.12	CLAYEY SILT to SILTY CLAY
46.0	54.3	32.4	2.86	8.72	SANDY SILT to CLAYEY SILT
46.5	83.4	49.4	.33	1.65	SAND to SILTY SAND
47.0	54.6	32.1	.41	-.06	SAND to SILTY SAND
47.5	38.8	22.6	1.28	-.05	SILTY SAND to SANDY SILT
48.0	159.6	92.3	.37	.31	SAND to SILTY SAND
48.5	142.4	81.7	.45	.38	SAND to SILTY SAND
49.0	150.8	85.9	.30	.38	SAND to SILTY SAND
49.5	107.0	60.4	.54	.31	SAND to SILTY SAND
50.0	190.0	106.5	.29	.41	SAND to SILTY SAND
50.5	253.1	140.8	.38	.49	SAND to SILTY SAND
51.0	183.6	101.4	.36	.46	SAND to SILTY SAND
51.5	137.3	75.2	.31	.40	SAND to SILTY SAND
52.0	159.6	86.7	.39	.47	SAND to SILTY SAND
52.5	105.7	57.0	1.36	.44	SILTY SAND to SANDY SILT
53.0	101.6	54.4	1.02	.48	SAND to SILTY SAND
53.5	40.1	21.3	.94	.43	SILTY SAND to SANDY SILT
54.0	124.0	65.4	1.81	.22	SILTY SAND to SANDY SILT
54.5	71.8	37.7	5.24	.55	*SANDY CLAY to SILTY CLAY
55.0	55.5	29.1	3.58	.71	SANDY SILT to CLAYEY SILT
55.5	49.4	25.8	3.68	.95	CLAYEY SILT to SILTY CLAY
56.0	68.6	35.7	4.11	1.38	CLAYEY SILT to SILTY CLAY
56.5	46.6	24.2	3.40	2.66	SANDY SILT to CLAYEY SILT
57.0	48.7	25.2	3.33	3.95	SANDY SILT to CLAYEY SILT
57.5	48.7	25.1	3.25	6.31	SANDY SILT to CLAYEY SILT
58.0	48.4	24.8	3.02	11.73	SANDY SILT to CLAYEY SILT
58.5	43.8	22.4	2.99	20.65	SANDY SILT to CLAYEY SILT
59.0	42.9	21.9	3.15	25.85	SANDY SILT to CLAYEY SILT
59.5	48.8	24.8	5.60	31.55	SILTY CLAY TO CLAY
60.0	80.3	40.7	6.13	21.88	*SANDY CLAY to SILTY CLAY
60.5	59.3	29.9	6.12	28.18	*SANDY CLAY to SILTY CLAY
61.0	47.9	24.1	4.51	32.86	CLAYEY SILT to SILTY CLAY
61.5	77.4	38.8	4.14	22.98	CLAYEY SILT to SILTY CLAY
62.0	50.6	25.3	3.18	28.77	SANDY SILT to CLAYEY SILT
62.5	54.1	27.0	3.43	35.84	SANDY SILT to CLAYEY SILT
63.0	78.2	38.9	5.53	32.23	*SANDY CLAY to SILTY CLAY
63.5	106.0	52.5	2.61	30.38	SANDY SILT to CLAYEY SILT
64.0	179.1	88.4	2.36	27.24	SILTY SAND to SANDY SILT
64.5	109.9	54.1	4.67	23.37	*SANDY CLAY to SILTY CLAY
65.0	108.6	53.3	4.60	24.69	*SANDY CLAY to SILTY CLAY
65.5	103.7	50.7	4.63	22.93	*SANDY CLAY to SILTY CLAY
66.0	124.1	60.5	2.83	20.41	SANDY SILT to CLAYEY SILT
66.5	143.6	69.7	3.20	11.51	SANDY SILT to CLAYEY SILT
67.0	100.6	48.7	5.71	15.66	*SANDY CLAY to SILTY CLAY
67.5	68.8	33.2	4.05	34.30	CLAYEY SILT to SILTY CLAY
68.0	49.1	23.6	2.68	36.00	SANDY SILT to CLAYEY SILT
68.5	50.0	24.0	2.62	36.00	SANDY SILT to CLAYEY SILT
69.0	244.9	117.0	1.88	36.00	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 54.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-16

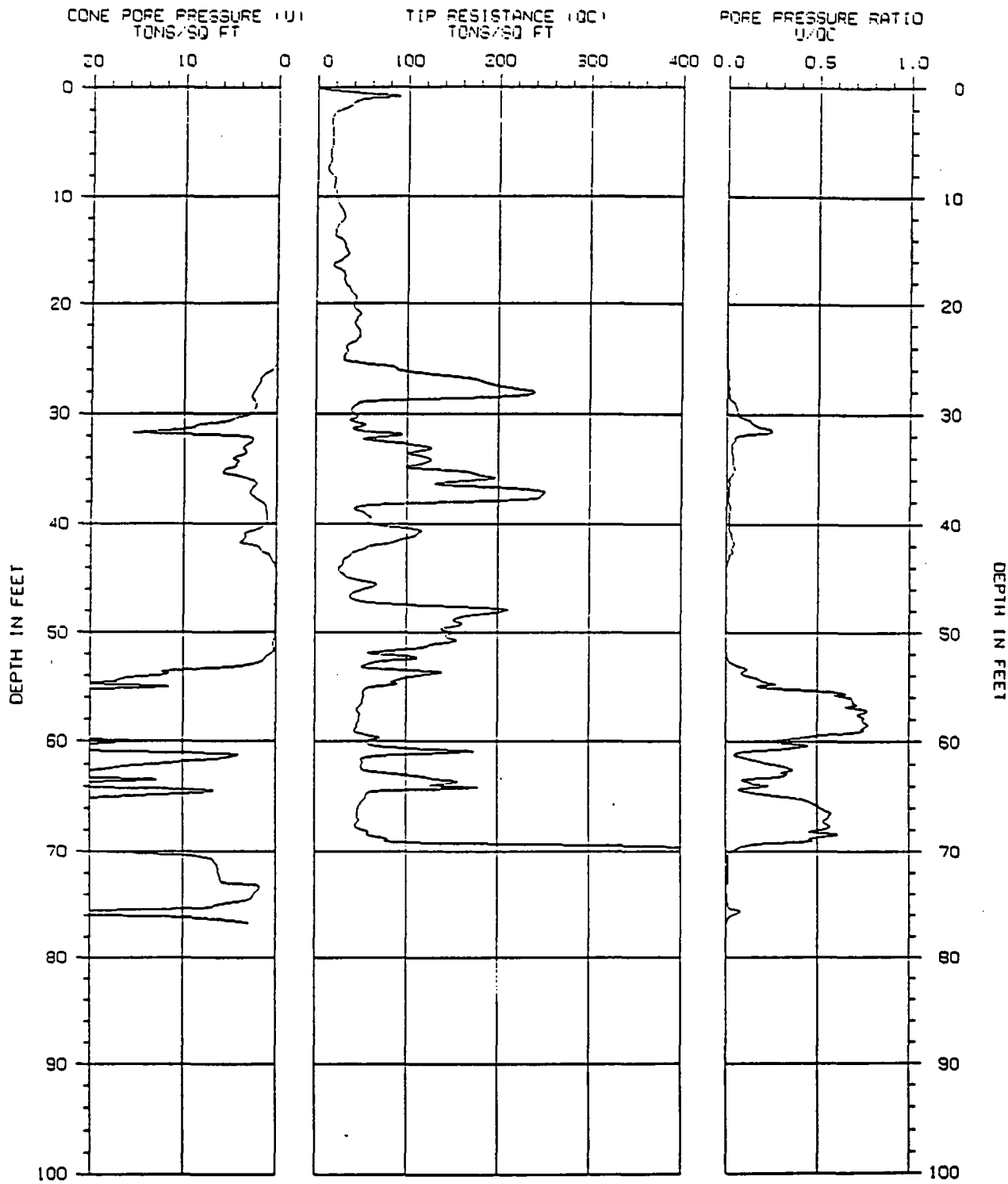
PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-22-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-16

PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-22-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-16
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 07-22-1992

PROJECT NO : 92-380-01111
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/MS

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	39.2	100.3	.62	.00	SAND to SILTY SAND
1.0	67.3	152.1	3.14	.00	*SILTY SAND to CLAYEY SAND
1.5	39.6	82.5	3.87	.00	*CLAYEY SAND to SANDY CLAY
2.0	27.1	53.0	3.32	-.06	SANDY SILT to CLAYEY SILT
2.5	17.7	33.0	3.89	-.02	CLAYEY SILT to SILTY CLAY
3.0	15.6	27.9	3.85	-.00	CLAYEY SILT to SILTY CLAY
3.5	16.5	28.3	4.19	-.00	CLAYEY SILT to SILTY CLAY
4.0	17.4	28.9	4.04	-.03	CLAYEY SILT to SILTY CLAY
4.5	16.6	26.6	4.13	-.03	CLAYEY SILT to SILTY CLAY
5.0	16.8	26.1	4.21	-.05	CLAYEY SILT to SILTY CLAY
5.5	15.4	23.4	4.31	-.08	CLAYEY SILT to SILTY CLAY
6.0	14.8	21.9	4.28	-.07	CLAYEY SILT to SILTY CLAY
6.5	15.7	22.6	4.14	-.06	CLAYEY SILT to SILTY CLAY
7.0	12.9	18.2	4.33	-.09	CLAYEY SILT to SILTY CLAY
7.5	12.1	16.8	4.04	-.19	CLAYEY SILT to SILTY CLAY
8.0	16.8	22.8	2.96	-.19	SANDY SILT to CLAYEY SILT
8.5	19.5	26.0	3.13	-.14	SANDY SILT to CLAYEY SILT
9.0	18.6	24.3	3.31	-.22	SANDY SILT to CLAYEY SILT
9.5	21.4	27.4	3.30	-.28	SANDY SILT to CLAYEY SILT
10.0	20.8	26.3	3.64	-.29	CLAYEY SILT to SILTY CLAY
10.5	23.3	28.8	4.03	-.28	CLAYEY SILT to SILTY CLAY
11.0	27.2	33.1	4.25	-.28	CLAYEY SILT to SILTY CLAY
11.5	29.8	35.7	4.20	-.28	CLAYEY SILT to SILTY CLAY
12.0	30.6	36.2	4.53	-.25	CLAYEY SILT to SILTY CLAY
12.5	25.8	29.9	4.25	-.25	CLAYEY SILT to SILTY CLAY
13.0	21.8	25.0	4.38	-.25	CLAYEY SILT to SILTY CLAY
13.5	20.1	22.7	4.34	-.25	CLAYEY SILT to SILTY CLAY
14.0	28.3	31.5	3.02	-.24	SANDY SILT to CLAYEY SILT
14.5	31.2	34.3	4.22	-.24	CLAYEY SILT to SILTY CLAY
15.0	33.8	36.6	3.84	-.24	SANDY SILT to CLAYEY SILT
15.5	33.8	36.2	3.68	-.22	SANDY SILT to CLAYEY SILT
16.0	27.0	28.5	3.91	-.21	CLAYEY SILT to SILTY CLAY
16.5	18.9	19.7	3.66	-.21	CLAYEY SILT to SILTY CLAY
17.0	29.9	30.7	3.74	-.21	CLAYEY SILT to SILTY CLAY
17.5	30.9	31.4	3.54	-.20	SANDY SILT to CLAYEY SILT
18.0	31.3	31.4	3.23	-.20	SANDY SILT to CLAYEY SILT
18.5	36.0	35.8	3.31	-.18	SANDY SILT to CLAYEY SILT
19.0	40.2	39.4	3.98	-.17	CLAYEY SILT to SILTY CLAY
19.5	43.8	42.4	4.09	-.17	CLAYEY SILT to SILTY CLAY
20.0	41.5	39.8	4.47	-.16	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-16

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	43.5	41.3	4.40	-.15	*SANDY CLAY to SILTY CLAY
21.0	48.8	45.8	4.63	-.13	*SANDY CLAY to SILTY CLAY
21.5	44.7	41.4	4.36	-.13	*SANDY CLAY to SILTY CLAY
22.0	43.8	40.2	4.02	-.12	CLAYEY SILT to SILTY CLAY
22.5	48.0	43.6	3.76	-.11	SANDY SILT to CLAYEY SILT
23.0	48.4	43.5	3.78	-.10	SANDY SILT to CLAYEY SILT
23.5	43.2	38.4	3.45	-.10	SANDY SILT to CLAYEY SILT
24.0	32.7	28.8	3.82	-.10	CLAYEY SILT to SILTY CLAY
24.5	33.7	29.3	3.34	-.10	SANDY SILT to CLAYEY SILT
25.0	31.3	27.0	3.49	-.10	SANDY SILT to CLAYEY SILT
25.5	51.0	43.5	3.53	-.07	SANDY SILT to CLAYEY SILT
26.0	88.3	74.6	5.09	.43	*SANDY CLAY to SILTY CLAY
26.5	129.3	108.1	4.14	1.34	*CLAYEY SAND to SANDY CLAY
27.0	177.5	147.0	1.96	1.74	SILTY SAND to SANDY SILT
27.5	196.5	161.2	1.88	2.00	SAND to SILTY SAND
28.0	238.9	194.1	1.81	2.44	SAND to SILTY SAND
28.5	191.3	153.9	2.32	2.72	SILTY SAND to SANDY SILT
29.0	47.3	37.7	4.20	2.29	CLAYEY SILT to SILTY CLAY
29.5	40.9	32.3	2.02	2.26	SILTY SAND to SANDY SILT
30.0	42.8	33.5	2.63	2.74	SANDY SILT to CLAYEY SILT
30.5	38.8	30.1	4.48	4.59	CLAYEY SILT to SILTY CLAY
31.0	54.4	41.8	4.75	8.12	*SANDY CLAY to SILTY CLAY
31.5	42.2	32.1	5.11	10.48	*SANDY CLAY to SILTY CLAY
32.0	86.3	65.1	2.86	4.73	SANDY SILT to CLAYEY SILT
32.5	67.7	50.6	3.55	2.60	SANDY SILT to CLAYEY SILT
33.0	118.9	88.2	2.91	3.41	SANDY SILT to CLAYEY SILT
33.5	103.9	76.3	3.42	3.18	*CLAYEY SAND to SANDY CLAY
34.0	122.5	89.2	2.44	4.70	SILTY SAND to SANDY SILT
34.5	119.6	86.3	2.61	4.26	SILTY SAND to SANDY SILT
35.0	107.3	76.8	3.14	5.08	SANDY SILT to CLAYEY SILT
35.5	176.4	125.2	1.27	5.15	SAND to SILTY SAND
36.0	181.9	127.9	1.40	2.87	SAND to SILTY SAND
36.5	137.4	95.8	1.94	2.19	SILTY SAND to SANDY SILT
37.0	240.0	166.0	.64	2.73	SAND to SILTY SAND
37.5	245.6	168.4	.94	2.53	SAND to SILTY SAND
38.0	153.8	104.5	1.46	1.70	SAND to SILTY SAND
38.5	44.7	30.1	2.23	1.15	SANDY SILT to CLAYEY SILT
39.0	52.6	35.2	1.56	1.05	SILTY SAND to SANDY SILT
39.5	59.6	39.5	2.01	1.02	SILTY SAND to SANDY SILT
40.0	61.0	40.1	2.74	1.01	SANDY SILT to CLAYEY SILT
40.5	111.1	72.4	1.88	1.93	SILTY SAND to SANDY SILT
41.0	110.2	71.3	1.52	3.35	SILTY SAND to SANDY SILT
41.5	89.9	57.7	1.69	3.55	SILTY SAND to SANDY SILT
42.0	60.5	38.5	1.80	2.22	SILTY SAND to SANDY SILT
42.5	46.1	29.1	1.52	1.64	SILTY SAND to SANDY SILT
43.0	36.3	22.7	.85	.64	SILTY SAND to SANDY SILT
43.5	31.2	19.4	.58	.31	SILTY SAND to SANDY SILT
44.0	26.4	16.3	.76	.08	SILTY SAND to SANDY SILT
44.5	28.6	17.5	.69	.01	SILTY SAND to SANDY SILT
45.0	41.2	25.0	.72	.01	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-16

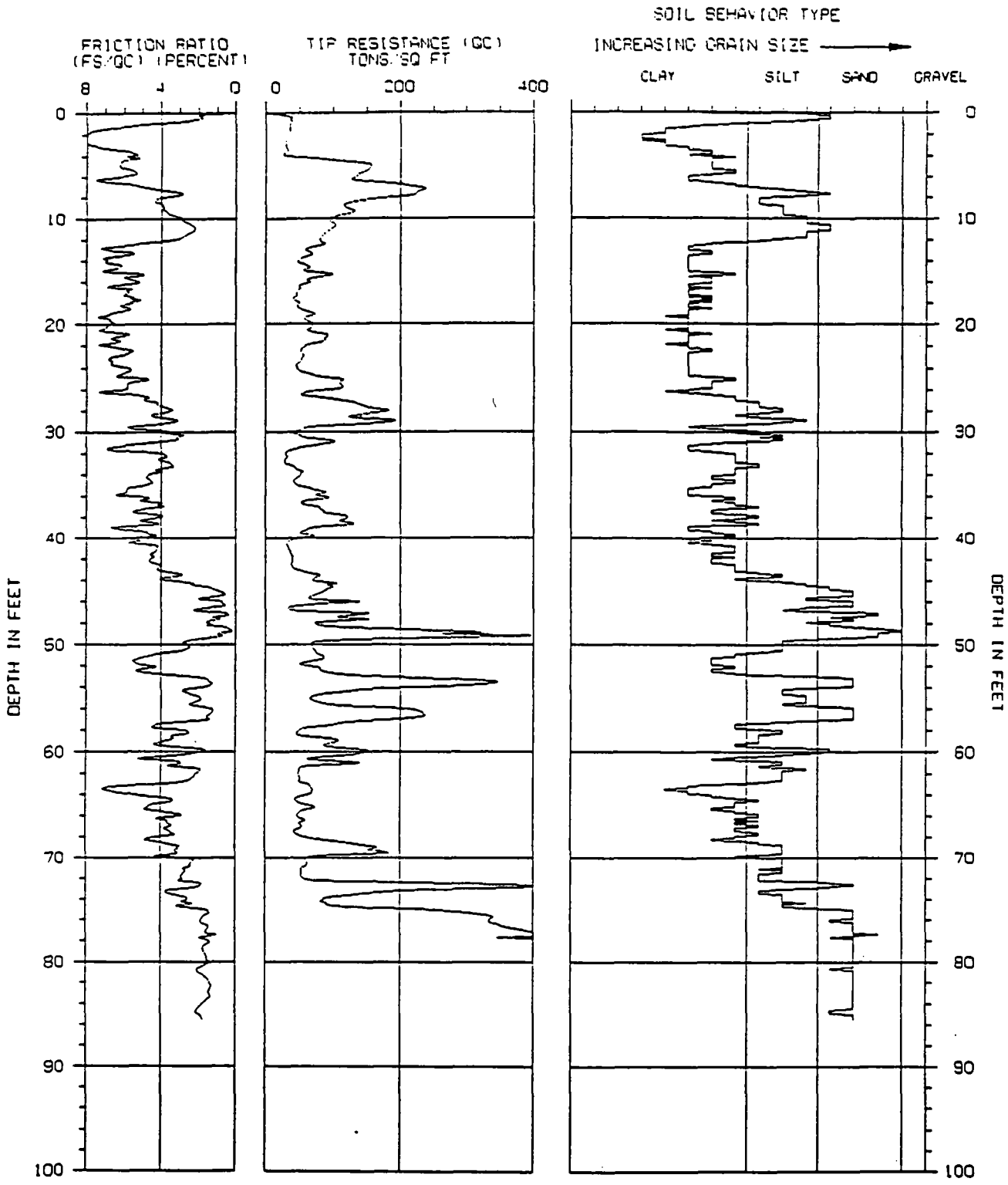
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	67.4	40.6	.69	.09	SAND to SILTY SAND
46.0	52.8	31.5	.82	.14	SILTY SAND to SANDY SILT
46.5	38.8	23.0	.86	.11	SILTY SAND to SANDY SILT
47.0	45.5	26.7	.74	.09	SILTY SAND to SANDY SILT
47.5	125.7	73.3	.59	.19	SAND to SILTY SAND
48.0	206.9	119.6	.48	.14	SAND to SILTY SAND
48.5	165.5	95.0	.72	.13	SAND to SILTY SAND
49.0	157.1	89.4	.70	.12	SAND to SILTY SAND
49.5	144.3	81.5	.85	.05	SAND to SILTY SAND
50.0	151.1	84.7	.75	.10	SAND to SILTY SAND
50.5	148.2	82.5	.98	.18	SAND to SILTY SAND
51.0	136.2	75.2	.48	.31	SAND to SILTY SAND
51.5	107.0	58.6	1.66	.18	SILTY SAND to SANDY SILT
52.0	62.1	33.7	4.98	.55	*SANDY CLAY to SILTY CLAY
52.5	90.7	48.9	4.72	1.33	*SANDY CLAY to SILTY CLAY
53.0	54.8	29.4	3.91	3.11	CLAYEY SILT to SILTY CLAY
53.5	99.0	52.6	2.94	10.53	SANDY SILT to CLAYEY SILT
54.0	113.8	60.0	3.63	12.80	SANDY SILT to CLAYEY SILT
54.5	82.3	43.3	4.80	17.06	*SANDY CLAY to SILTY CLAY
55.0	60.9	31.9	4.59	11.53	CLAYEY SILT to SILTY CLAY
55.5	52.4	27.4	3.67	32.58	CLAYEY SILT to SILTY CLAY
56.0	52.5	27.3	3.19	35.48	SANDY SILT to CLAYEY SILT
56.5	51.4	26.6	3.06	36.00	SANDY SILT to CLAYEY SILT
57.0	46.1	23.8	2.67	33.44	SANDY SILT to CLAYEY SILT
57.5	48.9	25.2	2.44	35.60	SANDY SILT to CLAYEY SILT
58.0	48.2	24.7	2.19	36.00	SANDY SILT to CLAYEY SILT
58.5	46.4	23.7	2.24	35.99	SANDY SILT to CLAYEY SILT
59.0	43.3	22.1	2.95	32.65	SANDY SILT to CLAYEY SILT
59.5	60.7	30.9	5.36	29.01	*SANDY CLAY to SILTY CLAY
60.0	57.4	29.1	5.51	14.18	*SANDY CLAY to SILTY CLAY
60.5	80.6	40.7	4.91	30.48	*SANDY CLAY to SILTY CLAY
61.0	147.1	74.1	2.76	9.52	SANDY SILT to CLAYEY SILT
61.5	52.1	26.2	2.56	5.58	SANDY SILT to CLAYEY SILT
62.0	51.6	25.8	2.01	13.27	SANDY SILT to CLAYEY SILT
62.5	51.1	25.5	2.68	18.66	SANDY SILT to CLAYEY SILT
63.0	97.8	48.6	4.82	32.66	*SANDY CLAY to SILTY CLAY
63.5	145.4	72.0	3.68	12.70	*CLAYEY SAND to SANDY CLAY
64.0	149.4	73.8	4.49	34.39	*SANDY CLAY to SILTY CLAY
64.5	62.4	30.7	4.59	7.00	CLAYEY SILT to SILTY CLAY
65.0	56.1	27.5	1.99	17.99	SILTY SAND to SANDY SILT
65.5	51.3	25.1	2.40	23.33	SANDY SILT to CLAYEY SILT
66.0	47.7	23.2	2.26	24.70	SANDY SILT to CLAYEY SILT
66.5	47.0	22.8	2.36	27.09	SANDY SILT to CLAYEY SILT
67.0	48.4	23.5	1.98	26.85	SANDY SILT to CLAYEY SILT
67.5	45.3	21.9	2.08	24.62	SANDY SILT to CLAYEY SILT
68.0	52.3	25.2	2.66	27.19	SANDY SILT to CLAYEY SILT
68.5	58.1	27.9	2.34	35.58	SANDY SILT to CLAYEY SILT
69.0	77.7	37.1	3.33	36.00	SANDY SILT to CLAYEY SILT
69.5	370.5	176.5	2.69	35.78	*SILTY SAND to CLAYEY SAND
70.0	594.4	282.3	1.92	19.73	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-16

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	578.0	273.6	2.46	8.15	*SILTY SAND to CLAYEY SAND
71.0	495.4	233.7	2.80	6.64	*SILTY SAND to CLAYEY SAND
71.5	421.0	198.0	2.32	6.21	*SILTY SAND to CLAYEY SAND
72.0	407.3	190.9	2.15	6.18	SILTY SAND to SANDY SILT
72.5	415.1	193.9	2.12	6.00	SILTY SAND to SANDY SILT
73.0	439.0	204.4	1.96	4.75	SAND to SILTY SAND
73.5	494.4	229.5	2.22	1.90	*SILTY SAND to CLAYEY SAND
74.0	486.3	225.0	2.59	2.37	*SILTY SAND to CLAYEY SAND
74.5	435.3	200.8	2.57	2.61	*SILTY SAND to CLAYEY SAND
75.0	418.7	192.5	2.78	5.88	*SILTY SAND to CLAYEY SAND
75.5	400.1	183.3	3.29	26.67	*SILTY SAND to CLAYEY SAND
76.0	478.4	218.5	2.25	19.77	*SILTY SAND to CLAYEY SAND
76.5	497.4	226.4	1.97	4.61	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 54.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-17

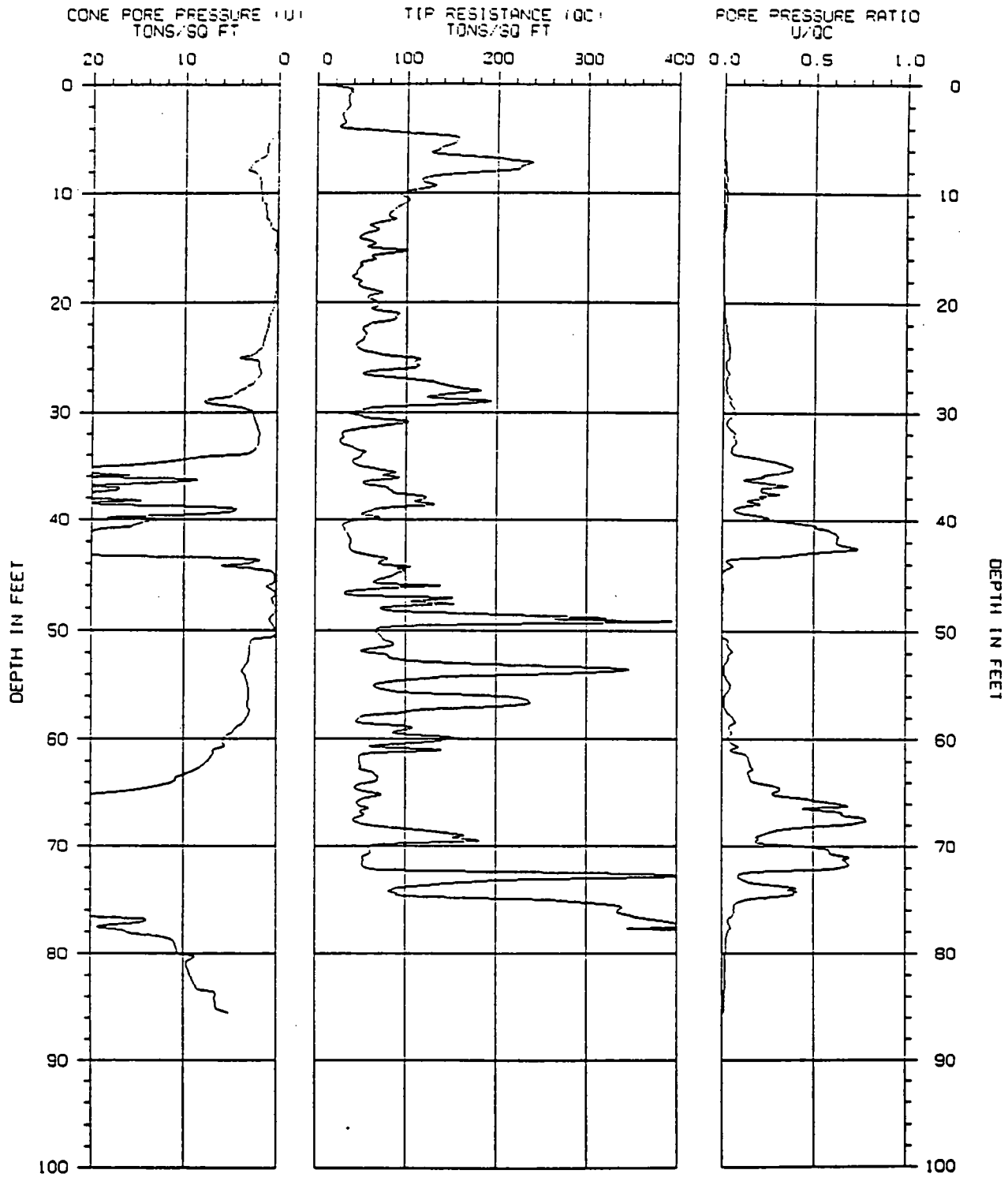
PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-22-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-17

PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-22-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-17
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 07-22-1992

PROJECT NO : 92-380-01111
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/MS

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	39.5	101.0	1.79	.00	SILTY SAND to SANDY SILT
1.0	35.0	79.2	4.16	.00	*CLAYEY SAND to SANDY CLAY
1.5	34.8	72.5	7.35	-.03	*SANDY CLAY to SILTY CLAY
2.0	35.5	69.5	8.35	-.05	*SANDY CLAY to SILTY CLAY
2.5	30.6	56.9	8.59	-.07	*SANDY CLAY to SILTY CLAY
3.0	29.0	51.7	7.64	-.08	*SANDY CLAY to SILTY CLAY
3.5	31.2	53.6	5.86	-.09	*SANDY CLAY to SILTY CLAY
4.0	31.0	51.3	5.92	-.16	*SANDY CLAY to SILTY CLAY
4.5	109.7	176.2	6.18	.21	*SANDY CLAY to SILTY CLAY
5.0	155.6	242.9	6.18	.79	*HEAVILY O.C./CEMENT. MAT.
5.5	146.7	222.9	5.40	1.14	*SANDY CLAY to SILTY CLAY
6.0	135.2	200.3	6.34	1.22	*HEAVILY O.C./CEMENT. MAT.
6.5	149.5	216.3	6.77	1.33	*HEAVILY O.C./CEMENT. MAT.
7.0	231.2	327.1	4.78	2.44	*HEAVILY O.C./CEMENT. MAT.
7.5	225.5	312.2	3.04	2.99	*SILTY SAND to CLAYEY SAND
8.0	188.2	255.3	3.98	2.67	*CLAYEY SAND to SANDY CLAY
8.5	125.6	167.1	4.21	2.05	*CLAYEY SAND to SANDY CLAY
9.0	121.6	158.7	3.90	1.88	*CLAYEY SAND to SANDY CLAY
9.5	122.6	157.2	3.69	1.91	*CLAYEY SAND to SANDY CLAY
10.0	96.1	121.0	2.89	1.77	*SILTY SAND to CLAYEY SAND
10.5	101.5	125.7	2.49	1.74	SILTY SAND to SANDY SILT
11.0	95.7	116.6	2.24	1.26	SILTY SAND to SANDY SILT
11.5	85.8	102.9	2.66	1.29	SILTY SAND to SANDY SILT
12.0	79.8	94.2	3.35	1.21	*CLAYEY SAND to SANDY CLAY
12.5	86.2	100.2	5.62	.99	*SANDY CLAY to SILTY CLAY
13.0	58.8	67.3	6.41	.84	*SANDY CLAY to SILTY CLAY
13.5	64.9	73.3	6.33	.25	*SANDY CLAY to SILTY CLAY
14.0	48.3	53.8	6.95	.09	*SANDY CLAY to SILTY CLAY
14.5	63.5	69.7	6.28	.17	*SANDY CLAY to SILTY CLAY
15.0	62.5	67.8	6.52	.23	*SANDY CLAY to SILTY CLAY
15.5	80.4	85.9	6.01	.16	*SANDY CLAY to SILTY CLAY
16.0	65.2	68.8	5.18	.05	*SANDY CLAY to SILTY CLAY
16.5	49.2	51.2	6.17	.05	*SANDY CLAY to SILTY CLAY
17.0	45.9	47.3	5.76	.05	*SANDY CLAY to SILTY CLAY
17.5	41.2	41.9	5.70	.07	*SANDY CLAY to SILTY CLAY
18.0	49.5	49.7	5.56	.10	*SANDY CLAY to SILTY CLAY
18.5	49.2	48.9	5.67	.14	*SANDY CLAY to SILTY CLAY
19.0	71.6	70.3	6.84	.25	*SANDY CLAY to SILTY CLAY
19.5	56.5	54.8	6.74	.29	*SANDY CLAY to SILTY CLAY
20.0	68.6	65.8	6.78	.39	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-17

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	60.7	57.5	7.36	.48	*SANDY CLAY to SILTY CLAY
21.0	92.0	86.2	6.03	.72	*SANDY CLAY to SILTY CLAY
21.5	88.6	82.2	6.18	.96	*SANDY CLAY to SILTY CLAY
22.0	59.1	54.2	6.93	.97	*SANDY CLAY to SILTY CLAY
22.5	51.8	47.0	5.66	1.09	*SANDY CLAY to SILTY CLAY
23.0	55.1	49.5	6.73	1.28	*SANDY CLAY to SILTY CLAY
23.5	51.4	45.7	6.63	1.46	*SANDY CLAY to SILTY CLAY
24.0	45.5	40.1	5.76	1.60	*SANDY CLAY to SILTY CLAY
24.5	59.6	51.9	6.10	2.16	*SANDY CLAY to SILTY CLAY
25.0	103.0	88.7	4.89	3.87	*SANDY CLAY to SILTY CLAY
25.5	110.3	94.1	5.80	1.93	*SANDY CLAY to SILTY CLAY
26.0	95.0	80.2	6.22	1.90	*SANDY CLAY to SILTY CLAY
26.5	51.4	43.0	5.32	1.74	*SANDY CLAY to SILTY CLAY
27.0	105.2	87.1	4.99	2.19	*SANDY CLAY to SILTY CLAY
27.5	140.6	115.3	4.23	2.68	*CLAYEY SAND to SANDY CLAY
28.0	182.0	147.9	3.47	4.03	*CLAYEY SAND to SANDY CLAY
28.5	128.8	103.7	4.54	4.83	*SANDY CLAY to SILTY CLAY
29.0	193.1	153.9	3.10	7.87	*SILTY SAND to CLAYEY SAND
29.5	85.7	67.7	5.22	4.90	*SANDY CLAY to SILTY CLAY
30.0	39.3	30.8	3.90	2.55	CLAYEY SILT to SILTY CLAY
30.5	53.5	41.4	3.23	2.40	SANDY SILT to CLAYEY SILT
31.0	101.3	77.8	4.49	2.29	*SANDY CLAY to SILTY CLAY
31.5	51.7	39.4	6.87	2.06	*SANDY CLAY to SILTY CLAY
32.0	28.9	21.8	4.00	1.93	CLAYEY SILT to SILTY CLAY
32.5	28.3	21.2	4.11	1.94	CLAYEY SILT to SILTY CLAY
33.0	29.5	21.8	3.46	2.02	SANDY SILT to CLAYEY SILT
33.5	45.8	33.6	4.36	2.37	CLAYEY SILT to SILTY CLAY
34.0	50.7	37.0	4.63	4.36	*SANDY CLAY to SILTY CLAY
34.5	41.7	30.1	4.57	10.58	CLAYEY SILT to SILTY CLAY
35.0	45.5	32.6	4.87	15.96	*SANDY CLAY to SILTY CLAY
35.5	82.5	58.5	5.87	29.22	*SANDY CLAY to SILTY CLAY
36.0	83.7	58.8	5.28	19.28	*SANDY CLAY to SILTY CLAY
36.5	55.3	38.6	5.00	9.61	*SANDY CLAY to SILTY CLAY
37.0	75.0	51.9	3.87	24.59	SANDY SILT to CLAYEY SILT
37.5	85.1	58.4	5.55	21.94	*SANDY CLAY to SILTY CLAY
38.0	122.7	83.4	4.11	27.20	*CLAYEY SAND to SANDY CLAY
38.5	121.4	81.8	4.60	24.77	*SANDY CLAY to SILTY CLAY
39.0	74.0	49.5	6.74	5.24	*SANDY CLAY to SILTY CLAY
39.5	50.3	33.3	4.79	8.45	*SANDY CLAY to SILTY CLAY
40.0	49.1	32.3	5.76	12.53	*SANDY CLAY to SILTY CLAY
40.5	30.0	19.6	5.76	15.28	SILTY CLAY TO CLAY
41.0	33.7	21.8	4.26	20.04	CLAYEY SILT to SILTY CLAY
41.5	37.3	23.9	4.60	23.59	CLAYEY SILT to SILTY CLAY
42.0	38.9	24.8	4.58	24.27	CLAYEY SILT to SILTY CLAY
42.5	37.6	23.7	4.24	27.00	CLAYEY SILT to SILTY CLAY
43.0	48.2	30.2	4.23	21.19	CLAYEY SILT to SILTY CLAY
43.5	80.6	50.1	2.91	4.54	SANDY SILT to CLAYEY SILT
44.0	69.3	42.7	3.64	3.02	SANDY SILT to CLAYEY SILT
44.5	90.5	55.3	2.16	2.39	SILTY SAND to SANDY SILT
45.0	86.4	52.4	.87	.24	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-17

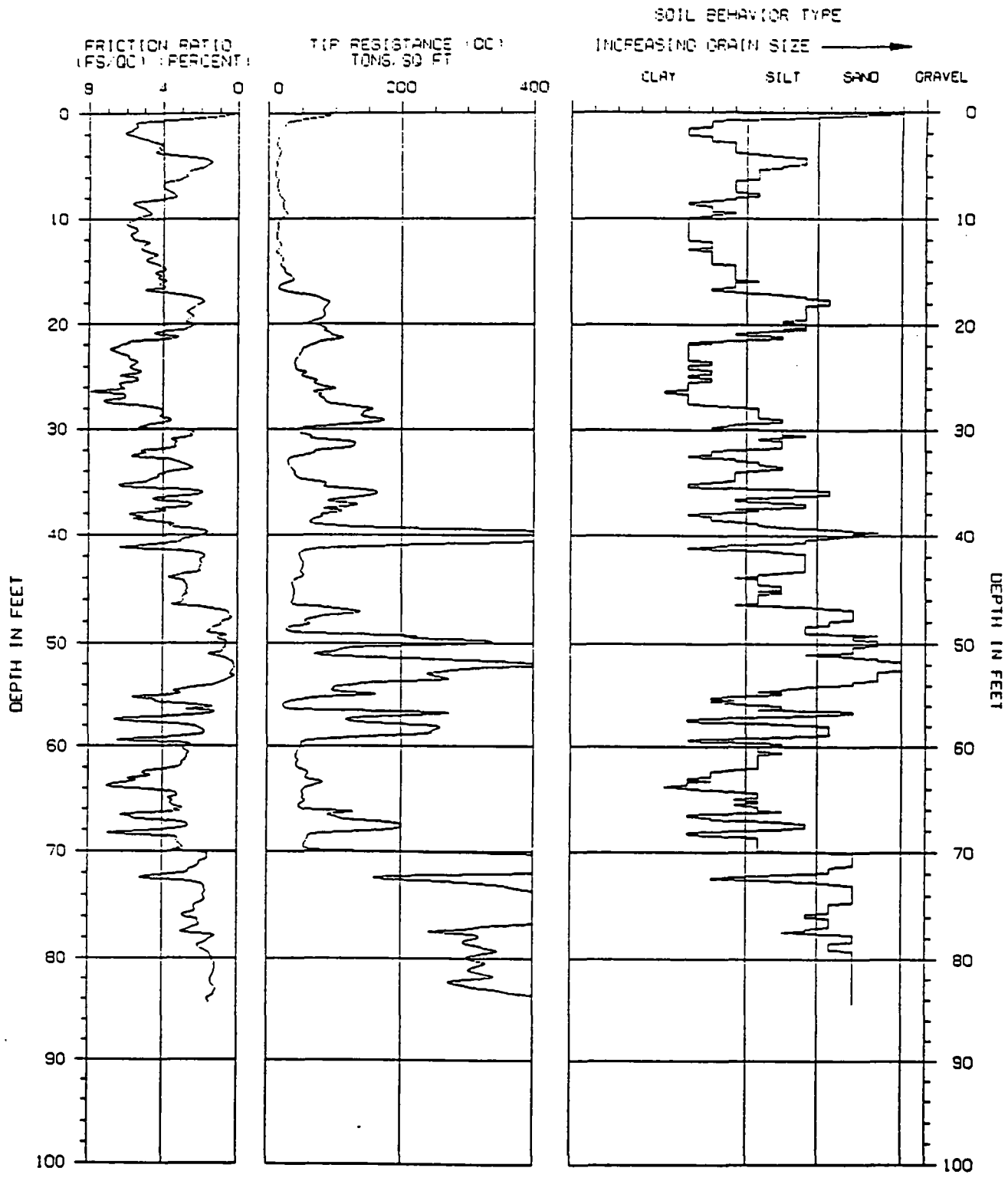
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	66.4	40.0	1.07	.17	SILTY SAND to SANDY SILT
46.0	139.5	83.3	.73	.99	SAND to SILTY SAND
46.5	36.1	21.4	.94	.28	SILTY SAND to SANDY SILT
47.0	152.5	89.6	.54	.45	SAND to SILTY SAND
47.5	139.7	81.5	.88	.42	SAND to SILTY SAND
48.0	71.3	41.2	1.49	.05	SILTY SAND to SANDY SILT
48.5	170.9	98.1	.41	.25	SAND to SILTY SAND
49.0	272.0	154.9	1.02	.68	SAND to SILTY SAND
49.5	129.5	73.1	2.31	.36	SILTY SAND to SANDY SILT
50.0	69.9	39.2	2.59	.22	SANDY SILT to CLAYEY SILT
50.5	73.2	40.7	2.91	.16	SANDY SILT to CLAYEY SILT
51.0	83.4	46.1	4.53	2.78	*SANDY CLAY to SILTY CLAY
51.5	73.1	40.0	5.53	2.83	*SANDY CLAY to SILTY CLAY
52.0	61.7	33.5	4.48	2.90	CLAYEY SILT to SILTY CLAY
52.5	88.6	47.8	5.16	2.99	*SANDY CLAY to SILTY CLAY
53.0	189.2	101.3	2.08	3.21	SILTY SAND to SANDY SILT
53.5	347.2	184.5	1.42	3.64	SAND to SILTY SAND
54.0	224.8	118.5	1.84	3.44	SILTY SAND to SANDY SILT
54.5	92.5	48.6	2.56	3.19	SANDY SILT to CLAYEY SILT
55.0	64.7	33.9	1.90	3.08	SILTY SAND to SANDY SILT
55.5	85.9	44.9	2.42	3.00	SANDY SILT to CLAYEY SILT
56.0	207.5	108.0	1.35	3.00	SAND to SILTY SAND
56.5	237.8	123.3	1.46	3.08	SAND to SILTY SAND
57.0	175.3	90.6	1.59	3.10	SILTY SAND to SANDY SILT
57.5	100.1	51.6	4.34	2.91	*SANDY CLAY to SILTY CLAY
58.0	49.1	25.2	2.72	3.19	SANDY SILT to CLAYEY SILT
58.5	55.4	28.3	3.50	3.64	SANDY SILT to CLAYEY SILT
59.0	105.7	53.9	3.91	4.45	*CLAYEY SAND to SANDY CLAY
59.5	92.7	47.1	3.39	5.00	SANDY SILT to CLAYEY SILT
60.0	148.4	75.2	1.98	5.68	SILTY SAND to SANDY SILT
60.5	73.7	37.2	4.68	5.54	*SANDY CLAY to SILTY CLAY
61.0	139.5	70.3	2.96	6.80	SANDY SILT to CLAYEY SILT
61.5	50.5	25.4	2.35	6.85	SANDY SILT to CLAYEY SILT
62.0	48.7	24.4	2.15	7.37	SANDY SILT to CLAYEY SILT
62.5	50.6	25.2	2.41	8.07	SANDY SILT to CLAYEY SILT
63.0	61.5	30.6	3.78	9.02	CLAYEY SILT to SILTY CLAY
63.5	69.3	34.3	7.13	10.36	*SANDY CLAY to SILTY CLAY
64.0	61.0	30.1	5.43	11.19	*SANDY CLAY to SILTY CLAY
64.5	43.8	21.5	3.38	13.49	SANDY SILT to CLAYEY SILT
65.0	60.9	29.9	4.53	17.46	CLAYEY SILT to SILTY CLAY
65.5	57.7	28.2	4.81	23.20	CLAYEY SILT to SILTY CLAY
66.0	47.0	22.9	2.95	30.09	SANDY SILT to CLAYEY SILT
66.5	59.0	28.7	3.62	25.95	SANDY SILT to CLAYEY SILT
67.0	54.5	26.4	3.43	35.43	SANDY SILT to CLAYEY SILT
67.5	43.0	20.7	3.52	33.62	CLAYEY SILT to SILTY CLAY
68.0	56.5	27.2	4.40	36.01	CLAYEY SILT to SILTY CLAY
68.5	115.4	55.3	4.04	36.05	*CLAYEY SAND to SANDY CLAY
69.0	163.6	78.2	3.09	35.77	SANDY SILT to CLAYEY SILT
69.5	182.5	86.9	3.10	33.72	SANDY SILT to CLAYEY SILT
70.0	60.3	28.6	2.67	25.37	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-17

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	61.1	28.9	2.43	35.99	SANDY SILT to CLAYEY SILT
71.0	52.9	25.0	2.73	36.05	SANDY SILT to CLAYEY SILT
71.5	52.8	24.8	2.85	35.98	SANDY SILT to CLAYEY SILT
72.0	56.8	26.6	2.85	36.05	SANDY SILT to CLAYEY SILT
72.5	293.4	137.1	1.85	36.05	SILTY SAND to SANDY SILT
73.0	315.8	147.1	2.74	30.04	*SILTY SAND to CLAYEY SAND
73.5	134.3	62.3	3.34	32.58	SANDY SILT to CLAYEY SILT
74.0	86.5	40.0	2.60	32.54	SANDY SILT to CLAYEY SILT
74.5	90.5	41.8	2.41	35.66	SANDY SILT to CLAYEY SILT
75.0	219.5	100.9	1.71	35.78	SILTY SAND to SANDY SILT
75.5	327.1	149.9	1.62	23.04	SAND to SILTY SAND
76.0	334.7	152.8	1.88	21.88	SILTY SAND to SANDY SILT
76.5	347.7	158.3	1.58	21.26	SAND to SILTY SAND
77.0	382.3	173.5	1.54	13.97	SAND to SILTY SAND
77.5	436.1	197.3	1.37	19.28	SAND to SILTY SAND
78.0	445.8	201.0	1.39	16.07	SAND to SILTY SAND
78.5	473.5	212.8	1.71	12.23	SAND to SILTY SAND
79.0	469.5	210.3	1.70	10.88	SAND to SILTY SAND
79.5	457.5	204.3	1.54	10.71	SAND to SILTY SAND
80.0	481.0	214.1	1.36	10.77	SAND to SILTY SAND
80.5	480.5	213.2	1.92	8.98	SAND to SILTY SAND
81.0	483.2	213.7	1.93	9.66	SAND to SILTY SAND
81.5	487.3	214.8	1.58	9.46	SAND to SILTY SAND
82.0	476.1	209.1	1.41	9.28	SAND to SILTY SAND
82.5	480.8	210.6	1.33	9.02	SAND to SILTY SAND
83.0	488.0	213.0	1.42	8.62	SAND to SILTY SAND
83.5	492.3	214.2	1.45	6.77	SAND to SILTY SAND
84.0	499.5	216.6	1.76	6.58	SAND to SILTY SAND
84.5	491.4	212.4	2.02	6.55	SAND to SILTY SAND
85.0	495.0	213.3	1.94	6.47	SAND to SILTY SAND
85.5	532.8	228.8	1.77	5.09	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 54.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CPT-18

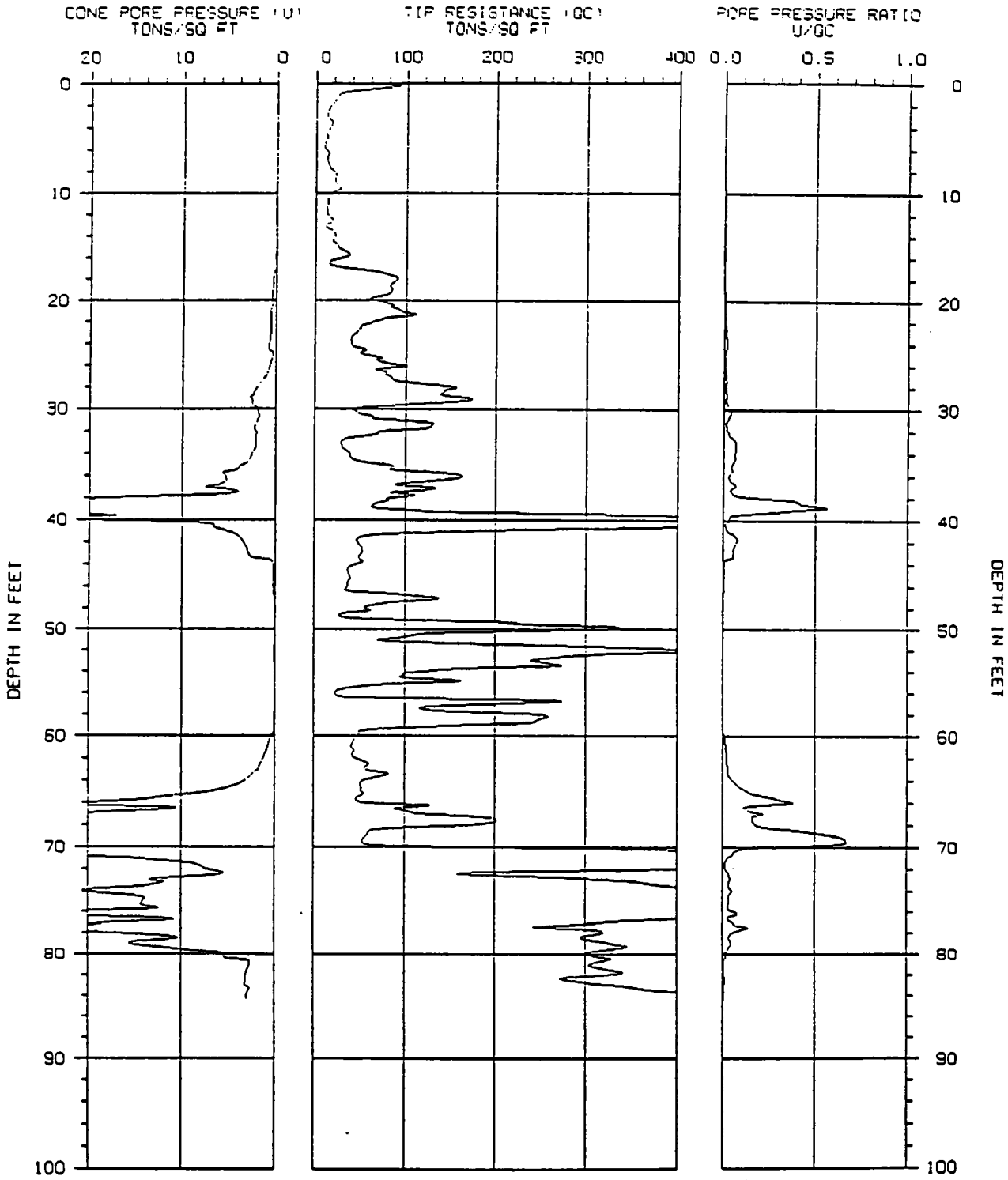
PROJECT NAME : O&M/P-1 NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-23-1992

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CPT-18

PROJECT NAME : D&M/P-1 NAPL

PROJECT NUMBER : 92-380-01111

LOCATION : TORRANCE CA.

DATE : 07-23-1992

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CPT-18
PROJECT : D&M/P-1 NAPL
LOCATION : TORRANCE CA.
DATE : 07-23-1992

PROJECT NO : 92-380-01111
INSTRUMENT : F15CKE092
SYSTEM : SYSTEM#3
OPERATOR : KC/MS

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	65.3	167.3	2.10	.04	SILTY SAND to SANDY SILT
1.0	25.6	57.8	5.57	.02	*SANDY CLAY to SILTY CLAY
1.5	21.1	44.0	5.68	.01	*SANDY CLAY to SILTY CLAY
2.0	16.4	32.1	5.90	.00	*SANDY CLAY to SILTY CLAY
2.5	14.0	26.1	4.94	-.00	CLAYEY SILT to SILTY CLAY
3.0	12.6	22.4	4.05	-.02	CLAYEY SILT to SILTY CLAY
3.5	18.3	31.4	4.33	-.03	CLAYEY SILT to SILTY CLAY
4.0	15.3	25.4	2.99	-.33	SANDY SILT to CLAYEY SILT
4.5	11.9	19.1	1.50	-.07	SILTY SAND to SANDY SILT
5.0	12.4	19.3	1.82	-.06	SANDY SILT to CLAYEY SILT
5.5	9.8	14.9	2.73	-.07	SANDY SILT to CLAYEY SILT
6.0	11.3	16.8	2.93	-.07	SANDY SILT to CLAYEY SILT
6.5	13.3	19.3	3.87	-.09	CLAYEY SILT to SILTY CLAY
7.0	13.2	18.6	3.99	-.08	CLAYEY SILT to SILTY CLAY
7.5	15.0	20.7	3.49	-.08	CLAYEY SILT to SILTY CLAY
8.0	20.2	27.4	3.64	-.01	CLAYEY SILT to SILTY CLAY
8.5	22.1	29.3	5.68	.04	*SANDY CLAY to SILTY CLAY
9.0	22.5	29.4	4.98	.07	CLAYEY SILT to SILTY CLAY
9.5	27.8	35.7	4.66	.12	*SANDY CLAY to SILTY CLAY
10.0	18.1	22.9	5.48	.12	SILTY CLAY TO CLAY
10.5	13.9	17.3	6.03	.11	SILTY CLAY TO CLAY
11.0	13.7	16.7	5.44	.08	SILTY CLAY TO CLAY
11.5	12.5	15.0	5.83	.08	SILTY CLAY TO CLAY
12.0	13.0	15.3	5.55	.07	SILTY CLAY TO CLAY
12.5	18.9	22.0	5.08	.06	CLAYEY SILT to SILTY CLAY
13.0	12.1	13.8	4.97	.06	CLAYEY SILT to SILTY CLAY
13.5	19.1	21.6	4.48	.06	CLAYEY SILT to SILTY CLAY
14.0	22.2	24.8	4.93	.05	CLAYEY SILT to SILTY CLAY
14.5	19.8	21.8	4.11	-.03	CLAYEY SILT to SILTY CLAY
15.0	25.0	27.1	4.42	-.04	CLAYEY SILT to SILTY CLAY
15.5	35.3	37.8	4.27	.05	CLAYEY SILT to SILTY CLAY
16.0	31.0	32.7	4.00	.14	CLAYEY SILT to SILTY CLAY
16.5	15.0	15.6	4.17	-.04	CLAYEY SILT to SILTY CLAY
17.0	40.4	41.6	3.62	.03	SANDY SILT to CLAYEY SILT
17.5	76.4	77.7	2.12	.25	SILTY SAND to SANDY SILT
18.0	91.0	91.3	1.98	.30	SILTY SAND to SANDY SILT
18.5	83.0	82.4	2.57	.33	SILTY SAND to SANDY SILT
19.0	84.2	82.6	2.55	.39	SILTY SAND to SANDY SILT
19.5	77.5	75.1	2.67	.40	SILTY SAND to SANDY SILT
20.0	65.2	62.5	2.45	.40	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

SOUNDING : CPT-18

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	84.6	80.1	3.06	.43	SANDY SILT to CLAYEY SILT
21.0	94.6	88.7	4.07	.66	*CLAYEY SAND to SANDY CLAY
21.5	92.4	85.7	4.67	.53	*SANDY CLAY to SILTY CLAY
22.0	64.2	58.9	6.30	.54	*SANDY CLAY to SILTY CLAY
22.5	50.5	45.8	6.68	.57	*SANDY CLAY to SILTY CLAY
23.0	46.4	41.7	5.86	.61	*SANDY CLAY to SILTY CLAY
23.5	40.3	35.8	5.47	.65	*SANDY CLAY to SILTY CLAY
24.0	40.8	35.9	5.80	.73	*SANDY CLAY to SILTY CLAY
24.5	53.8	46.8	5.17	.80	*SANDY CLAY to SILTY CLAY
25.0	51.5	44.4	5.77	.28	*SANDY CLAY to SILTY CLAY
25.5	69.5	59.3	5.82	.46	*SANDY CLAY to SILTY CLAY
26.0	95.6	80.8	6.12	.62	*SANDY CLAY to SILTY CLAY
26.5	69.4	58.1	7.30	.77	*SANDY CLAY to SILTY CLAY
27.0	81.0	67.1	6.08	1.00	*SANDY CLAY to SILTY CLAY
27.5	87.6	71.9	6.98	1.44	*SANDY CLAY to SILTY CLAY
28.0	155.7	126.5	4.19	1.94	*CLAYEY SAND to SANDY CLAY
28.5	142.4	114.6	3.98	2.29	*CLAYEY SAND to SANDY CLAY
29.0	167.3	133.4	3.63	2.75	*CLAYEY SAND to SANDY CLAY
29.5	133.9	105.8	4.52	2.54	*SANDY CLAY to SILTY CLAY
30.0	43.4	34.0	3.01	1.96	SANDY SILT to CLAYEY SILT
30.5	53.4	41.4	2.57	1.81	SANDY SILT to CLAYEY SILT
31.0	77.9	59.8	3.57	1.85	SANDY SILT to CLAYEY SILT
31.5	129.2	98.3	3.37	2.16	*CLAYEY SAND to SANDY CLAY
32.0	71.7	54.1	5.23	2.10	*SANDY CLAY to SILTY CLAY
32.5	49.1	36.7	5.69	2.08	*SANDY CLAY to SILTY CLAY
33.0	29.7	22.0	3.48	2.09	CLAYEY SILT to SILTY CLAY
33.5	31.7	23.3	2.55	2.16	SANDY SILT to CLAYEY SILT
34.0	38.7	28.2	3.70	2.50	CLAYEY SILT to SILTY CLAY
34.5	41.5	30.0	4.25	2.73	CLAYEY SILT to SILTY CLAY
35.0	72.9	52.2	4.92	3.30	*SANDY CLAY to SILTY CLAY
35.5	93.1	66.0	5.08	4.60	*SANDY CLAY to SILTY CLAY
36.0	162.9	114.6	1.86	5.27	SILTY SAND to SANDY SILT
36.5	128.1	89.3	4.19	5.29	*CLAYEY SAND to SANDY CLAY
37.0	107.6	74.4	2.78	7.19	SANDY SILT to CLAYEY SILT
37.5	82.4	56.5	4.48	4.33	*SANDY CLAY to SILTY CLAY
38.0	83.4	56.7	5.84	18.71	*SANDY CLAY to SILTY CLAY
38.5	67.4	45.4	5.64	28.21	*SANDY CLAY to SILTY CLAY
39.0	70.8	47.4	3.45	35.81	SANDY SILT to CLAYEY SILT
39.5	376.4	249.5	1.88	20.58	SAND to SILTY SAND
40.0	636.3	418.4	1.95	21.19	*SAND to SILTY SAND
40.5	434.8	283.5	3.05	6.53	*SILTY SAND to CLAYEY SAND
41.0	158.8	102.8	5.62	5.14	*SANDY CLAY to SILTY CLAY
41.5	51.7	33.2	2.51	3.91	SANDY SILT to CLAYEY SILT
42.0	47.6	30.3	1.79	3.43	SILTY SAND to SANDY SILT
42.5	52.5	33.1	1.97	3.10	SILTY SAND to SANDY SILT
43.0	51.6	32.3	2.05	2.85	SILTY SAND to SANDY SILT
43.5	50.7	31.5	2.67	.87	SANDY SILT to CLAYEY SILT
44.0	44.9	27.7	3.64	.27	SANDY SILT to CLAYEY SILT
44.5	36.7	22.4	2.80	.25	SANDY SILT to CLAYEY SILT
45.0	39.7	24.1	2.74	.25	SANDY SILT to CLAYEY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

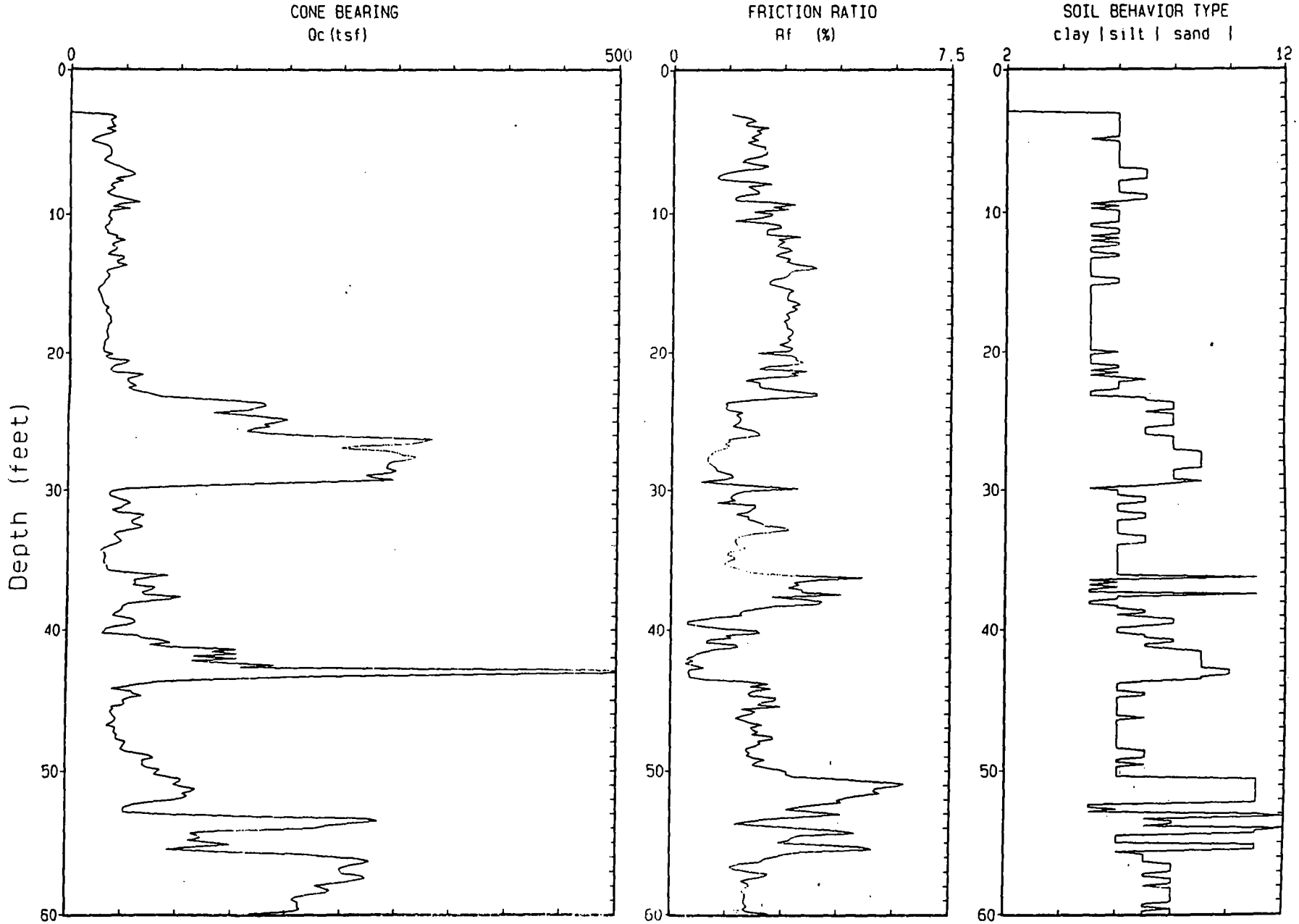
SOUNDING : CPT-18

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	37.8	22.7	2.84	.23	SANDY SILT to CLAYEY SILT
46.0	36.9	22.0	2.94	.23	SANDY SILT to CLAYEY SILT
46.5	45.5	26.9	3.32	.22	SANDY SILT to CLAYEY SILT
47.0	137.7	80.9	.56	.10	SAND to SILTY SAND
47.5	76.7	44.7	.37	.01	SAND to SILTY SAND
48.0	56.1	32.5	.79	-.04	SILTY SAND to SANDY SILT
48.5	30.5	17.5	1.34	-.05	SILTY SAND to SANDY SILT
49.0	61.0	34.7	1.47	-.02	SILTY SAND to SANDY SILT
49.5	221.4	125.1	1.08	.02	SAND to SILTY SAND
50.0	313.1	175.5	.62	.06	SAND to SILTY SAND
50.5	109.2	60.7	.88	-.01	SAND to SILTY SAND
51.0	69.4	38.3	1.62	-.01	SILTY SAND to SANDY SILT
51.5	257.3	140.9	.54	.06	SAND to SILTY SAND
52.0	420.8	228.8	.22	.12	SANDY GRAVEL to SAND
52.5	276.9	149.4	.28	.15	SANDY GRAVEL to SAND
53.0	245.0	131.2	.19	.17	SAND to SILTY SAND
53.5	251.1	133.4	.65	-.09	SAND to SILTY SAND
54.0	121.5	64.1	1.45	-.13	SILTY SAND to SANDY SILT
54.5	96.7	50.8	3.49	-.16	SANDY SILT to CLAYEY SILT
55.0	113.0	59.2	4.71	-.12	*SANDY CLAY to SILTY CLAY
55.5	38.1	19.9	4.50	-.14	CLAYEY SILT to SILTY CLAY
56.0	23.5	12.2	1.81	-.14	SANDY SILT to CLAYEY SILT
56.5	196.9	102.1	1.22	-.09	SAND to SILTY SAND
57.0	184.3	95.3	3.44	-.02	*CLAYEY SAND to SANDY CLAY
57.5	122.4	63.1	6.07	.02	*SANDY CLAY to SILTY CLAY
58.0	253.0	129.9	2.31	.10	SILTY SAND to SANDY SILT
58.5	245.8	125.8	1.77	.16	SILTY SAND to SANDY SILT
59.0	148.4	75.7	3.28	.16	SANDY SILT to CLAYEY SILT
59.5	53.1	27.0	5.30	.16	CLAYEY SILT to SILTY CLAY
60.0	47.9	24.3	2.84	.44	SANDY SILT to CLAYEY SILT
60.5	43.7	22.1	2.64	.61	SANDY SILT to CLAYEY SILT
61.0	41.5	20.9	2.72	.77	SANDY SILT to CLAYEY SILT
61.5	43.4	21.8	3.02	.98	SANDY SILT to CLAYEY SILT
62.0	45.7	22.8	3.44	1.21	SANDY SILT to CLAYEY SILT
62.5	60.4	30.1	5.13	1.52	*SANDY CLAY to SILTY CLAY
63.0	55.6	27.6	5.67	1.75	*SANDY CLAY to SILTY CLAY
63.5	82.6	40.9	6.06	2.44	*SANDY CLAY to SILTY CLAY
64.0	54.8	27.0	5.61	3.15	*SANDY CLAY to SILTY CLAY
64.5	51.9	25.5	3.25	4.37	SANDY SILT to CLAYEY SILT
65.0	51.0	25.0	3.75	6.65	CLAYEY SILT to SILTY CLAY
65.5	49.9	24.4	3.62	11.30	CLAYEY SILT to SILTY CLAY
66.0	53.0	25.8	3.44	20.40	SANDY SILT to CLAYEY SILT
66.5	89.8	43.6	5.99	10.49	*SANDY CLAY to SILTY CLAY
67.0	111.9	54.2	5.37	24.30	*SANDY CLAY to SILTY CLAY
67.5	199.4	96.2	2.66	32.78	SILTY SAND to SANDY SILT
68.0	168.4	81.0	4.33	30.59	*SANDY CLAY to SILTY CLAY
68.5	61.1	29.3	5.27	24.04	*SANDY CLAY to SILTY CLAY
69.0	58.3	27.8	3.25	35.31	SANDY SILT to CLAYEY SILT
69.5	53.4	25.4	2.93	36.01	SANDY SILT to CLAYEY SILT
70.0	170.0	80.7	2.38	36.01	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 54.0 FT

DAMES & MOORE

PROJECT : DEL AMO PROJECT CONTRACTOR : GREGG IN SITU FILE : CWL0012.OUT
LOCATION : CWL0012 GEOLOGIST : ERIC WEAVER DATE : 2/3/93

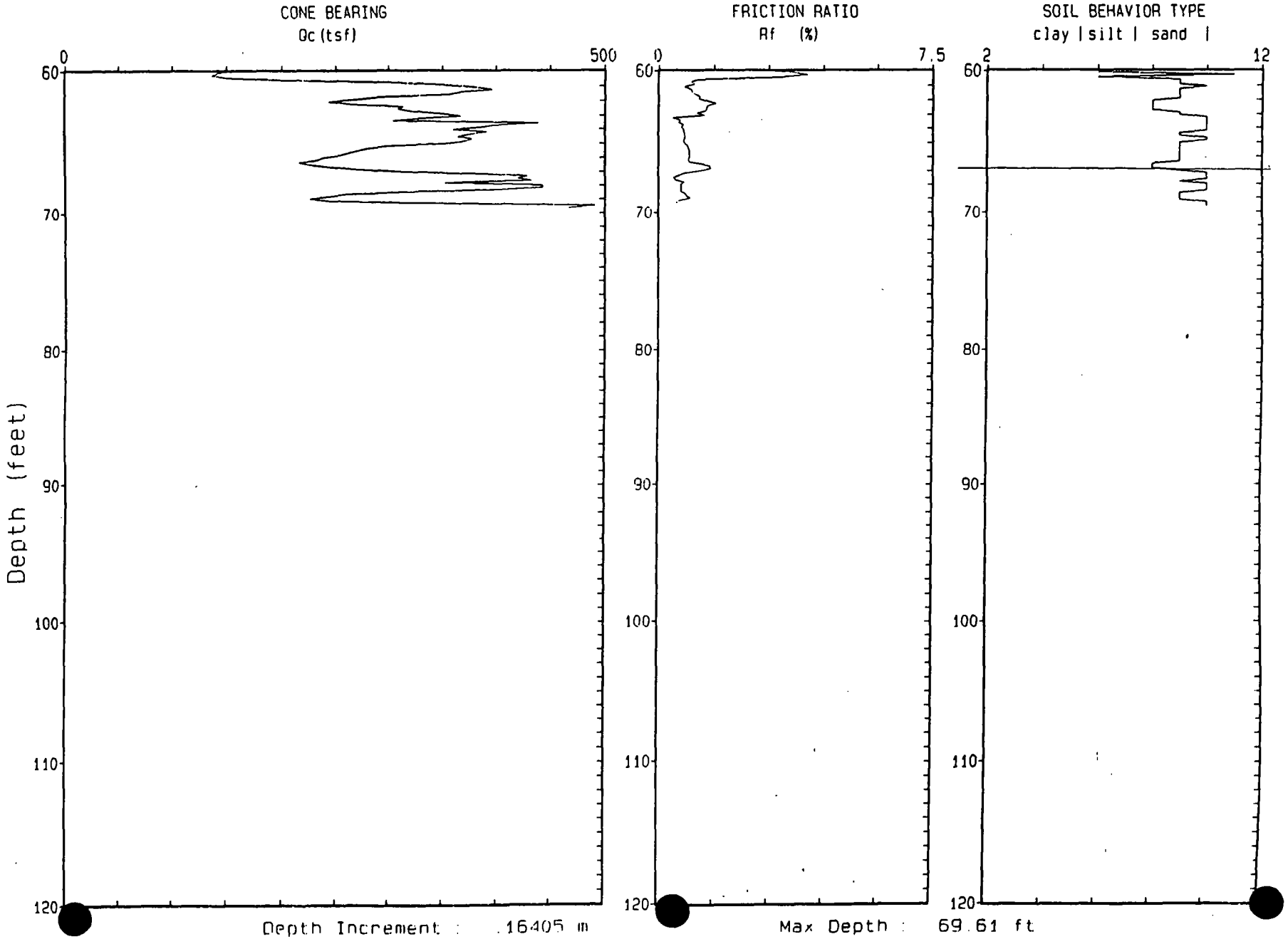


Depth Increment : .16405 m Max Depth : 69.61 ft

DAMES & MOORE

PROJECT : DEL AMO PROJECT CONTRACTOR : GREGG IN SITU FILE : CWL0012.OUT

LOCATION : CWL0012 GEOLOGIST : ERIC WEAVER DATE : 2/3/93

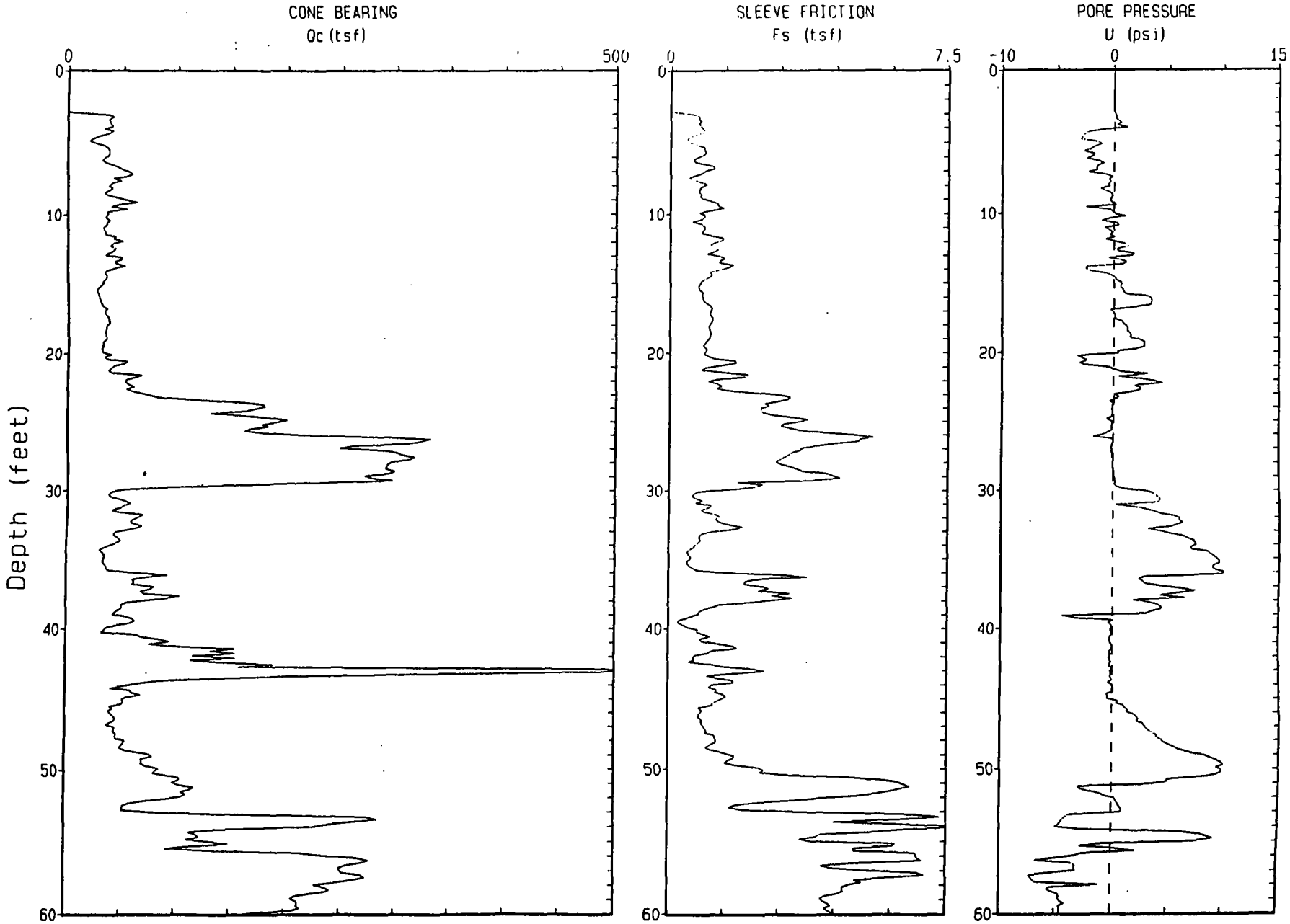


Depth Increment : .16405 m

Max Depth : 69.61 ft

DAMES & MOORE

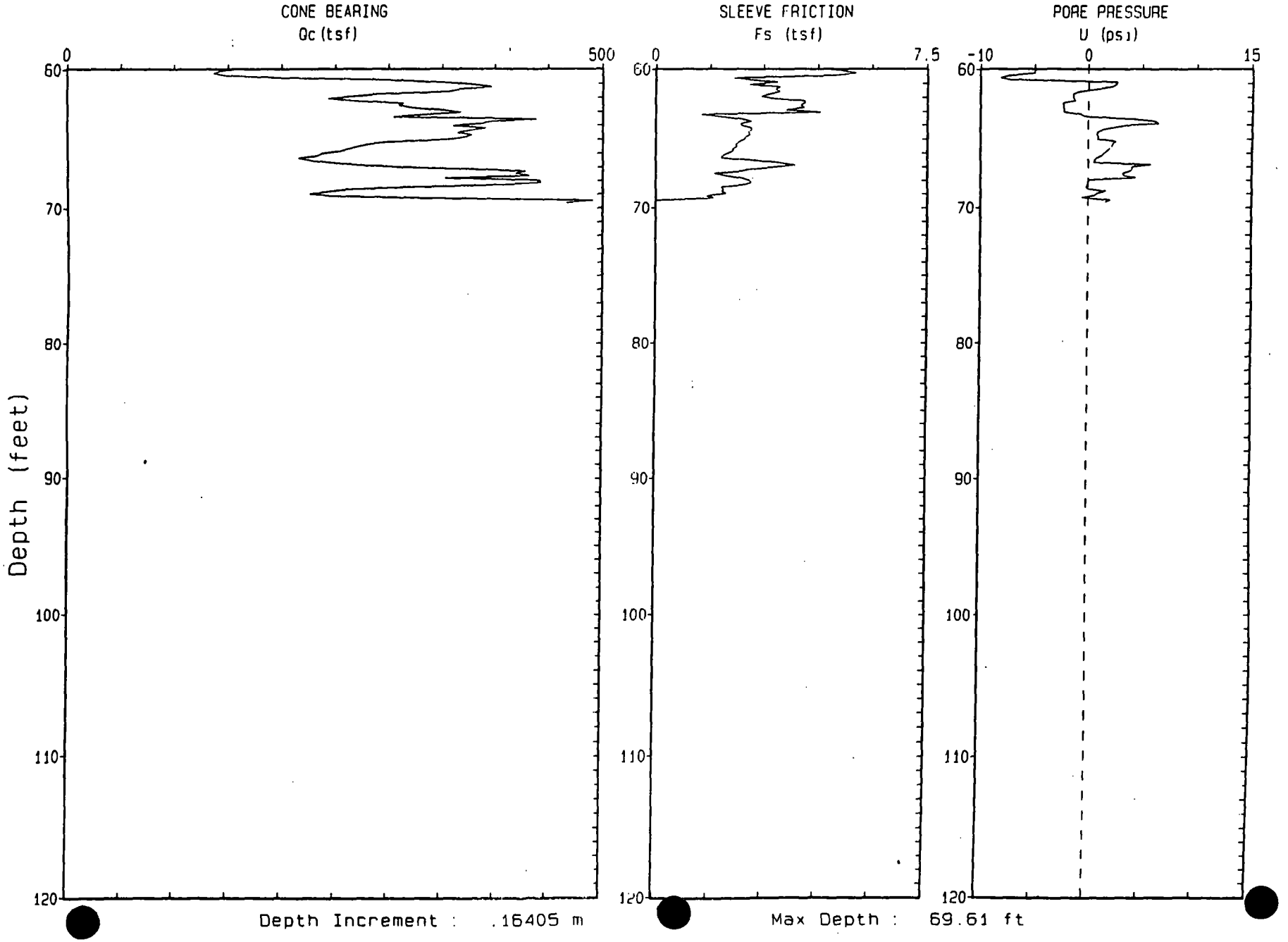
PROJECT : DEL AMO PROJECT CONTRACTOR : GREGG IN SITU FILE : CWL0012.OUT
LOCATION : CWL0012 GEOLOGIST : ERIC WEAVER DATE : 2/3/93



Depth Increment : .16405 m Max Depth : 69.61 ft

DAMES & MOORE

PROJECT : DEL AMO PROJECT CONTRACTOR : GREGG IN SITU FILE : CWL0012.OUT
LOCATION : CWL0012 GEOLOGIST : ERIC WEAVER DATE : 2/3/93



DAMES & MOORE

Project : DEL AMO PROJECT
Location : CWL0012
CPT Date : 2/3/93
Tot. Unit Wt. (avg) : 120 pcf

Contractor :2GREGG IN SITU
Geologist : ERIC WEAVER
Water table (feet) : 58.00525

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
1	0.00	0.00	0.00	0.03	undefined	UNDFND	UNDFD	UDF	UNDEFINED
2	0.00	0.00	0.00	0.09	undefined	UNDFND	UNDFD	UDF	UNDEFINED
3	5.30	0.08	1.56	0.15	sensitive fine grained	UNDFND	UNDFD	3	.3
4	37.46	0.78	2.10	0.22	sandy silt to clayey silt	UNDFND	UNDFD	14	2.4
5	28.43	0.63	2.22	0.28	sandy silt to clayey silt	UNDFND	UNDFD	11	1.9
6	35.36	0.86	2.42	0.33	sandy silt to clayey silt	UNDFND	UNDFD	14	2.3
7	42.54	0.91	2.13	0.39	sandy silt to clayey silt	UNDFND	UNDFD	16	2.8
8	45.90	0.74	1.61	0.45	silty sand to sandy silt	50-60	38-40	15	UNDEFINED
9	40.12	0.80	2.01	0.51	sandy silt to clayey silt	UNDFND	UNDFD	15	2.6
10	45.57	1.16	2.55	0.57	sandy silt to clayey silt	UNDFND	UNDFD	17	3.0
11	34.72	0.84	2.42	0.63	sandy silt to clayey silt	UNDFND	UNDFD	13	2.2
12	38.77	1.09	2.81	0.69	sandy silt to clayey silt	UNDFND	UNDFD	15	2.5
13	38.69	1.16	2.99	0.75	sandy silt to clayey silt	UNDFND	UNDFD	15	2.5
14	46.07	1.46	3.17	0.81	sandy silt to clayey silt	UNDFND	UNDFD	18	3.0
15	33.74	1.08	3.20	0.87	clayey silt to silty clay	UNDFND	UNDFD	16	2.1
16	27.50	0.80	2.92	0.93	clayey silt to silty clay	UNDFND	UNDFD	13	1.7
17	30.39	0.98	3.22	0.98	clayey silt to silty clay	UNDFND	UNDFD	15	1.9
18	35.15	1.11	3.15	1.04	clayey silt to silty clay	UNDFND	UNDFD	17	2.2
19	34.12	1.08	3.15	1.10	clayey silt to silty clay	UNDFND	UNDFD	16	2.2
[illegible]	31.12	0.96	3.10	1.16	clayey silt to silty clay	UNDFND	UNDFD	15	1.9
[illegible]	40.15	1.28	3.19	1.23	clayey silt to silty clay	UNDFND	UNDFD	19	2.5
22	48.87	1.45	2.97	1.29	sandy silt to clayey silt	UNDFND	UNDFD	19	3.1
23	57.81	1.49	2.59	1.35	sandy silt to clayey silt	UNDFND	UNDFD	22	3.7
24	137.08	2.87	2.09	1.41	silty sand to sandy silt	70-80	38-40	44	UNDEFINED
25	171.09	3.06	1.79	1.48	sand to silty sand	70-80	38-40	41	UNDEFINED
26	180.64	3.70	2.05	1.54	silty sand to sandy silt	70-80	38-40	>50	UNDEFINED
27	295.12	4.65	1.57	1.59	sand to silty sand	>90	40-42	>50	UNDEFINED
28	303.62	3.19	1.05	1.65	sand	>90	40-42	>50	UNDEFINED
29	290.05	3.69	1.27	1.71	sand	80-90	40-42	>50	UNDEFINED
30	187.54	2.83	1.51	1.77	sand to silty sand	70-80	38-40	45	UNDEFINED
31	44.96	0.73	1.63	1.83	silty sand to sandy silt	<40	<30	14	UNDEFINED
32	53.19	1.10	2.07	1.89	sandy silt to clayey silt	UNDFND	UNDFD	20	3.4
33	61.01	1.58	2.60	1.95	sandy silt to clayey silt	UNDFND	UNDFD	23	3.9
34	45.09	0.89	1.97	2.01	sandy silt to clayey silt	UNDFND	UNDFD	17	2.8
35	33.59	0.58	1.74	2.07	sandy silt to clayey silt	UNDFND	UNDFD	13	2.1
36	34.52	0.58	1.67	2.13	sandy silt to clayey silt	UNDFND	UNDFD	13	2.1
37	67.09	2.41	3.59	2.18	clayey silt to silty clay	UNDFND	UNDFD	32	4.3
38	81.66	2.85	3.49	2.24	sandy silt to clayey silt	UNDFND	UNDFD	31	5.2

Dr - All sands (Jamiolkowski et al. 1985) PHI - Durgunoglu and Mitchell 1975 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.02) ****

DAMES & MOORE

Project : DEL AMO PROJECT Location : CWL0012

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
39	52.56	1.55	2.96	2.30	sandy silt to clayey silt	UNDFND	UNDFD	20	3.3
40	53.11	0.47	0.89	2.36	silty sand to sandy silt	<40	<30	17	UNDEFINED
41	53.13	0.83	1.56	2.42	silty sand to sandy silt	<40	<30	17	UNDEFINED
42	117.28	1.25	1.07	2.48	sand to silty sand	50-60	32-34	28	UNDEFINED
43	205.33	1.12	0.54	2.55	sand	70-80	36-38	39	UNDEFINED
44	234.28	1.71	0.73	2.61	sand	70-80	36-38	45	UNDEFINED
45	55.55	1.34	2.41	2.67	sandy silt to clayey silt	UNDFND	UNDFD	21	3.5
46	44.71	1.06	2.37	2.74	sandy silt to clayey silt	UNDFND	UNDFD	17	2.7
47	42.41	0.88	2.07	2.79	sandy silt to clayey silt	UNDFND	UNDFD	16	2.6
48	46.50	1.14	2.45	2.85	sandy silt to clayey silt	UNDFND	UNDFD	18	2.9
49	57.71	1.25	2.17	2.91	sandy silt to clayey silt	UNDFND	UNDFD	22	3.6
50	74.63	1.85	2.47	2.97	sandy silt to clayey silt	UNDFND	UNDFD	29	4.7
51	93.54	4.13	4.41	3.03	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
52	109.68	5.95	5.43	3.09	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
53	64.10	2.59	4.04	3.15	clayey silt to silty clay	UNDFND	UNDFD	31	4.0
54	220.54	5.84	2.65	3.21	silty sand to sandy silt	70-80	34-36	>50	UNDEFINED
55	138.52	5.35	3.86	3.27	sand to clayey sand (*)	UNDFND	UNDFD	>50	UNDEFINED
56	141.35	5.48	3.88	3.33	sand to clayey sand (*)	UNDFND	UNDFD	>50	UNDEFINED
57	259.55	5.65	2.18	3.39	sand to silty sand	70-80	36-38	>50	UNDEFINED
58	259.82	5.88	2.26	3.44	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
59	229.19	4.67	2.04	3.49	sand to silty sand	70-80	34-36	>50	UNDEFINED
60	210.64	4.30	2.04	3.52	sand to silty sand	60-70	34-36	>50	UNDEFINED
61	182.86	4.16	2.28	3.55	silty sand to sandy silt	60-70	32-34	>50	UNDEFINED
62	356.46	3.24	0.91	3.58	sand	80-90	38-40	>50	UNDEFINED
63	296.40	3.74	1.26	3.61	sand	70-80	36-38	>50	UNDEFINED
64	370.74	2.49	0.67	3.64	gravelly sand to sand	80-90	38-40	>50	UNDEFINED
65	373.51	2.56	0.68	3.67	gravelly sand to sand	80-90	38-40	>50	UNDEFINED
66	279.98	2.21	0.79	3.70	sand	70-80	36-38	>50	UNDEFINED
67	251.99	2.83	1.12	3.73	sand	70-80	34-36	48	UNDEFINED
68	410.78	2.25	0.55	3.76	gravelly sand to sand	80-90	38-40	>50	UNDEFINED
69	316.31	2.10	0.66	3.78	gravelly sand to sand	80-90	36-38	>50	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Durgunoglu and Mitchell 1975 Su: Nk= 15

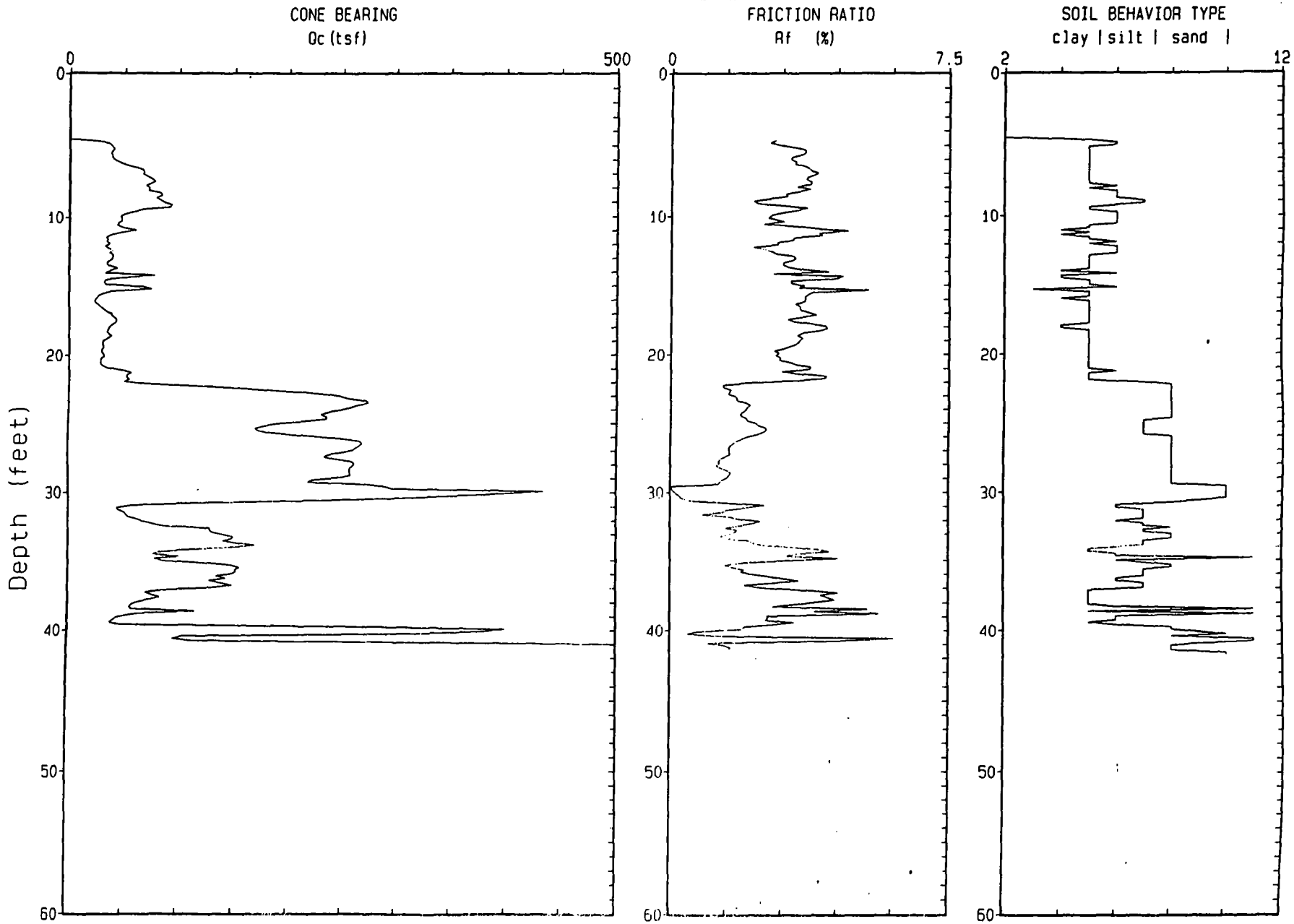
(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.02) ****

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0013.OUT

LOCATION : CWL0013 GEOLOGIST : ERIC WEAVER DATE : 2/5/93

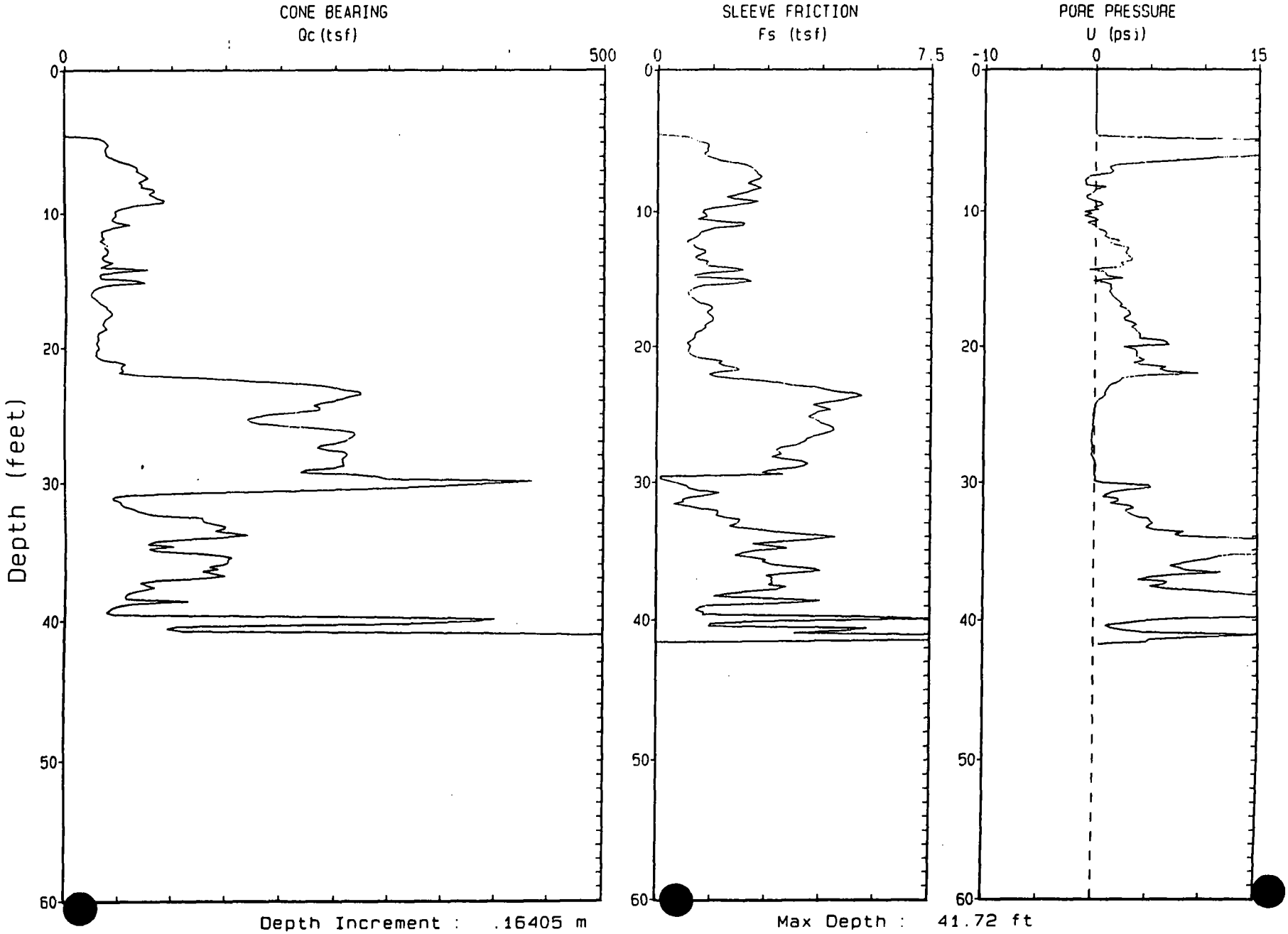


Depth Increment : .16405 m Max Depth : 41.72 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0013.OUT

LOCATION : CWL0013 GEOLOGIST : ERIC WEAVER DATE : 2/5/93



GREGG IN SITU TESTING

E: 2
ATION: CWL0013

DATE: 2:4:1993 10:05
CONE : 5 TON AD AD006

Depth metres	Qc tsf	Fs tsf	U psi	Rf %	R ohm-m	Soil Type
1.25	11.26	0.15	4.6	0.00	211.08	
1.30	11.56	0.14	4.3	0.00	211.08	
1.35	16.08	0.20	4.5	1.77	211.08	Clayey Silt
5.4 8.5 8.8 9.0						
1.40	14.56	0.17	1.7	1.44	211.08	Clayey Silt
1.45	21.18	0.19	7.4	1.20	211.08	Silt
1.50	25.81	0.21	4.5	1.41	211.08	Silt
1.55	25.54	0.19	3.5	0.91	211.08	Silt
1.60	23.22	0.15	10.5	1.03	211.08	Silt
1.65	40.62	0.29	11.9	1.12	211.08	Silt
1.70	41.01	0.42	7.4	1.49	211.08	Silt
1.75	42.45	0.55	12.9	1.36	211.08	Sandy Silt
1.80	58.39	0.82	9.7	1.50	9.12	Sandy Silt
1.85	63.76	0.71	2.8	1.64	6.82	Sandy Silt
1.90	65.36	1.05	1.5	1.80	6.40	Sandy Silt
1.95	54.33	1.47	3.0	2.31	5.24	Silt
2.00	38.53	1.79	-2.9	2.74	4.96	Silt
2.05	26.22	1.53	-1.2	2.76	4.95	Silt
2.10	29.47	0.78	-0.2	2.91	5.33	Silt
2.15	40.09	0.64	0.2	2.25	211.08	Silt
2.20	51.12	0.84	-1.1	2.83	211.08	Clayey Silt
2.25	54.39	1.04	-1.0	2.61	211.08	Silt
2.30	55.52	1.15	-0.3	2.30	211.08	Silt
2.35	59.11	1.16	-0.1	2.13	211.08	Silt
0.1 -0.0 -0.1 0.0						
2.40	56.30	1.48	0.3	2.55	21.05	Silt
2.45	72.18	1.50	-0.5	2.53	17.76	Silt
2.50	68.41	1.51	-0.6	2.65	14.97	Silt
2.55	59.24	1.39	-0.7	1.93	32.86	Sandy Silt
2.60	50.25	1.65	0.0	1.65	211.08	Silt
2.65	61.49	1.92	-1.9	3.24	18.20	Silt
2.70	69.50	1.72	0.0	2.85	4.42	Silt
2.75	31.13	1.98	0.5	3.21	4.49	Silt
2.80	35.73	1.01	0.0	2.89	4.47	Silt
2.85	38.84	2.42	0.5	1.85	211.08	Sandy Silt
2.90	35.97	1.98	1.3	3.11	20.05	Silt
2.95	35.93	1.20	2.0	3.08	30.59	Clayey Silt
3.00	33.21	0.70	2.6	1.93	59.95	Silt
3.05	34.04	0.68	3.1	1.89	18.22	Silt
3.10	33.55	0.57	2.8	2.03	35.57	Silt
3.15	33.17	0.65	2.7	1.31	65.52	Silt
3.20	29.21	0.61	3.4	1.82	72.42	Silt
3.25	25.99	0.61	4.5	1.23	6.03	Silt
3.30	22.44	0.49	4.3	1.89	5.38	Silt
3.35	24.86	0.33	4.5	1.40	6.35	Silt
4.5 5.2 5.1 5.0						
3.40	27.24	0.35	4.4	1.51	5.29	Silt
3.45	23.13	0.23	4.4	1.53	50.77	Silt
3.50	22.17	0.48	3.3	1.77	18.79	Silt

GREGG IN SITU TESTING

HOLE: 3
LOCATION:

DATE: 2:4:1993 11:28
CONE : 5 TON AD ASD006

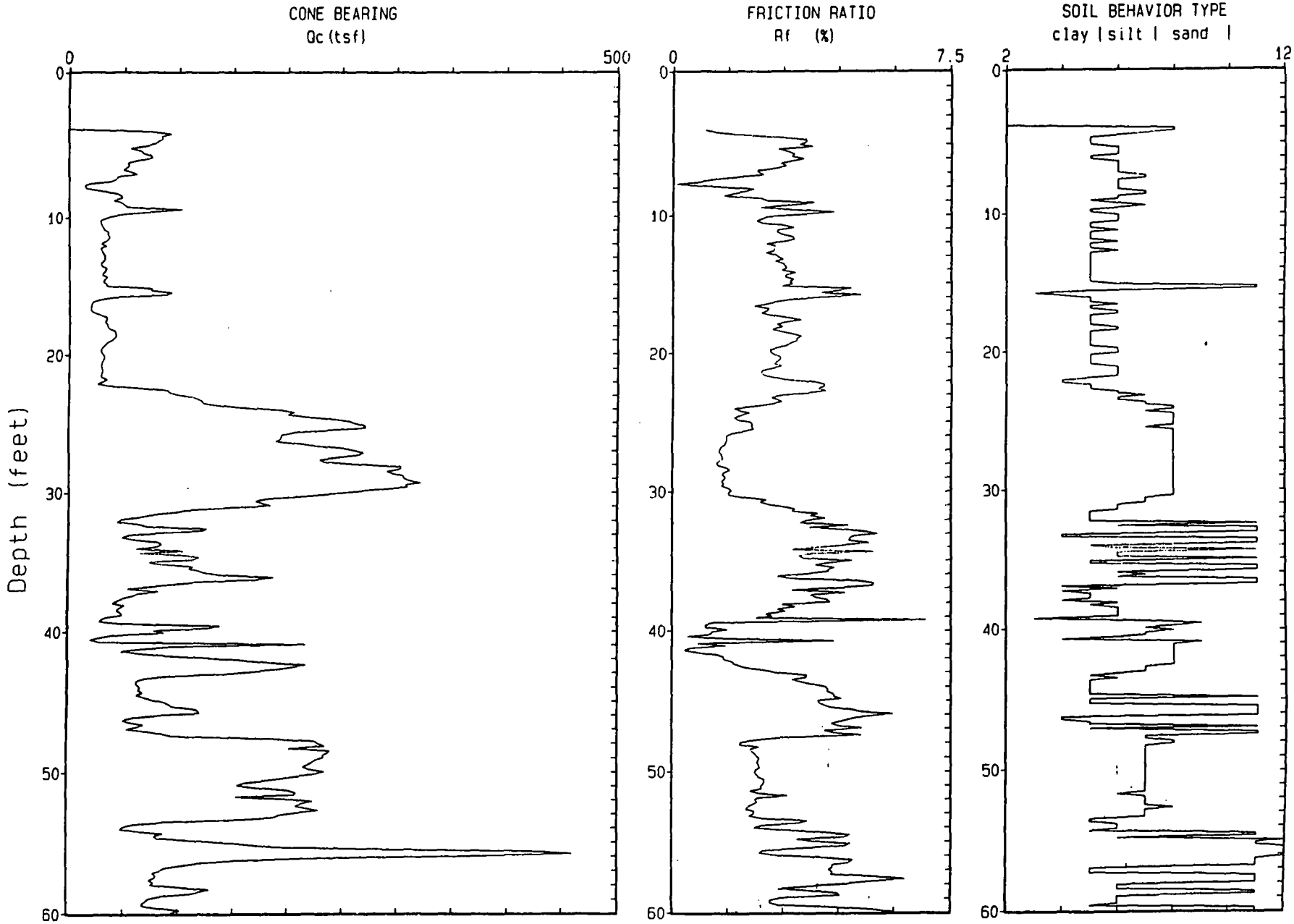
Depth metres	Qc tsf	Fs tsf	U psi	Rf %	R ohm-m	Soil Type
12.25	380.30	1.05	0.4	0.00	34.54	
12.30	543.96	2.58	0.6	0.00	39.74	

0.7 0.6 0.5 1.2 0.2 0.3 0.5 1.1
0.4 0.4 1.0
0.5 0.6 0.4 0.4 0.4 0.5 0.6 0.4 0.4 0.4 0.2 1.5
3.6 3.9

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0014.OUT

LOCATION : CWL0014 GEOLOGIST : ERIC WEAVER DATE : 2/4/92

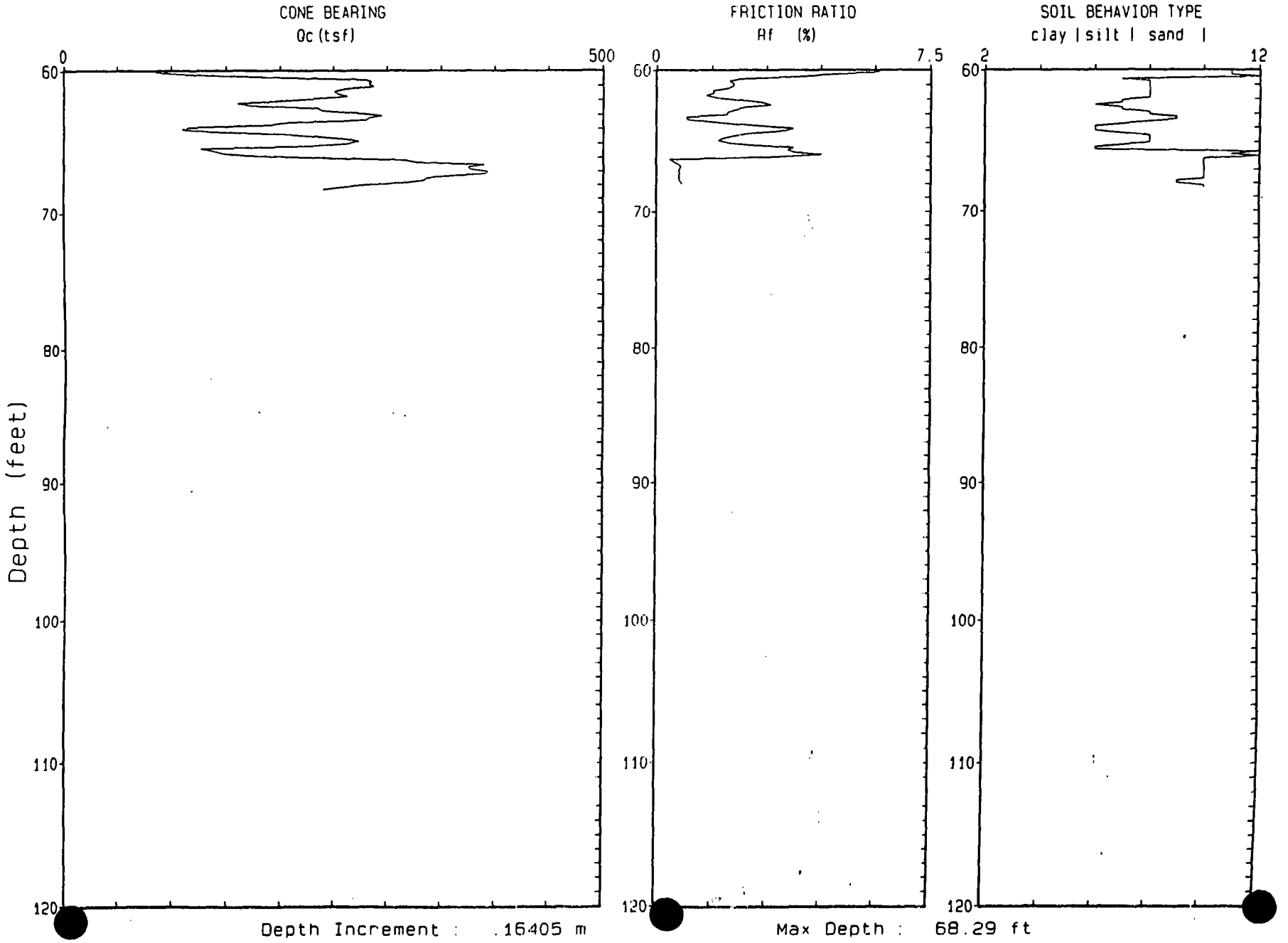


Depth Increment : .16405 m Max Depth : 68.29 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0014.OUT

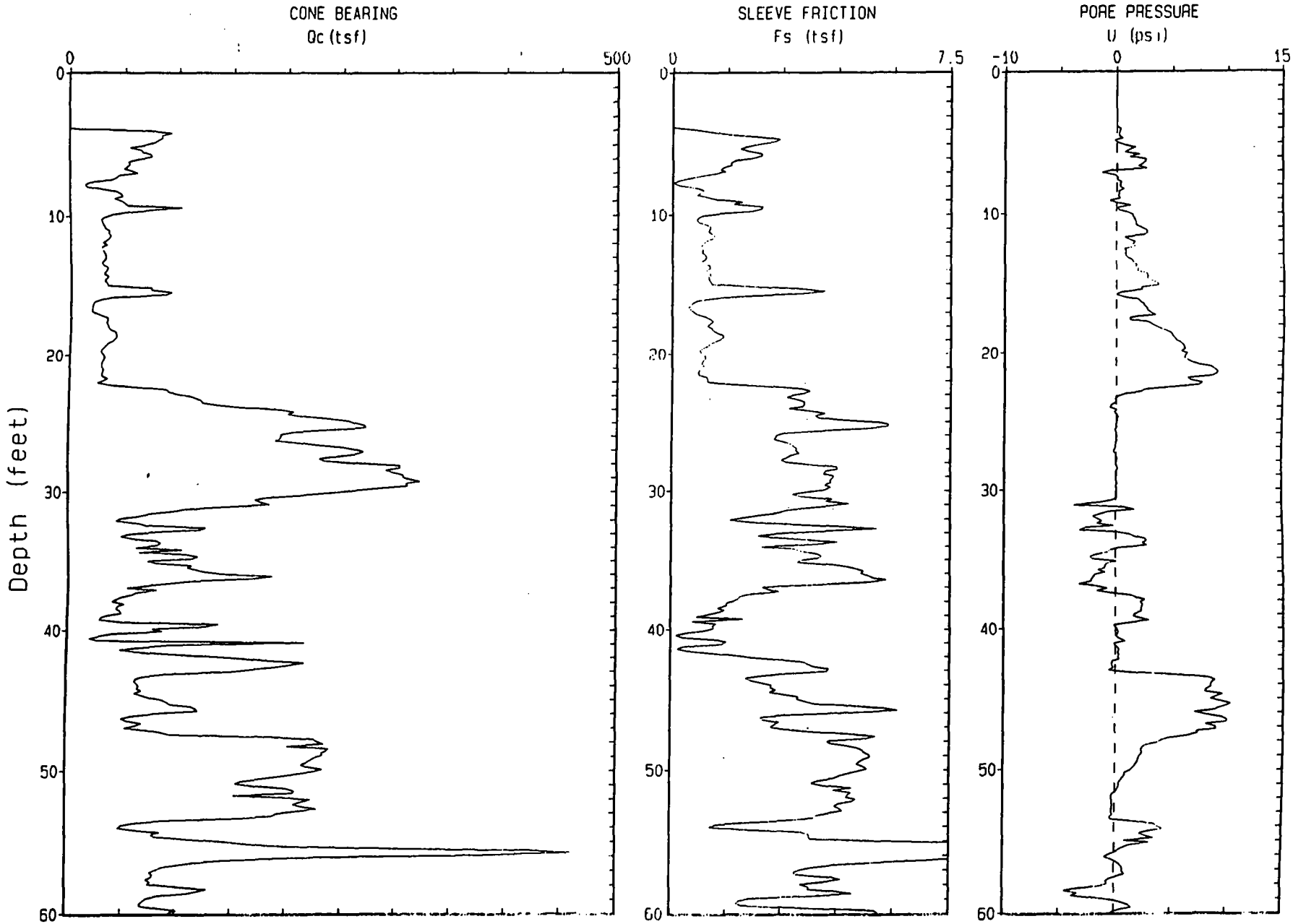
LOCATION : CWL0014 GEOLOGIST : ERIC WEAVER DATE : 2/4/92



DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0014.OUT

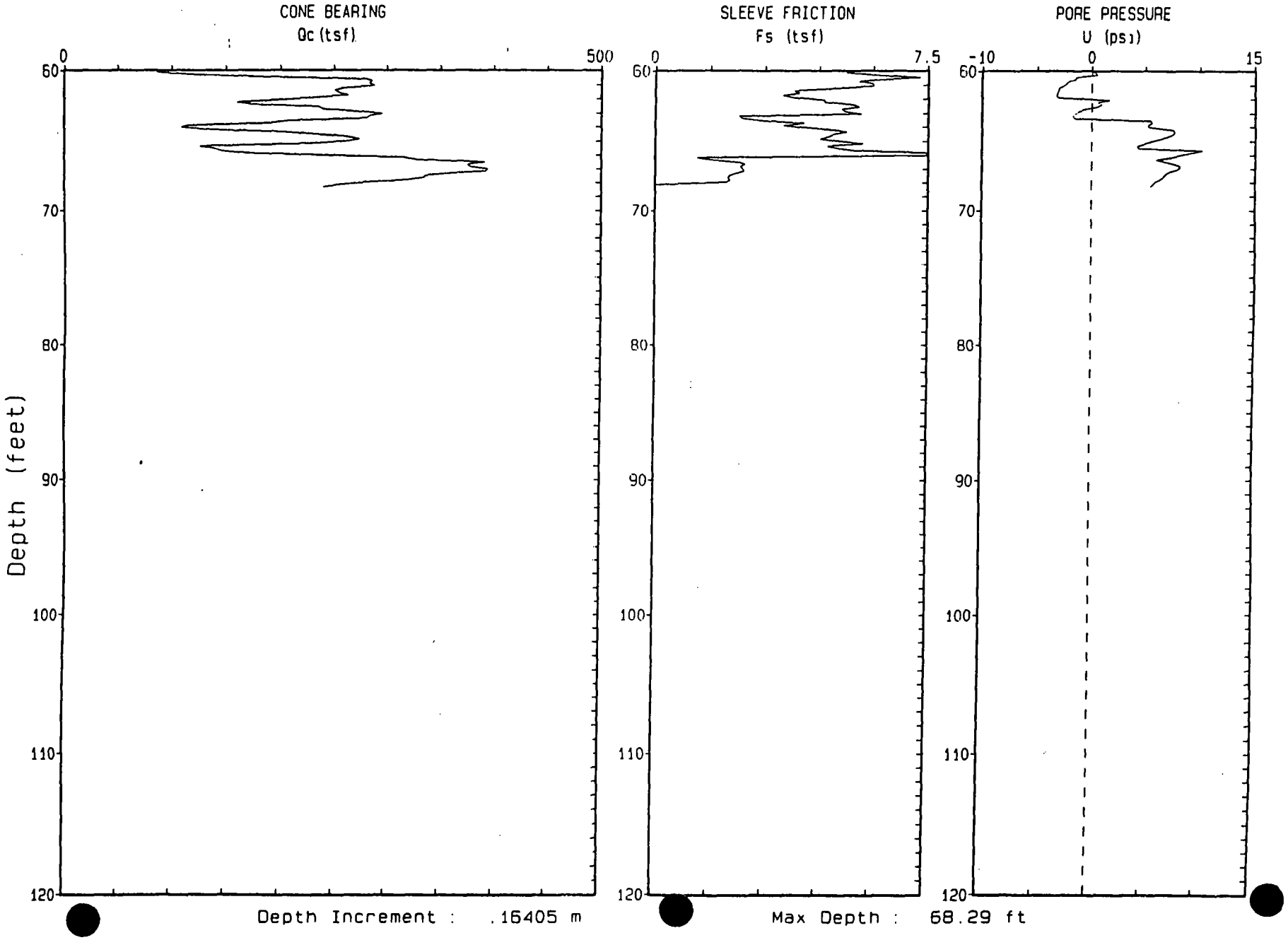
LOCATION : CWL0014 GEOLOGIST : ERIC WEAVER DATE : 2/4/92



Depth Increment : .16405 m Max Depth : 68.29 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0014.OUT
LOCATION : CWL0014 GEOLOGIST : ERIC WEAVER DATE : 2/4/92



Depth Increment : .15405 m Max Depth : 68.29 ft

DAMES & MOORE

Project : DEL AMO SITE
Location : CPL0014
CPT Date : 2/4/92
Tot. Unit Wt. (avg) : 120 pcf

Contractor : GREGG IN SITU
Geologist : ERIC WEAVER
Water table (feet) : 55.00394

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
1	0.00	0.00	0.00	0.03	undefined	UNDFND	UNDFD	UDF	UNDEFINED
2	0.00	0.00	0.00	0.09	undefined	UNDFND	UNDFD	UDF	UNDEFINED
3	0.00	0.00	0.00	0.15	undefined	UNDFND	UNDFD	UDF	UNDEFINED
4	12.04	0.16	0.57	0.22	sandy silt to clayey silt	UNDFND	UNDFD	5	.7
5	31.12	2.19	2.68	0.28	sandy silt to clayey silt	UNDFND	UNDFD	31	5.3
6	65.95	2.16	3.28	0.33	sandy silt to clayey silt	UNDFND	UNDFD	25	4.3
7	54.15	1.49	2.75	0.39	sandy silt to clayey silt	UNDFND	UNDFD	21	3.5
8	28.07	0.41	1.47	0.45	sandy silt to clayey silt	UNDFND	UNDFD	11	1.8
9	41.91	0.84	1.99	0.51	sandy silt to clayey silt	UNDFND	UNDFD	16	2.7
10	60.88	1.98	3.26	0.57	sandy silt to clayey silt	UNDFND	UNDFD	23	4.0
11	29.64	0.79	2.67	0.63	sandy silt to clayey silt	UNDFND	UNDFD	11	1.9
12	33.73	1.03	3.04	0.69	clayey silt to silty clay	UNDFND	UNDFD	16	2.2
13	30.49	0.82	2.68	0.75	sandy silt to clayey silt	UNDFND	UNDFD	12	1.9
14	30.75	0.91	2.96	0.81	clayey silt to silty clay	UNDFND	UNDFD	15	1.9
15	31.32	0.98	3.14	0.87	clayey silt to silty clay	UNDFND	UNDFD	15	2.0
16	66.56	2.75	4.12	0.93	clayey silt to silty clay	UNDFND	UNDFD	32	4.3
17	20.98	0.62	2.97	0.98	clayey silt to silty clay	UNDFND	UNDFD	10	1.3
18	30.22	0.88	2.90	1.04	clayey silt to silty clay	UNDFND	UNDFD	14	1.9
19	38.93	1.18	3.03	1.10	sandy silt to clayey silt	UNDFND	UNDFD	15	2.5
20	31.81	0.99	3.11	1.16	clayey silt to silty clay	UNDFND	UNDFD	15	2.0
21	29.81	0.94	2.82	1.23	clayey silt to silty clay	UNDFND	UNDFD	14	1.9
22	30.19	0.80	2.64	1.29	sandy silt to clayey silt	UNDFND	UNDFD	12	1.9
23	67.02	2.85	3.95	1.35	clayey silt to silty clay	UNDFND	UNDFD	32	4.2
24	136.33	3.39	2.49	1.41	silty sand to sandy silt	70-80	38-40	44	UNDEFINED
25	229.00	4.31	1.88	1.48	sand to silty sand	80-90	40-42	>50	UNDEFINED
26	228.36	4.47	1.95	1.54	sand to silty sand	80-90	40-42	>50	UNDEFINED
27	222.02	3.10	1.39	1.59	sand to silty sand	80-90	40-42	>50	UNDEFINED
28	250.91	3.22	1.28	1.65	sand	80-90	40-42	48	UNDEFINED
29	231.35	4.12	1.40	1.71	sand	>90	40-42	>50	UNDEFINED
30	211.37	4.17	1.42	1.77	sand	>90	40-42	>50	UNDEFINED
31	195.12	3.33	2.04	1.83	sand to silty sand	70-80	38-40	47	UNDEFINED
32	88.62	3.04	3.43	1.89	sandy silt to clayey silt	UNDFND	UNDFD	34	5.7
33	94.77	3.62	4.26	1.95	clayey silt to silty clay	UNDFND	UNDFD	41	5.5
34	67.83	3.39	5.00	2.01	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
35	94.35	3.55	3.75	2.07	sandy silt to clayey silt	UNDFND	UNDFD	35	6.1
36	103.05	4.40	4.27	2.13	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
37	130.58	5.16	3.95	2.18	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
38	57.96	2.33	4.01	2.24	clayey silt to silty clay	UNDFND	UNDFD	28	3.7

Dr - All sands (Jamiolkowski et al. 1985) PHI - Durgunoglu and Mitchell 1975 Su: Nk= 15

(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.02) ****

DAMES & MOORE

Project : DEL AMO SITE Location : CPL0014

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
39	46.14	1.45	3.15	2.30	sandy silt to clayey silt	UNDFND	UNDFD	18	2.9
40	68.05	1.09	1.60	2.36	silty sand to sandy silt	40-50	<30	22	UNDEFINED
41	47.15	0.70	1.48	2.42	silty sand to sandy silt	<40	<30	15	UNDEFINED
42	101.09	0.96	0.95	2.48	sand to silty sand	50-60	32-34	24	UNDEFINED
43	187.81	3.46	1.84	2.55	sand to silty sand	70-80	36-38	45	UNDEFINED
44	83.17	2.80	3.36	2.61	sandy silt to clayey silt	UNDFND	UNDFD	32	5.3
45	70.07	2.99	4.26	2.67	clayey silt to silty clay	UNDFND	UNDFD	34	4.4
46	103.18	4.86	4.71	2.74	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
47	58.20	2.77	4.76	2.79	silty clay to clay	UNDFND	UNDFD	37	3.6
48	148.85	4.45	2.99	2.85	sandy silt to clayey silt	UNDFND	UNDFD	>50	9.7
49	230.10	4.99	2.17	2.91	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
50	223.37	5.22	2.34	2.97	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
51	187.15	4.46	2.38	3.03	silty sand to sandy silt	60-70	34-36	>50	UNDEFINED
52	191.17	4.66	2.44	3.09	silty sand to sandy silt	60-70	34-36	>50	UNDEFINED
53	216.51	4.71	2.17	3.15	silty sand to sandy silt	70-80	34-36	>50	UNDEFINED
54	123.96	3.14	2.53	3.21	silty sand to sandy silt	50-60	30-32	40	UNDEFINED
55	78.11	2.99	3.83	3.27	clayey silt to silty clay	UNDFND	UNDFD	37	4.9
56	275.06	8.85	3.22	3.33	sand to clayey sand (*)	UNDFND	UNDFD	>50	UNDEFINED
57	172.80	6.77	3.92	3.37	sand to clayey sand (*)	UNDFND	UNDFD	>50	UNDEFINED
58	78.58	3.92	4.98	3.40	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
59	103.54	4.05	3.91	3.43	clayey silt to silty clay	UNDFND	UNDFD	50	6.6
60	77.52	2.82	3.64	3.46	clayey silt to silty clay	UNDFND	UNDFD	37	4.9
61	176.73	6.00	3.40	3.49	sand to clayey sand (*)	UNDFND	UNDFD	>50	UNDEFINED
62	266.72	4.71	1.77	3.51	sand to silty sand	70-80	36-38	>50	UNDEFINED
63	216.60	4.92	2.27	3.54	silty sand to sandy silt	70-80	34-36	>50	UNDEFINED
64	229.48	3.48	1.52	3.57	sand to silty sand	70-80	34-36	>50	UNDEFINED
65	202.97	4.73	2.33	3.60	silty sand to sandy silt	60-70	34-36	>50	UNDEFINED
66	186.83	5.96	3.20	3.63	sandy silt to clayey silt	UNDFND	UNDFD	>50	12.1
67	363.53	2.01	0.55	3.66	gravelly sand to sand	80-90	38-40	>50	UNDEFINED
68	337.27	2.10	0.62	3.69	gravelly sand to sand	80-90	38-38	>50	UNDEFINED

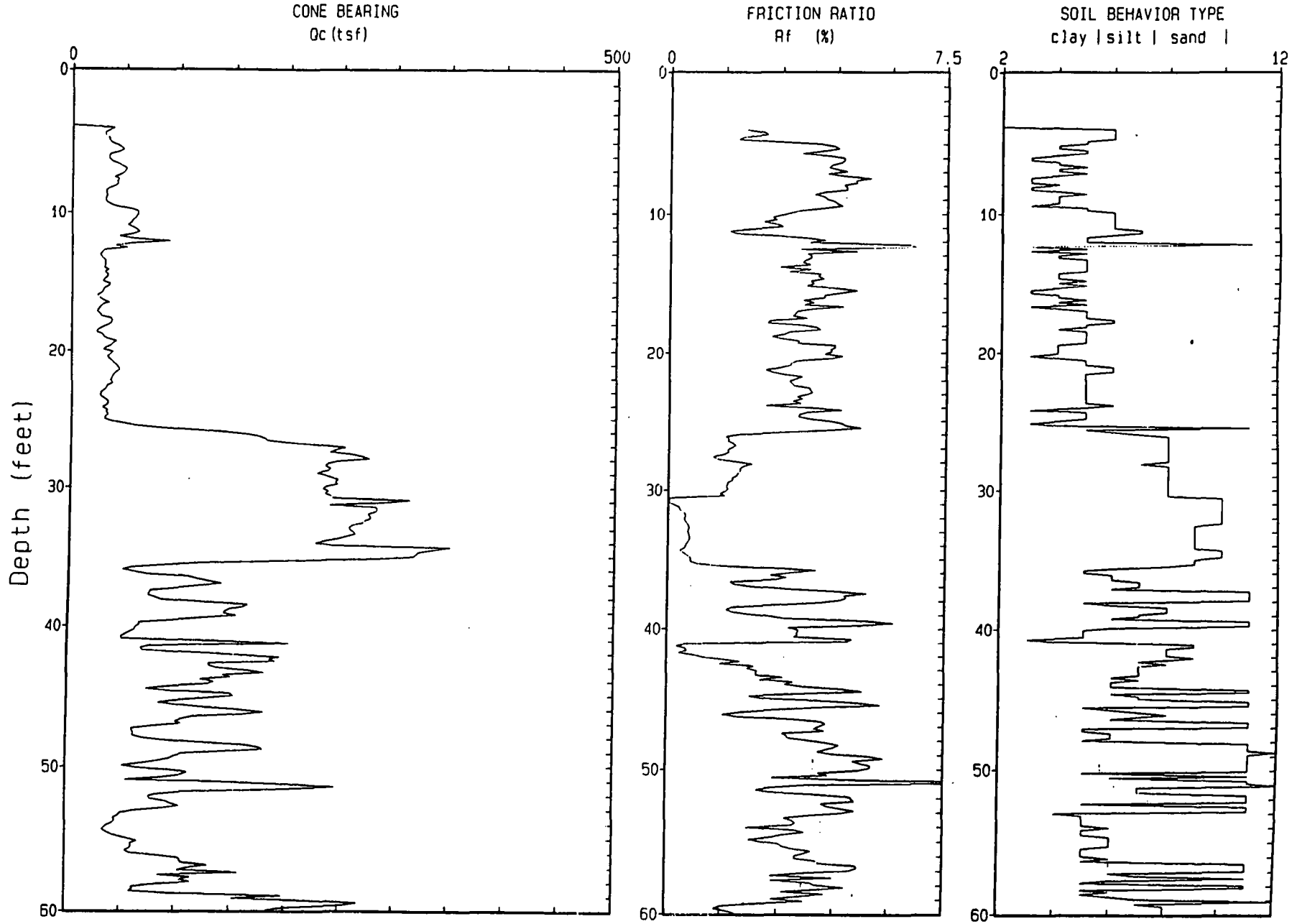
Dr - All sands (Jamiolkowski et al. 1985) PHI - Durgunoglu and Mitchell 1975 Su: Nk= 15

(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTRL (v 3.02) ****

DAMES & MOORE

PROJECT : DEL AMO SITE
LOCATION : CWL0015
CONTRACTOR : GREGG IN SITU
GEOLOGIST : ERIC WEAVER
FILE : CWL0015.OUT
DATE : 2/5/93

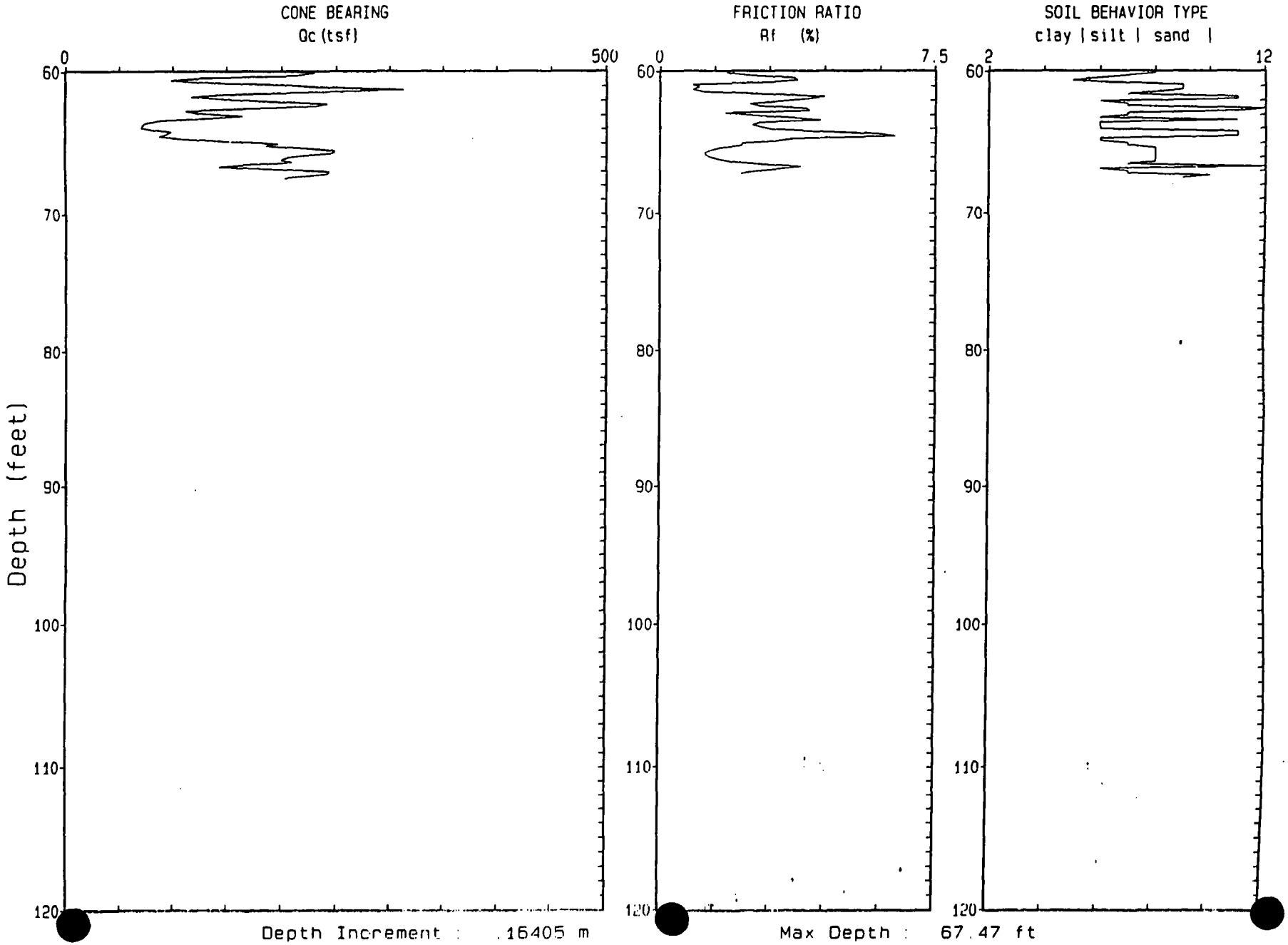


Depth Increment : .16405 m

Max Depth : 67.47 ft

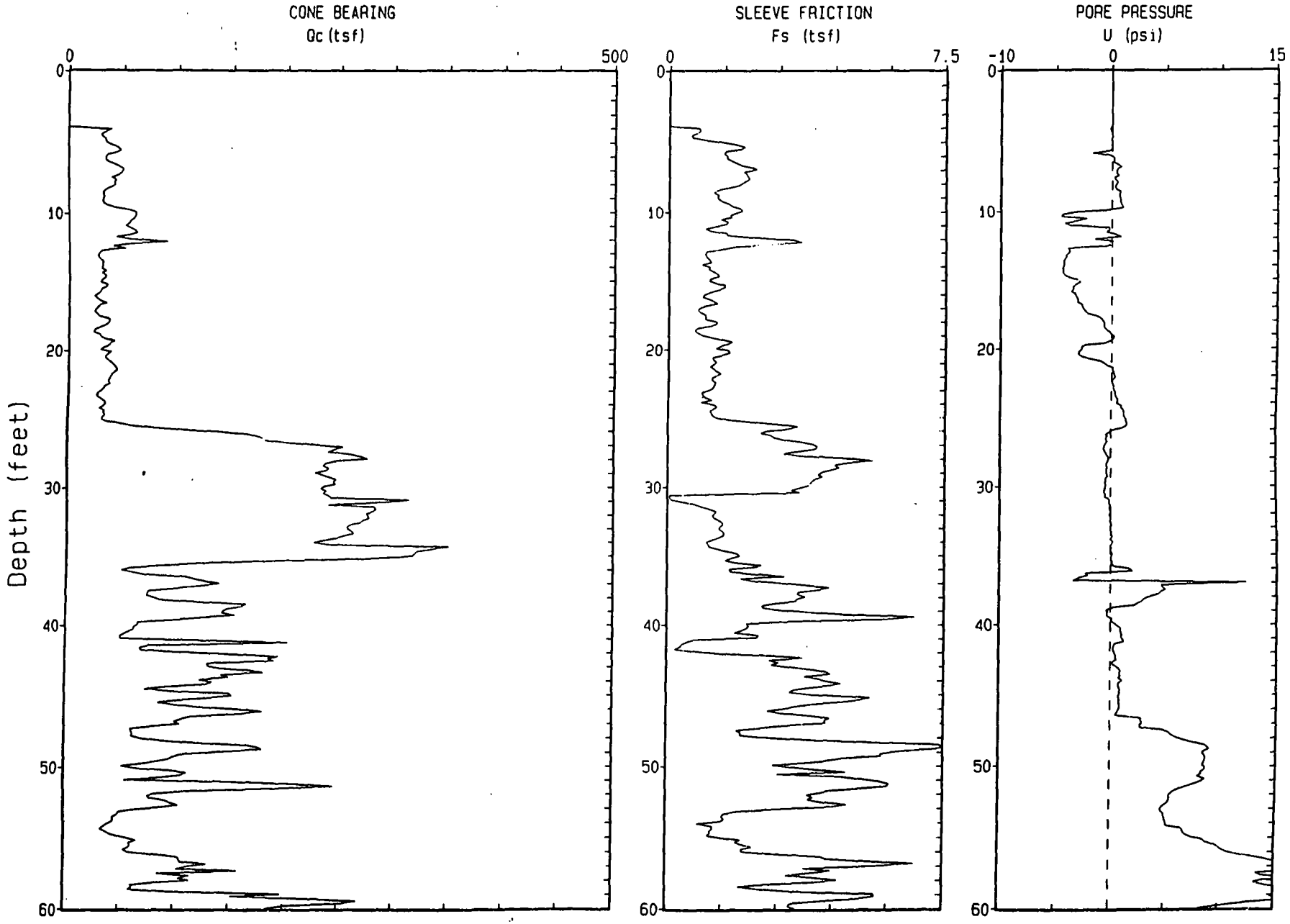
DAMES & MOORE

PROJECT : DEL AMO SITE
CONTRACTOR : GREGG IN SITU
FILE : CWL0015.OUT
LOCATION : CWL0015
GEOLOGIST : ERIC WEAVER
DATE : 2/5/93



DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0015.OUT
LOCATION : CWL0015 GEOLOGIST : ERIC WEAVER DATE : 2/5/93

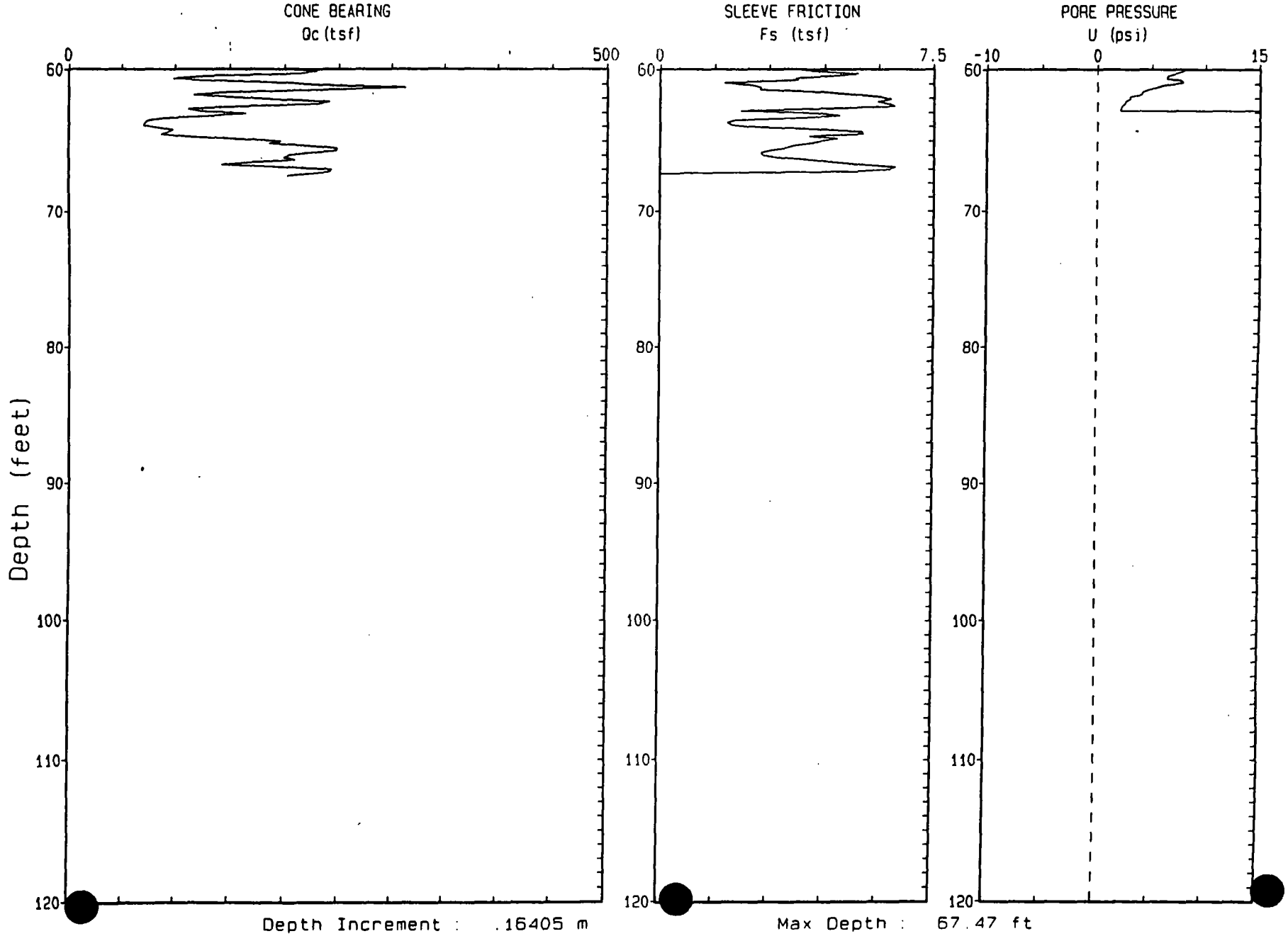


Depth Increment : .16405 m Max Depth : 67.47 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0015.OUT

LOCATION : CWL0015 GEOLOGIST : ERIC WEAVER DATE : 2/5/93



Depth Increment : .16405 m Max Depth : 67.47 ft

DAMES & MOORE

Project : DEL AMO SITE
Location : CWL0015
CPT Date : 2/5/93
Tot. Unit Wt. (avg) : 120 pcf

Contractor : GREGG IN SITU
Geologist : ERIC WEAVER
Water table (feet) : 56.49606

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
1	0.00	0.00	0.00	0.03	undefined	UNDFND	UNDFD	UDF	UNDEFINED
2	0.00	0.00	0.00	0.09	undefined	UNDFND	UNDFD	UDF	UNDEFINED
3	0.00	0.00	0.00	0.15	undefined	UNDFND	UNDFD	UDF	UNDEFINED
4	6.39	0.13	2.06	0.22	silty clay to clay	UNDFND	UNDFD	4	.4
5	32.58	0.87	2.66	0.28	sandy silt to clayey silt	UNDFND	UNDFD	12	2.1
6	40.42	1.71	4.23	0.33	silty clay to clay	UNDFND	UNDFD	26	2.6
7	42.63	1.93	4.52	0.39	silty clay to clay	UNDFND	UNDFD	27	2.9
8	42.84	2.07	4.82	0.45	silty clay to clay	UNDFND	UNDFD	27	2.8
9	33.03	1.43	4.34	0.51	silty clay to clay	UNDFND	UNDFD	21	2.1
10	42.52	1.66	3.92	0.57	clayey silt to silty clay	UNDFND	UNDFD	20	2.7
11	56.95	1.61	2.82	0.63	sandy silt to clayey silt	UNDFND	UNDFD	22	3.7
12	55.74	1.47	2.64	0.69	sandy silt to clayey silt	UNDFND	UNDFD	21	3.6
13	48.86	2.31	4.73	0.75	silty clay to clay	UNDFND	UNDFD	31	3.2
14	28.66	1.02	3.56	0.81	clayey silt to silty clay	UNDFND	UNDFD	14	1.8
15	31.40	1.20	3.81	0.87	clayey silt to silty clay	UNDFND	UNDFD	15	2.0
16	30.28	1.30	4.30	0.93	silty clay to clay	UNDFND	UNDFD	19	1.9
17	27.58	1.09	3.95	0.98	silty clay to clay	UNDFND	UNDFD	18	1.7
18	28.87	0.90	3.12	1.04	clayey silt to silty clay	UNDFND	UNDFD	14	1.8
19	28.55	0.99	3.47	1.10	clayey silt to silty clay	UNDFND	UNDFD	14	1.8
20	35.05	1.36	3.88	1.16	clayey silt to silty clay	UNDFND	UNDFD	17	2.2
21	35.41	1.39	3.91	1.23	clayey silt to silty clay	UNDFND	UNDFD	17	2.2
22	41.44	1.26	3.04	1.29	sandy silt to clayey silt	UNDFND	UNDFD	16	2.6
23	34.31	1.21	3.52	1.35	clayey silt to silty clay	UNDFND	UNDFD	16	2.1
24	29.98	1.02	3.41	1.41	clayey silt to silty clay	UNDFND	UNDFD	14	1.9
25	31.55	1.23	3.89	1.48	clayey silt to silty clay	UNDFND	UNDFD	15	2.0
26	78.46	2.74	3.50	1.54	sandy silt to clayey silt	UNDFND	UNDFD	30	5.1
27	186.77	3.13	1.68	1.59	sand to silty sand	70-80	38-40	45	UNDEFINED
28	257.03	3.86	1.50	1.65	sand to silty sand	80-90	40-42	>50	UNDEFINED
29	237.05	4.70	1.98	1.71	sand to silty sand	80-90	40-42	>50	UNDEFINED
30	241.49	3.97	1.64	1.77	sand to silty sand	80-90	40-42	>50	UNDEFINED
31	250.49	1.78	0.71	1.83	sand	80-90	40-42	48	UNDEFINED
32	275.62	0.95	0.35	1.89	gravelly sand to sand	80-90	40-42	44	UNDEFINED
33	269.47	1.38	0.51	1.95	gravelly sand to sand	80-90	40-42	43	UNDEFINED
34	253.95	1.42	0.56	2.01	sand	80-90	38-40	49	UNDEFINED
35	299.80	1.36	0.45	2.07	gravelly sand to sand	80-90	40-42	48	UNDEFINED
36	176.33	2.00	1.14	2.13	sand	70-80	36-38	34	UNDEFINED
37	89.74	2.19	2.44	2.18	silty sand to sandy silt	50-60	32-34	29	UNDEFINED
38	97.45	3.76	3.86	2.24	clayey silt to silty clay	UNDFND	UNDFD	47	6.3

Dr - All sands (Jamiolkowski et al. 1985) PHI - Durgunoglu and Mitchell 1975 Su: Nk= 15

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.02) ****

DAMES & MOORE

Project : DEL AMO SITE Location : CWL0015

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
39	126.47	3.13	2.48	2.30	silty sand to sandy silt	60-70	34-36	40	UNDEFINED
40	121.73	4.69	3.85	2.36	sandy silt to clayey silt	UNDFND	UNDFD	47	7.9
41	58.65	2.15	3.66	2.42	clayey silt to silty clay	UNDFND	UNDFD	28	3.7
42	100.73	0.78	0.77	2.48	sand to silty sand	50-60	32-34	24	UNDEFINED
43	163.63	2.83	1.73	2.55	sand to silty sand	60-70	34-36	39	UNDEFINED
44	149.14	3.99	2.68	2.61	silty sand to sandy silt	60-70	34-36	48	UNDEFINED
45	118.14	3.99	3.38	2.67	sandy silt to clayey silt	UNDFND	UNDFD	45	7.6
46	115.07	4.41	3.83	2.74	sandy silt to clayey silt	UNDFND	UNDFD	44	7.4
47	127.85	3.81	2.98	2.79	sandy silt to clayey silt	UNDFND	UNDFD	49	8.3
48	65.70	2.39	3.64	2.85	clayey silt to silty clay	UNDFND	UNDFD	31	4.1
49	145.28	6.35	4.37	2.91	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
50	84.45	4.60	5.45	2.97	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
51	87.68	4.24	4.84	3.03	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
52	164.76	5.29	3.21	3.09	sandy silt to clayey silt	UNDFND	UNDFD	>50	10.7
53	89.11	4.21	4.73	3.15	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
54	49.49	1.85	3.73	3.21	clayey silt to silty clay	UNDFND	UNDFD	24	3.0
55	39.99	1.15	2.88	3.27	sandy silt to clayey silt	UNDFND	UNDFD	15	2.4
56	60.28	1.99	3.30	3.33	sandy silt to clayey silt	UNDFND	UNDFD	23	3.7
57	98.47	4.31	4.37	3.39	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
58	113.31	4.19	3.69	3.42	sandy silt to clayey silt	UNDFND	UNDFD	43	7.3
59	79.26	3.17	4.00	3.44	clayey silt to silty clay	UNDFND	UNDFD	38	5.0
60	215.69	4.56	2.11	3.47	sand to silty sand	70-80	34-36	>50	UNDEFINED
61	163.36	4.22	2.58	3.50	silty sand to sandy silt	60-70	32-34	>50	UNDEFINED
62	207.48	3.23	1.56	3.53	sand to silty sand	60-70	34-36	50	UNDEFINED
63	172.60	5.41	3.13	3.56	sandy silt to clayey silt	UNDFND	UNDFD	>50	11.2
64	100.90	3.16	3.13	3.59	sandy silt to clayey silt	UNDFND	UNDFD	39	6.4
65	103.00	4.45	4.32	3.62	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
66	218.25	3.47	1.59	3.65	sand to silty sand	70-80	34-36	>50	UNDEFINED
67	193.29	5.07	2.62	3.68	silty sand to sandy silt	60-70	34-36	>50	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Durgunoglu and Mitchell 1975 Su: Nk= 15

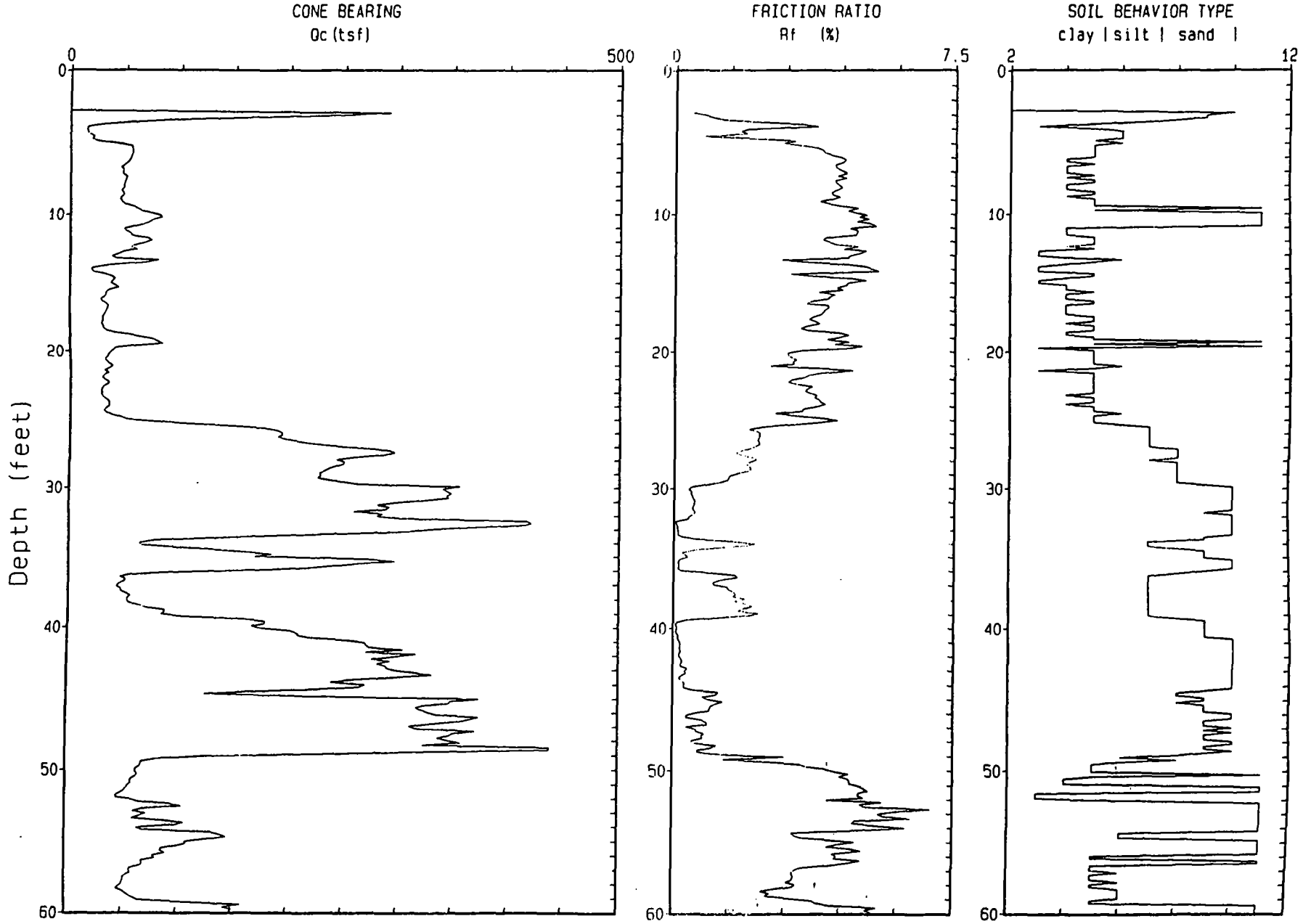
(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.02) ****

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0016.OUT

LOCATION : CWL0016 GEOLOGIST : ERIC WEAVER DATE : 2/8/93



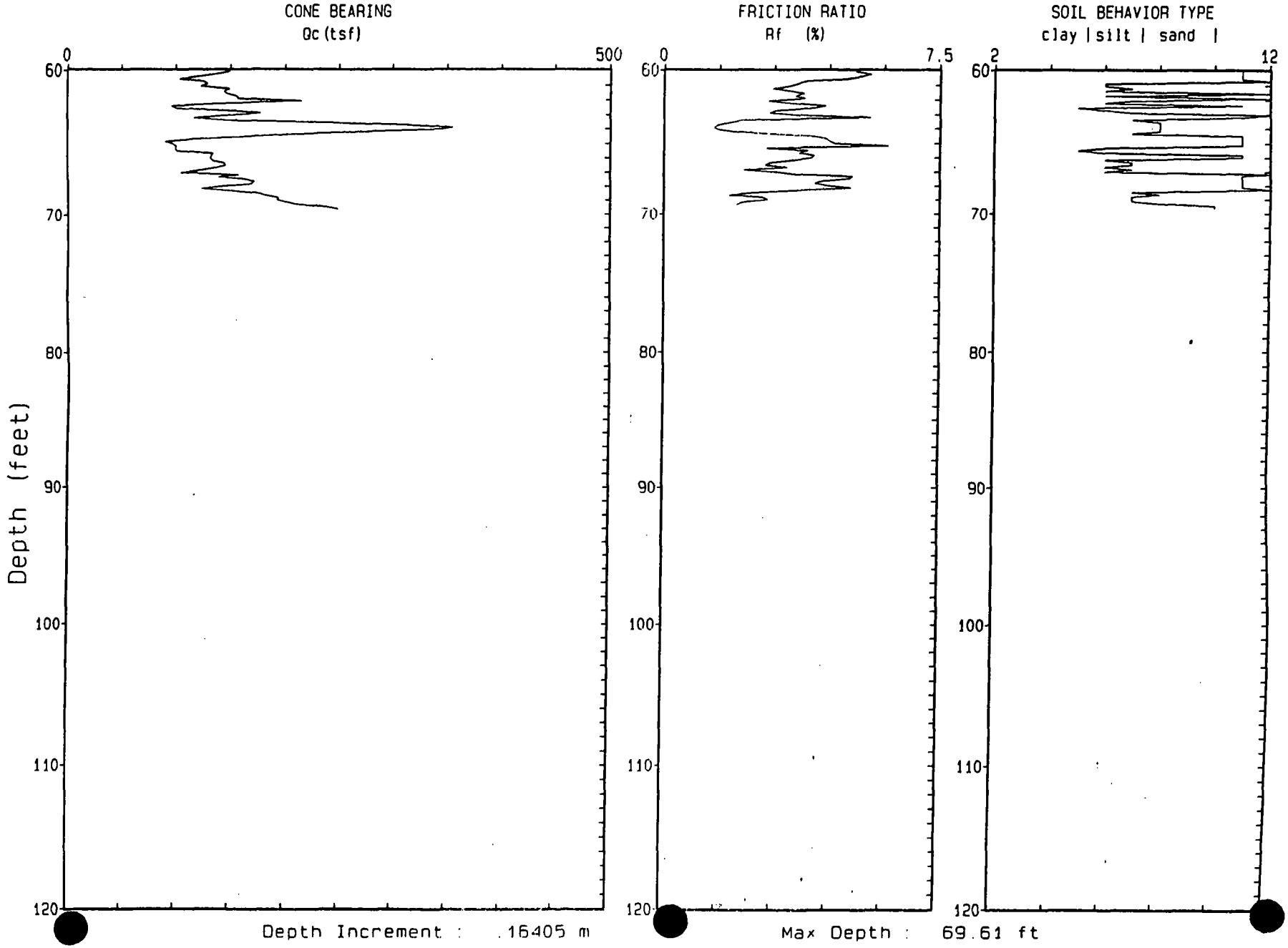
Depth Increment : .16405 m Max Depth : 69.61 ft

DAMES & MOORE

PROJECT : DEL AMO SITE
LOCATION : CWL0016

CONTRACTOR : GREGG IN SITU
GEOLOGIST : ERIC WEAVER

FILE : CWL0016.OUT
DATE : 2/8/93

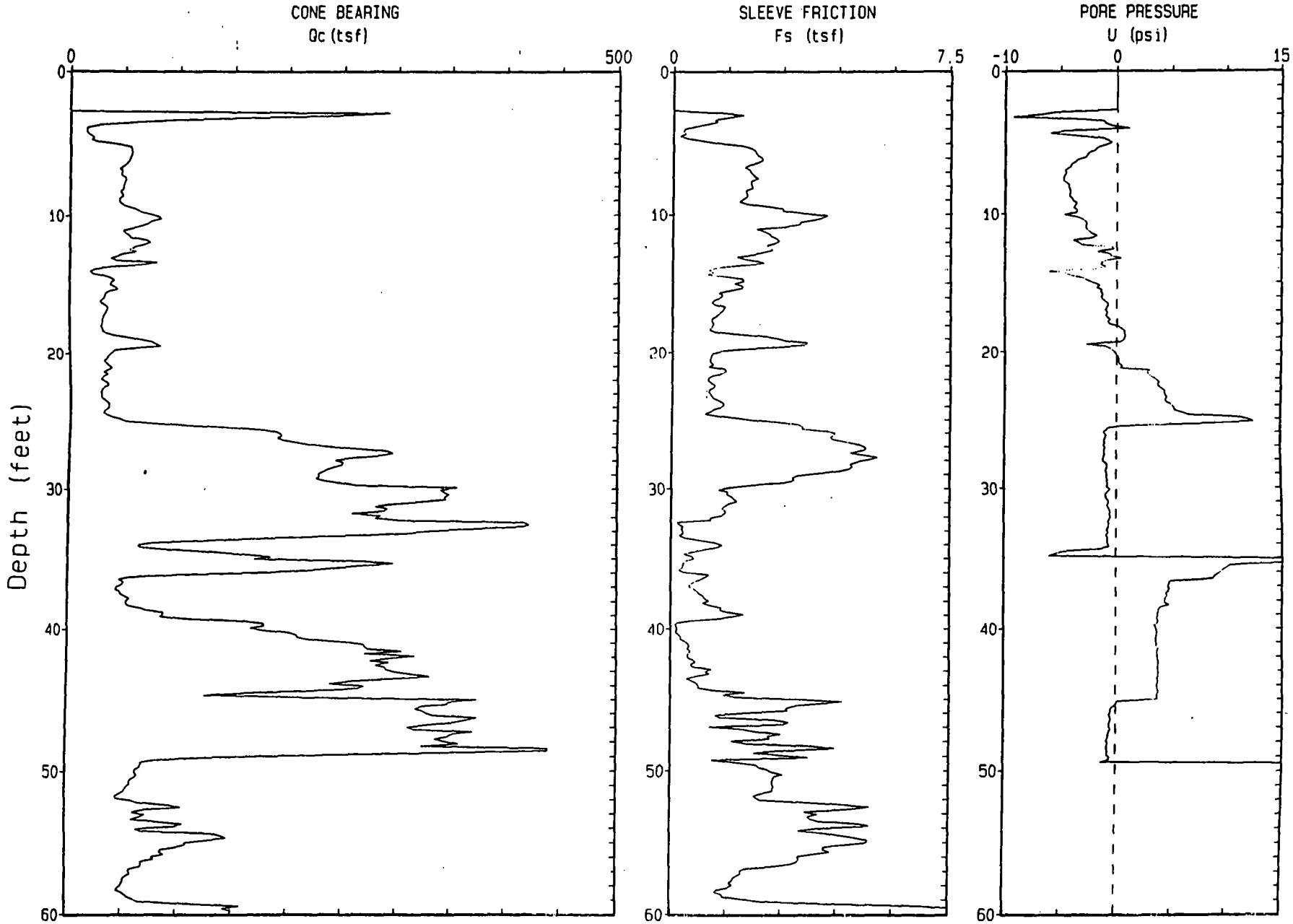


Depth Increment : .16405 m

Max Depth : 69.61 ft

DAMES & MOORE

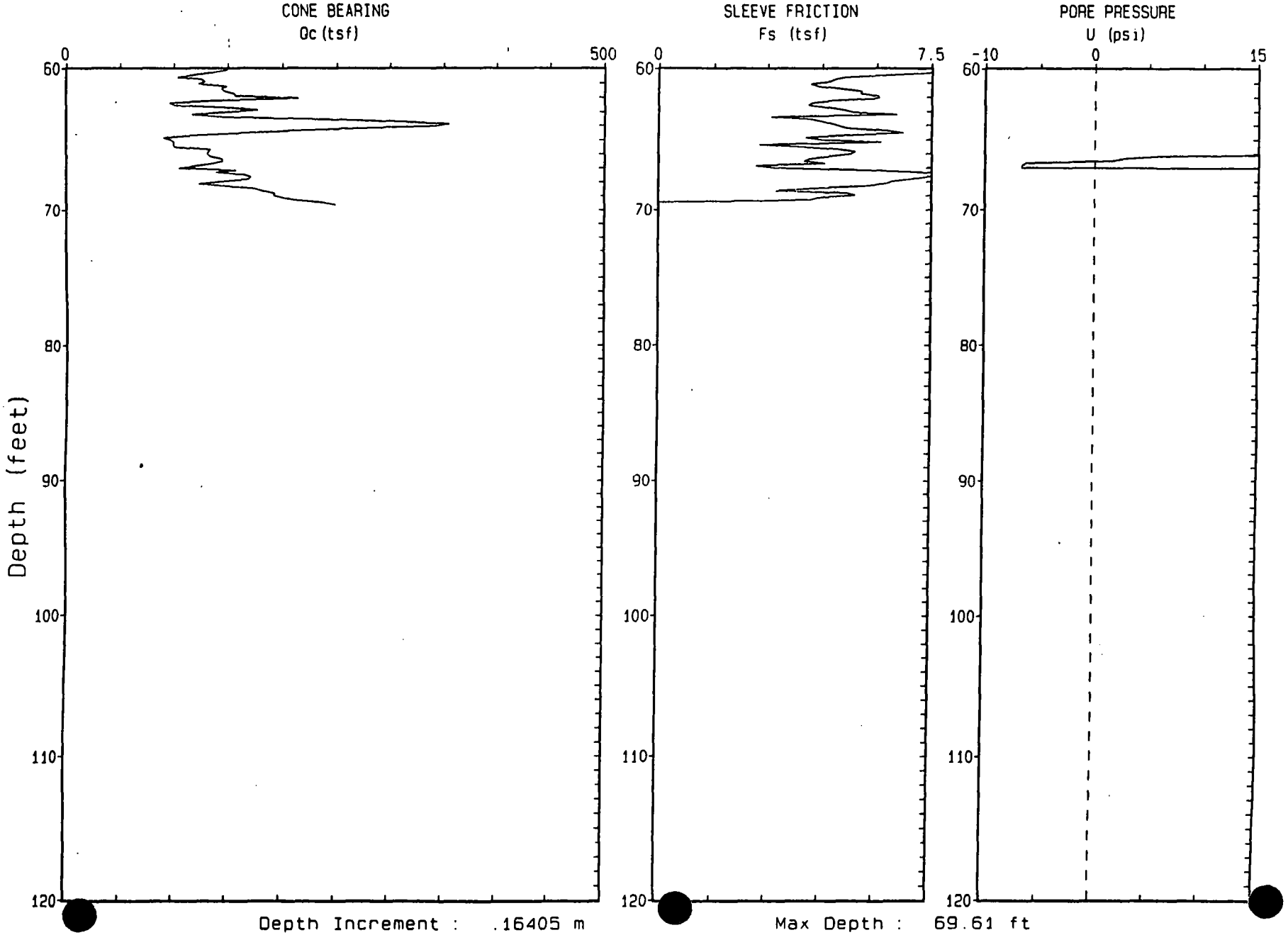
PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0016.OUT
LOCATION : CWL0016 GEOLOGIST : ERIC WEAVER DATE : 2/8/93



Depth Increment : .16405 m Max Depth : 69.61 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0016.OUT
LOCATION : CWL0016 GEOLOGIST : ERIC WEAVER DATE : 2/8/93



Depth Increment : .16405 m Max Depth : 69.61 ft

DAMES & MOORE

Project : DEL AMO SITE
Location : CWL0016
CPT Date : 2/8/93
Tot. Unit Wt. (avg) : 120 pcf

Contractor : GREGG IN SITU
Geologist : ERIC WEAVER
Water table (feet) : 56.49606

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
1	0.00	0.00	0.00	0.03	undefined	UNDFND	UNDFD	UDF	UNDEFINED
2	0.00	0.00	0.00	0.09	undefined	UNDFND	UNDFD	UDF	UNDEFINED
3	76.33	0.45	0.59	0.15	sand to silty sand	80-90	46-48	18	UNDEFINED
4	59.10	0.93	1.57	0.22	silty sand to sandy silt	70-80	42-44	19	UNDEFINED
5	23.69	0.54	2.29	0.28	sandy silt to clayey silt	UNDFND	UNDFD	9	1.5
6	54.86	2.19	3.99	0.33	clayey silt to silty clay	UNDFND	UNDFD	26	3.6
7	48.34	2.15	4.44	0.39	silty clay to clay	UNDFND	UNDFD	31	3.1
8	48.73	2.16	4.43	0.45	silty clay to clay	UNDFND	UNDFD	31	3.2
9	46.29	2.00	4.31	0.51	silty clay to clay	UNDFND	UNDFD	30	3.0
10	58.11	2.63	4.53	0.57	silty clay to clay	UNDFND	UNDFD	37	3.8
11	71.56	3.67	5.13	0.63	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
12	58.11	2.62	4.51	0.69	silty clay to clay	UNDFND	UNDFD	37	3.6
13	54.93	2.54	4.63	0.75	silty clay to clay	UNDFND	UNDFD	35	3.6
14	47.55	1.89	3.97	0.81	clayey silt to silty clay	UNDFND	UNDFD	23	3.1
15	30.58	1.37	4.49	0.87	silty clay to clay	UNDFND	UNDFD	20	1.9
16	36.40	1.60	4.39	0.93	silty clay to clay	UNDFND	UNDFD	23	2.3
17	31.30	1.24	3.97	0.98	clayey silt to silty clay	UNDFND	UNDFD	15	2.0
18	30.39	1.17	3.86	1.04	clayey silt to silty clay	UNDFND	UNDFD	15	1.9
19	35.18	1.41	4.02	1.10	clayey silt to silty clay	UNDFND	UNDFD	17	2.2
20	66.24	2.99	4.52	1.16	clayey silt to silty clay	UNDFND	UNDFD	32	4.3
21	34.28	1.09	3.19	1.23	clayey silt to silty clay	UNDFND	UNDFD	16	2.2
22	32.82	1.22	3.71	1.29	clayey silt to silty clay	UNDFND	UNDFD	16	2.1
23	31.00	1.04	3.37	1.35	clayey silt to silty clay	UNDFND	UNDFD	15	1.9
24	31.73	1.22	3.85	1.41	clayey silt to silty clay	UNDFND	UNDFD	15	2.0
25	38.32	1.38	3.61	1.48	clayey silt to silty clay	UNDFND	UNDFD	18	2.4
26	148.95	3.70	2.48	1.54	silty sand to sandy silt	70-80	38-40	48	UNDEFINED
27	207.54	4.66	2.24	1.59	silty sand to sandy silt	80-90	38-40	>50	UNDEFINED
28	273.70	5.24	1.91	1.65	sand to silty sand	80-90	40-42	>50	UNDEFINED
29	239.76	4.67	1.95	1.71	sand to silty sand	80-90	40-42	>50	UNDEFINED
30	259.69	2.82	1.09	1.77	sand	80-90	40-42	50	UNDEFINED
31	341.49	1.57	0.46	1.83	gravelly sand to sand	>90	40-42	>50	UNDEFINED
32	283.71	1.45	0.51	1.89	gravelly sand to sand	80-90	40-42	45	UNDEFINED
33	367.52	0.51	0.14	1.95	gravelly sand to sand	>90	40-42	>50	UNDEFINED
34	212.13	0.53	0.25	2.01	gravelly sand to sand	70-80	38-40	34	UNDEFINED
35	116.07	0.85	0.73	2.07	sand	60-70	34-36	22	UNDEFINED
36	244.55	0.36	0.15	2.13	gravelly sand to sand	80-90	38-40	39	UNDEFINED
37	81.52	0.71	0.87	2.18	sand to silty sand	40-50	30-32	20	UNDEFINED
38	48.24	0.72	1.49	2.24	silty sand to sandy silt	<40	<30	15	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Durgunoglu and Mitchell 1975 Su: Nk= 15

(*) overconsolidated or cemented

Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.02) ****

DAMES & MOORE

Project : DEL AMO SITE Location : CWL0016

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
39	63.73	1.19	1.87	2.30	silty sand to sandy silt	40-50	<30	20	UNDEFINED
40	132.11	0.99	0.75	2.36	sand	60-70	34-36	25	UNDEFINED
41	197.89	0.19	0.10	2.42	gravelly sand to sand	70-80	36-38	32	UNDEFINED
42	280.59	0.47	0.17	2.48	gravelly sand to sand	80-90	38-40	45	UNDEFINED
43	288.13	0.66	0.23	2.55	gravelly sand to sand	80-90	38-40	46	UNDEFINED
44	289.78	0.73	0.25	2.61	gravelly sand to sand	80-90	38-40	46	UNDEFINED
45	235.81	1.64	0.69	2.67	sand	70-80	36-38	45	UNDEFINED
46	332.20	3.37	1.01	2.74	sand	80-90	38-40	>50	UNDEFINED
47	345.94	2.12	0.61	2.79	gravelly sand to sand	80-90	38-40	>50	UNDEFINED
48	345.34	2.38	0.69	2.85	gravelly sand to sand	80-90	38-40	>50	UNDEFINED
49	353.62	3.10	0.88	2.91	sand	80-90	38-40	>50	UNDEFINED
50	78.55	2.32	2.96	2.97	sandy silt to clayey silt	UNDFND	UNDFD	30	5.0
51	60.86	2.83	4.64	3.03	silty clay to clay	UNDFND	UNDFD	39	3.8
52	50.57	2.58	5.10	3.09	silty clay to clay	UNDFND	UNDFD	32	3.1
53	75.59	4.13	5.46	3.15	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
54	81.07	4.37	5.39	3.21	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
55	113.18	4.47	3.95	3.27	clayey silt to silty clay	UNDFND	UNDFD	>50	7.3
56	96.75	4.47	4.62	3.33	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
57	70.80	3.11	4.40	3.39	clayey silt to silty clay	UNDFND	UNDFD	34	4.4
58	55.06	1.78	3.24	3.42	sandy silt to clayey silt	UNDFND	UNDFD	21	3.4
59	51.40	1.44	2.80	3.44	sandy silt to clayey silt	UNDFND	UNDFD	20	3.1
60	114.97	5.20	4.52	3.47	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
61	130.05	6.62	5.09	3.50	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
62	141.21	4.91	3.48	3.53	sandy silt to clayey silt	UNDFND	UNDFD	>50	9.1
63	148.04	5.00	3.38	3.56	sandy silt to clayey silt	UNDFND	UNDFD	>50	9.6
64	218.40	4.75	2.18	3.59	silty sand to sandy silt	70-80	34-36	>50	UNDEFINED
65	200.11	5.40	2.70	3.62	silty sand to sandy silt	60-70	34-36	>50	UNDEFINED
66	113.75	4.72	4.15	3.65	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
67	131.24	3.90	2.97	3.68	sandy silt to clayey silt	UNDFND	UNDFD	>50	8.4
68	157.64	6.99	4.44	3.71	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
69	169.48	5.00	2.95	3.74	silty sand to sandy silt	60-70	32-34	>50	UNDEFINED

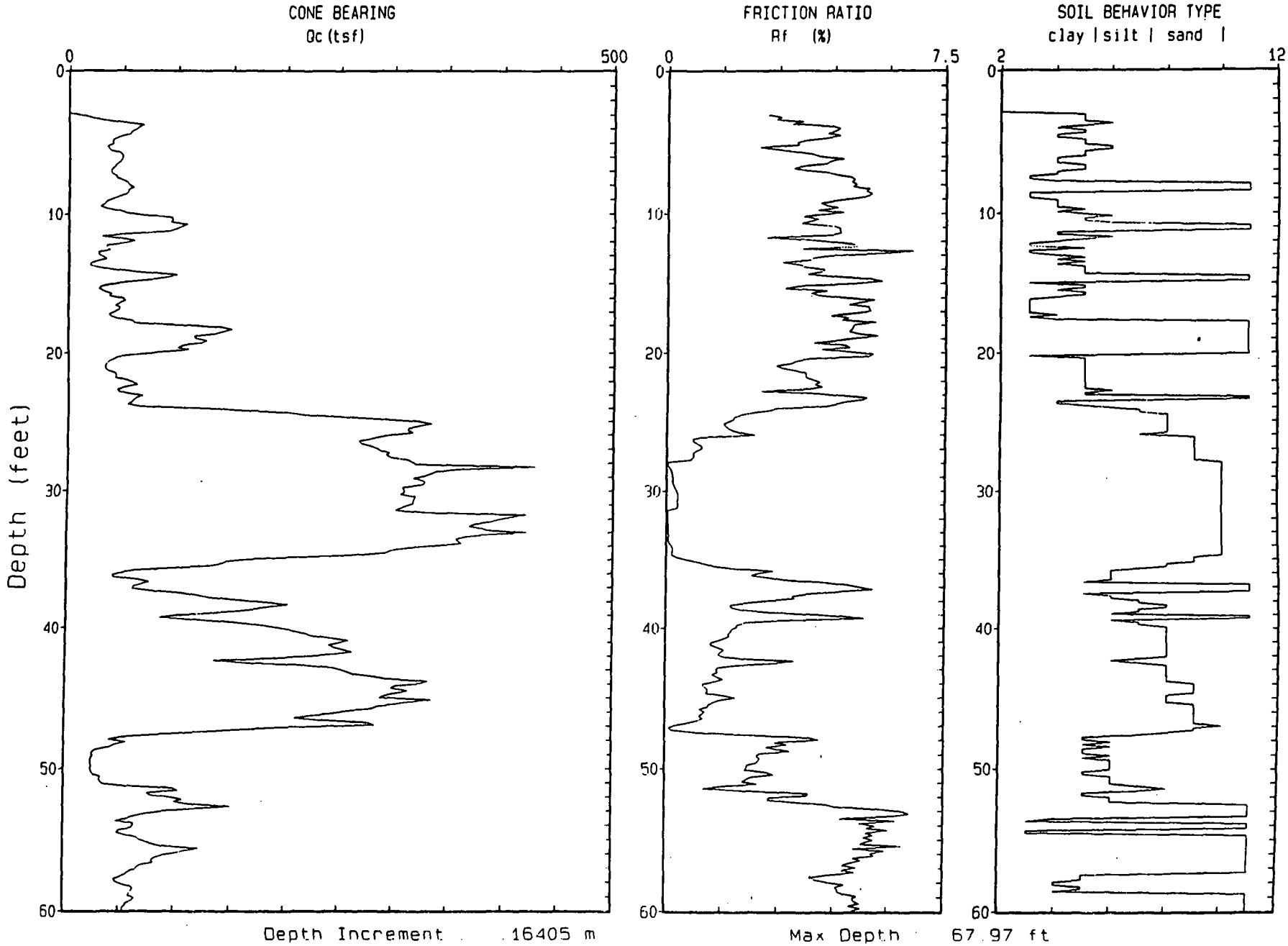
Dr - All sands (Jamiolkowski et al. 1985) PHI - Durgunoglu and Mitchell 1975 Su: Nk= 15

(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.02) ****

DAMES & MOORE

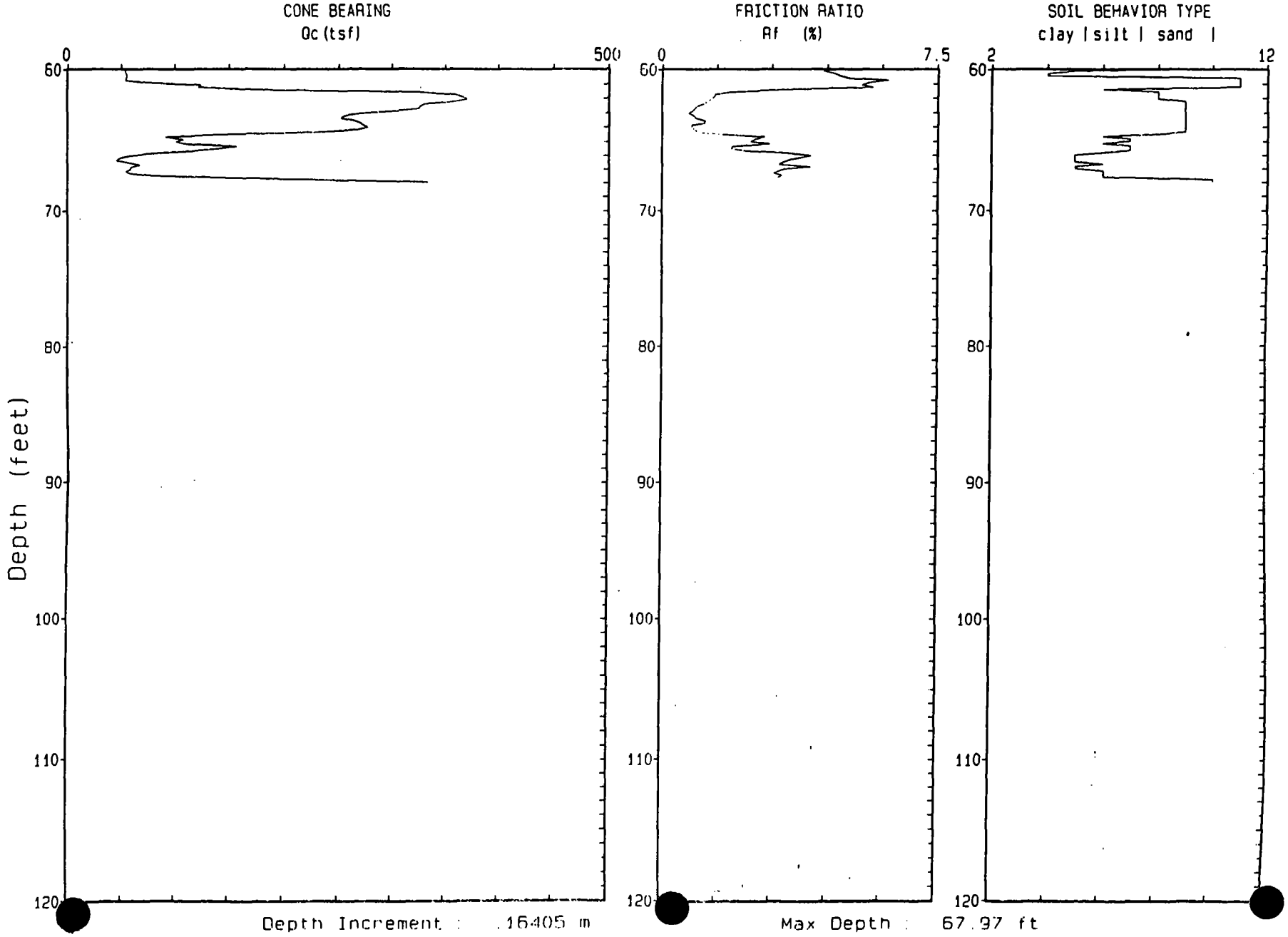
PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0017.OUT
LOCATION : CWL0017 GEOLOGIST : TONY KIRK DATE : 2/9/93



DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0017.OUT

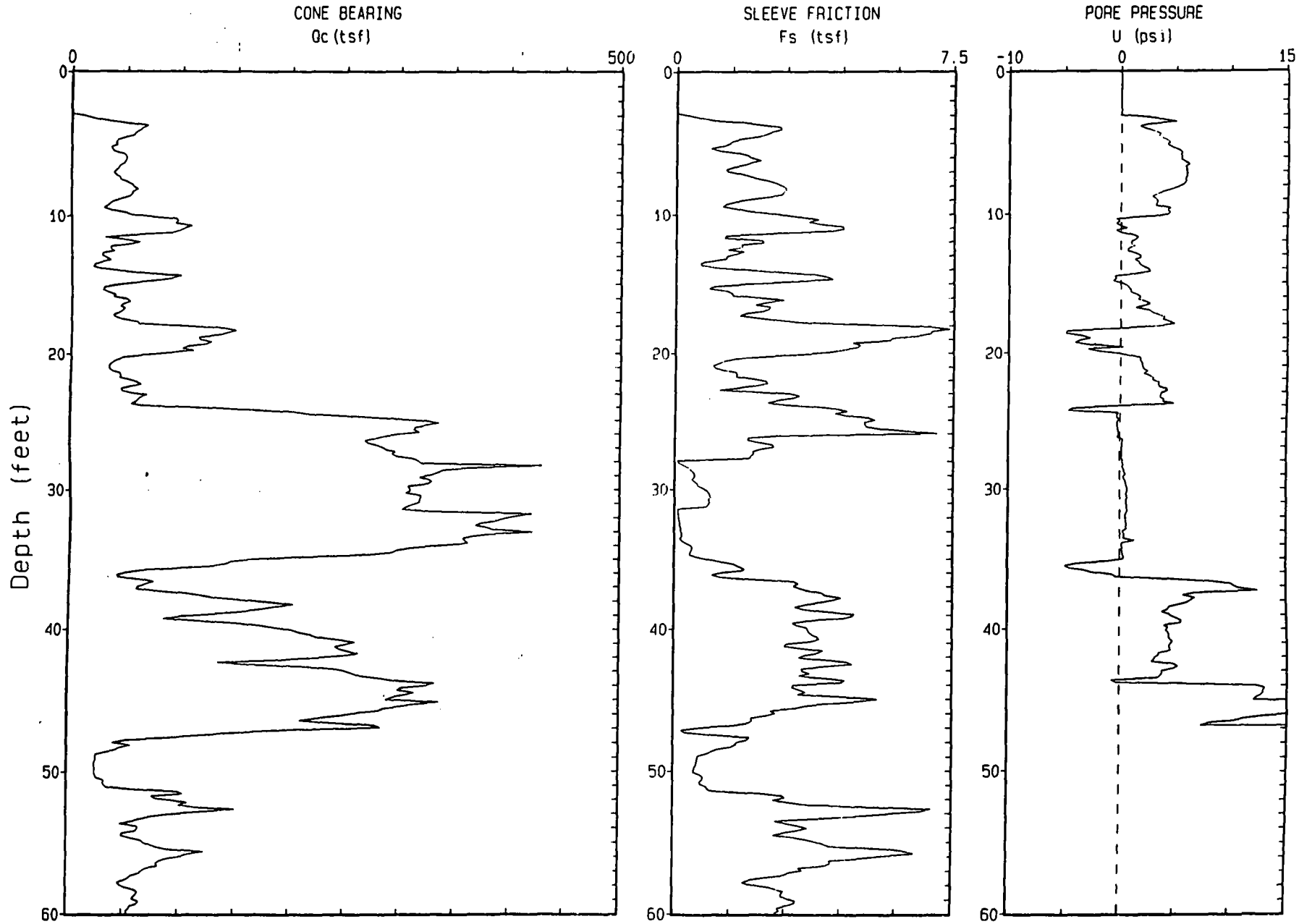
LOCATION : CWL0017 GEOLOGIST : TONY KIRK DATE : 2/9/93



Depth Increment : .16405 m Max Depth : 67.97 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0017.OUT
LOCATION : CWL0017 GEOLOGIST : TONY KIRK DATE : 2/9/93

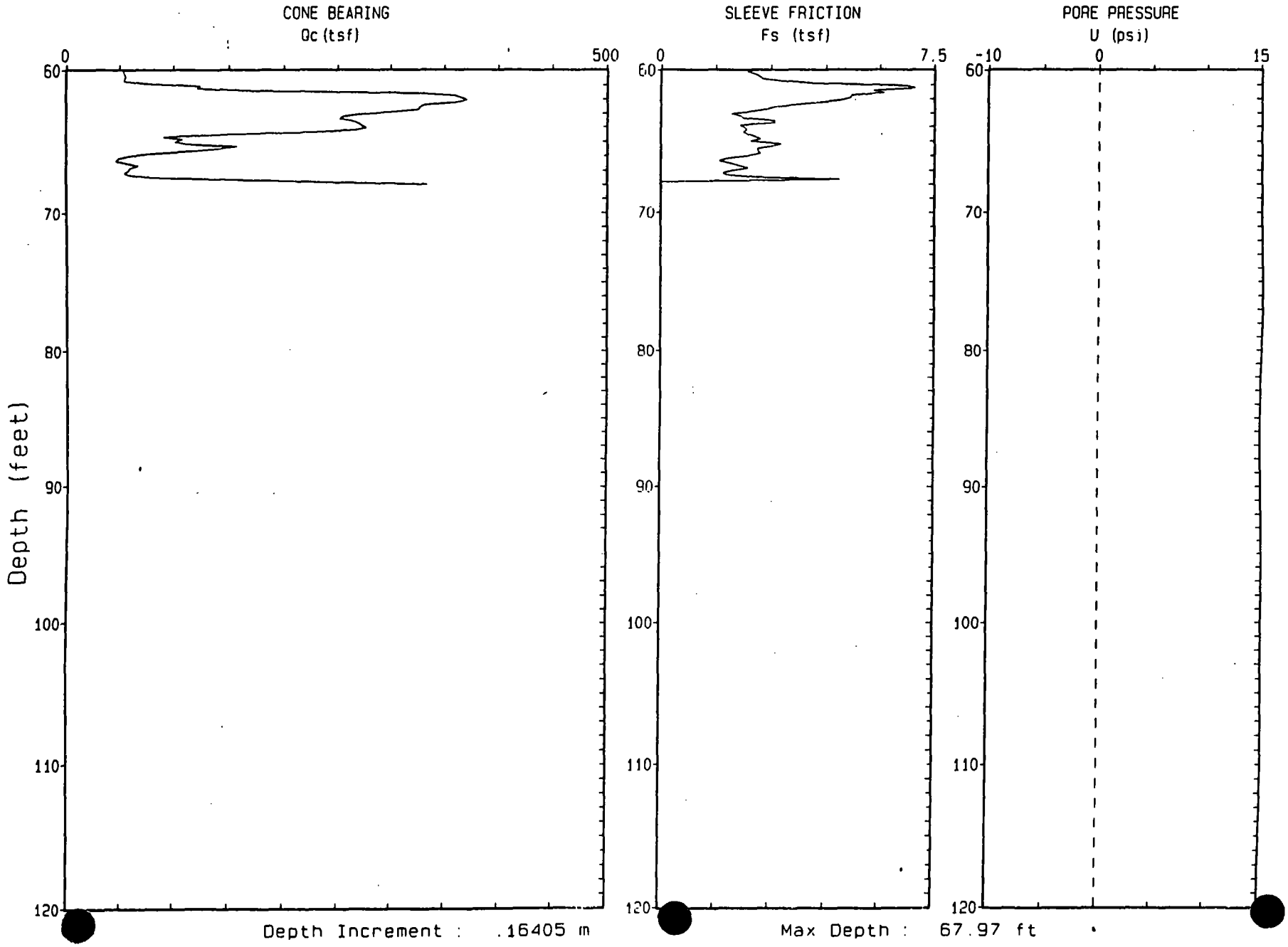


Depth Increment : .16405 m Max Depth : 67.97 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0017.OUT

LOCATION : CWL0017 GEOLOGIST : TONY KIRK DATE : 2/9/93



DAMES & MOORE

Project : DEL AMO SITE
Location : CWL0017
CPT Date : 2/9/93
Tot. Unit Wt. (avg) : 120 pcf

Contractor : GREGG IN SITU
Geologist : TONY KIRK
Water table (feet) : 45.99738

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
1	0.00	0.00	0.00	0.03	undefined	UNDFND	UNDFD	UDF	UNDEFINED
2	0.00	0.00	0.00	0.09	undefined	UNDFND	UNDFD	UDF	UNDEFINED
3	1.80	0.05	2.70	0.15	clay	UNDFND	UNDFD	2	.1
4	49.29	1.88	3.81	0.22	clayey silt to silty clay	UNDFND	UNDFD	24	3.2
5	46.91	1.97	4.21	0.28	clayey silt to silty clay	UNDFND	UNDFD	22	3.1
6	42.27	1.46	3.45	0.33	clayey silt to silty clay	UNDFND	UNDFD	20	2.7
7	42.45	1.72	4.04	0.39	clayey silt to silty clay	UNDFND	UNDFD	20	2.8
8	47.36	2.29	4.84	0.45	silty clay to clay	UNDFND	UNDFD	30	3.1
9	50.26	2.66	5.29	0.51	clay	UNDFND	UNDFD	48	3.3
10	38.54	1.69	4.39	0.57	silty clay to clay	UNDFND	UNDFD	25	2.5
11	94.34	3.70	3.92	0.63	clayey silt to silty clay	UNDFND	UNDFD	45	6.2
12	63.79	2.70	4.24	0.69	clayey silt to silty clay	UNDFND	UNDFD	31	4.2
13	35.55	1.76	4.95	0.75	clay	UNDFND	UNDFD	34	2.3
14	26.40	1.00	3.78	0.81	clayey silt to silty clay	UNDFND	UNDFD	13	1.7
15	72.64	3.33	4.58	0.87	clayey silt to silty clay	UNDFND	UNDFD	35	4.7
16	33.79	1.36	4.03	0.93	clayey silt to silty clay	UNDFND	UNDFD	16	2.1
17	47.34	2.47	5.22	0.98	clay	UNDFND	UNDFD	45	3.0
18	47.18	2.38	5.04	1.04	silty clay to clay	UNDFND	UNDFD	30	3.0
19	129.49	6.61	5.11	1.10	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
[illegible]	113.08	5.16	4.56	1.16	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
[illegible]	49.46	2.20	4.44	1.23	silty clay to clay	UNDFND	UNDFD	32	3.2
22	42.26	1.53	3.63	1.29	clayey silt to silty clay	UNDFND	UNDFD	20	2.7
23	53.43	2.03	3.80	1.35	clayey silt to silty clay	UNDFND	UNDFD	26	3.4
24	70.65	3.06	4.34	1.41	clayey silt to silty clay	UNDFND	UNDFD	34	4.6
25	242.04	4.77	1.97	1.48	sand to silty sand	80-90	40-42	>50	UNDEFINED
26	317.24	5.72	1.80	1.54	sand to silty sand	>90	42-44	>50	UNDEFINED
27	277.58	2.35	0.85	1.59	sand	80-90	40-42	>50	UNDEFINED
28	300.87	1.77	0.59	1.65	gravelly sand to sand	>90	40-42	48	UNDEFINED
29	353.26	0.35	0.10	1.71	gravelly sand to sand	>90	42-44	>50	UNDEFINED
30	320.26	0.57	0.18	1.77	gravelly sand to sand	>90	40-42	>50	UNDEFINED
31	315.60	0.90	0.29	1.83	gravelly sand to sand	>90	40-42	>50	UNDEFINED
32	346.52	0.34	0.10	1.89	gravelly sand to sand	>90	40-42	>50	UNDEFINED
33	382.89	0.13	0.03	1.95	gravelly sand to sand	>90	42-44	>50	UNDEFINED
34	375.56	0.19	0.05	2.01	gravelly sand to sand	>90	40-42	>50	UNDEFINED
35	288.05	0.45	0.16	2.07	gravelly sand to sand	80-90	40-42	46	UNDEFINED
36	124.55	1.51	1.22	2.13	sand to silty sand	60-70	34-36	30	UNDEFINED
37	57.81	2.02	3.49	2.18	clayey silt to silty clay	UNDFND	UNDFD	28	3.7
38	92.72	3.80	4.10	2.24	clayey silt to silty clay	UNDFND	UNDFD	44	6.0

Dr - All sands (Jamiolkowski et al. 1985) PHI - Durgunoglu and Mitchell 1975 Su: Nk= 15

(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.02) ****

DAMES & MOORE

Project : DEL AMO SITE Location : CWL0017

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
39	175.77	3.78	2.15	2.30	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
40	126.09	4.07	3.23	2.36	sandy silt to clayey silt	UNDFND	UNDFD	48	8.2
41	214.48	3.73	1.74	2.42	sand to silty sand	70-80	36-38	>50	UNDEFINED
42	252.14	3.52	1.40	2.48	sand	80-90	38-40	48	UNDEFINED
43	194.01	4.09	2.11	2.55	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
44	282.27	3.94	1.40	2.61	sand	80-90	38-40	>50	UNDEFINED
45	304.78	3.84	1.26	2.67	sand	80-90	38-40	>50	UNDEFINED
46	297.18	3.55	1.19	2.74	sand	80-90	38-40	>50	UNDEFINED
47	247.32	1.84	0.74	2.78	sand	70-80	36-38	47	UNDEFINED
48	109.24	1.22	1.12	2.80	sand to silty sand	50-60	32-34	26	UNDEFINED
49	38.32	1.14	2.99	2.83	sandy silt to clayey silt	UNDFND	UNDFD	15	2.3
50	24.89	0.60	2.40	2.86	sandy silt to clayey silt	UNDFND	UNDFD	10	1.4
51	29.42	0.70	2.39	2.89	sandy silt to clayey silt	UNDFND	UNDFD	11	1.7
52	75.17	1.84	2.45	2.92	sandy silt to clayey silt	UNDFND	UNDFD	29	4.8
53	114.92	4.64	4.04	2.95	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
54	67.00	4.00	5.96	2.97	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
55	58.32	3.26	5.60	3.00	clay	UNDFND	UNDFD	>50	3.6
56	91.19	5.13	5.62	3.03	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
57	84.75	4.46	5.26	3.06	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
58	57.88	2.68	4.63	3.09	silty clay to clay	UNDFND	UNDFD	37	3.6
59	58.29	2.72	4.67	3.12	silty clay to clay	UNDFND	UNDFD	37	3.6
60	59.79	3.08	5.15	3.14	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
61	54.55	2.75	5.04	3.17	silty clay to clay	UNDFND	UNDFD	35	3.3
62	196.31	5.85	2.98	3.20	silty sand to sandy silt	60-70	34-36	>50	UNDEFINED
63	340.52	3.84	1.13	3.23	sand	80-90	38-40	>50	UNDEFINED
64	264.23	2.45	0.93	3.26	sand	70-80	36-38	>50	UNDEFINED
65	185.17	2.42	1.31	3.29	sand to silty sand	60-70	34-36	44	UNDEFINED
66	108.95	2.74	2.52	3.32	silty sand to sandy silt	50-60	30-32	35	UNDEFINED
67	56.14	1.97	3.52	3.35	clayey silt to silty clay	UNDFND	UNDFD	27	3.4
68	152.87	1.83	1.20	3.38	sand to silty sand	60-70	32-34	37	UNDEFINED

Dr - All sands (Jamiolkovski et al. 1985) PHI - Durgunoglu and Mitchell 1975 Su: Nk= 15

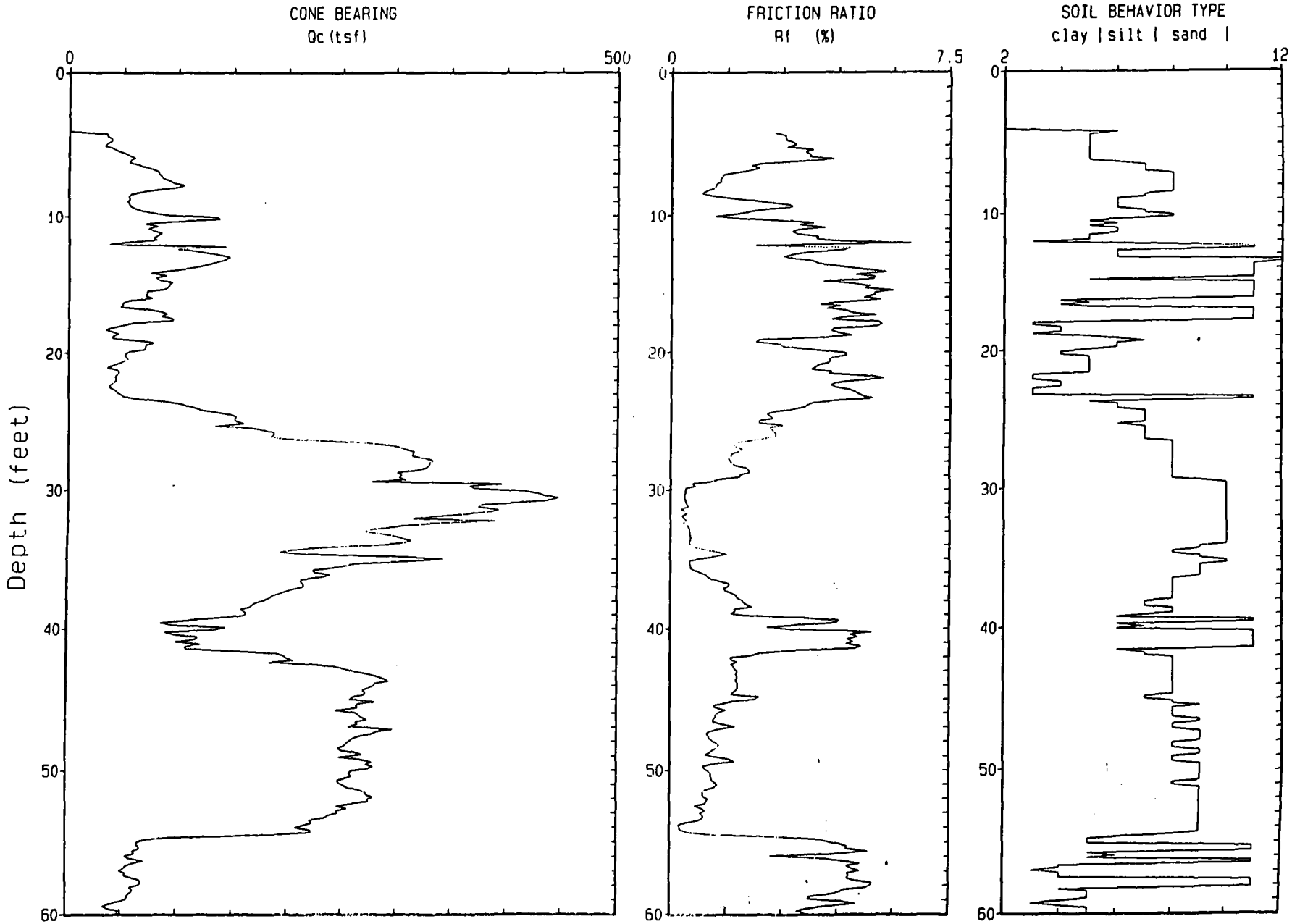
(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINT51 (v 3.02) ****

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0018.OUT

LOCATION : CWL0018 GEOLOGIST : TONY KIRK DATE : 2/10/93



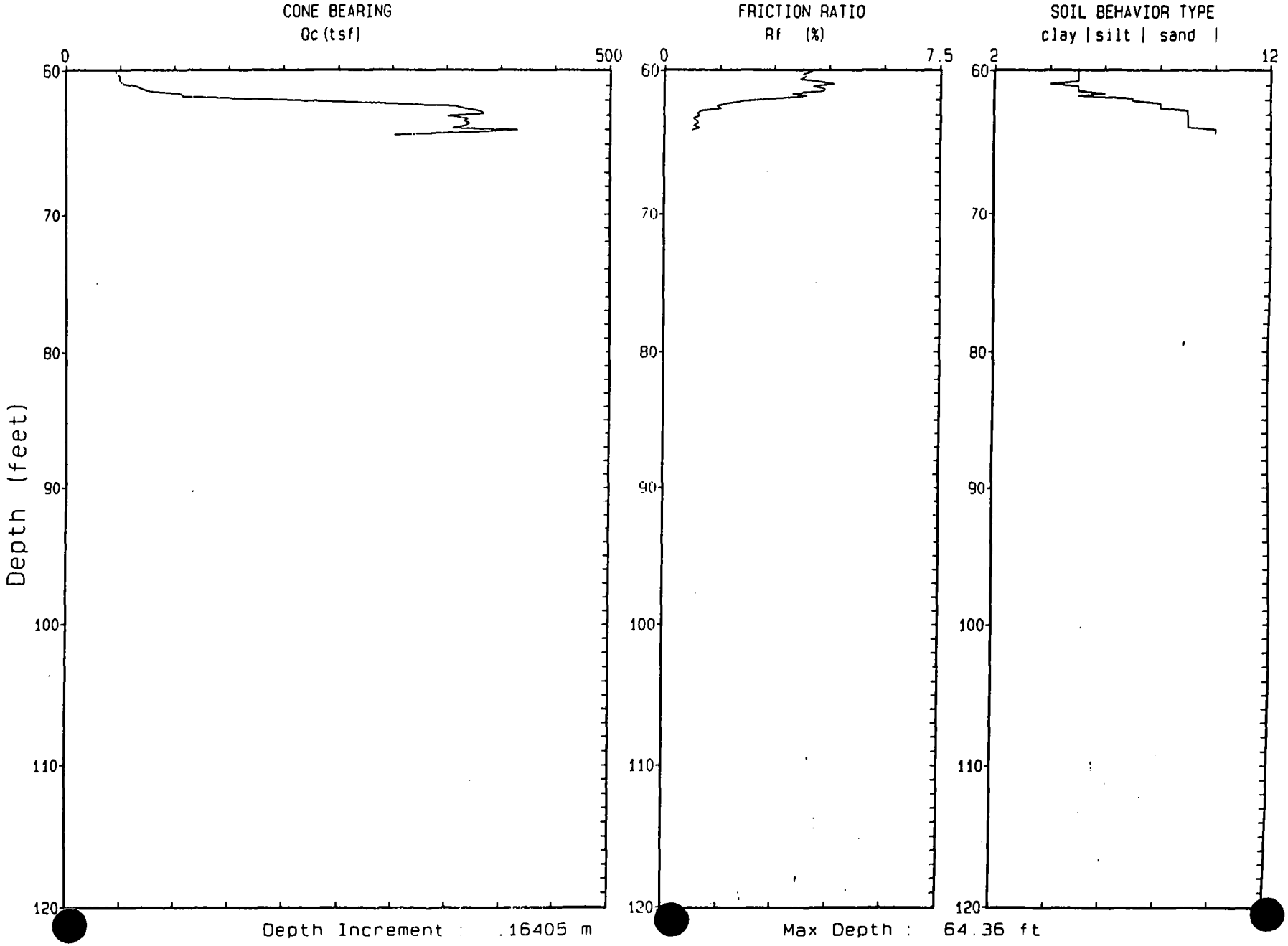
Depth Increment : .16405 m

Max Depth : 64.36 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0018.OUT

LOCATION : CWL0018 GEOLOGIST : TONY KIRK DATE : 2/10/93

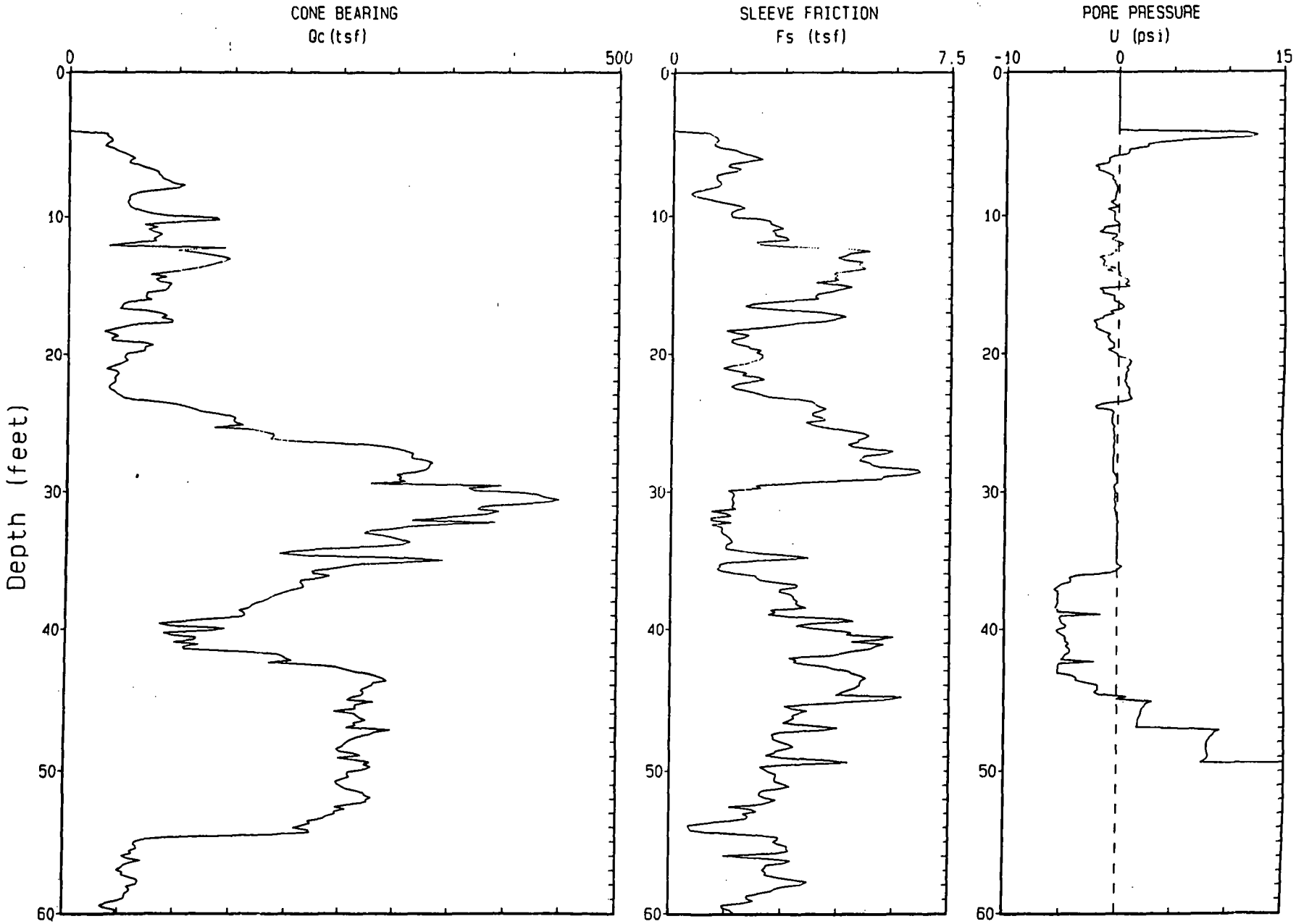


DAMES & MOORE

PROJECT : DEL AMO SITE
LOCATION : CWL0018

CONTRACTOR : GREGG IN SITU
GEOLOGIST : TONY KIRK

FILE : CWL0018.OUT
DATE : 2/10/93



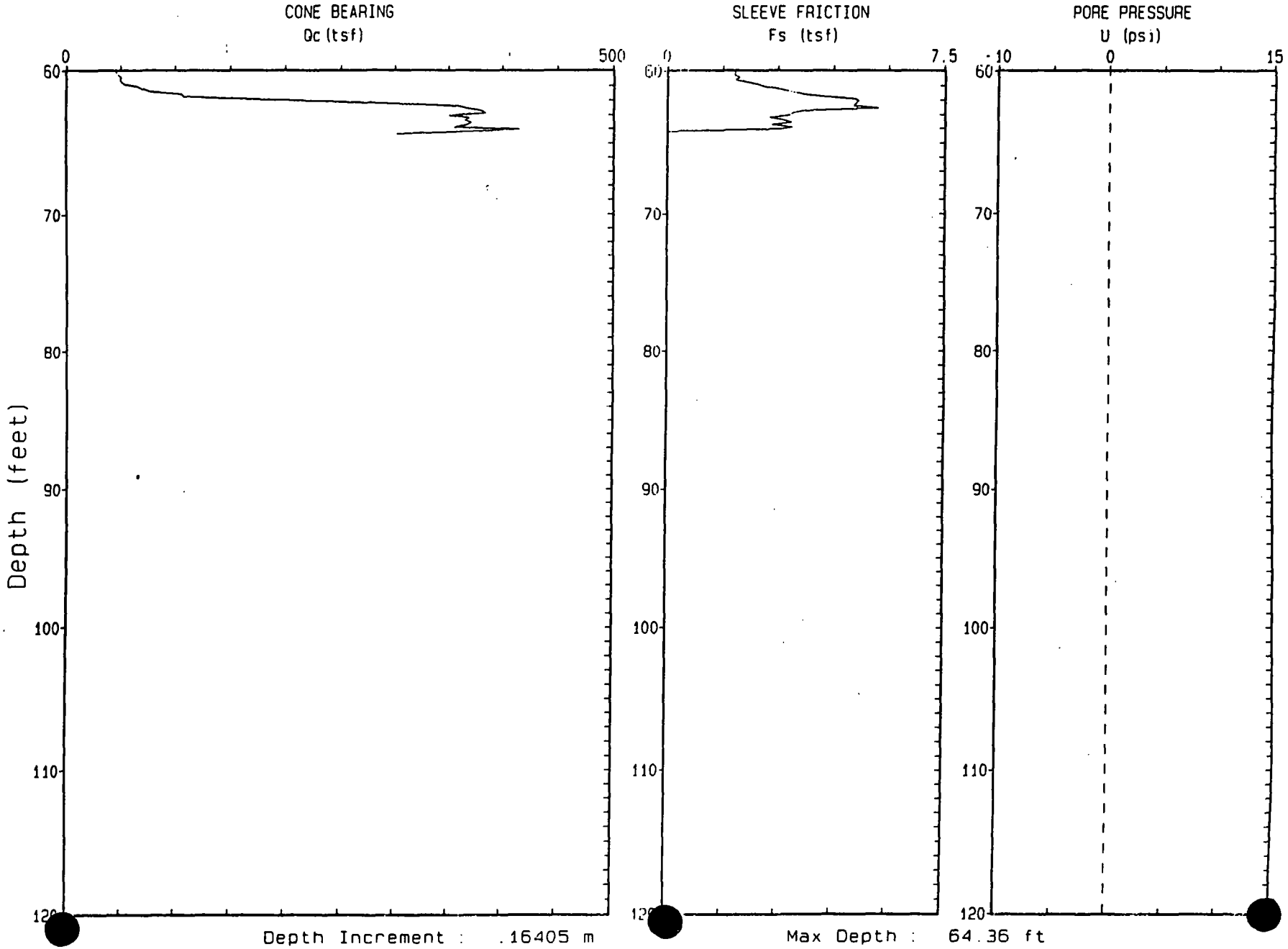
Depth Increment : .16405 m

Max Depth : 64.36 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0018.OUT

LOCATION : CWL0018 GEOLOGIST : TONY KIRK DATE : 2/10/93



DAMES & MOORE

Project : DEL AMO SITE
Location : CWL0018
CPT Date : 2/10/93
Tot. Unit Wt. (avg) : 120 pcf

Contractor : GREGG IN SITU
Geologist : TONY KIRK
Water table (feet) : 46.58793

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
1	0.00	0.00	0.00	0.03	undefined	UNDFND	UNDFD	UDF	UNDEFINED
2	0.00	0.00	0.00	0.09	undefined	UNDFND	UNDFD	UDF	UNDEFINED
3	0.00	0.00	0.00	0.15	undefined	UNDFND	UNDFD	UDF	UNDEFINED
4	0.00	0.00	0.00	0.22	undefined	UNDFND	UNDFD	UDF	UNDEFINED
5	35.38	1.09	3.09	0.28	clayey silt to silty clay	UNDFND	UNDFD	17	2.3
6	50.45	1.89	3.75	0.33	clayey silt to silty clay	UNDFND	UNDFD	24	3.3
7	70.87	1.64	2.31	0.39	silty sand to sandy silt	70-80	40-42	23	UNDEFINED
8	93.22	1.20	1.29	0.45	sand to silty sand	70-80	42-44	22	UNDEFINED
9	60.82	0.74	1.22	0.51	silty sand to sandy silt	60-70	38-40	19	UNDEFINED
10	66.76	1.64	2.46	0.57	sandy silt to clayey silt	UNDFND	UNDFD	26	4.4
11	98.15	2.48	2.53	0.63	silty sand to sandy silt	70-80	40-42	31	UNDEFINED
12	75.17	2.75	3.66	0.69	clayey silt to silty clay	UNDFND	UNDFD	36	4.9
13	110.08	4.17	3.79	0.75	sandy silt to clayey silt	UNDFND	UNDFD	42	7.2
14	129.37	4.90	3.79	0.81	sandy silt to clayey silt	UNDFND	UNDFD	50	8.5
15	84.66	4.36	5.14	0.87	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
16	80.12	4.29	5.36	0.93	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
17	57.47	2.72	4.73	0.98	silty clay to clay	UNDFND	UNDFD	37	3.7
18	84.29	4.12	4.89	1.04	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
[illegible]	41.46	2.04	4.92	1.10	silty clay to clay	UNDFND	UNDFD	26	2.6
[illegible]	65.61	1.92	2.92	1.16	sandy silt to clayey silt	UNDFND	UNDFD	25	4.2
21	49.72	2.16	4.35	1.23	silty clay to clay	UNDFND	UNDFD	32	3.2
22	42.52	1.94	4.56	1.29	silty clay to clay	UNDFND	UNDFD	27	2.7
23	40.74	1.90	4.67	1.35	silty clay to clay	UNDFND	UNDFD	26	2.6
24	81.30	3.44	4.23	1.41	clayey silt to silty clay	UNDFND	UNDFD	39	5.3
25	143.43	3.88	2.71	1.48	silty sand to sandy silt	70-80	38-40	46	UNDEFINED
26	168.85	4.59	2.72	1.54	silty sand to sandy silt	70-80	38-40	>50	UNDEFINED
27	246.68	5.03	2.04	1.59	sand to silty sand	80-90	40-42	>50	UNDEFINED
28	320.00	5.40	1.69	1.65	sand to silty sand	>90	40-42	>50	UNDEFINED
29	319.62	6.09	1.90	1.71	sand to silty sand	>90	40-42	>50	UNDEFINED
30	337.63	3.18	0.94	1.77	sand	>90	40-42	>50	UNDEFINED
31	429.85	1.66	0.39	1.83	gravelly sand to sand	>90	42-44	>50	UNDEFINED
32	373.06	1.44	0.39	1.89	gravelly sand to sand	>90	42-44	>50	UNDEFINED
33	321.01	1.32	0.41	1.95	gravelly sand to sand	>90	40-42	>50	UNDEFINED
34	297.85	1.53	0.51	2.01	gravelly sand to sand	80-90	40-42	48	UNDEFINED
35	241.00	2.39	0.99	2.07	sand	80-90	38-40	46	UNDEFINED
36	271.69	1.57	0.58	2.13	sand	80-90	38-40	>50	UNDEFINED
37	222.94	2.50	1.12	2.18	sand	70-80	38-40	43	UNDEFINED
38	197.38	3.18	1.61	2.24	sand to silty sand	70-80	36-38	47	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Durgunogiu and Mitchell 1975 Su: Nk= 15

(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.02) ****

DAMES & MOORE

Project : DEL AMO SITE Location : CWL0018

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
39	167.04	3.23	1.93	2.30	sand to silty sand	60-70	36-38	40	UNDEFINED
40	123.57	3.75	3.04	2.36	sandy silt to clayey silt	UNDFND	UNDFD	47	8.0
41	116.87	4.89	4.19	2.42	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
42	139.68	5.05	3.62	2.48	sandy silt to clayey silt	UNDFND	UNDFD	>50	9.1
43	218.51	3.68	1.69	2.55	sand to silty sand	70-80	36-38	>50	UNDEFINED
44	281.16	5.04	1.79	2.61	sand to silty sand	80-90	38-40	>50	UNDEFINED
45	269.81	5.16	1.91	2.67	sand to silty sand	80-90	38-40	>50	UNDEFINED
46	264.29	3.68	1.39	2.74	sand	80-90	38-40	>50	UNDEFINED
47	266.23	3.50	1.32	2.79	sand	70-80	36-38	>50	UNDEFINED
48	274.52	3.07	1.12	2.82	sand	80-90	38-40	>50	UNDEFINED
49	256.66	2.98	1.16	2.85	sand	70-80	36-38	49	UNDEFINED
50	270.32	3.36	1.24	2.88	sand	80-90	36-38	>50	UNDEFINED
51	254.31	2.85	1.12	2.91	sand	70-80	36-38	49	UNDEFINED
52	267.42	2.69	1.01	2.94	sand	70-80	36-38	>50	UNDEFINED
53	260.22	2.37	0.91	2.96	sand	70-80	36-38	50	UNDEFINED
54	230.59	1.57	0.68	2.99	sand	70-80	36-38	44	UNDEFINED
55	168.11	1.71	1.02	3.02	sand	60-70	34-36	32	UNDEFINED
56	64.34	3.03	4.70	3.05	silty clay to clay	UNDFND	UNDFD	41	4.0
57	58.69	2.58	4.40	3.08	clayey silt to silty clay	UNDFND	UNDFD	28	3.6
58	59.06	2.95	4.99	3.11	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
59	59.88	2.81	4.66	3.13	silty clay to clay	UNDFND	UNDFD	38	3.7
60	44.53	1.83	4.10	3.16	clayey silt to silty clay	UNDFND	UNDFD	21	2.7
61	48.50	1.87	3.86	3.19	clayey silt to silty clay	UNDFND	UNDFD	23	2.9
62	79.59	3.22	4.05	3.22	clayey silt to silty clay	UNDFND	UNDFD	38	5.0
63	313.95	4.74	1.51	3.25	sand to silty sand	80-90	38-40	>50	UNDEFINED
64	363.00	3.13	0.86	3.28	sand	80-90	38-40	>50	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Durgunoglu and Mitchell 1975 Su: Nk= 15

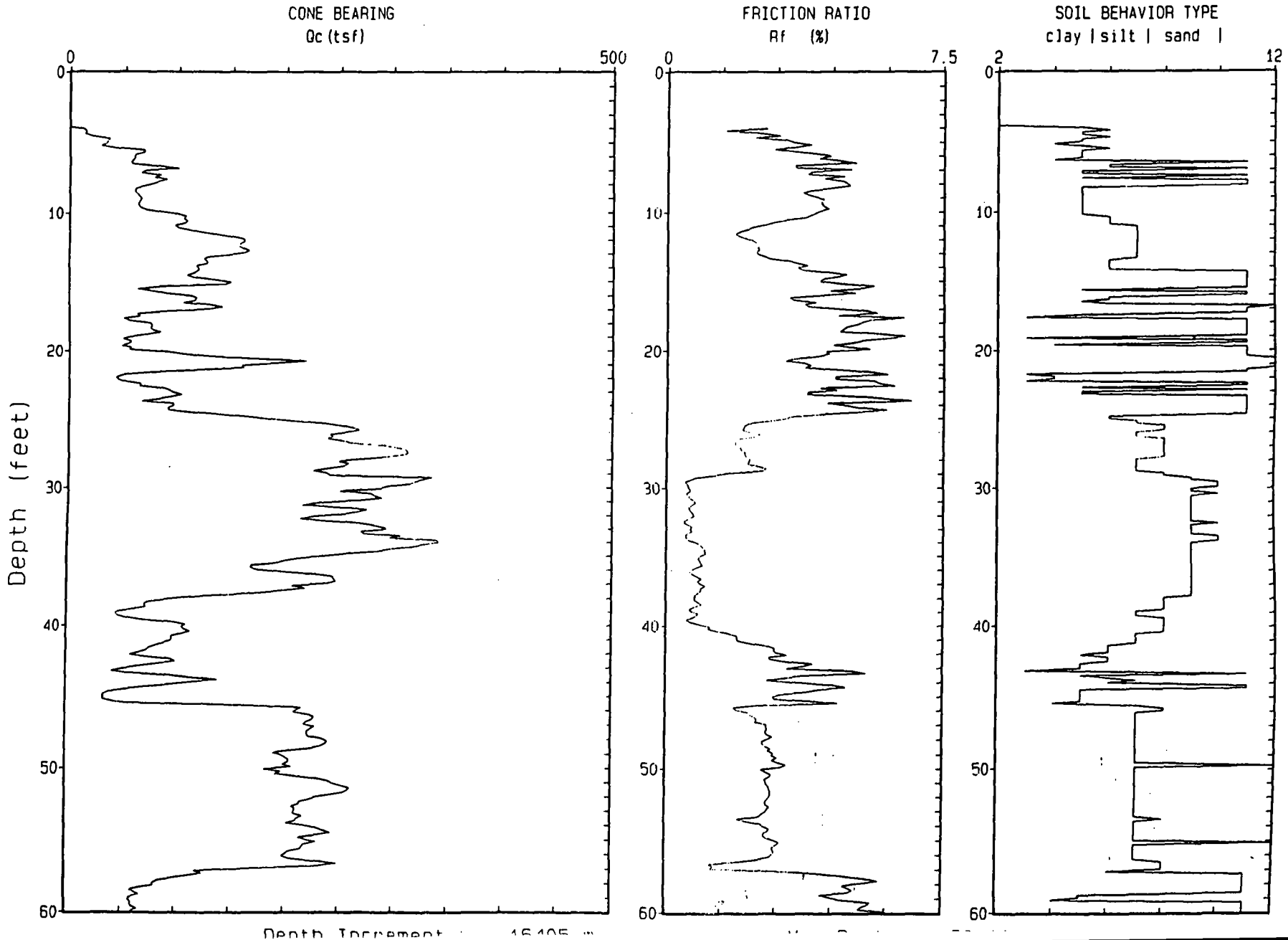
(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.02) ****

DAMES & MOORE

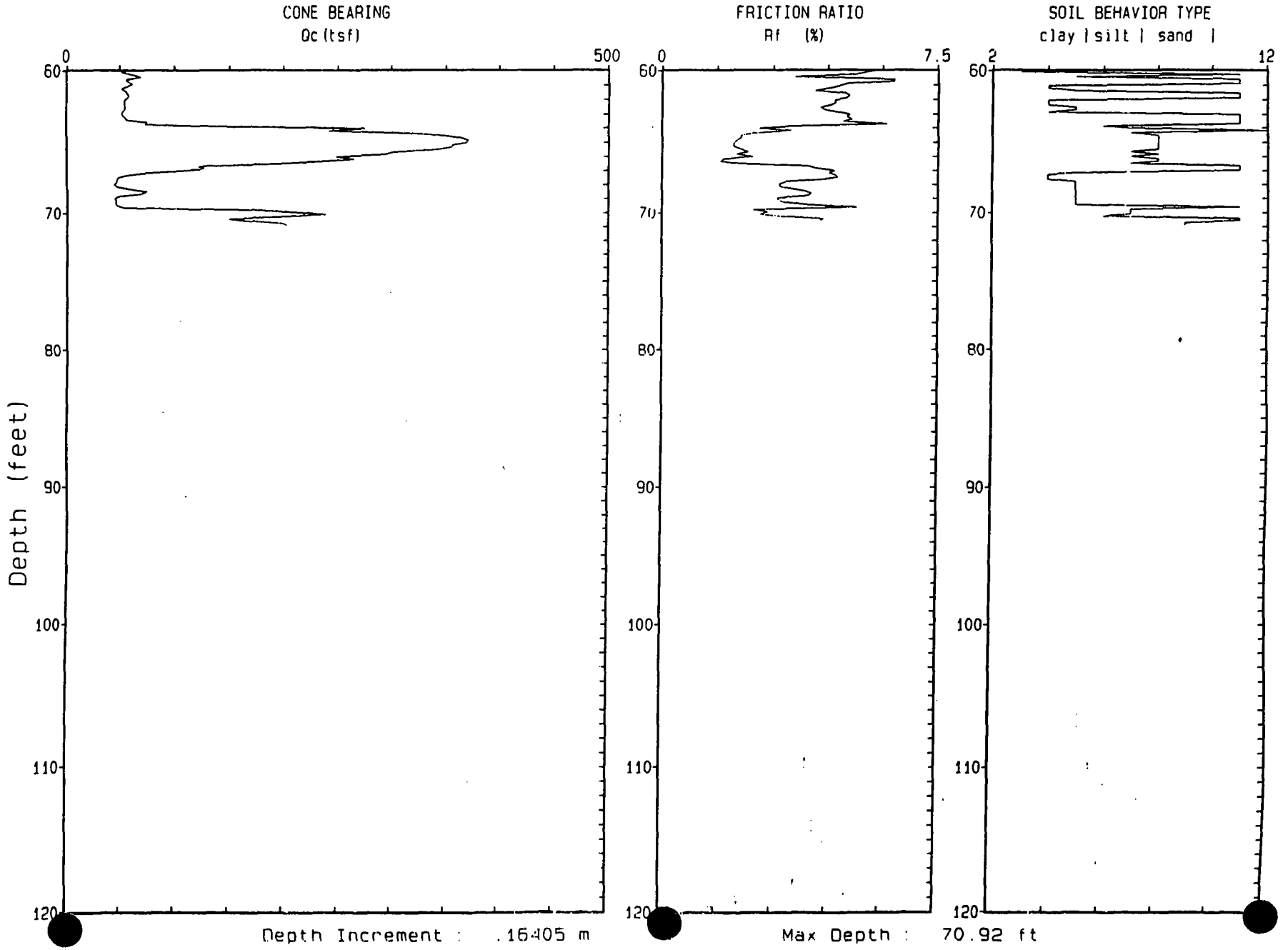
PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0019.OUT

LOCATION : CWL0019 GEOLOGIST : TONY KIRK DATE : 2/11/93



DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0019.OUT
LOCATION : CWL0019 GEOLOGIST : TONY KIRK DATE : 2/11/93

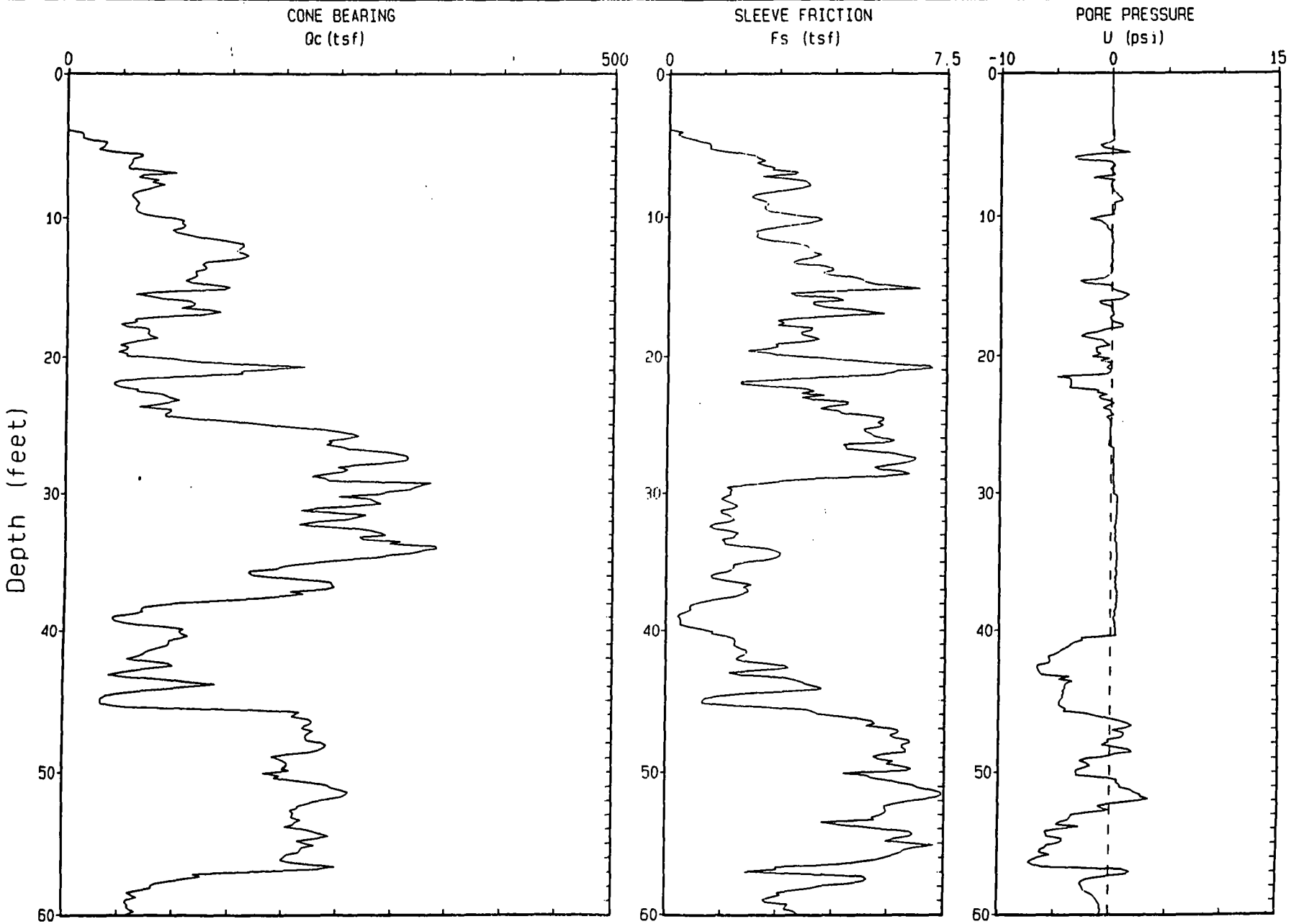


Depth Increment : .16405 m Max Depth : 70.92 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0019.OUT

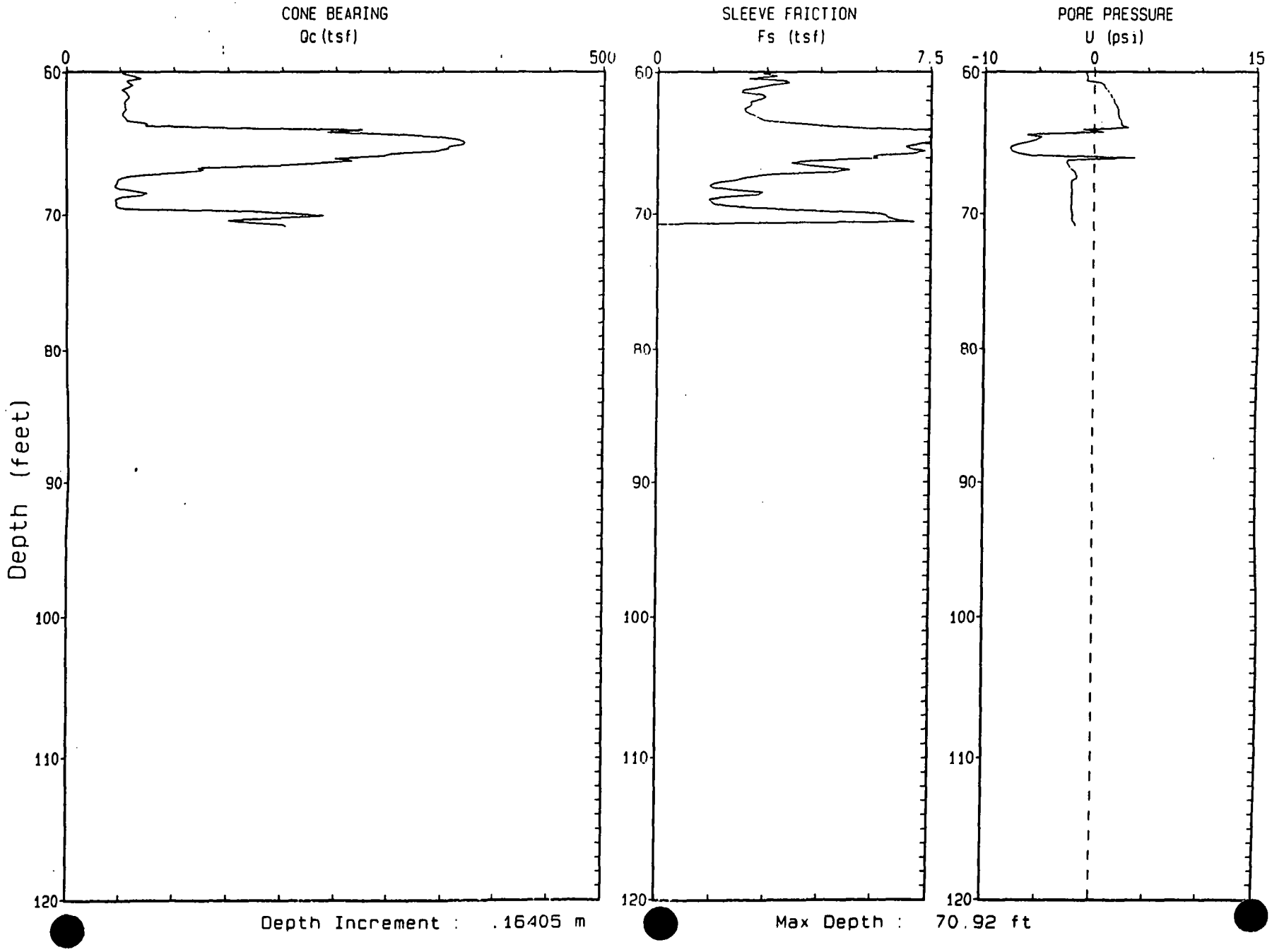
LOCATION : CWL0019 GEOLOGIST : TONY KIRK DATE : 2/11/93



Depth Increment : .16405 m Max Depth : 70.92 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0019.OUT
LOCATION : CWL0019 GEOLOGIST : TONY KIRK DATE : 2/11/93



DAMES & MOORE

Project : DEL AMO SITE
Location : CWL0019
CPT Date : 2/11/93
Tot. Unit Wt. (avg) : 120 pcf

Contractor : GREGG IN SITU
Geologist : TONY KIRK
Water table (feet) : 43.30709

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
1	0.00	0.00	0.00	0.03	undefined	UNDFND	UNDFD	UDF	UNDEFINED
2	0.00	0.00	0.00	0.09	undefined	UNDFND	UNDFD	UDF	UNDEFINED
3	0.00	0.00	0.00	0.15	undefined	UNDFND	UNDFD	UDF	UNDEFINED
4	2.10	0.06	2.70	0.22	clay	UNDFND	UNDFD	2	.1
5	24.35	0.71	2.84	0.28	clayey silt to silty clay	UNDFND	UNDFD	12	1.6
6	53.57	1.98	3.70	0.33	clayey silt to silty clay	UNDFND	UNDFD	26	3.5
7	69.56	2.92	4.20	0.39	clayey silt to silty clay	UNDFND	UNDFD	33	4.6
8	78.02	3.44	4.41	0.45	clayey silt to silty clay	UNDFND	UNDFD	37	5.1
9	61.92	2.59	4.19	0.51	clayey silt to silty clay	UNDFND	UNDFD	30	4.0
10	67.60	2.86	4.24	0.57	clayey silt to silty clay	UNDFND	UNDFD	32	4.4
11	103.60	3.56	3.43	0.63	sandy silt to clayey silt	UNDFND	UNDFD	40	6.8
12	128.63	2.66	2.07	0.69	silty sand to sandy silt	70-80	40-42	41	UNDEFINED
13	159.85	3.90	2.44	0.75	silty sand to sandy silt	80-90	42-44	>50	UNDEFINED
14	127.49	3.92	3.07	0.81	sandy silt to clayey silt	UNDFND	UNDFD	49	8.4
15	117.27	4.93	4.20	0.87	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
16	100.40	4.82	4.80	0.93	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
17	119.37	4.50	3.77	0.98	sandy silt to clayey silt	UNDFND	UNDFD	46	7.8
18	73.29	3.84	5.24	1.04	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
19	75.31	3.84	5.09	1.10	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
20	52.90	2.86	5.40	1.16	clay	UNDFND	UNDFD	>50	3.4
21	136.97	5.30	3.87	1.23	sand to clayey sand (*)	UNDFND	UNDFD	>50	UNDEFINED
22	101.12	4.51	4.46	1.29	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
23	65.78	3.39	5.08	1.35	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
24	89.86	4.35	4.85	1.41	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
25	130.02	5.55	4.27	1.48	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
26	247.05	5.56	2.25	1.54	silty sand to sandy silt	80-90	40-42	>50	UNDEFINED
27	254.42	5.34	2.10	1.59	sand to silty sand	80-90	40-42	>50	UNDEFINED
28	301.84	6.41	2.12	1.65	sand to silty sand	>90	40-42	>50	UNDEFINED
29	244.67	5.71	2.33	1.71	silty sand to sandy silt	80-90	40-42	>50	UNDEFINED
30	306.34	2.19	0.71	1.77	sand	>90	40-42	>50	UNDEFINED
31	276.47	1.70	0.61	1.83	sand	80-90	40-42	>50	UNDEFINED
32	249.35	1.68	0.67	1.89	sand	80-90	38-40	48	UNDEFINED
33	252.48	1.50	0.59	1.95	sand	80-90	38-40	48	UNDEFINED
34	297.21	1.74	0.58	2.01	gravelly sand to sand	80-90	40-42	47	UNDEFINED
35	304.40	2.93	0.96	2.07	sand	80-90	40-42	>50	UNDEFINED
36	196.75	1.77	0.90	2.13	sand	70-80	36-38	38	UNDEFINED
37	222.13	1.74	0.78	2.18	sand	70-80	38-40	43	UNDEFINED
38	197.33	1.82	0.92	2.24	sand	70-80	36-38	38	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Durgunoglu and Mitchell 1975 Su: Nk= 15

(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINT1 (v 3.02) ****

DAMES & MOORE

Project : DEL AMO SITE Location : CWL0019

DEPTH (feet)	Qc (avg) (tsf)	Fs (avg) (tsf)	Rf (avg) (%)	SIGV' (tsf)	SOIL BEHAVIOUR TYPE	Eq - Dr (%)	PHI deg.	SPT N	Su tsf
39	78.14	0.62	0.79	2.30	sand to silty sand	40-50	30-32	19	UNDEFINED
40	58.82	0.40	0.69	2.36	sand to silty sand	<40	<30	14	UNDEFINED
41	106.03	1.47	1.38	2.42	sand to silty sand	50-60	32-34	25	UNDEFINED
42	81.65	2.03	2.48	2.48	sandy silt to clayey silt	UNDFND	UNDFD	31	5.2
43	79.36	2.63	3.32	2.55	sandy silt to clayey silt	UNDFND	UNDFD	30	5.1
44	82.42	2.98	3.62	2.60	sandy silt to clayey silt	UNDFND	UNDFD	32	5.3
45	61.03	2.45	4.02	2.63	clayey silt to silty clay	UNDFND	UNDFD	29	3.8
46	119.71	2.91	2.43	2.66	silty sand to sandy silt	50-60	32-34	38	UNDEFINED
47	221.24	5.45	2.46	2.69	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
48	226.05	6.32	2.80	2.72	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
49	223.66	6.21	2.78	2.75	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
50	202.77	6.23	3.07	2.78	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
51	209.46	5.81	2.77	2.81	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
52	252.74	7.19	2.84	2.83	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
53	217.76	6.10	2.80	2.86	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
54	211.31	5.22	2.47	2.89	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
55	229.95	6.34	2.76	2.92	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
56	219.04	6.61	3.02	2.95	silty sand to sandy silt	70-80	36-38	>50	UNDEFINED
57	219.84	4.61	2.10	2.98	sand to silty sand	70-80	36-38	>50	UNDEFINED
58	119.13	4.53	3.81	3.00	sandy silt to clayey silt	UNDFND	UNDFD	46	7.7
59	69.99	3.44	4.91	3.03	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
60	60.43	3.13	5.19	3.06	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
61	59.51	3.24	5.44	3.09	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
62	56.95	2.72	4.78	3.12	silty clay to clay	UNDFND	UNDFD	36	3.5
63	54.59	2.54	4.64	3.15	silty clay to clay	UNDFND	UNDFD	35	3.3
64	78.40	3.69	4.70	3.18	very stiff fine grained (*)	UNDFND	UNDFD	>50	UNDEFINED
65	319.06	7.69	2.41	3.21	silty sand to sandy silt	80-90	38-40	>50	UNDEFINED
66	323.92	6.76	2.09	3.24	sand to silty sand	80-90	38-40	>50	UNDEFINED
67	174.24	4.53	2.60	3.27	silty sand to sandy silt	60-70	34-36	>50	UNDEFINED
68	52.60	2.22	4.21	3.30	clayey silt to silty clay	UNDFND	UNDFD	25	3.2
69	57.53	2.10	3.64	3.32	clayey silt to silty clay	UNDFND	UNDFD	28	3.5
70	95.54	3.00	3.13	3.35	sandy silt to clayey silt	UNDFND	UNDFD	37	6.0
71	191.90	4.38	2.28	3.38	silty sand to sandy silt	60-70	34-36	>50	UNDEFINED

Dr - All sands (Jamiolkowski et al. 1985) PHI - Durgunoglu and Mitchell 1975 Su: Nk= 15

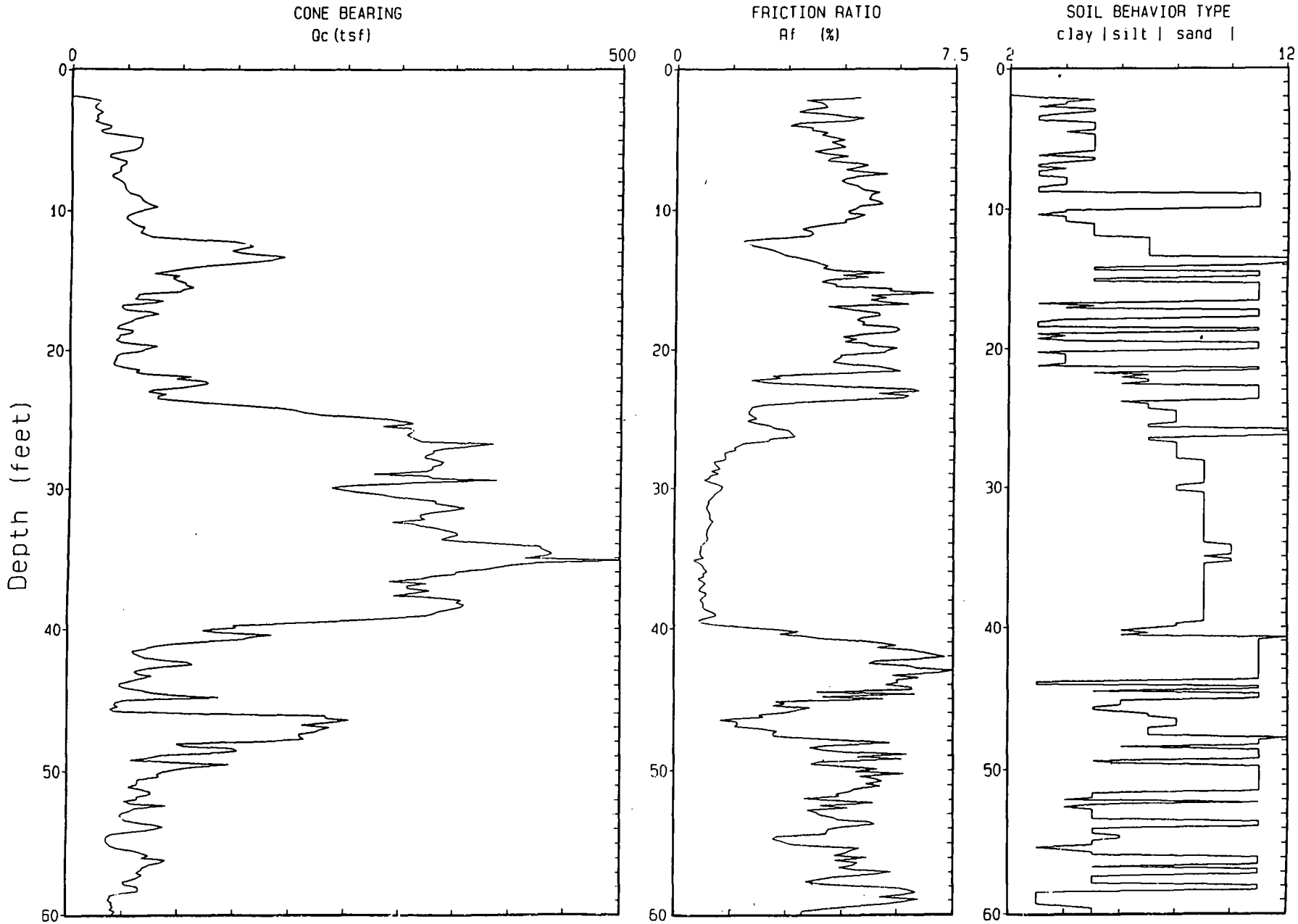
(*) overconsolidated or cemented

**** Note: For interpretation purposes the PLOTTED CPT PROFILE should be used with the TABULATED OUTPUT from CPTINTR1 (v 3.02) ****

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0020.OUT

LOCATION : CWL0020 GEOLOGIST : TONY KIRK DATE : 2/12/93



Depth Increment : .16405 m

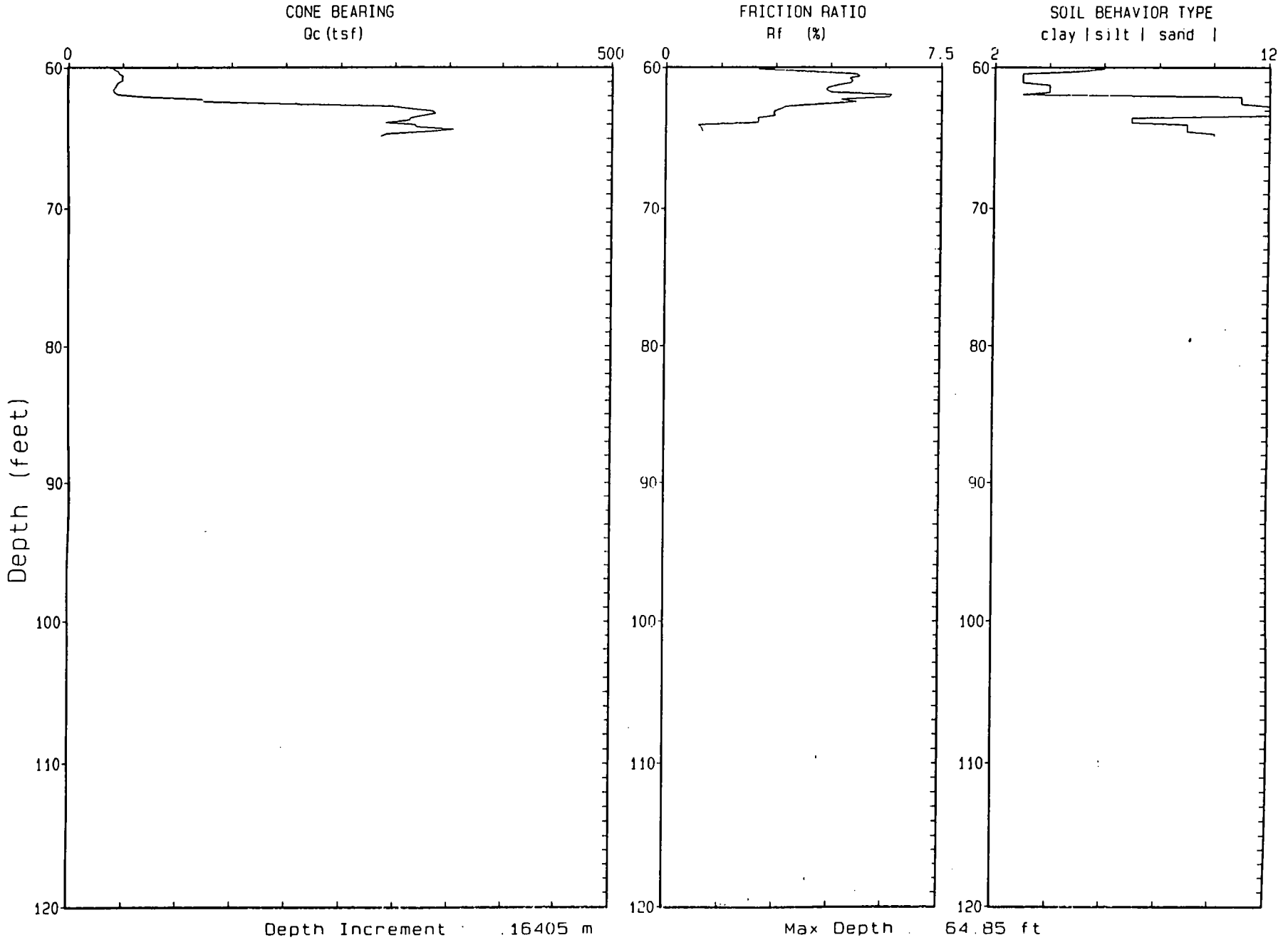
Max Depth : 64.85 ft

DAMES & MOORE

PROJECT : DEL AMO SITE
LOCATION : CWL0020

CONTRACTOR : GREGG IN SITU
GEOLOGIST : TONY KIRK

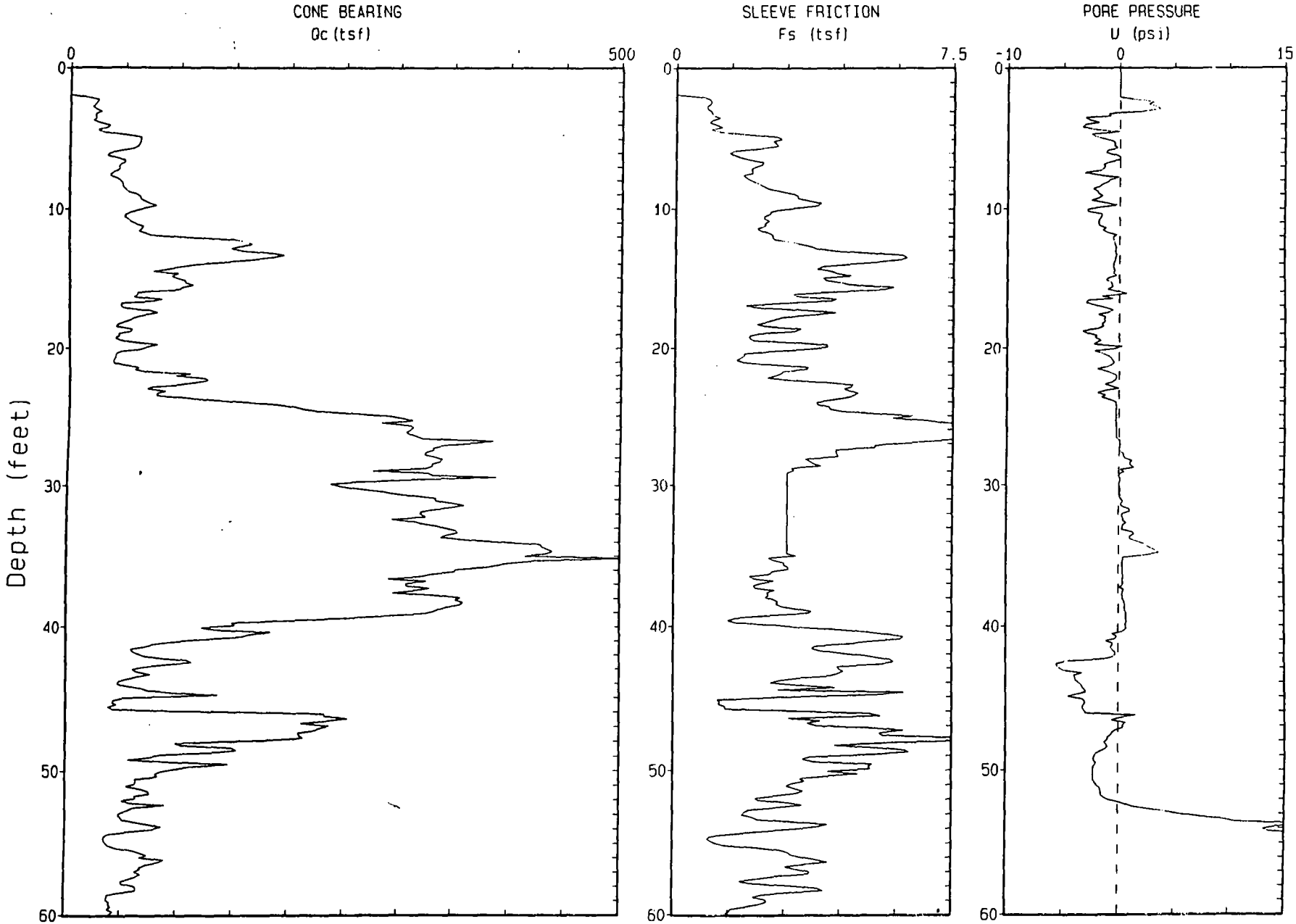
FILE : CWL0020.OUT
DATE : 2/12/93



DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0020.OUT

LOCATION : CWL0020 GEOLOGIST : TONY KIRK DATE : 2/12/93



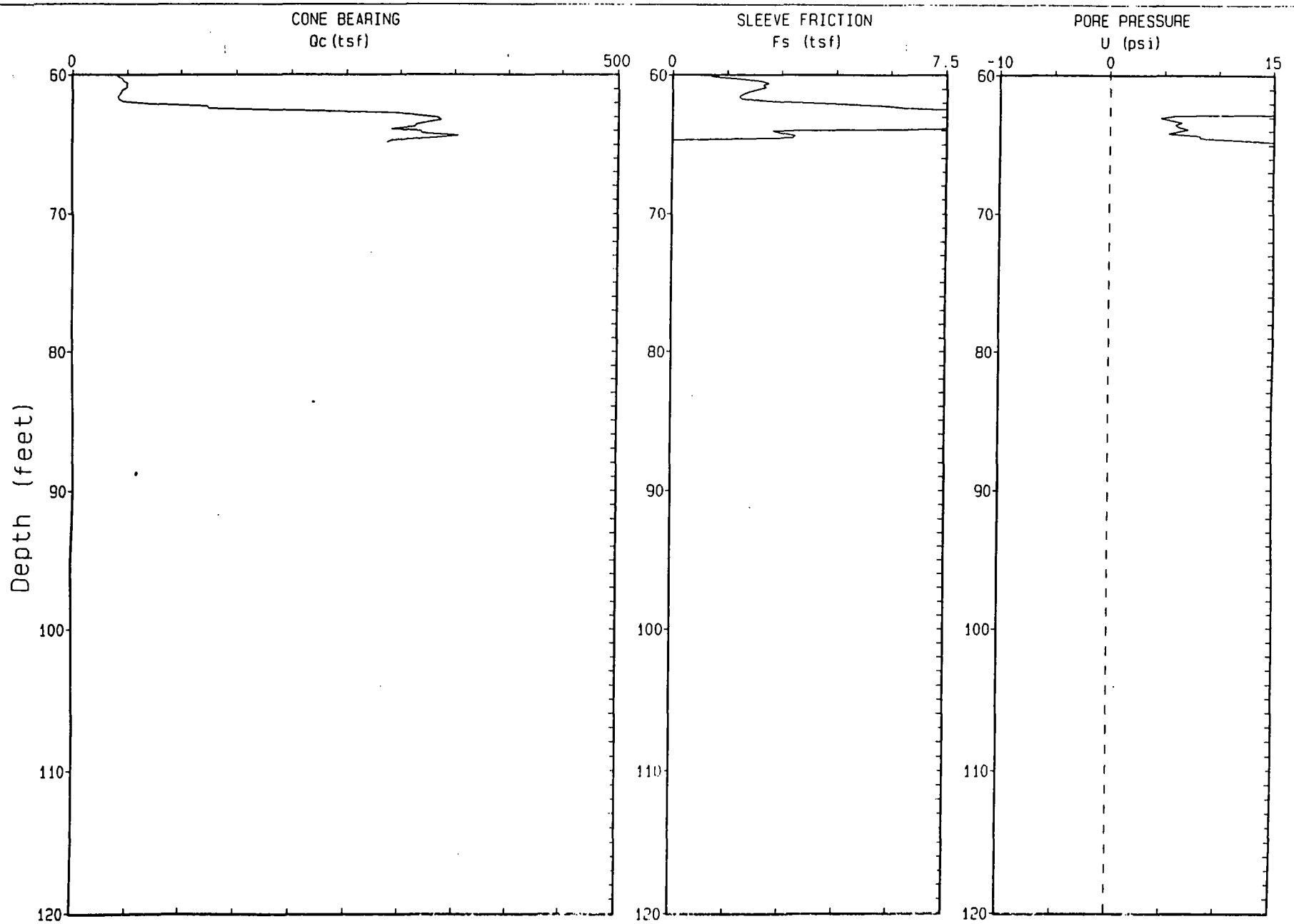
Depth Increment : .16405 m Max Depth 64.85 ft

DAMES & MOORE

PROJECT : DEL AMO SITE
LOCATION : CWL0020

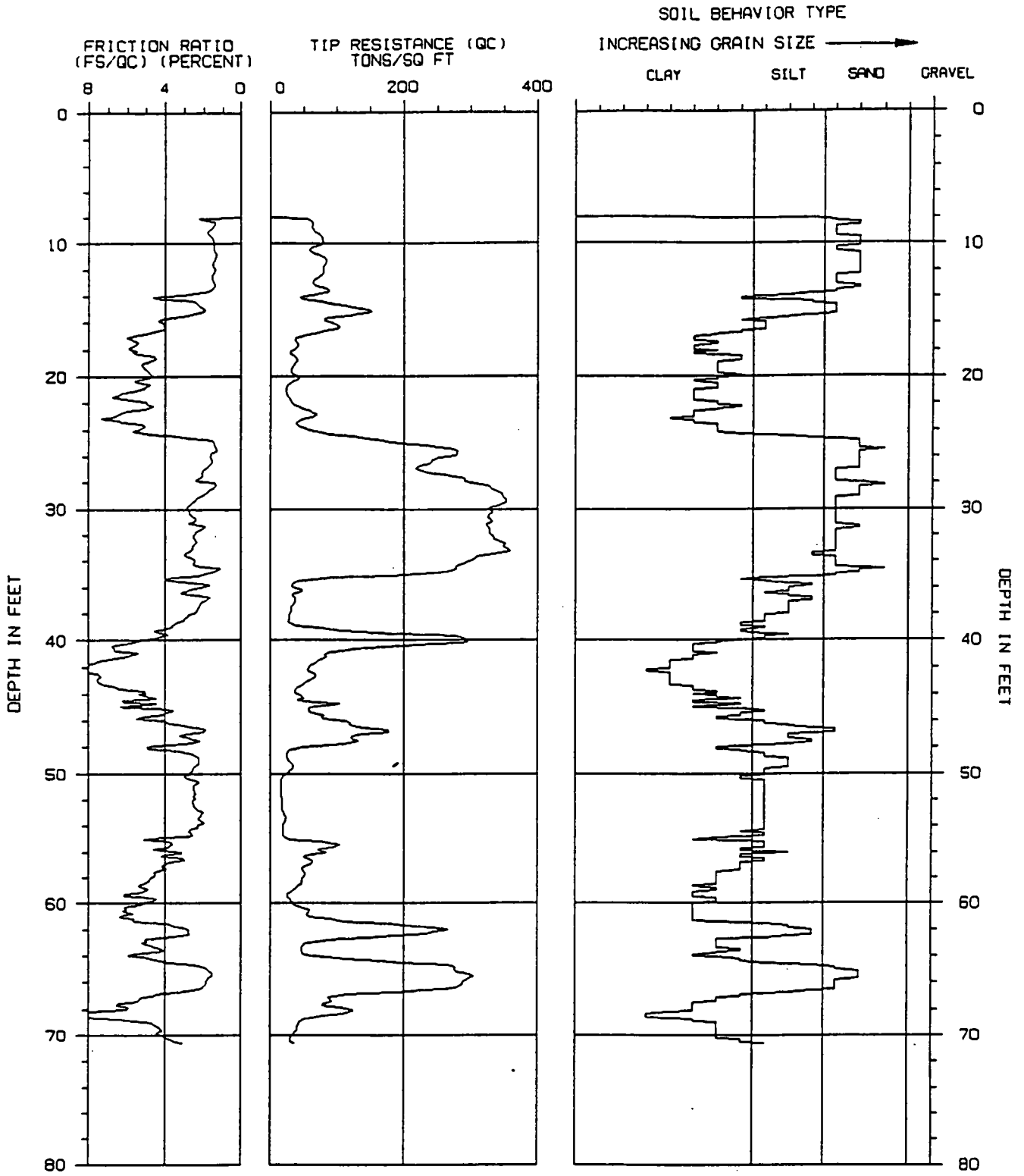
CONTRACTOR : GREGG IN SITU
GEOLOGIST : TONY KIRK

FILE : CWL0020.OUT
DATE : 2/12/93



Depth Increment : .16405 m

Max Depth : 64.85 ft



TOP 8.0 FT IS DISTURBED SOIL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0021

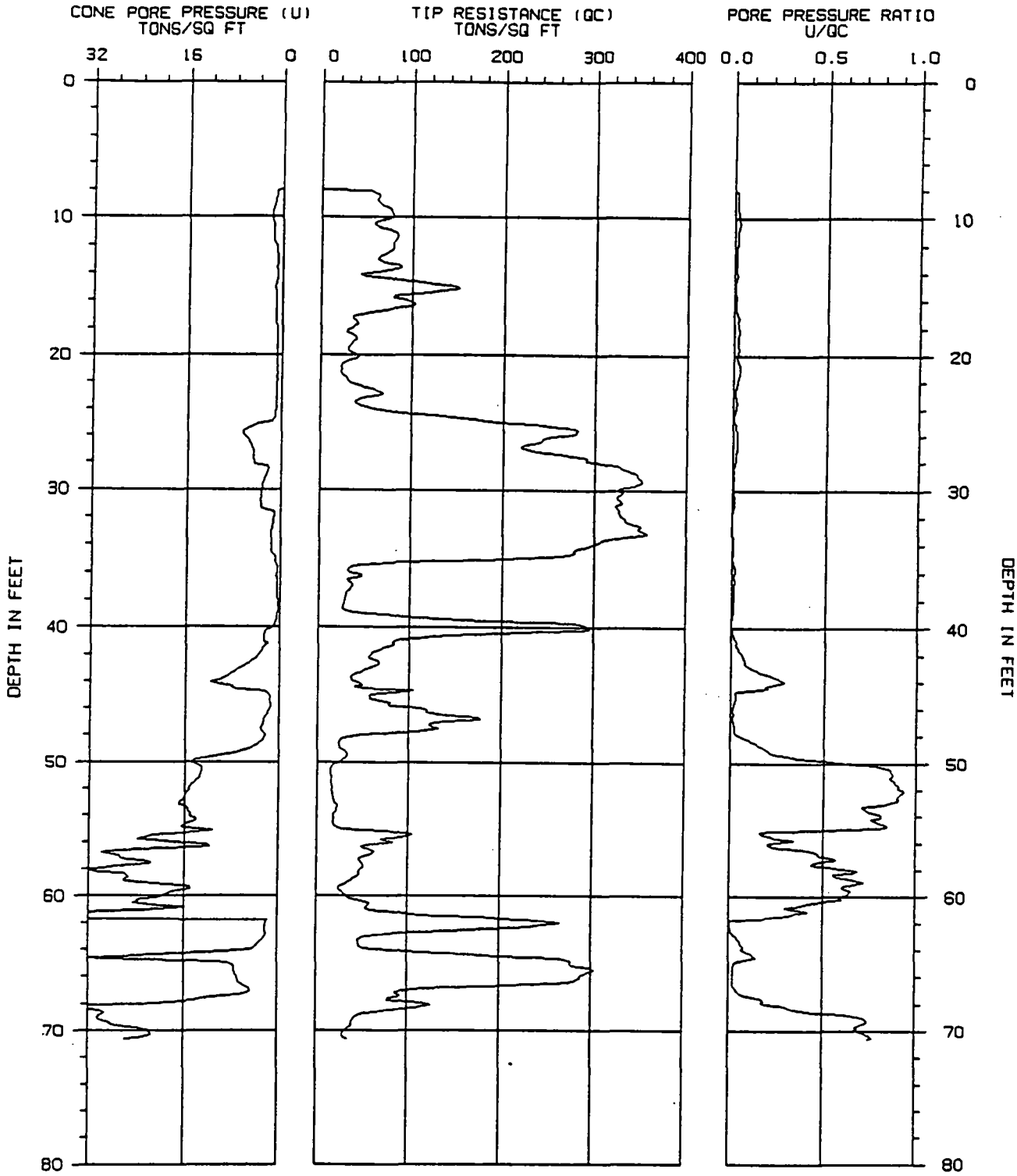
PROJECT NAME : D&M/O.A.I.

PROJECT NUMBER : 93-380-01108

LOCATION : TORRANCE CA.

DATE : 02-23-1993

THE EARTH TECHNOLOGY CORPORATION



TOP 8.0 FT IS DISTURBED SOIL

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0021

PROJECT NAME : O&M/O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-01108

DATE : 02-23-1993

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING	: CWL0021	PROJECT NO	: 93-380-01108
PROJECT	: D&M/O.A.I.	INSTRUMENT	: F15CKE091
LOCATION	: TORRANCE CA.	SYSTEM	: SYSTEM#3
DATE	: 02-23-1993	OPERATOR	: KC/RN

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	.0	.0	.00	.00	
1.0	.0	.0	.00	.00	
1.5	.0	.0	.00	.00	
2.0	.0	.0	.00	.00	
2.5	.0	.0	.00	.00	
3.0	.0	.0	.00	.00	
3.5	.0	.0	.00	.00	
4.0	.0	.0	.00	.00	
4.5	.0	.0	.00	.00	
5.0	.0	.0	.00	.00	
5.5	.0	.0	.00	.00	
6.0	.0	.0	.00	.00	
6.5	.0	.0	.00	.00	
7.0	.0	.0	.00	.00	
7.5	.0	.0	.00	.00	
8.0	.0	.0	.00	.00	
8.5	63.2	84.1	1.41	1.14	SAND to SILTY SAND
9.0	65.2	85.1	1.72	1.35	SILTY SAND to SANDY SILT
9.5	77.5	99.3	1.55	1.68	SAND to SILTY SAND
10.0	77.6	97.7	1.45	1.79	SAND to SILTY SAND
10.5	57.6	71.3	1.44	1.56	SILTY SAND to SANDY SILT
11.0	78.7	95.9	1.36	1.55	SAND to SILTY SAND
11.5	82.3	98.7	1.52	1.55	SAND to SILTY SAND
12.0	78.9	93.2	1.39	1.10	SAND to SILTY SAND
12.5	73.3	85.3	1.57	.99	SILTY SAND to SANDY SILT
13.0	62.3	71.4	1.44	.94	SILTY SAND to SANDY SILT
13.5	87.9	99.3	1.60	.98	SILTY SAND to SANDY SILT
14.0	51.1	56.9	3.99	.90	*CLAYEY SAND to SANDY CLAY
14.5	85.9	94.3	2.37	.95	SILTY SAND to SANDY SILT
15.0	147.5	159.9	1.95	1.23	SILTY SAND to SANDY SILT
15.5	104.3	111.5	3.22	1.11	*CLAYEY SAND to SANDY CLAY
16.0	94.1	99.4	4.10	1.15	*CLAYEY SAND to SANDY CLAY
16.5	90.4	94.2	4.15	1.11	*CLAYEY SAND to SANDY CLAY
17.0	44.6	45.9	5.89	1.00	*SANDY CLAY to SILTY CLAY
17.5	38.9	39.6	5.43	.98	*SANDY CLAY to SILTY CLAY
18.0	34.4	34.5	5.76	.94	*SANDY CLAY to SILTY CLAY
18.5	34.8	34.5	4.57	.86	CLAYEY SILT to SILTY CLAY
19.0	36.2	35.5	5.16	.85	*SANDY CLAY to SILTY CLAY
19.5	30.7	29.8	5.03	.83	*SANDY CLAY to SILTY CLAY
20.0	40.5	38.8	4.72	.85	*SANDY CLAY to SILTY CLAY

TOP 8.0 FT IS DISTURBED SOIL
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CWL0021

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	28.6	27.2	5.13	.82	CLAYEY SILT to SILTY CLAY
21.0	23.4	21.9	5.35	.80	SILTY CLAY TO CLAY
21.5	25.3	23.5	6.79	.80	*SANDY CLAY to SILTY CLAY
22.0	31.6	29.0	4.97	.80	CLAYEY SILT to SILTY CLAY
22.5	55.4	50.2	5.56	.85	*SANDY CLAY to SILTY CLAY
23.0	63.0	56.5	6.83	.88	*SANDY CLAY to SILTY CLAY
23.5	38.6	34.3	5.81	.87	*SANDY CLAY to SILTY CLAY
24.0	58.5	51.5	5.50	.95	*SANDY CLAY to SILTY CLAY
24.5	125.0	108.8	3.35	1.08	*CLAYEY SAND to SANDY CLAY
25.0	195.7	168.6	1.45	2.45	SAND to SILTY SAND
25.5	275.9	235.4	1.30	5.74	SAND to SILTY SAND
26.0	265.1	223.9	1.65	6.43	SAND to SILTY SAND
26.5	238.5	199.5	1.61	5.47	SAND to SILTY SAND
27.0	221.4	183.4	1.97	4.91	SILTY SAND to SANDY SILT
27.5	274.4	225.1	2.08	4.79	SILTY SAND to SANDY SILT
28.0	299.1	243.0	1.42	4.56	SAND to SILTY SAND
28.5	332.2	267.4	1.61	2.19	SAND to SILTY SAND
29.0	347.4	277.0	2.14	2.62	*SAND to SILTY SAND
29.5	352.2	278.2	2.56	3.10	*SILTY SAND to CLAYEY SAND
30.0	325.3	254.5	2.83	3.26	*SILTY SAND to CLAYEY SAND
30.5	325.4	252.3	2.62	3.38	*SILTY SAND to CLAYEY SAND
31.0	330.1	253.6	2.61	3.42	*SILTY SAND to CLAYEY SAND
31.5	326.9	248.9	2.04	2.70	SAND to SILTY SAND
32.0	330.5	249.3	2.50	1.13	*SILTY SAND to CLAYEY SAND
32.5	343.6	256.9	2.38	1.33	*SILTY SAND to CLAYEY SAND
33.0	350.8	260.0	2.55	1.52	*SILTY SAND to CLAYEY SAND
33.5	324.8	238.6	3.00	1.67	*SILTY SAND to CLAYEY SAND
34.0	298.0	217.0	2.47	1.65	*SILTY SAND to CLAYEY SAND
34.5	276.9	199.9	1.25	1.58	SAND to SILTY SAND
35.0	221.6	158.6	1.96	.92	SILTY SAND to SANDY SILT
35.5	47.3	33.6	3.78	.68	SANDY SILT to CLAYEY SILT
36.0	33.3	23.4	2.13	.54	SANDY SILT to CLAYEY SILT
36.5	33.9	23.6	3.16	.58	SANDY SILT to CLAYEY SILT
37.0	37.0	25.6	1.89	.54	SILTY SAND to SANDY SILT
37.5	30.7	21.0	2.26	.47	SANDY SILT to CLAYEY SILT
38.0	29.2	19.8	2.54	.43	SANDY SILT to CLAYEY SILT
38.5	26.5	17.9	3.06	.39	SANDY SILT to CLAYEY SILT
39.0	53.3	35.6	3.64	.44	SANDY SILT to CLAYEY SILT
39.5	183.8	121.9	4.09	.63	*CLAYEY SAND to SANDY CLAY
40.0	293.4	192.9	5.18	1.28	*SANDY CLAY to SILTY CLAY
40.5	169.3	110.4	6.79	2.59	*SANDY CLAY to SILTY CLAY
41.0	84.5	54.6	5.45	2.73	*SANDY CLAY to SILTY CLAY
41.5	72.3	46.4	7.28	2.83	*SANDY CLAY to SILTY CLAY
42.0	57.8	36.8	8.19	3.51	*SANDY CLAY to SILTY CLAY
42.5	65.1	41.1	7.56	4.72	*SANDY CLAY to SILTY CLAY
43.0	57.4	35.9	7.53	6.52	*SANDY CLAY to SILTY CLAY
43.5	40.8	25.3	6.62	8.31	*SANDY CLAY to SILTY CLAY
44.0	39.3	24.2	5.39	11.19	CLAYEY SILT to SILTY CLAY
44.5	41.0	25.1	6.22	8.15	*SANDY CLAY to SILTY CLAY
45.0	59.0	35.8	6.13	1.74	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CWL0021

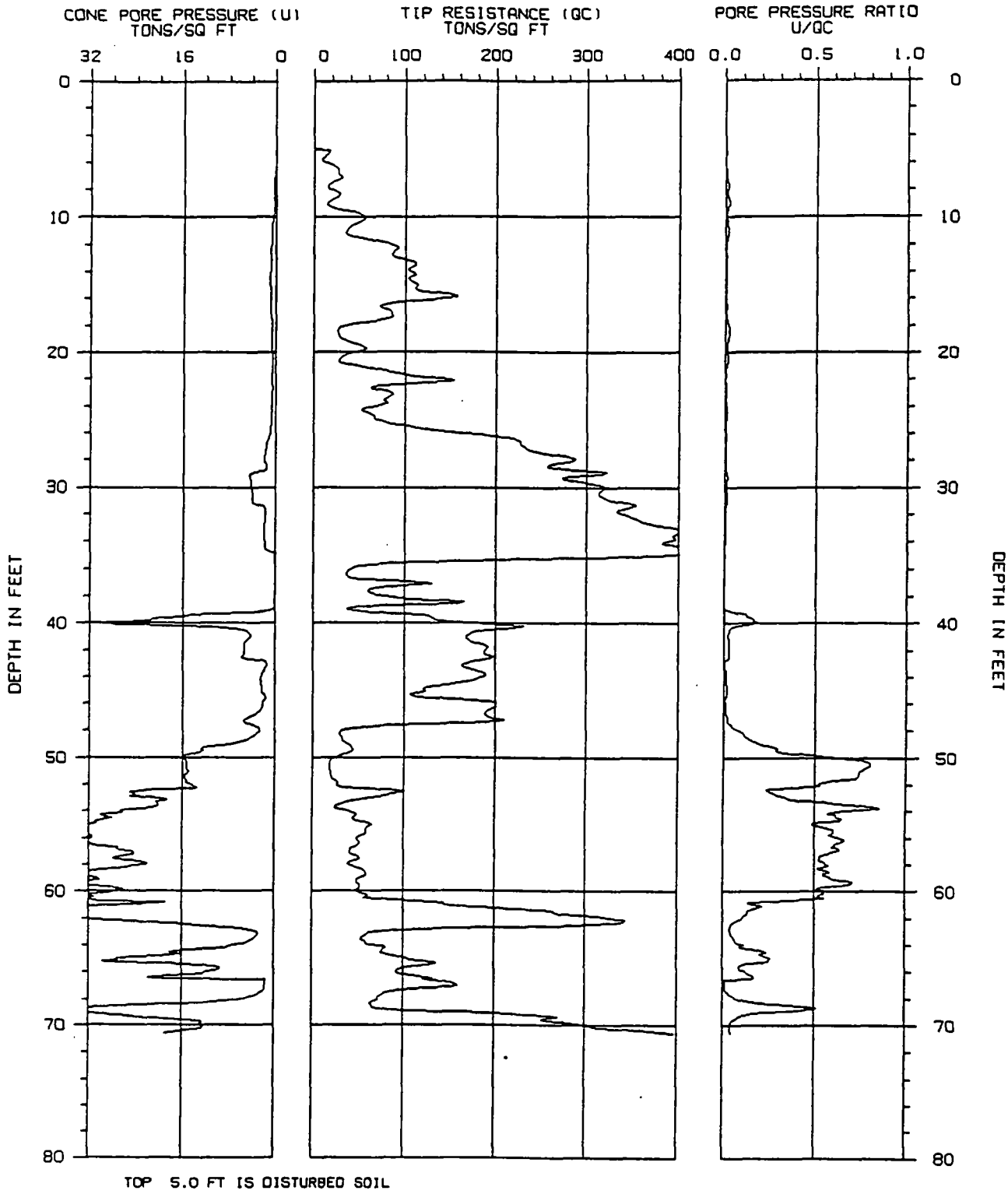
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	75.1	45.2	4.09	1.68	CLAYEY SILT to SILTY CLAY
46.0	112.8	67.4	4.14	1.59	*CLAYEY SAND to SANDY CLAY
46.5	139.6	82.7	2.48	2.15	SILTY SAND to SANDY SILT
47.0	138.5	81.4	2.90	2.61	SANDY SILT to CLAYEY SILT
47.5	131.9	76.9	2.21	3.13	SILTY SAND to SANDY SILT
48.0	48.2	27.9	4.98	2.38	CLAYEY SILT to SILTY CLAY
48.5	24.4	14.0	2.62	3.09	SANDY SILT to CLAYEY SILT
49.0	26.5	15.1	2.23	5.03	SANDY SILT to CLAYEY SILT
49.5	32.7	18.5	2.48	9.84	SANDY SILT to CLAYEY SILT
50.0	23.8	13.3	2.66	14.89	SANDY SILT to CLAYEY SILT
50.5	15.2	8.5	2.57	13.07	SANDY SILT to CLAYEY SILT
51.0	15.5	8.6	2.54	13.40	SANDY SILT to CLAYEY SILT
51.5	16.2	8.9	2.43	14.41	SANDY SILT to CLAYEY SILT
52.0	16.6	9.0	2.50	15.27	SANDY SILT to CLAYEY SILT
52.5	17.6	9.5	2.46	15.88	SANDY SILT to CLAYEY SILT
53.0	19.7	10.5	2.04	16.85	SANDY SILT to CLAYEY SILT
53.5	21.3	11.3	2.26	15.50	SANDY SILT to CLAYEY SILT
54.0	18.6	9.8	2.30	15.10	SANDY SILT to CLAYEY SILT
54.5	18.3	9.6	2.69	14.55	SANDY SILT to CLAYEY SILT
55.0	28.4	14.8	5.11	14.23	SILTY CLAY TO CLAY
55.5	101.0	52.1	3.77	21.52	SANDY SILT to CLAYEY SILT
56.0	83.2	42.6	3.14	17.74	SANDY SILT to CLAYEY SILT
56.5	54.4	27.6	3.09	20.27	SANDY SILT to CLAYEY SILT
57.0	55.4	27.9	4.10	27.10	CLAYEY SILT to SILTY CLAY
57.5	49.2	24.6	4.47	21.66	CLAYEY SILT to SILTY CLAY
58.0	48.3	24.0	4.70	31.14	CLAYEY SILT to SILTY CLAY
58.5	44.7	22.0	5.22	25.56	CLAYEY SILT to SILTY CLAY
59.0	33.3	16.3	4.94	23.13	CLAYEY SILT to SILTY CLAY
59.5	24.7	12.0	5.47	15.80	SILTY CLAY TO CLAY
60.0	32.8	15.8	5.15	19.63	SILTY CLAY TO CLAY
60.5	58.5	27.9	6.02	24.66	*SANDY CLAY to SILTY CLAY
61.0	58.7	27.8	6.39	23.08	*SANDY CLAY to SILTY CLAY
61.5	134.0	63.1	4.96	35.77	*SANDY CLAY to SILTY CLAY
62.0	265.2	123.9	2.79	2.00	*SILTY SAND to CLAYEY SAND
62.5	184.6	85.6	3.19	2.15	SANDY SILT to CLAYEY SILT
63.0	55.3	25.5	5.23	2.13	CLAYEY SILT to SILTY CLAY
63.5	46.7	21.3	4.24	3.06	CLAYEY SILT to SILTY CLAY
64.0	62.9	28.5	5.90	4.40	*SANDY CLAY to SILTY CLAY
64.5	196.4	88.4	3.80	26.53	*CLAYEY SAND to SANDY CLAY
65.0	276.5	123.5	1.80	8.44	SILTY SAND to SANDY SILT
65.5	303.1	135.0	1.59	7.45	SAND to SILTY SAND
66.0	287.6	127.6	1.88	6.97	SILTY SAND to SANDY SILT
66.5	259.6	114.8	2.26	6.37	SILTY SAND to SANDY SILT
67.0	96.9	42.8	4.71	4.65	*SANDY CLAY to SILTY CLAY
67.5	89.1	39.2	5.77	11.25	*SANDY CLAY to SILTY CLAY
68.0	122.3	53.6	6.04	23.48	*SANDY CLAY to SILTY CLAY
68.5	79.6	34.8	8.76	30.13	*SANDY CLAY to SILTY CLAY
69.0	42.6	18.5	5.05	30.35	CLAYEY SILT to SILTY CLAY
69.5	39.6	17.2	4.26	28.42	CLAYEY SILT to SILTY CLAY
70.0	32.0	13.8	4.21	21.95	CLAYEY SILT to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CWL0021

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	31.0	13.4	3.47	23.77	CLAYEY SILT to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT



CONE PENETRATION TEST

SOUNDING NUMBER: CWL0022

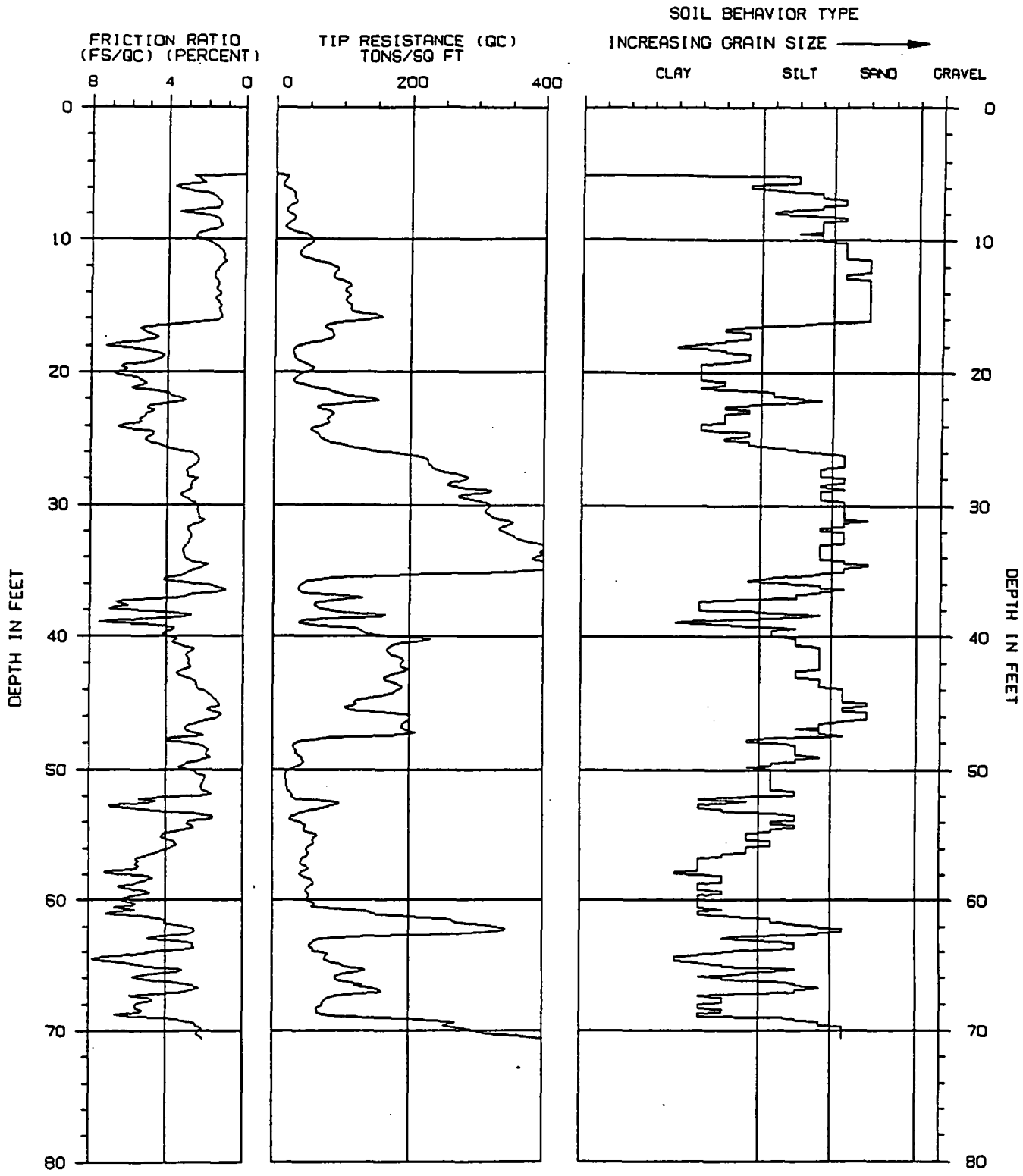
PROJECT NAME : D&M/O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-01108

DATE : 02-24-1993

THE EARTH TECHNOLOGY CORPORATION



TOP 5.0 FT IS DISTURBED SOIL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0022

PROJECT NAME : D&M/O.A.I.

PROJECT NUMBER : 93-380-01108

LOCATION : TORRANCE CA.

DATE : 02-24-1993

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING	: CWL0022	PROJECT NO	: 93-380-01108
PROJECT	: D&M/O.A.I.	INSTRUMENT	: F15CKE091
LOCATION	: TORRANCE CA.	SYSTEM	: SYSTEM#3
DATE	: 02-24-1993	OPERATOR	: KC/RN

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	.0	.0	.00	.00	
1.0	.0	.0	.00	.00	
1.5	.0	.0	.00	.00	
2.0	.0	.0	.00	.00	
2.5	.0	.0	.00	.00	
3.0	.0	.0	.00	.00	
3.5	.0	.0	.00	.00	
4.0	.0	.0	.00	.00	
4.5	.0	.0	.00	.00	
5.0	.0	.0	.00	.00	
5.5	13.1	19.9	2.25	.05	SANDY SILT to CLAYEY SILT
6.0	13.7	20.3	3.59	.01	CLAYEY SILT to SILTY CLAY
6.5	26.8	38.8	1.88	.14	SILTY SAND to SANDY SILT
7.0	30.2	42.7	1.37	.26	SILTY SAND to SANDY SILT
7.5	18.9	26.2	1.45	.30	SILTY SAND to SANDY SILT
8.0	19.2	26.0	3.05	.31	SANDY SILT to CLAYEY SILT
8.5	26.5	35.2	1.33	.41	SILTY SAND to SANDY SILT
9.0	14.5	19.0	1.37	.36	SILTY SAND to SANDY SILT
9.5	35.2	45.2	2.43	.37	SANDY SILT to CLAYEY SILT
10.0	56.1	70.7	2.25	.52	SILTY SAND to SANDY SILT
10.5	44.9	55.6	1.51	.65	SILTY SAND to SANDY SILT
11.0	35.4	43.1	1.16	.64	SILTY SAND to SANDY SILT
11.5	52.3	62.7	1.14	.64	SAND to SILTY SAND
12.0	85.4	100.9	1.33	.77	SAND to SILTY SAND
12.5	88.5	102.9	1.60	.84	SAND to SILTY SAND
13.0	93.1	106.6	1.52	.88	SAND to SILTY SAND
13.5	111.5	125.9	1.46	.94	SAND to SILTY SAND
14.0	105.3	117.2	1.32	.97	SAND to SILTY SAND
14.5	104.0	114.2	1.55	.99	SAND to SILTY SAND
15.0	113.0	122.4	1.28	1.01	SAND to SILTY SAND
15.5	120.5	128.9	1.32	.85	SAND to SILTY SAND
16.0	145.4	153.5	1.33	.93	SAND to SILTY SAND
16.5	76.8	80.0	4.22	.85	*CLAYEY SAND to SANDY CLAY
17.0	85.5	87.9	5.13	.85	*SANDY CLAY to SILTY CLAY
17.5	81.5	82.8	4.76	.80	*SANDY CLAY to SILTY CLAY
18.0	36.3	36.4	7.25	.73	*SANDY CLAY to SILTY CLAY
18.5	26.7	26.5	4.68	.63	CLAYEY SILT to SILTY CLAY
19.0	30.4	29.8	4.51	.62	CLAYEY SILT to SILTY CLAY
19.5	50.0	48.5	6.41	.64	*SANDY CLAY to SILTY CLAY
20.0	45.2	43.3	6.76	.61	*SANDY CLAY to SILTY CLAY

TOP 5.0 FT IS DISTURBED SOIL
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CWL0022

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	29.4	27.8	5.51	.58	*SANDY CLAY to SILTY CLAY
21.0	46.7	43.8	5.46	.60	*SANDY CLAY to SILTY CLAY
21.5	85.0	78.8	4.27	.61	*CLAYEY SAND to SANDY CLAY
22.0	140.7	129.0	3.29	.66	*CLAYEY SAND to SANDY CLAY
22.5	73.2	66.4	4.93	.60	*SANDY CLAY to SILTY CLAY
23.0	85.4	76.7	4.97	.68	*SANDY CLAY to SILTY CLAY
23.5	77.8	69.2	5.52	.75	*SANDY CLAY to SILTY CLAY
24.0	69.4	61.0	6.48	.75	*SANDY CLAY to SILTY CLAY
24.5	59.8	52.0	4.76	.75	*SANDY CLAY to SILTY CLAY
25.0	70.4	60.7	5.10	.74	*SANDY CLAY to SILTY CLAY
25.5	104.4	89.1	4.36	.80	*CLAYEY SAND to SANDY CLAY
26.0	163.5	138.1	2.93	.97	*SILTY SAND to CLAYEY SAND
26.5	223.4	186.9	2.37	1.41	*SILTY SAND to CLAYEY SAND
27.0	230.3	190.8	2.57	1.63	*SILTY SAND to CLAYEY SAND
27.5	252.4	207.0	2.97	1.81	*SILTY SAND to CLAYEY SAND
28.0	286.7	233.0	2.44	2.04	*SILTY SAND to CLAYEY SAND
28.5	256.2	206.2	2.79	1.58	*SILTY SAND to CLAYEY SAND
29.0	316.8	252.5	3.10	4.46	*SILTY SAND to CLAYEY SAND
29.5	283.2	223.7	2.99	4.31	*SILTY SAND to CLAYEY SAND
30.0	320.5	250.8	2.47	4.21	*SILTY SAND to CLAYEY SAND
30.5	313.4	243.0	2.41	4.03	*SILTY SAND to CLAYEY SAND
31.0	327.5	251.6	2.35	4.00	*SILTY SAND to CLAYEY SAND
31.5	347.9	264.9	2.62	1.87	*SILTY SAND to CLAYEY SAND
32.0	339.4	256.1	2.83	1.81	*SILTY SAND to CLAYEY SAND
32.5	359.0	268.4	2.76	1.85	*SILTY SAND to CLAYEY SAND
33.0	395.3	292.9	2.95	1.91	*SILTY SAND to CLAYEY SAND
33.5	395.1	290.2	3.17	1.95	*SILTY SAND to CLAYEY SAND
34.0	386.6	281.5	3.04	1.86	*SILTY SAND to CLAYEY SAND
34.5	432.3	312.0	1.89	1.82	*SAND to SILTY SAND
35.0	396.0	283.4	2.65	.20	*SILTY SAND to CLAYEY SAND
35.5	121.5	86.2	3.73	.12	*CLAYEY SAND to SANDY CLAY
36.0	42.4	29.8	2.56	.05	SANDY SILT to CLAYEY SILT
36.5	36.5	25.4	.97	.00	SILTY SAND to SANDY SILT
37.0	121.6	84.1	3.05	.01	SANDY SILT to CLAYEY SILT
37.5	62.1	42.6	6.49	-.04	*SANDY CLAY to SILTY CLAY
38.0	78.0	53.0	6.22	.03	*SANDY CLAY to SILTY CLAY
38.5	158.6	106.9	3.12	.14	*CLAYEY SAND to SANDY CLAY
39.0	38.3	25.6	6.71	.44	*SANDY CLAY to SILTY CLAY
39.5	129.4	85.8	3.70	16.12	*CLAYEY SAND to SANDY CLAY
40.0	175.5	115.4	3.89	30.64	*CLAYEY SAND to SANDY CLAY
40.5	191.7	125.0	3.63	5.89	*CLAYEY SAND to SANDY CLAY
41.0	168.3	108.9	2.58	4.22	SILTY SAND to SANDY SILT
41.5	178.6	114.6	2.97	5.26	*SILTY SAND to CLAYEY SAND
42.0	188.9	120.2	2.90	5.35	*SILTY SAND to CLAYEY SAND
42.5	197.6	124.7	3.03	5.61	*SILTY SAND to CLAYEY SAND
43.0	168.8	105.7	3.19	1.44	*CLAYEY SAND to SANDY CLAY
43.5	176.1	109.4	2.49	1.84	SILTY SAND to SANDY SILT
44.0	185.3	114.2	2.31	2.43	SILTY SAND to SANDY SILT
44.5	158.4	96.8	1.67	2.41	SILTY SAND to SANDY SILT
45.0	121.0	73.4	1.32	2.30	SAND to SILTY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CWL0022

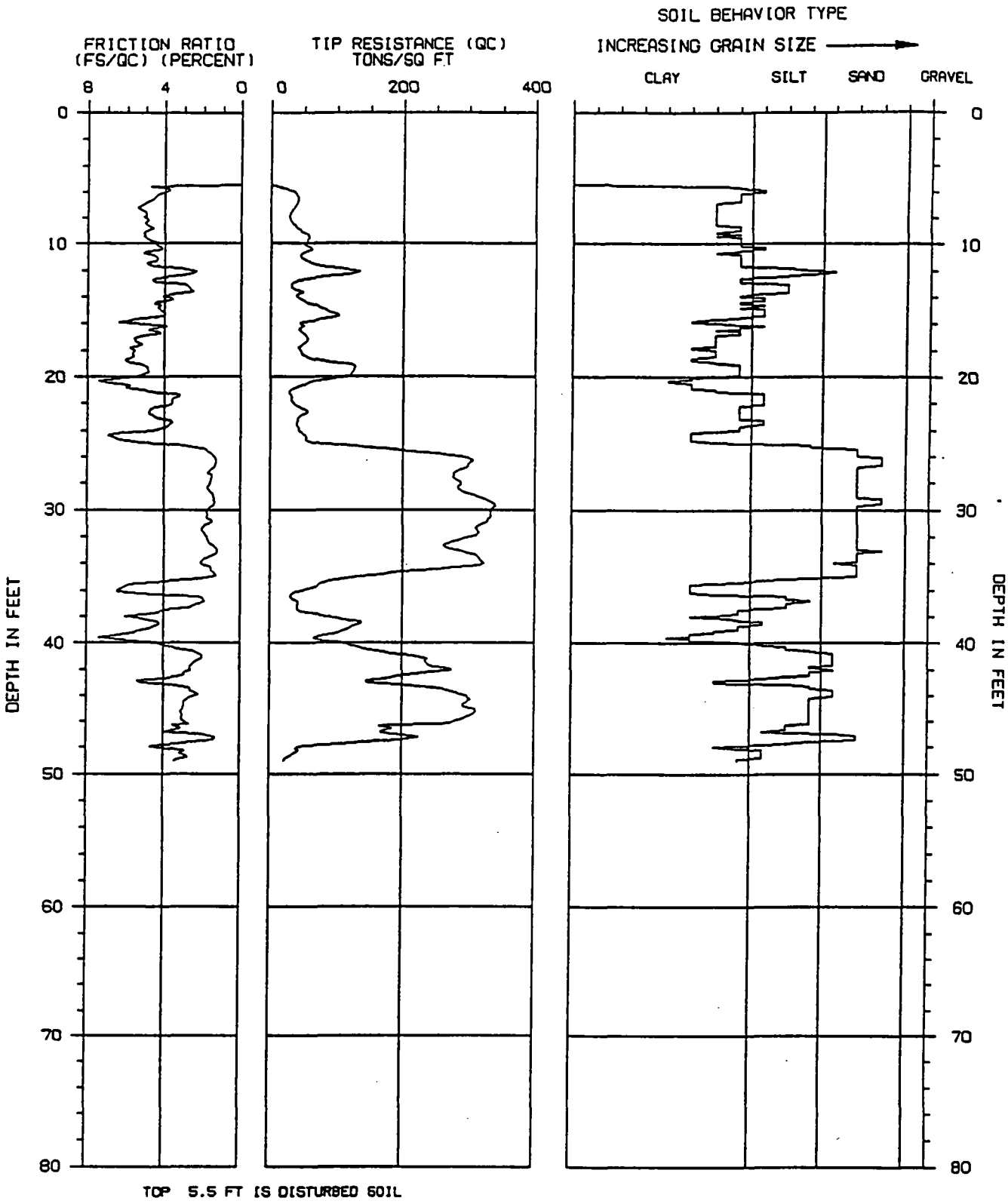
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	113.2	68.1	1.91	1.65	SILTY SAND to SANDY SILT
46.0	200.7	119.8	1.28	2.21	SAND to SILTY SAND
46.5	191.9	113.7	2.46	2.41	SILTY SAND to SANDY SILT
47.0	192.5	113.1	3.01	4.28	*SILTY SAND to CLAYEY SAND
47.5	125.9	73.4	2.69	4.64	SILTY SAND to SANDY SILT
48.0	32.7	18.9	2.88	2.73	SANDY SILT to CLAYEY SILT
48.5	32.7	18.8	1.85	3.99	SANDY SILT to CLAYEY SILT
49.0	39.0	22.2	1.80	7.85	SILTY SAND to SANDY SILT
49.5	43.3	24.5	2.95	12.35	SANDY SILT to CLAYEY SILT
50.0	25.3	14.2	2.78	15.97	SANDY SILT to CLAYEY SILT
50.5	18.9	10.5	2.00	15.27	SANDY SILT to CLAYEY SILT
51.0	19.9	11.0	2.11	14.97	SANDY SILT to CLAYEY SILT
51.5	21.4	11.7	2.15	15.60	SANDY SILT to CLAYEY SILT
52.0	27.4	14.9	2.48	14.35	SANDY SILT to CLAYEY SILT
52.5	98.7	53.3	4.95	24.57	*SANDY CLAY to SILTY CLAY
53.0	63.2	33.8	5.25	21.50	*SANDY CLAY to SILTY CLAY
53.5	29.1	15.5	1.67	20.05	SANDY SILT to CLAYEY SILT
54.0	40.2	21.2	2.82	26.64	SANDY SILT to CLAYEY SILT
54.5	45.1	23.6	2.81	28.08	SANDY SILT to CLAYEY SILT
55.0	65.8	34.2	4.22	32.08	CLAYEY SILT to SILTY CLAY
55.5	59.2	30.5	3.54	35.87	SANDY SILT to CLAYEY SILT
56.0	49.2	25.1	3.81	31.35	CLAYEY SILT to SILTY CLAY
56.5	51.8	26.3	4.89	31.62	CLAYEY SILT to SILTY CLAY
57.0	40.9	20.6	5.46	25.08	SILTY CLAY TO CLAY
57.5	52.6	26.3	5.55	27.83	*SANDY CLAY to SILTY CLAY
58.0	39.0	19.4	6.32	21.95	SILTY CLAY TO CLAY
58.5	58.4	28.8	5.20	33.81	*SANDY CLAY to SILTY CLAY
59.0	52.0	25.4	6.53	30.45	*SANDY CLAY to SILTY CLAY
59.5	52.2	25.3	5.07	35.78	CLAYEY SILT to SILTY CLAY
60.0	49.2	23.7	6.31	27.62	*SANDY CLAY to SILTY CLAY
60.5	57.5	27.5	6.63	32.06	*SANDY CLAY to SILTY CLAY
61.0	146.0	69.2	7.13	28.38	*SANDY CLAY to SILTY CLAY
61.5	264.4	124.5	4.16	35.97	*CLAYEY SAND to SANDY CLAY
62.0	326.8	152.7	3.06	35.88	*SILTY SAND to CLAYEY SAND
62.5	307.6	142.7	2.58	14.99	SILTY SAND to SANDY SILT
63.0	72.3	33.3	4.92	3.13	*SANDY CLAY to SILTY CLAY
63.5	54.4	24.9	2.62	3.45	SANDY SILT to CLAYEY SILT
64.0	61.3	27.8	5.08	7.10	CLAYEY SILT to SILTY CLAY
64.5	75.8	34.1	7.86	18.13	*SANDY CLAY to SILTY CLAY
65.0	102.8	45.9	5.50	27.21	*SANDY CLAY to SILTY CLAY
65.5	126.5	56.3	3.43	12.92	SANDY SILT to CLAYEY SILT
66.0	92.8	41.2	5.63	11.68	*SANDY CLAY to SILTY CLAY
66.5	132.2	58.5	2.64	20.76	SANDY SILT to CLAYEY SILT
67.0	160.3	70.7	3.03	1.67	SANDY SILT to CLAYEY SILT
67.5	83.8	36.8	5.05	2.26	*SANDY CLAY to SILTY CLAY
68.0	72.9	32.0	5.58	5.40	*SANDY CLAY to SILTY CLAY
68.5	65.6	28.6	5.24	23.65	*SANDY CLAY to SILTY CLAY
69.0	152.5	66.4	4.16	35.96	*CLAYEY SAND to SANDY CLAY
69.5	261.1	113.3	2.46	21.11	SILTY SAND to SANDY SILT
70.0	298.3	129.0	2.28	12.68	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CWL0022

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
70.5	381.9	164.7	2.15	17.58	SILTY SAND to SANDY SILT

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0023

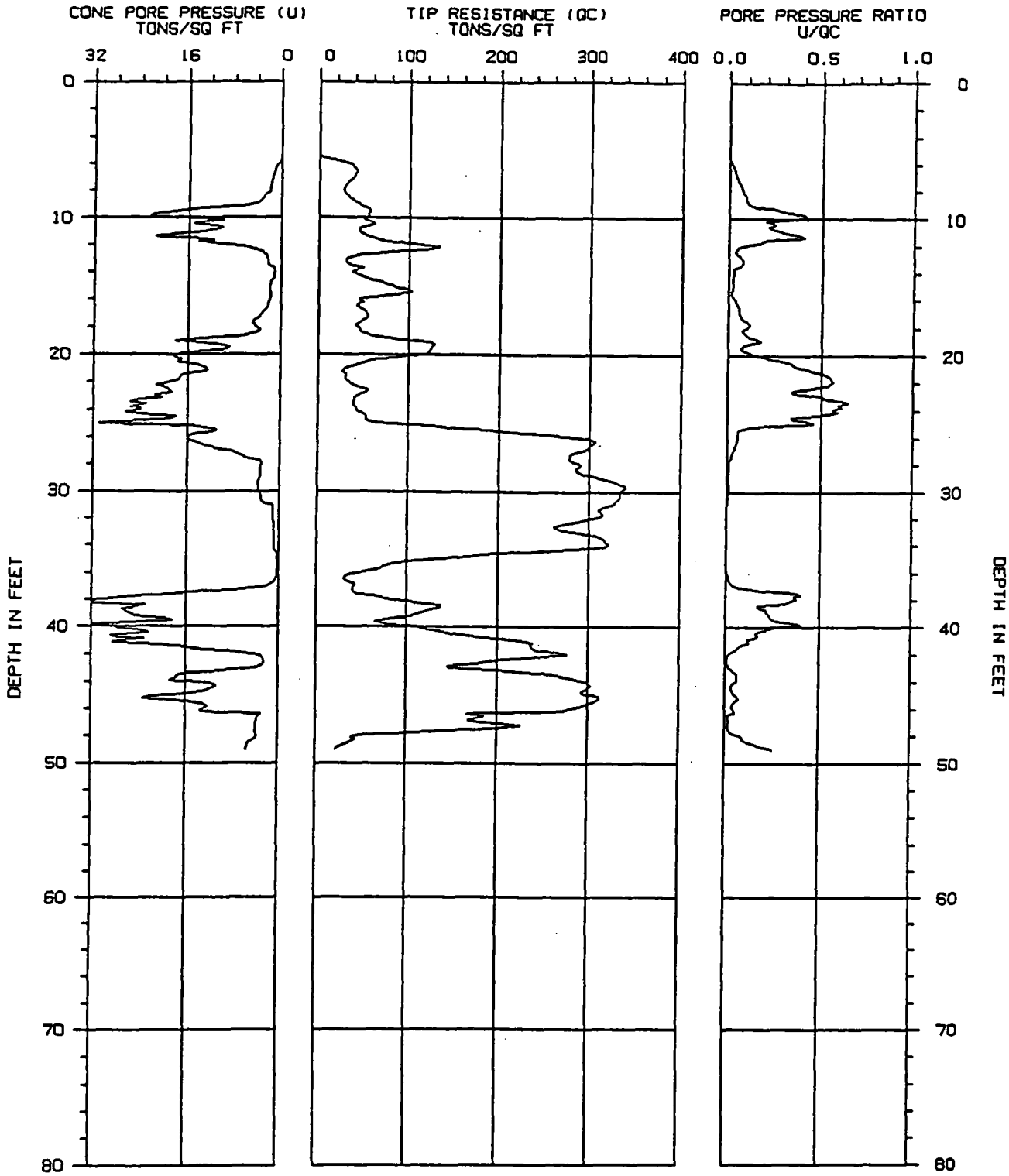
PROJECT NAME : O&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-00109

DATE : 03-01-1993

THE EARTH TECHNOLOGY CORPORATION



TOP 5.5 FT IS DISTURBED SOIL

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0023

PROJECT NAME : D&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-00109

DATE : 03-01-1993

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING	: CWL0023	PROJECT NO	: 93-380-00109
PROJECT	: D&M/SHELL O.A.I.	INSTRUMENT	: F15CKE091
LOCATION	: TORRANCE CA.	SYSTEM	: SYSTEM#3
DATE	: 03-01-1993	OPERATOR	: KC/RN

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	.0	.0	.00	.00	
1.0	.0	.0	.00	.00	
1.5	.0	.0	.00	.00	
2.0	.0	.0	.00	.00	
2.5	.0	.0	.00	.00	
3.0	.0	.0	.00	.00	
3.5	.0	.0	.00	.00	
4.0	.0	.0	.00	.00	
4.5	.0	.0	.00	.00	
5.0	.0	.0	.00	.00	
5.5	.0	.0	.00	.00	
6.0	34.3	50.9	3.85	.59	SANDY SILT to CLAYEY SILT
6.5	40.9	59.2	4.52	1.21	*SANDY CLAY to SILTY CLAY
7.0	38.6	54.5	5.10	1.58	*SANDY CLAY to SILTY CLAY
7.5	30.3	42.0	5.05	1.85	*SANDY CLAY to SILTY CLAY
8.0	27.4	37.1	5.09	1.97	*SANDY CLAY to SILTY CLAY
8.5	34.0	45.3	4.99	3.16	*SANDY CLAY to SILTY CLAY
9.0	44.8	58.5	4.92	5.07	*SANDY CLAY to SILTY CLAY
9.5	56.8	72.8	5.00	18.26	*SANDY CLAY to SILTY CLAY
10.0	52.2	65.7	4.35	17.91	*SANDY CLAY to SILTY CLAY
10.5	59.4	73.6	4.42	14.09	*SANDY CLAY to SILTY CLAY
11.0	44.9	54.7	4.44	13.28	*SANDY CLAY to SILTY CLAY
11.5	61.3	73.5	4.95	15.58	*SANDY CLAY to SILTY CLAY
12.0	121.2	143.0	2.63	9.35	*SILTY SAND to CLAYEY SAND
12.5	79.9	92.9	3.69	3.17	*CLAYEY SAND to SANDY CLAY
13.0	32.3	37.0	3.77	2.35	SANDY SILT to CLAYEY SILT
13.5	37.2	42.0	2.60	2.12	SANDY SILT to CLAYEY SILT
14.0	37.5	41.7	4.13	1.13	CLAYEY SILT to SILTY CLAY
14.5	55.9	61.4	4.55	1.38	*SANDY CLAY to SILTY CLAY
15.0	83.0	90.0	4.21	1.91	*CLAYEY SAND to SANDY CLAY
15.5	97.1	103.9	4.51	1.85	*SANDY CLAY to SILTY CLAY
16.0	44.4	46.9	5.66	1.88	*SANDY CLAY to SILTY CLAY
16.5	42.3	44.1	4.85	2.34	*SANDY CLAY to SILTY CLAY
17.0	53.9	55.5	5.45	3.31	*SANDY CLAY to SILTY CLAY
17.5	50.5	51.3	5.24	4.56	*SANDY CLAY to SILTY CLAY
18.0	45.2	45.4	5.53	4.41	*SANDY CLAY to SILTY CLAY
18.5	54.1	53.7	5.61	5.32	*SANDY CLAY to SILTY CLAY
19.0	109.2	107.1	5.41	18.04	*SANDY CLAY to SILTY CLAY
19.5	125.8	122.0	4.84	8.86	*SANDY CLAY to SILTY CLAY
20.0	117.2	112.4	5.54	18.21	*SANDY CLAY to SILTY CLAY

TOP 5.5 FT IS DISTURBED SOIL
*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CWL0023

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	54.2	51.4	6.48	17.77	*SANDY CLAY to SILTY CLAY
21.0	30.3	28.4	5.09	12.79	CLAYEY SILT to SILTY CLAY
21.5	31.6	29.3	3.25	16.98	SANDY SILT to CLAYEY SILT
22.0	34.3	31.5	3.60	19.01	SANDY SILT to CLAYEY SILT
22.5	53.6	48.7	4.76	19.12	*SANDY CLAY to SILTY CLAY
23.0	42.1	37.8	4.48	21.63	*SANDY CLAY to SILTY CLAY
23.5	39.1	34.7	3.63	25.05	SANDY SILT to CLAYEY SILT
24.0	42.7	37.6	4.58	23.96	*SANDY CLAY to SILTY CLAY
24.5	54.1	47.1	6.73	17.97	*SANDY CLAY to SILTY CLAY
25.0	81.1	69.9	4.29	31.10	*SANDY CLAY to SILTY CLAY
25.5	188.9	161.1	1.82	10.94	SAND to SILTY SAND
26.0	286.3	241.9	1.38	15.93	SAND to SILTY SAND
26.5	301.5	252.2	1.32	13.71	SAND to SILTY SAND
27.0	289.4	239.7	1.55	9.08	SAND to SILTY SAND
27.5	277.8	227.9	1.50	5.99	SAND to SILTY SAND
28.0	289.7	235.3	1.59	3.27	SAND to SILTY SAND
28.5	286.0	230.1	1.68	3.29	SAND to SILTY SAND
29.0	313.2	249.7	1.41	3.48	SAND to SILTY SAND
29.5	335.2	264.7	1.35	3.69	SAND to SILTY SAND
30.0	334.0	261.4	1.73	3.76	SAND to SILTY SAND
30.5	333.2	258.3	1.77	3.19	SAND to SILTY SAND
31.0	323.7	248.7	1.64	1.19	SAND to SILTY SAND
31.5	312.3	237.7	2.02	1.04	SAND to SILTY SAND
32.0	303.0	228.6	1.79	1.03	SAND to SILTY SAND
32.5	267.7	200.2	1.59	.94	SAND to SILTY SAND
33.0	279.9	207.5	1.26	.89	SAND to SILTY SAND
33.5	313.8	230.5	1.66	.88	SAND to SILTY SAND
34.0	322.3	234.7	2.10	.86	SILTY SAND to SANDY SILT
34.5	223.2	161.1	1.54	.49	SAND to SILTY SAND
35.0	134.5	96.2	1.56	.33	SILTY SAND to SANDY SILT
35.5	74.6	52.9	5.40	.23	*SANDY CLAY to SILTY CLAY
36.0	48.8	34.4	6.47	.32	*SANDY CLAY to SILTY CLAY
36.5	30.2	21.1	2.30	.54	SANDY SILT to CLAYEY SILT
37.0	41.6	28.8	2.19	2.14	SANDY SILT to CLAYEY SILT
37.5	41.5	28.5	3.87	15.70	CLAYEY SILT to SILTY CLAY
38.0	85.8	58.4	6.02	30.07	*SANDY CLAY to SILTY CLAY
38.5	138.0	93.0	4.21	24.21	*CLAYEY SAND to SANDY CLAY
39.0	114.6	76.6	5.05	25.49	*SANDY CLAY to SILTY CLAY
39.5	71.9	47.7	6.95	18.26	*SANDY CLAY to SILTY CLAY
40.0	111.3	73.2	4.41	27.77	*SANDY CLAY to SILTY CLAY
40.5	150.4	98.1	3.00	24.64	SANDY SILT to CLAYEY SILT
41.0	216.4	140.0	2.00	25.42	SILTY SAND to SANDY SILT
41.5	237.4	152.3	2.40	15.73	SILTY SAND to SANDY SILT
42.0	276.3	175.8	2.58	4.53	*SILTY SAND to CLAYEY SAND
42.5	194.4	122.7	3.07	2.46	*SILTY SAND to CLAYEY SAND
43.0	146.9	92.0	5.25	3.85	*SANDY CLAY to SILTY CLAY
43.5	259.5	161.2	2.61	17.00	*SILTY SAND to CLAYEY SAND
44.0	295.9	182.4	2.31	17.24	SILTY SAND to SANDY SILT
44.5	298.9	182.7	2.93	11.37	*SILTY SAND to CLAYEY SAND
45.0	304.4	184.6	2.99	18.89	*SILTY SAND to CLAYEY SAND

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

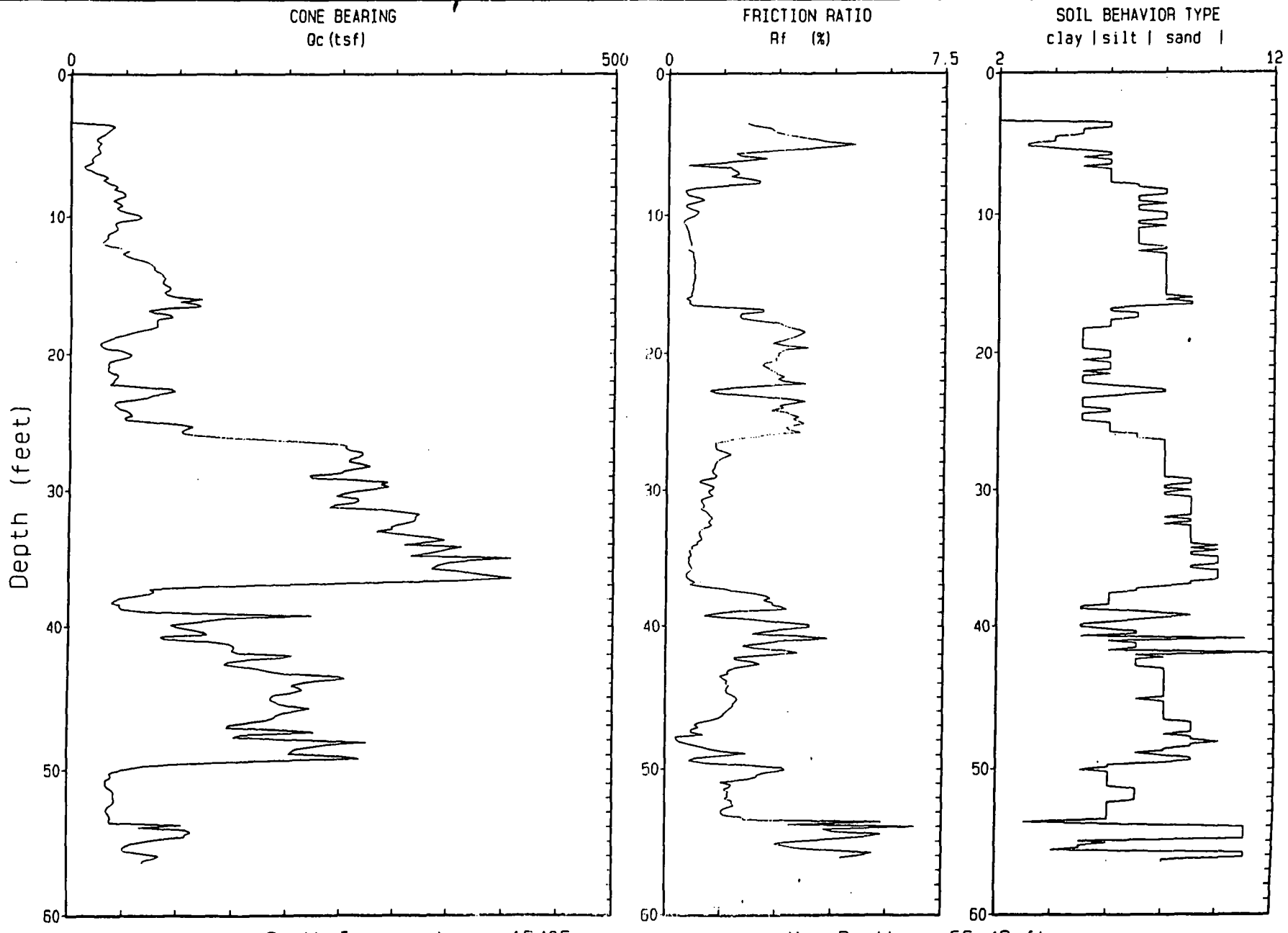
SOUNDING : CWL0023

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	305.0	183.5	3.02	14.72	*SILTY SAND to CLAYEY SAND
46.0	279.7	166.9	2.91	12.97	*SILTY SAND to CLAYEY SAND
46.5	185.9	110.1	3.09	3.45	*CLAYEY SAND to SANDY CLAY
47.0	186.7	109.7	2.11	3.84	SILTY SAND to SANDY SILT
47.5	171.0	99.7	1.82	3.96	SILTY SAND to SANDY SILT
48.0	41.5	24.0	4.68	3.80	CLAYEY SILT to SILTY CLAY
48.5	36.6	21.0	3.15	5.14	SANDY SILT to CLAYEY SILT
49.0	22.1	12.6	3.43	5.50	CLAYEY SILT to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

DAMES & MOORE

PROJECT : DEL AMO SITE
CONTRACTOR : GREGG IN SITU
FILE : ~~CWL0022.~~OUT CWL0024.OUT
LOCATION : ~~CWL0022~~ CWL0027
GEOLOGIST : DAVID JOHNSON
DATE : 3/1/93



Depth Increment : .16405 m

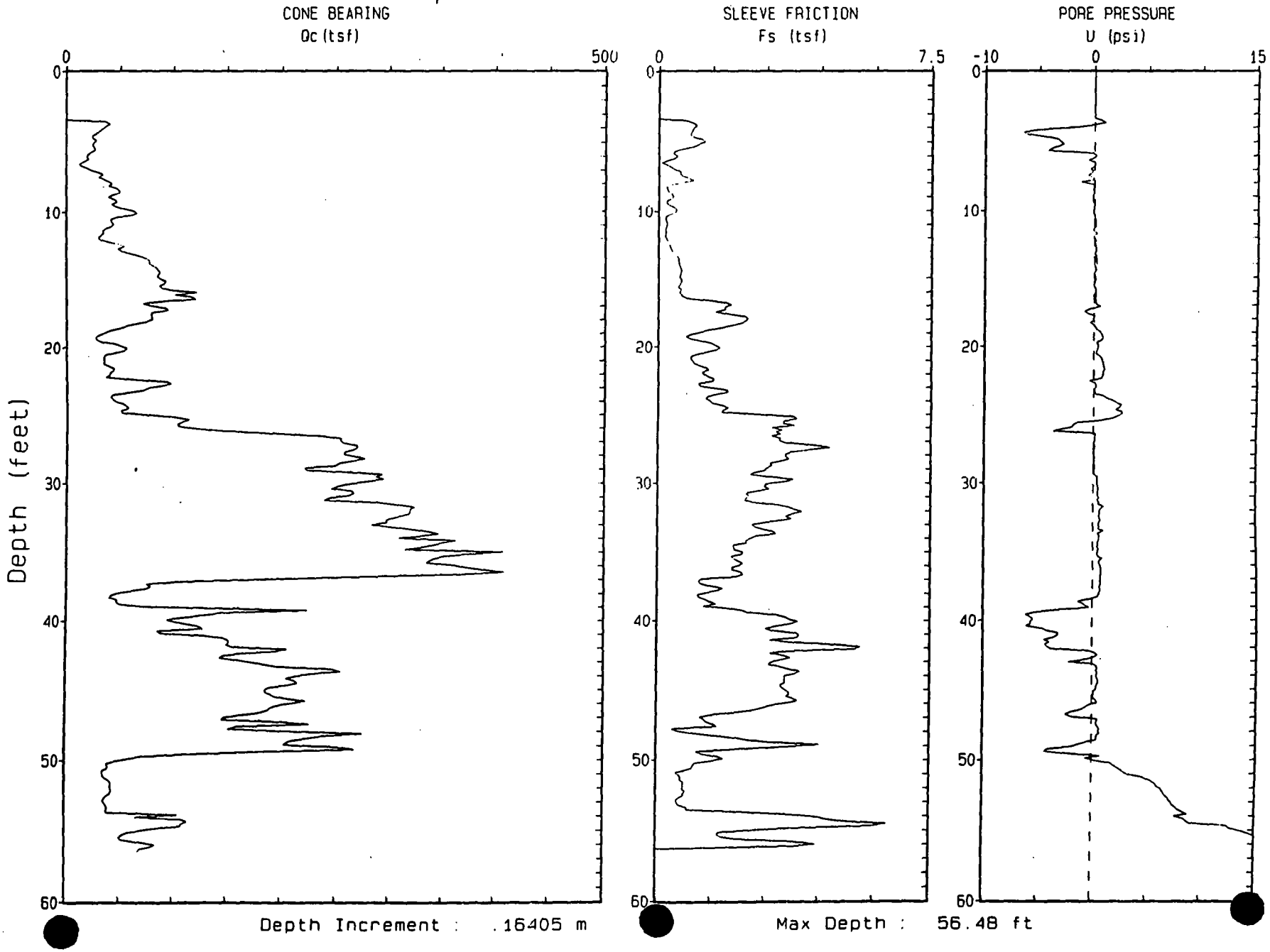
Max Depth : 56.48 ft

DAMES & MOORE

PROJECT : DEL AMO SITE
LOCATION : ~~CWL0022~~ CWL0024

CONTRACTOR : GREGG IN SITU
GEOLOGIST : DAVID JOHNSON

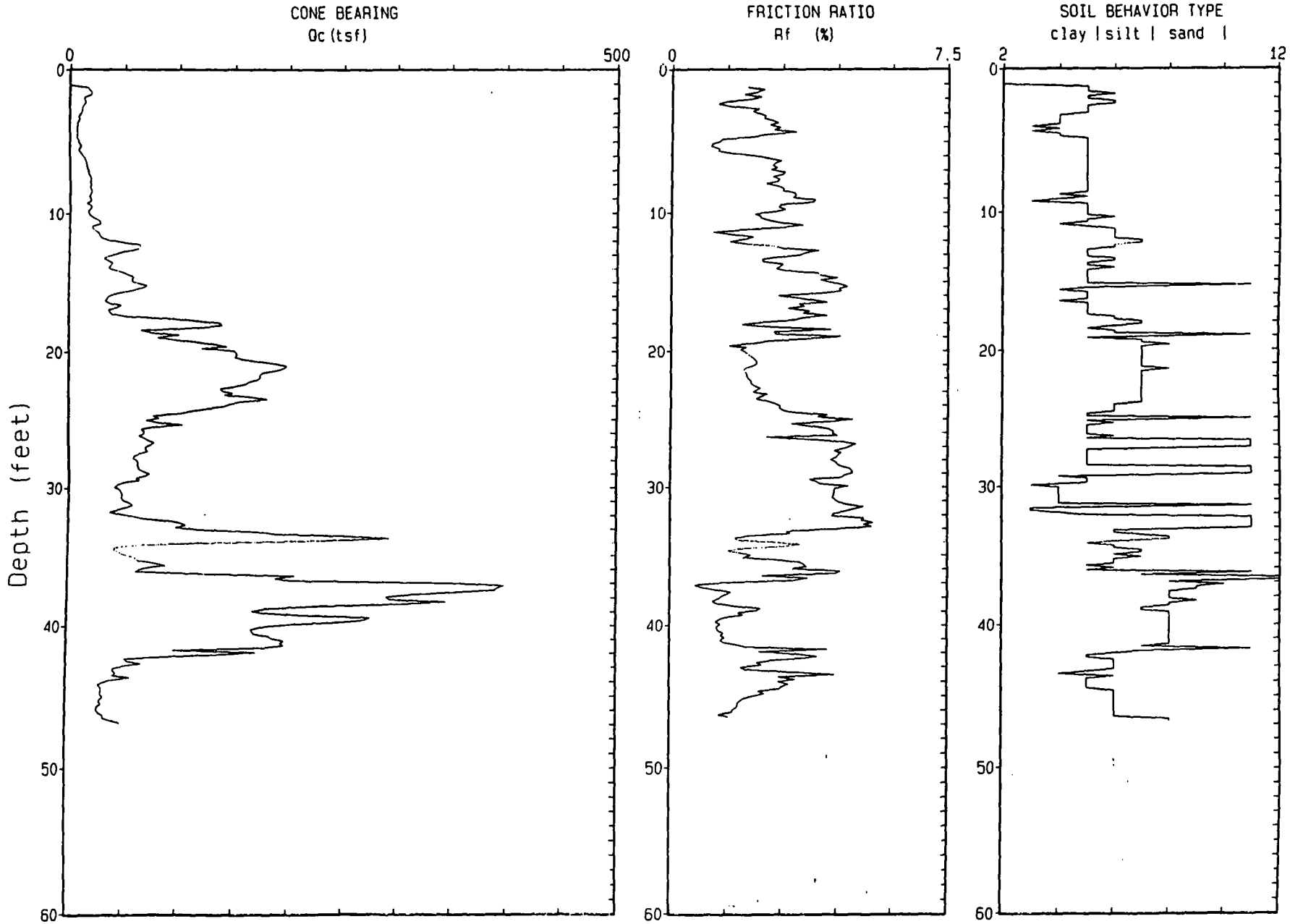
FILE : ~~CWL0022.OUT~~ CWL0024.OUT
DATE : 3/1/93



DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0025.OUT

LOCATION : CWL0025 GEOLOGIST : DAVID JOHNSON DATE : 3/2/93

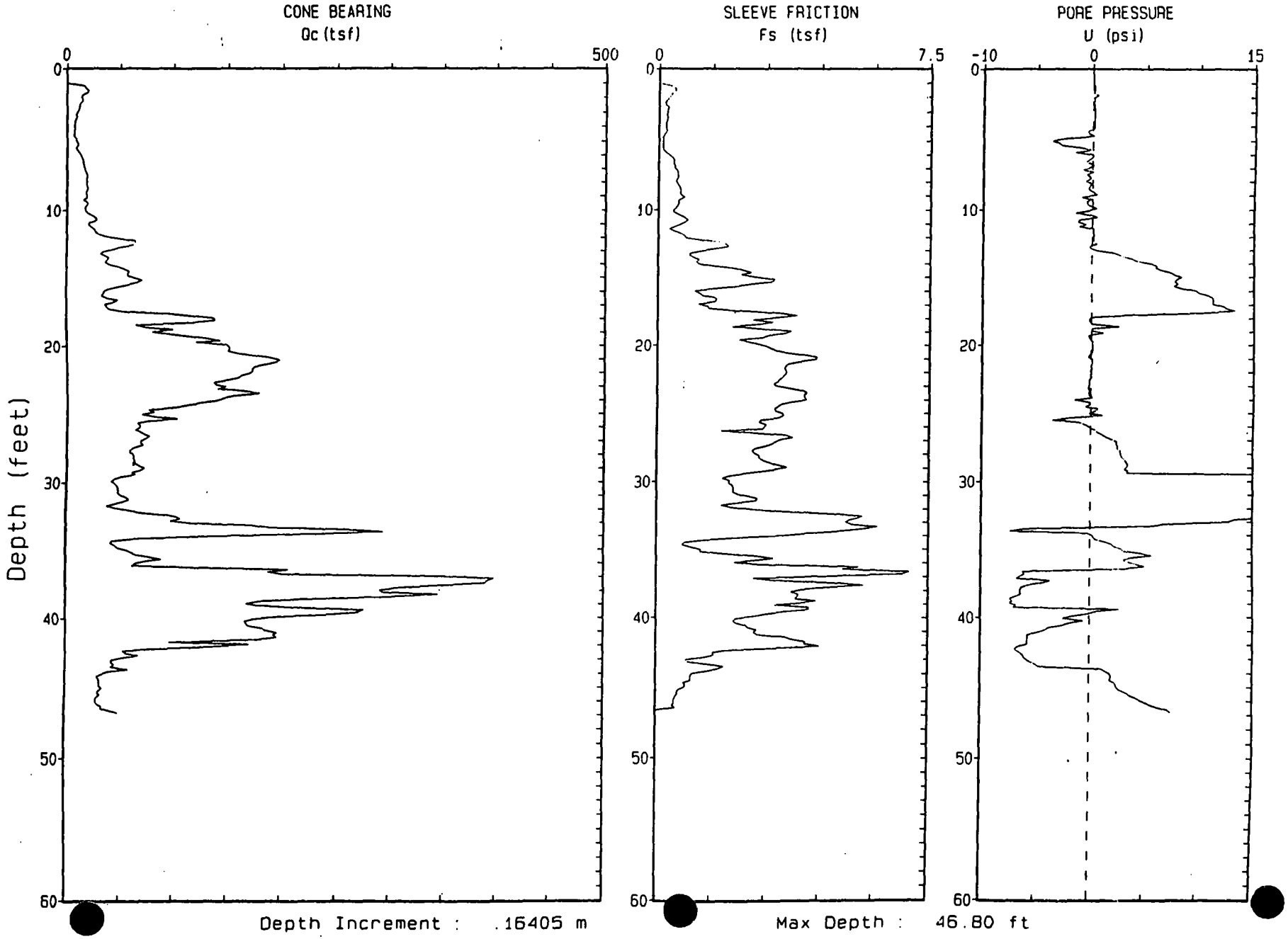


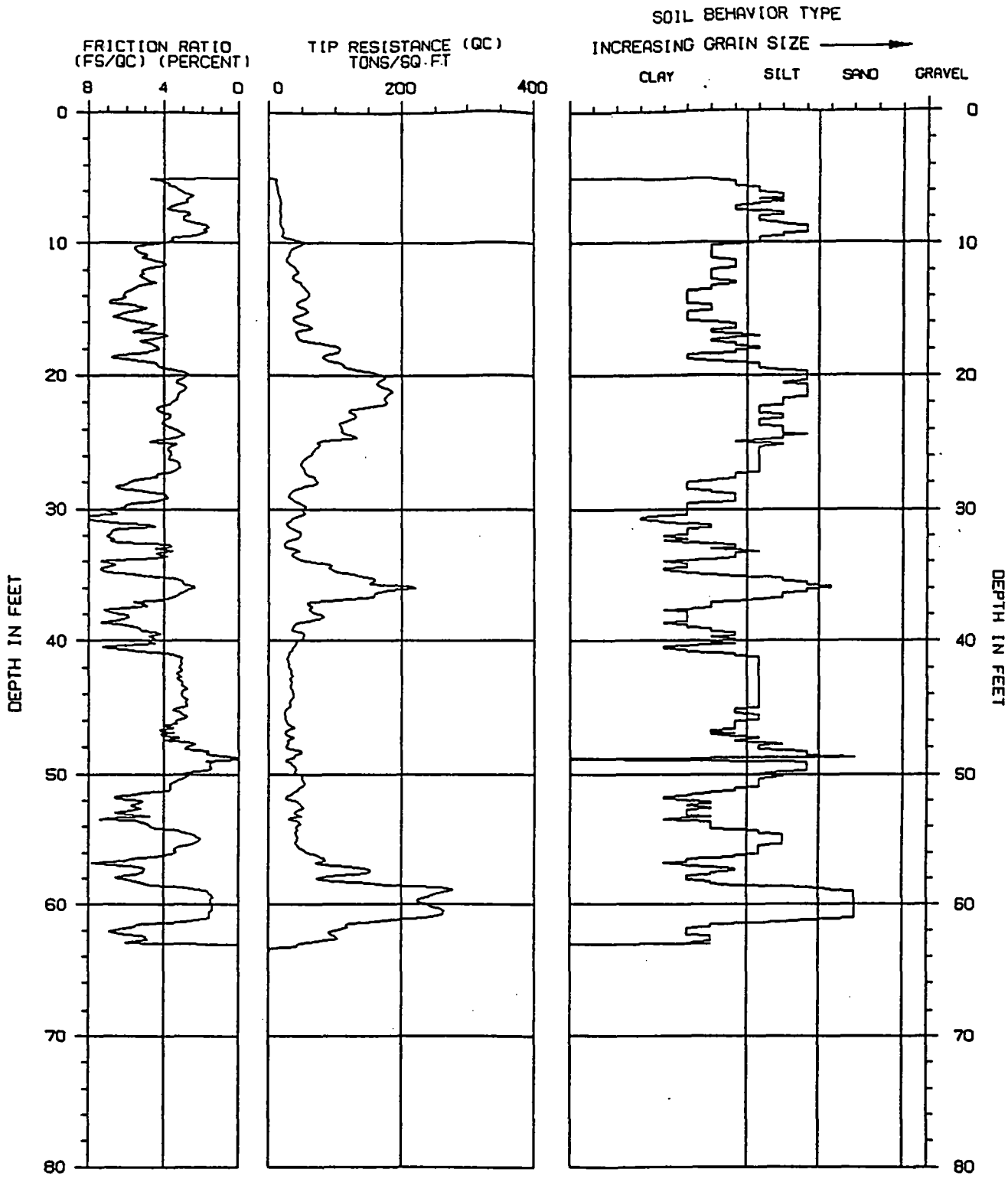
Depth Increment : .16405 m Max Depth : 46.80 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0025.OUT

LOCATION : CWL0025 GEOLOGIST : DAVID JOHNSON DATE : 3/2/93





TOP 5.0 FT IS DISTURBED SOIL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0026

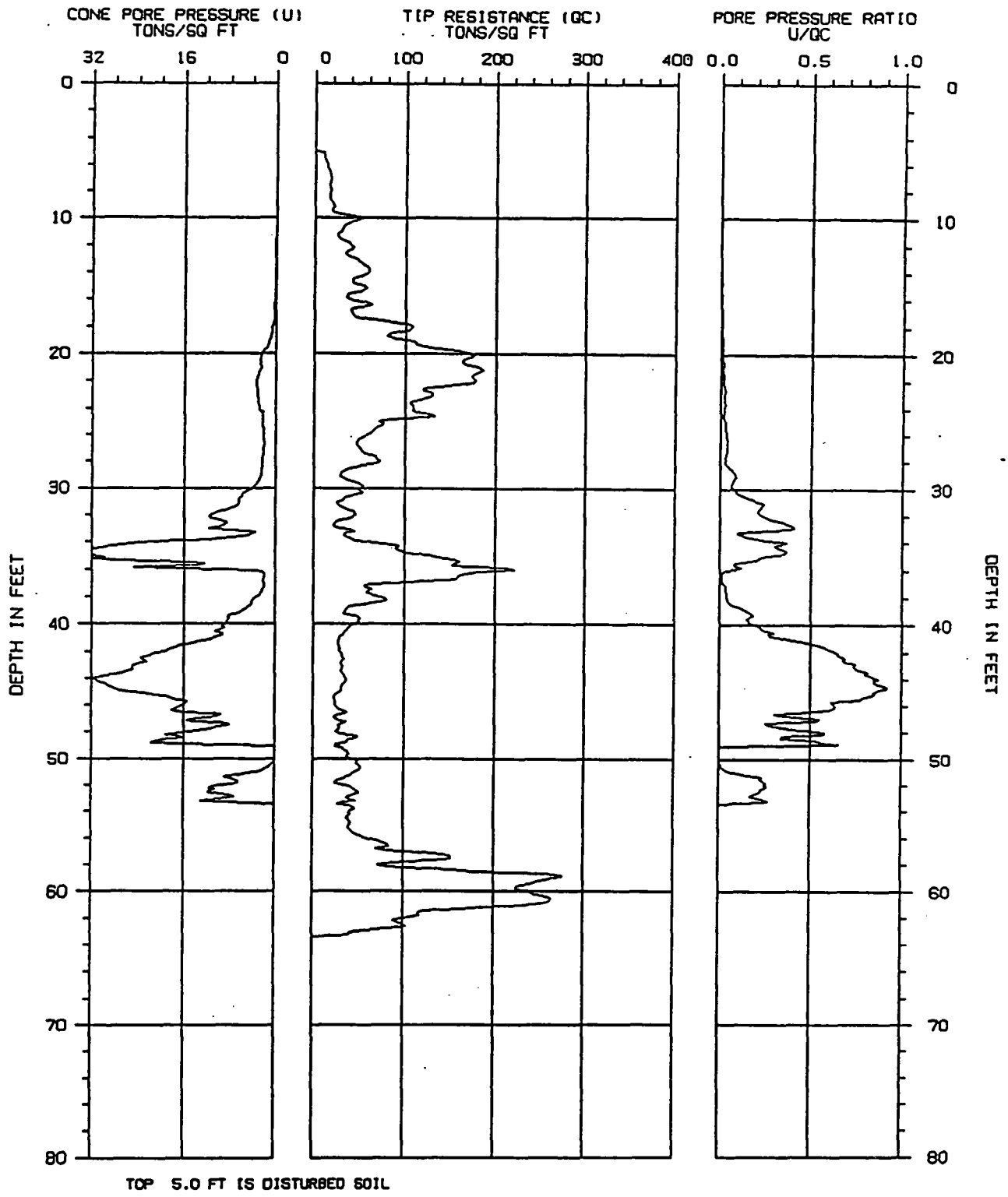
PROJECT NAME : D&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-00109

DATE : 03-02-1993

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CWL0026

PROJECT NAME : D&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-00109

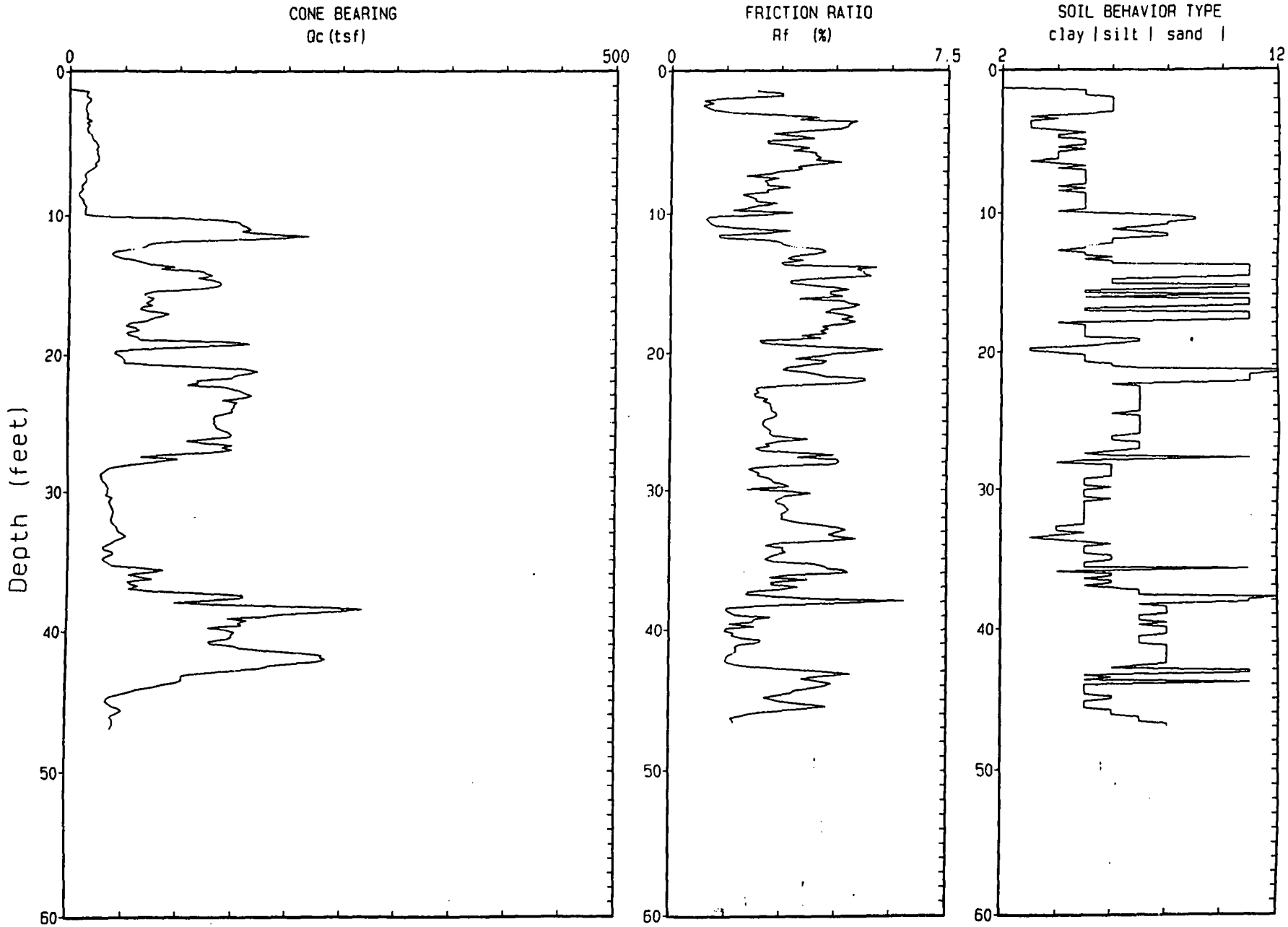
DATE : 03-02-1993

THE EARTH TECHNOLOGY CORPORATION

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0027.OUT

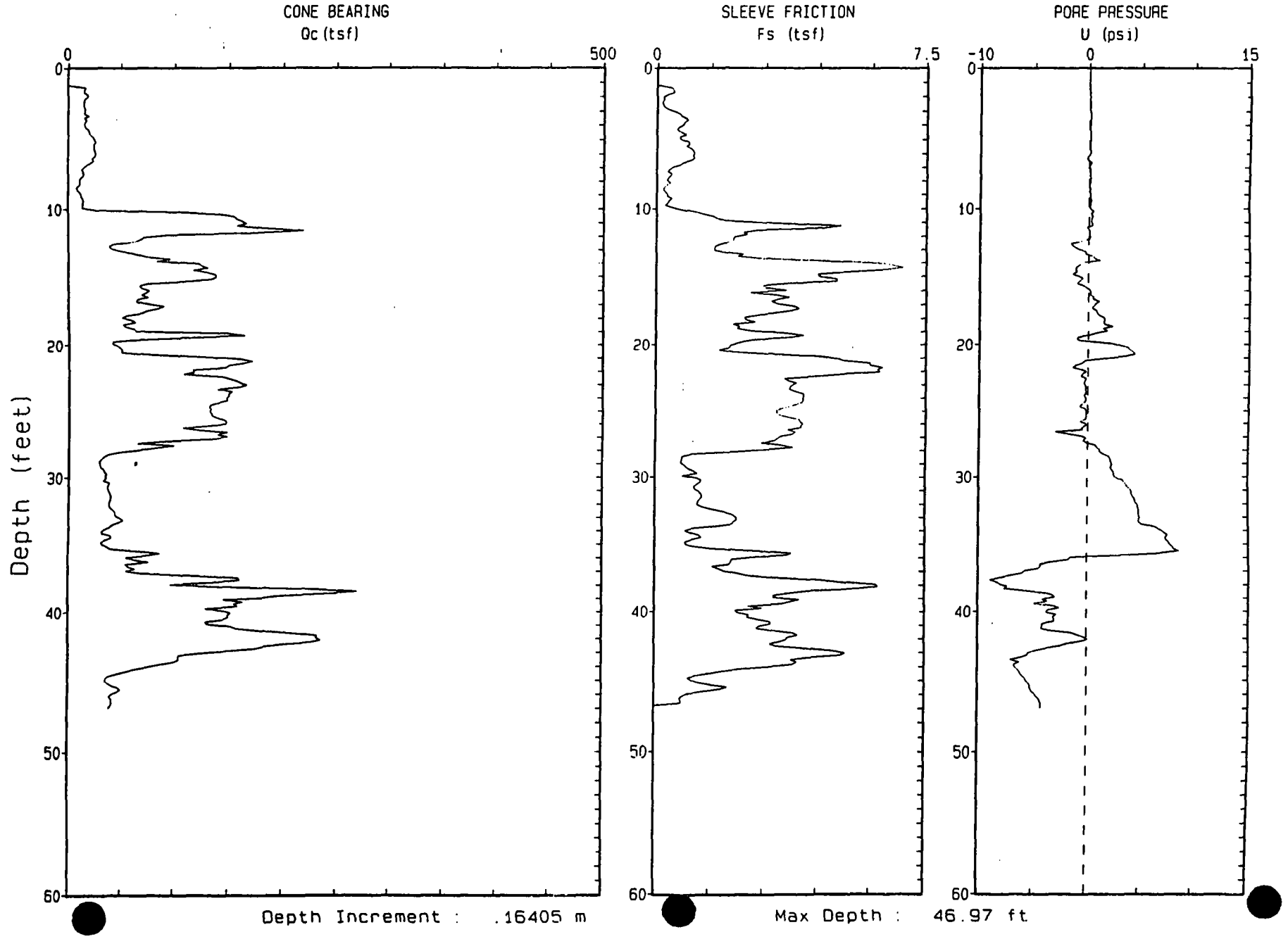
LOCATION : CWL0027 GEOLOGIST : DAVID JOHNSON DATE : 3/2/93

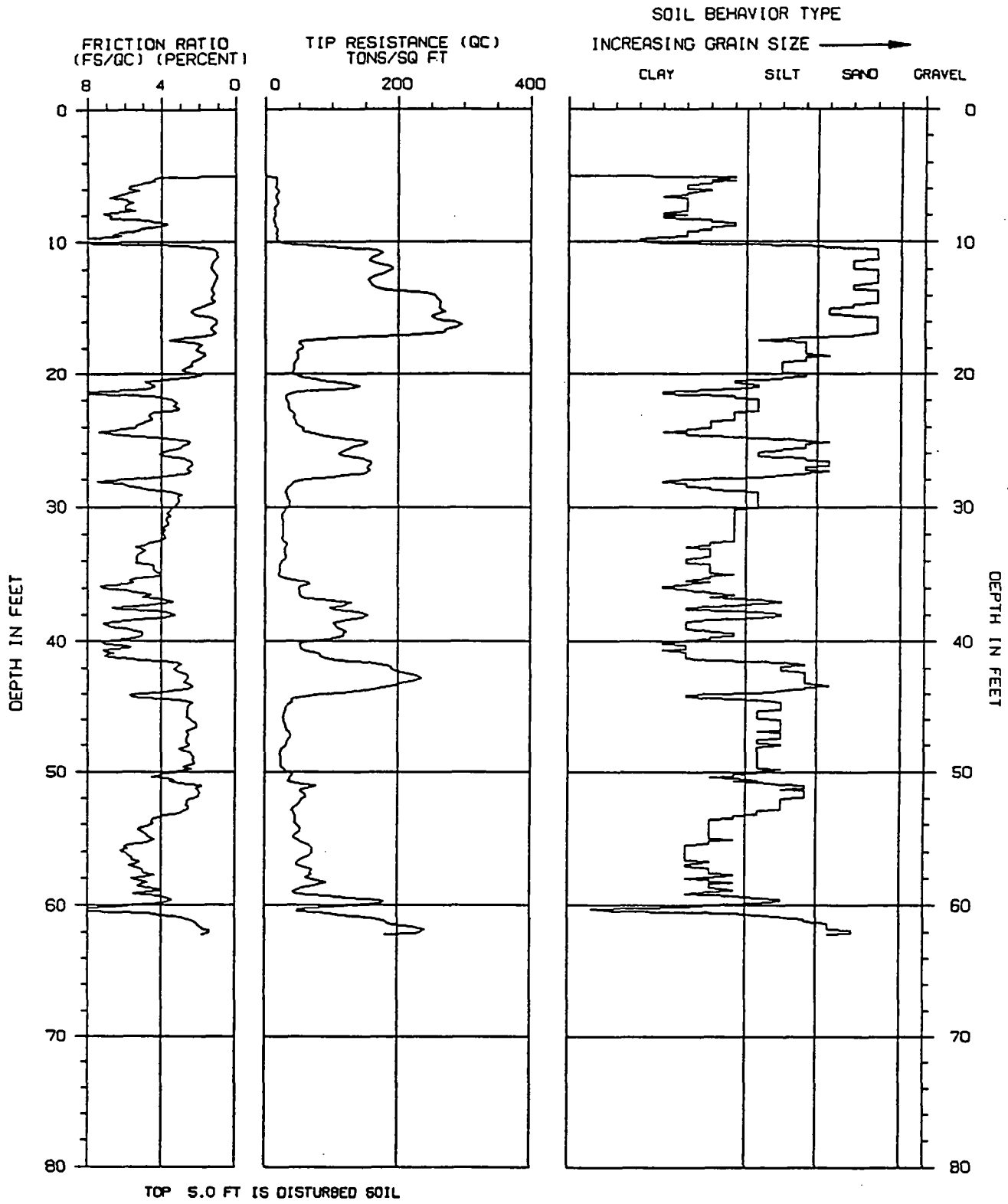


Depth Increment : .16405 m Max Depth : 46.97 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0027.OUT
LOCATION : CWL0027 GEOLOGIST : DAVID JOHNSON DATE : 3/2/93





ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0028

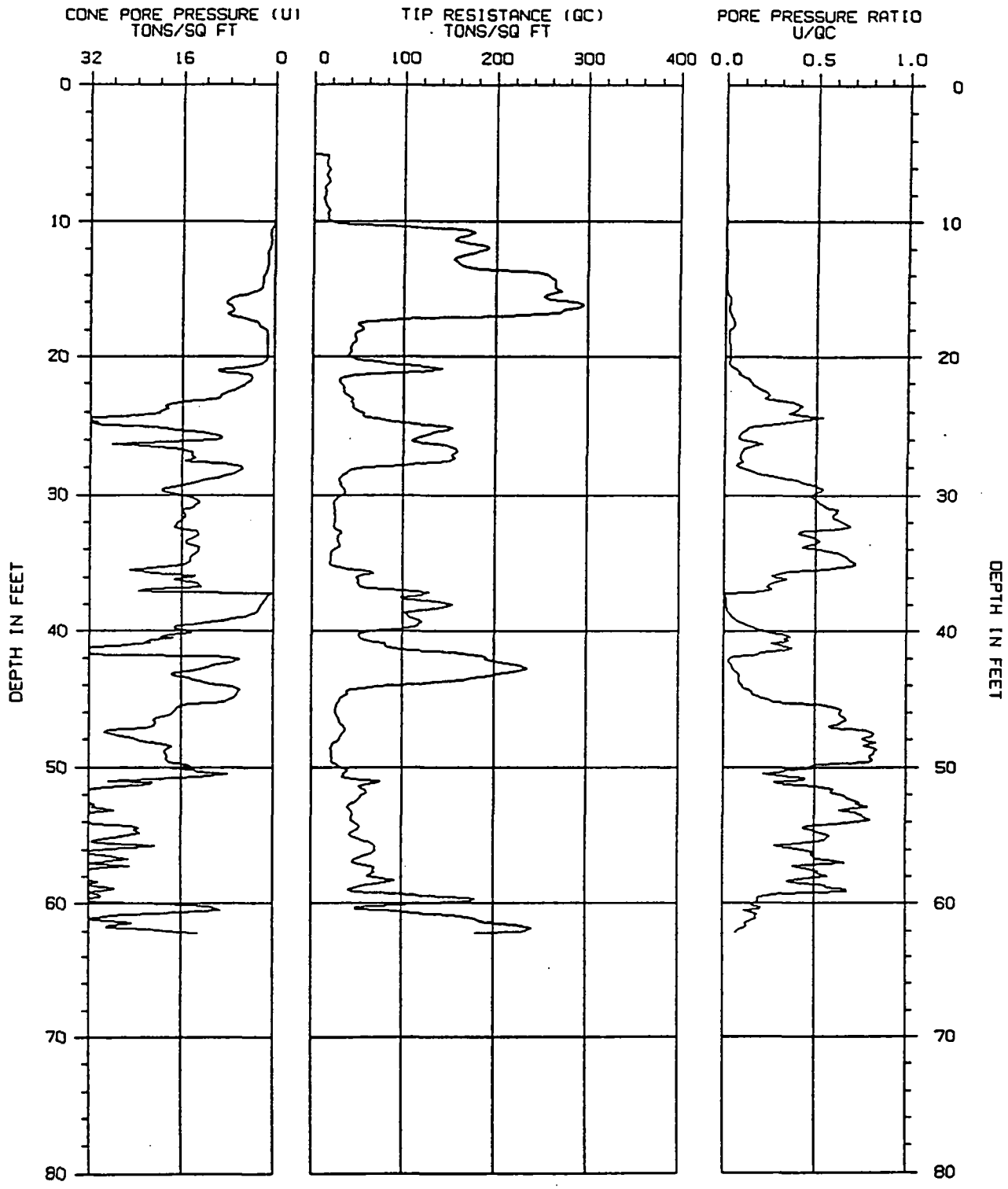
PROJECT NAME : D&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-00109

DATE : 03-02-1993

THE EARTH TECHNOLOGY CORPORATION



TOP 5.0 FT IS DISTURBED SOIL

CONE PENETRATION TEST SOUNDING NUMBER: CWL0028

PROJECT NAME : O&M/SHELL O.A.I. LOCATION : TORRANCE CA.

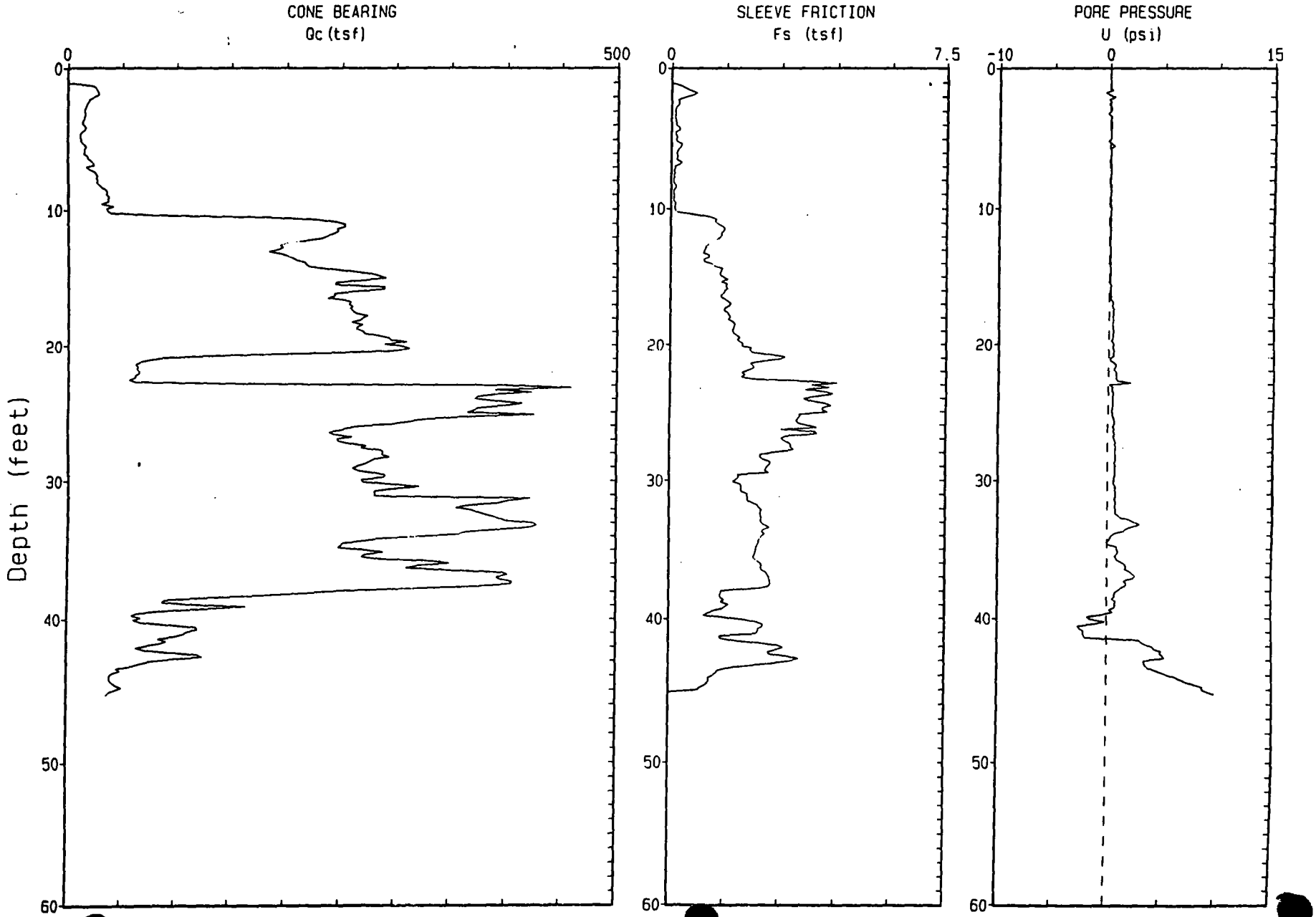
PROJECT NUMBER : 93-380-00109 DATE : 03-02-1993

THE EARTH TECHNOLOGY CORPORATION

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0029.OUT

LOCATION : CWL0029 GEOLOGIST : DAVID JOHNSON DATE : 3/2/93

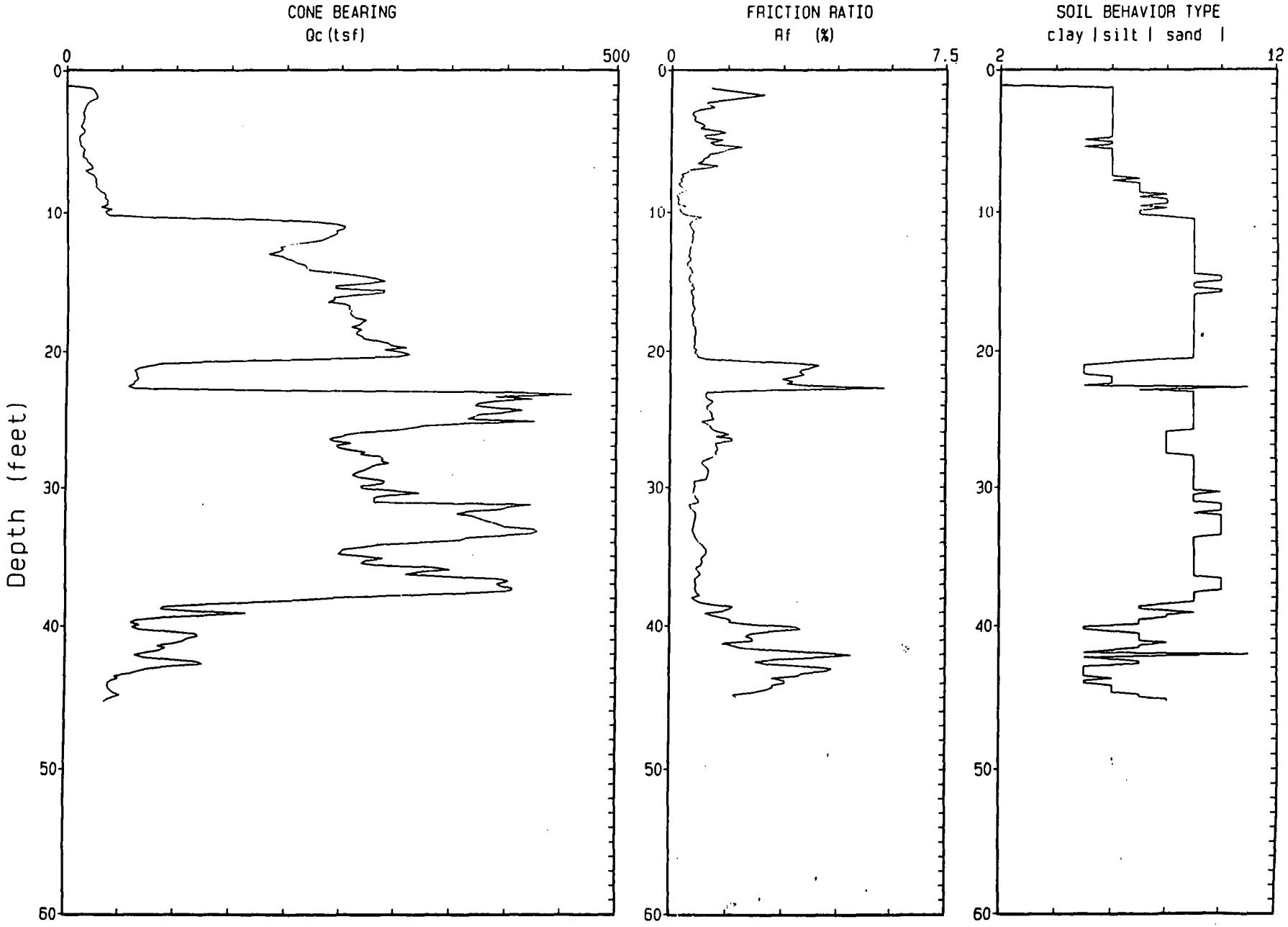


Depth Increment : .16405 m Max Depth : 45.33 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0029.OUT

LOCATION : CWL0029 GEOLOGIST : DAVID JOHNSON DATE : 3/2/93



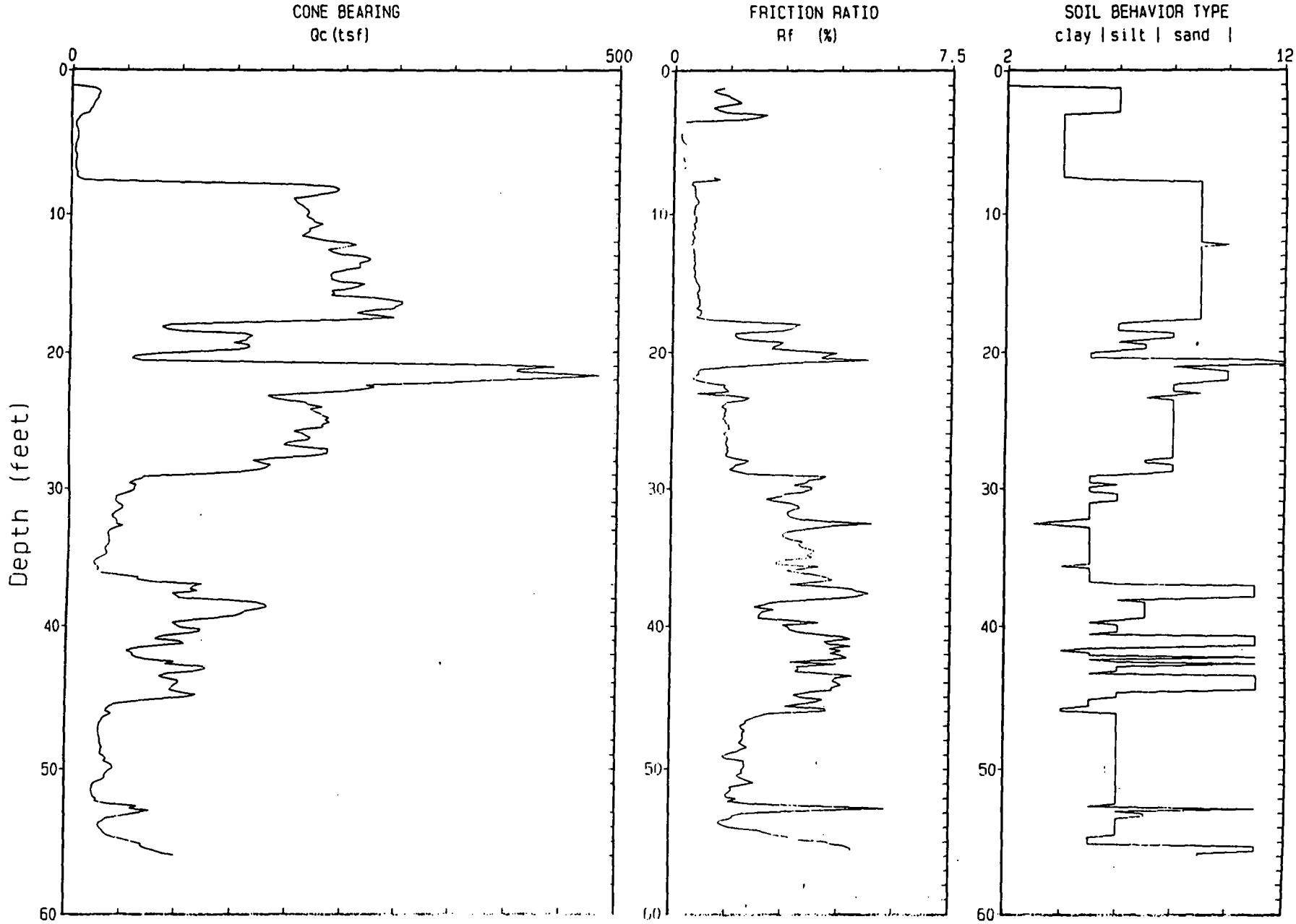
Depth Increment : .16405 m

Max Depth : 45.33 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0030.OUT

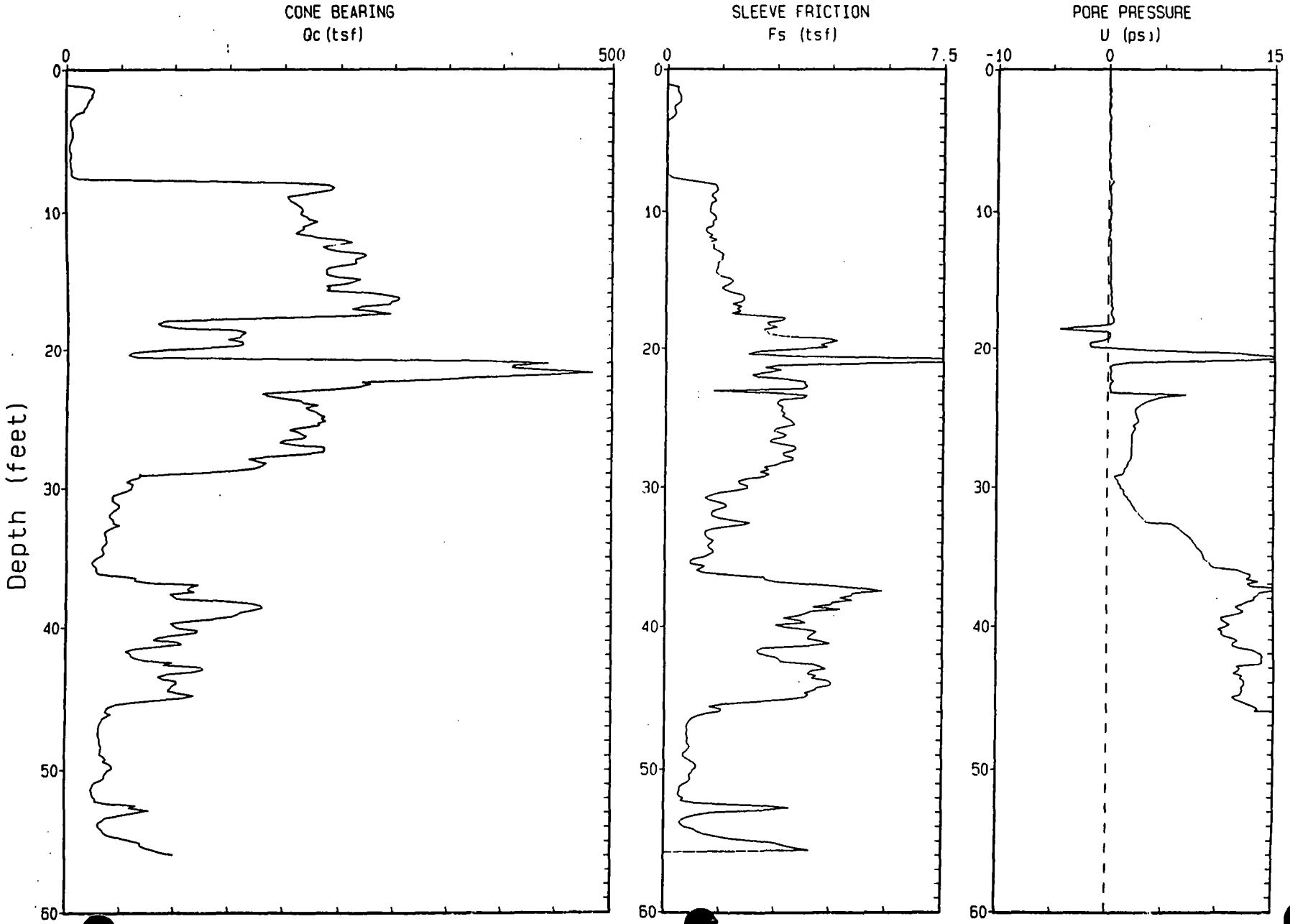
LOCATION : CWL0030 GEOLOGIST : DAVID JOHNSON DATE : 3/3/93



Depth Increment .16405 m Max Depth 55.99 ft

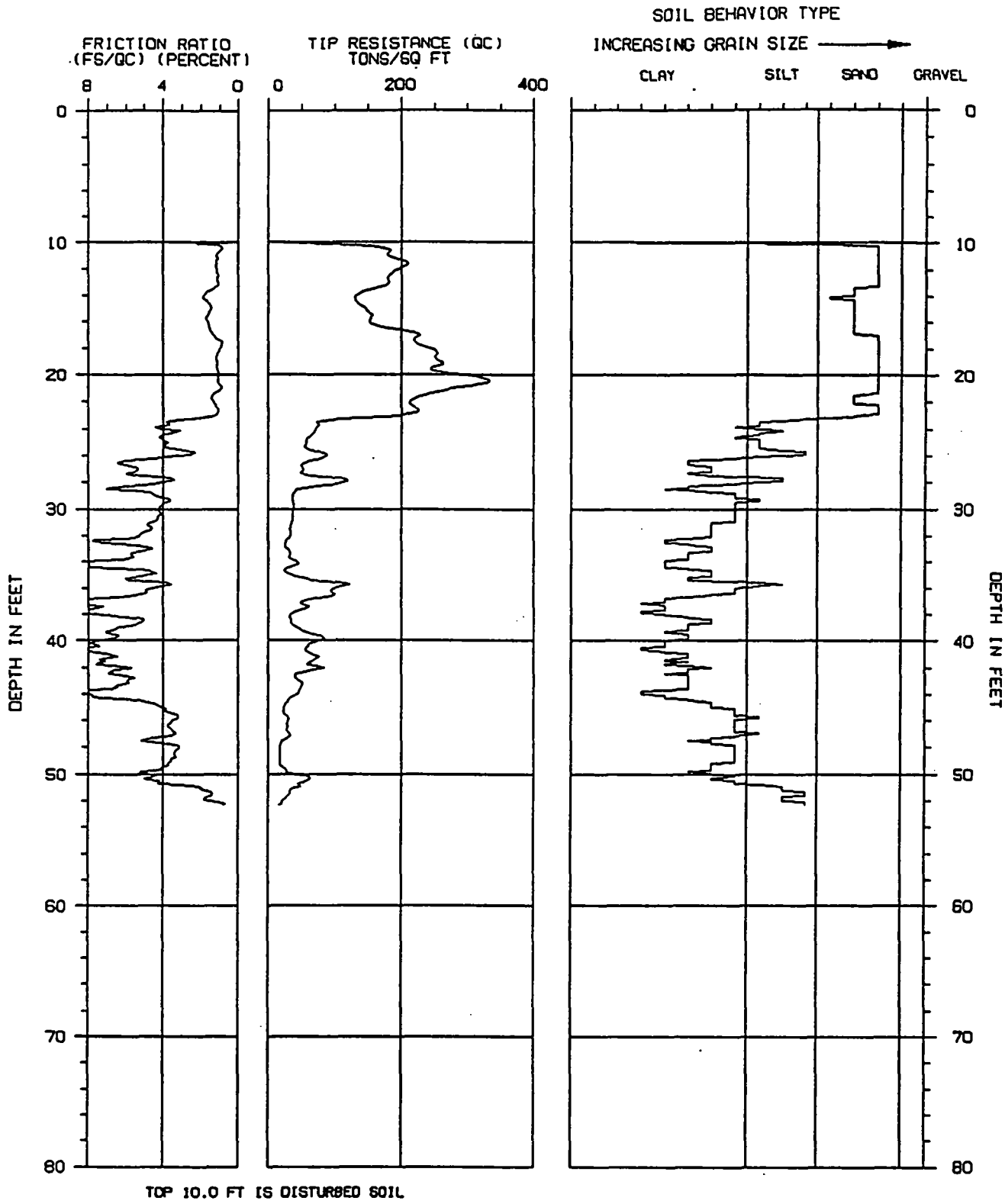
DAMES & MOORE

PROJECT : DEL AMO SITE
CONTRACTOR : GREGG IN SITU
FILE : CWL0030.OUT
LOCATION : CWL0030
GEOLOGIST : DAVID JOHNSON
DATE : 3/3/93



Depth Increment : .16405 m

Max Depth : 55.99 ft



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0031

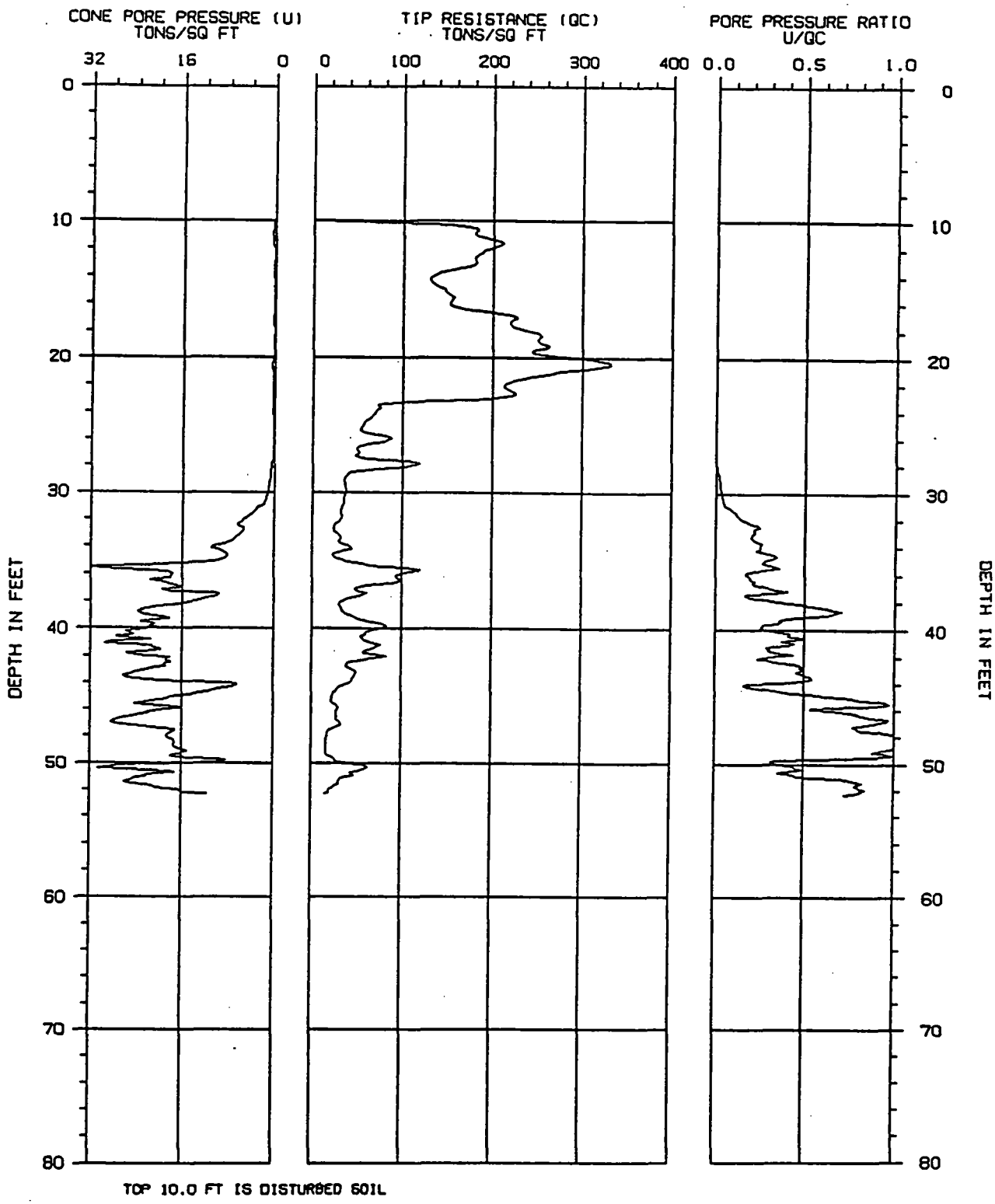
PROJECT NAME : D&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-00109

DATE : 03-04-1993

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CWL0031

PROJECT NAME : D&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-00109

DATE : 03-04-1993

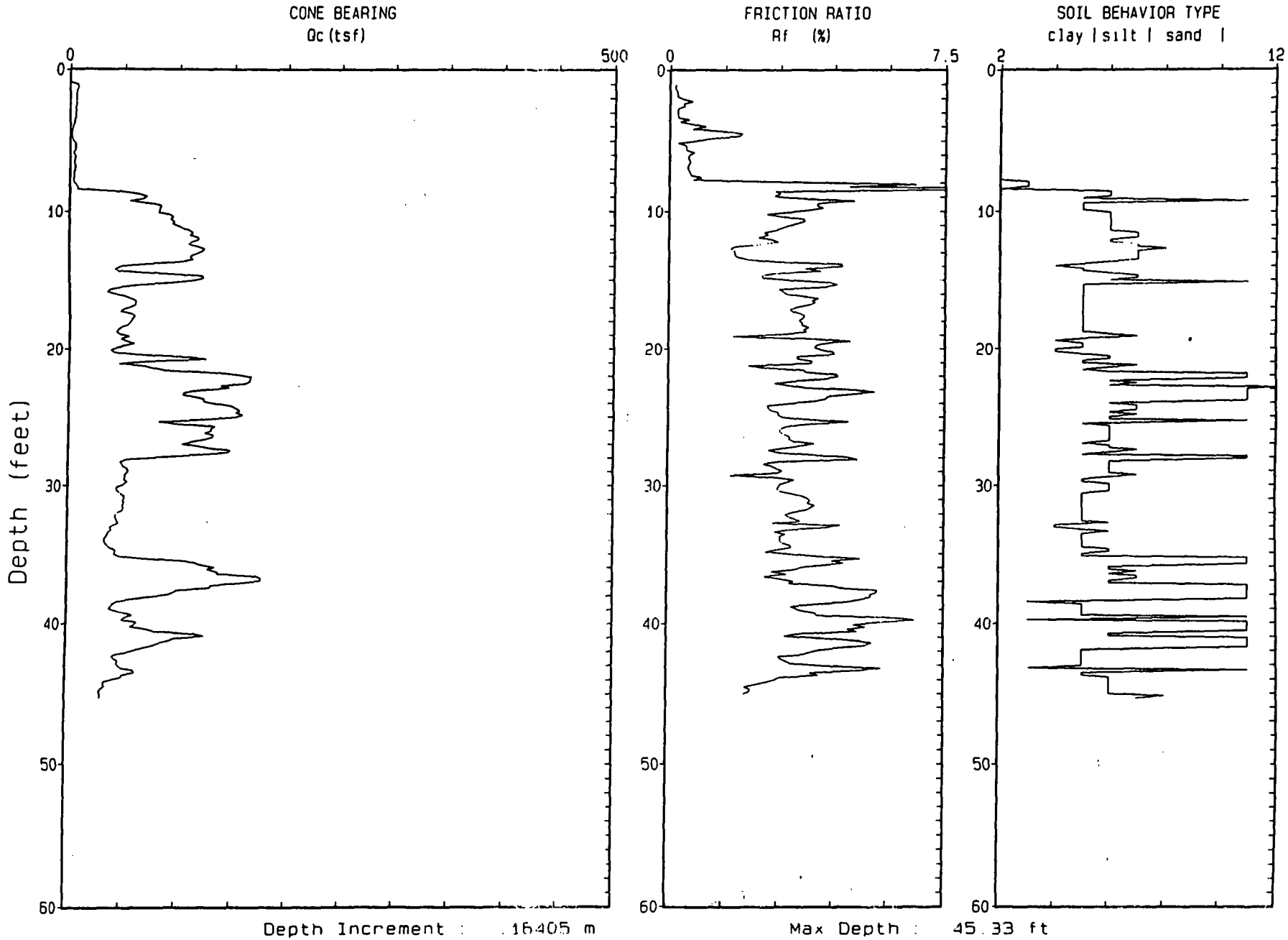
THE EARTH TECHNOLOGY CORPORATION

DAMES & MOORE

PROJECT : DEL AMO SITE
LOCATION : CWL0032

CONTRACTOR : GREGG IN SITU
GEOLOGIST : DAVID JOHNSON

FILE : CWL0032.OUT
DATE : 3/3/93



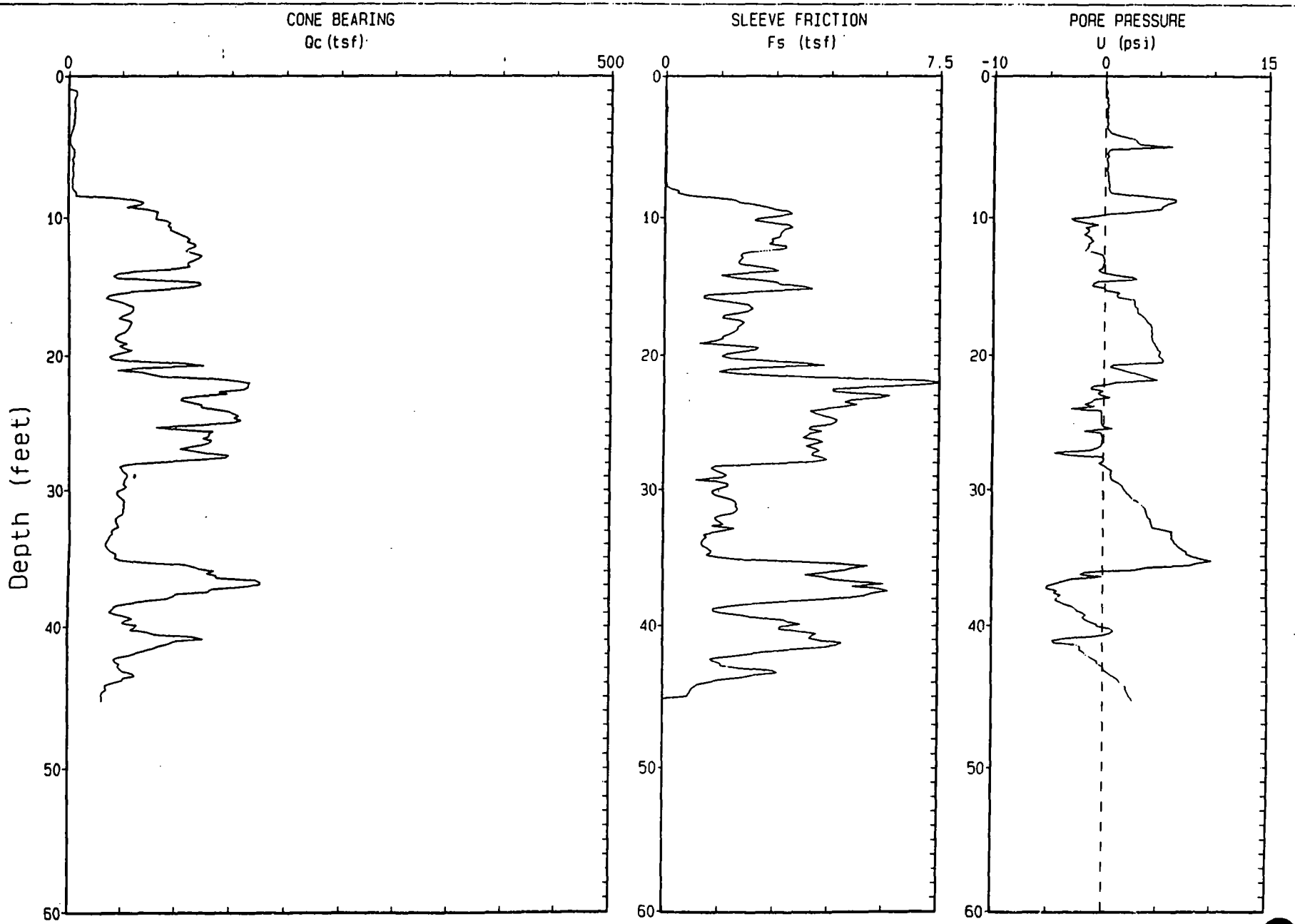
Depth Increment : .16405 m

Max Depth : 45.33 ft

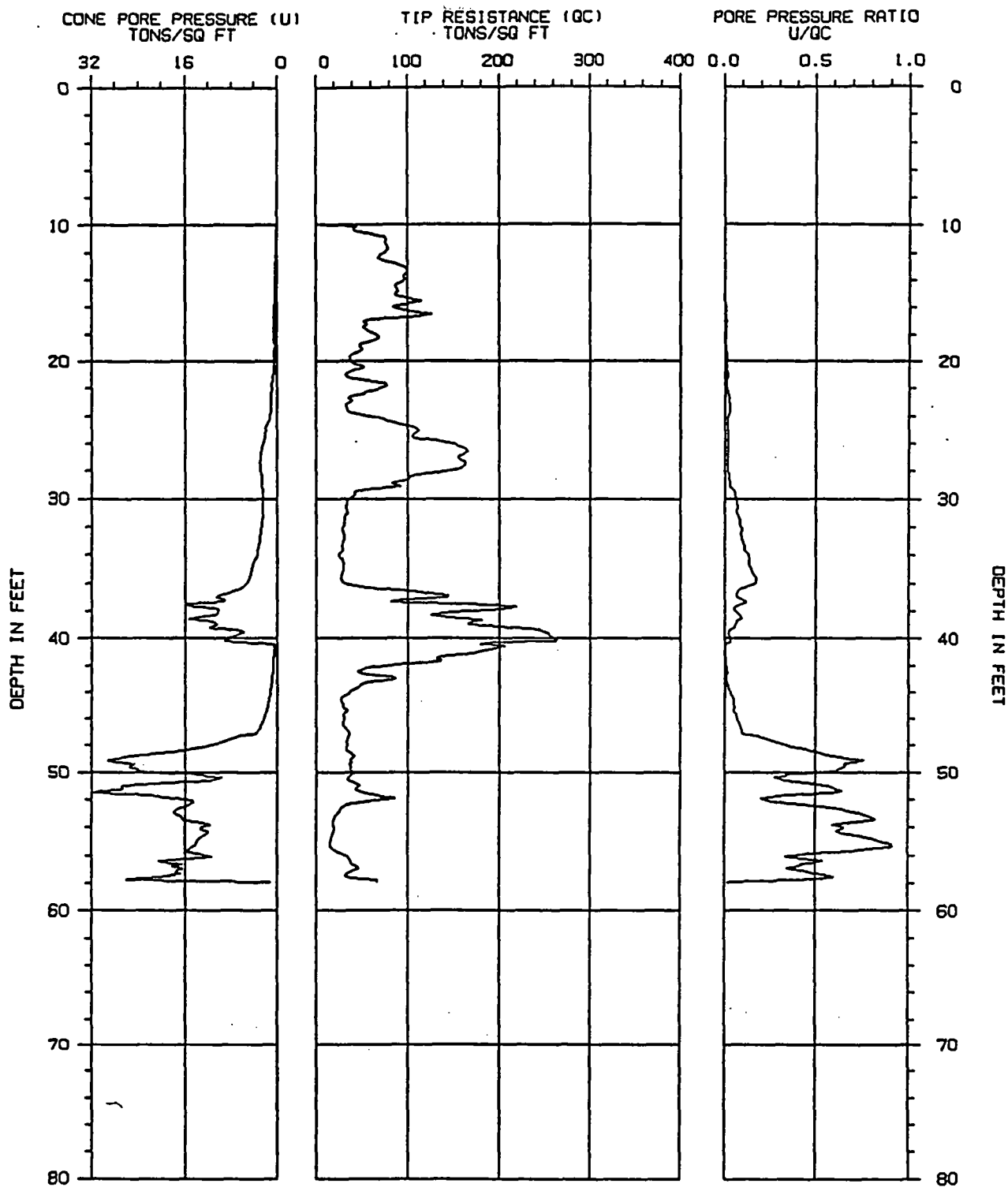
DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0032.OUT

LOCATION : CWL0032 GEOLOGIST : DAVID JOHNSON DATE : 3/3/93



Depth Increment : .16405 m Max Depth : 45.33 ft



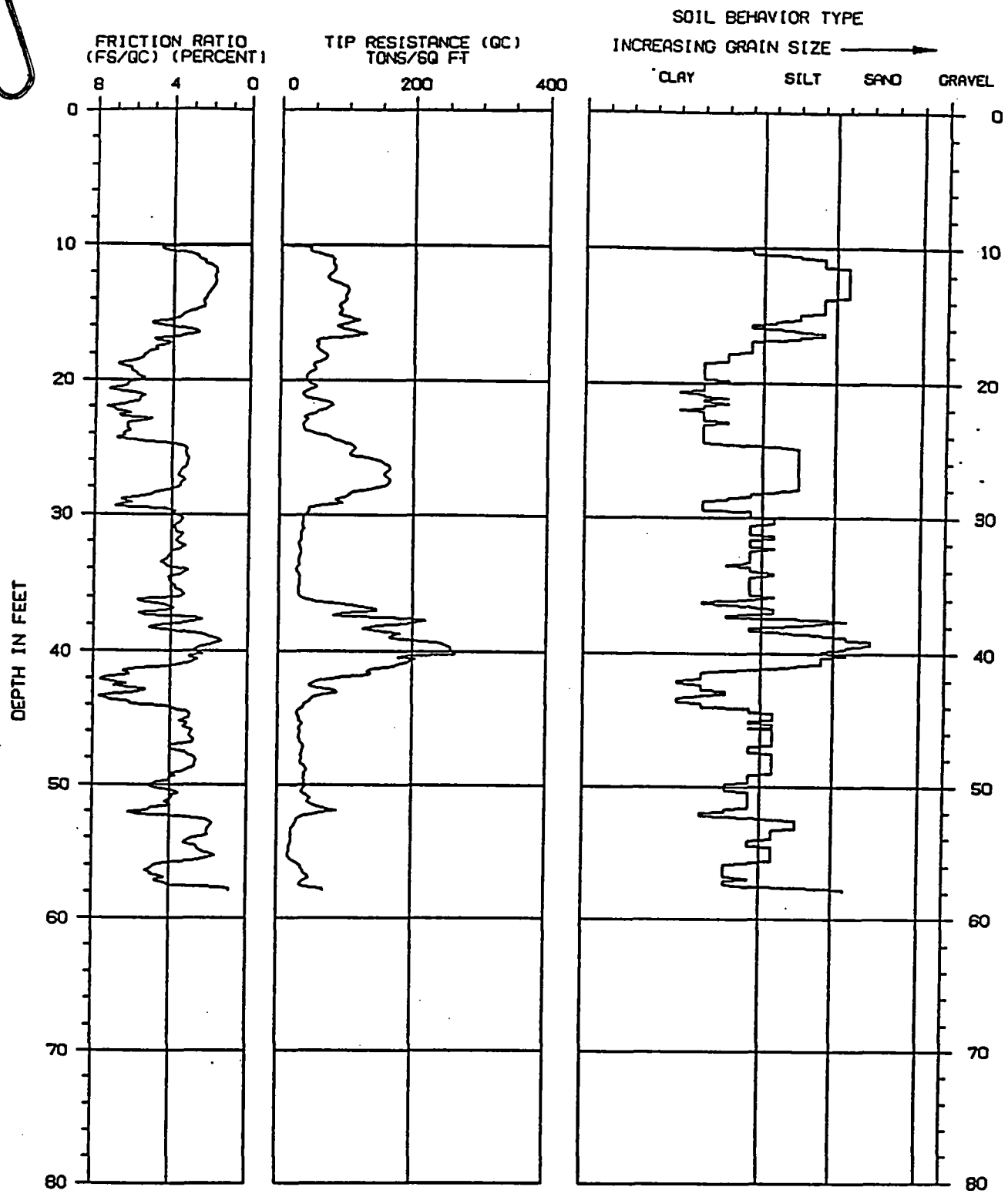
TOP 10.0 FT IS DISTURBED SOIL

CONE PENETRATION TEST SOUNDING NUMBER: CWL003~~2~~3

PROJECT NAME : D&M/SHELL O.A.I. LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-00109 DATE : 03-03-1993

THE EARTH TECHNOLOGY CORPORATION



TOP 10.0 FT IS DISTURBED SOIL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CWL003~~2~~3

PROJECT NAME : D&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-00109

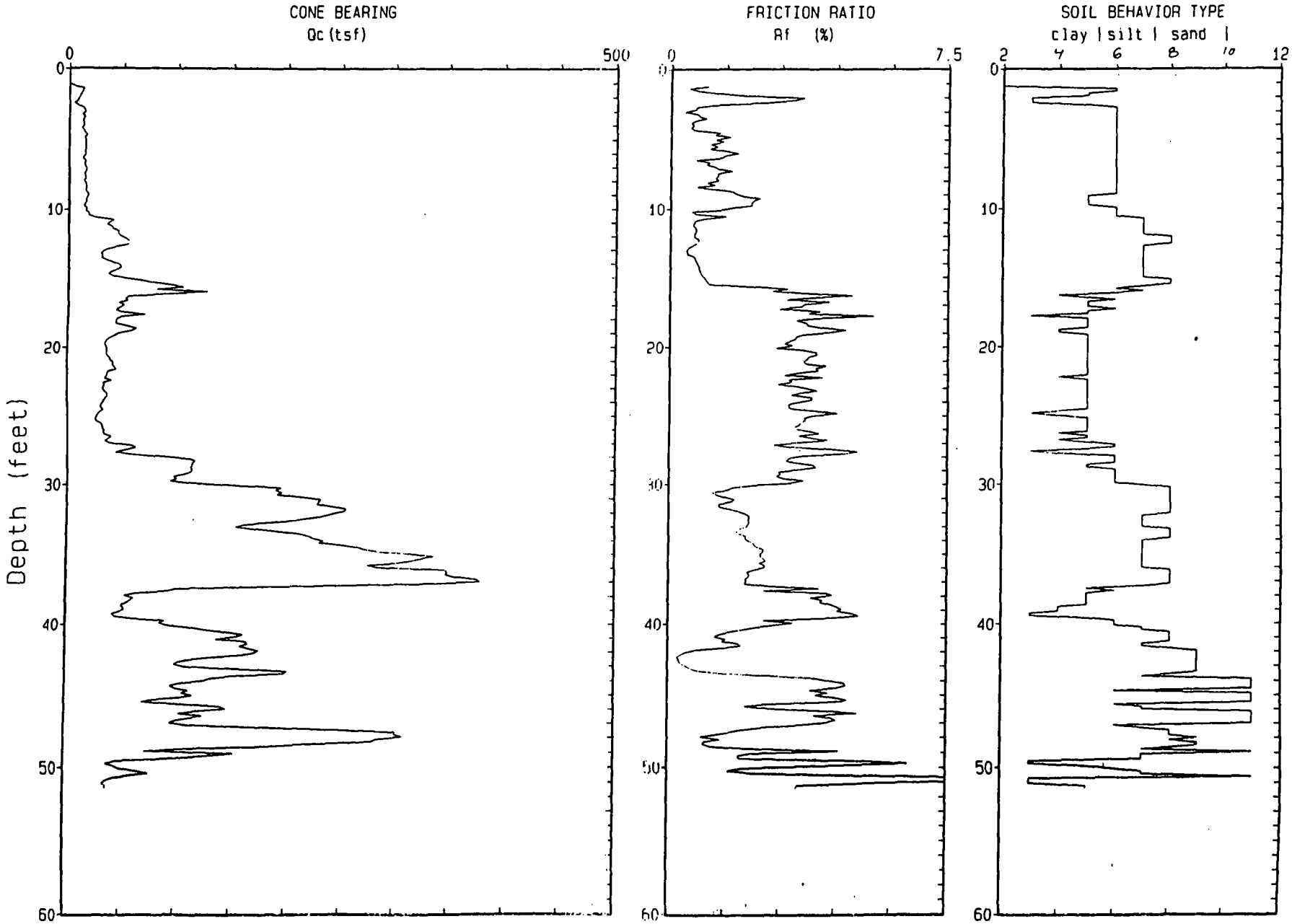
DATE : 03-03-1993

THE EARTH TECHNOLOGY CORPORATION

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0034.OUT

LOCATION : CWL0034 GEOLOGIST : MZD DATE : 3/4/93

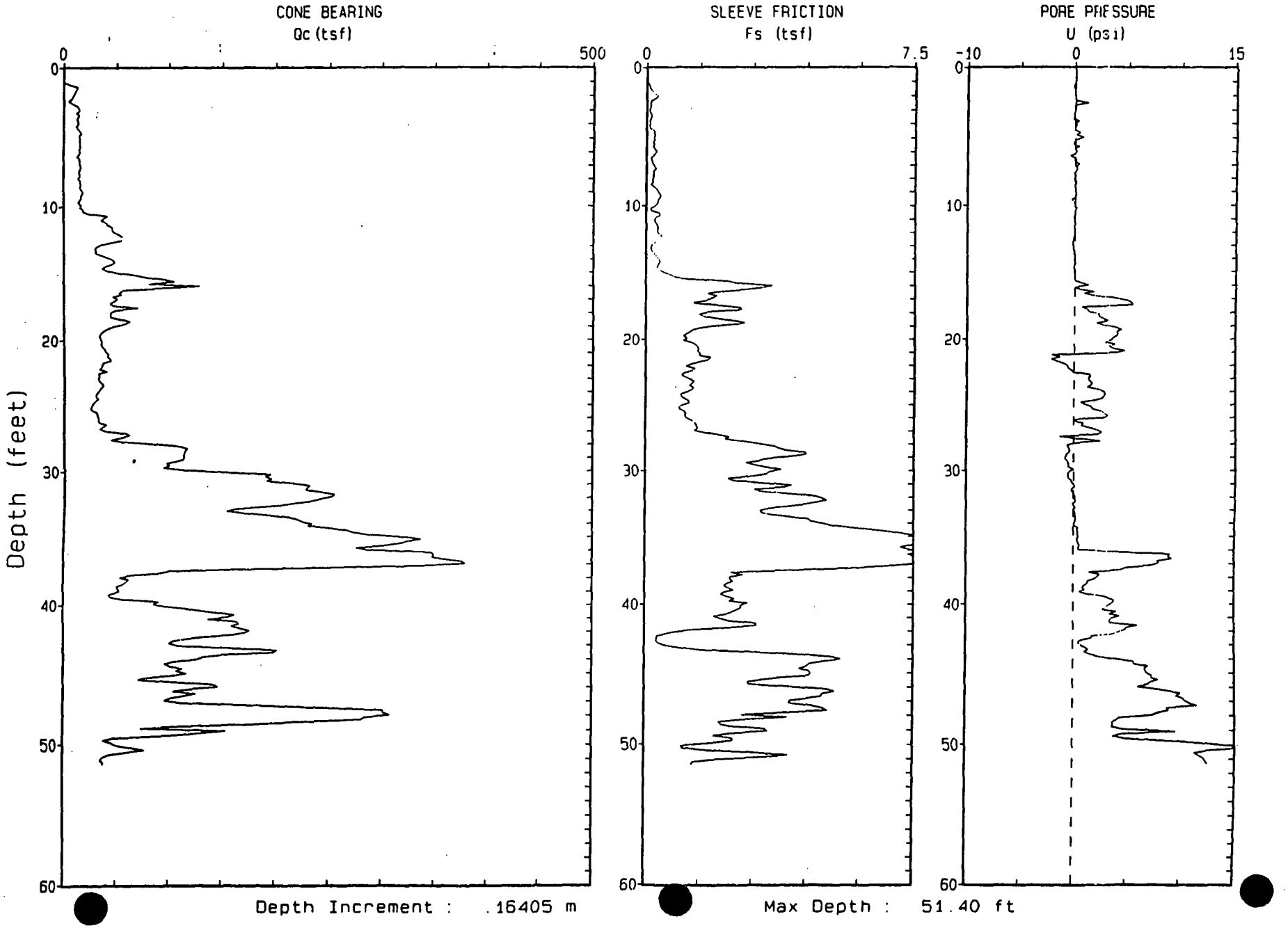


Depth Increment : .16405 m

Max Depth : 51.40 ft

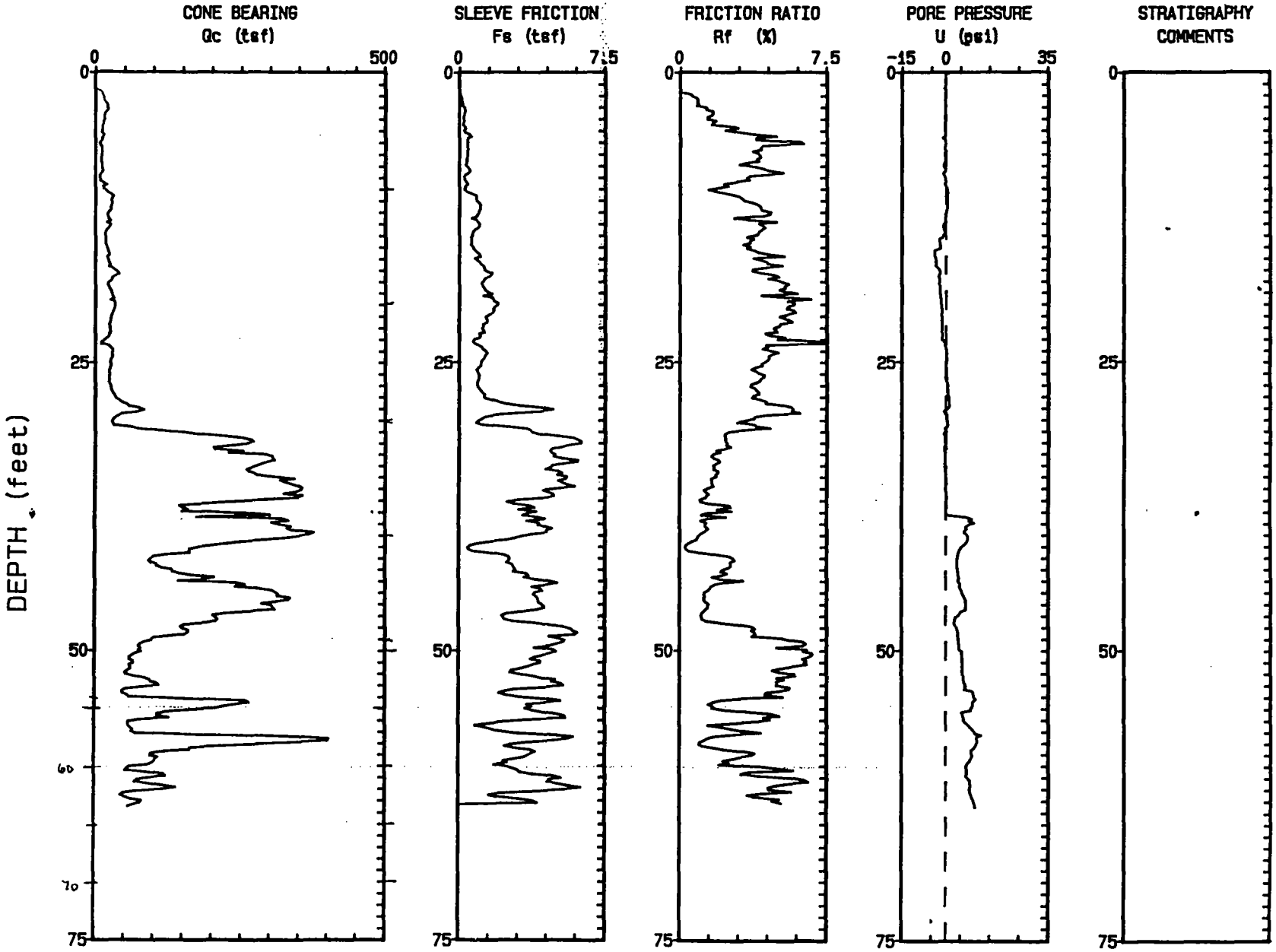
DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0034.OUT
LOCATION : CWL0034 GEOLOGIST : MZD DATE : 3/4/93

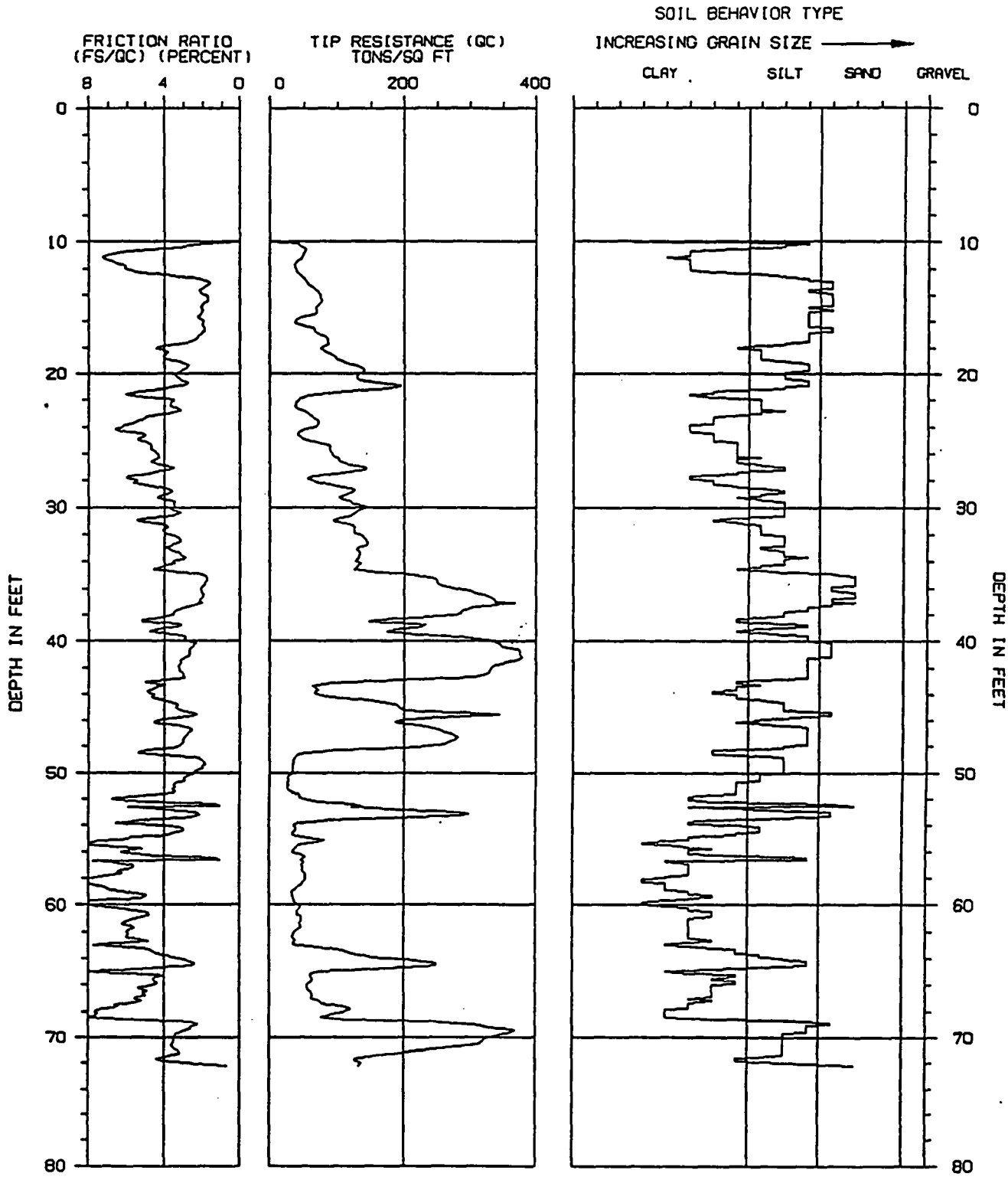


DAMES & MOORE

Project : DEL AMO SITE Contractor : GREGG IN SITU File Name : CWL0035A.DAT
Location : CWL0035a Geologist : MZD 3 CPT Date : /5/93



Depth Increment : .164042 ~~m~~ ft Max Depth : 63.53 ~~m~~ ft



TOP 10.0 FT IS DISTURBED SOIL

ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0036

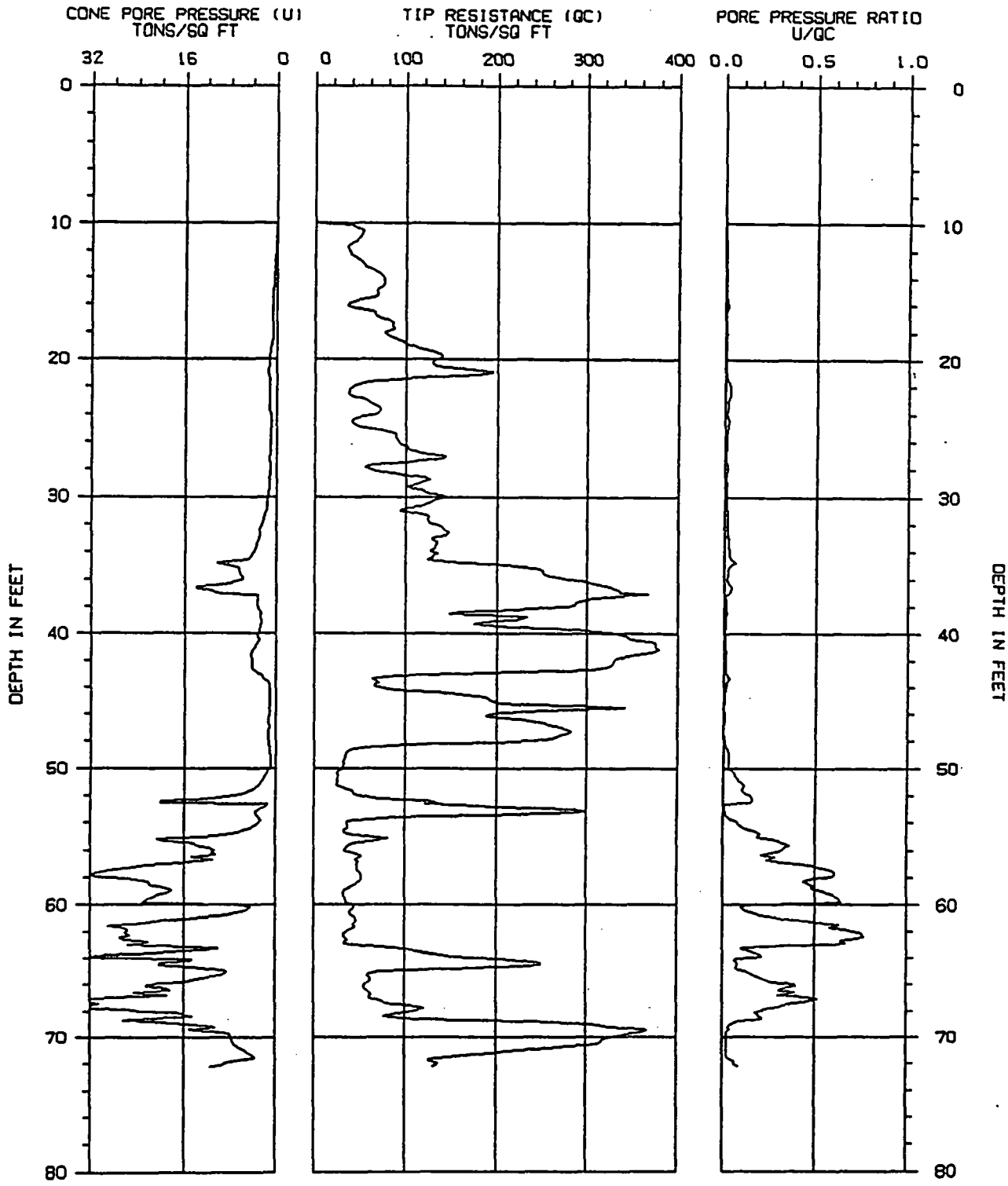
PROJECT NAME : D&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-00109

DATE : 03-04-1993

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CWL0036

PROJECT NAME : D&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-00109

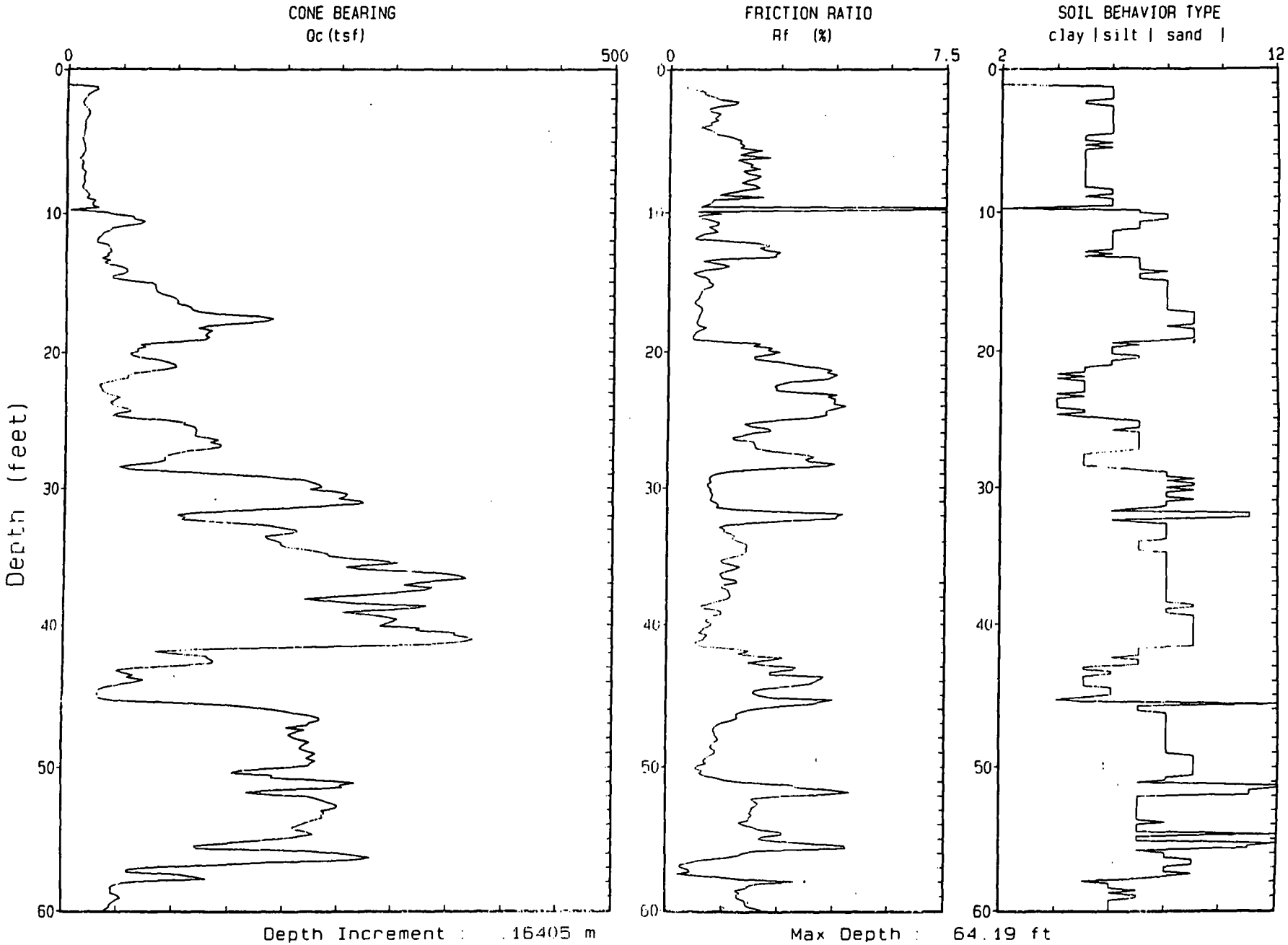
DATE : 03-04-1993

THE EARTH TECHNOLOGY CORPORATION

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0037.OUT

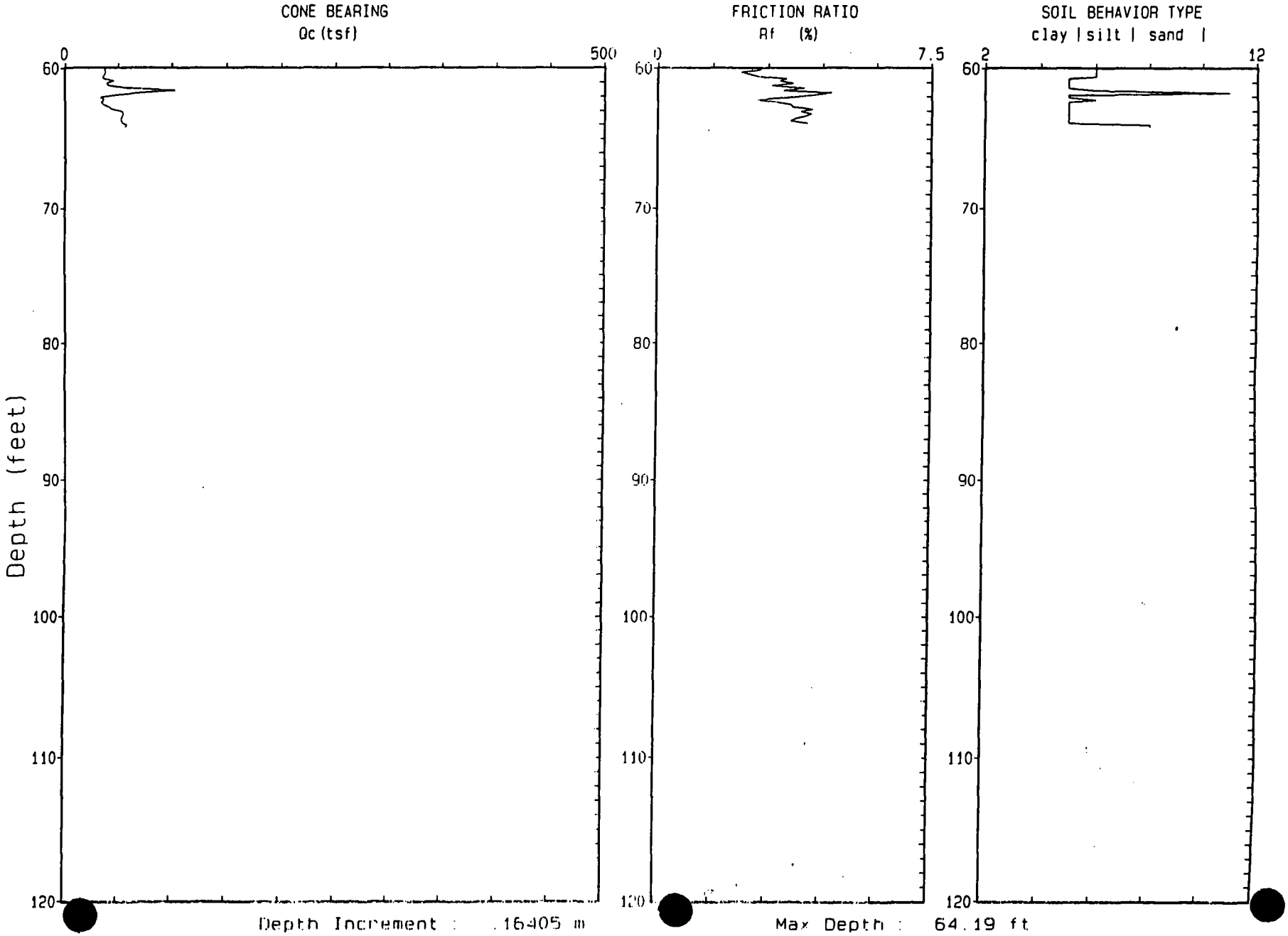
LOCATION : CWL0037 GEOLOGIST : MZD 3 DATE : /5/93



DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0037.OUT

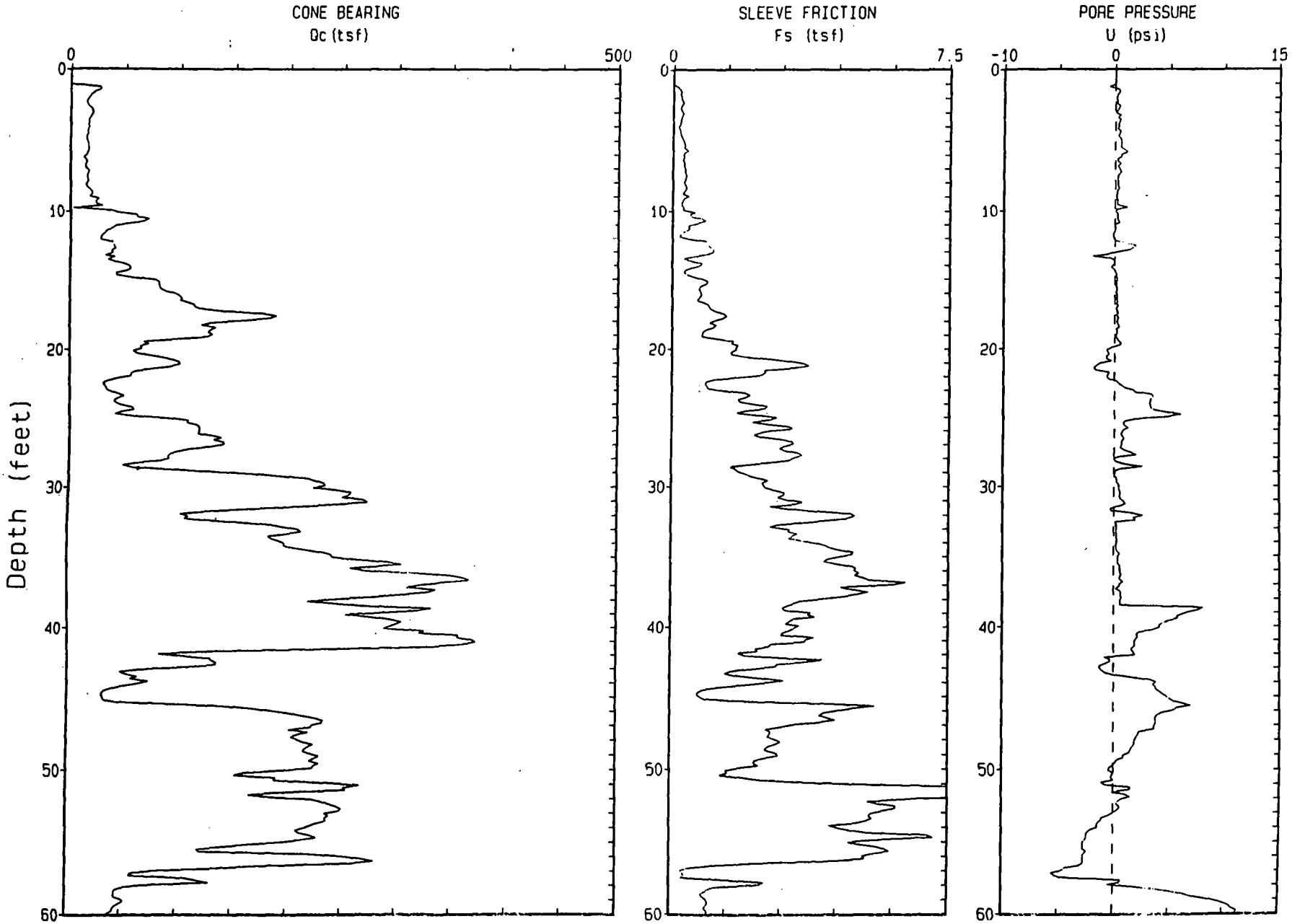
LOCATION : CWL0037 GEOLOGIST : MZD 3 DATE : /5/93



DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0037.OUT

LOCATION : CWL0037 GEOLOGIST : MZD 3 DATE : /5/93



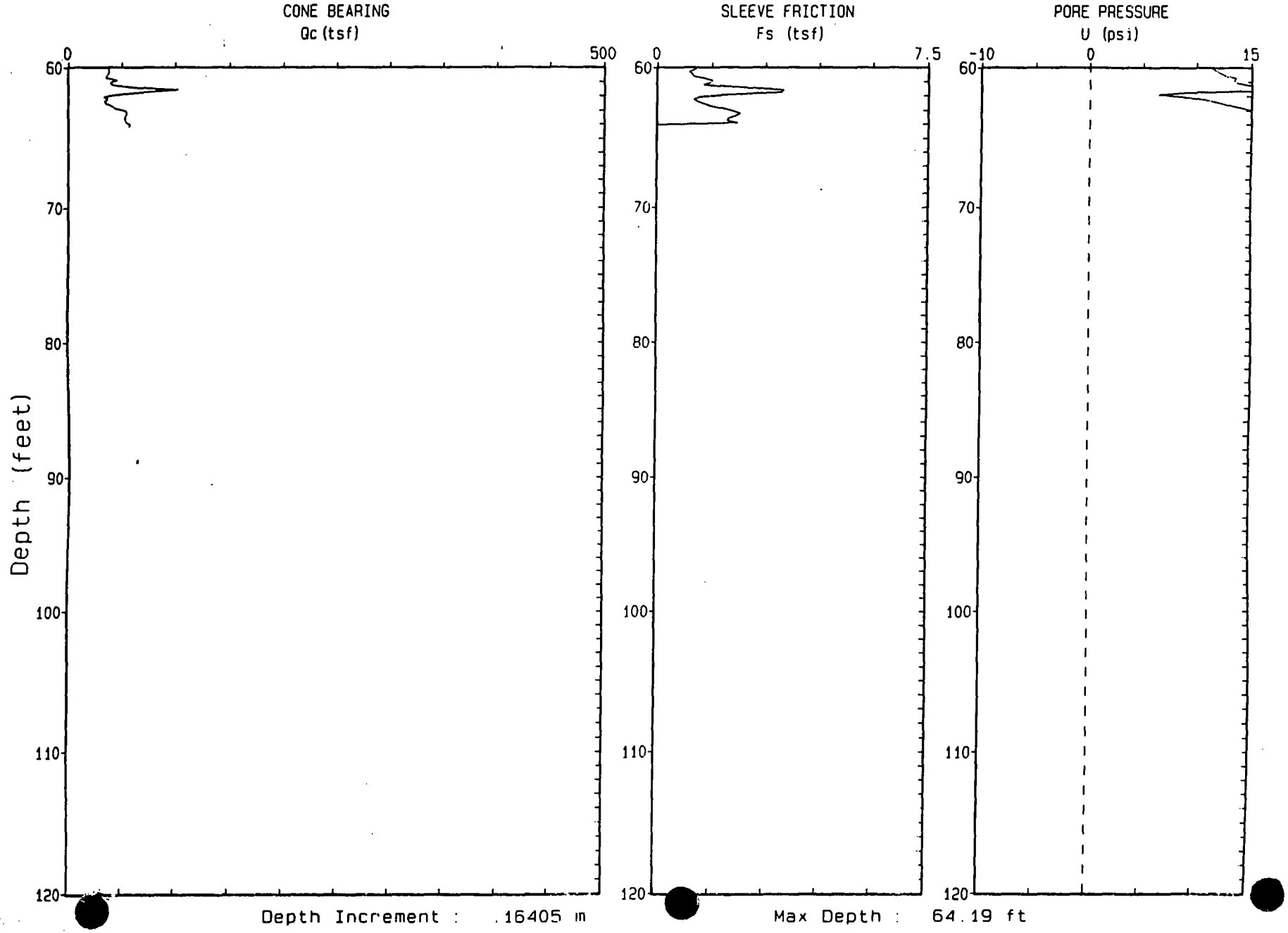
Depth Increment : .16405 m

Max Depth : 64.19 ft

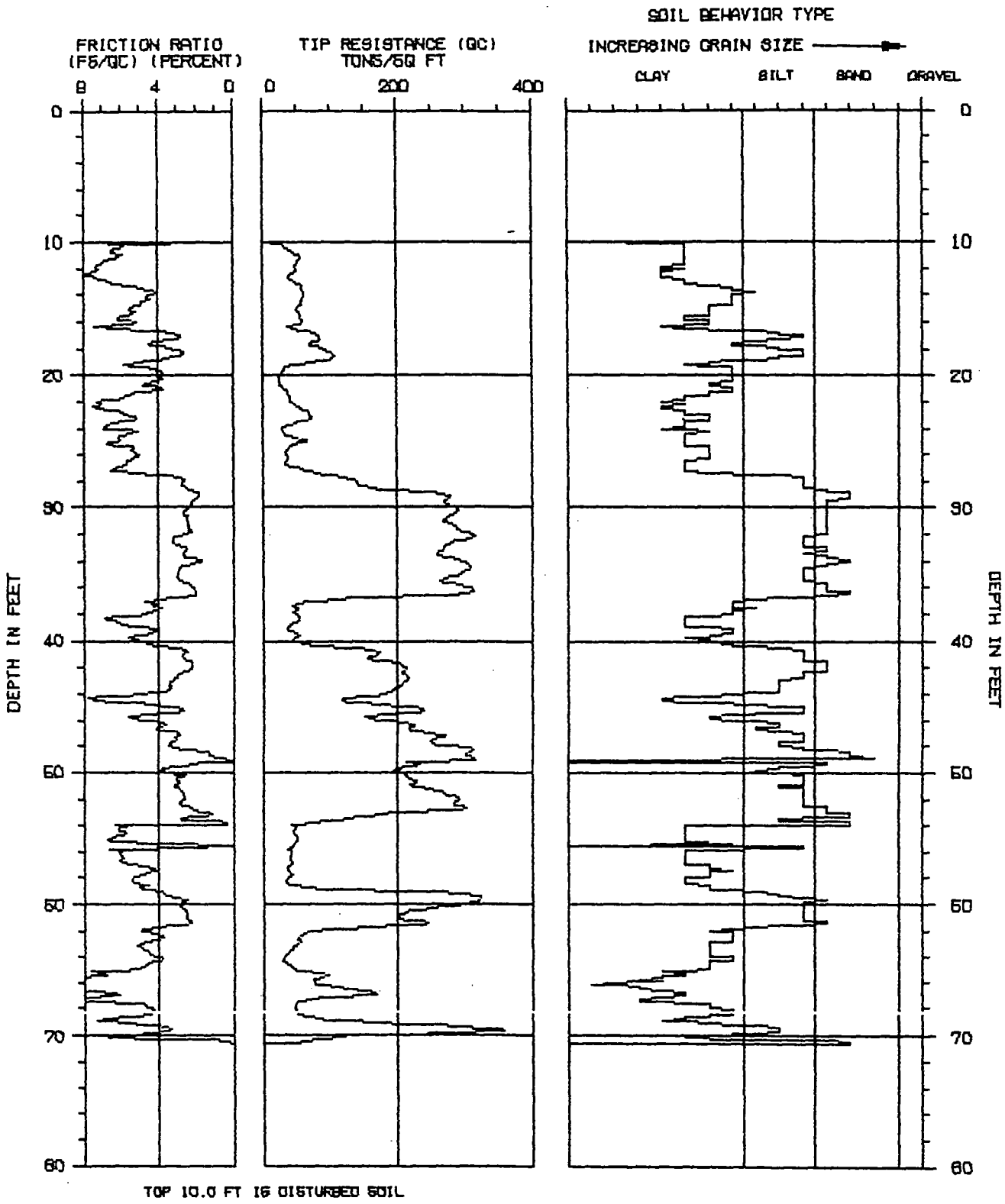
DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0037.OUT

LOCATION : CWL0037 GEOLOGIST : MZD 3 DATE : /5/93



Depth Increment : .16405 m Max Depth : 64.19 ft



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 62.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0038

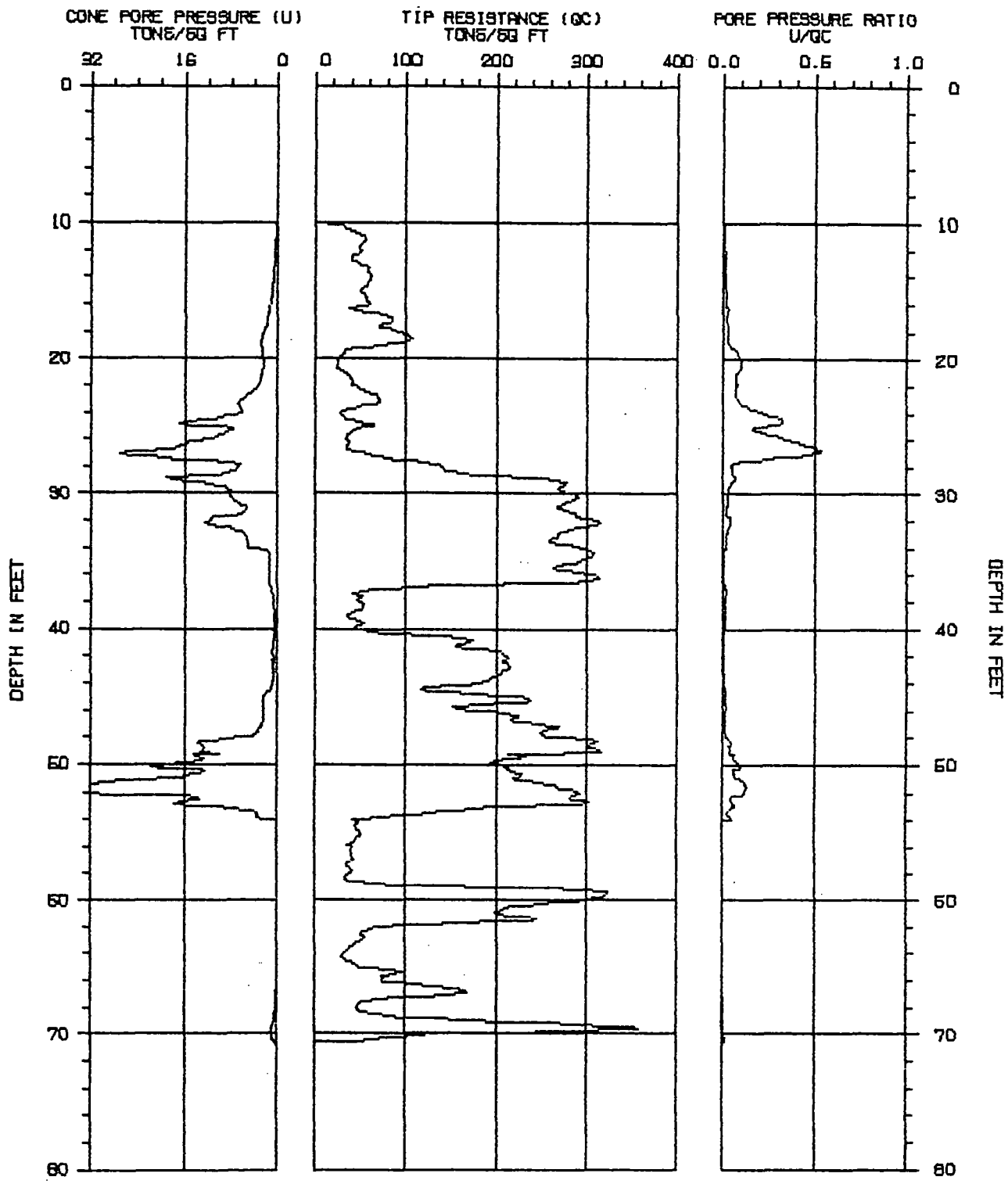
PROJECT NAME : O&M/O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-01108

DATE : 03-08-1993

THE EARTH TECHNOLOGY CORPORATION



TOP 10.0 FT IS DISTURBED SOIL

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0038

PROJECT NAME : O&M/O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-01108

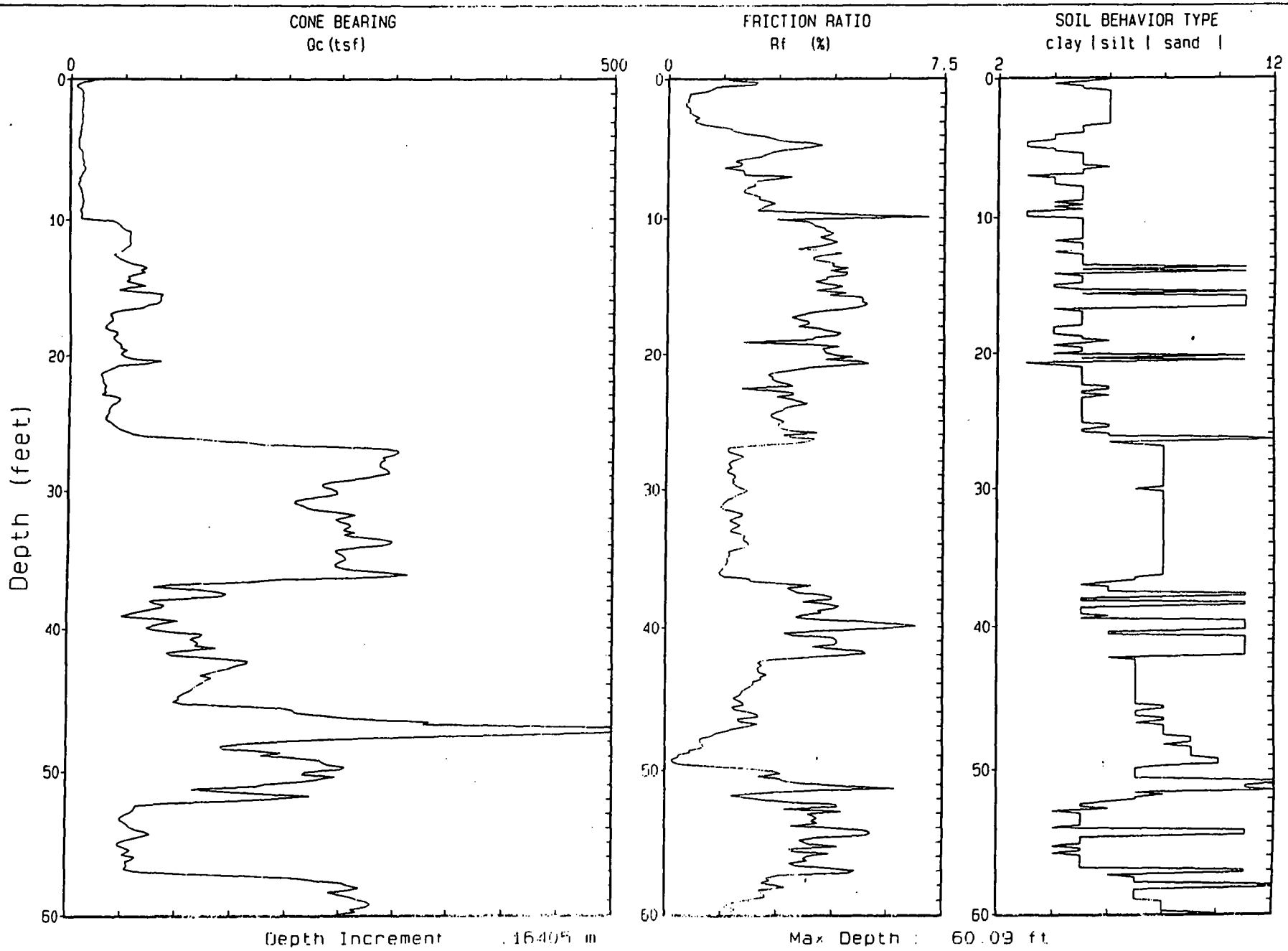
DATE : 03-08-1993

THE EARTH TECHNOLOGY CORPORATION

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0039.OUT

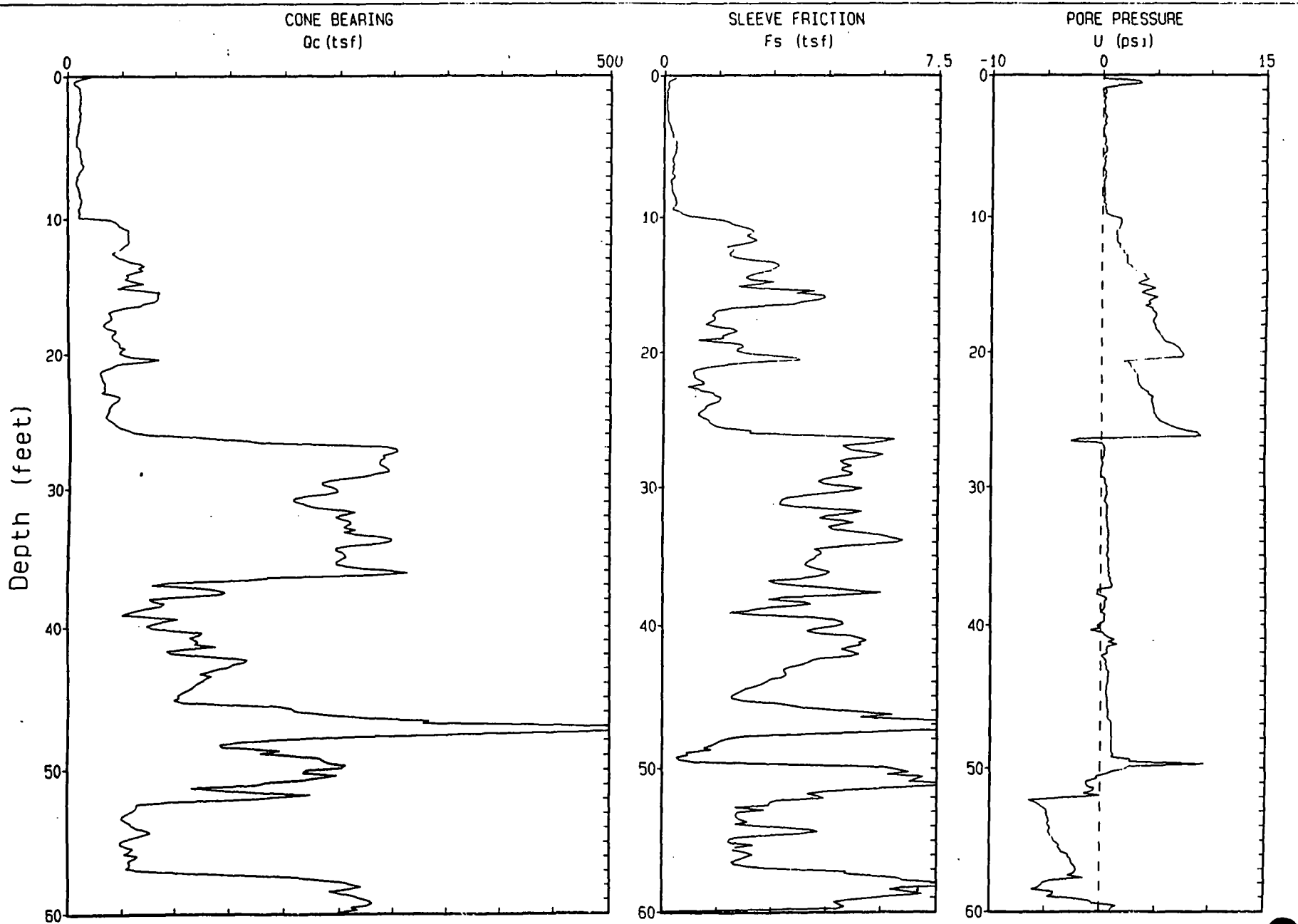
LOCATION : CWL0039 GEOLOGIST : MZD 3 DATE : /9/93



DAMES & MOORE

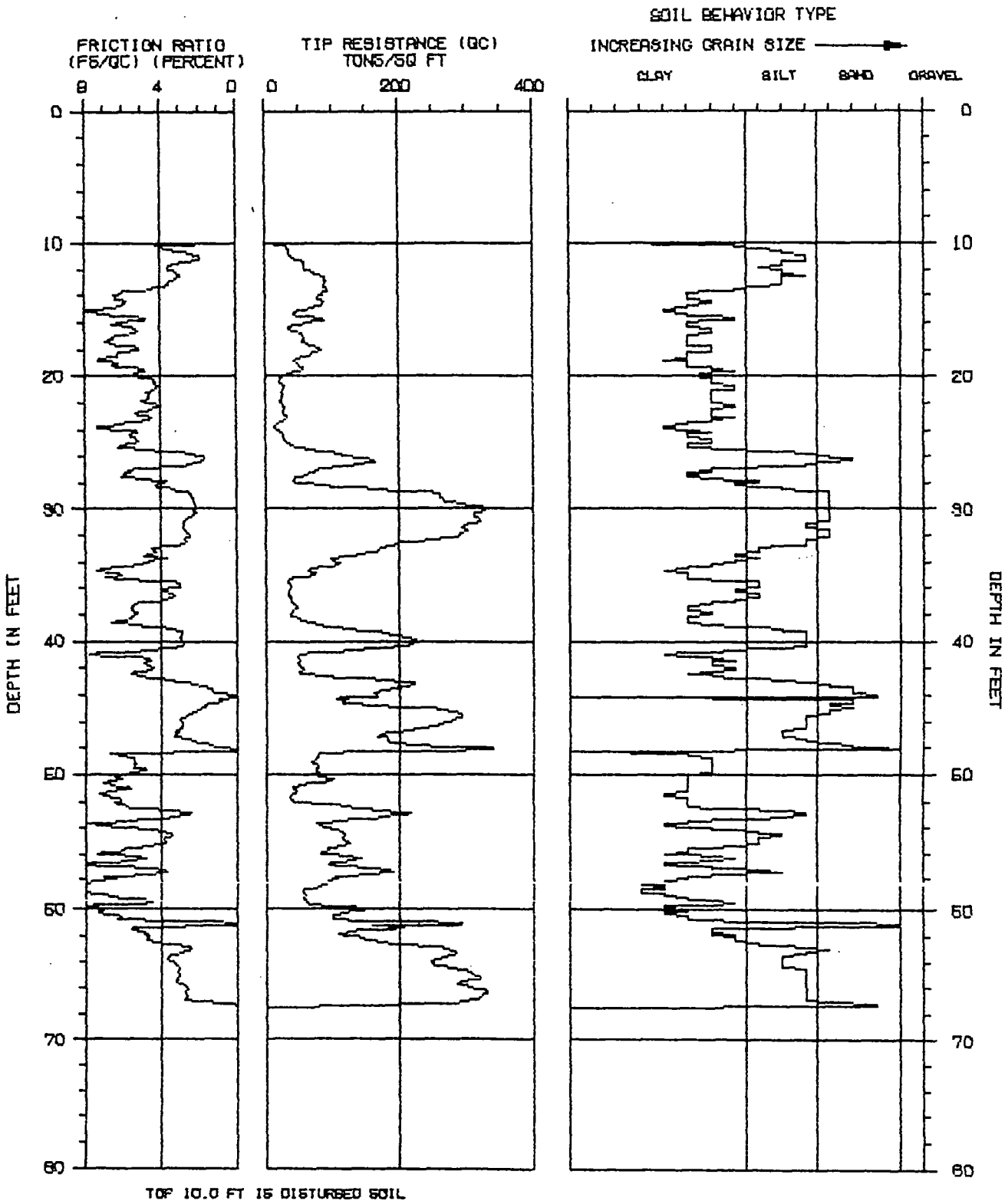
PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0039.OUT

LOCATION : CWL0039 GEOLOGIST : MZD 3 DATE : /9/93



Depth Increment : .16405 m

Max Depth : 60.09 ft



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 51.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0040

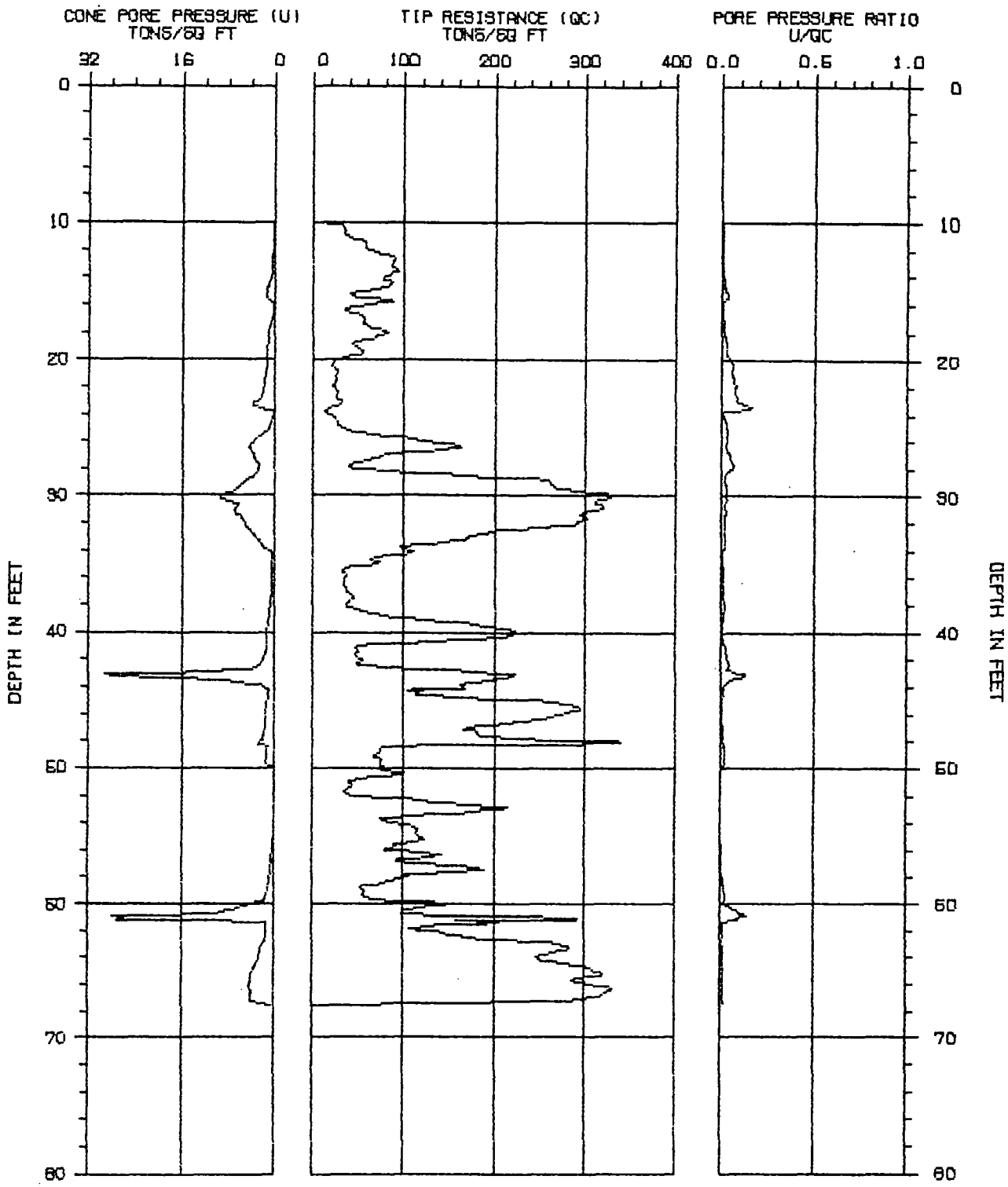
PROJECT NAME : O&M/O.A.I.

PROJECT NUMBER : 93-380-01108

LOCATION : TORRANCE CA.

DATE : 03-08-1993

THE EARTH TECHNOLOGY CORPORATION



TOP 10.0 FT IS DISTURBED SOIL

CONE PENETRATION TEST SOUNDING NUMBER: CWL0040

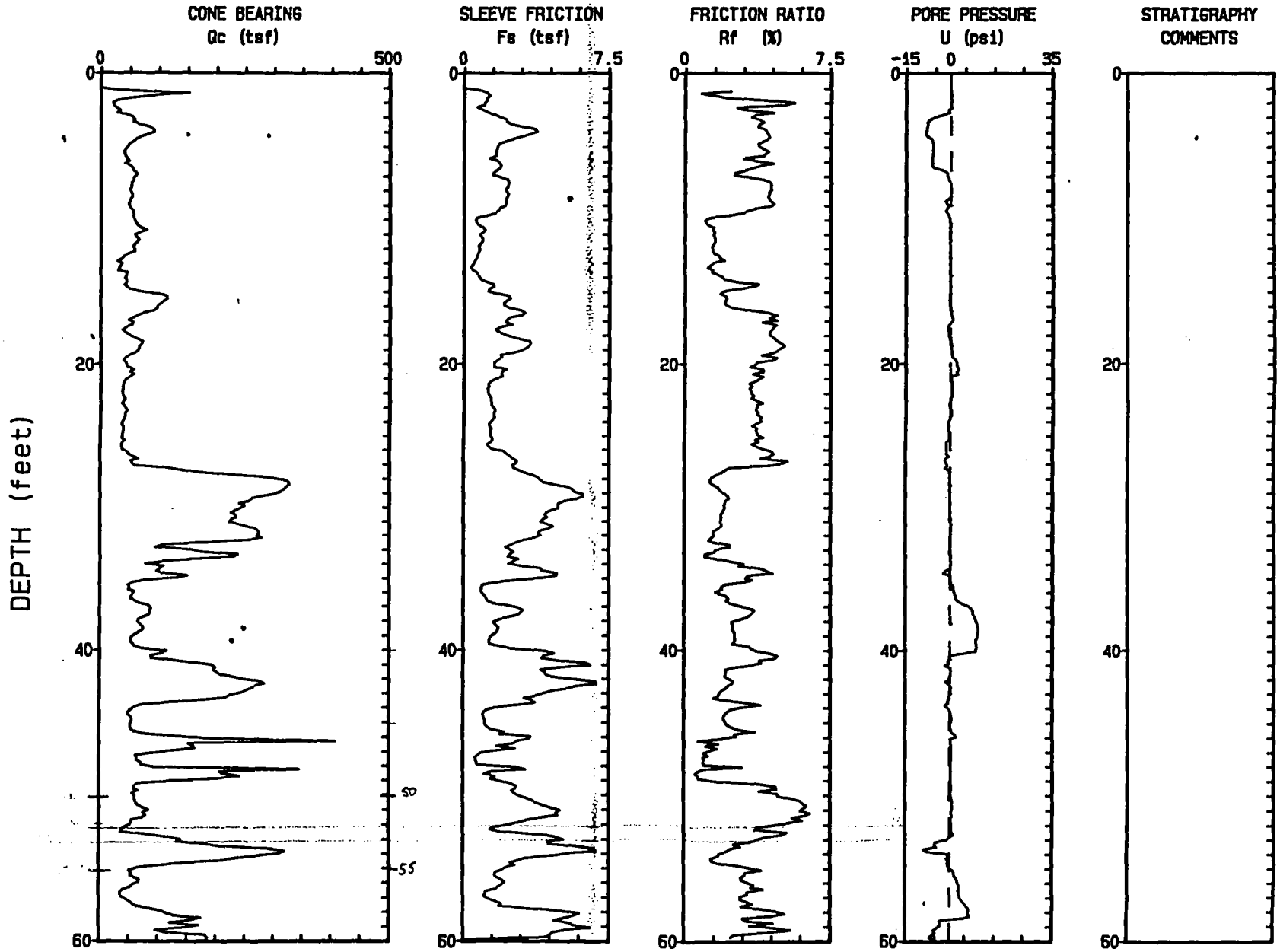
PROJECT NAME : O&M/O.A.I. LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-01108 DATE : 03-08-1993

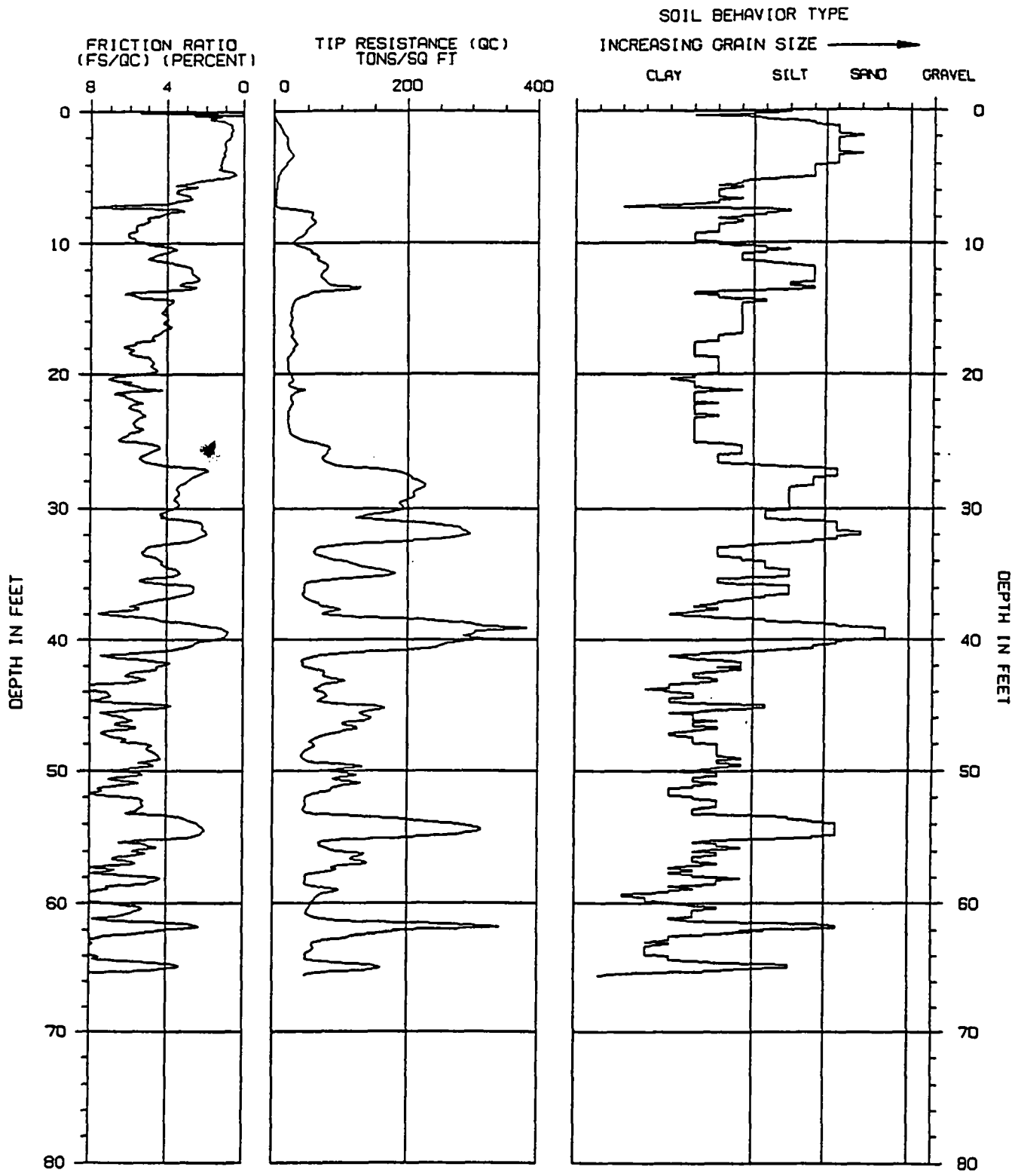
THE EARTH TECHNOLOGY CORPORATION

DAMES & MOORE

Project : DEL AMO SITE Contractor : GREGG IN SITU File Name : CWL0041.DAT
Location : CWL0041 Geologist : MZD CPT Date : 3/8/93



Depth Increment : .164042 ~~m~~ ft Max Depth : 60.09 ~~m~~ ft



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0042

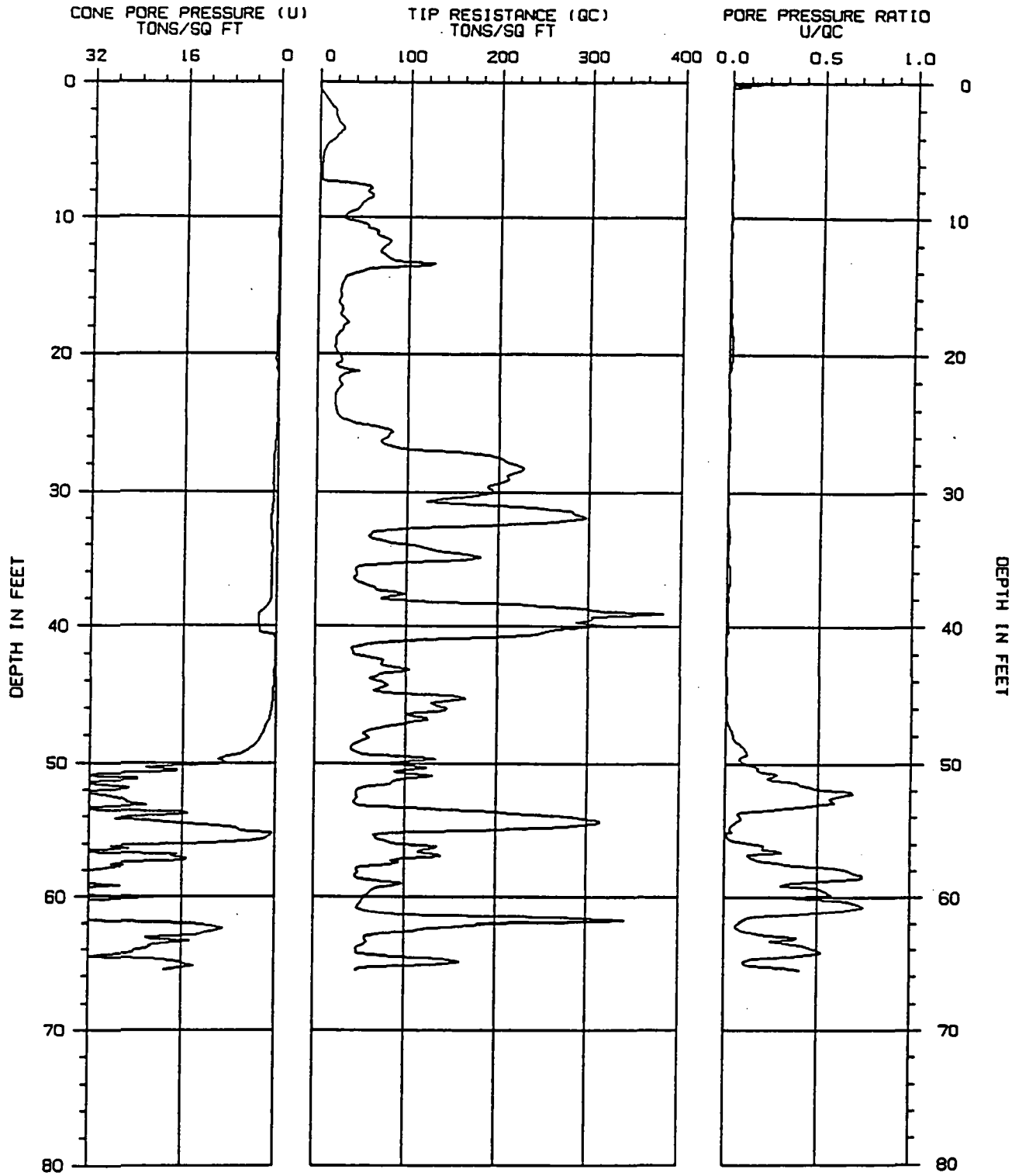
PROJECT NAME : D&M/SHELL

PROJECT NUMBER : 93-380-01108

LOCATION : TORRANCE CA.

DATE : 03-09-1993

THE EARTH TECHNOLOGY CORPORATION



CONE PENETRATION TEST

SOUNDING NUMBER: CWL0042

PROJECT NAME : D&M/SHELL

PROJECT NUMBER : 93-380-01108

LOCATION : TORRANCE CA.

DATE : 03-09-1993

THE EARTH TECHNOLOGY CORPORATION

CONE PENETRATION TEST

SOUNDING : CWL0042
PROJECT : D&M/SHELL
LOCATION : TORRANCE CA.
DATE : 03-09-1993

PROJECT NO : 93-380-01108
INSTRUMENT : F15CKE091
SYSTEM : T-3 SYSTEM#3
OPERATOR : KC/RN

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
.0	.0	.0	.00	.00	
.5	.7	1.9	1.17	-.00	SILTY CLAY to CLAY
1.0	6.0	13.7	.75	-.00	SILTY SAND to SANDY SILT
1.5	11.4	23.8	.64	-.00	SILTY SAND to SANDY SILT
2.0	18.3	35.9	.75	-.00	SAND to SILTY SAND
2.5	18.9	35.1	1.03	-.00	SILTY SAND to SANDY SILT
3.0	22.9	40.8	1.04	.01	SILTY SAND to SANDY SILT
3.5	25.9	44.5	1.13	.01	SILTY SAND to SANDY SILT
4.0	18.0	29.9	1.22	.01	SILTY SAND to SANDY SILT
4.5	9.2	14.8	1.11	.01	SILTY SAND to SANDY SILT
5.0	5.4	8.5	.89	.01	SILTY SAND to SANDY SILT
5.5	3.4	5.2	3.01	.01	SILTY CLAY to CLAY
6.0	3.0	4.5	3.35	.01	SILTY CLAY to CLAY
6.5	2.9	4.2	2.82	.00	SILTY CLAY to CLAY
7.0	2.8	3.9	4.19	.01	SILTY CLAY TO CLAY
7.5	45.7	63.3	3.13	.07	SANDY SILT to CLAYEY SILT
8.0	53.5	72.6	4.94	.09	*SANDY CLAY to SILTY CLAY
8.5	58.0	77.2	5.35	.13	*SANDY CLAY to SILTY CLAY
9.0	47.4	61.9	5.58	.14	*SANDY CLAY to SILTY CLAY
9.5	37.4	47.9	6.06	.17	*SANDY CLAY to SILTY CLAY
10.0	28.3	35.7	5.12	.18	*SANDY CLAY to SILTY CLAY
10.5	53.6	66.4	3.52	.20	SANDY SILT to CLAYEY SILT
11.0	65.6	79.9	4.73	.31	*SANDY CLAY to SILTY CLAY
11.5	72.7	87.1	3.82	.32	*CLAYEY SAND to SANDY CLAY
12.0	75.9	89.6	2.70	.10	SILTY SAND to SANDY SILT
12.5	68.2	79.3	2.57	.12	SILTY SAND to SANDY SILT
13.0	77.2	88.4	2.88	.12	SILTY SAND to SANDY SILT
13.5	123.1	139.0	2.86	.17	*SILTY SAND to CLAYEY SAND
14.0	49.0	54.6	5.73	.10	*SANDY CLAY to SILTY CLAY
14.5	29.3	32.2	3.66	.13	SANDY SILT to CLAYEY SILT
15.0	26.0	28.1	4.11	.18	CLAYEY SILT to SILTY CLAY
15.5	24.6	26.3	4.07	.19	CLAYEY SILT to SILTY CLAY
16.0	24.9	26.2	4.14	.20	CLAYEY SILT to SILTY CLAY
16.5	25.6	26.7	3.87	.24	CLAYEY SILT to SILTY CLAY
17.0	25.4	26.1	4.64	.26	CLAYEY SILT to SILTY CLAY
17.5	29.8	30.3	5.05	.30	*SANDY CLAY to SILTY CLAY
18.0	28.5	28.6	6.20	.34	*SANDY CLAY to SILTY CLAY
18.5	23.9	23.7	5.98	.36	*SANDY CLAY to SILTY CLAY
19.0	20.6	20.2	4.83	.38	CLAYEY SILT to SILTY CLAY
19.5	19.5	18.9	4.80	.40	CLAYEY SILT to SILTY CLAY
20.0	24.2	23.2	5.39	.43	SILTY CLAY TO CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CWL0042

DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
20.5	27.4	26.0	6.55	.41	*SANDY CLAY to SILTY CLAY
21.0	25.5	23.9	5.55	.28	SILTY CLAY TO CLAY
21.5	28.6	26.5	6.78	.07	*SANDY CLAY to SILTY CLAY
22.0	25.3	23.2	5.81	.09	SILTY CLAY TO CLAY
22.5	24.0	21.8	5.98	.12	SILTY CLAY TO CLAY
23.0	20.6	18.5	5.34	.14	SILTY CLAY TO CLAY
23.5	20.7	18.4	5.61	.17	SILTY CLAY TO CLAY
24.0	21.0	18.5	5.64	.19	SILTY CLAY TO CLAY
24.5	24.5	21.4	6.03	.24	SILTY CLAY TO CLAY
25.0	44.6	38.5	6.51	.28	*SANDY CLAY to SILTY CLAY
25.5	81.7	69.7	4.41	.36	*SANDY CLAY to SILTY CLAY
26.0	78.4	66.2	5.05	.41	*SANDY CLAY to SILTY CLAY
26.5	74.7	62.5	5.23	.47	*SANDY CLAY to SILTY CLAY
27.0	127.2	105.3	2.88	.58	SILTY SAND to SANDY SILT
27.5	200.1	164.1	2.37	.68	SILTY SAND to SANDY SILT
28.0	217.5	176.7	2.96	.73	*SILTY SAND to CLAYEY SAND
28.5	222.7	179.2	3.48	.77	*CLAYEY SAND to SANDY CLAY
29.0	210.7	168.0	3.38	.79	*CLAYEY SAND to SANDY CLAY
29.5	191.0	150.8	3.52	.79	*CLAYEY SAND to SANDY CLAY
30.0	194.8	152.5	3.61	.79	*CLAYEY SAND to SANDY CLAY
30.5	142.2	110.2	4.37	.77	*CLAYEY SAND to SANDY CLAY
31.0	200.3	153.9	2.46	.81	SILTY SAND to SANDY SILT
31.5	282.1	214.7	2.19	.94	SILTY SAND to SANDY SILT
32.0	292.2	220.4	1.99	1.02	SAND to SILTY SAND
32.5	184.1	137.7	2.93	1.03	*SILTY SAND to CLAYEY SAND
33.0	64.1	47.5	5.00	.96	*SANDY CLAY to SILTY CLAY
33.5	62.8	46.1	5.26	.92	*SANDY CLAY to SILTY CLAY
34.0	107.8	78.5	4.25	.81	*CLAYEY SAND to SANDY CLAY
34.5	143.9	103.9	3.82	.79	*CLAYEY SAND to SANDY CLAY
35.0	178.3	127.6	3.38	.89	*CLAYEY SAND to SANDY CLAY
35.5	59.6	42.3	5.42	.86	*SANDY CLAY to SILTY CLAY
36.0	45.6	32.1	2.59	.85	SANDY SILT to CLAYEY SILT
36.5	42.3	29.5	2.88	.84	SANDY SILT to CLAYEY SILT
37.0	57.4	39.7	4.83	.84	*SANDY CLAY to SILTY CLAY
37.5	86.7	59.5	5.52	.84	*SANDY CLAY to SILTY CLAY
38.0	72.2	49.1	7.43	.95	*SANDY CLAY to SILTY CLAY
38.5	249.8	168.4	4.29	1.55	*CLAYEY SAND to SANDY CLAY
39.0	361.3	241.5	1.54	2.78	SAND to SILTY SAND
39.5	302.8	200.8	.85	2.98	SAND to SILTY SAND
40.0	309.0	203.2	1.58	2.97	SAND to SILTY SAND
40.5	245.4	160.1	2.88	2.19	*SILTY SAND to CLAYEY SAND
41.0	119.1	77.0	5.12	.26	*SANDY CLAY to SILTY CLAY
41.5	44.8	28.7	5.77	.23	*SANDY CLAY to SILTY CLAY
42.0	42.8	27.2	4.38	.24	CLAYEY SILT to SILTY CLAY
42.5	75.5	47.6	5.45	.26	*SANDY CLAY to SILTY CLAY
43.0	88.1	55.2	5.29	.26	*SANDY CLAY to SILTY CLAY
43.5	71.1	44.2	8.08	.28	*SANDY CLAY to SILTY CLAY
44.0	70.8	43.6	7.25	.38	*SANDY CLAY to SILTY CLAY
44.5	72.8	44.5	7.29	.44	*SANDY CLAY to SILTY CLAY
45.0	122.3	74.2	4.14	.52	*CLAYEY SAND to SANDY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

SOUNDING : CWL0042

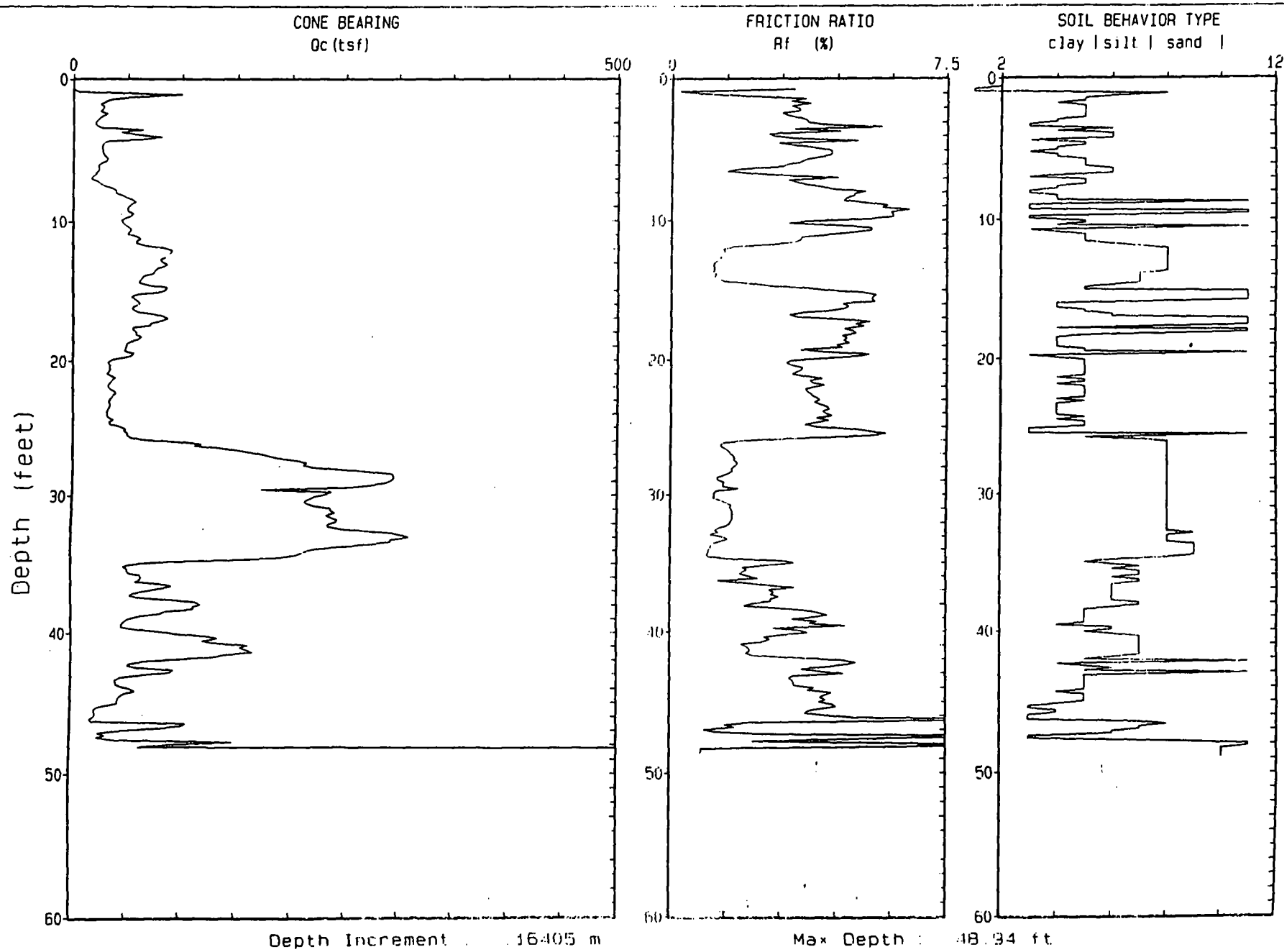
DEPTH (ft)	TIP RESISTANCE (tsf)	NORMALIZED TIP RESISTANCE (tsf)	FRICTION RATIO (%)	CONE PORE PRESSURE (tsf)	SOIL BEHAVIOR TYPE
45.5	136.4	82.0	6.84	.62	*SANDY CLAY to SILTY CLAY
46.0	145.1	86.6	6.23	.76	*SANDY CLAY to SILTY CLAY
46.5	103.3	61.1	6.73	.91	*SANDY CLAY to SILTY CLAY
47.0	104.8	61.6	7.06	1.40	*SANDY CLAY to SILTY CLAY
47.5	64.8	37.8	6.63	1.91	*SANDY CLAY to SILTY CLAY
48.0	58.6	33.9	5.11	2.45	*SANDY CLAY to SILTY CLAY
48.5	46.5	26.7	4.98	3.19	CLAYEY SILT to SILTY CLAY
49.0	41.6	23.7	4.38	4.54	CLAYEY SILT to SILTY CLAY
49.5	97.6	55.1	4.90	8.36	*SANDY CLAY to SILTY CLAY
50.0	78.9	44.2	7.31	8.76	*SANDY CLAY to SILTY CLAY
50.5	101.1	56.2	6.56	16.98	*SANDY CLAY to SILTY CLAY
51.0	123.7	68.3	5.80	30.11	*SANDY CLAY to SILTY CLAY
51.5	83.3	45.6	7.38	33.26	*SANDY CLAY to SILTY CLAY
52.0	46.9	25.5	6.08	29.15	*SANDY CLAY to SILTY CLAY
52.5	47.6	25.7	5.26	27.73	CLAYEY SILT to SILTY CLAY
53.0	45.5	24.4	5.53	24.08	SILTY CLAY TO CLAY
53.5	175.4	93.2	3.19	29.71	*CLAYEY SAND to SANDY CLAY
54.0	280.8	148.0	2.34	24.60	SILTY SAND to SANDY SILT
54.5	308.0	161.1	2.05	15.85	SILTY SAND to SANDY SILT
55.0	180.7	93.8	2.93	5.96	SILTY SAND to SANDY SILT
55.5	67.6	34.8	5.17	1.26	*SANDY CLAY to SILTY CLAY
56.0	92.2	47.1	5.80	15.11	*SANDY CLAY to SILTY CLAY
56.5	116.5	59.2	6.77	32.07	*SANDY CLAY to SILTY CLAY
57.0	126.8	63.9	5.82	17.26	*SANDY CLAY to SILTY CLAY
57.5	85.1	42.5	6.93	28.16	*SANDY CLAY to SILTY CLAY
58.0	48.3	24.0	4.62	31.94	CLAYEY SILT to SILTY CLAY
58.5	47.2	23.3	5.15	35.24	CLAYEY SILT to SILTY CLAY
59.0	97.0	47.4	7.53	32.53	*SANDY CLAY to SILTY CLAY
59.5	63.1	30.6	9.71	33.40	*SANDY CLAY to SILTY CLAY
60.0	55.3	26.6	6.99	19.42	*SANDY CLAY to SILTY CLAY
60.5	50.1	24.0	5.38	35.91	CLAYEY SILT to SILTY CLAY
61.0	56.6	26.8	6.67	35.87	*SANDY CLAY to SILTY CLAY
61.5	200.6	94.4	3.97	35.98	*CLAYEY SAND to SANDY CLAY
62.0	179.8	84.0	4.42	14.48	*SANDY CLAY to SILTY CLAY
62.5	116.7	54.1	7.25	9.14	*SANDY CLAY to SILTY CLAY
63.0	57.4	26.4	7.86	17.78	*SANDY CLAY to SILTY CLAY
63.5	58.5	26.7	8.92	17.32	*SANDY CLAY to SILTY CLAY
64.0	48.5	22.0	7.69	23.50	*SANDY CLAY to SILTY CLAY
64.5	87.5	39.4	4.88	31.56	*SANDY CLAY to SILTY CLAY
65.0	155.4	69.4	4.23	16.02	*CLAYEY SAND to SANDY CLAY
65.5	46.7	20.8	12.64	19.02	*SANDY CLAY to SILTY CLAY

*INDICATES OVERCONSOLIDATED OR CEMENTED MATERIAL
ASSUMED TOTAL UNIT WT = 110 PCF
ASSUMED DEPTH OF WATER TABLE = 65.0 FT

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0043.OUT

LOCATION : CWL0043B GEOLOGIST : MZD 3 DATE : /6/93

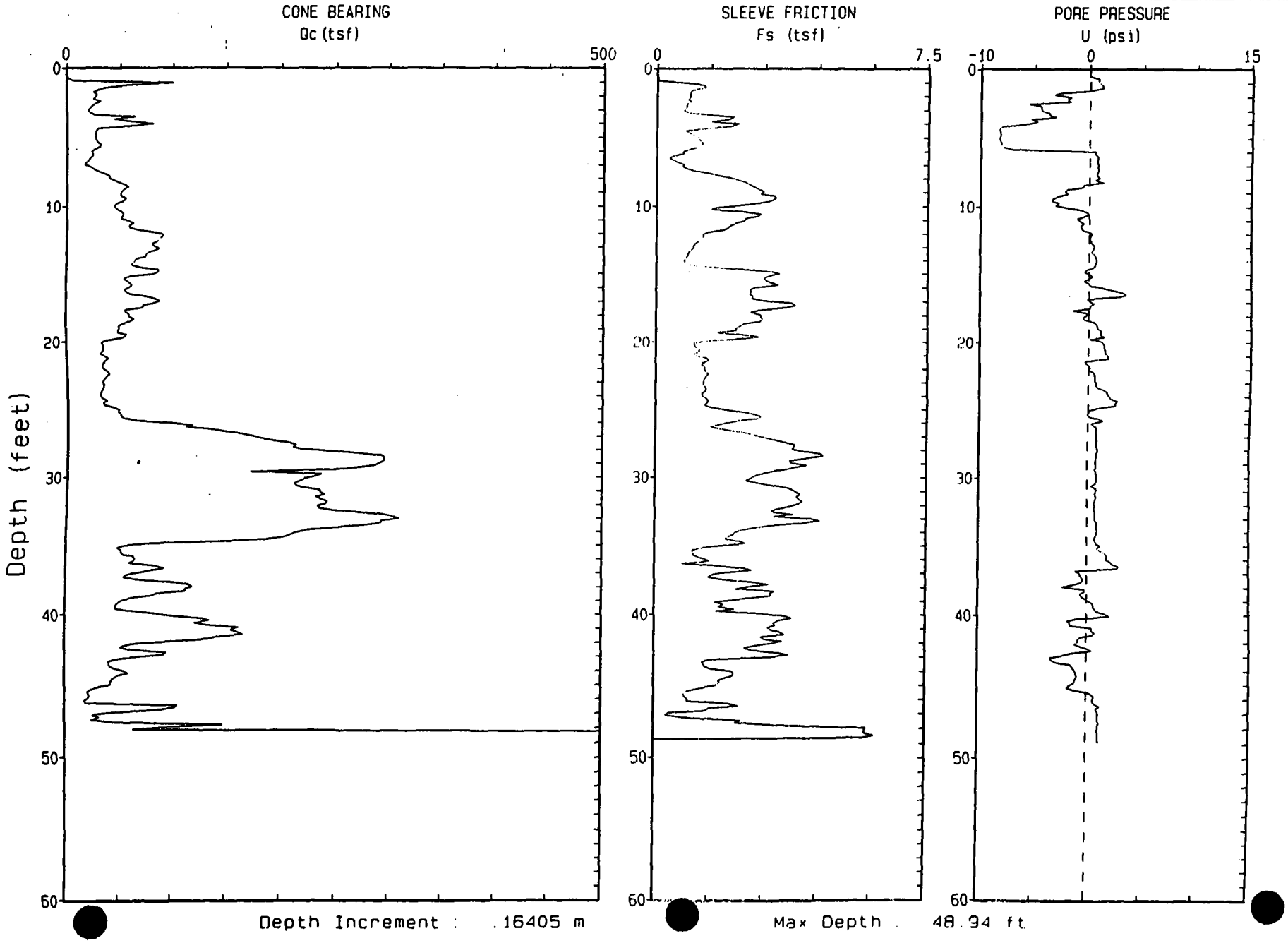


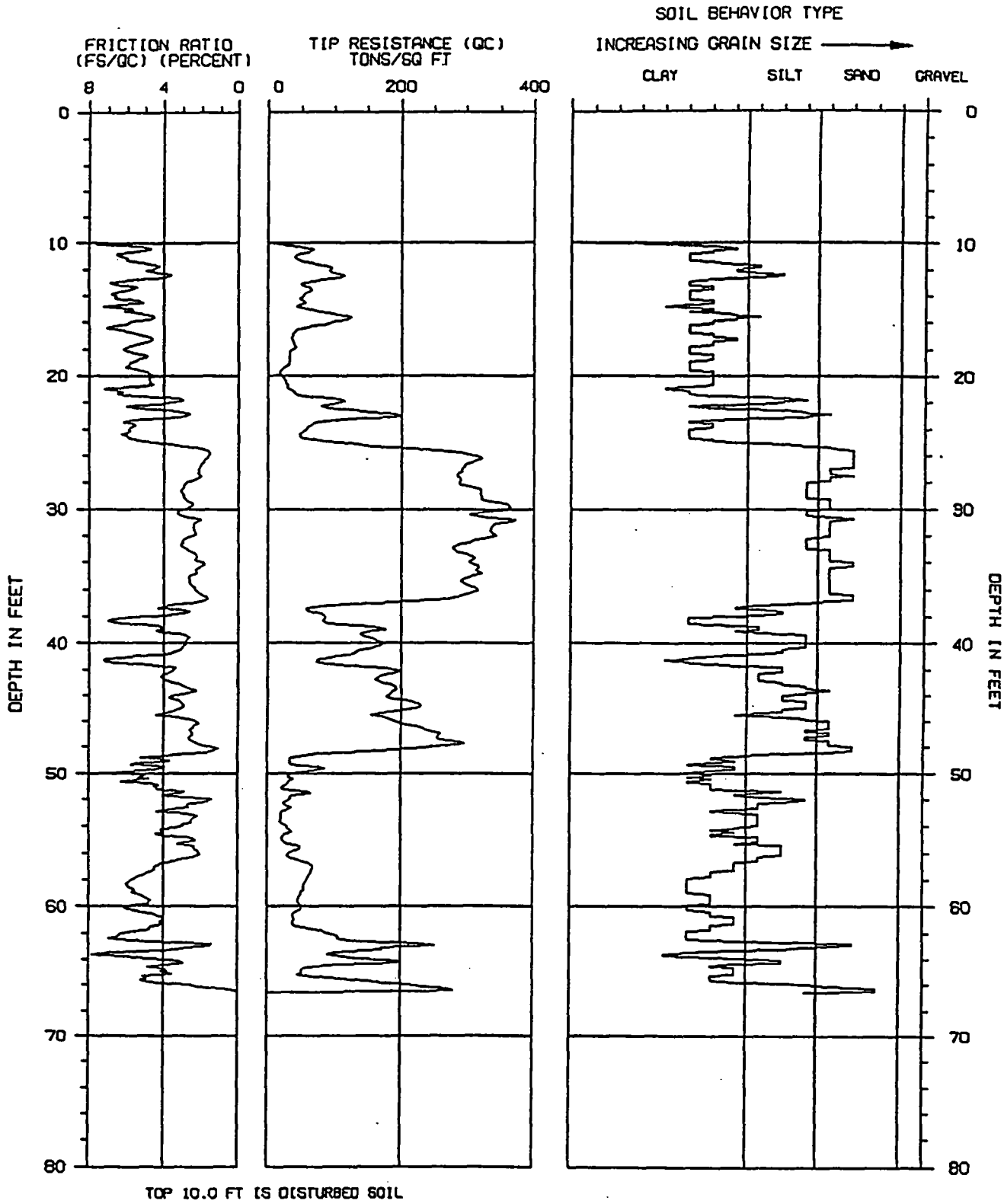
Depth Increment : .16405 m

Max Depth : 48.94 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0043.OUT
LOCATION : CWL0043B GEOLOGIST : MZD 3 DATE : /6/93





ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0044

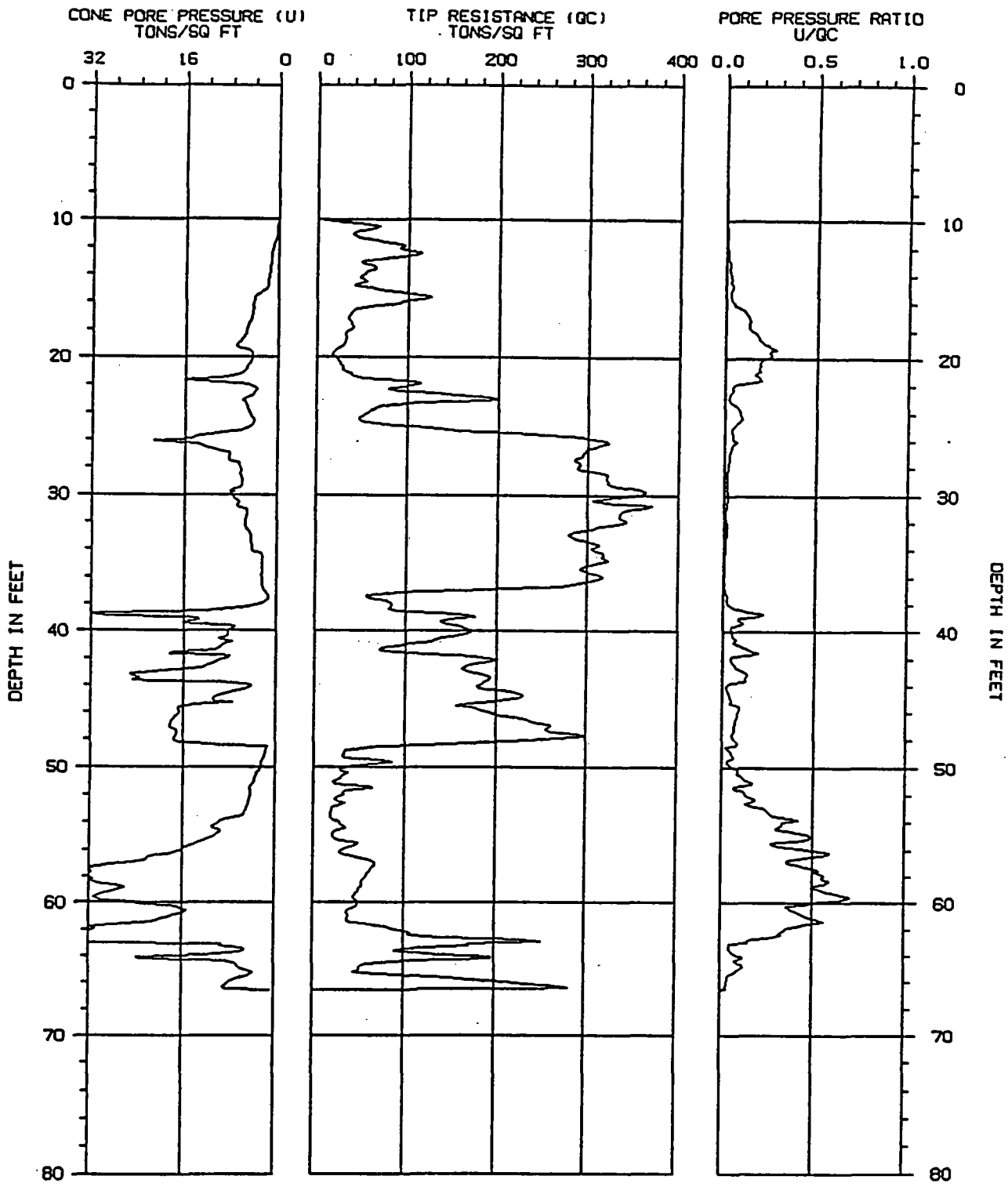
PROJECT NAME : D&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-01108

DATE : 03-10-1993

THE EARTH TECHNOLOGY CORPORATION



TOP 10.0 FT IS DISTURBED SOIL

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0044

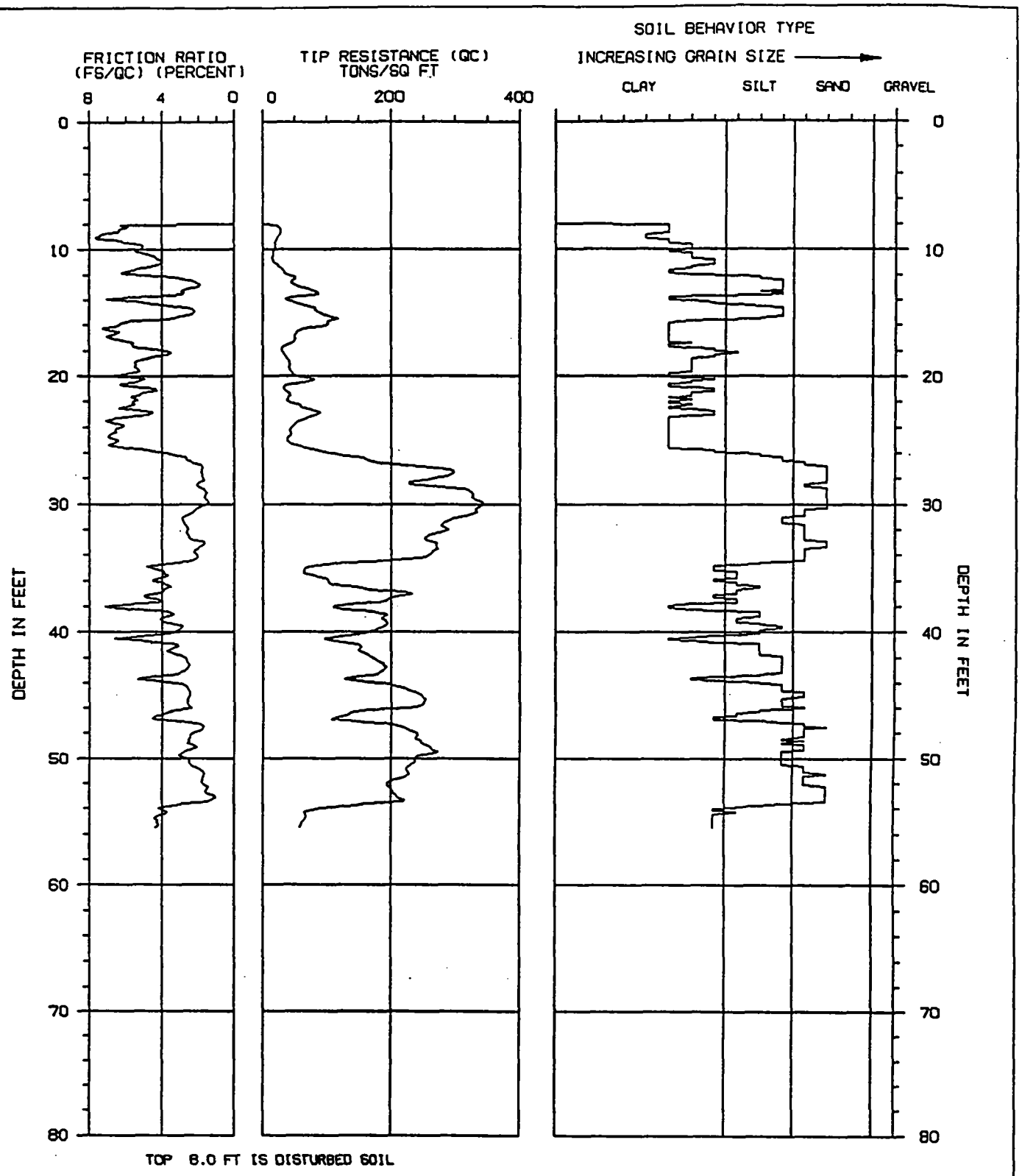
PROJECT NAME : D&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-01108

DATE : 03-10-1993

THE EARTH TECHNOLOGY CORPORATION



ASSUMED TOTAL UNIT WT = 110 PCF

ASSUMED DEPTH OF WATER TABLE = 65.0 FT

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0045

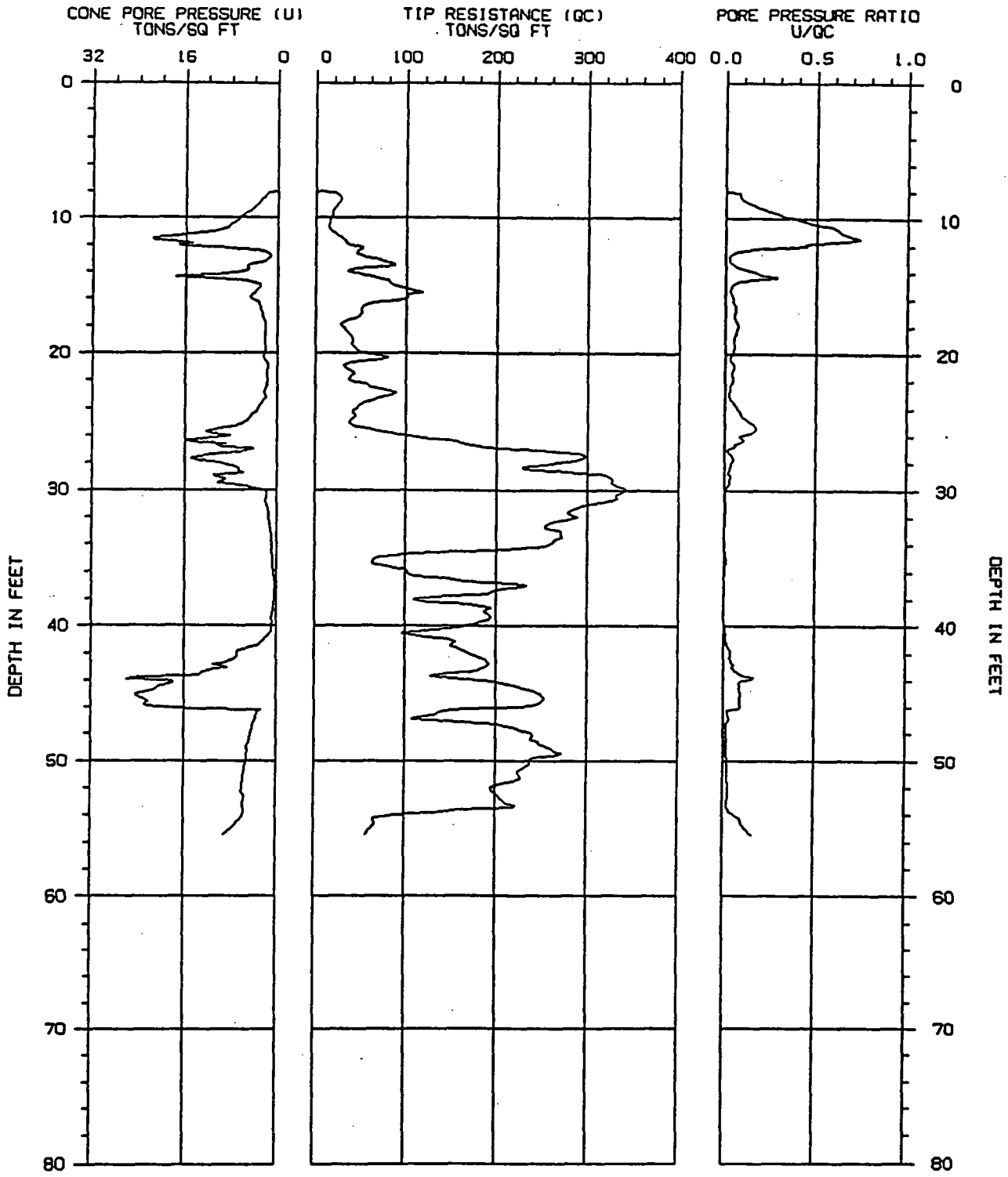
PROJECT NAME : D&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-01108

DATE : 03-10-1993

THE EARTH TECHNOLOGY CORPORATION



TOP 8.0 FT IS DISTURBED SOIL

CONE PENETRATION TEST

SOUNDING NUMBER: CWL0045

PROJECT NAME : D&M/SHELL O.A.I.

LOCATION : TORRANCE CA.

PROJECT NUMBER : 93-380-01108

DATE : 03-10-1993

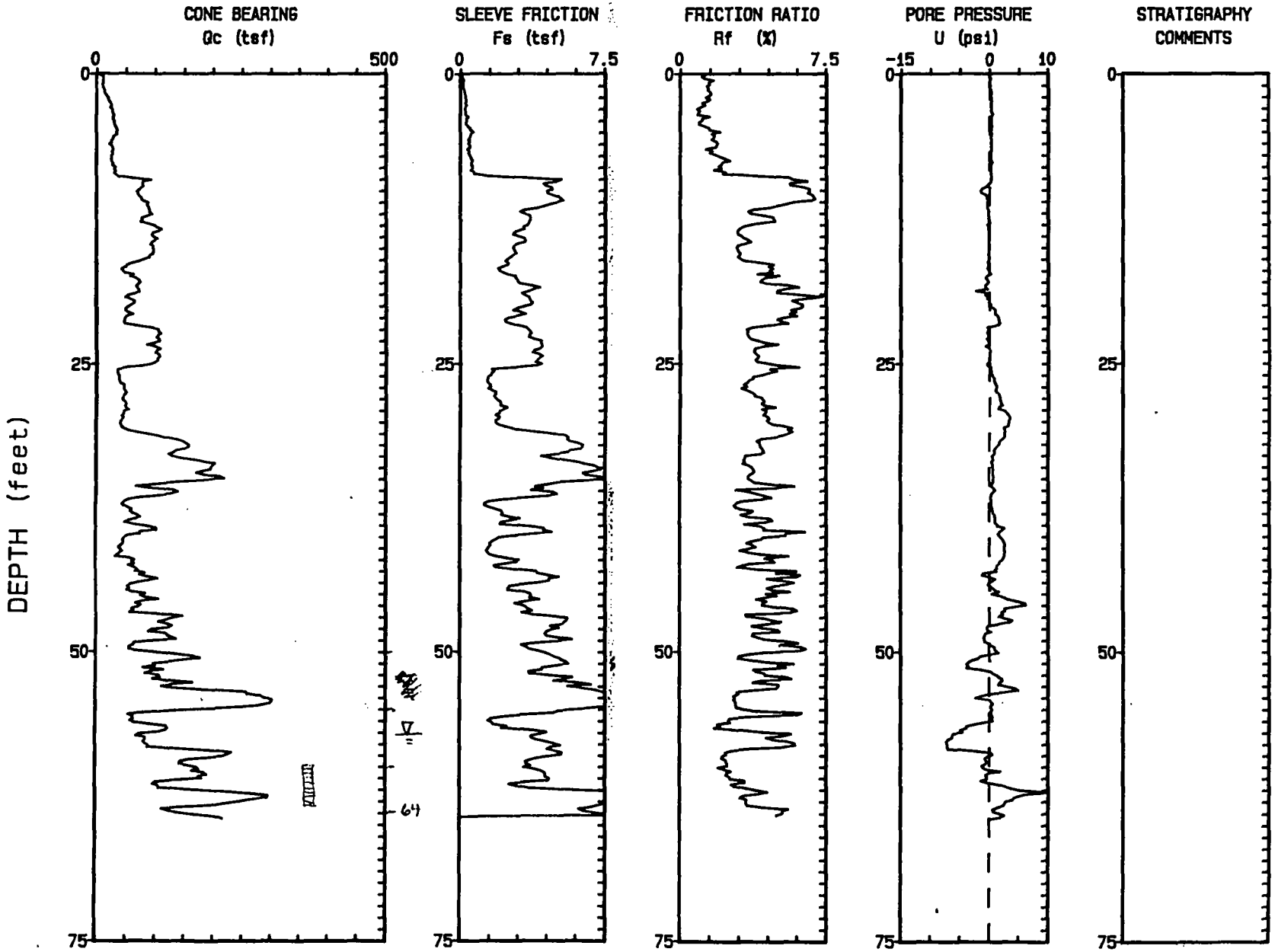
THE EARTH TECHNOLOGY CORPORATION

DAMES & MOORE

Project : DEL AMO SITE
Location : CWL0046

Contractor : GREGG IN SITU
Geologist : DAVID MEYERS

File Name : CWL0046.DAT
CPT Date : 3/16/93



Depth Increment : .164042 m

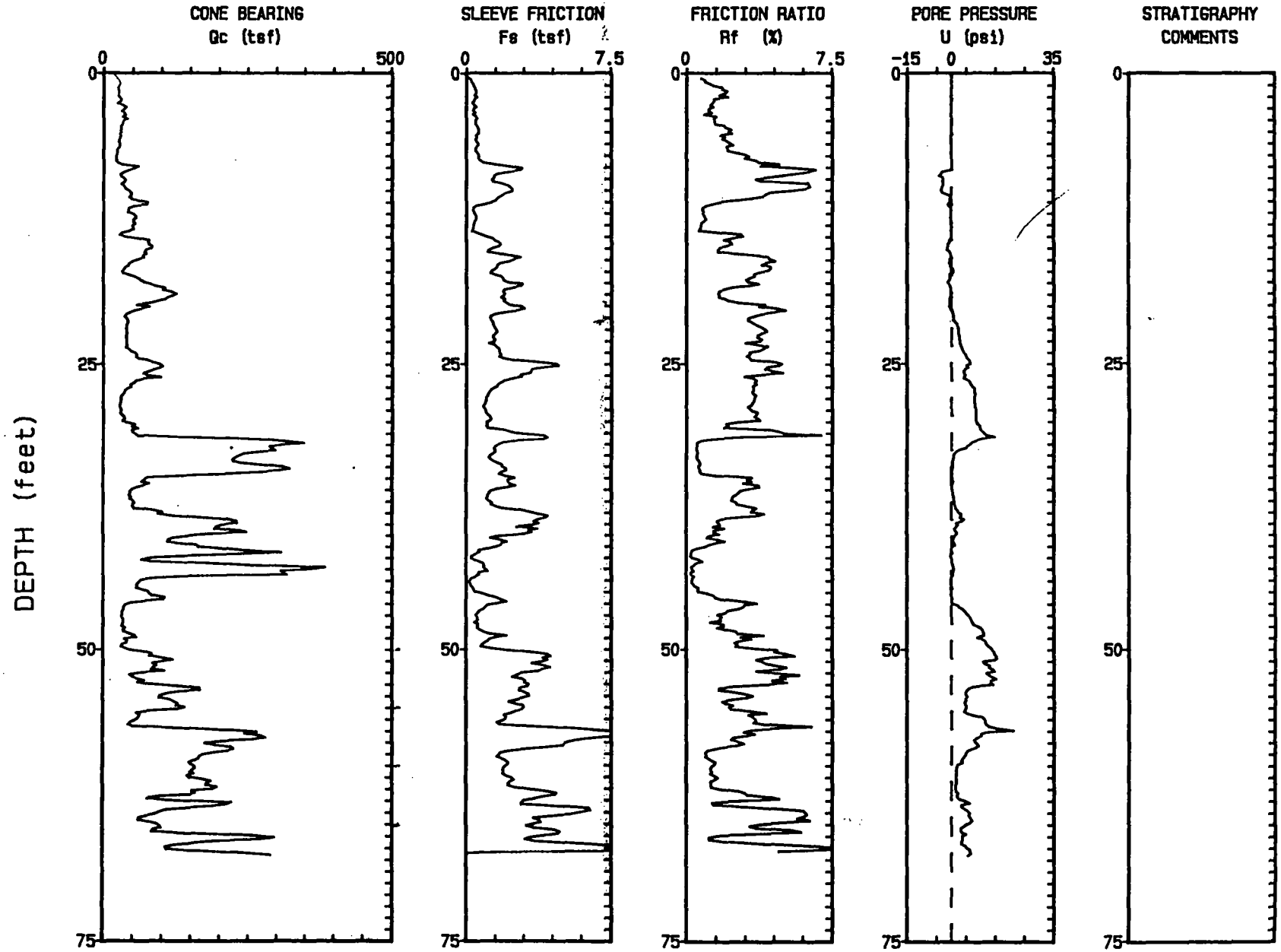
Max Depth : 64.52 m

DAMES & MOORE

Project : DEL AMO SITE
Location : CWL47A

Contractor : GREGG IN SITU
Geologist : DAVID MEYER

File Name : CWL0047A.DAT
CPT Date : 3/17/93



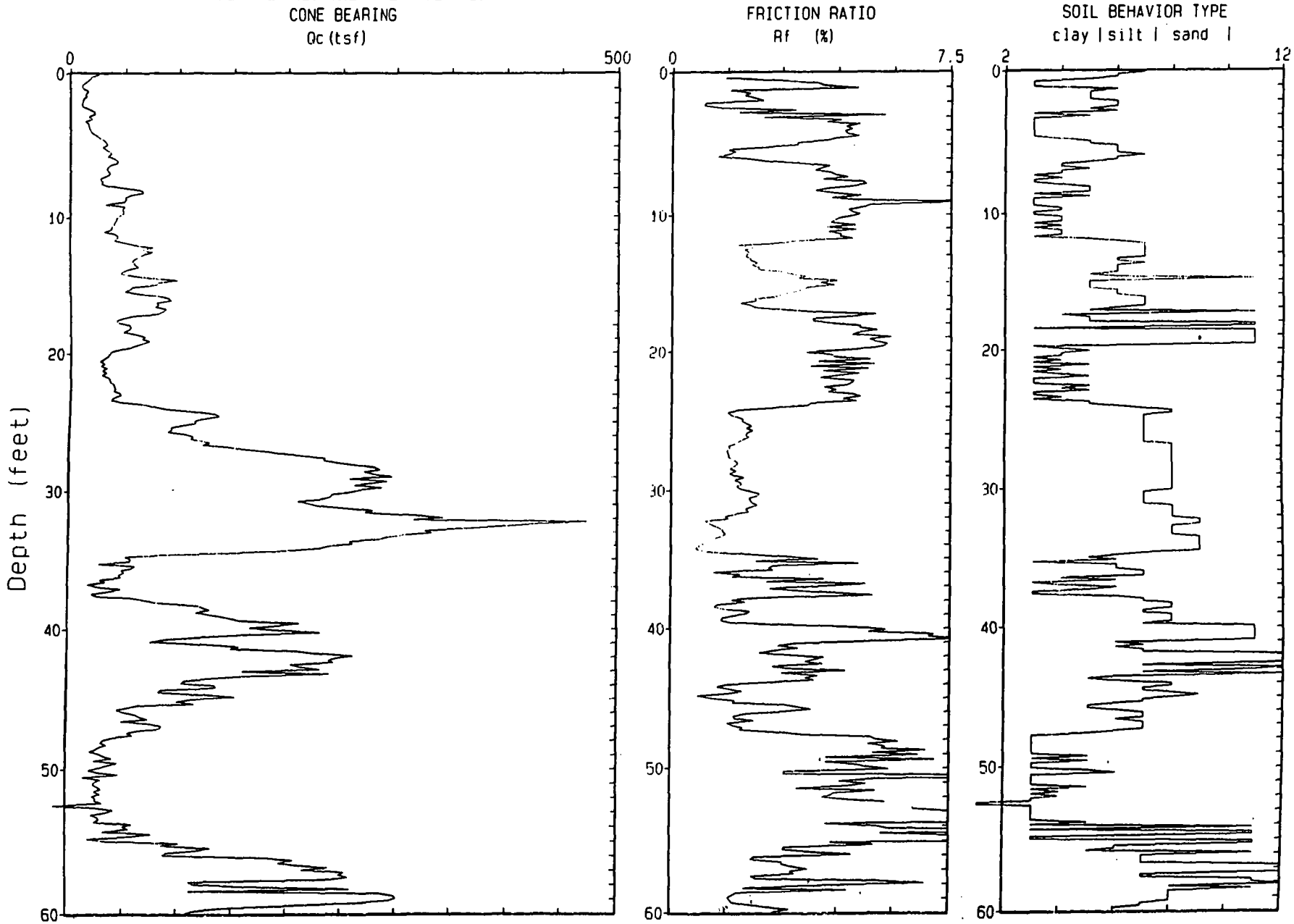
Depth Increment : .164042 m

Max Depth : 67.64 m

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0048.OUT

LOCATION : CWL0048 GEOLOGIST : DAVID MEYER DATE : 3/16/93

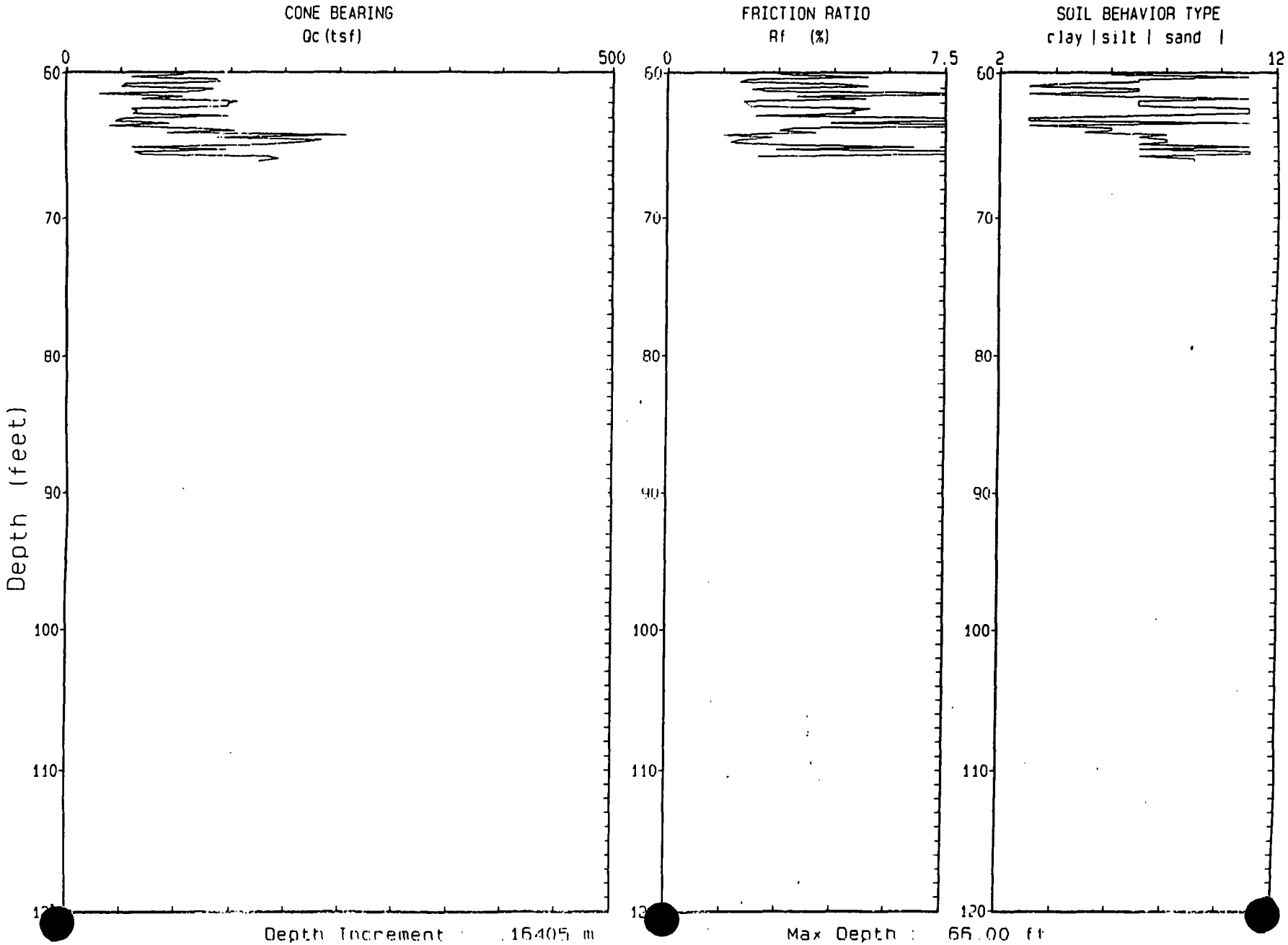


Depth Increment : .16405 m Max Depth : 66.00 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0048.OUT

LOCATION : CWL0048 GEOLOGIST : DAVID MEYER DATE : 3/16/93

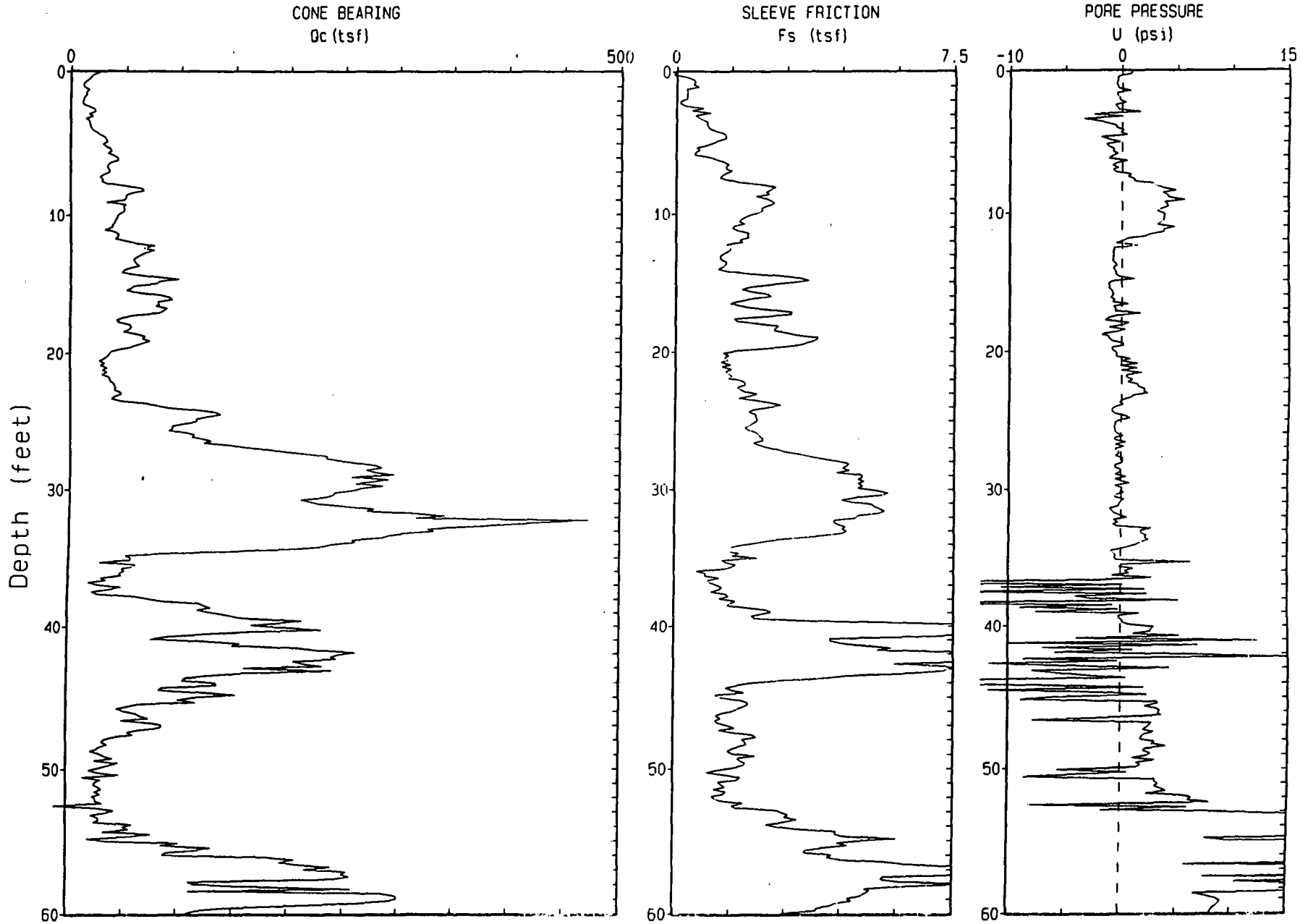


Depth Increment .16405 m Max Depth : 66.00 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0048.OUT

LOCATION : CWL0048 GEOLOGIST : DAVID MEYER DATE : 3/16/93

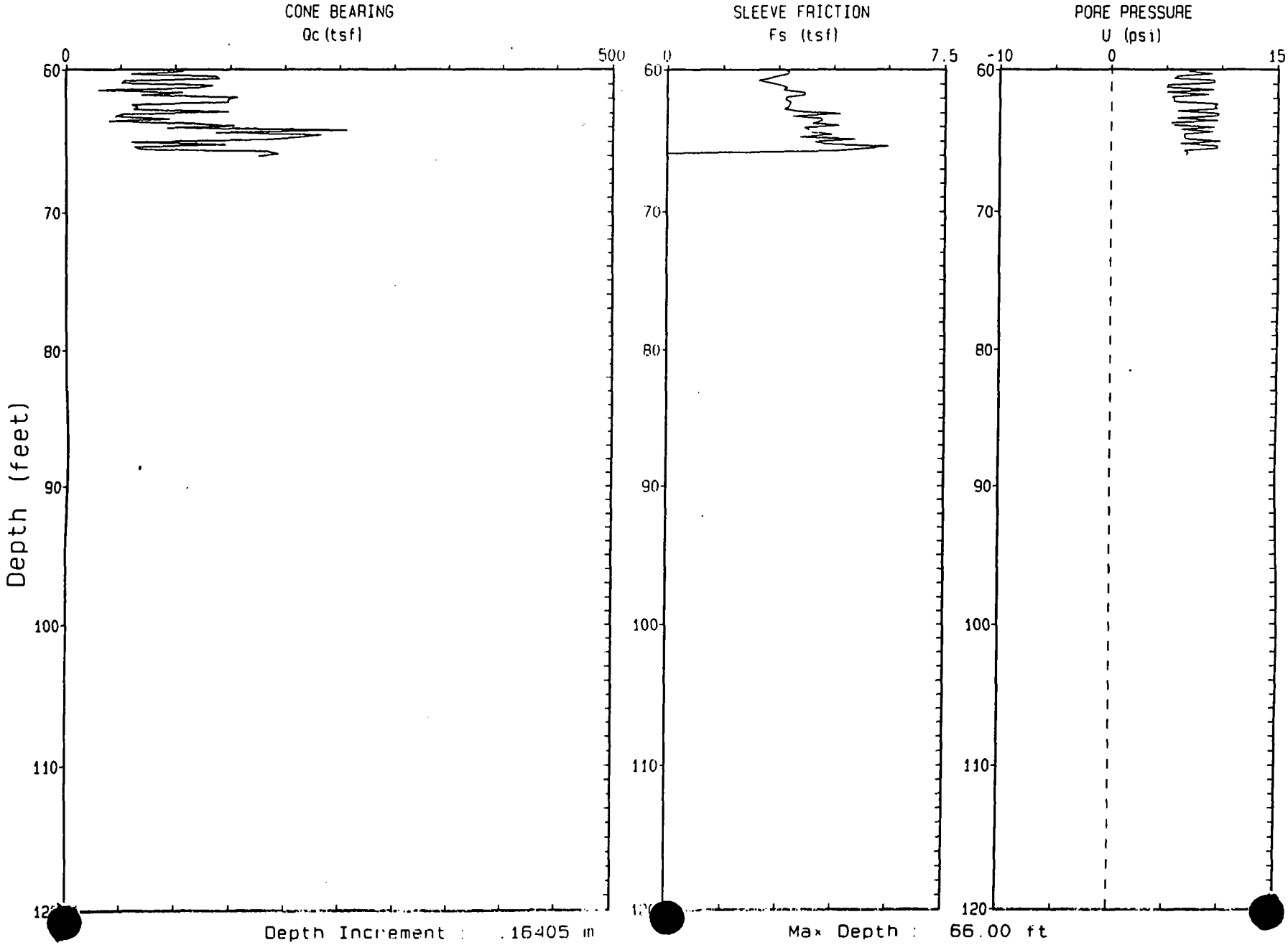


Depth Increment : .16405 m

Max Depth : 66.00 ft

DAMES & MOORE

PROJECT : DEL AMO SITE CONTRACTOR : GREGG IN SITU FILE : CWL0048.OUT
LOCATION : CWL0048 GEOLOGIST : DAVID MEYER DATE : 3/16/93



Depth Increment : .16405 m Max Depth : 66.00 ft

APPENDIX F

SUMMARY OF SOIL PROPERTIES

APPENDIX F1

SUMMARY TABLE OF LABORATORY ANALYSIS OF SOIL PROPERITES

NOTE: Complete analytical laboratory results are on file at Dames & Moore

TABLE F 1
Summary Results - Laboratory Analyses of Soil Properties
Groundwater Remedial Investigation Report - Del Amo Study Area

Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0001	SSS00005	09/09/92	15.8	AIR CONDUCTIVITY		1.5E-07	2.4E-07	cm/s
				EFFECTIVE POROSITY		7.94	1.07	%vb
				HYDRAULIC CONDUCTIVITY		1.4E-04	2.0E-04	cm/s
				NATIVE STATE AIRPERM		0.988	1.60	md
				WATER PERM		130	200	md
	SSS00008	09/09/92	20.3	AIR CONDUCTIVITY		2.3E-06	3.5E-07	cm/s
				EFFECTIVE POROSITY		7.23	0.360	%vb
				HYDRAULIC CONDUCTIVITY		5.5E-07	1.5E-05	cm/s
				NATIVE STATE AIRPERM		25.5	2.33	md
				WATER PERM		0.530	14.0	md
SBL0002	SSS00013	09/10/92	21.0	AIR CONDUCTIVITY		2.3E-06	1.4E-04	cm/s
				EFFECTIVE POROSITY		4.81	12.97	%vb
				HYDRAULIC CONDUCTIVITY		2.0E-03	1.7E-03	cm/s
				NATIVE STATE AIRPERM		22.7	2170	md
				WATER PERM		1920	1630	md
	SSS00015	09/10/92	26.0	AIR CONDUCTIVITY		1.9E-05	5.7E-06	cm/s
				EFFECTIVE POROSITY		10.6	10.9	%vb
				HYDRAULIC CONDUCTIVITY		3.2E-04	1.0E-03	cm/s
				NATIVE STATE AIRPERM		270	75.6	md
				WATER PERM		310	990	md
	SSS00016	09/10/92	26.3	AIR CONDUCTIVITY		1.3E-05	2.2E-05	cm/s
				EFFECTIVE POROSITY		10.6	16.0	%vb
				HYDRAULIC CONDUCTIVITY		8.6E-06	2.4E-06	cm/s
				NATIVE STATE AIRPERM		190	330	md
				WATER PERM		8.25	2.34	md
SBL0003	WSS00004	09/11/92	26.0	AIR CONDUCTIVITY		1.2E-07	2.5E-07	cm/s
				NATIVE STATE AIRPERM		0.826	3.73	md
	WSS00005	09/11/92	26.3	AIR CONDUCTIVITY		3.7E-08	1.0E-08	cm/s
				NATIVE STATE AIRPERM		0.251	0.151	md
	WSS00006	09/11/92	30.8	AIR CONDUCTIVITY		8.9E-07	7.7E-07	cm/s
				NATIVE STATE AIRPERM		6.01	11.5	md
	WSS00007	09/14/92	31.0	AIR CONDUCTIVITY		2.3E-07	1.2E-07	cm/s
				NATIVE STATE AIRPERM		1.54	1.71	md
SBL0004	SSS00026	09/14/92	10.5	AIR CONDUCTIVITY		1.7E-06	4.5E-08	cm/s
				NATIVE STATE AIRPERM		11.4	0.662	md
SBL0005	WSS00009	09/14/92	3.3	AIR CONDUCTIVITY		4.7E-07	<1.0E-09	cm/s
				NATIVE STATE AIRPERM		3.20	0.0134	md
	WSS00010	09/14/92	3.5	AIR CONDUCTIVITY		3.0E-07	2.6E-08	cm/s
				NATIVE STATE AIRPERM		2.02	0.388	md
SBL0011	SSS00154	10/13/92	69.5	AIR CONDUCTIVITY		3.9E-07	6.9E-08	cm/s
				BULK DENSITY		1.41	1.48	g/cc
				EFFECTIVE POROSITY		7.09	3.47	%vb
				GRAIN DENSITY		2.70	2.70	g/cc
				HYDRAULIC CONDUCTIVITY		5.2E-06	3.6E-06	cm/s
				NATIVE STATE AIRPERM		2.64	0.463	md
				PERCENT MOISTURE	33.9			%wt
				TOTAL POROSITY		47.8	45.3	%vb
				WATER PERM		5.05	3.48	md
SBL0012	SSS00155	11/17/92	30.0	AIR CONDUCTIVITY		1.4E-04	1.1E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	20.63			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt

TABLE F 1
Summary Results - Laboratory Analyses of Soil Properties
Groundwater Remedial Investigation Report - Del Amo Study Area

Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0012	SSS00155	11/17/92	30.0	BULK DENSITY		1.51	1.48	g/cc
				EFFECTIVE POROSITY		26.8	25.1	%vb
				GRAIN DENSITY		2.55	2.50	g/cc
				HYDRAULIC CONDUCTIVITY		9.2E-05	6.3E-05	cm/s
				INTRINSIC WATER PERM		96.7	66.6	cm^2
				NATIVE STATE AIRPERM		2100	1650	md
				PERCENT MOISTURE	25.5			%wt
				TOTAL POROSITY		40.8	40.9	%vb
				WATER PERM		97.9	67.5	md
	SSS00156	11/18/92	133.0	AIR CONDUCTIVITY		5.9E-05	1.7E-04	cm/s
				BULK DENSITY		1.68	1.67	g/cc
				EFFECTIVE POROSITY		22.9	26.4	%vb
				GRAIN DENSITY		2.61	2.59	g/cc
				HYDRAULIC CONDUCTIVITY		5.2E-05	7.3E-05	cm/s
				INTRINSIC WATER PERM		54.6	76.8	cm^2
				NATIVE STATE AIRPERM		892	2570	md
				TOTAL POROSITY		35.4	35.7	%vb
				WATER PERM		55.3	77.8	md
	SSS00157	11/18/92	142.5	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	72			%wt
				ATTERBERG MOISTURE AS RECVD	35.06			%wt
				ATTERBERG PLASTIC INDEX	51			%wt
				ATTERBERG PLASTIC LIMIT	21			%wt
				BULK DENSITY		1.37	1.34	g/cc
				EFFECTIVE POROSITY		11.0	9.30	%vb
				GRAIN DENSITY		2.60	2.59	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		47.3	48.2	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
SBL0013	SSS00246	11/17/92	31.5	AIR CONDUCTIVITY		1.5E-05	6.9E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	3.60			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.42	1.51	g/cc
				EFFECTIVE POROSITY		25.4	25.7	%vb
				GRAIN DENSITY		2.62	2.65	g/cc
				HYDRAULIC CONDUCTIVITY		5.9E-05	7.4E-05	cm/s
				INTRINSIC WATER PERM		62.4	78.2	cm^2
				NATIVE STATE AIRPERM		220	1040	md
				PERCENT MOISTURE	25.7			%wt
				TOTAL POROSITY		45.9	43.3	%vb
				WATER PERM		63.2	79.2	md
	SSS00257	11/18/92	72.0	AIR CONDUCTIVITY		6.6E-07	4.4E-07	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	35.38			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.42	1.42	g/cc

TABLE F 1
Summary Results - Laboratory Analyses of Soil Properties
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0013	SSS00257	11/18/92	72.0	EFFECTIVE POROSITY		13.1	18.3	%vb
				GRAIN DENSITY		2.63	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		1.5E-05	7.5E-06	cm/s
				INTRINSIC WATER PERM		15.8	7.90	cm^2
				NATIVE STATE AIRPERM		10.00	6.70	md
				TOTAL POROSITY		45.9	46.9	%vb
				WATER PERM		16.0	8.00	md
	SSS00258	11/19/92	115.5	AIR CONDUCTIVITY		4.4E-05	1.1E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	25.2105			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.51	1.48	g/cc
				EFFECTIVE POROSITY		24.8	15.2	%vb
				GRAIN DENSITY		2.58	2.55	g/cc
				HYDRAULIC CONDUCTIVITY		1.1E-04	5.7E-05	cm/s
				INTRINSIC WATER PERM		111	60.2	cm^2
				NATIVE STATE AIRPERM		663	174	md
				TOTAL POROSITY		41.4	42.0	%vb
				WATER PERM		112	61.0	md
	SSS00259	11/19/92	171.5	AIR CONDUCTIVITY		4.5E-05	1.8E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	28.4253			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.46	1.46	g/cc
				EFFECTIVE POROSITY		10.4	11.7	%vb
				GRAIN DENSITY		2.63	2.64	g/cc
				HYDRAULIC CONDUCTIVITY		8.7E-05	3.4E-05	cm/s
				INTRINSIC WATER PERM		90.9	36.0	cm^2
				NATIVE STATE AIRPERM		681	273	md
				TOTAL POROSITY		44.3	44.6	%vb
				WATER PERM		92.1	36.5	md
SBL0014	SSS00260	11/19/92	34.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	33			%wt
				ATTERBERG MOISTURE AS RECVD	18.0944			%wt
				ATTERBERG PLASTIC INDEX	15			%wt
				ATTERBERG PLASTIC LIMIT	18			%wt
				BULK DENSITY		1.65	1.63	g/cc
				EFFECTIVE POROSITY		6.30	5.70	%vb
				GRAIN DENSITY		2.61	2.62	g/cc
				HYDRAULIC CONDUCTIVITY		2.0E-06	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				PERCENT MOISTURE	21.9			%wt
				TOTAL POROSITY		36.7	37.7	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00266	11/20/92	119.0	AIR CONDUCTIVITY		1.6E-04	1.1E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	14.6325			%wt

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0014	SSS00266	11/20/92	119.0	ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.57	1.75	g/cc
				EFFECTIVE POROSITY		17.7	12.1	%vb
				GRAIN DENSITY		2.62	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		9.5E-05	5.6E-05	cm/s
				INTRINSIC WATER PERM		99.6	58.7	cm^2
				NATIVE STATE AIRPERM		2410	1640	md
				TOTAL POROSITY		40.1	34.5	%vb
				WATER PERM		101	59.5	md
	SSS00267	11/20/92	135.0	AIR CONDUCTIVITY		6.2E-07	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	29			%wt
				ATTERBERG MOISTURE AS RECVD	23.44			%wt
				ATTERBERG PLASTIC INDEX	13			%wt
				ATTERBERG PLASTIC LIMIT	16			%wt
				BULK DENSITY		1.70	1.74	g/cc
				EFFECTIVE POROSITY		13.5	5.70	%vb
				GRAIN DENSITY		2.61	2.64	g/cc
				HYDRAULIC CONDUCTIVITY		5.1E-05	<1.0E-09	cm/s
				INTRINSIC WATER PERM		53.5	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		9.36	<1.0E-03	md
				TOTAL POROSITY		34.8	34.2	%vb
				WATER PERM		54.2	<1.0E-03	md
SBL0015	SSS00262	11/23/92	94.5	ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	75			%wt
				ATTERBERG MOISTURE AS RECVD	40.59			%wt
				ATTERBERG PLASTIC INDEX	42			%wt
				ATTERBERG PLASTIC LIMIT	33			%wt
	SSS00268	11/23/92	34.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	34			%wt
				ATTERBERG MOISTURE AS RECVD	25.2408			%wt
				ATTERBERG PLASTIC INDEX	14			%wt
				ATTERBERG PLASTIC LIMIT	20			%wt
				BULK DENSITY		1.62	1.62	g/cc
				EFFECTIVE POROSITY		6.70	8.60	%vb
				GRAIN DENSITY		2.61	2.61	g/cc
				HYDRAULIC CONDUCTIVITY		1.9E-05	<1.0E-09	cm/s
				INTRINSIC WATER PERM		19.6	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				PERCENT MOISTURE	21.4			%wt
				TOTAL POROSITY		37.9	38.1	%vb
				WATER PERM		19.8	<1.0E-03	md
	SSS00269	11/23/92	77.0	AIR CONDUCTIVITY		<1.0E-09	1.8E-07	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	41			%wt
				ATTERBERG MOISTURE AS RECVD	36.3987			%wt
				ATTERBERG PLASTIC INDEX	16			%wt
				ATTERBERG PLASTIC LIMIT	25			%wt
				BULK DENSITY		1.33	1.46	g/cc
				EFFECTIVE POROSITY		12.8	15.3	%vb
				GRAIN DENSITY		2.63	2.61	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s

TABLE F 1
Summary Results - Laboratory Analyses of Soil Properties
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0015	SSS00269	11/23/92	77.0	INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	2.75	md
				TOTAL POROSITY		49.4	44.2	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00270	11/23/92	110.0	AIR CONDUCTIVITY		1.3E-05	4.2E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	25.6561			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.45	1.41	g/cc
				EFFECTIVE POROSITY		17.3	15.9	%vb
				GRAIN DENSITY		2.58	2.55	g/cc
				HYDRAULIC CONDUCTIVITY		3.2E-04	3.9E-05	cm/s
				INTRINSIC WATER PERM		340	40.5	cm^2
				NATIVE STATE AIRPERM		190	637	md
				TOTAL POROSITY		44.0	44.5	%vb
				WATER PERM		344	41.0	md
	SSS00271	11/24/92	145.0	AIR CONDUCTIVITY		9.5E-04	8.0E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	17.1537			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.70	1.66	g/cc
				EFFECTIVE POROSITY		14.9	13.8	%vb
				GRAIN DENSITY		2.60	2.57	g/cc
				HYDRAULIC CONDUCTIVITY		7.2E-05	7.7E-05	cm/s
				INTRINSIC WATER PERM		75.7	80.9	cm^2
				NATIVE STATE AIRPERM		14400	12100	md
				TOTAL POROSITY		34.7	35.6	%vb
				WATER PERM		76.7	81.9	md
SBL0016	SSS00272	11/23/92	45.0	AIR CONDUCTIVITY		6.1E-07	4.1E-07	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	24			%wt
				ATTERBERG MOISTURE AS RECVD	12.6057			%wt
				ATTERBERG PLASTIC INDEX	9			%wt
				ATTERBERG PLASTIC LIMIT	15			%wt
				BULK DENSITY		1.84	1.83	g/cc
				EFFECTIVE POROSITY		11.6	13.5	%vb
				GRAIN DENSITY		2.60	2.66	g/cc
				HYDRAULIC CONDUCTIVITY		1.7E-05	2.7E-06	cm/s
				INTRINSIC WATER PERM		17.7	2.84	cm^2
				NATIVE STATE AIRPERM		9.26	6.22	md
				PERCENT MOISTURE	12.7			%wt
				TOTAL POROSITY		29.3	31.1	%vb
				WATER PERM		17.9	2.88	md
	SSS00273	11/24/92	110.0	AIR CONDUCTIVITY		2.7E-04	6.4E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	25.9715			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.46	1.47	g/cc

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0016	SSS00273	11/24/92	110.0	EFFECTIVE POROSITY		11.8	12.1	%vb
				GRAIN DENSITY		2.57	2.58	g/cc
				HYDRAULIC CONDUCTIVITY		6.2E-05	6.8E-05	cm/s
				INTRINSIC WATER PERM		65.2	71.5	cm^2
				NATIVE STATE AIRPERM		4030	9680	md
				TOTAL POROSITY		43.2	42.9	%vb
				WATER PERM		66.1	72.5	md
	SSS00274	11/24/92	134.0	AIR CONDUCTIVITY		1.0E-05	6.3E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	18.1522			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	18			%wt
				BULK DENSITY		1.69	1.67	g/cc
				EFFECTIVE POROSITY		10.2	12.3	%vb
				GRAIN DENSITY		2.59	2.58	g/cc
				HYDRAULIC CONDUCTIVITY		8.9E-06	5.1E-05	cm/s
				INTRINSIC WATER PERM		9.36	53.5	cm^2
				NATIVE STATE AIRPERM		157	953	md
				TOTAL POROSITY		34.6	35.5	%vb
				WATER PERM		9.48	54.2	md
SBL0019	SSS00280	11/30/92	48.5	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				BULK DENSITY		1.56	1.59	g/cc
				EFFECTIVE POROSITY		8.2	6.39	%vb
				GRAIN DENSITY		2.61	2.59	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				PERCENT MOISTURE	30.7			%wt
				TOTAL POROSITY		40.00	38.79	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00281	12/01/92	122.7	AIR CONDUCTIVITY		1.1E-06	8.0E-07	cm/s
				BULK DENSITY		1.85	1.80	g/cc
				EFFECTIVE POROSITY		10.24	12.49	%vb
				GRAIN DENSITY		2.61	2.58	g/cc
				HYDRAULIC CONDUCTIVITY		3.0E-06	1.2E-06	cm/s
				INTRINSIC WATER PERM		3.23	1.32	cm^2
				NATIVE STATE AIRPERM		13.8	7.27	md
				TOTAL POROSITY		29.19	30.43	%vb
				WATER PERM		3.27	1.34	md
	SSS00282	12/01/92	128.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				BULK DENSITY		1.35	1.27	g/cc
				EFFECTIVE POROSITY		7.76	7.27	%vb
				GRAIN DENSITY		2.72	2.62	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		44.80	51.34	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00283	12/01/92	159.6	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				BULK DENSITY		1.48	1.75	g/cc
				EFFECTIVE POROSITY		10.26	4.89	%vb
				GRAIN DENSITY		2.59	2.62	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0019	SSS00283	12/01/92	159.6	INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		42.95	33.23	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00284	12/02/92	168.5	AIR CONDUCTIVITY		1.7E-05	5.8E-06	cm/s
				BULK DENSITY		1.49	1.52	g/cc
				EFFECTIVE POROSITY		18.73	14.46	%vb
				GRAIN DENSITY		2.58	2.59	g/cc
				HYDRAULIC CONDUCTIVITY		1.5E-04	9.8E-05	cm/s
				INTRINSIC WATER PERM		168	109	cm^2
				NATIVE STATE AIRPERM		260.00	88.3	md
				TOTAL POROSITY		42.35	41.27	%vb
				WATER PERM		170	110	md
SBL0020	SSS00275	12/01/92	42.0	AIR CONDUCTIVITY		1.4E-05	1.1E-04	cm/s
				BULK DENSITY		1.76	1.73	g/cc
				EFFECTIVE POROSITY		16.55	15.14	%vb
				GRAIN DENSITY		2.60	2.59	g/cc
				HYDRAULIC CONDUCTIVITY		8.7E-05	2.1E-04	cm/s
				INTRINSIC WATER PERM		93.3	227	cm^2
				NATIVE STATE AIRPERM		220	1600	md
				PERCENT MOISTURE	15.0			%wt
				TOTAL POROSITY		32.42	33.14	%vb
				WATER PERM		94.5	230	md
	SSS00276	12/01/92	52.0	AIR CONDUCTIVITY		3.5E-06	5.1E-06	cm/s
				BULK DENSITY		1.44	1.44	g/cc
				EFFECTIVE POROSITY		21.69	12.52	%vb
				GRAIN DENSITY		2.68	2.71	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		42.0	77.8	md
				PERCENT MOISTURE	22.5			%wt
				TOTAL POROSITY		46.24	46.81	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00296	12/01/92	48.5	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	32			%wt
				ATTERBERG MOISTURE AS RECVD	25.8555			%wt
				ATTERBERG PLASTIC INDEX	12			%wt
				ATTERBERG PLASTIC LIMIT	20			%wt
				BULK DENSITY		1.55	1.52	g/cc
				EFFECTIVE POROSITY		5.57	5.61	%vb
				GRAIN DENSITY		2.62	2.62	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				PERCENT MOISTURE	28.9			%wt
				TOTAL POROSITY		40.70	41.90	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00277	12/02/92	81.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				BULK DENSITY		1.29	1.22	g/cc
				EFFECTIVE POROSITY		6.63	6.30	%vb
				GRAIN DENSITY		2.56	2.61	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2

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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0020	SSS00277	12/02/92	81.0	NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		49.14	53.47	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00278	12/02/92	111.0	AIR CONDUCTIVITY		1.7E-04	<1.0E-03	cm/s
				BULK DENSITY		1.65	1.58	g/cc
				EFFECTIVE POROSITY		15.6	15.9	%vb
				GRAIN DENSITY		2.63	2.58	g/cc
				HYDRAULIC CONDUCTIVITY		1.2E-03	1.7E-04	cm/s
				INTRINSIC WATER PERM		1303	188	cm^2
				NATIVE STATE AIRPERM		2520	1500	md
				TOTAL POROSITY		37.26	38.19	%vb
				WATER PERM		1320	190	md
	SSS00279	12/02/92	140.5	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				BULK DENSITY		1.51	1.48	g/cc
				EFFECTIVE POROSITY		7.31	5.17	%vb
				GRAIN DENSITY		2.63	2.58	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		42.44	42.58	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00297	12/02/92	79.5	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				BULK DENSITY		1.24	1.20	g/cc
				EFFECTIVE POROSITY		7.39	6.54	%vb
				GRAIN DENSITY		2.58	2.59	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		50.63	53.82	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
			81.0	ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	79			%wt
				ATTERBERG MOISTURE AS RECVD	40.9363			%wt
				ATTERBERG PLASTIC INDEX	52			%wt
				ATTERBERG PLASTIC LIMIT	27			%wt
	SSS00298	12/02/92	142.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	22.8383			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
			143.0	AIR CONDUCTIVITY		2.0E-05	6.4E-07	cm/s
				BULK DENSITY		1.53	1.55	g/cc
				EFFECTIVE POROSITY		14.6	11.9	%vb
				GRAIN DENSITY		2.62	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		8.2E-05	<1.0E-09	cm/s
				INTRINSIC WATER PERM		88.0	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		310	3.87	md
				TOTAL POROSITY		41.54	42.06	%vb
				WATER PERM		89.1	<1.0E-03	md
SBL0021	SSS00299	12/04/92	97.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	64			%wt
				ATTERBERG MOISTURE AS RECVD	40.5324			%wt
				ATTERBERG PLASTIC INDEX	40			%wt

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0021	SSS00299	12/04/92	97.0	ATTERBERG PLASTIC LIMIT	24			%wt
				BULK DENSITY		1.30	1.18	g/cc
				EFFECTIVE POROSITY		6.48	7.08	%vb
				GRAIN DENSITY		2.56	2.62	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		49.22	54.74	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00300	12/04/92	104.0	AIR CONDUCTIVITY		4.0E-05	1.8E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	29.8583			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.42	FAIL	g/cc
				EFFECTIVE POROSITY		10.1	FAIL	%vb
				GRAIN DENSITY		2.57	FAIL	g/cc
				HYDRAULIC CONDUCTIVITY		6.2E-04	FAIL	cm/s
				INTRINSIC WATER PERM		671	FAIL	cm^2
				NATIVE STATE AIRPERM		600	2700	md
				TOTAL POROSITY		44.70	FAIL	%vb
				WATER PERM		680	FAIL	md
	SSS00301	12/04/92	137.5	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	54			%wt
				ATTERBERG MOISTURE AS RECVD	40.7617			%wt
				ATTERBERG PLASTIC INDEX	28			%wt
				ATTERBERG PLASTIC LIMIT	26			%wt
				BULK DENSITY		1.26	1.31	g/cc
				EFFECTIVE POROSITY		6.25	5.09	%vb
				GRAIN DENSITY		2.64	2.66	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		52.10	50.65	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00302	12/07/92	197.5	AIR CONDUCTIVITY		3.7E-05	4.8E-05	cm/s
				BULK DENSITY		1.42	1.44	g/cc
				EFFECTIVE POROSITY		12.1	11.7	%vb
				GRAIN DENSITY		2.61	2.60	g/cc
				HYDRAULIC CONDUCTIVITY		1.1E-04	1.5E-04	cm/s
				INTRINSIC WATER PERM		118	158	cm^2
				NATIVE STATE AIRPERM		570	730	md
				TOTAL POROSITY		45.59	44.54	%vb
				WATER PERM		120	160	md
			201.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	22.9533			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
	SSS00303	12/08/92	235.0	AIR CONDUCTIVITY		2.3E-07	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt

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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0021	SSS00303	12/08/92	235.0	ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	27			%wt
				BULK DENSITY		1.50	1.50	g/cc
				EFFECTIVE POROSITY		14.3	8.35	%vb
				GRAIN DENSITY		2.64	2.64	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	1.9E-06	cm/s
				INTRINSIC WATER PERM		<1.0E-03	2.02	cm^2
				NATIVE STATE AIRPERM		1.38	<1.0E-03	md
				TOTAL POROSITY		43.35	43.32	%vb
				WATER PERM		<1.0E-03	2.05	md
SBL0022	SSS00285	12/04/92	35.0	AIR CONDUCTIVITY		3.2E-04	4.0E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	16.5187			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.48	1.43	g/cc
				EFFECTIVE POROSITY		28.4	33.2	%vb
				GRAIN DENSITY		2.58	2.59	g/cc
				HYDRAULIC CONDUCTIVITY		5.9E-04	4.8E-03	cm/s
				INTRINSIC WATER PERM		632	5231	cm^2
				NATIVE STATE AIRPERM		4900	6000	md
				PERCENT MOISTURE	11.1			%wt
				TOTAL POROSITY		41.26	43.18	%vb
				WATER PERM		640	5300	md
	SSS00286	12/04/92	63.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	44			%wt
				ATTERBERG MOISTURE AS RECVD	29.2698			%wt
				ATTERBERG PLASTIC INDEX	17			%wt
				ATTERBERG PLASTIC LIMIT	27			%wt
				BULK DENSITY		1.49	1.43	g/cc
				EFFECTIVE POROSITY		8.90	6.47	%vb
				GRAIN DENSITY		2.69	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		44.69	46.45	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00287	12/07/92	89.0	AIR CONDUCTIVITY		2.2E-05	4.9E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	26.0744			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.46	1.47	g/cc
				EFFECTIVE POROSITY		17.8	11.4	%vb
				GRAIN DENSITY		2.56	2.59	g/cc
				HYDRAULIC CONDUCTIVITY		6.9E-04	3.0E-03	cm/s
				INTRINSIC WATER PERM		711	3058	cm^2
				NATIVE STATE AIRPERM		340	750	md
				TOTAL POROSITY		43.16	41.38	%vb
				WATER PERM		720	3098	md
	SSS00288	12/07/92	152.0	AIR CONDUCTIVITY		2.2E-06	1.4E-06	cm/s

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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0022	SSS00288	12/07/92	152.0	ATTERBERG CLASSIFICATION	ML			
				ATTERBERG LIQUID LIMIT	24			%wt
				ATTERBERG MOISTURE AS RECVD	23.6551			%wt
				ATTERBERG PLASTIC INDEX	3			%wt
				ATTERBERG PLASTIC LIMIT	21			%wt
				BULK DENSITY		1.57	1.62	g/cc
				EFFECTIVE POROSITY		20.4	14.5	%vb
				GRAIN DENSITY		2.63	2.61	g/cc
				HYDRAULIC CONDUCTIVITY		1.7E-05	2.2E-05	cm/s
				INTRINSIC WATER PERM		17.8	22.7	cm^2
				NATIVE STATE AIRPERM		19.6	12.8	md
				TOTAL POROSITY		40.37	38.16	%vb
				WATER PERM		18.1	23.0	md
	SSS00289	12/08/92	200.0	AIR CONDUCTIVITY		1.6E-04	2.1E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	21.54			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.48	1.46	g/cc
				EFFECTIVE POROSITY		12.1	17.2	%vb
				GRAIN DENSITY		2.60	2.59	g/cc
				HYDRAULIC CONDUCTIVITY		6.2E-04	4.0E-04	cm/s
				INTRINSIC WATER PERM		632	405	cm^2
				NATIVE STATE AIRPERM		2400	3100	md
				TOTAL POROSITY		41.79	42.47	%vb
				WATER PERM		640	410	md
SBL0023	SSS00290	12/10/92	47.0	AIR CONDUCTIVITY		9.4E-06	2.9E-04	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	34			%wt
				ATTERBERG PLASTIC INDEX	17			%wt
				ATTERBERG PLASTIC LIMIT	17			%wt
				BULK DENSITY		1.72	1.74	g/cc
				EFFECTIVE POROSITY		9.98	14.6	%vb
				GRAIN DENSITY		2.62	2.57	g/cc
				HYDRAULIC CONDUCTIVITY		6.3E-06	1.5E-04	cm/s
				INTRINSIC WATER PERM		6.78	158	cm^2
				NATIVE STATE AIRPERM		140	4400	md
				PERCENT MOISTURE	13.1			%wt
				TOTAL POROSITY		34.42	32.38	%vb
				WATER PERM		6.87	160	md
	SSS00291	12/10/92	81.0	AIR CONDUCTIVITY		1.9E-04	1.3E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	16.09			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.44	1.41	g/cc
				EFFECTIVE POROSITY		28.9	28.3	%vb
				GRAIN DENSITY		2.60	2.56	g/cc
				HYDRAULIC CONDUCTIVITY		2.2E-03	2.5E-04	cm/s
				INTRINSIC WATER PERM		2369	266	cm^2
				NATIVE STATE AIRPERM		2800	1900	md
				TOTAL POROSITY		44.56	43.87	%vb

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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0023	SSS00291	12/10/92	81.0	WATER PERM		2400	270	md
	SSS00292	12/10/92	125.0	AIR CONDUCTIVITY		4.1E-04	1.2E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	13.29			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.67	1.64	g/cc
				EFFECTIVE POROSITY		22.8	16.9	%vb
				GRAIN DENSITY		2.59	2.58	g/cc
				HYDRAULIC CONDUCTIVITY		1.5E-04	3.2E-04	cm/s
				INTRINSIC WATER PERM		168	336	cm^2
				NATIVE STATE AIRPERM		6200	1900	md
				TOTAL POROSITY		35.49	36.55	%vb
				WATER PERM		170	340	md
SBL0024	SSS00293	12/09/92	41.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	39			%wt
				ATTERBERG MOISTURE AS RECVD	25.12			%wt
				ATTERBERG PLASTIC INDEX	14			%wt
				ATTERBERG PLASTIC LIMIT	25			%wt
				BULK DENSITY		1.54	1.32	g/cc
				EFFECTIVE POROSITY		7.89	8.63	%vb
				GRAIN DENSITY		2.57	2.52	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				PERCENT MOISTURE	33.3			%wt
				TOTAL POROSITY		40.13	46.11	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00294	12/09/92	111.0	AIR CONDUCTIVITY		2.6E-05	2.2E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	27.16			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.45	1.42	g/cc
				EFFECTIVE POROSITY		7.16	8.11	%vb
				GRAIN DENSITY		2.59	2.59	g/cc
				HYDRAULIC CONDUCTIVITY		2.4E-03	4.1E-04	cm/s
				INTRINSIC WATER PERM		2566	424	cm^2
				NATIVE STATE AIRPERM		400	340	md
				TOTAL POROSITY		43.43	44.67	%vb
				WATER PERM		2600	430	md
	SSS00295	12/09/92	144.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	88			%wt
				ATTERBERG PLASTIC INDEX	61			%wt
				ATTERBERG PLASTIC LIMIT	27			%wt
				BULK DENSITY		1.15	1.16	g/cc
				EFFECTIVE POROSITY		8.98	9.33	%vb
				GRAIN DENSITY		2.59	2.51	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	5.8E-06	cm/s
				INTRINSIC WATER PERM		<1.0E-03	6.26	cm^2

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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0024	SSS00295	12/09/92	144.0	NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		55.70	52.19	%vb
				WATER PERM		<1.0E-03	6.34	md
SBL0025	SSS00304	12/14/92	29.0	AIR CONDUCTIVITY		3.6E-04	2.3E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	9.16			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.46	1.47	g/cc
				EFFECTIVE POROSITY		33.2	24.5	%vb
				GRAIN DENSITY		2.63	2.64	g/cc
				HYDRAULIC CONDUCTIVITY		1.7E-03	1.7E-03	cm/s
				INTRINSIC WATER PERM		1777	1875	cm^2
				NATIVE STATE AIRPERM		5400	3400	md
				PERCENT MOISTURE	9.82			%wt
				TOTAL POROSITY		41.5	41.7	%vb
				WATER PERM		1800	1900	md
	SSS00305	12/14/92	90.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	MH			
				ATTERBERG LIQUID LIMIT	53			%wt
				ATTERBERG MOISTURE AS RECVD	36.49			%wt
				ATTERBERG PLASTIC INDEX	18			%wt
				ATTERBERG PLASTIC LIMIT	35			%wt
				BULK DENSITY		1.30	1.35	g/cc
				EFFECTIVE POROSITY		6.80	7.41	%vb
				GRAIN DENSITY		2.72	2.69	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		50.1	47.4	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00254	12/15/92	130.0	AIR CONDUCTIVITY		1.6E-04	1.5E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	18.73			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.63	1.59	g/cc
				EFFECTIVE POROSITY		16.0	9.21	%vb
				GRAIN DENSITY		2.66	2.66	g/cc
				HYDRAULIC CONDUCTIVITY		8.4E-04	7.3E-04	cm/s
				INTRINSIC WATER PERM		908	790	cm^2
				NATIVE STATE AIRPERM		2400	2500	md
				TOTAL POROSITY		36.1	37.9	%vb
				WATER PERM		920	800	md
	SSS00255	12/15/92	150.0	AIR CONDUCTIVITY		3.1E-04	<1.0E-03	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	9.32			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.57	1.66	g/cc
				EFFECTIVE POROSITY		24.8	16.5	%vb

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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0025	SSS00255	12/15/92	150.0	GRAIN DENSITY		2.65	2.64	g/cc
				HYDRAULIC CONDUCTIVITY		2.3E-04	1.7E-04	cm/s
				INTRINSIC WATER PERM		247	188	cm^2
				NATIVE STATE AIRPERM		4700	1500	md
				TOTAL POROSITY		38.9	35.0	%vb
				WATER PERM		250	190	md
SBL0026	SSS00306	12/15/92	35.0	AIR CONDUCTIVITY		5.3E-05	2.7E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	23.59			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.46	1.49	g/cc
				EFFECTIVE POROSITY		13.5	10.9	%vb
				GRAIN DENSITY		2.67	2.63	g/cc
				HYDRAULIC CONDUCTIVITY		6.7E-04	5.0E-04	cm/s
				INTRINSIC WATER PERM		691	563	cm^2
				NATIVE STATE AIRPERM		810	410	md
				PERCENT MOISTURE	25.2			%wt
				TOTAL POROSITY		42.3	40.0	%vb
				WATER PERM		700	570	md
	SSS00307	12/16/92	71.0	AIR CONDUCTIVITY		6.3E-07	1.1E-06	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	29.73			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	24			%wt
				BULK DENSITY		1.48	1.49	g/cc
				EFFECTIVE POROSITY		16.3	18.4	%vb
				GRAIN DENSITY		2.66	2.65	g/cc
				HYDRAULIC CONDUCTIVITY		8.6E-06	1.8E-05	cm/s
				INTRINSIC WATER PERM		9.25	19.6	cm^2
				NATIVE STATE AIRPERM		9.6	16.2	md
				TOTAL POROSITY		42.6	41.6	%vb
				WATER PERM		9.37	19.9	md
	SSS00308	12/16/92	140.0	AIR CONDUCTIVITY		3.8E-04	1.1E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	24.87			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.47	1.46	g/cc
				EFFECTIVE POROSITY		9.52	17.7	%vb
				GRAIN DENSITY		2.67	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		6.7E-04	3.6E-04	cm/s
				INTRINSIC WATER PERM		721	385	cm^2
				NATIVE STATE AIRPERM		5800	1600	md
				TOTAL POROSITY		41.5	42.1	%vb
				WATER PERM		730	390	md
	SSS00309	12/17/92	160.0	AIR CONDUCTIVITY		2.1E-06	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	40			%wt
				ATTERBERG MOISTURE AS RECVD	31.22			%wt
				ATTERBERG PLASTIC INDEX	18			%wt

TABLE F 1
Summary Results - Laboratory Analyses of Soil Properties
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0026	SSS00309	12/17/92	160.0	ATTERBERG PLASTIC LIMIT	22			%wt
				BULK DENSITY		1.54	1.62	g/cc
				EFFECTIVE POROSITY		10.6	3.50	%vb
				GRAIN DENSITY		2.66	2.65	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		31.3	<1.0E-03	md
				TOTAL POROSITY		39.4	37.6	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
SBL0027	SSS00310	12/16/92	25.0	AIR CONDUCTIVITY		4.6E-04	1.1E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	6.22			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.55	1.63	g/cc
				EFFECTIVE POROSITY		24.6	15.8	%vb
				GRAIN DENSITY		2.64	2.63	g/cc
				HYDRAULIC CONDUCTIVITY		2.7E-04	2.1E-04	cm/s
				INTRINSIC WATER PERM		286	227	cm^2
				NATIVE STATE AIRPERM		7000	1700	md
				PERCENT MOISTURE	12.9			%wt
				TOTAL POROSITY		39.9	35.9	%vb
				WATER PERM		290	230	md
	SSS00311	12/16/92	50.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	42			%wt
				ATTERBERG MOISTURE AS RECVD	38.73			%wt
				ATTERBERG PLASTIC INDEX	20			%wt
				ATTERBERG PLASTIC LIMIT	22			%wt
				BULK DENSITY		1.32	1.33	g/cc
				EFFECTIVE POROSITY		5.74	6.46	%vb
				GRAIN DENSITY		2.64	2.63	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		48.8	48.3	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00312	12/18/92	151.0	AIR CONDUCTIVITY		3.0E-04	3.6E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	6.98			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.59	1.55	g/cc
				EFFECTIVE POROSITY		26.2	28.1	%vb
				GRAIN DENSITY		2.65	2.65	g/cc
				HYDRAULIC CONDUCTIVITY		2.8E-03	9.2E-04	cm/s
				INTRINSIC WATER PERM		2961	987	cm^2
				NATIVE STATE AIRPERM		4600	5400	md
				TOTAL POROSITY		36.2	37.8	%vb
				WATER PERM		3000	1000	md
	SSS00313	12/18/92	158.0	AIR CONDUCTIVITY		2.1E-06	1.7E-06	cm/s
				ATTERBERG CLASSIFICATION	NP			

TABLE F-1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0027	SSS00313	12/18/92	158.0	ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	21.29			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.48	1.49	g/cc
				EFFECTIVE POROSITY		9.46	10.4	%vb
				GRAIN DENSITY		2.66	2.65	g/cc
				HYDRAULIC CONDUCTIVITY		1.7E-05	1.1E-05	cm/s
				INTRINSIC WATER PERM		18.7	11.9	cm^2
				NATIVE STATE AIRPERM		32.0	25.3	md
				TOTAL POROSITY		42.2	42.4	%vb
				WATER PERM		19.0	12.0	md
	SSS00314	12/18/92	186.0	AIR CONDUCTIVITY		3.2E-04	4.1E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	5.85			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.49	1.43	g/cc
				EFFECTIVE POROSITY		18.4	29.2	%vb
				GRAIN DENSITY		2.64	2.63	g/cc
				HYDRAULIC CONDUCTIVITY		1.6E-03	1.3E-03	cm/s
				INTRINSIC WATER PERM		1777	1481	cm^2
				NATIVE STATE AIRPERM		4900	6200	md
				TOTAL POROSITY		41.2	41.7	%vb
				WATER PERM		1800	1500	md
SBL0028	SSS00160	12/18/92	38.0	AIR CONDUCTIVITY		2.5E-06	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	20.80			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	22			%wt
				BULK DENSITY		1.61	1.68	g/cc
				EFFECTIVE POROSITY		14.7	4.82	%vb
				GRAIN DENSITY		2.66	2.65	g/cc
				HYDRAULIC CONDUCTIVITY		8.8E-06	<1.0E-09	cm/s
				INTRINSIC WATER PERM		9.43	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		28.6	<1.0E-03	md
				PERCENT MOISTURE	22.0			%wt
				TOTAL POROSITY		37.5	34.2	%vb
				WATER PERM		9.56	<1.0E-03	md
	SSS00265	12/18/92	72.0	AIR CONDUCTIVITY		3.6E-06	2.4E-06	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	27.83			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.45	1.48	g/cc
				EFFECTIVE POROSITY		16.3	20.5	%vb
				GRAIN DENSITY		2.66	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		1.5E-04	2.5E-05	cm/s
				INTRINSIC WATER PERM		158	26.9	cm^2
				NATIVE STATE AIRPERM		54.2	22.2	md
				TOTAL POROSITY		43.7	42.6	%vb

TABLE F 1
Summary Results - Laboratory Analyses of Soil Properties
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0028	SSS00265	12/18/92	72.0	WATER PERM		160	27.3	md
	SSS00315	12/18/92	121.0	AIR CONDUCTIVITY		3.0E-05	3.1E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	27.35			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.43	1.43	g/cc
				EFFECTIVE POROSITY		15.8	8.82	%vb
				GRAIN DENSITY		2.64	2.63	g/cc
				HYDRAULIC CONDUCTIVITY		7.7E-04	1.4E-03	cm/s
				INTRINSIC WATER PERM		849	1579	cm^2
				NATIVE STATE AIRPERM		450	470	md
				TOTAL POROSITY		43.2	43.8	%vb
				WATER PERM		860	1600	md
	SSS00316	12/22/92	155.5	AIR CONDUCTIVITY		1.5E-06	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL-ML			
				ATTERBERG LIQUID LIMIT	26			%wt
				ATTERBERG MOISTURE AS RECVD	17.76			%wt
				ATTERBERG PLASTIC INDEX	6			%wt
				ATTERBERG PLASTIC LIMIT	20			%wt
				BULK DENSITY		1.66	1.54	g/cc
				EFFECTIVE POROSITY		9.04	8.54	%vb
				GRAIN DENSITY		2.68	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		14.0	<1.0E-03	md
				TOTAL POROSITY		36.1	40.3	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
SBL0029	SSS00317	12/22/92	46.0	AIR CONDUCTIVITY		3.7E-05	2.4E-04	cm/s
				ATTERBERG CLASSIFICATION	CL-ML			
				ATTERBERG LIQUID LIMIT	23			%wt
				ATTERBERG MOISTURE AS RECVD	12.44			%wt
				ATTERBERG PLASTIC INDEX	5			%wt
				ATTERBERG PLASTIC LIMIT	18			%wt
				BULK DENSITY		1.66	1.61	g/cc
				EFFECTIVE POROSITY		12.6	19.1	%vb
				GRAIN DENSITY		2.68	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	2.9E-04	cm/s
				INTRINSIC WATER PERM		<1.0E-03	306	cm^2
				NATIVE STATE AIRPERM		570	3700	md
				PERCENT MOISTURE	13.9			%wt
				TOTAL POROSITY		37.8	37.9	%vb
				WATER PERM		<1.0E-03	310	md
	SSS00318	12/23/92	80.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	9.35			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		FAIL	1.54	g/cc
				EFFECTIVE POROSITY		23.6	15.4	%vb
				GRAIN DENSITY		FAIL	2.67	g/cc
				TOTAL POROSITY		FAIL	40.1	%vb
	SSS00319	01/04/93	129.0	ATTERBERG CLASSIFICATION	NP			

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Summary Results - Laboratory Analyses of Soil Properties
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0029	SSS00319	01/04/93	129.0	ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	9.20			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.61	1.62	g/cc
				EFFECTIVE POROSITY		10.6	7.95	%vb
				GRAIN DENSITY		2.58	2.63	g/cc
				TOTAL POROSITY		37.8	37.2	%vb
	SSS00320	01/04/93	145.5	ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	40			%wt
				ATTERBERG MOISTURE AS RECVD	28.62			%wt
				ATTERBERG PLASTIC INDEX	23			%wt
				ATTERBERG PLASTIC LIMIT	17			%wt
				BULK DENSITY		1.38	1.32	g/cc
				EFFECTIVE POROSITY		8.64	11.4	%vb
				GRAIN DENSITY		2.63	2.61	g/cc
				TOTAL POROSITY		47.5	49.5	%vb
SBL0030	SSS00321	01/04/93	40.0	AIR CONDUCTIVITY		3.6E-04	4.2E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	9.20			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.52	1.51	g/cc
				EFFECTIVE POROSITY		26.9	28.7	%vb
				GRAIN DENSITY		2.66	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		2.2E-03	6.1E-04	cm/s
				INTRINSIC WATER PERM		2369	681	cm^2
				NATIVE STATE AIRPERM		5500	6400	md
				PERCENT MOISTURE	10.8			%wt
				TOTAL POROSITY		41.4	42.0	%vb
				WATER PERM		2400	690	md
	SSS00322	01/04/93	90.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	28.21			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.42	1.50	g/cc
				EFFECTIVE POROSITY		2.81	11.6	%vb
				GRAIN DENSITY		2.61	2.70	g/cc
				TOTAL POROSITY		45.8	42.9	%vb
	SSS00323	01/05/93	123.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	30.34			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		2.55	1.41	g/cc
				EFFECTIVE POROSITY		FAIL	6.38	%vb
				GRAIN DENSITY		2.55	2.62	g/cc
				TOTAL POROSITY		FAIL	46.2	%vb
	SSS00324	01/05/93	132.0	ATTERBERG CLASSIFICATION	ML			
				ATTERBERG LIQUID LIMIT	42			%wt
				ATTERBERG MOISTURE AS RECVD	37.23			%wt
				ATTERBERG PLASTIC INDEX	13			%wt

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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0030	SSS00324	01/05/93	132.0	ATTERBERG PLASTIC LIMIT	29			%wt
				BULK DENSITY		1.27	1.42	g/cc
				EFFECTIVE POROSITY		5.96	6.66	%vb
				GRAIN DENSITY		2.68	2.68	g/cc
				TOTAL POROSITY		51.6	46.3	%vb
SBL0031	SSS00325	01/06/93	46.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	52			%wt
				ATTERBERG MOISTURE AS RECVD	36.50			%wt
				ATTERBERG PLASTIC INDEX	31			%wt
				ATTERBERG PLASTIC LIMIT	21			%wt
				BULK DENSITY		1.39	1.35	g/cc
				EFFECTIVE POROSITY		6.71	5.45	%vb
				GRAIN DENSITY		2.64	2.63	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				PERCENT MOISTURE	35.6			%wt
				TOTAL POROSITY		45.5	47.9	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00326	01/06/93	71.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	ML			
				ATTERBERG LIQUID LIMIT	39			%wt
				ATTERBERG MOISTURE AS RECVD	33.74			%wt
				ATTERBERG PLASTIC INDEX	12			%wt
				ATTERBERG PLASTIC LIMIT	27			%wt
				BULK DENSITY		1.43	1.40	g/cc
				EFFECTIVE POROSITY		8.35	7.22	%vb
				GRAIN DENSITY		2.69	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		45.7	46.8	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00327	01/07/93	105.0	AIR CONDUCTIVITY		5.4E-05	8.5E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	26.47			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.48	1.47	g/cc
				EFFECTIVE POROSITY		7.49	14.5	%vb
				GRAIN DENSITY		2.63	2.62	g/cc
				HYDRAULIC CONDUCTIVITY		4.9E-04	8.5E-04	cm/s
				INTRINSIC WATER PERM		494	880	cm^2
				NATIVE STATE AIRPERM		820	1300	md
				TOTAL POROSITY		42.2	42.3	%vb
				WATER PERM		500	880	md
	SSS00328	01/07/93	150.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	35			%wt
				ATTERBERG MOISTURE AS RECVD	19.56			%wt
				ATTERBERG PLASTIC INDEX	19			%wt
				ATTERBERG PLASTIC LIMIT	16			%wt

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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0031	SSS00328	01/07/93	150.0	BULK DENSITY		1.71	1.72	g/cc
				EFFECTIVE POROSITY		6.50	6.04	%vb
				GRAIN DENSITY		2.69	2.69	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		35.0	34.9	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
SBL0032	SSS00329	01/08/93	52.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	26			%wt
				ATTERBERG MOISTURE AS RECVD	16.79			%wt
				ATTERBERG PLASTIC INDEX	14			%wt
				ATTERBERG PLASTIC LIMIT	12			%wt
				BULK DENSITY		1.79	1.81	g/cc
				EFFECTIVE POROSITY		5.42	5.55	%vb
				GRAIN DENSITY		2.69	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				PERCENT MOISTURE	17.6			%wt
				TOTAL POROSITY		31.9	31.0	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00330	01/11/93	73.0	AIR CONDUCTIVITY		6.8E-05	6.5E-06	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	24.60			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.52	1.56	g/cc
				EFFECTIVE POROSITY		13.8	16.4	%vb
				GRAIN DENSITY		2.70	2.69	g/cc
				HYDRAULIC CONDUCTIVITY		4.7E-04	3.5E-04	cm/s
				INTRINSIC WATER PERM		473.76	355.3	cm^2
				NATIVE STATE AIRPERM		1000	97.9	md
				TOTAL POROSITY		41.8	40.2	%vb
				WATER PERM		480	360	md
	SSS00331	01/11/93	105.0	AIR CONDUCTIVITY		9.6E-07	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	29.89			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.42	1.41	g/cc
				EFFECTIVE POROSITY		9.62	15.5	%vb
				GRAIN DENSITY		2.71	2.69	g/cc
				HYDRAULIC CONDUCTIVITY		1.9E-05	<1.0E-09	cm/s
				INTRINSIC WATER PERM		19.3	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		14.6	<1.0E-03	md
				TOTAL POROSITY		45.5	45.2	%vb
				WATER PERM		19.5	<1.0E-03	md
	SSS00332	01/11/93	136.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	40			%wt

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0032	SSS00332	01/11/93	136.0	ATTERBERG MOISTURE AS RECVD	31.00			%wt
				ATTERBERG PLASTIC INDEX	16			%wt
				ATTERBERG PLASTIC LIMIT	24			%wt
				BULK DENSITY		1.48	1.52	g/cc
				EFFECTIVE POROSITY		6.92	5.38	%vb
				GRAIN DENSITY		2.69	2.70	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		43.0	42.3	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00333	01/11/93	37.0	AIR CONDUCTIVITY		4.9E-04	1.5E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	10.58			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.51	1.55	g/cc
				EFFECTIVE POROSITY		35.0	14.3	%vb
				GRAIN DENSITY		2.64	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		2.2E-03	2.7E-03	cm/s
				INTRINSIC WATER PERM		2270	2764	cm^2
				NATIVE STATE AIRPERM		7400	2300	md
				PERCENT MOISTURE	13.9			%wt
				TOTAL POROSITY		41.3	39.8	%vb
				WATER PERM		2300	2800	md
SBL0033	SSS00334	01/11/93	81.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	ML			
				ATTERBERG LIQUID LIMIT	41			%wt
				ATTERBERG MOISTURE AS RECVD	36.38			%wt
				ATTERBERG PLASTIC INDEX	7			%wt
				ATTERBERG PLASTIC LIMIT	34			%wt
				BULK DENSITY		1.35	1.31	g/cc
				EFFECTIVE POROSITY		8.04	10.7	%vb
				GRAIN DENSITY		2.70	2.71	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		48.5	49.7	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00335	01/12/93	120.0	AIR CONDUCTIVITY		5.0E-06	1.2E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	26.85			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.54	1.48	g/cc
				EFFECTIVE POROSITY		19.4	17.2	%vb
				GRAIN DENSITY		2.67	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		9.4E-05	1.4E-04	cm/s
				INTRINSIC WATER PERM		96	148	cm^2
				NATIVE STATE AIRPERM		75.5	200	md
				TOTAL POROSITY		39.7	42.4	%vb
				WATER PERM		97.3	150	md

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0033	SSS00336	01/13/93	154.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	51			%wt
				ATTERBERG MOISTURE AS RECVD	32.31			%wt
				ATTERBERG PLASTIC INDEX	25			%wt
				ATTERBERG PLASTIC LIMIT	26			%wt
				BULK DENSITY		1.35	1.36	g/cc
				EFFECTIVE POROSITY		7.89	8.83	%vb
				GRAIN DENSITY		2.70	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		48.2	47.3	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00337	01/13/93	172.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				BULK DENSITY		1.53	1.44	g/cc
				EFFECTIVE POROSITY		6.30	6.71	%vb
				GRAIN DENSITY		2.68	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		41.2	43.9	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
			192.0	ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	31			%wt
				ATTERBERG MOISTURE AS RECVD	25.28			%wt
				ATTERBERG PLASTIC INDEX	9			%wt
				ATTERBERG PLASTIC LIMIT	22			%wt
	SSS00338	01/14/93	261.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	36.39			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	31			%wt
			261.5	AIR CONDUCTIVITY		1.0E-06	1.2E-06	cm/s
				BULK DENSITY		1.39	1.41	g/cc
				EFFECTIVE POROSITY		12.1	15.0	%vb
				GRAIN DENSITY		2.71	2.72	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		15.3	17.6	md
				TOTAL POROSITY		47.2	46.3	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
SBL0034	SSS00339	01/13/93	39.0	AIR CONDUCTIVITY		4.5E-04	4.8E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	18.45			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.52	1.51	g/cc
				EFFECTIVE POROSITY		18.0	22.6	%vb
				GRAIN DENSITY		2.64	2.64	g/cc
				HYDRAULIC CONDUCTIVITY		2.5E-03	1.1E-03	cm/s
				INTRINSIC WATER PERM		2566	1184.4	cm^2
				NATIVE STATE AIRPERM		7200	7700	md

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0034	SSS00339	01/13/93	39.0	PERCENT MOISTURE	18.8			%wt
				TOTAL POROSITY		40.4	40.2	%vb
				WATER PERM		2600	1200	md
	SSS00340	01/14/93	52.0	AIR CONDUCTIVITY		1.7E-05	9.5E-06	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	19.23			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.58	1.61	g/cc
				EFFECTIVE POROSITY		15.8	12.6	%vb
				GRAIN DENSITY		2.68	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		1.0E-04	3.4E-05	cm/s
				INTRINSIC WATER PERM		109	35.0	cm^2
				NATIVE STATE AIRPERM		260	140	md
				TOTAL POROSITY		39.7	37.6	%vb
				WATER PERM		110	35.4	md
	SSS00341	01/14/93	104.0	AIR CONDUCTIVITY		5.2E-05	1.8E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	28.40			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.48	1.55	g/cc
				EFFECTIVE POROSITY		8.23	16.6	%vb
				GRAIN DENSITY		2.65	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		3.3E-04	1.7E-04	cm/s
				INTRINSIC WATER PERM		247	168	cm^2
				NATIVE STATE AIRPERM		790	300	md
				TOTAL POROSITY		42.9	40.2	%vb
				WATER PERM		250	170	md
	SSS00342	01/14/93	174.0	AIR CONDUCTIVITY		1.1E-05	1.1E-06	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	28.05			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.46	1.45	g/cc
				EFFECTIVE POROSITY		21.0	23.9	%vb
				GRAIN DENSITY		2.69	2.72	g/cc
				HYDRAULIC CONDUCTIVITY		1.1E-04	2.2E-05	cm/s
				INTRINSIC WATER PERM		109	22.5	cm^2
				NATIVE STATE AIRPERM		170	16.7	md
				TOTAL POROSITY		43.7	44.3	%vb
				WATER PERM		110	22.8	md
SBL0035	SSS00343	01/18/93	37.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	45			%wt
				ATTERBERG MOISTURE AS RECVD	29.61			%wt
				ATTERBERG PLASTIC INDEX	26			%wt
				ATTERBERG PLASTIC LIMIT	19			%wt
				BULK DENSITY		1.08	1.40	g/cc
				EFFECTIVE POROSITY		33.0	8.99	%vb
				GRAIN DENSITY		2.61	2.63	g/cc

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0035	SSS00343	01/18/93	37.0	HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				PERCENT MOISTURE	30.1			%wt
				TOTAL POROSITY		30.7	45.7	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00344	01/18/93	60.0	AIR CONDUCTIVITY		3.1E-05	3.2E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	18.56			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.56	1.55	g/cc
				EFFECTIVE POROSITY		9.68	10.0	%vb
				GRAIN DENSITY		2.71	2.71	g/cc
				HYDRAULIC CONDUCTIVITY		1.9E-04	3.7E-04	cm/s
				INTRINSIC WATER PERM		197	385	cm^2
				NATIVE STATE AIRPERM		470	490	md
				TOTAL POROSITY		39.8	41.2	%vb
				WATER PERM		200	390	md
	SSS00345	01/19/93	97.0	AIR CONDUCTIVITY		8.6E-06	4.8E-05	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	21.21			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.43	1.58	g/cc
				EFFECTIVE POROSITY		25.6	11.2	%vb
				GRAIN DENSITY		2.68	2.70	g/cc
				HYDRAULIC CONDUCTIVITY		7.9E-05	7.7E-05	cm/s
				INTRINSIC WATER PERM		80.8	79.1	cm^2
				NATIVE STATE AIRPERM		130	740	md
				TOTAL POROSITY		32.7	40.1	%vb
				WATER PERM		81.9	80.2	md
	SSS00346	01/19/93	140.0	AIR CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	42			%wt
				ATTERBERG MOISTURE AS RECVD	41.05			%wt
				ATTERBERG PLASTIC INDEX	12			%wt
				ATTERBERG PLASTIC LIMIT	30			%wt
				BULK DENSITY		1.25	1.28	g/cc
				EFFECTIVE POROSITY		6.79	5.58	%vb
				GRAIN DENSITY		2.71	2.70	g/cc
				HYDRAULIC CONDUCTIVITY		<1.0E-09	<1.0E-09	cm/s
				INTRINSIC WATER PERM		<1.0E-03	<1.0E-03	cm^2
				NATIVE STATE AIRPERM		<1.0E-03	<1.0E-03	md
				TOTAL POROSITY		52.0	51.4	%vb
				WATER PERM		<1.0E-03	<1.0E-03	md
	SSS00347	01/19/93	145.0	AIR CONDUCTIVITY		3.4E-04	3.7E-04	cm/s
				ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	18.32			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0035	SSS00347	01/19/93	145.0	BULK DENSITY		1.62	1.63	g/cc
				EFFECTIVE POROSITY		7.54	9.76	%vb
				GRAIN DENSITY		2.65	2.65	g/cc
				HYDRAULIC CONDUCTIVITY		2.1E-03	5.2E-04	cm/s
				INTRINSIC WATER PERM		2073	533	cm^2
				NATIVE STATE AIRPERM		5300	5600	md
				TOTAL POROSITY		37.5	37.0	%vb
				WATER PERM		2100	540	md
SBL0038	SSS00419	01/27/93	8.0	ATTERBERG CLASSIFICATION	CL-ML			
				ATTERBERG LIQUID LIMIT	23			%wt
				ATTERBERG MOISTURE AS RECVD	12.61			%wt
				ATTERBERG PLASTIC INDEX	3			%wt
				ATTERBERG PLASTIC LIMIT	20			%wt
	SSS00420	01/27/93	8.0	BULK DENSITY			1.64	g/cc
				PERCENT MOISTURE	14.8			%wt
SBL0052	SSS00886	06/19/93	105.0	AIR CONDUCTIVITY		1.94E-04	1.88E-04	cm/s
				BULK DENSITY		1.44	1.46	g/cc
				EFFECTIVE POROSITY		35.4	27.9	%vb
				GRAIN DENSITY		2.67	2.66	g/cc
				HYDRAULIC CONDUCTIVITY		1.08E-03	1.22E-03	cm/s
				NATIVE STATE AIRPERM		3000	2900	md
				TOTAL POROSITY		46.2	39.2	%vb
				WATER PERM		920	1000	md
	SSS00887	06/19/93	141.5	AIR CONDUCTIVITY		2.47E-04	3.12E-04	cm/s
				BULK DENSITY		1.60	1.54	g/cc
				EFFECTIVE POROSITY		44.1	41.7	%vb
				GRAIN DENSITY		2.66	2.65	g/cc
				HYDRAULIC CONDUCTIVITY		3.00E-03	3.00E-03	cm/s
				NATIVE STATE AIRPERM		3800	4800	md
				TOTAL POROSITY		39.8	47.1	%vb
				WATER PERM		2500	2500	md
	SSS00889	06/19/93	170.0	AIR CONDUCTIVITY		1.19E-04	1.21E-04	cm/s
				BULK DENSITY		1.50	1.50	g/cc
				EFFECTIVE POROSITY		39.9	44.1	%vb
				GRAIN DENSITY		2.68	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		9.13E-04	6.82E-04	cm/s
				NATIVE STATE AIRPERM		1800	1900	md
				TOTAL POROSITY		44.2	46.0	%vb
				WATER PERM		770	570	md
SBL0053	SSS00716	07/07/93	59.0	AIR CONDUCTIVITY		5.36E-10	4.11E-09	cm/s
				BULK DENSITY		1.33	1.24	g/cc
				EFFECTIVE POROSITY		8.03	10.5	%vb
				GRAIN DENSITY		2.71	2.73	g/cc
				HYDRAULIC CONDUCTIVITY		3.72E-07	2.64E-07	cm/s
				NATIVE STATE AIRPERM		.0037	.0284	md
				PERCENT MOISTURE	38.6			%wt
				SAT CONTAMINANT		1.19		%ps
				SAT WATER		97.56		%ps
				TOTAL POROSITY		51.1	54.5	%vb
				WATER PERM		.322	.229	md
	SSS00717	07/07/93	86.0	AIR CONDUCTIVITY		6.24E-06	1.34E-05	cm/s
				BULK DENSITY		1.48	1.48	g/cc
				EFFECTIVE POROSITY		16.9	10.6	%vb
				GRAIN DENSITY		2.64	2.65	g/cc

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0053	SSS00717	07/07/93	86.0	HYDRAULIC CONDUCTIVITY		5.71E-04	1.97E-03	cm/s
				NATIVE STATE AIRPERM		96.71	207.3	md
				PERCENT MOISTURE	28.3			%wt
				SAT CONTAMINANT		6.37		%ps
				SAT WATER		82.63		%ps
				TOTAL POROSITY		44.1	44.3	%vb
				WATER PERM		481.4	1659	md
	SSS00718	07/07/93	124.0	AIR CONDUCTIVITY		4.70E-07	5.79E-05	cm/s
				BULK DENSITY		1.66	1.67	g/cc
				EFFECTIVE POROSITY		13.4	13.3	%vb
				GRAIN DENSITY		2.68	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		2.25E-06	1.61E-03	cm/s
				NATIVE STATE AIRPERM		3.243	897.1	md
				PERCENT MOISTURE	25.3			%wt
				SAT CONTAMINANT		8.49		%ps
				SAT WATER		73.44		%ps
				TOTAL POROSITY		37.9	37.4	%vb
				WATER PERM		1.950	1397	md
	SSS00719	07/07/93	146.5	AIR CONDUCTIVITY		9.08E-06	1.57E-05	cm/s
				BULK DENSITY		1.51	1.46	g/cc
				EFFECTIVE POROSITY		13.8	8.20	%vb
				GRAIN DENSITY		2.70	2.70	g/cc
				HYDRAULIC CONDUCTIVITY		3.42E-04	7.63E-04	cm/s
				NATIVE STATE AIRPERM		140.7	242.6	md
				PERCENT MOISTURE	30.1			%wt
				SAT CONTAMINANT		10.99		%ps
				SAT WATER		88.97		%ps
				TOTAL POROSITY		44.2	46.0	%vb
				WATER PERM		288.6	643.8	md
	SSS00720	07/07/93	155.0	AIR CONDUCTIVITY		2.02E-10	9.90E-09	cm/s
				BULK DENSITY		1.32	1.37	g/cc
				EFFECTIVE POROSITY		9.60	10.1	%vb
				GRAIN DENSITY		2.67	2.73	g/cc
				HYDRAULIC CONDUCTIVITY		5.63E-08	4.56E-07	cm/s
				NATIVE STATE AIRPERM		.0014	.0683	md
				PERCENT MOISTURE	36.3			%wt
				SAT CONTAMINANT		1.24		%ps
				SAT WATER		98.75		%ps
				TOTAL POROSITY		50.7	49.6	%vb
				WATER PERM		.047	.385	md
	SSS00763	07/07/93	170.0	AIR CONDUCTIVITY		1.84E-05	2.07E-05	cm/s
				BULK DENSITY		1.58	1.64	g/cc
				EFFECTIVE POROSITY		7.07	6.87	%vb
				GRAIN DENSITY		2.70	2.71	g/cc
				HYDRAULIC CONDUCTIVITY		3.69E-04	1.88E-03	cm/s
				NATIVE STATE AIRPERM		285.5	320.9	md
				PERCENT MOISTURE	22.8			%wt
				SAT CONTAMINANT		4.44		%ps
				SAT WATER		86.45		%ps
				TOTAL POROSITY		41.6	39.5	%vb
				WATER PERM		311.63	1582	md
SBL0054	SSS00764	07/07/93	78.0	AIR CONDUCTIVITY		1.22E-05	1.23E-05	cm/s
				BULK DENSITY		1.48	1.58	g/cc
				EFFECTIVE POROSITY		15.3	13.4	%vb

TABLE F 1
Summary Results - Laboratory Analyses of Soil Properties
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0054	SSS00764	07/07/93	78.0	GRAIN DENSITY		2.69	2.70	g/cc
				HYDRAULIC CONDUCTIVITY		5.59E-04	3.89E-04	cm/s
				NATIVE STATE AIRPERM		151.8	152.2	md
				PERCENT MOISTURE	24.4			%wt
				SAT CONTAMINANT		1.05		%ps
				SAT WATER		79.40		%ps
				TOTAL POROSITY		45.0	41.3	%vb
				WATER PERM		484.4	337.0	md
	SSS00765	07/07/93	132.0	AIR CONDUCTIVITY		2.53E-05	5.67E-05	cm/s
				BULK DENSITY		1.65	1.62	g/cc
				EFFECTIVE POROSITY		12.9	4.40	%vb
				GRAIN DENSITY		2.68	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		1.17E-03	1.23E-03	cm/s
				NATIVE STATE AIRPERM		391.3	878.1	md
				PERCENT MOISTURE	22.8			%wt
				SAT CONTAMINANT		11.26		%ps
				SAT WATER		83.29		%ps
				TOTAL POROSITY		38.4	39.4	%vb
				WATER PERM		1016	1068	md
	SSS00766	07/07/93	154.0	AIR CONDUCTIVITY		5.23E-06	2.70E-06	cm/s
				BULK DENSITY		1.53	1.52	g/cc
				EFFECTIVE POROSITY		6.70	14.8	%vb
				GRAIN DENSITY		2.70	2.70	g/cc
				HYDRAULIC CONDUCTIVITY		2.96E-04	1.38E-03	cm/s
				NATIVE STATE AIRPERM		80.95	41.79	md
				PERCENT MOISTURE	27.8			%wt
				SAT CONTAMINANT		3.86		%ps
				SAT WATER		88.61		%ps
				TOTAL POROSITY		43.4	43.8	%vb
				WATER PERM		256.5	1195	md
	SSS00767	07/07/93	175.0	AIR CONDUCTIVITY		9.72E-11	2.63E-09	cm/s
				BULK DENSITY		1.38	1.31	g/cc
				EFFECTIVE POROSITY		7.17	9.48	%vb
				GRAIN DENSITY		2.73	2.74	g/cc
				HYDRAULIC CONDUCTIVITY		8.82E-08	3.58E-08	cm/s
				NATIVE STATE AIRPERM		.0007	.0181	md
				PERCENT MOISTURE	40.9			%wt
				SAT CONTAMINANT		10.98		%ps
				SAT WATER		89.01		%ps
				TOTAL POROSITY		49.3	52.3	%vb
				WATER PERM		.889	.0314	md
	SSS00768	07/08/93	187.0	AIR CONDUCTIVITY		8.56E-06	1.19E-05	cm/s
				BULK DENSITY		1.60	1.61	g/cc
				EFFECTIVE POROSITY		16.9	12.5	%vb
				GRAIN DENSITY		2.69	2.73	g/cc
				HYDRAULIC CONDUCTIVITY		4.74E-04	1.08E-03	cm/s
				NATIVE STATE AIRPERM		132.6	183.6	md
				PERCENT MOISTURE	20.5			%wt
				SAT CONTAMINANT		3.99		%ps
				SAT WATER		80.86		%ps
				TOTAL POROSITY		40.3	41.0	%vb
				WATER PERM		416.3	945.9	md
SBL0056	SSS00786	07/20/93	5.0	DEGREE OF SATURATION	40.2			%s
				MOISTURE CONTENT	14.2			%wt

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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0056	SSS00786	07/20/93	5.0	SPECIFIC GRAVITY	2.727			g/cc
	SSS00787	07/20/93	10.0	DEGREE OF SATURATION	45.6			%s
				MOISTURE CONTENT	12.9			%wt
				SPECIFIC GRAVITY	2.745			g/cc
	SSS00788	07/20/93	10.0	AIR CONDUCTIVITY		1.16E-05	1.27E-05	cm/s
				BULK DENSITY		1.63	1.62	g/cc
				EFFECTIVE POROSITY		25.1	23.1	%vb
				GRAIN DENSITY		2.72	2.71	g/cc
				NATIVE STATE AIRPERM		180	197	md
				PERCENT MOISTURE	11.4			%wt
				TOTAL POROSITY		40.1	40.1	%vb
	SSS00789	07/20/93	15.0	DEGREE OF SATURATION	81			%s
				MOISTURE CONTENT	23.5			%wt
				SPECIFIC GRAVITY	2.729			g/cc
	SSS00793	07/20/93	15.1	DEGREE OF SATURATION	80.5			%s
	SSS00794	07/20/93	20.0	DEGREE OF SATURATION	84.9			%s
				MOISTURE CONTENT	18.3			%wt
				SPECIFIC GRAVITY	2.722			g/cc
	SSS00795	07/20/93	20.0	AIR CONDUCTIVITY		2.23E-07	2.55E-07	cm/s
				BULK DENSITY		1.67	1.67	g/cc
				EFFECTIVE POROSITY		15.2	15.3	%vb
				GRAIN DENSITY		2.70	2.72	g/cc
				NATIVE STATE AIRPERM		2	2	md
				PERCENT MOISTURE	19.8			%wt
				TOTAL POROSITY		38.3	38.8	%vb
	SSS00798	07/20/93	25.0	DEGREE OF SATURATION	72.4			%s
				MOISTURE CONTENT	15.9			%wt
				SPECIFIC GRAVITY	2.703			g/cc
	SSS00801	07/20/93	30.0	DEGREE OF SATURATION	95.3	79	90.3	%s
				MOISTURE CONTENT	26.4	27.7	26.8	%wt
				SPECIFIC GRAVITY		2.759		g/cc
				SPECIFIC GRAVITY	2.76		2.763	g/cc
	SSS00802	07/20/93	30.0	HYDRAULIC CONDUCTIVITY		6.5E-07	2.1E-06	cm/s
	SSS00803	07/20/93	35.0	DEGREE OF SATURATION	28.1			%s
				MOISTURE CONTENT	8			%wt
				SPECIFIC GRAVITY	2.693			g/cc
	SSS00804	07/20/93	40.0	DEGREE OF SATURATION	15.2			%s
				MOISTURE CONTENT	4.8			%wt
				SPECIFIC GRAVITY	2.675			g/cc
	SSS00805	07/20/93	43.0	DEGREE OF SATURATION		91.4	97.2	%s
				HYDRAULIC CONDUCTIVITY		5.6E-09	8.9E-09	cm/s
				MOISTURE CONTENT		39.5	40.6	%wt
				SPECIFIC GRAVITY		2.831		g/cc
				SPECIFIC GRAVITY			2.736	g/cc
	SSS00808	07/20/93	48.0	DEGREE OF SATURATION	27.8	19.5	24.1	%s
				HYDRAULIC CONDUCTIVITY		0.00017	0.00012	cm/s
				MOISTURE CONTENT	11.2	7.8	7	%wt
				SPECIFIC GRAVITY		2.729		g/cc
				SPECIFIC GRAVITY	2.706		2.719	g/cc
	SSS00812	07/20/93	51.0	AIR CONDUCTIVITY			1.85E-05	cm/s
				BULK DENSITY			1.59	g/cc
				EFFECTIVE POROSITY			33.9	%vb
				GRAIN DENSITY			2.69	g/cc
				NATIVE STATE AIRPERM			286	md

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0056	SSS00812	07/20/93	51.0	TOTAL POROSITY			40.7	%vb
	SSS00813	07/20/93	51.0	DEGREE OF SATURATION	30.5	35.7	32.2	%s
				HYDRAULIC CONDUCTIVITY		Failure	0.00012	cm/s
				MOISTURE CONTENT	8.9	8.8	8.7	%wt
				SPECIFIC GRAVITY		2.826		g/cc
				SPECIFIC GRAVITY	2.657		2.699	g/cc
SBL0057	SSS00817	07/21/93	10.0	DEGREE OF SATURATION	78.8			%s
				MOISTURE CONTENT	18.2			%wt
				SPECIFIC GRAVITY	2.757			g/cc
	SSS00818	07/21/93	10.0	AIR CONDUCTIVITY		6.25E-07	2.33E-06	cm/s
				BULK DENSITY		1.75	1.70	g/cc
				EFFECTIVE POROSITY		13.5	17.1	%vb
				GRAIN DENSITY		2.72	2.72	g/cc
				NATIVE STATE AIRPERM		6	36	md
				SAT CONTAMINANT		0.7		%ps
				SAT WATER		76.3	77.5	%ps
				TOTAL POROSITY		35.6	37.3	%vb
	SSS00819	07/21/93	10.0	PERCENT MOISTURE	18.2			%wt
	SSS00820	07/21/93	15.0	DEGREE OF SATURATION	53.6			%s
				MOISTURE CONTENT	14.8			%wt
				SPECIFIC GRAVITY	2.749			g/cc
	SSS00824	07/21/93	18.0	DEGREE OF SATURATION		52.7	61.1	%s
				HYDRAULIC CONDUCTIVITY		2.6E-06	5.7E-05	cm/s
				MOISTURE CONTENT		17.9	18.1	%wt
				SPECIFIC GRAVITY		2.769		g/cc
				SPECIFIC GRAVITY			2.828	g/cc
	SSS00826	07/21/93	20.5	DEGREE OF SATURATION	58.1			%s
				MOISTURE CONTENT	15.3			%wt
				SPECIFIC GRAVITY	2.769			g/cc
	SSS00827	07/21/93	20.5	AIR CONDUCTIVITY		4.16E-07	9.70E-06	cm/s
				BULK DENSITY		1.63	1.61	g/cc
				EFFECTIVE POROSITY		24.7	25.9	%vb
				GRAIN DENSITY		2.71	2.71	g/cc
				NATIVE STATE AIRPERM		4	150	md
				PERCENT MOISTURE	14.2			%wt
				SAT CONTAMINANT		1.2		%ps
				SAT WATER		60.0		%ps
				TOTAL POROSITY		39.7	40.3	%vb
	SSS00828	07/21/93	25.0	DEGREE OF SATURATION	92.4			%s
				MOISTURE CONTENT	17.8			%wt
				SPECIFIC GRAVITY	2.683			g/cc
	SSS00831	07/21/93	30.0	DEGREE OF SATURATION	39.8			%s
				MOISTURE CONTENT	11.0			%wt
				SPECIFIC GRAVITY	2.825			g/cc
	SSS00834	07/21/93	35.0	DEGREE OF SATURATION	22.7			%s
				MOISTURE CONTENT	7.6			%wt
				SPECIFIC GRAVITY	2.834			g/cc
	SSS00835	07/21/93	39.5	DEGREE OF SATURATION		82.7	93.2	%s
				HYDRAULIC CONDUCTIVITY		6E-08	1.2E-08	cm/s
				MOISTURE CONTENT		33.8	33.8	%wt
				SPECIFIC GRAVITY		2.717		g/cc
				SPECIFIC GRAVITY			2.868	g/cc
	SSS00836	07/21/93	40.0	DEGREE OF SATURATION	59.2			%s
				MOISTURE CONTENT	17.1			%wt

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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0057	SSS00836	07/21/93	40.0	SPECIFIC GRAVITY	2.748			g/cc
	SSS00837	07/21/93	44.5	DEGREE OF SATURATION		14.3	21.9	%s
				HYDRAULIC CONDUCTIVITY		Failure	4.1E-05	cm/s
				MOISTURE CONTENT		5.4	6.4	%wt
				SPECIFIC GRAVITY		2.687		g/cc
				SPECIFIC GRAVITY			2.71	g/cc
	SSS00840	07/21/93	50.5	DEGREE OF SATURATION	33.5			%s
				MOISTURE CONTENT	11.3			%wt
				SPECIFIC GRAVITY	2.739			g/cc
	SSS00843	07/21/93	55.0	DEGREE OF SATURATION	80.2			%s
				MOISTURE CONTENT	24.4			%wt
				SPECIFIC GRAVITY	2.761			g/cc
	SSS00844	07/21/93	56.0	DEGREE OF SATURATION		95.9	70	%s
				HYDRAULIC CONDUCTIVITY		Failure	2.4E-05	cm/s
				MOISTURE CONTENT		26.2	28.8	%wt
				SPECIFIC GRAVITY		2.291		g/cc
				SPECIFIC GRAVITY			3.271	g/cc
	SSS00845	07/21/93	58.0	AIR CONDUCTIVITY			3.81E-07	cm/s
				BULK DENSITY			1.35	g/cc
				EFFECTIVE POROSITY			16.4	%vb
				GRAIN DENSITY			2.74	g/cc
				NATIVE STATE AIRPERM			4	md
				SAT WATER			56.9	%ps
				TOTAL POROSITY			50.8	%vb
	SSS00848	07/21/93	64.0	DEGREE OF SATURATION	94.8			%s
				MOISTURE CONTENT	28.6			%wt
				SPECIFIC GRAVITY	2.759			g/cc
SBL0058	SSS00857	07/21/93	10.0	AIR CONDUCTIVITY		3.51E-06	6.37E-06	cm/s
				BULK DENSITY		1.64	1.61	g/cc
				EFFECTIVE POROSITY		25.5	22.2	%vb
				GRAIN DENSITY		2.72	2.73	g/cc
				NATIVE STATE AIRPERM		54	99	md
				PERCENT MOISTURE	11.8			%wt
				SAT WATER		44.7	49.3	%ps
				TOTAL POROSITY		39.8	41.3	%vb
	SSS00858	07/21/93	12.0	DEGREE OF SATURATION	56.7			%s
				MOISTURE CONTENT	16.4			%wt
				SPECIFIC GRAVITY	2.847			g/cc
	SSS00864	07/21/93	15.0	DEGREE OF SATURATION	81.8			%s
				MOISTURE CONTENT	16.6			%wt
				SPECIFIC GRAVITY	2.618			g/cc
	SSS00865	07/21/93	20.0	AIR CONDUCTIVITY		8.52E-05	3.29E-06	cm/s
				BULK DENSITY		1.60	1.65	g/cc
				EFFECTIVE POROSITY		24.1	11.1	%vb
				GRAIN DENSITY		2.72	2.72	g/cc
				NATIVE STATE AIRPERM		1320	51	md
				PERCENT MOISTURE	15.4			%wt
				SAT WATER		51.7	58.2	%ps
				TOTAL POROSITY		41.0	39.2	%vb
	SSS00866	07/21/93	20.0	DEGREE OF SATURATION	70.4			%s
				MOISTURE CONTENT	15.9			%wt
				SPECIFIC GRAVITY	2.722			g/cc
	SSS00867	07/21/93	25.0	DEGREE OF SATURATION	98.4			%s
				MOISTURE CONTENT	17.0			%wt

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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0058	SSS00867	07/21/93	25.0	SPECIFIC GRAVITY	2.672			g/cc
	SSS00871	07/21/93	30.0	DEGREE OF SATURATION	88.8			%s
				MOISTURE CONTENT	26.2			%wt
				SPECIFIC GRAVITY	2.678			g/cc
	SSS00874	07/21/93	35.0	DEGREE OF SATURATION	87.8			%s
				MOISTURE CONTENT	18.9			%wt
				SPECIFIC GRAVITY	2.692			g/cc
	SSS00875	07/21/93	40.0	DEGREE OF SATURATION	91.9			%s
				MOISTURE CONTENT	26.5			%wt
				SPECIFIC GRAVITY	2.732			g/cc
	SSS00876	07/21/93	45.0	DEGREE OF SATURATION	42.8			%s
				MOISTURE CONTENT	15.7			%wt
				SPECIFIC GRAVITY	2.679			g/cc
	SSS00879	07/21/93	50.0	DEGREE OF SATURATION	76.0			%s
				MOISTURE CONTENT	21.8			%wt
				SPECIFIC GRAVITY	2.715			g/cc
	SSS00880	07/21/93	55.0	DEGREE OF SATURATION	90.0			%s
				MOISTURE CONTENT	25.7			%wt
				SPECIFIC GRAVITY	2.796			g/cc
	SSS00883	07/21/93	55.0	AIR CONDUCTIVITY			6.68E-08	cm/s
				BULK DENSITY			1.50	g/cc
				EFFECTIVE POROSITY			20.0	%vb
				GRAIN DENSITY			2.74	g/cc
				NATIVE STATE AIRPERM			0	md
				SAT CONTAMINANT			11.3	%ps
				SAT WATER			64.1	%ps
				TOTAL POROSITY			45.0	%vb
SBL0059	SSS00769	07/22/93	64.0	AIR CONDUCTIVITY		7.26E-07	2.20E-06	cm/s
				BULK DENSITY		1.61	1.59	g/cc
				EFFECTIVE POROSITY		2.9	18.6	%vb
				GRAIN DENSITY		2.71	2.71	g/cc
				HYDRAULIC CONDUCTIVITY		1.15E-05	4.72E-05	cm/s
				NATIVE STATE AIRPERM		5	15	md
				PERCENT MOISTURE	29.8			%wt
				SAT CONTAMINANT		15.4		%ps
				SAT WATER		80.6		%ps
				TOTAL POROSITY		40.7	41.1	%vb
				WATER PERM		9.71	39.82	md
	SSS00770	07/22/93	69.0	AIR CONDUCTIVITY		3.17E-06	3.21E-07	cm/s
				BULK DENSITY		1.55	1.55	g/cc
				EFFECTIVE POROSITY		11.9	13.9	%vb
				GRAIN DENSITY		2.67	2.66	g/cc
				HYDRAULIC CONDUCTIVITY		4.48E-05	2.93E-06	cm/s
				NATIVE STATE AIRPERM		22	2	md
				PERCENT MOISTURE	32.8			%wt
				SAT CONTAMINANT		16.0		%ps
				SAT WATER		83.5		%ps
				TOTAL POROSITY		42.0	41.6	%vb
				WATER PERM		37.81	2.47	md
	SSS00815	07/22/93	139.0	AIR CONDUCTIVITY		4.95E-05	3.37E-05	cm/s
				BULK DENSITY		1.61	1.72	g/cc
				EFFECTIVE POROSITY		29.9	22.0	%vb
				GRAIN DENSITY		2.66	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		2.68E-03	6.10E-07	cm/s

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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0059	SSS00815	07/22/93	139.0	NATIVE STATE AIRPERM		765	520	md
				PERCENT MOISTURE	18.2			%wt
				SAT CONTAMINANT		1.5		%ps
				SAT WATER		70.5		%ps
				TOTAL POROSITY		39.4	35.2	%vb
				WATER PERM		2261.2	514.11	md
	SSS00849	07/22/93	168.0	AIR CONDUCTIVITY		5.72E-06	1.51E-09	cm/s
				BULK DENSITY		1.56	1.53	g/cc
				EFFECTIVE POROSITY		12.6	8.7	%vb
				GRAIN DENSITY		2.67	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		4.17E-05	8.46E-07	cm/s
				NATIVE STATE AIRPERM		88	0	md
				PERCENT MOISTURE	32.6			%wt
				SAT CONTAMINANT		0.4		%ps
				SAT WATER		95.2		%ps
				TOTAL POROSITY		41.7	42.5	%vb
				WATER PERM		35.2	0.71	md
	SSS00850	07/22/93	187.0	AIR CONDUCTIVITY		3.78E-05	1.87E-05	cm/s
				BULK DENSITY		1.44	1.49	g/cc
				EFFECTIVE POROSITY		9.8	13.3	%vb
				GRAIN DENSITY		2.64	2.63	g/cc
				HYDRAULIC CONDUCTIVITY		2.33E-03	3.46E-03	cm/s
				NATIVE STATE AIRPERM		584	289	md
				PERCENT MOISTURE	26.3			%wt
				SAT CONTAMINANT		1.5		%ps
				SAT WATER		86.4		%ps
				TOTAL POROSITY		45.4	43.5	%vb
				WATER PERM		1961.34	2919.63	md
SBL0060	SSS00891	07/22/93	5.0	DEGREE OF SATURATION	53.2			%s
				MOISTURE CONTENT	12.9			%wt
				SPECIFIC GRAVITY	2.709			g/cc
	SSS00896	07/22/93	10.0	DEGREE OF SATURATION	46.5			%s
				MOISTURE CONTENT	10.7			%wt
				SPECIFIC GRAVITY	2.692			g/cc
	SSS00897	07/22/93	15.0	DEGREE OF SATURATION	66.2			%s
				MOISTURE CONTENT	14.4			%wt
				SPECIFIC GRAVITY	2.775			g/cc
	SSS00898	07/22/93	20.0	DEGREE OF SATURATION	83.8			%s
				MOISTURE CONTENT	24.8			%wt
				SPECIFIC GRAVITY	2.842			g/cc
	SSS00903	07/22/93	25.0	DEGREE OF SATURATION	69.7			%s
				MOISTURE CONTENT	16.1			%wt
				SPECIFIC GRAVITY	2.723			g/cc
	SSS00906	07/22/93	30.0	DEGREE OF SATURATION	67.8			%s
				MOISTURE CONTENT	19.7			%wt
				SPECIFIC GRAVITY	2.993			g/cc
	SSS00907	07/22/93	35.0	DEGREE OF SATURATION	78.2			%s
				MOISTURE CONTENT	22.7			%wt
				SPECIFIC GRAVITY	2.838			g/cc
	SSS00908	07/22/93	40.0	DEGREE OF SATURATION	66.0			%s
				MOISTURE CONTENT	18.0			%wt
				SPECIFIC GRAVITY	2.752			g/cc
	SSS00909	07/22/93	45.0	DEGREE OF SATURATION	87.5			%s
				MOISTURE CONTENT	22.6			%wt

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0060	SSS00909	07/22/93	45.0	SPECIFIC GRAVITY	2.72			g/cc
	SSS00912	07/22/93	50.0	DEGREE OF SATURATION	28.1			%s
				MOISTURE CONTENT	8.9			%wt
				SPECIFIC GRAVITY	2.825			g/cc
	SSS00913	07/22/93	55.0	DEGREE OF SATURATION	94.4			%s
				MOISTURE CONTENT	31.6			%wt
				SPECIFIC GRAVITY	2.762			g/cc
SBL0061	SSS00926	07/22/93	5.0	DEGREE OF SATURATION	57.8			%s
				MOISTURE CONTENT	13.1			%wt
				SPECIFIC GRAVITY	2.795			g/cc
	SSS00930	07/22/93	10.0	DEGREE OF SATURATION	42.3			%s
				MOISTURE CONTENT	10.8			%wt
				SPECIFIC GRAVITY	2.738			g/cc
	SSS00931	07/22/93	15.0	DEGREE OF SATURATION	81.4			%s
				MOISTURE CONTENT	18.3			%wt
				SPECIFIC GRAVITY	2.747			g/cc
SBL0063	SSS00941	07/23/93	5.0	DEGREE OF SATURATION	50.7			%s
				MOISTURE CONTENT	11.9			%wt
				SPECIFIC GRAVITY	2.706			g/cc
	SSS00945	07/23/93	10.0	DEGREE OF SATURATION	82.0			%s
				MOISTURE CONTENT	20.2			%wt
				SPECIFIC GRAVITY	2.76			g/cc
	SSS00946	07/23/93	15.0	DEGREE OF SATURATION	82.5			%s
				MOISTURE CONTENT	19.9			%wt
				SPECIFIC GRAVITY	2.783			g/cc
SBL0065	SSS00956	07/27/93	5.5	DEGREE OF SATURATION	34.1			%s
				MOISTURE CONTENT	9.9			%wt
				SPECIFIC GRAVITY	2.813			g/cc
	SSS00962	07/27/93	10.0	DEGREE OF SATURATION	63.9			%s
				MOISTURE CONTENT	16.7			%wt
				SPECIFIC GRAVITY	2.87			g/cc
	SSS00963	07/27/93	15.0	DEGREE OF SATURATION	59.1			%s
				MOISTURE CONTENT	19.0			%wt
				SPECIFIC GRAVITY	2.844			g/cc
SBL0066	SSS00955	07/27/93	5.0	DEGREE OF SATURATION	80.1			%s
				MOISTURE CONTENT	14.9			%wt
				SPECIFIC GRAVITY	2.796			g/cc
	SSS00993	07/27/93	10.0	DEGREE OF SATURATION	68.8			%s
				MOISTURE CONTENT	18.5			%wt
				SPECIFIC GRAVITY	2.703			g/cc
	SSS00994	07/27/93	15.0	DEGREE OF SATURATION	70.5			%s
				MOISTURE CONTENT	17.4			%wt
				SPECIFIC GRAVITY	2.81			g/cc
SBL0067	SSS00999	07/27/93	5.0	DEGREE OF SATURATION	57.8			%s
				MOISTURE CONTENT	13.5			%wt
				SPECIFIC GRAVITY	2.721			g/cc
	SSS01020	07/27/93	10.0	DEGREE OF SATURATION	44.9			%s
				MOISTURE CONTENT	11.3			%wt
				SPECIFIC GRAVITY	2.844			g/cc
	SSS01025	07/27/93	15.0	DEGREE OF SATURATION	76.7			%s
				MOISTURE CONTENT	21.8			%wt
				SPECIFIC GRAVITY	2.738			g/cc
SBL0068	SSS01038	07/28/93	7.0	AIR CONDUCTIVITY		1.79E-05	2.03E-05	cm/s
				BULK DENSITY		1.65	1.58	g/cc

TABLE F 1
Summary Results - Laboratory Analyses of Soil Properties
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0068	SSS01038	07/28/93	7.0	EFFECTIVE POROSITY		21.5	18.0	%vb
				GRAIN DENSITY		2.72	2.70	g/cc
				HYDRAULIC CONDUCTIVITY		7.48E-07	3.86E-07	cm/s
				NATIVE STATE AIRPERM		280	320	md
				TOTAL POROSITY		39.2	41.6	%vb
				WATER PERM		0.618	0.319	md
	SSS01041	07/28/93	20.0	AIR CONDUCTIVITY		2.84E-06	6.42E-06	cm/s
				BULK DENSITY		1.44	1.43	g/cc
				EFFECTIVE POROSITY		9.7	15.8	%vb
				GRAIN DENSITY		2.67	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		3.41E-07	4.25E-07	cm/s
				NATIVE STATE AIRPERM		44	100	md
				TOTAL POROSITY		46.0	46.4	%vb
				WATER PERM		0.282	0.351	md
	SSS01043	07/28/93	25.0	AIR CONDUCTIVITY		6.46E-05	1.61E-04	cm/s
				BULK DENSITY		1.70	1.70	g/cc
				EFFECTIVE POROSITY		16.2	25.4	%vb
				GRAIN DENSITY		2.70	2.72	g/cc
				HYDRAULIC CONDUCTIVITY		2.37E-04	1.60E-04	cm/s
				NATIVE STATE AIRPERM		1000	2500	md
				TOTAL POROSITY		37.2	37.6	%vb
				WATER PERM		200	130	md
	SSS01051	07/28/93	55.0	AIR CONDUCTIVITY		7.18E-04	5.44E-04	cm/s
				BULK DENSITY		1.42	1.42	g/cc
				EFFECTIVE POROSITY		40.5	44.0	%vb
				GRAIN DENSITY		2.70	2.71	g/cc
				HYDRAULIC CONDUCTIVITY		2.61E-03	2.79E-03	cm/s
				NATIVE STATE AIRPERM		11000	8400	md
				TOTAL POROSITY		47.2	47.7	%vb
				WATER PERM		2200	2300	md
SBL0069	SSS00974	07/28/93	8.0	AIR CONDUCTIVITY		1.47E-06	3.00E-06	cm/s
				BULK DENSITY		1.78	1.74	g/cc
				EFFECTIVE POROSITY		18.7	14.9	%vb
				GRAIN DENSITY		2.66	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		1.68E-06	4.04E-07	cm/s
				NATIVE STATE AIRPERM		10	47	md
				TOTAL POROSITY		33.2	34.7	%vb
				WATER PERM		1.36	0.33	md
	SSS01028	07/28/93	30.0	AIR CONDUCTIVITY		8.55E-04	8.89E-04	cm/s
				BULK DENSITY		1.61	1.58	g/cc
				EFFECTIVE POROSITY		36.3	35.4	%vb
				GRAIN DENSITY		2.70	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		2.90E-03	1.19E-03	cm/s
				NATIVE STATE AIRPERM		13300	13800	md
				TOTAL POROSITY		40.1	41.0	%vb
				WATER PERM		2300	970	md
	SSS01033	07/29/93	43.5	AIR CONDUCTIVITY		1.80E-04	3.05E-04	cm/s
				BULK DENSITY		1.73	1.56	g/cc
				EFFECTIVE POROSITY		29.0	24.4	%vb
				GRAIN DENSITY		2.70	2.69	g/cc
				HYDRAULIC CONDUCTIVITY		1.47E-03	7.85E-04	cm/s
				NATIVE STATE AIRPERM		2800	4700	md
				TOTAL POROSITY		39.2	42.1	%vb
				WATER PERM		1200	640	md

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0069	SSS01056	07/29/93	47.0	AIR CONDUCTIVITY		1.58E-07	6.17E-07	cm/s
				BULK DENSITY		1.55	1.53	g/cc
				EFFECTIVE POROSITY		17.5	10.0	%vb
				GRAIN DENSITY		2.70	2.71	g/cc
				HYDRAULIC CONDUCTIVITY		9.93E-08	2.37E-06	cm/s
				NATIVE STATE AIRPERM		1	4	md
				TOTAL POROSITY		42.6	43.5	%vb
				WATER PERM		0.0804	1.92	md
	SSS01058	07/29/93	53.0	AIR CONDUCTIVITY		5.68E-04	5.25E-04	cm/s
				BULK DENSITY		1.39	1.42	g/cc
				EFFECTIVE POROSITY		42.9	42.1	%vb
				GRAIN DENSITY		2.69	2.69	g/cc
				HYDRAULIC CONDUCTIVITY		7.85E-04	9.10E-04	cm/s
				NATIVE STATE AIRPERM		8800	8100	md
				TOTAL POROSITY		48.1	47.2	%vb
				WATER PERM		640	740	md
SBL0070	SSS01102	07/29/93	10.0	AIR CONDUCTIVITY		1.68E-6	1.06E-5	cm/s
				BULK DENSITY		1.67	1.66	g/cc
				GRAIN DENSITY		2.72	2.73	g/cc
				HYDRAULIC CONDUCTIVITY		3.03E-7	4.75E-7	cm/s
				NATIVE STATE AIRPERM		25.9	162.8	md
				TOTAL POROSITY		38.7	39.2	%vb
				WATER PERM		.272	.426	md
	SSS01107	07/29/93	26.5	AIR CONDUCTIVITY		9.26E-4	9.85E-4	cm/s
				BULK DENSITY		1.45	1.48	g/cc
				GRAIN DENSITY		2.65	2.72	g/cc
				HYDRAULIC CONDUCTIVITY		3.91E-3	3.59E-3	cm/s
				NATIVE STATE AIRPERM		14260	15180	md
				TOTAL POROSITY		45.4	45.5	%vb
				WATER PERM		3510	3220	md
	SSS01110	07/29/93	40.0	AIR CONDUCTIVITY		3.97E-4	4.20E-4	cm/s
				BULK DENSITY		1.41	1.37	g/cc
				GRAIN DENSITY		2.67	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		2.06E-3	2.56E-3	cm/s
				NATIVE STATE AIRPERM		6110	6470	md
				TOTAL POROSITY		47.3	48.7	%vb
				WATER PERM		1850	2300	md
SBL0071	SSS01073	07/30/93	27.0	AIR CONDUCTIVITY		8.36E-04	7.22E-04	cm/s
				BULK DENSITY		1.48	1.49	g/cc
				EFFECTIVE POROSITY		39.7	37.6	%vb
				GRAIN DENSITY		2.64	2.63	g/cc
				HYDRAULIC CONDUCTIVITY		5.32E-03	5.32E-03	cm/s
				NATIVE STATE AIRPERM		13000	11000	md
				TOTAL POROSITY		43.9	43.3	%vb
				WATER PERM		4400	4400	md
	SSS01077	07/30/93	34.0	AIR CONDUCTIVITY		5.35E-07	2.60E-08	cm/s
				BULK DENSITY		1.70	1.70	g/cc
				EFFECTIVE POROSITY		3.5	6.2	%vb
				GRAIN DENSITY		2.70	2.69	g/cc
				HYDRAULIC CONDUCTIVITY		6.37E-08	4.56E-07	cm/s
				NATIVE STATE AIRPERM		4	0	md
				TOTAL POROSITY		36.8	36.7	%vb
				WATER PERM		0.0526	0.3764	md
	SSS01091	08/02/93	71.0	BULK DENSITY			1.64	g/cc

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0071	SSS01091	08/02/93	71.0	EFFECTIVE POROSITY			12.2	%vb
				GRAIN DENSITY			2.73	g/cc
				SAT CONTAMINANT			8.3	%ps
				SAT WATER			82.9	%ps
				TOTAL POROSITY			39.6	%vb
SBL0073	SSS01183	08/03/93	13.0	AIR CONDUCTIVITY		5.05E-05	4.77E-05	cm/s
				BULK DENSITY		1.60	1.64	g/cc
				EFFECTIVE POROSITY		23.1	23.7	%vb
				GRAIN DENSITY		2.70	2.71	g/cc
				HYDRAULIC CONDUCTIVITY		7.55E-06	2.49E-06	cm/s
				NATIVE STATE AIRPERM		780	730	md
				TOTAL POROSITY		40.6	39.4	%vb
				WATER PERM		6.54	2.16	md
	SSS01202	08/03/93	55.5	AIR CONDUCTIVITY		6.81E-04	3.04E-04	cm/s
				BULK DENSITY		1.49	1.45	g/cc
				EFFECTIVE POROSITY		39.4	36.7	%vb
				GRAIN DENSITY		2.68	2.66	g/cc
				HYDRAULIC CONDUCTIVITY		3.13E-03	2.77E-03	cm/s
				NATIVE STATE AIRPERM		10500	4700	md
				TOTAL POROSITY		44.5	45.6	%vb
				WATER PERM		2700	2400	md
SBL0077	SSS01152	09/28/93	130.0	BULK DENSITY		1.98		g/cc
				EFFECTIVE POROSITY		8.91	12.7	%vb
				GRAIN DENSITY		2.71		g/cc
				HYDRAULIC CONDUCTIVITY		1.25E-5	2.10E-6	cm/s
				TOTAL POROSITY		27.0		%vb
				WATER PERM		11.7	1.96	md
	SSS01153	09/28/93	150.0	ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	44			%wt
				ATTERBERG MOISTURE AS RECVD	36.26			%wt
				ATTERBERG PLASTIC INDEX	19			%wt
				ATTERBERG PLASTIC LIMIT	25			%wt
				BULK DENSITY		1.42		g/cc
				EFFECTIVE POROSITY		3.25	18.3	%vb
				GRAIN DENSITY		2.77		g/cc
				HYDRAULIC CONDUCTIVITY		1.07E-6	2.98E-6	cm/s
				TOTAL POROSITY		48.8		%vb
				WATER PERM		.947	2.65	md
	SSS01154	09/28/93	165.0	BULK DENSITY		1.46		g/cc
				EFFECTIVE POROSITY		13.5	11.1	%vb
				GRAIN DENSITY		2.66		g/cc
				HYDRAULIC CONDUCTIVITY		1.93E-3	2.02E-3	cm/s
				TOTAL POROSITY		45.2		%vb
				WATER PERM		1710	1790	md
SBL0078	SSS01292	10/27/93	63.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.57	1.52	g/cc
				EFFECTIVE POROSITY		2.65	8.69	%vb
				GRAIN DENSITY		2.74	2.69	g/cc
				HYDRAULIC CONDUCTIVITY		9.30E-4	3.28E-3	cm/s
				TOTAL POROSITY		42.7	43.2	%vb
				WATER PERM		1010	3580	md

TABLE F 1
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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0078	SSS01293	10/28/93	84.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.48	1.48	g/cc
				EFFECTIVE POROSITY		3.54	5.75	%vb
				GRAIN DENSITY		2.67	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		2.30E-3	2.41E-3	cm/s
				TOTAL POROSITY		44.4	44.4	%vb
				WATER PERM		2510	2620	md
	SSS01294	10/28/93	97.0	ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	59			%wt
				ATTERBERG PLASTIC INDEX	34			%wt
				ATTERBERG PLASTIC LIMIT	25			%wt
				BULK DENSITY		1.29	1.30	g/cc
				EFFECTIVE POROSITY		13.3	11.2	%vb
				GRAIN DENSITY		2.74	2.74	g/cc
				HYDRAULIC CONDUCTIVITY		1.18E-7	2.49E-7	cm/s
				TOTAL POROSITY		52.9	52.5	%vb
				WATER PERM		.129	.272	md
	SSS01295	10/28/93	112.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.45	1.46	g/cc
				EFFECTIVE POROSITY		5.54	13.8	%vb
				GRAIN DENSITY		2.68	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		1.17E-3	5.29E-4	cm/s
				TOTAL POROSITY		45.8	45.7	%vb
				WATER PERM		1280	580	md
	SSS01296	10/28/93	157.0	ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	47			%wt
				ATTERBERG PLASTIC INDEX	20			%wt
				ATTERBERG PLASTIC LIMIT	27			%wt
				BULK DENSITY		1.44	1.41	g/cc
				EFFECTIVE POROSITY		3.78	10.4	%vb
				GRAIN DENSITY		2.72	2.72	g/cc
				HYDRAULIC CONDUCTIVITY		5.25E-5	2.64E-6	cm/s
				TOTAL POROSITY		47.3	48.3	%vb
				WATER PERM		57.3	2.88	md
	SSS01297	10/28/93	164.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.58	1.55	g/cc
				EFFECTIVE POROSITY		5.77	3.26	%vb
				GRAIN DENSITY		2.68	2.65	g/cc
				HYDRAULIC CONDUCTIVITY		9.18E-4	1.80E-3	cm/s
				TOTAL POROSITY		41.2	41.6	%vb
				WATER PERM		1000	1960	md
SBL0080	SSS01298	12/21/93	72.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	32.83			%wt
				ATTERBERG PLASTIC INDEX	0			%wt

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Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SBL0080	SSS01298	12/21/93	72.0	ATTERBERG PLASTIC LIMIT	0			%wt
	SSS01299	12/21/93	135.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	19.19			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
	SSS01300	12/22/93	145.0	ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	86			%wt
				ATTERBERG MOISTURE AS RECVD	41.43			%wt
				ATTERBERG PLASTIC INDEX	53			%wt
				ATTERBERG PLASTIC LIMIT	33			%wt
	SSS01301	12/22/93	177.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	25.76			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
	SSS01302	12/22/93	220.0	ATTERBERG CLASSIFICATION	ML			
				ATTERBERG LIQUID LIMIT	34			%wt
				ATTERBERG MOISTURE AS RECVD	30.69			%wt
				ATTERBERG PLASTIC INDEX	5			%wt
				ATTERBERG PLASTIC LIMIT	29			%wt
SBL0081	SSS01303	01/19/94	72.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	27.61			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
	SSS01304	01/19/94	163.0	ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	60			%wt
				ATTERBERG MOISTURE AS RECVD	33.53			%wt
				ATTERBERG PLASTIC INDEX	36			%wt
				ATTERBERG PLASTIC LIMIT	24			%wt
	SSS01305	01/20/94	180.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	25.05			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
SWL0001	SSS00151	10/13/92	72.0	AIR CONDUCTIVITY		2.8E-05	1.2E-04	cm/s
				ATTERBERG CLASSIFICATION	SP-SM			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	24.17			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.51	1.49	g/cc
				EFFECTIVE POROSITY		7.67	17.2	%vb
				GRAIN DENSITY		2.68	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		9.9E-04	4.4E-04	cm/s
				NATIVE STATE AIRPERM		420	1830	md
				PERCENT MOISTURE	24.7			%wt
				TOTAL POROSITY		43.6	44.5	%vb
				WATER PERM		960	420	md
SWL0002	SSS00152	10/13/92	61.0	AIR CONDUCTIVITY		1.0E-06	5.6E-06	cm/s
				ATTERBERG CLASSIFICATION	SP-SM			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	23.76			%wt

TABLE F 1
Summary Results - Laboratory Analyses of Soil Properties
Groundwater Remedial Investigation Report - Del Amo Study Area

Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SWL0002	SSS00152	10/13/92	61.0	ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
				BULK DENSITY		1.40	1.42	g/cc
				EFFECTIVE POROSITY		12.2	12.1	%vb
				GRAIN DENSITY		2.72	2.72	g/cc
				HYDRAULIC CONDUCTIVITY		2.0E-03	1.7E-03	cm/s
				NATIVE STATE AIRPERM		150	84.3	md
				PERCENT MOISTURE	27.1			%wt
				TOTAL POROSITY		48.6	48.0	%vb
				WATER PERM		1920	1630	md
SWL0005	SSS00387	01/28/93	4.0	ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	43			%wt
				ATTERBERG MOISTURE AS RECVD	14.77			%wt
				ATTERBERG PLASTIC INDEX	27			%wt
				ATTERBERG PLASTIC LIMIT	16			%wt
	SSS00388	01/28/93	14.0	ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	38			%wt
				ATTERBERG MOISTURE AS RECVD	22.91			%wt
				ATTERBERG PLASTIC INDEX	15			%wt
				ATTERBERG PLASTIC LIMIT	23			%wt
	SSS00389	01/28/93	24.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	8.94			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
	SSS00390	01/28/93	33.0	ATTERBERG CLASSIFICATION	CL-ML			
				ATTERBERG LIQUID LIMIT	26			%wt
				ATTERBERG MOISTURE AS RECVD	13.19			%wt
				ATTERBERG PLASTIC INDEX	5			%wt
				ATTERBERG PLASTIC LIMIT	21			%wt
	SSS00412	01/28/93	44.0	ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	28			%wt
				ATTERBERG MOISTURE AS RECVD	16.51			%wt
				ATTERBERG PLASTIC INDEX	10			%wt
				ATTERBERG PLASTIC LIMIT	18			%wt
	SSS00413	01/28/93	55.0	ATTERBERG CLASSIFICATION	ML			
				ATTERBERG LIQUID LIMIT	38			%wt
				ATTERBERG MOISTURE AS RECVD	36.62			%wt
				ATTERBERG PLASTIC INDEX	11			%wt
				ATTERBERG PLASTIC LIMIT	27			%wt
	SSS00414	01/28/93	61.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	28.09			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
SWL0006	SSS00415	01/28/93	4.0	ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	50			%wt
				ATTERBERG MOISTURE AS RECVD	17.41			%wt
				ATTERBERG PLASTIC INDEX	34			%wt
				ATTERBERG PLASTIC LIMIT	16			%wt
	SSS00443	02/01/93	14.0	ATTERBERG CLASSIFICATION	CL			
				ATTERBERG LIQUID LIMIT	41			%wt
				ATTERBERG MOISTURE AS RECVD	18.62			%wt
				ATTERBERG PLASTIC INDEX	24			%wt

TABLE F 1
Summary Results - Laboratory Analyses of Soil Properties
Groundwater Remedial Investigation Report - Del Amo Study Area

Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
SWL0006	SSS00443	02/01/93	14.0	ATTERBERG PLASTIC LIMIT	17			%wt
	SSS00444	02/01/93	24.0	ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	56			%wt
				ATTERBERG MOISTURE AS RECVD	30.49			%wt
				ATTERBERG PLASTIC INDEX	32			%wt
				ATTERBERG PLASTIC LIMIT	23			%wt
	SSS00445	02/01/93	33.0	ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	56			%wt
				ATTERBERG MOISTURE AS RECVD	34.64			%wt
				ATTERBERG PLASTIC INDEX	27			%wt
				ATTERBERG PLASTIC LIMIT	27			%wt
	SSS00446	02/01/93	44.0	ATTERBERG CLASSIFICATION	CH			
				ATTERBERG LIQUID LIMIT	91			%wt
				ATTERBERG MOISTURE AS RECVD	49.84			%wt
				ATTERBERG PLASTIC INDEX	63			%wt
				ATTERBERG PLASTIC LIMIT	28			%wt
	SSS00447	02/01/93	58.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	21.92			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
	SSS00448	02/01/93	68.0	ATTERBERG CLASSIFICATION	NP			
				ATTERBERG LIQUID LIMIT	0			%wt
				ATTERBERG MOISTURE AS RECVD	24.63			%wt
				ATTERBERG PLASTIC INDEX	0			%wt
				ATTERBERG PLASTIC LIMIT	0			%wt
VWL0001	SSS00034	09/15/92	30.3	AIR CONDUCTIVITY		5.6E-05	1.8E-05	cm/s
				BULK DENSITY		1.67	1.70	g/cc
				EFFECTIVE POROSITY		22.6	18.1	%vb
				GRAIN DENSITY		2.69	2.71	g/cc
				HYDRAULIC CONDUCTIVITY		5.7E-05	6.0E-05	cm/s
				NATIVE STATE AIRPERM		850	260	md
				PERCENT MOISTURE	18.3			%wt
				TOTAL POROSITY		37.7	37.1	%vb
				WATER PERM		56.5	59.6	md
	SSS00043	09/16/92	48.3	AIR CONDUCTIVITY		5.1E-04	2.6E-04	cm/s
				BULK DENSITY		1.59	1.60	g/cc
				EFFECTIVE POROSITY		28.4	27.2	%vb
				GRAIN DENSITY		2.67	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		5.3E-04	4.2E-04	cm/s
				NATIVE STATE AIRPERM		7930	3970	md
				PERCENT MOISTURE	5.24			%wt
				TOTAL POROSITY		40.3	40.4	%vb
				WATER PERM		520	420	md
VWL0002	SSS00053	09/16/92	53.3	AIR CONDUCTIVITY		3.3E-04	2.2E-04	cm/s
				BULK DENSITY		1.56	1.59	g/cc
				EFFECTIVE POROSITY		32.9	24.5	%vb
				GRAIN DENSITY		2.67	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		7.4E-05	1.9E-04	cm/s
				NATIVE STATE AIRPERM		5120	2250	md
				PERCENT MOISTURE	15.1			%wt
				TOTAL POROSITY		41.6	40.7	%vb
				WATER PERM		73.0	190	md
VWL0003	SSS00092	09/17/92	30.5	AIR CONDUCTIVITY		2.5E-04	3.7E-04	cm/s

TABLE F 1
Summary Results - Laboratory Analyses of Soil Properties
Groundwater Remedial Investigation Report - Del Amo Study Area

Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
VWL0003	SSS00092	09/17/92	30.5	BULK DENSITY		1.52	1.49	g/cc
				EFFECTIVE POROSITY		35.4	39.2	%vb
				GRAIN DENSITY		2.63	2.70	g/cc
				HYDRAULIC CONDUCTIVITY		3.9E-04	5.0E-04	cm/s
				NATIVE STATE AIRPERM		3920	5880	md
				PERCENT MOISTURE	7.96			%wt
				TOTAL POROSITY		42.3	44.8	%vb
				WATER PERM		380	480	md
	SSS00096	09/17/92	35.0	AIR CONDUCTIVITY		2.8E-04	1.7E-05	cm/s
				BULK DENSITY		1.48	1.49	g/cc
				EFFECTIVE POROSITY		26.1	21.9	%vb
				GRAIN DENSITY		2.66	2.66	g/cc
				HYDRAULIC CONDUCTIVITY		9.4E-04	5.0E-04	cm/s
				NATIVE STATE AIRPERM		4470	1510	md
				PERCENT MOISTURE	2.19			%wt
				TOTAL POROSITY		44.4	44.2	%vb
				WATER PERM		900	480	md
	SSS00107	09/17/92	40.0	AIR CONDUCTIVITY		9.4E-05	9.7E-06	cm/s
				BULK DENSITY		1.72	1.52	g/cc
				EFFECTIVE POROSITY		17.6	20.3	%vb
				GRAIN DENSITY		2.69	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		1.2E-04	9.2E-05	cm/s
				NATIVE STATE AIRPERM		1460	120	md
				PERCENT MOISTURE	14.5			%wt
				TOTAL POROSITY		36.2	43.1	%vb
				WATER PERM		110	88.6	md
VWL0004	SSS00070	09/17/92	36.5	AIR CONDUCTIVITY		1.5E-05	6.0E-07	cm/s
				BULK DENSITY		1.56	1.54	g/cc
				EFFECTIVE POROSITY		23.2	12.8	%vb
				GRAIN DENSITY		2.68	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		1.4E-05	1.4E-06	cm/s
				NATIVE STATE AIRPERM		220	4.27	md
				PERCENT MOISTURE	20.4			%wt
				TOTAL POROSITY		41.9	42.3	%vb
				WATER PERM		13.2	1.33	md
	SSS00078	09/17/92	55.0	AIR CONDUCTIVITY		1.5E-05	4.3E-06	cm/s
				BULK DENSITY		1.58	1.56	g/cc
				EFFECTIVE POROSITY		16.5	11.8	%vb
				GRAIN DENSITY		2.68	2.67	g/cc
				HYDRAULIC CONDUCTIVITY		3.2E-05	1.6E-05	cm/s
				NATIVE STATE AIRPERM		230	56.3	md
				PERCENT MOISTURE	19.1			%wt
				TOTAL POROSITY		41.1	41.5	%vb
				WATER PERM		30.4	15.3	md
	SSS00080	09/17/92	55.5	AIR CONDUCTIVITY		1.1E-04	2.6E-05	cm/s
				BULK DENSITY		1.55	1.71	g/cc
				EFFECTIVE POROSITY		26.5	16.6	%vb
				GRAIN DENSITY		2.67	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		2.0E-04	6.6E-05	cm/s
				NATIVE STATE AIRPERM		1730	380	md
				PERCENT MOISTURE	15.9			%wt
				TOTAL POROSITY		42.0	36.0	%vb
				WATER PERM		200	63.0	md
VWL0005	SSS00084	09/18/92	31.0	AIR CONDUCTIVITY		3.3E-07	1.2E-04	cm/s

TABLE F 1
Summary Results - Laboratory Analyses of Soil Properties
Groundwater Remedial Investigation Report - Del Amo Study Area

Location	Sample ID	Date	Depth (ft)	Parameter	Total	Horizontal	Vertical	Units
VWL0005	SSS00084	09/18/92	31.0	BULK DENSITY		1.73	1.58	g/cc
				EFFECTIVE POROSITY		6.16	18.4	%vb
				GRAIN DENSITY		2.66	2.65	g/cc
				HYDRAULIC CONDUCTIVITY		9.8E-07	6.2E-04	cm/s
				NATIVE STATE AIRPERM		2.19	1890	md
				PERCENT MOISTURE	18.6			%wt
				TOTAL POROSITY		35.2	40.6	%vb
				WATER PERM		0.94	590	md
	SSS00114	09/18/92	37.5	AIR CONDUCTIVITY		2.8E-05	3.9E-05	cm/s
				BULK DENSITY		1.55	1.52	g/cc
				EFFECTIVE POROSITY		23.1	27.6	%vb
				GRAIN DENSITY		2.70	2.68	g/cc
				HYDRAULIC CONDUCTIVITY		1.4E-04	2.0E-04	cm/s
				NATIVE STATE AIRPERM		430	600	md
				PERCENT MOISTURE	16.9			%wt
				TOTAL POROSITY		42.7	43.4	%vb
				WATER PERM		130	200	md
VWL0006	SSS00125	09/18/92	31.5	AIR CONDUCTIVITY		7.3E-07	8.7E-08	cm/s
				BULK DENSITY		1.41	1.39	g/cc
				EFFECTIVE POROSITY		11.6	3.82	%vb
				GRAIN DENSITY		2.67	2.65	g/cc
				HYDRAULIC CONDUCTIVITY		6.0E-06	4.9E-06	cm/s
				NATIVE STATE AIRPERM		5.20	0.586	md
				PERCENT MOISTURE	29.0			%wt
				TOTAL POROSITY		47.1	47.6	%vb
				WATER PERM		5.80	4.68	md
	SSS00163	09/18/92	37.5	AIR CONDUCTIVITY		1.2E-04	1.7E-05	cm/s
				BULK DENSITY		1.60	1.57	g/cc
				EFFECTIVE POROSITY		26.4	23.2	%vb
				GRAIN DENSITY		2.67	2.66	g/cc
				HYDRAULIC CONDUCTIVITY		2.6E-04	3.8E-05	cm/s
				NATIVE STATE AIRPERM		1880	260	md
				PERCENT MOISTURE	10.5			%wt
				TOTAL POROSITY		40.2	40.2	%vb
				WATER PERM		250	36.7	md
VWL0007	SSS00174	09/21/92	31.3	AIR CONDUCTIVITY		7.3E-05	3.2E-04	cm/s
				BULK DENSITY		1.53	1.51	g/cc
				EFFECTIVE POROSITY		34.8	42.4	%vb
				GRAIN DENSITY		2.65	2.65	g/cc
				HYDRAULIC CONDUCTIVITY		3.2E-04	1.0E-03	cm/s
				NATIVE STATE AIRPERM		1160	5080	md
				PERCENT MOISTURE	9.11			%wt
				TOTAL POROSITY		42.3	43.3	%vb
				WATER PERM		310	990	md
	SSS00182	09/21/92	37.3	AIR CONDUCTIVITY		1.9E-06	7.3E-07	cm/s
				BULK DENSITY		1.52	1.47	g/cc
				EFFECTIVE POROSITY		17.8	18.2	%vb
				GRAIN DENSITY		2.69	2.69	g/cc
				HYDRAULIC CONDUCTIVITY		8.6E-06	2.4E-06	cm/s
				NATIVE STATE AIRPERM		16.4	5.33	md
				PERCENT MOISTURE	19.4			%wt
				TOTAL POROSITY		43.7	45.2	%vb
				WATER PERM		8.25	2.34	md
VWL0008	SSS00132	09/21/92	30.0	AIR CONDUCTIVITY		2.8E-06	8.7E-07	cm/s

APPENDIX F2

SEDIMENT GRAIN SIZE DISTRIBUTION GRAPHS

NOTE: Complete analytical laboratory results are on file at Dames & Moore

Table F2-1
Summary of Grain Size Distribution
Data Availability

Location ID	Sample ID	Sample Depth	HSU
SBL0011	SSS00153	62.5	MBFM
SBL0011	SSS00154	69.5	MBFM
SBL0012	SSS00155	30	UBF
SBL0012	SSS00156	133	LBF
SBL0012	SSS00157	142.5	LBF
SBL0013	SSS00246	31.5	UBF
SBL0013	SSS00257	72	UBF
SBL0013	SSS00258	115.5	MBFC
SBL0013	SSS00259	171.5	LBF
SBL0014	SSS00260	34	UBF
SBL0014	SSS00266	119	MBFC
SBL0014	SSS00267	135	LBF
SBL0015	SSS00268	34	UBF
SBL0015	SSS00269	77	MBFB
SBL0015	SSS00270	110	MBFC
SBL0015	SSS00271	145	MBFC
SBL0016	SSS00272	45	UBF
SBL0016	SSS00273	110	MBFC
SBL0016	SSS00274	134	MBFC
SBL0019	SSS00280	47	UBF
SBL0019	SSS00281	123	MBFC
SBL0019	SSS00282	128	LBF
SBL0019	SSS00283	160	LBF
SBL0019	SSS00284	168	LBF
SBL0020	SSS00275	42	UBF
SBL0020	SSS00276	52	UBF
SBL0020	SSS00277	82	MBFM
SBL0020	SSS00278	111	MBFC
SBL0020	SSS00279	141	LBF
SBL0020	SSS00296	48.5	UBF
SBL0020	SSS00297	81	MBFM
SBL0020	SSS00298	142	LBF
SBL0021	SSS00299	97	MBFM
SBL0021	SSS00300	104	MBFC
SBL0021	SSS00301	137.5	LBF
SBL0021	SSS00302	201	GAGE
SBL0021	SSS00303	235	GLA
SBL0022	SSS00285	35	UBF
SBL0022	SSS00286	63	UBF
SBL0022	SSS00287	89	MBFB
SBL0022	SSS00288	152	LBF
SBL0022	SSS00289	200	GAGE
SBL0023	SSS00290	47	UBF
SBL0023	SSS00291	81	MBFB
SBL0023	SSS00292	125	MBFC
SBL0024	SSS00293	41	UBF
SBL0024	SSS00294	111	MBFC
SBL0024	SSS00295	144	LBF
SBL0025	SSS00254	130	MBFC
SBL0025	SSS00255	150	LBF
SBL0025	SSS00304	29	UBF
SBL0025	SSS00305	90	MBFC
SBL0026	SSS00306	35	UBF
SBL0026	SSS00307	71	UBF
SBL0026	SSS00308	140	MBFC
SBL0026	SSS00309	160	LBF
SBL0027	SSS00310	25	UBF
SBL0027	SSS00311	50	UBF
SBL0027	SSS00312	151	MBFC
SBL0027	SSS00313	158	LBF
SBL0027	SSS00314	186	GAGE
SBL0028	SSS00160	38	UBF
SBL0028	SSS00265	72	UBF
SBL0028	SSS00315	121	MBFC
SBL0028	SSS00316	155.5	MBFC
SBL0029	SSS00317	46	UBF
SBL0029	SSS00318	80	MBFC
SBL0029	SSS00319	129	MBFC
SBL0029	SSS00320	145.5	LBF
SBL0030	SSS00321	40	UBF
SBL0030	SSS00322	90	MBFB
SBL0030	SSS00323	123	MBFC
SBL0030	SSS00324	132	MBFC
SBL0031	SSS00325	46	UBF
SBL0031	SSS00326	71	UBF
SBL0031	SSS00327	105	MBFC
SBL0031	SSS00328	150	LBF
SBL0032	SSS00329	52	UBF
SBL0032	SSS00330	73	UBF
SBL0032	SSS00331	105	MBFB
SBL0032	SSS00332	136	MBFC
SBL0032	SSS00333	37	UBF
SBL0033	SSS00334	81	GLA
SBL0033	SSS00335	120	GLA
SBL0033	SSS00336	154	GLA
SBL0033	SSS00337	192	GLA
SBL0033	SSS00338	261	GLA
SBL0034	SSS00339	39	UBF
SBL0034	SSS00340	52	UBF
SBL0034	SSS00341	104	MBFB
SBL0034	SSS00342	174	LBF
SBL0035	SSS00343	37	UBF
SBL0035	SSS00344	60	UBF
SBL0035	SSS00345	97	MBFB

Table F2-1
Summary of Grain Size Distribution
Data Availability

Location ID	Sample ID	Sample Depth	HSU
SBL0035	SSS00346	140	LBF
SBL0035	SSS00347	145	LBF
SBL0038	SSS00421	8	UBF
SBL0052	SSS00886	105	MBFB
SBL0052	SSS00887	141.5	MBFC
SBL0052	SSS00889	170	LBF
SBL0053	SSS00716	59	UBF
SBL0053	SSS00717	86	MBFB
SBL0053	SSS00718	124	MBFC
SBL0053	SSS00719	146.5	LBF
SBL0053	SSS00720	155	LBF
SBL0053	SSS00763	170	GAGE
SBL0054	SSS00764	78	UBF
SBL0054	SSS00765	132	MBFC
SBL0054	SSS00766	154	LBF
SBL0054	SSS00767	175	LBF
SBL0054	SSS00768	187	GAGE
SBL0059	SSS00769	64	UBF
SBL0059	SSS00770	69	UBF
SBL0059	SSS00815	139	MBFC
SBL0059	SSS00849	168	LBF
SBL0059	SSS00850	187	GAGE
SBL0077	SSS01152	130	MBFC
SBL0077	SSS01153	150	LBF
SBL0077	SSS01154	165	GAGE
SBL0077	SSS01170	166.3	GAGE
SBL0078	SSS01292	63	UBF
SBL0078	SSS01293	84	MBFB
SBL0078	SSS01294	97	MBFM
SBL0078	SSS01295	112	MBFC
SBL0078	SSS01296	157	LBF
SBL0078	SSS01297	164	GAGE
SBL0080	SSS01298	72	UBF
SBL0080	SSS01299	135	MBFC
SBL0080	SSS01300	145	LBF
SBL0080	SSS01301	177	GAGE
SBL0080	SSS01302	220	GLA
SBL0081	SSS01303	72	UBF
SBL0081	SSS01304	163	LBF
SBL0081	SSS01305	180	GLA
SBL0085	SSS01329	64.5	MBFC
SBL0085	SSS01331	69.7	MBFC
SBL0085	SSS01334	81.9	MBFC
SBL0086	SSS01336	62.4	MBFC
SBL0086	SSS01337	64.5	MBFC
SBL0086	SSS01341	72.7	MBFC
SBL0087	SSS01348	63.2	MBFC

Location ID	Sample ID	Sample Depth	HSU
SBL0088	SSS01365	71.2	MBFC
SBL0089	SSS01379	64.6	MBFC
SBL0089	SSS01380	65.5	MBFC
SBL0089	SSS01382	66.2	MBFC
SBL0089	SSS01384	68.5	MBFC
SBL0089	SSS01391	73.9	MBFC
SBL0089	SSS01394	75.4	MBFC
SBL0089	SSS01396	78.5	MBFC
SBL0090	SSS01399	63.3	MBFC
SBL0090	SSS01403	66.7	MBFC
SBL0090	SSS01405	70.3	MBFC
SBL0090	SSS01410	73.8	MBFC
SBL0090	SSS01411	74.3	MBFC
SBL0090	SSS01413	74.6	MBFC
SBL0090	SSS01418	76.9	MBFC
SBL0090	SSS01419	77.3	MBFC
SBL0091	SSS01425	64.6	MBFC
SBL0091	SSS01430	72.5	MBFC
SBL0091	SSS01431	72.6	MBFC
SBL0091	SSS01433	78.2	MBFC
SBL0091	SSS01434	79.3	MBFC
SBL0092	SSS01441	80.5	MBFC
SBL0093	SSS01446	76.7	MBFC
SBL0093	SSS01447	77.8	MBFC
SBL0093	SSS01450	81.7	MBFC
SBL0093	SSS01451	83.7	MBFC
SBL0093	SSS01452	88.5	MBFC
SBL0093	SSS01454	89.5	MBFC
SBL0094	SSS01455	71.3	MBFC
SBL0094	SSS01461	79.8	MBFC
SBL0094	SSS01463	81.5	MBFC
SBL0094	SSS01464	81.7	MBFC
SBL0094	SSS01471	88.8	MBFC
SBL0106	SSS01494	85	MBFC
SBL0106	SSS01495	125	MBFC
SBL0108	SSS01506	120	MBFC
SBL0108	SSS01507	126	MBFC
SWL0001	SSS00151	72	UBF
SWL0002	SSS00152	61	UBF
SWL0005	SSS00387	4	UBF
SWL0005	SSS00388	14	UBF
SWL0005	SSS00389	24	UBF
SWL0005	SSS00390	33	UBF
SWL0005	SSS00412	44	UBF
SWL0005	SSS00413	55	UBF
SWL0005	SSS00414	61	UBF
SWL0006	SSS00415	4	UBF

Table F2-1
Summary of Grain Size Distribution
Data Availability

Location ID	Sample ID	Sample Depth	HSU
SWL0006	SSS00443	14	UBF
SWL0006	SSS00444	24	UBF
SWL0006	SSS00445	33	UBF
SWL0006	SSS00446	44	UBF
SWL0006	SSS00447	58	UBF
SWL0006	SSS00448	68	UBF
VWL0001	SSS00034	30.3	UBF
VWL0001	SSS00043	48.3	UBF
VWL0001	SSS00044	48.5	UBF
VWL0002	SSS00053	53.3	UBF
VWL0002	SSS00054	53.5	UBF
VWL0003	SSS00092	30.5	UBF
VWL0003	SSS00096	35	UBF
VWL0003	SSS00107	40	UBF
VWL0004	SSS00070	36.5	UBF
VWL0004	SSS00078	55	UBF
VWL0004	SSS00080	55.5	UBF
VWL0005	SSS00084	31	UBF
VWL0005	SSS00114	37.5	UBF
VWL0006	SSS00125	31.5	UBF
VWL0006	SSS00163	37.5	UBF
VWL0007	SSS00174	31.3	UBF
VWL0007	SSS00182	37.3	UBF
VWL0008	SSS00132	30	UBF
VWL0008	SSS00137	35	UBF
VWL0008	SSS00147	40	UBF
VWL0009	SSS00191	30.3	UBF
VWL0009	SSS00204	37.5	UBF
VWL0010	SSS00214	31.3	UBF
VWL0010	SSS00222	37	UBF
VWL0010	SSS00229	41.3	UBF

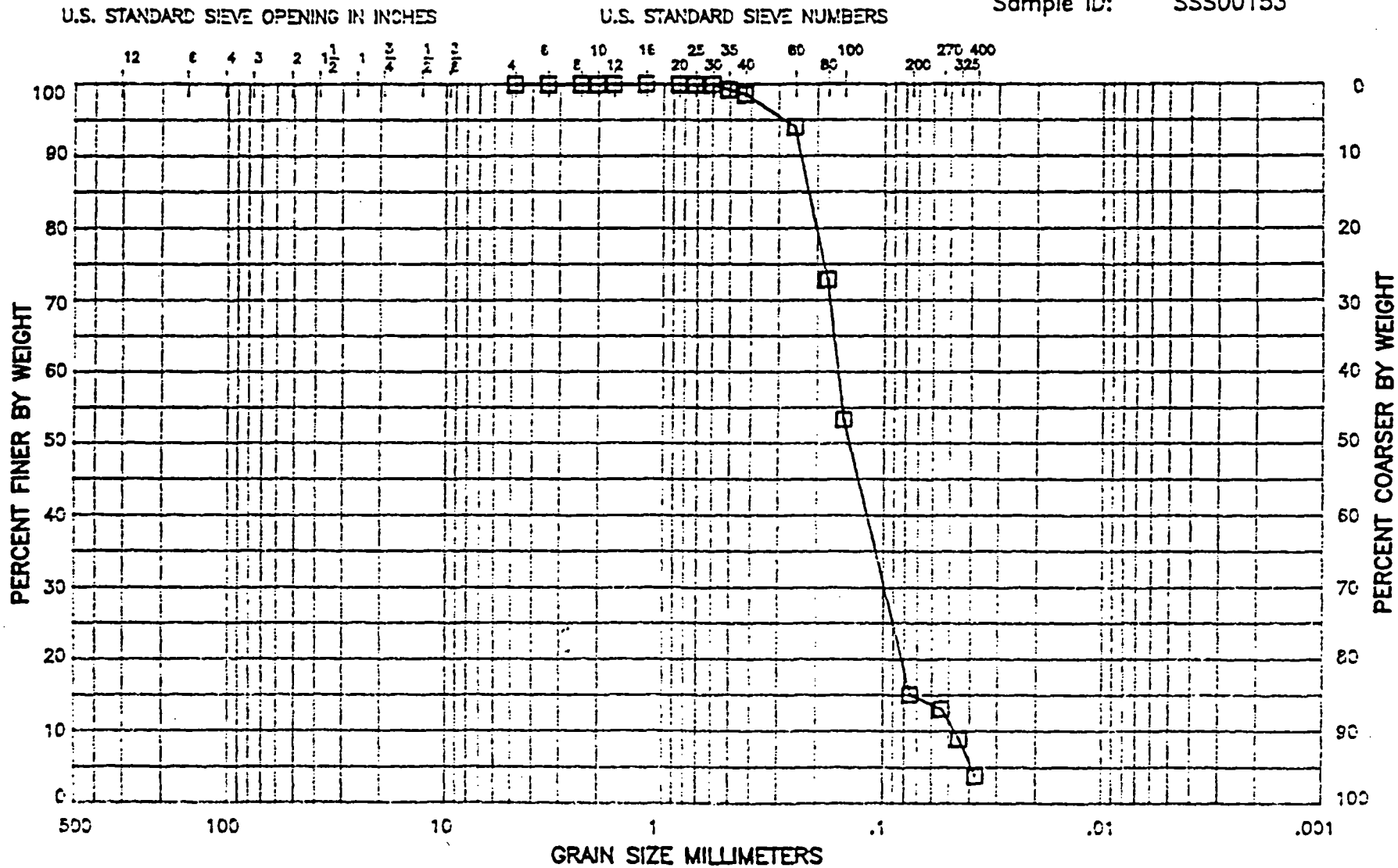
PTS Laboratories, Inc.

File No: 20004
Date: November 17, 1992

Client: Dames & Moore

Project Name: Del Amo RAFS
Project No.: 00216-315-5108-13
State: California
Sample ID: SSS00153

DRY SIEVE ANALYSIS



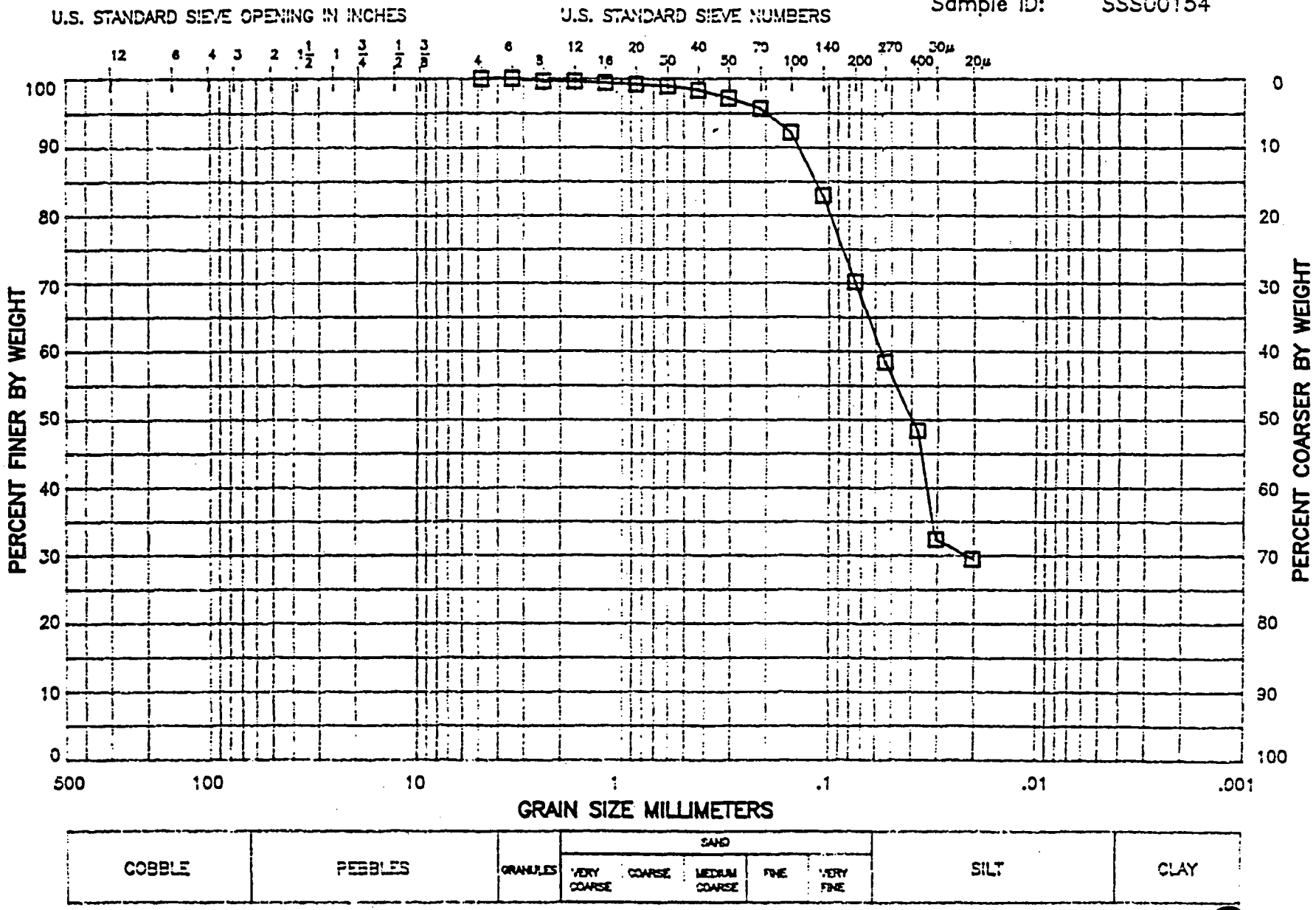
PTS Laboratories, Inc.

File No: 20004
Date: November 17, 1992

Project Name: Del Amo RNFS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00154

Client: Dames & Moore

WET/DRY SIEVE ANALYSIS



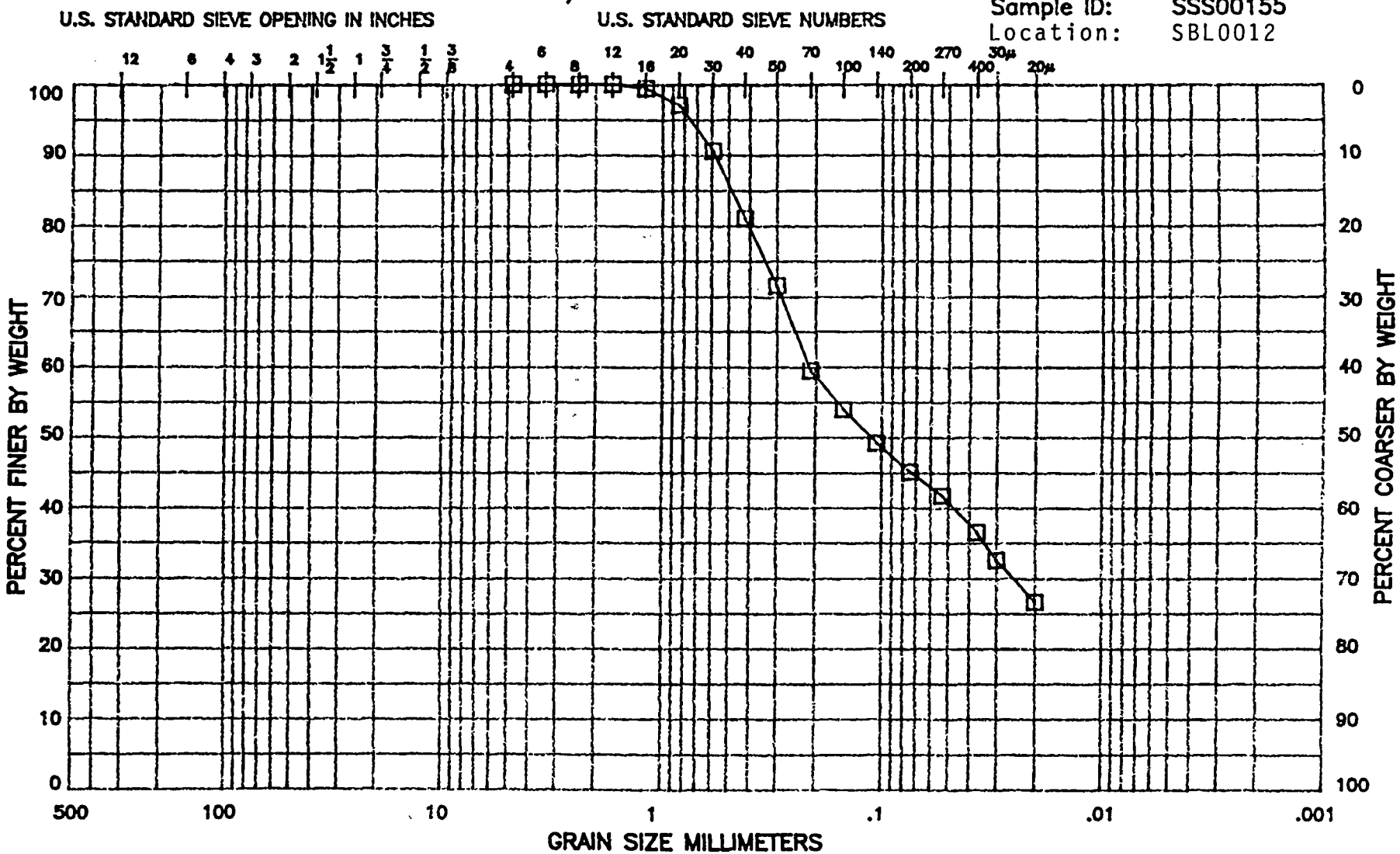
PTS Laboratories, Inc.

File No: 20004
Date: December 28, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00155
Location: SBL0012

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

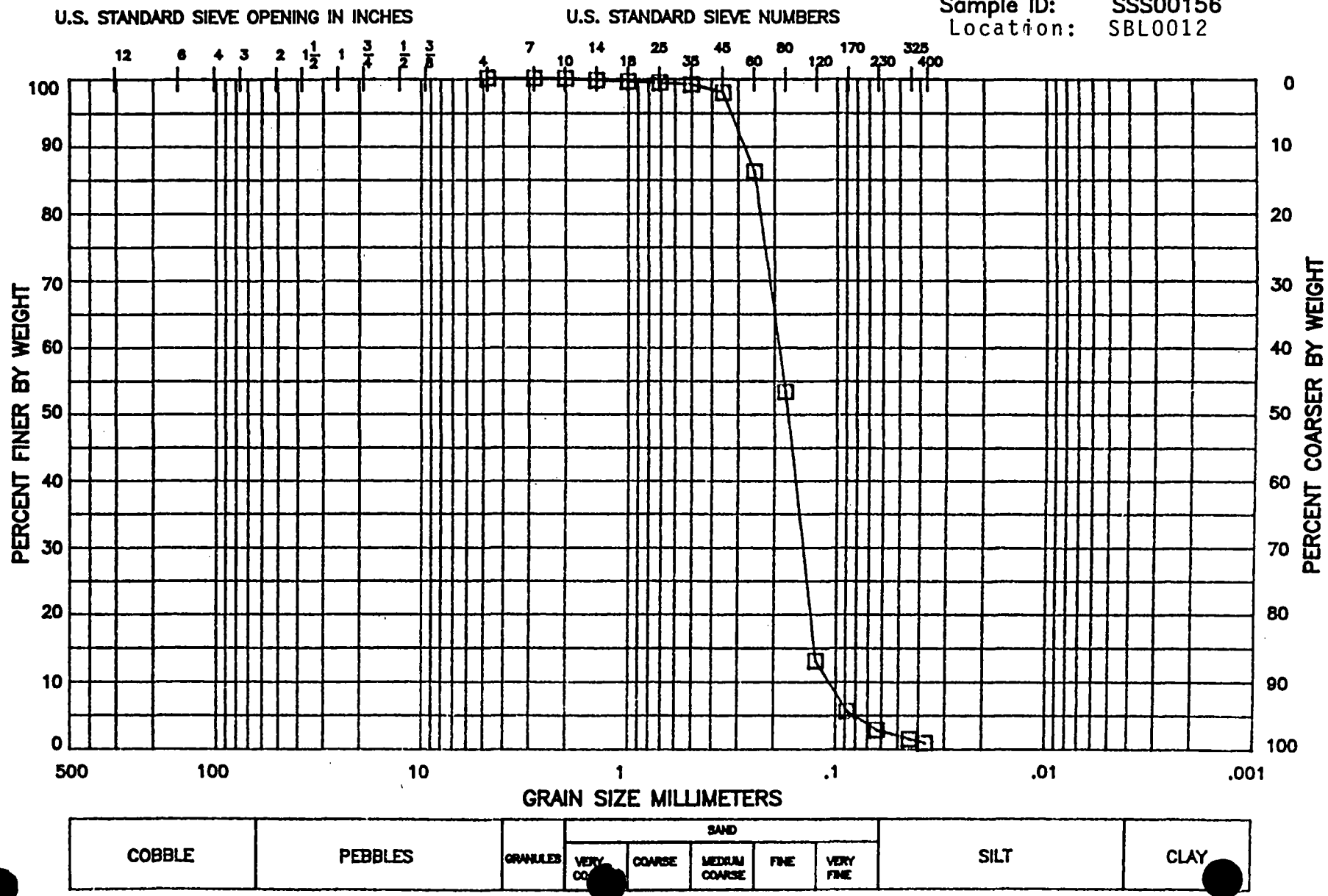
PTS Laboratories, Inc.

File No: 20004
Date: December 18, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00156
Location: SBL0012

DRY SIEVE ANALYSIS



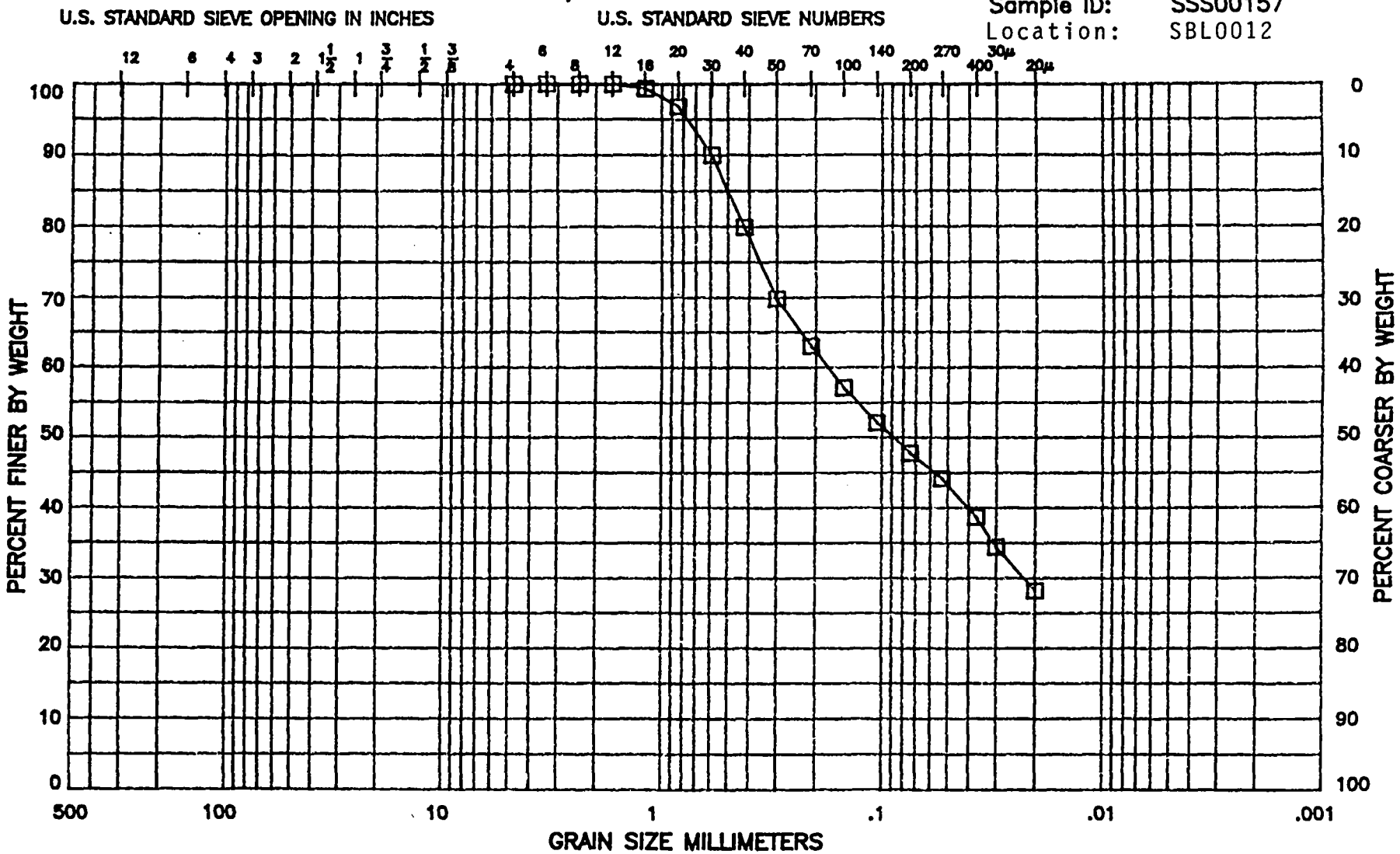
PTS Laboratories, Inc.

File No: 2004
Date: December 21, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00157
Location: SBL0012

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

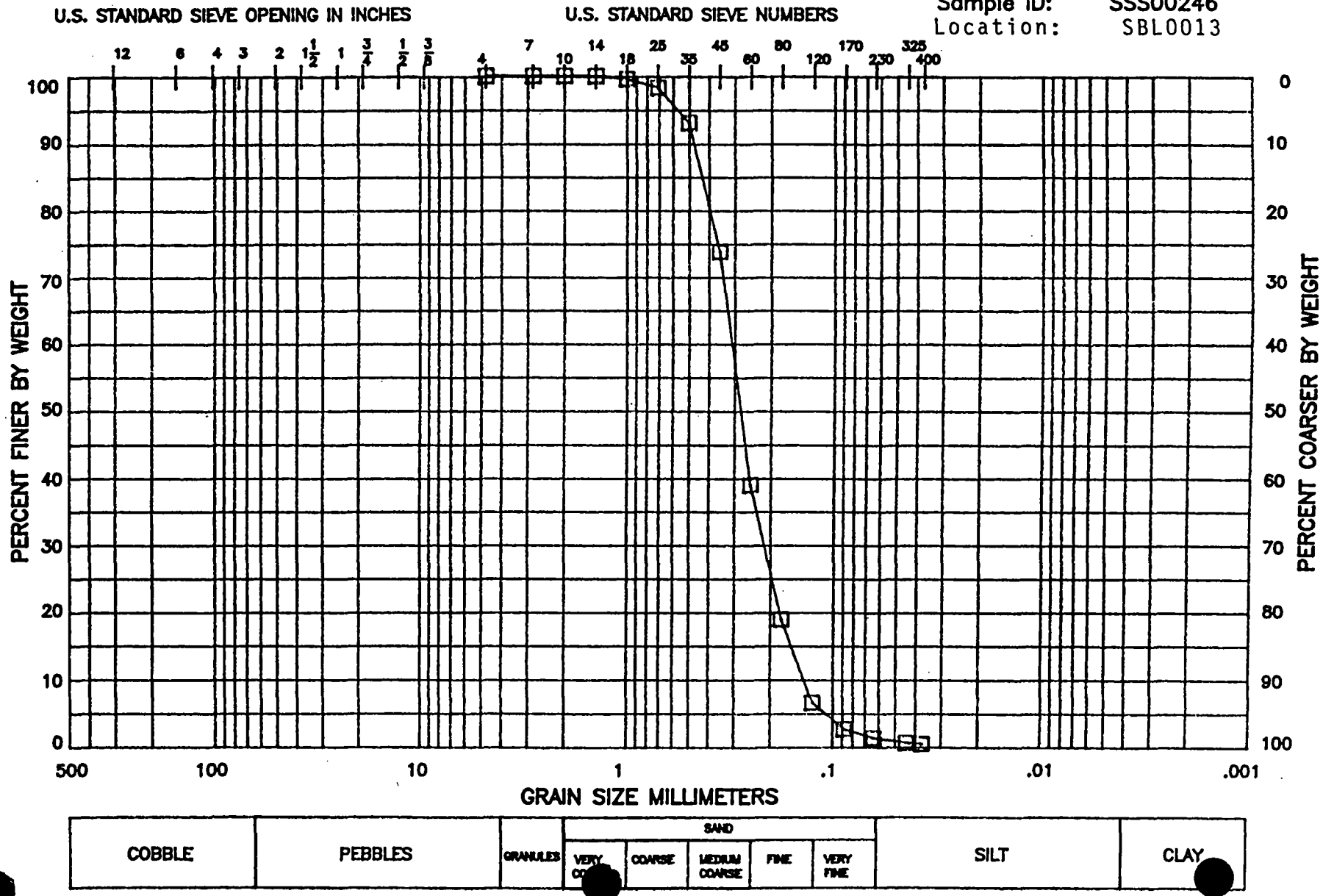
PTS Laboratories, Inc.

File No: 20004
Date: December 18, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00246
Location: SBL0013

DRY SIEVE ANALYSIS



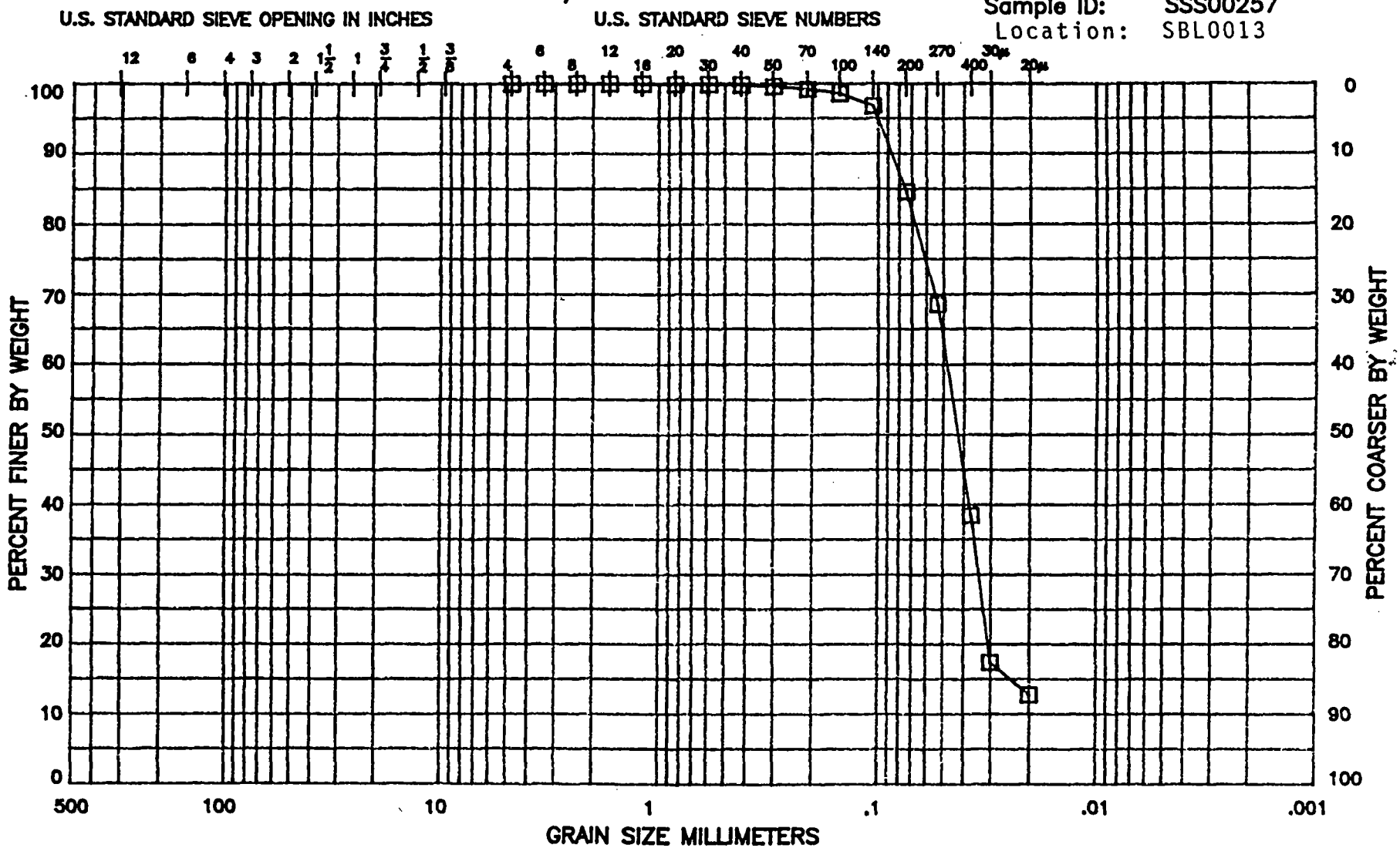
PTS Laboratories, Inc.

File No: 20004
Date: December 23, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00257
Location: SBL0013

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

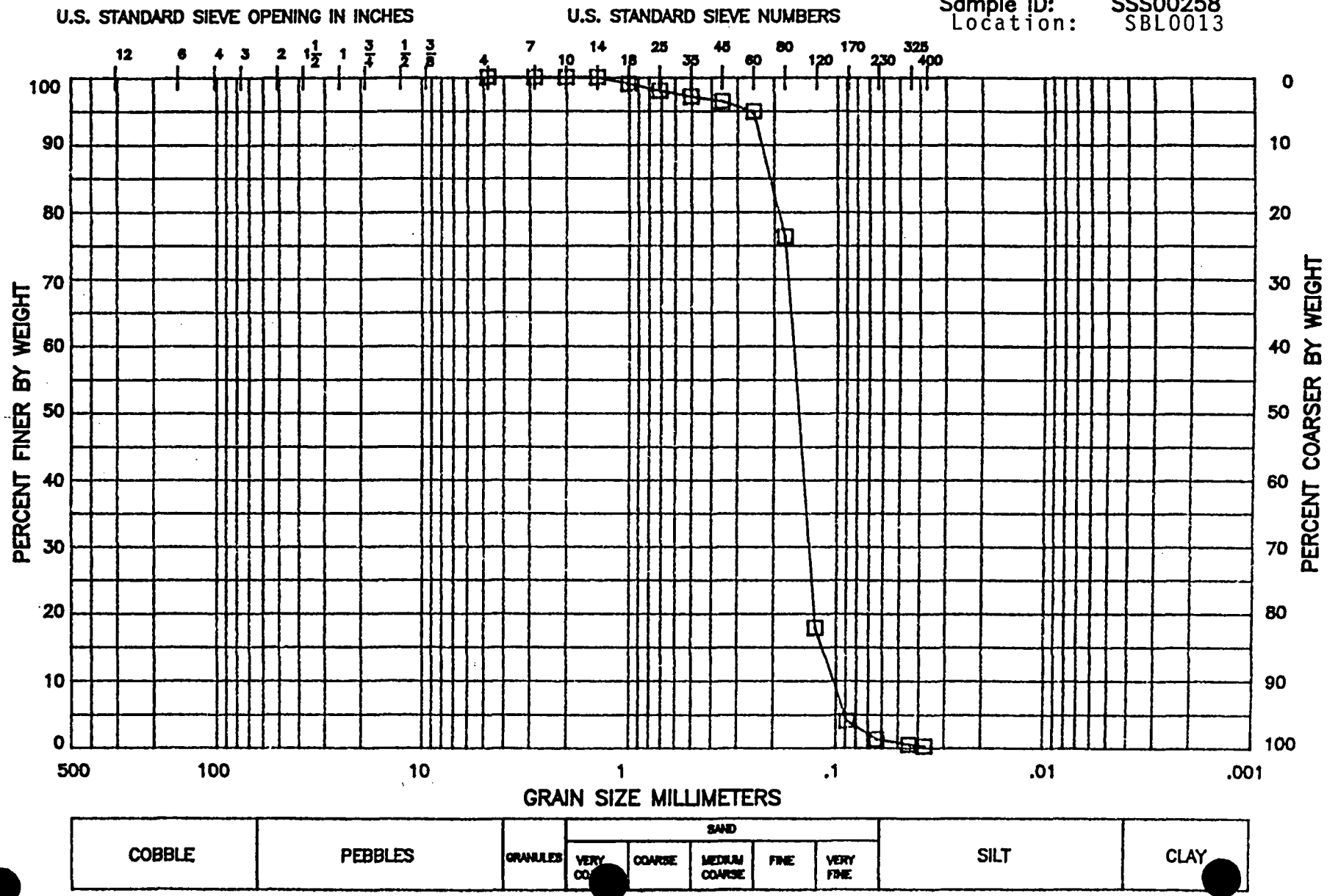
PTS Laboratories, Inc.

File No: 20004
Date: December 18, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00258
Location: SBL0013

DRY SIEVE ANALYSIS



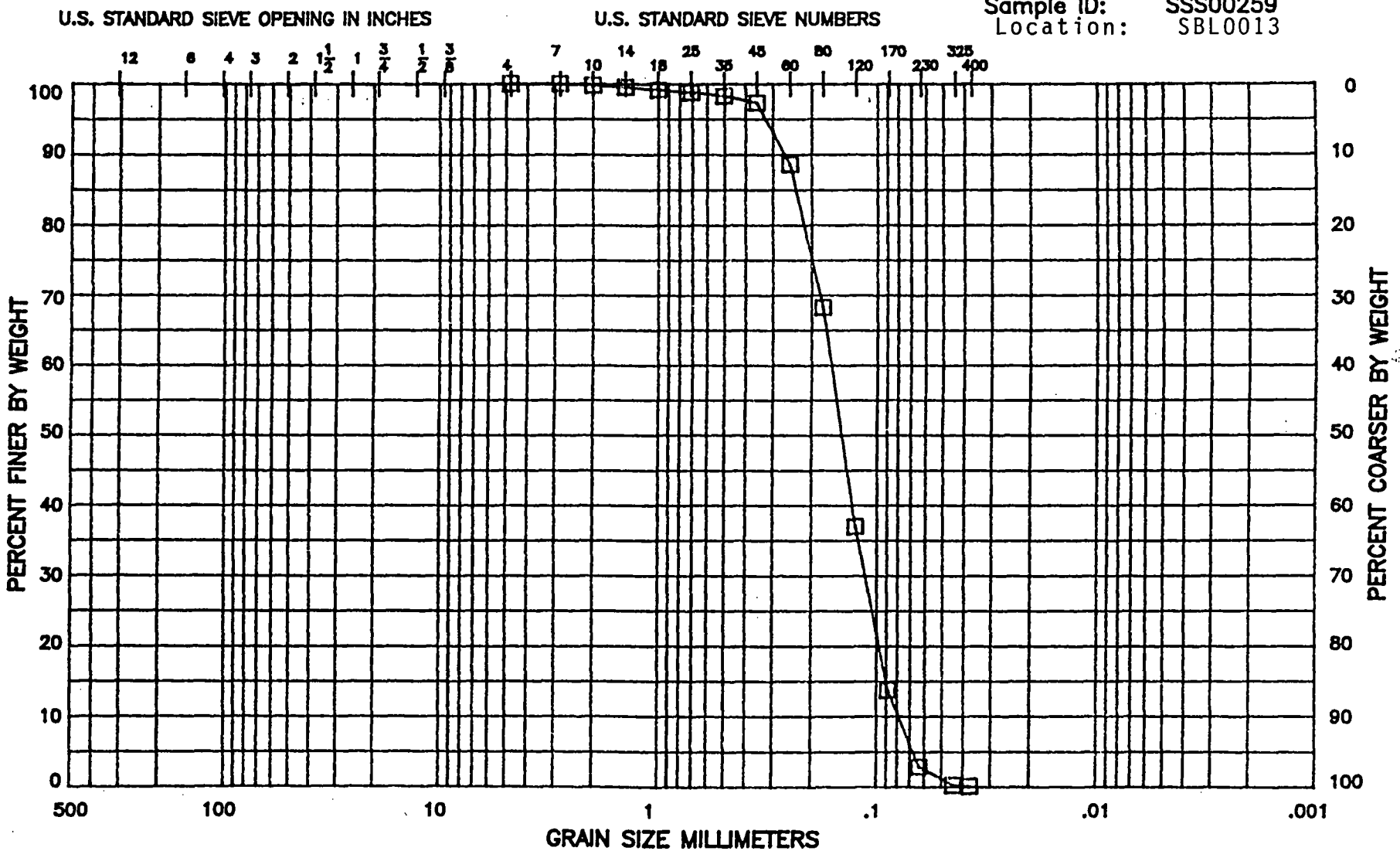
PTS Laboratories, Inc.

File No: 20004
Date: December 18, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00259
Location: SBL0013

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

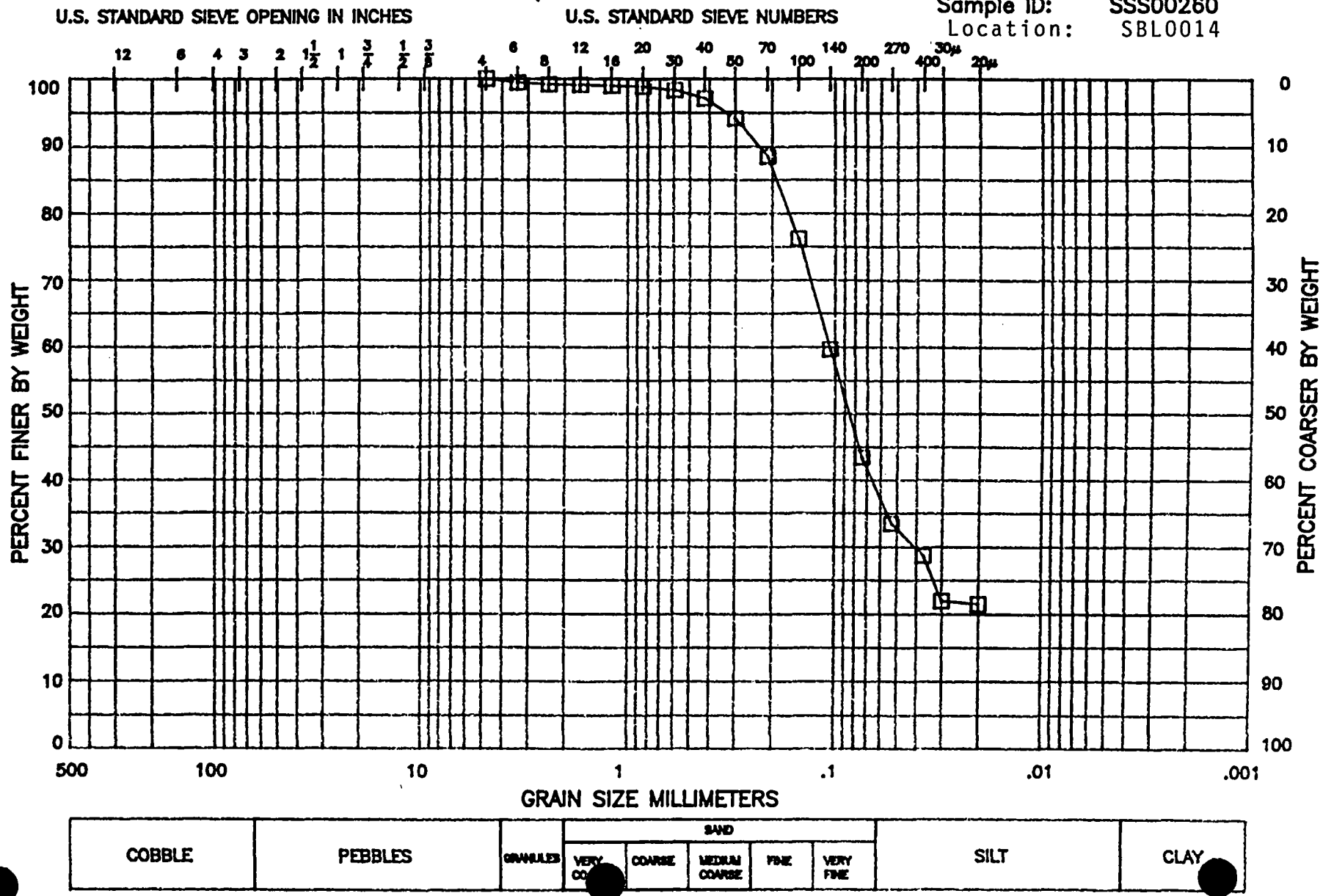
PTS Laboratories, Inc.

File No: 20004
Date: December 23, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00260
Location: SBL0014

WET/DRY SIEVE ANALYSIS



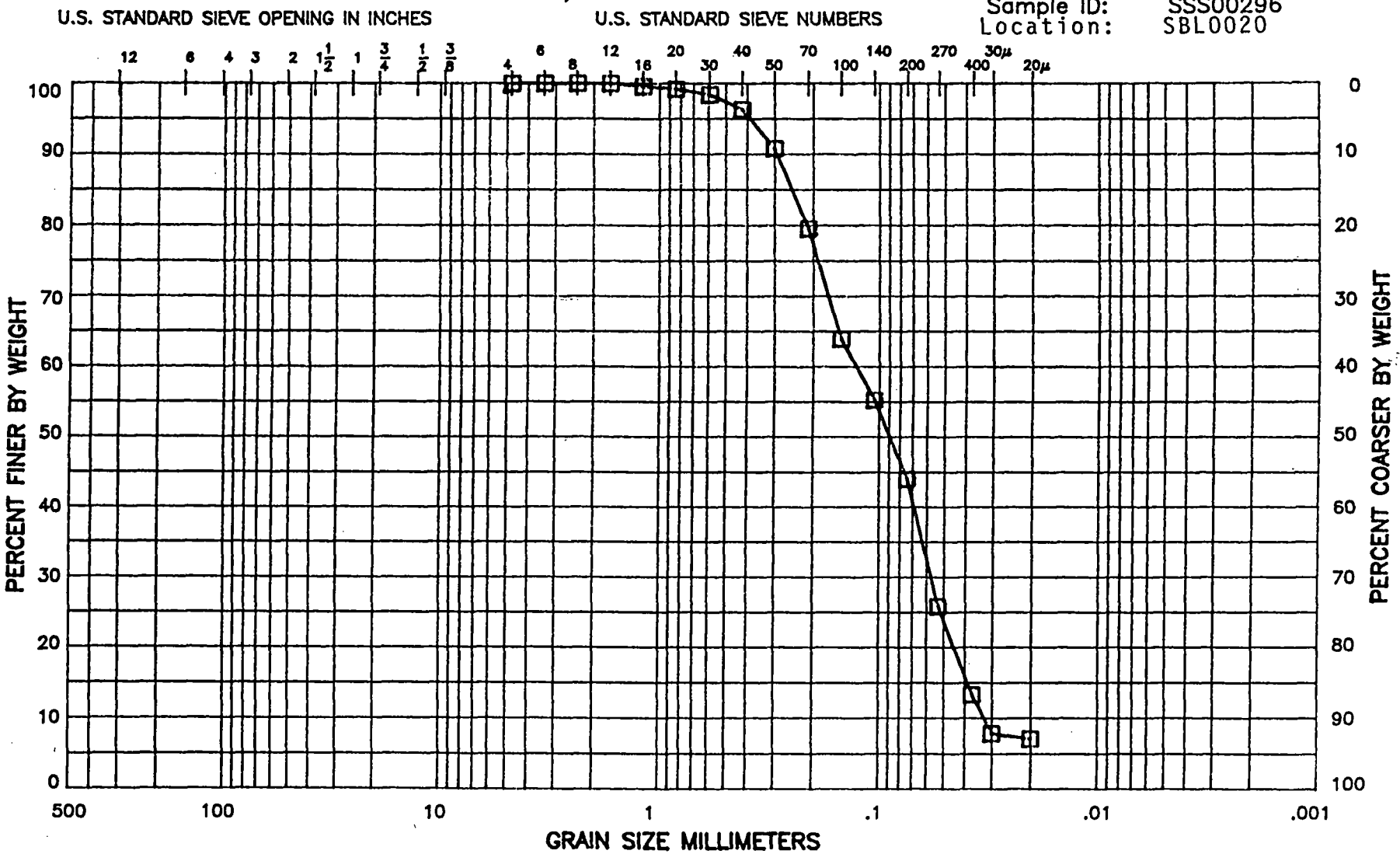
PTS Laboratories, Inc.

File No: 2000[4]
Date: January 08, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00296
Location: SBL0020

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

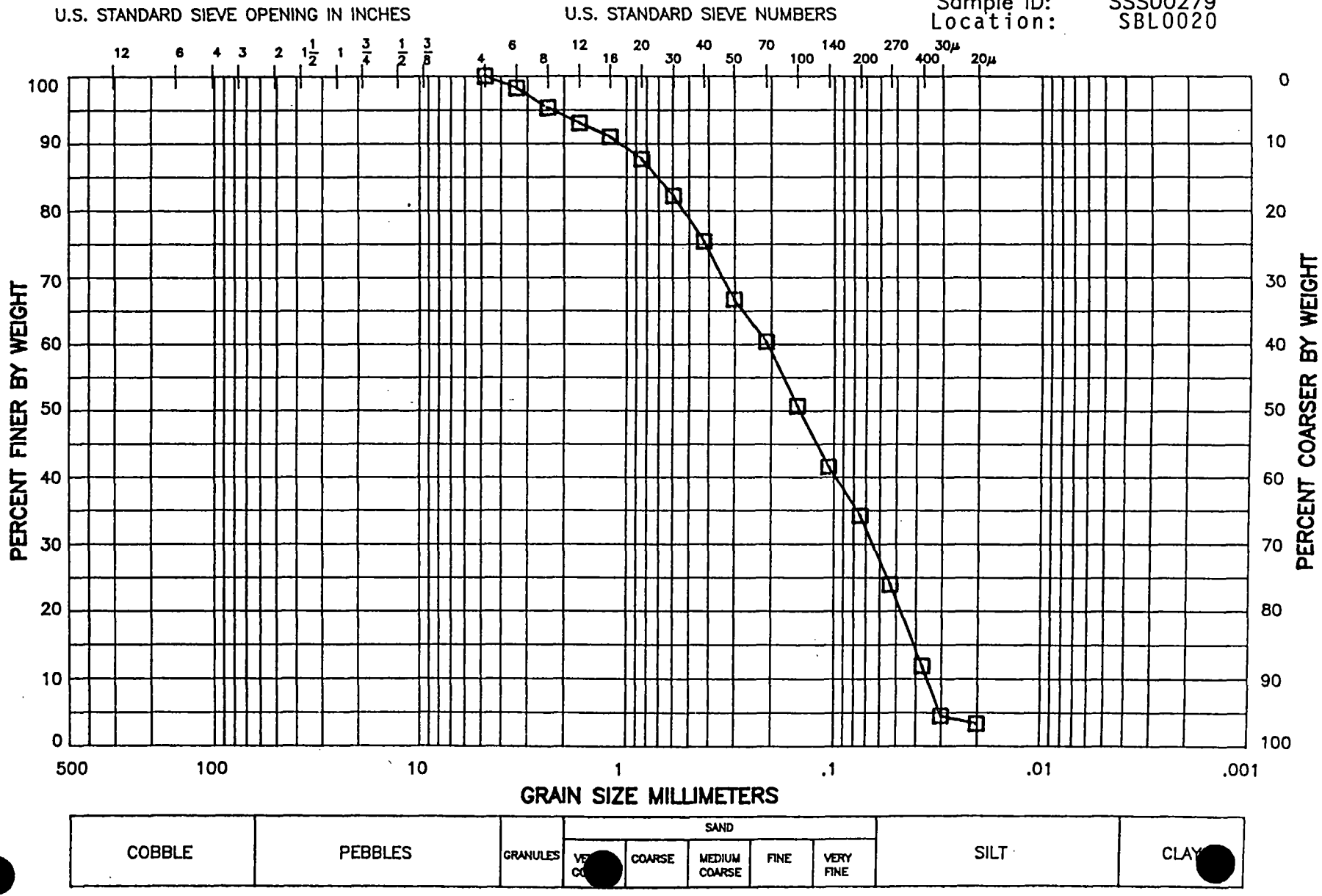
PTS Laboratories, Inc.

File No: 20004
Date: January 08, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00279
Location: SBL0020

WET/DRY SIEVE ANALYSIS



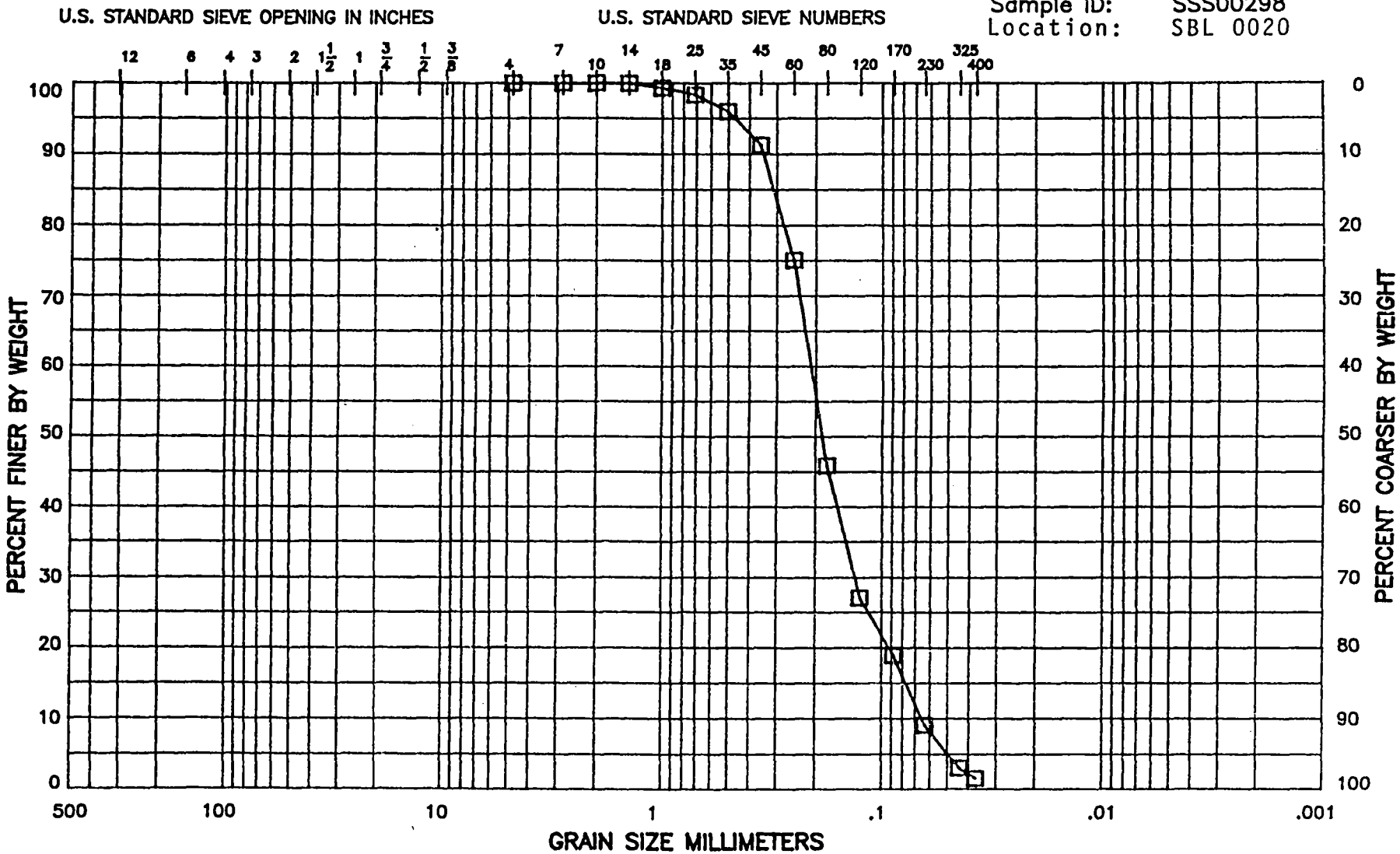
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00298
Location: SBL 0020

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

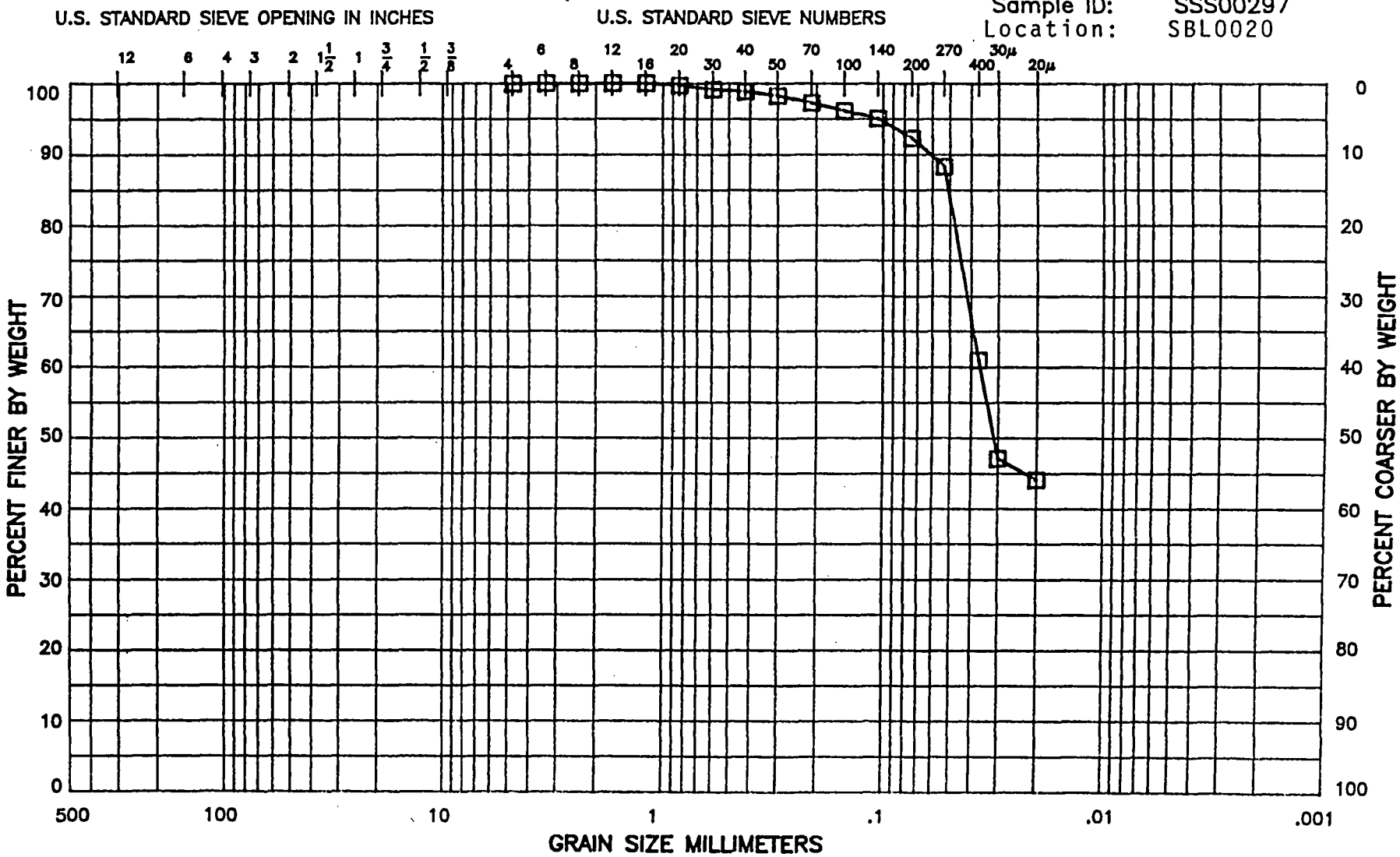
PTS Laboratories, Inc.

File No: 20004
Date: January 08, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00297
Location: SBL0020

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

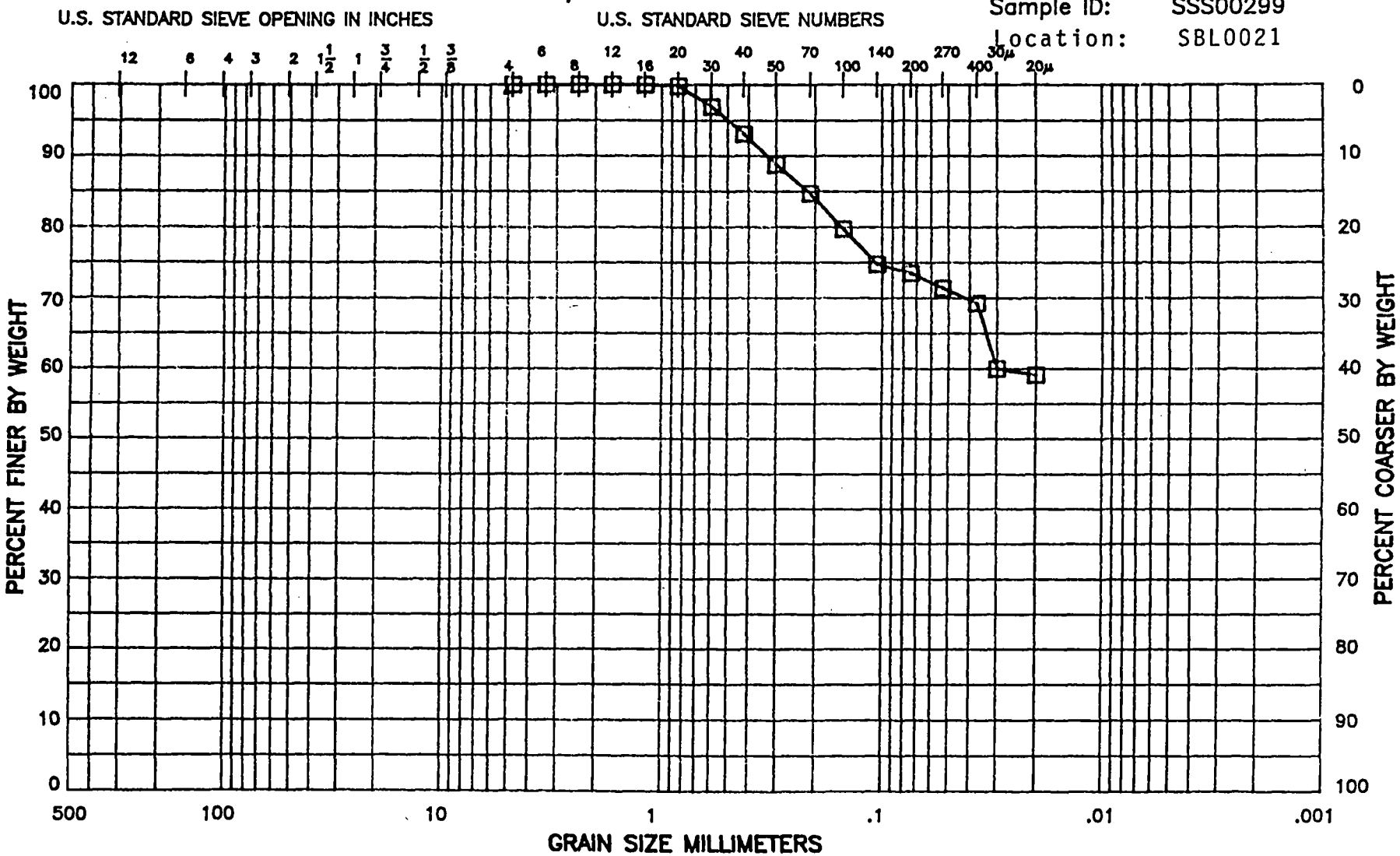
PTS Laboratories, Inc.

File No: 2000 4
Date: January 08, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00299
Location: SBL0021

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

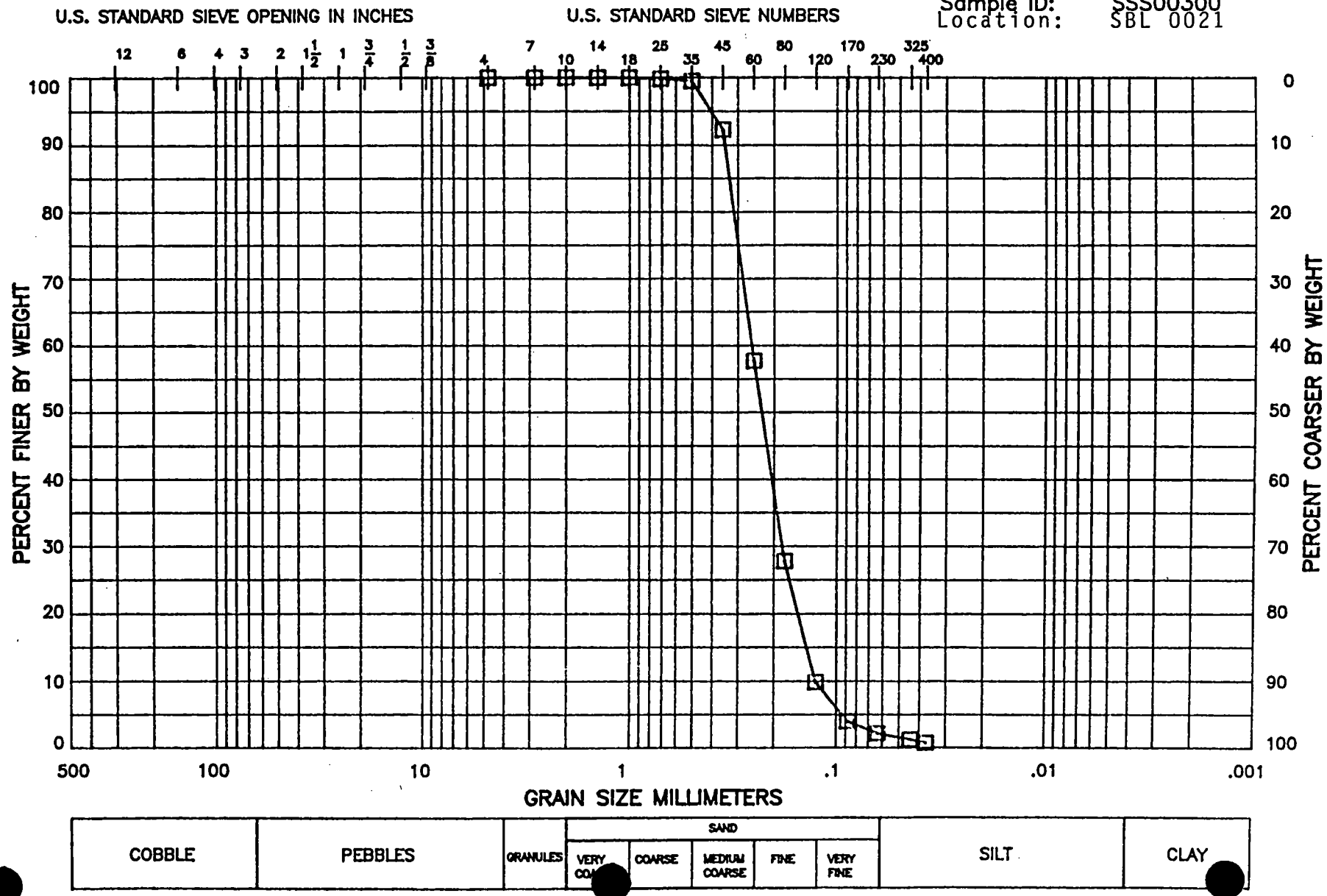
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00300
Location: SBL 0021

DRY SIEVE ANALYSIS



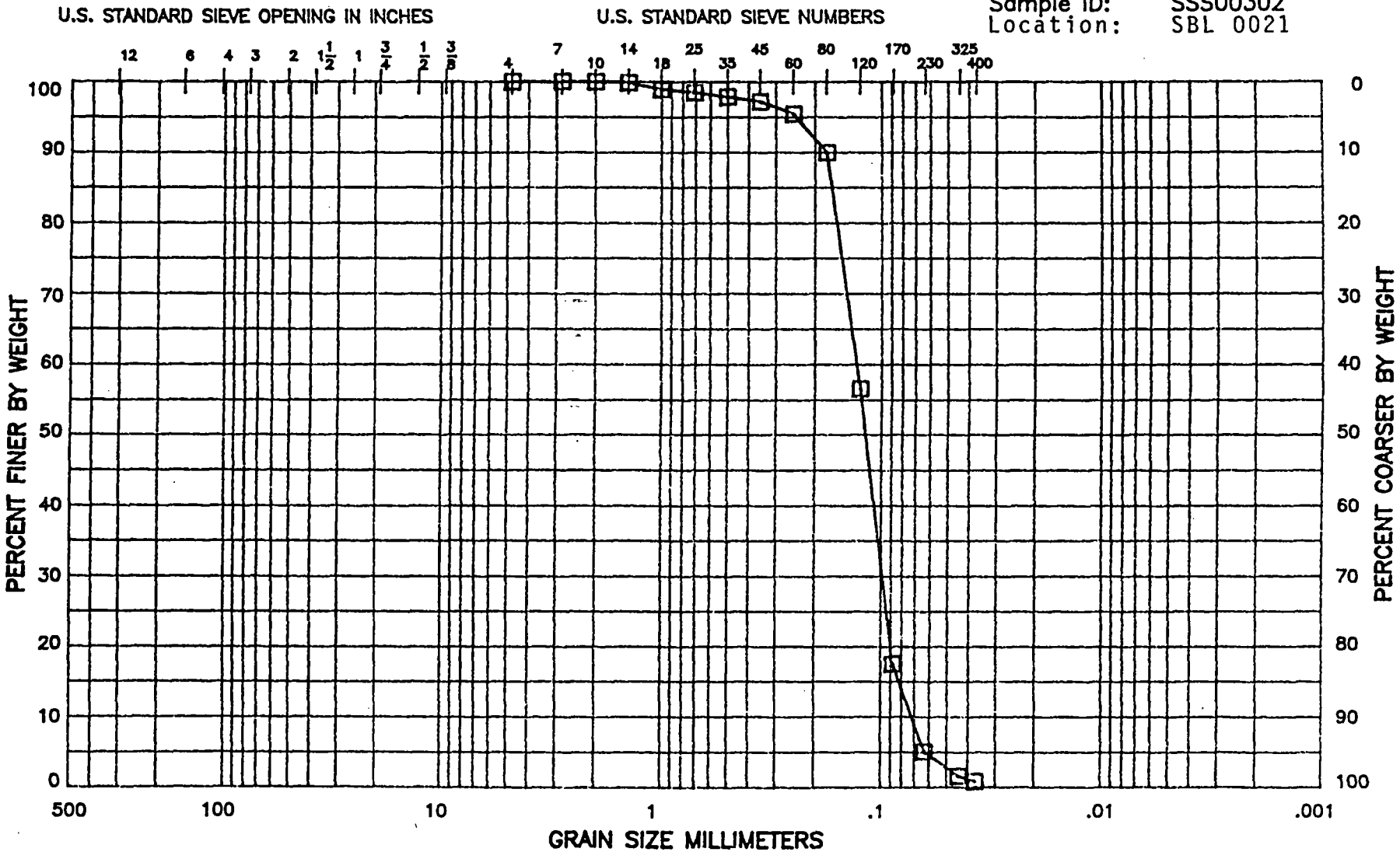
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00302
Location: SBL 0021

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

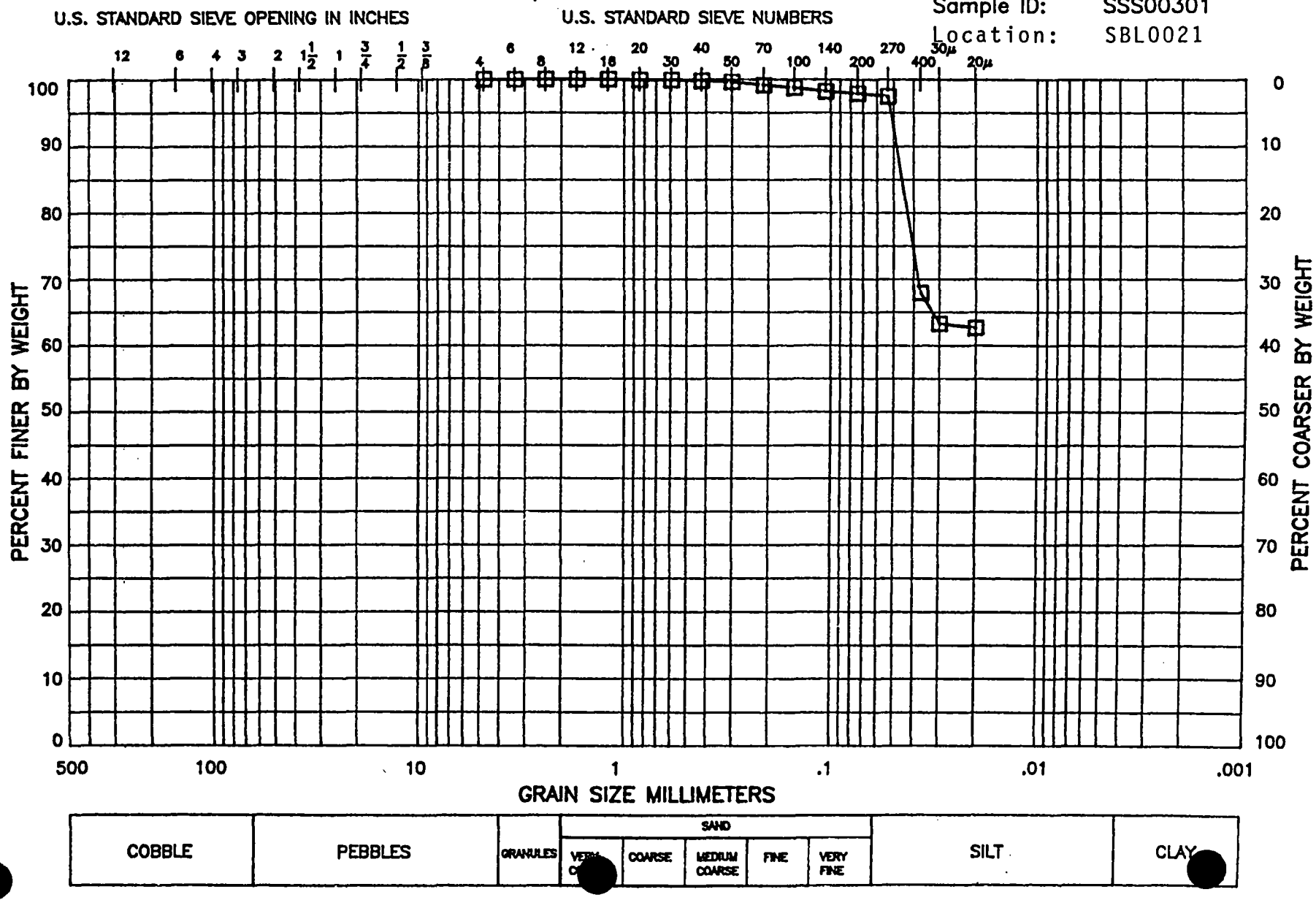
PTS Laboratories, Inc.

File No: 2000 4
Date: January 15, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00301
Location: SBL0021

WET/DRY SIEVE ANALYSIS



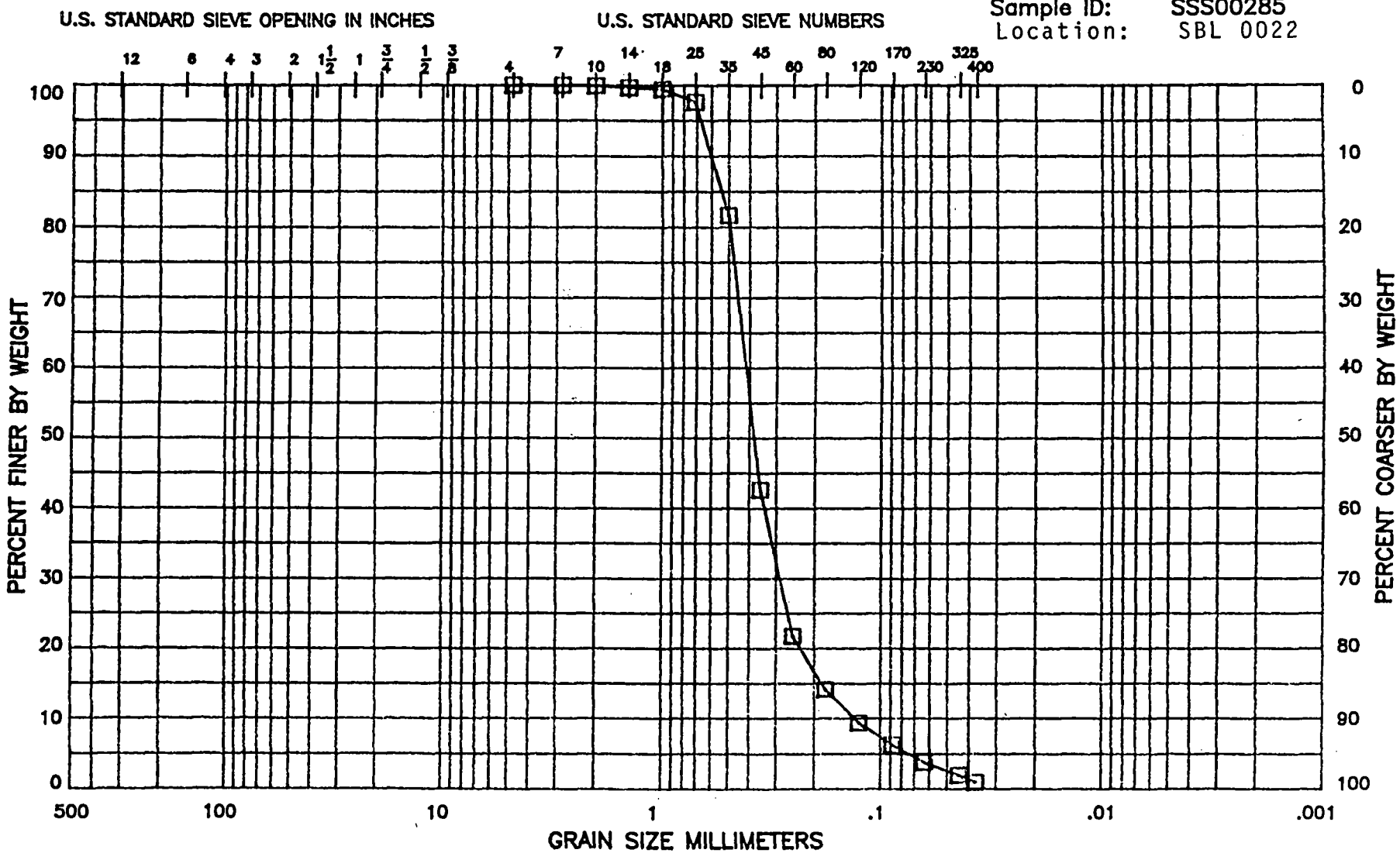
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00285
Location: SBL 0022

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

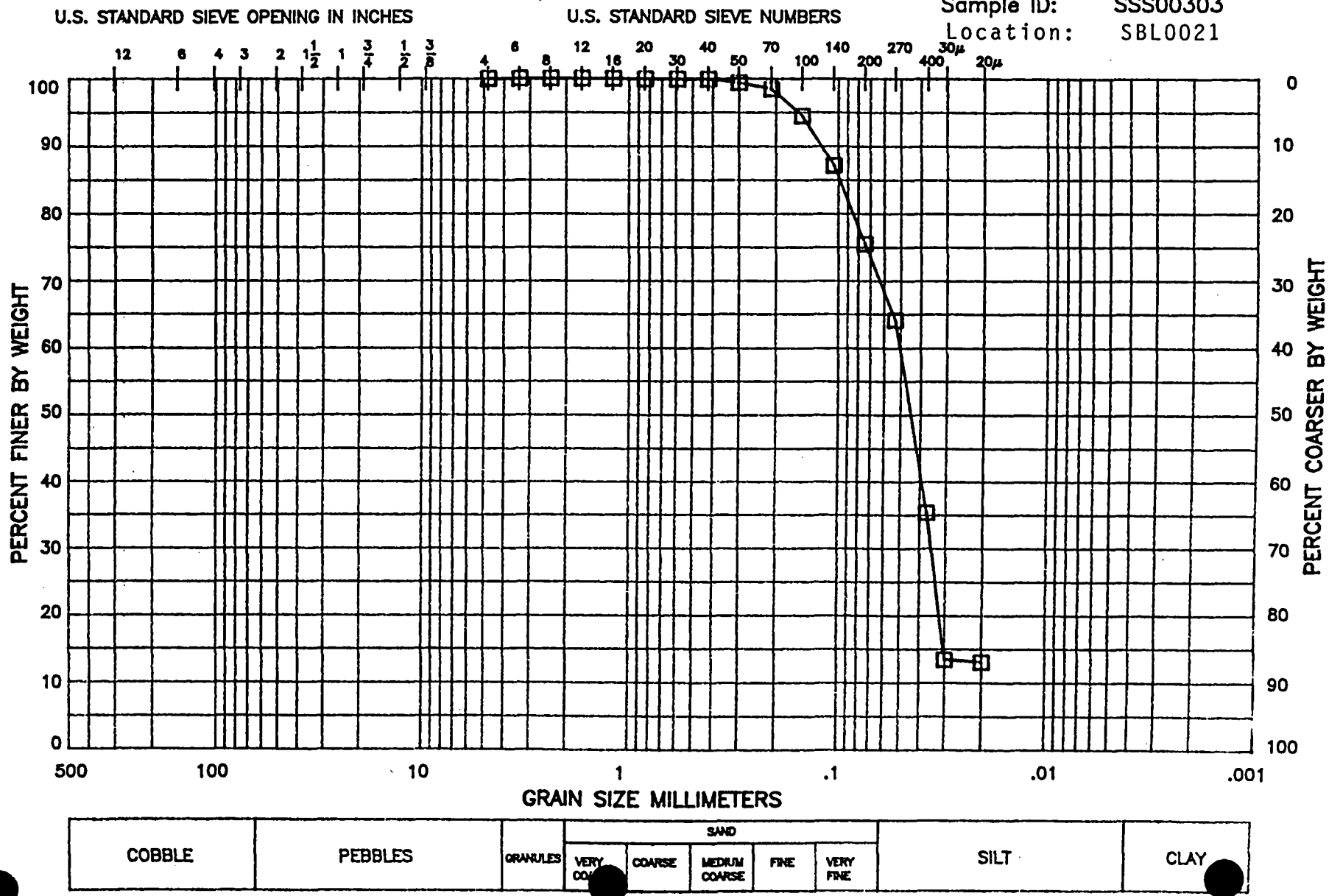
PTS Laboratories, Inc.

File No: 2000[4]
Date: January 15, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00303
Location: SBL0021

WET/DRY SIEVE ANALYSIS



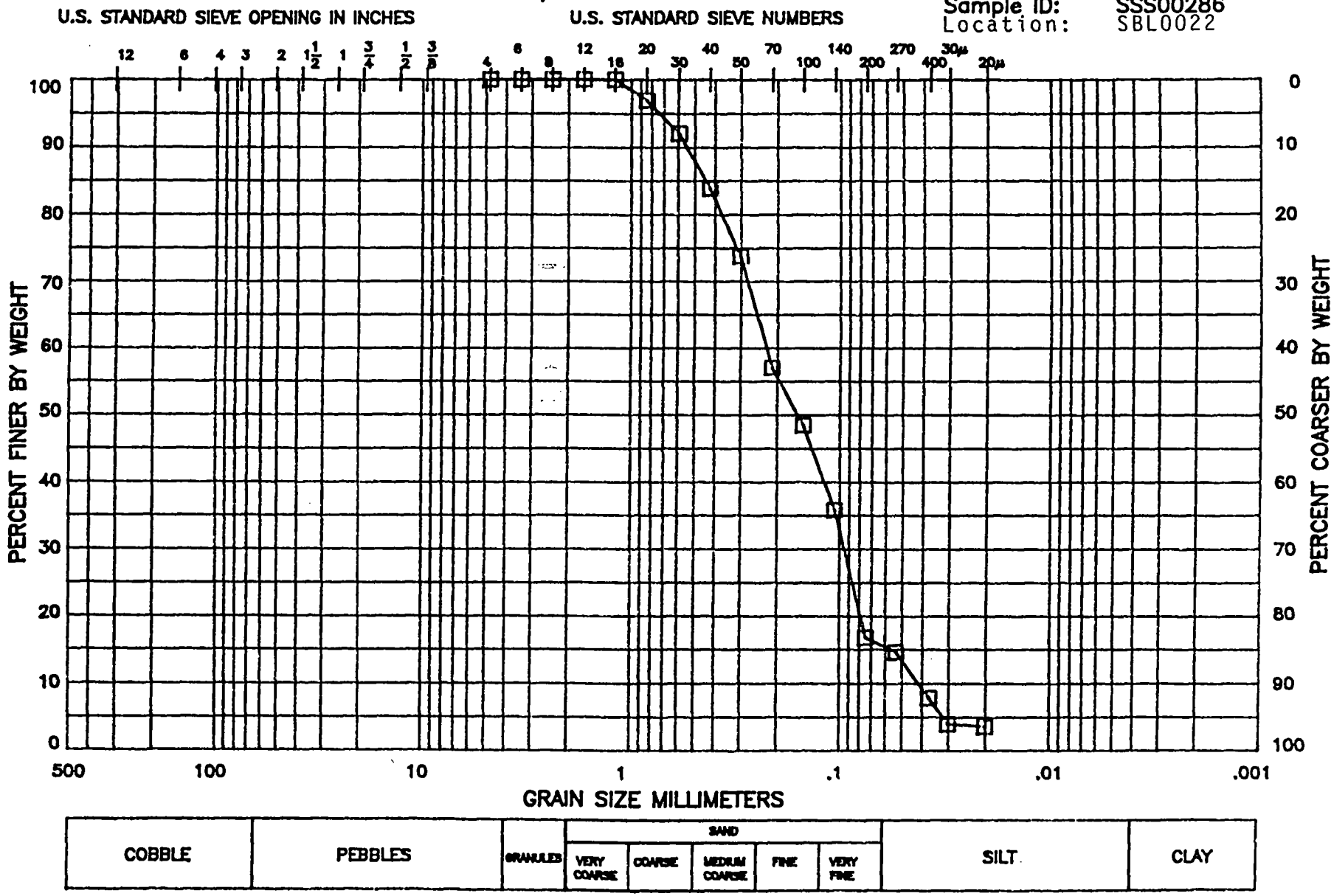
PTS Laboratories, Inc.

File No: 20004
Date: January 26, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00286
Location: SBL0022

WET/DRY SIEVE ANALYSIS



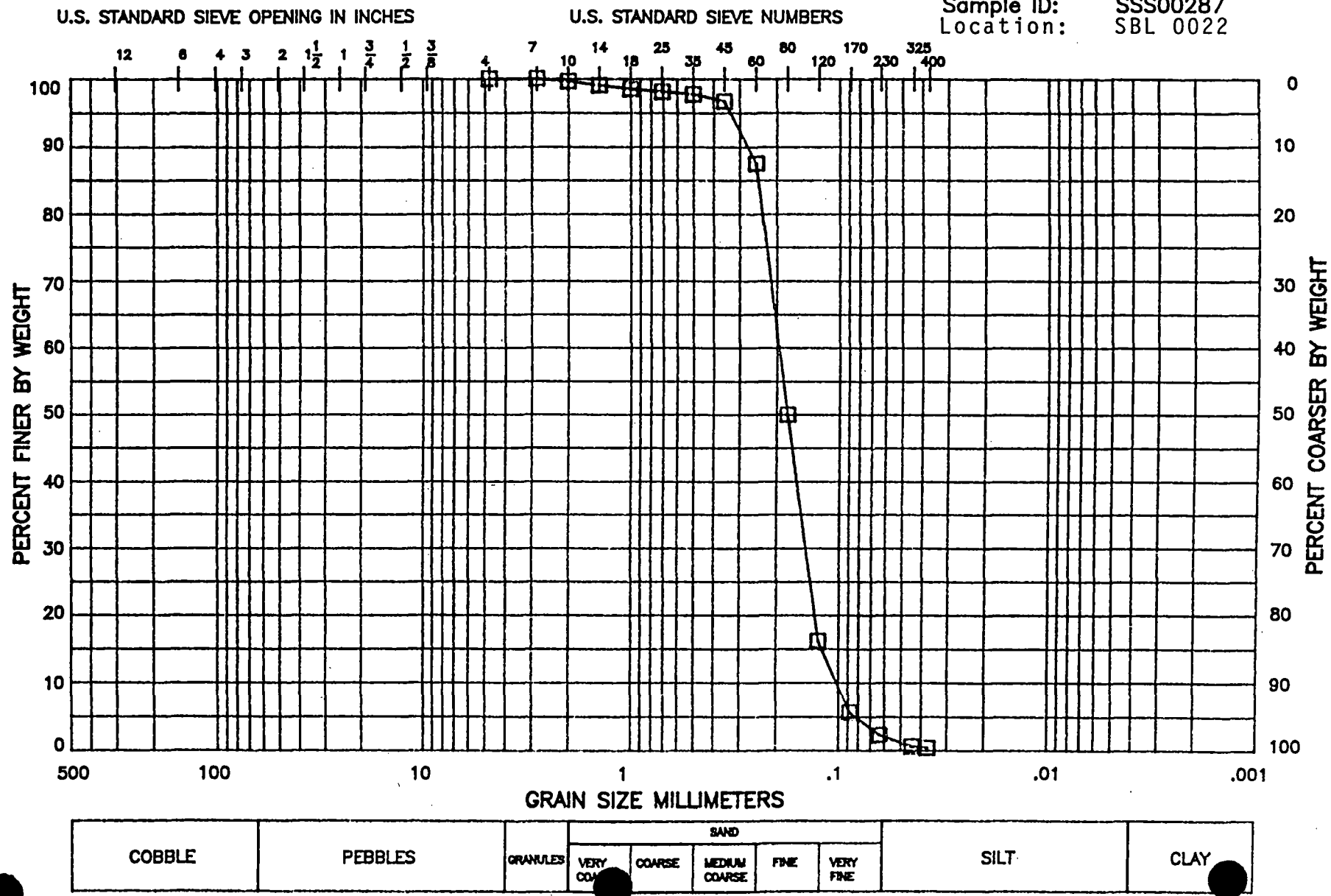
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00287
Location: SBL 0022

DRY SIEVE ANALYSIS



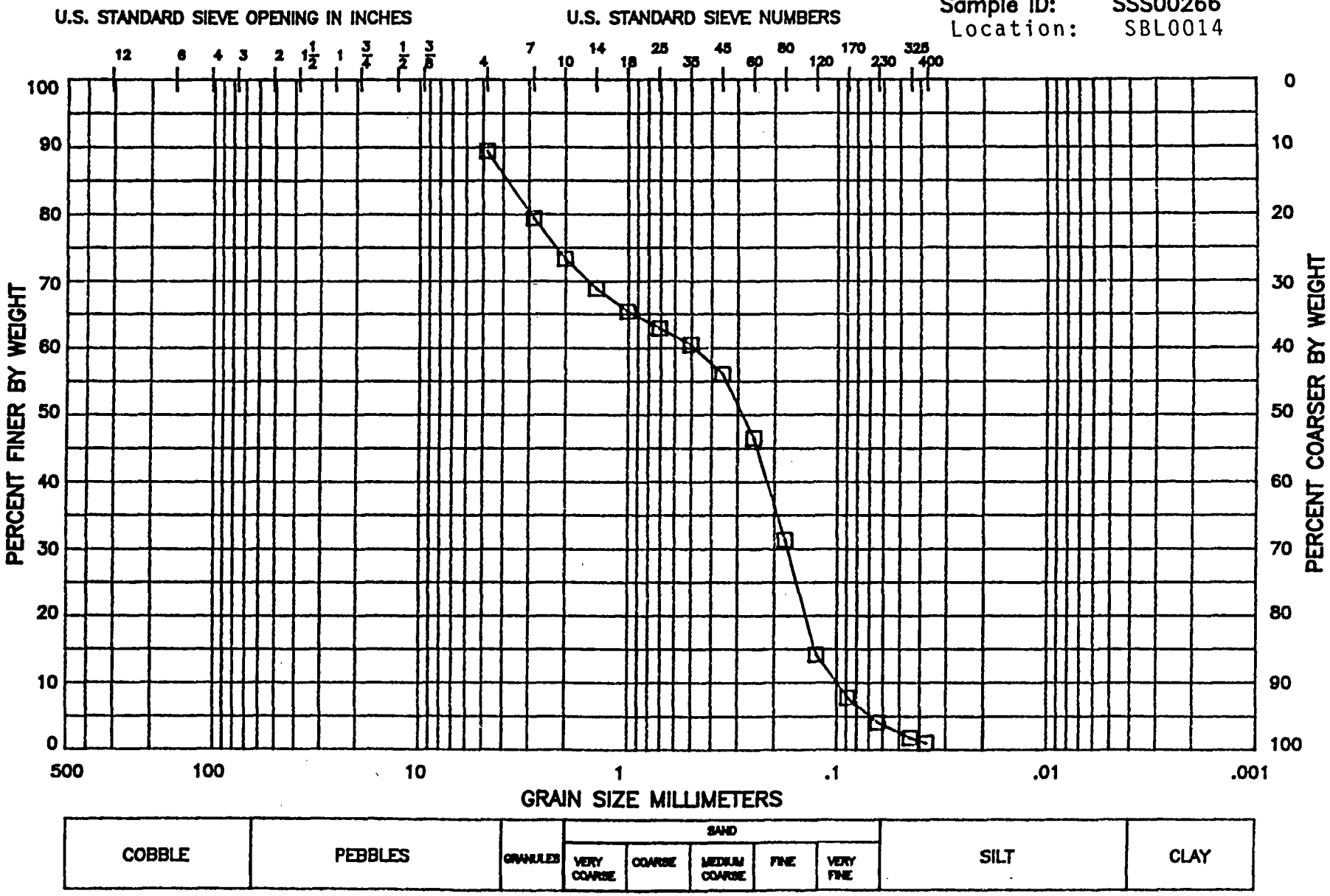
PTS Laboratories, Inc.

File No: 20004
Date: December 18, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00266
Location: SBL0014

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

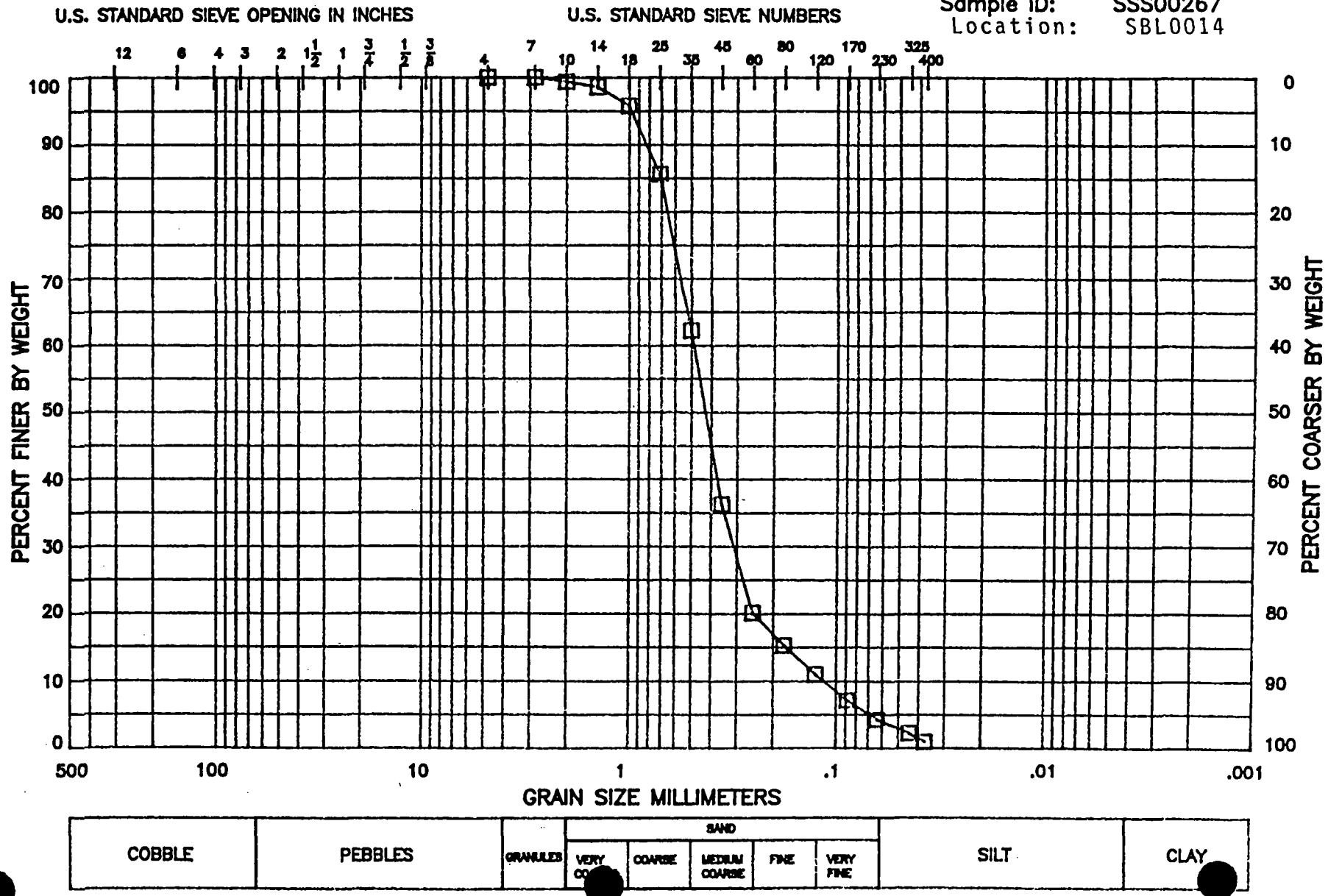
PTS Laboratories, Inc.

File No: 20004
Date: December 18, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00267
Location: SBL0014

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

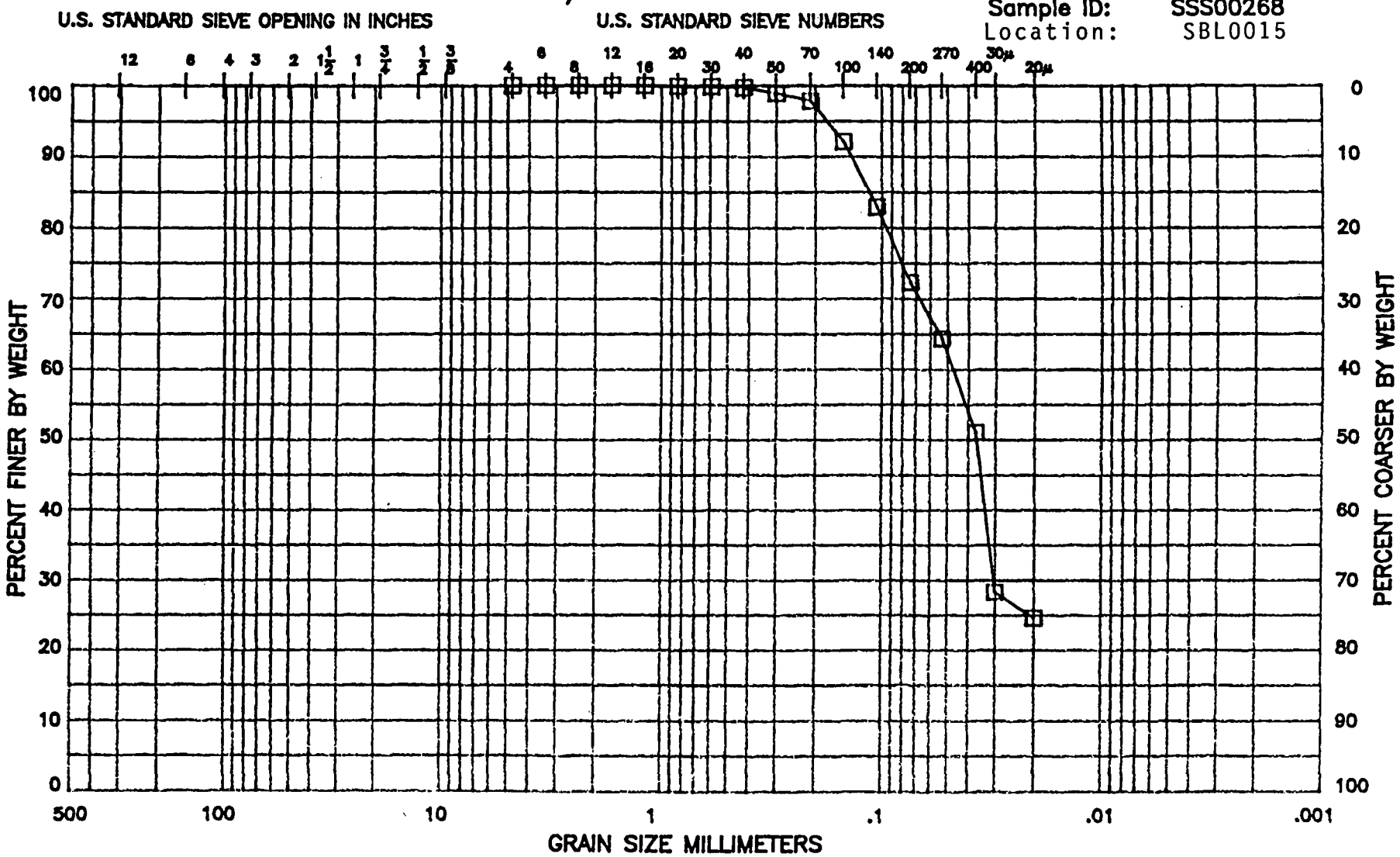
PTS Laboratories, Inc.

File No: 2000 4
Date: December 23, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00268
Location: SBL0015

WET/DRY SIEVE ANALYSIS



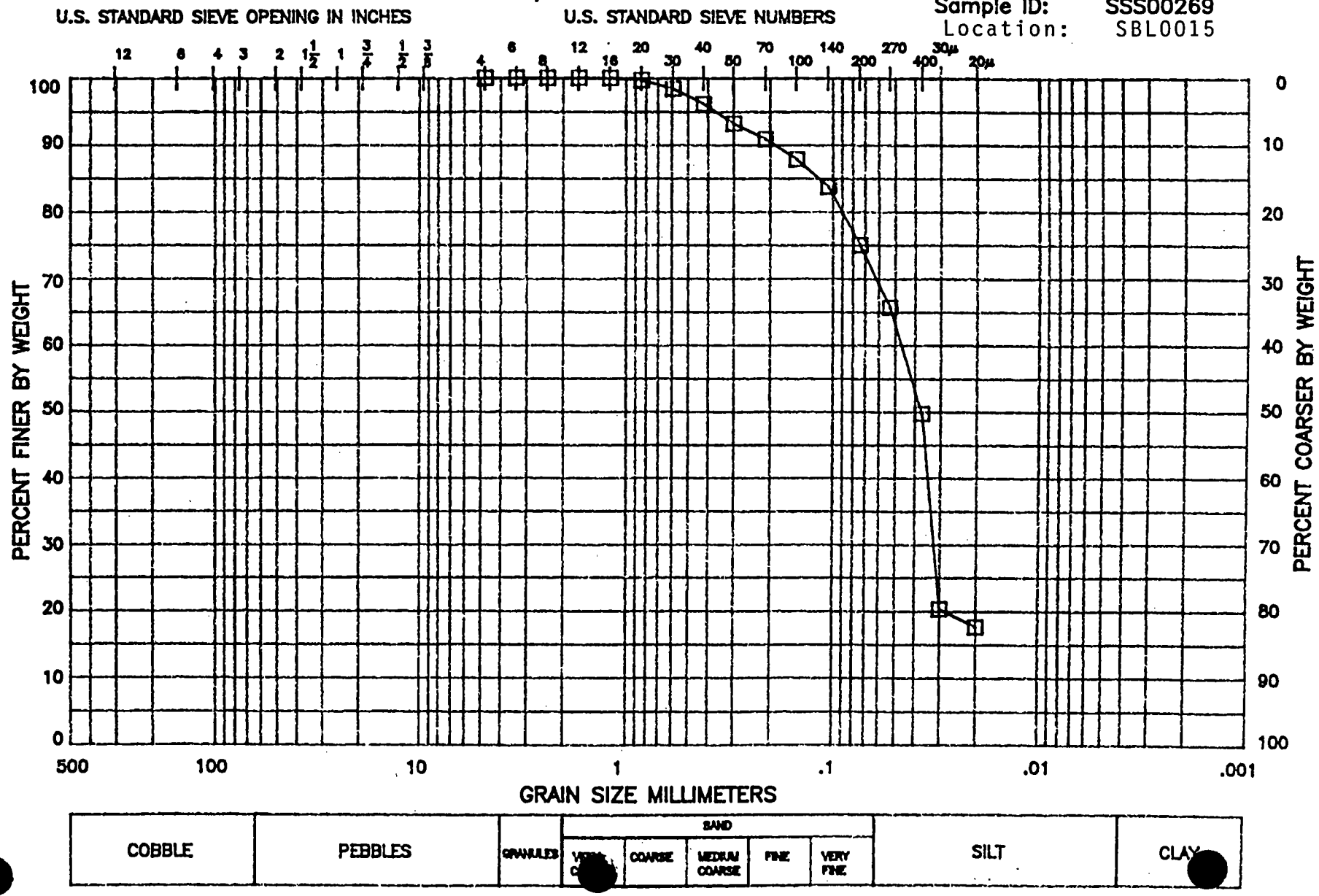
PTS Laboratories, Inc.

File No: 2000 4
Date: December 23, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00269
Location: SBL0015

WET/DRY SIEVE ANALYSIS



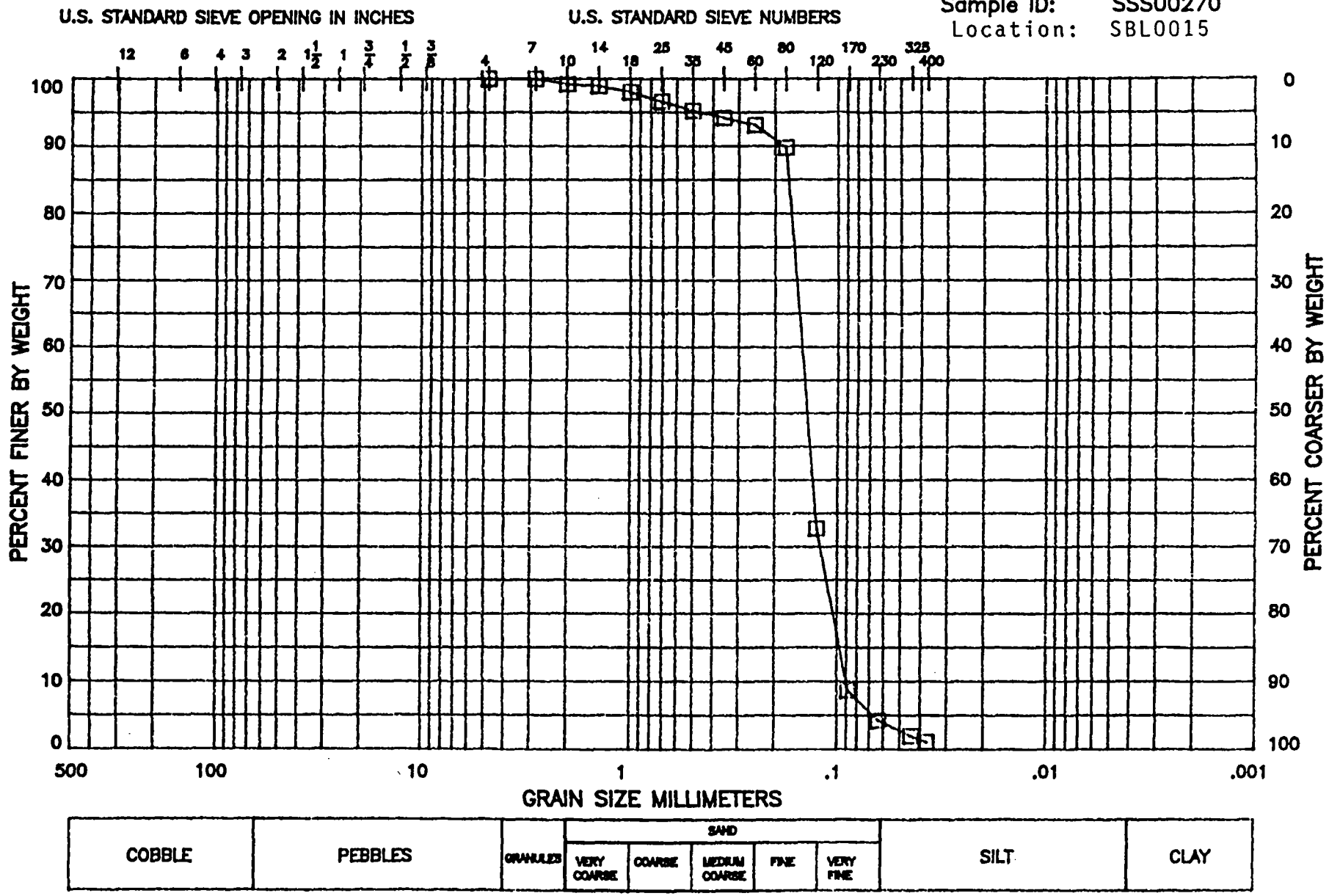
PTS Laboratories, Inc.

File No: 20004
Date: December 18, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00270
Location: SBL0015

DRY SIEVE ANALYSIS



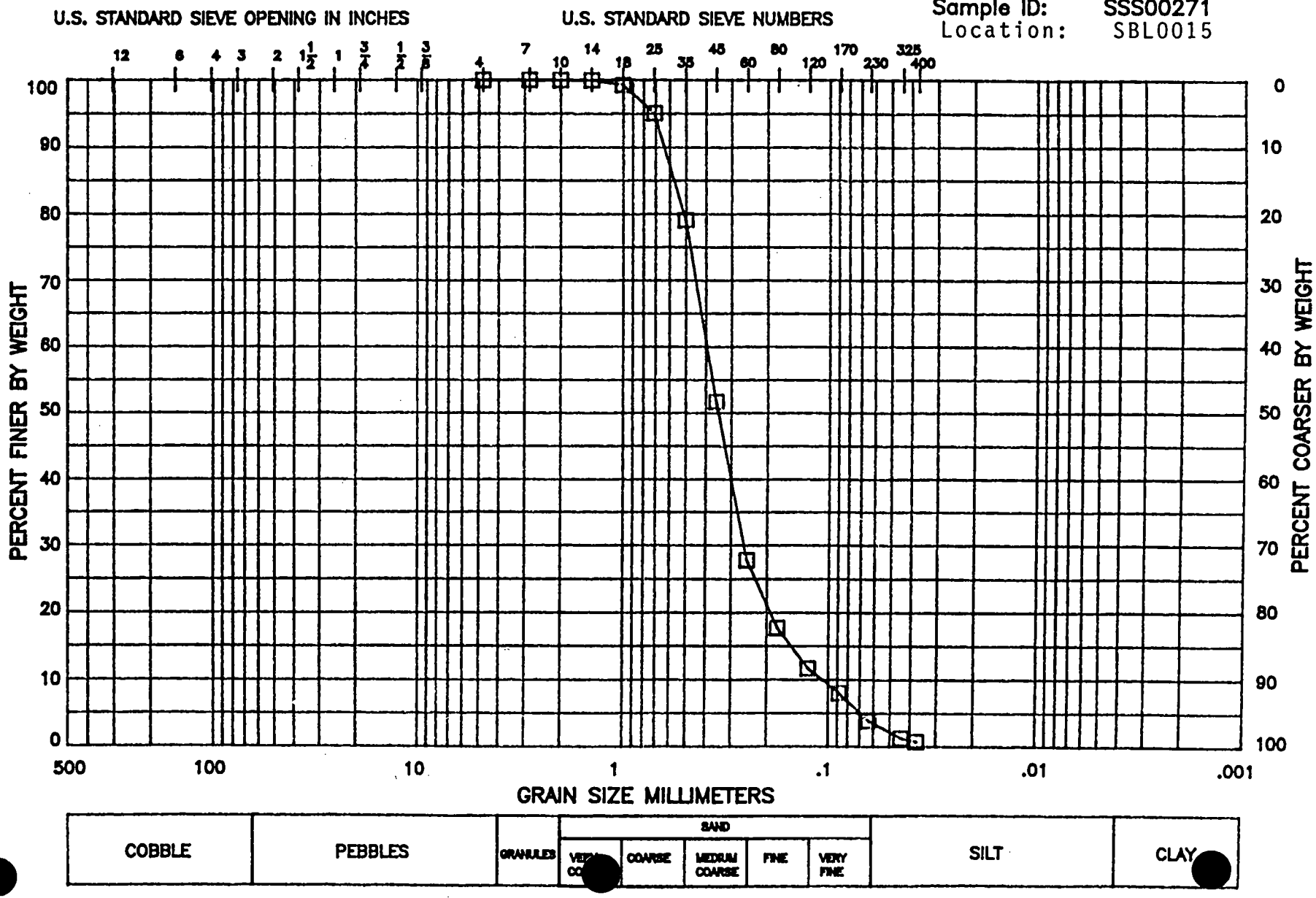
PTS Laboratories, Inc.

File No: 20004
Date: December 18, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00271
Location: SBL0015

DRY SIEVE ANALYSIS



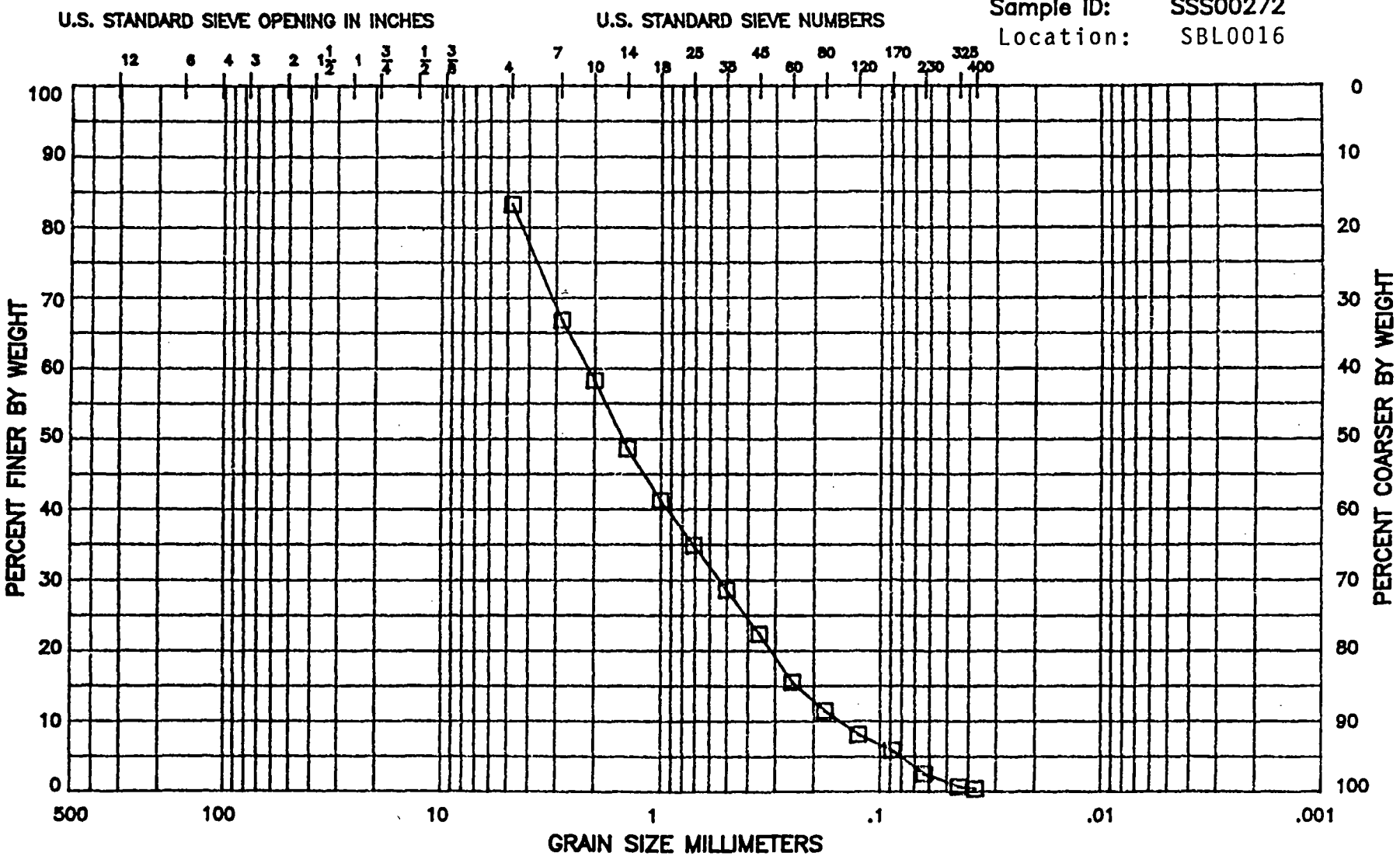
PTS Laboratories, Inc.

File No: 20004
Date: December 18, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00272
Location: SBL0016

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

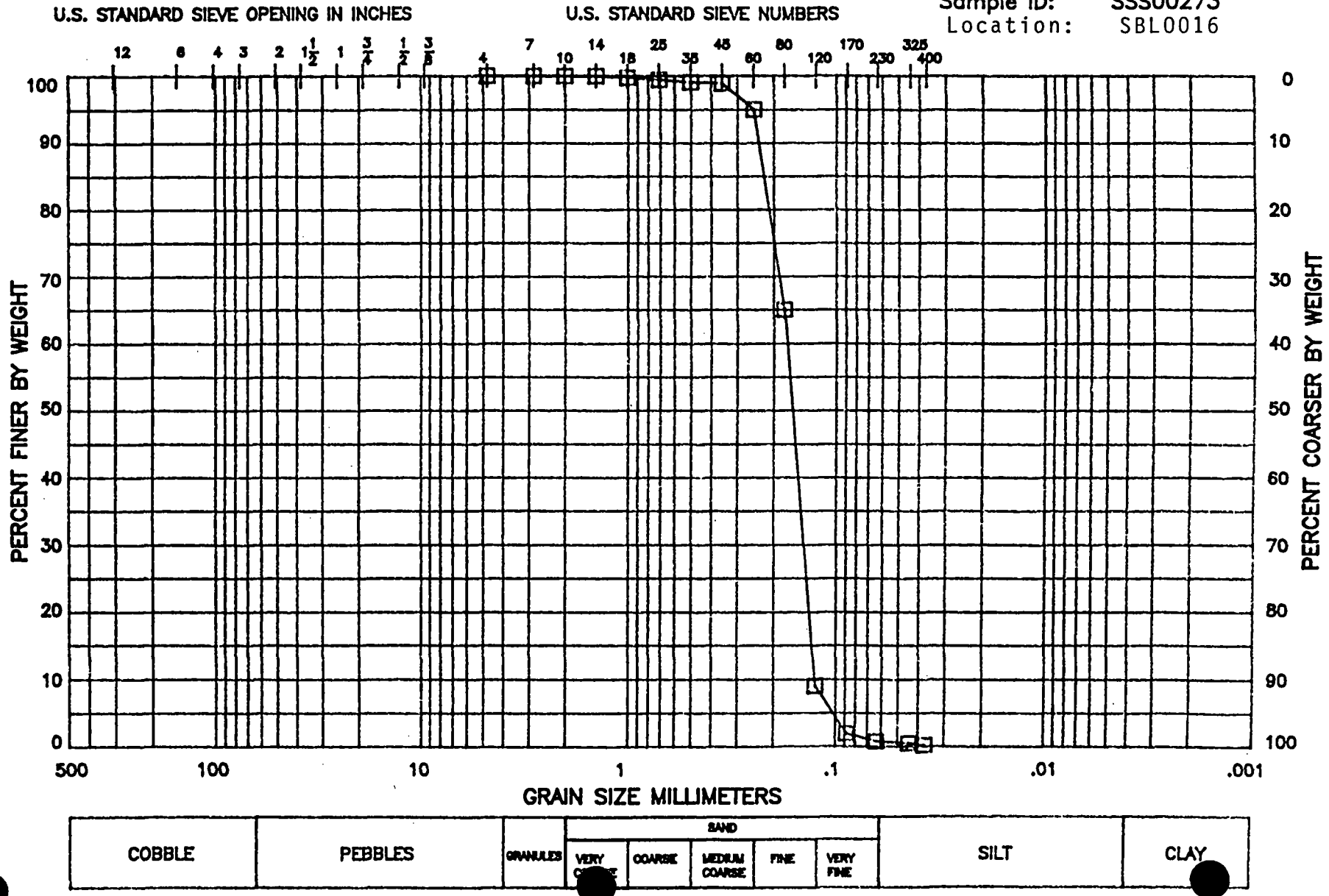
PTS Laboratories, Inc.

File No: 20004
Date: December 18, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00273
Location: SBL0016

DRY SIEVE ANALYSIS



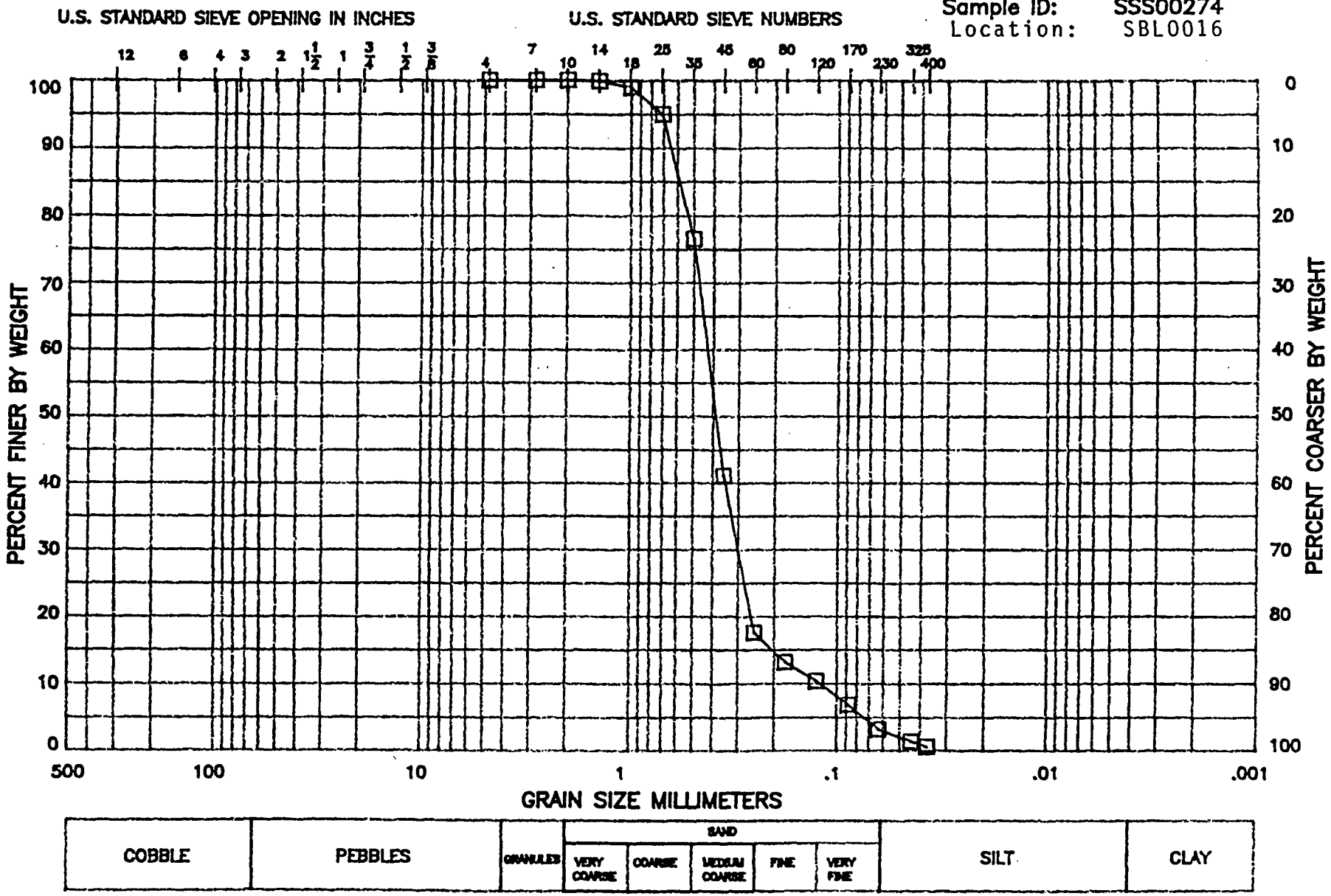
PTS Laboratories, Inc.

File No: 20004
Date: December 28, 1992

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00274
Location: SBL0016

DRY SIEVE ANALYSIS



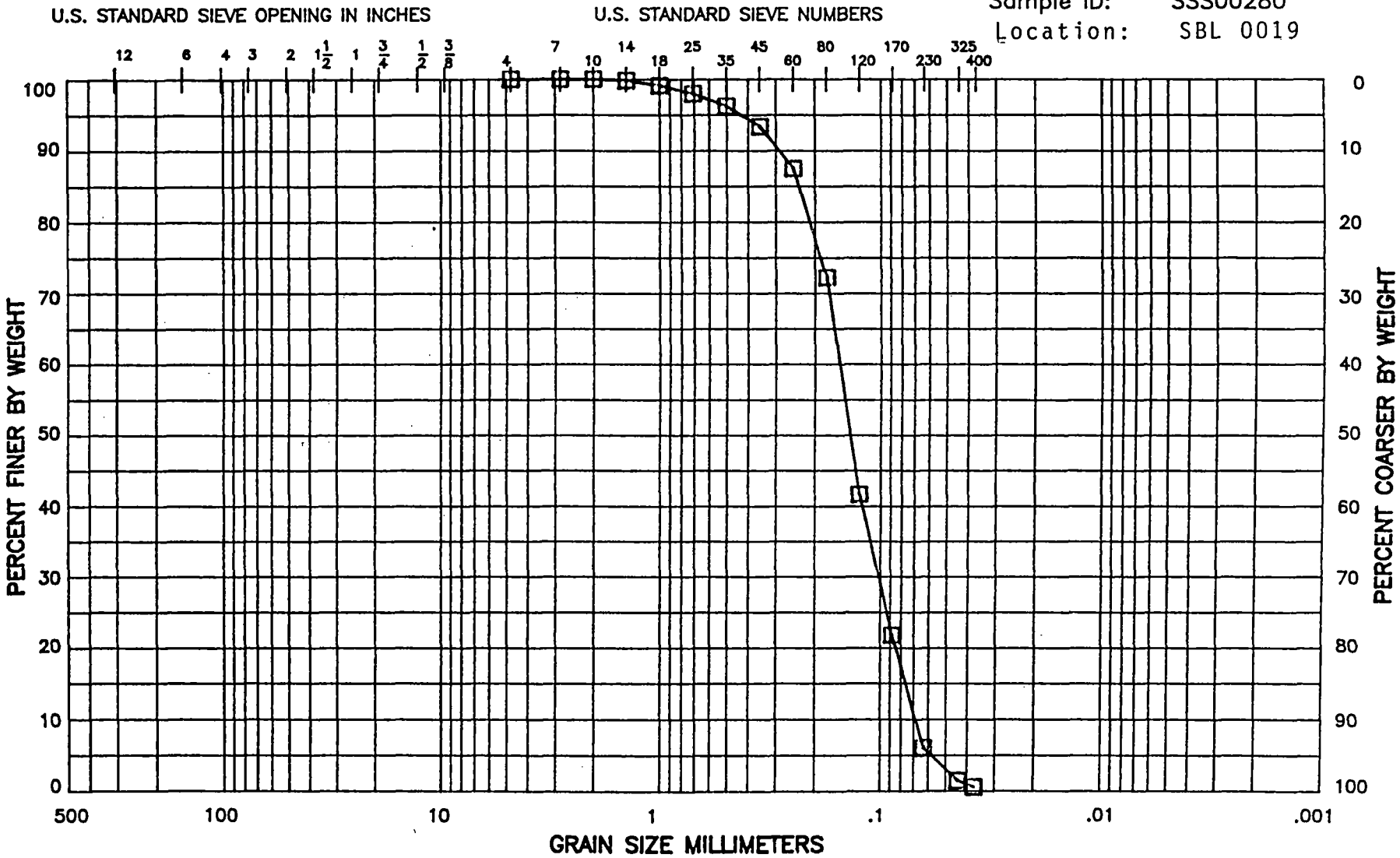
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00280
Location: SBL 0019

DRY SIEVE ANALYSIS



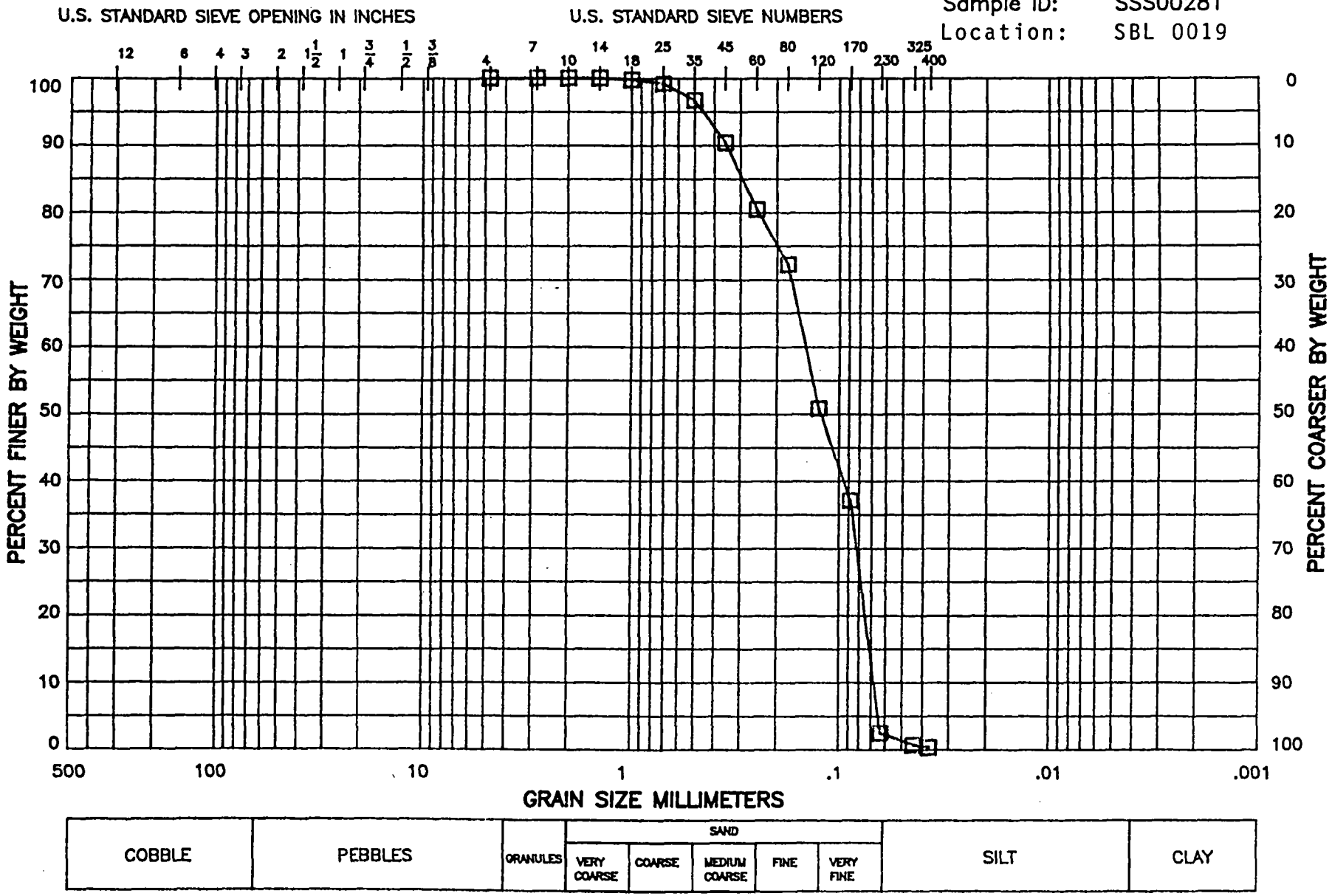
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00281
Location: SBL 0019

DRY SIEVE ANALYSIS



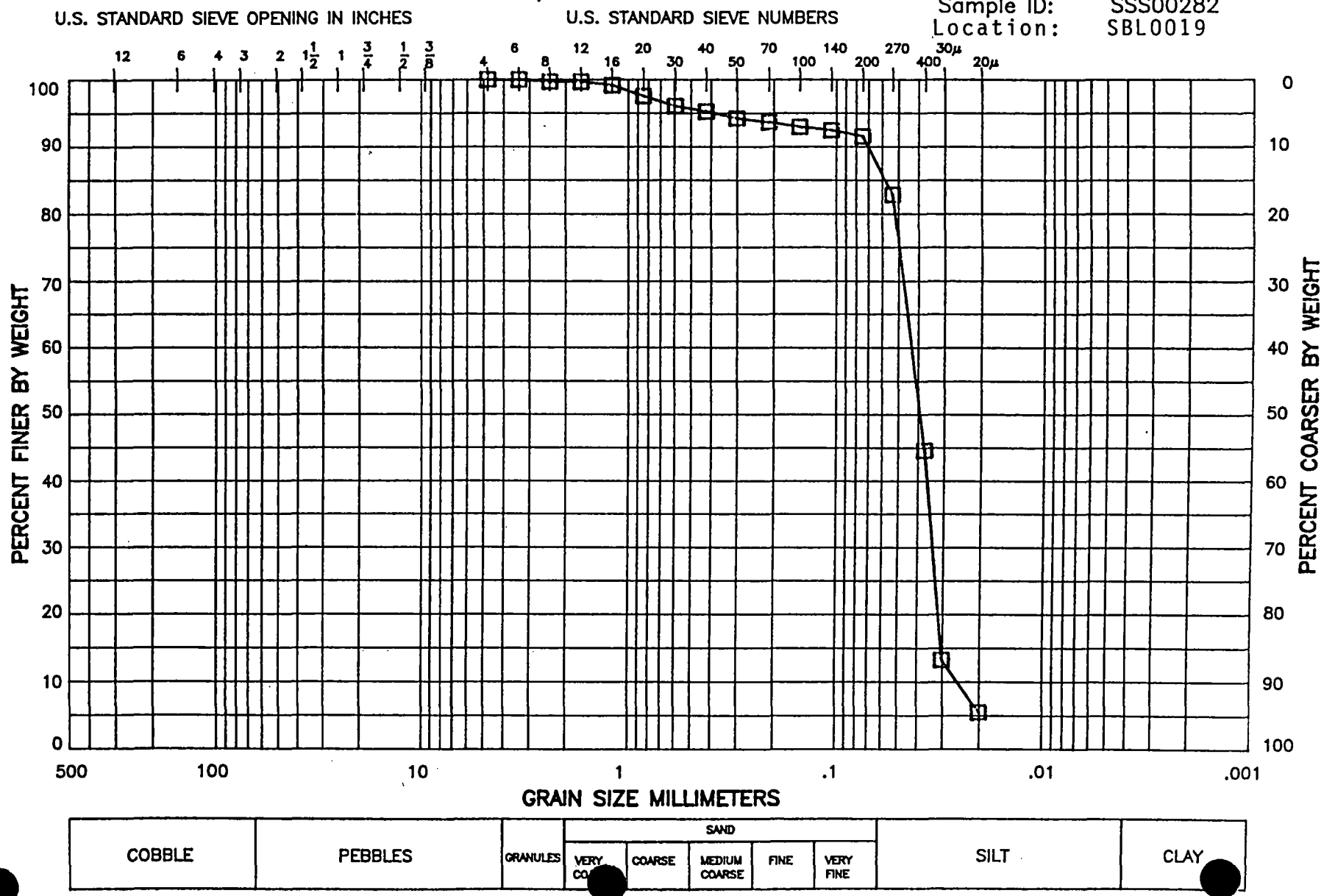
PTS Laboratories, Inc.

File No: 20004
Date: January 08, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00282
Location: SBL0019

WET/DRY SIEVE ANALYSIS



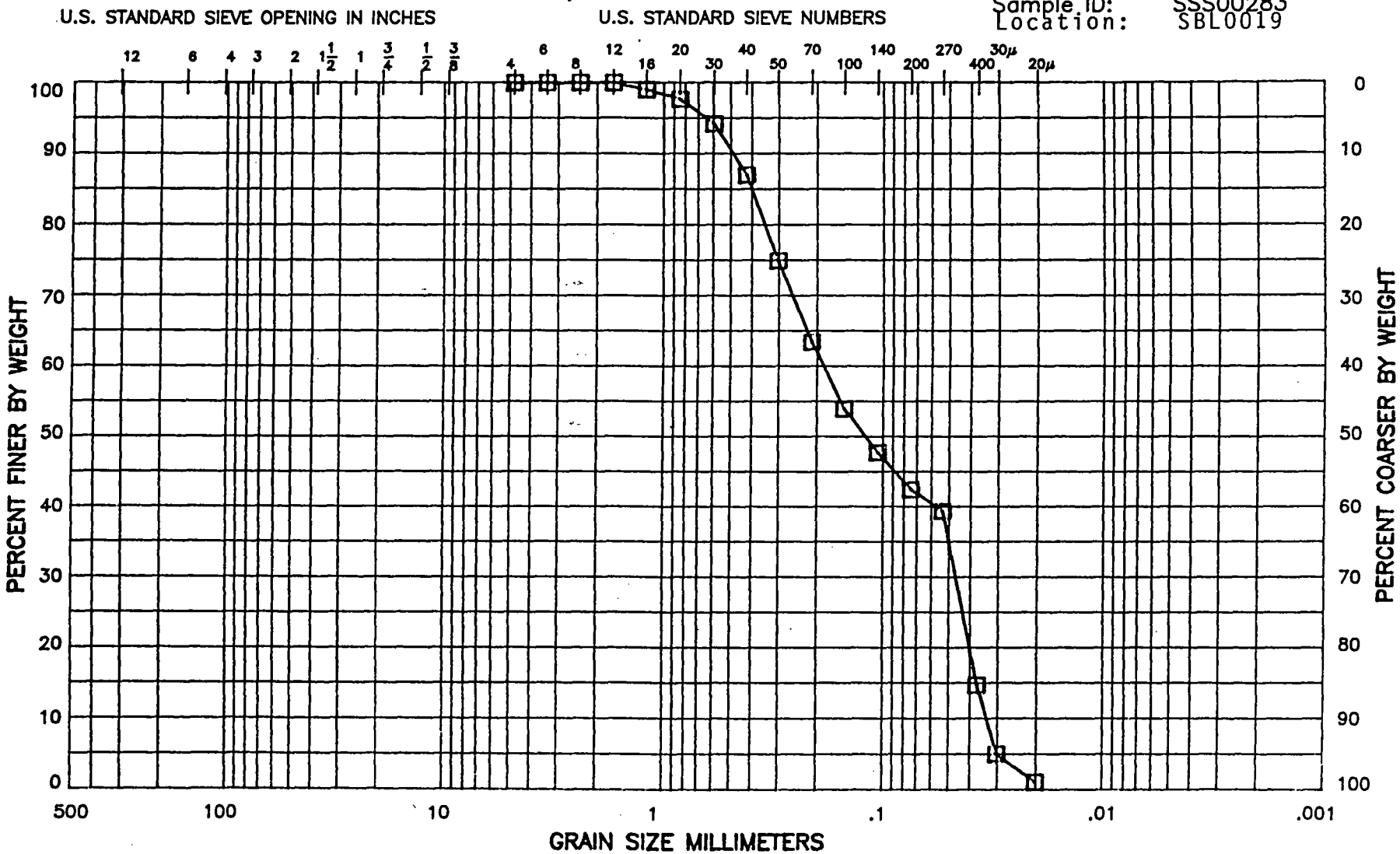
PTS Laboratories, Inc.

File No: 20004
Date: January 08, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00283
Location: SBL0019

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

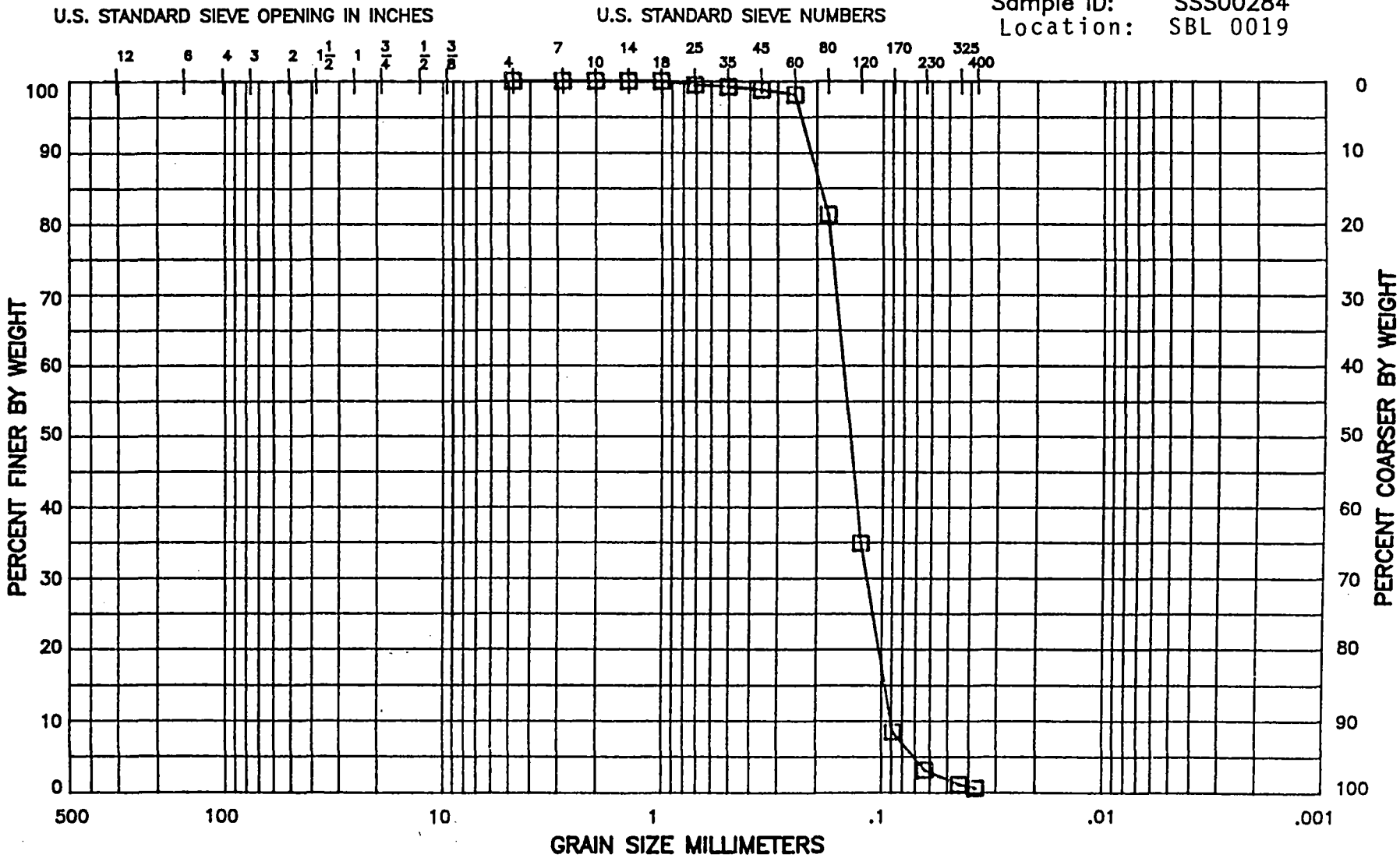
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00284
Location: SBL 0019

DRY SIEVE ANALYSIS



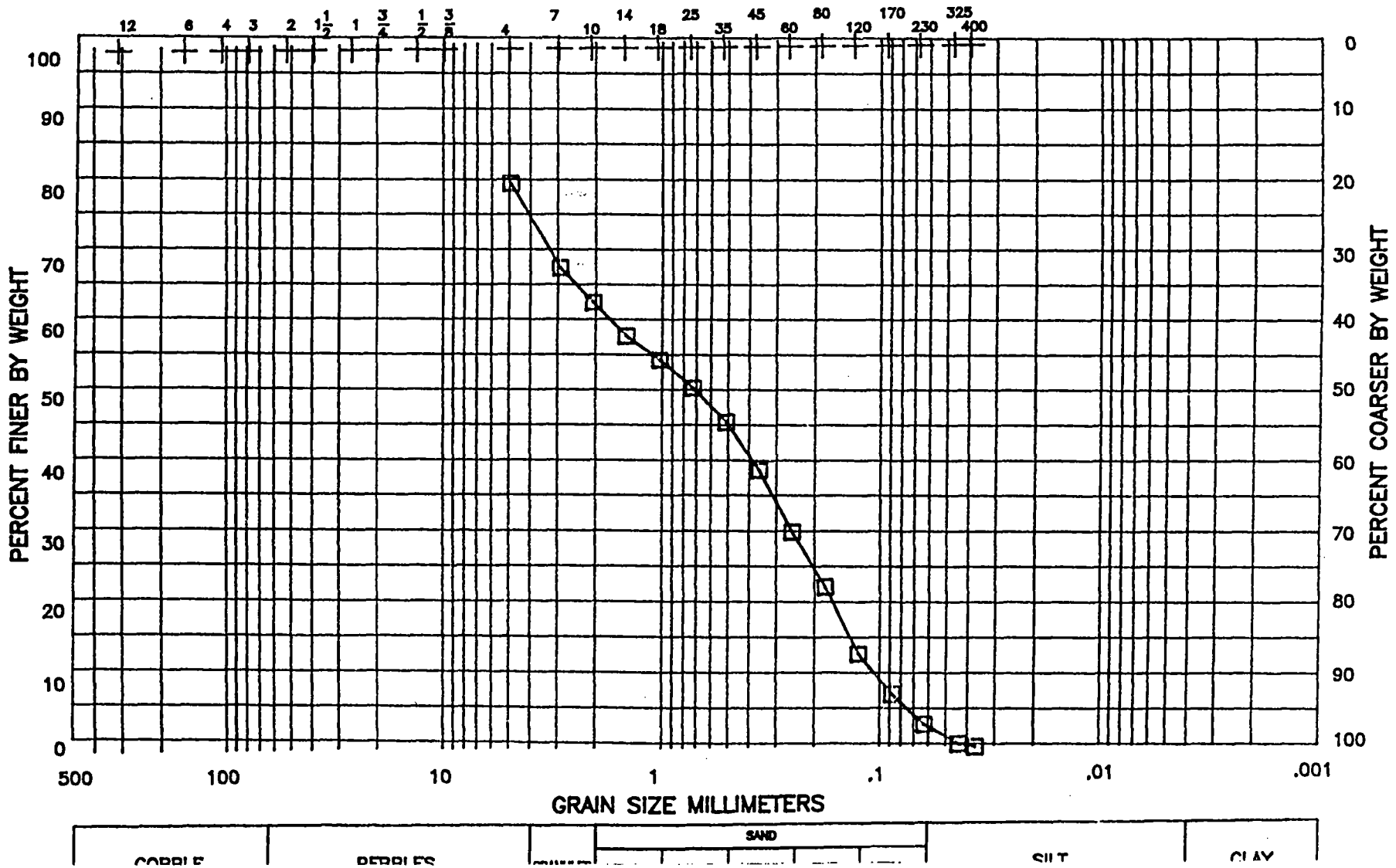
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00275
Location: SBL 0020

DRY SIEVE ANALYSIS



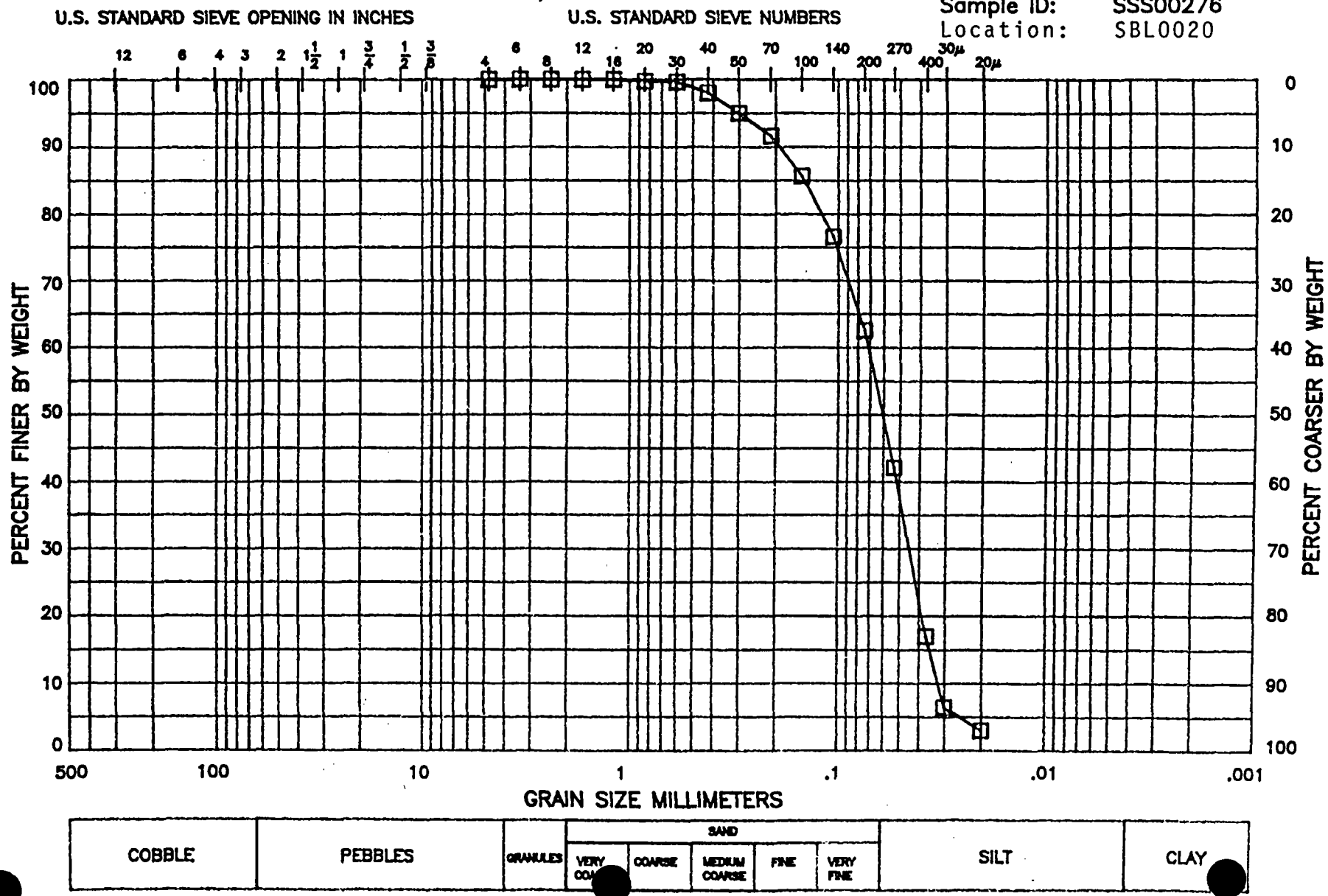
PTS Laboratories, Inc.

File No: 2000 4
Date: January 08, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00276
Location: SBL0020

WET/DRY SIEVE ANALYSIS



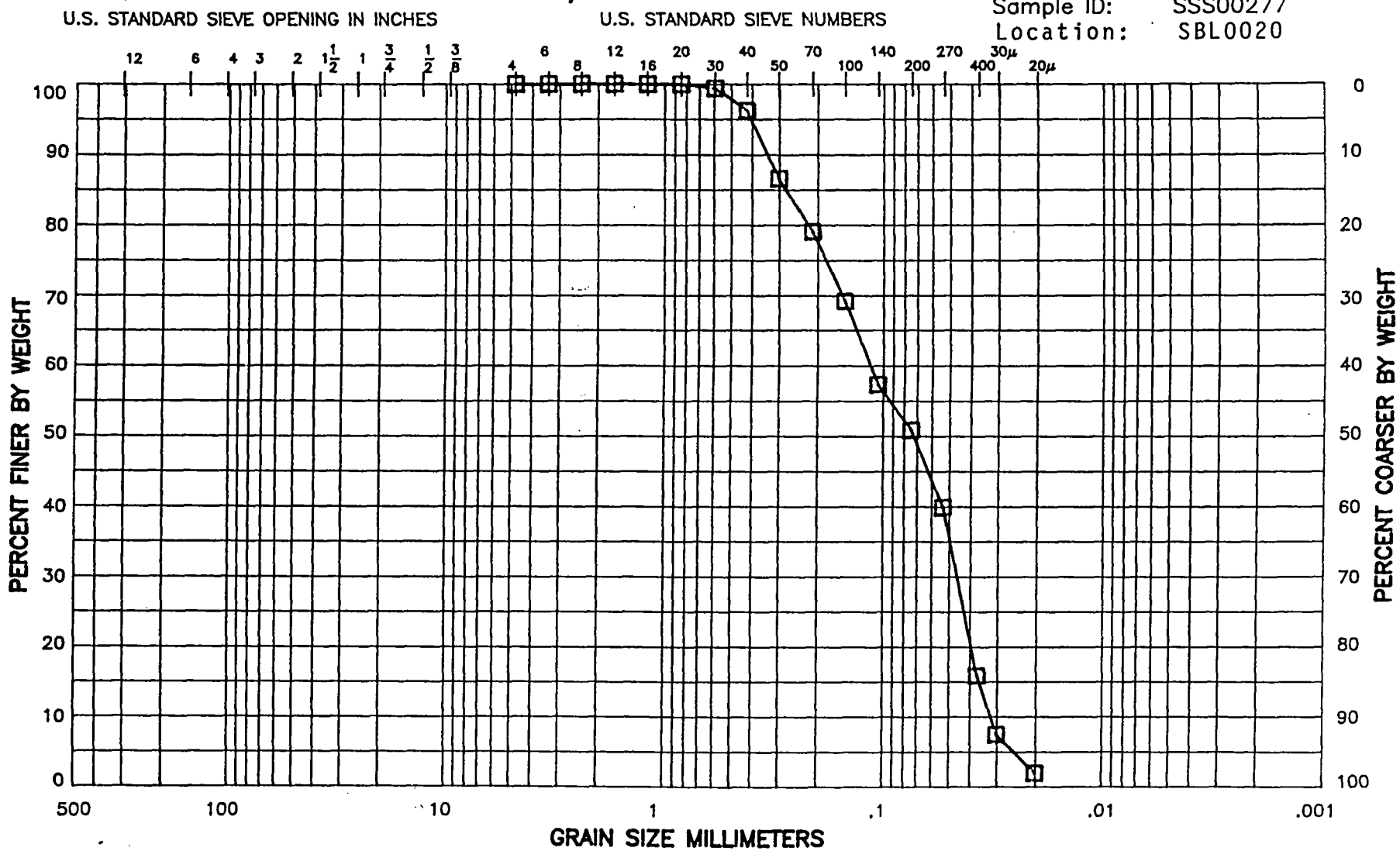
PTS Laboratories, Inc.

File No: 2000 4
Date: January 08, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00277
Location: SBL0020

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

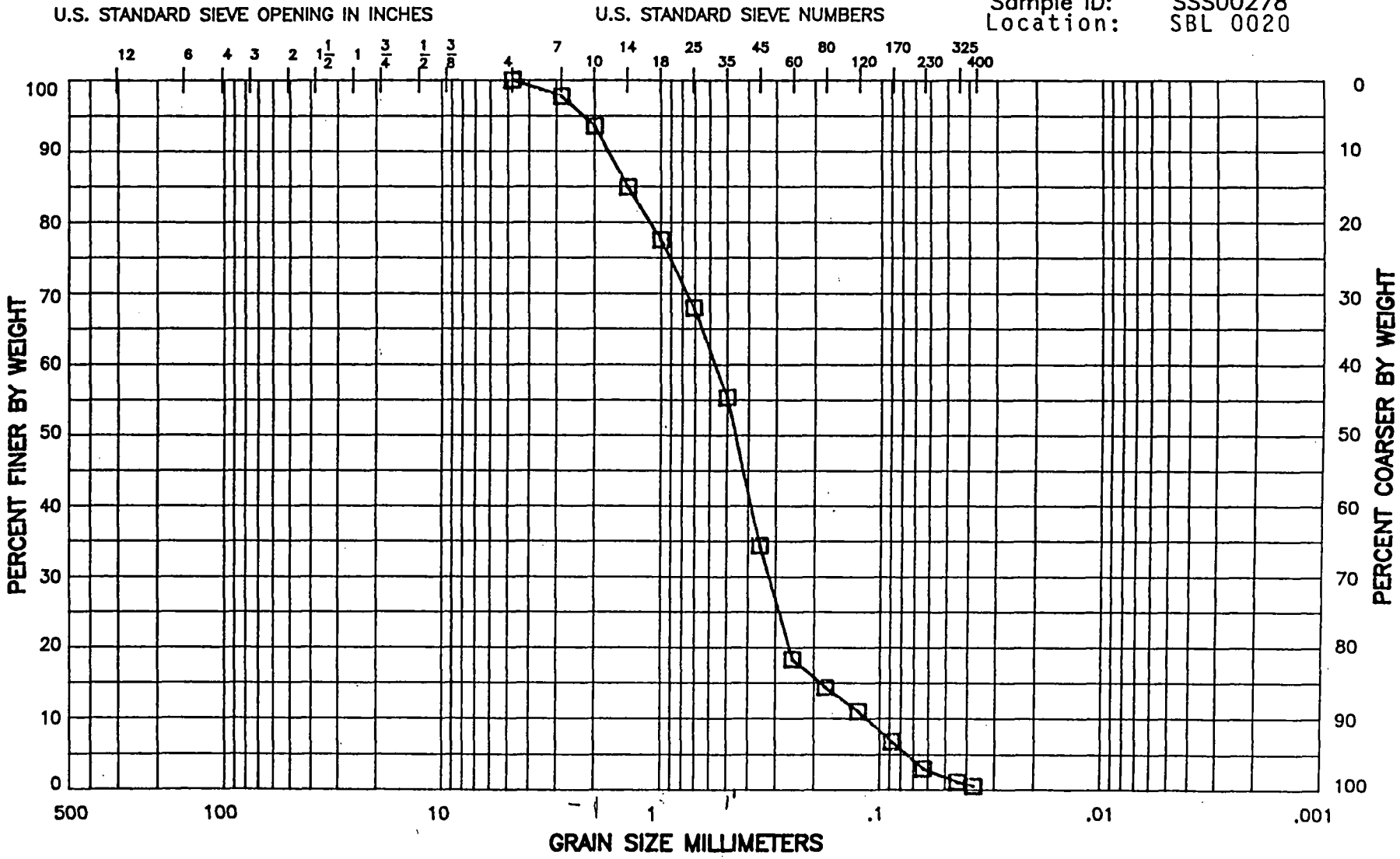
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00278
Location: SBL 0020

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COA	COARSE	MEDIUM COARSE	FINE	VERY FINE		

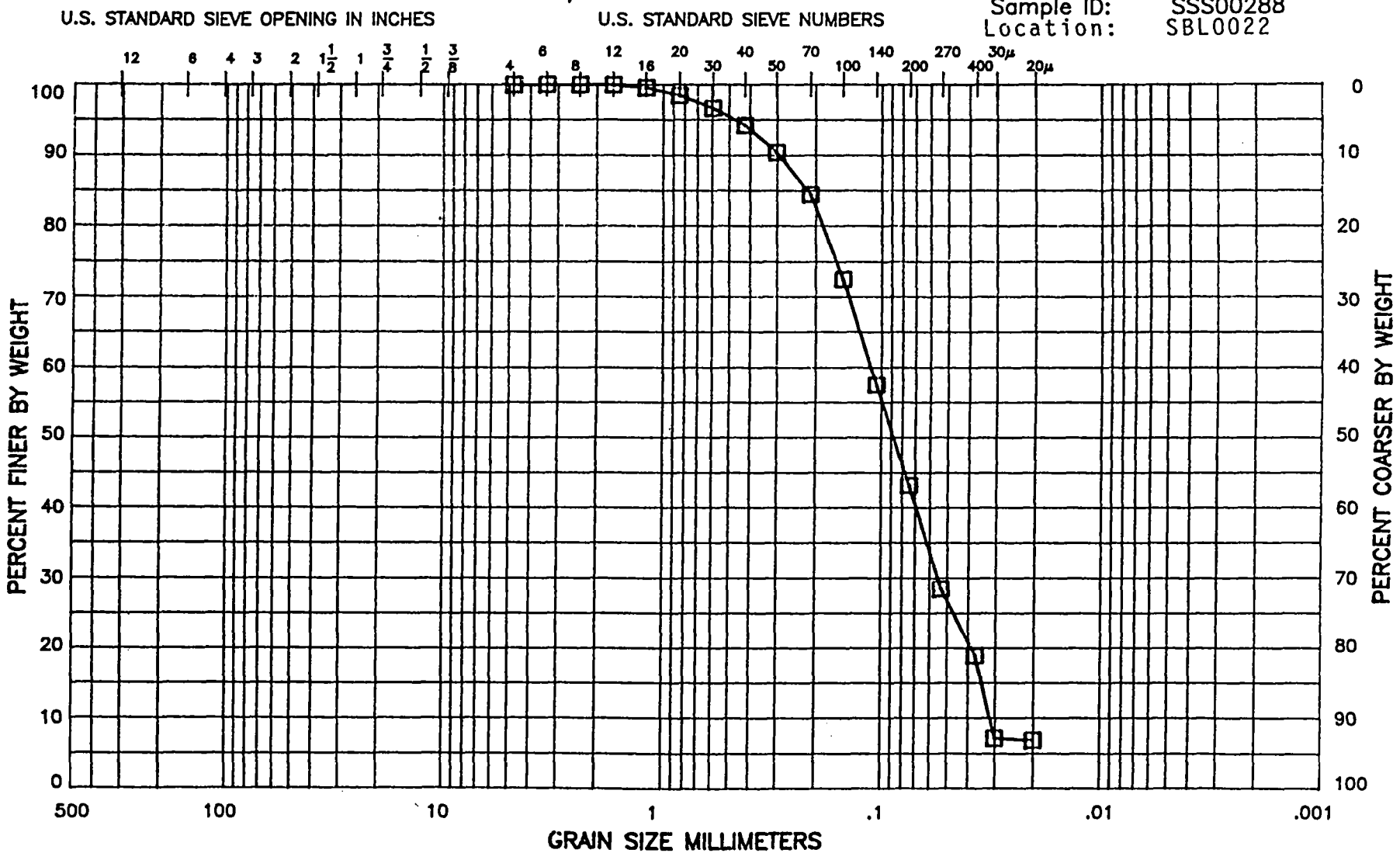
PTS Laboratories, Inc.

File No: 2000[4]
Date: January 08, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00288
Location: SBL0022

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

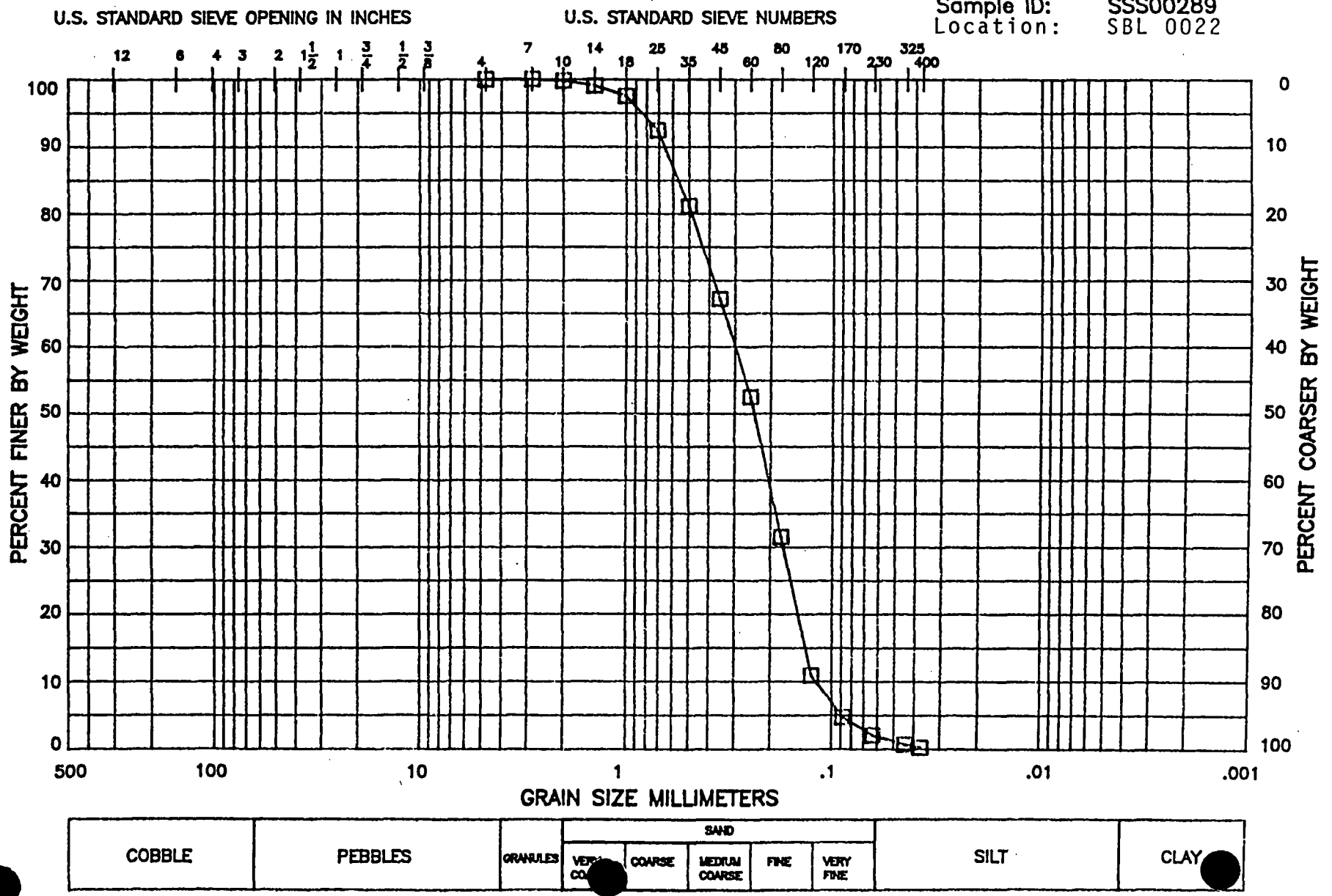
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00289
Location: SBL 0022

DRY SIEVE ANALYSIS



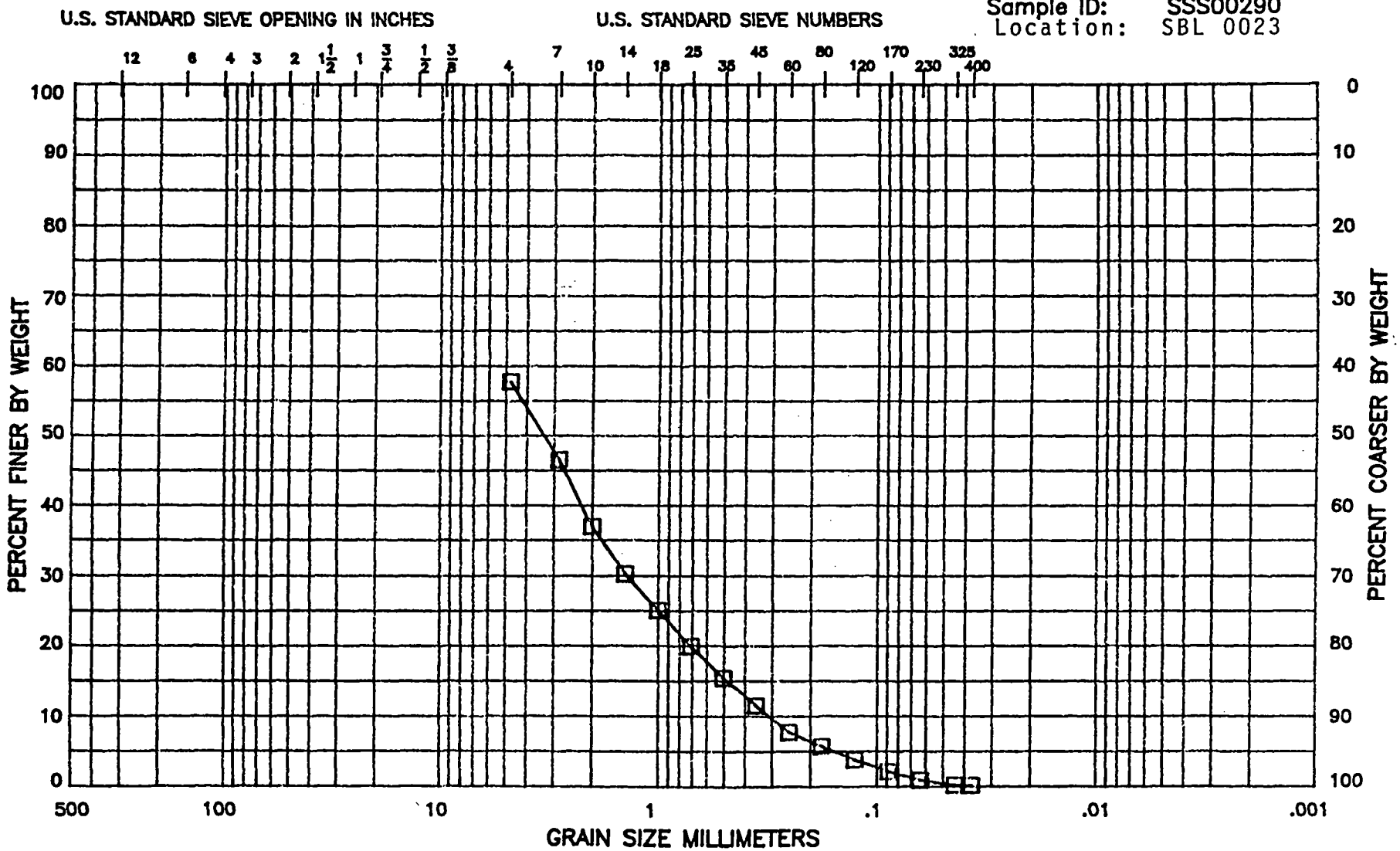
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00290
Location: SBL 0023

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

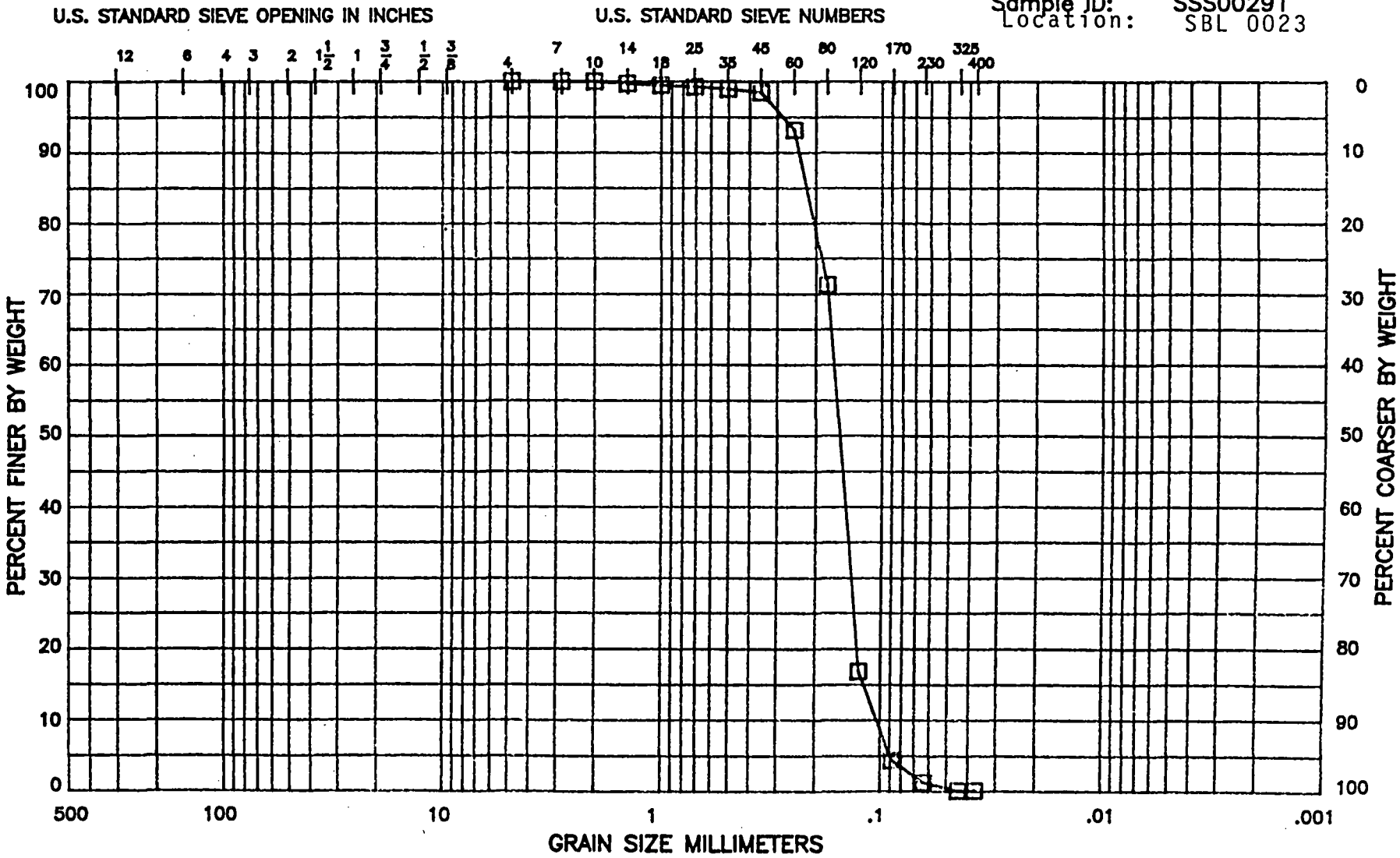
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00291
Location: SBL 0023

DRY SIEVE ANALYSIS



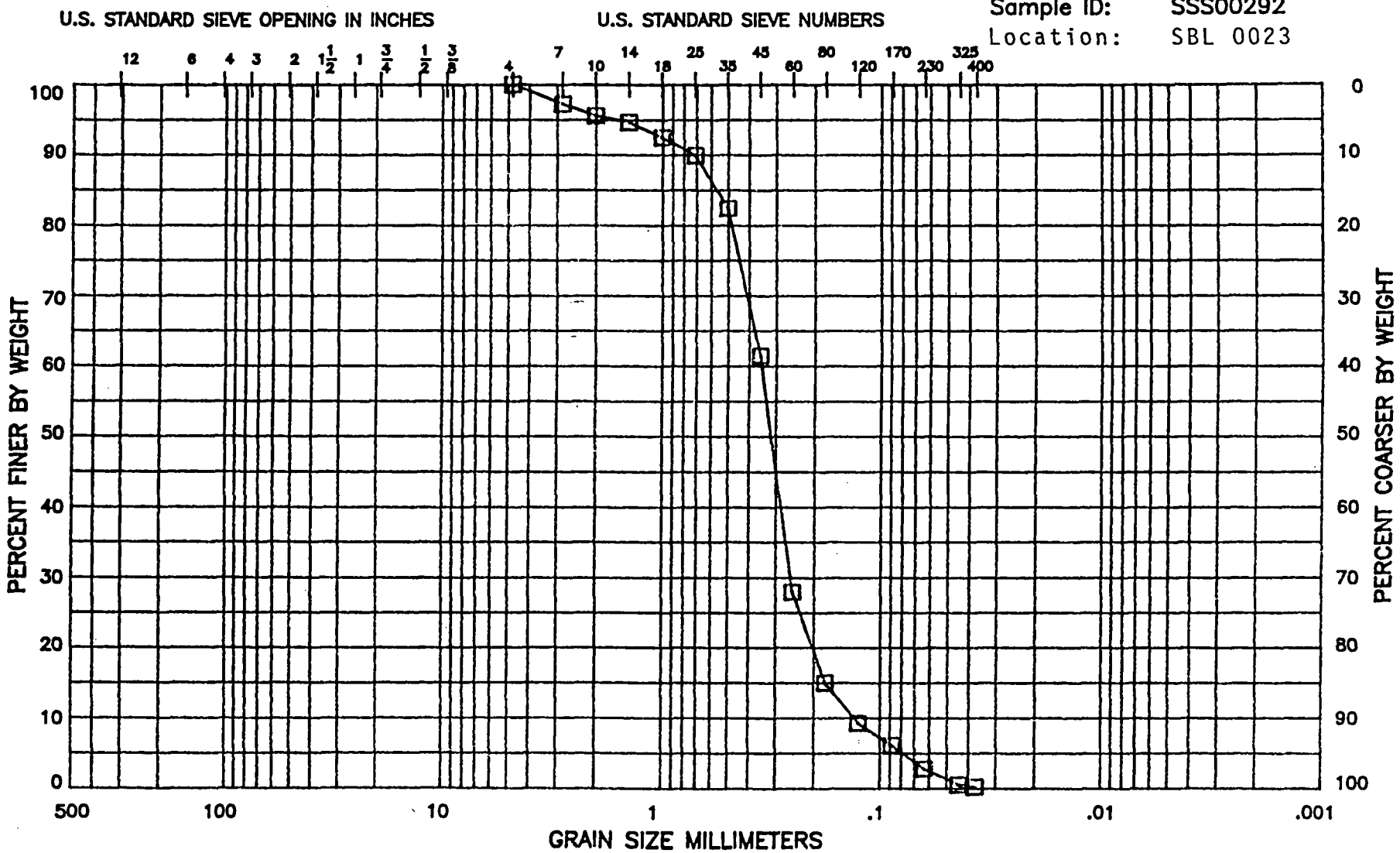
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00292
Location: SBL 0023

DRY SIEVE ANALYSIS



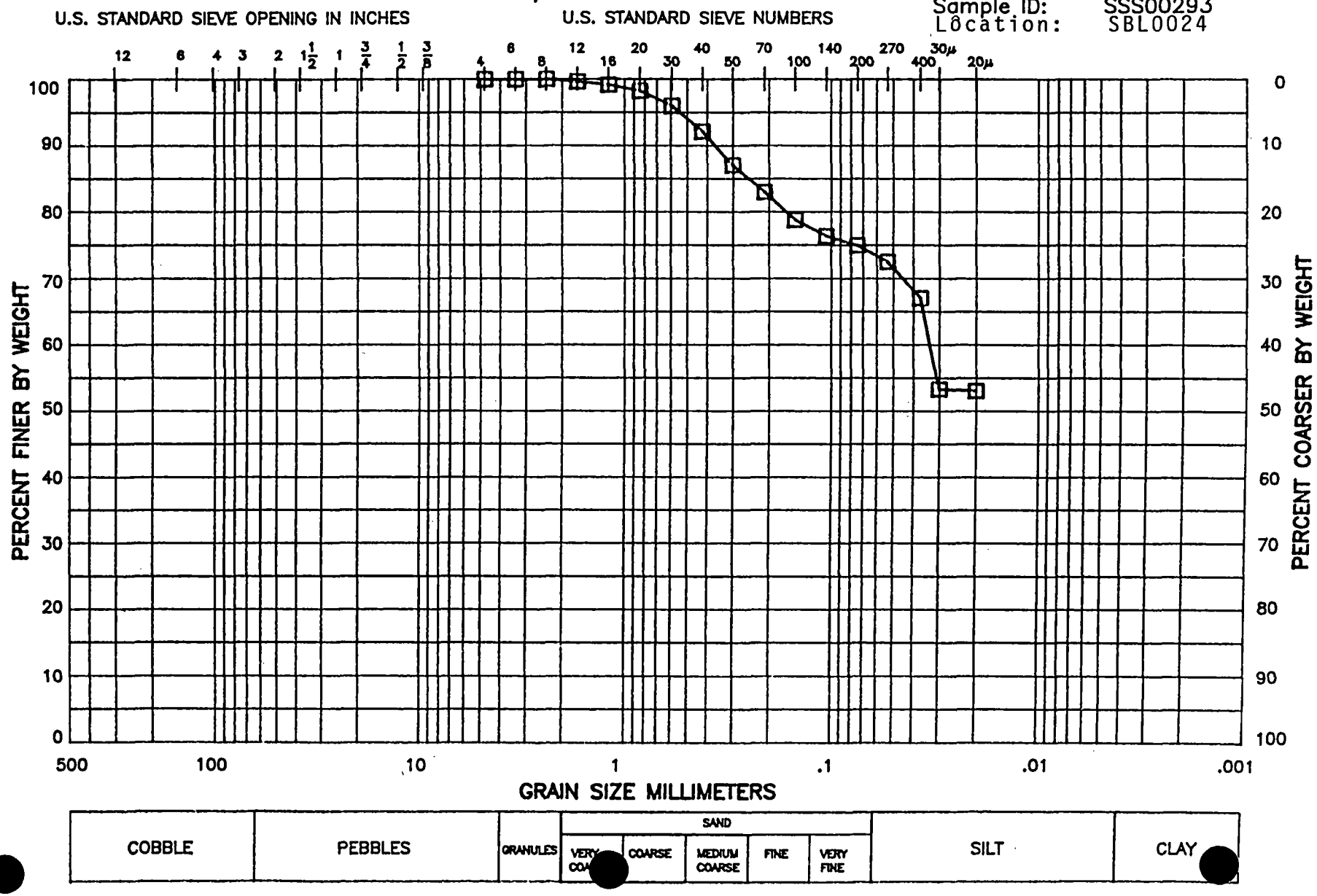
PTS Laboratories, Inc.

File No: 2000 4
Date: January 08, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00293
Location: SBL0024

WET/DRY SIEVE ANALYSIS



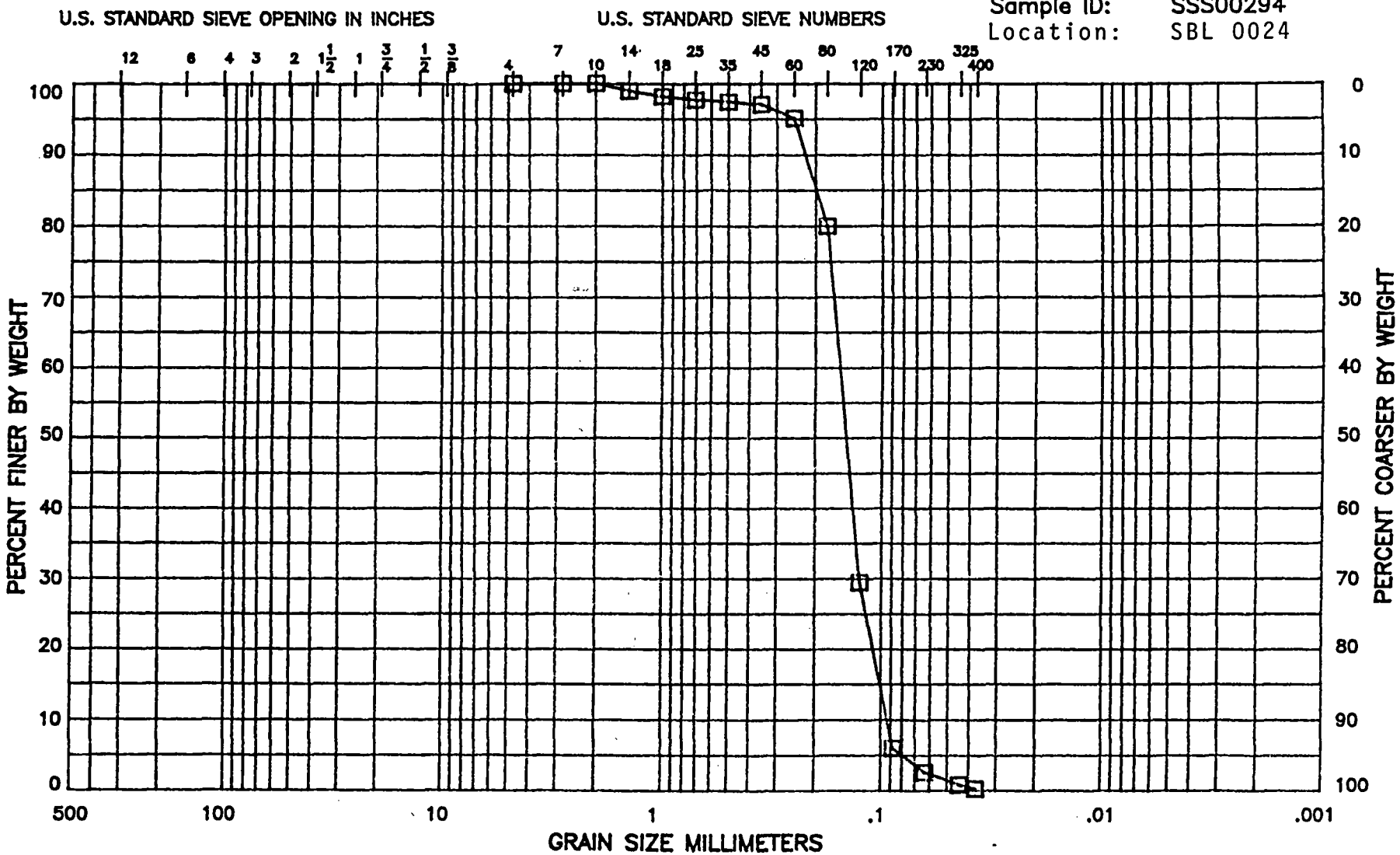
PTS Laboratories, Inc.

File No: 20004
Date: January 05, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00294
Location: SBL 0024

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

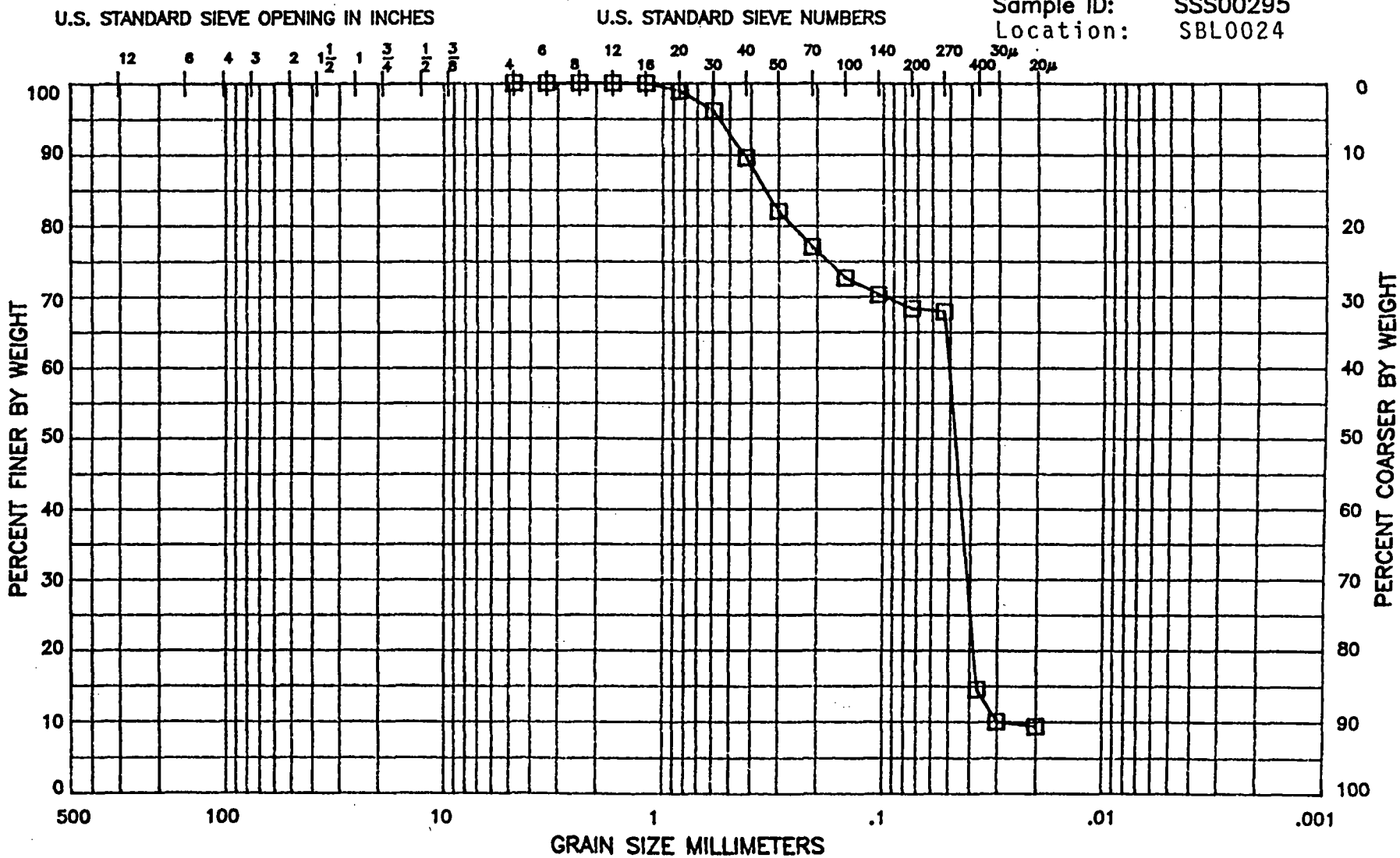
PTS Laboratories, Inc.

File No: 2000 4
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00295
Location: SBL0024

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

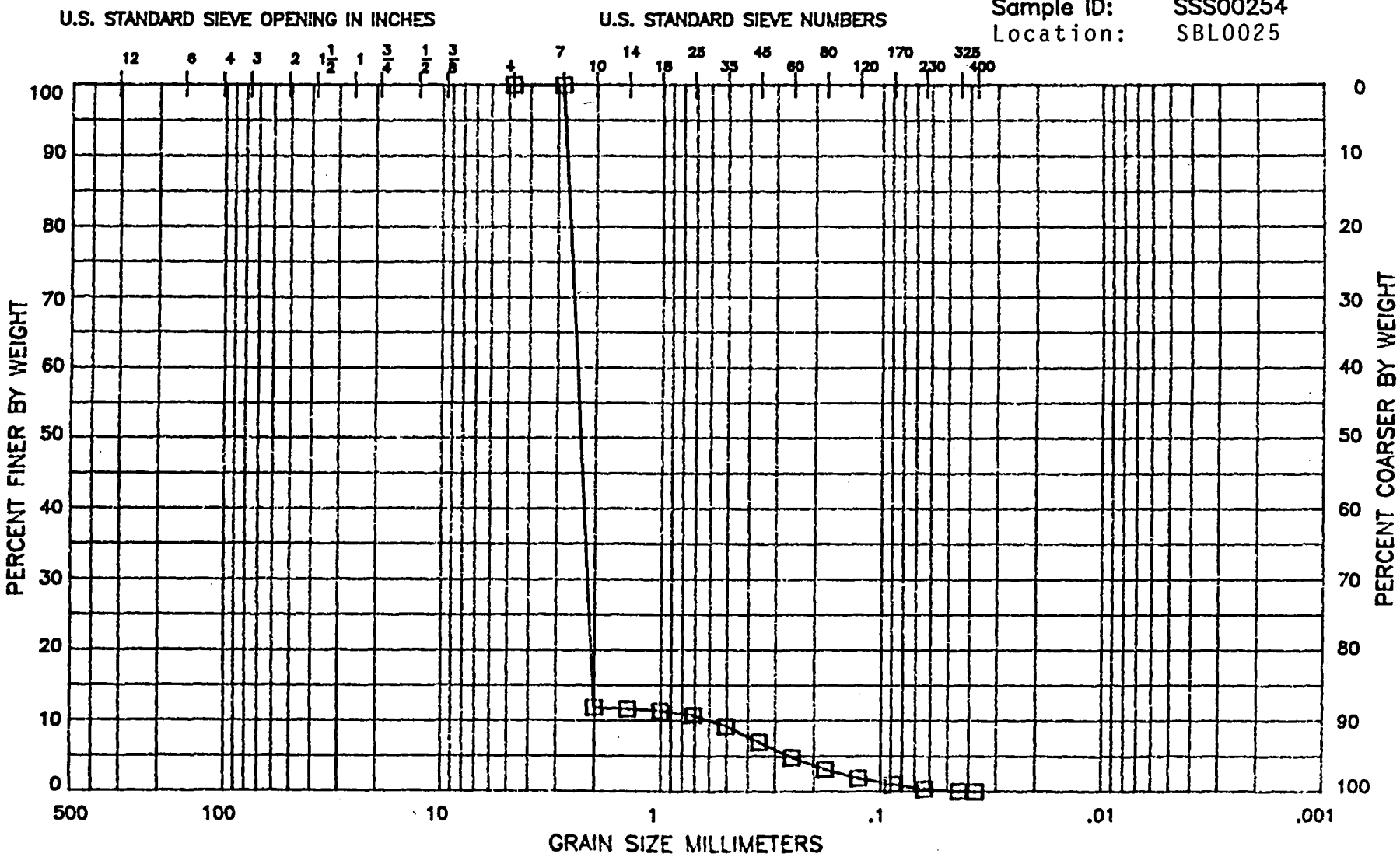
PTS Laboratories, Inc.

File No: 20004
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00254
Location: SBL0025

DRY SIEVE ANALYSIS



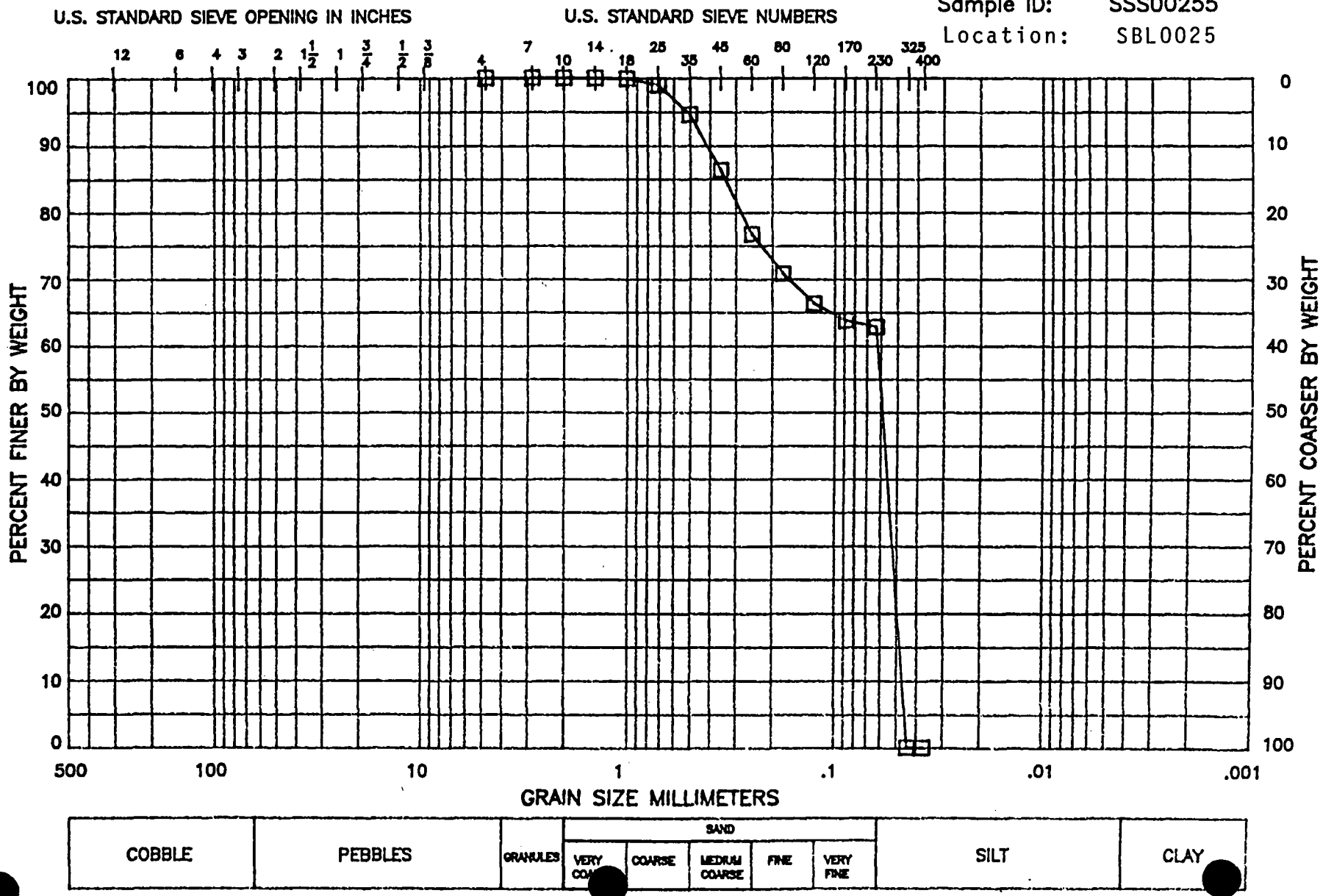
PTS Laboratories, Inc.

File No: 20004
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00255
Location: SBL0025

DRY SIEVE ANALYSIS



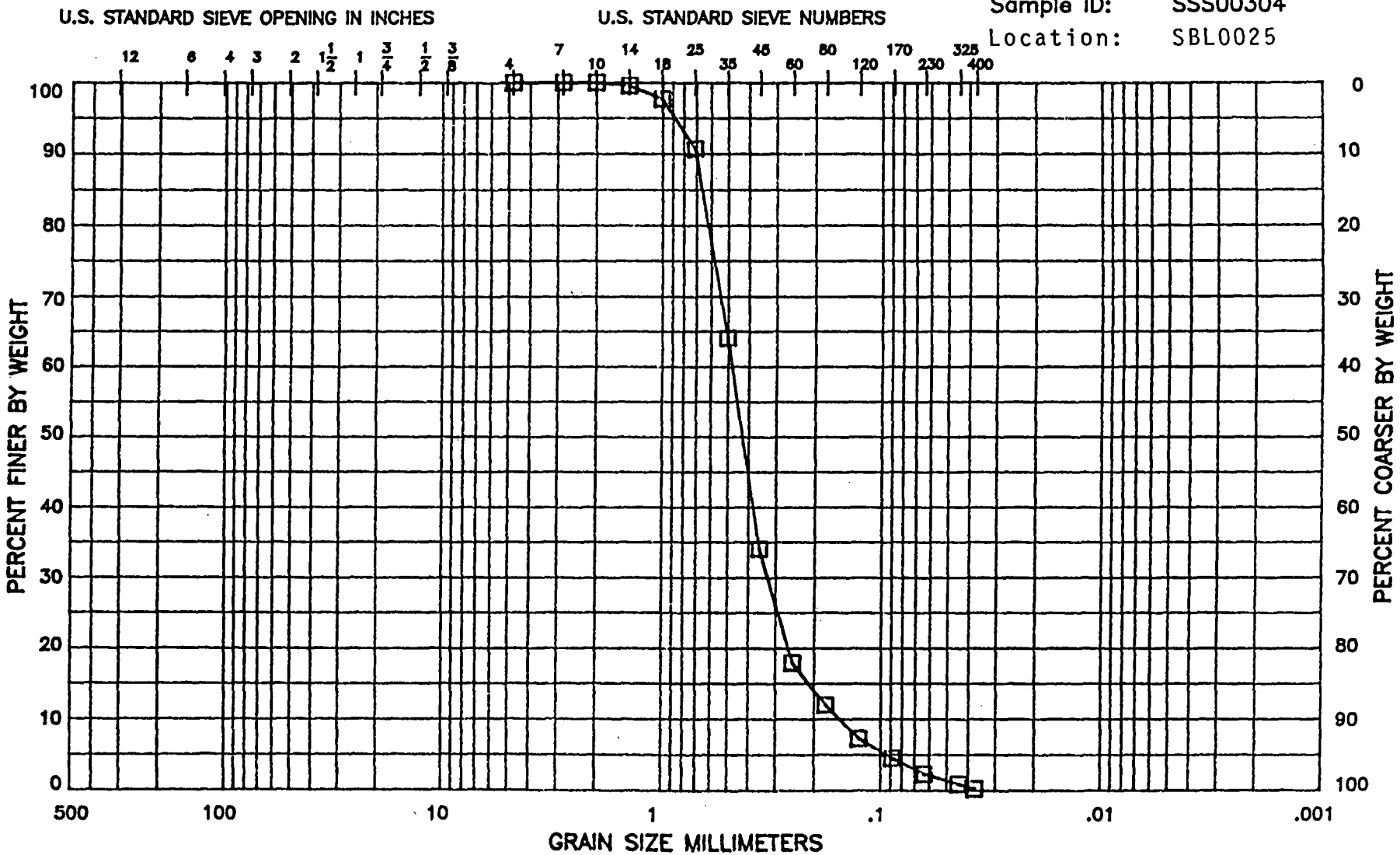
PTS Laboratories, Inc.

File No: 20004
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00304
Location: SBL0025

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

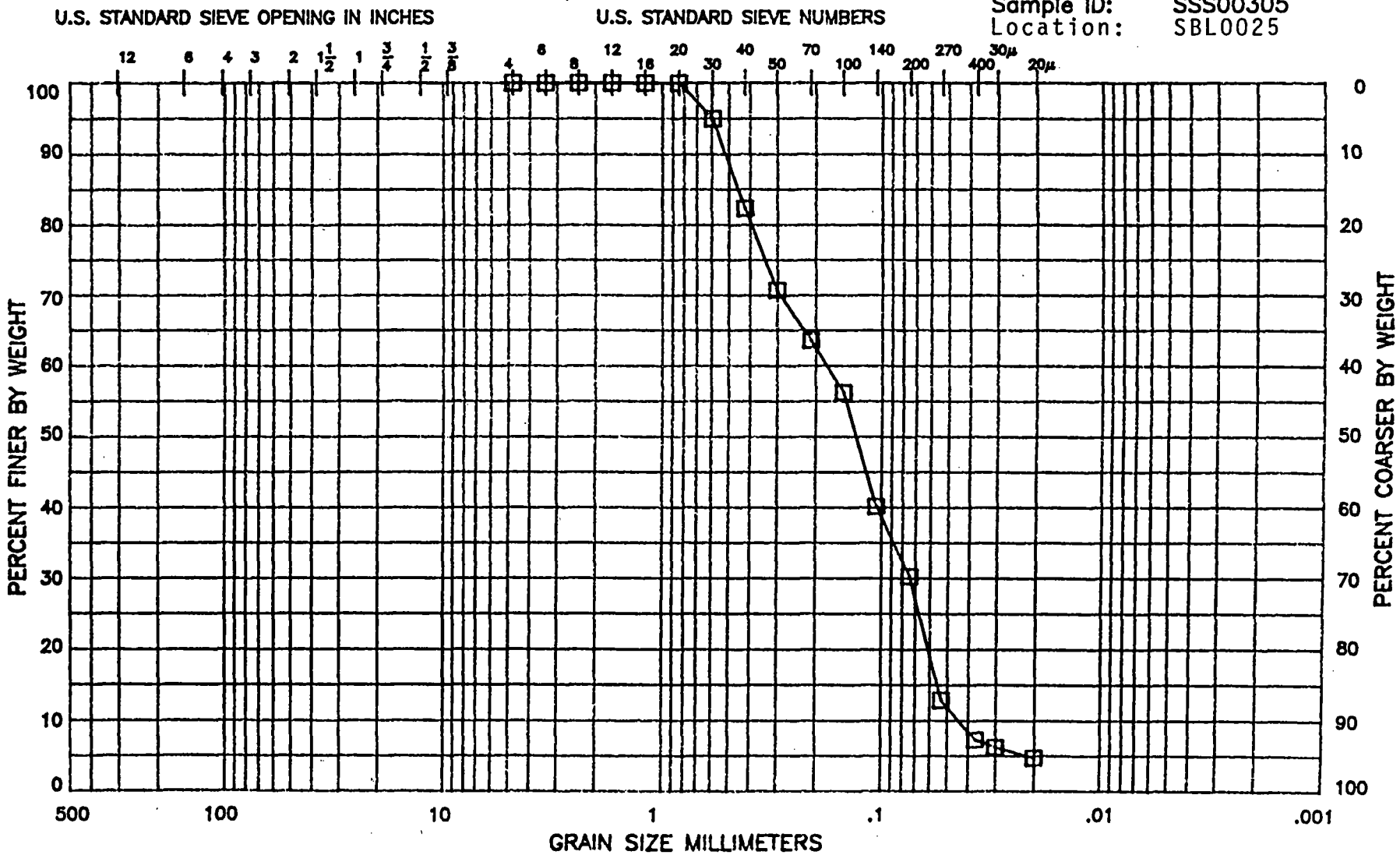
PTS Laboratories, Inc.

File No: 2000 4
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00305
Location: SBL0025

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

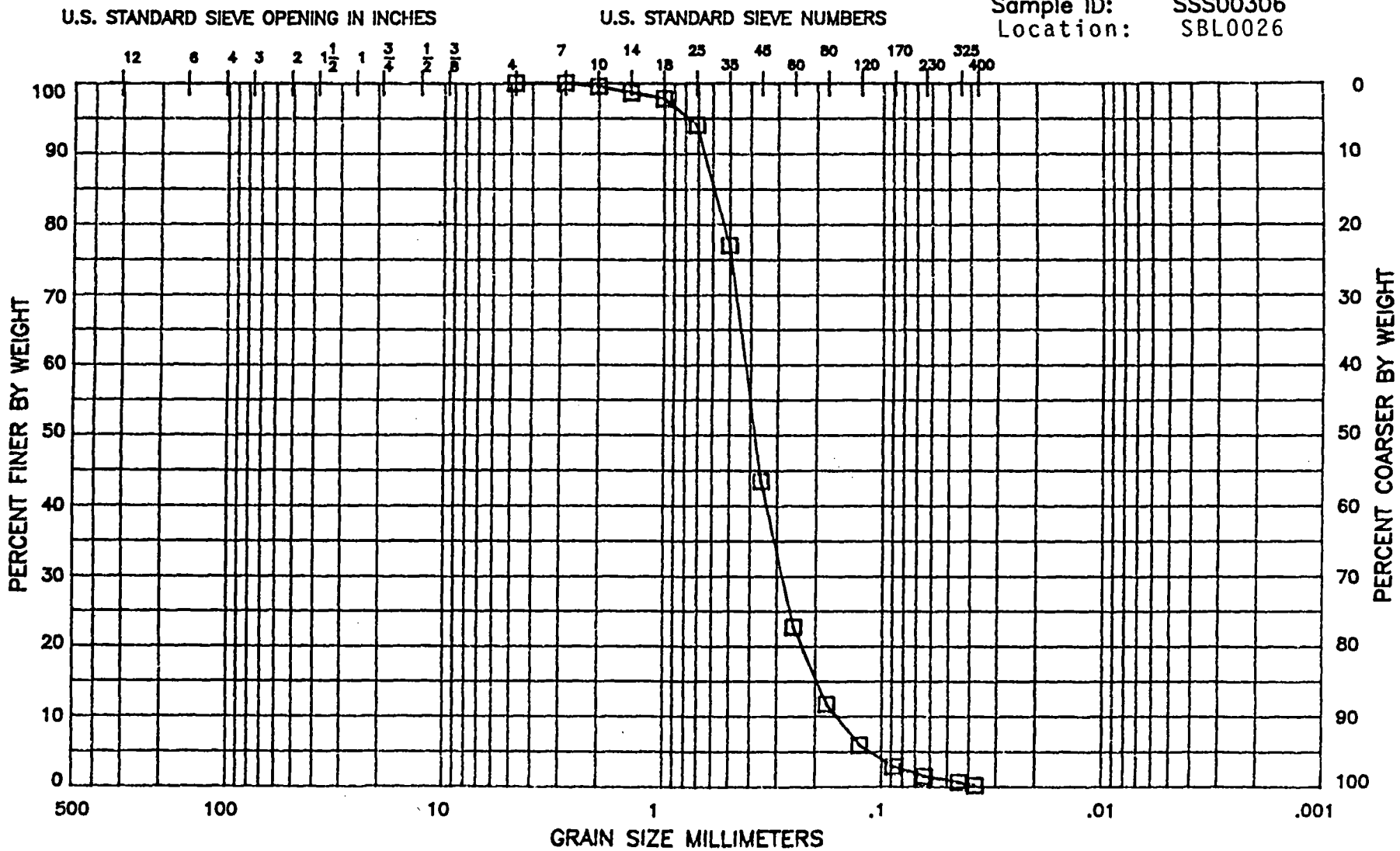
PTS Laboratories, Inc.

File No: 20004
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00306
Location: SBL0026

DRY SIEVE ANALYSIS



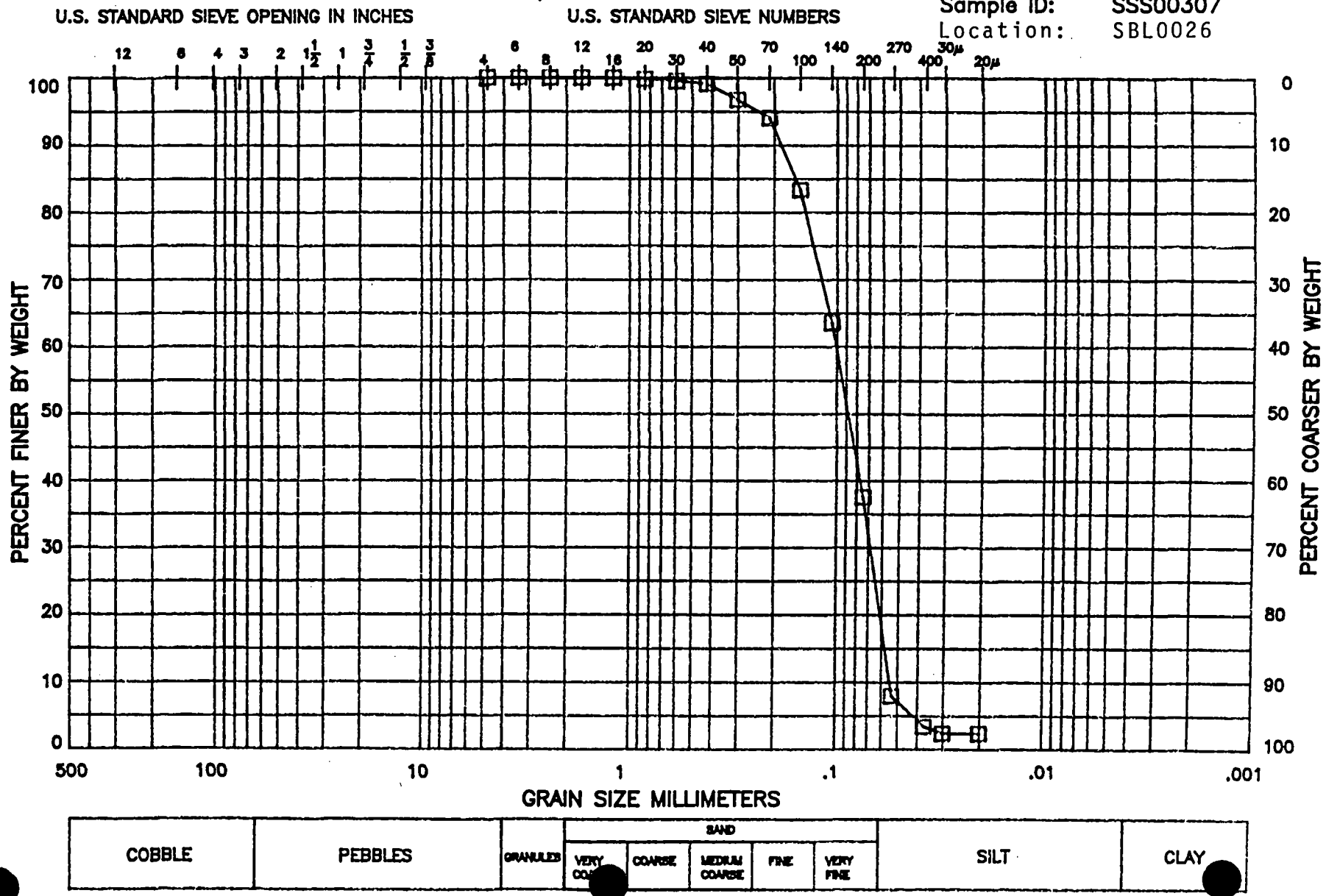
PTS Laboratories, Inc.

File No: 20004
Date: January 26, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00307
Location: SBL0026

WET/DRY SIEVE ANALYSIS



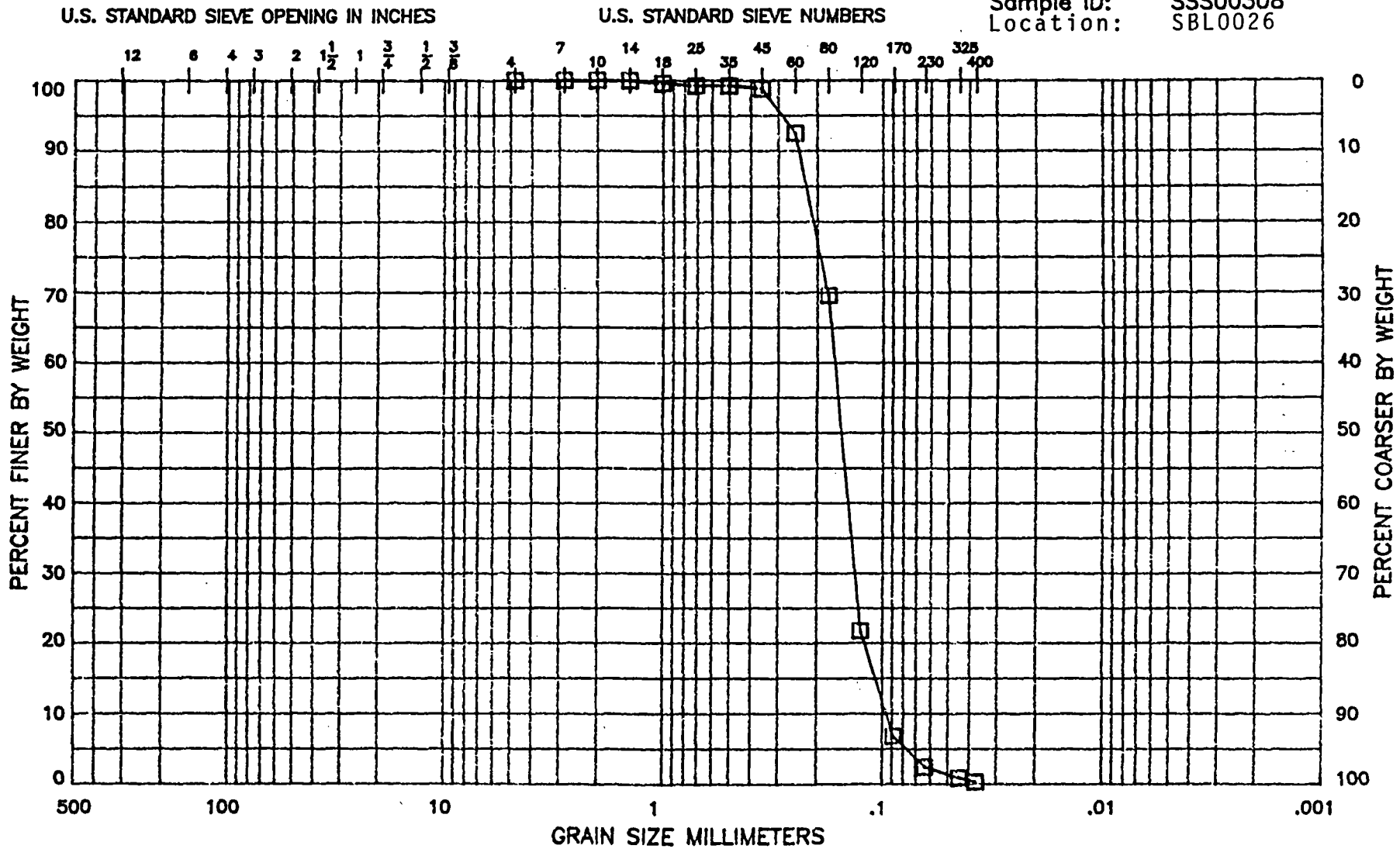
PTS Laboratories, Inc.

File No: 20004
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00308
Location: SBL0026

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

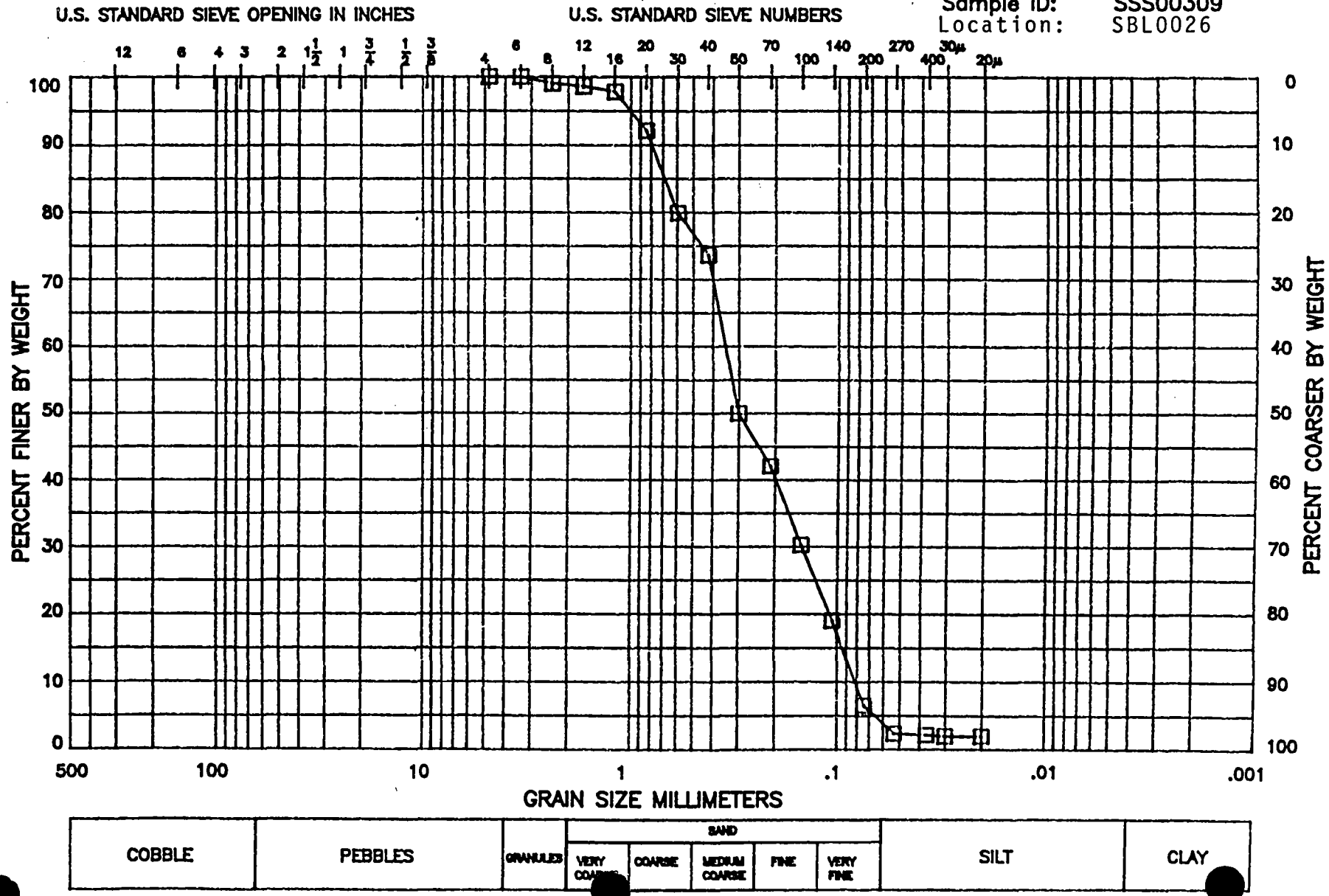
PTS Laboratories, Inc.

File No: 20004
Date: January 26, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00309
Location: SBL0026

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND: VERY COARSE	SAND: COARSE	SAND: MEDIUM COARSE	SAND: FINE	SAND: VERY FINE	SILT	CLAY

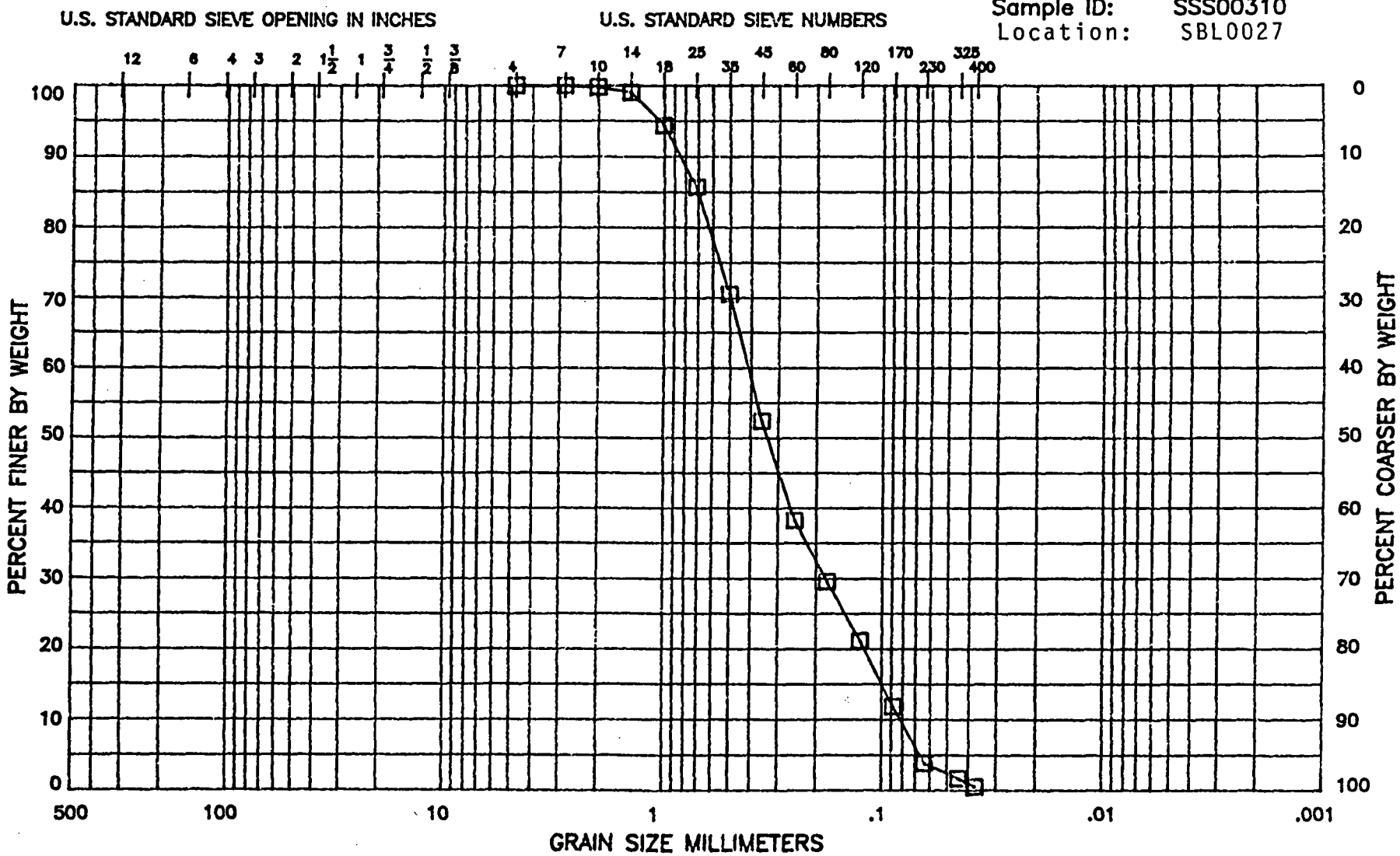
PTS Laboratories, Inc.

File No: 20004
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00310
Location: SBL0027

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

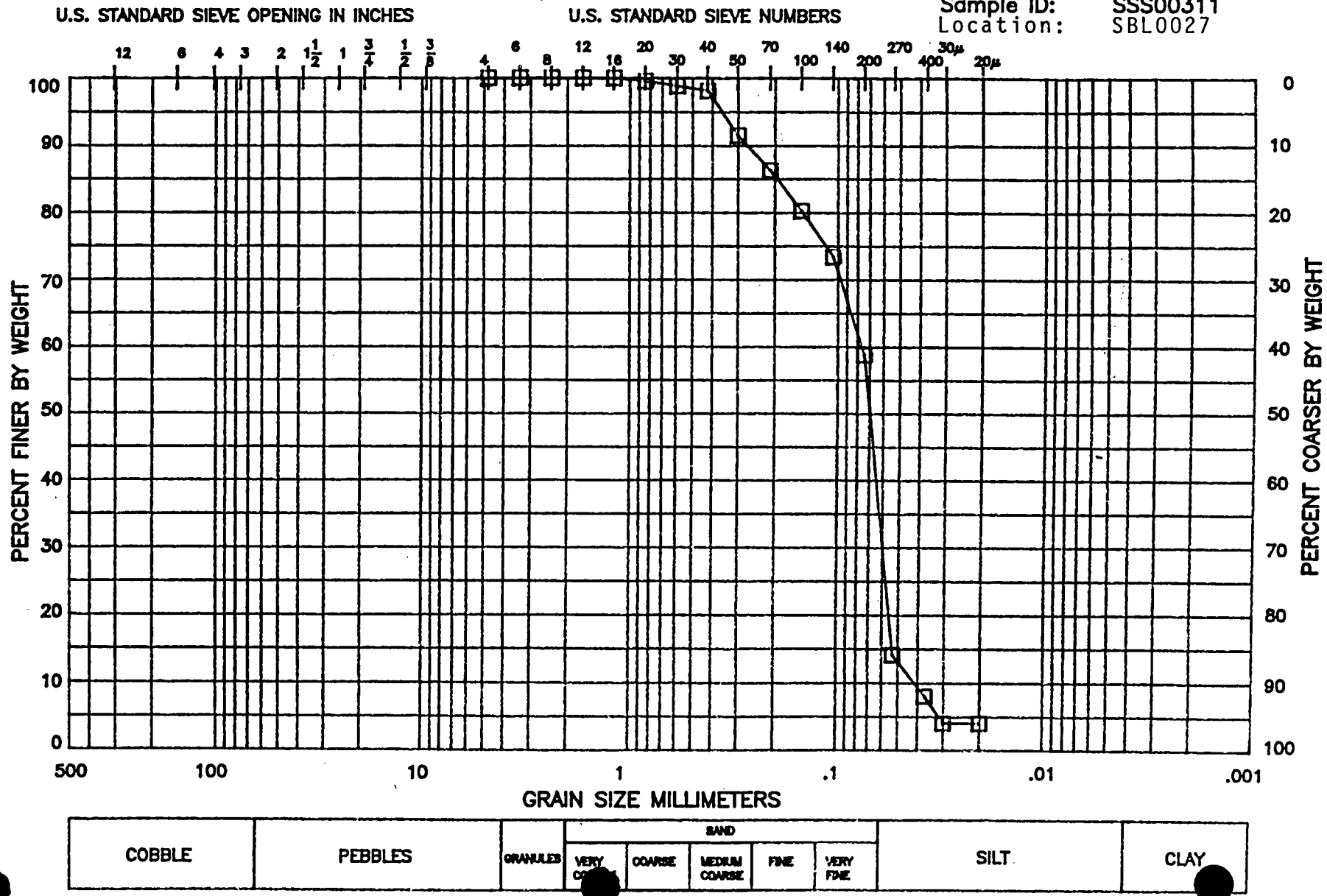
PTS Laboratories, Inc.

File No: 20004
Date: January 26, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00311
Location: SBL0027

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

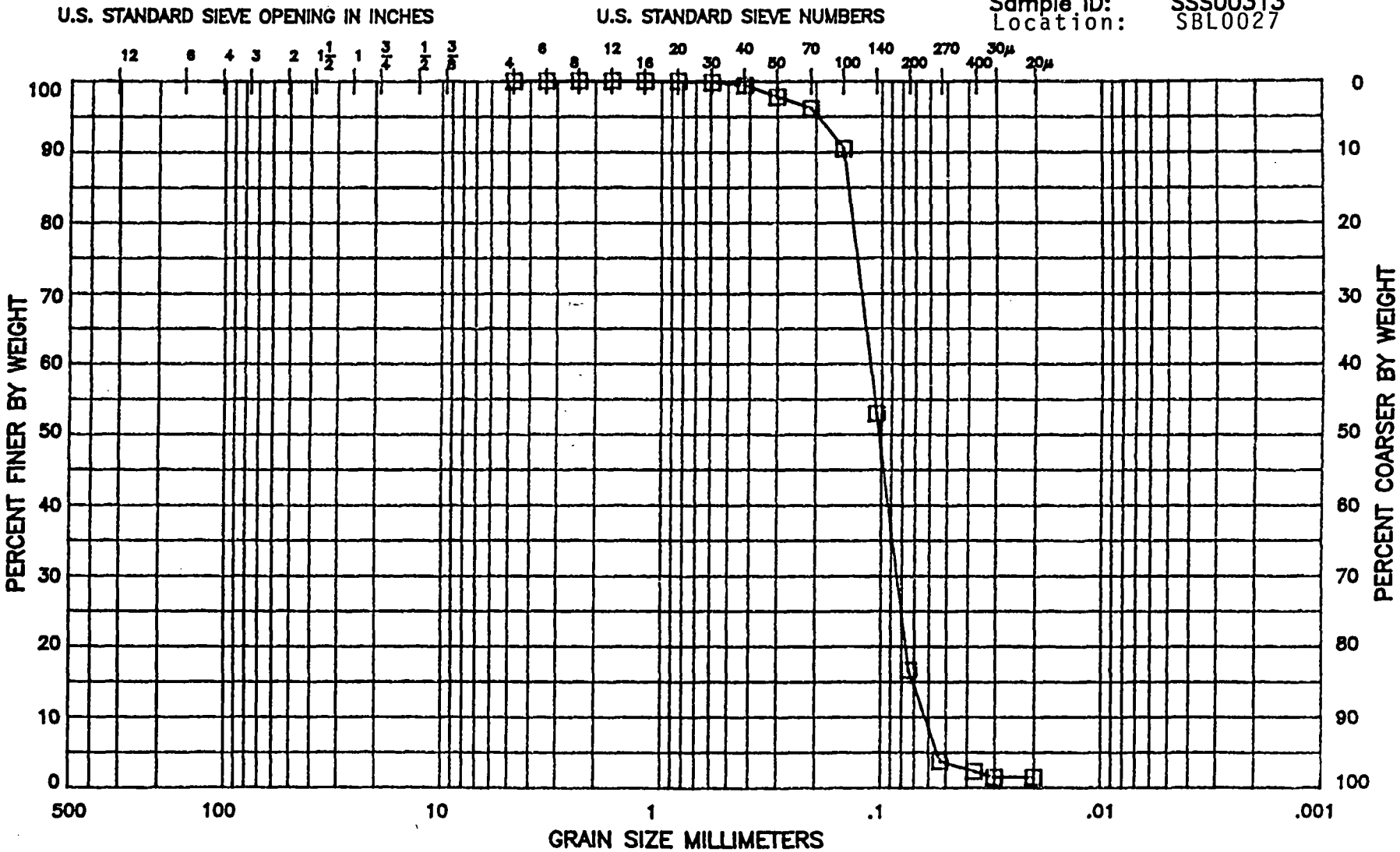
PTS Laboratories, Inc.

File No: 20004
Date: January 26, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00313
Location: SBL0027

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

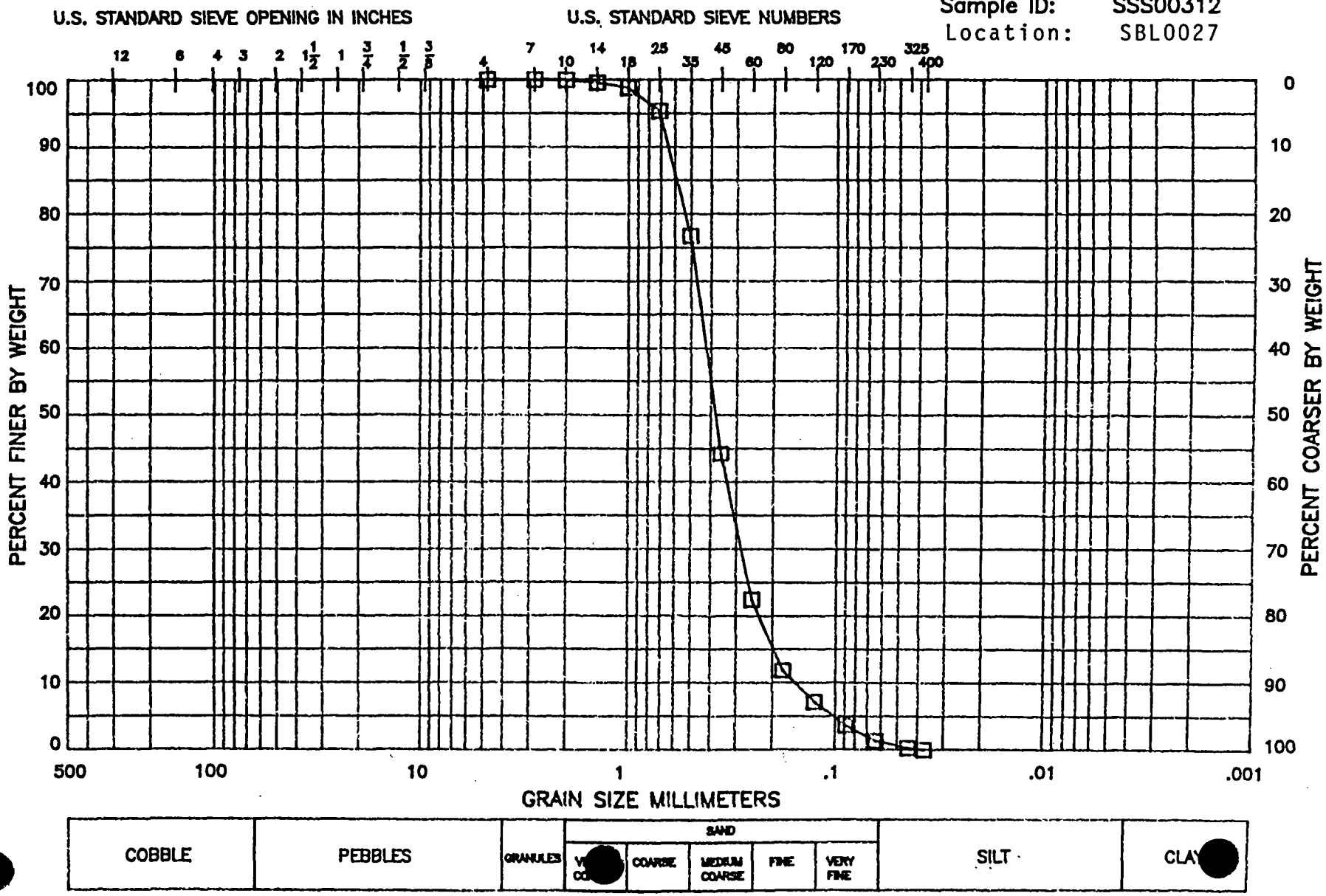
PTS Laboratories, Inc.

File No: 20004
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00312
Location: SBL0027

DRY SIEVE ANALYSIS



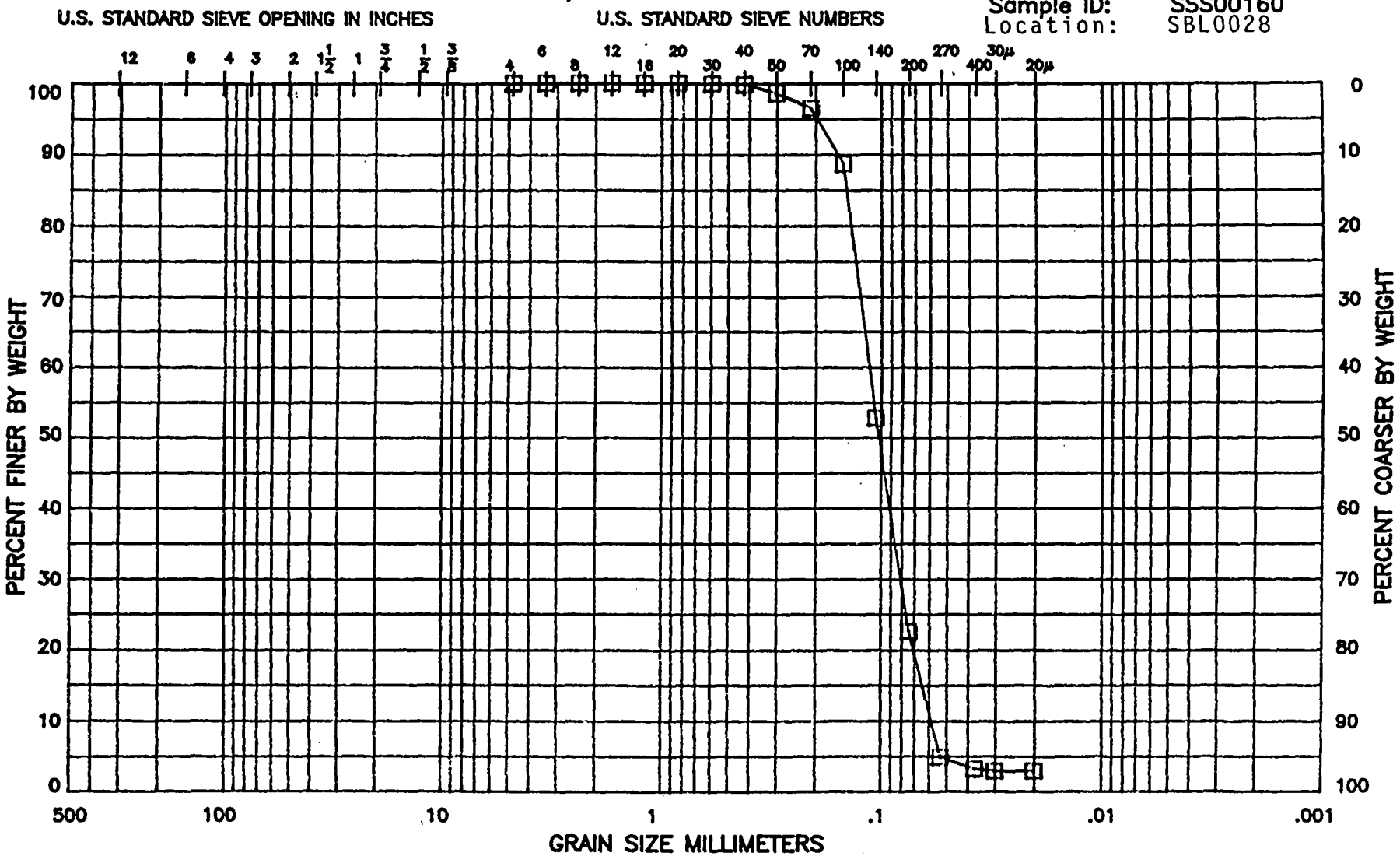
PTS Laboratories, Inc.

File No: 20004
Date: January 26, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00160
Location: SBL0028

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

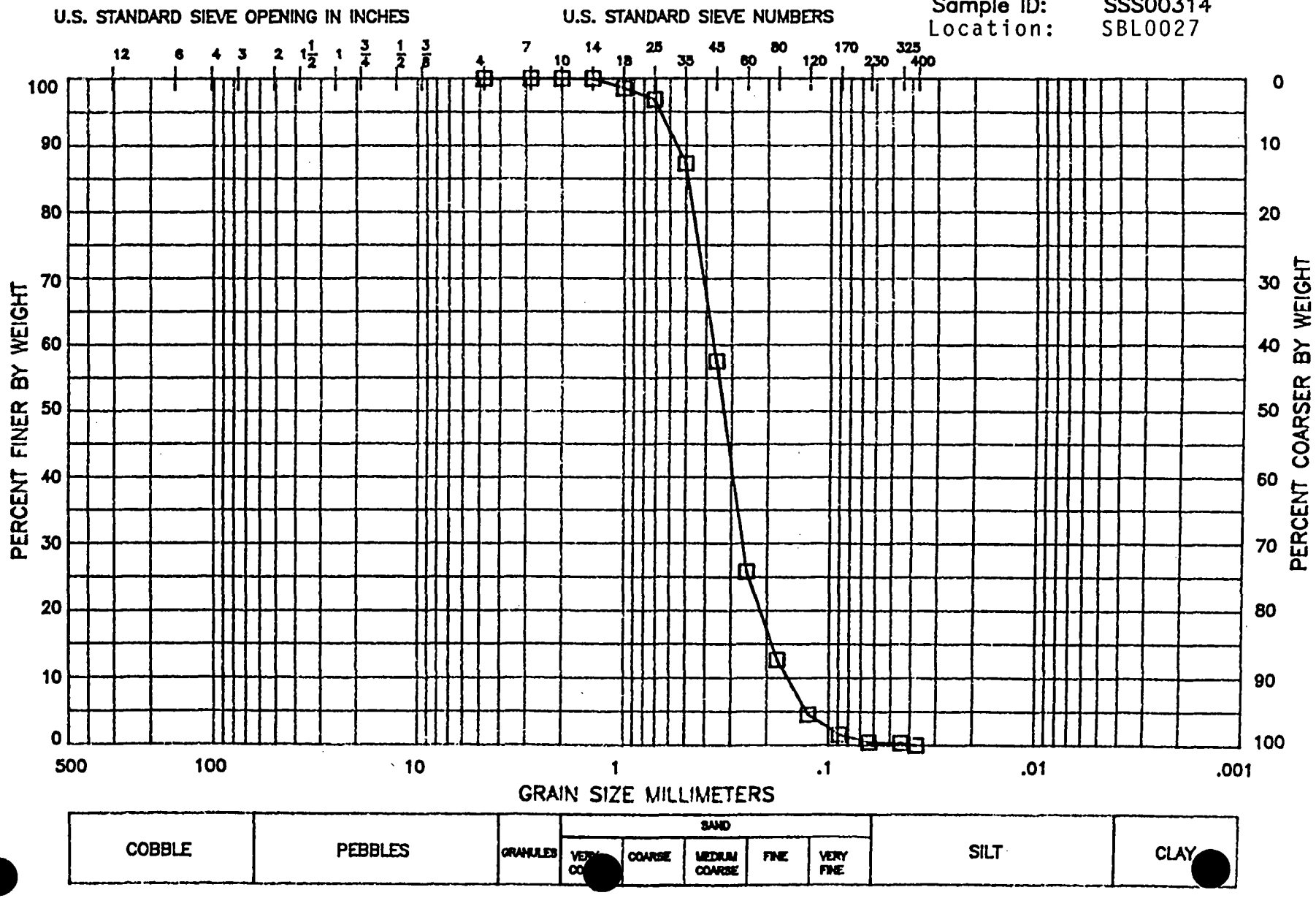
PTS Laboratories, Inc.

File No: 20004
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00314
Location: SBL0027

DRY SIEVE ANALYSIS



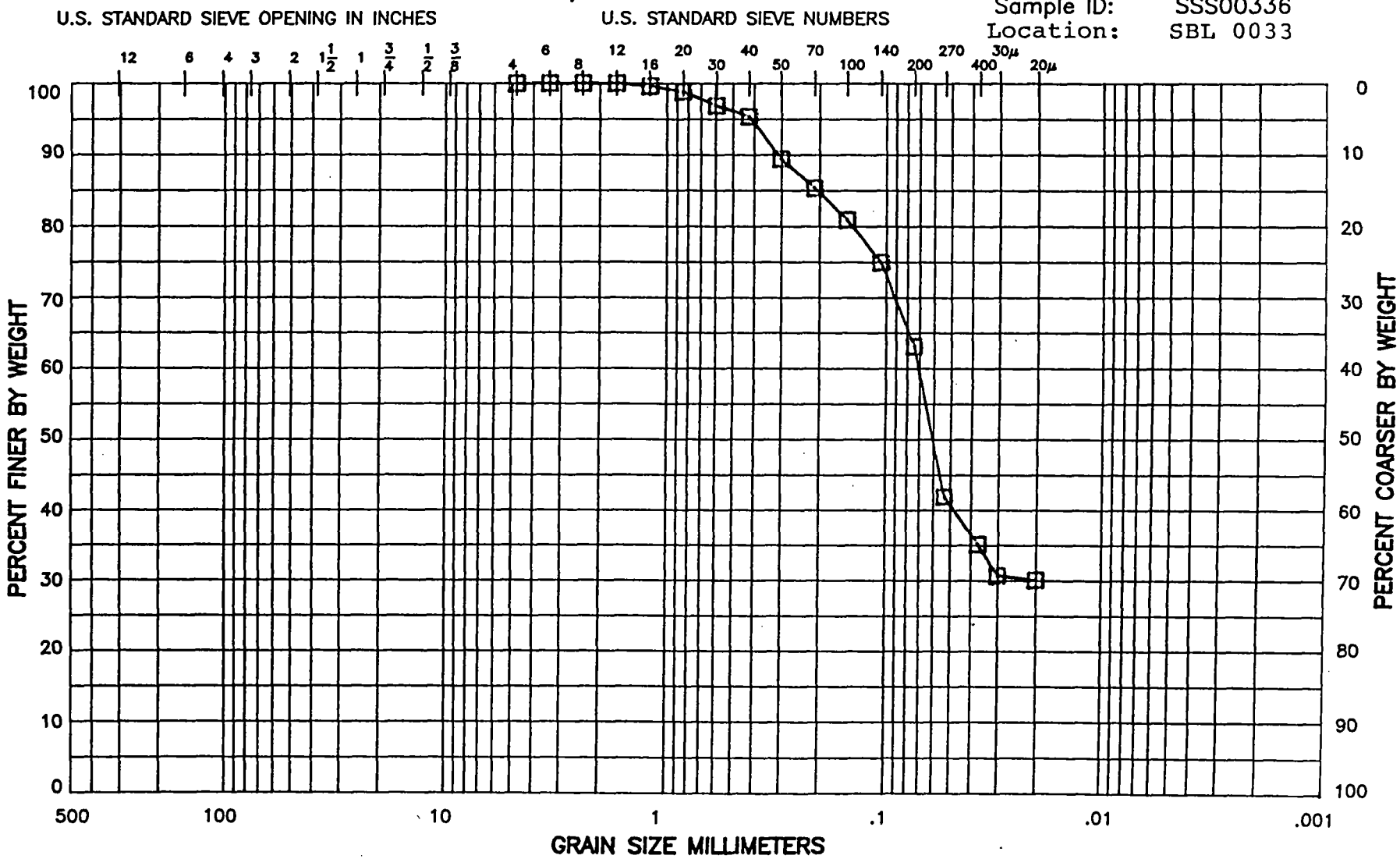
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00336
Location: SBL 0033

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

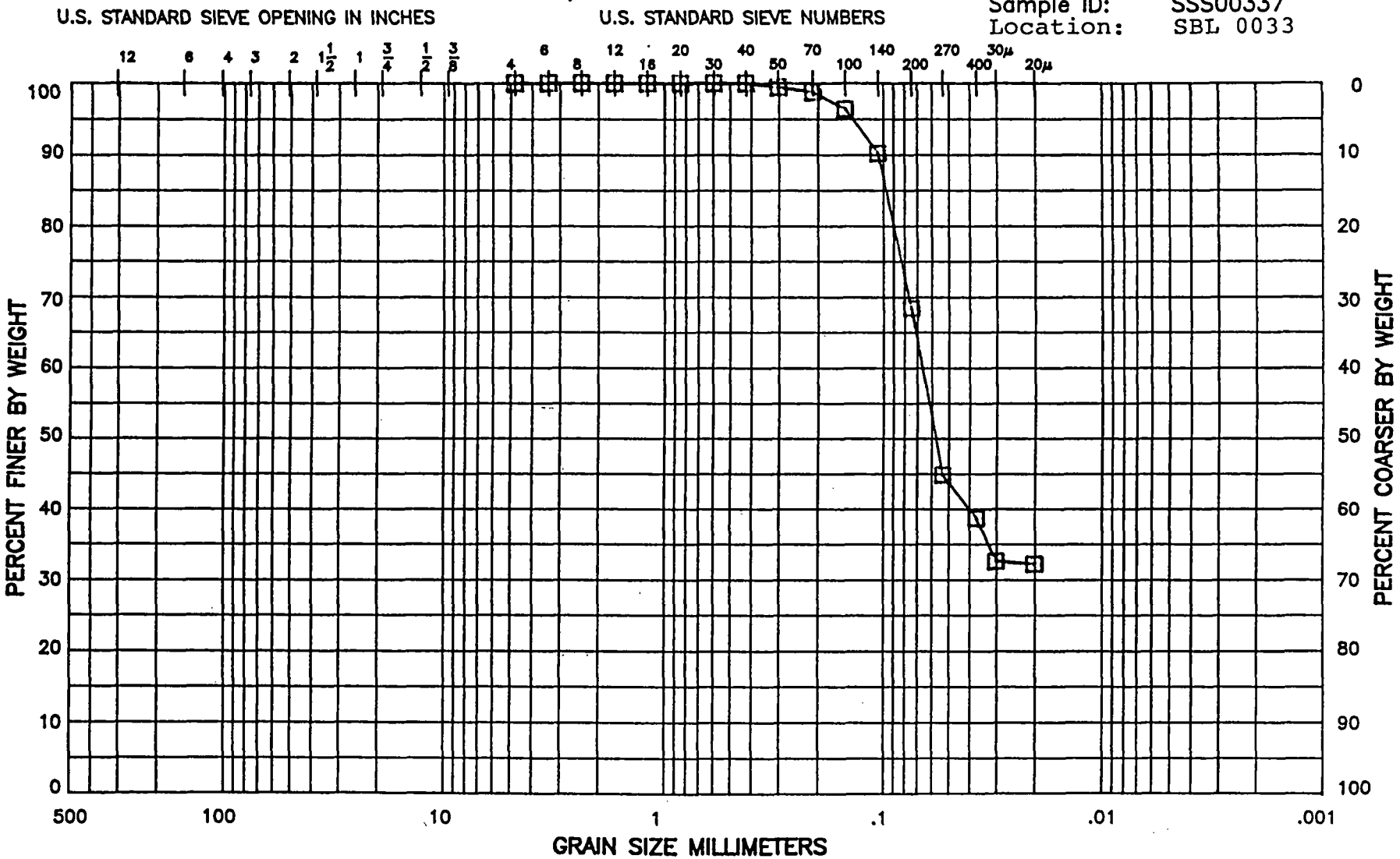
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00337
Location: SBL 0033

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

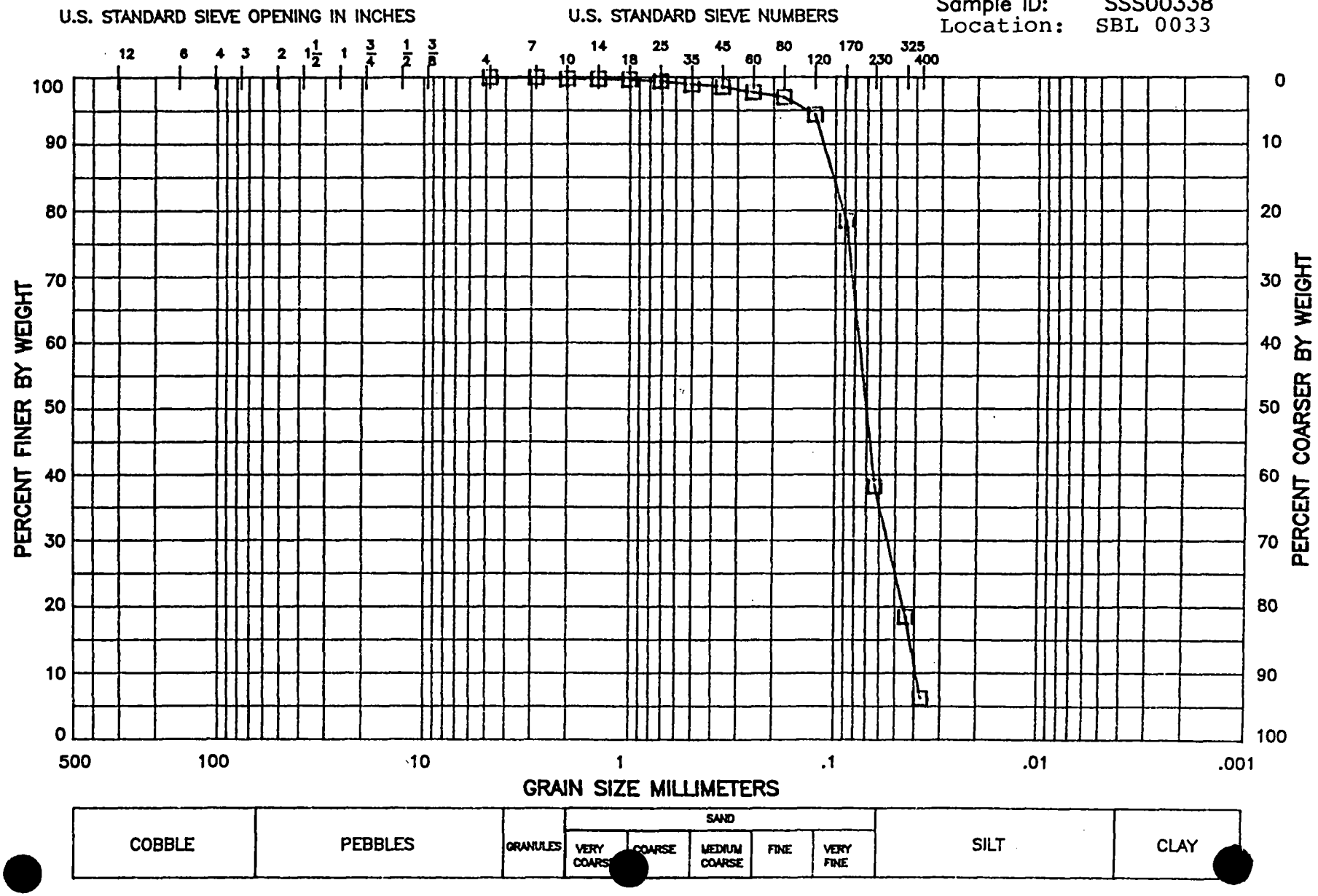
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00338
Location: SBL 0033

DRY SIEVE ANALYSIS



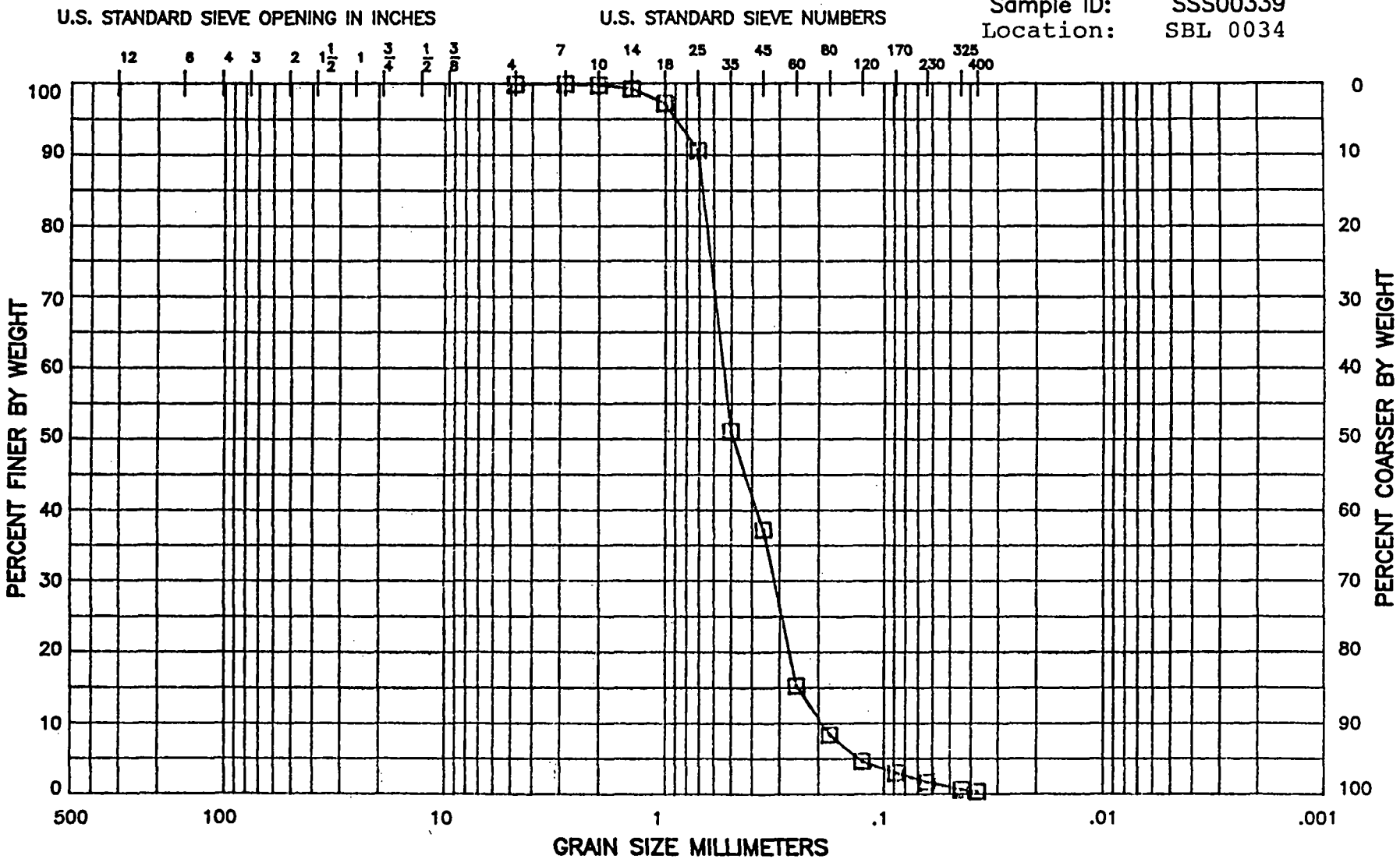
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00339
Location: SBL 0034

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

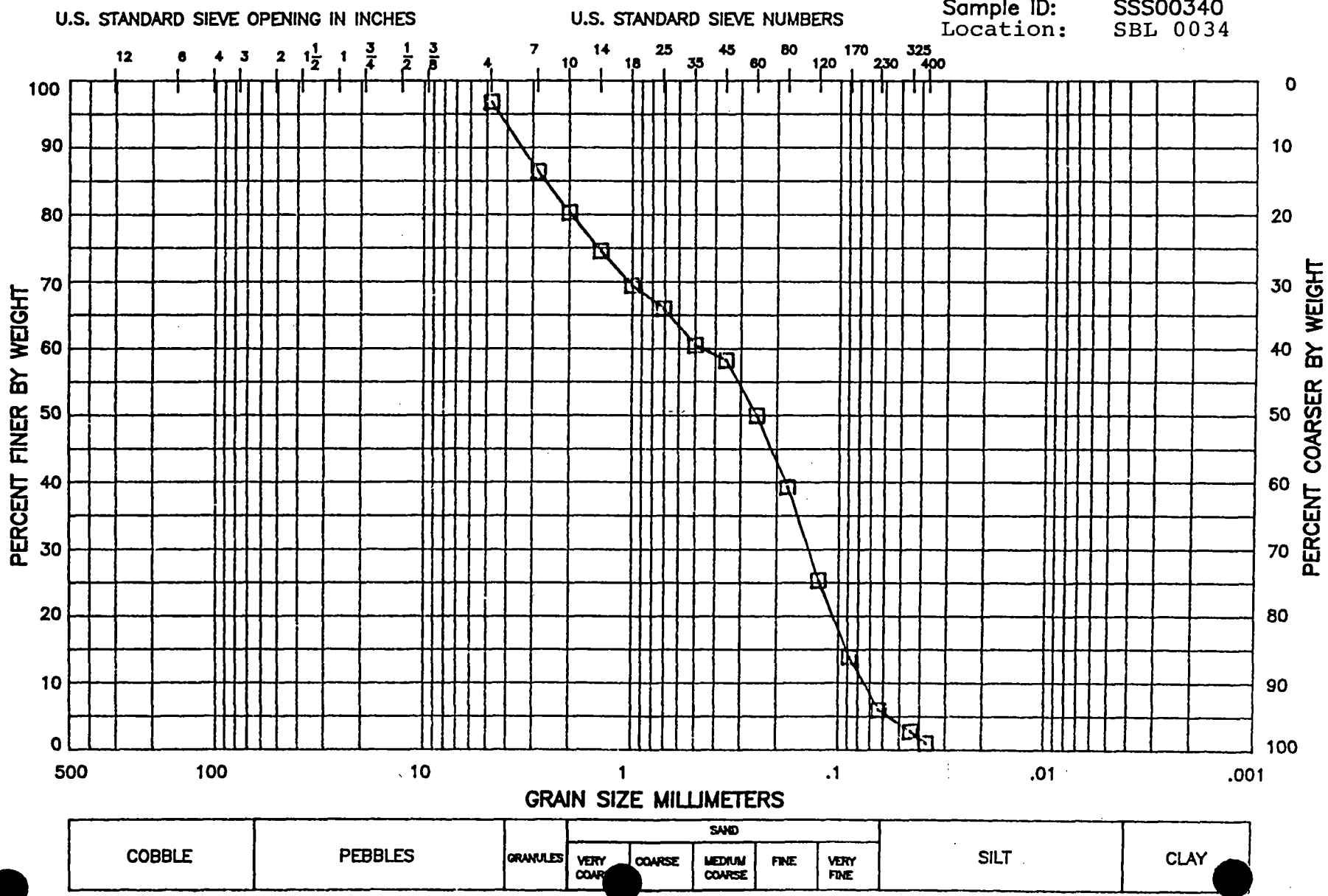
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00340
Location: SBL 0034

DRY SIEVE ANALYSIS



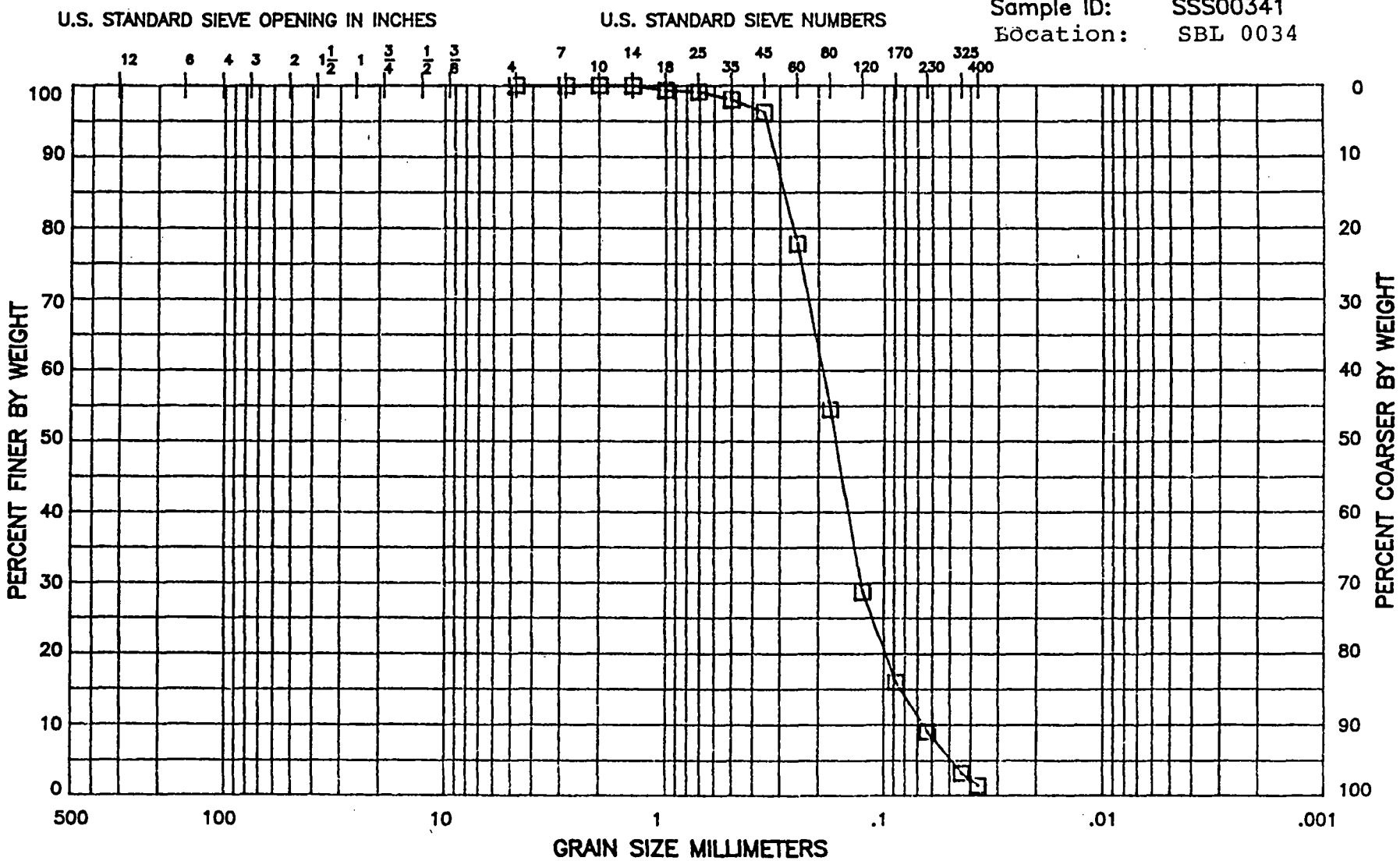
PTS Laboratories, Inc.

File No: 2000 4
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00341
Location: SBL 0034

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

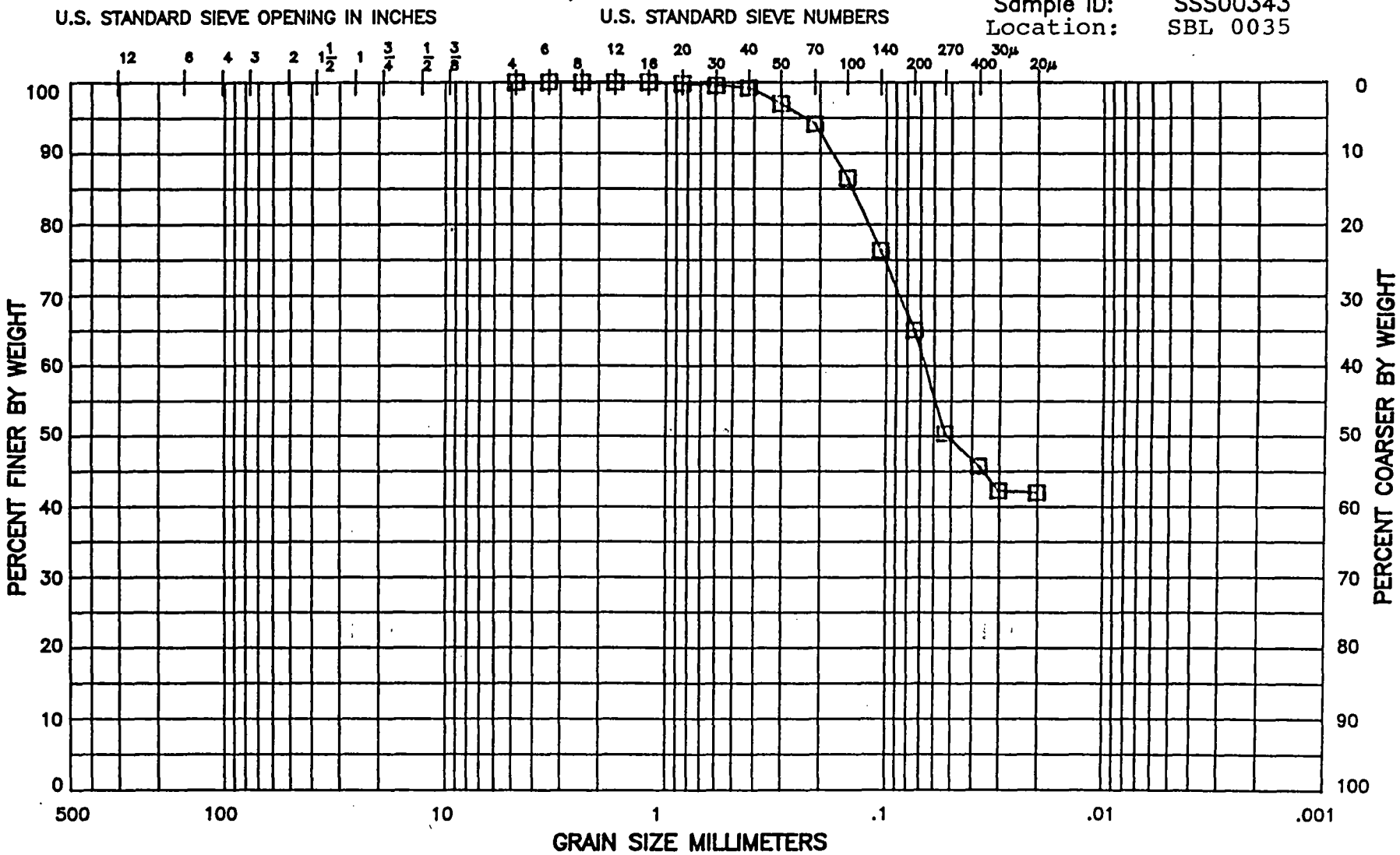
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1995

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00343
Location: SBL 0035

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

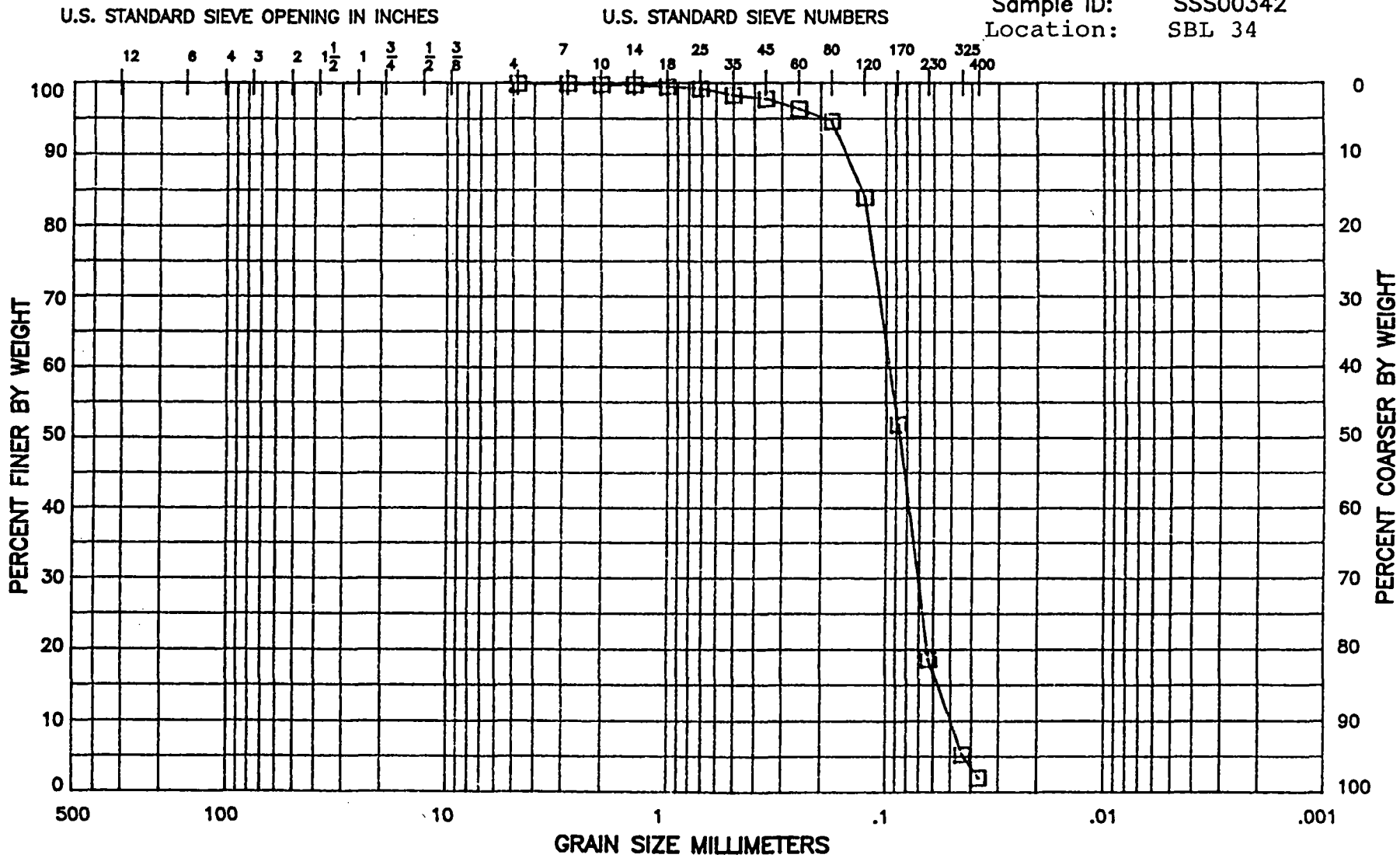
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00342
Location: SBL 34

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

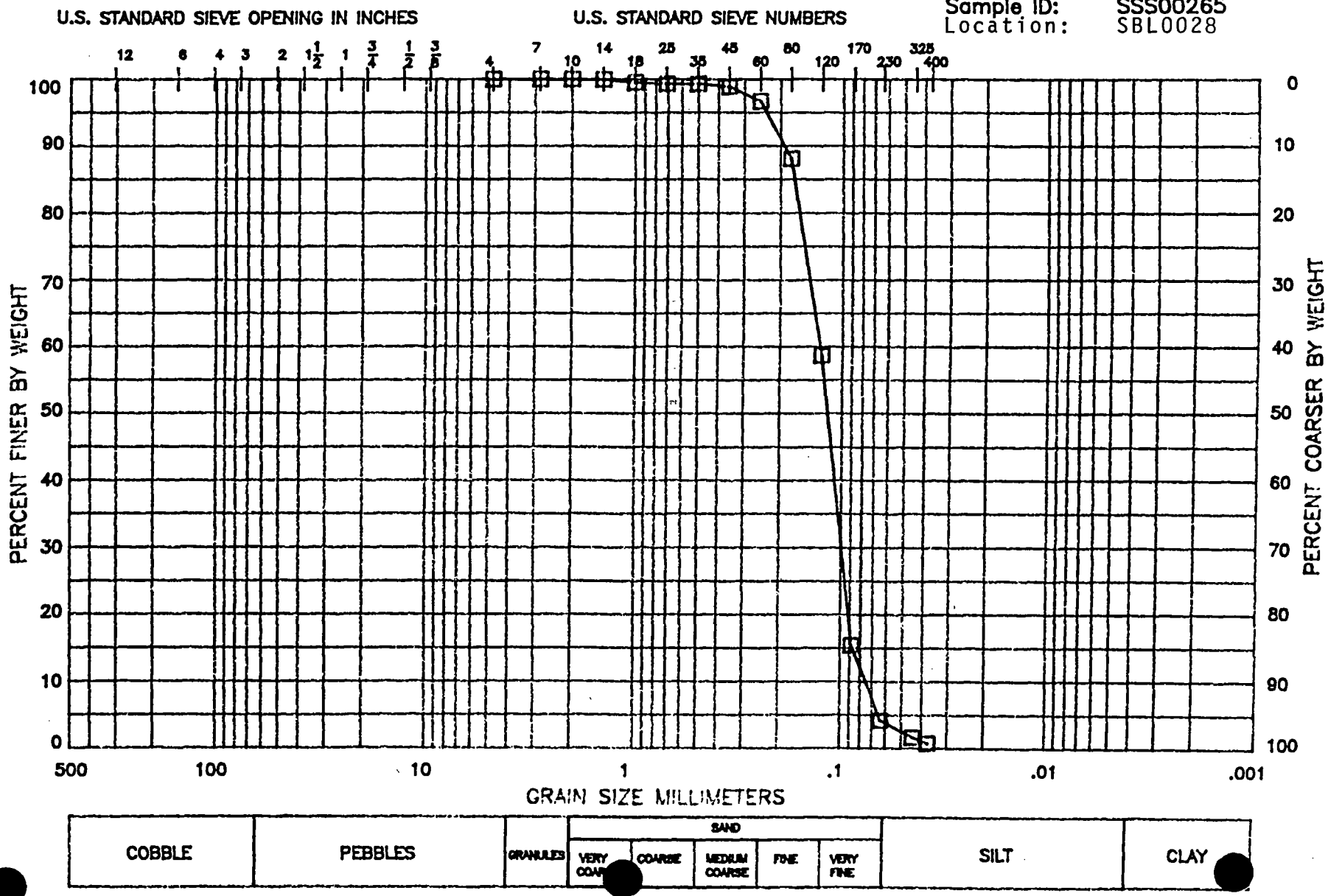
PTS Laboratories, Inc.

File No: 20004
Date: January 19, 1995

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00265
Location: SBL0028

DRY SIEVE ANALYSIS



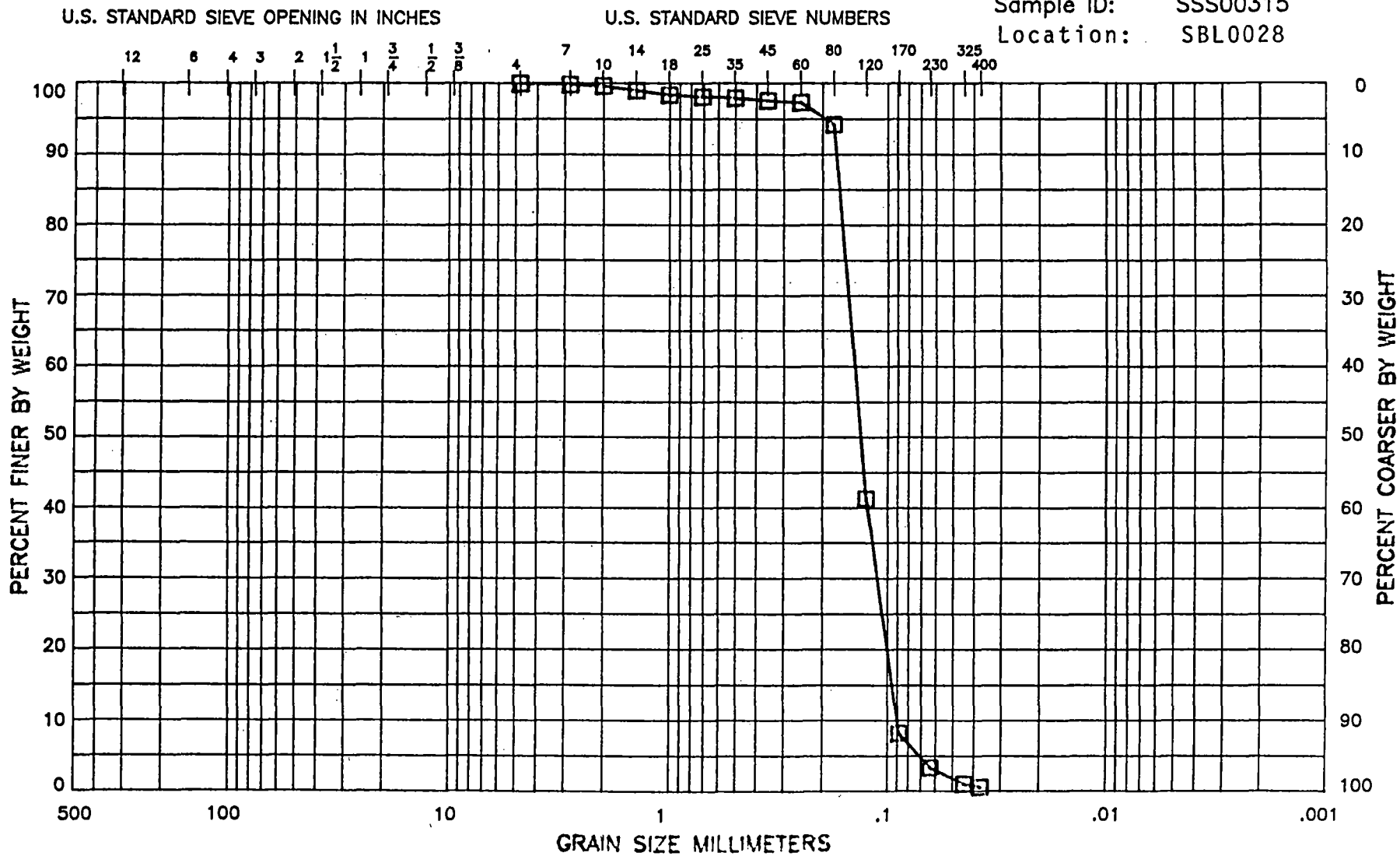
PTS Laboratories, Inc.

File No: 20004
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00315
Location: SBL0028

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

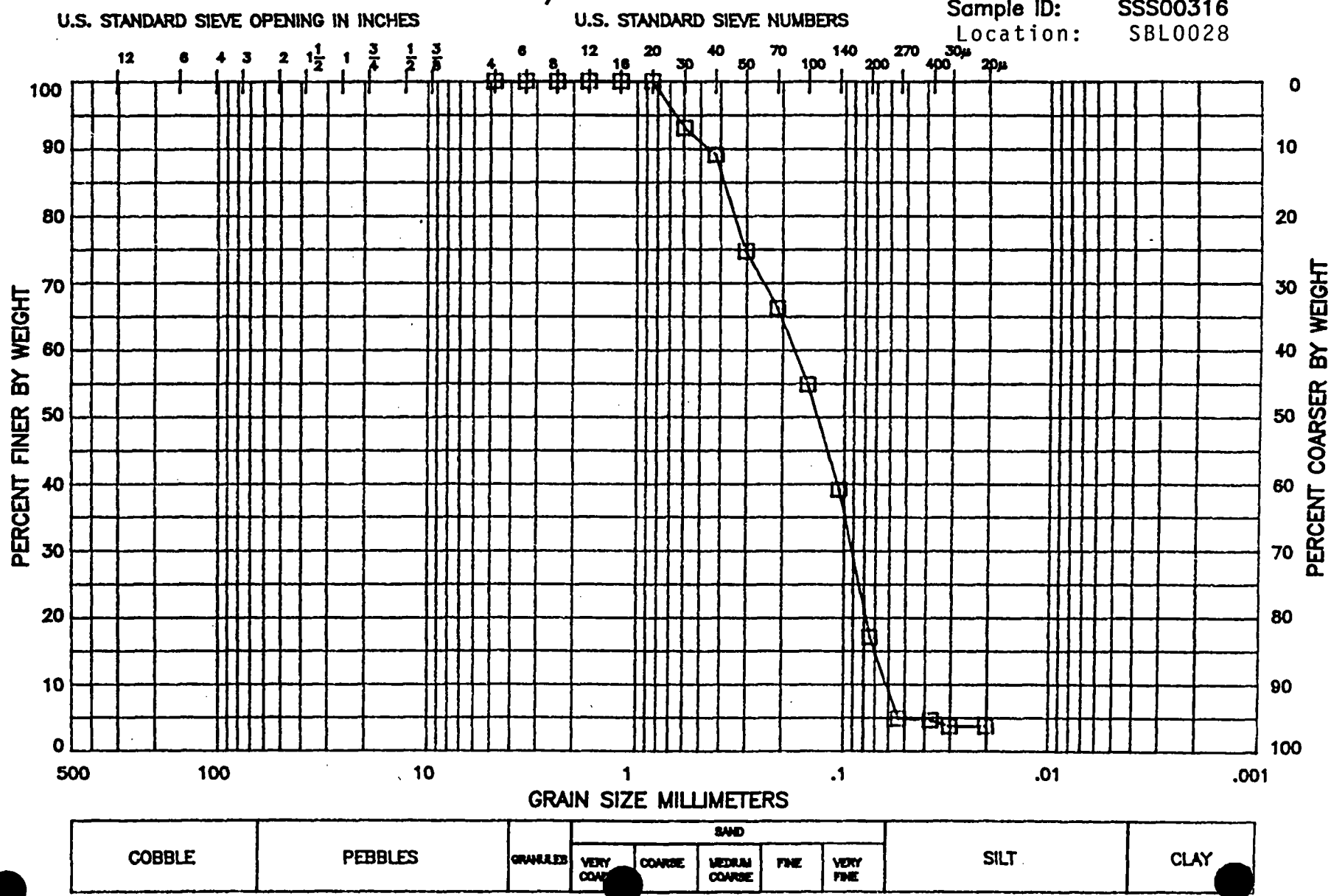
PTS Laboratories, Inc.

File No: 20004
Date: January 26, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00316
Location: SBL0028

WET/DRY SIEVE ANALYSIS



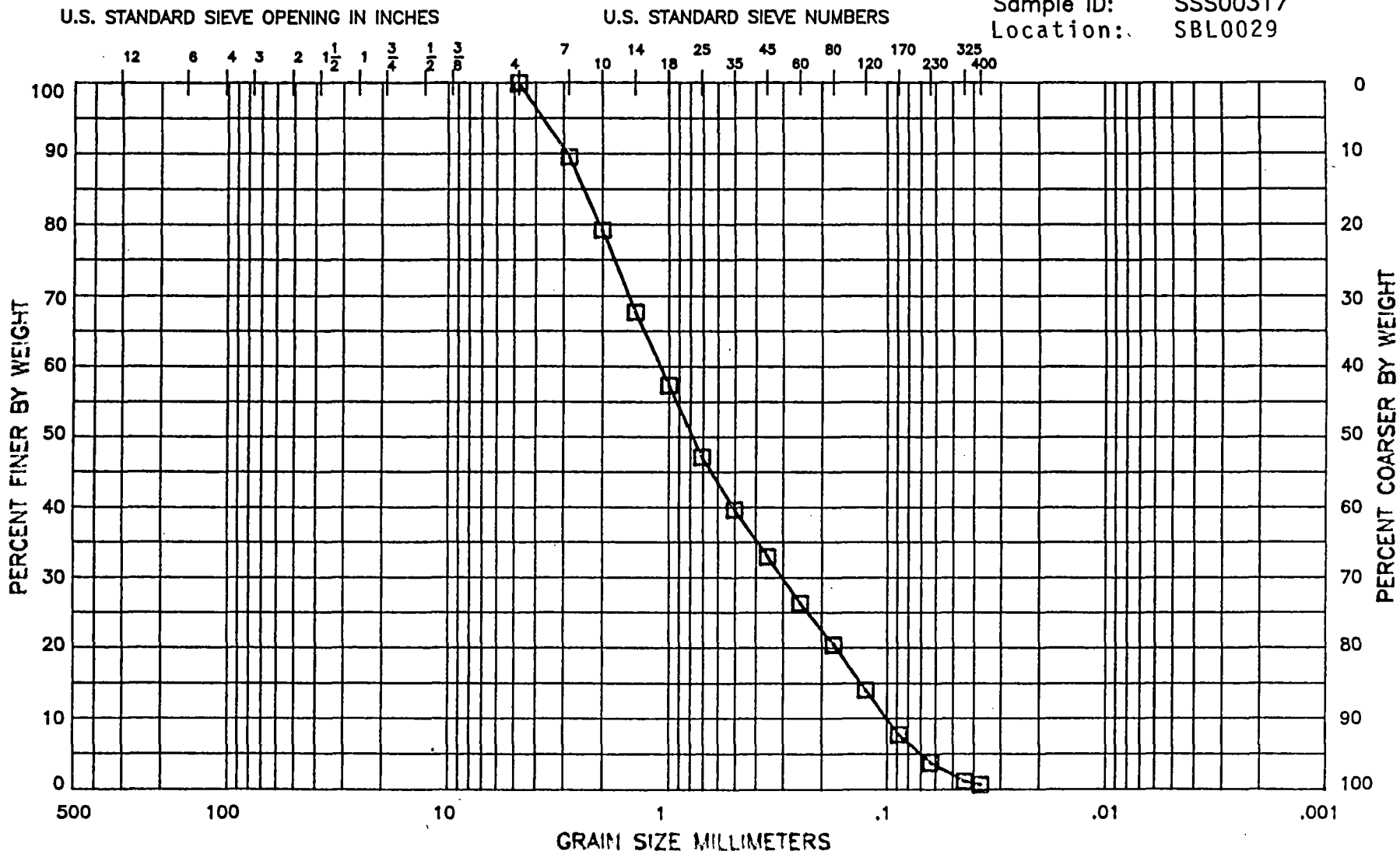
PTS Laboratories, Inc.

File No: 20004
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00317
Location: SBL0029

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

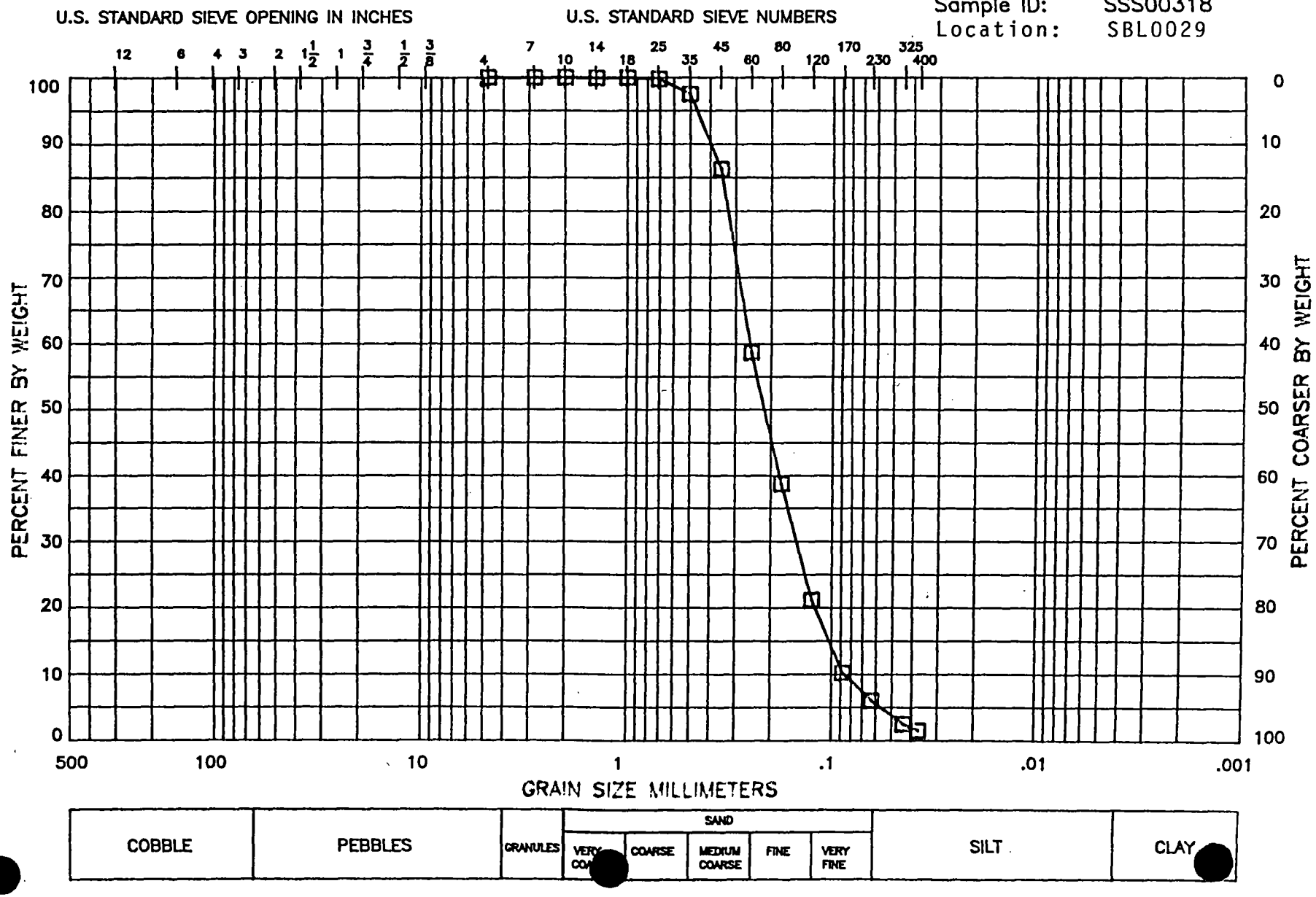
PTS Laboratories, Inc.

File No: 20004
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00318
Location: SBL0029

DRY SIEVE ANALYSIS



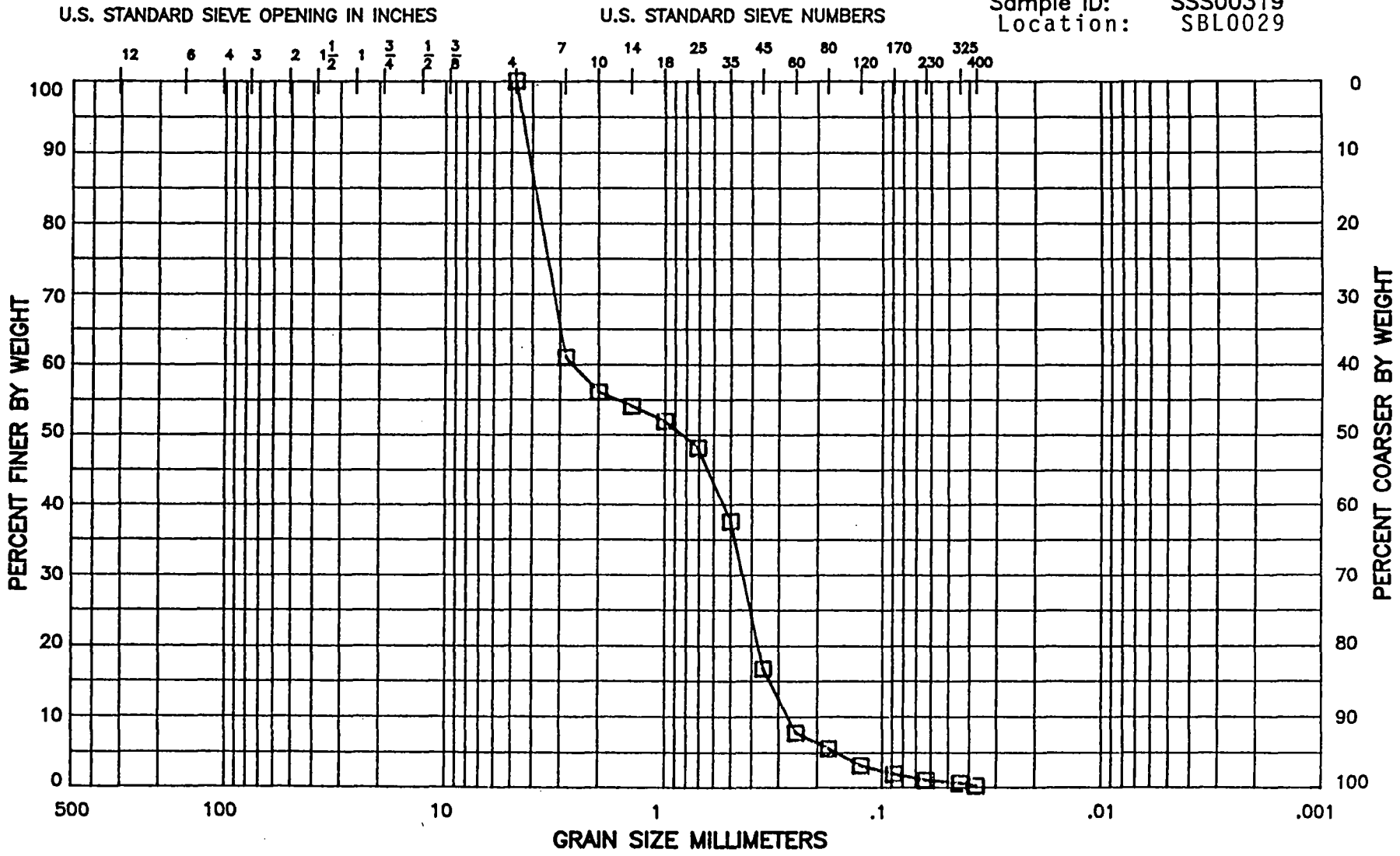
PTS Laboratories, Inc.

File No: 20004
Date: January 19, 1993

Client: Dames & Moore

Project Name: Del Amo RI
Project No.: 00216-382-139
State: California
Sample ID: SSS00319
Location: SBL0029

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

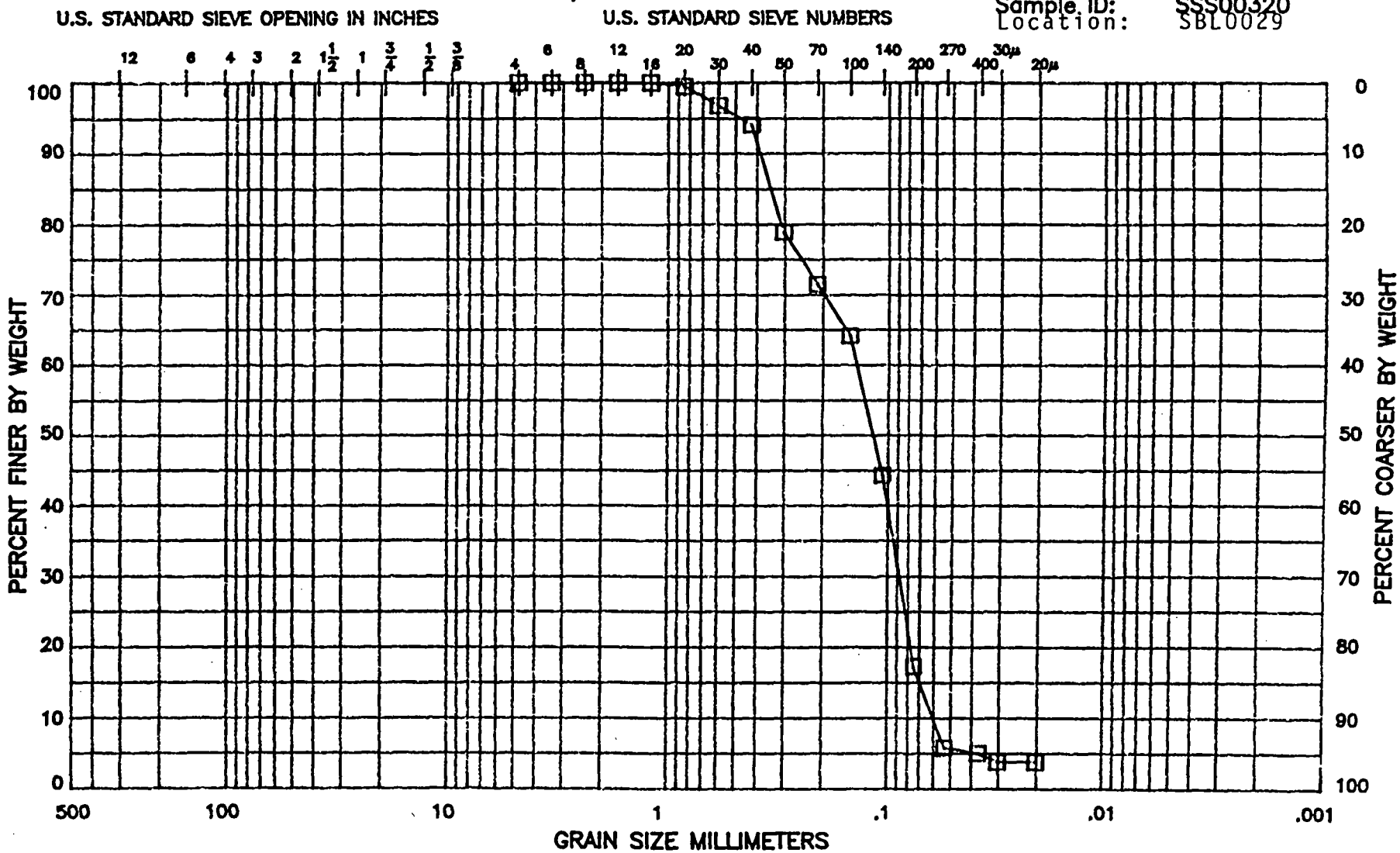
PTS Laboratories, Inc.

File No: 20004
Date: January 26, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00320
Location: SBL0029

WET/DRY SIEVE ANALYSIS



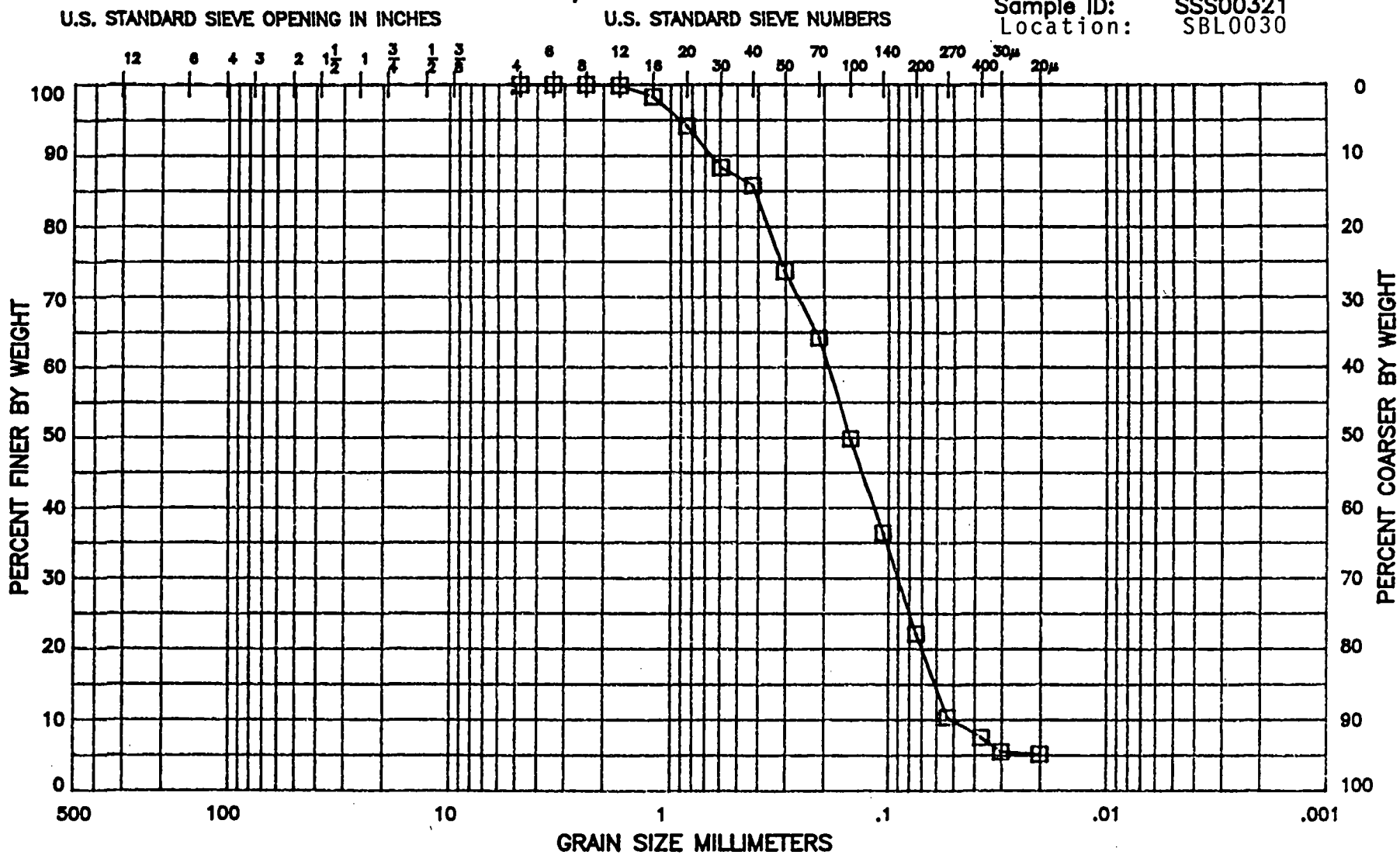
PTS Laboratories, Inc.

File No: 20004
Date: January 26, 1995

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00321
Location: SBL0030

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

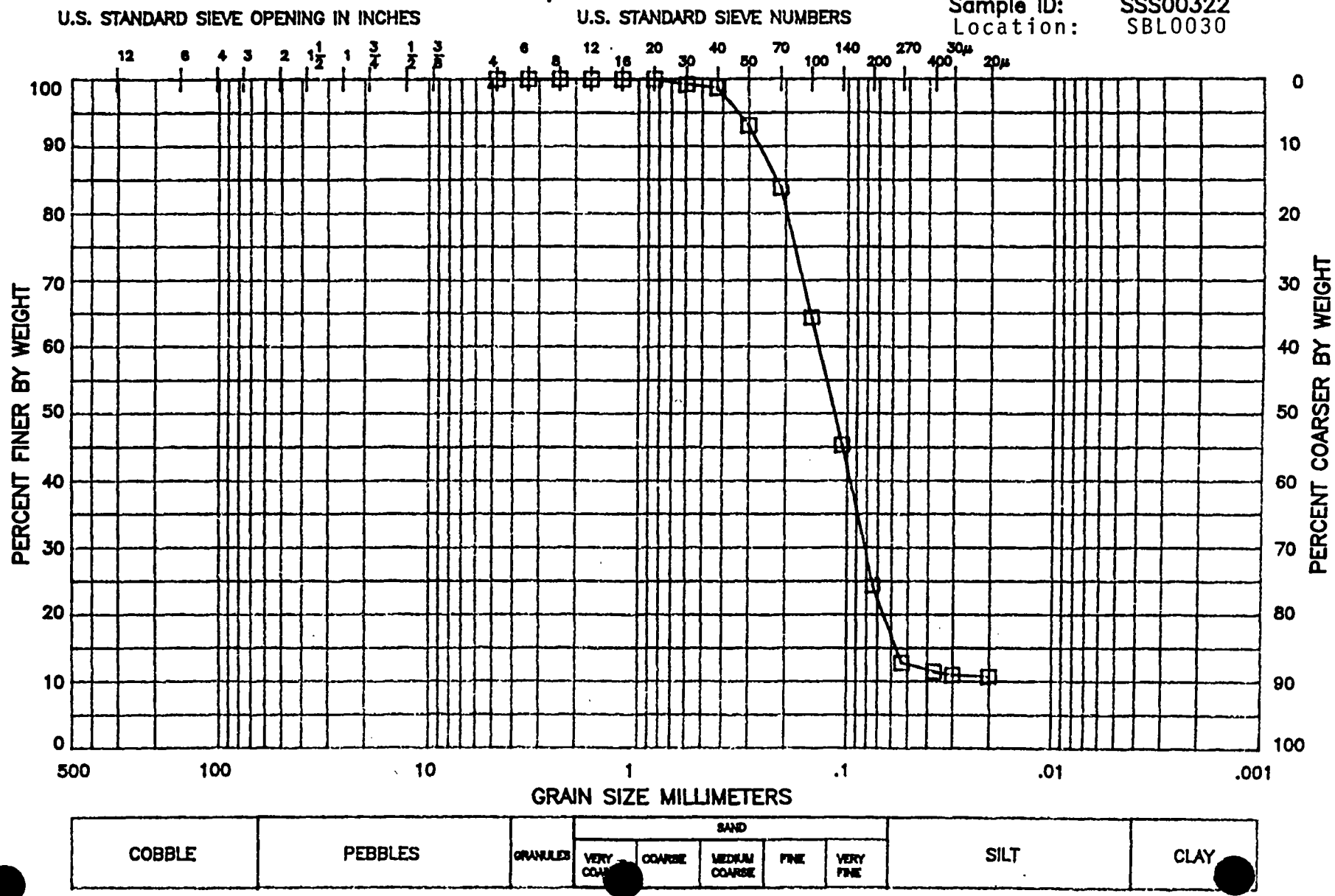
PTS Laboratories, Inc.

File No: 20004
Date: January 26, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00322
Location: SBL0030

WET/DRY SIEVE ANALYSIS



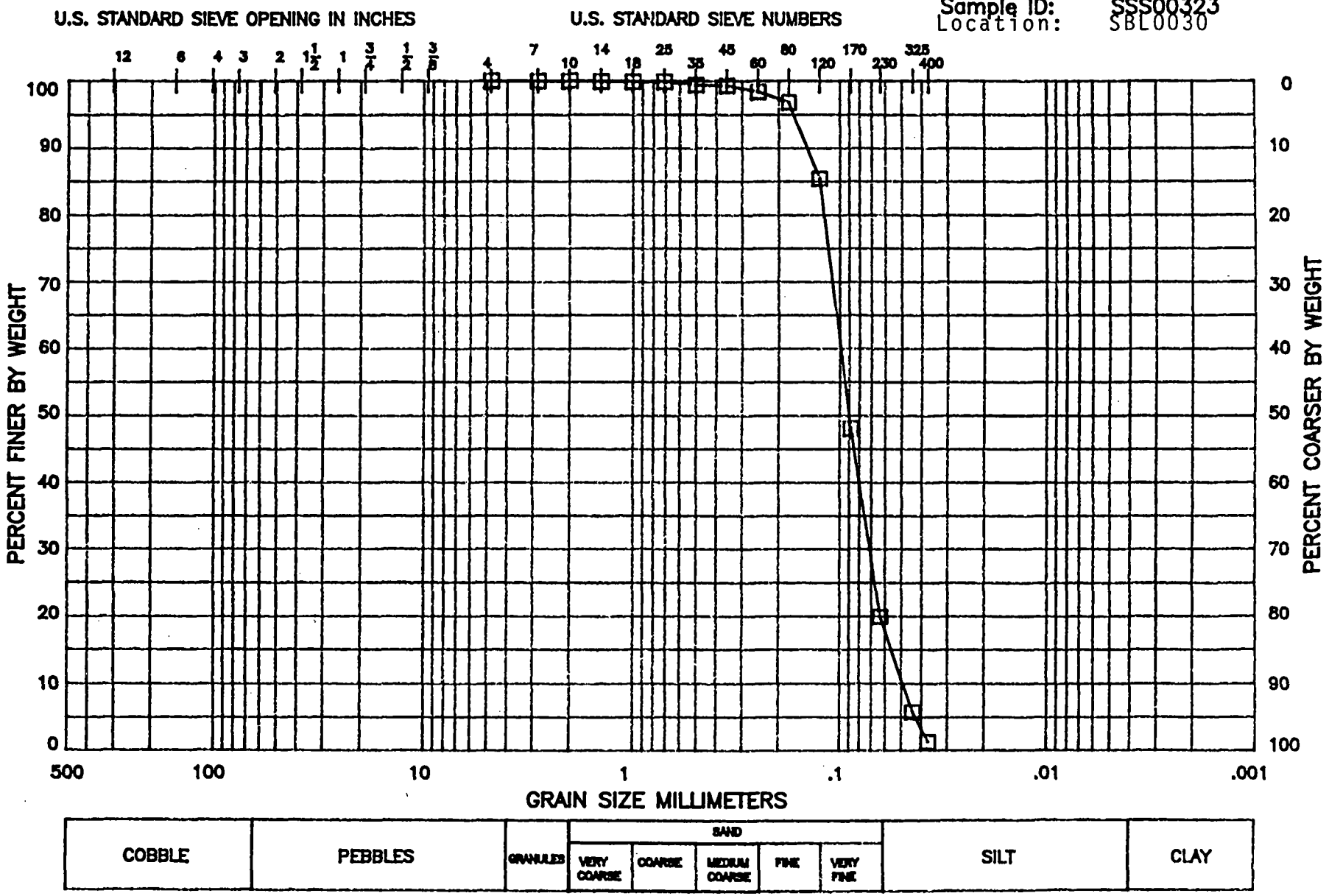
PTS Laboratories, Inc.

File No: 2000
Date: January 26, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00323
Location: SBL0030

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

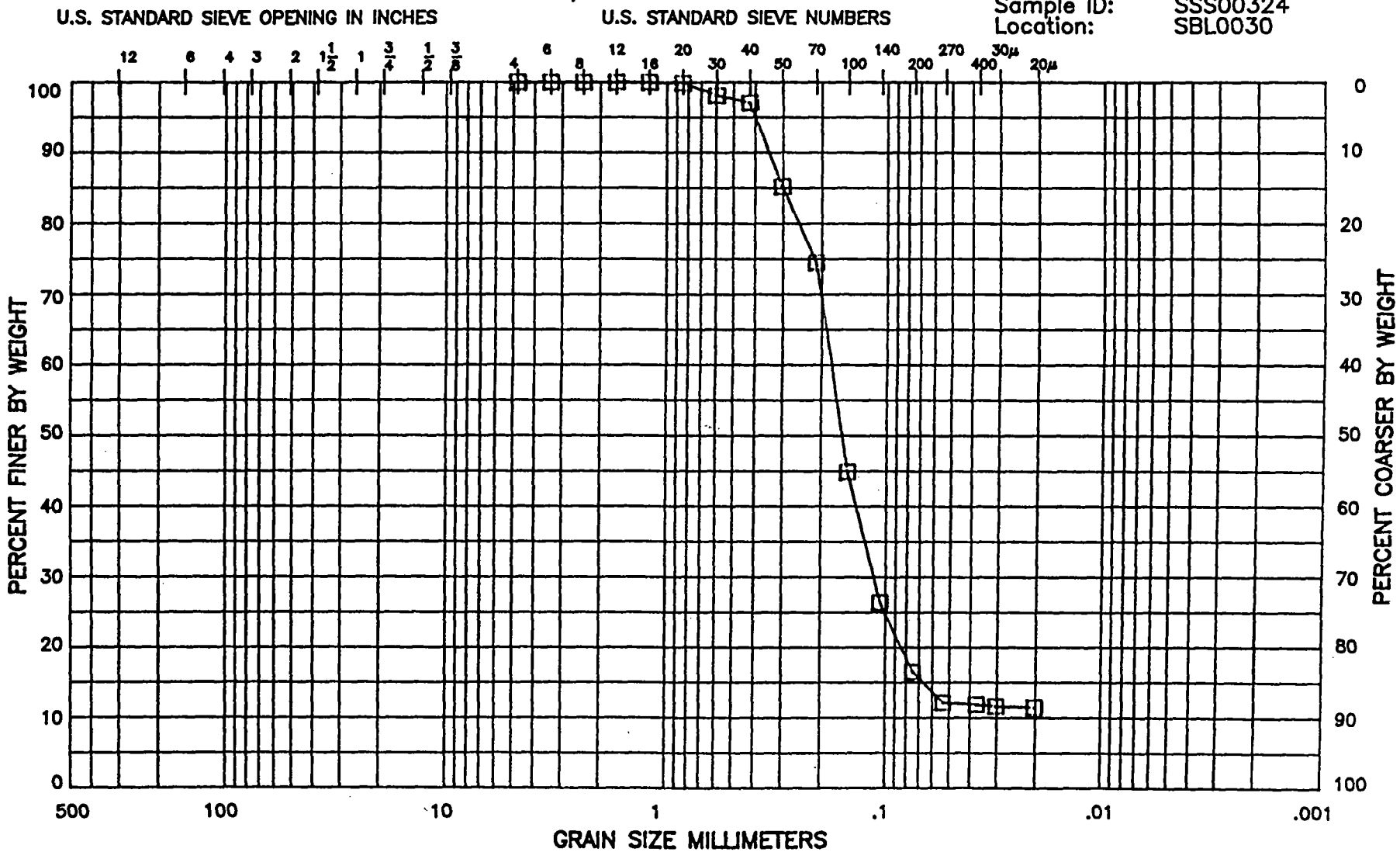
PNP Laboratories, Inc.

File No: 20004
Date: February 16, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00324
Location: SBL0030

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

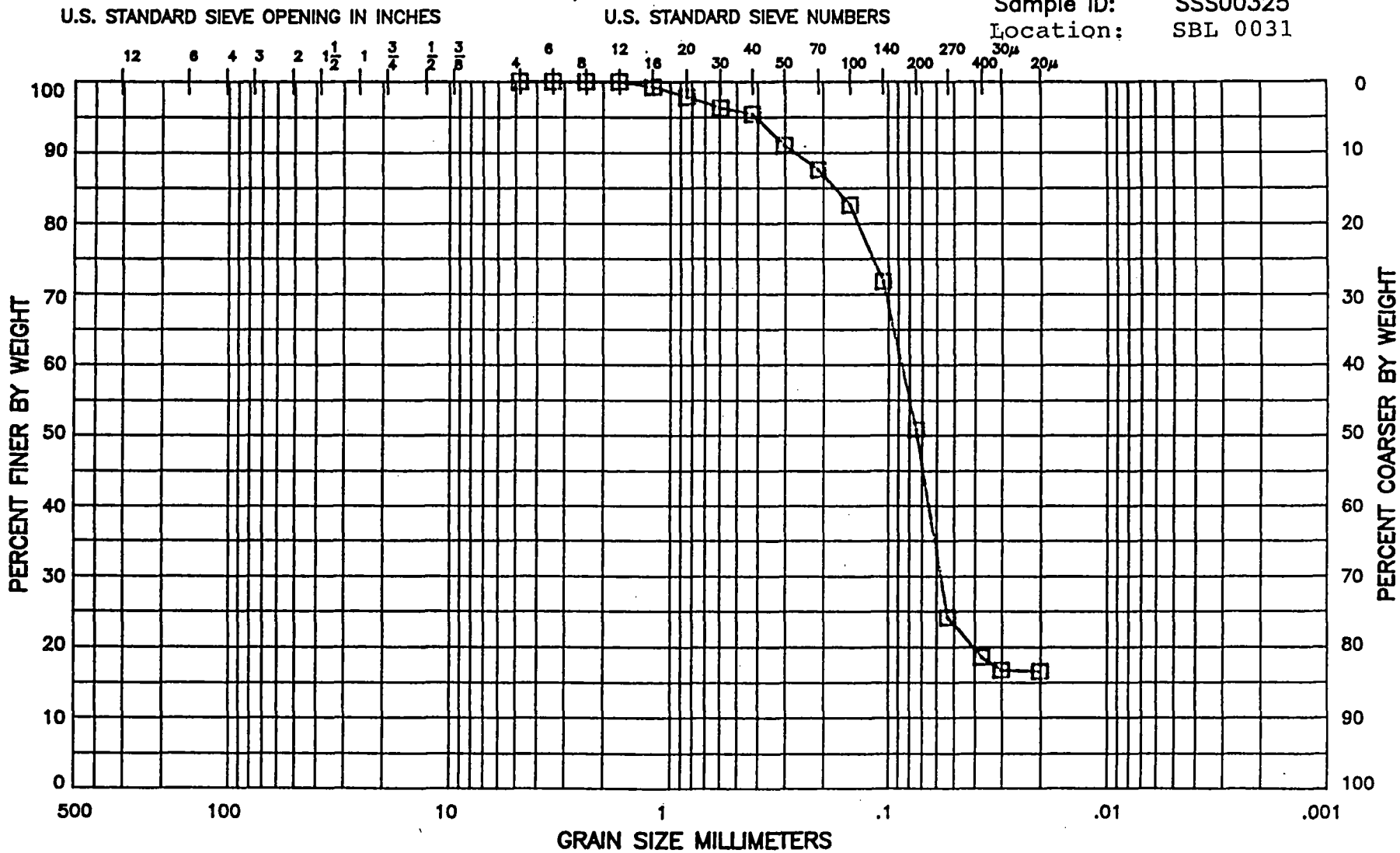
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00325
Location: SBL 0031

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

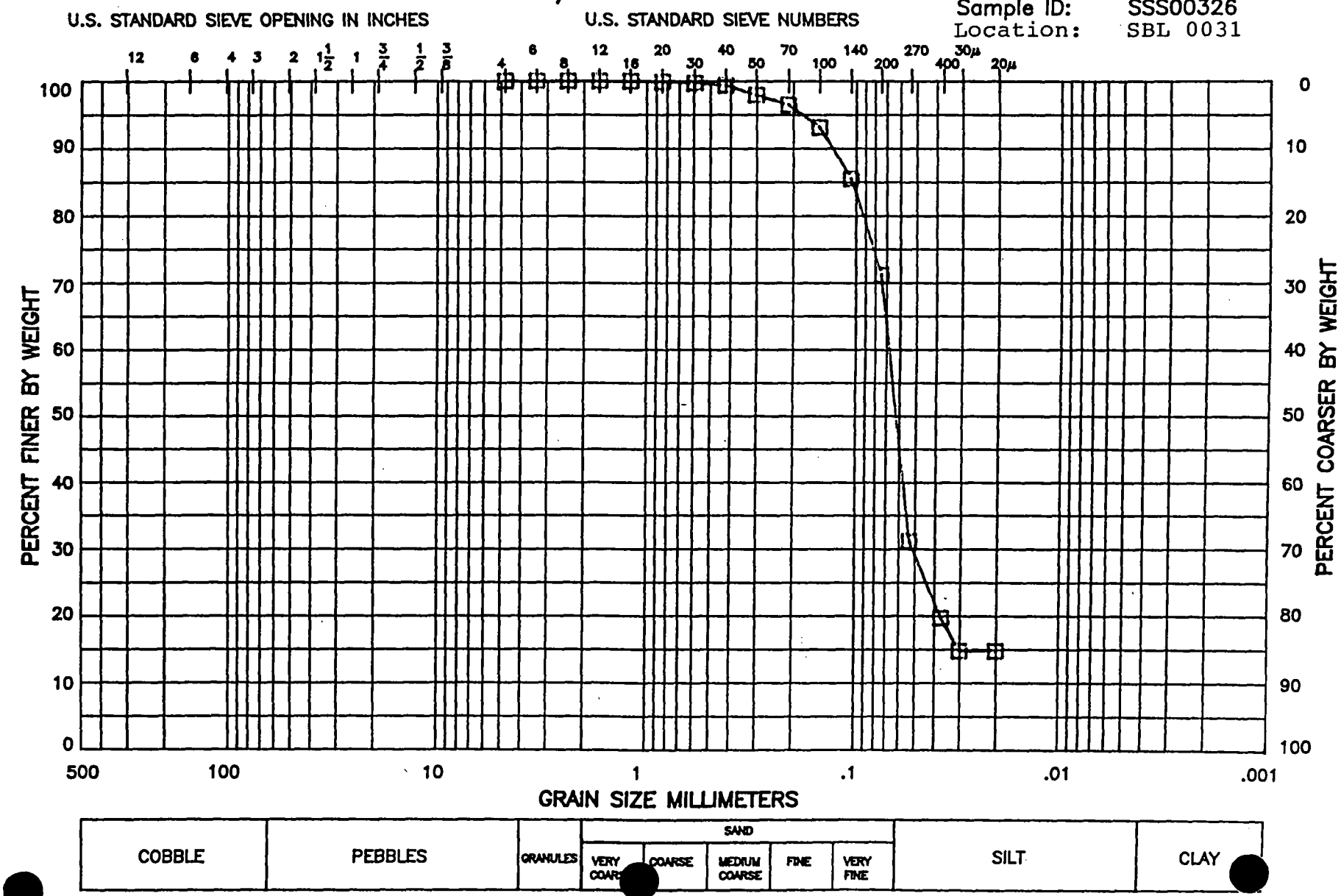
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00326
Location: SBL 0031

WET/DRY SIEVE ANALYSIS



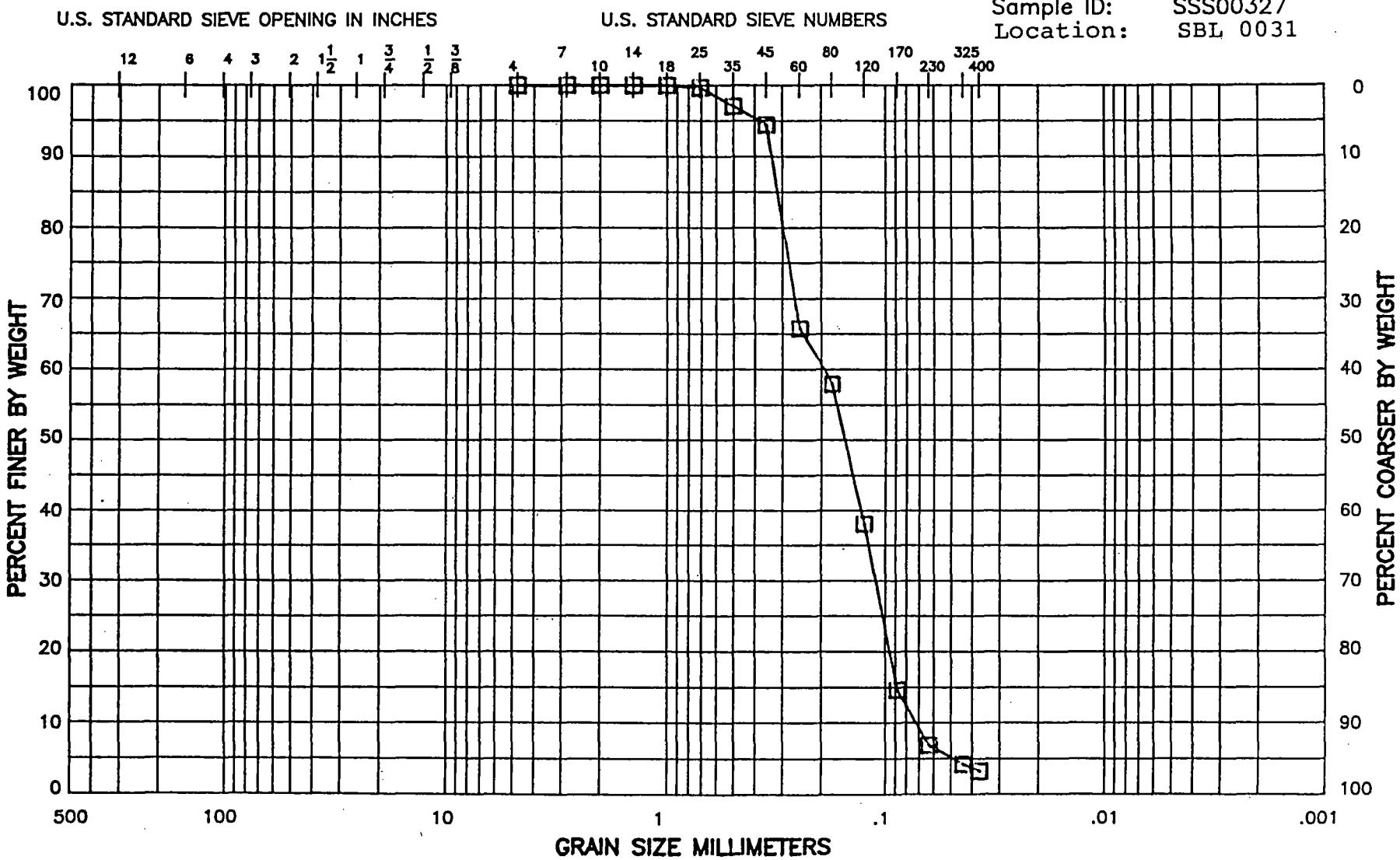
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00327
Location: SBL 0031

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

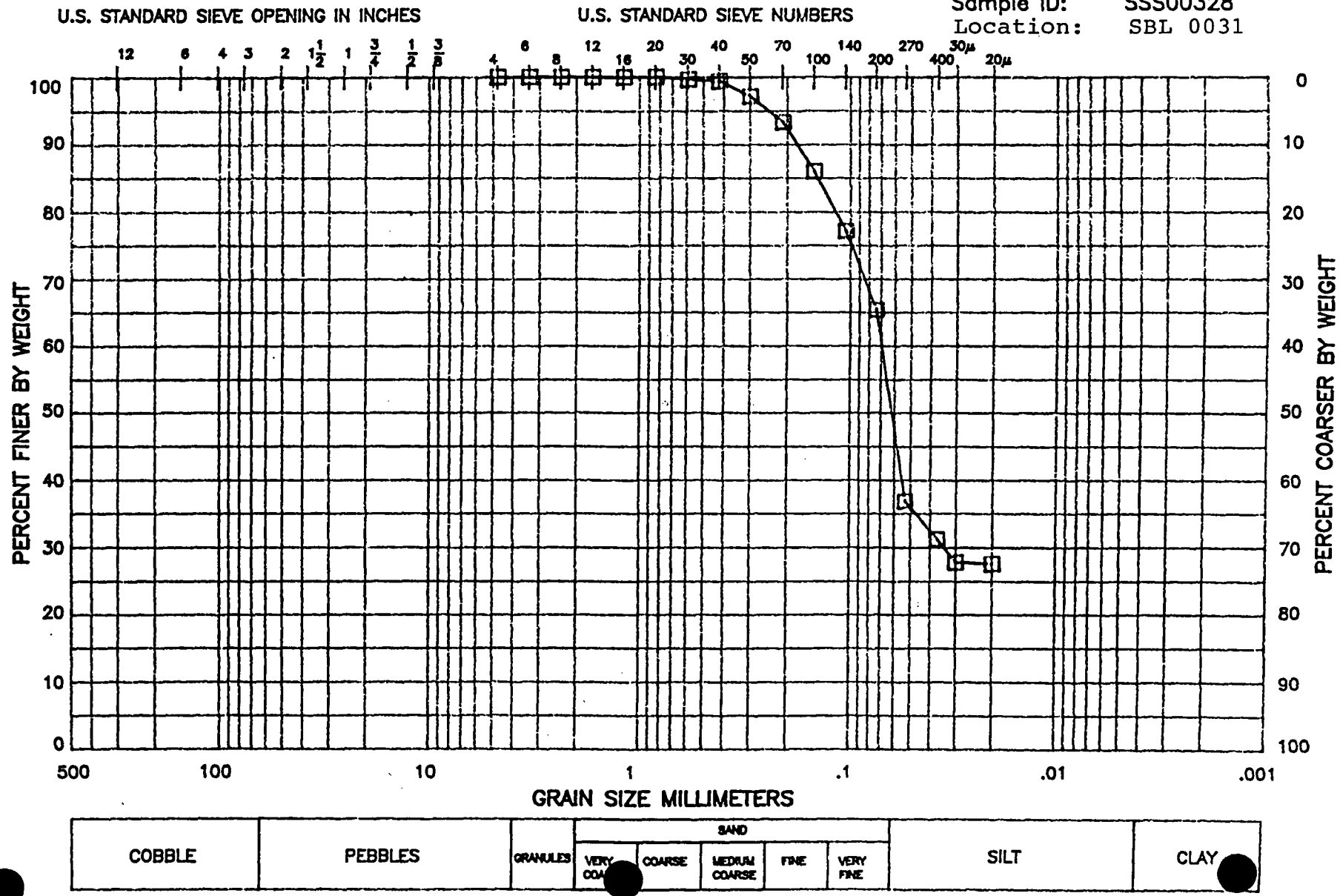
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00328
Location: SBL 0031

WET/DRY SIEVE ANALYSIS



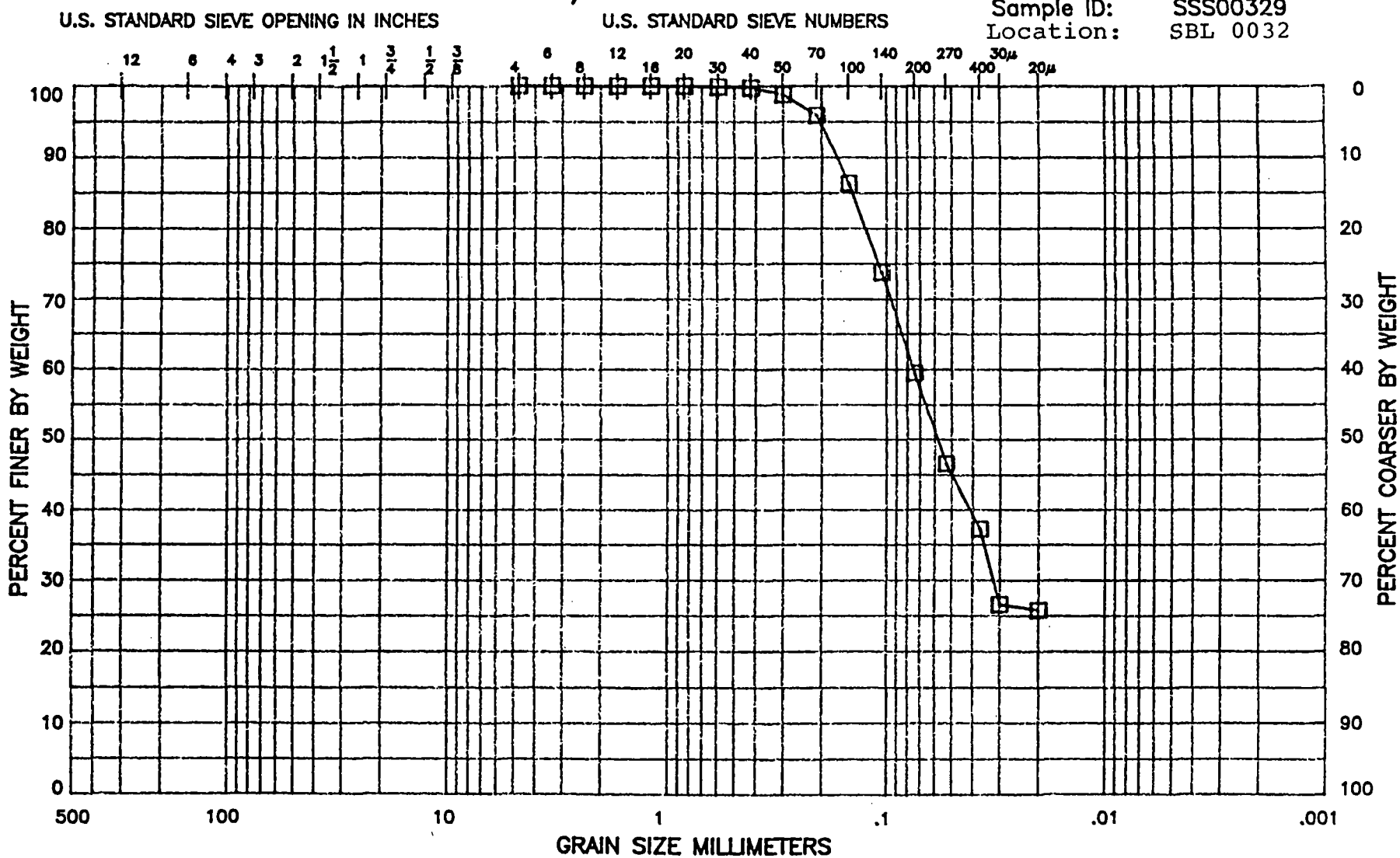
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00329
Location: SBL 0032

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

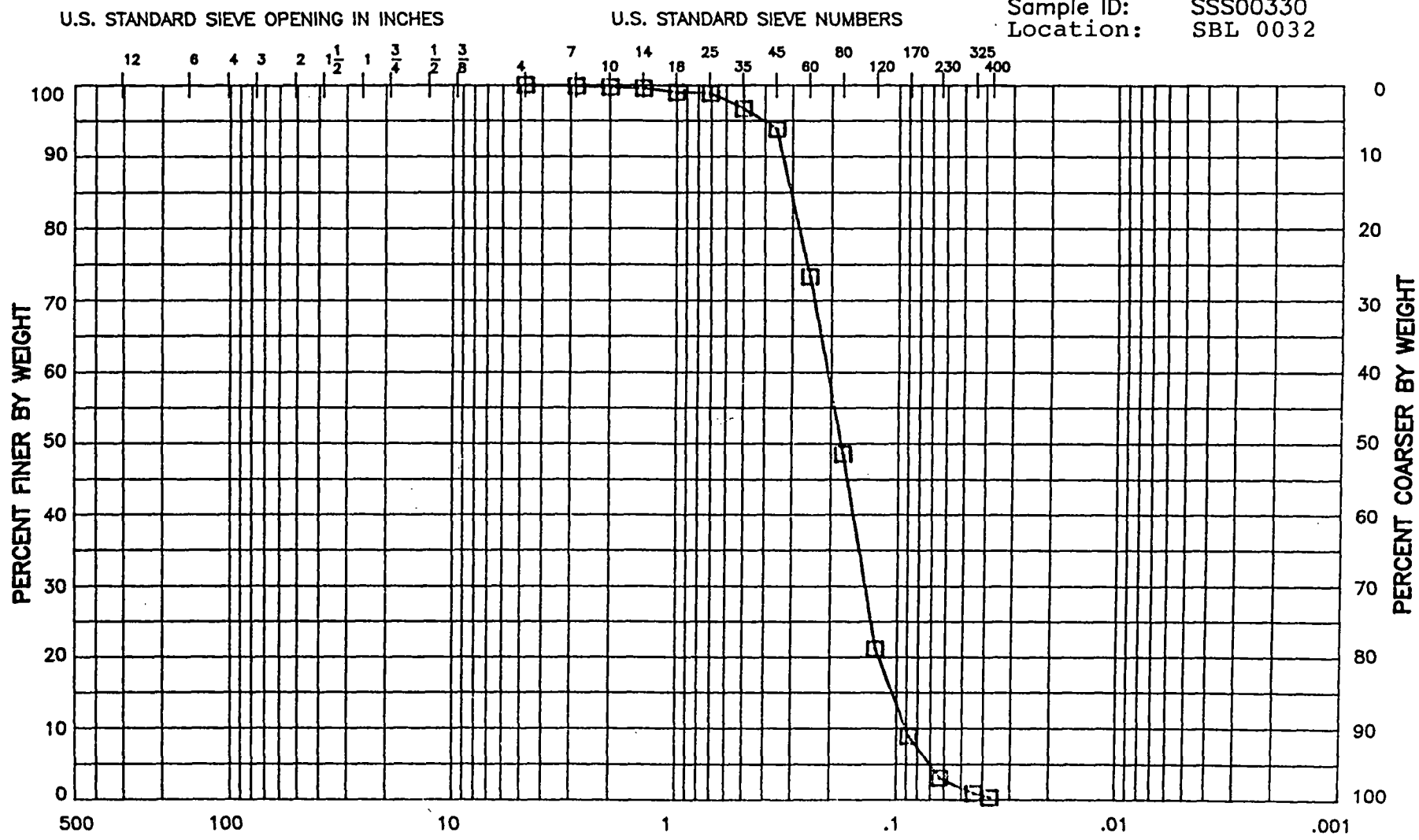
PTS Laboratories, Inc.

File No: 2000 4
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00330
Location: SBL 0032

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

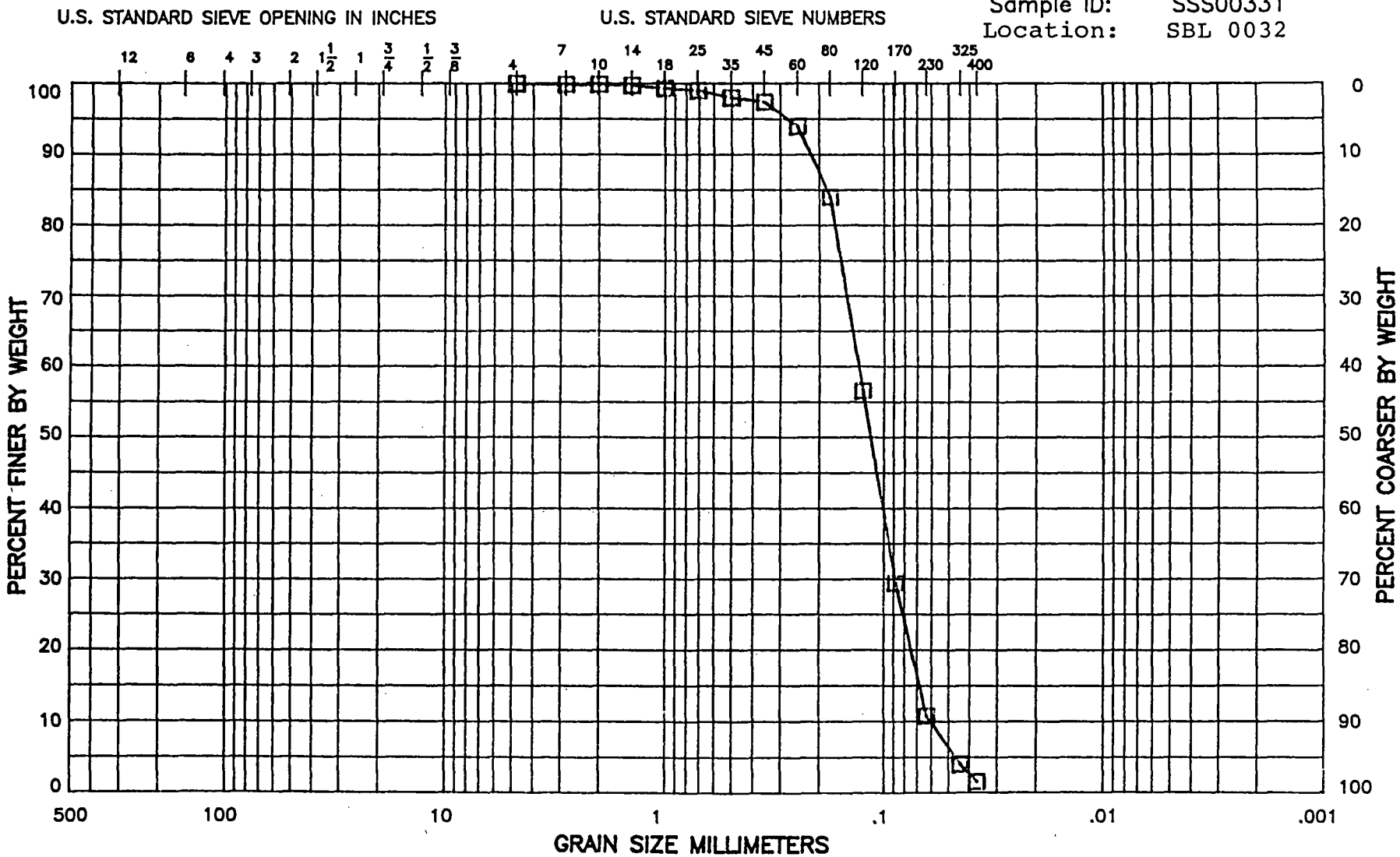
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00331
Location: SBL 0032

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

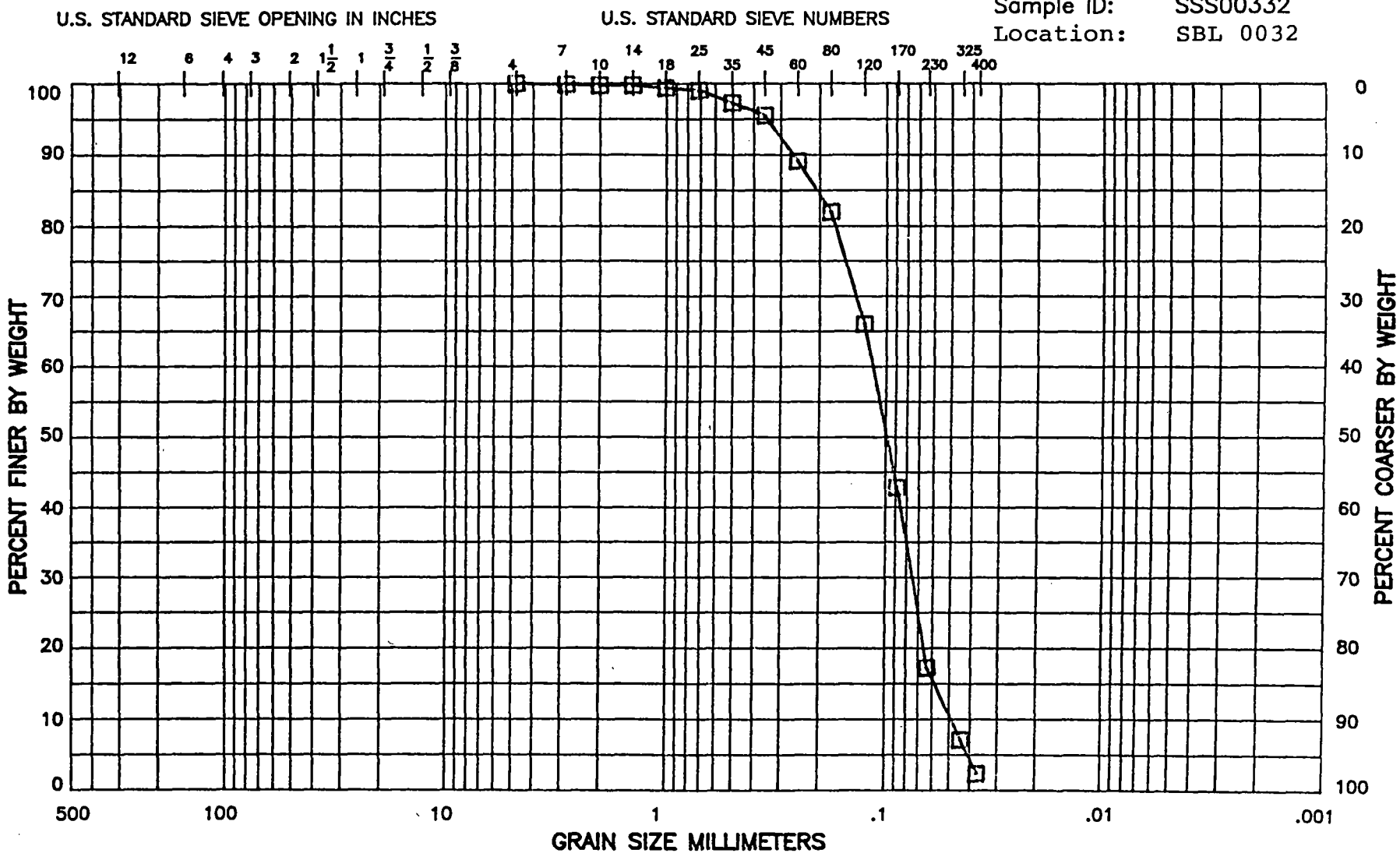
PTS Laboratories, Inc.

File No: 2000 4
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00332
Location: SBL 0032

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

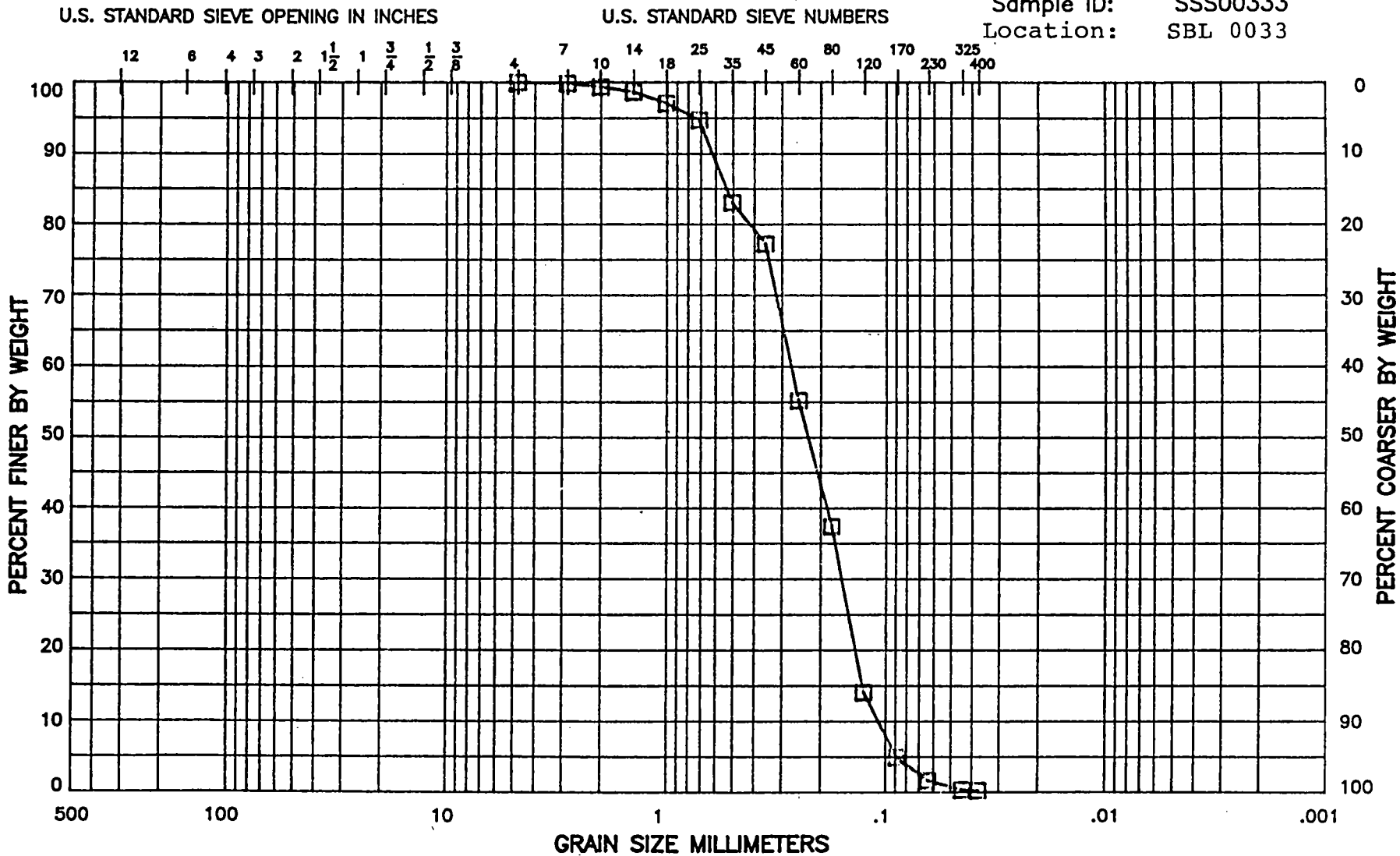
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00333
Location: SBL 0033

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

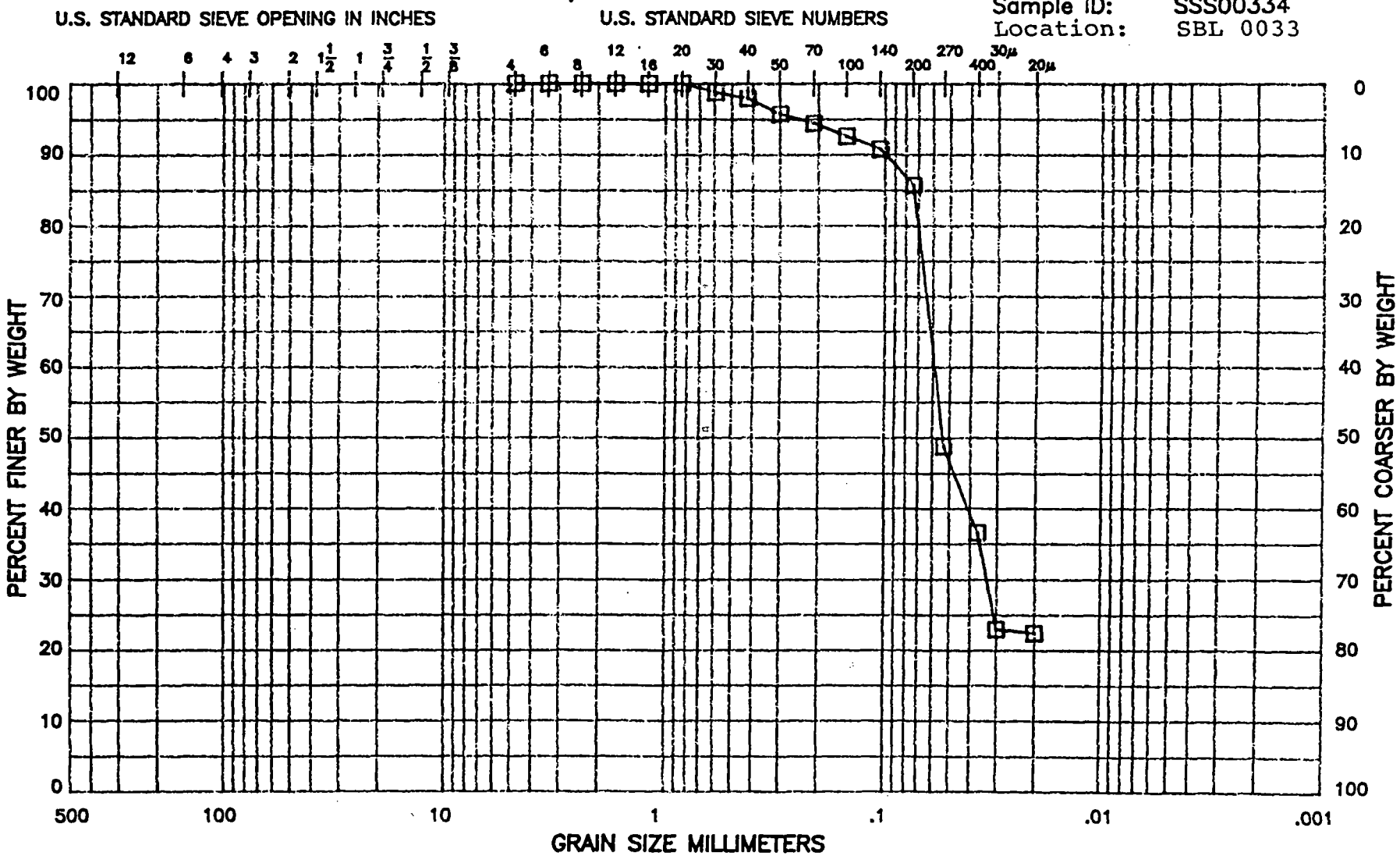
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00334
Location: SBL 0033

WET/DRY SIEVE ANALYSIS



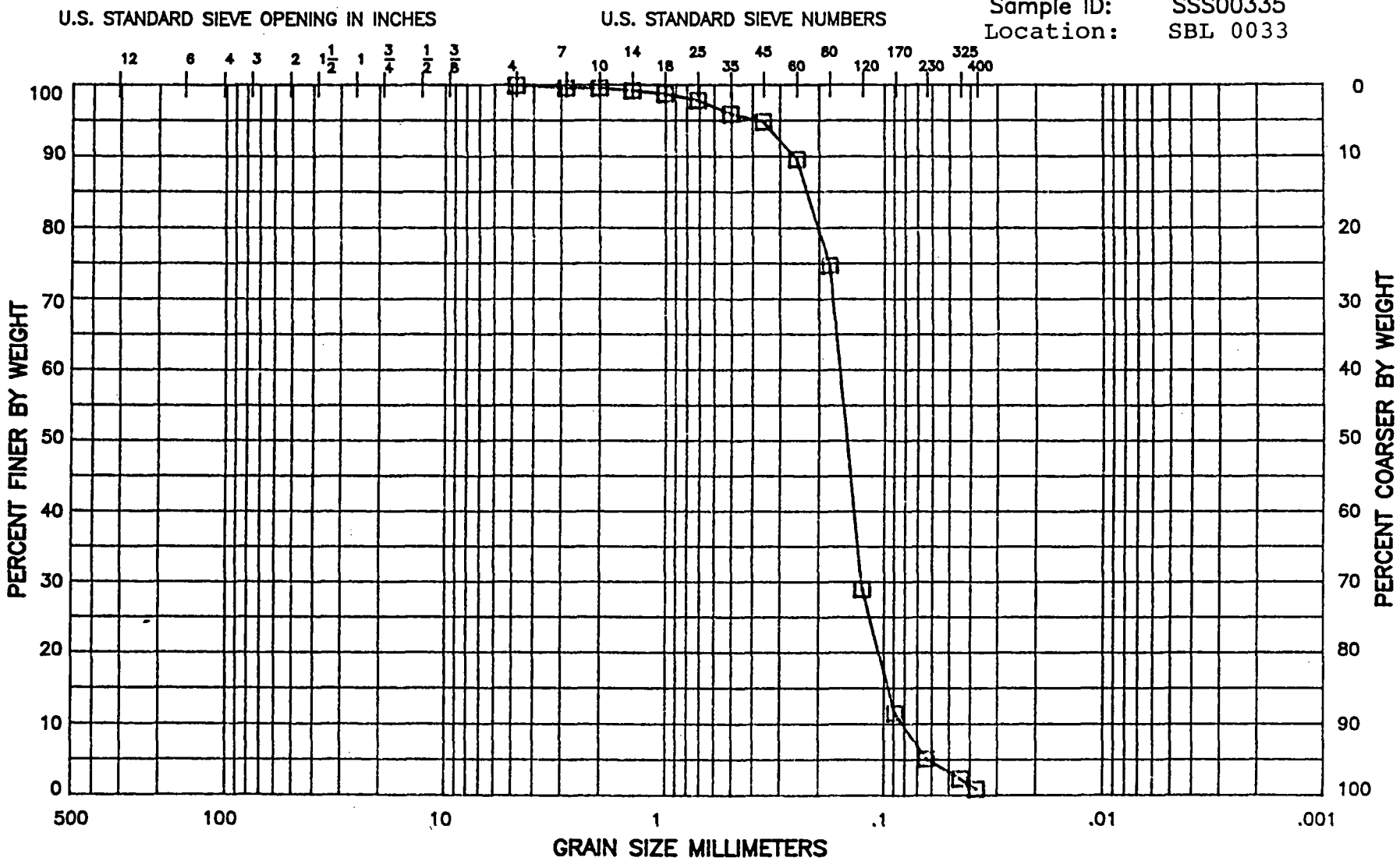
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00335
Location: SBL 0033

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

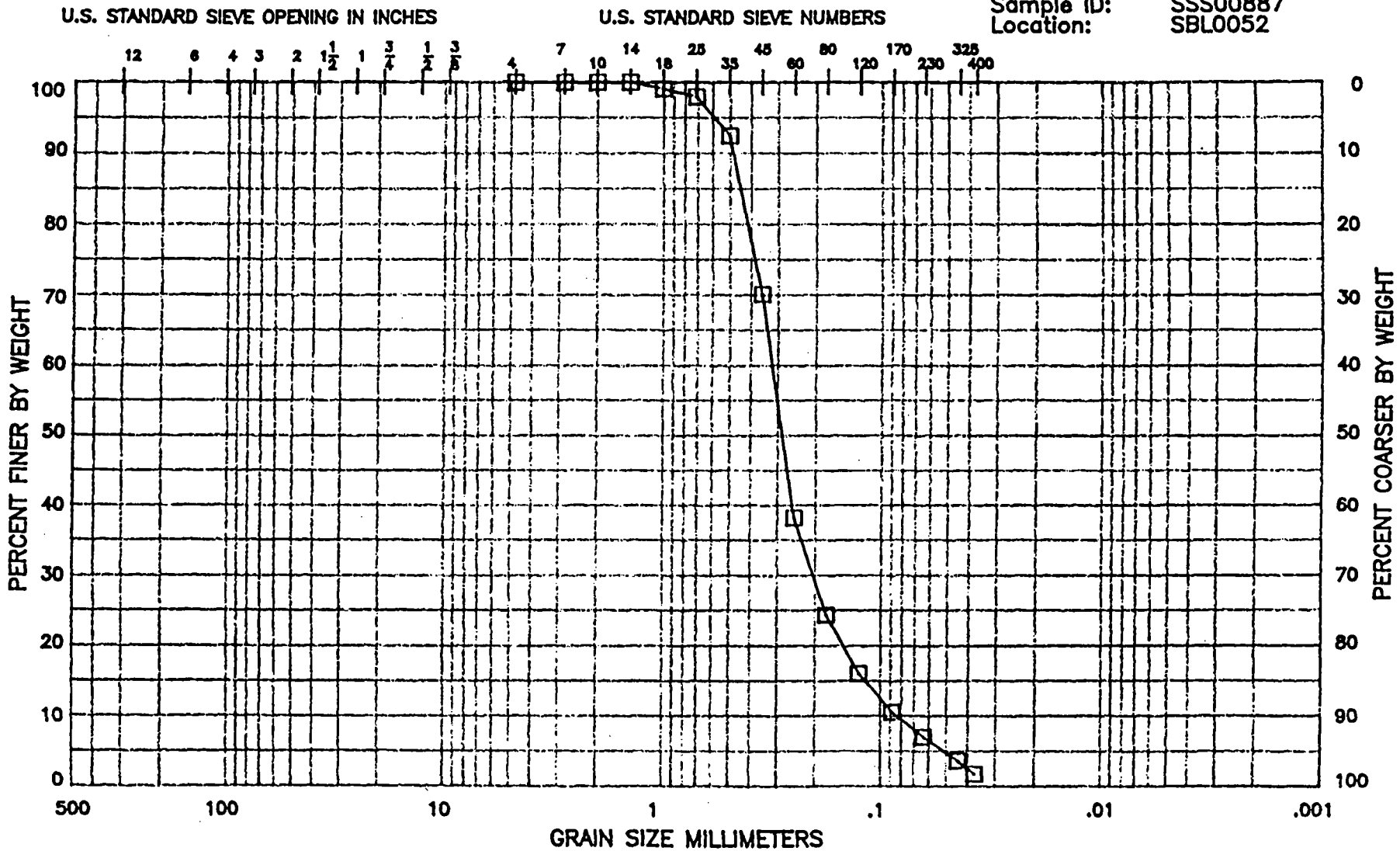
PNP Laboratories, Inc.

File No: 23066
Date: September 07, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-384-139
State: California
Sample ID: SSS00887
Location: SBL0052

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

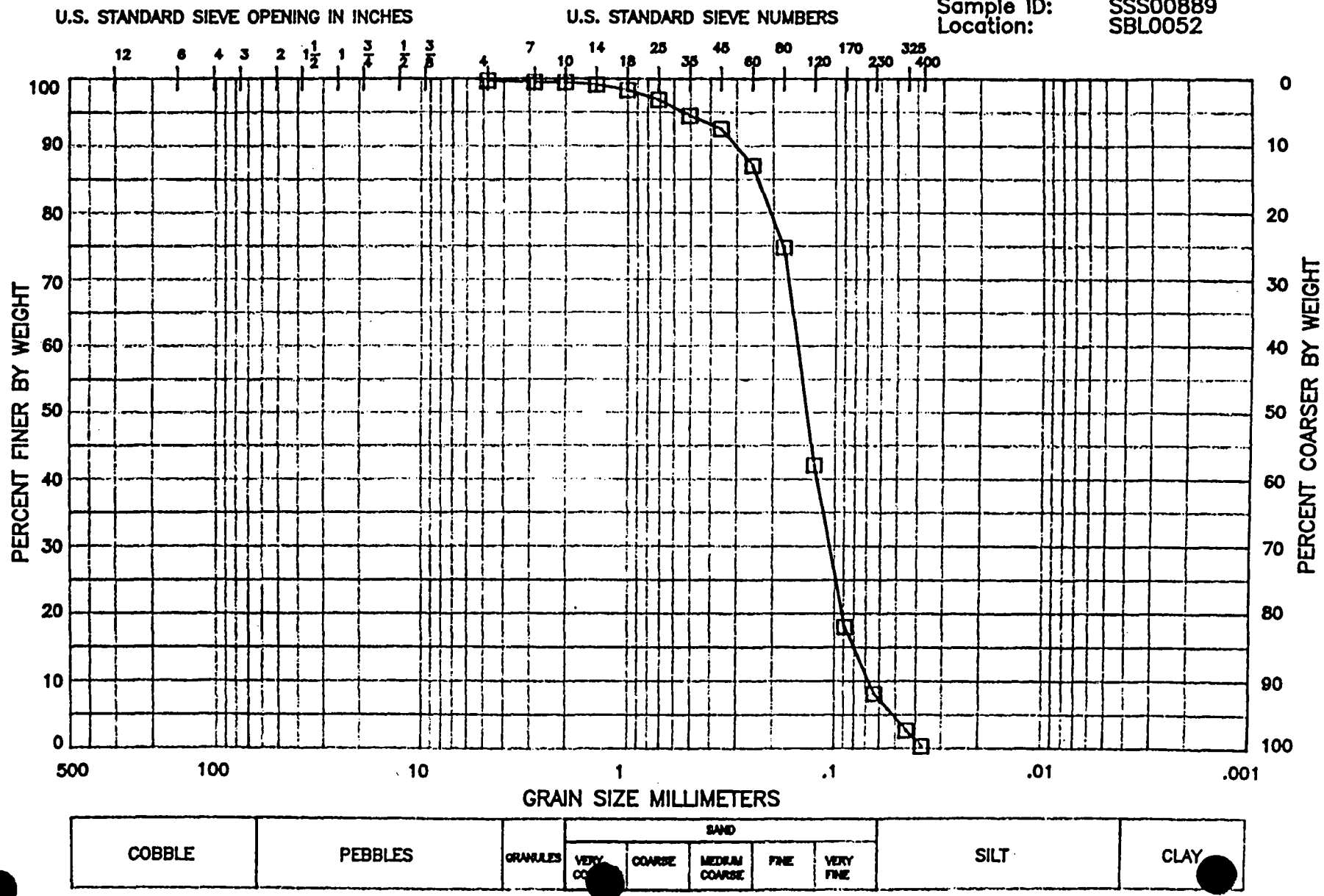
PNP Laboratories, Inc.

File No: 23066
Date: September 07, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-384-139
State: California
Sample ID: SSS00889
Location: SBL0052

DRY SIEVE ANALYSIS



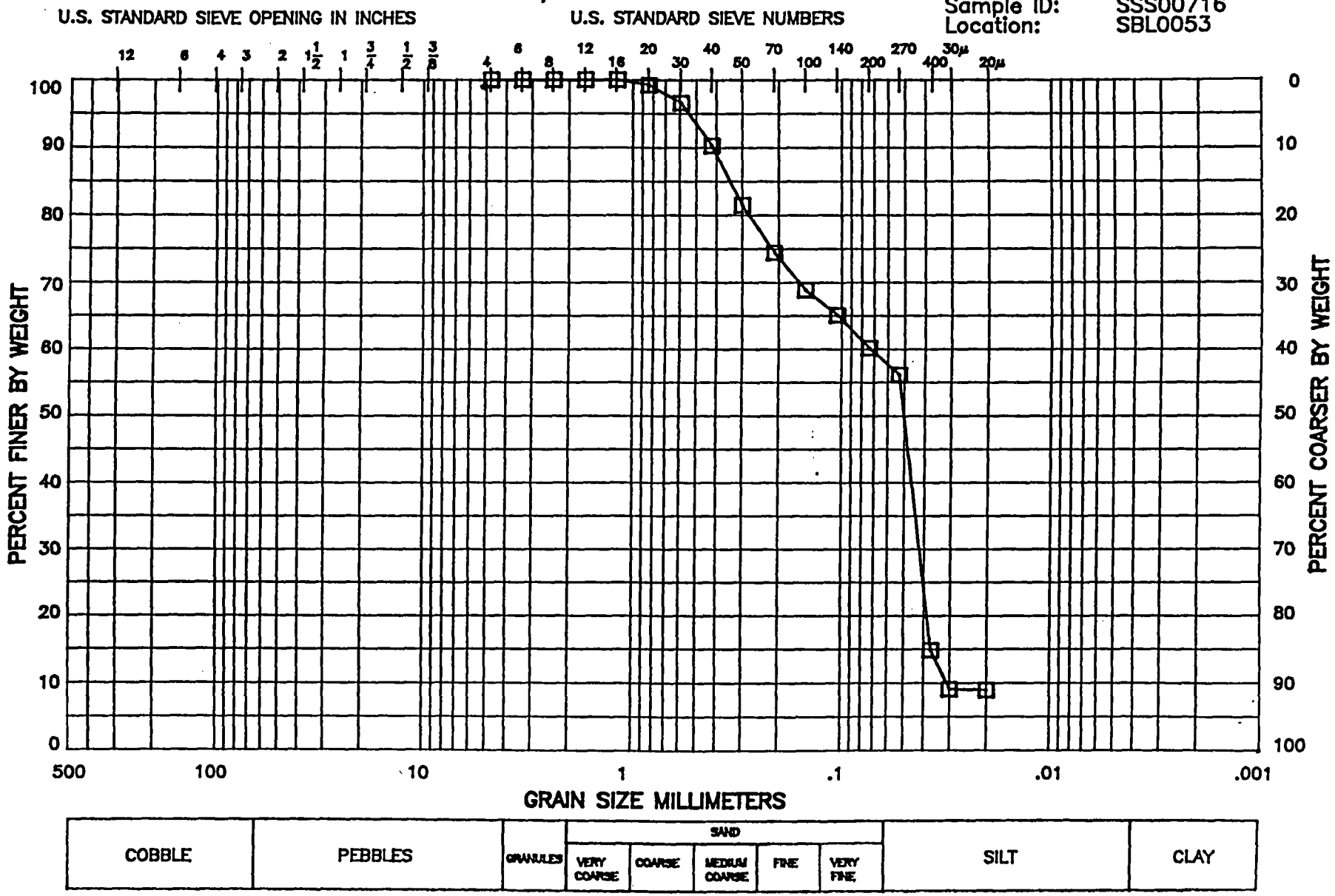
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00716
Location: SBL0053

WET/DRY SIEVE ANALYSIS



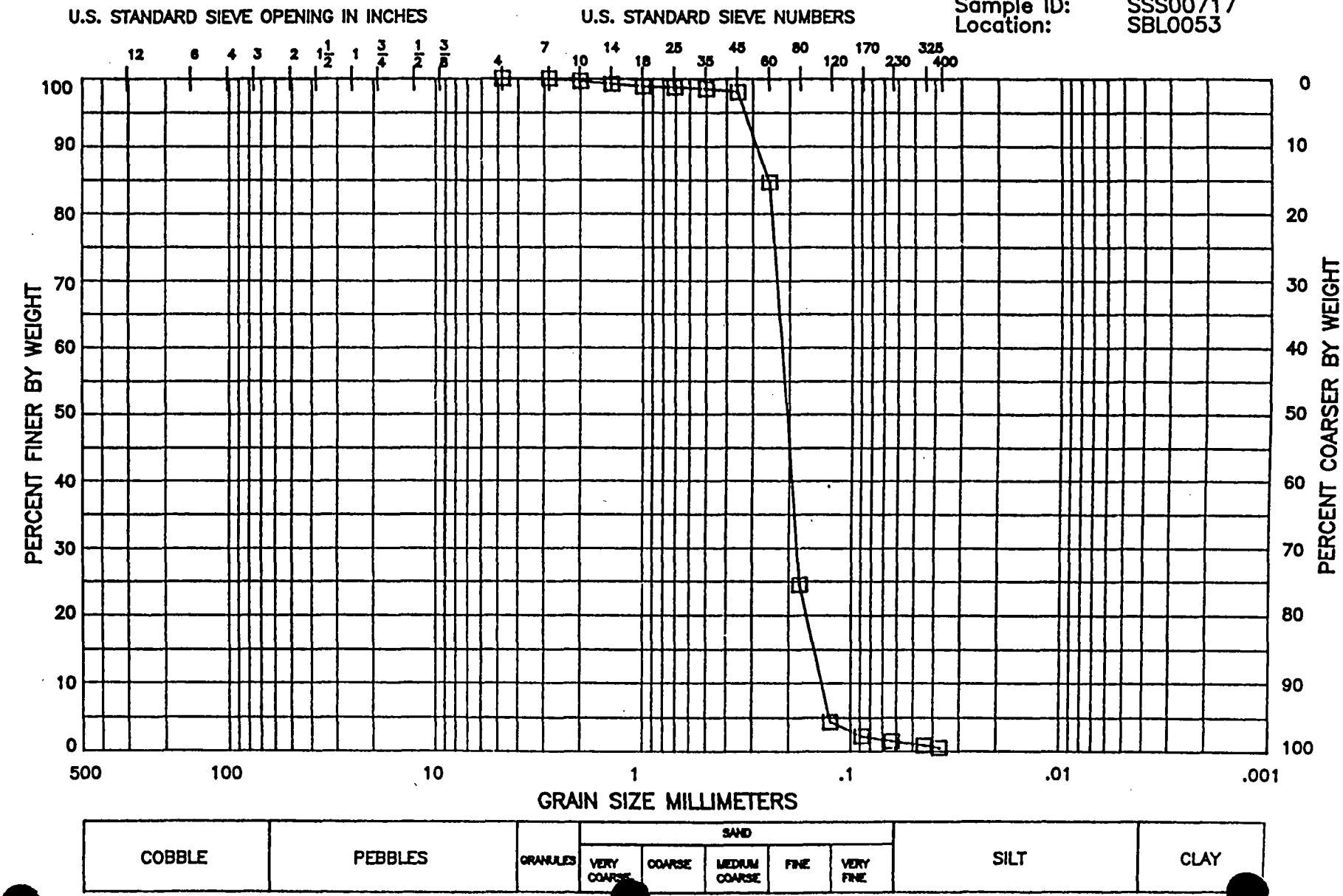
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00717
Location: SBL0053

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

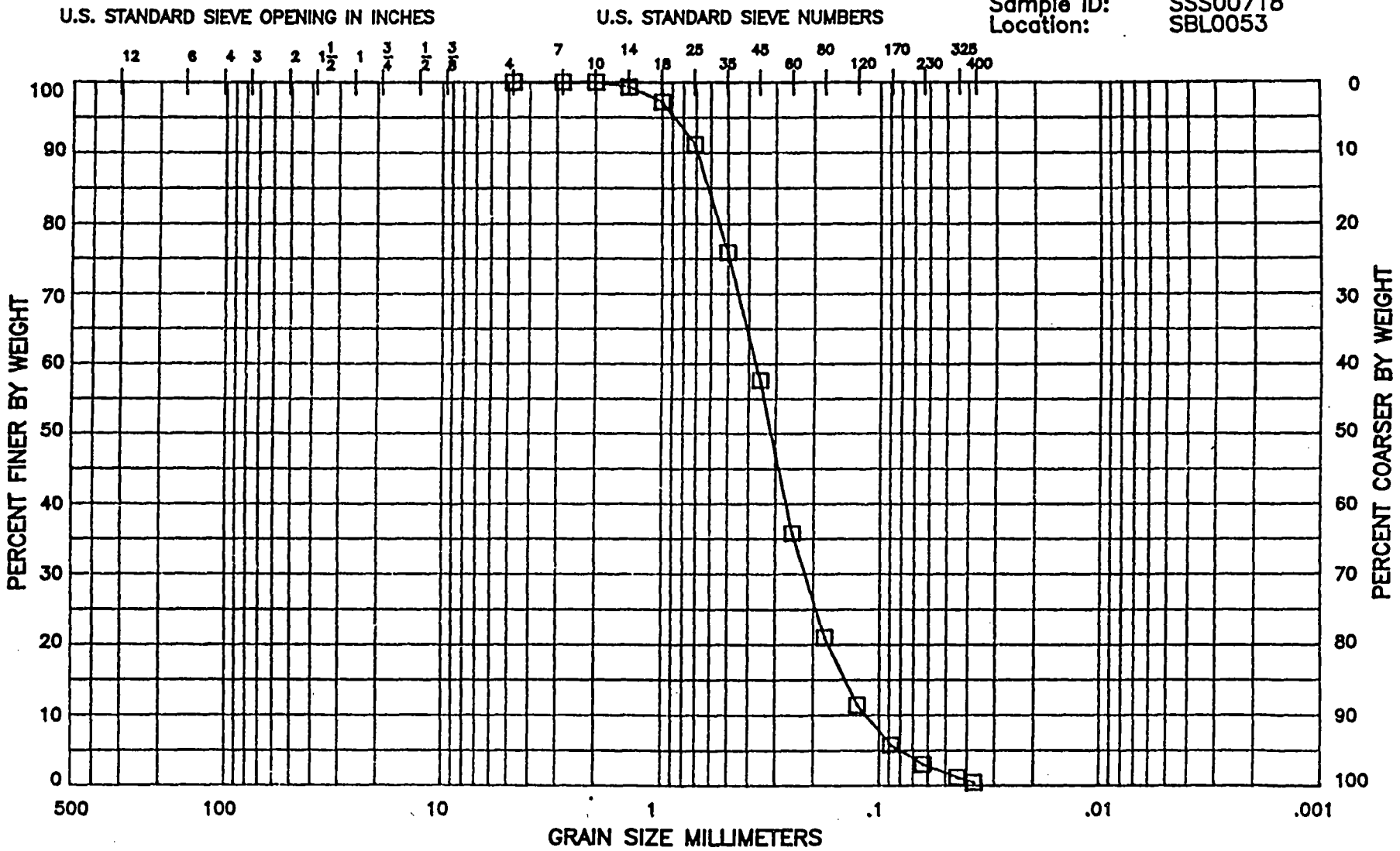
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00718
Location: SBL0053

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

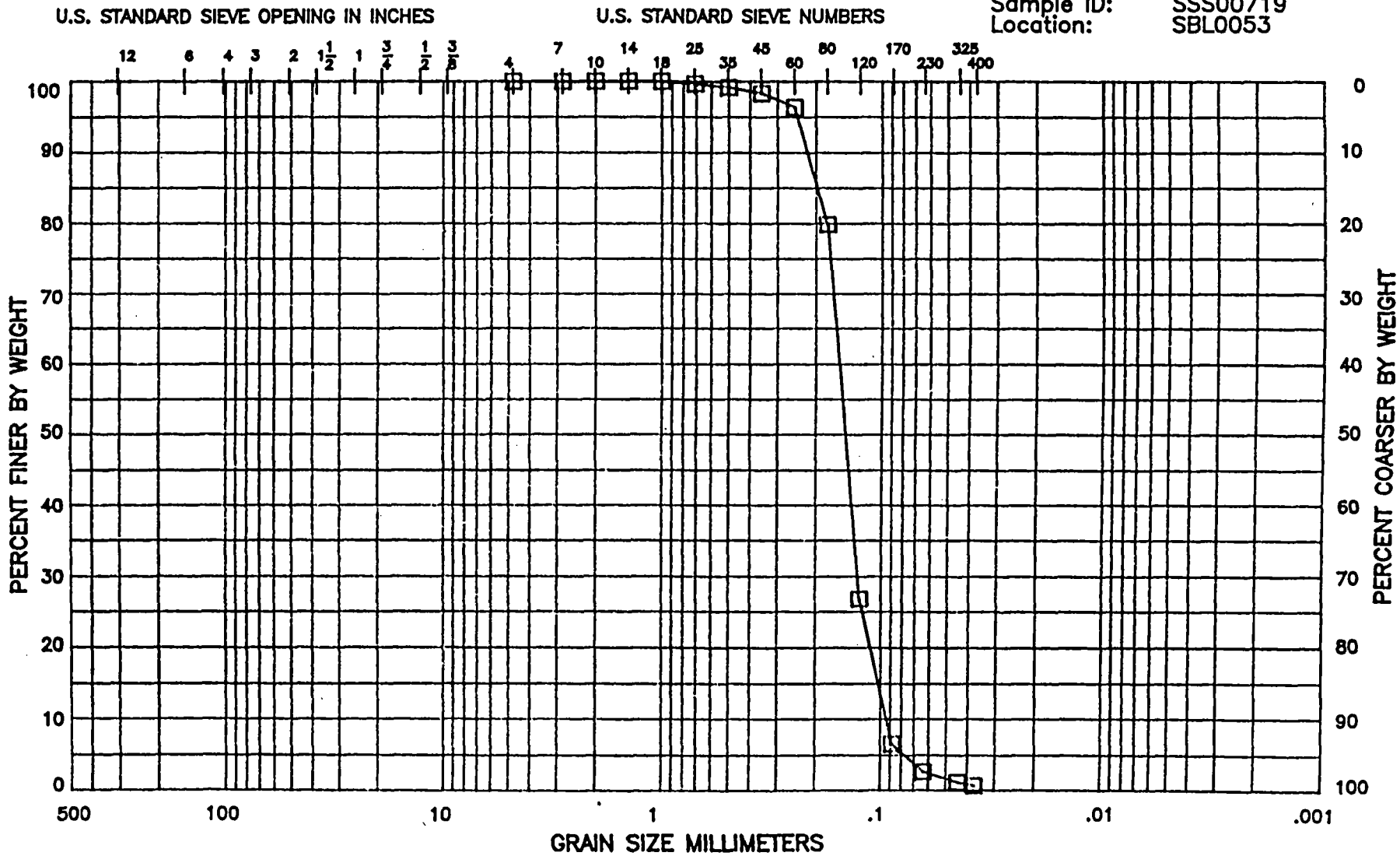
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00719
Location: SBL0053

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

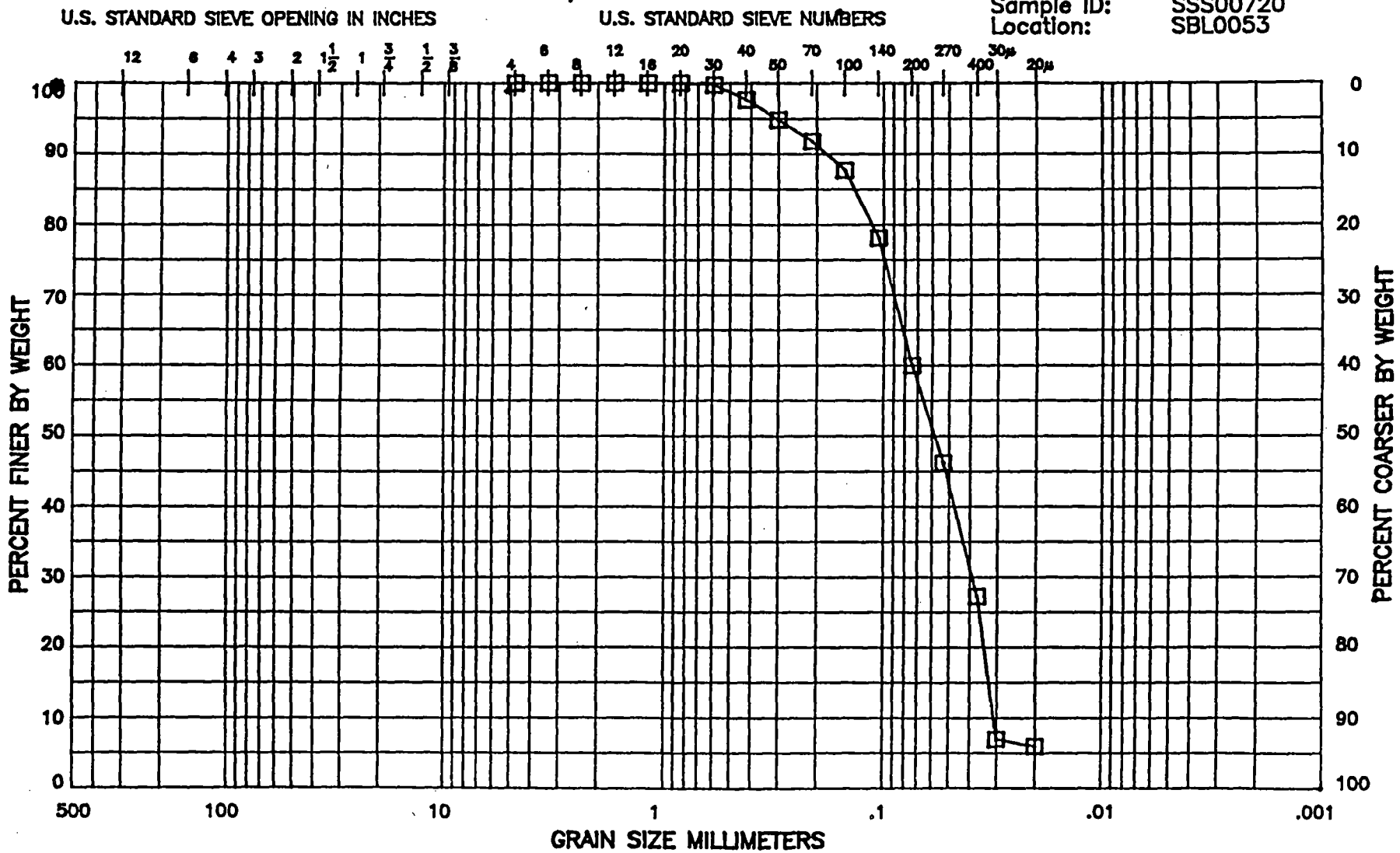
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00720
Location: SBL0053

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

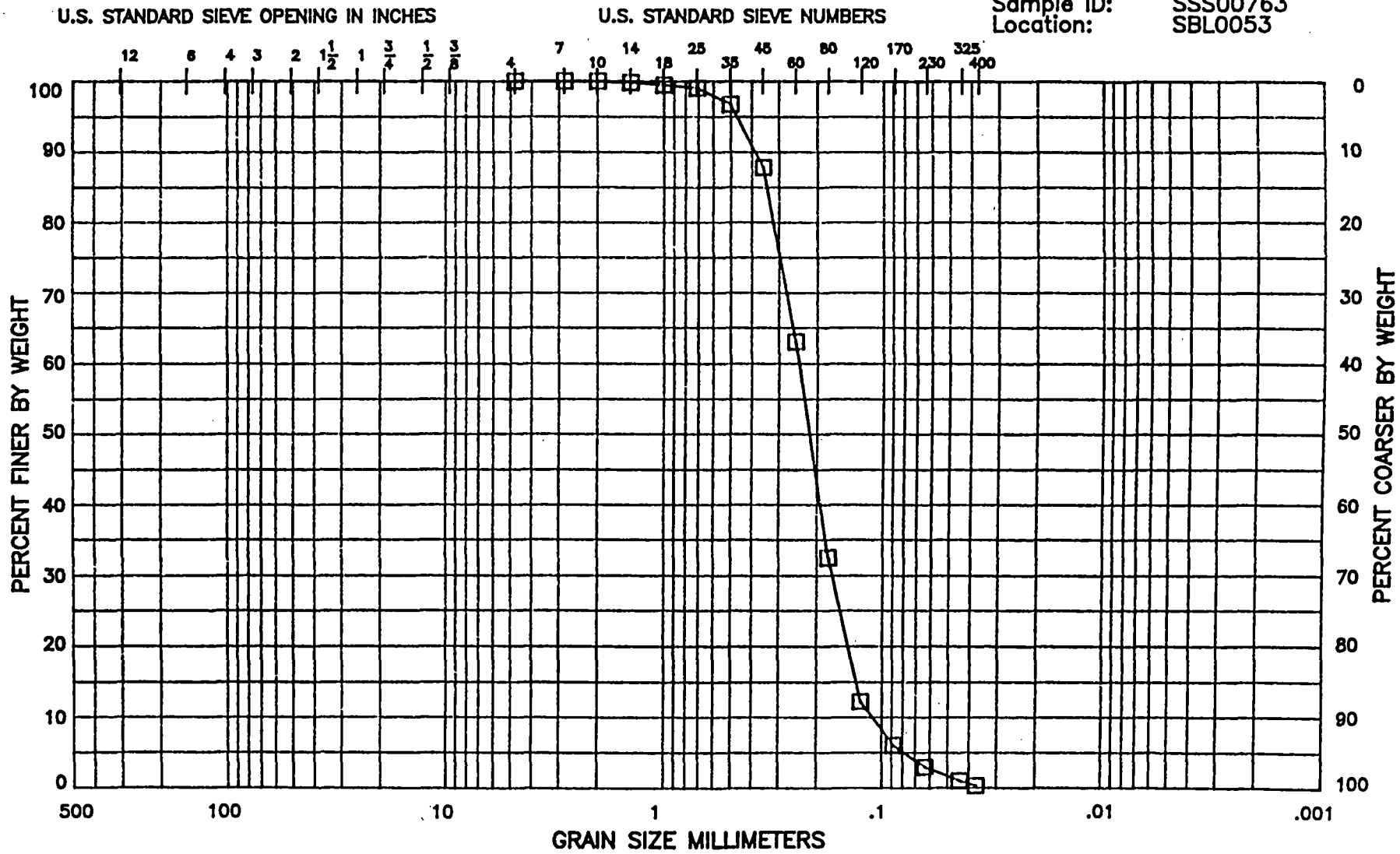
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00763
Location: SBL0053

DRY SIEVE ANALYSIS



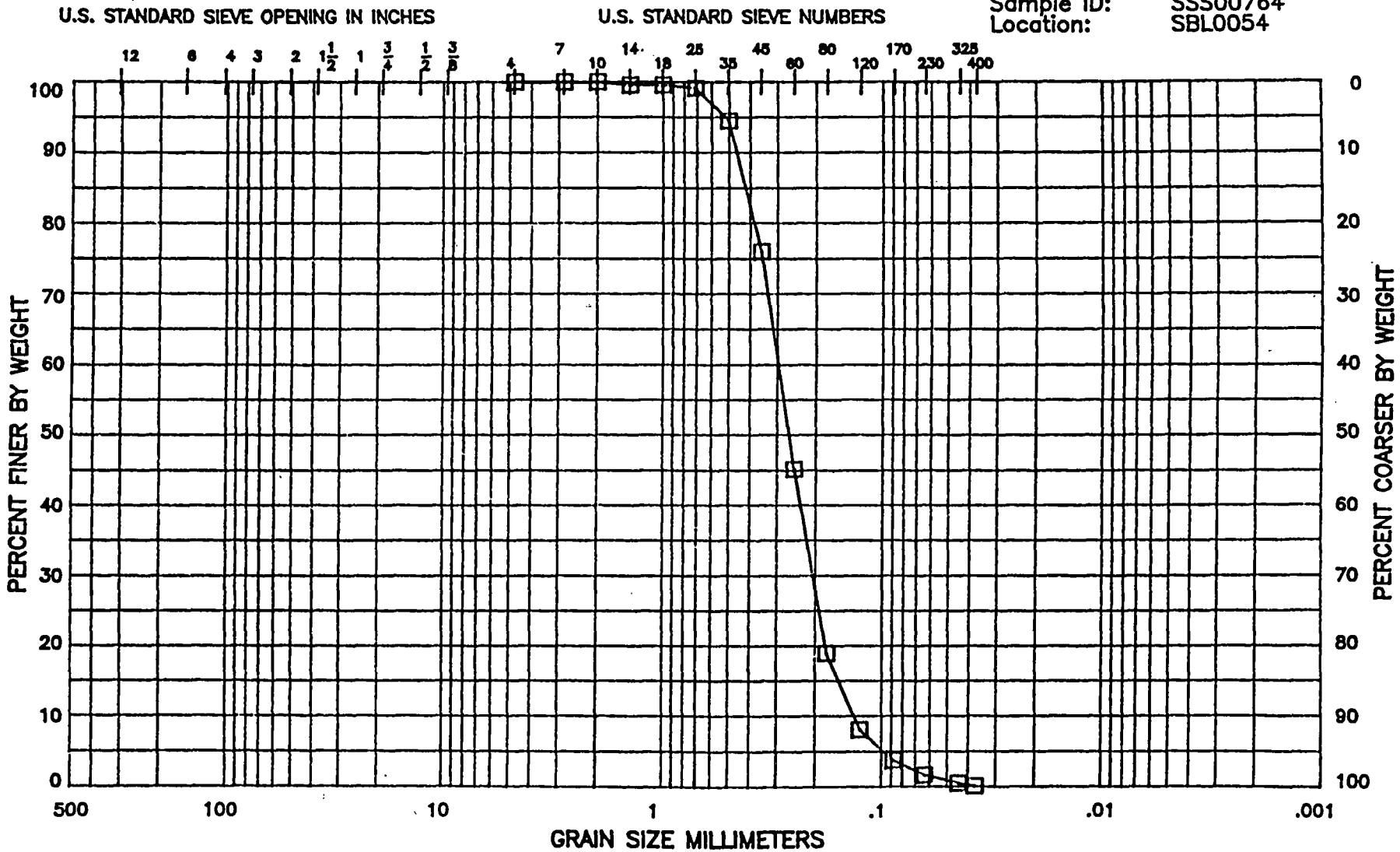
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00764
Location: SBL0054

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

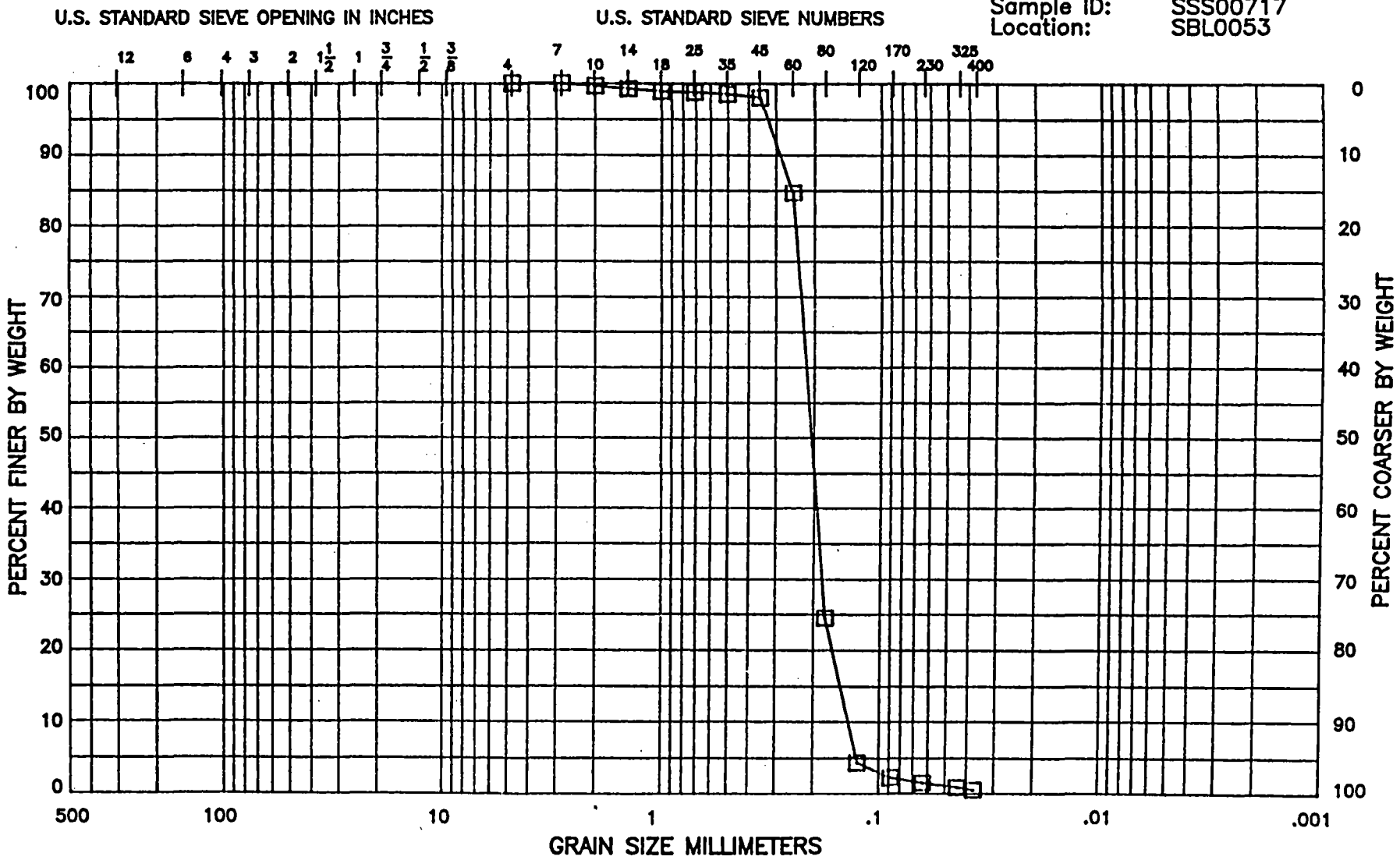
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00717
Location: SBL0053

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

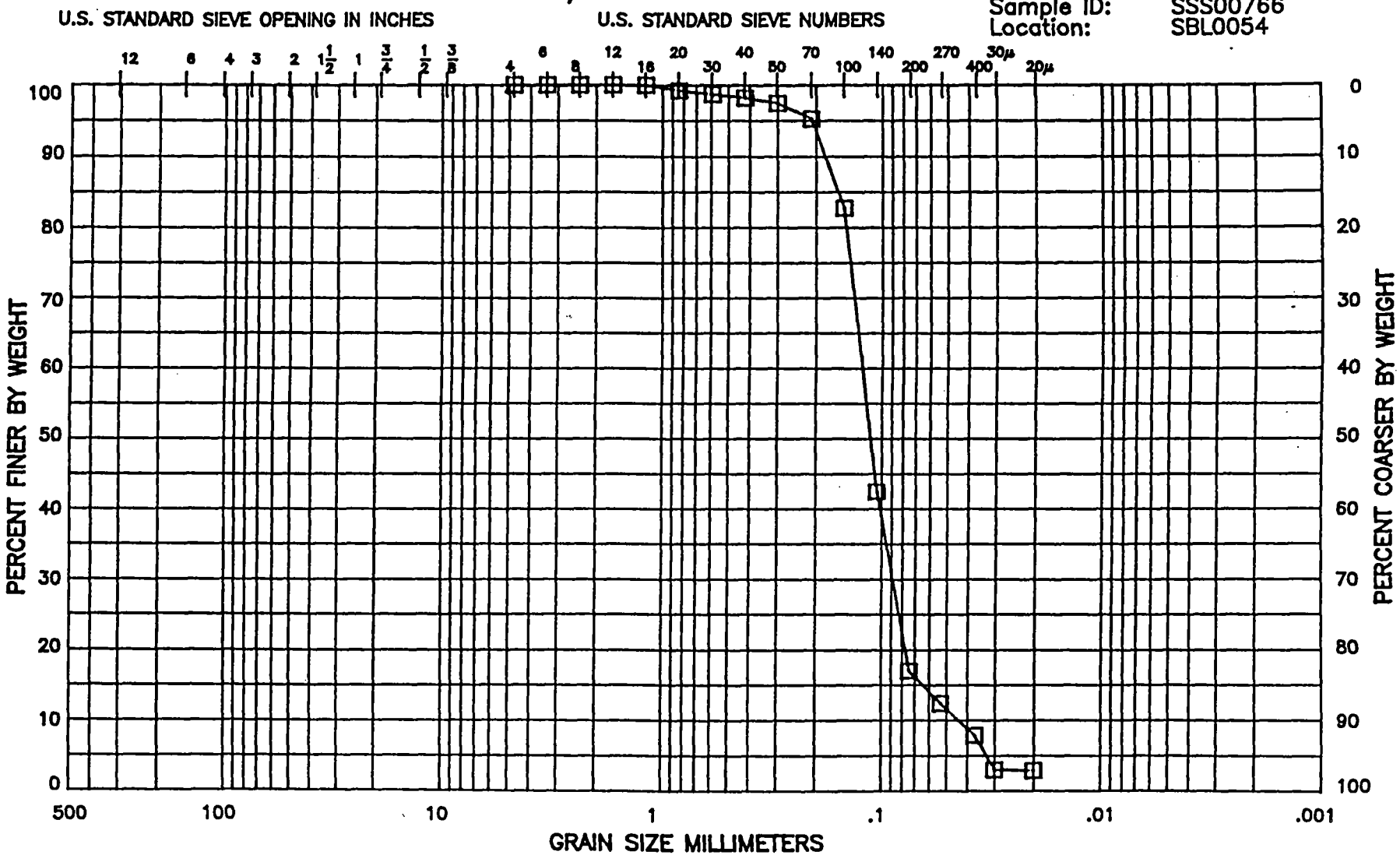
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00766
Location: SBL0054

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

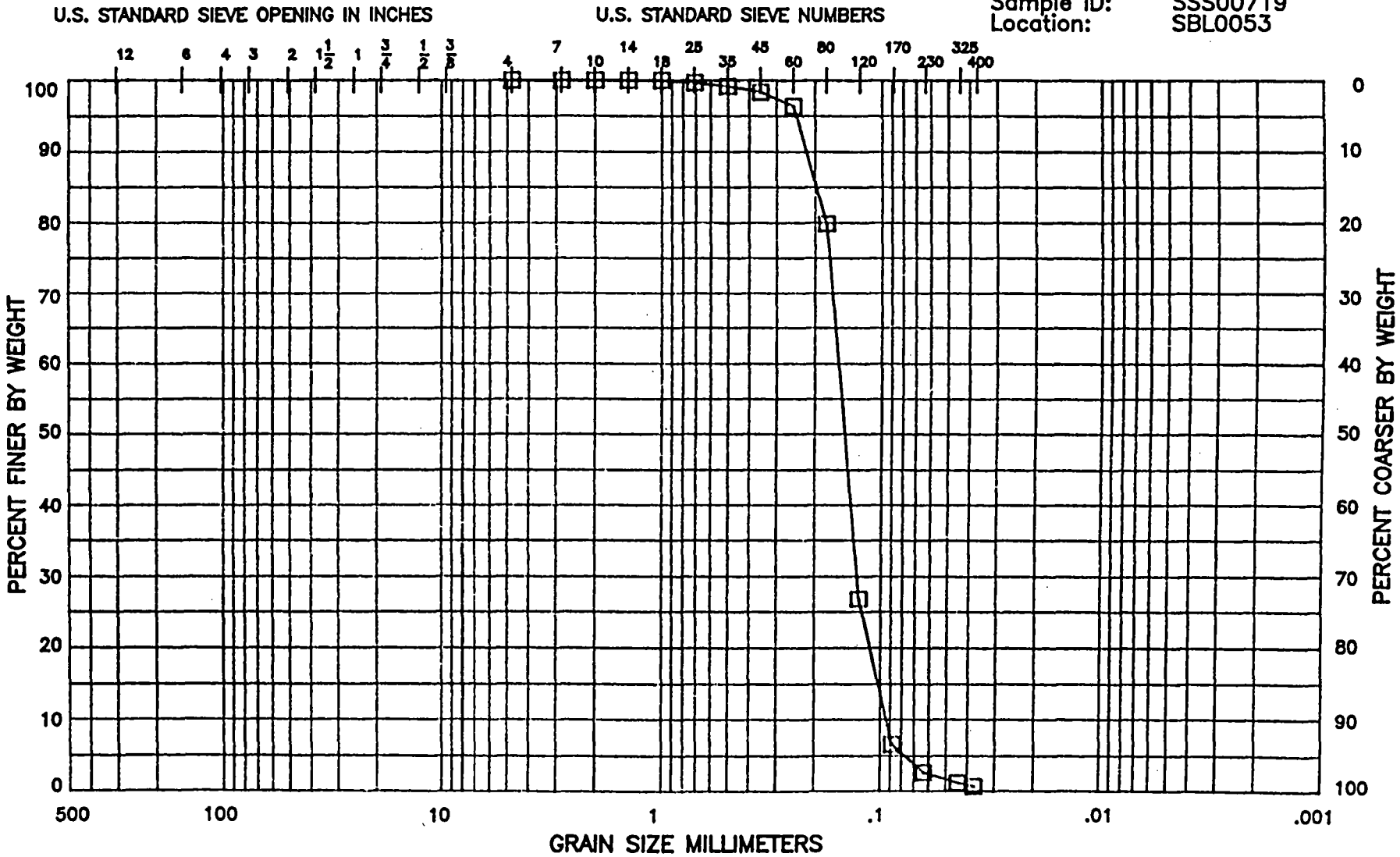
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00719
Location: SBL0053

DRY SIEVE ANALYSIS



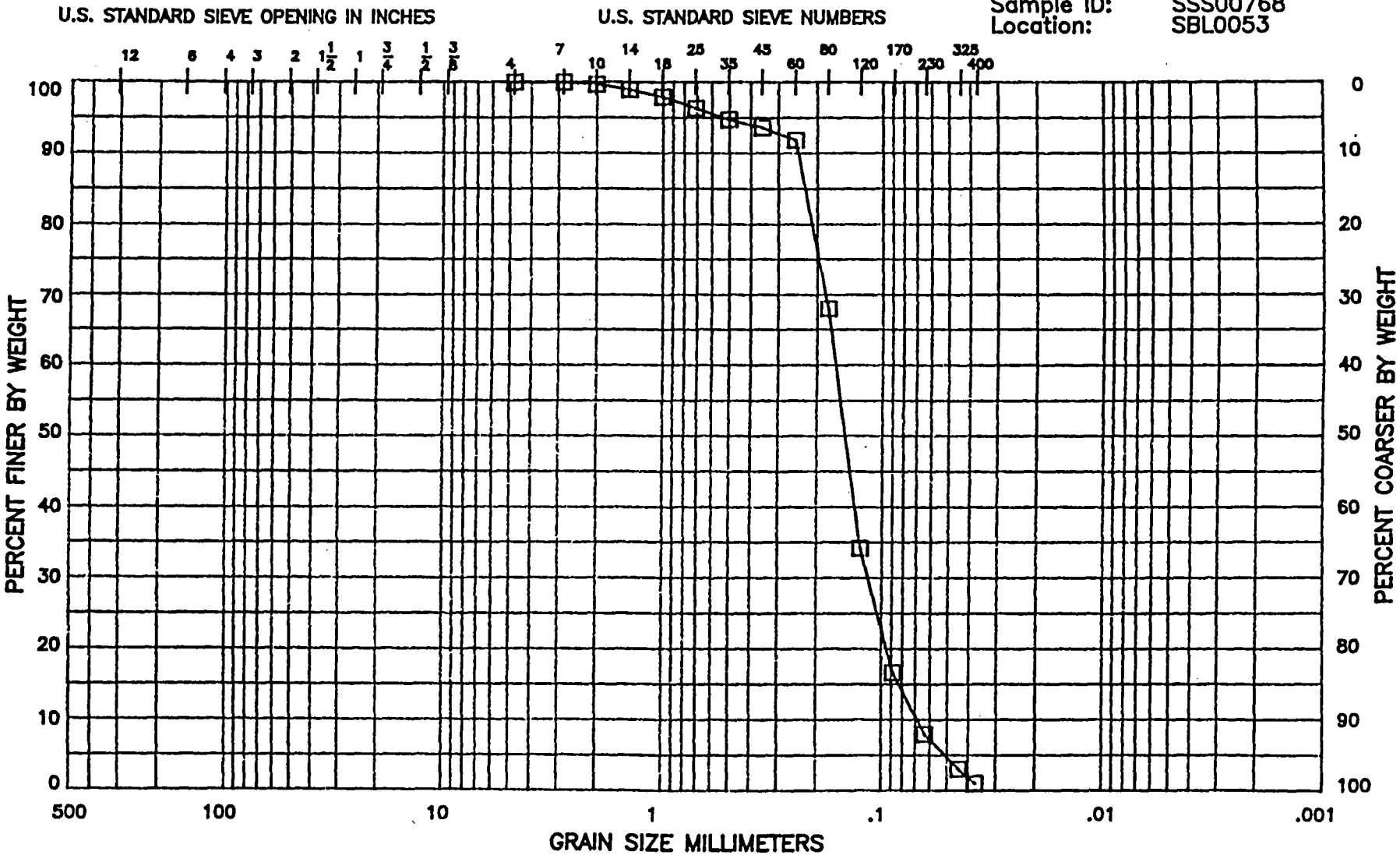
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00768
Location: SBL0053

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

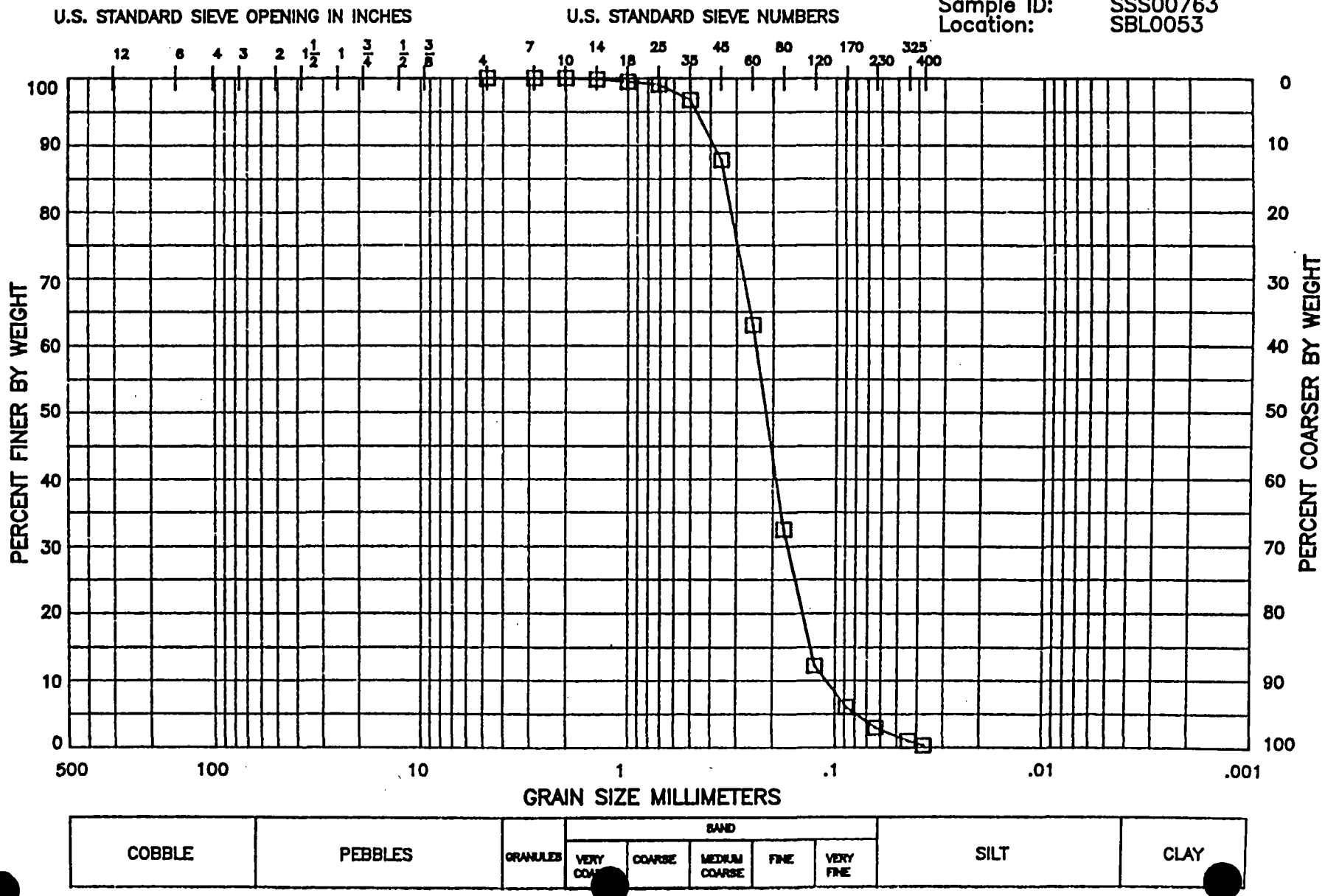
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00763
Location: SBL0053

DRY SIEVE ANALYSIS



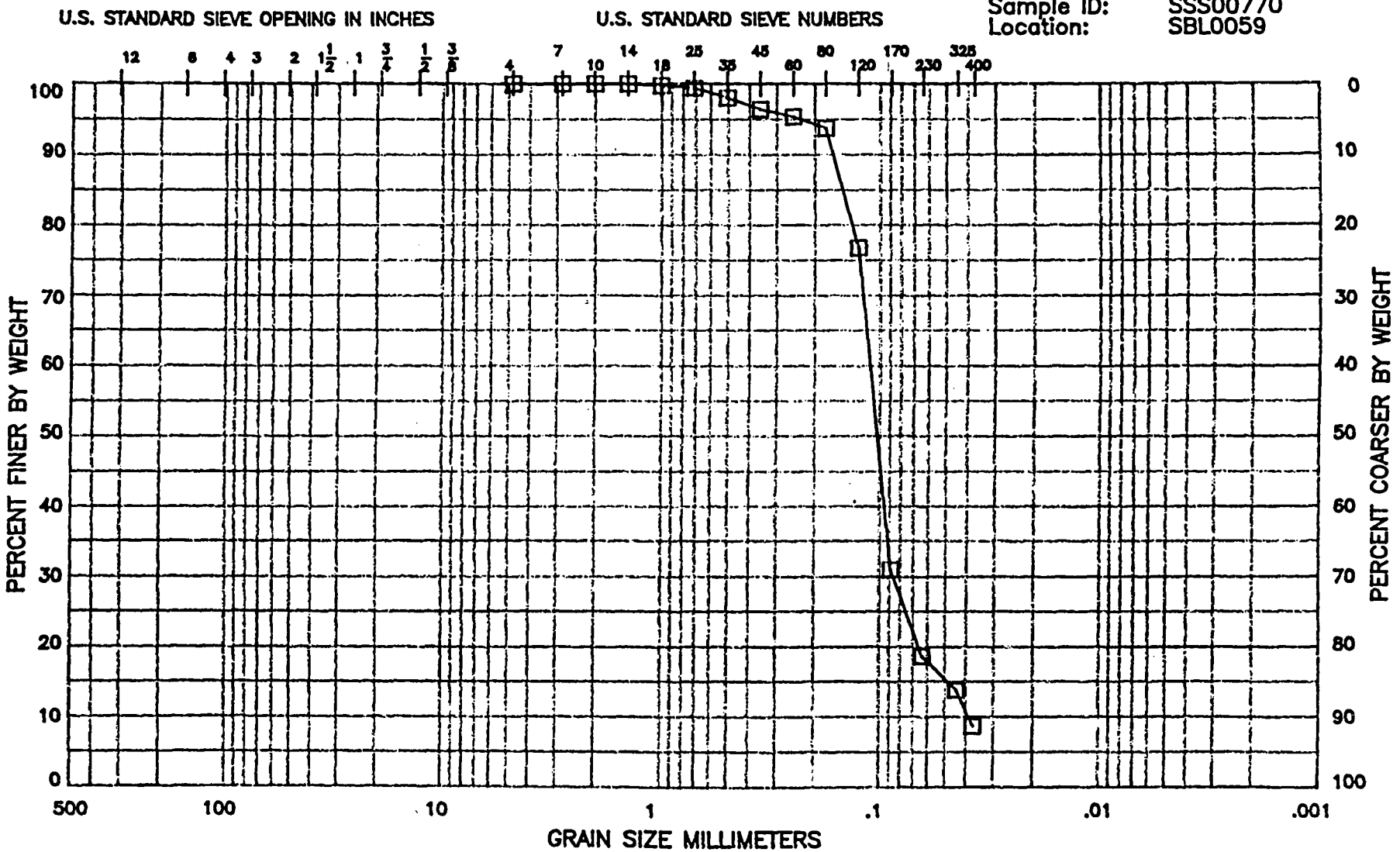
PNP Laboratories, Inc.

File No: 23066
Date: September 07, 1993

Client: Dames & Moore

Project Name: Del Amo P./FS
Project No.: 00216-384-139
State: California
Sample ID: SSS00770
Location: SBL0059

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

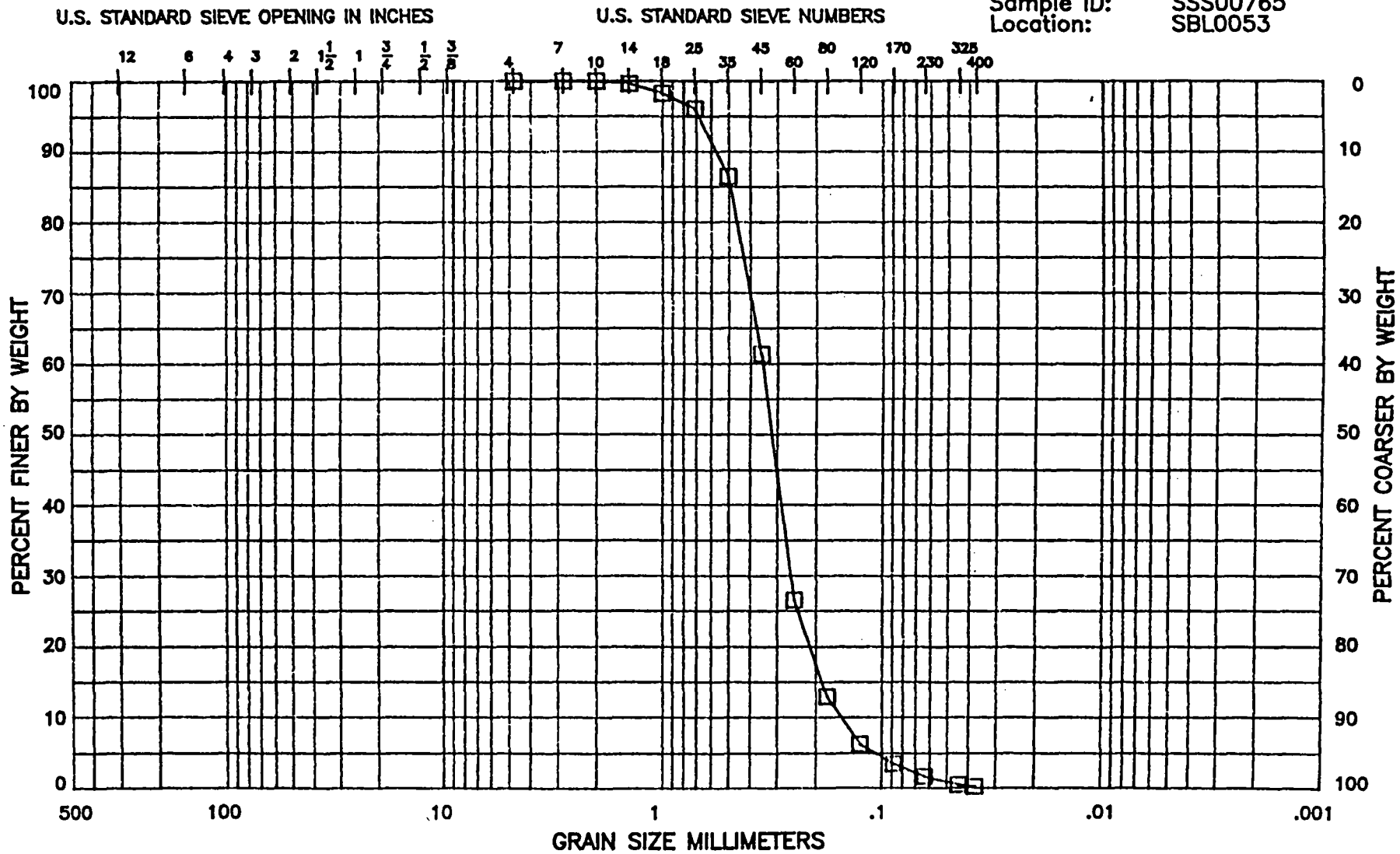
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00765
Location: SBL0053

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

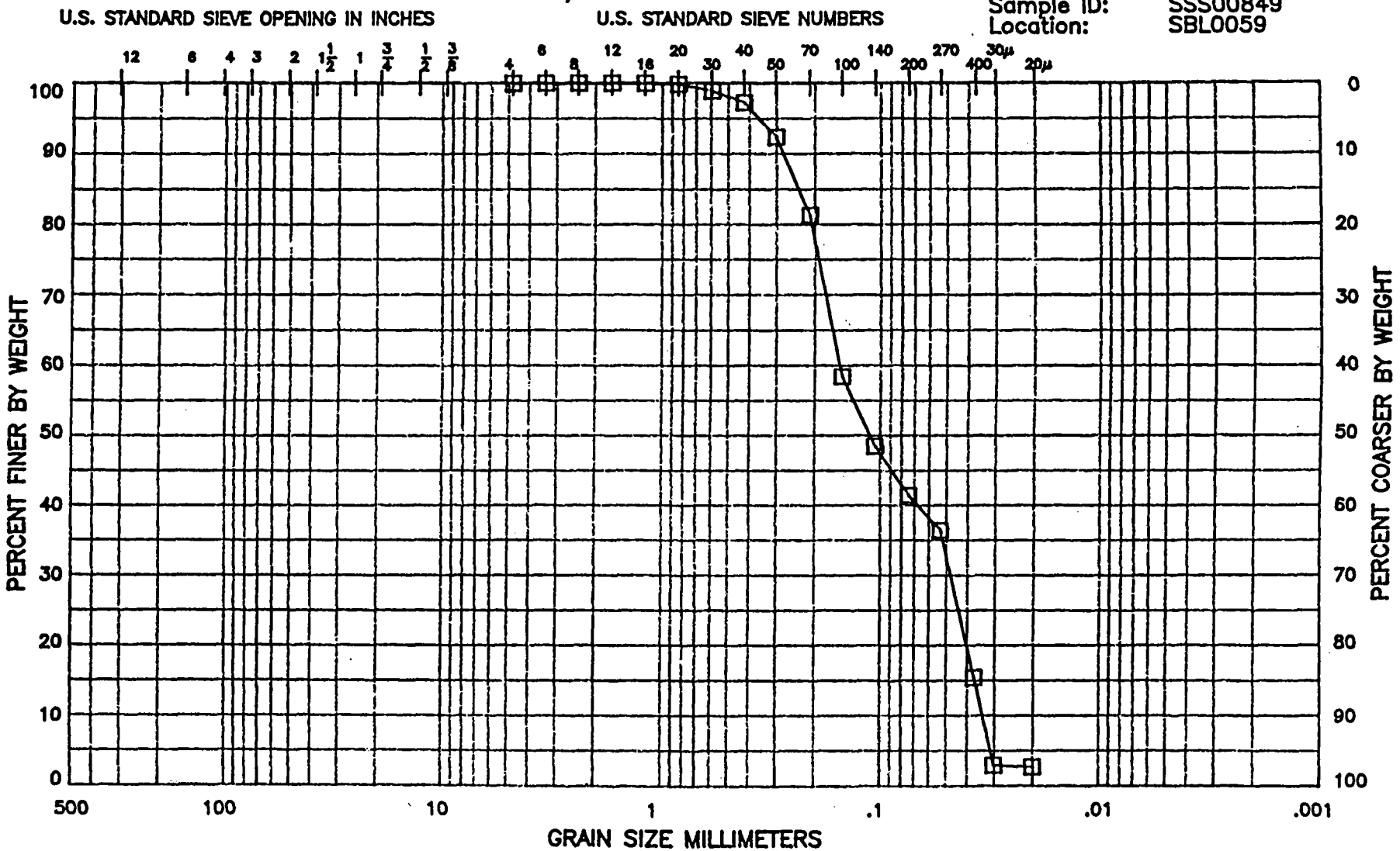
PNP Laboratories, Inc.

File No: 23066
Date: September 07, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-384-139
State: California
Sample ID: SSS00849
Location: SBL0059

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

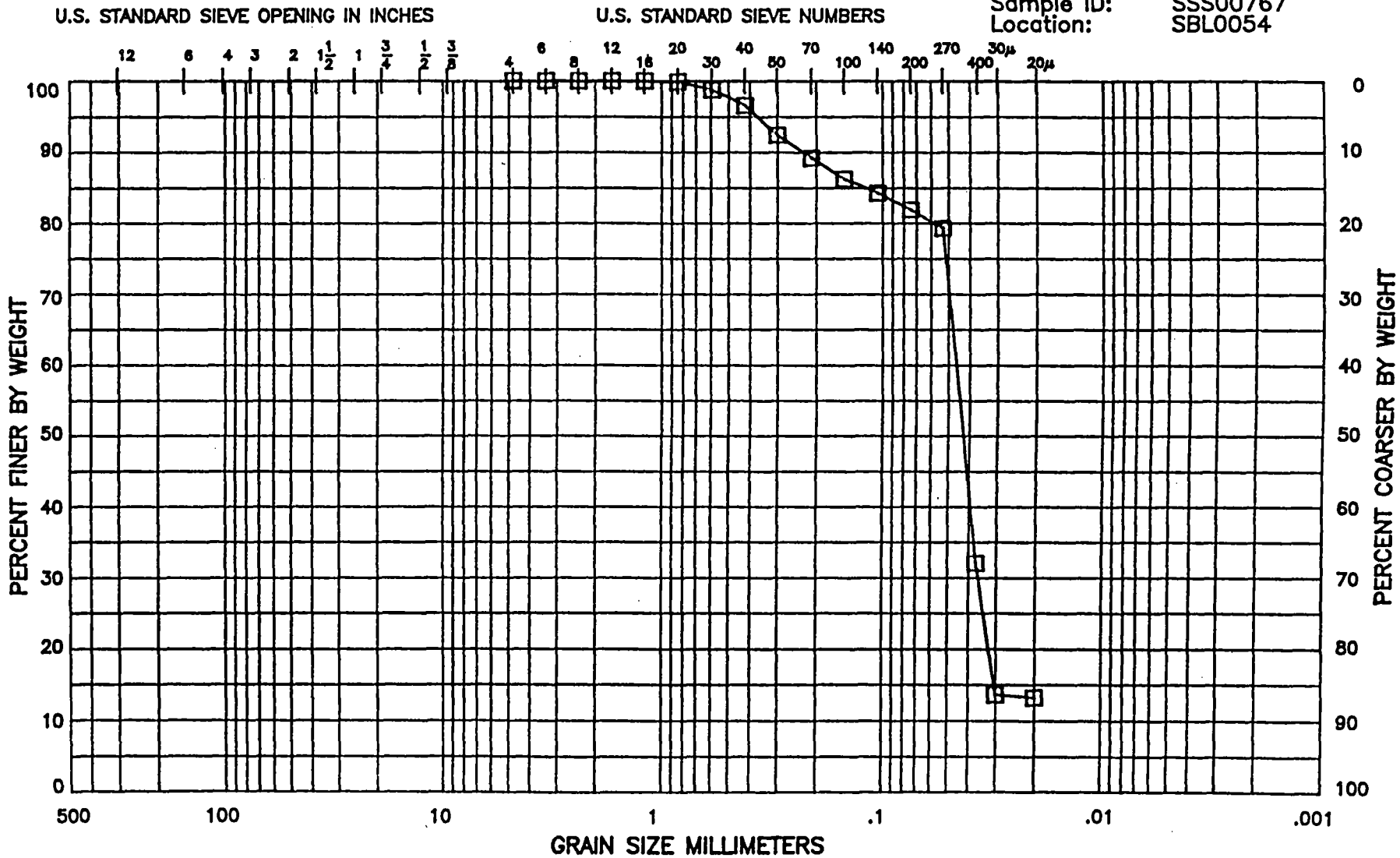
PNP Laboratories, Inc.

File No: 23014
Date: August 25, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00767
Location: SBL0054

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

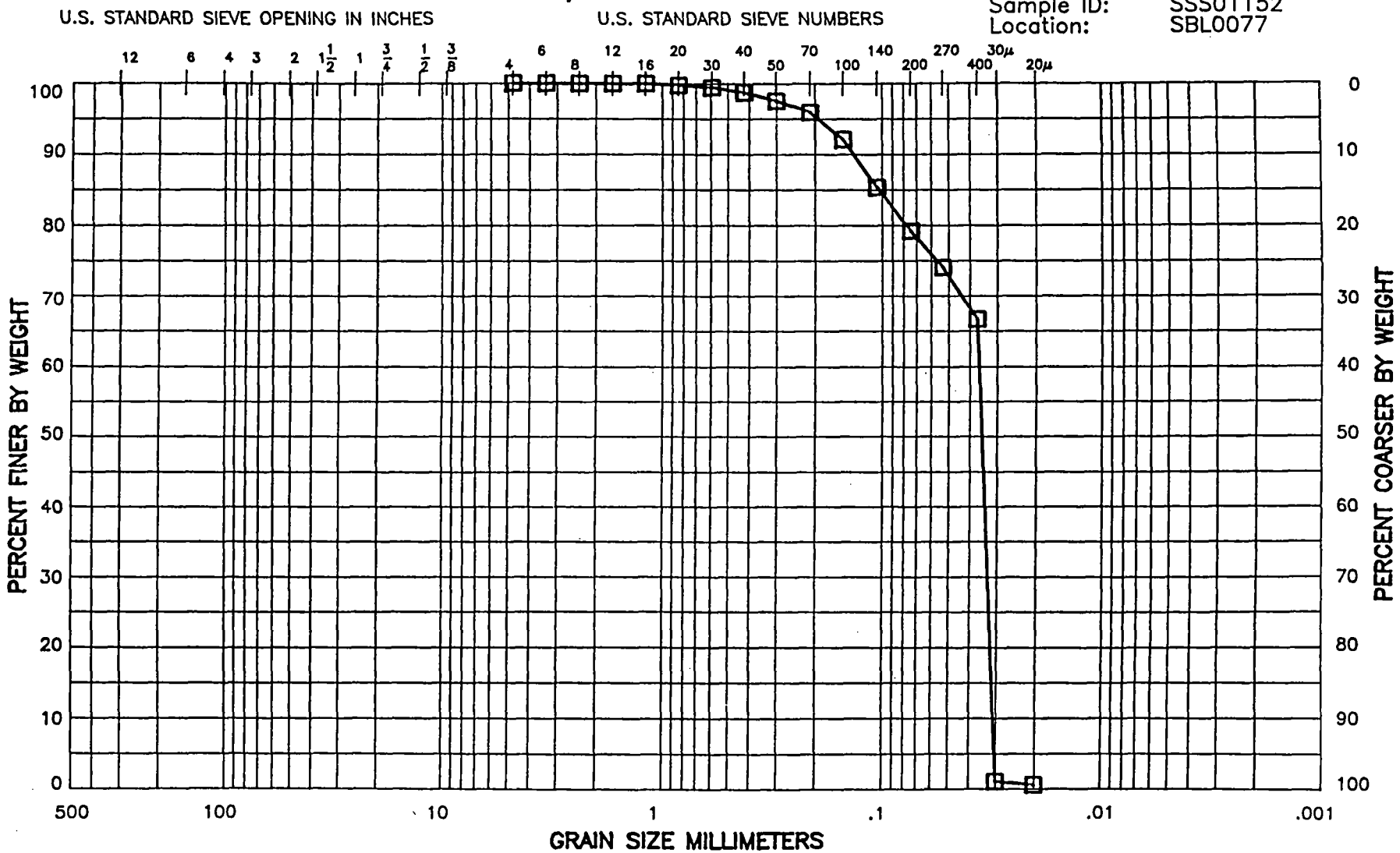
PNP Laboratories, Inc.

File No: 23096
Date: October 25, 1993

Client: DAMES & MOORE

Project Name: N/A
Project No.: 00216-387-139
State: CA
Sample ID: SSS01152
Location: SBL0077

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

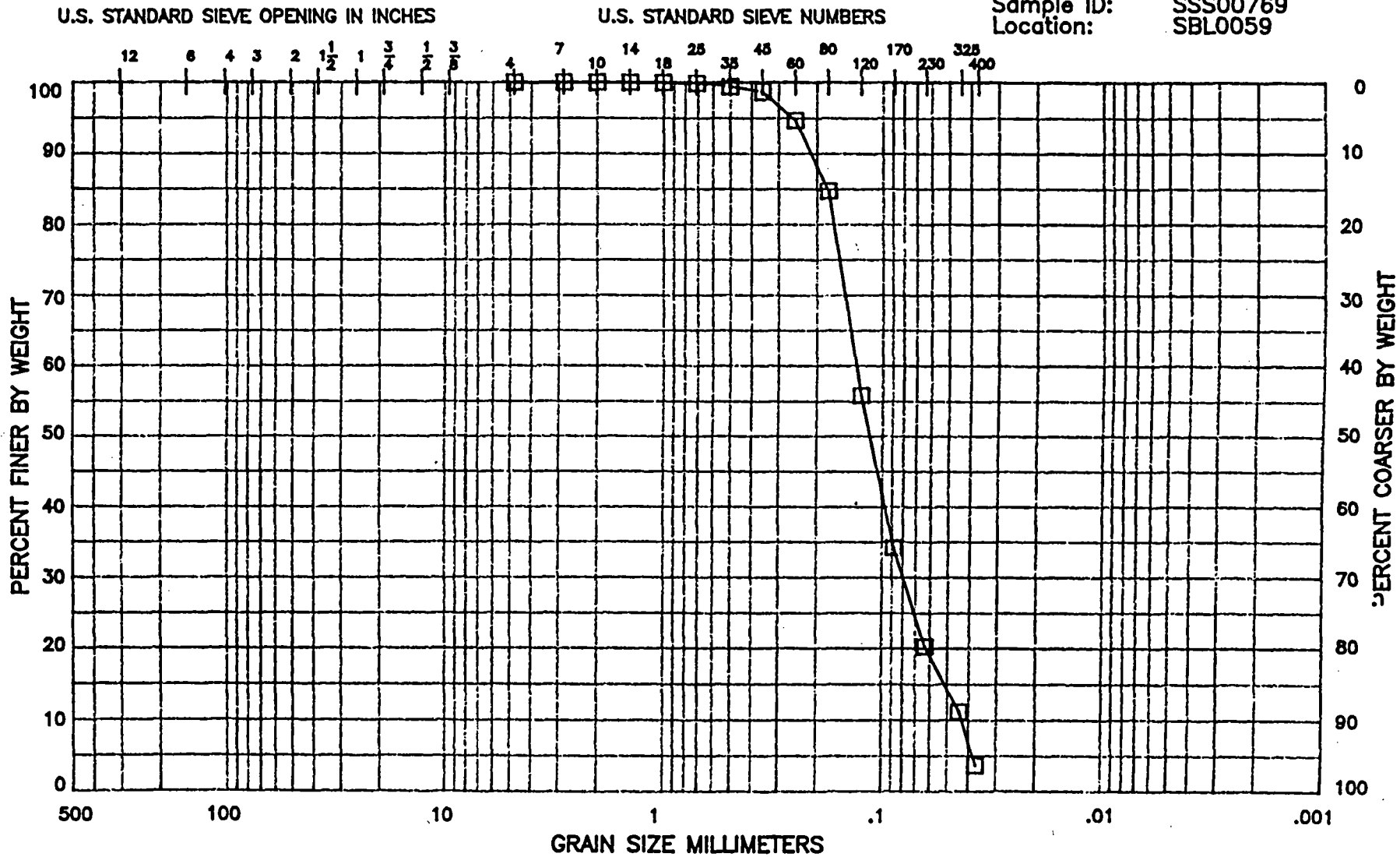
PNP Laboratories, Inc.

File No: 23066
Date: September 07, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-384-139
State: California
Sample ID: SSS00769
Location: SBL0059

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

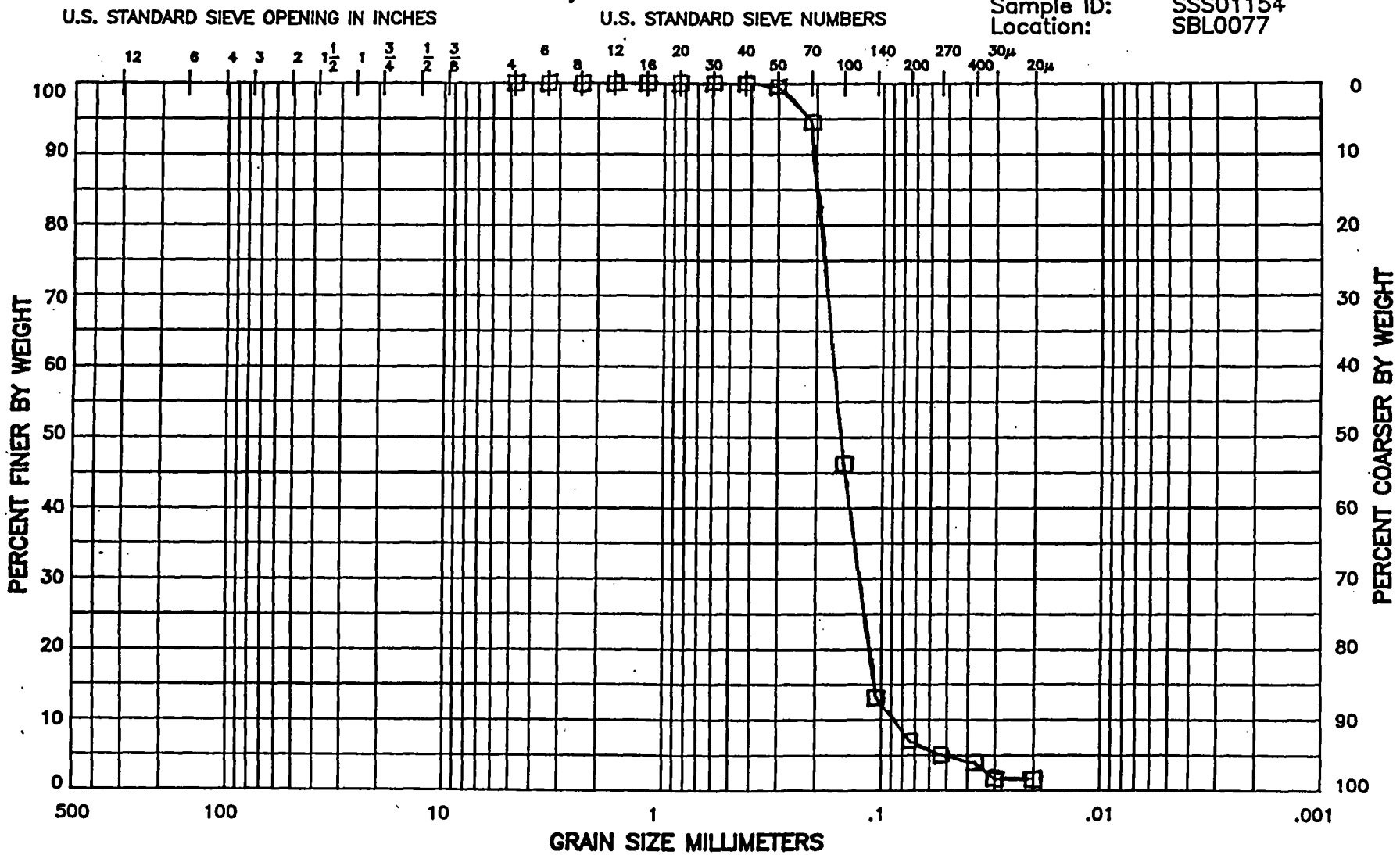
PNP Laboratories, Inc.

File No: 23096
Date: October 25, 1993

Client: DAMES & MOORE

Project Name: N/A
Project No.: 00216-387-139
State: CA
Sample ID: SSS01154
Location: SBL0077

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

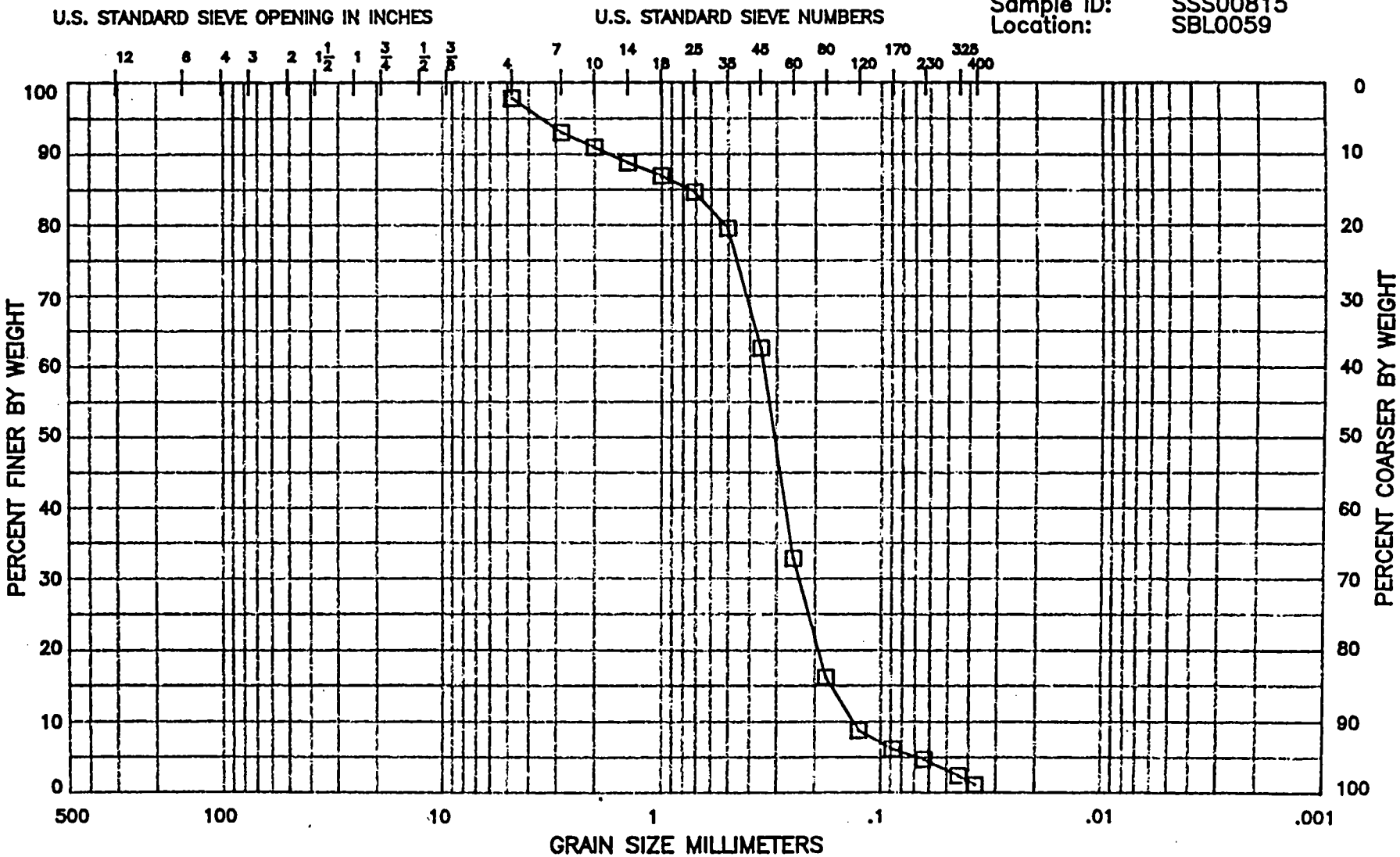
PNP Laboratories, Inc.

File No: 23066
Date: September 07, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-384-139
State: California
Sample ID: SSS00815
Location: SBL0059

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

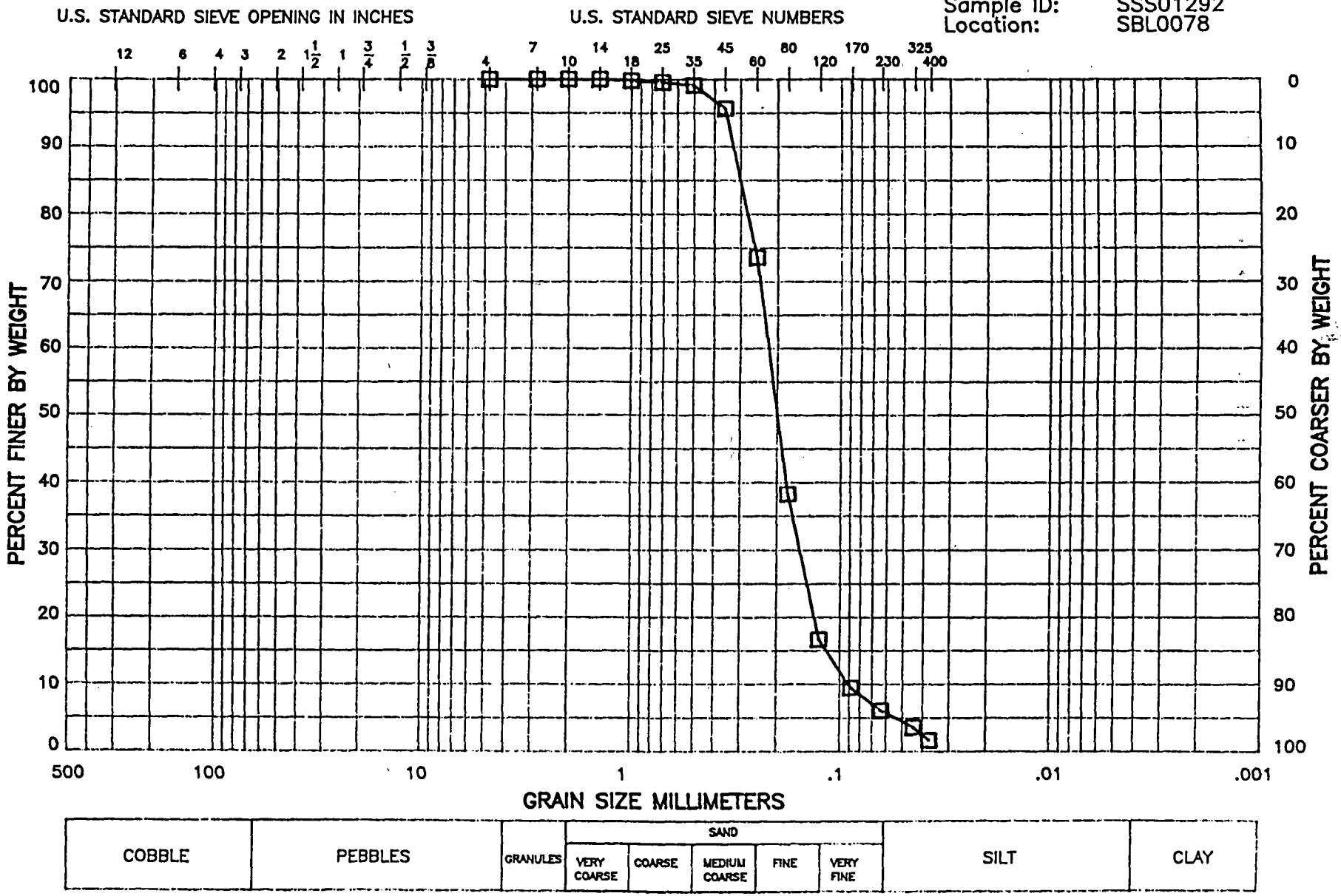
PNP Laboratories, Inc.

File No: 23014
Date: December 24, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS01292
Location: SBL0078

DRY SIEVE ANALYSIS



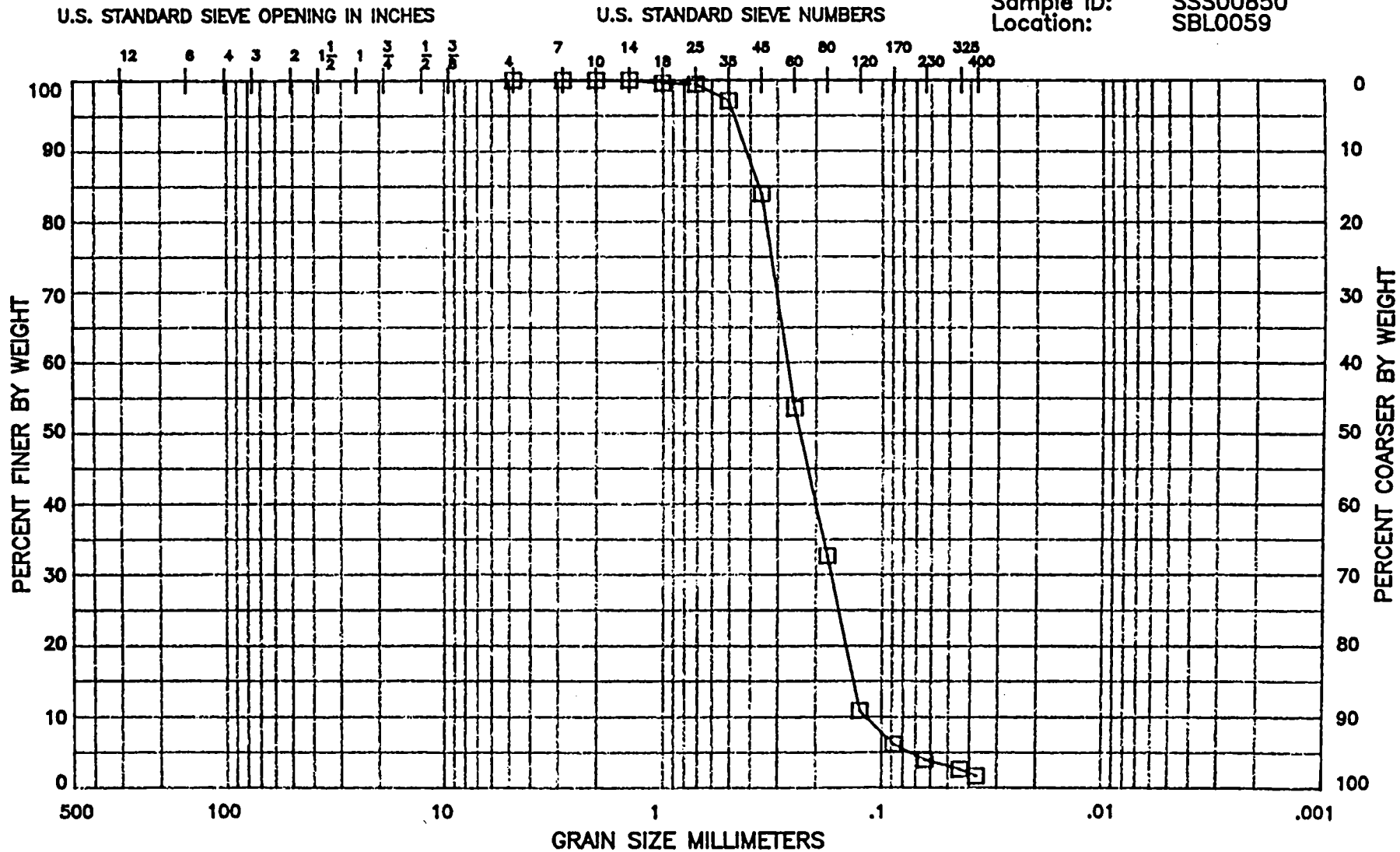
PNP Laboratories, Inc.

File No: 23066
Date: September 07, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-384-139
State: California
Sample ID: SSS00850
Location: SBL0059

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

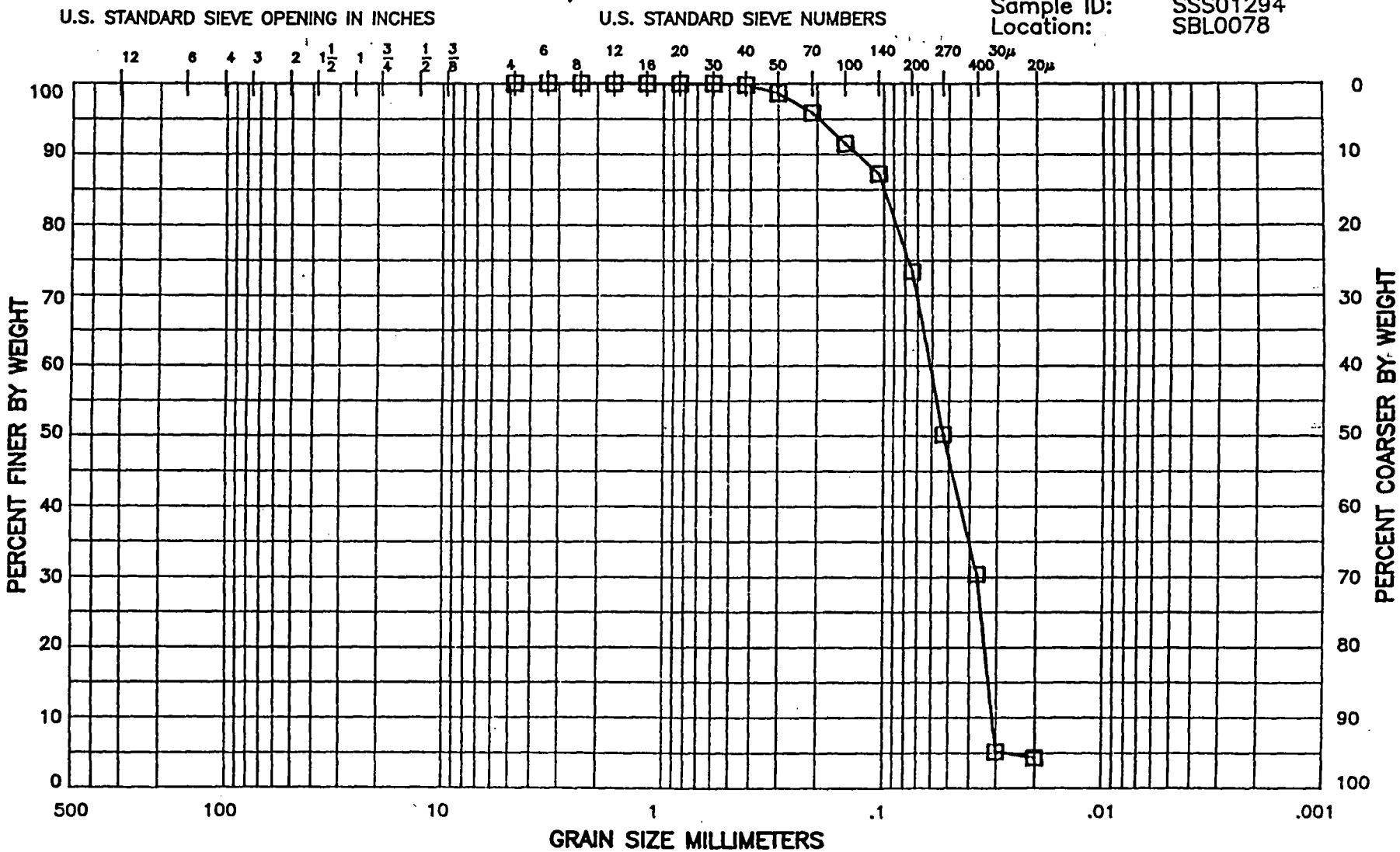
PNP Laboratories, Inc.

File No: 23014
Date: December 24, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS01294
Location: SBL0078

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

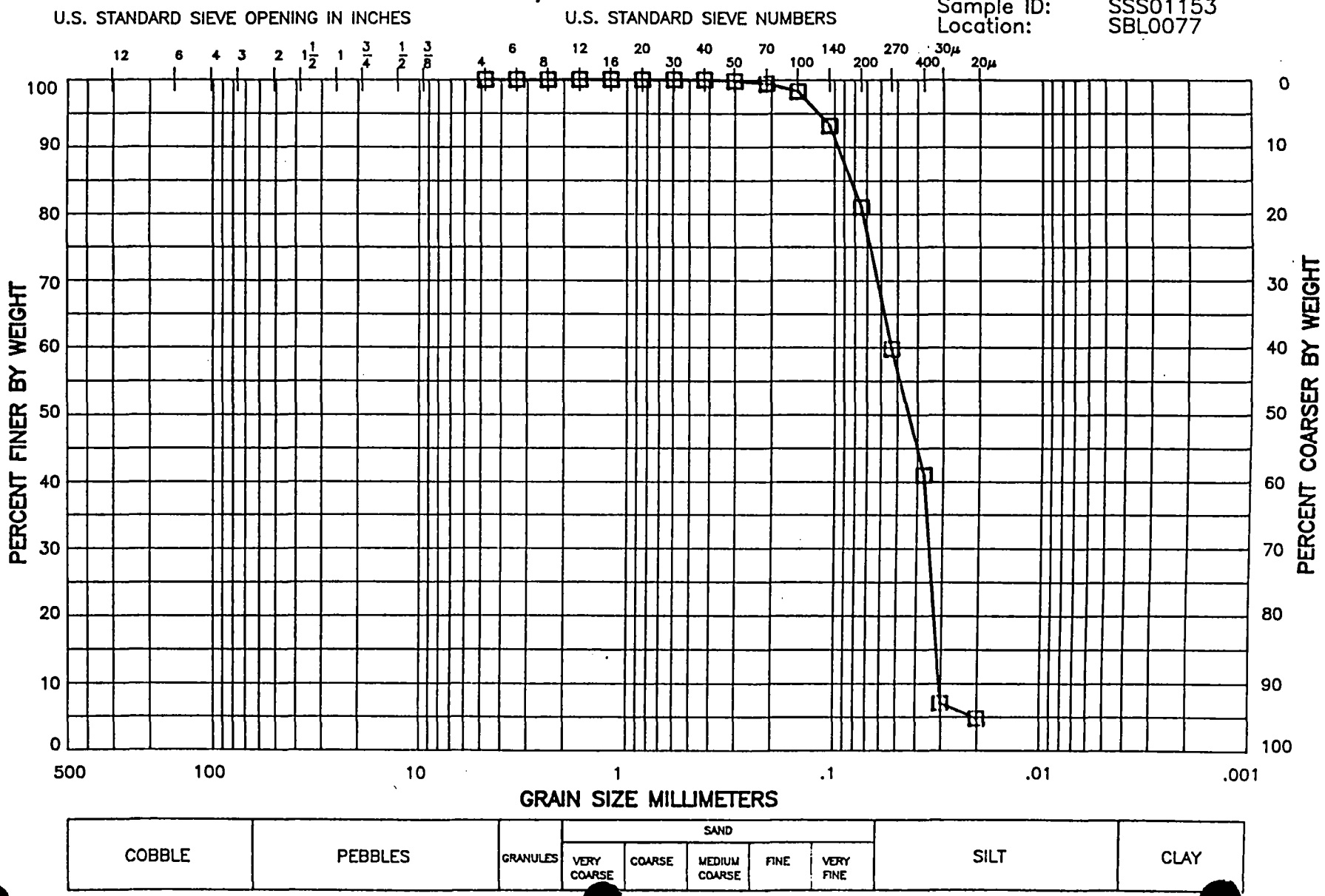
PNP Laboratories, Inc.

File No: 23096
Date: October 25, 1993

Client: DAMES & MOORE

Project Name: N/A
Project No.: 00216-387-139
State: CA
Sample ID: SSS01153
Location: SBL0077

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

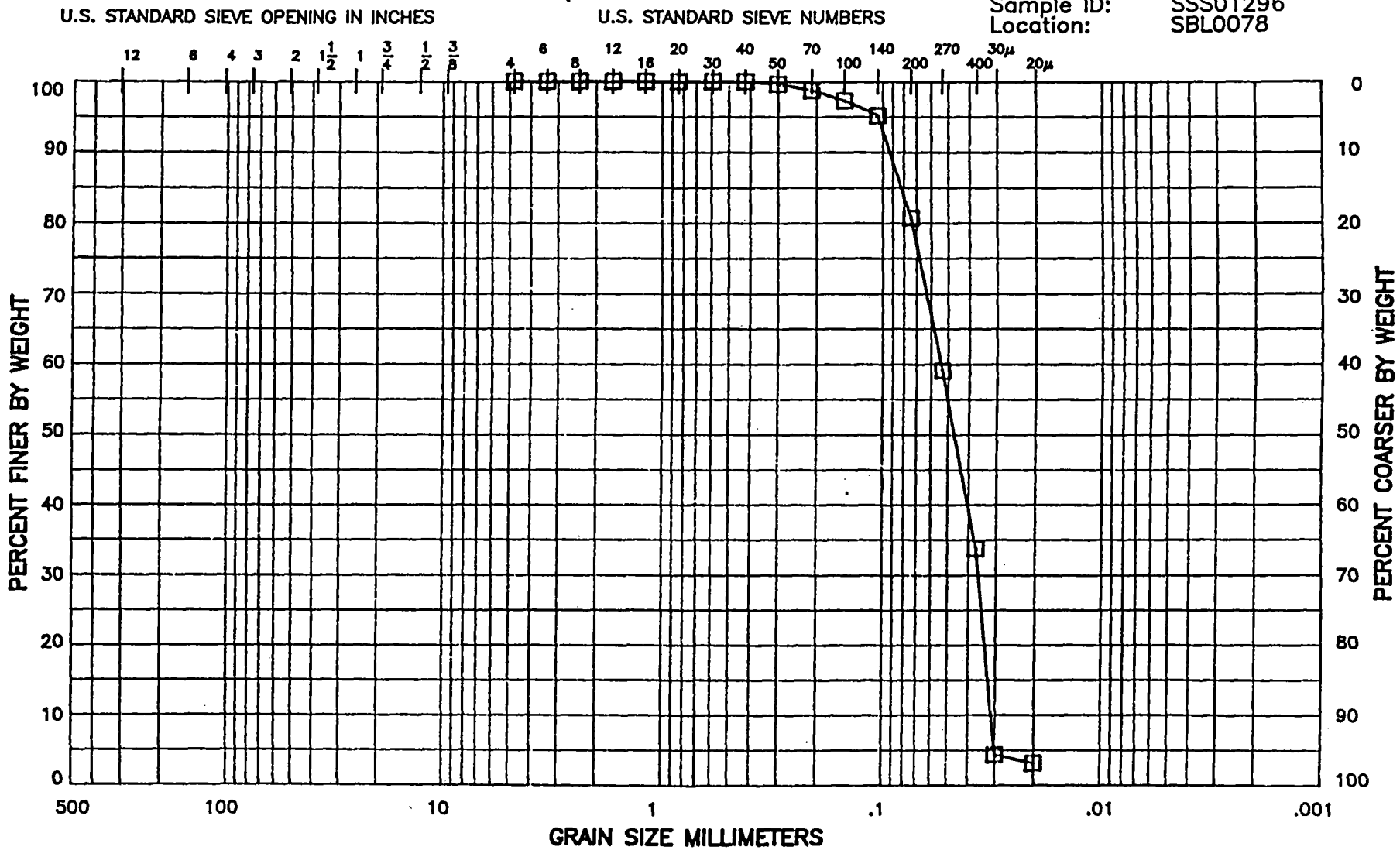
PNP Laboratories, Inc.

File No: 23014
Date: December 24, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS01296
Location: SBL0078

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

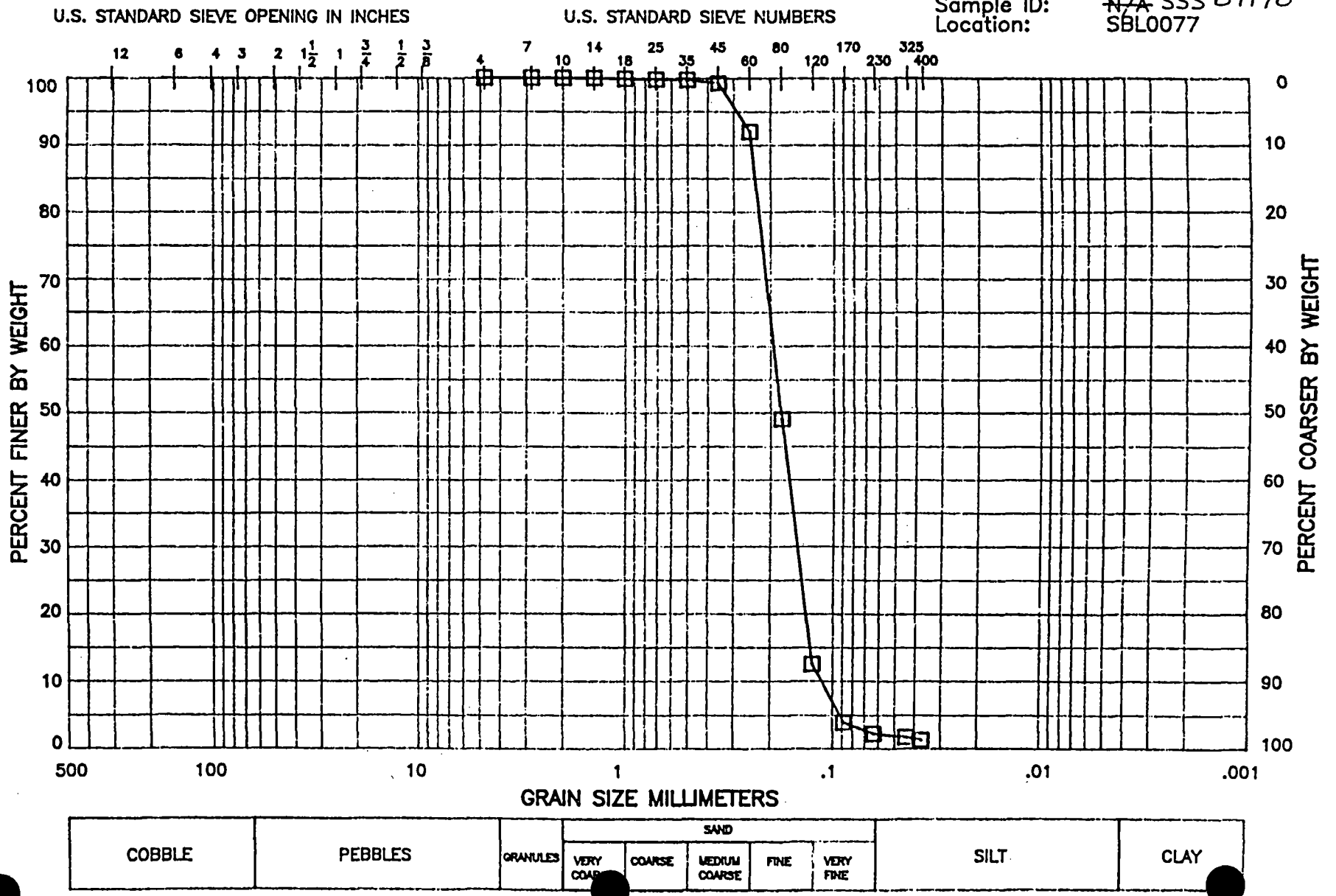
PNP Laboratories, Inc.

File No: 23096
Date: October 19, 1993

Client: DAMES & MOORE

Project Name: N/A
Project No.: 00216-387-139
State: CA
Sample ID: ~~N/A~~ SSS 01170
Location: SBL0077

DRY SIEVE ANALYSIS



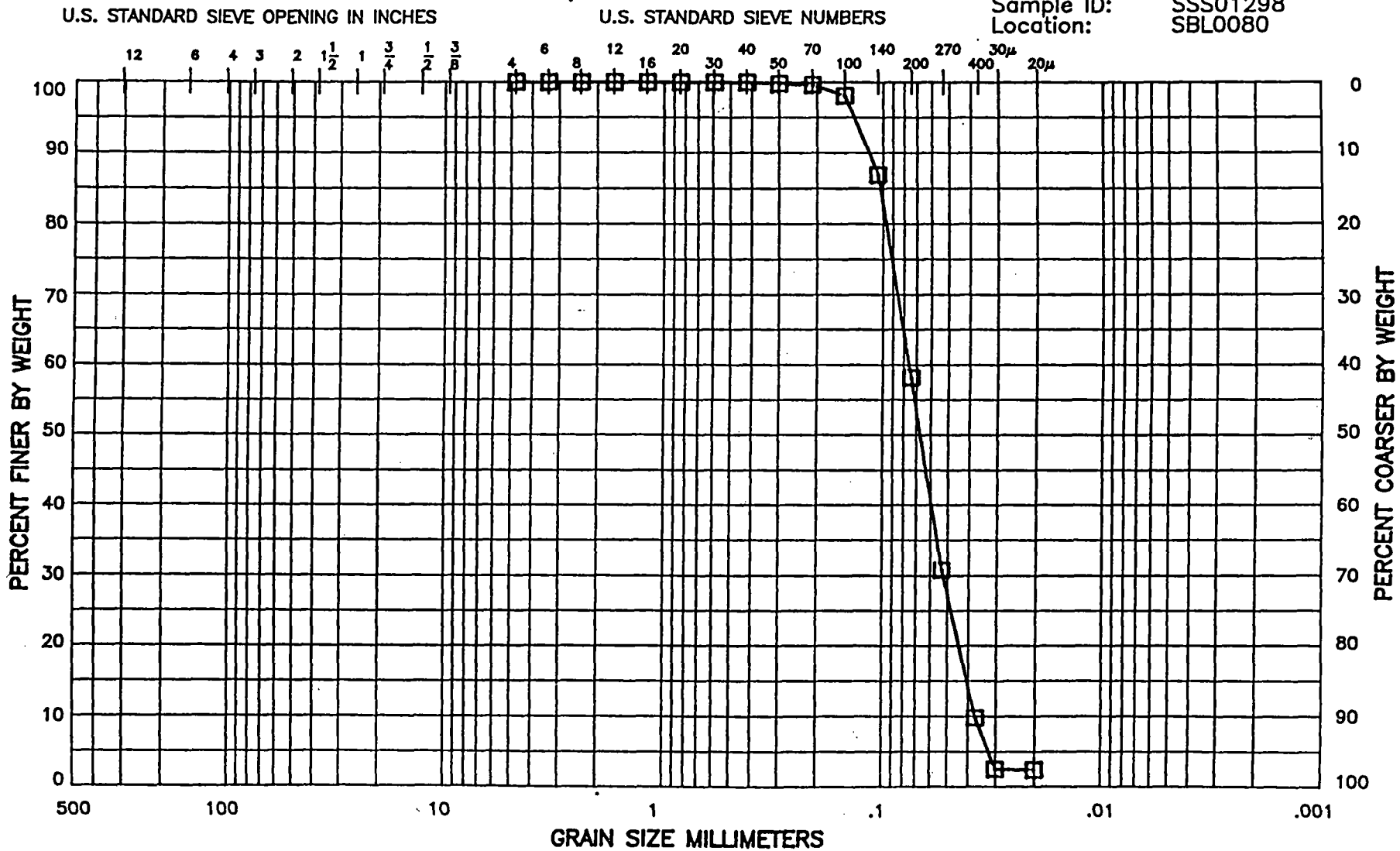
PNP Laboratories, Inc.

File No: 23014
Date: April 09, 1994

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS01298
Location: SBL0080

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

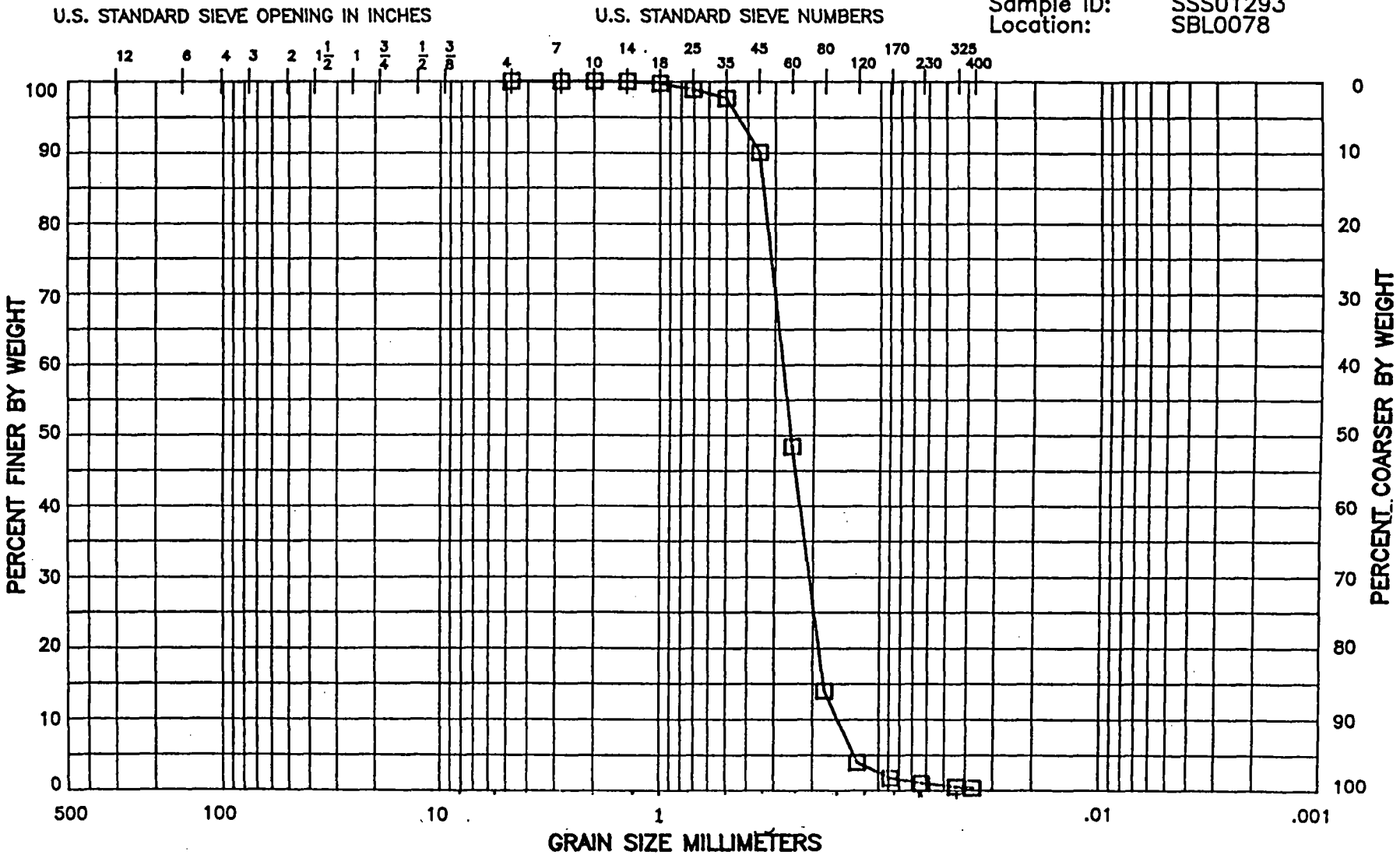
PNP Laboratories, Inc.

File No: 23014
Date: December 24, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS01293
Location: SBL0078

DRY SIEVE ANALYSIS



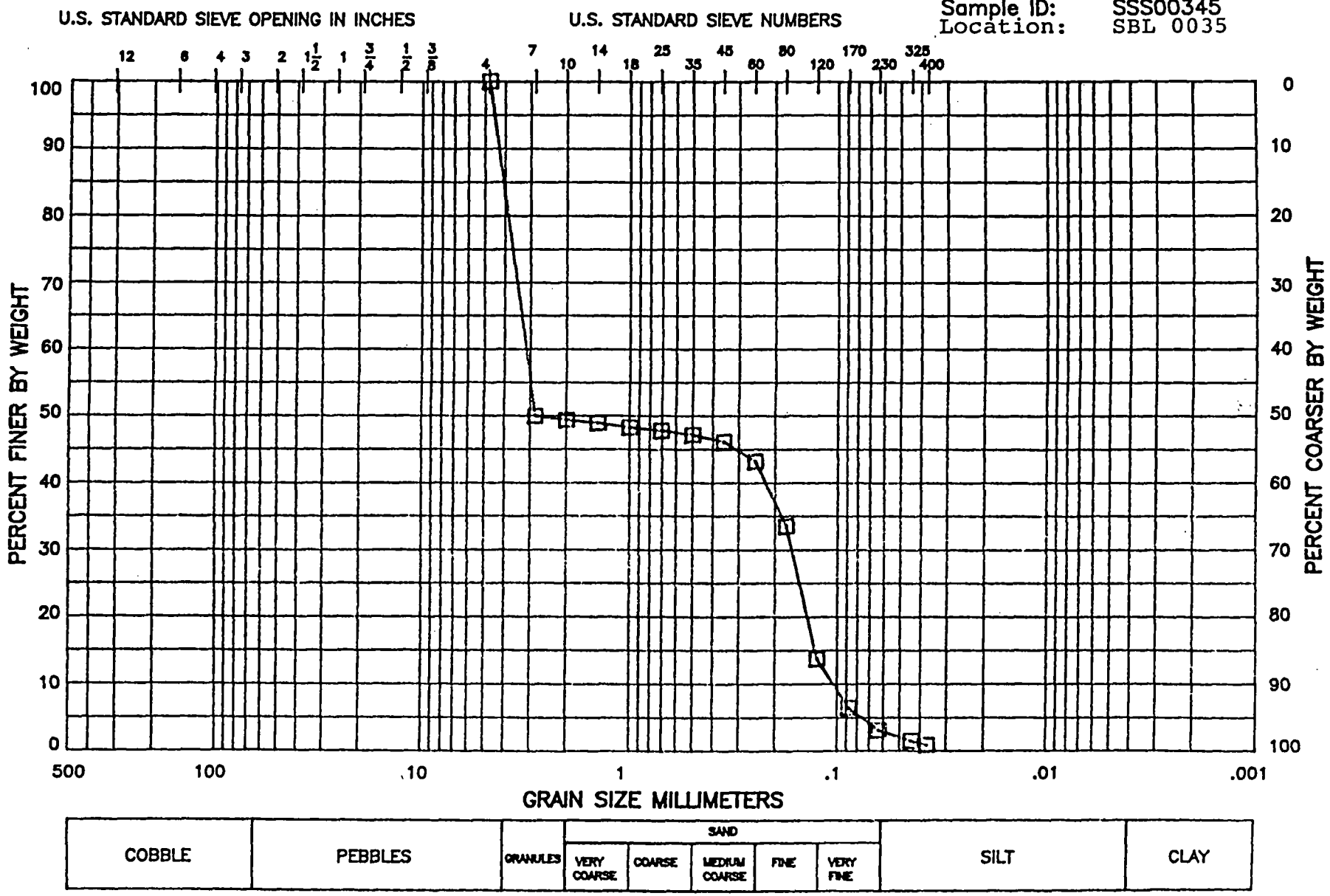
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00345
Location: SBL 0035

DRY SIEVE ANALYSIS



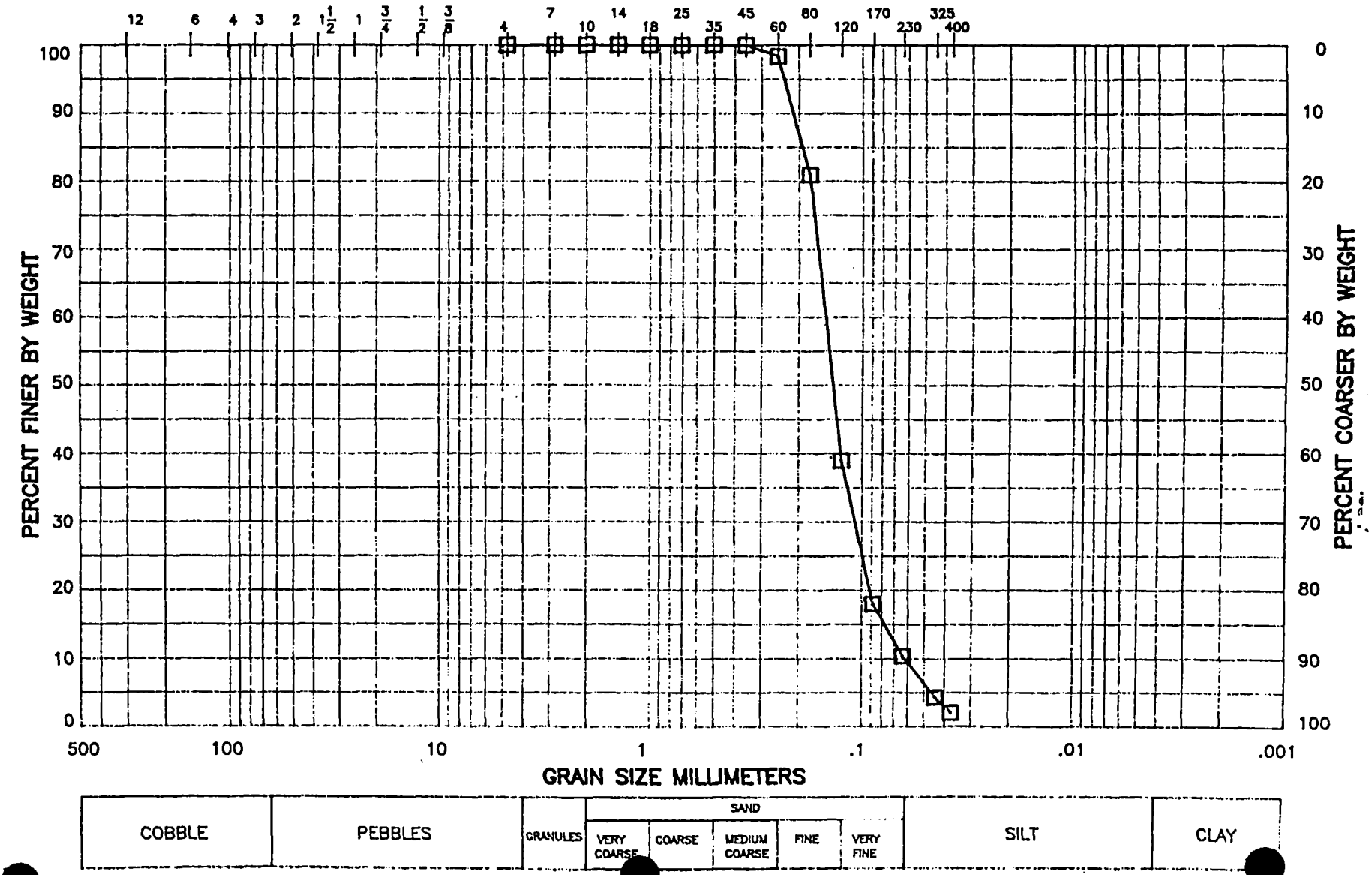
PNP Laboratories, Inc.

File No: 23014
Date: December 24, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS01295
Location: SBL0078

DRY SIEVE ANALYSIS



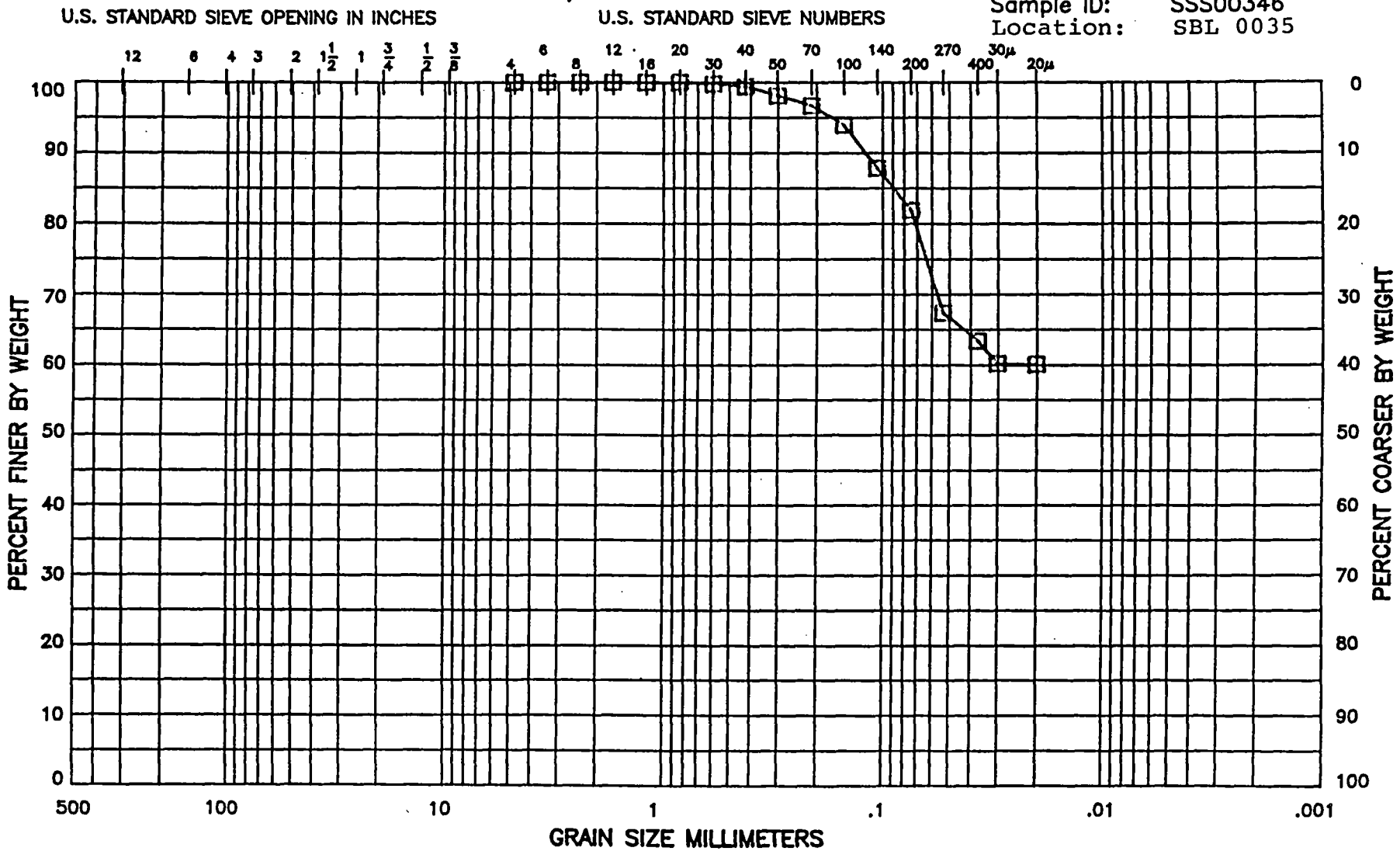
PTS Laboratories, Inc.

File No: 20004
Date: February 01, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-382-139
State: California
Sample ID: SSS00346
Location: SBL 0035

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

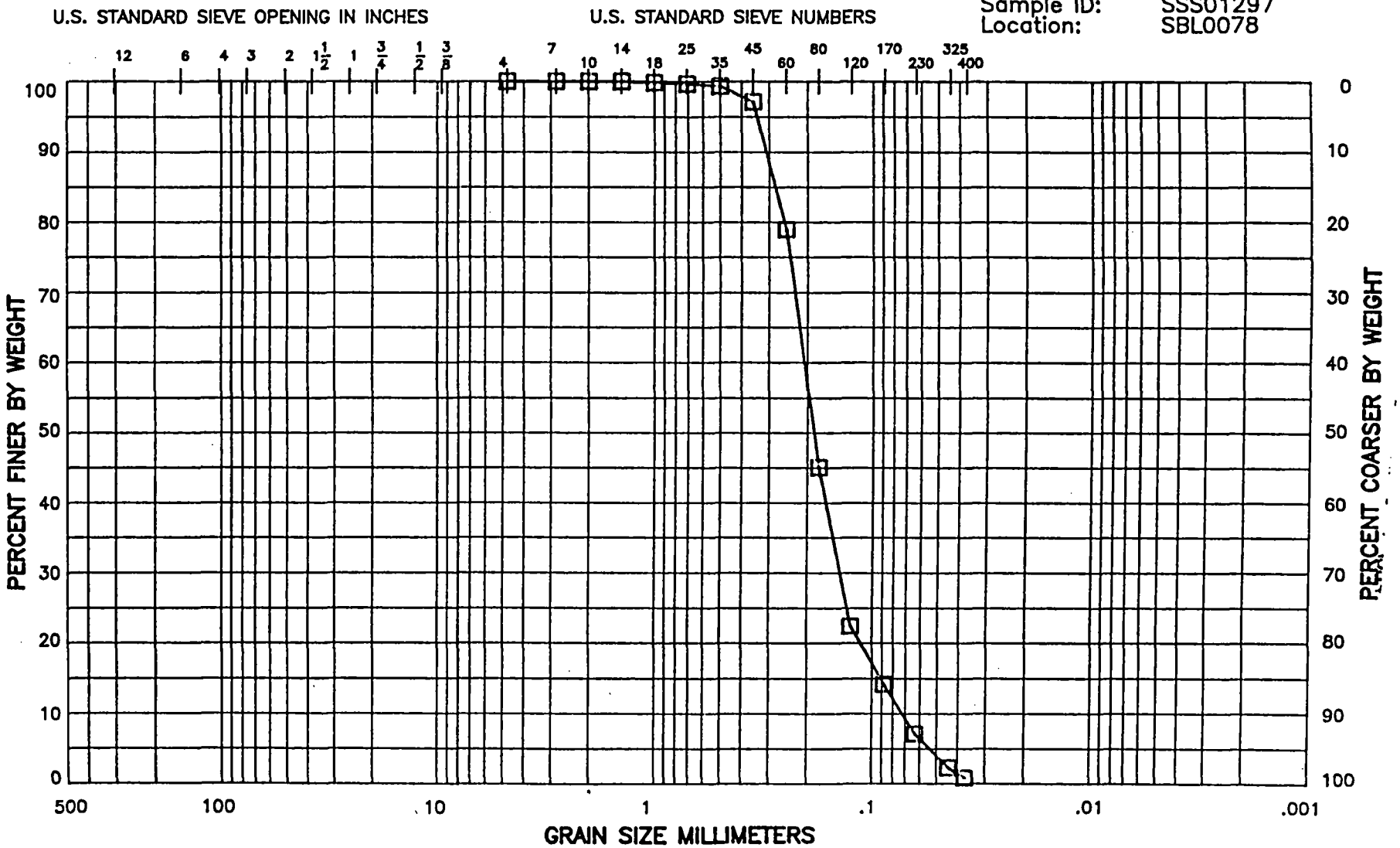
PNP Laboratories, Inc.

File No: 23014
Date: December 24, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS01297
Location: SBL0078

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

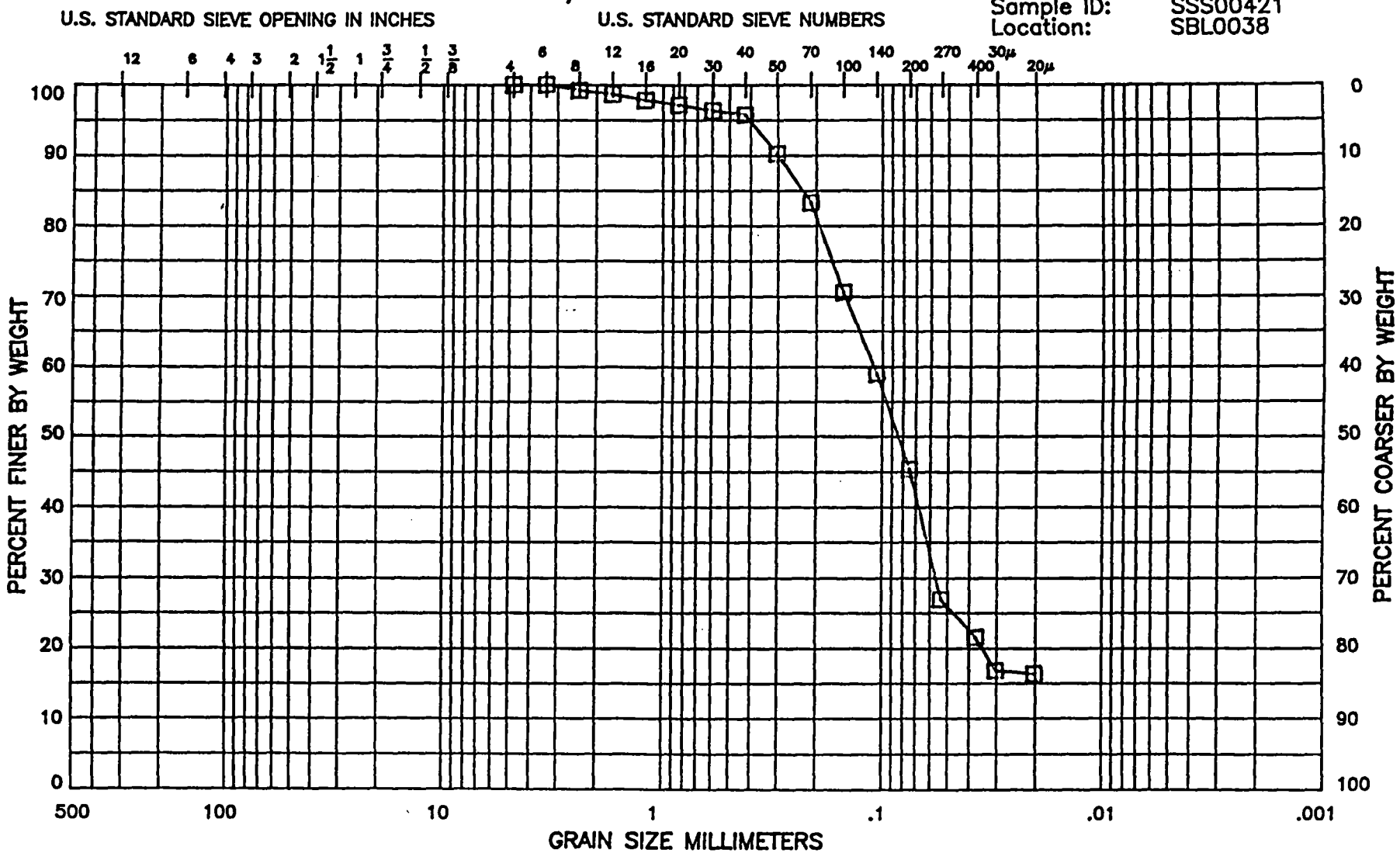
PNP Laboratories, Inc.

File No: 23013
Date: February 16, 1993

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-386-139
State: California
Sample ID: SSS00421
Location: SBL0038

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

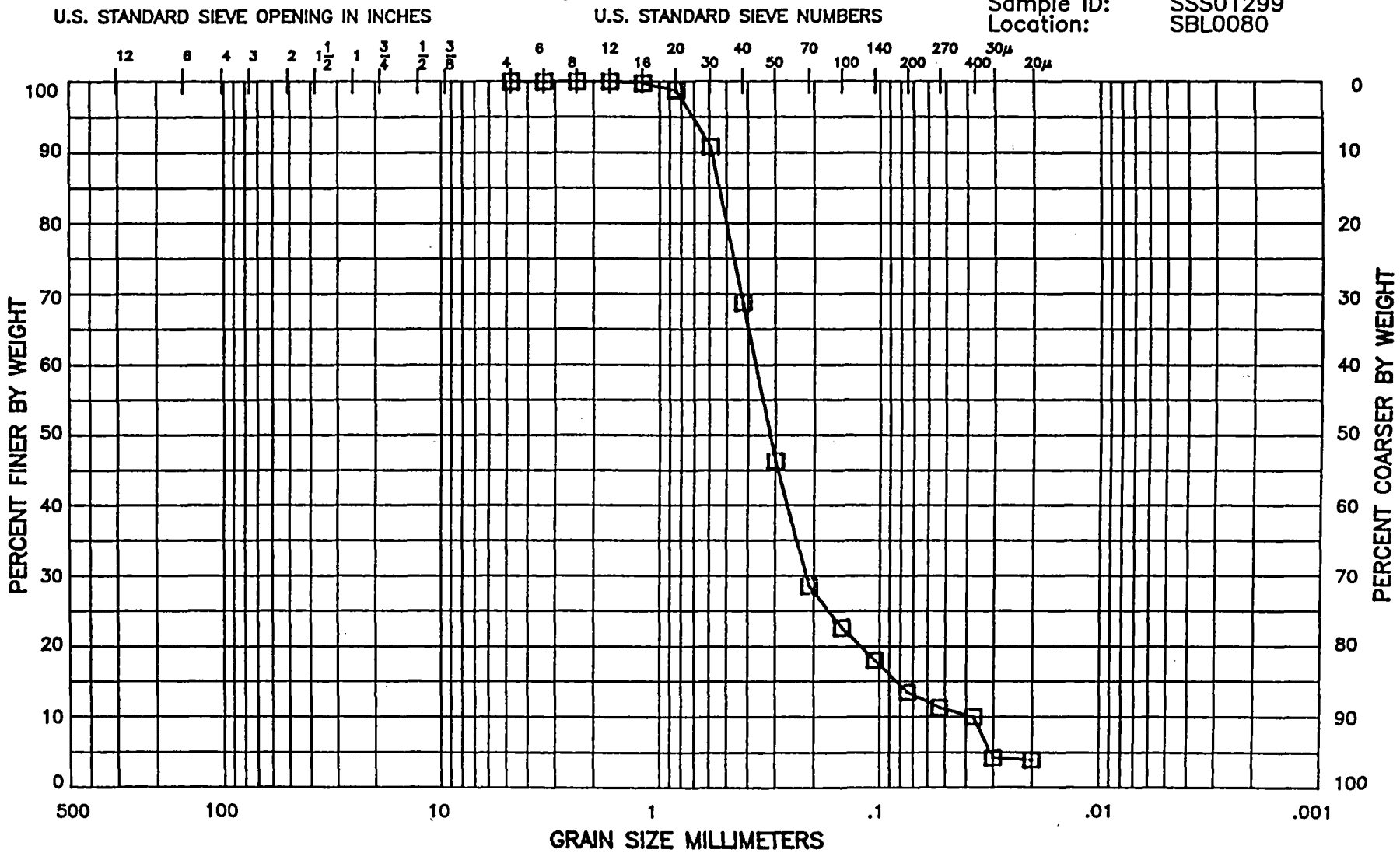
PNP Laboratories, Inc.

File No: 23014
Date: April 09, 1994

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS01299
Location: SBL0080

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

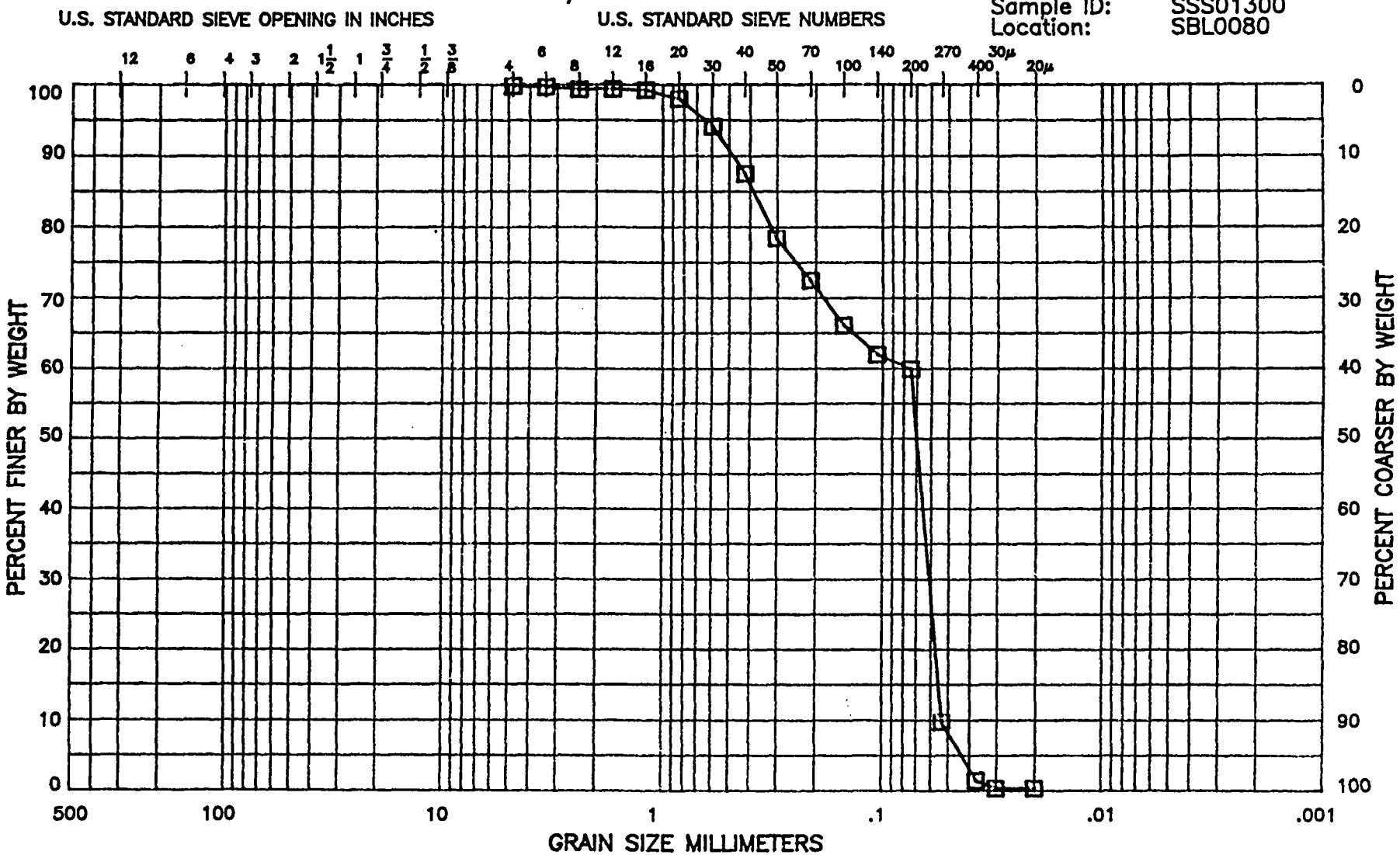
PNP Laboratories, Inc.

File No: 23014
Date: April 11, 1994

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS01300
Location: SBL0080

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

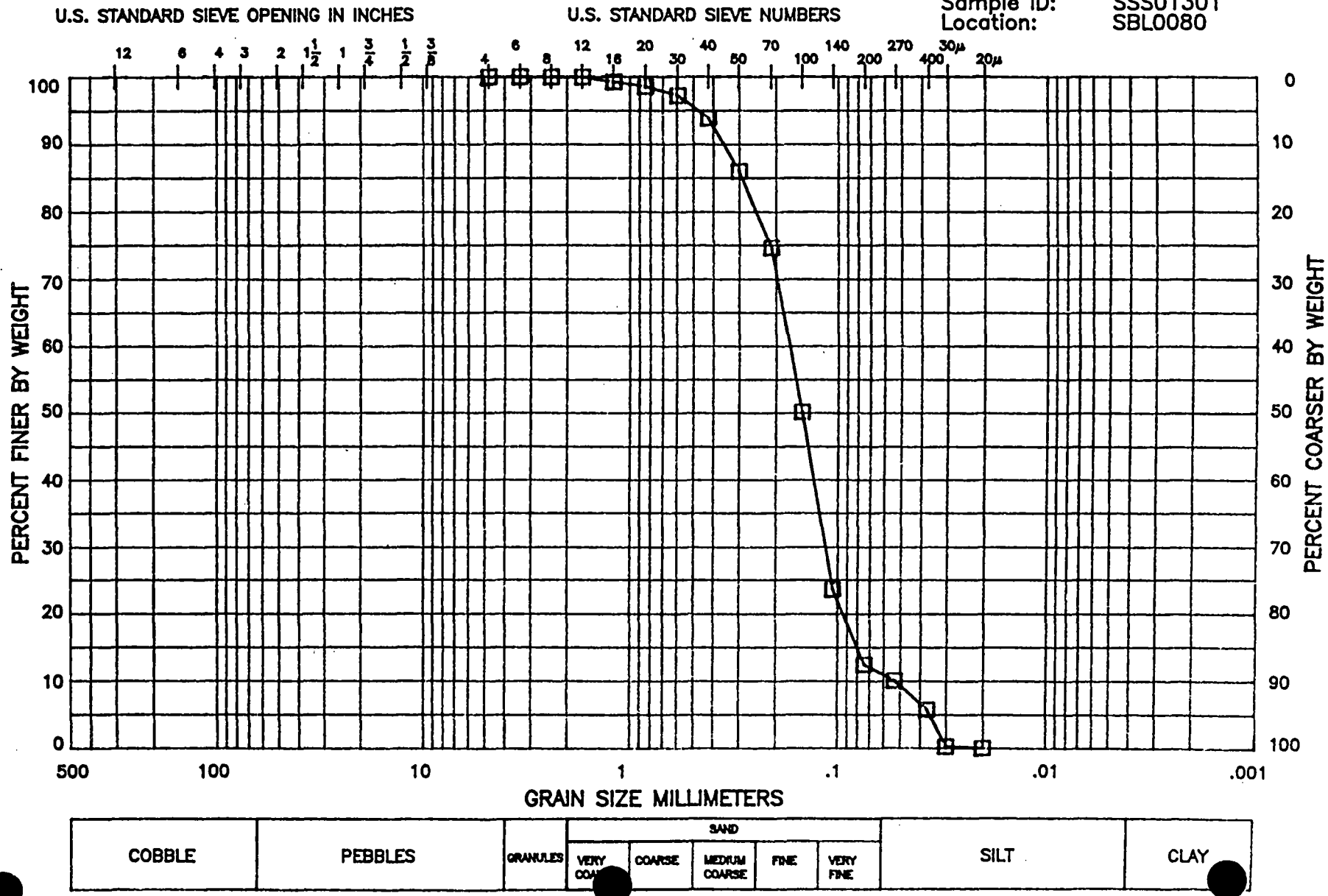
PNP Laboratories, Inc.

File No: 23014
Date: April 11, 1994

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS01301
Location: SBL0080

WET/DRY SIEVE ANALYSIS



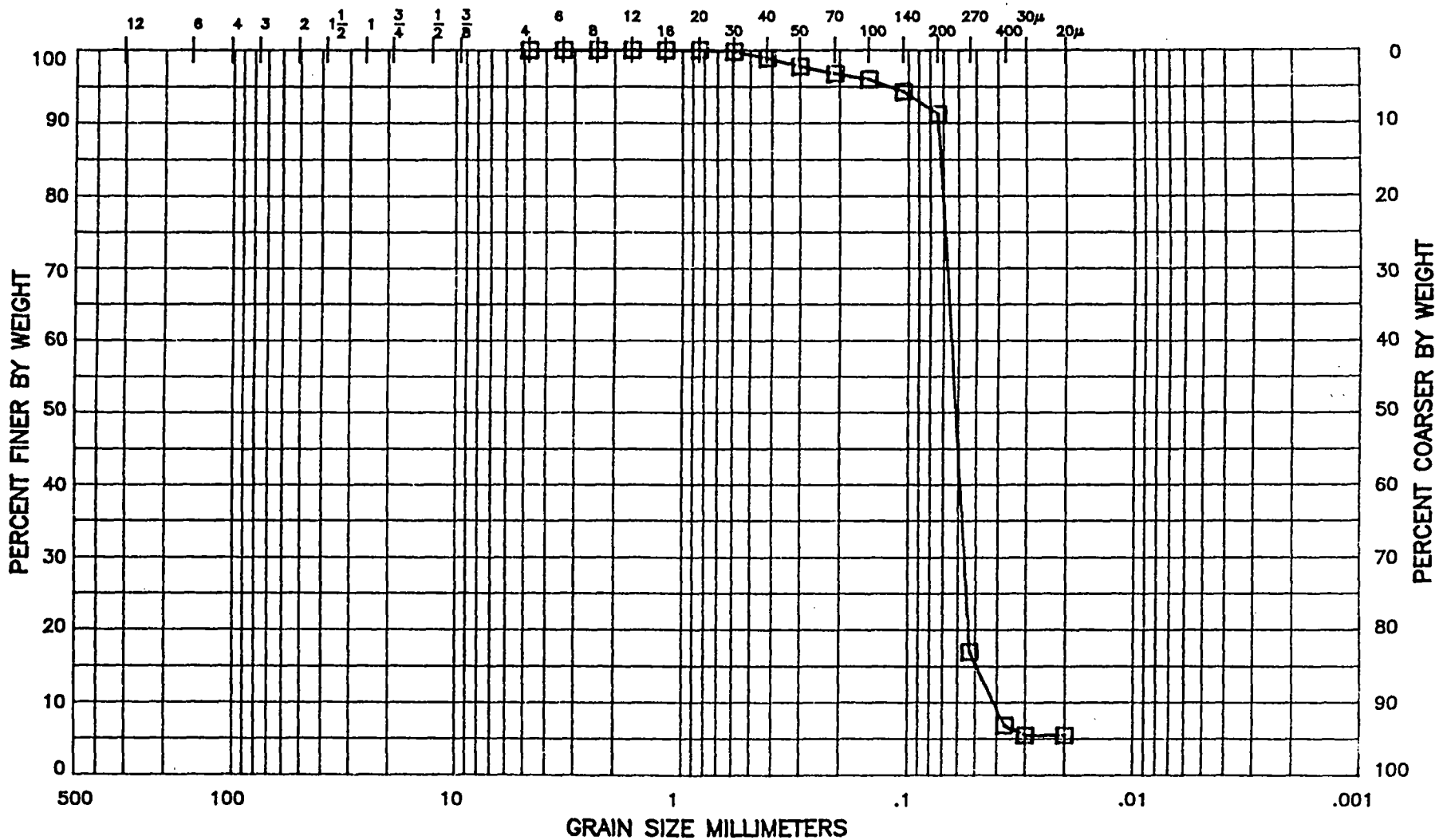
PNP Laboratories, Inc.

File No: 23014
Date: April 09, 1994

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS01302
Location: SBL0080

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

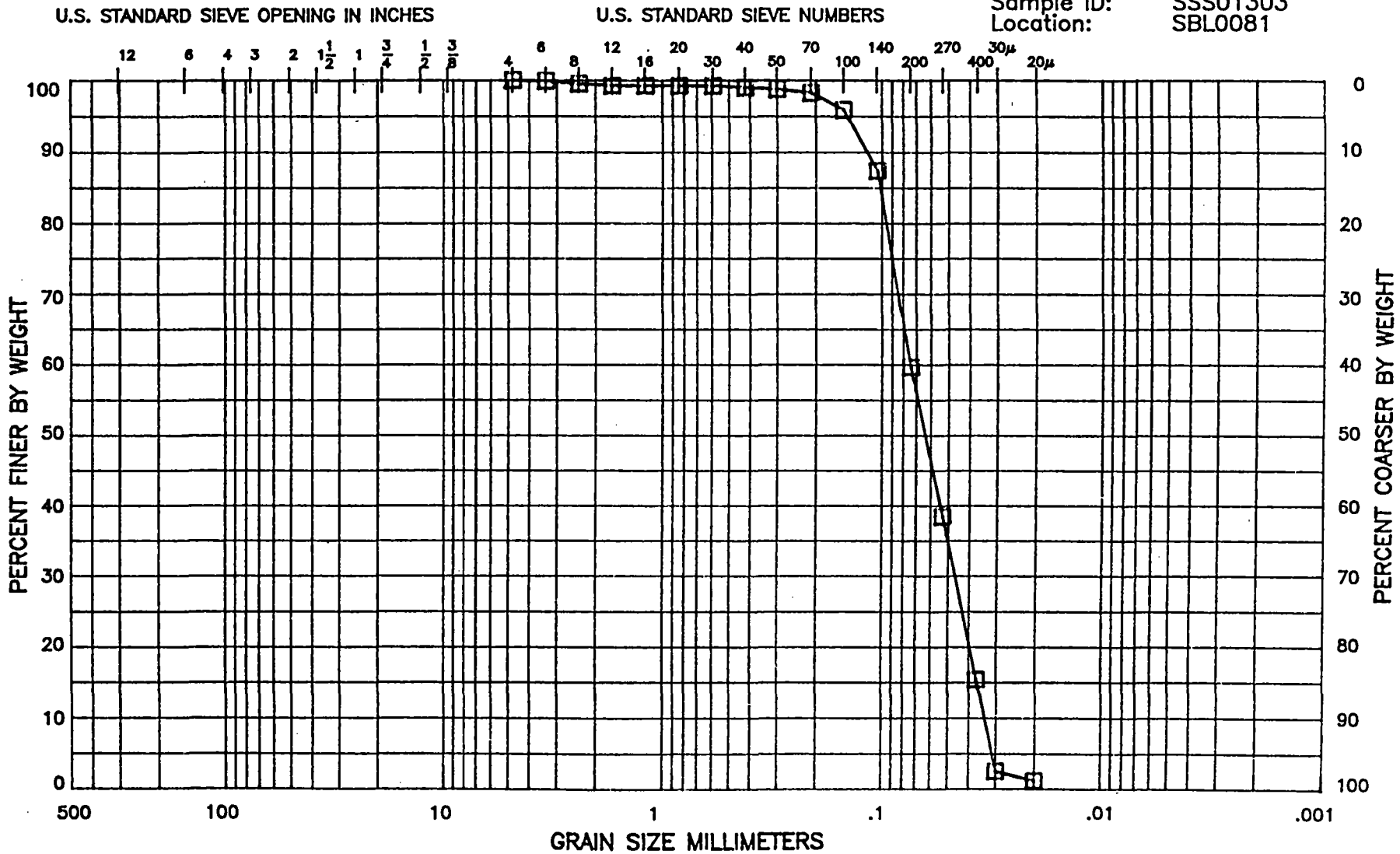
PNP Laboratories, Inc.

File No: 24009
Date: April 09, 1994

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-440-139
State: California
Sample ID: SSS01303
Location: SBL0081

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

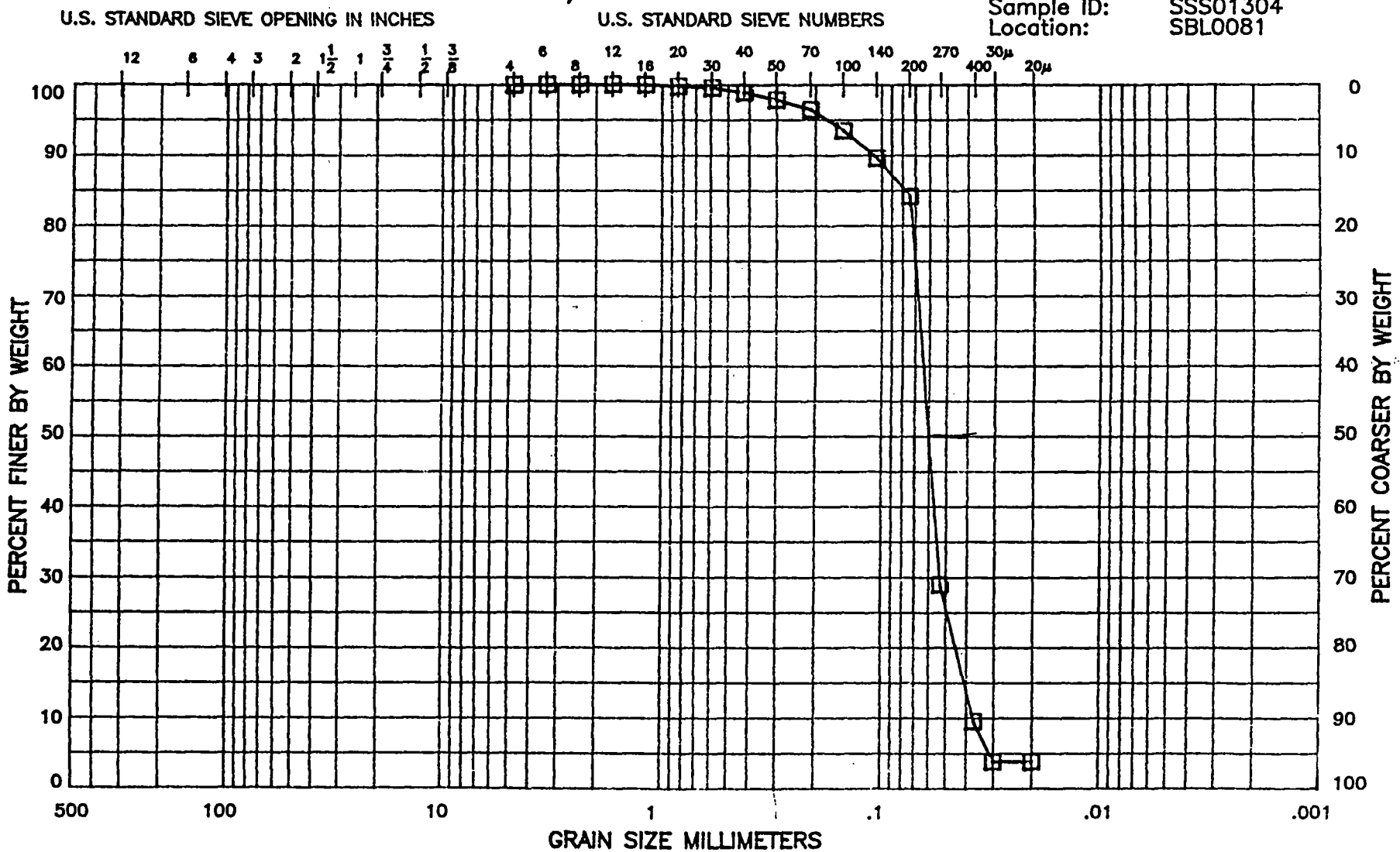
PNP Laboratories, Inc.

File No: 24009
Date: April 09, 1994

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-440-139
State: California
Sample ID: SSS01304
Location: SBL0081

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

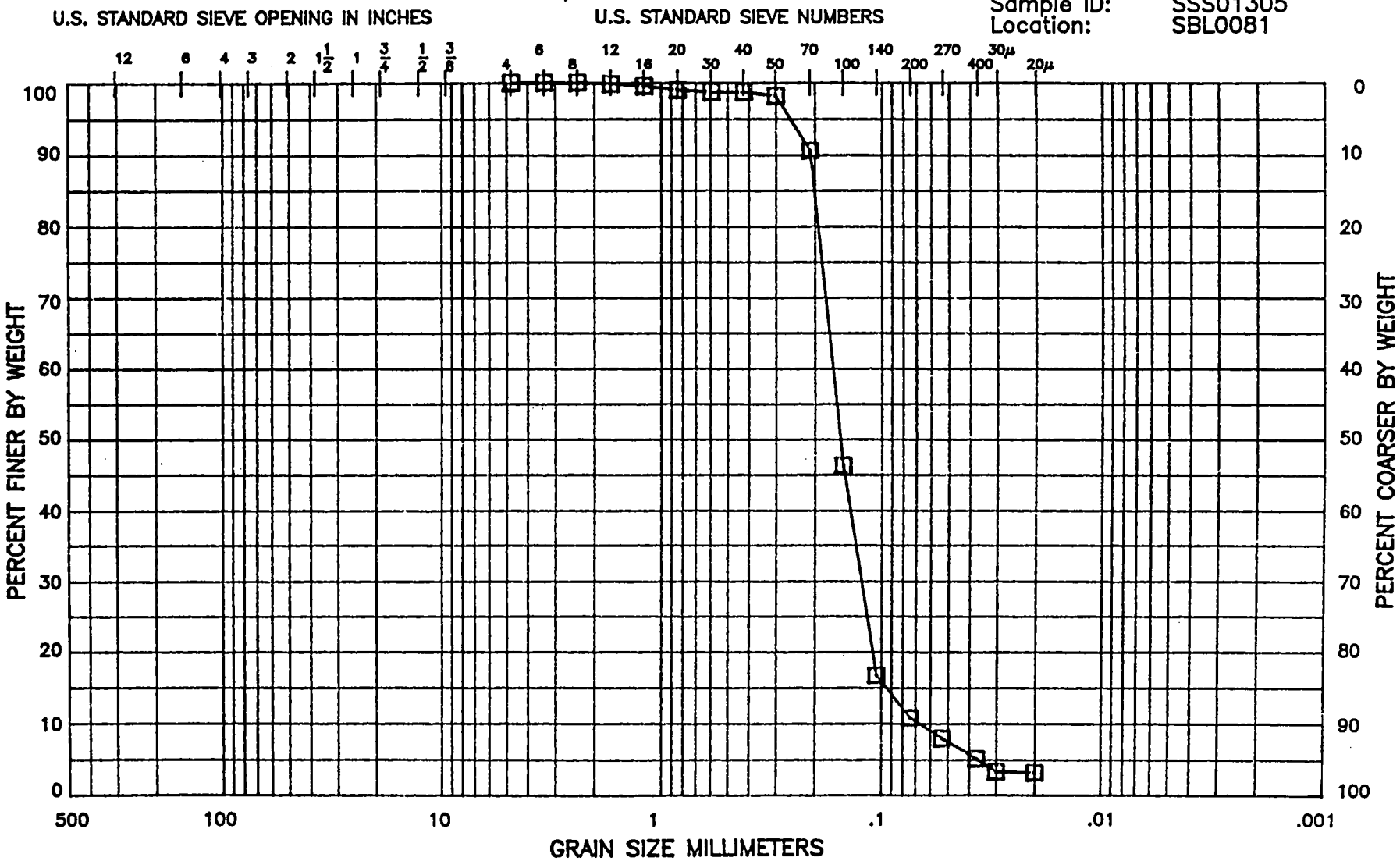
PNP Laboratories, Inc.

File No: 24009
Date: April 09, 1994

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-440-139
State: California
Sample ID: SSS01305
Location: SBL0081

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

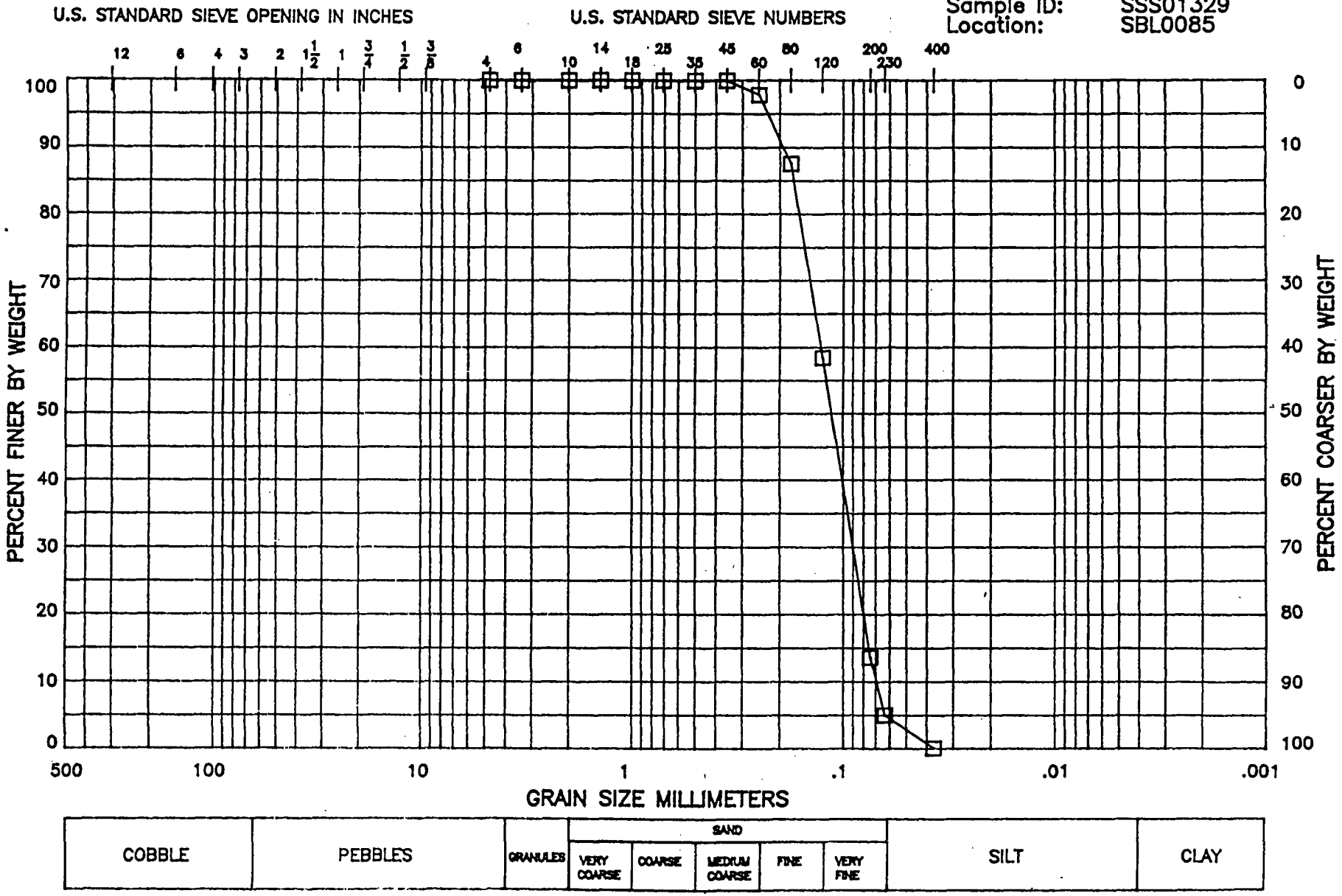
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01329
Location: SBL0085

DRY SIEVE ANALYSIS



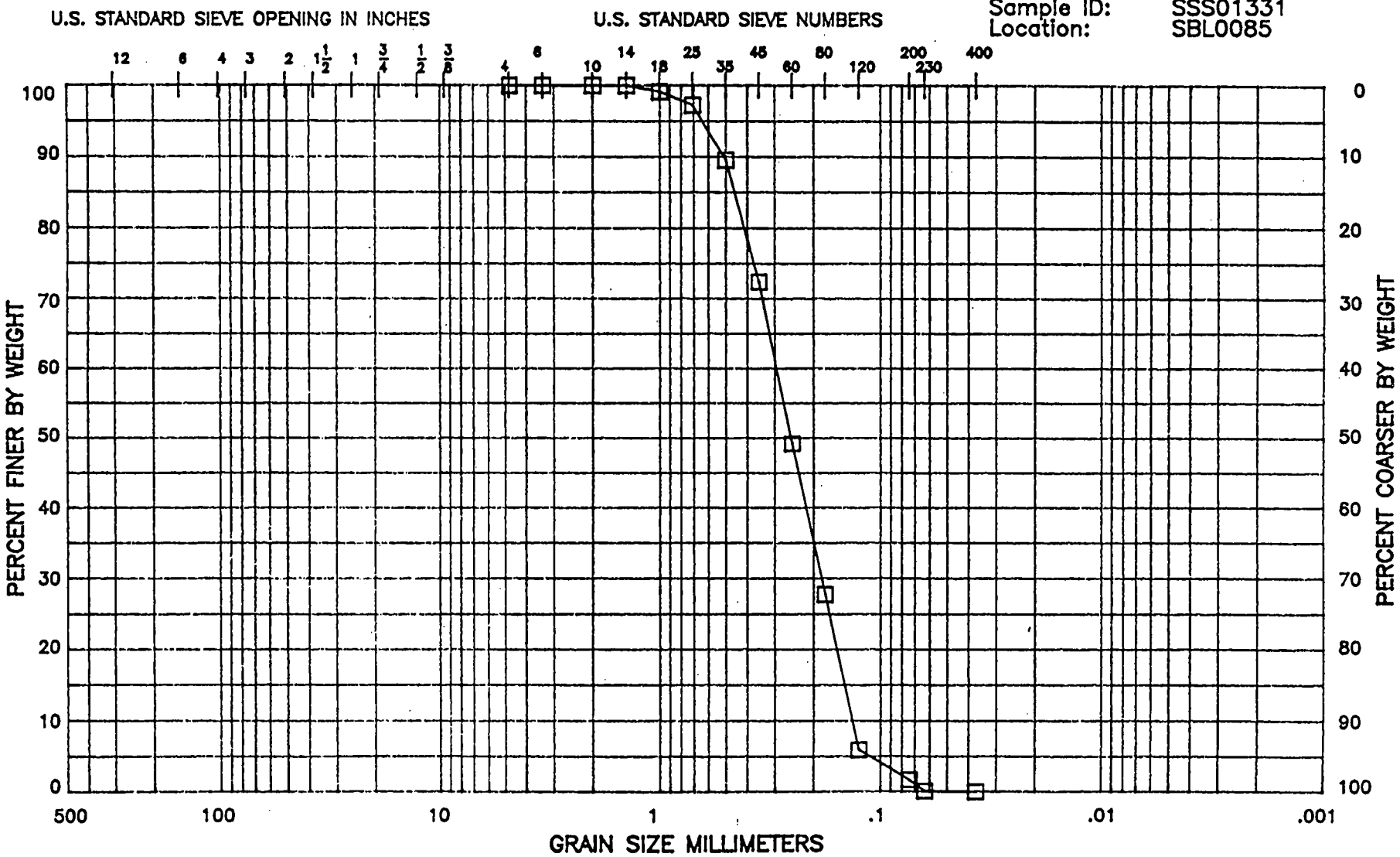
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01331
Location: SBL0085

DRY SIEVE ANALYSIS



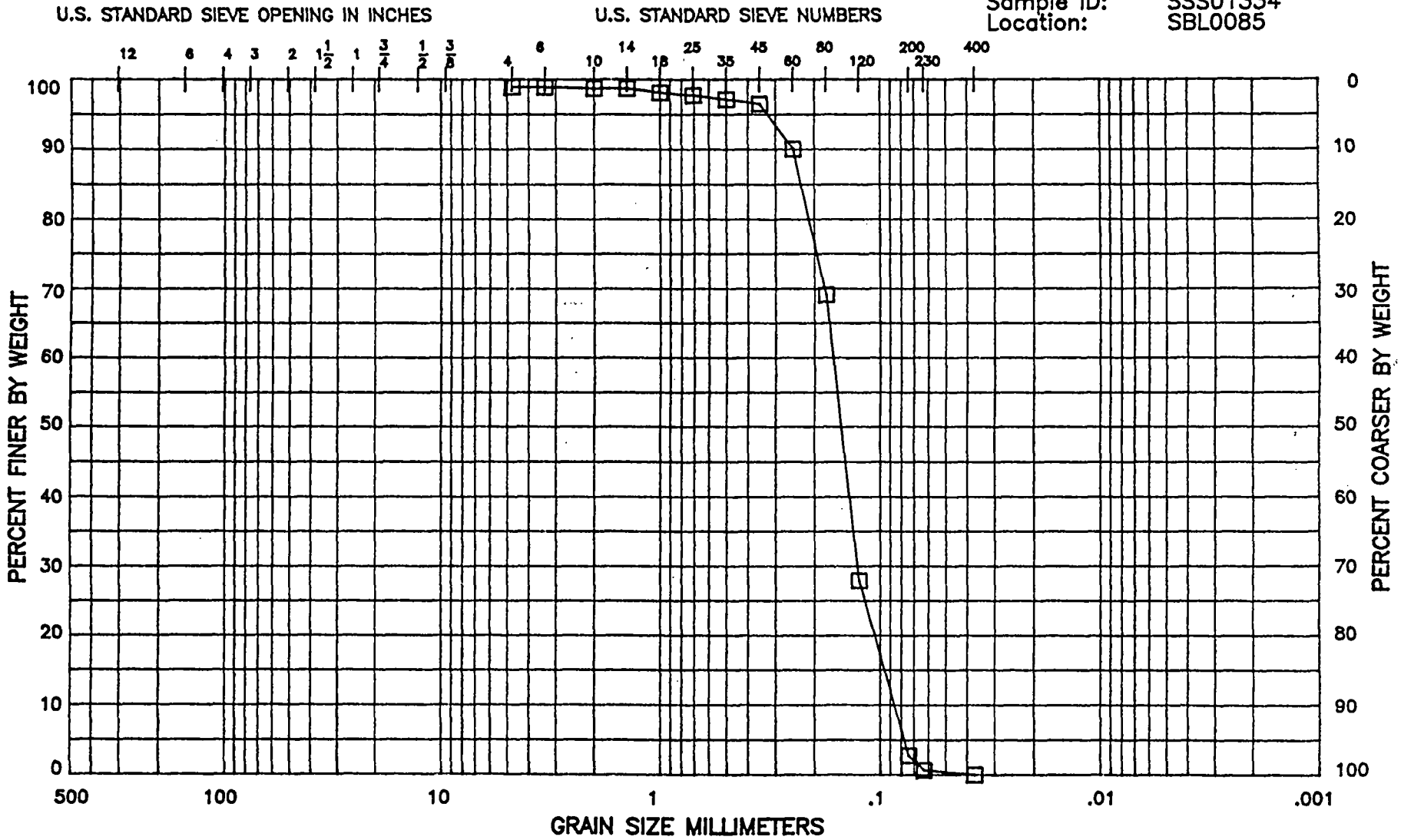
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01334
Location: SBL0085

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

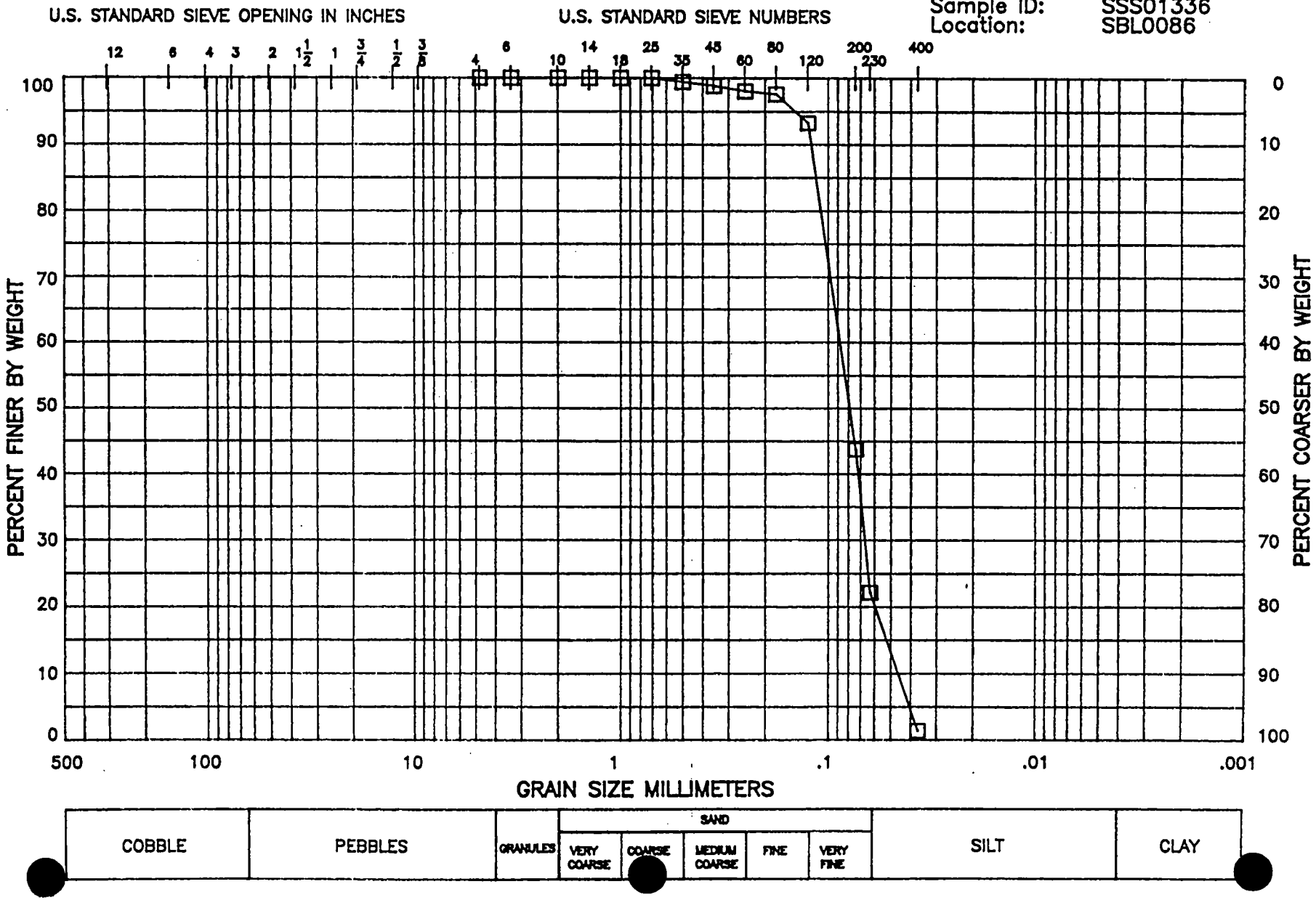
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01336
Location: SBL0086

DRY SIEVE ANALYSIS



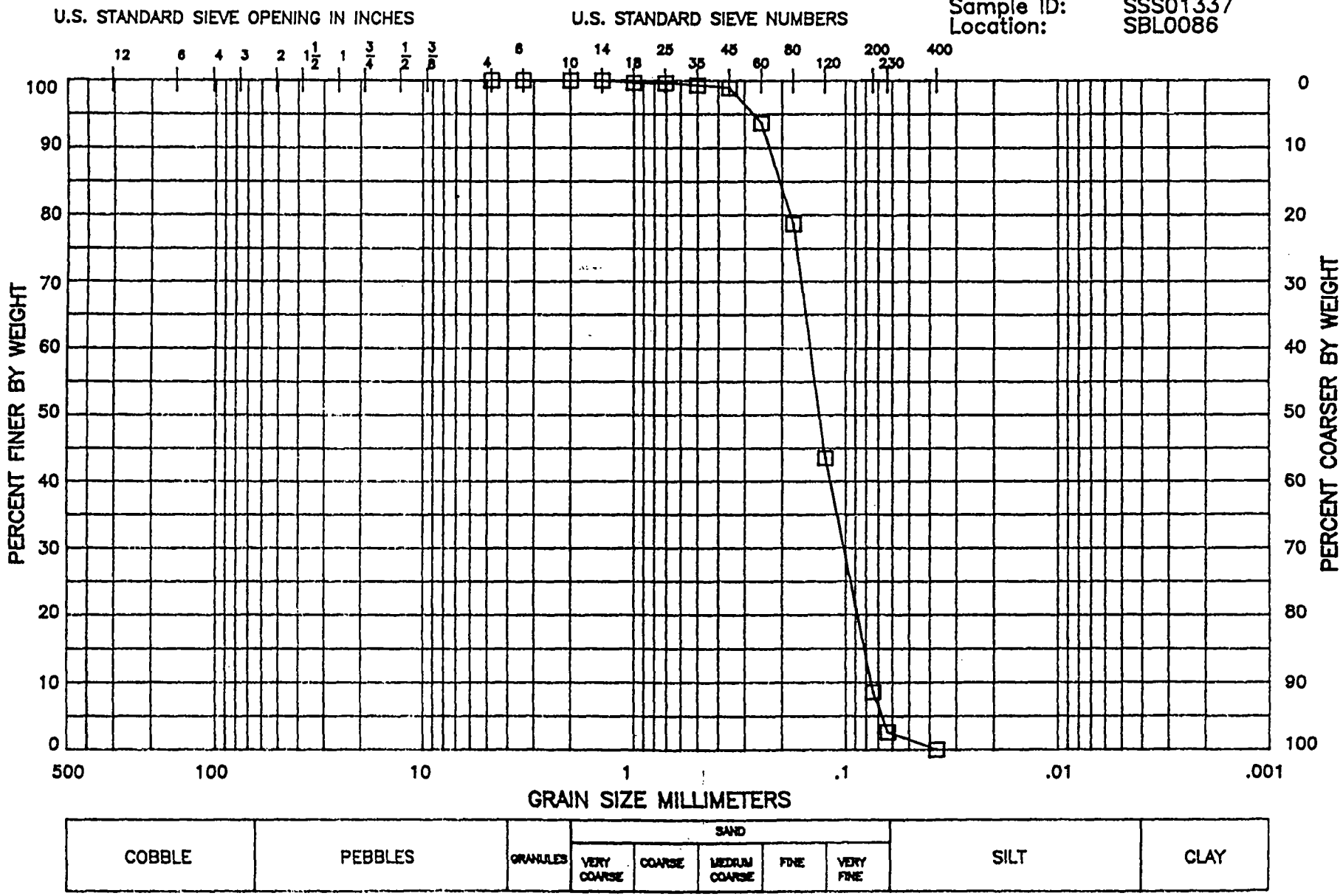
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01337
Location: SBL0086

DRY SIEVE ANALYSIS



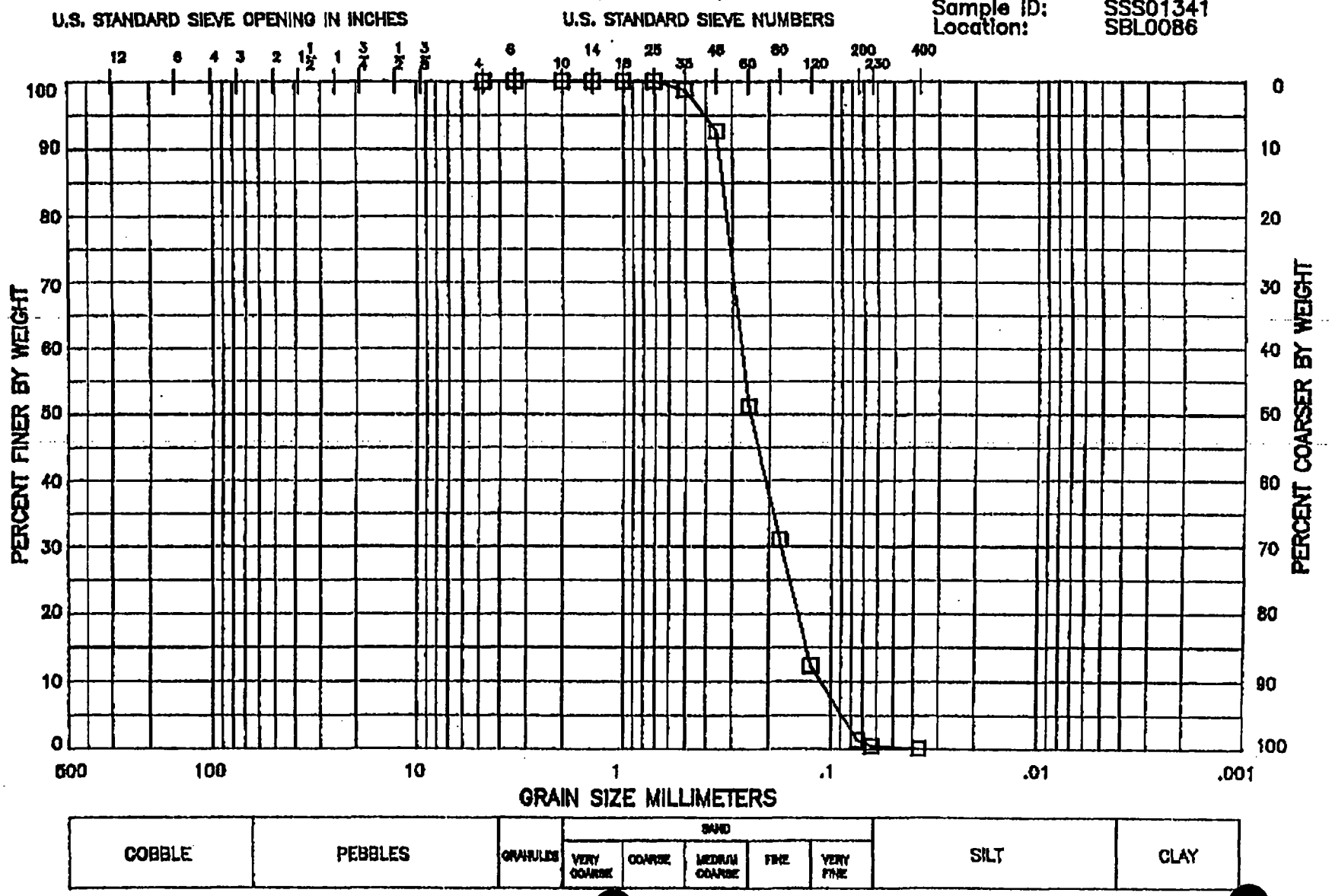
PTS Laboratories, Inc.

File No: 24133 Page: 3
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01341
Location: SBL0086

DRY SIEVE ANALYSIS



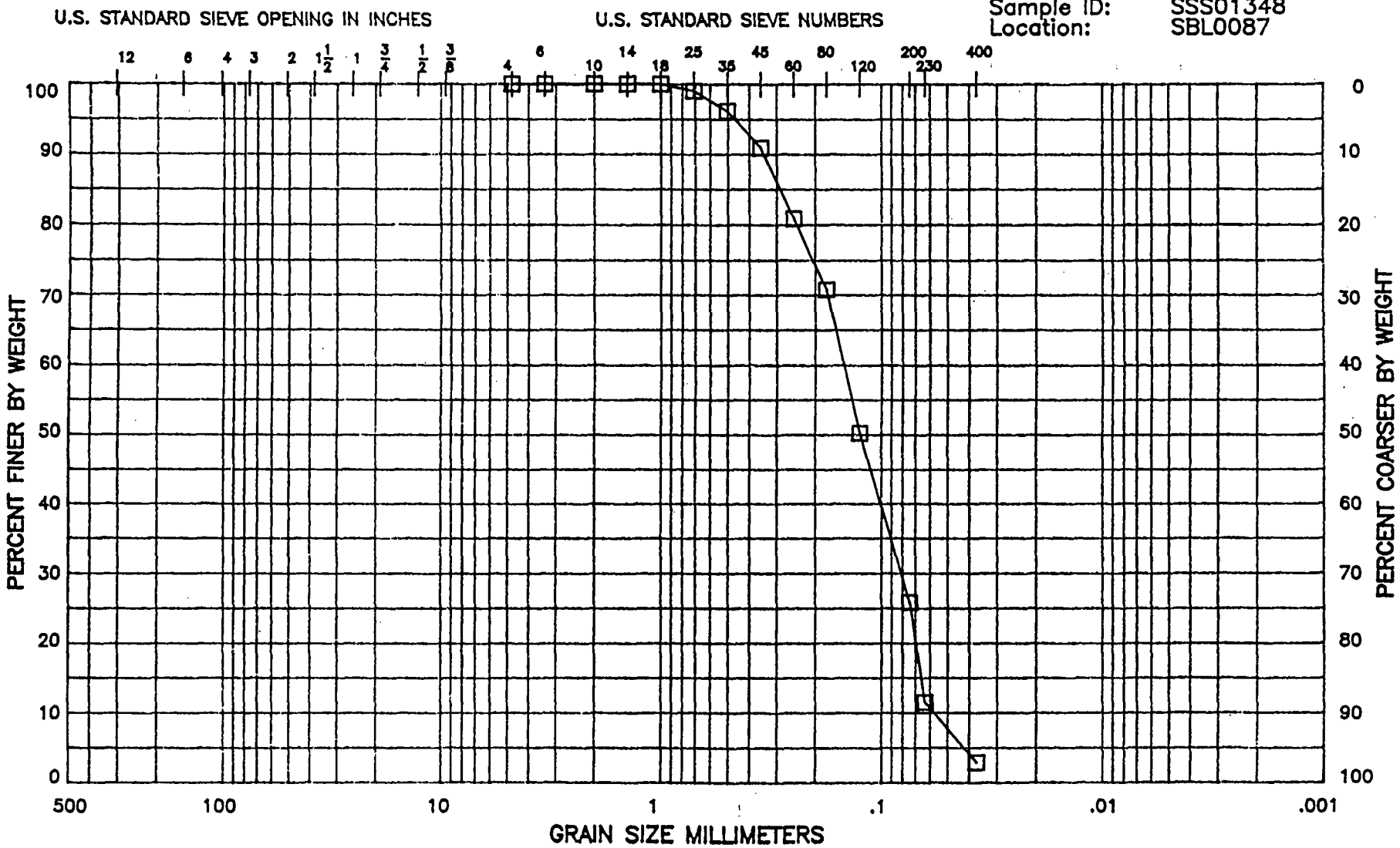
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01348
Location: SBL0087

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

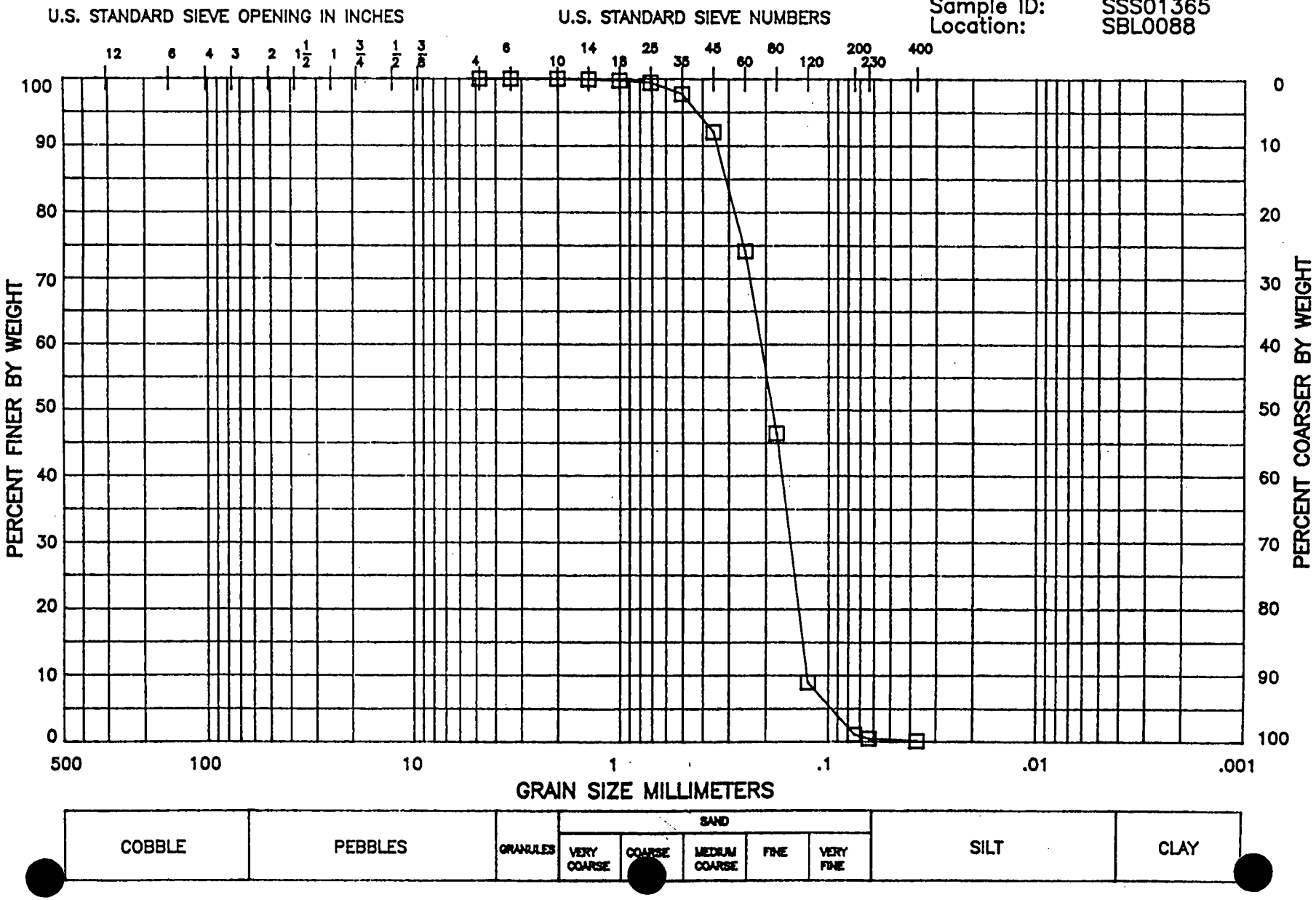
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01365
Location: SBL0088

DRY SIEVE ANALYSIS



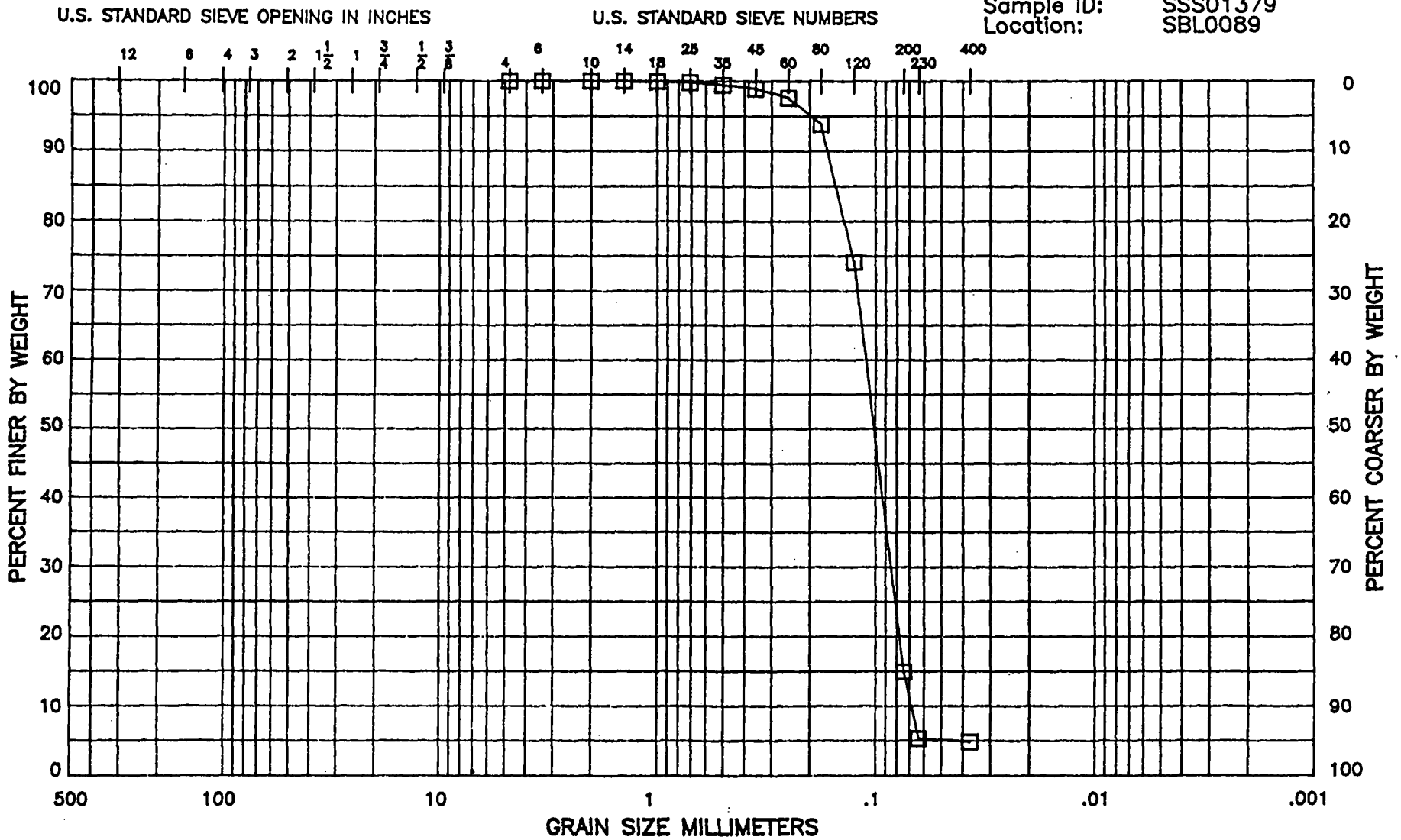
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01379
Location: SBL0089

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

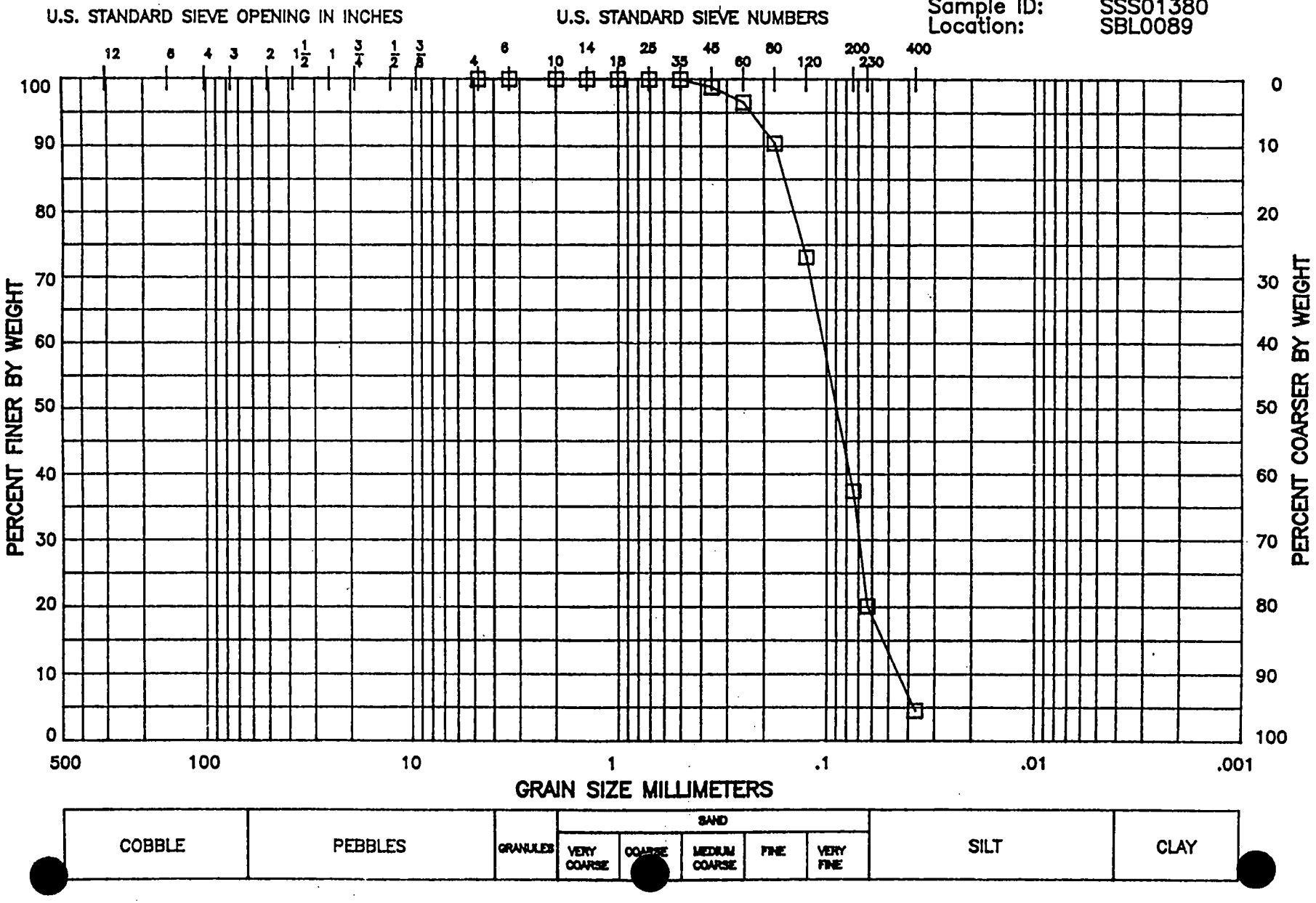
PTS Laboratories, Inc.

File No: 24133
Date: September 06, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01380
Location: SBL0089

DRY SIEVE ANALYSIS



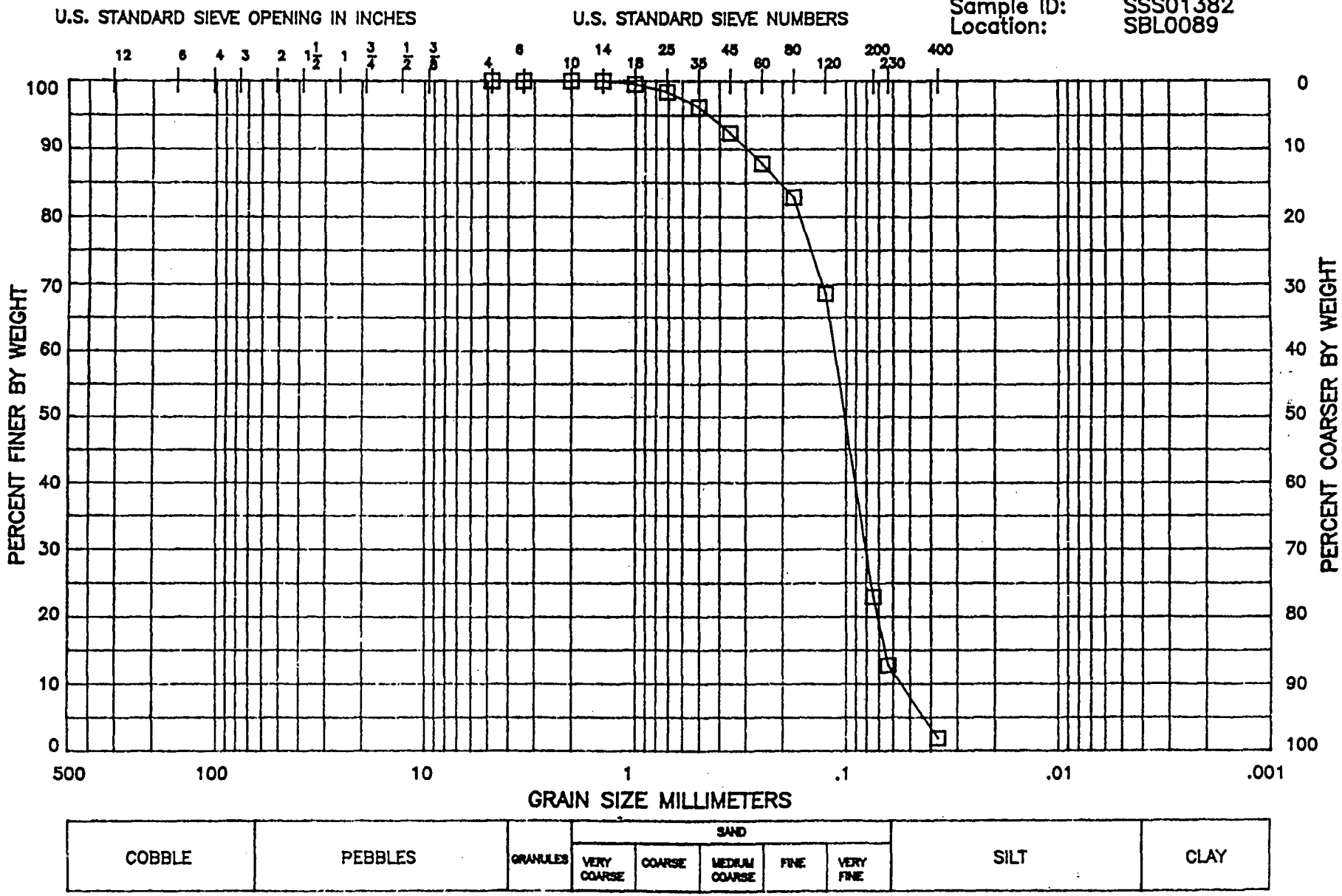
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01382
Location: SBL0089

DRY SIEVE ANALYSIS



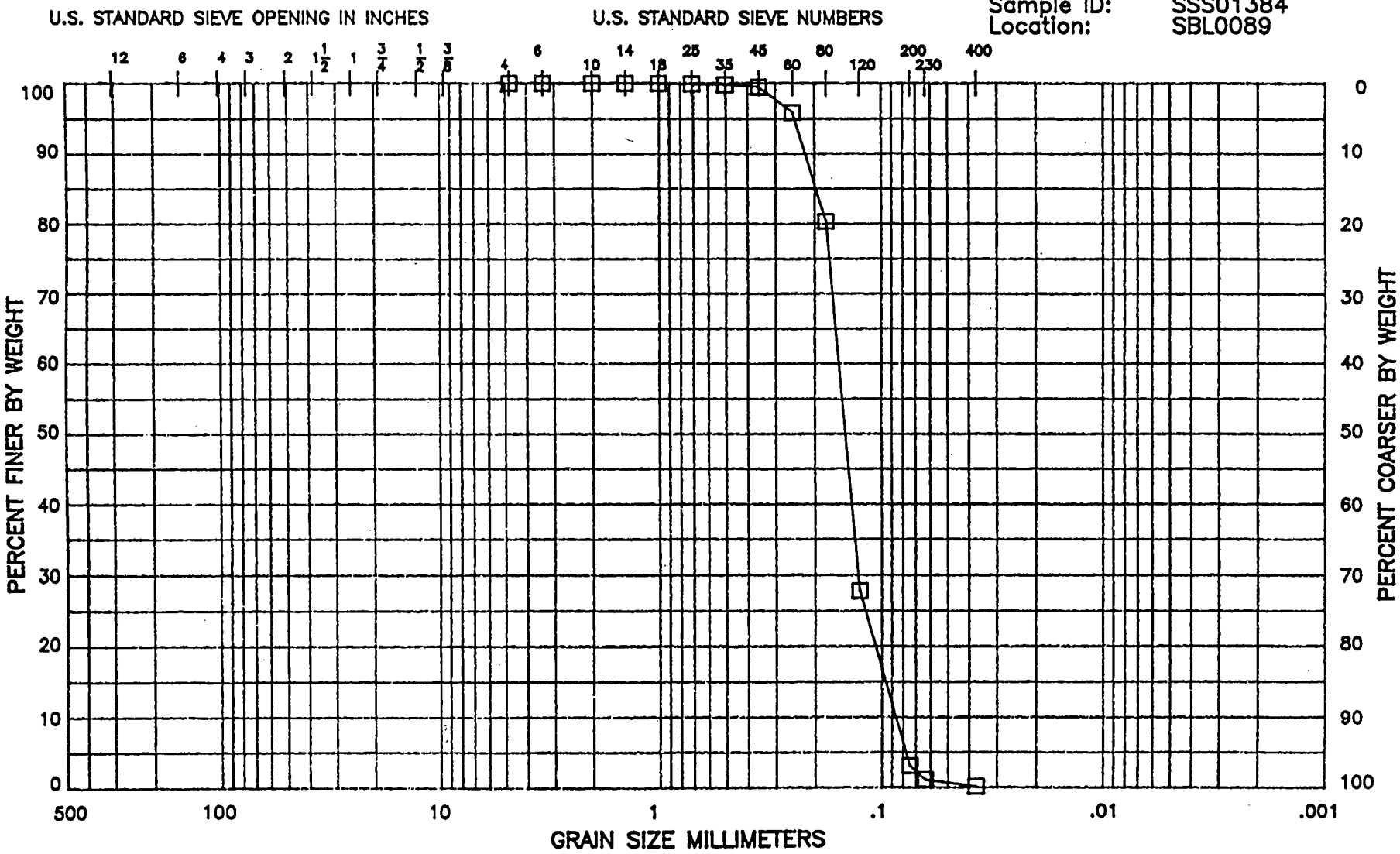
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01384
Location: SBL0089

DRY SIEVE ANALYSIS



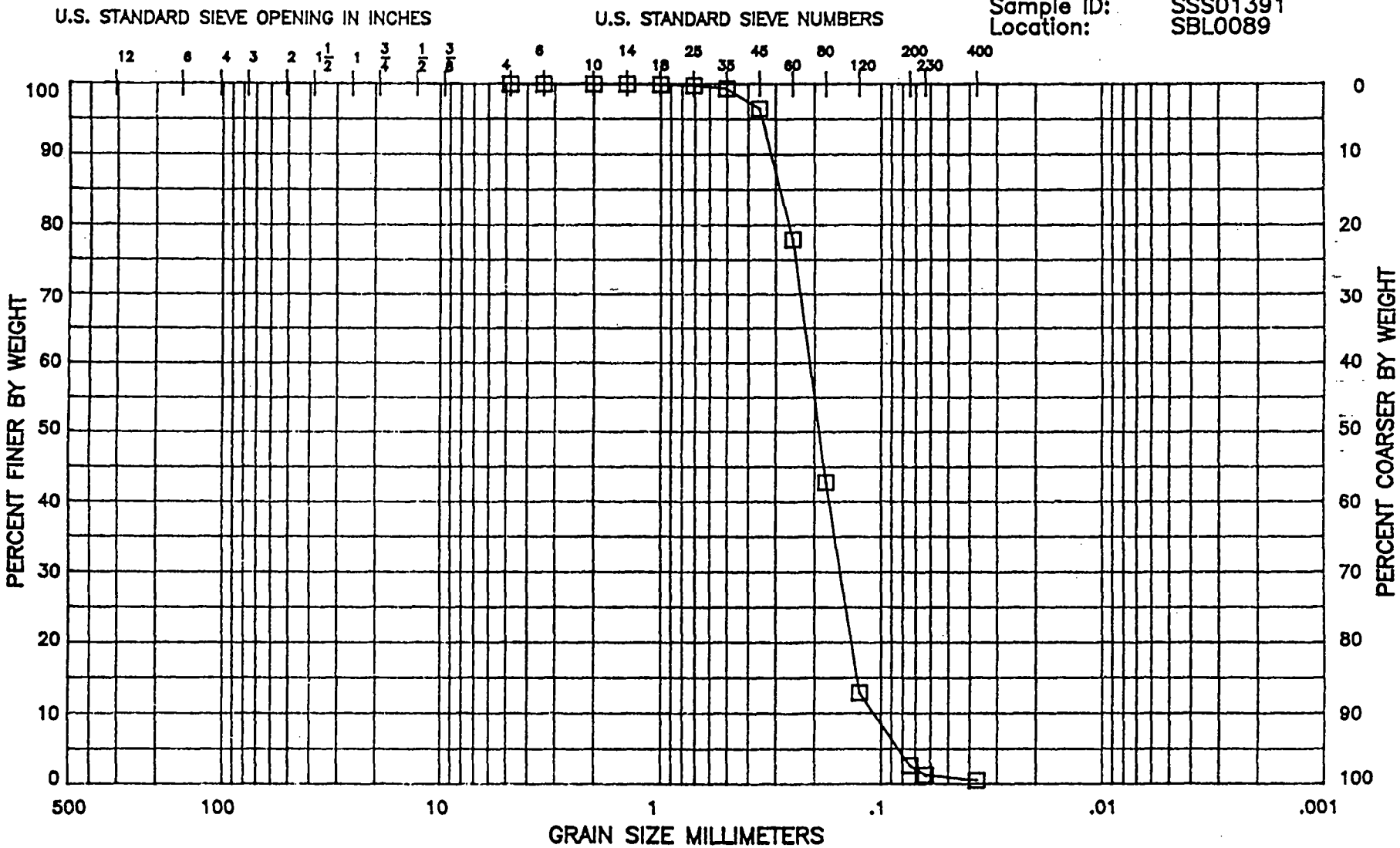
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01391
Location: SBL0089

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

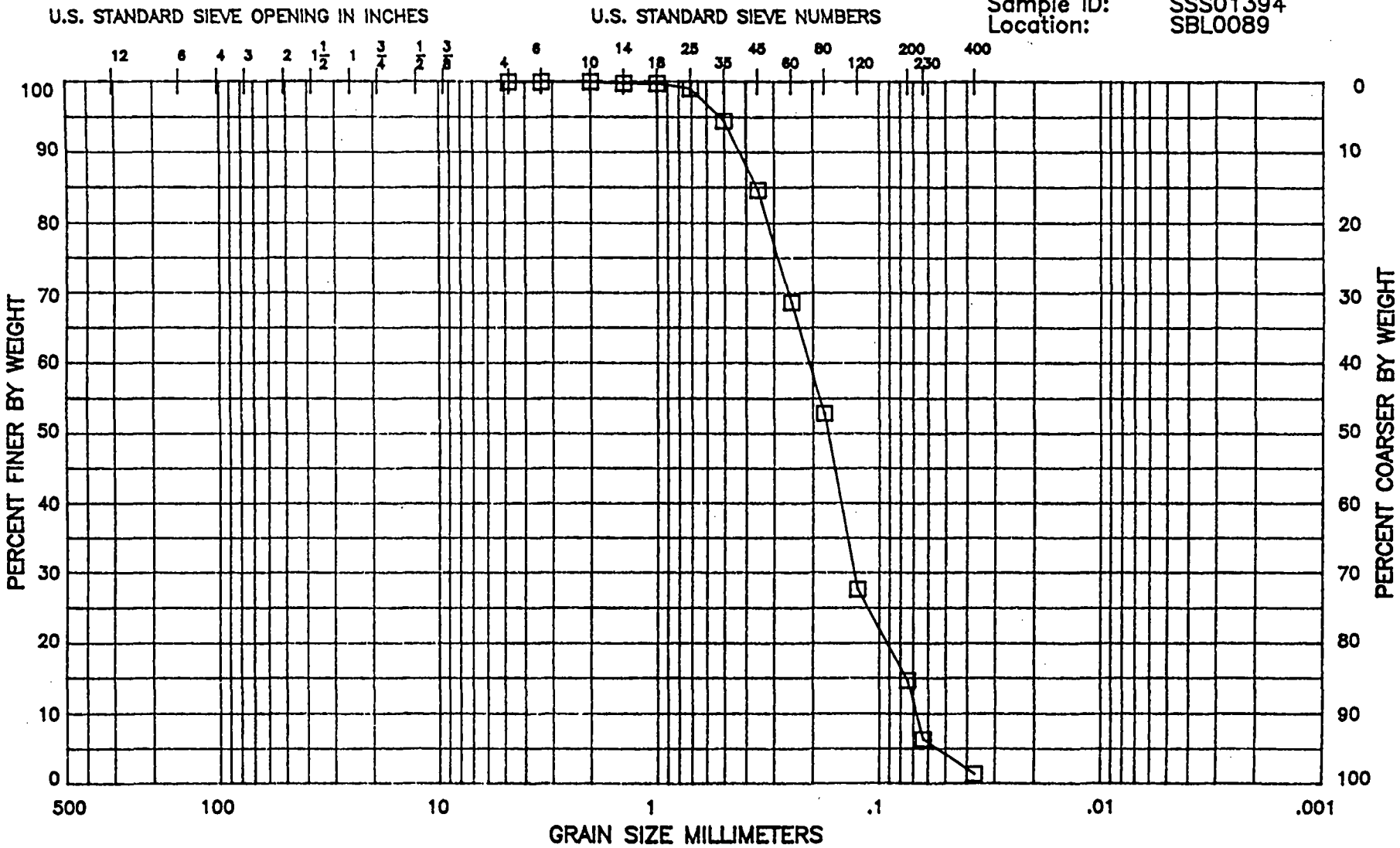
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01394
Location: SBL0089

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

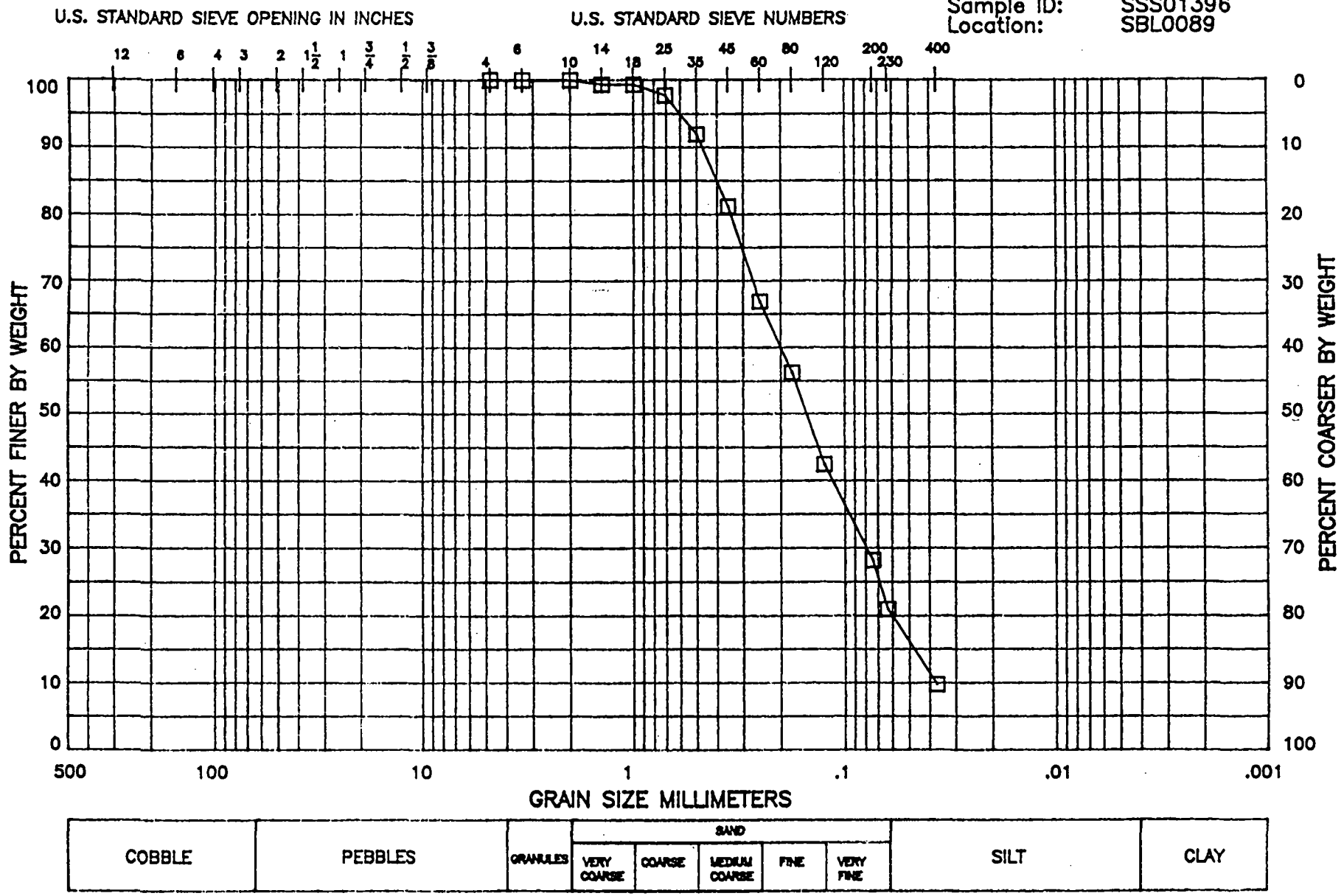
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01396
Location: SBL0089

DRY SIEVE ANALYSIS



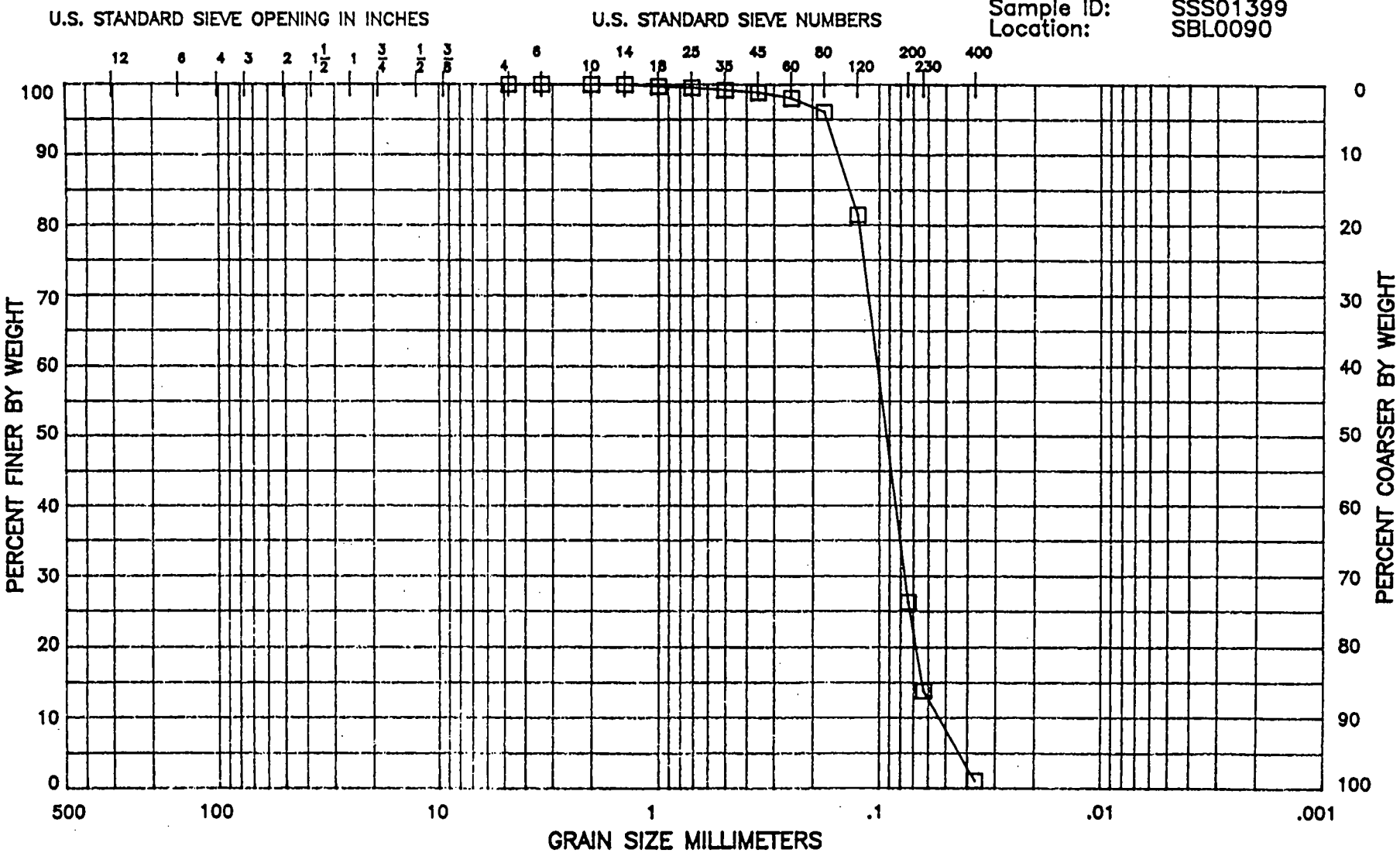
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01399
Location: SBL0090

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

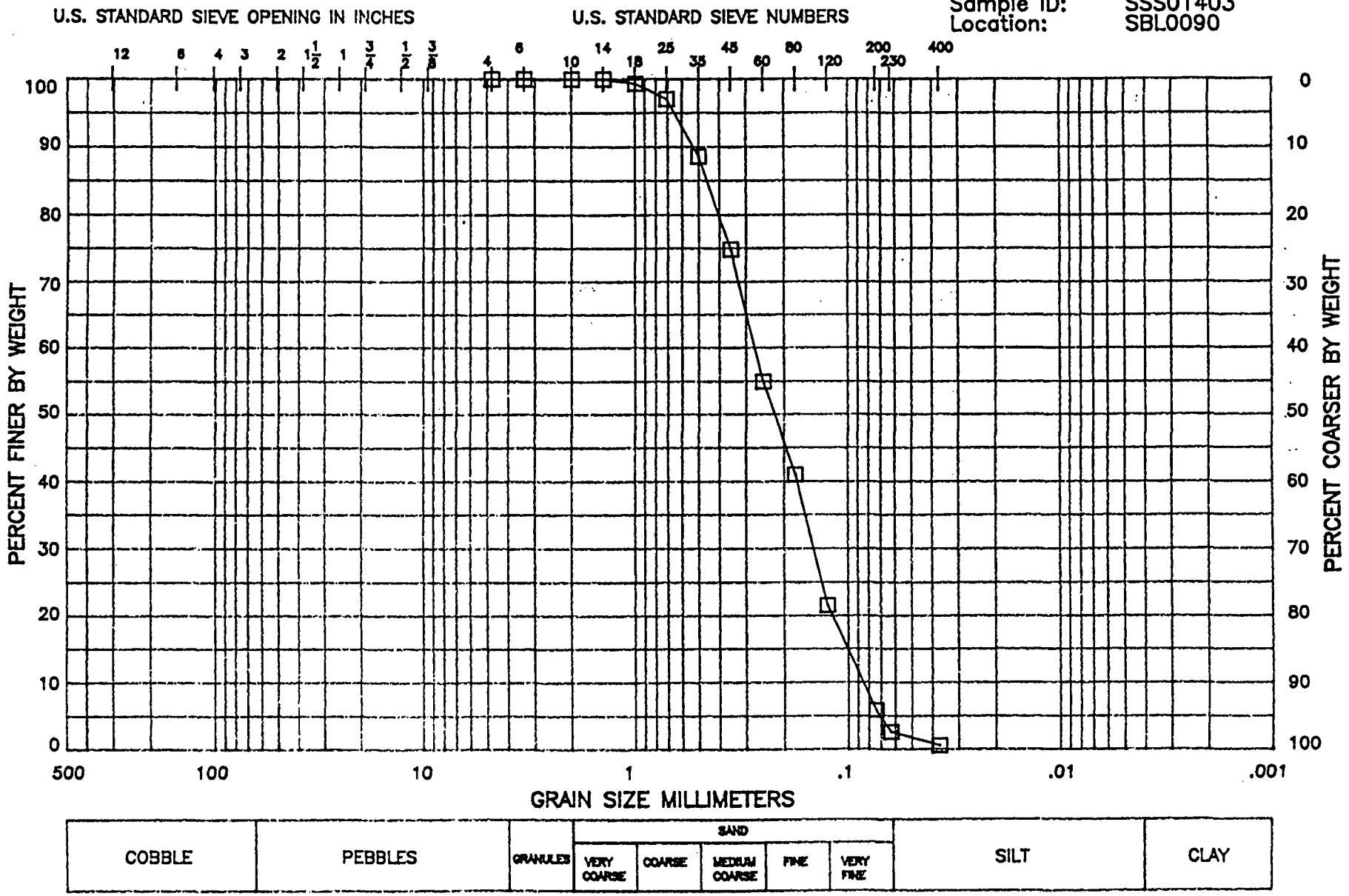
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01403
Location: SBL0090

DRY SIEVE ANALYSIS



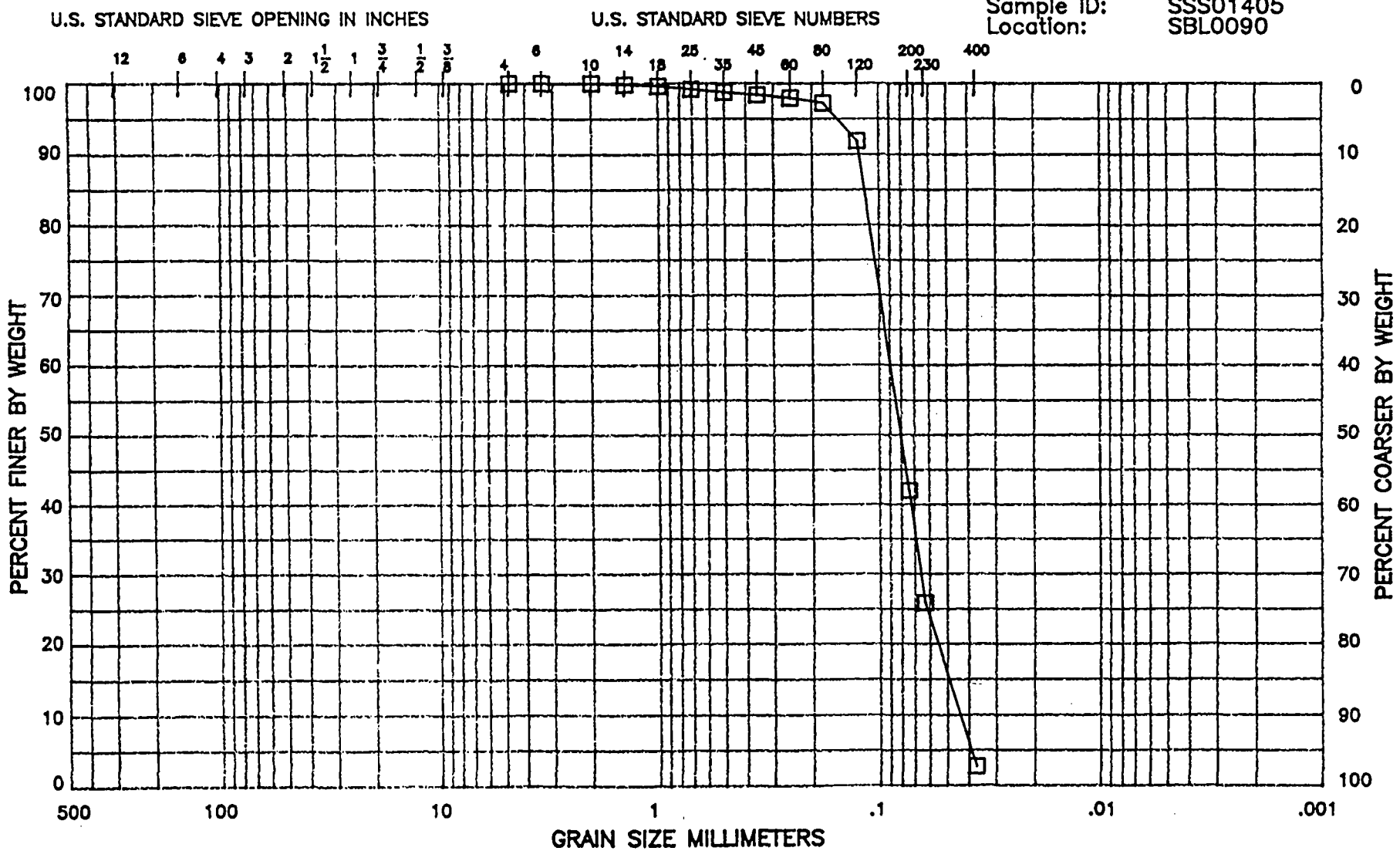
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01405
Location: SBL0090

DRY SIEVE ANALYSIS



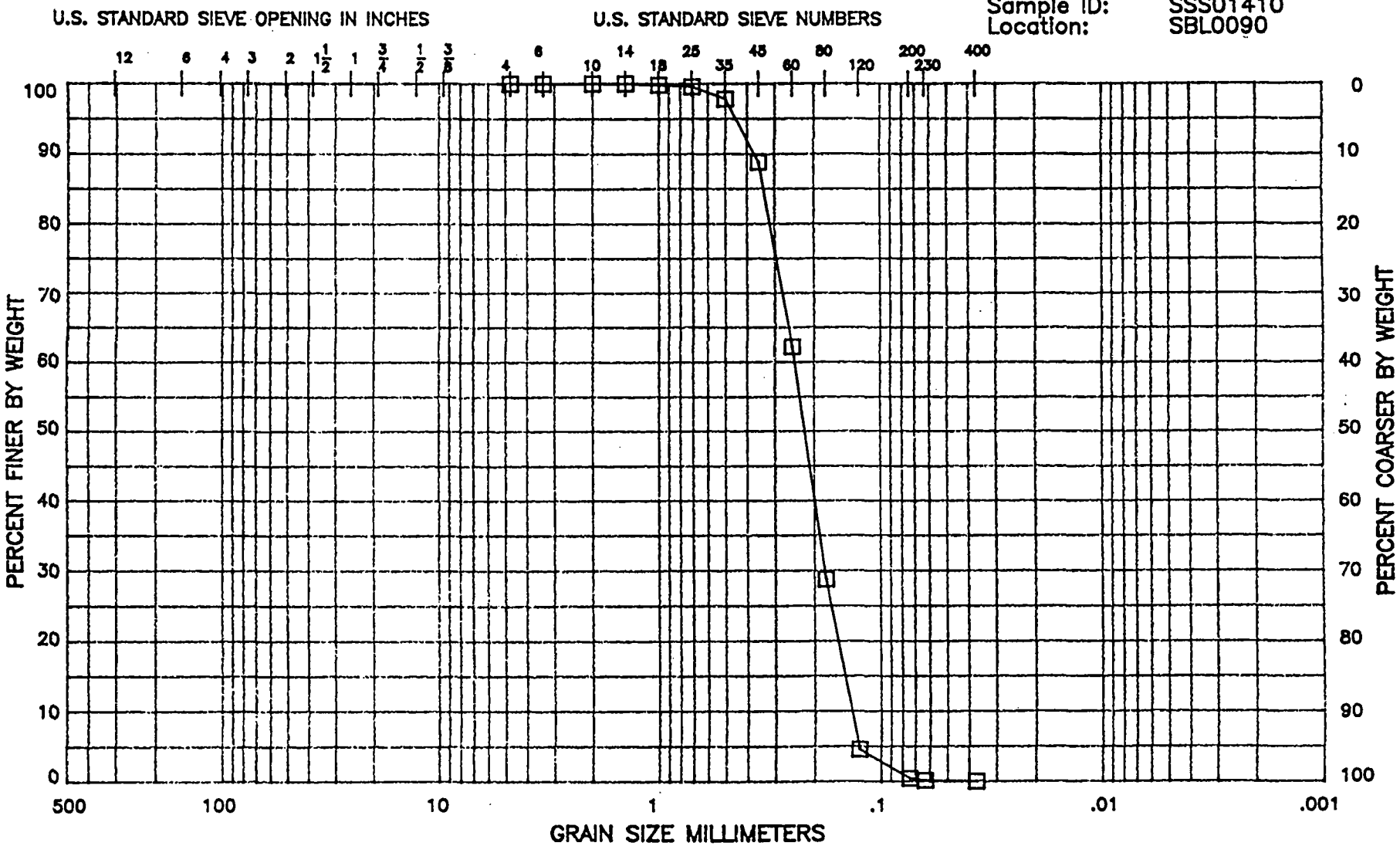
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01410
Location: SBL0090

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

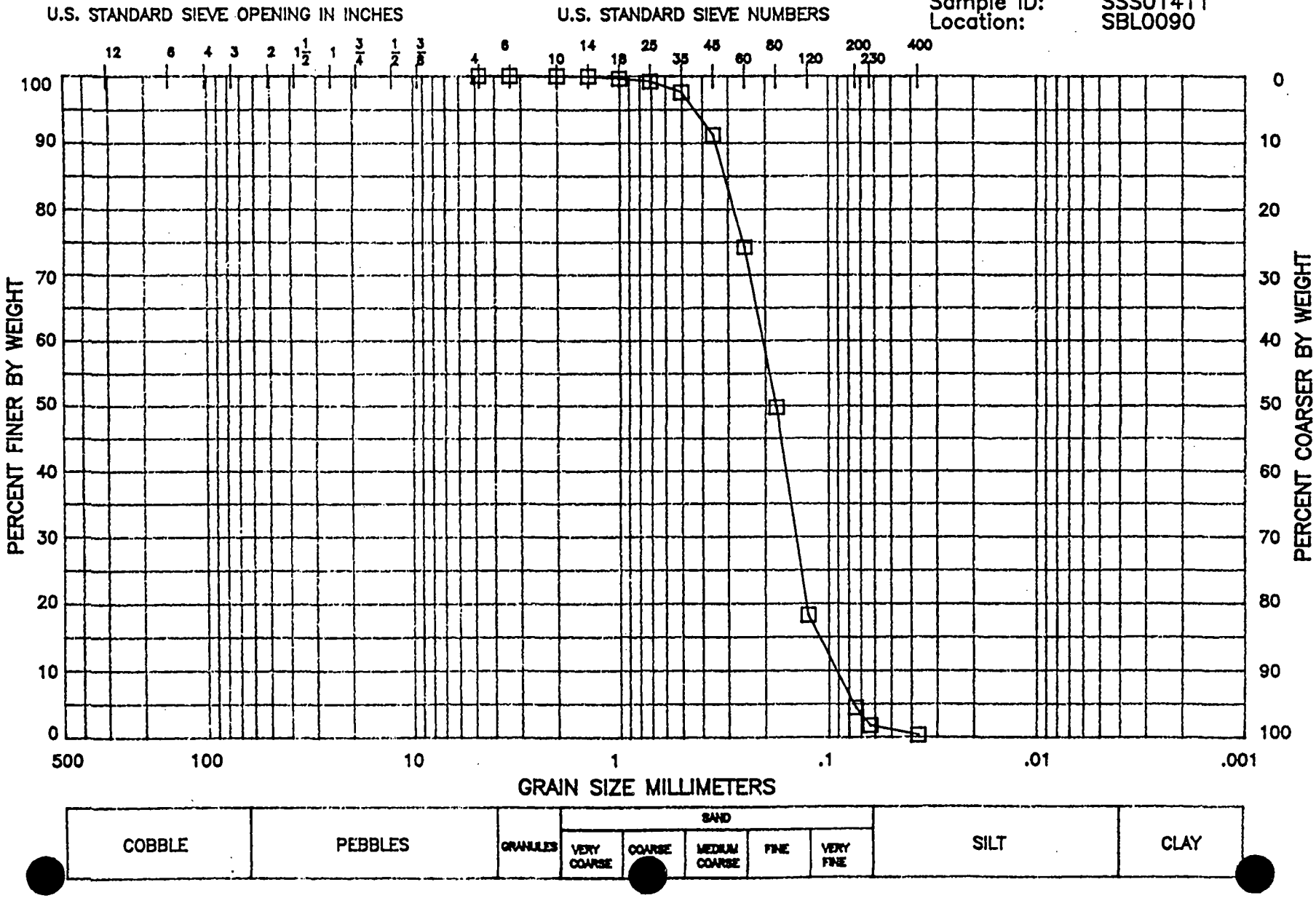
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01411
Location: SBL0090

DRY SIEVE ANALYSIS



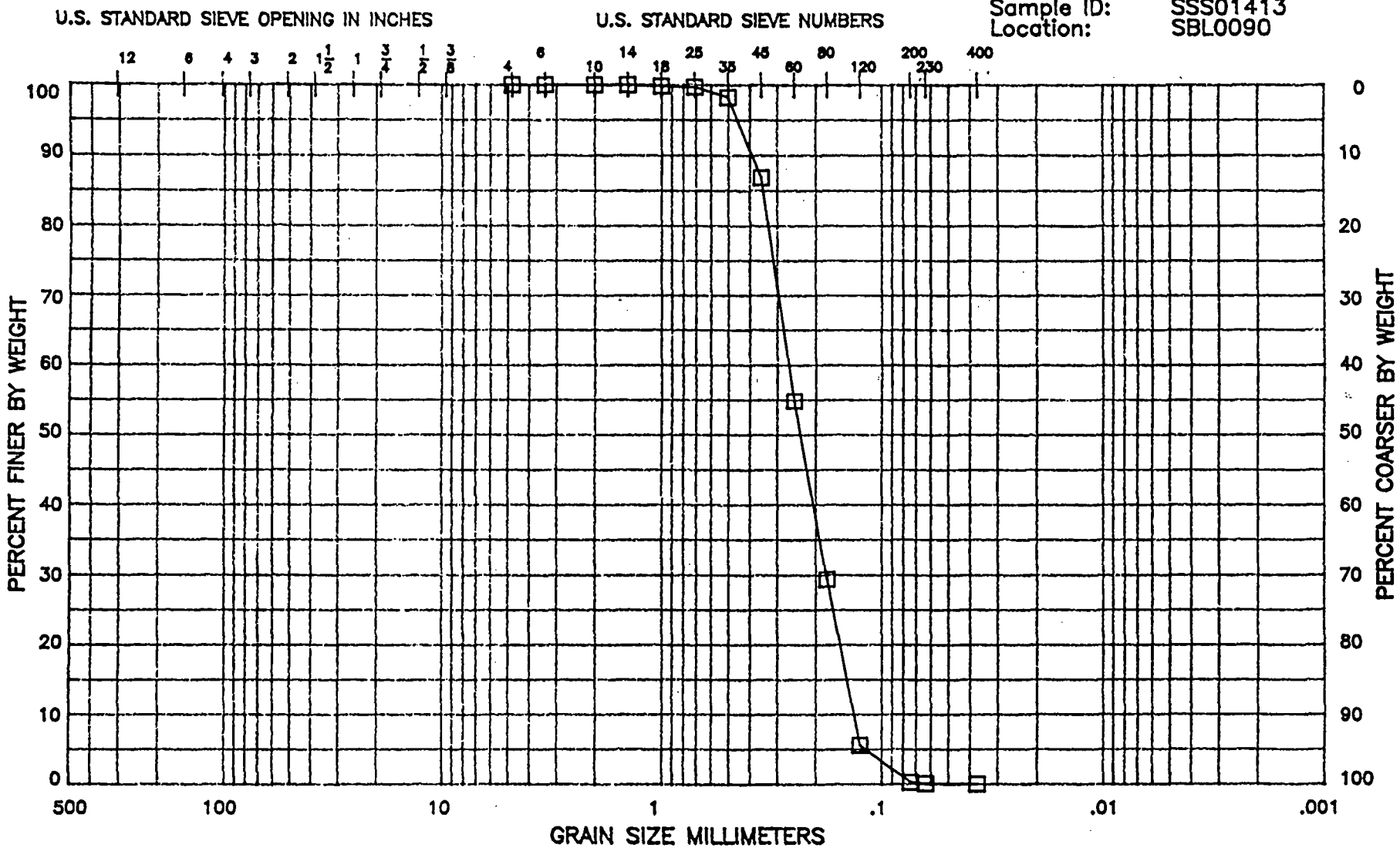
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01413
Location: SBL0090

DRY SIEVE ANALYSIS



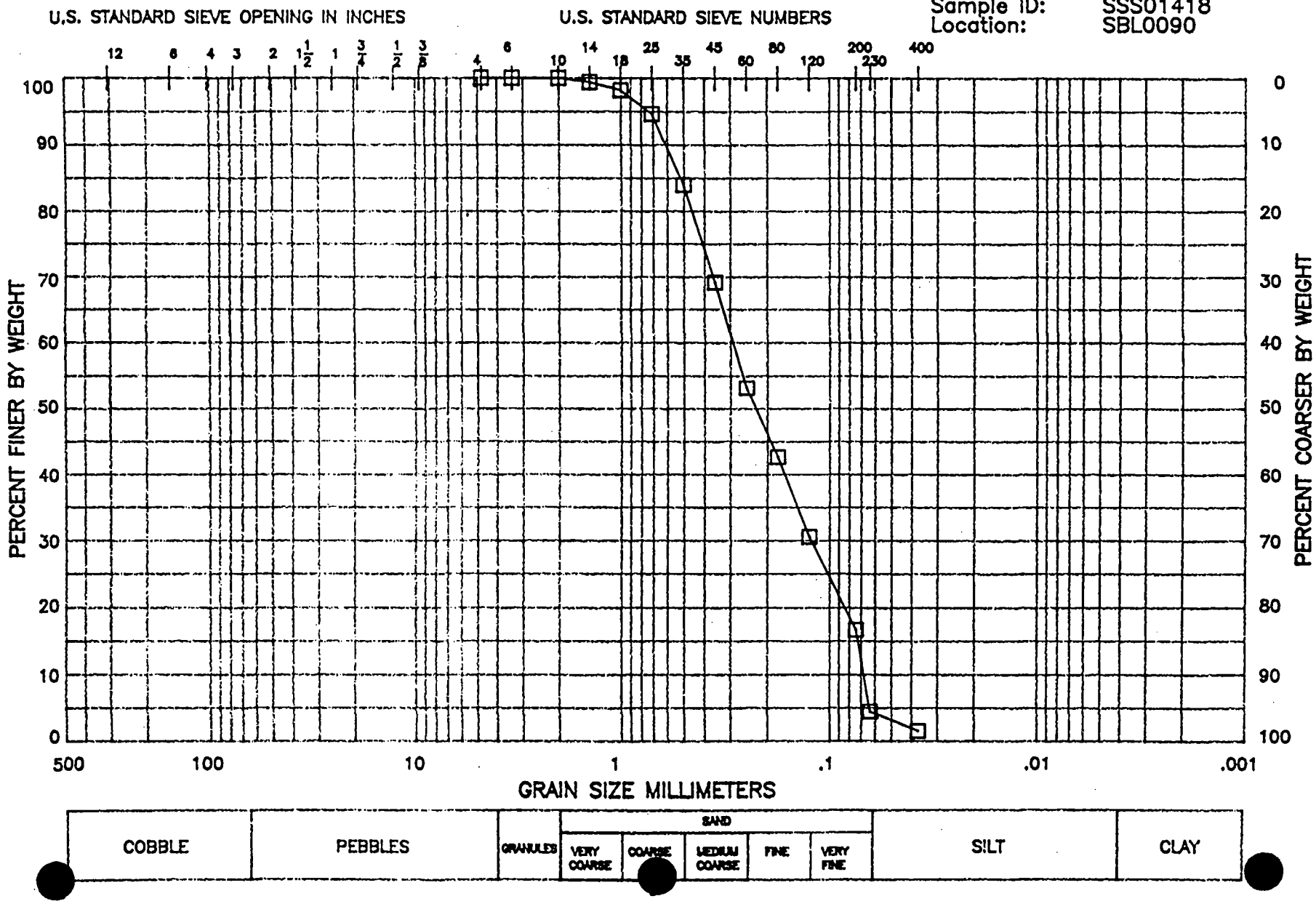
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01418
Location: SBL0090

DRY SIEVE ANALYSIS



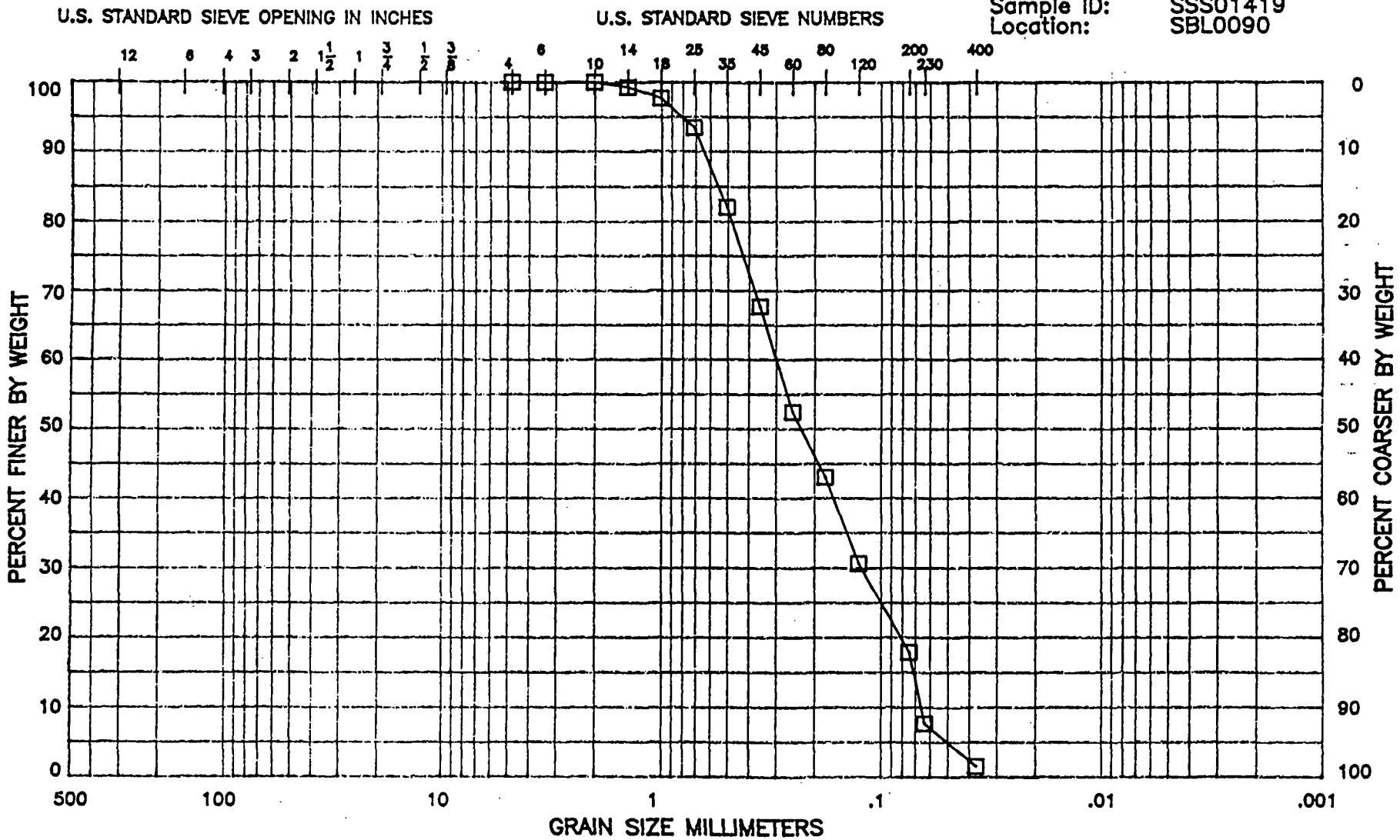
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01419
Location: SBL0090

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

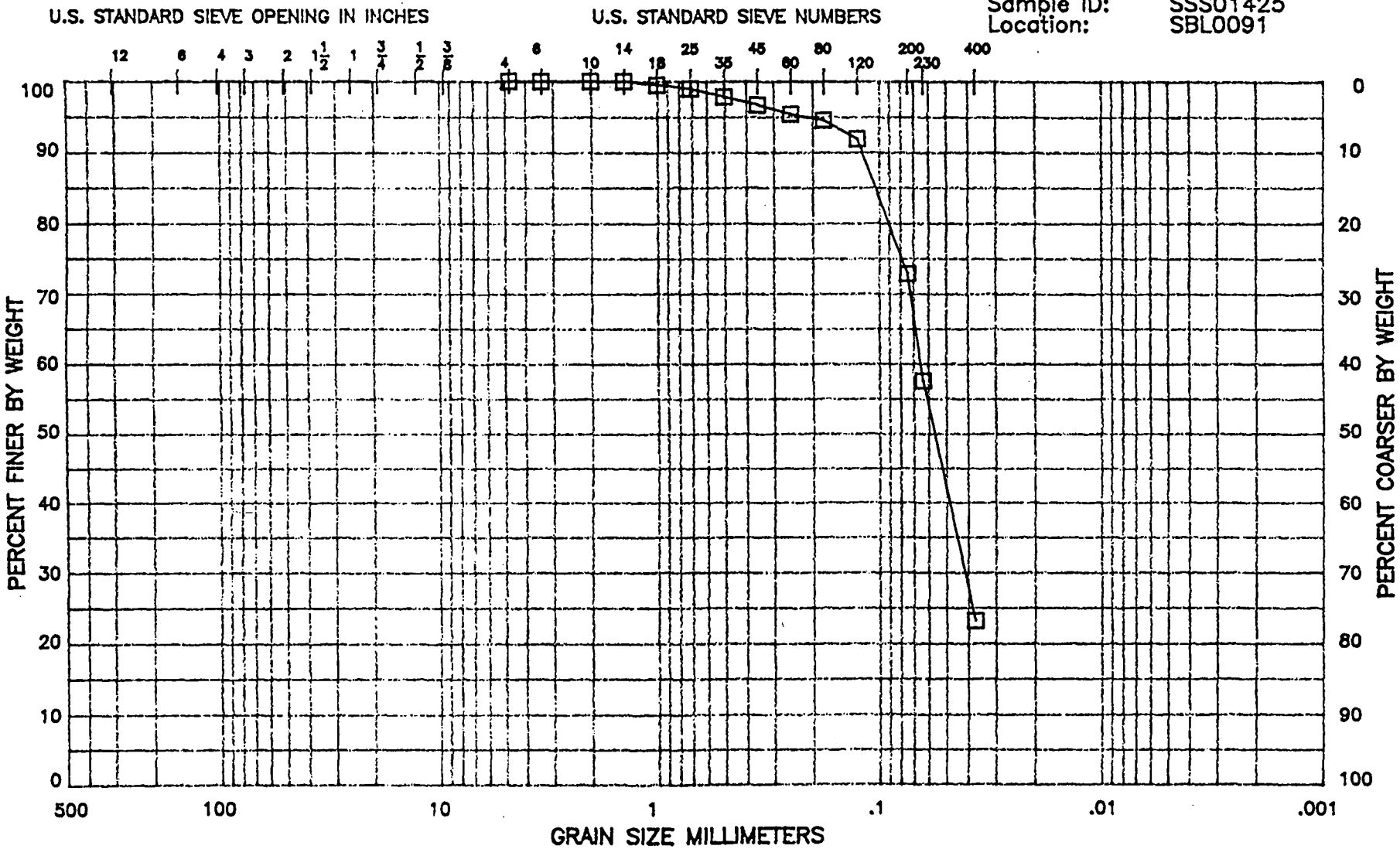
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01425
Location: SBL0091

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

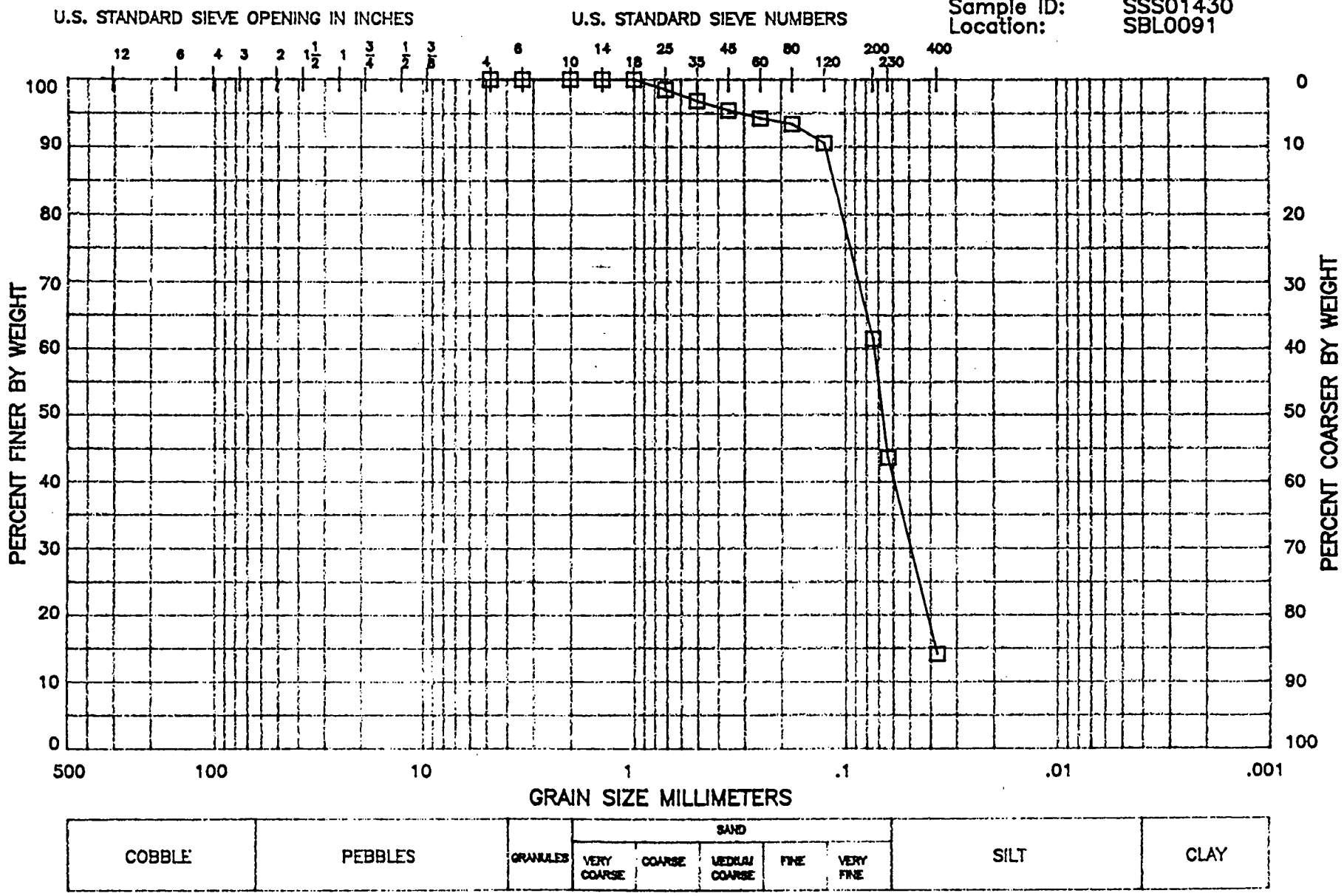
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW--20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01430
Location: SBL0091

DRY SIEVE ANALYSIS



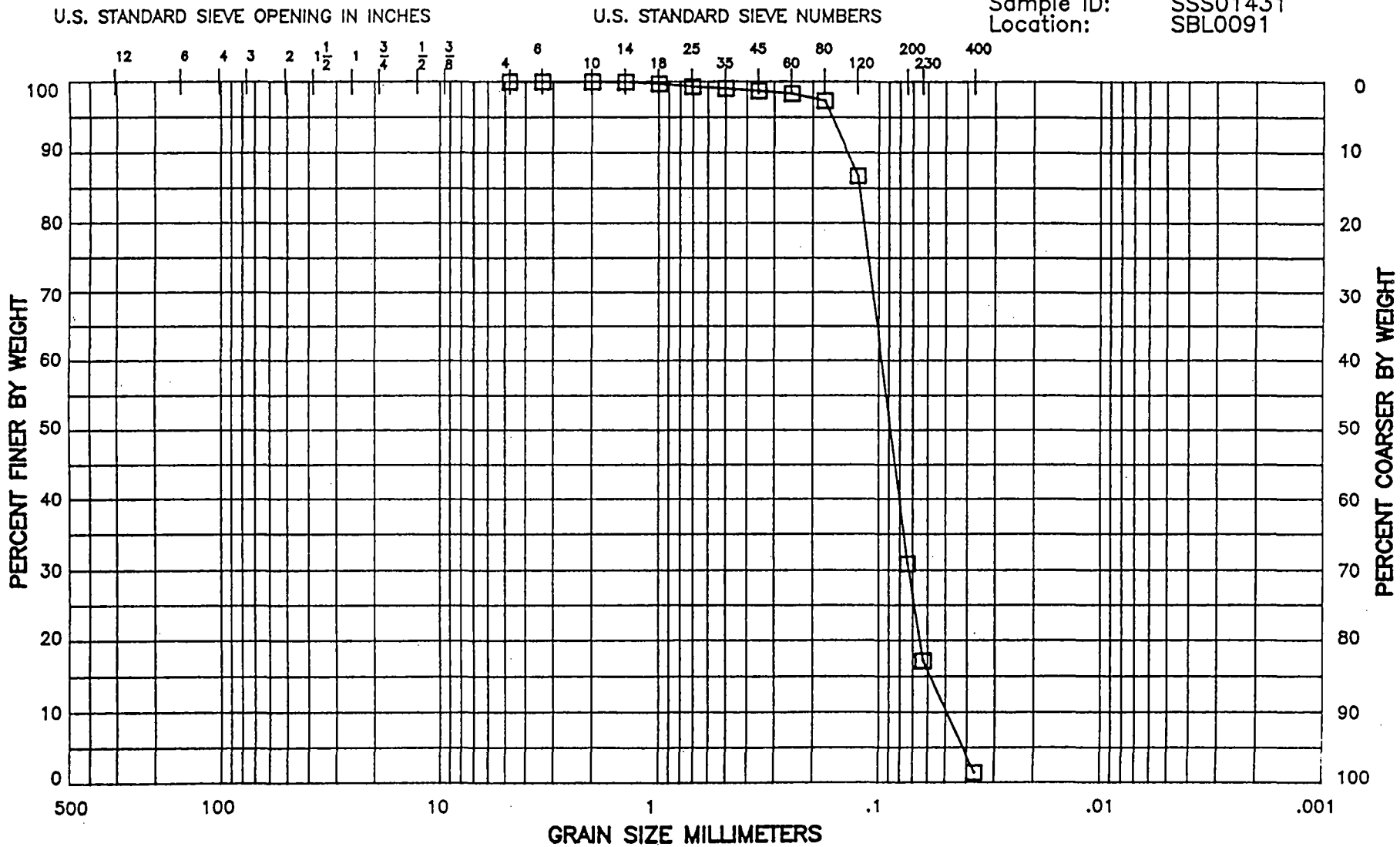
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01431
Location: SBL0091

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

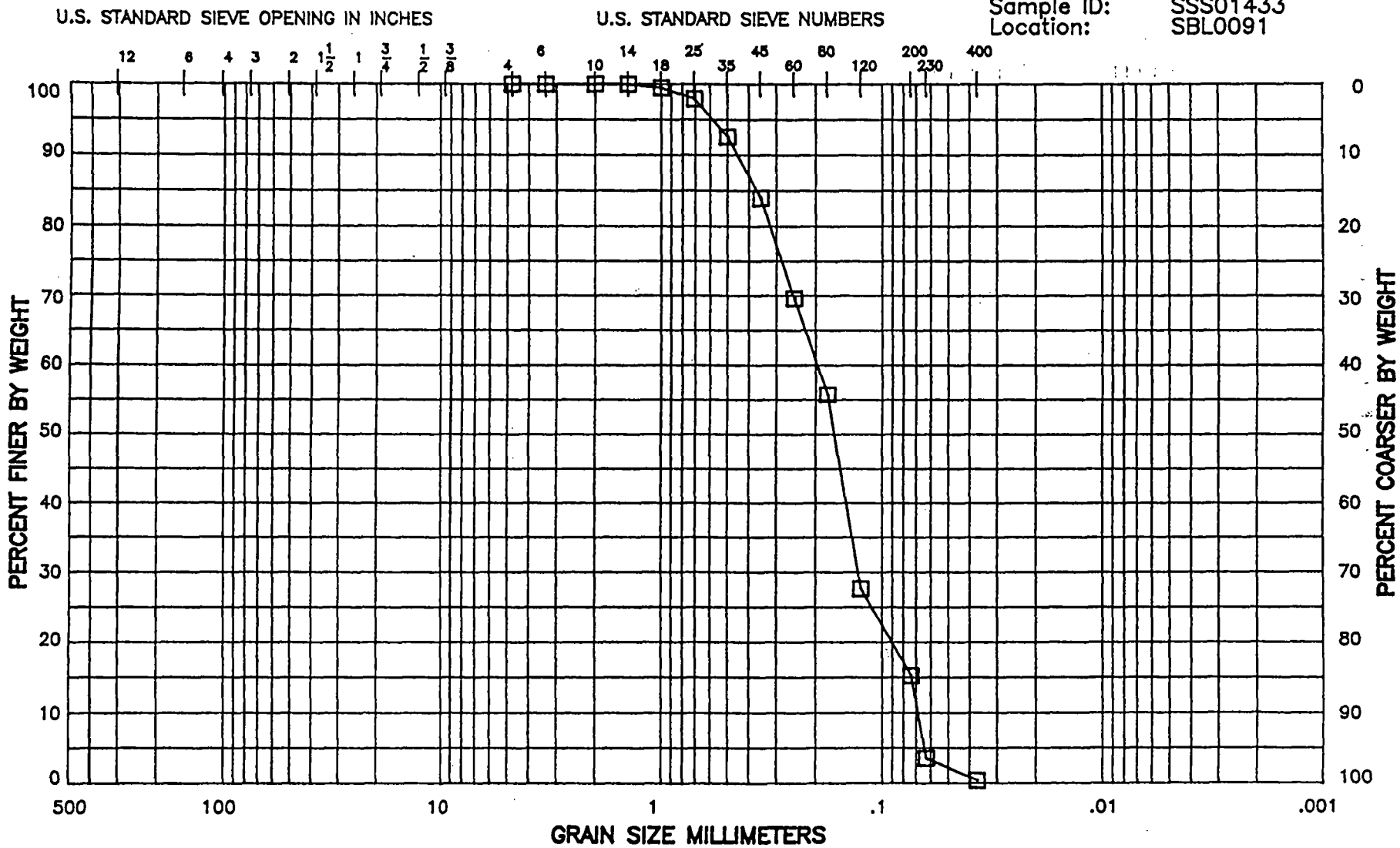
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01433
Location: SBL0091

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

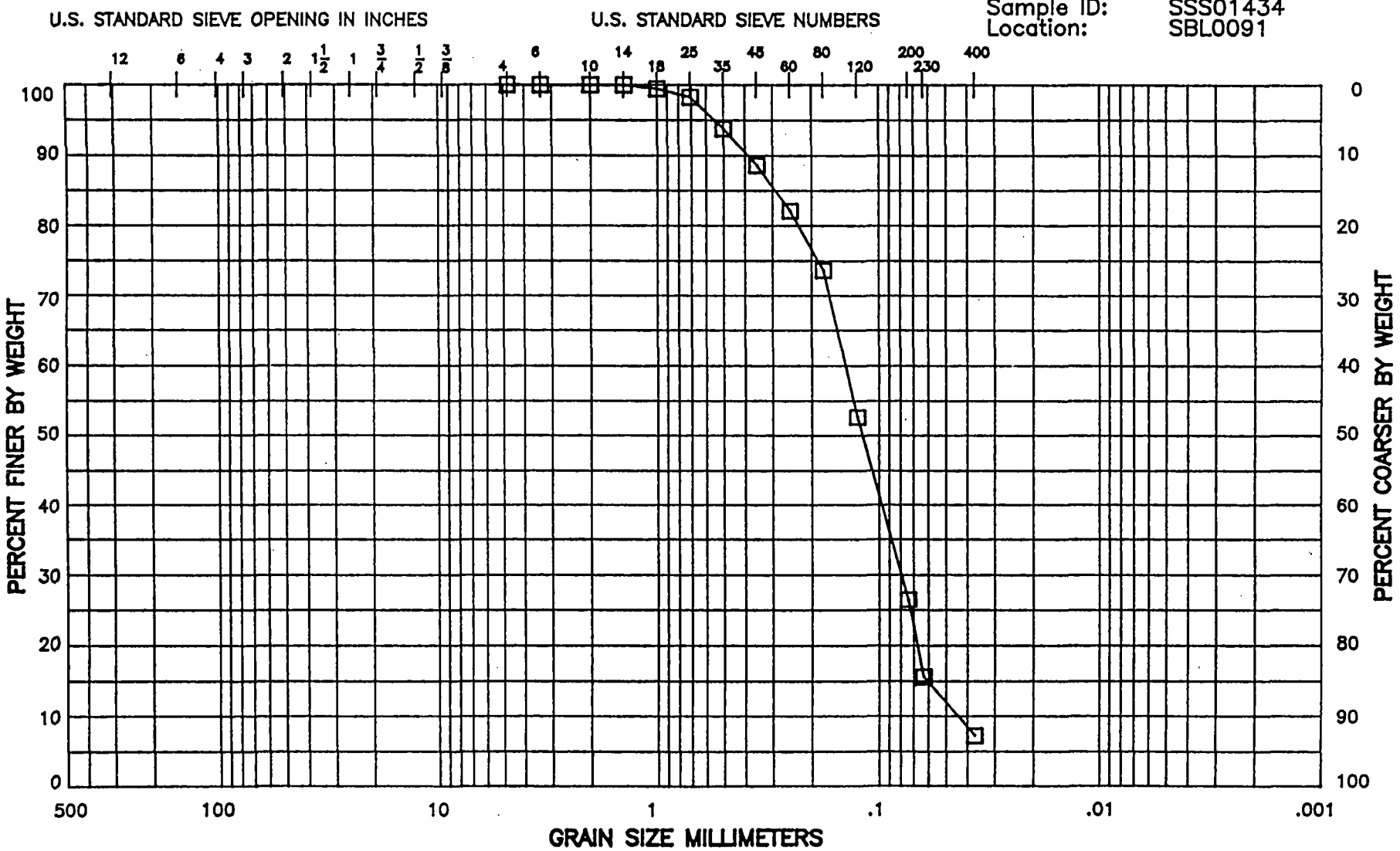
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01434
Location: SBL0091

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

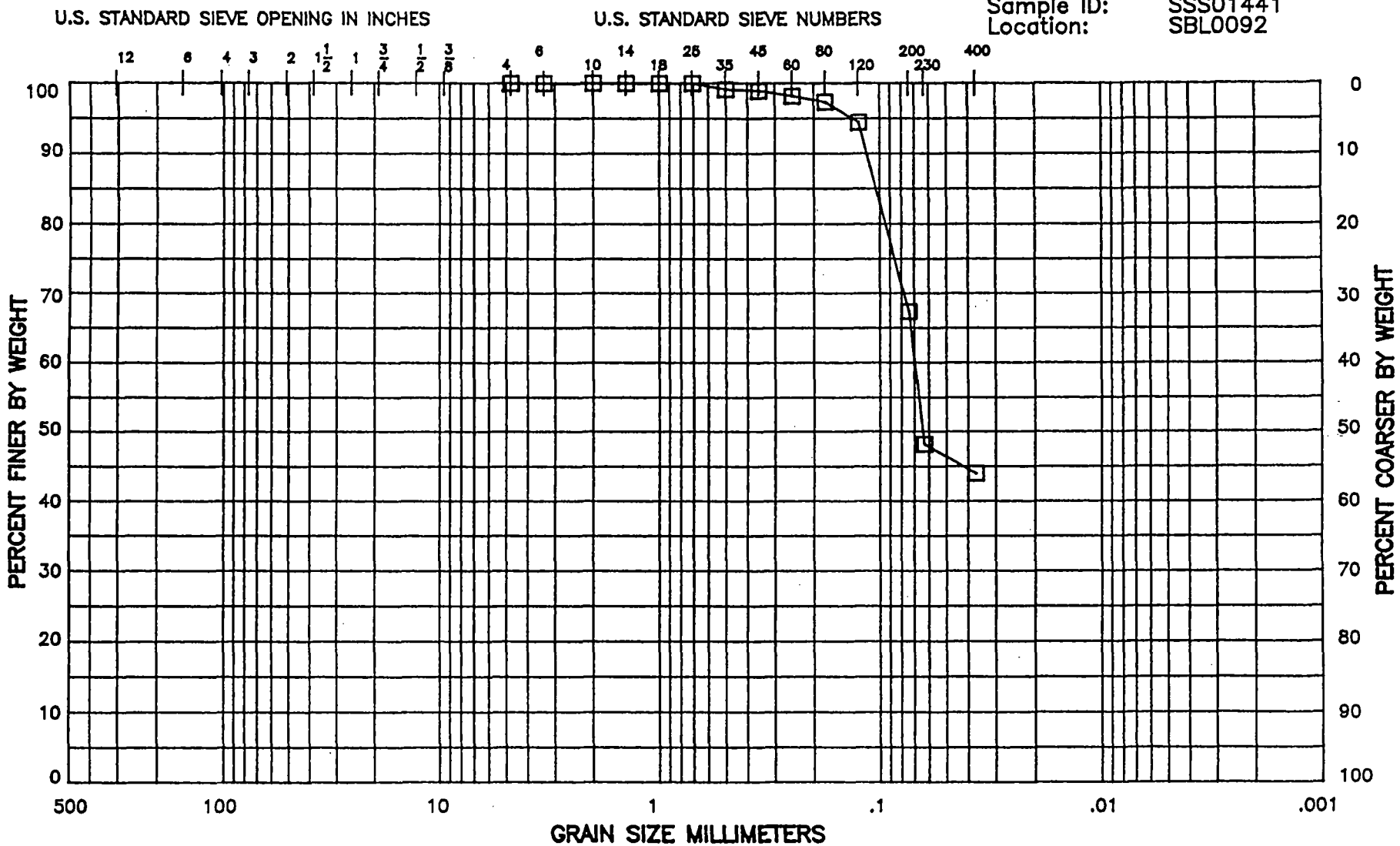
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01441
Location: SBL0092

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

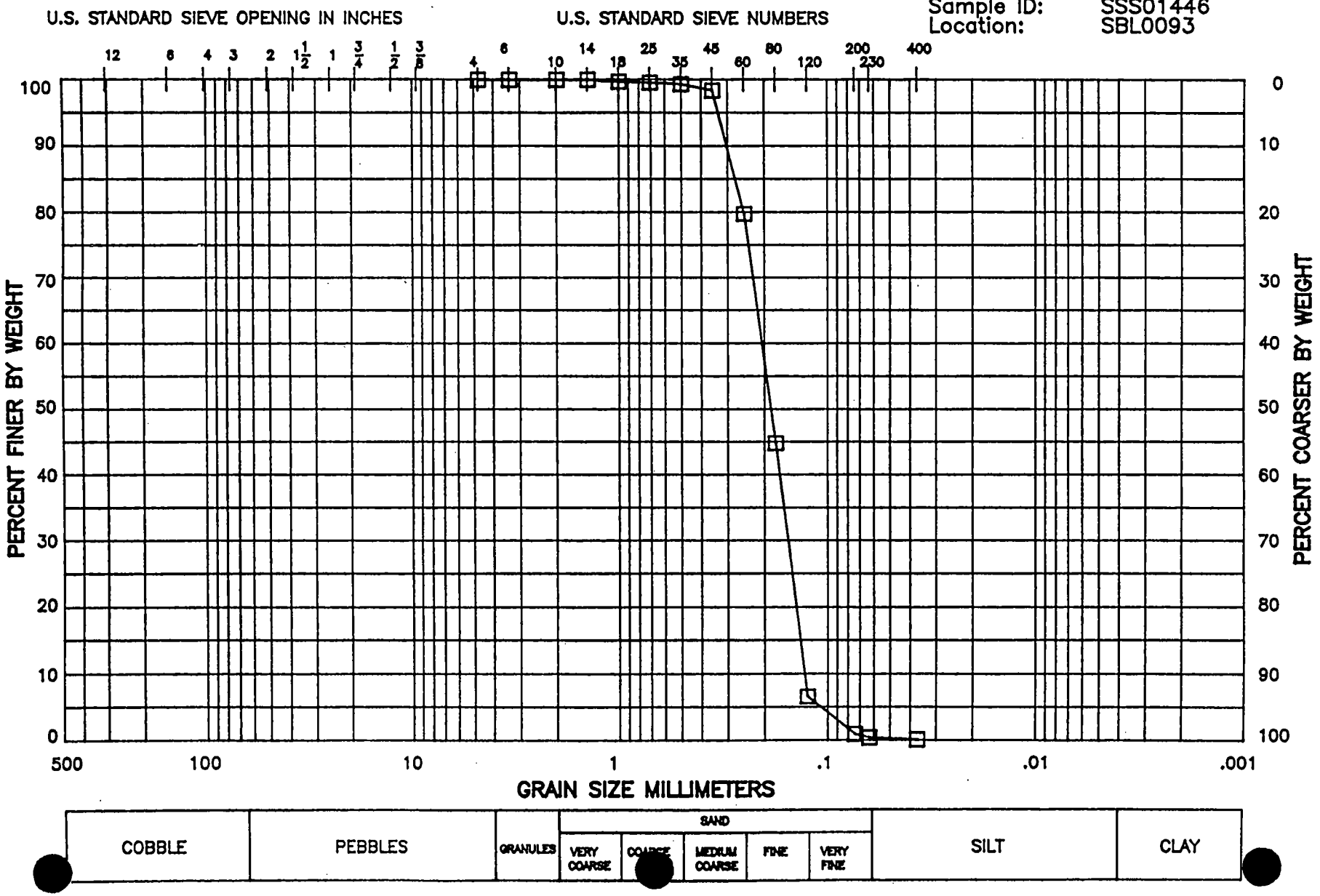
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01446
Location: SBL0093

DRY SIEVE ANALYSIS



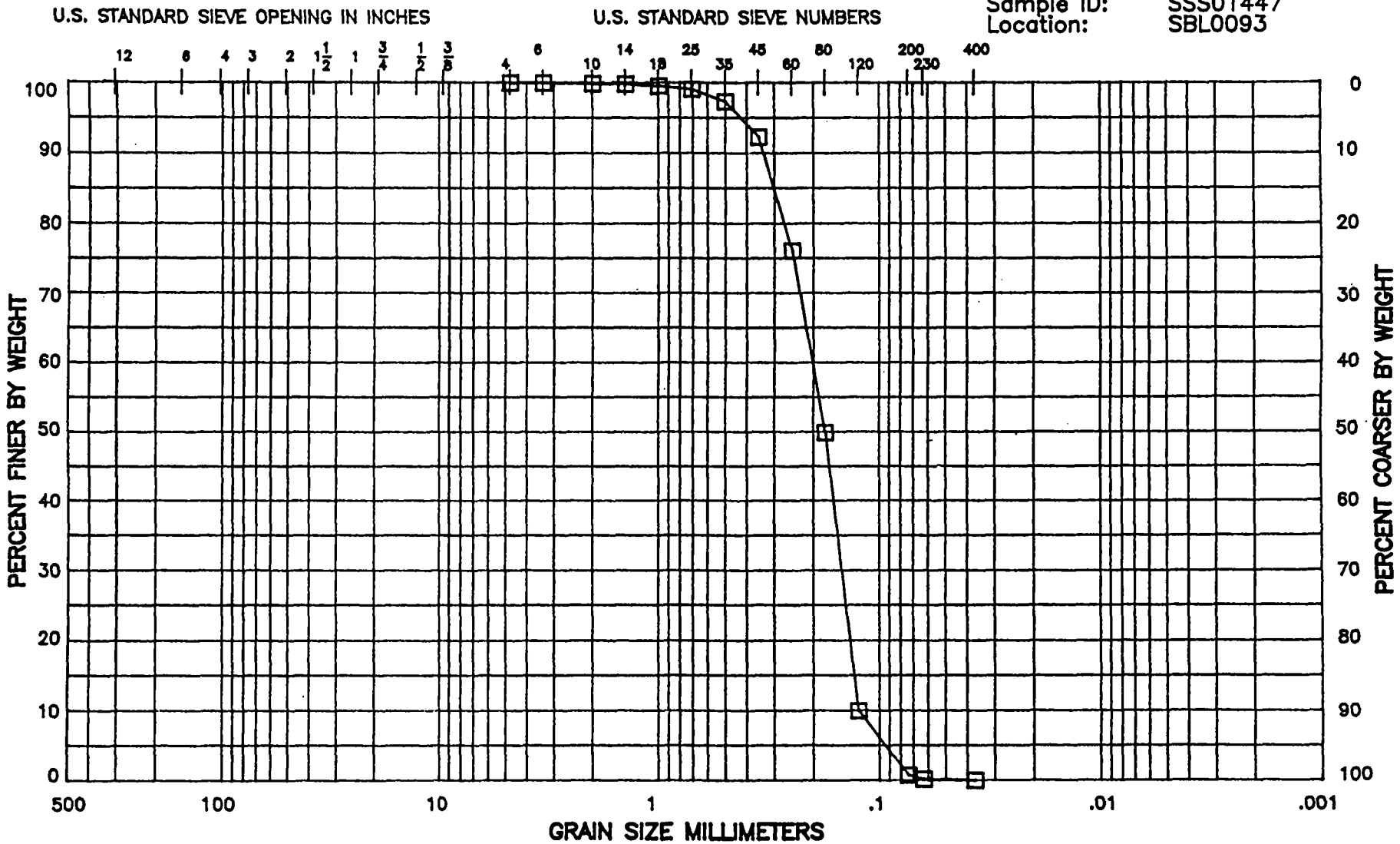
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01447
Location: SBL0093

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

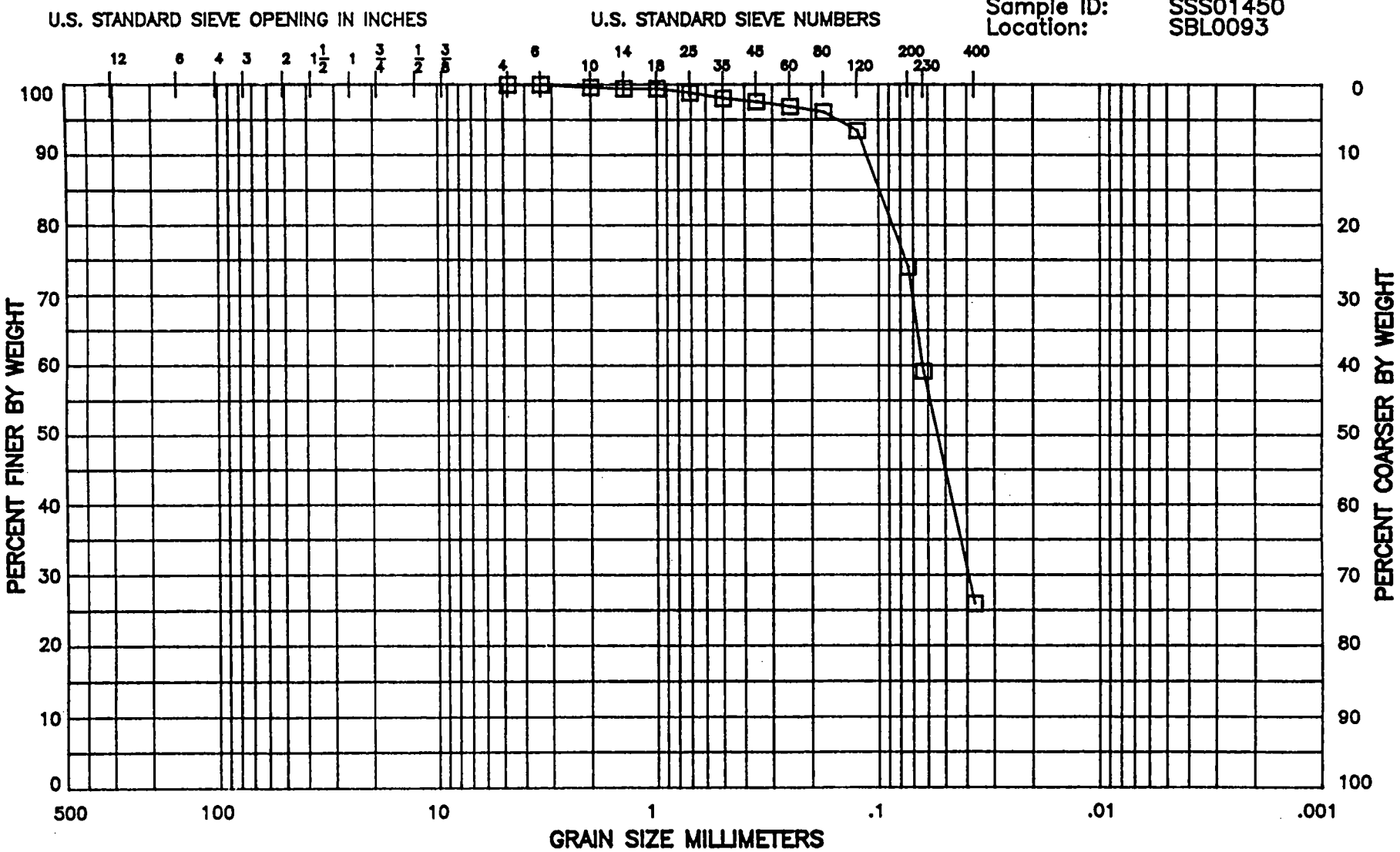
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01450
Location: SBL0093

DRY SIEVE ANALYSIS



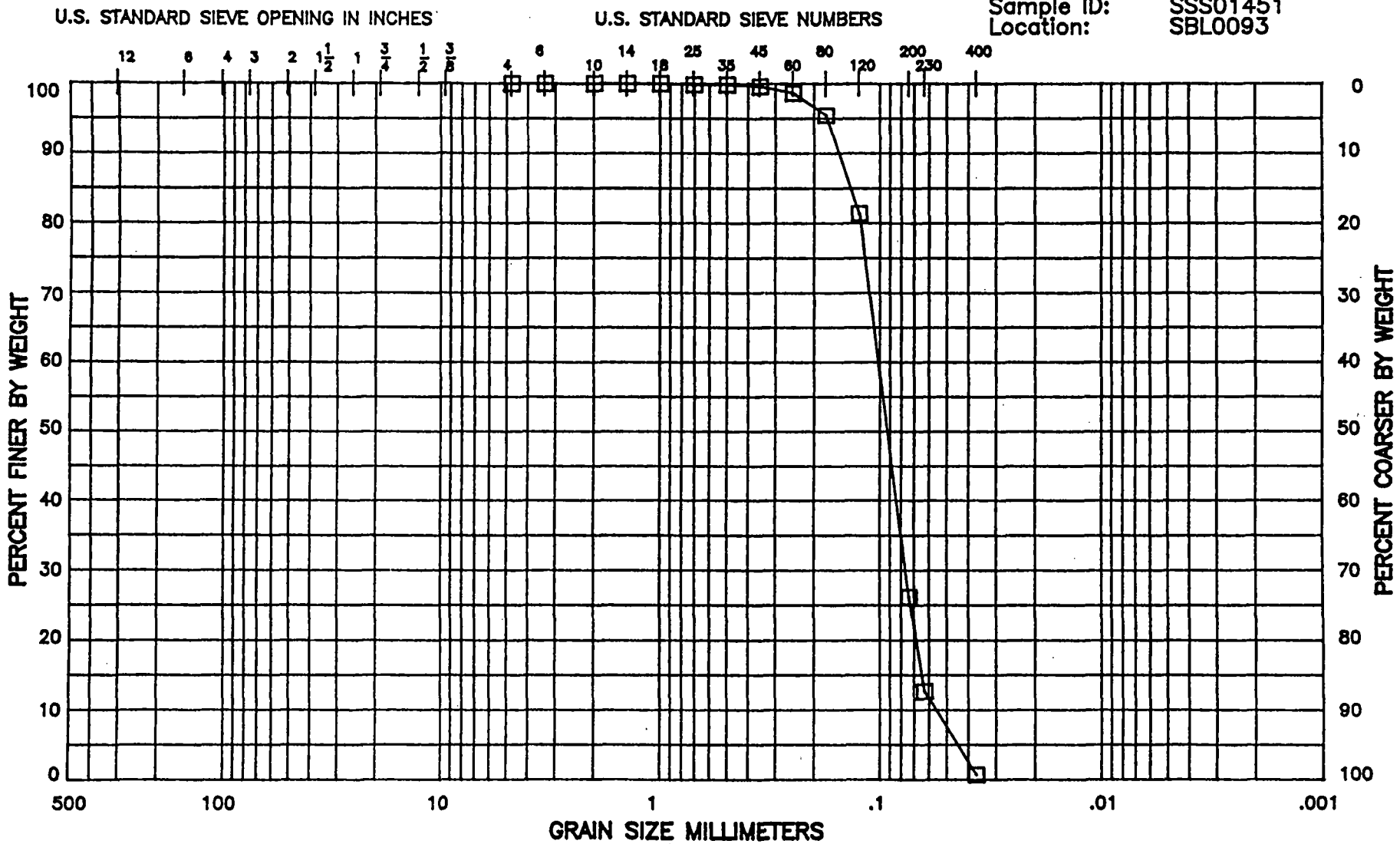
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01451
Location: SBL0093

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

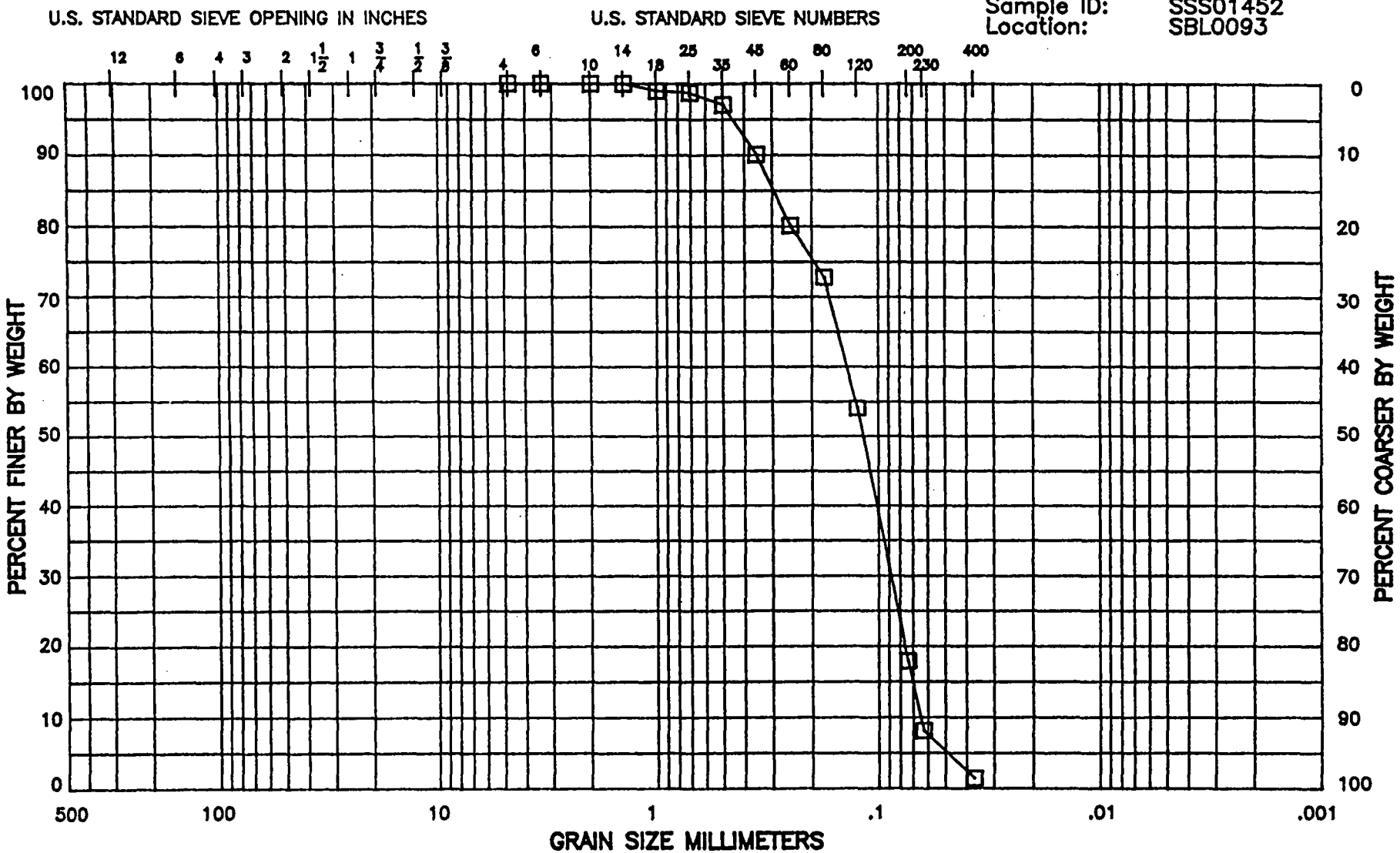
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01452
Location: SBL0093

DRY SIEVE ANALYSIS



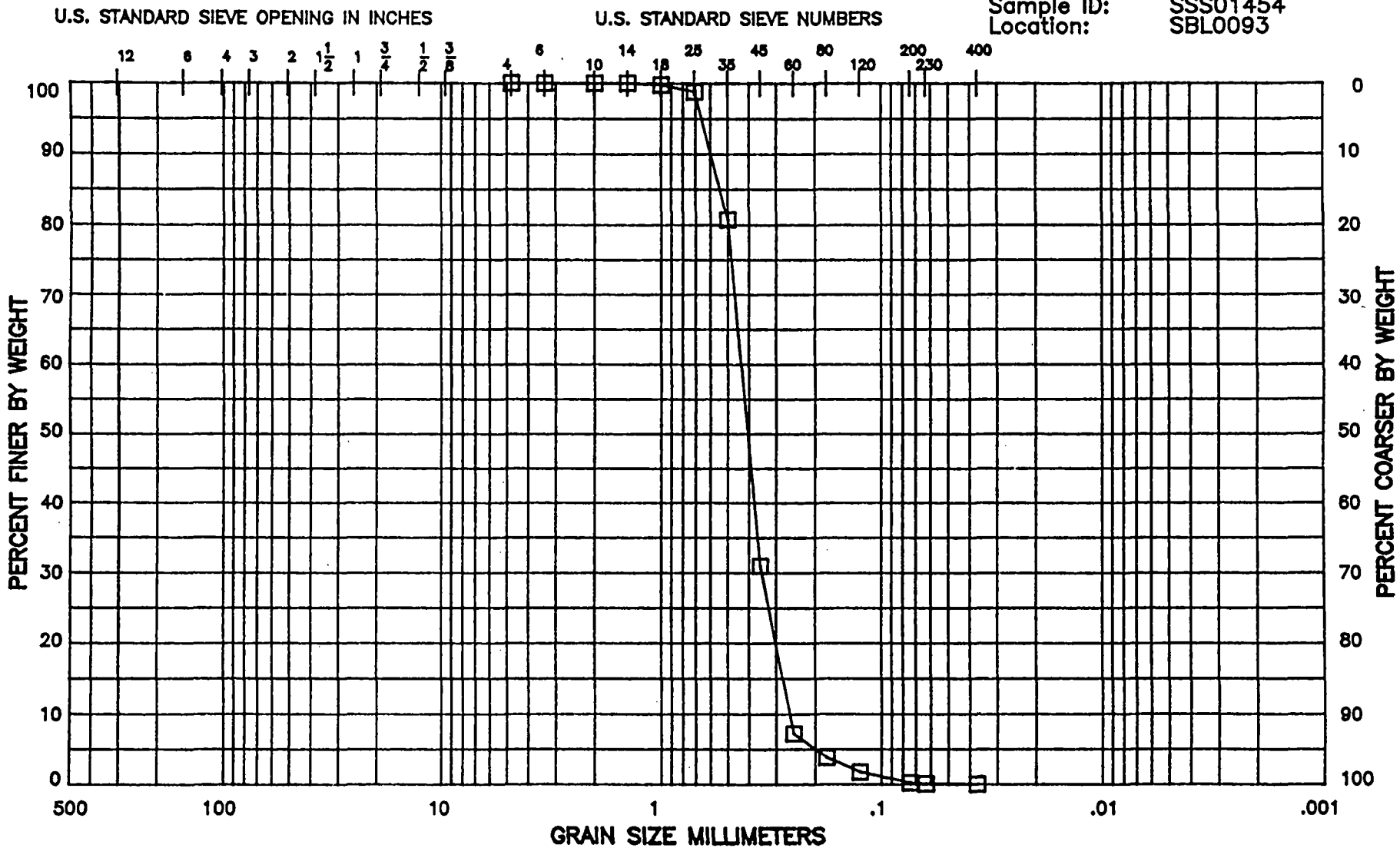
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01454
Location: SBL0093

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

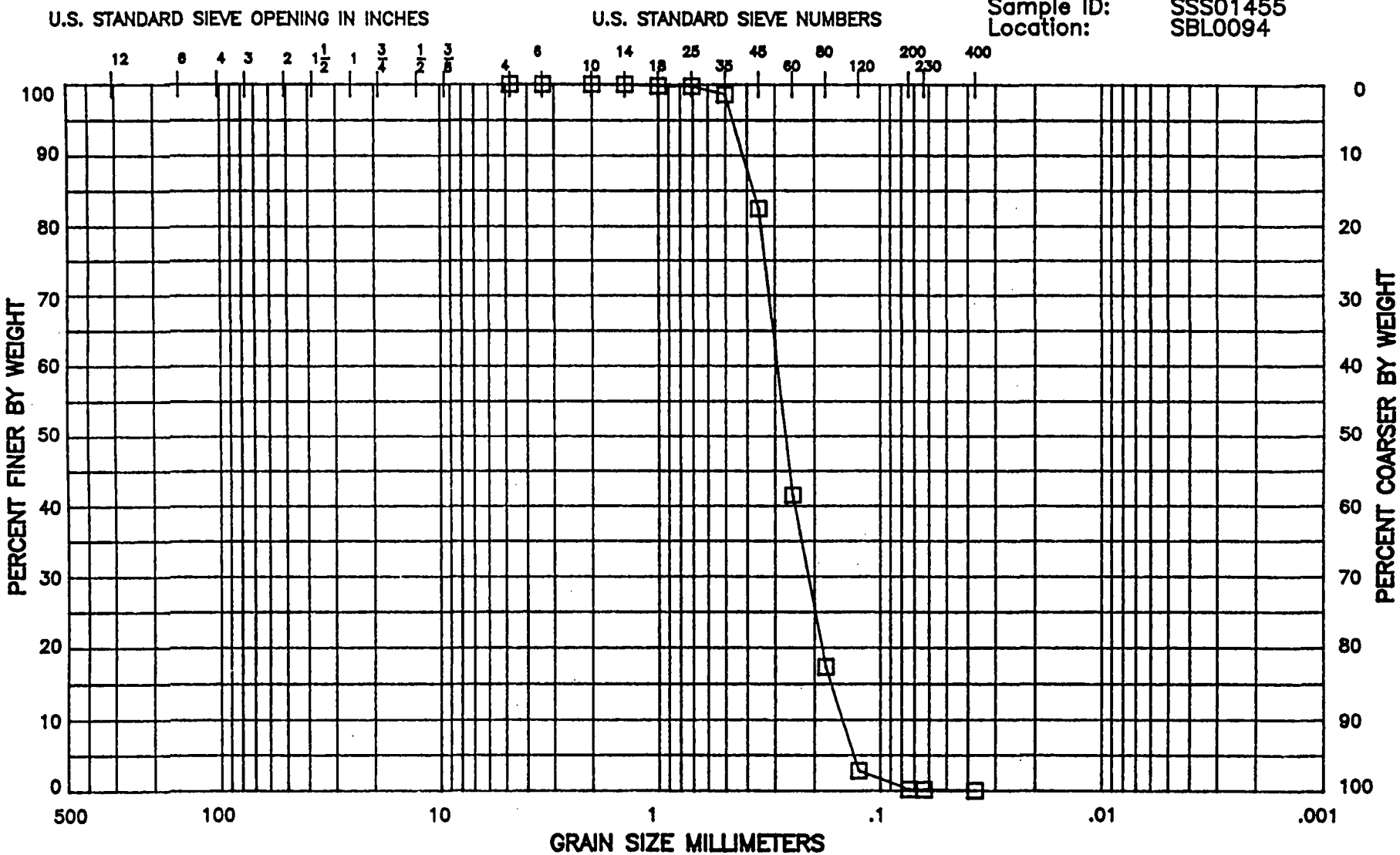
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01455
Location: SBL0094

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

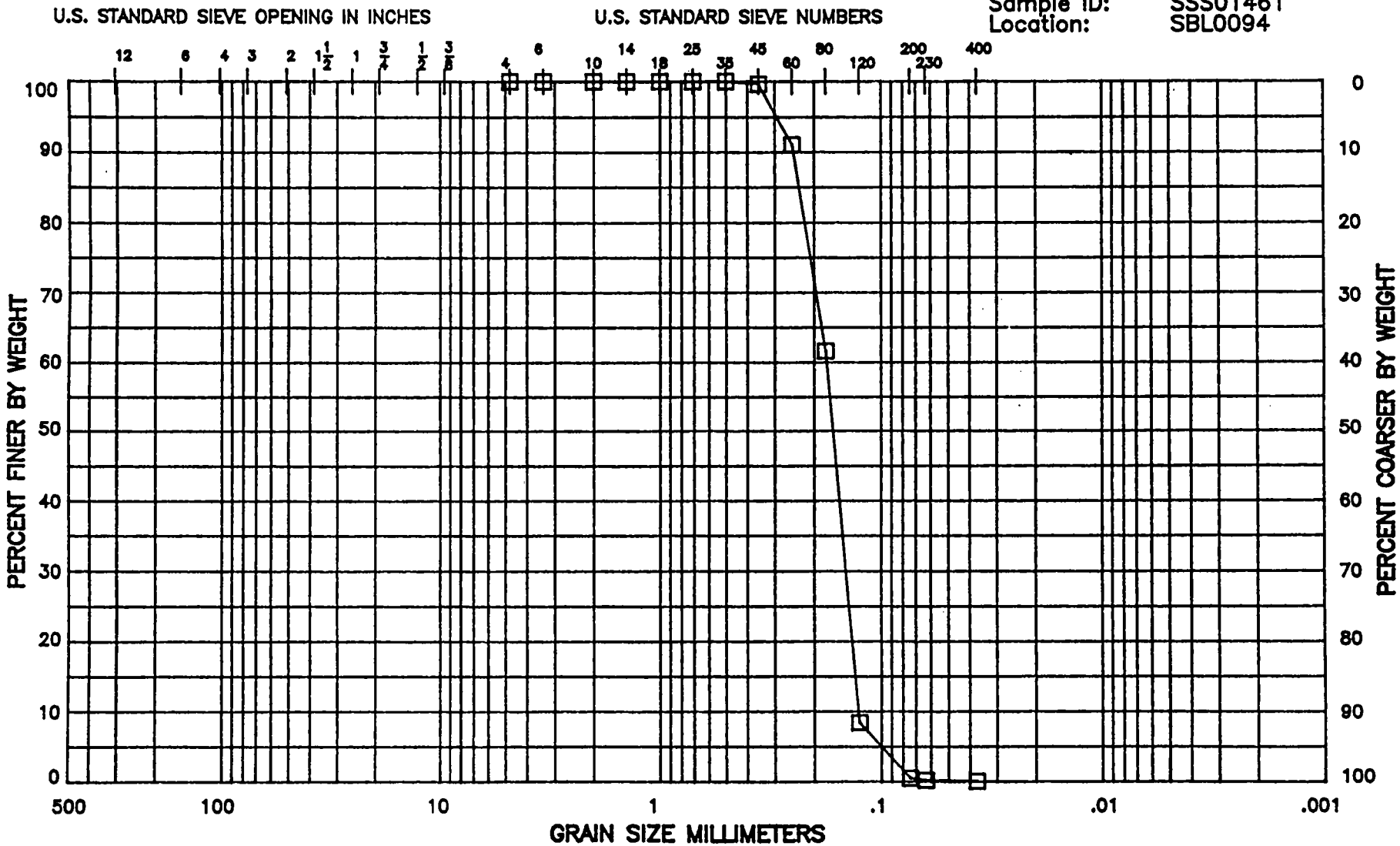
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01461
Location: SBL0094

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

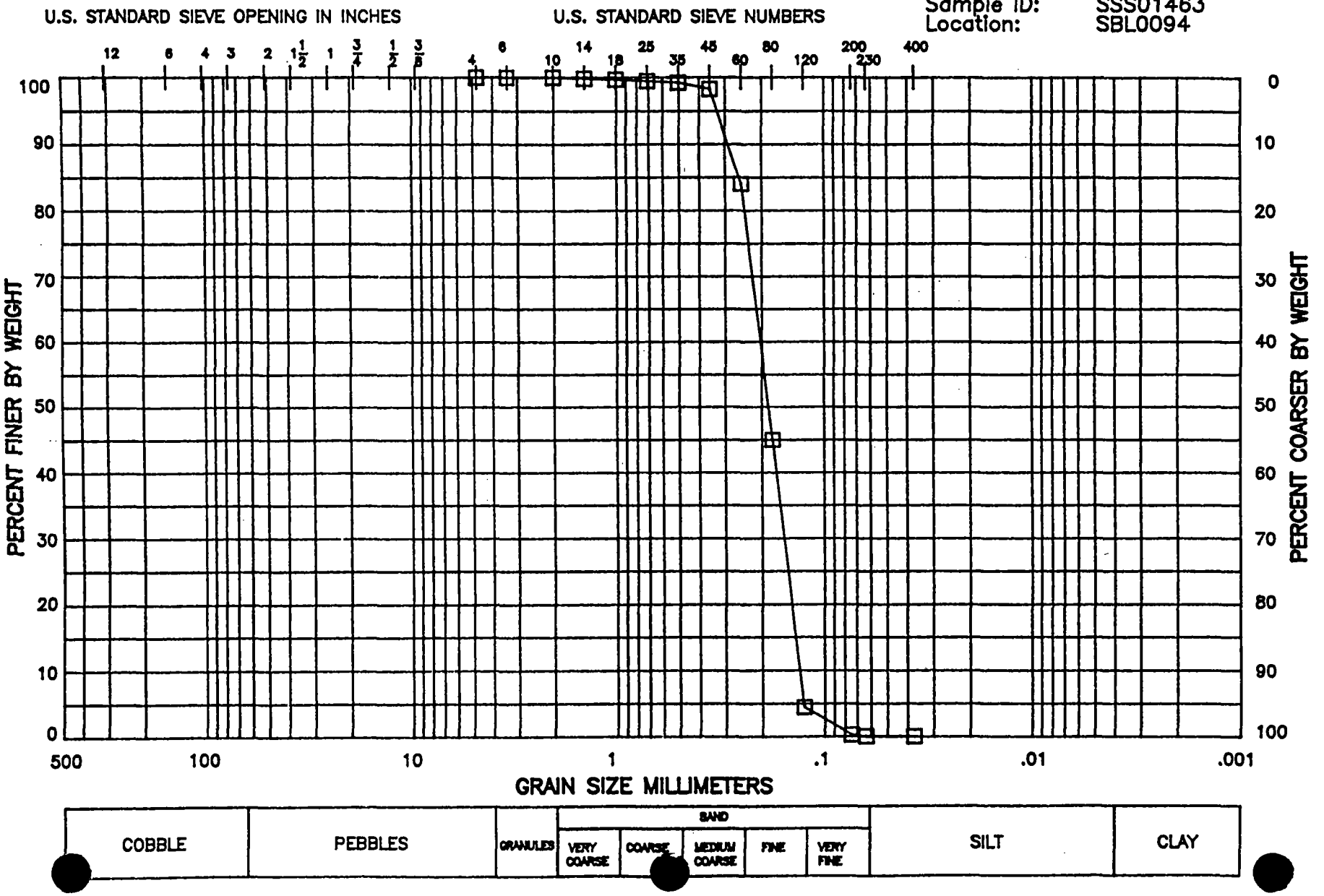
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01463
Location: SBL0094

DRY SIEVE ANALYSIS



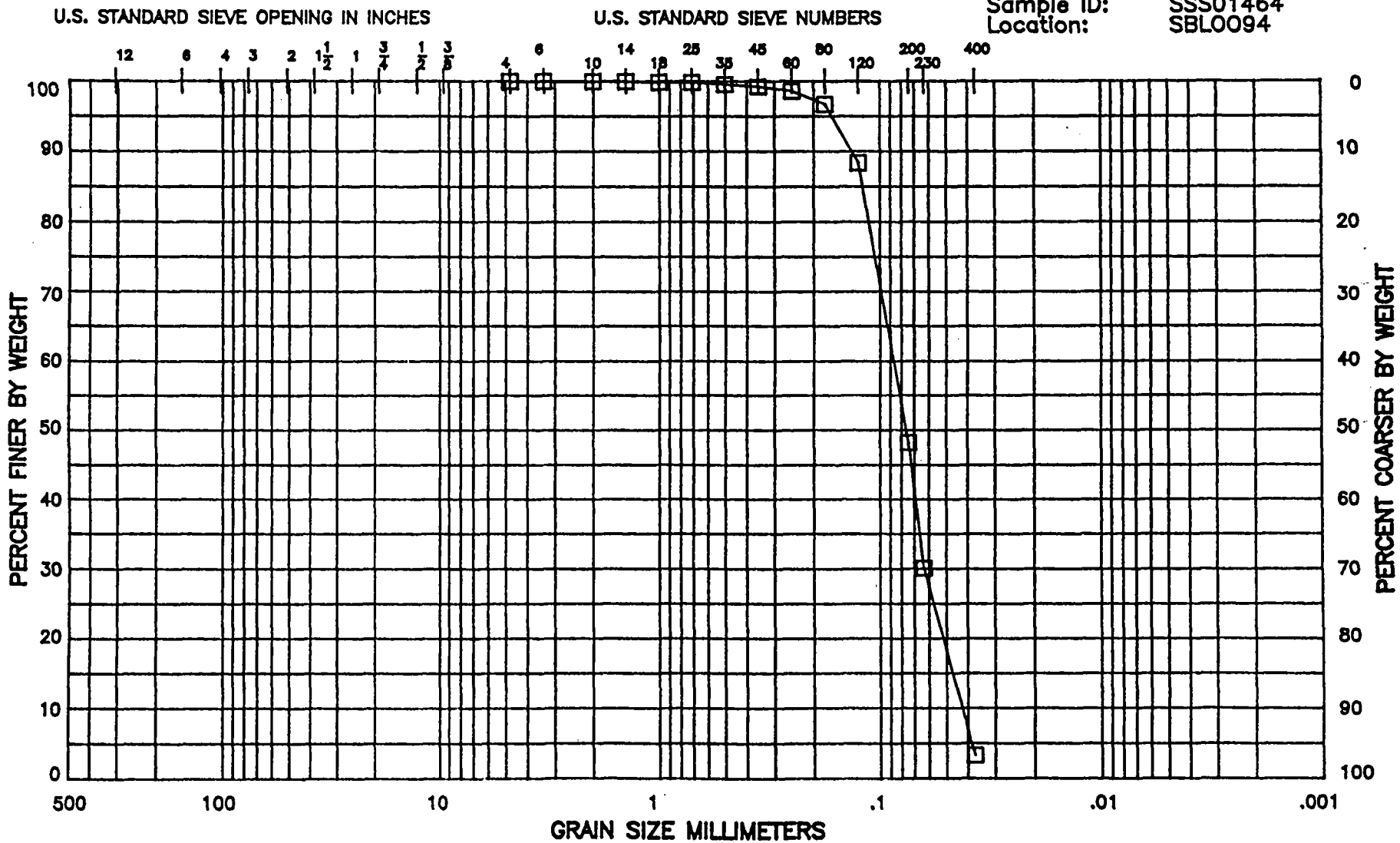
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01464
Location: SBL0094

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

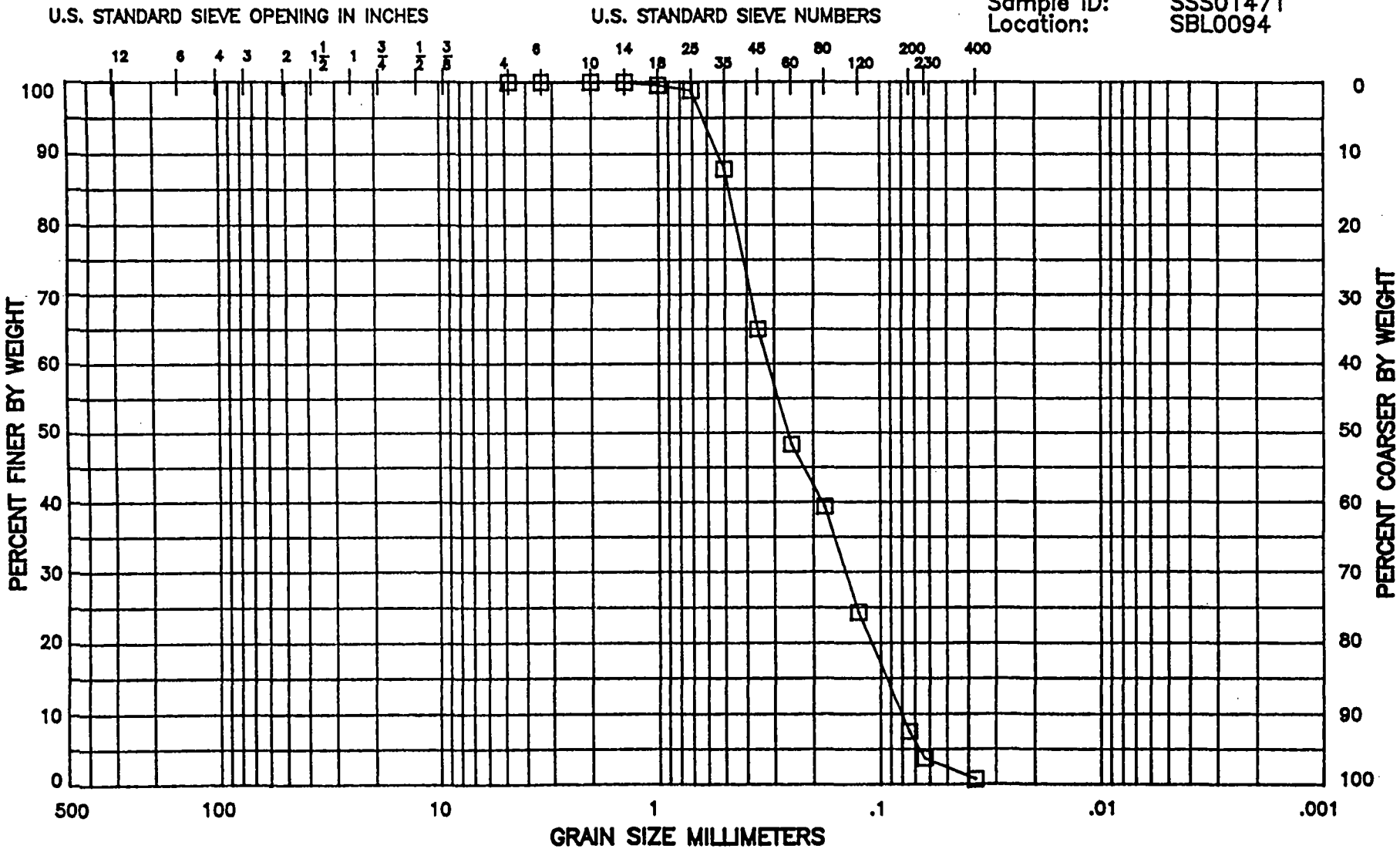
PTS Laboratories, Inc.

File No: 24133
Date: September 04, 1996

Client: Dames & Moore

Project Name: MW-20 Pilot Project
Project No.: 00216-451-139
State: California
Sample ID: SSS01471
Location: SBL0094

DRY SIEVE ANALYSIS



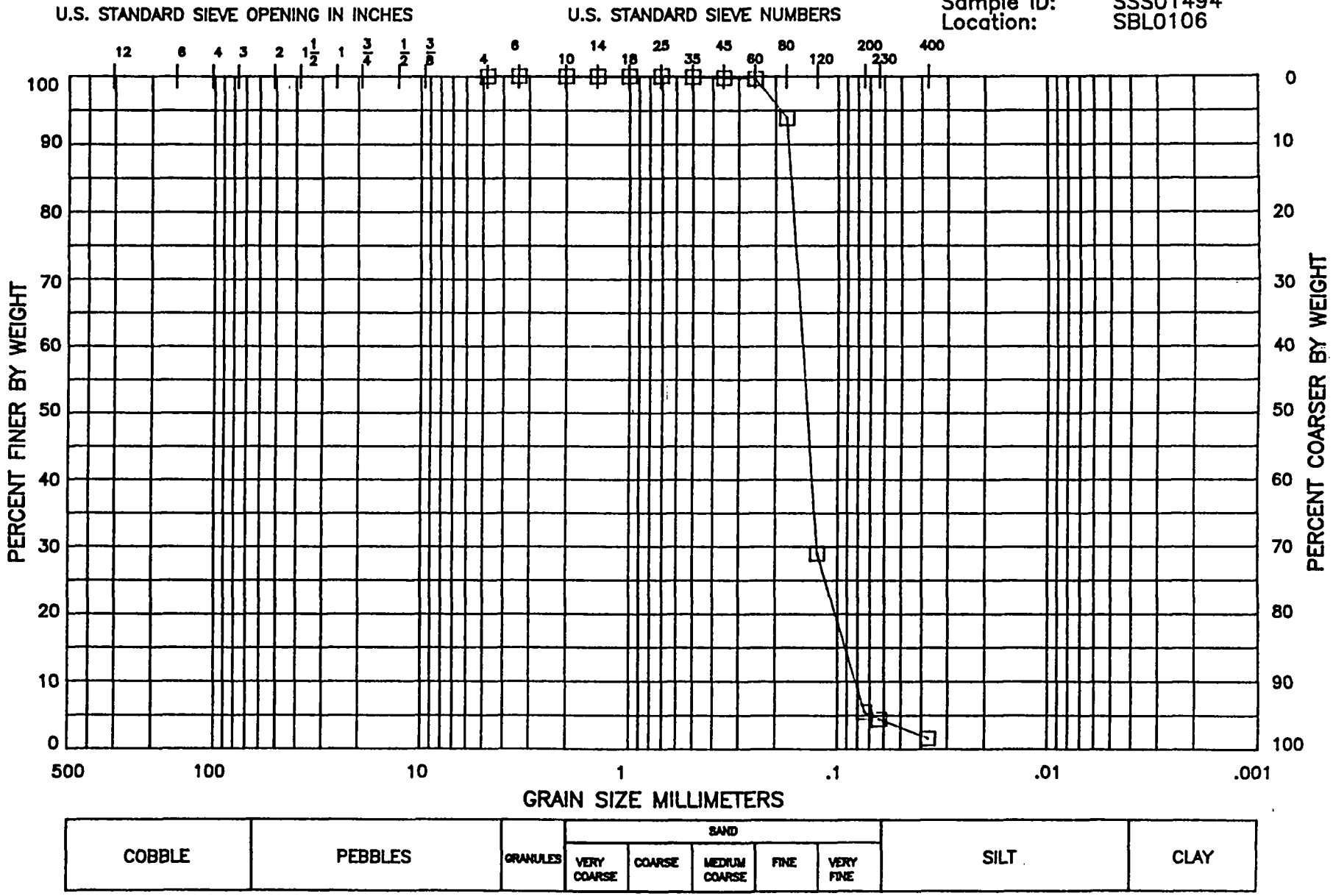
PTS Laboratories, Inc.

File No: 25112
Date: March 21, 1996

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-440-139
State: California
Sample ID: SSS01494
Location: SBL0106

DRY SIEVE ANALYSIS



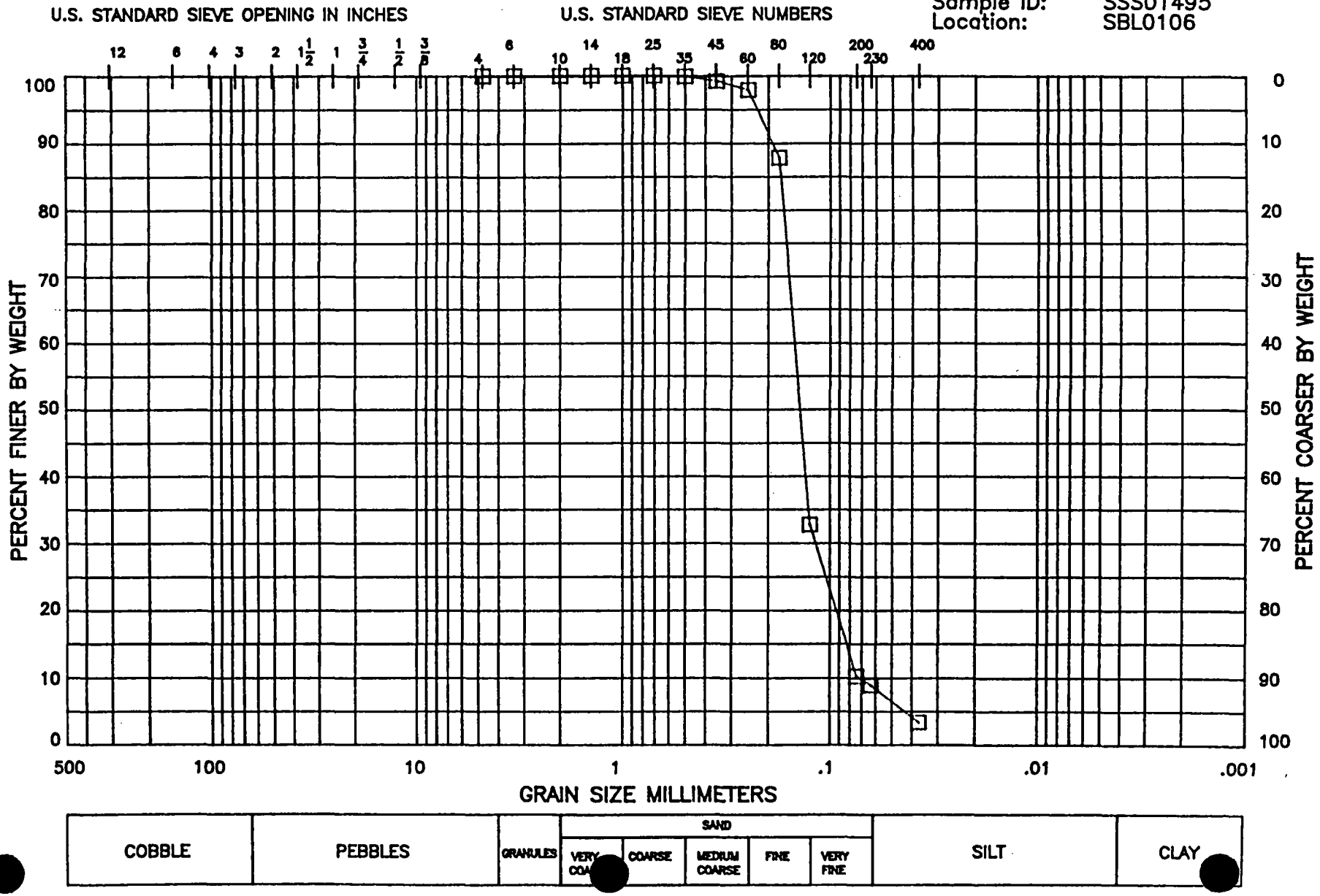
PTS Laboratories, Inc.

File No: 25112
Date: March 21, 1996

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-440-139
State: California
Sample ID: SSS01495
Location: SBL0106

DRY SIEVE ANALYSIS



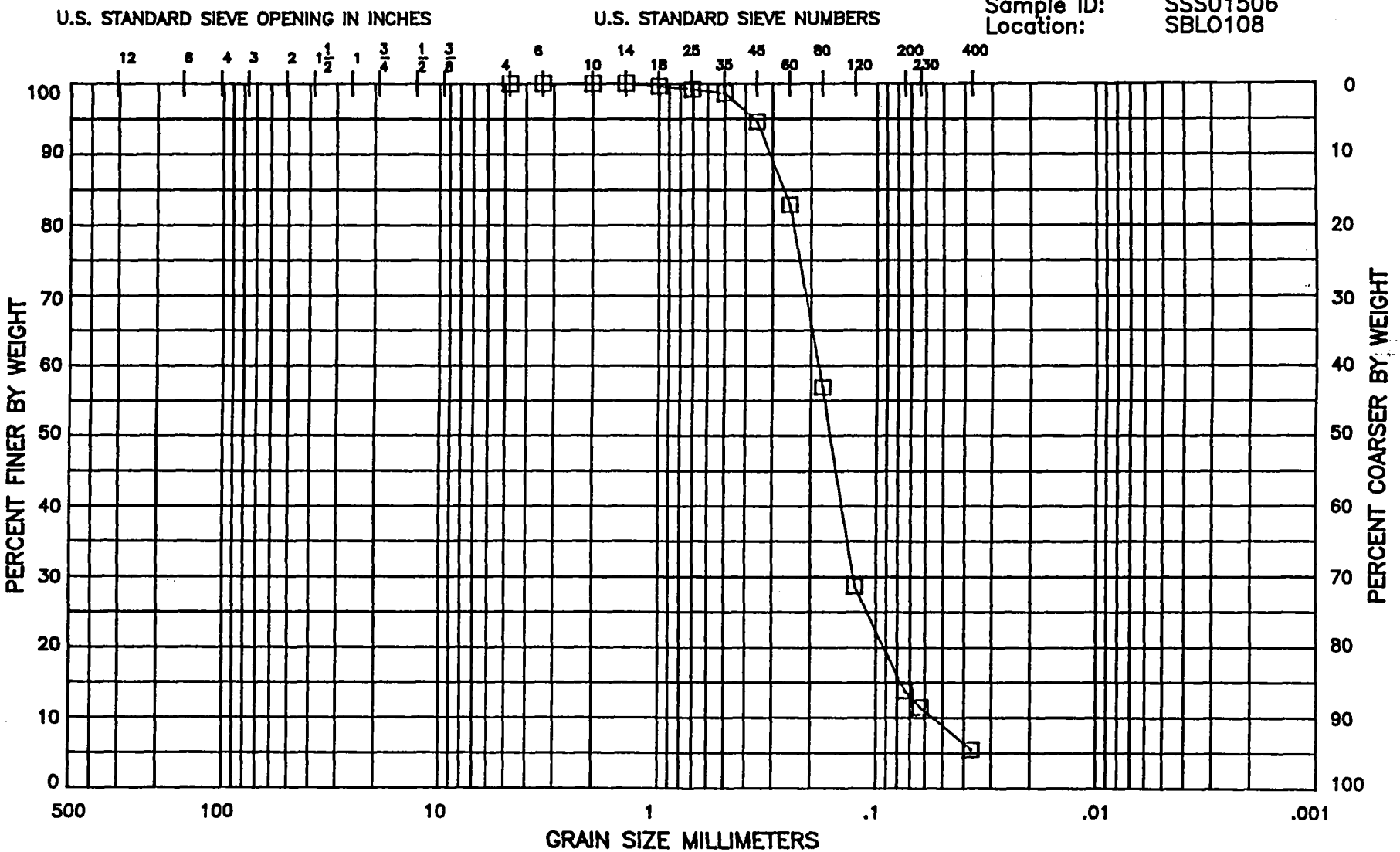
PTS Laboratories, Inc.

File No: 25112
Date: March 21, 1996

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-440-139
State: California
Sample ID: SSS01506
Location: SBL0108

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

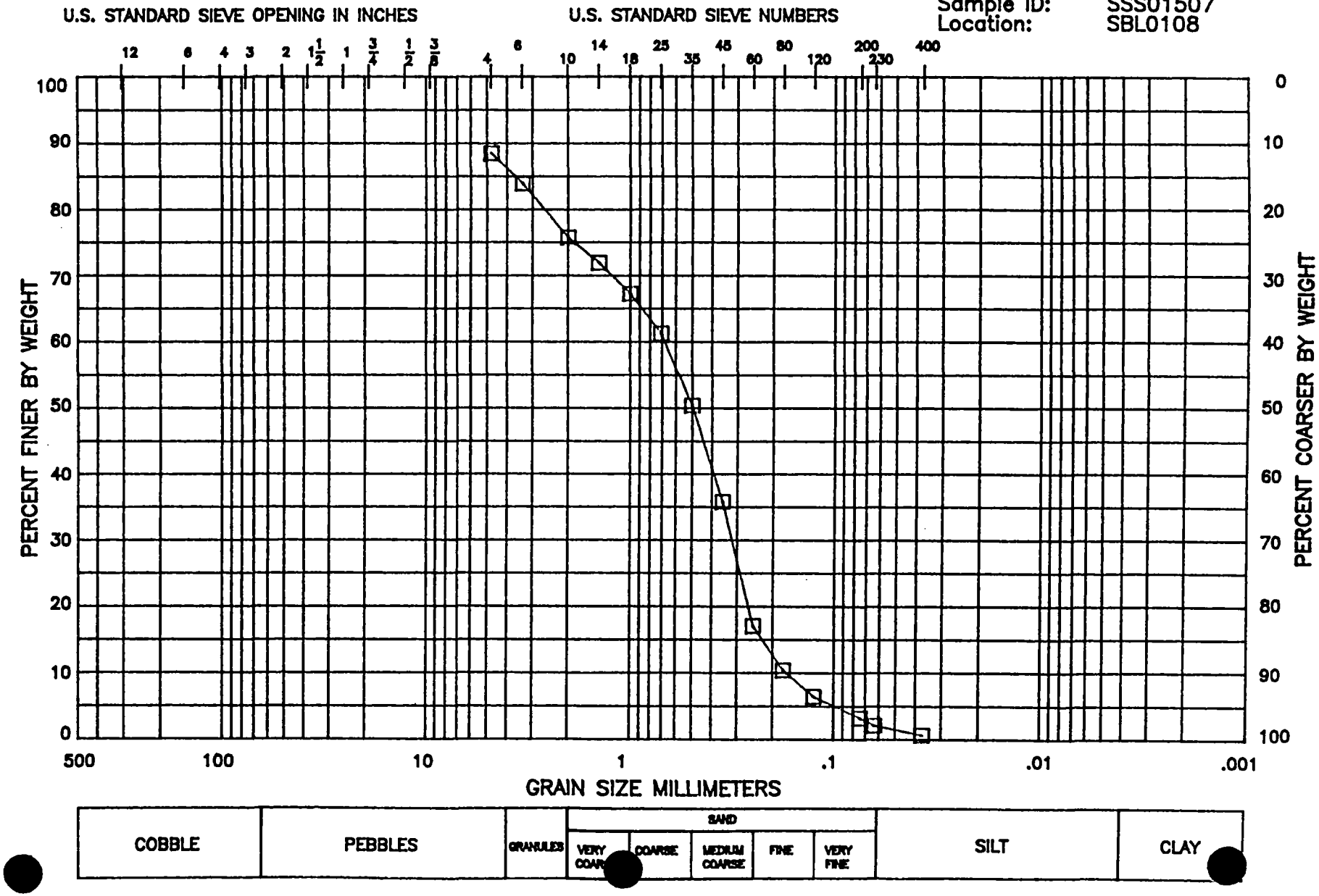
PTS Laboratories, Inc.

File No: 25112
Date: March 21, 1996

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-440-139
State: California
Sample ID: SSS01507
Location: SBL0108

DRY SIEVE ANALYSIS



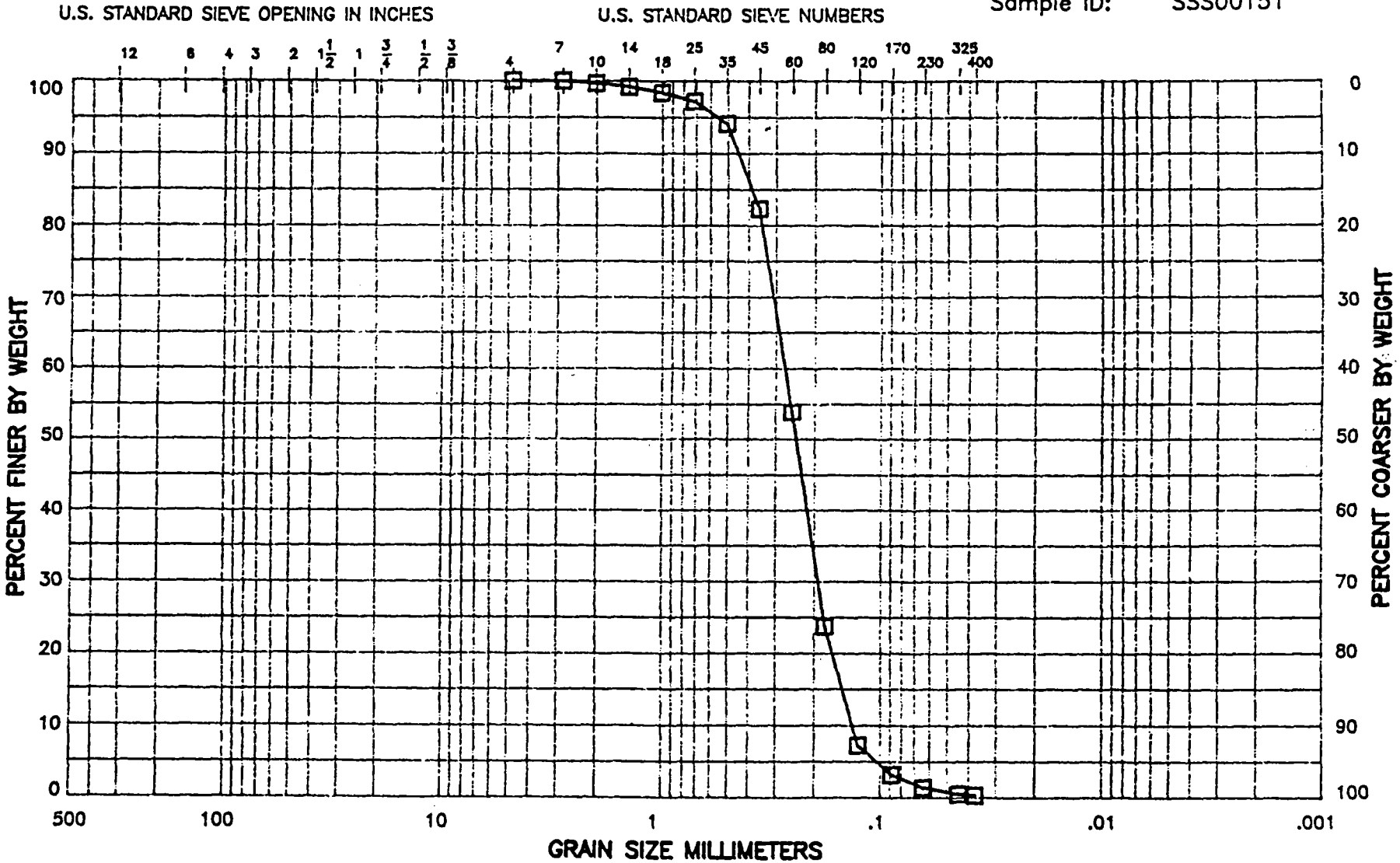
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00151

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

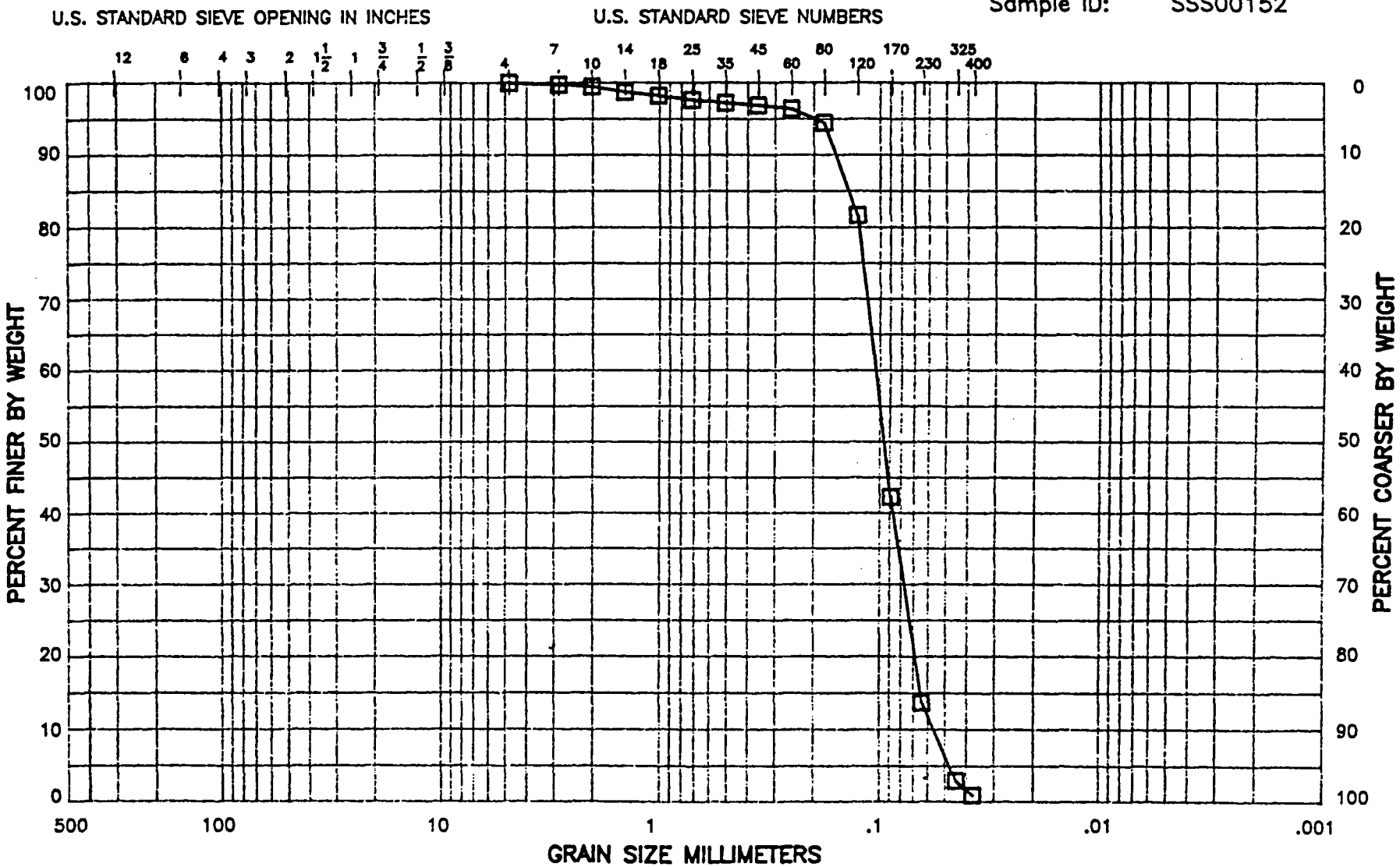
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00152

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

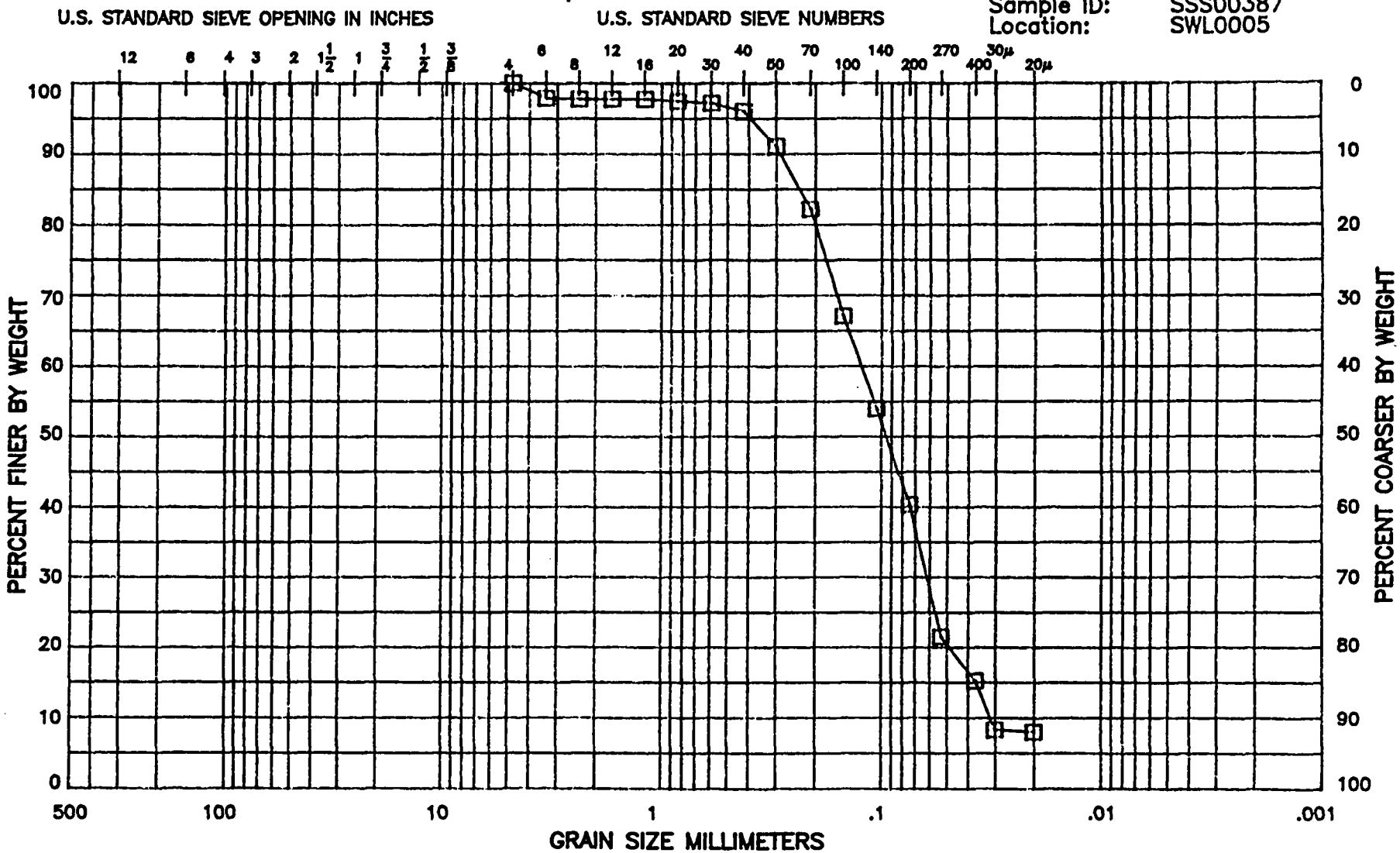
PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00387
Location: SWL0005

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

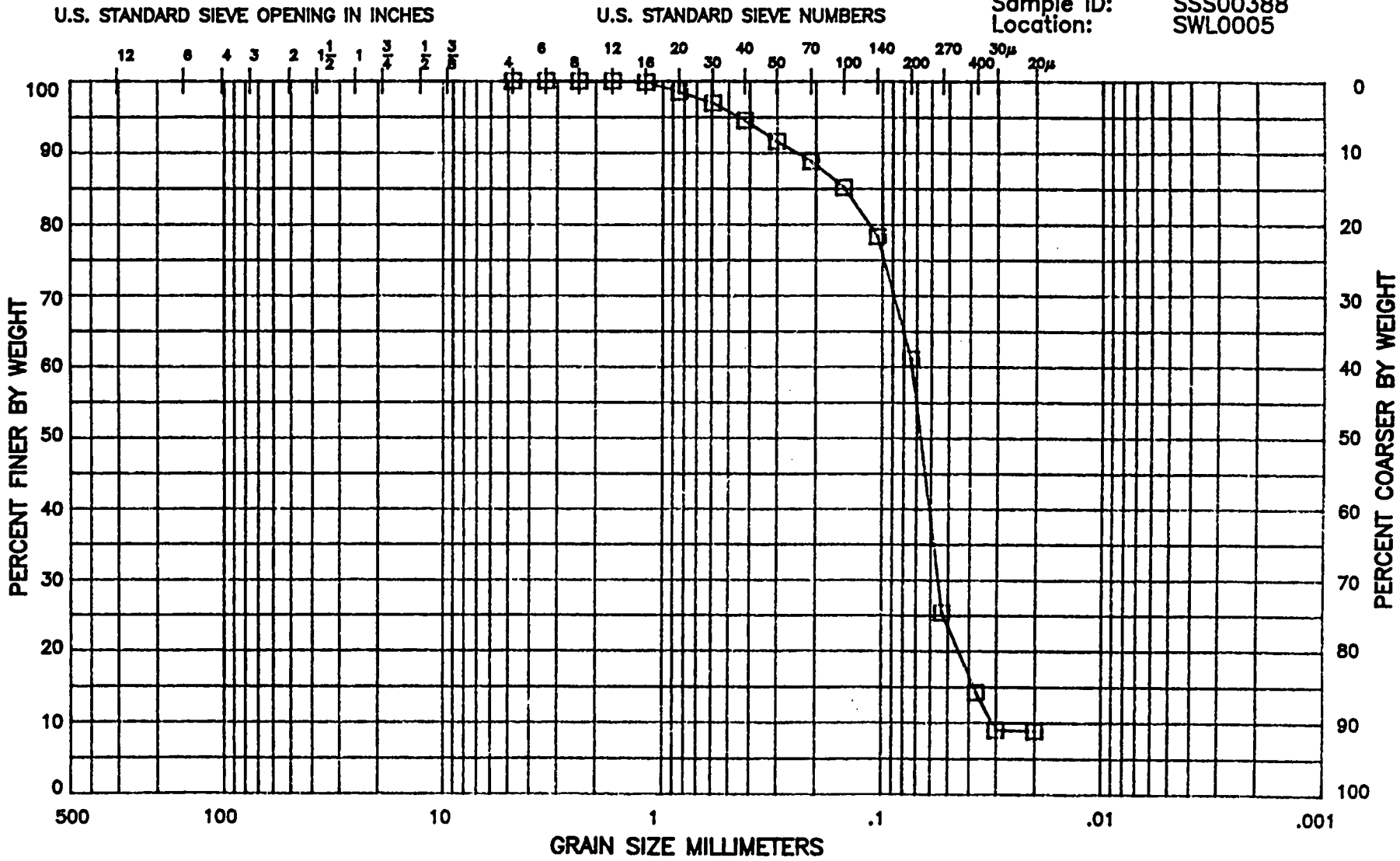
PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00388
Location: SWL0005

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

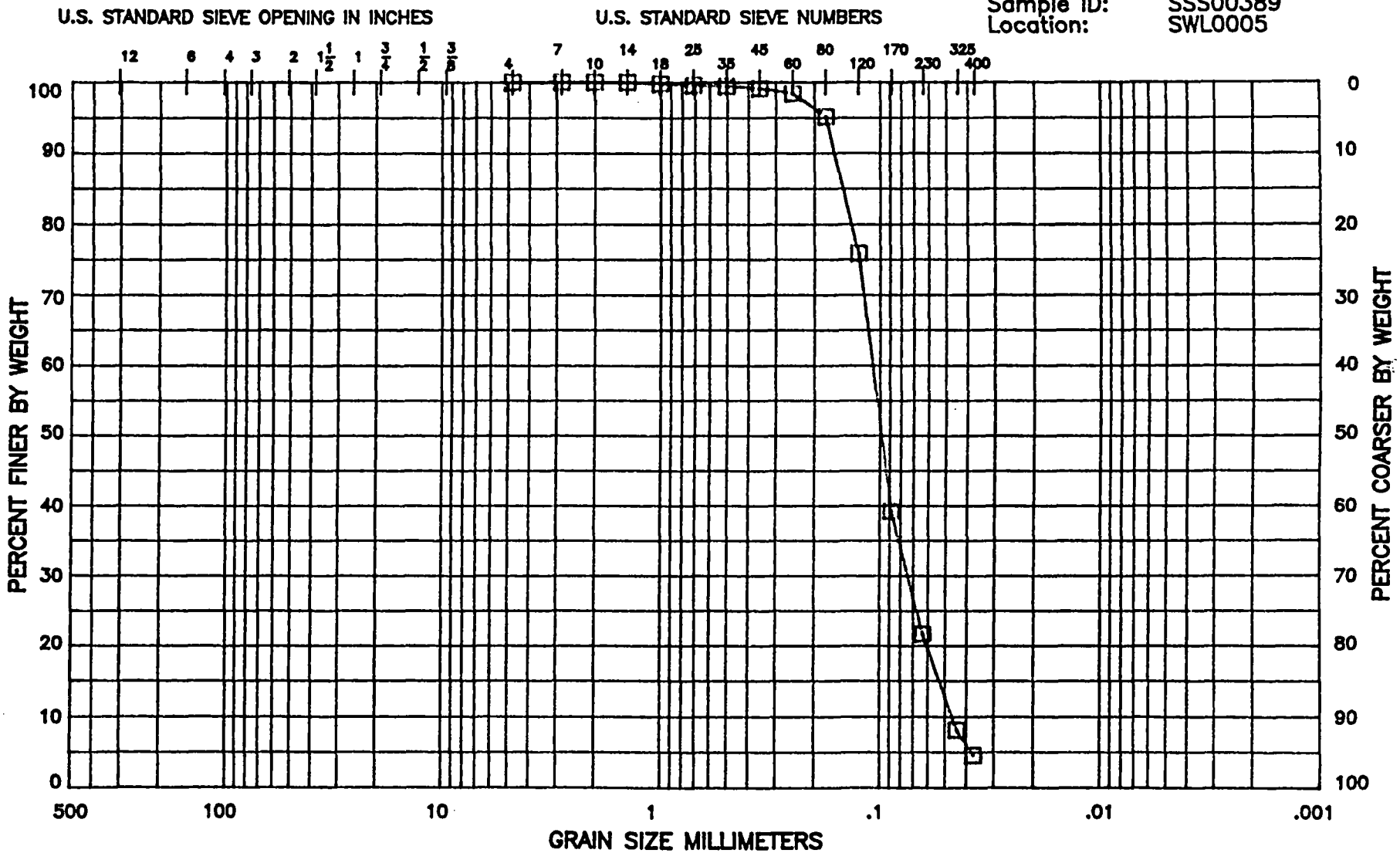
PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00389
Location: SWL0005

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

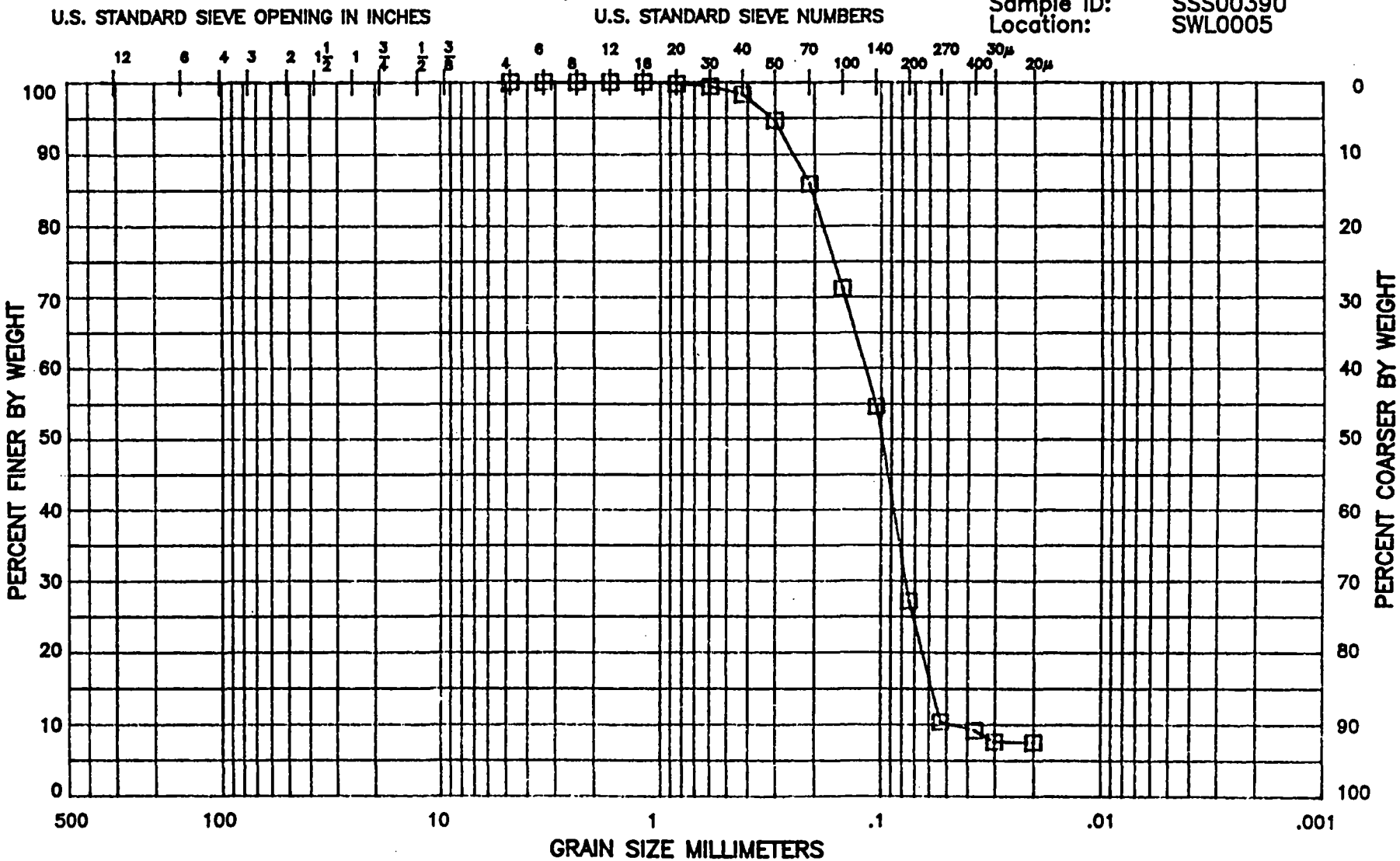
PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00390
Location: SWL0005

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

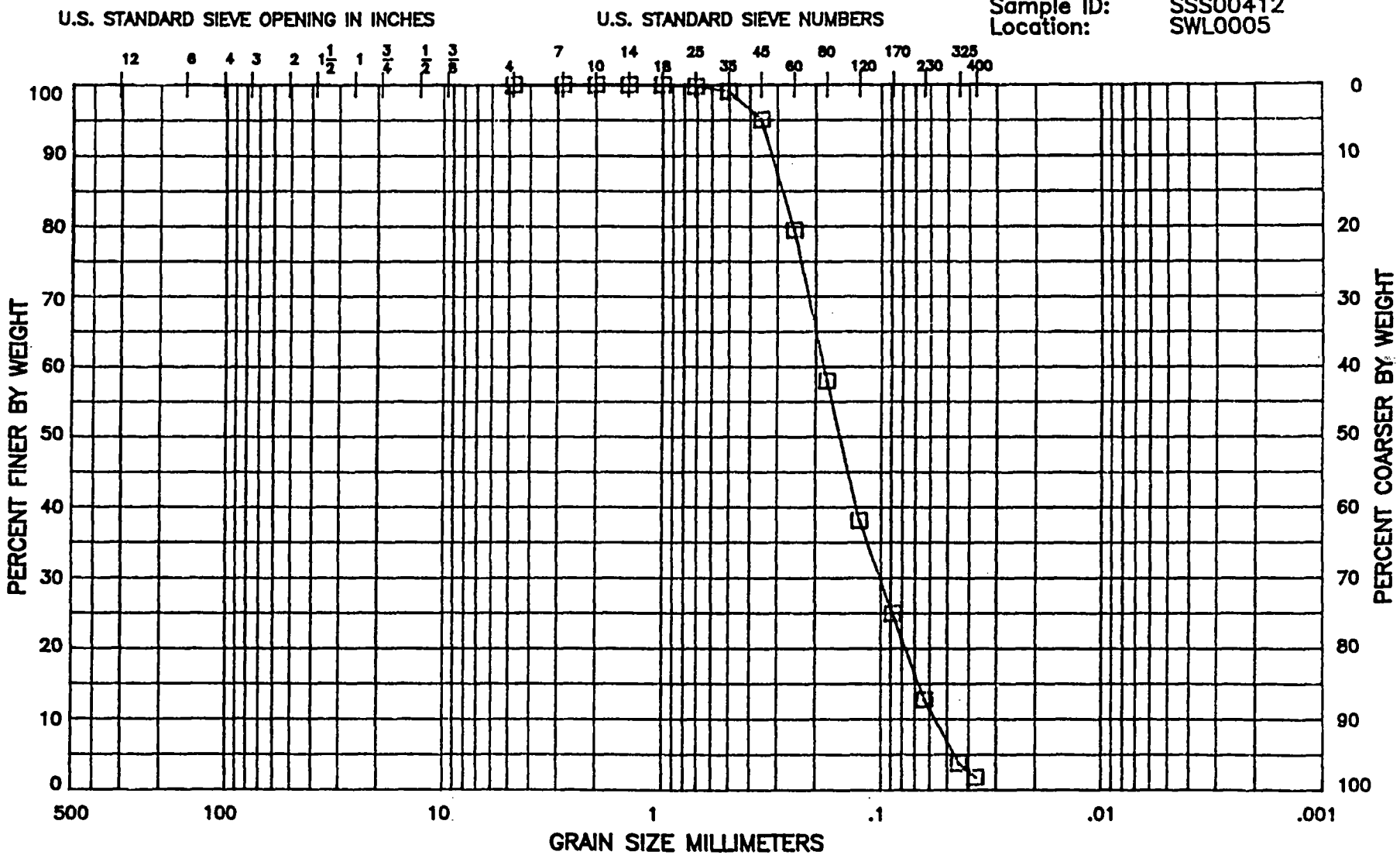
PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00412
Location: SWL0005

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

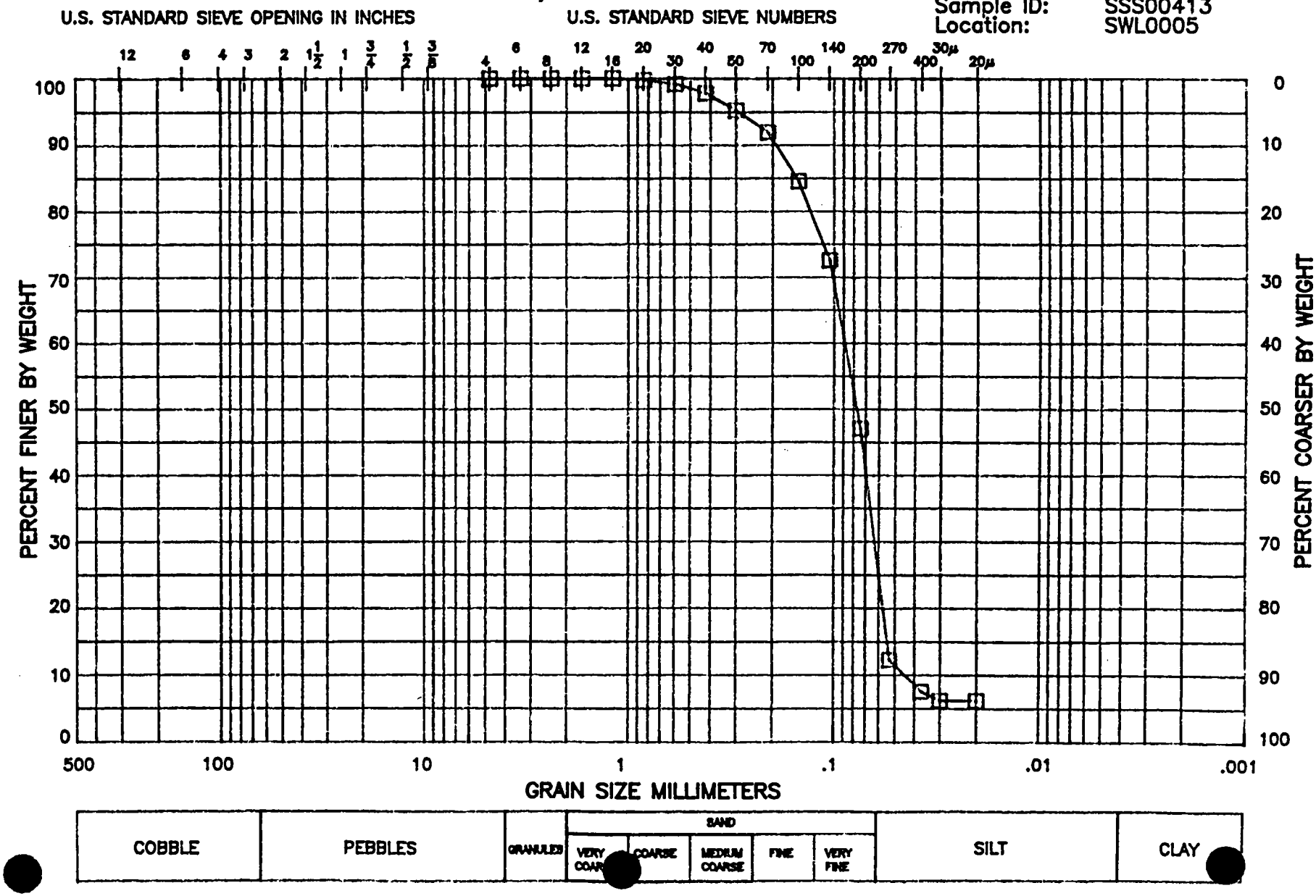
PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00413
Location: SWL0005

WET/DRY SIEVE ANALYSIS



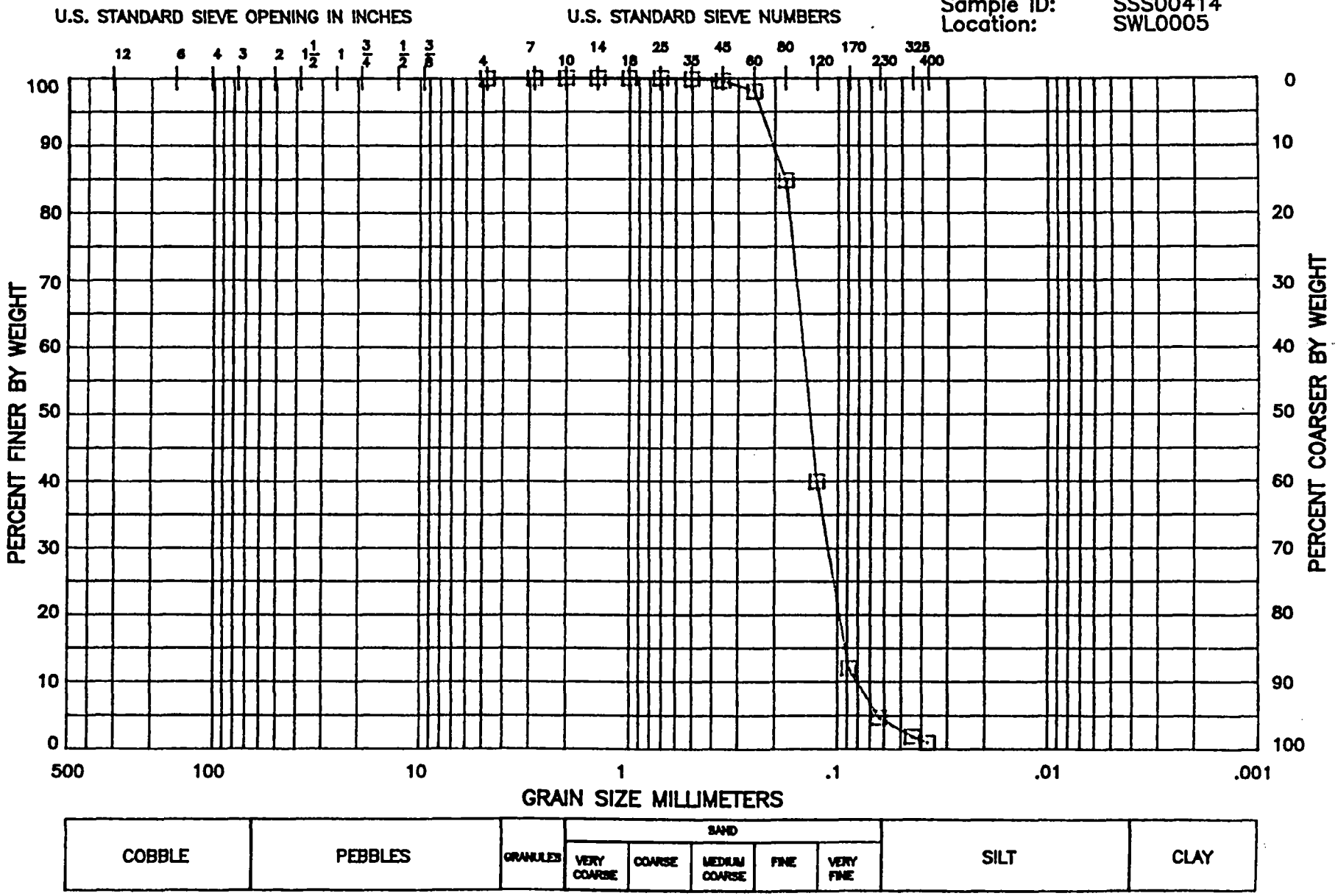
PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00414
Location: SWL0005

DRY SIEVE ANALYSIS



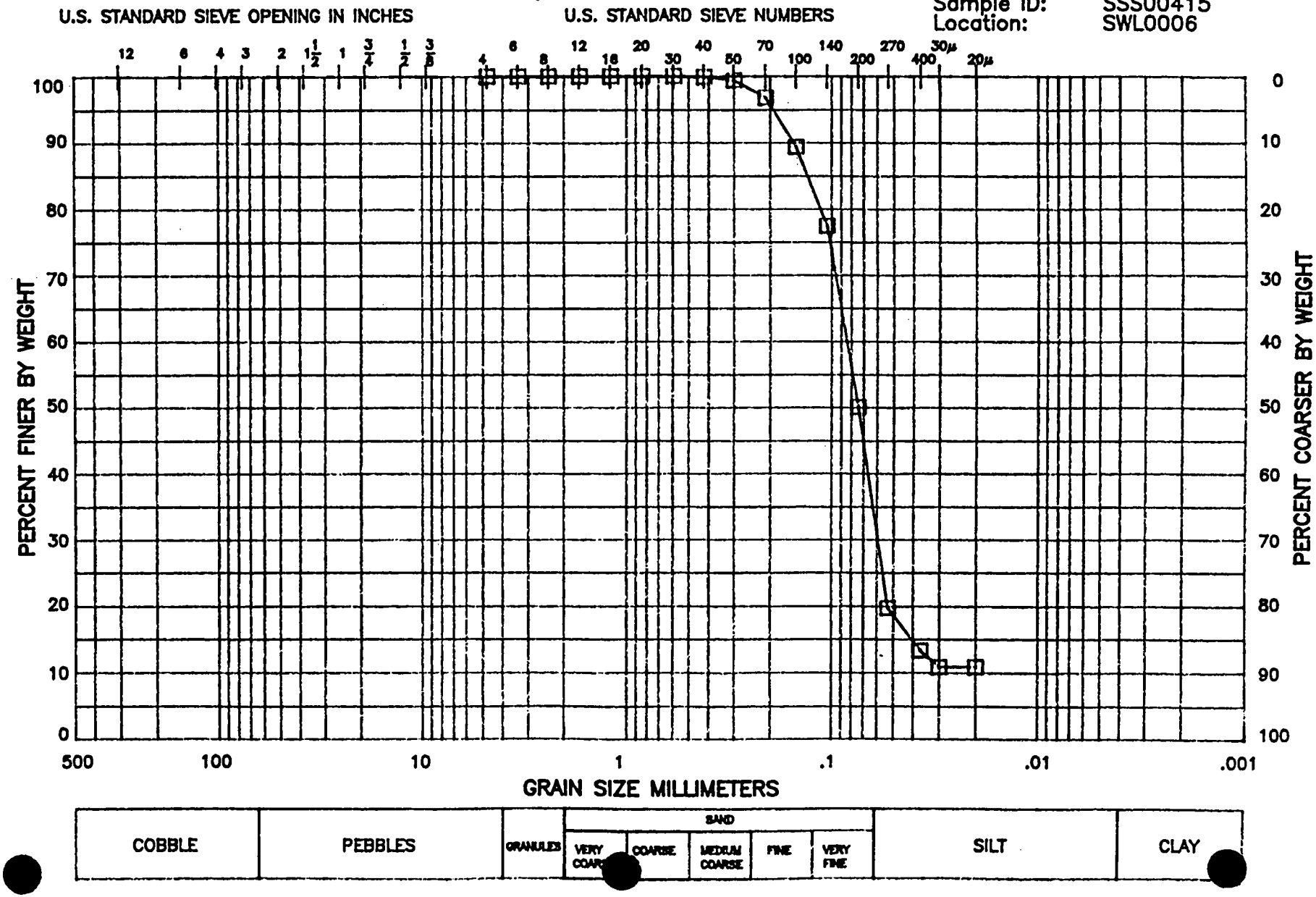
PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00415
Location: SWL0006

WET/DRY SIEVE ANALYSIS



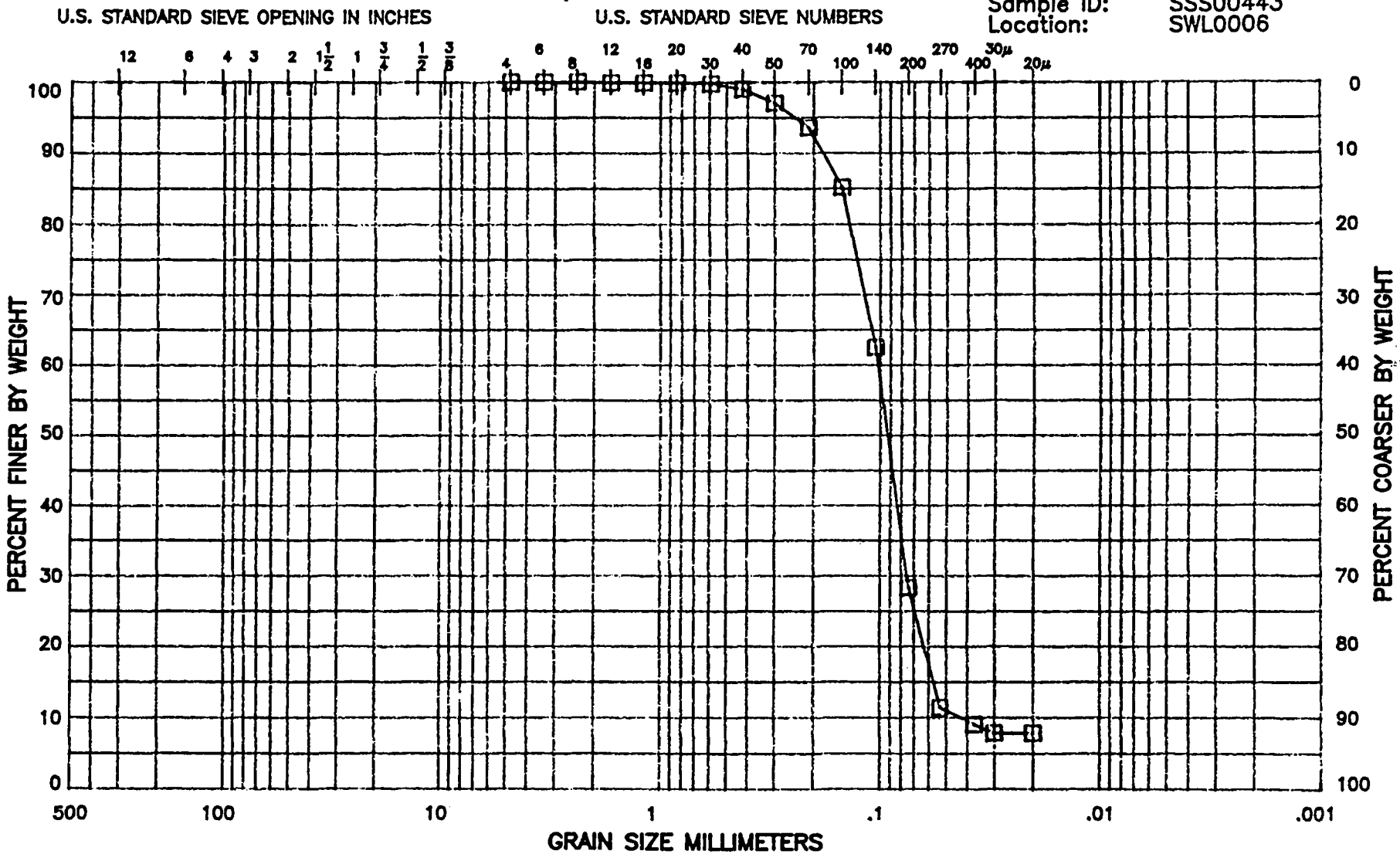
PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00443
Location: SWL0006

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

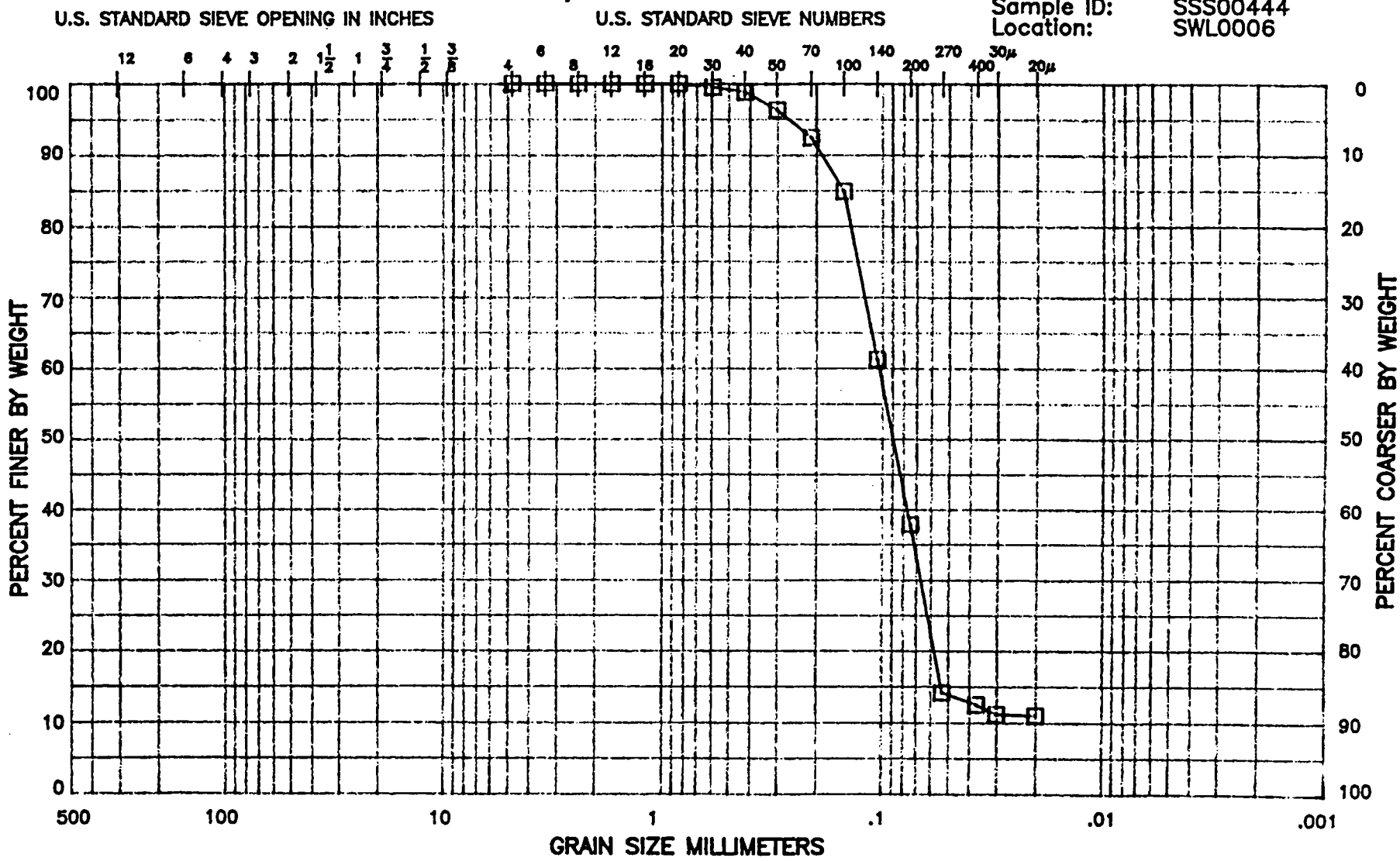
PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00444
Location: SWL0006

WET/DRY SIEVE ANALYSIS



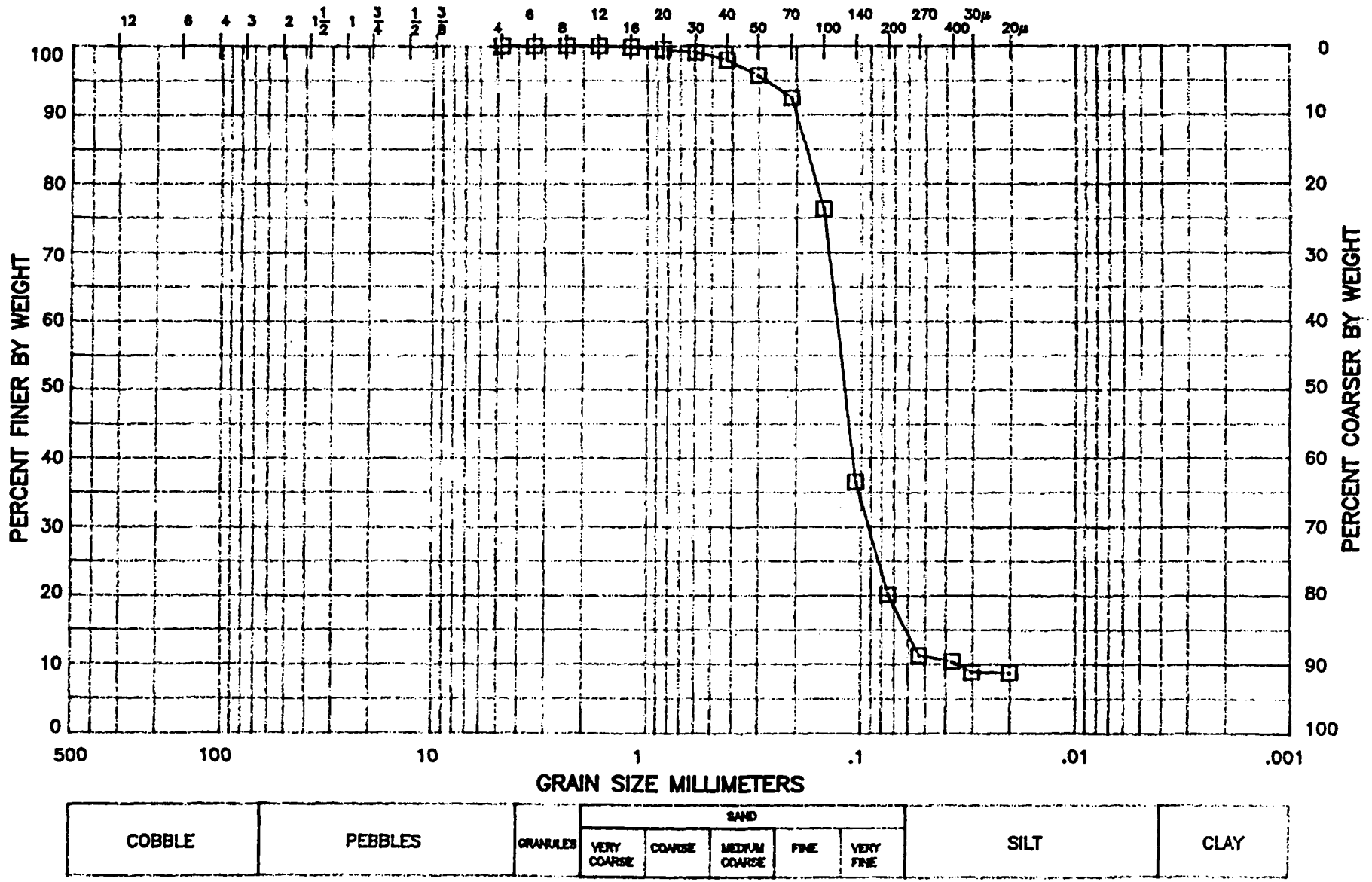
PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00445
Location: SWL0006

WET/DRY SIEVE ANALYSIS



PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00446
Location: SWL0006

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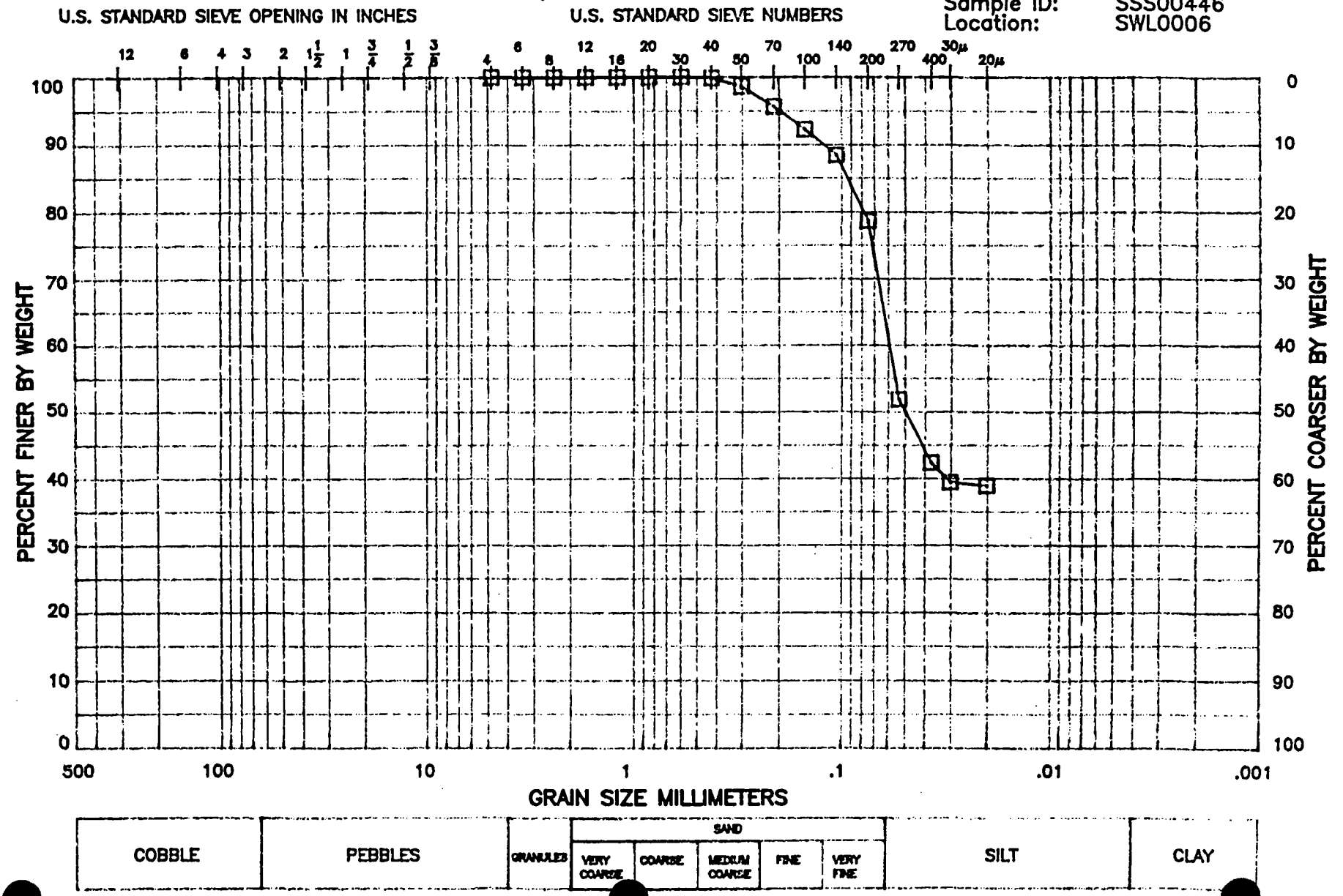


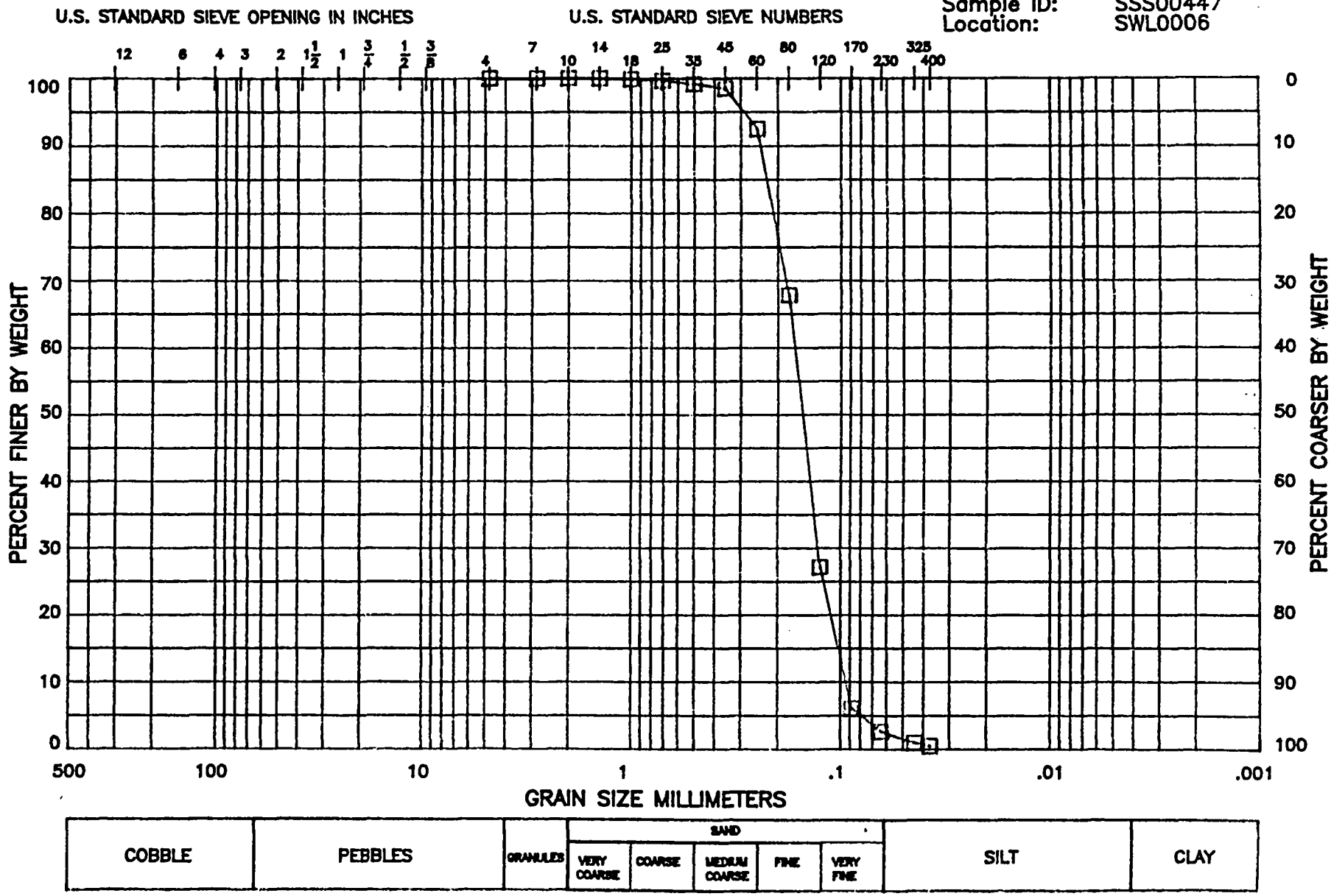
PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Client: Dames and Moore

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00447
Location: SWL0006

DRY SIEVE ANALYSIS



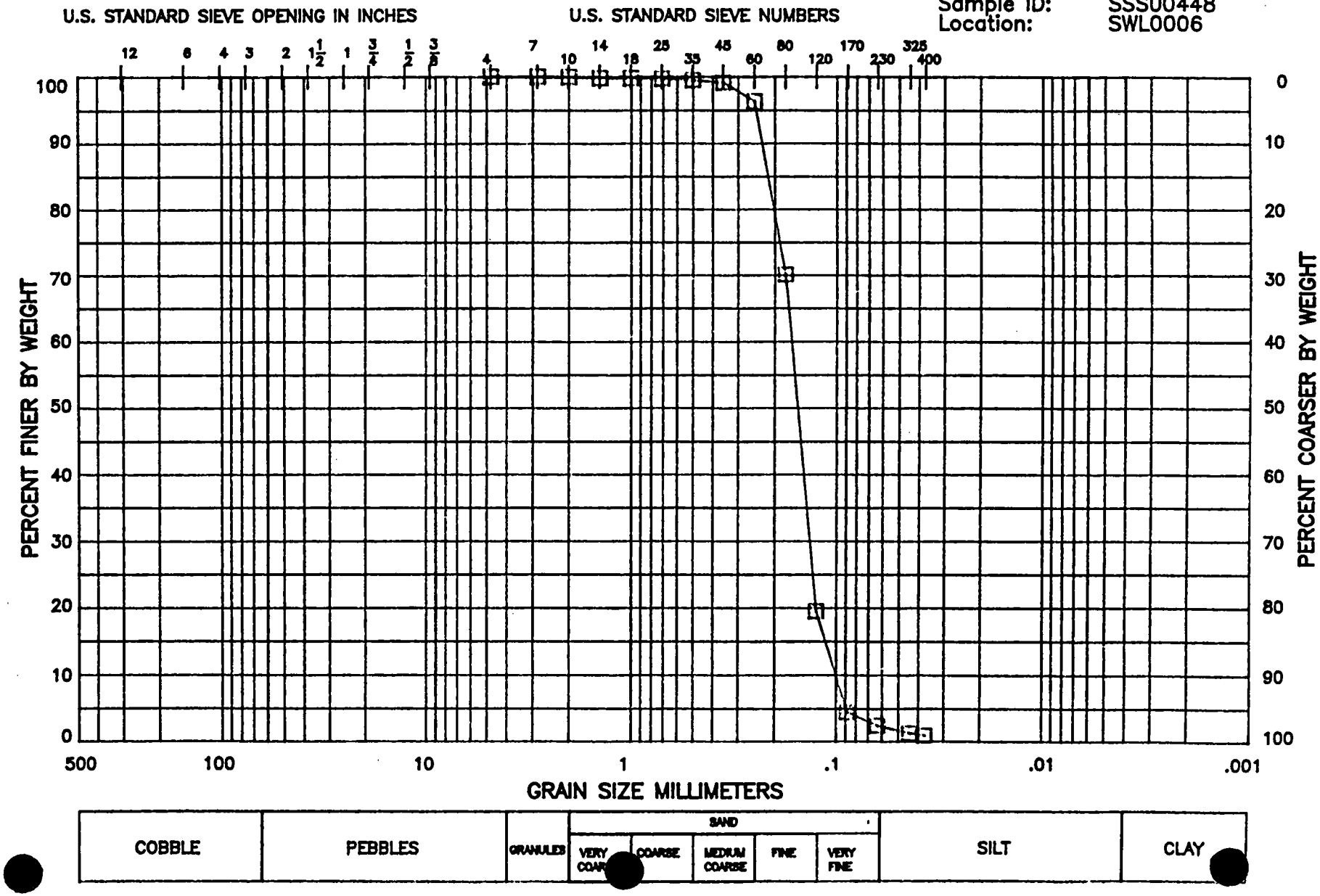
PNP Laboratories, Inc.

File No: 23014
Date: February 24, 1993

Project Name: Del Amo RI/FS
Project No.: 00216-387-139
State: California
Sample ID: SSS00448
Location: SWL0006

Client: Dames and Moore

DRY SIEVE ANALYSIS



PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 14, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108--13
State: California
Sample ID: SSS00034

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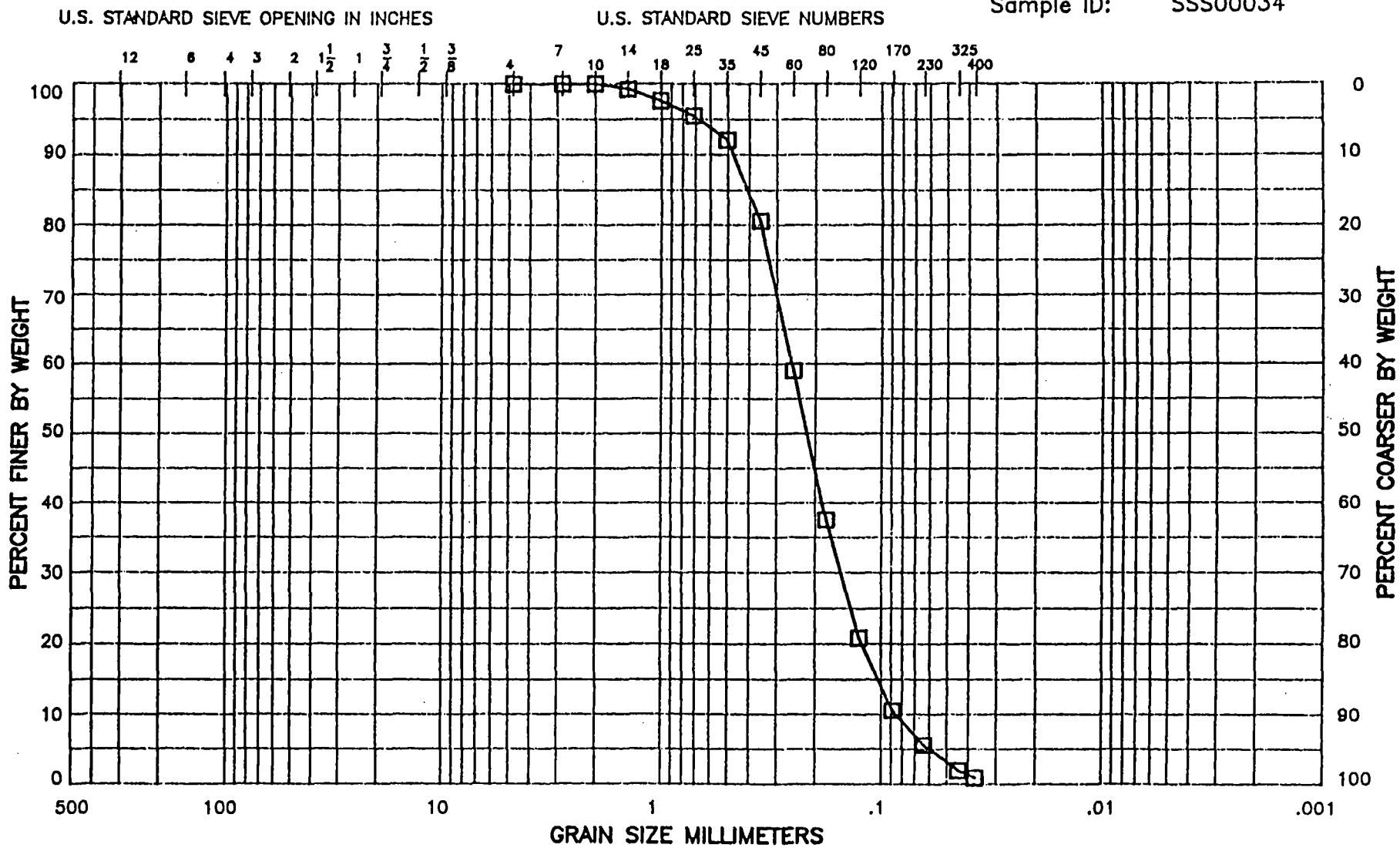

COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 14, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00043

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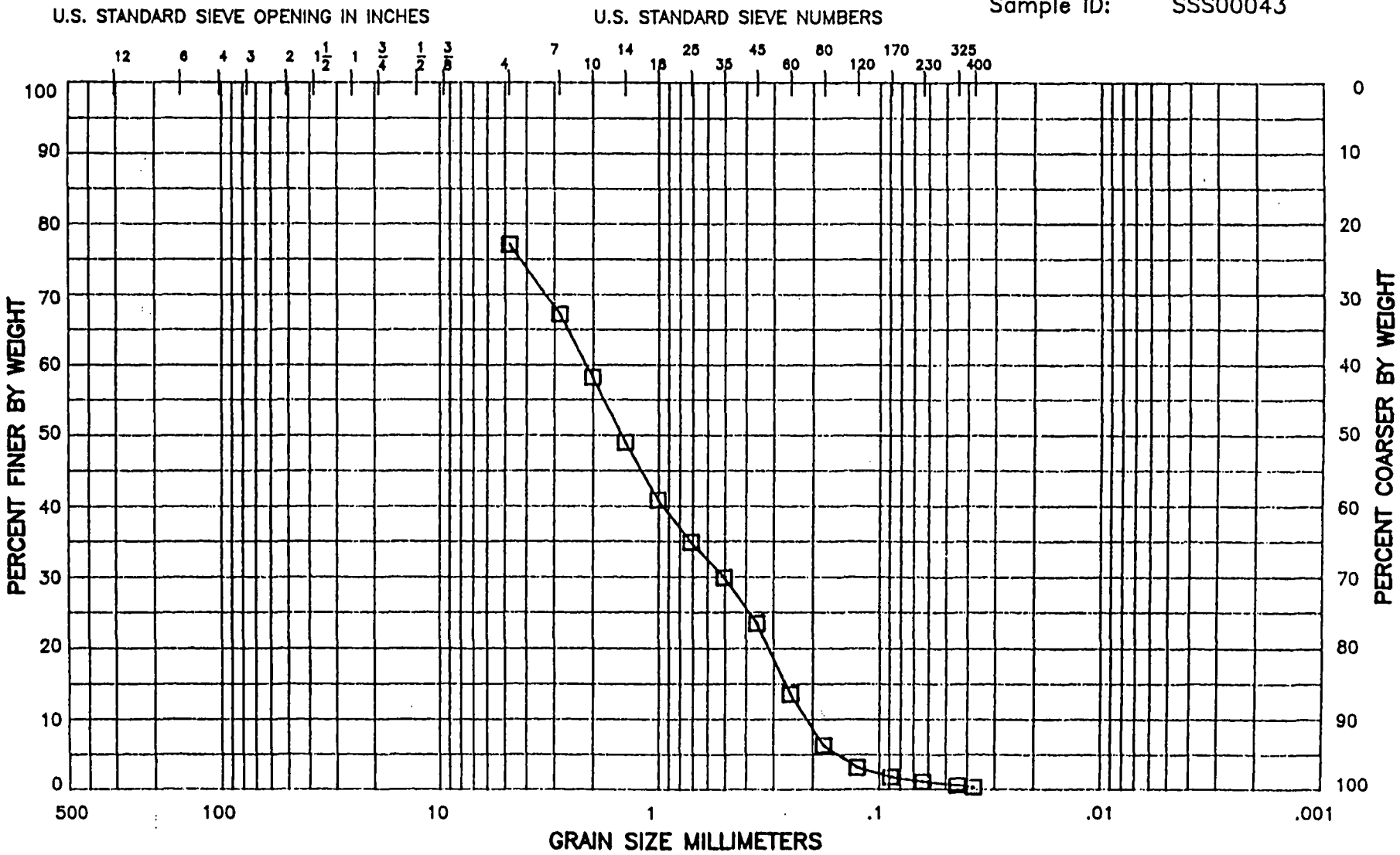

COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 14, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00044

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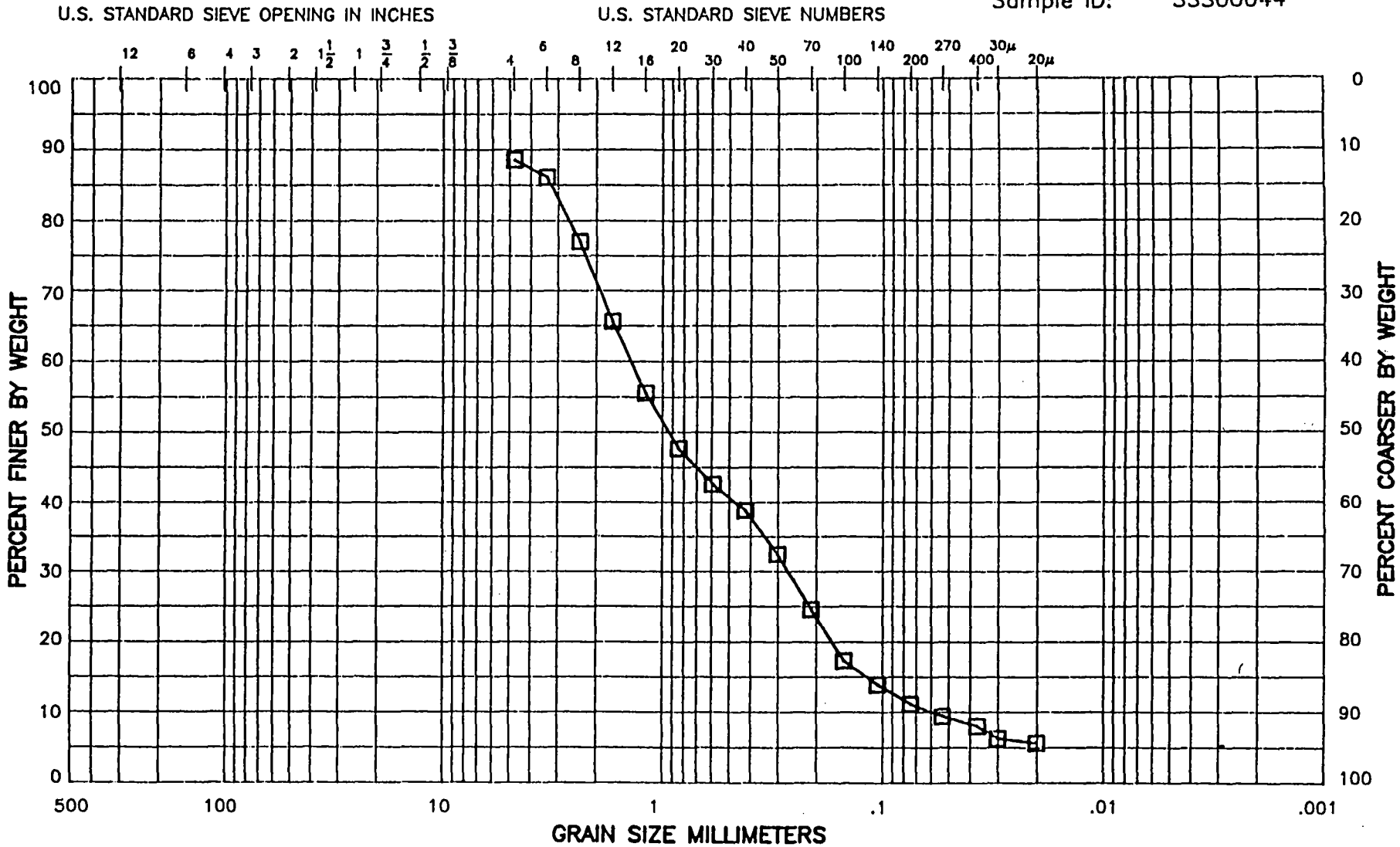

COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 14, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345--5108-13
State: California
Sample ID: SSS00053

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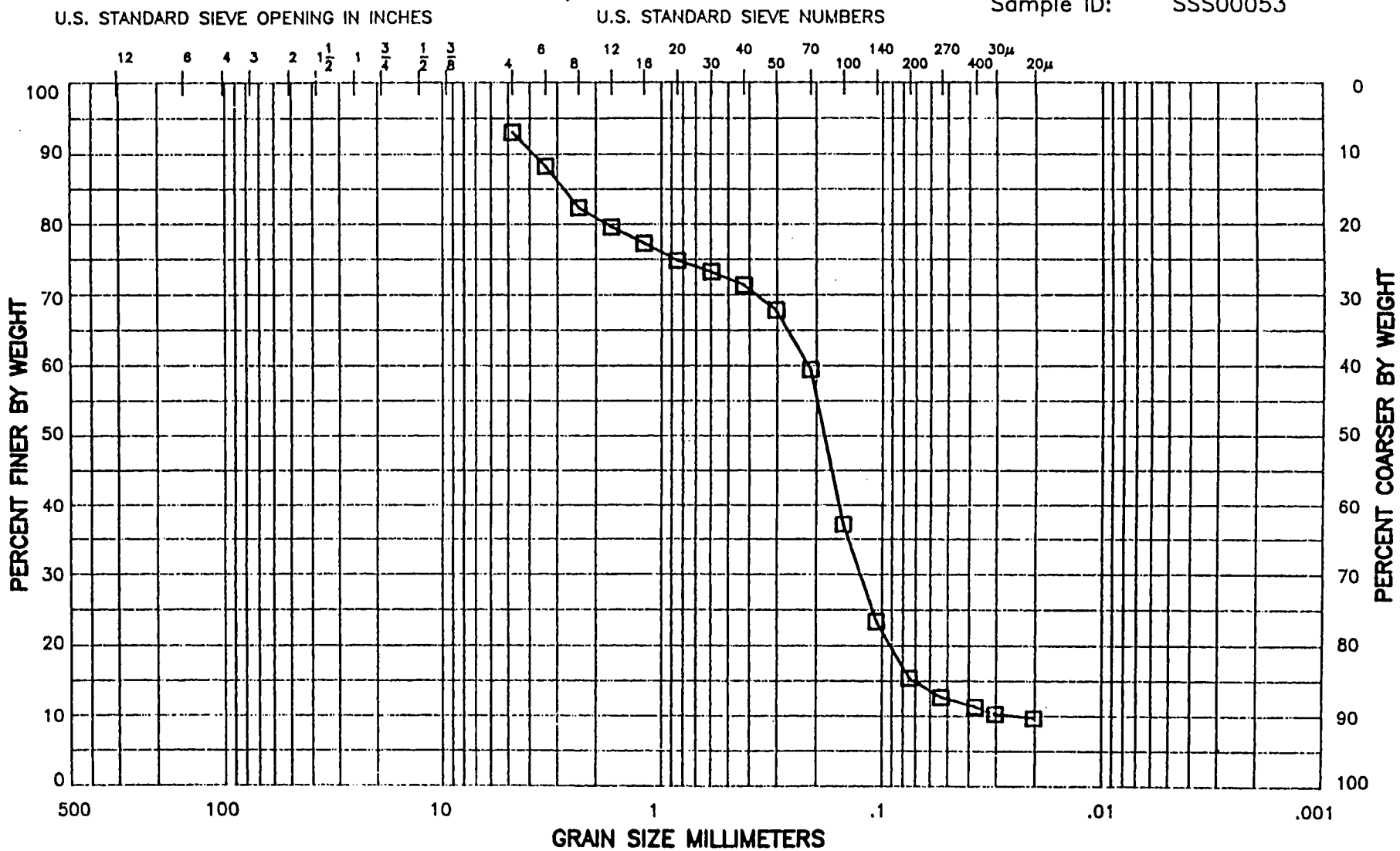

COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 14, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00054

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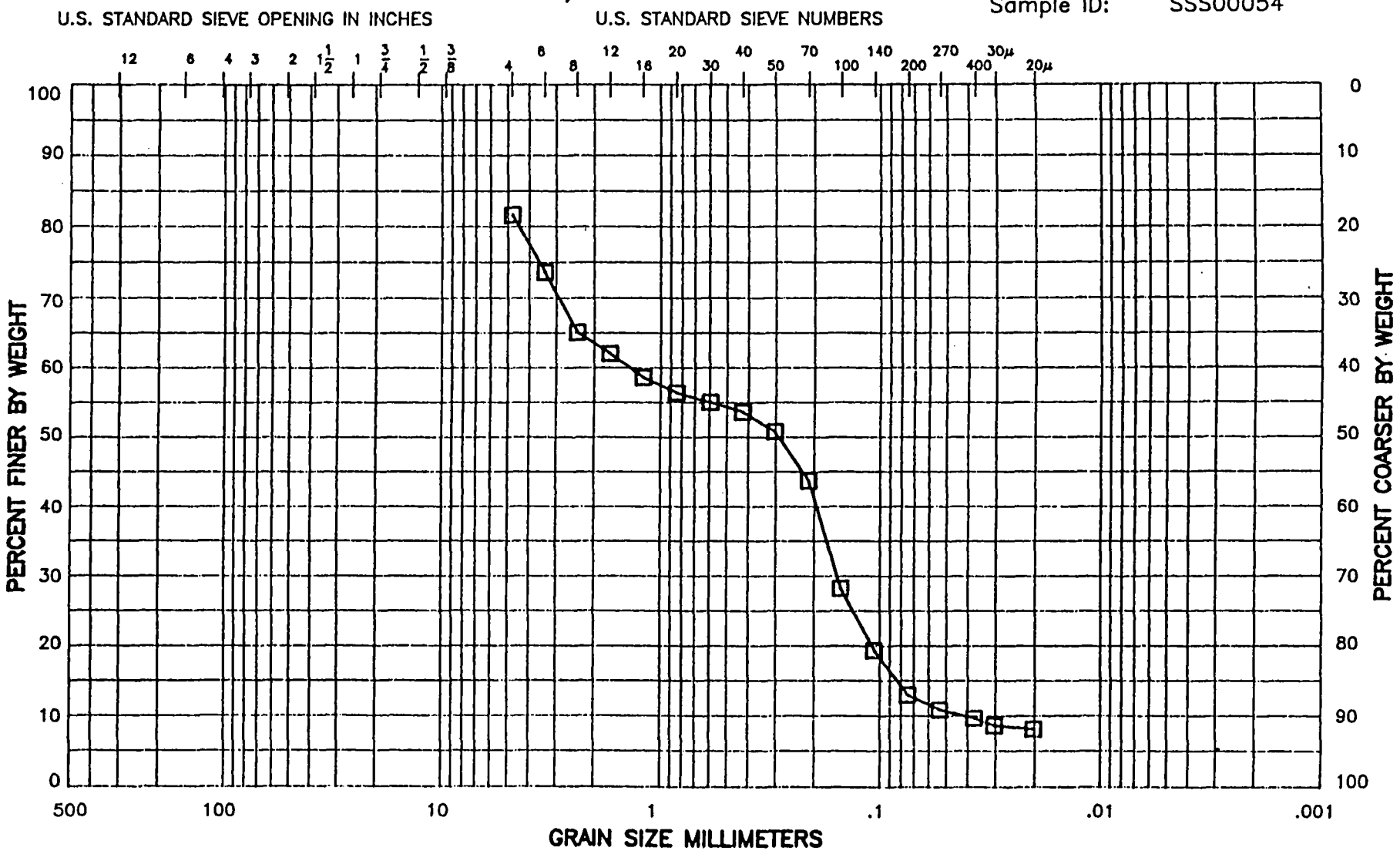


COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

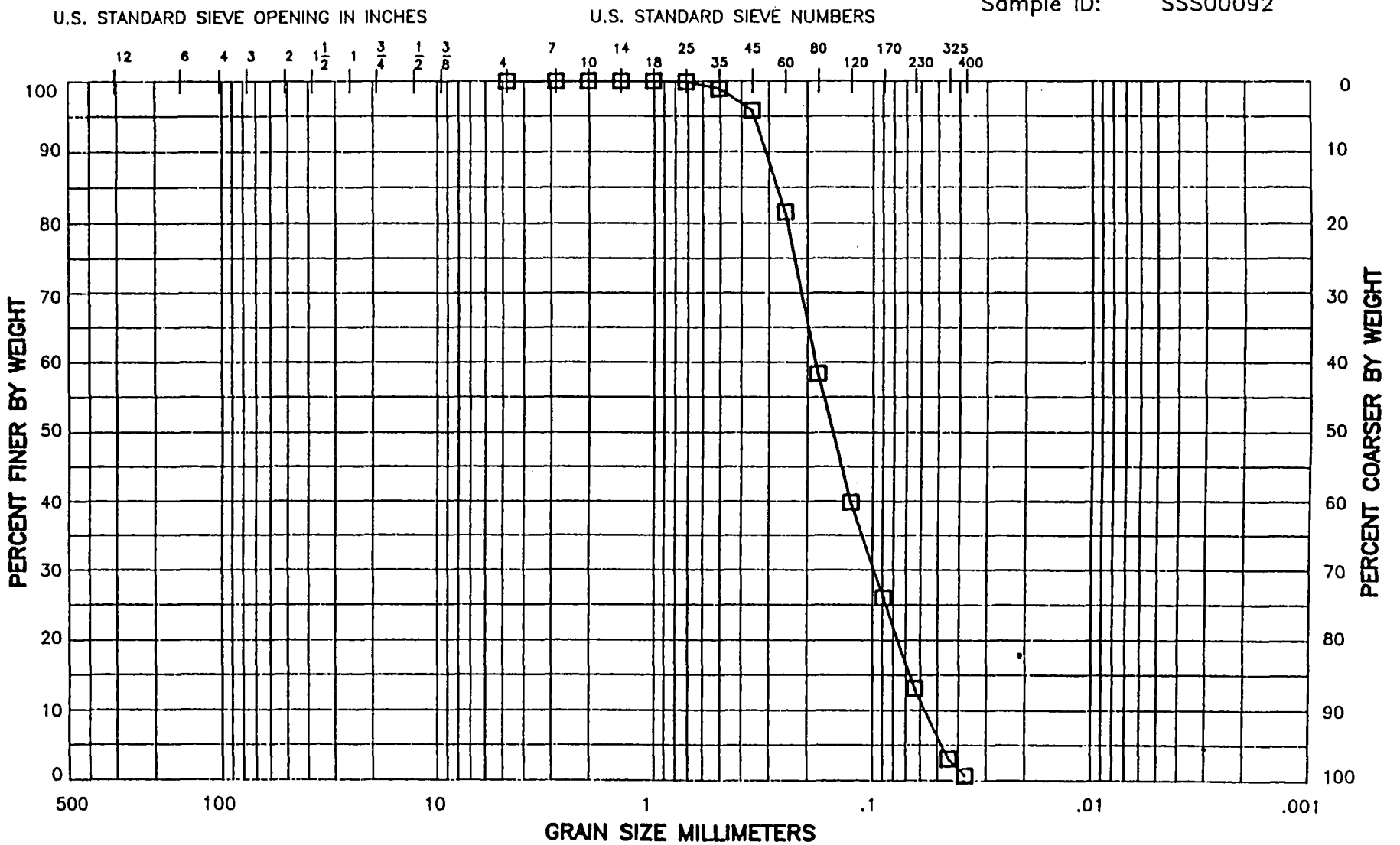
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 14, 1992

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00092

Client: Dames & Moore

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

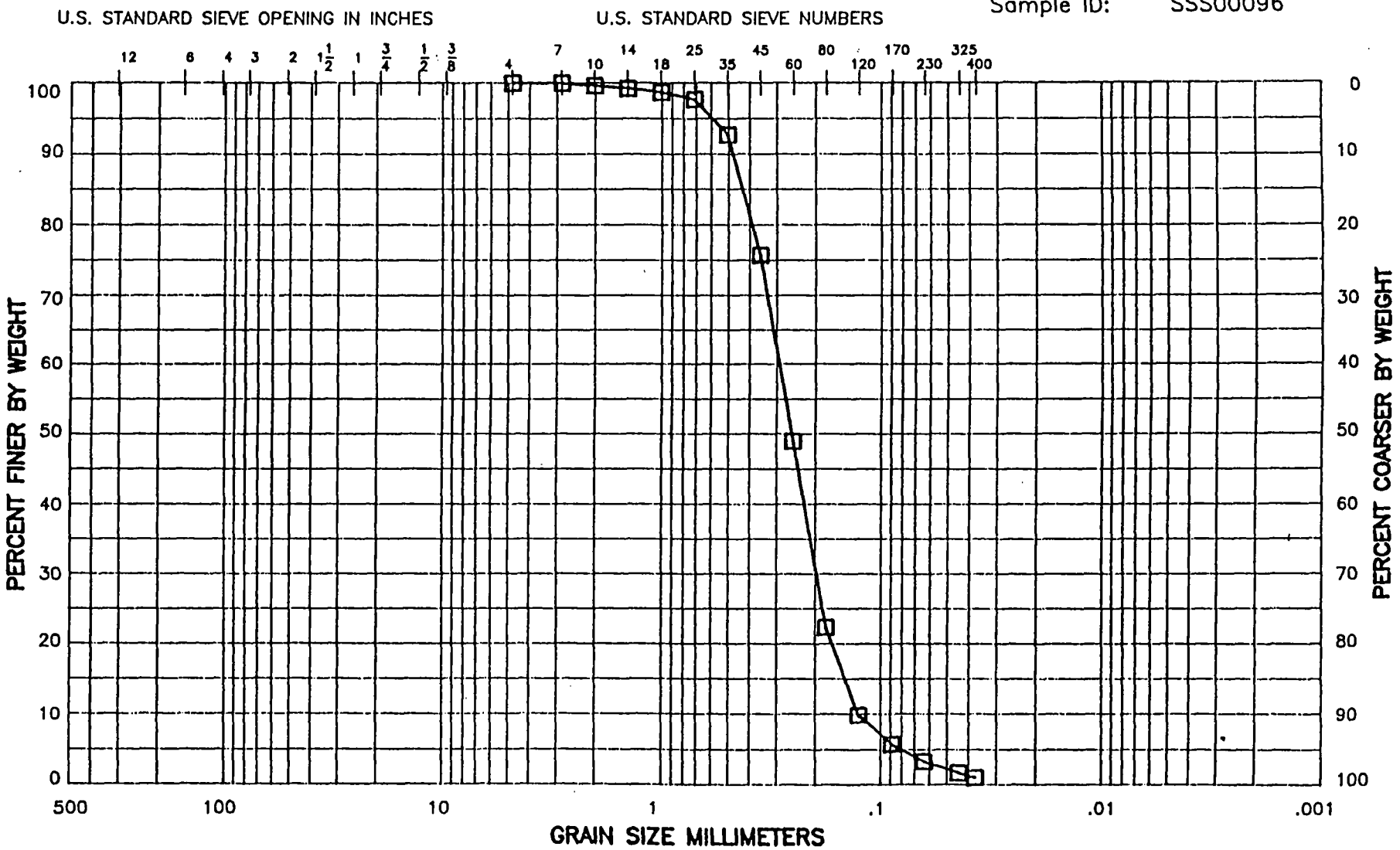
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 14, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00096

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

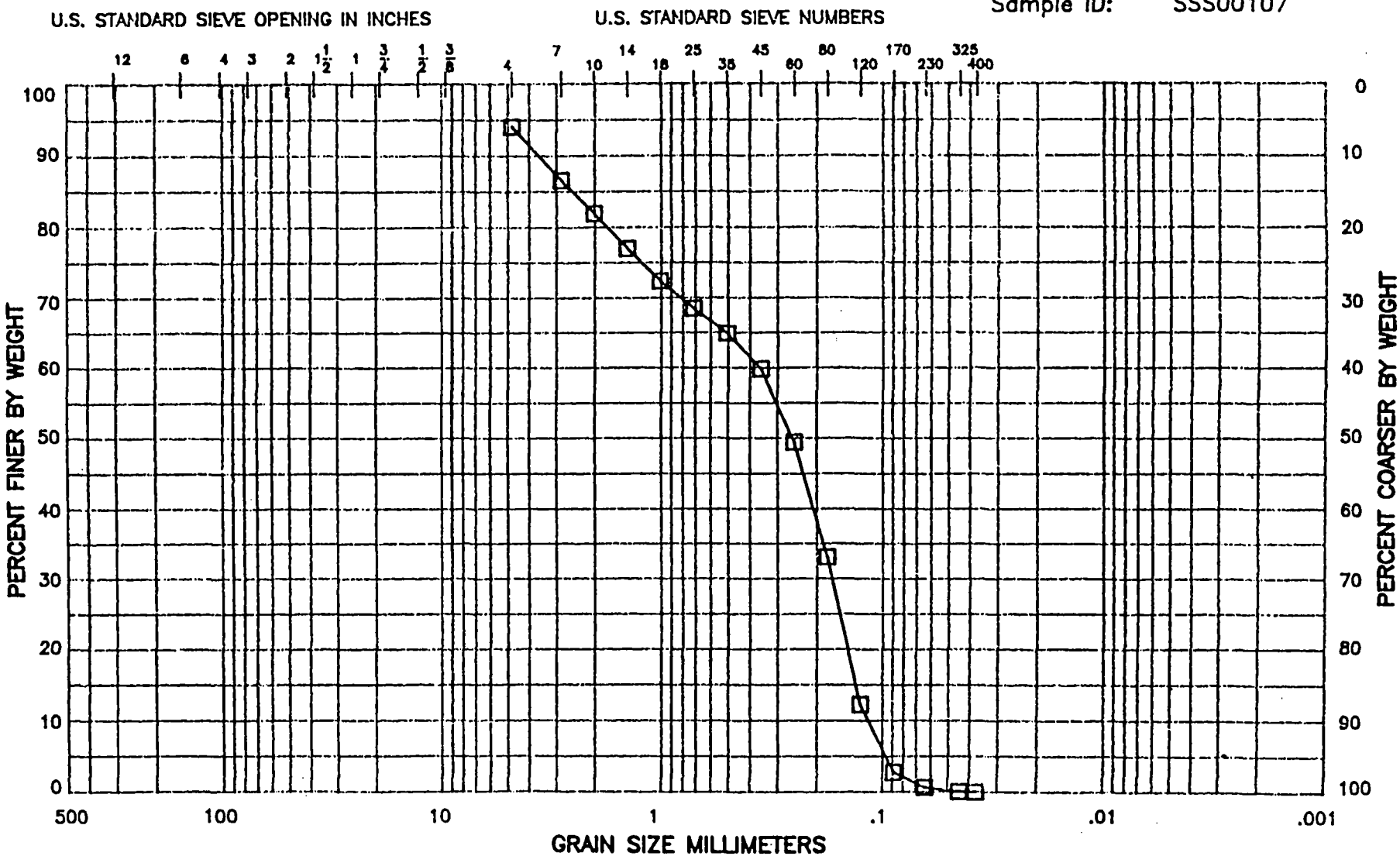
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 14, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00107

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

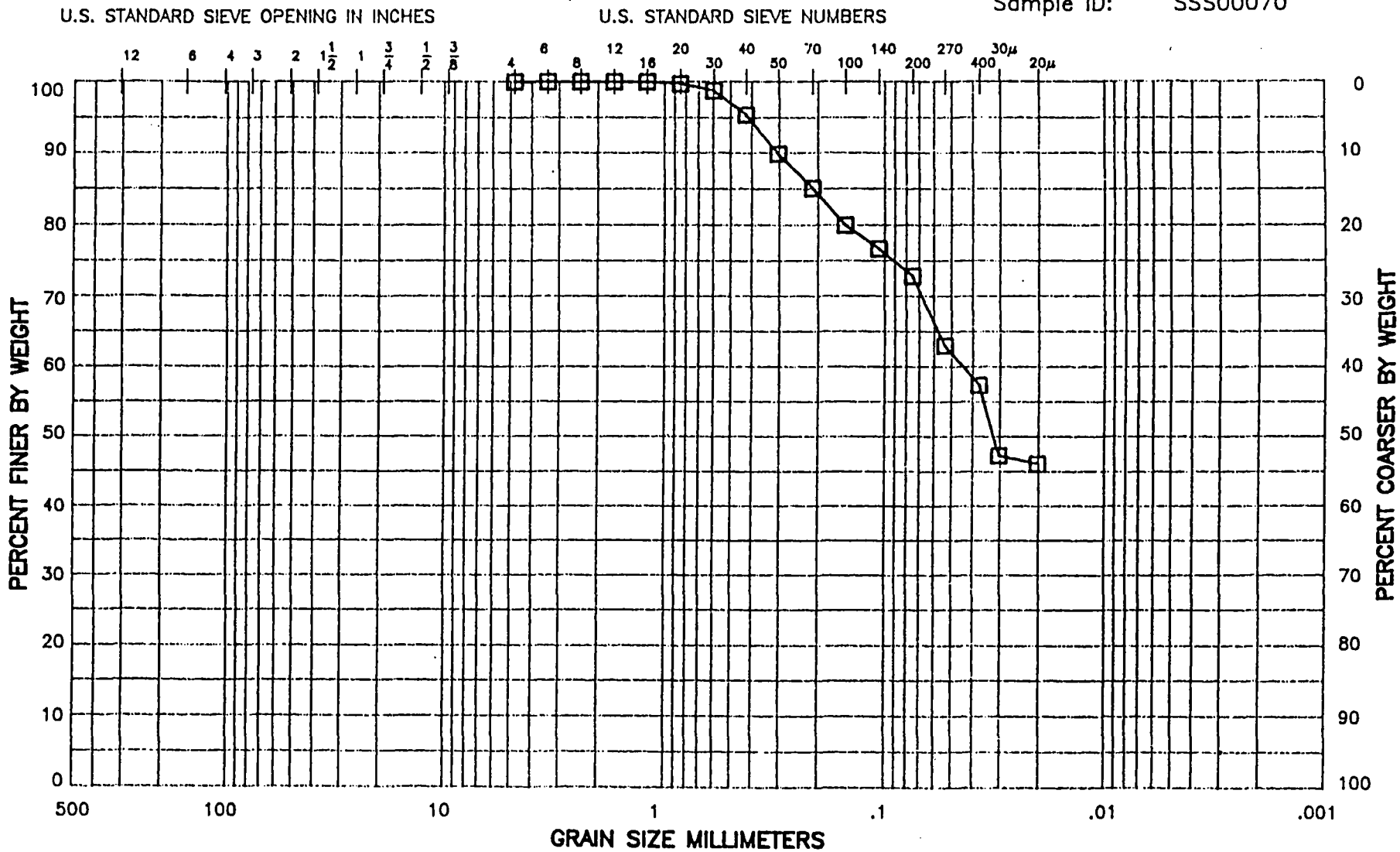
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 14, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00070

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

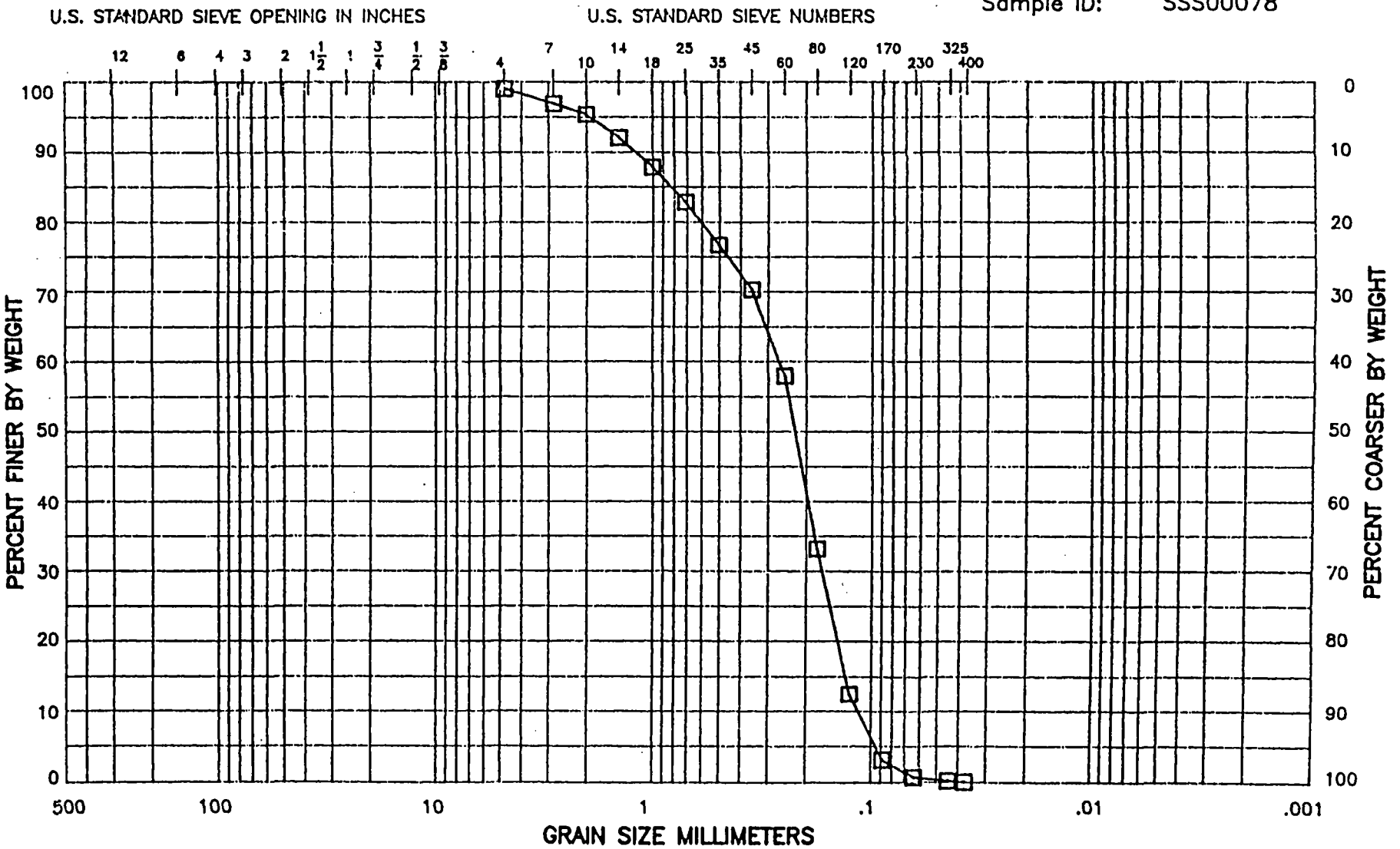
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 14, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00078

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	[illegible]RSE	MEDIUM COARSE	FINE	VERY FINE		

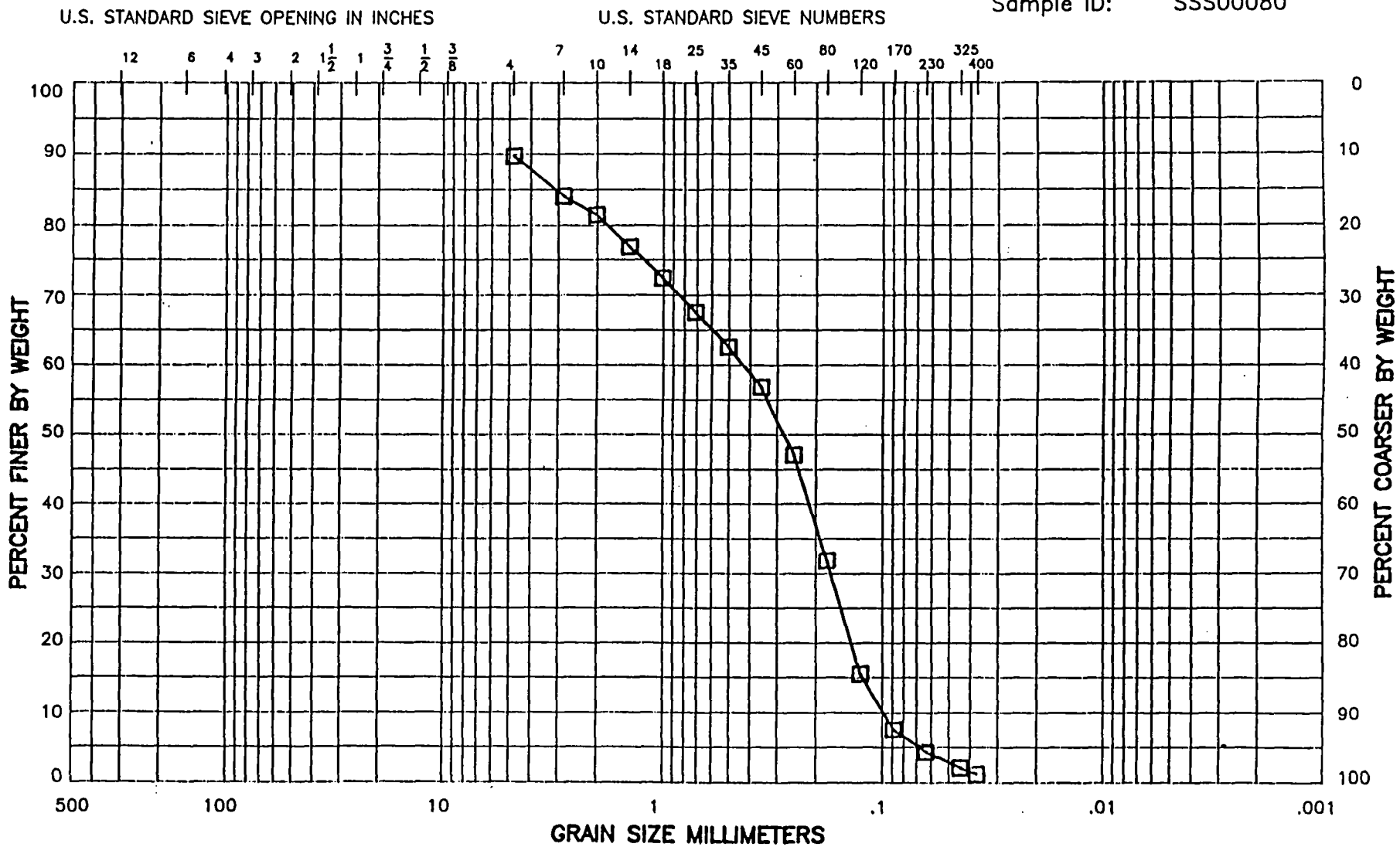
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 14, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00080

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

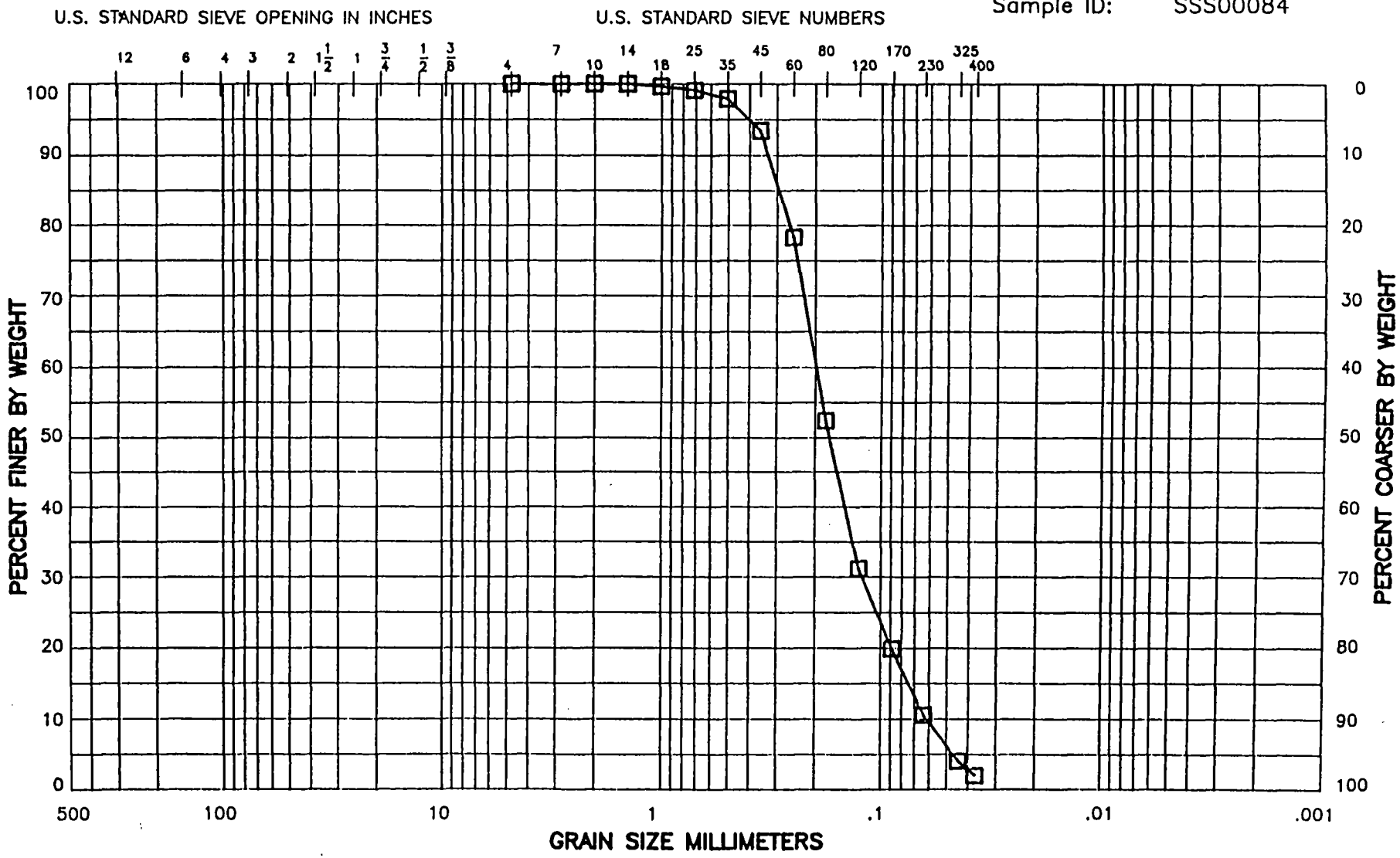
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 14, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00084

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

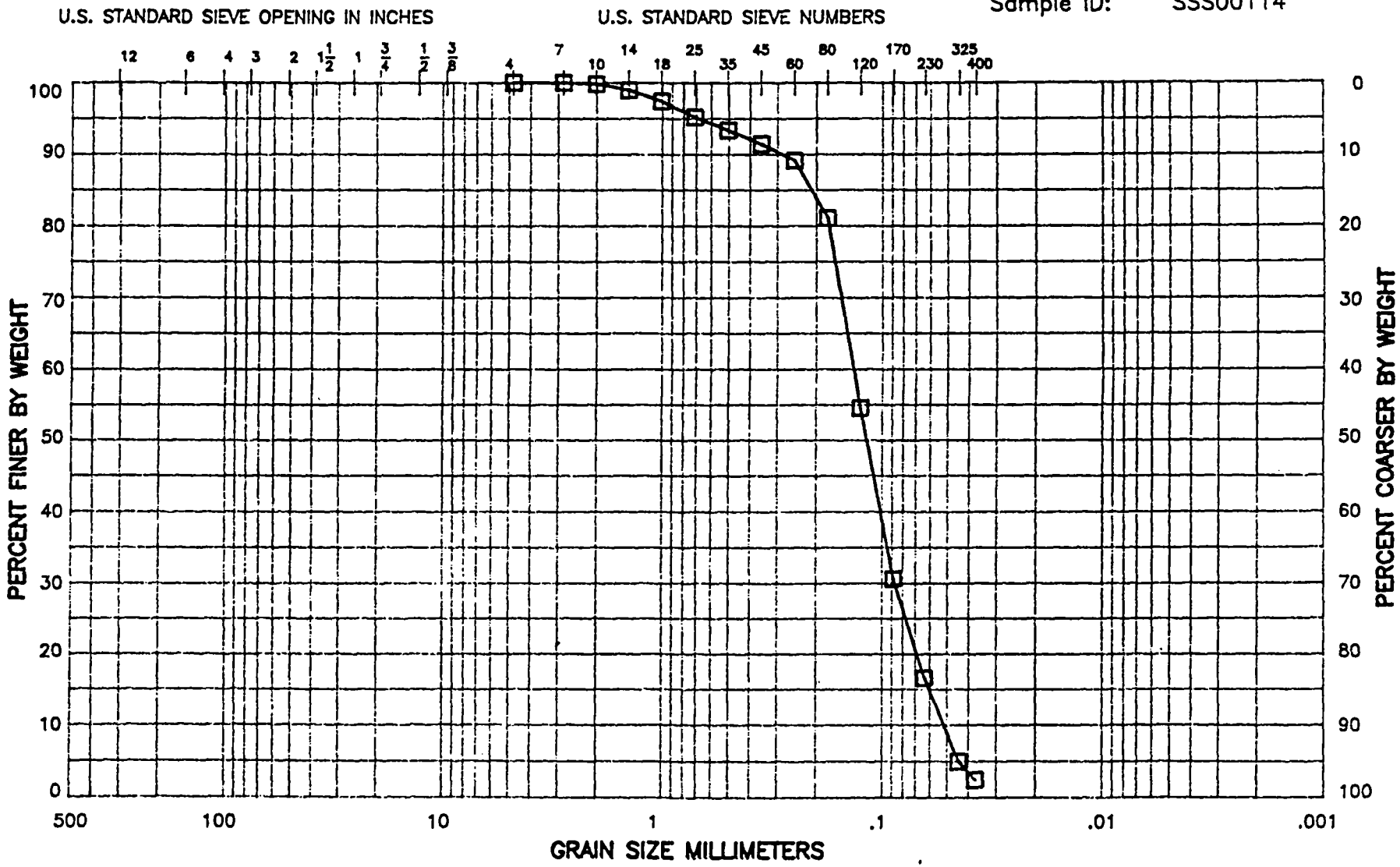
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00114

DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

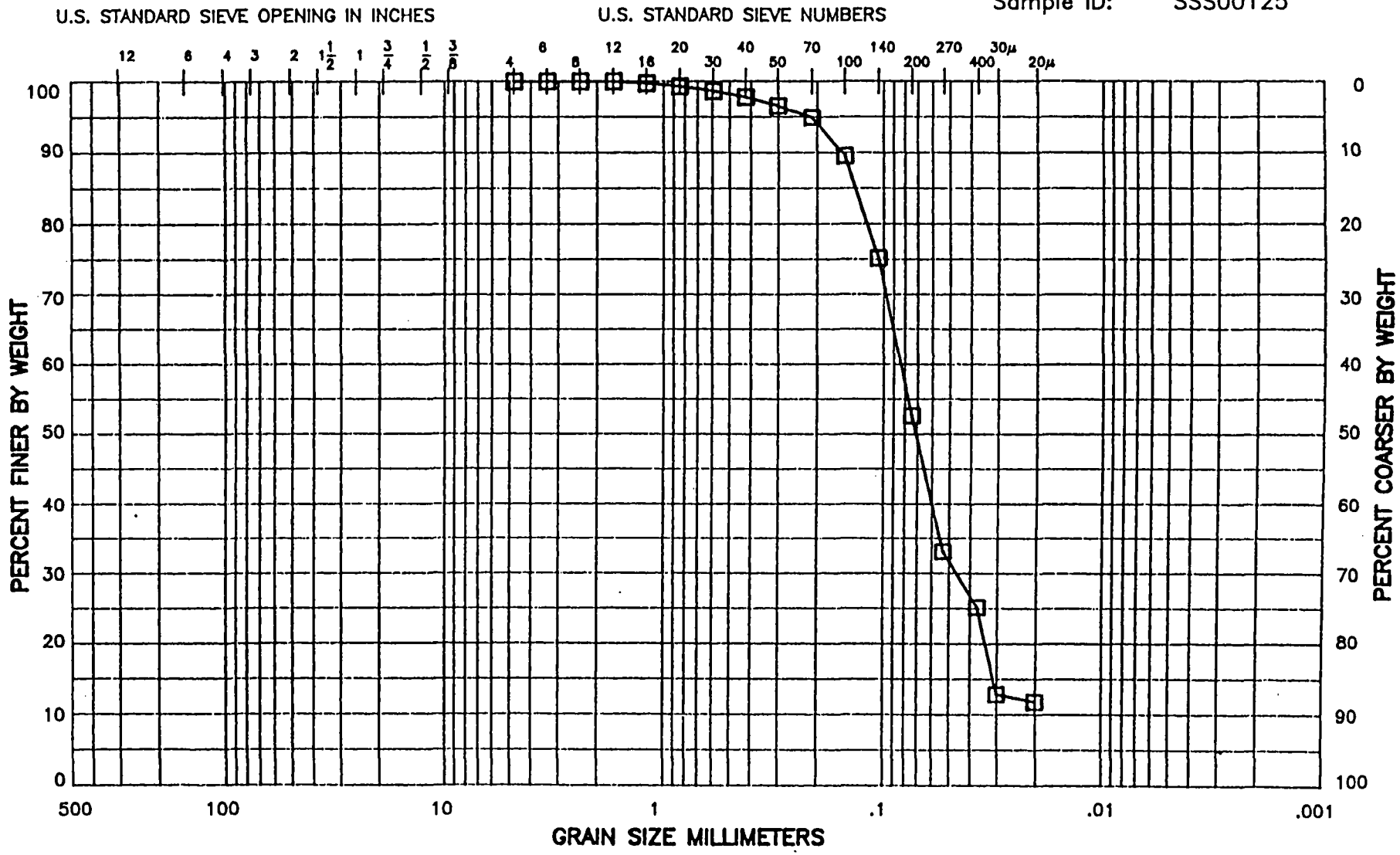
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 14, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00125

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00163

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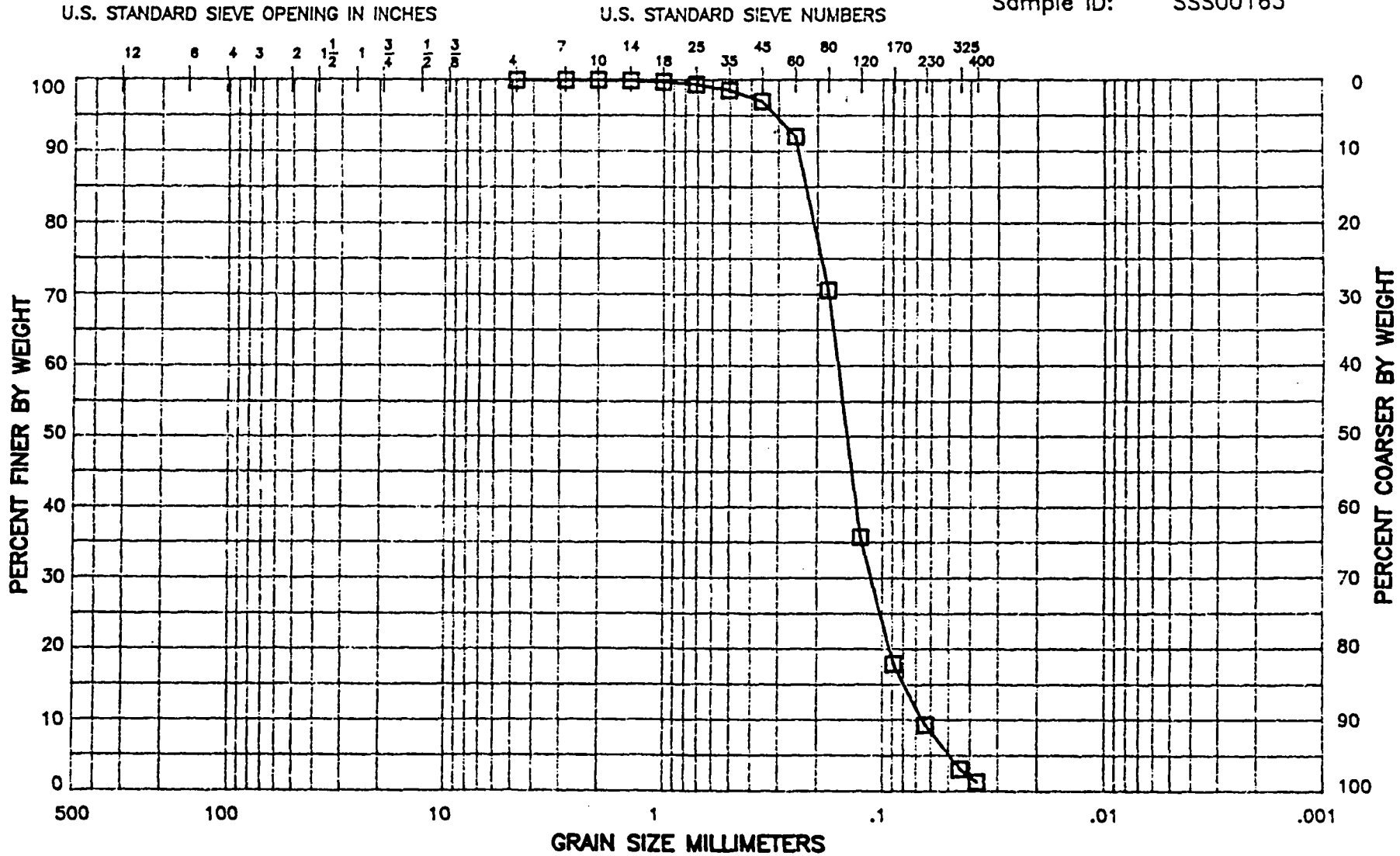

COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00174

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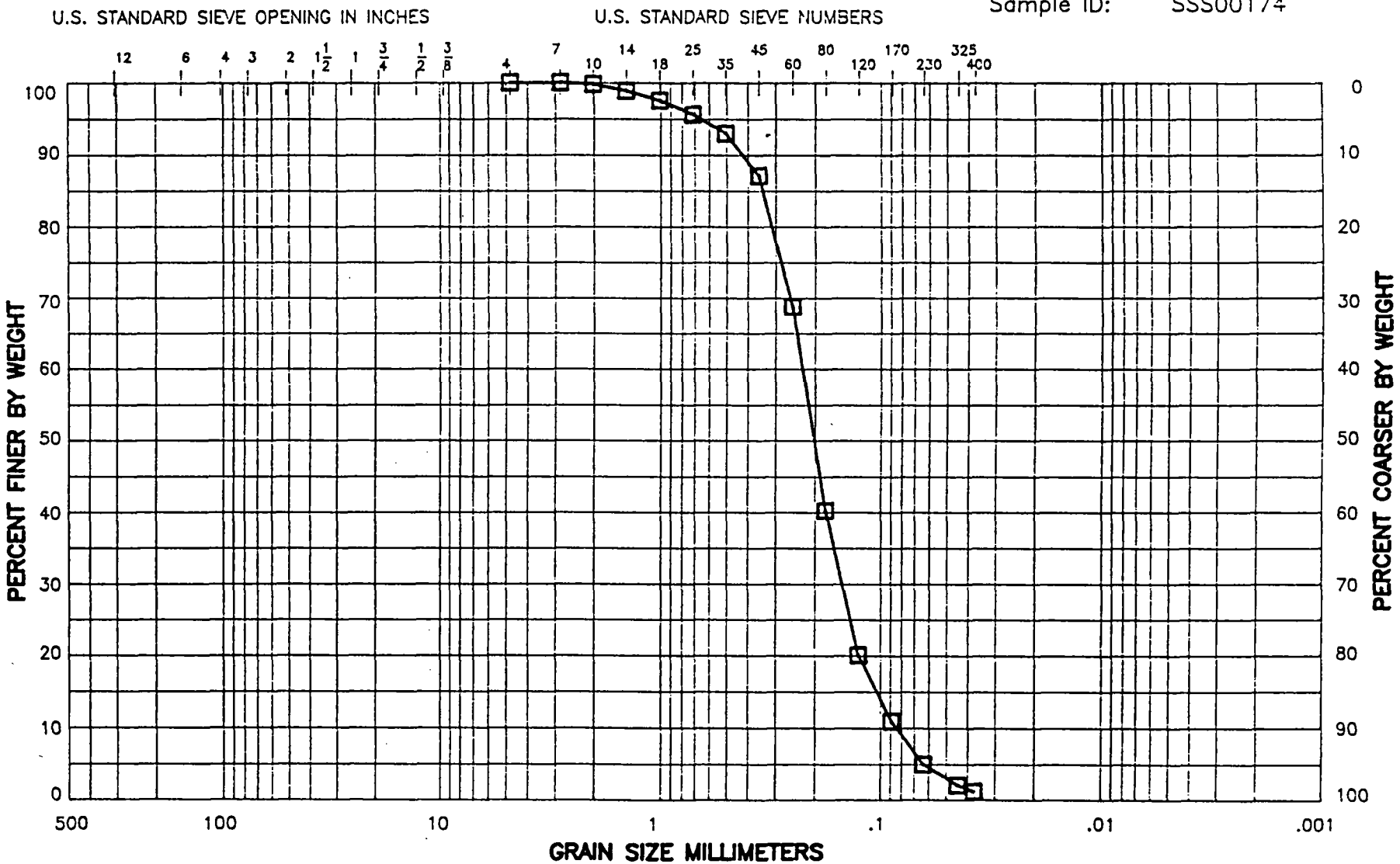

COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00182

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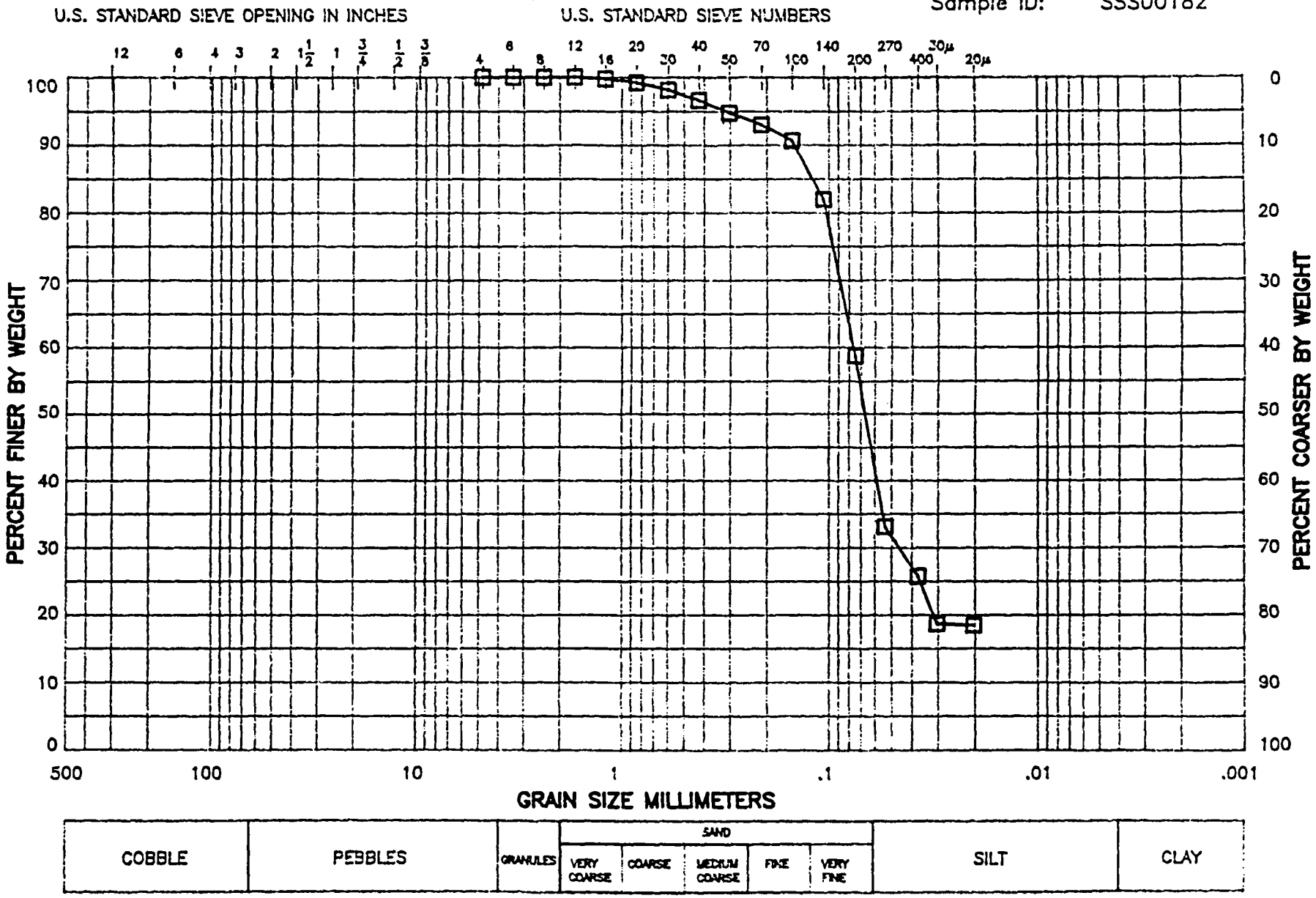


COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

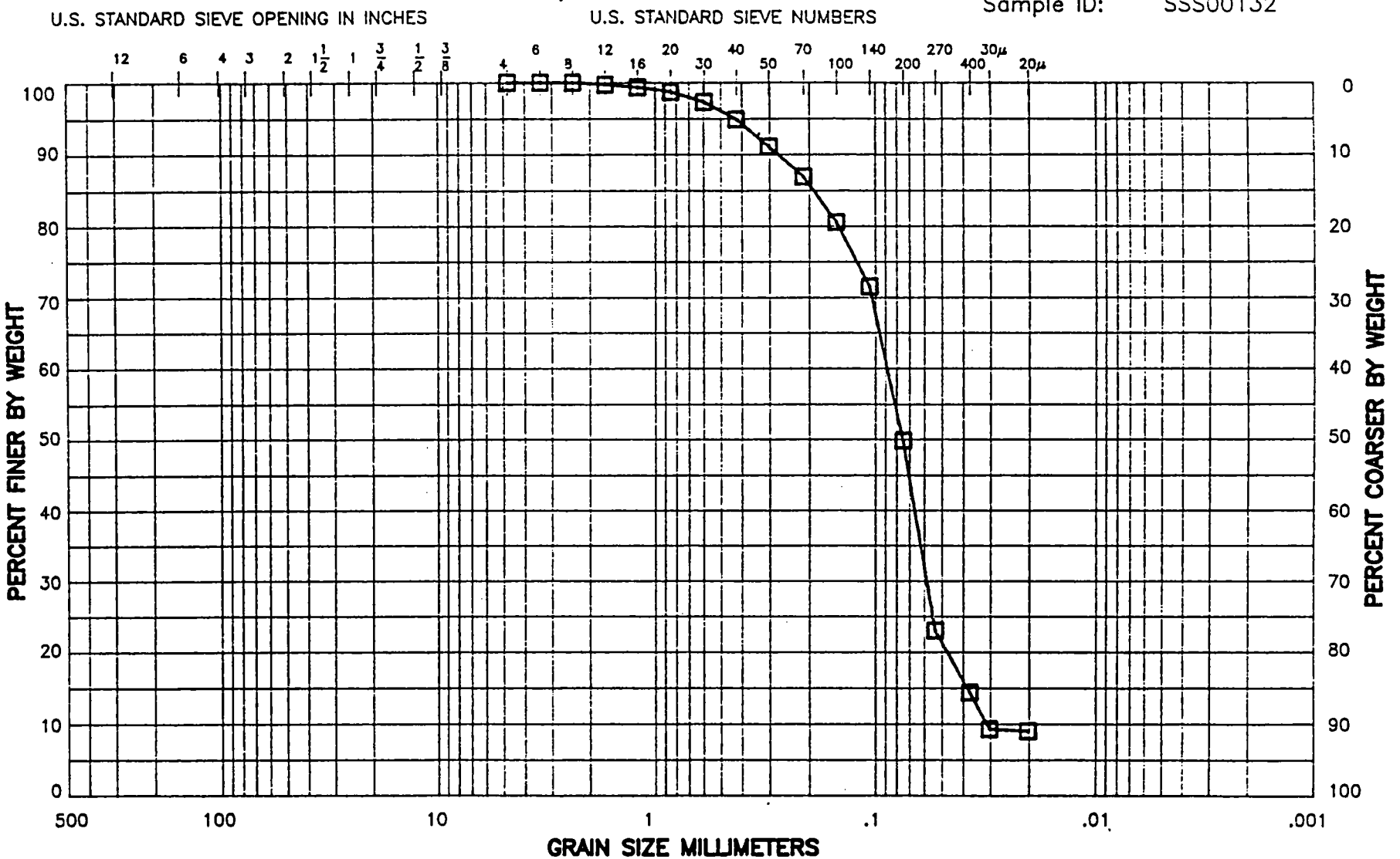
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00132

Client: Dames & Moore

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

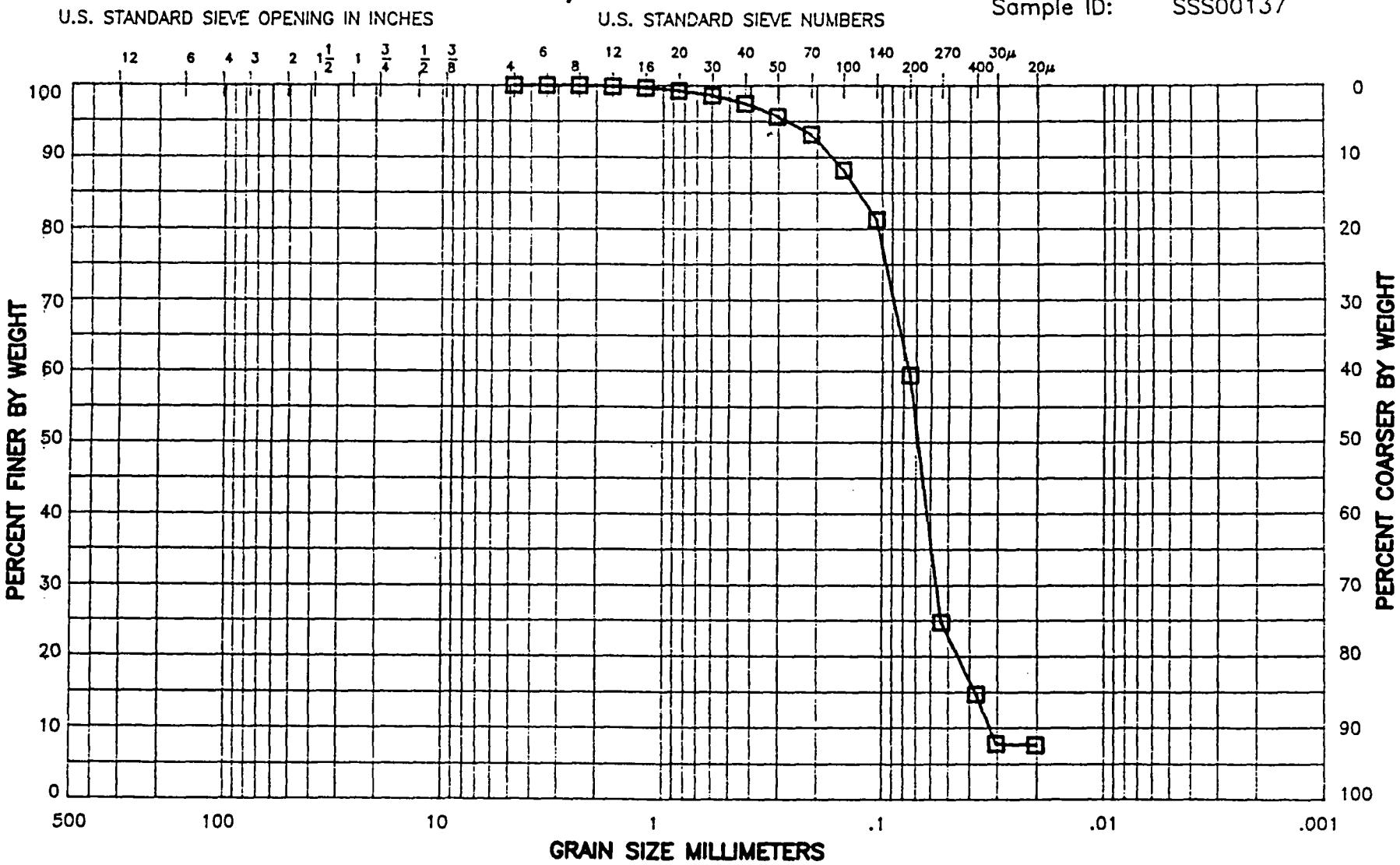
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00137

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

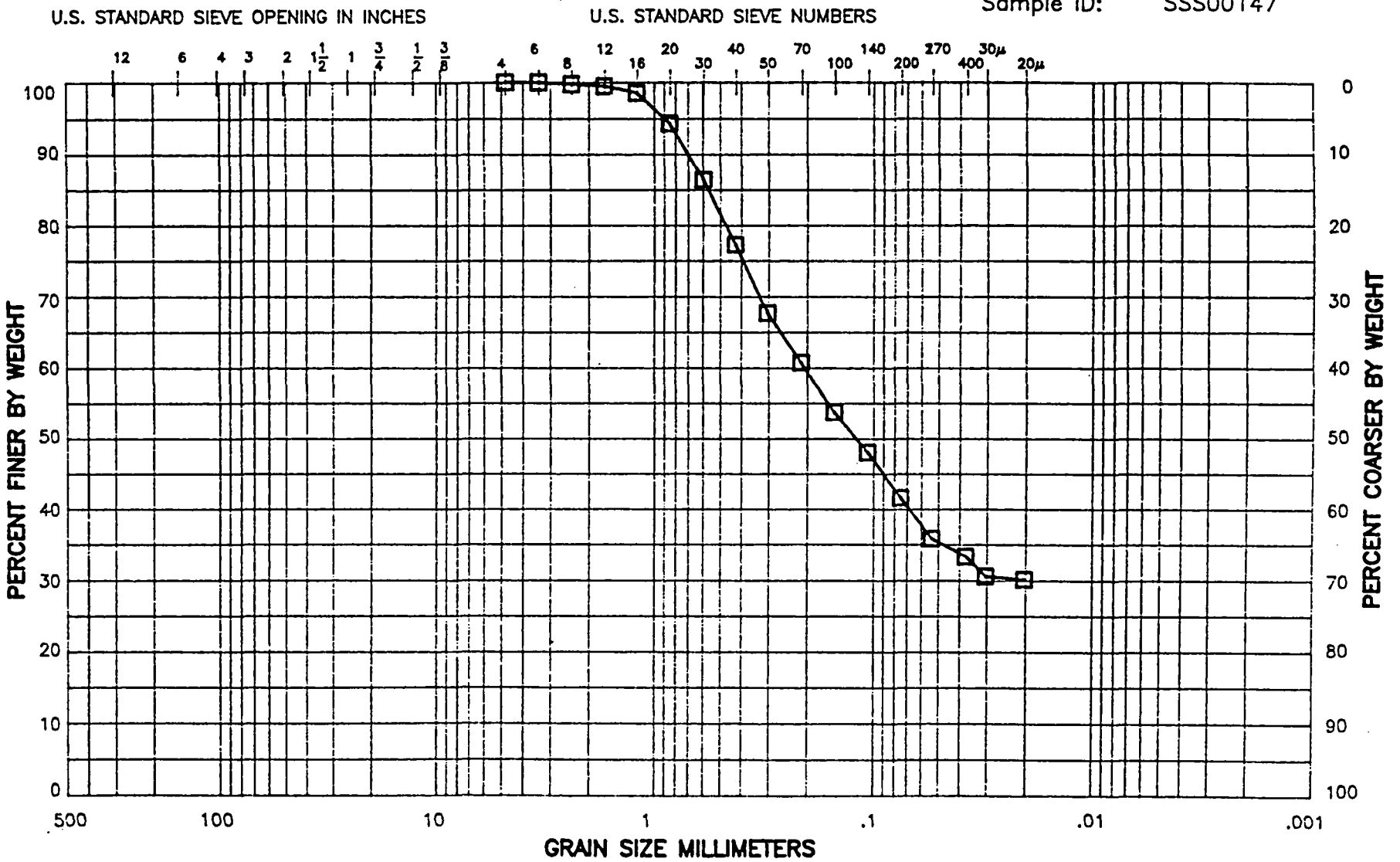
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00147

WET/DRY SIEVE ANALYSIS



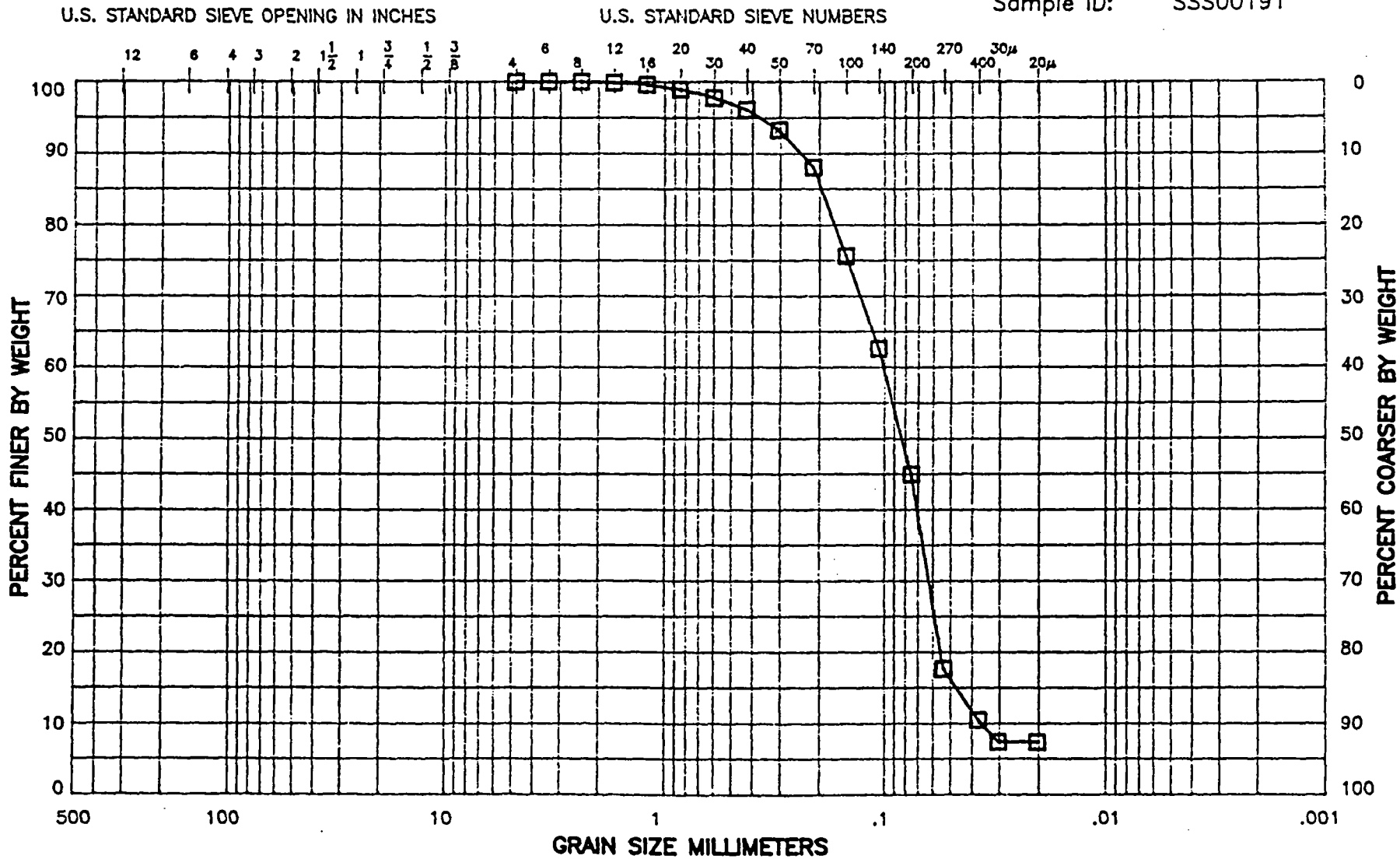
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00191

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

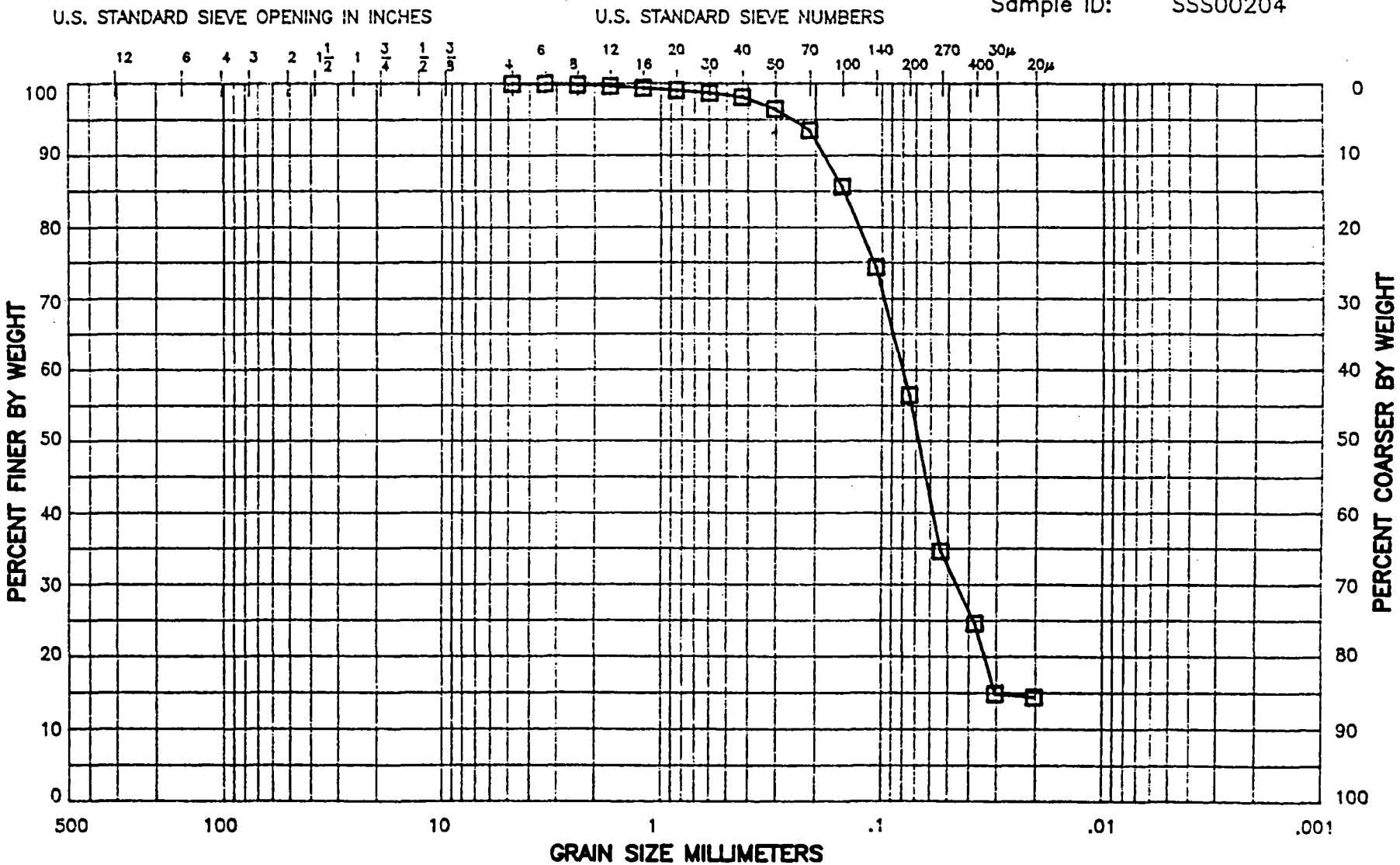
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00204

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

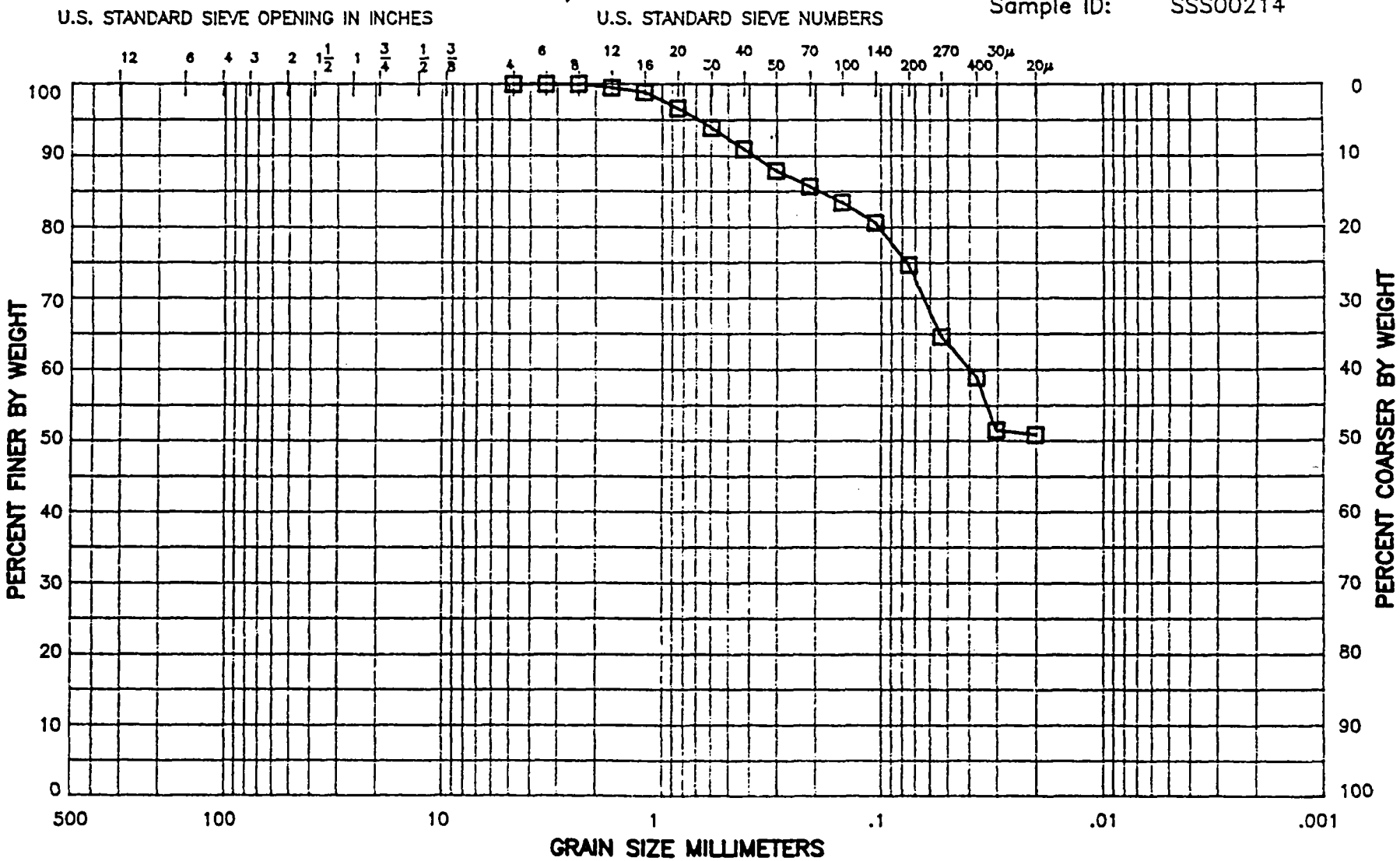
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00214

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

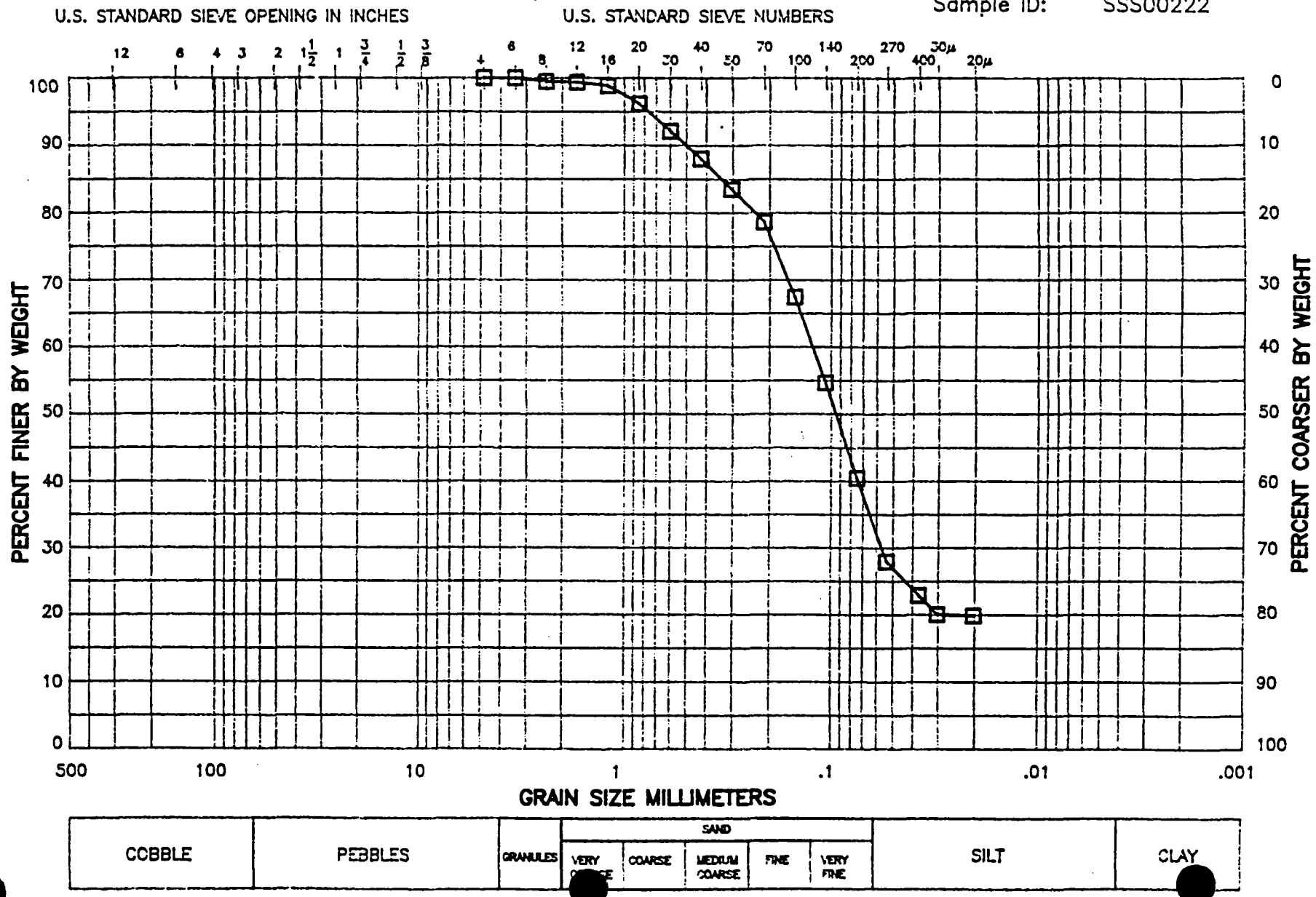
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00222

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

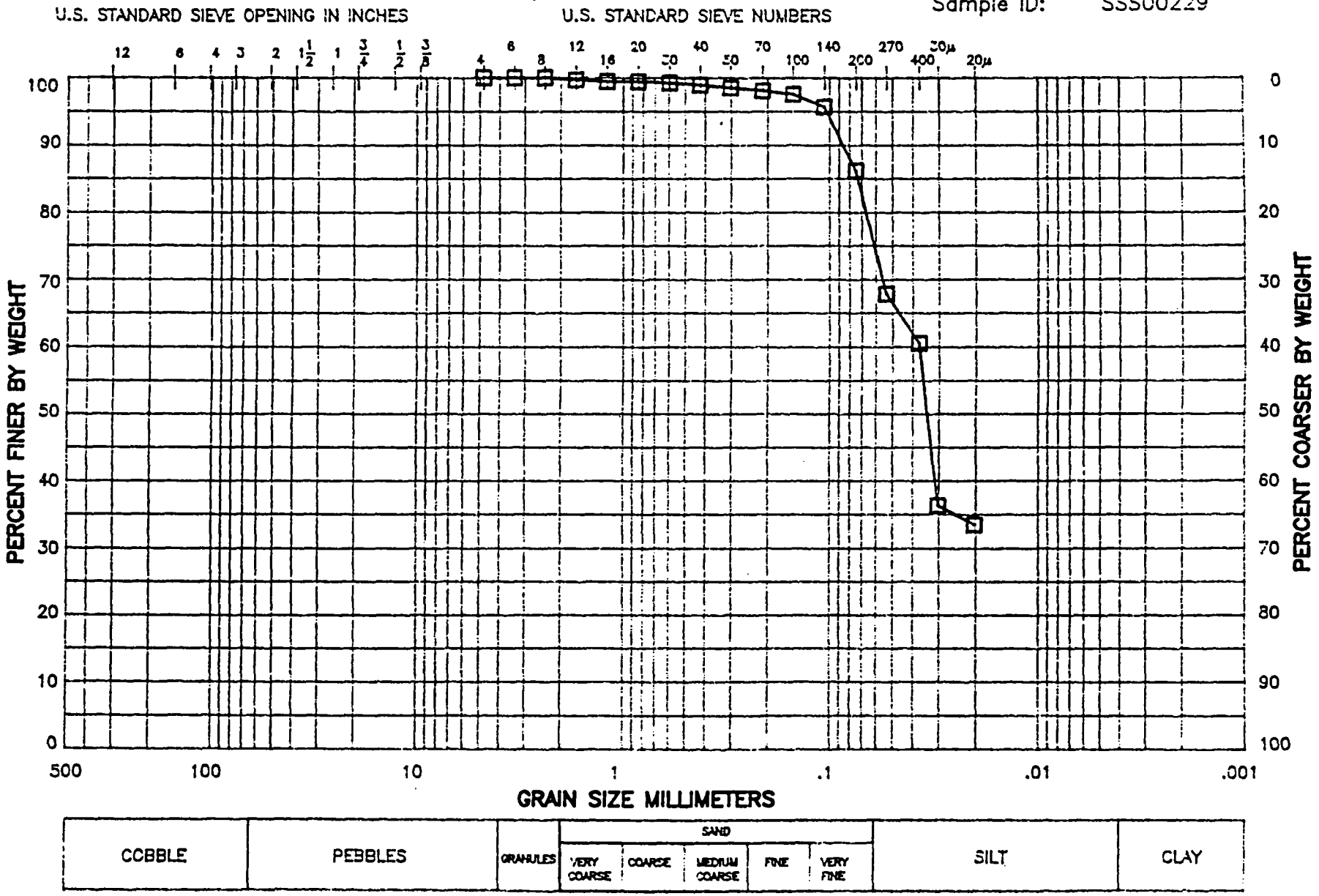
PETROLEUM TESTING SERVICE, INC.

File No: 14613
Date: October 22, 1992

Client: Dames & Moore

Project Name: Del Amo RI/FS
Project No.: 00216-345-5108-13
State: California
Sample ID: SSS00229

WET/DRY SIEVE ANALYSIS



COBBLE	PEBBLES	GRANULES	SAND					SILT	CLAY
			VERY COARSE	COARSE	MEDIUM COARSE	FINE	VERY FINE		

APPENDIX F3

CONSOLIDATION TEST RESULTS

APPENDIX F3

CONSOLIDATION TEST RESULTS

F3.1.0 INTRODUCTION

Appendix F3 presents the results of the consolidation testing conducted in the Del Amo Study Area. The purpose of the consolidation testing was to evaluate the elastic properties of the aquitard sediments in the Del Amo Study Area and in particular, to evaluate the specific storage and vertical hydraulic conductivity. These tests were also conducted to aid in the interpretation of aquifer testing data (Appendix H).

F3.2.0 LOCATION OF SAMPLES AND PROCEDURES

Laboratory consolidation tests were conducted on soil core samples collected from the upper Bellflower (UBF) aquitard at boreholes SWL0043, SWL0048, SWL0050, SWL0052, and SBL0105 (Figure F3-1), and from the lower Bellflower (LBF) aquitard at boreholes SWL0043, SBL0101, SBL0103, SBL0104 and SBL0106 (Figure F3-2). The compression characteristics of all soil samples were determined using ASTM procedure D-2435. Additionally, time-compression readings were taken on eight samples collected from SWL0048 through SWL0052 to assess how the permeability of the sediments will change with effective pressure. The visual classification, grain-size analysis, group symbol of the Unified Soil Classification System (USCS), Atterberg limits, water content, and specific gravity of the solids were determined using ASTM procedures, D-422, D-4318, D-2937, and D-854, respectively.

Aquitard specific storage, S_s', and hydraulic conductivity, K', were computed following the procedure described below. S_s' was determined using equation (1) given the unit weight of water, γ_w, and by measuring the coefficient of compressibility, a_v, and the void ratio, e, of each soil sample:

$$S_s' = \frac{a_v \gamma_w}{1+e} \qquad (1)$$

where e = volume of voids/volume of solids

a_v = coefficient of compressibility (see equation 6)

K′ was calculated using equation (2) by measuring the coefficient of consolidation, C_v, as:

$$K' = \frac{a_v \gamma_w}{1+e} C_v \tag{2}$$

Substituting S_s' into equation (2) shows that $C_v = K'/S_s'$, which is defined as the aquitard diffusivity:

$$\alpha' = \frac{K'}{S_s'} \tag{3}$$

The compression characteristics, a_v, C_v, and e were measured using the one-dimensional consolidation test procedures described by Lambe (1951) and the U.S. Bureau of Reclamation (1960). In this test, undisturbed soil samples collected at each borehole were trimmed to fit 2-inch diameter by 1-inch long rings. The rings were placed in a consolidometer by means of two porous plates to allow drainage of the groundwater trapped in the soil voids as each load was applied. As each load was applied, the load was slowly transferred from the water in the voids to the soil structure as the water drained from the sample. This was simultaneously accompanied by a decrease in soil volume as the sample compressed and by a gradual pressure adjustment with the soil mass. This gradual process was defined by Taylor (1948) as consolidation.

Loads were applied in the range of 100 to 51,200 pounds per square foot such that each succeeding load was double that of the previous load. As each load was applied, dial readings of consolidation were recorded at time intervals up to 24 hours or until the consolidation was virtually complete for that load. The final stress-strain relations were presented as a curve of void ratio versus log of pressure, the final condition for each increment of load being a point on the curve.

C_v, was determined using the following equation (4) by use of the 50-percent point on the time-consolidation curve (ASTM D-2435) as:

$$C_v = \frac{T_{50} H_{50}^2}{t_{50}} \tag{4}$$

where T_{50} = time factor at 50-percent consolidation=0.197
H_{50} = one-half the specimen thickness at 50-percent consolidation
t_{50} = time required for specimen to reach 50-percent consolidation

The compression index, C_c, represents the compressibility of the soil sample and is defined by equation (5) below as the difference in void ratio for one logarithmic increment of load for the virgin compression or field consolidation curve (ASTM D-2435):

$$C_c = \frac{\Delta e}{\Delta(\log p)} \tag{5}$$

The coefficient of compressibility, a_v, is defined below by equation (6) and by the slope of a plot of void ratio versus pressure at the average pressure corresponding to the pressure increment used (ASTM D-2435):

$$a_v = \frac{-\Delta e}{\Delta p} \tag{6}$$

The maximum past pressure was estimated by determining the intersection of two tangent lines fitted to the void ratio versus pressure curve following the procedure described by Casagrande (1936). This value was then used to interpret the loading history at the site to aid in estimating representative average S_s' and K' values.

Additionally, permeability values for eight of the samples were also determined by computation from time-consolidation data obtained during each load increment using the Terzaghi theory for one-dimensional consolidation (Taylor, 1948).

F3.3.0 RESULTS

The compressibility characteristics of the six samples collected from SWL0043 (Dames & Moore, 1995b), and the eight samples from SWL0048, SWL0050, SWL0052, SBL0101, and SBL0103 through SBL0106 are shown in Tables F3-1 and F3-2. Void ratio versus pressure curves for SWL0043 are shown in Dames & Moore (1995b) and indicated that the sediments in the aquitards may be over consolidated. However, with additional testing conducted on soil samples collected from boreholes SWL0048, SWL0050, SWL0052, SBL0101, and SBL0103 through SBL0106, this is believed not to be the case due to the high sand content of many of the samples. Permeability versus pressure curves were not constructed for soil samples collected from SWL0043 because time consolidation readings were not taken between measurements. Void ratio versus pressure curves for samples from boreholes SLW0048, SWL0050, SWL0052, SBL0101, and SBL0103 through SBL0106 are included at the end of this appendix.

The results indicate that the average computed hydraulic conductivity and specific storage of the UBF are 6.3×10^{-3} feet/day and 5.8×10^{-4} feet^{-1}, respectively, and of the LBF is 5.3×10^{-4} feet/day and 7.0×10^{-4} feet^{-1}, respectively. The ranges of derived hydraulic conductivity values for each sample analyzed from the UBF and LBF are shown in Figures F3-1 and F3-2, respectively.

F3.4.0 REFERENCES

Casagrande, A., 1936. The Determination of the preconsolidation load and its practical significances,Harvard University, Proc. Int. Conf. Soil Mechanics, v. III.

Dames & Moore, 1995b. Technical Memorandum, Interpretation of Montrose and Del Amo Pump and Slug Test Data, Del Amo Study Area. May 5, 1995.

Lambe, T.W., 1951. Soil Testing for Engineers, John Wiley and Sons, New York.

Taylor, D.W., 1948. Fundamentals of Soil Mechanics, John Wiley and Sons, New York.

U.S. Bureau of Reclamation, 1960. Earth Manual, Denver, Colorado.

TABLE F3-1
VISUAL AND LABORATORY CLASSIFICATION OF SOIL SAMPLES TESTED FOR CONSOLIDATION

Borehole	Sample ID/Depth (feet)	Grain Size Diameter mm 2 0.06 0.002			Visual Description	USCS[a]	Liquid Limit %	Plastic Limit %	Plasticity Index	Specific Gravity of Solids	% Water Content
		Sand	Silt	Clay							
UPPER BELLFLOWER AQUITARD											
SWL0043	SSS01321 70.0-70.5	6	64	30	Sandy Clayey Silt	MH	65.5	31.1	34.4	2.60	37.5
	SSS01322 71.5-72.0	64	18	18	Silty Clayey Sand	SM	29.5	18.5	11	2.70	26.5
	SSS01323 73.0-73.5	85	9.5	5.5	Clayey Silty Sand	SM	Non-Plastic			2.72	
SWL0048	SSS01486 76	25	68	7	Fine Sandy Silt	ML	49	--	12	--	--
SWL0050	SSS01489 62	14	79	7	Fine Sandy Silt	MH	51	--	14	--	--
SBL0105 (SWL0051)	SSS01492 56	40	53	7	Fine Sandy Silt	ML	35	--	7	--	--
SWL0052 (SWL0053)	SSS01493 70	9	81	10	Fine Sandy Silt	ML	50	--	11	--	--
LOWER BELLFLOWER AQUITARD											
SWL0043	SSS01324 132-133.4	5.5	65	29.5	Sandy Clayey Silt	MH	53.3	31.2	22	2.64	--
	SSS01326 156	--	--	--	Silty Sand/Sandy Silt	--	--	--	--	2.72	--
	SSS01327 162-163.5	10	61	29	Sandy Clay Silt	CH	74.2	29.8	44.4	2.60	27.6
SBL0101 (SWL0048)	CRS00643 158	53	40	7	Silty Fine Sand With Clay	ML	33	--	3	--	--
SBL0104 (SWL0049)	SSS01488 131.5	29	64	7	Silty Clay	CL	51	--	14	--	--
SBL0103 (SWL0050)	SSS01487 152.5	61	32	7	Fine Silty Sand	non-plastic				--	--
SBL0106 (SWL0052/53)	SSS01490 152	51	42	7	Silty Fine Sand	non-plastic				--	--

[a] - Unified Soil Classification System
-- - Not reported
(SWL0052) Collocated well

TABLE F3-2
CONSOLIDATION CHARACTERISTICS
OF UPPER BELLFLOWER AND LOWER BELLFLOWER SEDIMENTS
Page 1 of 1

Borehole Location	Depth (feet)	Soil Type	Initial Water Content (%)	Initial Dry Density (pcf)	Estimated Maximum Past Pressure (kg/cm²)	Approx. Present Overburden Pressure[1] (kg/cm²)	Coefficient of Consolidation[2] C_v (cm²/sec)	Coefficient of Compressibility a_v (cm²/kg)	Void Ratio e	Average Computed Hydraulic Conductivity[3] K' (ft/day)	Specific Storage S_s' (ft⁻¹)
UPPER BELLFLOWER AQUITARD (UBF)											
SWL0043	70 to 70.5	Clayey silt (MH)	37.5	87.6	6.4	3.2	8.10×10^{-2}(V) 1.44×10^{-1}(R)	4.3×10^{-3}(V) 4.0×10^{-3}(R)	0.98	5.1×10^{-4}(V) 8.3×10^{-5}(R)	6.6×10^{-5}(V) 6.2×10^{-5}(R)
	71.5 to 72	Silty sand (SM)	26.5	102.6	7.3	3.2	1.21(V) 1.007(R)	6.7×10^{-3}(V) 2.9×10^{-3}(R)	0.72	1.3×10^{-2}(V) 4.8×10^{-3}(R)	1.2×10^{-4}(V) 5.2×10^{-5}(R)
	73 to 73.5	Silty sand (SM)	14.8	122.9	7.3	3.3	4.94(V) 2.84(R)	3.5×10^{-3}(V) 3.5×10^{-3}(R)	0.4	2.6×10^{-2}(V) 2.0×10^{-2}(R)	7.6×10^{-5}(V) 7.6×10^{-5}(R)
SWL0048	76	Sandy Silt (ML)	–	–	4.2	3.8	1.47×10^{-3} 2.22×10^{-2}	5.90×10^{-3} 1.33×10^{-1}	0.4	1.4×10^{-3}	1.6×10^{-3}
SWL0050	62	Sandy Silt (MH)	–	–	8.1	3.5	3.39×10^{-3} 1.25×10^{-2}	3.53×10^{-3} 3.69×10^{-2}	0.4	3.5×10^{-4}	4.8×10^{-4}
SBL0105 (SWL0051)	56	Sandy Silt (ML)	–	–	2.4	2.8	8.13×10^{-4} 1.06×10^{-2}	2.02×10^{-3} 7.96×10^{-2}	0.4	2.6×10^{-4}	9.2×10^{-4}
SWL0052 (SWL0053)	70	Sandy Silt (ML)	–	–	5.2	3.3	3.39×10^{-3} 1.48×10^{-2}	7.18×10^{-3} 6.89×10^{-2}	0.4	3.4×10^{-4}	8.6×10^{-4}
								UBF Average (V)		6.3×10^{-3}	5.8×10^{-4}
LOWER BELLFLOWER AQUITARD (LBF)											
SWL0043	132.3-133.5	Clayey Silt (MH)	34.1	91	7.8	4.9	1.92×10^{-2}(V) 1.22×10^{-2}(R)	9.6×10^{-3}(V) 4.5×10^{-3}(R)	0.9	2.8×10^{-4}(V) 8.4×10^{-5}(R)	1.5×10^{-4}(V) 7.2×10^{-5}(R)
	156	Silty Sand Sandy Silt (SM/ML)	24.9	101.5	7.3	5.6	1.57(V) 1.247(R)	– 1.9×10^{-3}(R)	0.68	– 4.1×10^{-3}(R)	– 0.35×10^{-4} (R)
	162.5-163.5	Clay (CH)	27.6	92.3	8.3	5.8	7.85×10^{-2}(V) 7.88×10^{-2}(R)	7.2×10^{-3}(V) 2.9×10^{-3}(R)	0.72	9.4×10^{-4}(V) 3.8×10^{-4}(R)	1.3×10^{-4}(V) 0.51×10^{-4} (R)
SBL0101 (SWL0048)	158	Silty Sand (ML)	–	–	6	6.1	7.18×10^{-4} 3.39×10^{-3}	3.53×10^{-3} 1.33×10^{-1}	0.4	4.5×10^{-4}(V)	1.5×10^{-3}
SBL0104 (SWL0049)	131.5	Silty Clay (CL)	–	–	12	5.3	4.49×10^{-3} 2.80×10^{-2}	3.93×10^{-3} 3.98×10^{-2}	0.4	10.0×10^{-4}(V)	5.1×10^{-3}
SBL0103 (SWL0050)	152.5	Silty Sand (non-plastic)	–	–	5.6	6.0	4.25×10^{-4} 1.79×10^{-2}	2.67×10^{-3} 7.95×10^{-2}	0.4	3.4×10^{-4}(V)	9.3×10^{-4}
SBL0106 (SWL0052, SWL0053)	152	Silty Sand (non-plastic)	–	–	7.9	5.5	1.31×10^{-4} 7.01×10^{-3}	1.90×10^{-2} 6.31×10^{-2}	0.4	1.6×10^{-4}(V)	9.3×10^{-4}
								LBF Average (V)		5.3×10^{-4}	7.0×10^{-4}

– - Not Measured
1 - Total unit weight of 120 Pcf (0.0019 kg/cm³) and water table at 42 feet below grade.
2 - Computed from consolidation data $C_v = 0.197\ H^2/t_{50}$
3 - Computed from consolidation data $K' = c_v\ a_v\ \gamma_w/(1+e)$
(V) Virgin Compression Readings
(R) Recompression Readings
(SWL0050) Collocated well

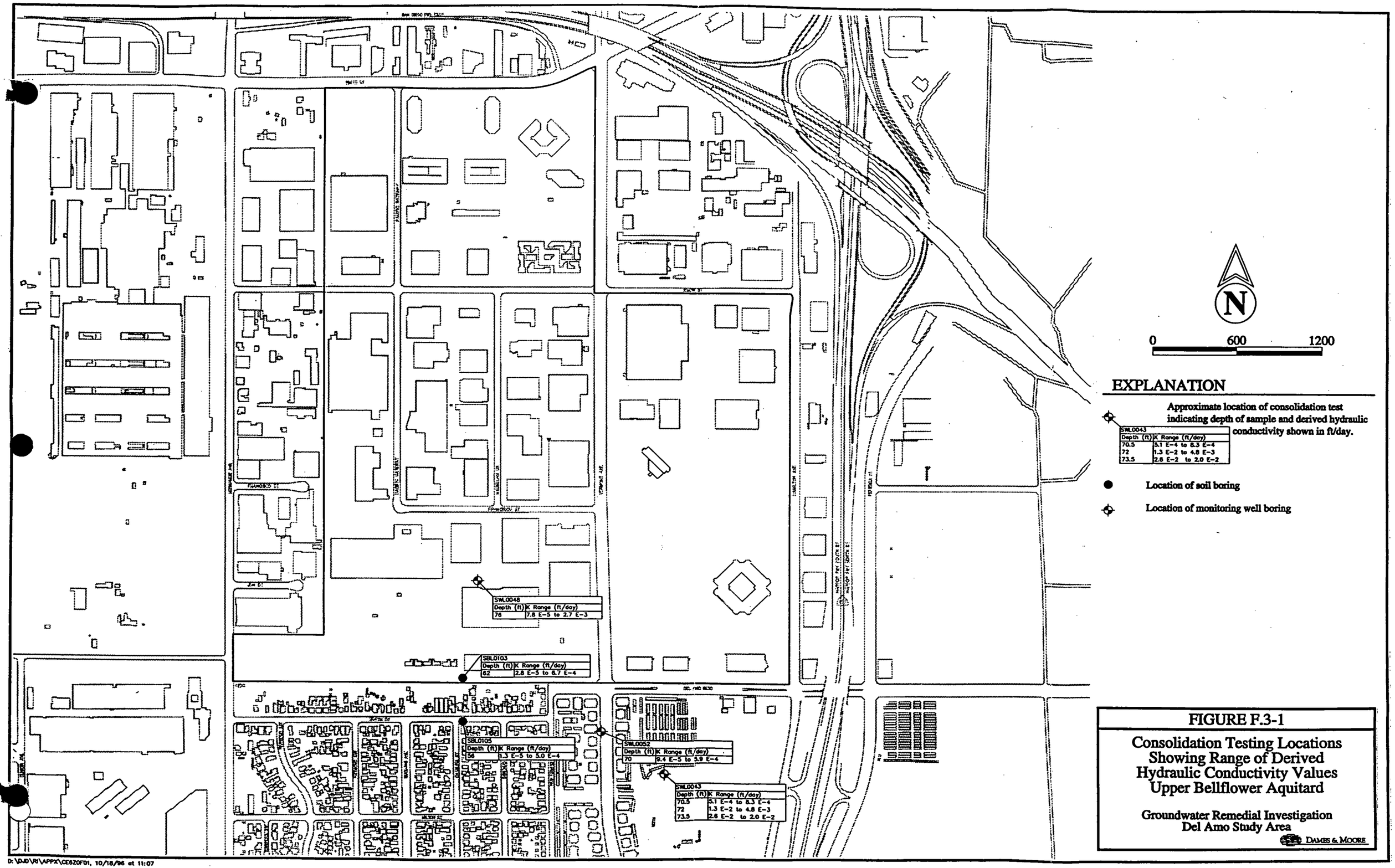


FIGURE F.3-1

Consolidation Testing Locations Showing Range of Derived Hydraulic Conductivity Values Upper Bellflower Aquitard

Groundwater Remedial Investigation Del Amo Study Area

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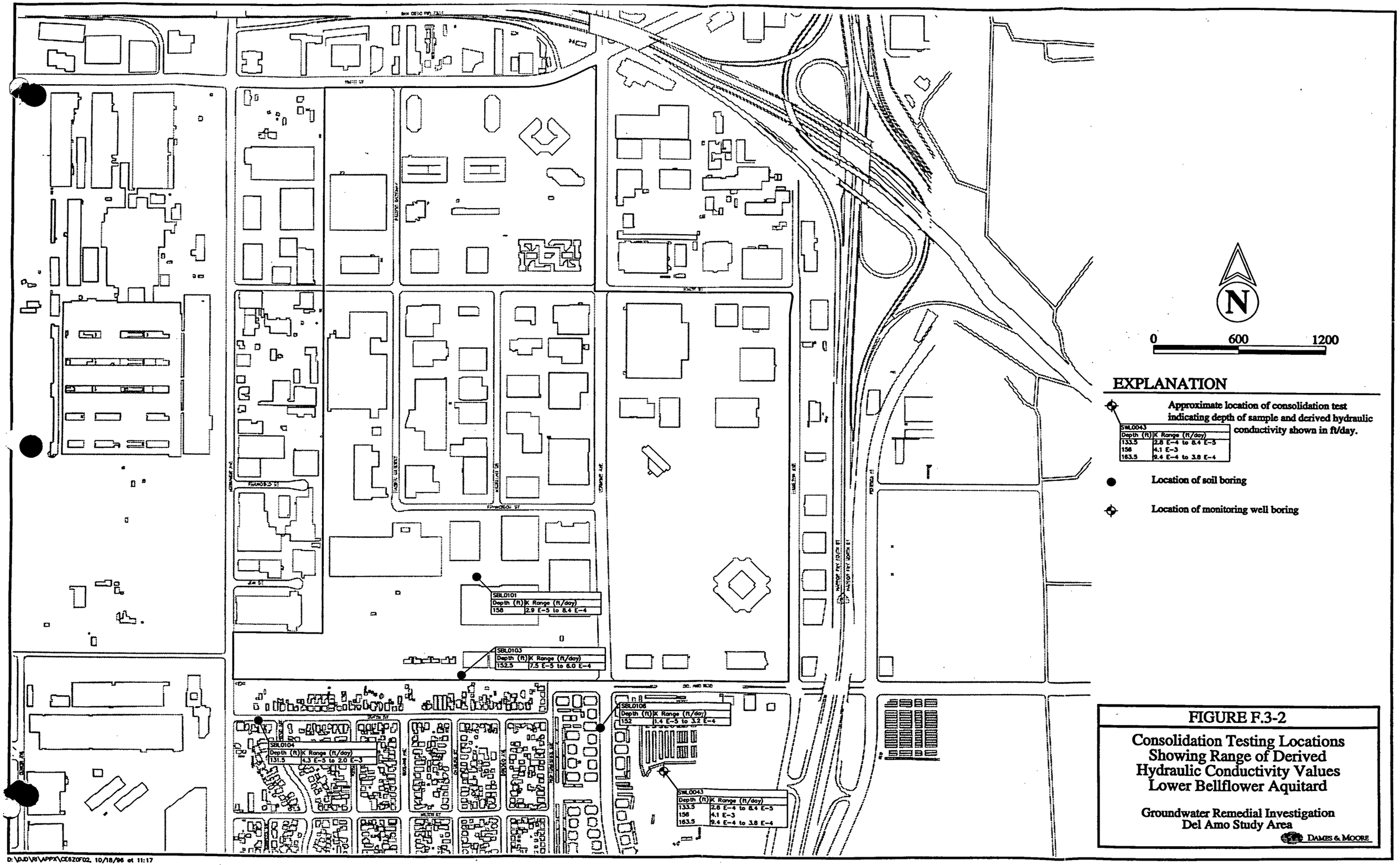

FIGURE F.3-2

Consolidation Testing Locations Showing Range of Derived Hydraulic Conductivity Values Lower Bellflower Aquitard

Groundwater Remedial Investigation
Del Amo Study Area

DAMES & MOORE

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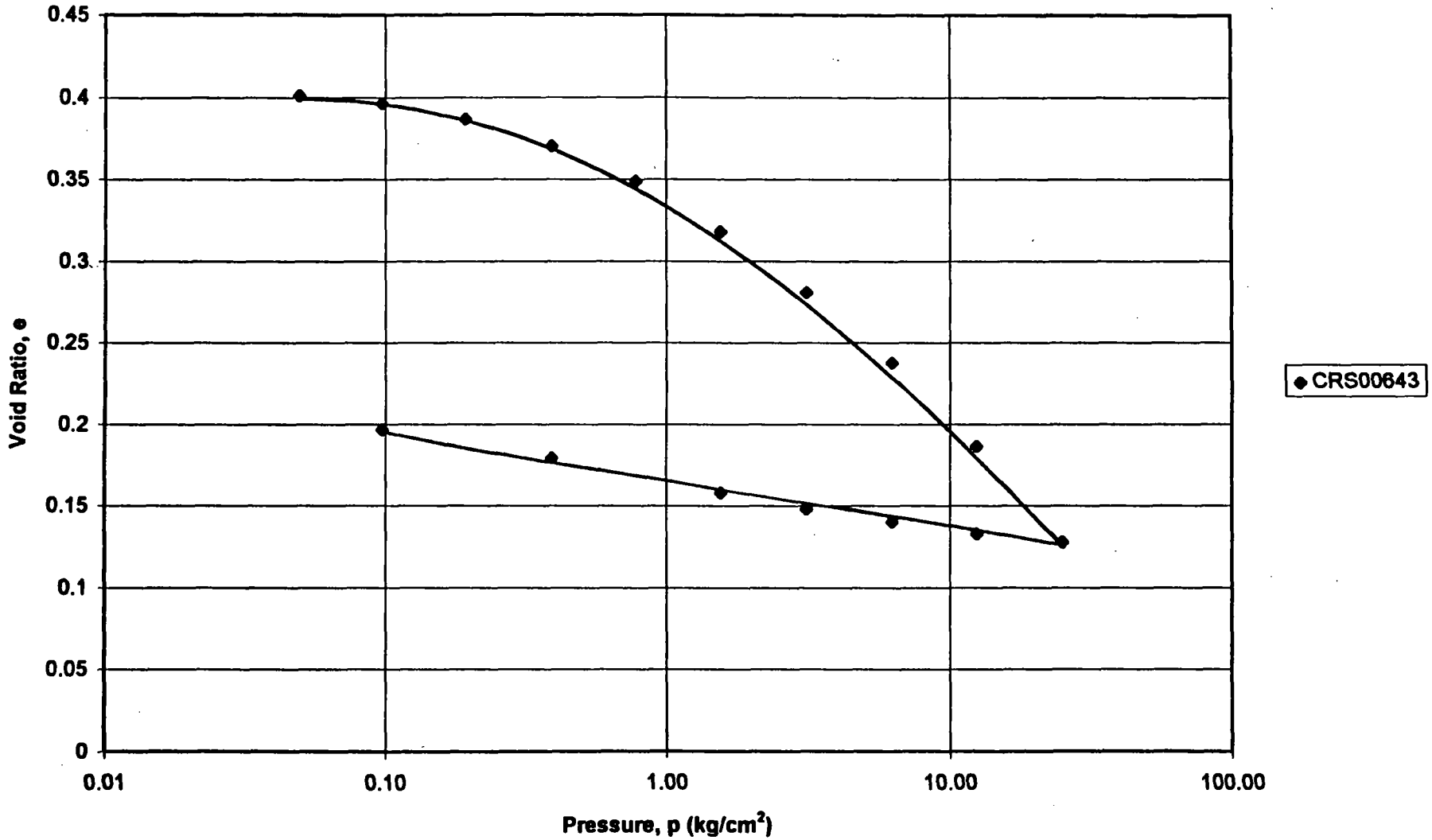
Consolidation Curves



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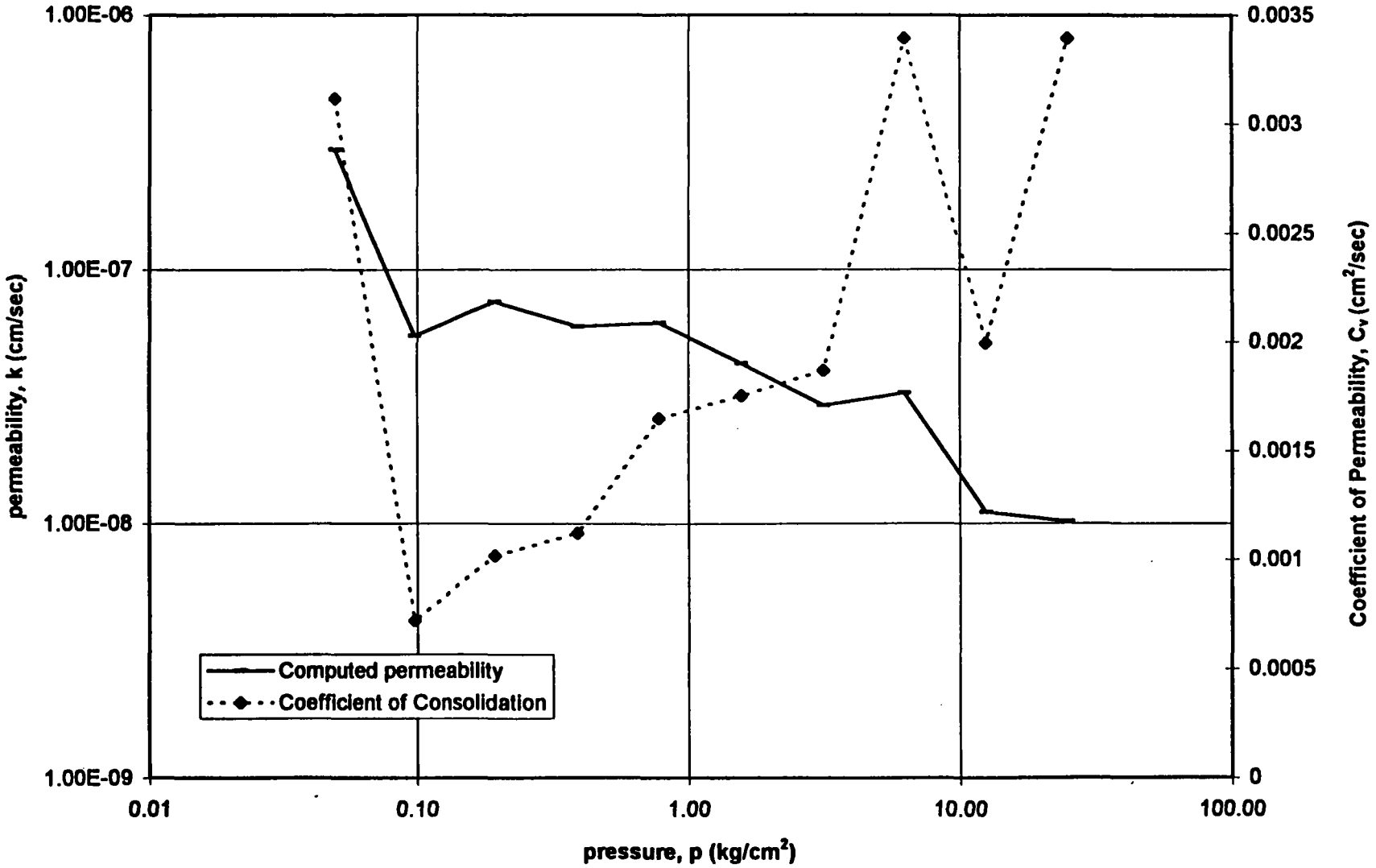
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0.0005
0
Coefficient of Permeability, C_v (cm^2/sec)
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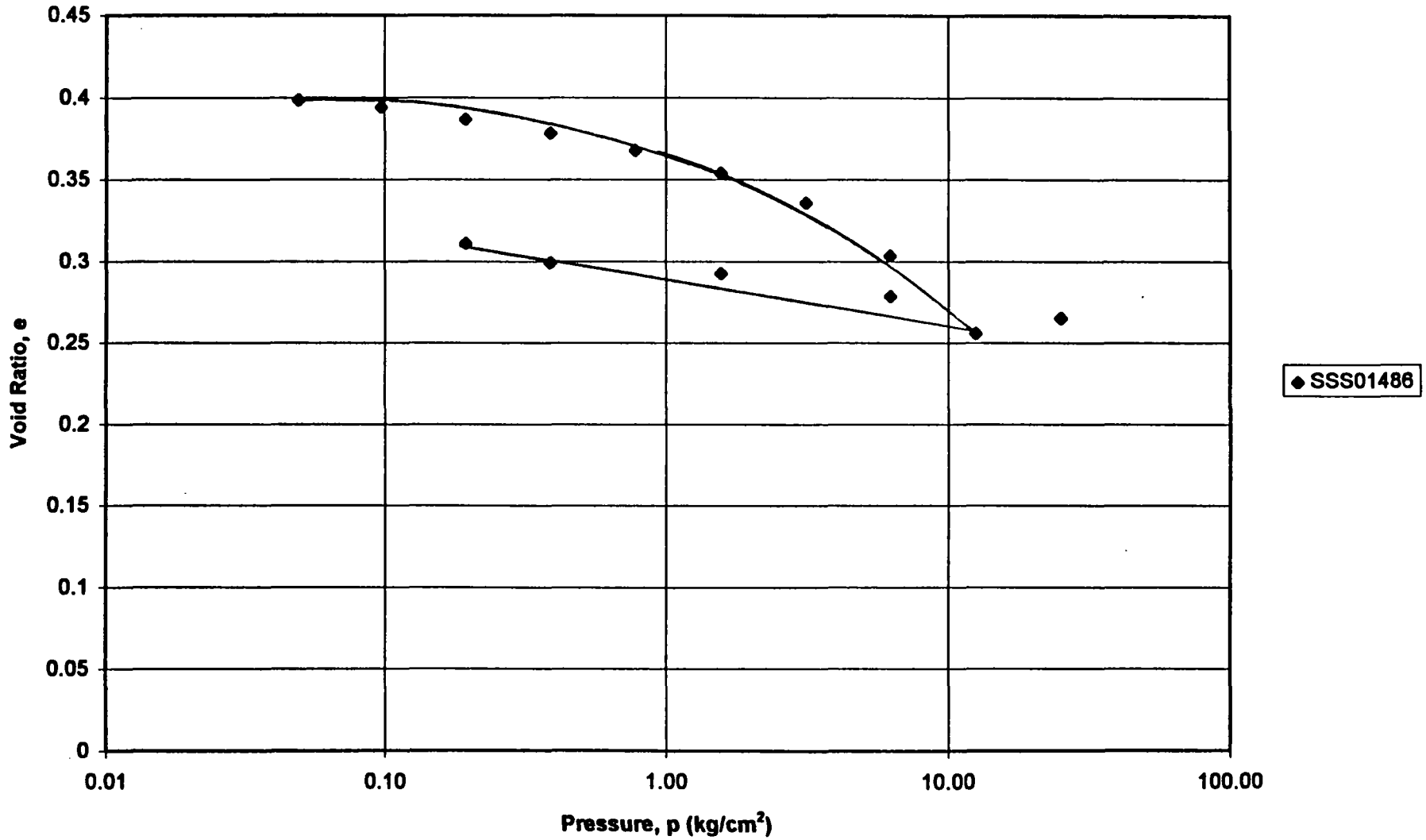
pressure, p (kg/cm^2)
Computed permeability
Coefficient of Consolidation

Consolidation Curve



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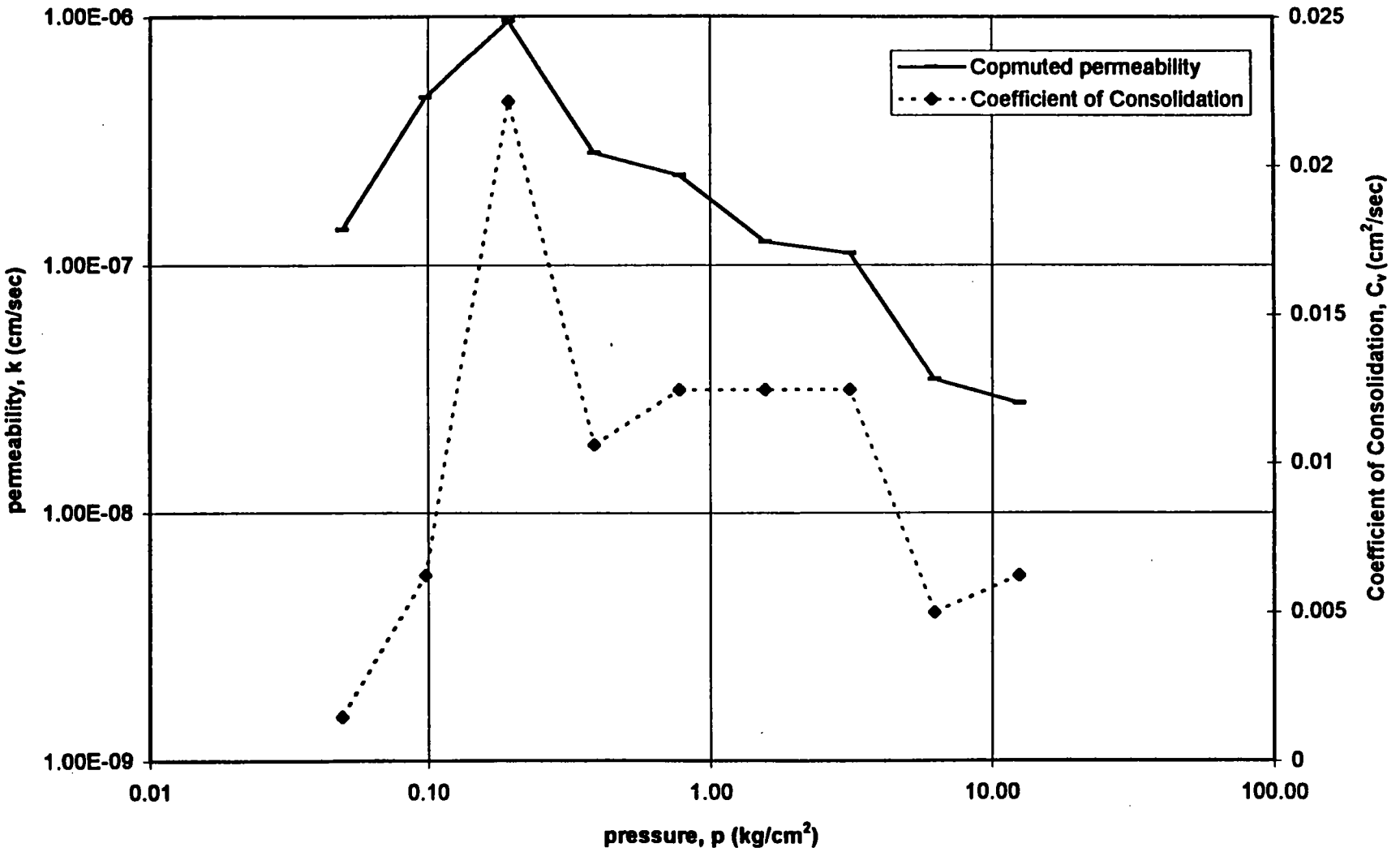
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0
Coefficient of Consolidation, C_v (cm^2/sec)
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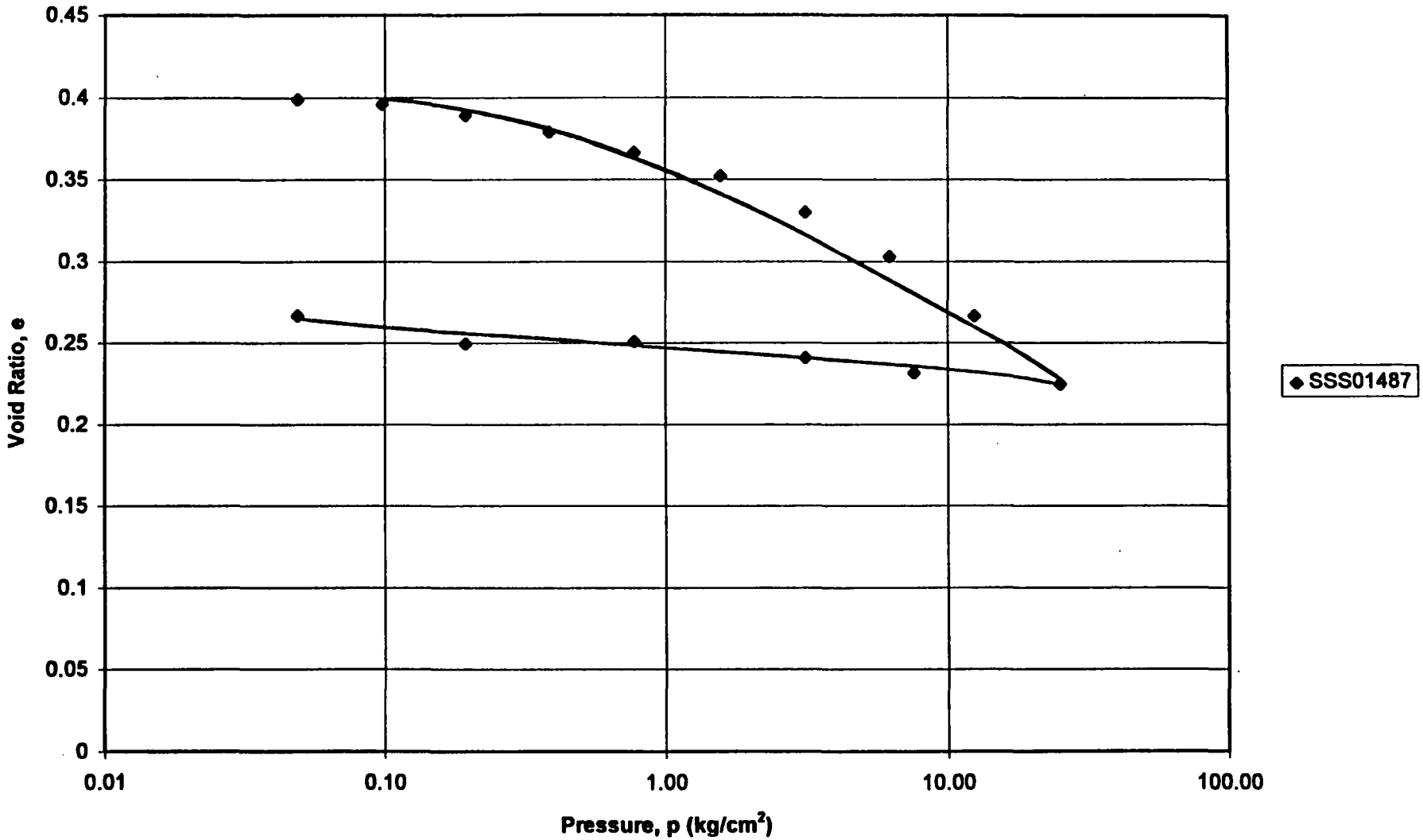
pressure, p (kg/cm^2)
Copmuted permeability
Coefficient of Consolidation

Consolidation Curves



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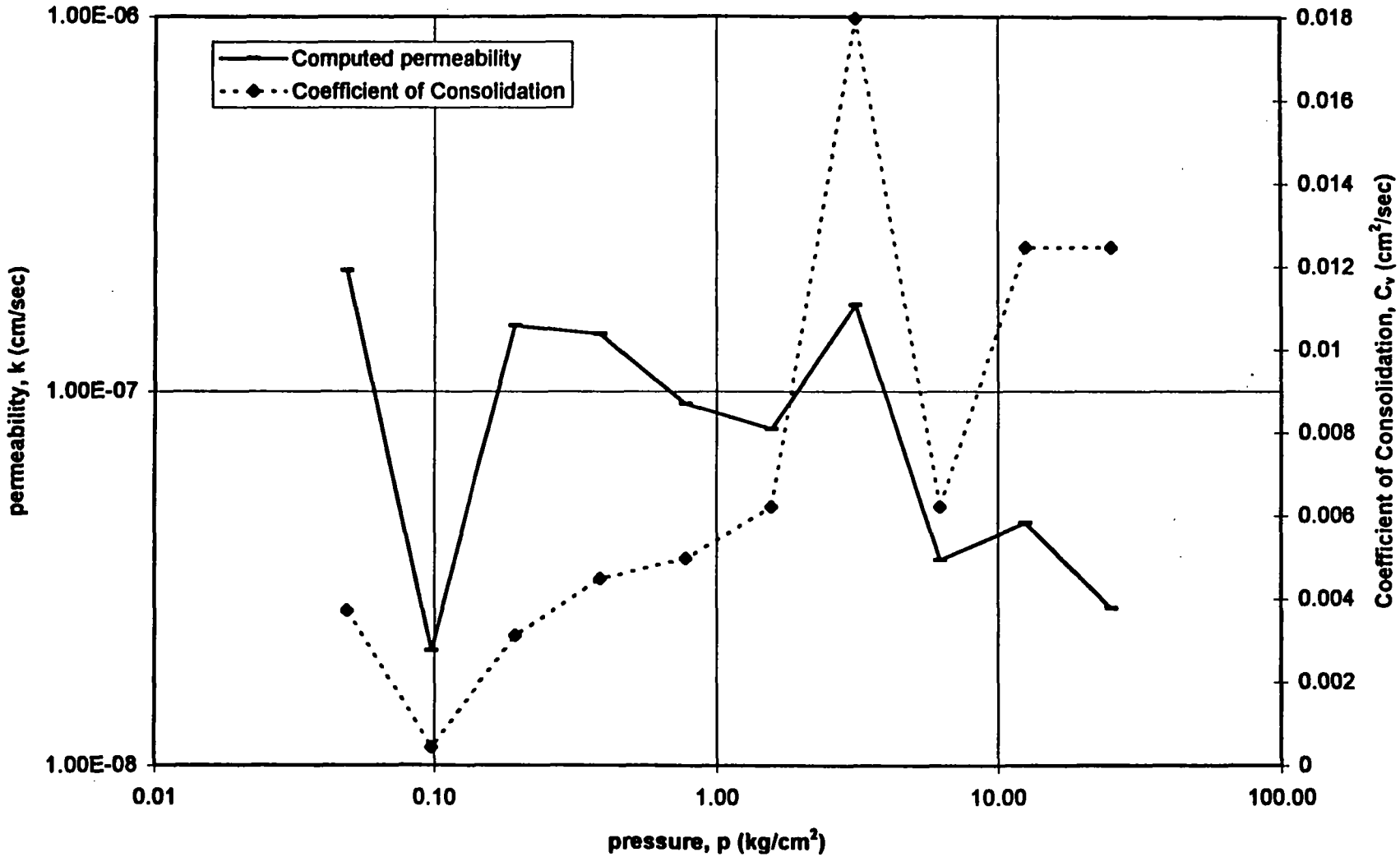
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Coefficient of Consolidation, C_v (cm^2/sec)
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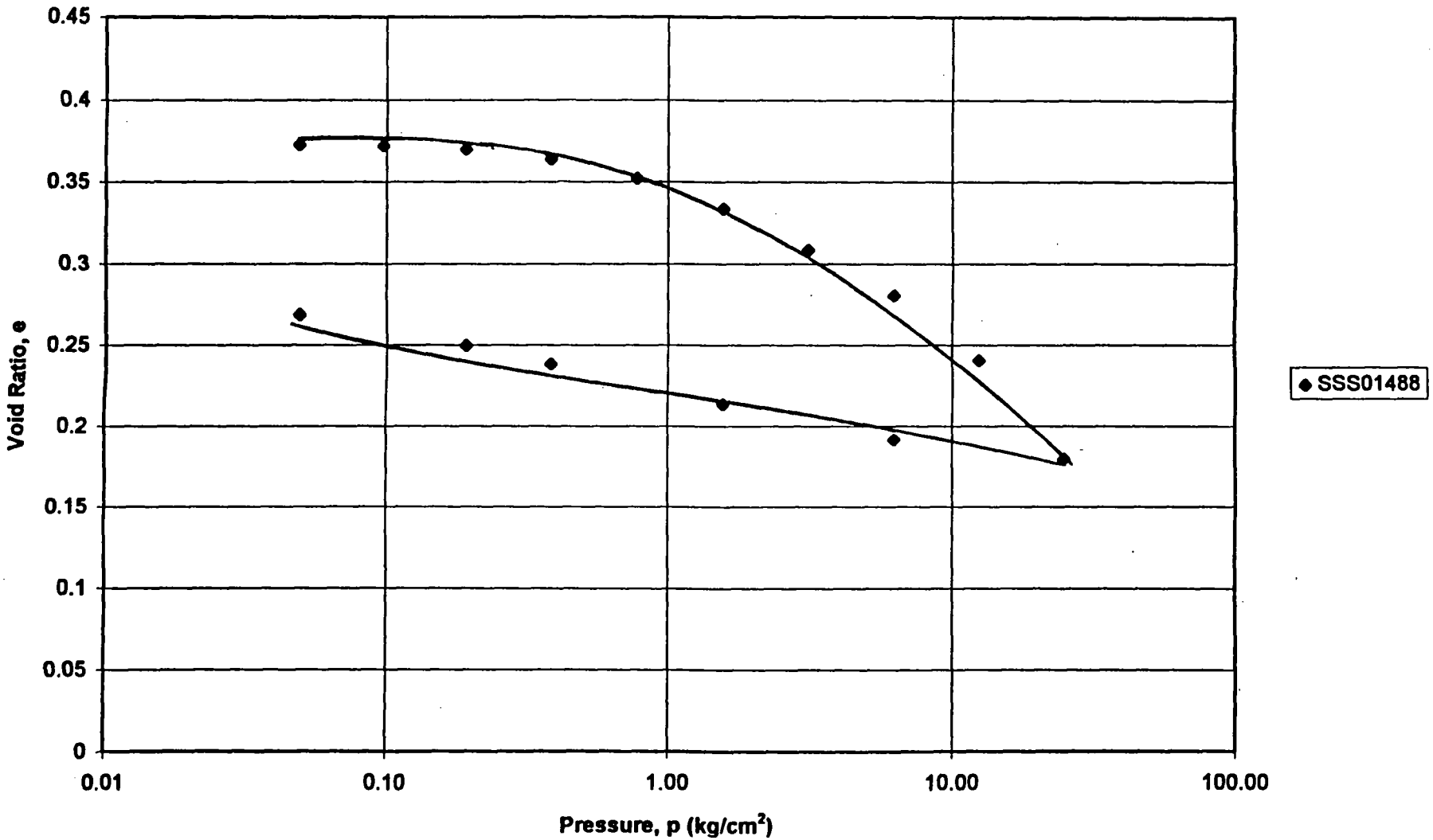
100.00
pressure, p (kg/cm^2)

Consolidation Curves



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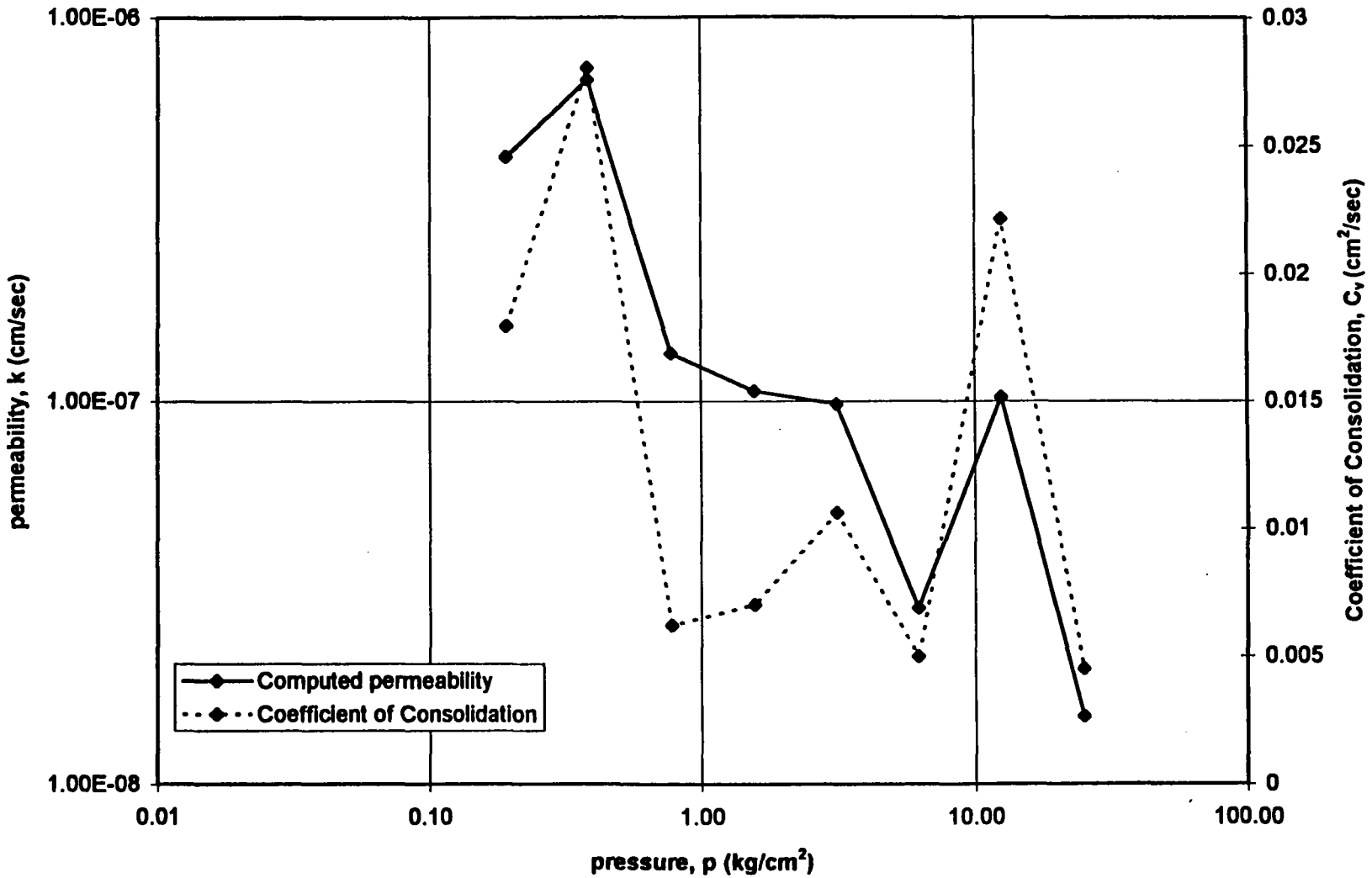
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Coefficient of Consolidation, C_v (cm^2/sec)
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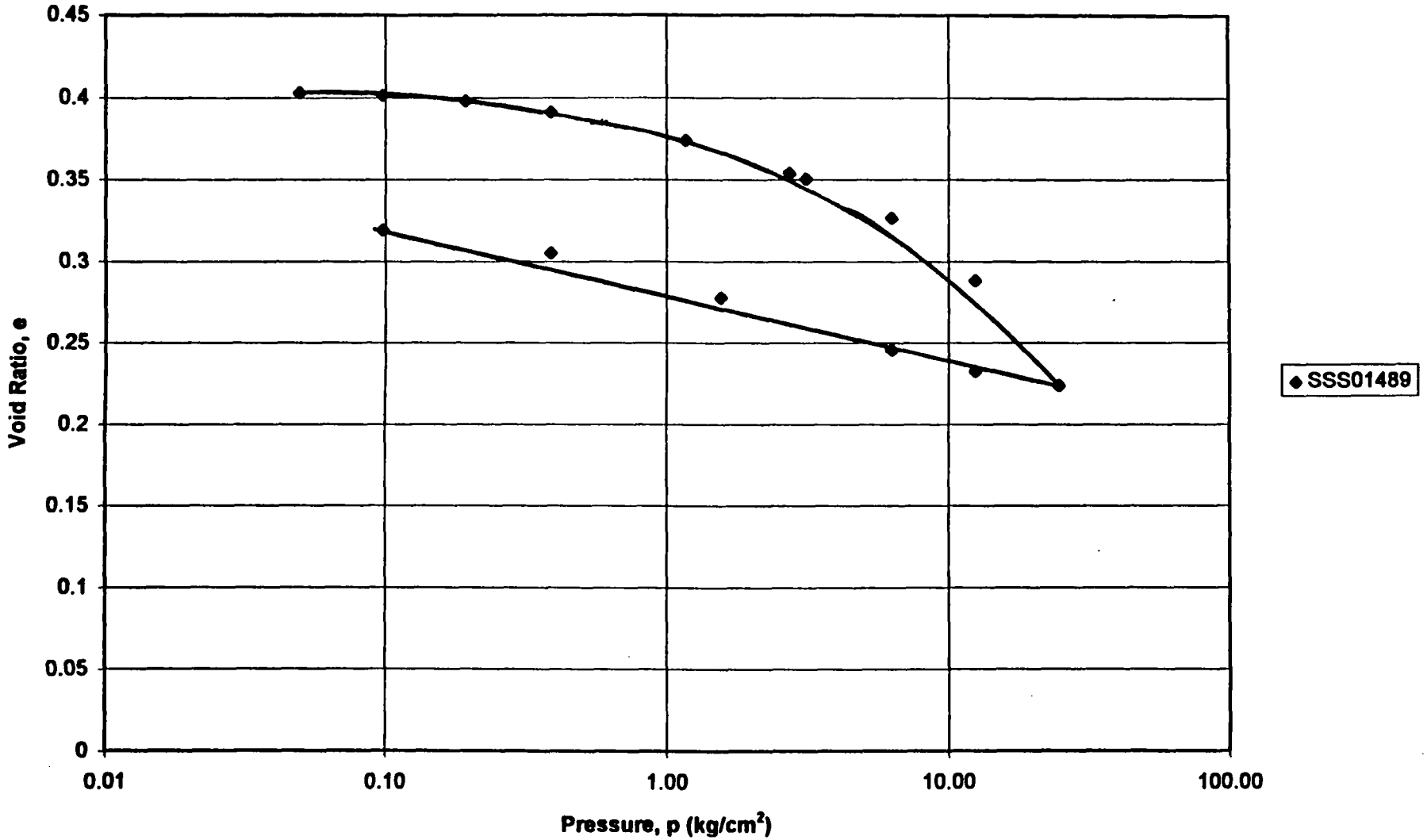
pressure, p (kg/cm^2)
Computed permeability
Coefficient of Consolidation

Consolidation Curves



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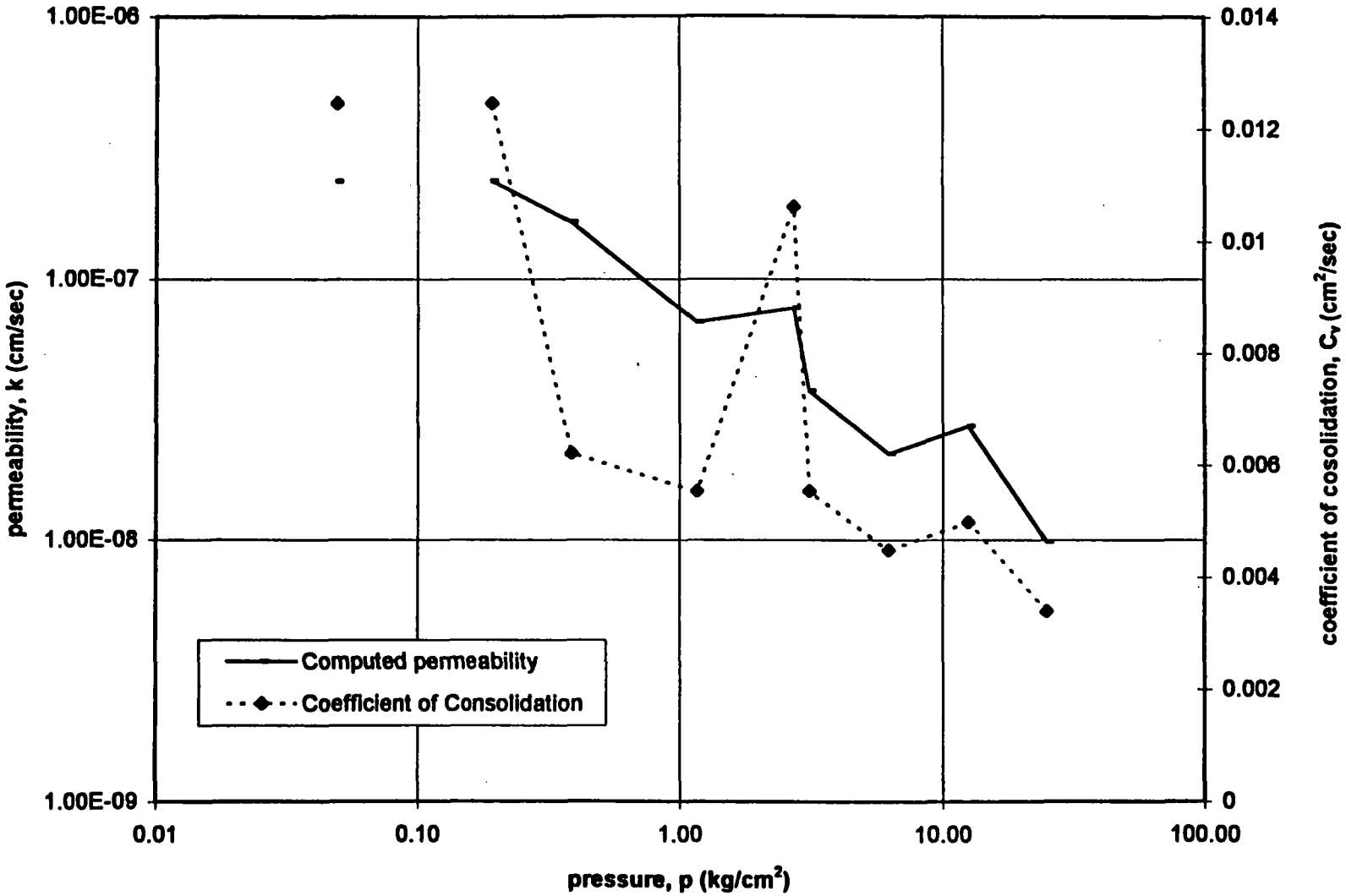
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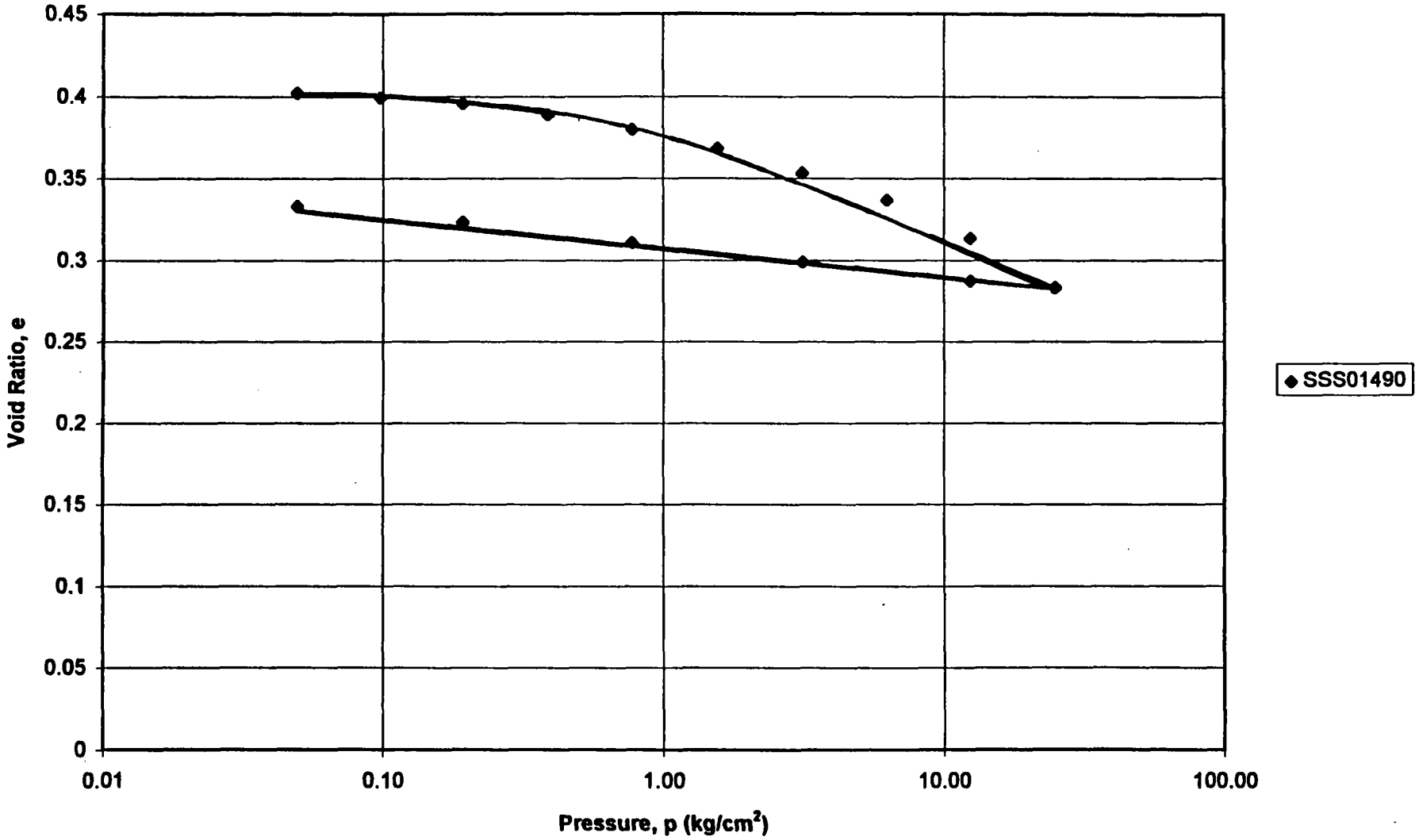
pressure, p (kg/cm^2)
Computed permeability
Coefficient of Consolidation

Consolidation Curves



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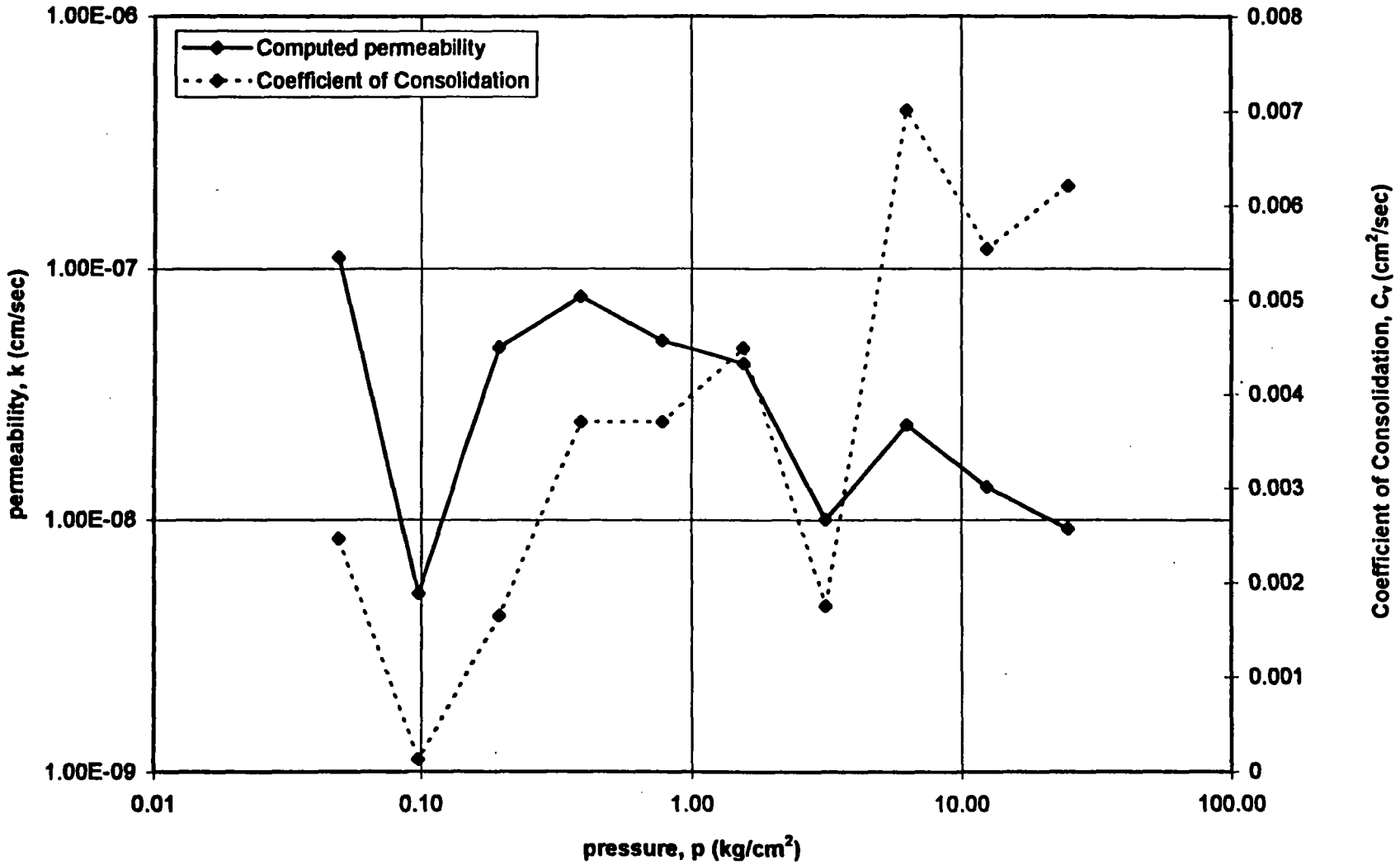
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Coefficient of Consolidation
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0.005
0.004
0.003
0.002
0.001
0
Coefficient of Consolidation, C_v (cm^2/sec)
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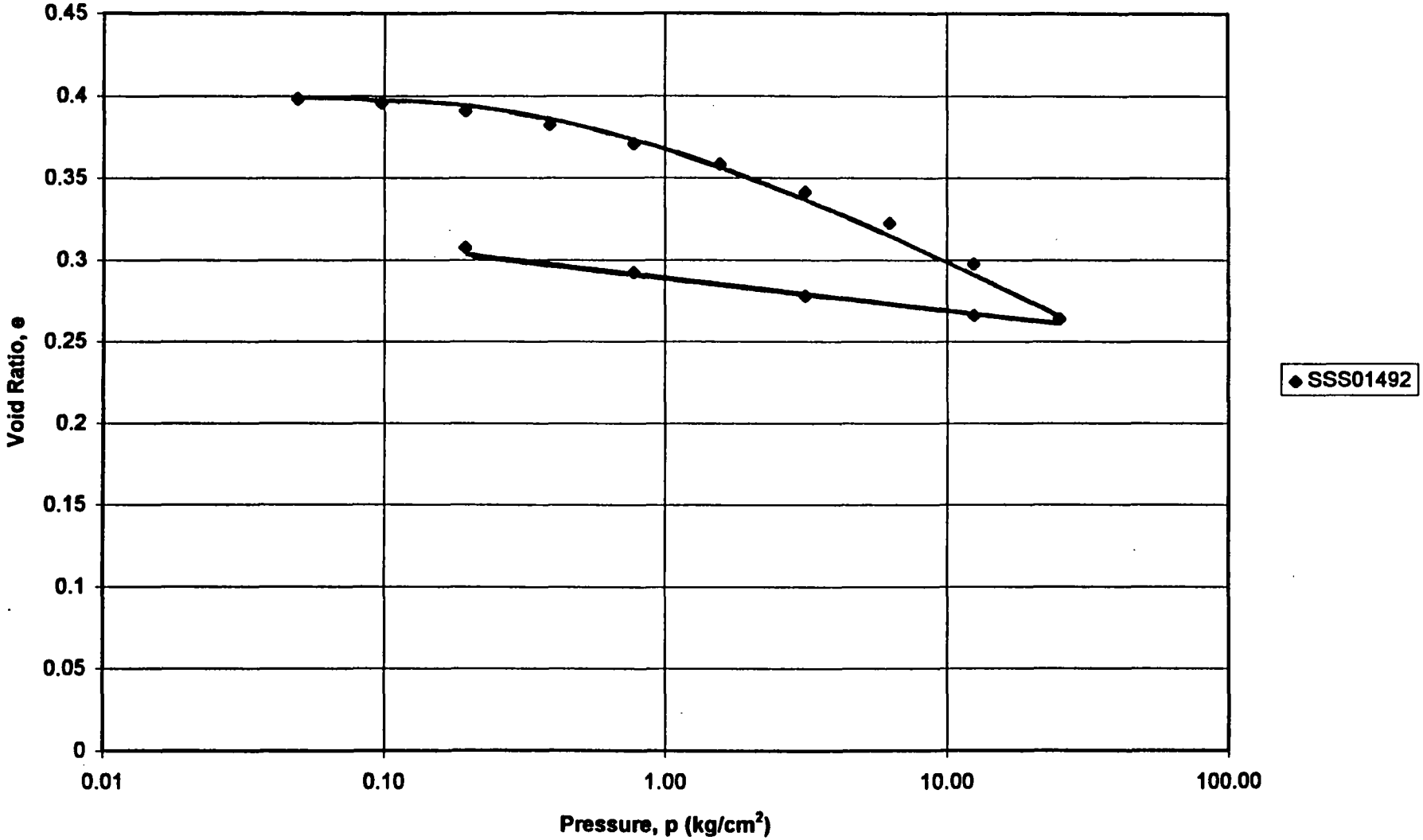
pressure, p (kg/cm^2)

Consolidation Curves



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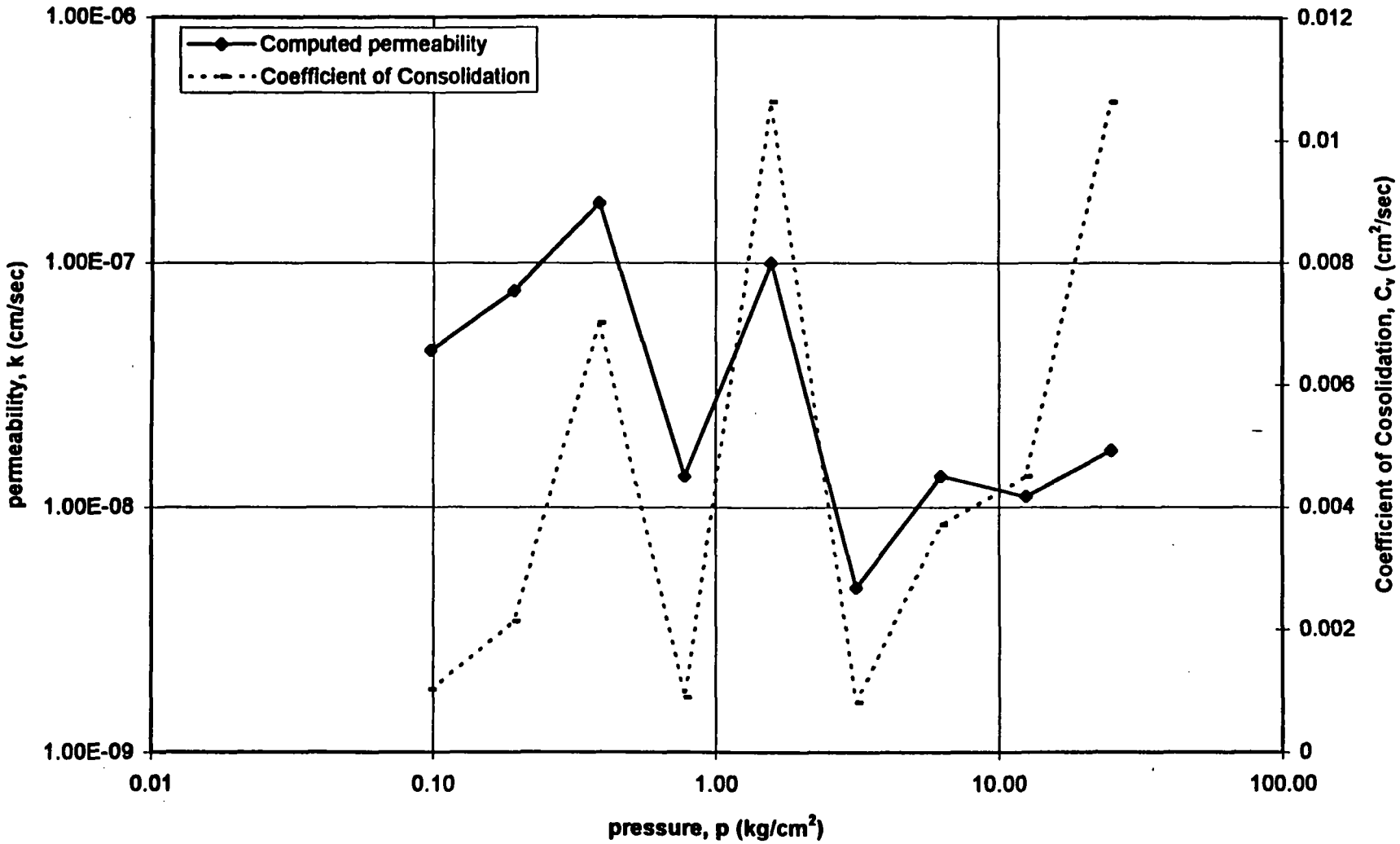
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permeability, k (cm/sec)
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0.01
0.008
0.006
0.004
0.002
0
Coefficient of Cosolidation, C_v (cm^2/sec)
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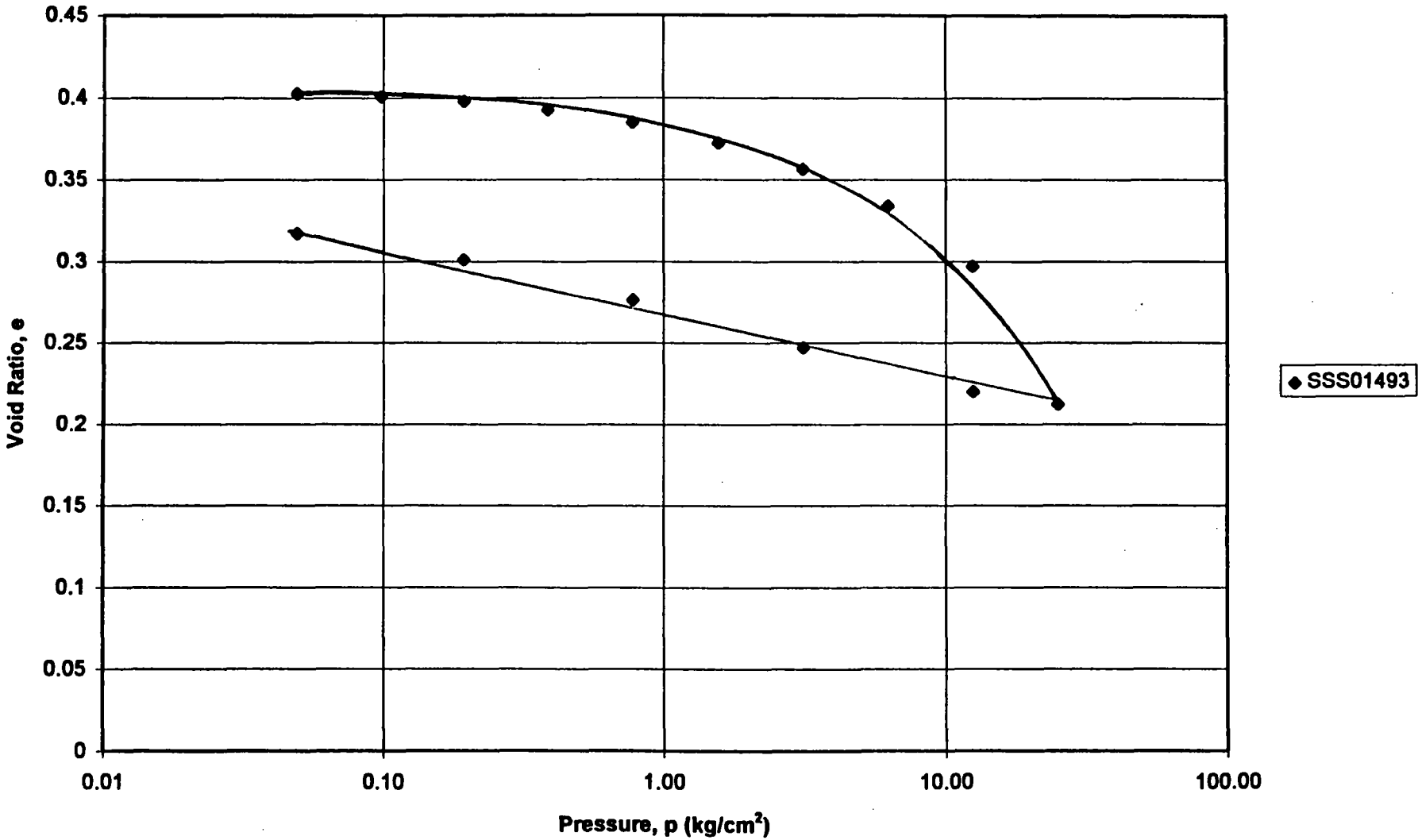
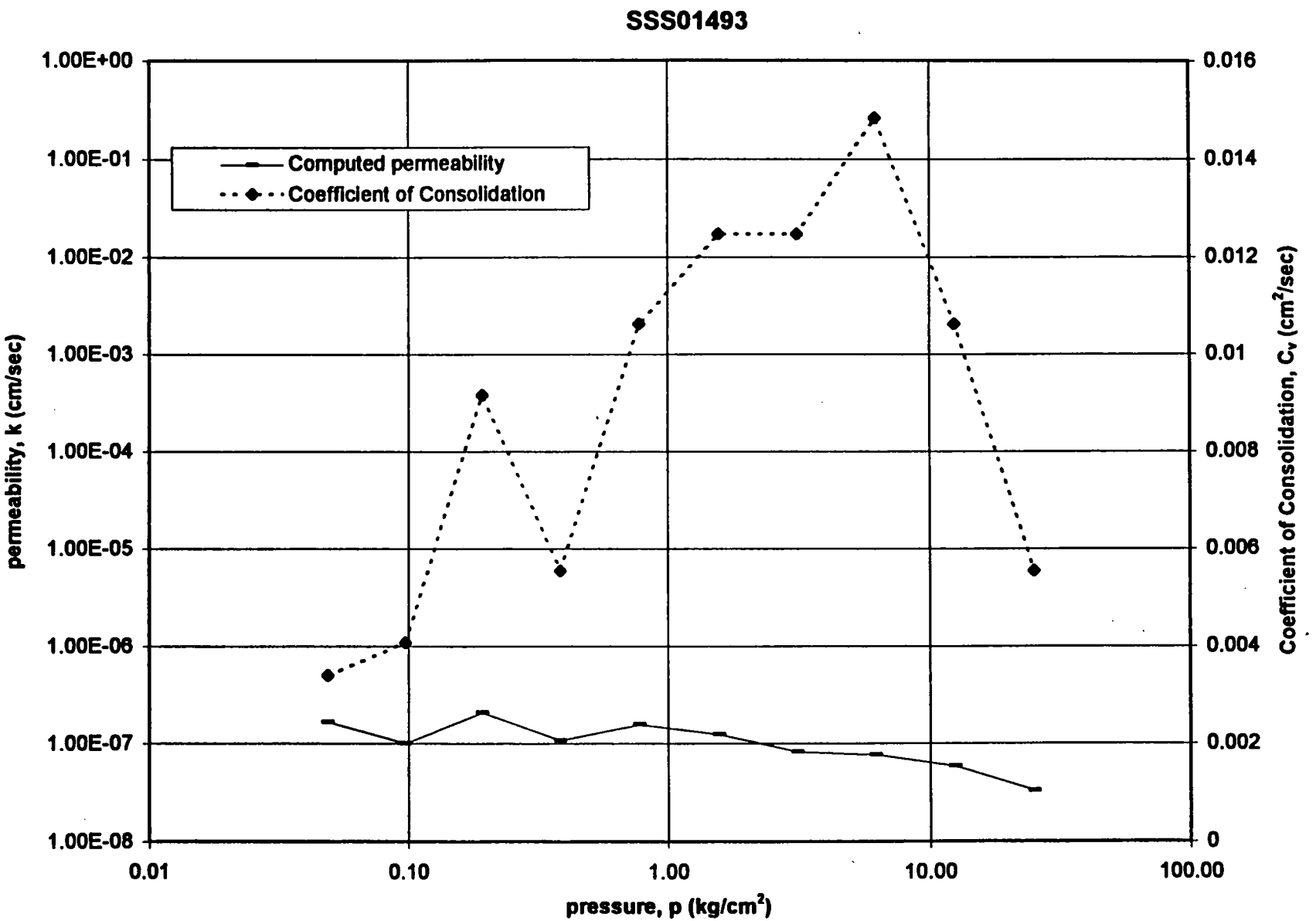
100.00
pressure, p (kg/cm^2)

Consolidation Curves

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permeability, k (cm/sec)
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Coefficient of Consolidation, C_v (cm^2/sec)
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10.00
100.00
pressure, p (kg/cm^2)