

22. GRAIN-SIZE AND CARBON-CARBONATE ANALYSES, LEG 58

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GRAIN-SIZE ANALYSES

Sand-silt-clay distribution was determined on 10-cm³ sediment samples collected at the time the cores were split and described. The results are listed in Table 1. (No analyses were done for Hole 446A.)

The sediment classification used here is that of Shepard (1954), with the sand, silt, and clay boundaries based on the Wentworth (1922) scale (Figure 1). Thus the sand, silt, and clay fractions are composed of particles whose diameters are 2000 to 62.5 μm , 62.5 to 3.91 μm , and less than 3.91 μm , respectively. This classification is applied without regard to sediment type and origin; therefore, the sediment names used in this table may differ from those used elsewhere in this volume; e.g., a silt (in this table) composed of nannofossils may be called a nannofossil ooze in a site chapter.

Standard sieve and pipette methods were used to determine the grain-size distribution. The sediment sample was dried and dispersed in a Calgon solution. If a sediment sample failed to disaggregate, it was treated with a sonic probe and, if necessary, hydrogen peroxide. Sediment samples which resisted this treatment were not analyzed.

The sand fraction was removed by wet sieving, using a 63- μm sieve, and the silt and clay fractions were analyzed by standard pipette analysis. Sampling depths and times were calculated from equations derived from the Stokes settling-velocity equation (Krumbein and Pettijohn, 1938, pp. 95-96):

$$D = V = \frac{2gr^2(d_1 - d_2)}{9\eta}$$

$$t = \frac{9D\eta}{2gr^2(d_1 - d_2)}$$

where

V = velocity, in cm/s

t = time, in seconds*

D = depth pipette is inserted, in cm

g = gravity, in cm/s²*

r = radius of individual particles, in cm*

d_1 = density of solid particles arbitrarily set at 2.675 g/cc

d_2 = absolute density of distilled water at different temperatures (Hodgman et al., 1960, p. 2129)

η = viscosity of distilled water in poises at different temperatures (Hodgman et al., 1960, p. 2181)

* Five figures were used in calculations to avoid rounding off variations.

The reproducibility of the grain-size analysis has been tested previously (Boyce, 1972), and it was found that over a period of time, with several operators, the reproducibility for the sand-silt-clay fractions is ± 2.5 per cent (absolute). For detailed step-by-step procedures, see Volume 4 of the *Initial Reports of the Deep Sea Drilling Project*.

CARBON-CARBONATE ANALYSES

Sediments recovered during Leg 58 were analyzed for total carbon and acid-insoluble (organic) carbon, using the LECO WR-12 analyzer, according to the standard technique outlined below.

The 3-cm³ sediment samples were first dried and ground into a homogeneous powder. The ground sediment was redried at 105 to 110°C, and two samples, one 0.1g, and the other 0.5 g, were weighed into LECO clay crucibles. The 0.5-g sample was acidified with 10 per cent hydrochloric acid and washed with distilled water. The sample was then dried and analyzed for acid-insoluble carbon. The 0.1-g sample was analyzed for total carbon without further treatment. If the sample contained less than 10 per cent CaCO₃, an additional 0.5-g sample was analyzed, for greater accuracy. The calcium-carbonate percentages were calculated as follows: (per cent total C - per cent organic C) \times 8.33 = per cent CaCO₃. Although other carbonates may be present, all acid-soluble carbon was calculated as calcium carbonate. All results are given in weight per cent (Table 2).

Detailed descriptions of the technique and theory may be found in Bader, Gerard, et al. (1970) and Boyce and Bode (1972).

REFERENCES

- Bader, R. G., Gerard, R. D., et al., 1970. *Init. Repts. DSDP*, 4: Washington (U. S. Govt. Printing Office).
- Boyce, R. E., 1972. Grain size analyses, Leg 9, Deep Sea Drilling Project. In Hays, J. D., et al., *Init. Repts. DSDP*, 9: Washington (U. S. Govt. Printing Office), p. 799.
- Boyce, R. E., and Bode, G. W., 1972. Carbon and carbonate analyses, Leg 9, Deep Sea Drilling Project. In Hays, J. D., et al., *Init. Repts. DSDP*, 9: Washington (U. S. Govt. Printing Office), p. 747.
- Hodgman, C. D., Weast, R. C. Y., and Selby, S. M., 1960. *Handbook of Chemistry and Physics*: Cleveland (Chemical Rubber Publishing Co.).
- Krumbein, W. C., and Pettijohn, F. J., 1938. *Manual of sedimentary petrography*: New York (Appleton-Century-Crofts).
- Shepard, F. P., 1954. Nomenclature based on sand-silt-clay ratios. *J. Sediment. Petrol.*, 24, 151.
- Wentworth, C. K., 1922. A scale of grade and class terms for clastic sediments. *J. Geol.*, 30, 377.

TABLE 1
Grain-Size Analysis, Leg 58

Sample (Interval in cm)	Sub- Bottom (m)	Sand (%)	Silt (%)	Clay (%)	Classification
442A-2-2, 98	11.98	0.4	47.1	52.5	Silty clay
2-4, 76	14.76	0.0	91.2	8.7	Silt
2-6, 50	17.50	2.9	50.5	46.7	Clayey silt
3-2, 41	20.91	3.8	51.2	45.1	Clayey silt
3-4, 70	24.20	0.3	39.4	60.2	Silty clay
3-6, 88	27.38	1.3	51.8	47.0	Clayey silt
4-2, 70	30.70	0.9	46.8	52.3	Silty clay
4-4, 82	33.82	0.1	49.0	50.9	Silty clay
5-2, 74	40.24	1.2	48.5	50.3	Silty clay
5-4, 34	42.84	1.9	41.1	57.1	Silty clay
5-4, 40	42.90	1.6	47.3	51.1	Silty clay
5-6, 10	45.60	0.8	46.2	53.0	Silty clay
6-2, 54	49.54	0.3	44.8	54.9	Silty clay
6-4, 70	52.70	0.4	55.9	43.7	Clayey silt
6-6, 15	55.15	0.8	42.9	56.3	Silty clay
7-2, 60	59.10	0.1	43.5	56.4	Silty clay
7-4, 60	62.10	1.1	42.0	56.9	Silty clay
8-4, 26	71.26	0.3	42.0	57.7	Silty clay
10-2, 124	88.24	0.4	40.0	59.6	Silty clay
10-4, 30	90.30	15.8	60.2	24.0	Clayey silt
13-2, 130	116.80	0.5	39.4	60.1	Silty clay
14-3, 45	126.95	0.2	39.0	60.9	Silty clay
15-2, 11	134.61	0.4	36.8	62.8	Silty clay
15-4, 24	137.74	0.1	34.7	65.2	Silty clay
16-2, 61	144.61	0.2	32.2	67.6	Silty clay
17-2, 51	154.01	0.4	36.3	63.3	Silty clay
18-2, 120	164.20	0.5	38.1	61.5	Silty clay
19-2, 20	172.70	1.9	35.1	62.9	Silty clay
21-2, 43	191.93	0.4	29.7	69.9	Silty clay
22-1, 145	200.95	0.6	26.9	72.5	Silty clay
23-2, 36	210.86	0.9	28.0	71.1	Silty clay
23-4, 36	213.86	1.1	29.9	69.0	Silty clay
24-2, 109	221.09	4.8	33.7	61.5	Silty clay
24-4, 109	224.09	1.2	37.0	61.8	Silty clay
25-2, 41	229.91	1.5	48.3	50.2	Silty clay
25-4, 41	232.91	1.1	42.6	56.2	Silty clay
26-2, 94	239.94	1.6	41.3	57.1	Silty clay
27-2, 103	249.53	3.6	47.0	49.4	Silty clay
28-2, 28	258.28	0.5	47.8	51.7	Silty clay
28-3, 129	260.79	7.5	73.8	18.7	Clayey silt
29-2, 104	268.54	1.2	48.1	50.7	Silty clay
30-2, 26	277.26	2.4	22.4	75.2	Clay
31-1, 22	285.22	0.5	26.1	73.3	Silty clay
442B-1-2, 73	269.73	2.4	72.2	25.4	Clayey silt
2-2, 38	278.88	2.4	44.6	53.0	Silty clay
443-1-2, 8	1.58	0.1	34.6	65.3	Silty clay
1-4, 76	5.26	0.2	42.3	57.5	Silty clay
2-2, 85	9.35	0.4	40.0	59.6	Silty clay
2-4, 67	12.17	0.5	40.6	58.9	Silty clay
3-2, 68	18.68	0.5	44.0	55.5	Silty clay
3-4, 10	21.10	0.6	62.4	37.0	Clayey silt
4-2, 39	27.89	0.3	45.4	54.3	Silty clay
4-4, 3	30.53	0.4	45.5	54.1	Silty clay
5-2, 20	37.20	0.6	43.1	56.4	Silty clay
5-4, 20	40.20	0.3	42.2	57.4	Silty clay
6-2, 22	46.72	0.3	46.0	53.8	Silty clay
6-4, 26	49.76	1.4	48.5	50.1	Silty clay
7-6, 98	62.98	1.1	45.1	53.8	Silty clay
8-4, 66	69.16	0.1	39.3	60.6	Silty clay
9-1, 74	74.24	0.2	33.2	66.6	Silty clay
9-4, 74	78.74	0.3	32.9	66.8	Silty clay
9-6, 74	81.74	0.8	43.3	55.9	Silty clay
10-2, 125	85.75	0.7	45.7	53.6	Silty clay

TABLE 1 - Continued

Sample (Interval in cm)	Sub- Bottom (m)	Sand (%)	Silt (%)	Clay (%)	Classification
443-10-4, 57	88.07	1.4	44.0	54.6	Silty clay
10-6, 57	91.07	0.1	42.0	57.9	Silty clay
11-2, 118	95.18	0.6	41.0	58.4	Silty clay
11-4, 118	98.18	0.5	50.3	49.2	Clayey silt
11-6, 60	100.60	0.1	44.2	55.7	Silty clay
14-4, 80	126.30	0.4	48.0	51.6	Silty clay
15-2, 24	132.24	0.2	35.8	64.0	Silty clay
15-4, 24	135.24	0.1	34.5	65.4	Silty clay
15-7, 18	139.68	1.9	47.4	50.8	Silty clay
17-4, 33	154.33	0.7	45.6	53.7	Silty clay
18-2, 46	160.96	0.9	50.0	49.0	Clayey silt
21-2, 31	189.31	0.2	26.4	73.5	Silty clay
22-2, 125	199.75	3.2	52.0	44.8	Clayey silt
23-2, 25	208.25	0.7	33.4	65.9	Silty clay
23-4, 32	211.32	9.1	43.1	47.8	Silty clay
24-3, 36	219.36	2.0	40.6	57.4	Silty clay
24-4, 127	221.77	0.5	29.9	69.6	Silty clay
24-6, 83	224.33	0.5	32.7	66.8	Silty clay
25-2, 60	227.60	0.7	38.7	60.6	Silty clay
26-2, 48	236.98	0.1	30.1	69.7	Silty clay
27-2, 90	246.90	0.6	31.7	67.6	Silty clay
28-1, 120	255.20	0.2	33.1	66.7	Silty clay
29-2, 94	265.94	1.2	34.8	64.1	Silty clay
29-4, 94	268.94	0.3	35.5	64.2	Silty clay
30-2, 86	275.36	1.1	43.2	55.7	Silty clay
31-2, 27	284.27	1.5	17.7	80.8	Clay
31-4, 27	287.27	4.3	43.9	51.9	Silty clay
32-1, 51	292.51	2.3	48.6	49.1	Silty clay
33-2, 64	303.64	3.6	49.9	46.5	Clayey silt
34-2, 21	312.71	3.0	49.6	47.4	Clayey silt
34-4, 21	315.71	4.8	52.2	42.9	Clayey silt
35-2, 35	322.35	0.9	40.7	58.4	Silty clay
36-2, 24	331.74	1.0	41.4	57.5	Silty clay
36-4, 22	334.72	0.5	44.2	55.3	Silty clay
39-2, 22	360.22	0.3	37.5	62.2	Silty clay
40-2, 36	369.86	2.5	36.6	60.9	Silty clay
42-1, 107	388.07	0.3	42.8	56.9	Silty clay
43-2, 65	398.65	4.6	51.2	44.2	Clayey silt
45-2, 20	417.20	2.0	49.5	48.5	Clayey silt
46-2, 19	426.69	1.8	45.2	53.0	Silty clay
48-1, 105	445.05	4.3	54.5	41.2	Clayey silt
49-2, 45	455.45	0.2	38.9	60.9	Silty clay
444-2-2, 55	8.05	0.7	37.6	61.8	Silty clay
2-4, 43	10.93	0.8	35.2	64.0	Silty clay
3-2, 64	17.64	0.1	35.3	64.6	Silty clay
4-2, 27	26.77	16.5	52.1	31.4	Clayey silt
4-4, 44	29.94	4.4	48.3	47.2	Clayey silt
5-4, 50	39.50	2.1	46.9	51.1	Silty clay
7-1, 64	54.14	13.4	48.1	38.4	Clayey silt
7-3, 93	57.43	3.6	48.9	47.5	Clayey silt
10-2, 38	83.88	0.8	43.4	55.8	Silty clay
444A-1-2, 76	84.26	4.4	52.5	43.1	Clayey silt
1-4, 76	87.26	0.7	52.7	46.6	Clayey silt
1-6, 76	90.26	2.1	44.1	53.8	Silty clay
2-2, 85	93.85	8.7	81.0	10.3	Silt
3-4, 80	106.30	0.7	43.4	55.8	Silty clay
6-2, 24	131.24	1.0	36.2	62.7	Silty clay
6-5, 24	135.74	3.7	40.6	55.8	Silty clay
7-1, 33	139.33	1.7	41.6	56.7	Silty clay
8-1, 48	148.98	0.4	30.6	69.0	Silty clay
9-2, 98	160.48	14.9	56.7	28.4	Clayey silt
9-4, 75	163.25	0.5	42.5	57.0	Silty clay
10-2, 57	169.57	14.8	55.6	29.7	Clayey silt
11-2, 49	178.99	0.9	80.2	18.9	Silt

TABLE 1 - Continued

Sample (Interval in cm)	Sub-Bottom (m)	Sand (%)	Silt (%)	Clay (%)	Classification
444A-11-4, 21	181.71	0.2	74.1	25.8	Clayey silt
12-2, 71	188.71	0.1	37.1	62.8	Silty clay
13-2, 16	197.66	1.6	53.1	45.3	Clayey silt
14-2, 11	207.11	0.6	82.6	16.8	Silt
14-4, 11	210.11	5.2	56.2	38.6	Clayey silt
15-2, 93	217.43	1.0	51.1	47.9	Clayey silt
16-2, 105	227.05	0.4	80.2	19.4	Silt
21-2, 89	255.39	0.9	48.5	50.6	Silty clay
445-1-1, 46	0.46	1.5	37.8	60.6	Silty clay
1-3, 106	4.06	5.5	42.4	52.1	Silty clay
2-1, 50	9.00	13.9	50.9	35.2	Clayey silt
2-3, 136	12.86	0.8	22.8	76.4	Clay
3-1, 75	18.75	1.7	35.1	63.2	Silty clay
3-3, 81	21.81	1.6	31.2	67.3	Silty clay
3-5, 46	24.46	6.4	49.9	43.7	Clayey silt
4-1, 20	27.70	1.2	36.2	62.6	Silty clay
4-3, 67	31.17	2.7	36.1	61.2	Silty clay
4-5, 56	34.06	0.0	34.9	65.0	Silty clay
5-1, 2	37.02	2.7	36.0	61.2	Silty clay
5-3, 2	40.02	9.9	31.6	58.6	Silty clay
6-1, 25	46.75	3.9	33.4	62.7	Silty clay
6-3, 25	49.75	3.6	25.3	71.1	Silty clay
6-5, 25	52.75	5.1	31.1	63.9	Silty clay
7-5, 60	62.60	2.6	27.0	70.5	Silty clay
8-1, 90	66.40	1.0	25.9	73.1	Silty clay
8-3, 90	69.40	0.0	29.0	70.9	Silty clay
8-5, 90	72.40	0.2	27.4	72.4	Silty clay
10-1, 57	85.07	2.8	30.9	66.3	Silty clay
10-3, 57	88.07	3.3	31.6	65.1	Silty clay
10-5, 57	91.07	3.2	33.0	63.9	Silty clay
11-2, 62	96.12	3.6	28.7	67.7	Silty clay
11-4, 62	99.12	4.8	31.9	63.3	Silty clay
12-1, 54	104.04	0.3	24.5	75.2	Clay
12-3, 54	107.04	0.6	29.2	70.2	Silty clay
13-1, 48	113.48	0.0	27.2	72.8	Silty clay
13-3, 47	116.47	0.0	31.9	68.1	Silty clay
14-1, 78	123.28	0.1	27.8	72.2	Silty clay
15-1, 63	132.63	0.6	30.0	69.4	Silty clay
16-1, 76	142.26	0.0	28.1	71.9	Silty clay
16-3, 76	145.26	35.8	38.3	25.9	Sand-silt-clay
17-1, 70	151.70	0.8	27.5	71.7	Silty clay
18-1, 43	160.93	1.9	30.3	67.9	Silty clay
18-3, 43	163.93	0.1	31.5	68.4	Silty clay
18-5, 43	166.93	0.0	39.0	61.0	Silty clay
19-1, 100	171.00	2.1	38.2	59.8	Silty clay
19-3, 100	174.00	0.7	31.7	67.6	Silty clay
20-1, 24	179.74	1.5	33.5	65.0	Silty clay
20-3, 24	182.74	3.9	39.4	56.7	Silty clay
21-1, 60	189.60	1.6	33.1	65.3	Silty clay
22-1, 39	198.89	1.0	27.8	71.3	Silty clay
23-1, 29	208.29	0.9	40.0	59.2	Silty clay
23-3, 29	211.29	0.6	28.1	71.3	Silty clay
24-1, 39	217.89	0.2	21.6	78.2	Clay
24-3, 38	220.88	4.2	46.9	48.9	Silty clay
24-5, 44	223.94	0.9	40.3	58.9	Silty clay
25-1, 44	227.44	0.3	29.9	69.8	Silty clay
25-3, 44	230.44	1.2	32.8	66.0	Silty clay
25-5, 44	233.44	0.4	53.9	45.7	Clayey silt
26-1, 51	237.01	0.2	32.9	66.8	Silty clay
26-3, 51	240.01	0.0	73.9	26.1	Clayey silt
26-6, 51	244.51	0.0	45.2	54.8	Silty clay
27-1, 120	247.20	1.2	34.6	64.2	Silty clay
27-3, 120	250.20	0.1	30.7	69.2	Silty clay
28-1, 114	256.64	0.1	28.0	71.8	Silty clay
29-3, 52	268.52	0.5	33.3	66.2	Silty clay

TABLE 1 - Continued

Sample (Interval in cm)	Sub-Bottom (m)	Sand (%)	Silt (%)	Clay (%)	Classification
446-1-1, 91	0.91	0.2	30.9	68.9	Silty clay
3-1, 55	11.55	0.1	29.4	70.4	Silty clay
3-3, 55	14.55	0.1	27.4	72.5	Silty clay
3-5, 55	17.55	0.1	22.2	77.7	Clay
5-3, 82	33.82	0.6	23.4	76.0	Clay
5-5, 82	36.82	0.3	22.0	77.7	Clay
6-1, 90	40.40	0.1	12.7	87.1	Clay
6-3, 90	43.40	0.1	13.5	86.4	Clay
7-1, 91	49.91	0.0	11.4	88.6	Clay
7-4, 91	54.41	0.1	11.7	88.2	Clay
7-5, 91	55.91	0.1	14.2	85.7	Clay
8-1, 29	58.79	0.1	11.0	88.9	Clay
8-4, 124	64.24	0.1	10.9	89.0	Clay
9-1, 74	68.74	0.8	11.5	87.7	Clay
9-3, 21	71.21	1.5	9.9	88.6	Clay
9-5, 57	74.57	0.0	6.4	93.5	Clay
10-1, 138	78.88	0.1	8.7	91.2	Clay
10-3, 48	80.98	0.1	8.9	91.0	Clay
10-5, 94	84.44	0.1	8.6	91.3	Clay
11-1, 25	87.25	0.0	4.4	95.6	Clay
11-1, 25	87.25	0.0	3.4	96.6	Clay
12-1, 130	97.80	0.1	6.8	93.2	Clay
12-3, 105	100.55	0.1	10.8	89.1	Clay
13-1, 116	107.16	0.0	7.2	92.7	Clay
13-3, 115	110.15	0.0	16.4	83.5	Clay
14-1, 140	116.90	0.0	9.5	90.5	Clay
14-3, 61	119.11	0.0	8.4	91.6	Clay
14-5, 61	122.11	0.0	18.1	81.9	Clay
15-1, 123	126.23	0.2	13.9	85.9	Clay
15-3, 123	129.23	0.2	27.0	72.8	Silty clay
16-1, 135	135.85	0.1	16.3	83.7	Clay
16-3, 135	138.85	0.1	21.1	78.8	Clay
18-1, 122	154.72	0.8	32.5	66.7	Silty clay
20-CC, 10	173.55	71.9	20.4	7.8	Silty sand
20-CC, 34	173.55	0.5	65.7	33.8	Clayey silt
21-1, 132	183.32	1.5	51.6	46.9	Clayey silt
23-1, 73	201.73	1.1	60.7	38.2	Clayey silt
24-1, 53	211.03	0.9	43.8	55.3	Silty clay
24-3, 53	214.03	0.4	65.7	33.8	Clayey silt

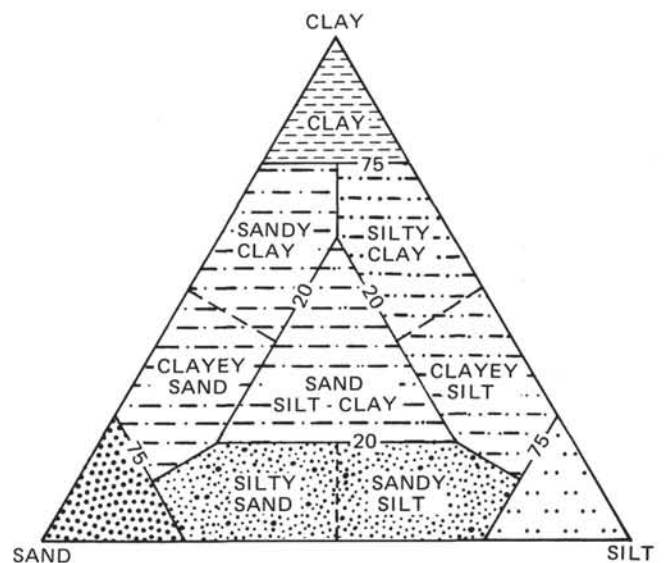


Figure 1. Textural sediment classification (after Shepard, 1954.)

TABLE 2
Carbon-Carbonate Analyses, Leg 58

Sample (Interval in cm)	Sub-Bottom Depth (m)	Total Carbon (%)	Organic Carbon (%)	CaCO ₃ (%)
442A-3-4, 80	24.30	0.5	0.5	0
3-6, 74	27.24	0.5	0.5	0
4-2, 80	30.80	0.3	0.2	1
4-4, 87	33.87	0.6	0.7	0
5-2, 79	40.29	0.5	0.3	2
5-6, 15	45.65	0.3	0.2	1
6-2, 21	49.21	0.3	0.2	1
6-4, 27	52.27	0.3	0.2	1
6-6, 10	55.10	0.3	0.2	1
7-2, 84	59.34	0.4	0.3	1
7-4, 84	62.34	0.5	0.3	2
8-4, 30	71.30	0.3	0.2	0
10-2, 132	88.32	0.3	0.2	1
10-4, 34	90.34	0.3	0.2	1
13-2, 125	116.75	0.2	0.2	0
14-3, 83	127.33	0.3	0.2	1
15-2, 16	134.66	0.4	0.1	2
15-4, 16	137.66	0.2	0.2	0
16-2, 22	144.22	0.2	0.2	0
17-2, 81	154.31	0.2	0.2	0
18-2, 129	164.29	0.2	0.2	1
19-2, 7	172.57	0.1	0.1	0
21-2, 48	191.98	0.1	0.1	0
23-2, 47	210.97	0.4	0.1	3
23-4, 47	213.97	0.2	0.2	0
24-2, 113	221.13	0.1	0.1	0
24-4, 113	224.13	0.1	0.1	0
25-2, 60	230.10	0.2	0.1	1
25-4, 60	233.10	0.1	0.1	0
26-2, 106	240.06	0.2	0.1	1
27-2, 107	249.57	0.1	0.1	0
28-2, 49	258.49	0.1	0.1	0
29-2, 103	268.53	0.1	0.0	0
30-2, 33	277.33	0.0	0.0	0
442B-1-2, 64	269.64	0.1	0.1	0
2-2, 60	279.10	0.1	0.1	0
443-1-2, 11	1.61	0.9	0.5	3
1-4, 81	5.31	0.4	0.3	1
2-2, 93	9.43	0.9	0.4	5
2-4, 64	12.14	1.0	0.4	5
3-2, 16	18.16	0.3	0.2	1
3-4, 16	21.16	0.7	0.3	3
3-6, 79	24.79	0.5	0.3	1
4-2, 12	27.62	1.2	0.3	8
4-4, 8	30.58	0.8	0.4	3
5-2, 69	37.69	0.9	0.4	5
5-4, 27	40.27	0.5	0.3	2
6-2, 63	47.13	1.1	0.2	7
6-4, 36	49.86	0.3	0.2	1
7-6, 82	62.82	1.9	0.2	15
8-4, 70	69.20	0.6	0.4	2
9-1, 77	74.27	1.3	0.4	7
9-4, 77	78.77	1.1	0.4	6
9-6, 77	81.77	0.5	0.2	2
10-2, 146	85.96	0.2	0.2	0
10-4, 69	88.19	0.6	0.2	3
10-6, 59	91.09	0.3	0.2	1
11-2, 122	95.22	1.1	0.3	7
11-4, 122	98.22	0.5	0.3	2
11-6, 64	100.64	0.4	0.3	1
14-4, 83	126.33	0.2	0.2	0
15-2, 28	132.28	0.4	0.2	1
15-4, 28	135.28	0.9	0.3	5

TABLE 2 - Continued

Sample (Interval in cm)	Sub-Bottom Depth (m)	Total Carbon (%)	Organic Carbon (%)	CaCO ₃ (%)
443-15-7, 22	139.72	0.2	0.2	0
17-4, 38	154.38	0.5	0.2	3
18-2, 51	161.01	0.3	0.2	0
21-2, 33	189.33	0.3	0.2	1
22-2, 132	199.82	0.8	0.1	6
23-2, 15	208.15	0.3	0.1	1
23-4, 15	211.15	0.2	0.1	1
24-3, 22	219.22	0.7	0.1	5
24-4, 110	221.60	0.2	0.1	1
24-6, 109	224.59	2.0	0.1	15
25-2, 41	227.41	1.0	0.1	7
26-2, 90	237.40	0.5	0.1	3
27-2, 66	246.66	0.3	0.1	1
27-4, 39	249.39	0.2	0.1	1
28-1, 124	255.24	0.1	0.1	0
29-2, 99	265.99	0.4	0.1	2
29-4, 99	268.99	0.2	0.1	1
30-2, 81	275.31	0.2	0.1	1
31-2, 32	284.32	0.2	0.2	0
31-4, 32	287.32	0.2	0.1	1
32-1, 56	292.56	0.3	0.1	2
33-2, 69	303.69	0.6	0.1	4
34-2, 25	312.75	1.6	0.1	13
34-4, 25	315.75	1.0	0.1	8
35-2, 40	322.40	3.3	0.1	26
36-2, 18	331.68	2.3	0.1	18
36-4, 27	334.77	0.9	0.1	7
39-2, 26	360.26	0.6	0.1	4
40-2, 45	369.95	0.9	0.1	7
42-2, 27	388.77	0.5	0.1	3
43-2, 46	398.46	1.1	0.1	9
45-2, 34	417.34	0.1	0.1	0
46-2, 21	426.71	0.1	0.1	0
48-1, 109	445.09	0.8	0.4	3
49-2, 49	455.49	1.5	0.0	12
444-2-2, 58	8.08	0.1	0.1	0
2-4, 53	11.03	0.7	0.4	3
3-2, 68	17.68	0.8	0.5	3
4-2, 32	26.82	0.2	0.2	1
4-4, 64	30.14	0.3	0.2	1
5-2, 64	36.64	0.8	0.2	5
5-4, 60	39.60	0.7	0.1	4
7-1, 70	54.20	0.1	0.0	0
7-3, 63	57.13	0.1	0.1	0
7-4, 77	58.77	0.1	0.1	0
10-2, 42	83.92	0.2	0.1	1
444A-1-2, 80	84.30	1.5	0.1	11
1-4, 80	87.30	0.2	0.1	1
1-6, 80	90.30	0.1	0.1	1
2-2, 88	93.88	0.5	0.1	4
3-4, 84	106.34	0.2	0.1	1
6-2, 29	131.29	0.1	0.1	0
6-5, 29	135.79	0.1	0.1	0
7-1, 39	139.39	0.1	0.1	0
8-1, 53	149.03	0.1	0.1	0
9-2, 103	160.53	0.1	0.0	0
9-4, 80	163.30	2.0	0.1	16
10-2, 62	169.62	0.1	0.1	0
11-2, 44	178.94	0.5	0.0	4
11-4, 17	181.67	1.1	0.0	9
12-2, 51	188.51	3.5	0.1	29
13-2, 35	197.85	0.4	0.1	3
14-2, 8	207.08	0.0	0.0	0
14-4, 8	210.08	0.0	0.0	0

TABLE 2 - Continued

Sample (Interval in cm)	Sub-Bottom Depth (m)	Total Carbon (%)	Organic Carbon (%)	CaCO ₃ (%)
444A-15-2, 91	217.41	0.1	0.1	0
16-2, 108	227.08	0.0	0.0	0
17-1, 21	230.21	0.1	0.1	0
21-2, 90	255.40	0.0	0.1	0
22-2, 25	264.25	0.5	0.1	3
23-1, 31	272.31	2.6	0.1	21
445-1-1, 55	0.55	4.7	0.3	37
1-3, 109	4.09	7.8	0.1	64
2-1, 63	9.13	4.8	0.2	38
2-3, 132	12.82	7.2	0.1	59
3-1, 78	16.78	5.1	0.1	42
3-3, 84	21.84	6.4	0.1	52
3-5, 49	24.49	3.2	0.1	26
4-1, 23	27.73	4.1	0.1	33
4-3, 71	31.21	6.4	0.1	53
4-5, 59	34.09	8.2	1.0	60
5-1, 5	37.05	6.8	0.1	56
5-3, 5	40.05	8.2	0.7	63
6-1, 28	46.78	8.4	0.9	63
6-3, 28	49.78	8.4	0.1	70
6-5, 28	52.78	7.2	0.1	59
7-5, 64	62.64	7.8	0.1	64
8-1, 95	66.45	8.0	0.1	66
8-3, 95	69.45	8.1	0.1	67
8-5, 95	72.45	7.9	0.1	65
10-1, 61	65.11	9.2	0.1	76
10-3, 61	88.11	9.1	0.1	76
11-2, 66	96.16	8.6	0.1	71
11-4, 66	99.16	8.1	0.1	67
12-1, 58	104.08	8.4	0.1	69
12-3, 58	107.08	7.9	0.1	65
13-1, 52	113.52	9.2	0.1	76
13-3, 52	116.52	9.0	0.1	74
14-1, 82	123.32	9.7	0.1	81
15-1, 67	132.67	8.1	0.1	67
16-1, 80	142.30	10.1	0.0	84
16-3, 80	145.30	11.0	0.1	91
17-1, 74	151.74	10.1	0.1	83
18-1, 40	160.90	9.7	0.1	80
18-3, 40	163.90	7.3	0.1	61
18-5, 40	166.90	9.3	0.0	77
19-1, 105	171.05	10.2	0.0	85
19-3, 105	174.05	10.3	0.0	86
20-1, 29	179.79	9.5	0.0	79
20-3, 29	182.79	9.5	0.0	78
21-1, 64	189.64	9.1	0.0	75
22-1, 43	198.93	10.5	0.5	83
23-1, 33	208.33	4.2	0.1	34
23-3, 33	211.33	8.9	0.1	74
24-1, 42	217.92	9.4	0.1	78
24-3, 42	220.92	9.1	0.0	75
24-5, 42	223.92	6.8	0.1	56
25-1, 41	227.41	5.1	0.1	42
25-3, 41	230.41	8.9	0.1	74
25-5, 41	233.41	7.3	0.1	60
26-1, 44	236.94	3.7	0.1	30
26-3, 44	239.94	9.5	0.1	79
26-6, 44	244.44	9.3	0.0	77
27-1, 124	247.24	6.8	0.1	56
27-3, 124	250.24	4.9	0.1	40
28-1, 120	256.70	5.5	0.1	45
29-2, 47	266.97	7.0	0.1	57
30-1, 130	275.80	6.7	0.1	56
30-3, 130	278.80	9.2	0.0	76
31-1, 66	284.66	6.9	0.0	57

TABLE 2 - Continued

Sample (Interval in cm)	Sub-Bottom Depth (m)	Total Carbon (%)	Organic Carbon (%)	CaCO ₃ (%)
445-31-3, 66	287.66	8.5	0.1	70
31-5, 66	290.66	6.1	0.2	49
32-2, 76	295.76	1.2	0.2	8
33-1, 89	303.89	7.2	0.0	59
33-3, 89	306.89	8.4	0.1	70
34-1, 140	313.90	9.0	0.0	75
34-3, 140	316.90	8.7	0.0	72
35-1, 88	322.88	8.8	0.0	73
35-3, 88	325.88	9.0	0.0	75
36-1, 39	331.89	4.4	0.1	36
37-1, 90	341.90	7.3	0.0	60
38-1, 77	351.27	7.5	0.0	62
39-1, 82	360.82	10.1	0.1	84
40-2, 63	371.63	9.6	0.1	80
40-3, 79	373.29	9.7	0.0	81
41-1, 44	379.44	9.4	0.0	78
41-3, 44	382.44	8.8	0.0	73
41-5, 44	385.44	9.0	0.0	74
42-1, 23	388.73	10.5	0.1	87
42-3, 30	391.80	10.1	0.0	84
42-5, 38	394.88	5.1	0.0	42
43-1, 85	398.85	9.4	0.0	78
43-3, 85	401.85	7.2	0.0	59
44-1, 121	408.71	10.6	0.0	88
44-3, 121	411.71	11.1	0.0	92
45-1, 124	418.24	10.9	0.0	91
45-3, 124	421.24	11.0	0.0	92
45-5, 39	423.39	10.7	0.0	89
46-2, 98	428.98	10.9	0.0	90
47-2, 44	437.94	10.7	0.0	89
48-1, 114	446.64	10.5	0.0	87
49-1, 110	456.10	10.7	0.0	89
50-1, 36	464.86	10.1	0.0	84
51-1, 33	474.33	9.6	0.0	79
52-1, 22	483.72	9.1	0.0	75
53-1, 70	493.70	9.7	0.0	81
54-1, 61	503.11	7.8	0.0	65
55-1, 74	512.74	9.6	0.0	80
56-1, 66	522.16	8.5	0.0	70
57-1, 93	531.93	9.2	0.1	76
58-2, 55	542.55	10.5	0.0	87
59-2, 17	551.67	7.4	0.0	61
60-2, 67	561.67	7.5	0.0	62
61-2, 99	571.49	5.8	0.0	48
62-2, 61	580.61	3.0	0.0	25
64-2, 137	600.37	2.6	0.0	22
65-1, 50	607.50	2.7	0.1	22
66-1, 60	617.10	5.0	0.1	41
67-1, 70	626.70	8.0	0.1	66
68-1, 17	635.67	5.6	0.0	46
69-1, 77	645.77	2.2	0.0	18
70-1, 62	655.12	2.8	0.1	23
71-1, 124	665.24	3.5	0.1	28
72-1, 21	673.71	3.9	0.1	32
73-2, 94	685.44	1.8	0.1	14
74-2, 89	694.89	4.3	0.1	35
75-2, 90	704.40	2.4	0.1	19
76-2, 74	713.74	2.8	0.1	23
77-2, 23	722.73	3.7	0.1	30
78-2, 18	732.18	3.9	0.1	32
79-3, 46	743.46	1.7	0.1	13
80-2, 59	751.59	2.5	0.1	20
81-2, 41	760.91	1.7	0.1	13
82-1, 20	768.70	1.1	0.1	8
83-1, 104	779.04	1.1	0.2	8
84-1, 120	788.70	0.8	0.1	6

TABLE 2 – Continued

Sample (Interval in cm)	Sub-Bottom Depth (m)	Total Carbon (%)	Organic Carbon (%)	CaCO ₃ (%)
445-85-2, 64	799.14	0.2	0.0	1
86-1, 66	807.16	1.4	0.2	10
87-1, 70	816.70	1.3	0.1	10
88-1, 94	826.44	0.4	0.1	3
89-3, 57	838.57	1.2	0.1	9
90-2, 108	847.08	1.0	0.1	8
91-2, 56	856.06	1.9	0.1	15
92-2, 45	865.45	0.3	0.0	3
93-2, 140	875.90	0.4	0.0	3
94-2, 102	885.02	0.4	0.0	3
446 ₂ 1-1, 96	0.96	0.2	0.2	0
3-1, 59	11.59	0.1	0.1	0
3-3, 59	14.59	0.1	0.1	0
3-5, 59	17.59	0.1	0.1	0
5-3, 87	33.87	0.1	0.1	0
5-5, 87	36.87	0.1	0.1	0
6-3, 95	43.45	0.1	0.1	0
7-1, 88	49.88	0.1	0.1	0
7-5, 88	55.88	0.1	0.1	0
8-1, 31	58.81	0.1	0.1	0
8-4, 129	64.29	0.1	0.1	0
9-1, 72	68.72	0.1	0.1	0
9-3, 72	71.72	0.1	0.1	0
9-5, 72	74.72	0.1	0.1	0
10-1, 136	78.86	0.1	0.1	0
10-3, 46	80.96	0.0	0.0	0

TABLE 2 – Continued

Sample (Interval in cm)	Sub-Bottom Depth (m)	Total Carbon (%)	Organic Carbon (%)	Carbon (%)
10-5, 92	84.42	0.1	0.1	0
11-1, 29	87.29	0.1	0.1	0
11-3, 29	90.29	0.1	0.1	0
12-1, 32	96.82	0.1	0.1	0
12-3, 32	99.82	0.0	0.1	0
13-1, 98	106.98	0.0	0.0	0
13-3, 99	109.99	0.0	0.0	0
14-1, 101	116.51	0.0	0.0	0
14-3, 101	119.51	0.1	0.0	0
15-1, 127	126.27	0.1	0.1	0
15-3, 127	129.27	0.0	0.0	0
16-1, 140	135.90	0.1	0.1	0
16-3, 140	138.90	0.0	0.0	0
18-1, 126	154.76	0.0	0.0	0
20-1, 6	172.56	4.1	0.1	34
21-1, 136	183.36	0.5	0.0	4
23-1, 77	201.77	0.1	0.0	0
24-1, 52	211.02	0.9	0.0	7
24-3, 52	214.02	0.2	0.1	1
38-3, 128	347.78	0.2	0.1	1
39-1, 31	353.31	2.5	0.1	20
39-3, 31	356.31	1.9	0.0	16
446A-12-3, 85	470.85	0.1	0.0	1
13-3, 64	480.14	0.3	0.1	2
25-4, 14	595.14	5.8	2.9	24
28-1, 32	619.32	0.6	0.0	4