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4. Data Report: Grain-Size Analysis of Pleistocene Cores from ODP Sites 1071, 1072, and 1073, New Jersey Margin[1]

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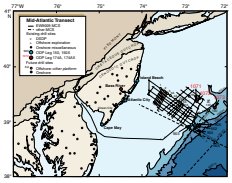
ABSTRACT

We drilled three sites (Sites 1071, 1072, and 1073) on the New Jersey shelf and slope at water depths between 88 and 664 m. Grain-size analyses from shelf sites (Sites 1071 and 1072) define five types of sediment: well-sorted fine sand, silty sand or sandy silt, clayey silt, poorly sorted sandy mud, and poorly sorted lag sediments. At slope Site 1073, a grain-size minimum of 3–6 µm is found at 300 meters below seafloor. These sediments are well sorted and lack sand- and clay-sized grains. Horizons of coarse-grained sediments are present in Unit I at Site 1073.

INTRODUCTION

During Leg 174A of the Ocean Drilling Program (ODP), we drilled two sites (Sites 1071 and 1072) on the continental shelf in water depths between 88 and 100 m and one site (Site 1073) on the slope at a water depth of 663.6 m (Austin, Christie-Blick, Malone, et al., 1998). The sites are located ~130 km east of Atlantic City, New Jersey (Fig. F1). We analyzed the grain size of the sediments from these three sites with a laser-diffraction size analyzer. The capabilities of laser-diffraction size analysis have improved greatly in recent years. Its advantages include speed, precision, and the capability to analyze undisturbed samples (Agrawal et al., 1991). Some analyzers have poor resolution with very fine grained sediments (<0.4 µm), but the Coulter LS230 used for these analyses has

F1. Location of Sites 1071, 1072, and 1073, p. 6.



[1]Hoyanagi, K., and Omura, A., 2001. Data report: Grain-size analysis of Pleistocene cores from ODP Sites 1071, 1072, and 1073, New Jersey Margin. *In* Christie-Blick, N., Austin, J.A., Jr., and Malone, M.J. (Eds.), *Proc. ODP, Sci. Results,* 174A, 1–18 [Online]. Available from World Wide Web: <http://www-odp.tamu.edu/publications/174A_SR/VOLUME/CHAPTERS/SR174A04.PDF>. [Cited YYYY-MM-DD]
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been improved with 133 detectors and a combination of Fraunhofer theory, Mie scattering theory, and polarization intensity differential scattering (PIDS) (Bott and Hart, 1991).

SAMPLE LOCATIONS

Site 1071

Hole 1071A was cored to 51.9 meters below seafloor (mbsf) with 55.6% recovery. Sampling positions for grain-size analysis are at intervals of ~1.5 m from 0 to 17 mbsf and at 26.1 and 49.45 mbsf (Table T1).

Hole 1071B was washed from 0 to 39.8 mbsf and cored from 39.8 to 77.4 mbsf, recovering 11.0 m (29.3%). Samples were taken at 40.29 and 49.46 mbsf and at intervals of 1–3 m from 53 to 67 mbsf (Table T2).

Hole 1071C was cored from 58.4 to 257.4 mbsf with 33.9% recovery. Only 10 samples were taken above 145 mbsf because of poor core recovery. Samples were taken at intervals of 2–7 m from 145 to 175 mbsf. Only one sample was taken between 175 and 210 mbsf. Five samples were taken at intervals of 1 m from 210 to 215 mbsf, and eight samples were taken from 229 to 257 mbsf (Table T3).

Site 1072

Hole 1072A was cored from 0 to 306.8 mbsf with 49.50% recovery. Above 254.61 mbsf, 85 samples were taken for grain-size analysis. Samples were taken at intervals of 1.5–15 m above 70 mbsf, but none were taken from 71 to 89 m because of poor core recovery. Samples were taken at intervals of 3–5 m between 89 and 254.61 mbsf (Table T4).

Site 1073

Hole 1073A was cored from 0 to 663.6 mbsf with 99.91% recovery. Samples were taken at intervals of ~3 m. However, the samples below 595 mbsf were difficult to degrade and were therefore not analyzed. A total of 191 samples from this hole was analyzed (Table T5).

METHOD

We used a laser-diffraction size analyzer (Coulter LS230) at the Technical Research Center of Japan National Oil Corporation. The size range detected by the Coulter LS230 is 0.04–2000 µm. Subsamples of ~1 g were taken from each 5-cm³ sample. Each sample was degraded with 10% H_2O_2 solution. Some of the samples from Sites 1071 and 1072 and most of those from Site 1073 were difficult to degrade into particles. We left them in the solution for up to 2 days and used an ultrasonic vibration for 15–60 s before analyzing. The degraded samples were dispersed using 60- to 90-s ultrasonic vibration in the analyzer water bath.

RESULTS

Site 1071

Grain-size frequency distribution curves from Hole 1071A (e.g., at 1.29, 2.8, and 4.3 mbsf) indicate that the sediments are well-sorted fine sand (Fig. F2). The sediment from 6.0 mbsf is well-sorted very fine sand. These sediments contain very little mud <63 µm in diameter. In contrast, the samples from 9.8, 12.88, and 13.60 mbsf have broad size distributions and bimodal or trimodal peaks representing fine sand, silt, and clay. The sediments at 7.01 and 15.3 mbsf have broad size distributions but unimodal peaks in the size range of medium silt. The size distributions at 16.65 and 26.10 mbsf are similar to those from the upper part of the hole. The sediments at 49.46 mbsf contain mainly clay and silt and show a single peak at 5 µm.

Some representative size-frequency distributions from Hole 1071B are shown in Figure F3. Sediments at 53.36 mbsf are mainly coarse silt with some clay-size grains, whereas those at 60.68 mbsf have broad size distributions including silt, very fine sand, and fine sand. Polymodal size distributions, for example at 65.30 mbsf, include peaks representative of silt, fine sand, and coarse sand. Well-sorted fine sand at 67.91 mbsf is similar to sediments from the upper part of this site (Hole 1071A) (Fig. F2).

The most common size distributions in Hole 1071C have polymodal peaks representing silt and coarse silt to very fine sand (e.g., 152.07 and 172.37 mbsf in Fig. F4). Lag-type deposits with polymodal peaks in coarse silt, medium sand, and coarse to very coarse sand ranges are also present (Fig. F4). Site 1071 sediments can be classified into the following five types: well-sorted fine sand, silty sand or sandy silt, clayey silt, poorly sorted sandy mud, and poorly sorted lag sediments (Figs. F2, F3). We analyzed and examined the samples in lithostratigraphic Subunits IA, IB, IC, and IIA (Shipboard Scientific Party, 1998a) (Fig. F5).

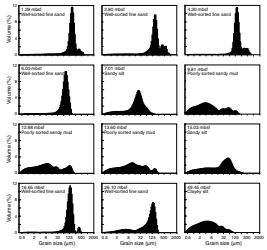
Site 1072

Grain-size distributions at Site 1072 are similar to those at Site 1071, although well-sorted fine sands are lacking at Site 1071. Polymodal sediments containing fine sand and fine silt are dominant. Unimodal sediments, mainly silt, are also common. Poorly sorted sediments containing medium to coarse sand, silt, and clay are present at subunit boundaries (Table T4; Fig. F5).

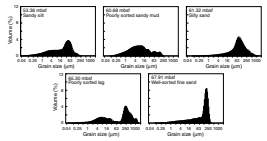
Site 1073

Sediments are mainly sandy mud, accompanied by muddy sand and interbedded sand and mud (Shipboard Scientific Party, 1998c). Size distributions of most samples show primarily frequency peaks at 8–10 µm and secondary peaks of fine sand size at 125–250 µm (Fig. F6A; Table T5). Fine-grained fractions of most samples include clay-sized sediments. The average grain sizes (arithmetic means) of most samples range from several to 30 µm, but some samples range from 30 to 200 µm (Fig. F6B). A grain-size minimum of 3–6 µm is found at ~300 mbsf (Figs. F6C, F7). The size frequency curves indicate that these sediments are well sorted and lack sand- and clay-size grains (Fig. F6C). Grain-size analyses were made on samples at 3-m intervals from Subunits IA, IB, IC, ID, IE, IIA, and IIB (Table T5; Fig. F7). The average grain size exceeds

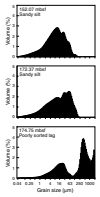
F2. Grain-size frequency histograms, Hole 1071A, p. 7.



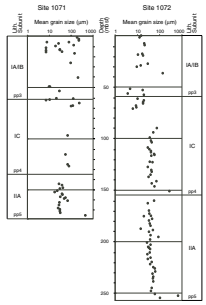
F3. Grain-size frequency histograms, Hole 1071B, p. 8.



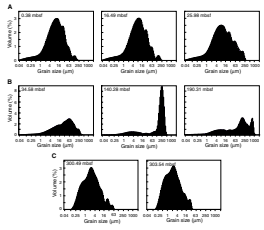
F4. Grain-size frequency histograms, Hole 1071C, p. 9.



F5. Average grain-size variations, Sites 1071 and 1072, p. 10.

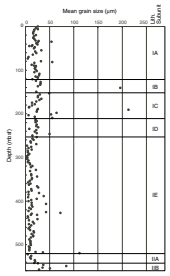


F6. Grain-size frequency, Site 1073, p. 11.



30 µm at several horizons in Unit I (Fig. F7). The sediments of Subunit IIA consist of sandy mud similar to that of Unit I and fine upward (Fig. F7). Sediments of Subunit IIB are generally coarser than those of Unit I and Subunit IIA and are mainly muddy sand with sandy mud. The middle part of Subunit IIB is much coarser than the upper and lower parts.

F7. Average grain-size variations, Site 1073, p. 12.



CONCLUSIONS

The sediments at the two shelf sites (Sites 1071 and 1073) are divided into the five types: well-sorted fine sand, silty sand or sandy silt, clayey silt, poorly sorted sandy mud, and poorly sorted lag sediments.

At the slope site (Site 1073), the finest grained sediments (average = 3–6 µm) are found at 300 mbsf. They are well sorted and lack sand- and clay-sized grains. Thin coarse-grained horizons are present in Unit I at Site 1073.

ACKNOWLEDGMENTS

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Shipboard Scientific Party, 1998a. Site 1071. *In* Austin, J.A., Jr., Christie-Blick, N., Malone, M.J., et al., *Proc. ODP, Init. Repts.,* 174A: College Station, TX (Ocean Drilling Program), 37–97.

————, 1998b. Site 1072. *In* Austin, J.A., Jr., Christie-Blick, N., Malone, M.J., et al., *Proc. ODP, Init. Repts.,* 174A: College Station, TX (Ocean Drilling Program), 99–152.

————, 1998c. Site 1073. *In* Austin, J.A., Jr., Christie-Blick, N., Malone, M.J., et al., *Proc. ODP, Init. Repts.,* 174A: College Station, TX (Ocean Drilling Program), 153–191.

Figure F1. Location of Sites 1071 and 1072 on the outer shelf and Site 1073 on the uppermost slope (Christie-Blick et al., 1998).

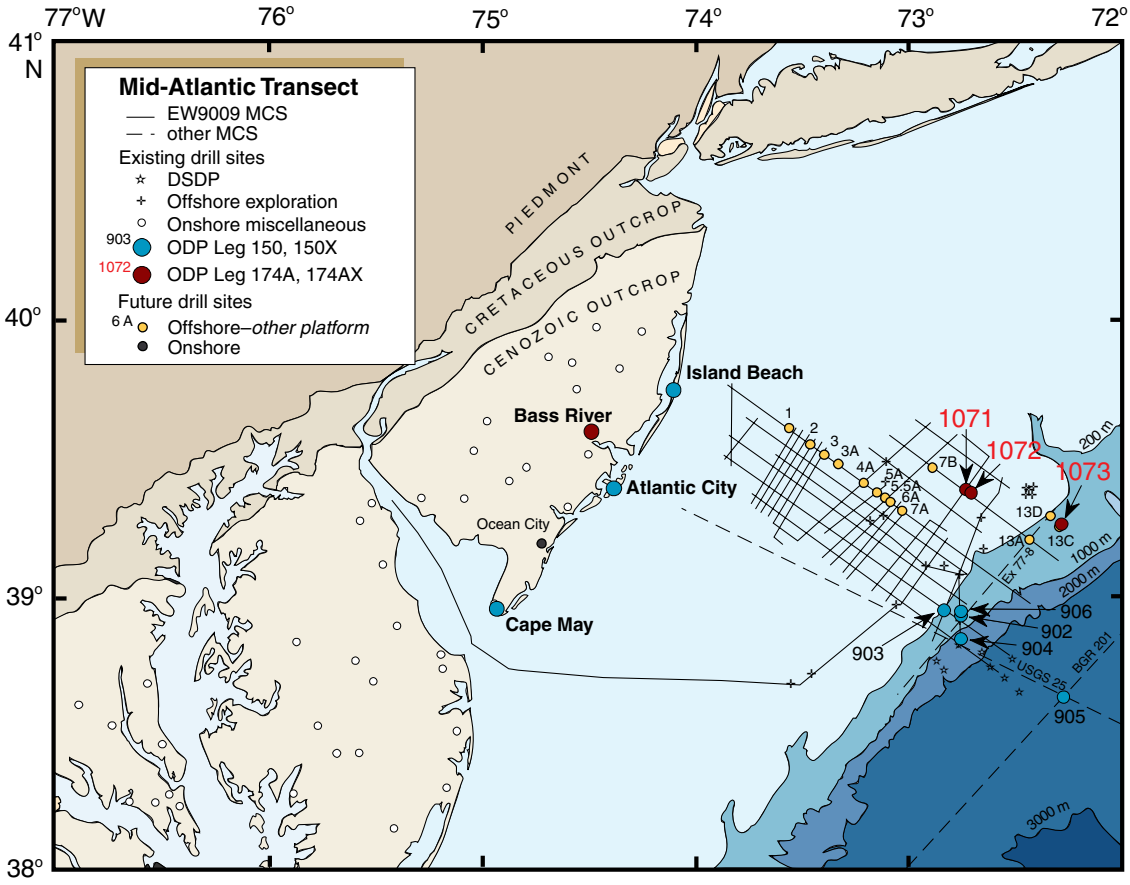

Figure F2. Representative grain-size frequency histograms from Hole 1071A.

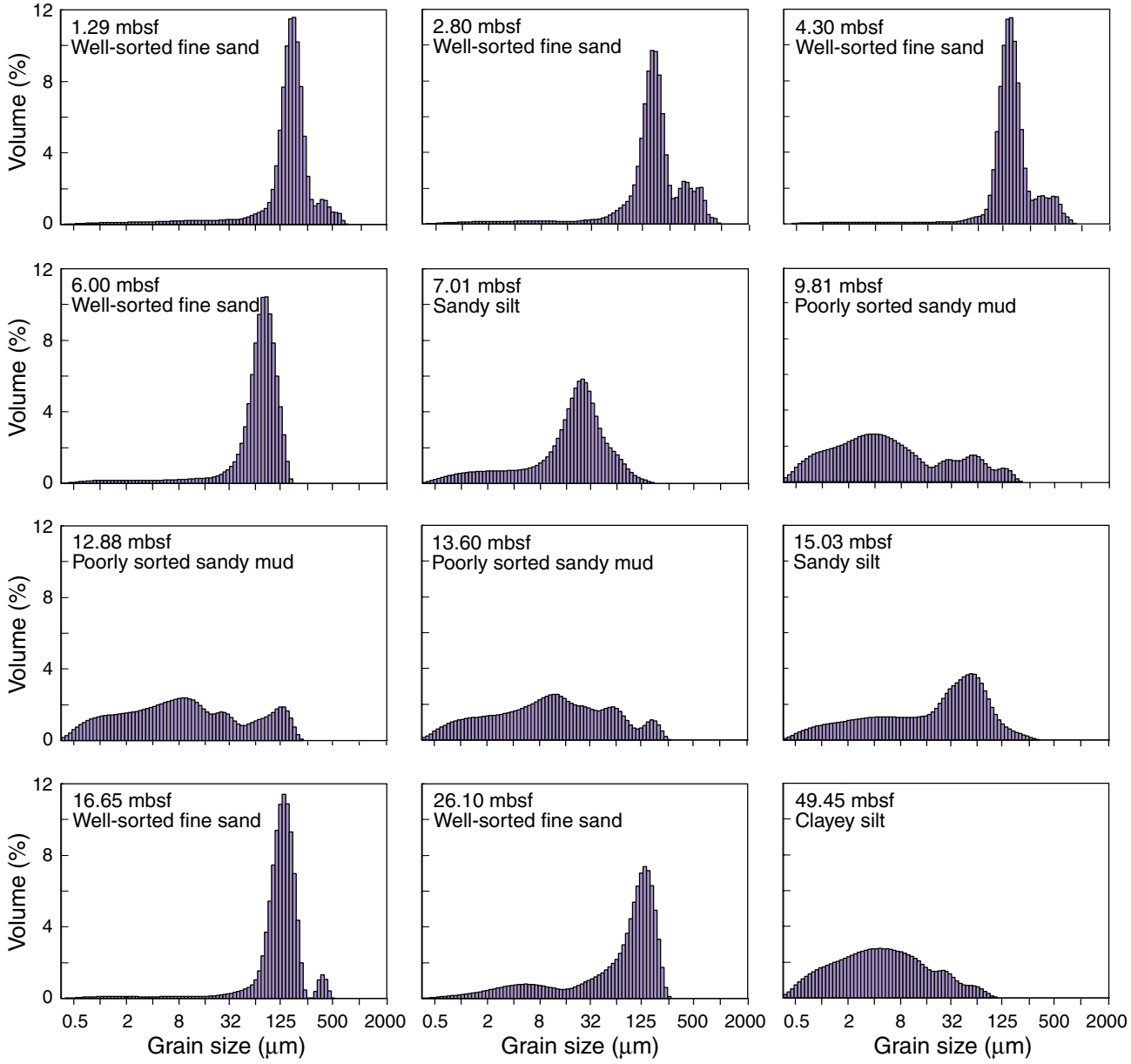

Figure F3. Representative grain-size frequency histograms from Hole 1071B.

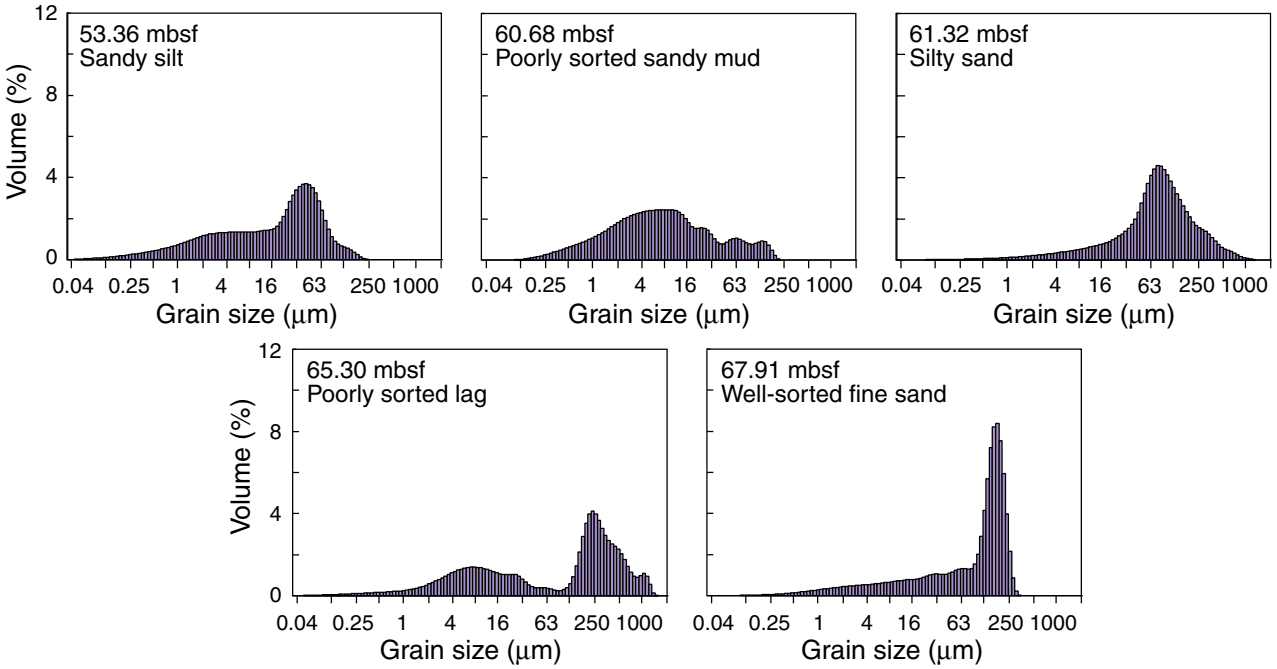

Figure F4. Representative grain-size frequency histograms from Hole 1071C.

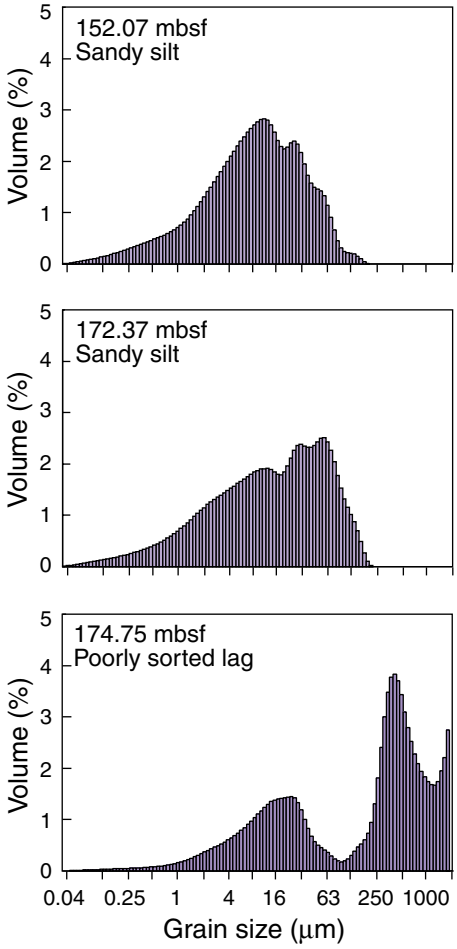

Figure F5. Average (arithmetic mean) grain-size variations at Sites 1071 and 1072. Seismic surfaces pp3, pp4, and pp5 may correlate with the transition between lithostratigraphic subunits (Shipboard Scientific Party, 1998a, 1998b).

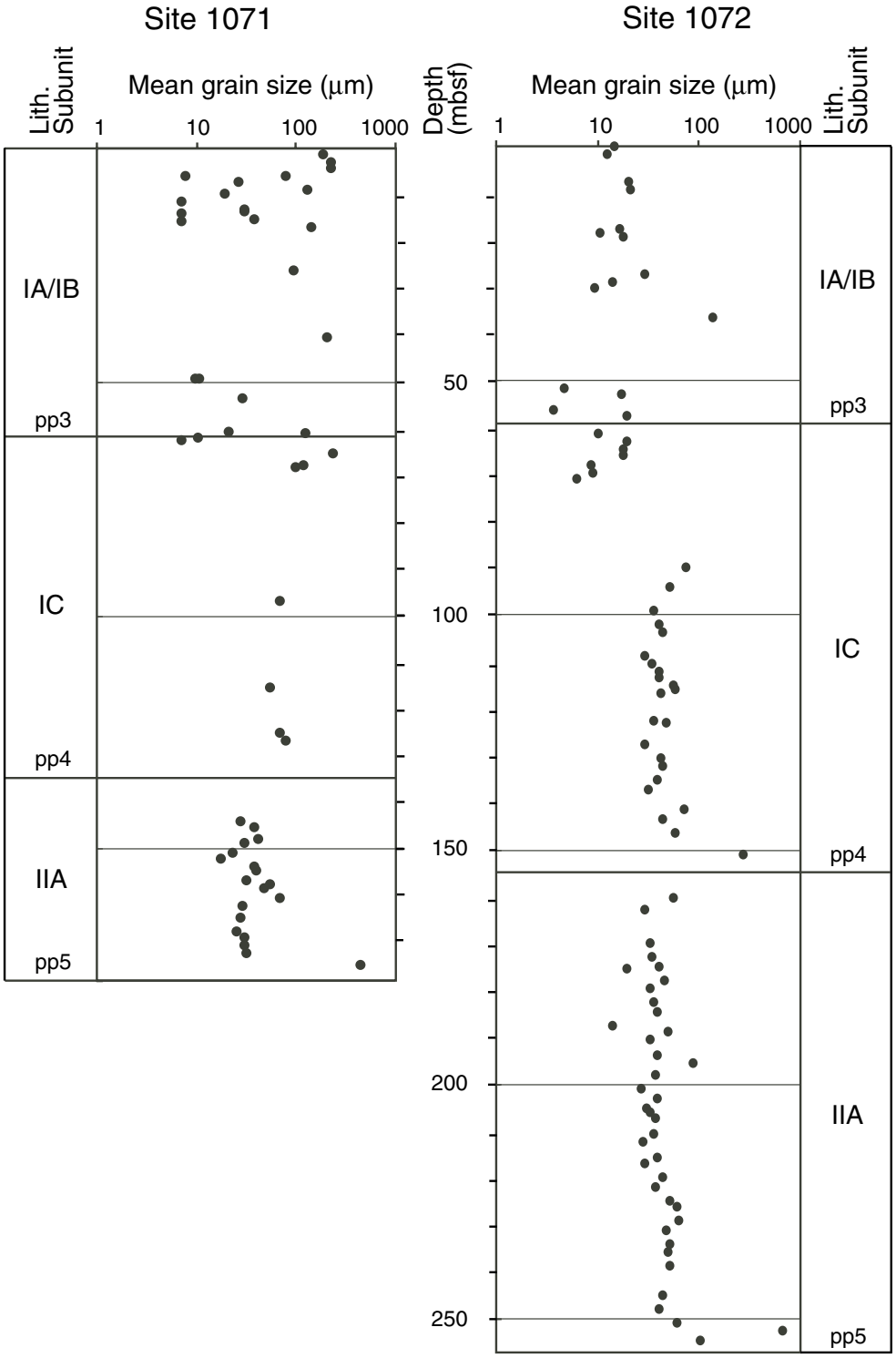

Figure F6. Representative grain-size frequency from Site 1073. **A.** Most typical distributions. **B.** Coarse-grained horizons. **C.** Finest sediments at ~300 mbsf.

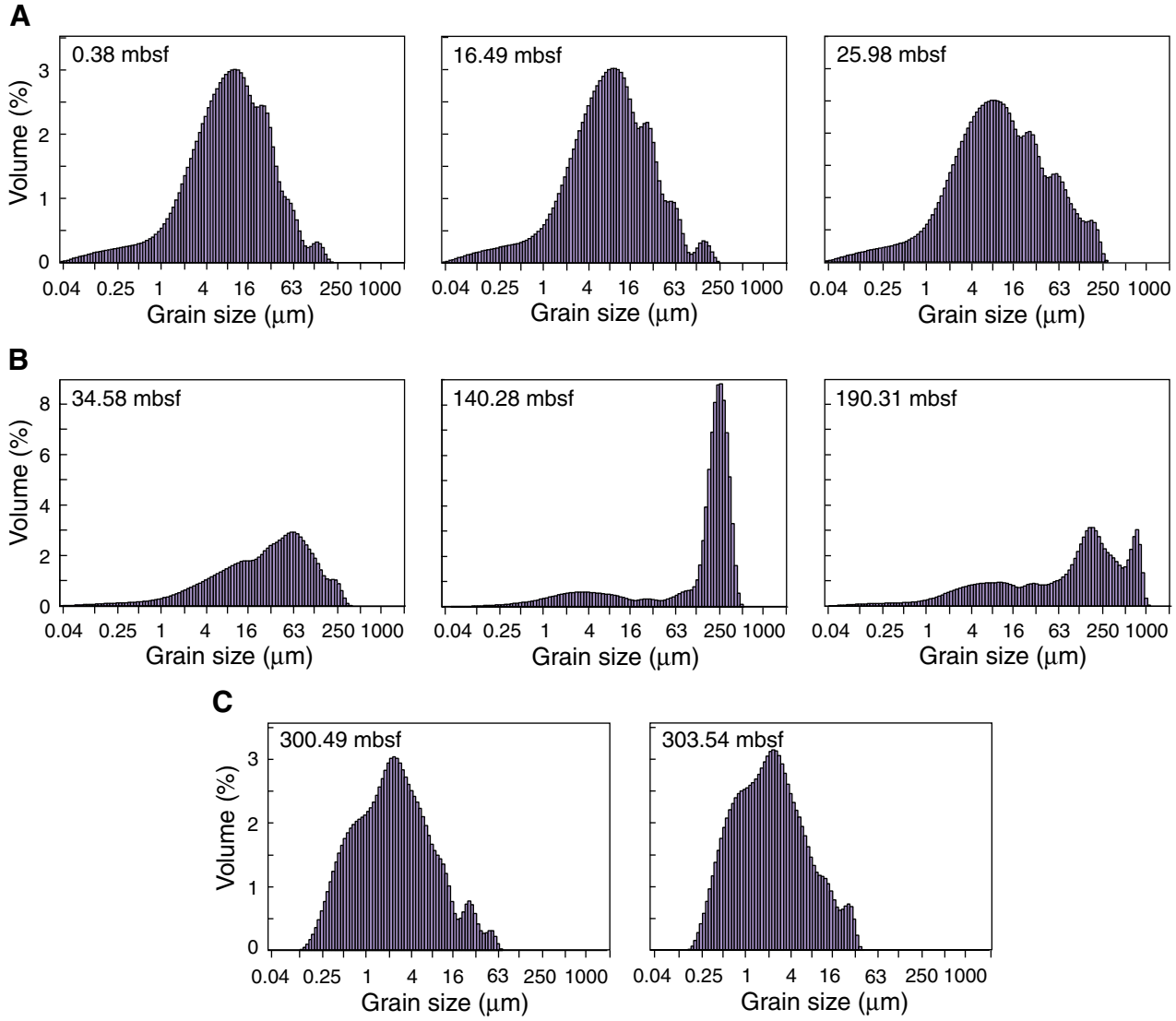

Figure F7. Average (arithmetic mean) grain-size variations at Site 1073.

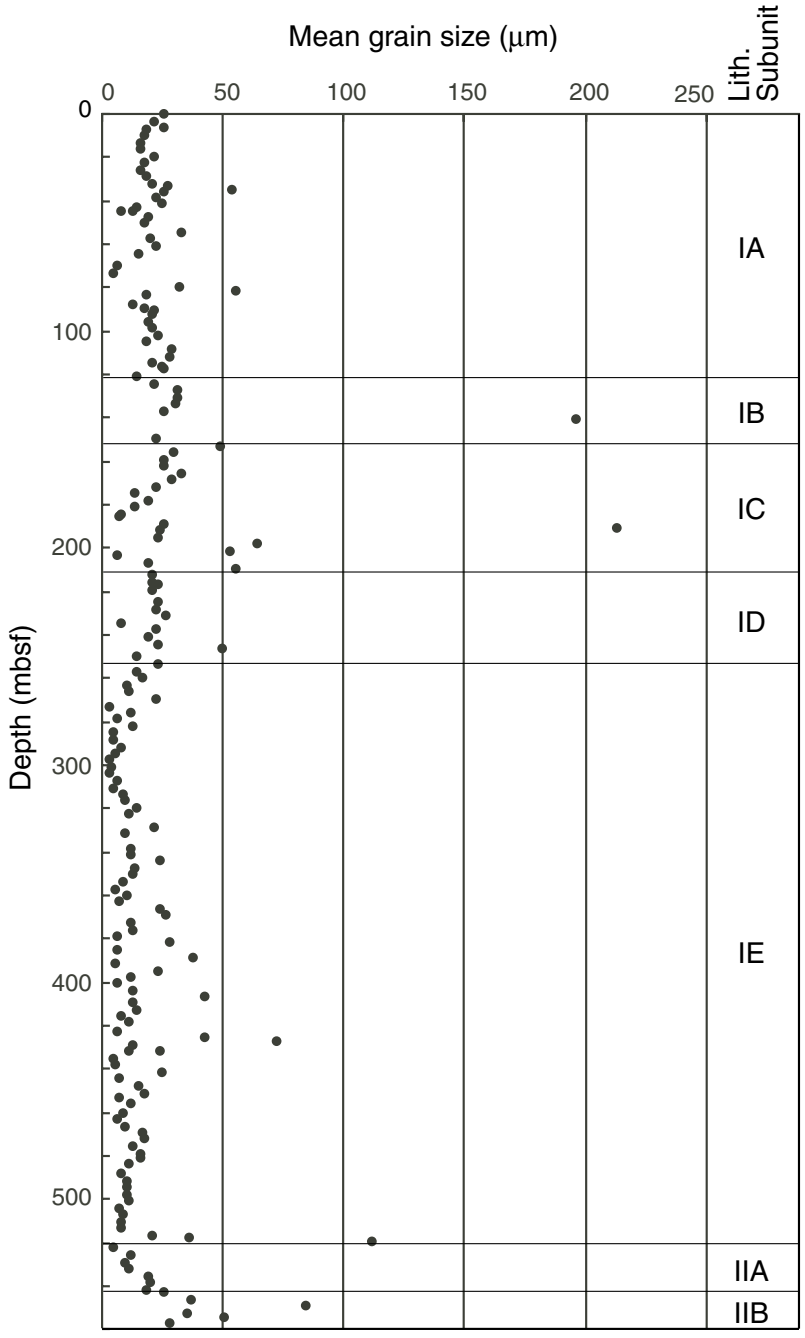

Table T1. Grain-size analysis data, Hole 1071A.

Core, section	Depth (mbsf)	Grain size (μm)			
		Mean	Median	Mode	δ
174A-1071A-					
1H-1	1.29	183.0	172.4	185.3	104.0
1H-2	2.80	219.6	177.3	168.8	159.0
1H-3	4.30	218.6	182.7	185.3	140.0
2H-1	5.69	7.7	3.0	2.8	13.4
2H-1	6.00	77.1	78.3	87.9	33.4
2H-2	7.01	26.5	22.4	26.1	22.5
3H-1	8.79	129.6	17.1	23.8	247.0
3H-2	9.81	18.9	5.0	4.0	31.7
3H-3	11.47	7.0	3.5	3.4	10.4
4H-1	12.88	30.2	9.1	9.4	45.3
4H-2	13.60	30.1	11.7	12.4	44.7
4H-2	14.07	6.9	4.2	6.5	7.3
4H-3	15.30	38.1	27.4	55.1	41.6
4H-3	15.57	6.9	4.0	4.9	8.6
5H-1	16.65	140.0	133.5	140.1	72.1
6H-1	26.10	96.1	101.5	140.1	64.0
10X-1	49.45	10.7	5.0	4.9	14.8

Note: Mean = arithmetic mean.

Table T2. Grain-size analysis data, Hole 1071B.

Core, section	Depth (mbsf)	Grain size (μm)			
		Mean	Median	Mode	δ
174A-1071B-					
2X-1	40.26	205.6	170.2	223.4	259.0
3X-1	49.46	9.5	4.8	4.4	11.8
4X-1	53.36	29.5	20.6	41.7	32.8
5X-2	60.68	21.4	6.9	7.8	36.4
5X-2	61.32	123.7	82.0	80.1	142.0
5X-5	65.30	233.1	178.0	245.2	278.0
6X-CC	67.91	119.0	134.4	185.3	83.5

Note: Mean = arithmetic mean.

Table T3. Grain-size analysis data, Hole 1071C.

Core, section	Depth (mbsf)	Grain size (μm)			
		Mean	Median	Mode	δ
174A-1071C-					
2X-1	59.71	24.1	6.0	5.4	43.0
2X-2	60.88	125.5	60.7	60.5	153.0
2X-3	61.56	11.9	4.2	3.7	25.0
2X-3	62.00	7.2	3.3	2.8	10.8
3X-1	67.98	131.9	34.3	185.3	208.0
3X-CC	68.34	99.3	82.9	105.9	92.6
6X-1	96.73	69.2	23.7	168.8	93.3
8X-1	115.19	54.7	25.7	73.0	77.7
9X-1	125.09	69.0	61.7	87.9	59.0
9X-2	126.82	79.9	53.8	96.5	94.5
11X-1	144.07	28.2	13.6	60.5	34.5
11X--2	145.11	38.1	15.5	14.9	56.7
11X-3	147.73	40.9	10.6	6.5	63.6
12X-2	150.54	23.4	11.2	11.3	30.0
12X-3	152.07	17.3	9.1	11.3	22.4
13X-1	153.49	37.3	24.4	60.5	38.3
13X-2	154.55	40.3	23.5	73.0	41.2
13X-3	156.49	32.1	17.4	60.5	37.2
14X-1	158.46	46.9	35.7	73.0	43.6
13X-CC	157.31	54.9	41.0	87.9	54.4
14X-2	160.25	68.1	45.9	105.9	78.2
14X-3	162.13	29.2	11.8	28.7	39.3
15X-2	164.49	28.1	10.8	28.7	43.6
15X-4	167.49	24.8	12.2	28.7	31.2
15X-5	168.99	29.8	15.1	60.5	35.4
15X-6	170.48	30.4	15.1	60.5	36.2
16X-1	172.37	31.5	13.2	28.7	44.0
16X-2	174.75	448.9	324.9	429.2	512.0
19X-1	200.56	170.1	145.6	203.5	214.0
20X-2	211.59	41.1	8.0	127.6	56.6
20X-1	210.10	87.9	30.7	153.8	132.0
20X-3	212.55	67.9	24.6	140.1	90.8
20X-3	213.61	155.2	67.7	153.8	245.0
20X-4	214.50	220.6	104.6	390.9	269.0
22X-1	229.02	197.6	204.0	245.2	165.0
22X-2	230.14	137.4	116.8	245.2	142.0
23X-1	238.29	95.3	24.6	223.4	113.0
24X-1	247.59	76.3	33.9	153.8	81.0
25X-1	252.07	89.0	48.2	153.8	105.0
25X-2	253.70	20.1	6.4	11.3	31.8
25X-3	255.19	30.8	9.1	9.4	55.2
25X-4	256.51	242.9	31.5	824.5	332.0

Note: Mean = arithmetic mean.

Table T4. Grain-size analysis data, Hole 1072A.

Core, section	Depth (mbsf)	Grain size (μm)			
		Mean	Median	Mode	δ
174A-1072A-					
1R-1	0.71	10.3	3.5	5.4	21.8
1R-1	0.11	14.6	4.9	4.9	26.7
1R-2	1.63	12.6	5.3	5.9	19.5
2R-1	7.63	20.2	6.0	5.4	37.6
2R-2	9.08	21.2	9.6	50.2	25.0
3R-1	17.68	16.7	4.8	4.4	35.1
3R-2	18.67	10.6	4.4	4.9	18.1
3R-2	19.13	17.7	5.9	5.4	30.1
4R-1	27.29	28.6	5.3	3.7	52.4
4R-2	28.79	14.1	3.7	3.1	30.6
4R-3	30.30	9.4	4.1	4.0	14.7
5R-1	36.67	135.7	21.5	269.2	180.0
7R-1	51.46	4.7	2.6	2.8	5.8
7R-2	52.92	17.4	3.6	3.4	43.5
8R-1	56.12	3.7	2.6	3.1	3.7
8R-1	57.33	19.5	4.7	4.4	44.3
9R-1	61.45	10.3	4.4	7.8	20.2
9R-2	63.14	19.1	6.6	8.5	30.5
9R-3	64.63	18.0	6.7	9.4	30.0
10R-1	65.88	18.3	7.0	10.3	32.2
10R-2	67.90	8.7	3.9	3.4	14.0
10R-3	69.51	9.1	4.3	4.9	12.5
11R-1	70.87	6.2	3.6	8.5	6.8
15R-1	89.88	74.7	39.1	140.1	80.1
16R-1	94.17	51.0	12.2	140.1	72.9
17R-1	99.18	35.1	9.2	7.1	58.0
17R-2	101.80	40.9	9.0	5.4	64.8
18R-1	103.58	44.3	11.1	105.9	67.2
19R-1	108.59	29.4	10.1	8.5	48.1
19R-2	110.49	33.8	16.0	12.4	41.5
19R-3	111.99	39.9	15.8	12.4	53.6
20R-1	113.09	40.0	11.1	8.5	66.2
20R-2	114.99	56.2	26.2	127.6	66.8
20R-2	115.81	58.6	18.1	127.6	85.6
20R-3	116.49	41.2	12.4	7.8	59.0
21R-1	122.59	35.8	12.4	8.5	52.2
21R-1	123.04	47.0	13.2	7.8	72.6
22R-1	127.59	28.9	10.0	8.5	47.1
22R-3	130.59	42.6	12.0	8.5	69.7
23R-1	132.09	43.5	13.0	8.5	69.4
23R-3	135.09	39.3	10.2	8.5	71.8
24R-1	137.07	31.1	8.3	7.1	54.0
25R-1	141.48	72.3	12.1	8.5	122.0
25R-2	143.39	43.6	9.9	5.4	68.5
26R-1	146.49	59.2	13.2	6.5	101.0
27R-1	151.05	274.6	136.6	993.5	348.0
29R-1	160.44	56.4	24.4	66.4	80.0
29R-2	162.60	29.5	15.9	31.5	34.7
31R-1	169.99	32.4	15.3	26.4	51.9
31R-3	172.98	34.25	12.1	11.3	59.7
32R-1	174.99	40.2	14.9	10.3	59.3
32R-1	175.34	19.27	9.5	9.4	26.0
32R-3	177.99	45.1	19.9	14.9	61.1
33R-1	179.49	33.1	12.8	9.4	47.9
33R-3	182.45	35.4	15.4	11.3	48.4
34R-1	184.48	39.0	17.6	60.5	51.2
34R-3	187.48	13.8	8.2	10.3	15.1
35R-1	188.78	49.3	17.1	12.4	72.1
35R-2	190.69	32.5	13.8	60.5	41.3
36R-1	193.78	38.8	17.7	60.5	49.6
36R-2	195.69	87.7	88.7	140.1	34.9
37R-1	198.08	37.6	11.4	8.5	57.2
37R-3	201.09	26.8	8.0	8.5	47.8
38R-1	203.09	39.0	18.8	60.5	48.3
38R-2	204.99	29.8	13.8	11.3	37.4
38R-3	206.09	33.0	14.9	12.4	43.8
39R-1	207.48	37.3	13.5	11.3	54.8
39R-3	210.49	35.3	16.1	12.4	49.7
40R-1	212.47	28.3	13.2	12.4	36.3
40R-3	215.50	38.4	15.5	11.3	52.5
41R-1	216.89	28.9	11.4	11.3	42.5
41R-3	219.90	43.3	23.1	66.4	55.3
42R-1	221.88	37.5	19.1	28.7	48.3
42R-3	224.89	50.6	26.8	87.9	60.0
43R-1	226.28	60.8	38.2	105.9	63.8
43R-3	229.29	62.8	34.4	87.9	90.4
44R-1	231.29	47.0	26.9	73.0	52.1
44R-3	234.29	51.9	28.8	87.9	57.4
45R-1	235.68	50.4	26.7	80.1	59.4
45R-3	238.68	50.8	28.7	96.5	56.4
46R-1	244.88	43.9	19.0	15.0	66.1
46R-3	247.88	40.2	15.1	11.3	51.4
46R-5	250.95	60.3	26.4	116.3	87.3
46R-6	252.45	672.9	393.6	712.0	173.9
47R-1	254.61	101.5	7.8	8.5	229.0

Note: Mean = arithmetic mean.

Table T5. Grain-size analysis data, Hole 1073A. (See table note. Continued on next page.)

Core, section	Depth (mbsf)	Grain size (μm)			
		Mean	Median	Mode	δ
174A-1073A-					
1H-1	0.38	26.4	9.6	8.6	42.2
1H-3	3.39	22.8	9.0	9.4	36.2
1H-5	6.39	26.4	8.8	10.3	45.1
2H-1	6.99	19.3	7.8	7.1	31.6
2H-3	9.99	18.8	8.5	7.8	29.5
2H-5	12.99	17.0	7.8	8.5	27.2
3H-1	16.49	16.9	8.9	10.3	23.8
3H-3	19.29	22.3	11.5	11.3	30.9
3H-5	22.09	18.1	9.6	11.3	25.4
4H-1	25.98	16.6	8.0	9.4	26.3
4H-3	28.85	19.4	9.5	10.3	28.7
4H-5	31.79	21.6	11.4	12.4	29.3
4H-6	33.18	27.9	13.0	12.0	38.1
4H-7	34.58	54.1	31.8	60.5	62.7
5H-1	35.47	26.3	11.8	28.7	37.5
5H-3	38.48	22.8	11.2	26.1	31.4
5H-5	41.49	25.9	13.0	26.1	34.9
5H-6	43.04	15.1	6.9	10.3	26.4
5H-7	44.53	13.3	5.4	5.9	24.0
6H-1	44.99	8.7	4.3	4.4	11.5
6H-3	47.28	19.9	6.2	6.5	36.0
6H-5	50.21	18.4	7.2	10.3	31.5
7H-1	54.47	33.9	12.8	11.3	47.8
7H-3	57.49	20.6	8.6	10.3	33.1
7H-5	60.47	23.4	10.8	12.4	32.7
8H-1	63.99	16.2	6.7	7.1	25.3
8H-5	69.97	7.0	3.4	3.1	9.8
9H-1	73.49	7.7	4.1	4.4	10.0
9H-5	79.48	32.4	13.6	26.1	45.9
9H-6	80.98	40.7	15.3	28.7	56.7
10H-1	82.99	19.2	7.8	7.1	30.0
10H-4	87.49	13.7	5.8	6.5	26.8
10H-5	88.99	18.6	7.5	7.1	29.0
10H-6	90.49	22.0	8.0	7.1	34.4
11H-1	92.48	21.4	8.9	9.4	33.6
11H-3	95.49	19.9	8.1	7.8	31.7
11H-5	98.49	21.8	8.4	7.1	33.4
12H-1	101.99	23.8	9.8	10.3	38.0
12H-3	104.99	19.0	8.1	8.5	31.6
12H-5	107.90	29.7	9.8	8.5	48.2
13H-1	111.49	28.5	11.7	12.4	43.5
13H-3	114.49	22.0	9.5	11.3	33.3
13H-4	115.99	25.4	9.6	8.5	38.7
13H-5	117.49	26.3	9.8	11.3	40.6
14H-1	120.98	15.5	5.5	5.4	28.1
14H-3	123.98	22.4	8.0	7.1	35.5
14H-5	126.99	32.3	11.6	11.3	45.9
15H-1	130.45	31.9	14.1	26.1	42.7
15H-3	133.48	30.9	13.4	12.4	42.0
15H-5	136.48	26.8	11.0	11.3	37.8
16H-1	140.28	198.5	201.0	269.2	184.0
17H-1	149.49	23.6	5.7	2.5	39.6
17H-3	152.49	49.6	29.0	60.5	55.6
17H-5	155.49	30.6	11.1	11.3	46.1
18H-1	158.99	26.4	10.1	11.3	40.6
18H-3	161.99	26.3	10.3	11.3	39.2
18H-5	164.99	33.3	14.7	13.6	44.4
19H-1	168.49	30.0	14.8	26.1	40.1
19H-3	171.39	23.1	10.7	12.4	35.5
19H-5	174.39	14.1	6.5	9.4	21.3
20H-1	177.99	19.8	7.0	9.4	34.4
20H-3	180.85	14.0	5.0	5.9	24.8
20H-5	183.79	9.1	4.3	4.9	12.7
21H-1	185.48	8.4	3.6	3.1	11.8
21H-3	188.23	26.8	8.0	7.8	44.7
21H-4	190.31	213.1	128.5	185.3	245.0
21H-5	191.37	24.7	6.8	4.9	39.4
22H-1	194.99	23.9	9.6	28.7	33.6
22H-3	197.92	65.2	13.5	245.2	92.5
22H-5	201.16	53.8	26.2	96.5	62.8
23H-1	203.19	7.2	3.4	3.1	10.2
23H-3	206.19	19.6	5.4	2.8	31.6
23H-5	209.19	55.6	31.4	87.9	62.6
24H-1	212.19	21.6	9.3	10.3	34.0
24H-3	215.15	21.5	8.8	8.5	33.3
25X-1	216.08	24.2	8.3	7.8	42.6
25X-3	219.08	21.5	8.0	8.5	38.4
26X-1	224.78	24.2	8.7	7.8	40.8
26X-3	227.78	23.2	8.3	8.5	41.6
26X-5	230.79	27.0	9.9	10.3	45.0
27X-1	234.28	9.1	4.3	4.4	12.8
27X-3	237.28	23.4	8.6	6.5	33.1
27X-5	240.28	20.4	7.4	7.1	30.9
28X-1	243.88	23.9	8.5	28.7	35.1
28X-2	245.47	50.5	31.2	73.0	55.5
28X-5	249.89	15.0	4.1	2.5	26.1
29X-1	253.39	23.7	6.8	2.8	36.3
29X-3	256.39	15.4	4.4	2.8	26.2
29X-5	259.39	17.7	6.1	11.3	28.0
30X-1	262.87	10.9	4.1	3.1	18.9
30X-3	265.88	12.3	4.2	2.5	19.6
30X-5	268.88	22.9	6.7	2.5	34.8
31X-1	272.38	4.2	1.9	2.1	5.9
31X-3	275.39	13.1	4.2	2.5	21.6
31X-5	278.36	7.3	2.5	2.3	12.4
32X-1	281.79	14.0	5.1	2.8	21.2
32X-3	284.73	5.6	2.5	2.3	9.0
32X-5	287.73	5.7	2.2	2.1	8.1
33X-1	291.09	8.5	3.2	2.5	12.5
33X-3	294.04	6.2	2.5	2.3	8.9
33X-5	297.04	3.8	2.1	2.3	5.2
34X-1	300.49	5.2	2.2	2.3	8.5
34X-3	303.54	3.8	1.9	2.1	5.3
34X-5	306.49	6.9	2.8	2.3	10.4
35X-1	309.85	5.8	2.4	2.3	8.4
35X-3	312.89	9.5	4.1	3.1	13.5
35X-5	315.89	10.2	4.4	3.4	14.2
36X-1	318.78	15.6	4.8	2.8	29.7
36X-3	321.78	11.8	5.0	4.9	20.4
37X-1	328.19	22.2	8.6	8.6	35.6
37X-3	331.19	10.2	5.2	5.4	12.9
38X-1	337.59	13.0	6.5	7.8	19.3
38X-3	340.59	12.5	6.2	7.1	18.9
38X-5	343.59	24.5	10.0	10.3	37.7
39X-1	346.99	14.4	6.6	10.3	23.4
39X-3	349.99	13.2	6.7	10.3	18.7
39X-5	352.99	9.5	4.8	5.9	13.8
40X-1	356.39	6.6	2.8	2.5	10.2
40X-3	359.39	11.5	5.4	8.5	16.6
40X-5	362.39	8.2	4.4	8.5	9.7
41X-1	365.79	25.0	7.9	9.4	42.8
41X-3	368.79	26.9	12.8	28.7	36.0
41X-5	371.79	13.1	6.9	11.3	18.4
42X-1	375.29	13.8	6.9	11.3	19.8
42X-3	378.25	6.9	2.9	2.5	9.5
42X-5	381.25	28.4	11.2	28.7	38.8
43X-1	384.69	7.2	3.2	3.1	11.2
43X-3	387.69	38.3	16.5	60.5	46.9
43X-5	390.69	6.2	2.5	2.5	10.3
44X-1	393.99	24.3	9.9	28.7	34.2
44X-3	396.99	12.9	4.8	5.4	20.1
44X-5	399.99	7.3	3.5	3.1	9.1
45X-1	402.89	13.9	4.8	2.8	20.5
45X-3	405.89	43.2	35.4	66.4	39.1
45X-5	408.89	13.9	5.9	11.3	19.7
46X-1	412.29	14.9	5.1	5.4	23.7
46X-3	414.68	9.0	4.0	3.0	13.1

Table T5 (continued).

Core, section	Depth (mbsf)	Grain size (μm)			
		Mean	Median	Mode	δ
46X-5	417.68	12.0	4.6	2.8	17.6
47X-1	421.88	7.0	3.1	3.1	10.6
47X-3	424.87	42.9	8.3	168.8	62.3
47X-4	426.79	72.7	45.5	140.1	76.8
47X-5	427.88	13.8	6.5	8.5	21.8
47X-7	430.89	24.5	8.1	3.7	34.2
48X-1	431.28	11.8	5.4	5.4	16.8
48X-3	434.27	5.9	3.2	3.7	7.3
48X-5	437.25	6.5	3.5	3.7	8.9
49X-1	440.76	25.3	10.4	28.7	36.2
49X-3	443.78	8.2	3.9	4.8	11.5
49X-5	446.79	15.6	6.7	10.3	22.6
50X-1	450.27	18.2	6.9	11.3	28.5
50X-3	452.51	8.2	3.8	3.1	11.8
50X-5	455.49	12.6	4.1	2.5	21.9
51X-1	459.72	9.9	3.7	3.1	15.0
51X-3	462.65	7.1	2.7	2.3	10.1
51X-5	465.69	10.3	4.3	3.4	14.0
52X-1	468.59	18.0	6.7	6.5	27.7
52X-3	471.59	18.5	6.0	4.9	32.3
52X-5	474.59	13.5	5.9	6.5	25.1
53X-1	477.98	17.1	5.9	5.4	28.4
53X-3	480.29	16.6	6.0	4.9	26.8
53X-5	483.30	12.0	5.4	7.1	20.1
54X-1	487.56	8.7	3.9	3.1	12.0
54X-3	490.58	11.2	5.2	9.4	17.8
54X-5	493.59	10.9	5.2	8.5	17.6
55X-1	496.97	11.1	4.6	3.4	16.1
55X-3	499.99	12.3	4.4	3.1	19.3
55X-5	502.99	8.0	3.5	3.1	11.8
56X-1	506.39	9.3	4.2	4.4	14.8
56X-3	509.34	8.8	4.4	5.4	11.8
56X-5	512.34	8.8	3.5	2.8	15.1
57X-1	515.69	21.8	5.3	4.9	44.8
57X-2	517.19	36.5	7.4	4.9	60.8
57X-3	518.68	111.8	39.3	185.3	143.0
57X-5	521.69	5.4	3.4	4.0	6.2
58X-1	525.19	13.0	7.0	12.4	14.9
58X-3	528.18	10.2	6.1	7.8	12.1
58X-5	531.15	11.7	7.2	11.3	12.8
59X-1	534.67	20.0	8.7	28.7	27.9
59X-3	537.66	21.2	8.5	7.1	29.3
59X-5	540.73	19.6	6.2	5.4	34.4
60X-1	542.15	26.2	7.8	4.1	40.8
60X-3	545.05	37.3	9.4	8.5	63.1
60X-5	548.13	84.7	12.4	245.2	109.0
61X-1	551.37	35.9	7.5	7.1	61.8
61X-3	553.31	51.1	11.7	203.5	70.7
61X-5	556.33	29.1	8.7	7.8	48.5

Note: Mean = arithmetic mean.