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42. *DATA REPORT:* ORGANIC CARBON AND CARBONATE RECORDS FROM DETROIT SEAMOUNT AND PATTON-MURRAY SEAMOUNT: RESULTS FROM SITES 882 AND 887 (NORTH PACIFIC TRANSECT)[1]

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INTRODUCTION

The main objectives of Ocean Drilling Program (ODP) Leg 145 were to drill five sites on a transect in the North Pacific in order to reconstruct the history of paleoclimate and paleoceanography. Most of the sediments recovered during the cruise are extremely interesting for high-resolution stratigraphic, geochemical, and sedimentological studies and yield information about major changes in paleoceanographic conditions (e.g., onset of the major Northern Hemisphere glaciation) of the North Pacific. In this report results of organic carbon and carbonate analyses from Sites 882 and 887 are presented to provide a data record for the last 3.5 Ma.

Site 882 was drilled on Detroit Seamount in the western subarctic North Pacific (50°21.797′N, 167°35.999′E) at a water depth of 3244 m. Site 887 was drilled in the eastern part of Patton-Murray Seamount (Gulf of Alaska, 54°21.934′N, 148°25.778′W) at a water depth of 3630 m. The elevated positions of the two sites were chosen in order to obtain relatively undisturbed sediment columns with high sedimentation rates, precluding influence of vertical mass transport.

METHODS

Samples from Sites 882 and 887 were examined for organic carbon, total nitrogen, and carbonate carbon using a Heraeus CHN-Analyzer. The accuracy of the CHN-Analyzer is 0.02% and the relative standard deviation of the control measurements is about 0.2%. Measurements of total nitrogen show in many samples values near or below the detection limit of the analyzer. To separate the carbonate bonded carbon from organic carbon the samples were treated with HCl (10%, p.A.) and washed and dried (Weliky et al., 1983). For the calculation of the total organic carbon (TOC) content from total carbon (TC) in the bulk sample and total carbon in the carbonate-free sample split (TOC′) the following equation was used:

$$\mathrm{TOC}\% = \frac{100 - (8.333 \cdot \mathrm{TC})}{(100 / \mathrm{TOC}') - 8.333} \cdot \quad (1)$$

Calcium carbonate content was calculated by:

$$\mathrm{CaCO_3} = (\mathrm{TC} - \mathrm{TOC}) \cdot 8.333. \quad (2)$$

RESULTS

The results of the elemental analyses are presented in Tables 1 and 2 and plotted vs. depth and age in Figs. 1A–2B. To convert the data into the time domain, stratigraphic tie points were taken from the sedimentation rates section of Sites 882 and 887 in Rea, Basov, Janecek, Palmer-Julson, et al. (1993).

Organic Carbon

The sediments from Leg 145 are generally characterized by low organic carbon contents. At Site 882 the values range between 0 and 0.7 wt%. The interval from 140 to 105 mbsf (3–2.6 Ma) shows a relatively low TOC variation of about 0.2 wt%, followed by an interval with increased amplitudes of about 0.5 wt% between 105 and 0 mbsf (2.6–0 Ma). The remarkable high-amplitude cyclicity seen in this data is discussed in detail in Haug et al. (this volume). Site 887, however, displays a very different pattern compared to Site 882. The record can be divided into three intervals regarding the TOC fluctuation. Between 3.5 and 2.8 Ma (112–94 mbsf) the values range from 0.05 wt% to 0.4 wt%, whereas lower amplitudes generally dominate between 2.8 and 1.0 Ma (94–52 mbsf). A dramatic increase in short-term variability is recorded in the third interval from 1 Ma to present (52–0 mbsf). Values reach up to 0.7 wt% in this part of the sediment column.

The ratio of organic carbon and total nitrogen is used for a first characterization of the organic matter in terms of marine vs. terrestrial origin. Due to the very low organic carbon and nitrogen contents, however, most of the samples show no reliable TOC/N ratios. Values between 4 and 15 indicate a major portion of marine organic matter in sediments from both sites. This preliminary interpretation has to be verified by further investigations.

Calcium Carbonate

The entire carbonate record of Site 882 shows a distinct fluctuation between 0 wt% and almost 40 wt%, with most values close to zero. Only the lowermost part between 3 and 2.7 Ma (140–110 mbsf) is characterized by a slightly increased average in carbonate content of about 10 wt%. At Site 887 carbonate fluctuation is low, ranging between 0 wt% and 10 wt%. The three-interval trend of the curve is similar to the trend recorded in the TOC values from this site (Fig. 2).

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* Abbreviations for names of organizations and publications in ODP reference lists follow the style given in *Chemical Abstracts Service Source Index* (published by American Chemical Society).

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Table 1. Carbonate, organic carbon, and total nitrogen concentrations, and ratios of organic carbon and nitrogen, Hole 882A.

Core, section, interval (cm)	Depth (mbsf)	Age (Ma)	TOC (wt%)	N (wt%)	TOC/N	$CaCO_3$ (wt%)
145-882A-						
1H-1, 75–77	0.75	0.020	0.63	0.05	13	0.50
1H-1, 135–137	1.35	0.036	0.49	0.05	10	0.00
1H-2, 50–54	2.00	0.053	0.40	0.03	15	0.45
1H-2, 76–78	2.26	0.060	0.41	0.04	11	0.11
1H-2, 104–108	2.54	0.067	0.34			0.00
1H-2, 140–144	2.90	0.077	0.41	0.04	12	0.18
1H-3, 20–24	3.20	0.085	0.40	0.03	13	0.00
1H-3, 50–54	3.50	0.093	0.50	0.04	13	0.00
1H-3, 80–84	3.80	0.101	0.45	0.03	15	0.87
1H-3, 104–108	4.04	0.107	0.35			0.00
1H-3, 135–137	4.35	0.115	0.17			3.28
1H-3, 140–144	4.40	0.117	0.29			6.17
1H-4, 76–78	5.26	0.140	0.47	0.04	13	0.00
1H-4, 135–137	5.85	0.155	0.24			0.10
1H-5, 26–28	6.26	0.166	0.31			0.00
1H-5, 50–54	6.50	0.172	0.37			0.00
1H-5, 76–78	6.76	0.179	0.19			18.68
1H-5, 80–84	6.80	0.180	0.22			17.91
1H-5, 135–137	7.35	0.195	0.70	0.05	15	0.28
1H-5, 140–144	7.40	0.196	0.61	0.05	12	0.00
1H-6, 26–28	7.76	0.206	0.35			0.00
2H-2, 26–28	9.16	0.243	0.17			0.00
2H-2, 75–77	9.69	0.257	0.27			0.00
2H-2, 106–110	10.00	0.265	0.39			0.00
2H-2, 135–137	10.29	0.273	0.30			0.00
2H-3, 26–28	10.66	0.283	0.44	0.07	7	0.23
2H-3, 50–54	10.94	0.290	0.40	0.07	5	0.00
2H-3, 75–77	11.19	0.297	0.39			0.00
2H-3, 81–85	11.25	0.298	0.38			4.45
2H-3, 135–137	11.79	0.313	0.33			0.00
2H-4, 26–28	12.16	0.323	0.35			0.00
2H-4, 75–77	12.69	0.337	0.48	0.07	7	0.14
2H-4, 103–107	12.97	0.344	0.40	0.05	8	0.00
2H-4, 135–137	13.29	0.353	0.33			0.00
2H-5, 26–28	13.70	0.363	0.16			0.00
2H-5, 50–54	13.94	0.370	0.39			0.00
2H-5, 75–77	14.19	0.376	0.24			3.01
2H-5, 135–137	14.79	0.392	0.31			0.00
2H-5, 140–144	14.84	0.394	0.41	0.05	8	0.00
2H-6, 20–24	15.14	0.402	0.33			0.00
2H-6, 26–28	15.16	0.402	0.33			0.00
2H-6, 50–54	15.44	0.410	0.31			0.00
2H-6, 75–77	15.69	0.416	0.30			0.00
2H-6, 81–85	15.75	0.418	0.39			0.31
2H-6, 103–107	15.97	0.424	0.38			1.55
2H-6, 135–137	16.29	0.432	0.16			13.51
2H-6, 140–144	16.34	0.434	0.14			0.00
2H-7, 26–28	16.66	0.442	0.45	0.06	7	0.00
2H-7, 75–77	17.19	0.456	0.36			0.00
2H-7, 81–85	17.25	0.458	0.48	0.06	8	0.00
2H-7, 135–137	17.79	0.472	0.40	0.06	6	0.00
2H-7, 140–144	17.84	0.473	0.46	0.06	8	0.00
2H-8, 26–28	18.20	0.483	0.43	0.07	7	0.00
3H-1, 20–24	18.50	0.491	0.41	0.05	9	1.89
3H-1, 26–28	18.56	0.492	0.28			16.76
3H-1, 52–56	18.82	0.499	0.22			27.10
3H-1, 75–77	19.05	0.505	0.15			23.95
3H-1, 79–83	19.09	0.506	0.11			13.79
3H-1, 135–137	19.65	0.521	0.46	0.05	9	0.36
3H-1, 140–144	19.70	0.523	0.43	0.06	8	0.00
3H-2, 26–28	20.06	0.532	0.39			0.00
3H-2, 52–54	20.32	0.539	0.28			0.00
3H-2, 75–77	20.55	0.545	0.27			0.00
3H-2, 80–84	20.60	0.547	0.35			0.00
3H-2, 135–137	21.15	0.561	0.49	0.05	10	3.79
3H-2, 140–144	21.20	0.562	0.54	0.05	10	0.81
3H-3, 26–28	21.56	0.572	0.46	0.06	7	0.00
3H-3, 52–56	21.82	0.579	0.28			0.00
3H-3, 75–77	22.05	0.585	0.30			0.00
3H-3, 80–84	22.10	0.586	0.50	0.05	9	0.00
3H-3, 135–137	22.65	0.601	0.40	0.05	9	0.00
3H-3, 140–144	22.70	0.602	0.46	0.04	12	0.00
3H-4, 20–24	23.00	0.610	0.32			4.37
3H-4, 26–28	23.06	0.612	0.22			6.08
3H-4, 75–77	23.55	0.625	0.38			14.85
3H-4, 80–84	23.60	0.626	0.42	0.05	8	9.51
3H-4, 90–91	23.70	0.629	0.40	0.04	10	7.58
3H-4, 135–137	24.15	0.641	0.35			9.05
3H-4, 140–144	24.20	0.642	0.45	0.04	10	11.49
3H-5, 20–24	24.50	0.650	0.26			20.38
3H-5, 26–28	24.56	0.652	0.20			14.92
3H-5, 75–77	25.05	0.665	0.41	0.05	8	0.00
3H-5, 135–137	25.65	0.681	0.55	0.05	10	0.00
3H-5, 140–144	25.70	0.682	0.42	0.05	9	0.00
3H-6, 26–28	26.06	0.691	0.31			0.00
3H-6, 52–56	26.32	0.698	0.39			0.00
3H-6, 75–77	26.55	0.704	0.41	0.04	10	0.60
3H-7, 26–28	27.56	0.731	0.51	0.05	11	0.00
4H-1, 26–28	28.06	0.744	0.22			5.31
4H-1, 75–77	28.55	0.757	0.24			0.79
4H-1, 80–84	28.60	0.759	0.43	0.05	8	2.28
4H-1, 135–137	29.15	0.773	0.28			0.00
4H-2, 26–28	29.56	0.784	0.41	0.05	8	0.00
4H-2, 74–76	30.04	0.797	0.17			0.02
4H-2, 80–84	30.10	0.799	0.34			0.00
4H-2, 135–137	30.65	0.813	0.50	0.06	8	0.00
4H-3, 26–28	31.06	0.824	0.51	0.06	8	0.53
4H-3, 50–54	31.30	0.830	0.39			15.11
4H-3, 74–76	31.54	0.837	0.26			27.45
4H-3, 135–137	32.15	0.853	0.37			19.26
4H-4, 25–27	32.55	0.864	0.29			7.72
4H-4, 73–75	33.03	0.876	0.39			0.00
4H-4, 135–137	33.65	0.893	0.46	0.06	8	4.96
4H-5, 26–28	34.06	0.904	0.46	0.06	8	0.00
4H-5, 50–54	34.30	0.910	0.48	0.06	8	0.00
4H-5, 76–78	34.56	0.917	0.52	0.07	8	0.00
4H-5, 80–84	34.60	0.918	0.42	0.06	8	0.00
4H-5, 104–108	34.84	0.924	0.39			0.00
4H-5, 135–137	35.15	0.933	0.25			0.00
4H-6, 17–21	35.47	0.941	0.49	0.03	16	31.43
4H-6, 28–30	35.58	0.944	0.35			20.07
4H-6, 75–77	36.05	0.956	0.49	0.06	8	0.00
4H-6, 80–84	36.10	0.958	0.40	0.05	8	0.00
4H-6, 104–108	36.34	0.964	0.43	0.06	7	0.00
4H-6, 135–137	36.65	0.972	0.37			0.00
4H-6, 140–144	36.70	0.974	0.39			2.78
4H-7, 26–28	37.06	0.983	0.35			0.00
5H-1, 25–27	37.55	0.996	0.37			0.00
5H-1, 75–77	38.05	1.009	0.02			0.03
5H-1, 135–137	38.65	1.025	0.51	0.07	7	0.00
5H-2, 20–24	39.00	1.035	0.44	0.08	6	0.00
5H-2, 25–27	39.05	1.036	0.40	0.07	6	0.74
5H-2, 75–77	39.55	1.049	0.43	0.07	6	0.00
5H-2, 80–84	39.60	1.051	0.47	0.09	5	0.00
5H-2, 104–108	39.84	1.057	0.49	0.07	7	3.53
5H-2, 135–137	40.15	1.065	0.21			5.20
5H-2, 140–144	40.20	1.067	0.42	0.07	6	3.16
5H-3, 26–28	40.56	1.076	0.45	0.08	6	0.00
5H-3, 51–55	40.81	1.083	0.35			0.00
5H-3, 75–77	41.05	1.089	0.42	0.09	5	0.21
5H-3, 104–108	41.34	1.097	0.42	0.07	6	0.00
5H-3, 135–137	41.65	1.105	0.39	0.06	6	0.00
5H-3, 140–144	41.70	1.106	0.47	0.08	6	0.00
5H-4, 20–24	42.00	1.114	0.41	0.08	5	0.00
5H-4, 25–27	42.05	1.116	0.39			0.00
5H-4, 51–59	42.31	1.123	0.40	0.08	5	0.00
5H-4, 75–77	42.55	1.129	0.23			19.40
5H-4, 80–84	42.60	1.130	0.21			29.05
5H-4, 135–137	43.15	1.145	0.37			0.10
5H-5, 19–23	43.49	1.154	0.57	0.09	6	0.00
5H-5, 25–27	43.55	1.155	0.52	0.10	5	0.12
5H-5, 51–55	43.81	1.162	0.52	0.08	7	0.00
5H-5, 75–77	44.05	1.169	0.36			0.05
5H-5, 80–84	44.10	1.170	0.37			0.00
5H-5, 104–108	44.34	1.176	0.47	0.09	5	0.00
5H-5, 135–137	44.65	1.185	0.48	0.09	5	1.09
5H-5, 140–144	44.70	1.186	0.51	0.08	7	0.00
5H-6, 25–27	45.05	1.195	0.52	0.08	6	0.00
5H-7, 25–27	46.55	1.235	0.56	0.09	6	0.00
5H-7, 51–55	46.81	1.242	0.51	0.08	6	1.19
5H-7, 75–77	47.05	1.248	0.44	0.07	6	0.09
6H-1, 25–27	47.05	1.248	0.03			0.06
6H-1, 75–77	47.55	1.262	0.38			0.00
6H-1, 80–84	47.60	1.263	0.46	0.09	5	0.00
6H-1, 136–138	48.16	1.278	0.30			26.65
6H-1, 140–144	48.20	1.279	0.27			30.44
6H-2, 25–27	48.55	1.288	0.17			24.01
6H-2, 75–77	49.05	1.301	0.35			1.91
6H-2, 80–84	49.10	1.303	0.40	0.07	6	0.00
6H-2, 104–108	49.34	1.309	0.44	0.07	6	0.00
6H-2, 136–138	49.66	1.318	0.29			0.15
6H-3, 19–23	49.99	1.326	0.44	0.06	7	11.03
6H-3, 51–55	50.31	1.335	0.45	0.06	8	9.57
6H-3, 75–77	50.55	1.341	0.49	0.06	8	0.00
6H-3, 104–108	50.84	1.349	0.46	0.06	8	0.00
6H-3, 136–138	51.16	1.357	0.51	0.08	6	0.30
6H-3, 140–144	51.20	1.358	0.40	0.08	5	0.00
6H-4, 19–23	51.49	1.366	0.35			0.00
6H-4, 25–27	51.55	1.368	0.27			0.00
6H-4, 51–55	51.81	1.375	0.42	0.06	7	0.00
6H-4, 75–77	52.05	1.381	0.39			0.00
6H-4, 80–84	52.10	1.382	0.35			0.00
6H-4, 104–108	52.34	1.389	0.39			0.00
6H-4, 136–138	52.66	1.397	0.34			0.39
6H-4, 140–144	52.70	1.398	0.39			1.40
6H-5, 19–23	52.99	1.406	0.42	0.08	5	5.85
6H-5, 25–27	53.05	1.407	0.33			11.82

Table 1 (continued).

Core, section, interval (cm)	Depth (mbsf)	Age (Ma)	TOC (wt%)	N (wt%)	TOC/N	$CaCO_3$ (wt%)
6H-5, 50–54	53.30	1.414	0.34			12.94
6H-5, 75–77	53.55	1.421	0.25			12.76
6H-5, 80–84	53.60	1.422	0.31			12.36
6H-5, 104–108	53.84	1.428	0.42	0.08	6	1.61
6H-5, 136–138	54.16	1.437	0.39			0.04
6H-5, 140–144	54.20	1.438	0.43	0.09	5	0.00
6H-6, 19–23	54.49	1.446	0.41	0.06	6	0.00
6H-6, 25–27	54.55	1.447	0.45	0.07	6	0.04
6H-6, 50–54	54.80	1.454	0.39			0.00
6H-6, 104–108	55.34	1.468	0.44	0.07	6	0.00
6H-6, 136–137	55.66	1.477	0.42	0.07	6	0.00
6H-6, 140–144	55.70	1.478	0.38			0.00
6H-7, 19–23	55.99	1.485	0.35			1.40
6H-7, 25–27	56.05	1.487	0.28			3.98
6H-7, 50–54	56.30	1.494	0.39			9.35
7H-1, 26–28	56.56	1.501	0.01			3.26
7H-1, 37–39	56.67	1.503	0.55	0.07	8	6.14
7H-1, 54–58	56.84	1.508	0.45	0.09	5	0.00
7H-1, 75–77	57.05	1.514	0.39			0.00
7H-1, 80–84	57.10	1.515	0.42	0.07	6	0.02
7H-1, 104–108	57.34	1.521	0.28			0.00
7H-1, 135–137	57.65	1.529	0.22			0.00
7H-1, 140–144	57.70	1.531	0.23			0.00
7H-2, 20–24	58.00	1.539	0.20			0.00
7H-2, 26–28	58.06	1.540	0.17			0.00
7H-2, 52–54	58.32	1.547	0.35			0.00
7H-2, 75–77	58.55	1.553	0.32			0.00
7H-2, 81–85	58.61	1.555	0.38			0.00
7H-2, 104–108	58.84	1.561	0.37			0.00
7H-2, 135–137	59.15	1.569	0.22			0.00
7H-2, 137–139	59.17	1.570	0.23			0.00
7H-3, 20–24	59.50	1.579	0.23			0.00
7H-3, 26–28	59.56	1.580	0.19			0.00
7H-3, 75–77	60.05	1.593	0.28			0.00
7H-3, 104–108	60.34	1.601	0.39			0.00
7H-3, 135–137	60.65	1.609	0.30			0.10
7H-3, 140–144	60.70	1.610	0.22			11.65
7H-4, 20–24	61.00	1.618	0.14			24.74
7H-4, 26–28	61.06	1.620	0.14			13.30
7H-4, 50–54	61.30	1.626	0.16			0.00
7H-4, 75–77	61.55	1.633	0.23			0.04
7H-4, 104–108	61.84	1.641	0.25			0.00
7H-4, 135–137	62.15	1.649	0.24			9.84
7H-4, 140–144	62.20	1.650	0.27			16.94
7H-5, 20–24	62.50	1.658	0.34			0.21
7H-5, 26–28	62.56	1.660	0.27			0.03
7H-5, 50–54	62.80	1.666	0.34			0.00
7H-5, 75–77	63.05	1.673	0.35			0.00
7H-5, 80–84	63.10	1.674	0.26			0.72
7H-5, 104–108	63.34	1.680	0.43	0.08	6	1.97
7H-5, 135–137	63.65	1.689	0.14			38.38
7H-5, 140–144	63.70	1.690	0.15			37.99
7H-6, 26–28	64.06	1.700	0.12			35.79
7H-6, 50–54	64.30	1.706	0.31			0.05
7H-6, 75–77	64.55	1.713	0.42	0.07	6	0.06
7H-6, 80–84	64.60	1.714	0.44	0.07	7	0.00
7H-6, 104–108	64.84	1.720	0.38			0.00
7H-6, 135–137	65.15	1.728	0.42	0.08	5	0.00
7H-7, 26–28	65.56	1.739	0.38			0.00
7H-7, 50–54	65.80	1.746	0.40	0.08	5	0.00
8H-1, 20–24	66.00	1.751	0.43	0.07	6	5.32
8H-1, 26–28	66.06	1.753	0.32			14.84
8H-1, 50–54	66.30	1.759	0.39			0.00
8H-1, 75–77	66.55	1.766	0.37			0.00
8H-1, 80–84	66.60	1.767	0.43	0.06	7	0.00
8H-1, 104–108	66.84	1.773	0.21			7.89
8H-1, 135–137	67.15	1.782	0.25			0.13
8H-1, 140–144	67.20	1.783	0.44	0.06	7	0.05
8H-2, 20–24	67.50	1.791	0.49	0.06	8	0.00
8H-2, 26–28	67.56	1.792	0.49	0.06	8	0.00
8H-2, 50–54	67.80	1.799	0.40	0.06	7	0.00
8H-2, 75–77	68.05	1.805	0.22			0.00
8H-2, 80–84	68.10	1.807	0.24			0.00
8H-2, 104–108	68.34	1.813	0.27			0.00
8H-2, 138–140	68.68	1.822	0.17			0.08
8H-2, 140–144	68.70	1.823	0.21			0.00
8H-3, 20–24	69.00	1.831	0.24			0.00
8H-3, 26–28	69.06	1.832	0.22			0.06
8H-3, 52–56	69.32	1.839	0.30			0.00
8H-3, 75–77	69.55	1.845	0.21			0.00
8H-3, 80–84	69.60	1.847	0.21			0.00
8H-3, 104–108	69.84	1.853	0.25			0.00
8H-3, 135–137	70.15	1.861	0.23			0.00
8H-3, 140–144	70.20	1.862	0.28			0.00
8H-4, 26–28	70.56	1.872	0.17			0.13
8H-4, 52–56	70.82	1.879	0.17			0.00
8H-4, 75–77	71.05	1.885	0.20			0.00
8H-4, 80–84	71.10	1.886	0.18			0.00
8H-4, 135–137	71.65	1.901	0.15			0.14
8H-4, 140–144	71.70	1.902	0.17			0.07
8H-5, 20–24	72.00	1.910	0.31			0.00
8H-5, 26–28	72.06	1.912	0.31			0.02
8H-5, 52–56	72.32	1.919	0.17			17.04
8H-5, 75–77	72.55	1.925	0.15			7.45
8H-5, 80–84	72.60	1.926	0.19			5.76
8H-5, 104–108	72.84	1.932	0.41	0.06	7	0.00
8H-5, 135–137	73.15	1.941	0.37			0.00
8H-5, 140–144	73.20	1.942	0.24			0.00
8H-6, 20–24	73.50	1.950	0.17			0.00
8H-6, 26–28	73.56	1.952	0.16			0.26
8H-6, 46–48	73.76	1.957	0.15			0.02
8H-6, 75–77	74.05	1.965	0.25			0.00
8H-6, 80–84	74.10	1.966	0.21			0.00
8H-6, 104–108	74.34	1.972	0.21			0.00
8H-6, 135–137	74.65	1.981	0.23			0.00
8H-6, 140–144	74.70	1.982	0.36			0.00
8H-7, 26–28	75.06	1.991	0.20			0.00
8H-7, 52–56	75.32	1.998	0.19			0.15
8H-7, 75–77	75.50	2.003	0.35			0.00
9H-1, 20–24	75.52	2.004	0.15			1.41
9H-1, 29–31	75.59	2.005	0.15			1.38
9H-1, 50–54	75.80	2.011	0.37			0.00
9H-1, 75–77	76.05	2.018	0.25			0.00
9H-1, 80–84	76.10	2.019	0.23			0.00
9H-1, 104–108	76.34	2.025	0.19			0.00
9H-1, 135–137	76.65	2.034	0.16			0.00
9H-1, 140–144	76.70	2.035	0.19			0.00
9H-2, 20–24	77.00	2.043	0.21			0.00
9H-2, 29–31	77.09	2.045	0.18			0.00
9H-2, 50–54	77.30	2.051	0.15			0.00
9H-2, 75–77	77.55	2.057	0.15			0.00
9H-2, 104–108	77.84	2.065	0.20			0.00
9H-2, 135–137	78.15	2.073	0.16			0.00
9H-2, 140–144	78.20	2.075	0.17			0.00
9H-3, 20–24	78.50	2.083	0.19			0.00
9H-3, 29–31	78.59	2.085	0.18			0.00
9H-3, 50–54	78.80	2.091	0.19			2.31
9H-3, 75–77	79.05	2.097	0.14			0.10
9H-3, 78–82	79.08	2.098	0.14			0.00
9H-3, 104–108	79.34	2.105	0.19			1.79
9H-3, 135–137	79.65	2.113	0.21			0.06
9H-3, 140–144	79.70	2.114	0.21			0.00
9H-4, 20–24	80.00	2.122	0.18			13.47
9H-4, 29–31	80.09	2.125	0.14			9.79
9H-4, 50–54	80.30	2.130	0.16			0.00
9H-4, 75–77	80.55	2.137	0.11			0.61
9H-4, 80–84	80.60	2.138	0.14			0.46
9H-4, 108–112	80.88	2.146	0.17			0.00
9H-4, 135–137	81.15	2.153	0.35			0.04
9H-4, 140–144	81.20	2.154	0.26			0.00
9H-5, 50–54	81.80	2.170	0.50	0.08	6	0.00
9H-5, 61–65	81.91	2.173	0.23			0.17
9H-5, 83–85	82.13	2.179	0.18			8.26
9H-5, 100–104	82.30	2.183	0.23			0.00
9H-5, 140–144	82.70	2.194	0.17			0.00
9H-6, 50–54	83.30	2.210	0.15			1.27
9H-6, 75–77	83.55	2.217	0.13			23.03
9H-6, 80–84	83.60	2.218	0.16			15.51
9H-6, 102–108	83.82	2.224	0.34			0.00
9H-6, 140–144	84.20	2.234	0.61	0.09	7	0.13
9H-7, 20–24	84.50	2.242	0.58	0.09	7	0.00
9H-7, 29–31	84.59	2.244	0.54	0.10	6	0.00
10H-1, 20–24	85.00	2.255	0.32			0.00
10H-1, 50–54	85.30	2.263	0.24			0.00
10H-1, 81–85	85.61	2.271	0.25			5.22
10H-1, 104–108	85.84	2.277	0.22			10.49
10H-1, 140–144	86.20	2.287	0.53	0.08	7	0.95
10H-2, 20–24	86.50	2.295	0.39			0.00
10H-2, 50–54	86.80	2.303	0.47	0.08	6	0.00
10H-2, 80–84	87.10	2.311	0.47	0.09	5	0.09
10H-2, 100–104	87.30	2.316	0.34			0.90
10H-2, 140–144	87.70	2.327	0.21			3.16
10H-3, 20–24	88.00	2.335	0.22			0.00
10H-3, 50–54	88.30	2.343	0.39			0.00
10H-3, 80–84	88.60	2.351	0.29			0.00
10H-3, 104–108	88.84	2.357	0.40	0.07	6	0.00
10H-3, 140–144	89.20	2.367	0.38			1.88
10H-4, 20–24	89.50	2.374	0.14			31.87
10H-4, 50–54	89.80	2.382	0.25			12.45
10H-4, 80–84	90.10	2.390	0.28			4.30
10H-4, 104–108	90.34	2.397	0.34			4.02
10H-4, 140–144	90.70	2.406	0.31			0.00
10H-5, 20–24	91.00	2.414	0.30			9.05
10H-5, 52–54	91.32	2.423	0.18			22.56
10H-5, 80–84	91.60	2.430	0.21			0.00
10H-5, 104–108	91.84	2.437	0.33			0.00
10H-5, 140–144	92.20	2.446	0.27			0.00
10H-6, 20–24	92.50	2.454	0.19			0.00

Table 1 (continued).

Core, section, interval (cm)	Depth (mbsf)	Age (Ma)	TOC (wt%)	N (wt%)	TOC/N	$CaCO_3$ (wt%)
10H-6, 50–54	92.80	2.462	0.19			0.00
10H-6, 80–84	93.10	2.470	0.21			0.00
10H-6, 104–108	93.34	2.476	0.33			0.00
10H-6, 140–144	93.70	2.486	0.30			0.00
10H-7, 20–24	94.00	2.494	0.36			0.85
10H-7, 50–54	94.30	2.502	0.18			0.52
11H-1, 20–24	94.50	2.507	0.16			5.98
11H-1, 50–54	94.80	2.515	0.22			3.39
11H-1, 80–84	95.10	2.523	0.66	0.09	8	0.00
11H-1, 104–108	95.34	2.529	0.50	0.07	7	0.00
11H-1, 140–144	95.70	2.539	0.50	0.08	6	0.00
11H-2, 20–24	96.00	2.547	0.52	0.09	6	0.00
11H-2, 50–54	96.30	2.555	0.35			0.00
11H-2, 80–84	96.60	2.563	0.28			0.00
11H-2, 104–108	96.84	2.569	0.21			0.06
11H-2, 140–144	97.20	2.579	0.28			0.00
11H-3, 20–24	97.50	2.587	0.35			0.00
11H-3, 50–54	97.80	2.595	0.24			0.00
11H-3, 80–84	98.10	2.601	0.18			0.00
11H-3, 104–108	98.34	2.603	0.19			0.00
11H-3, 140–144	98.70	2.606	0.53	0.07	7	0.00
11H-4, 20–24	99.00	2.609	0.52	0.07	7	0.00
11H-4, 50–54	99.30	2.612	0.31			0.00
11H-4, 80–84	99.60	2.615	0.27			1.59
11H-4, 104–108	99.84	2.617	0.25			4.07
11H-4, 142–146	100.22	2.620	0.37			2.81
11H-5, 20–24	100.50	2.623	0.42	0.07	6	5.16
11H-5, 50–54	100.80	2.625	0.51	0.07	8	2.48
11H-5, 80–84	101.10	2.628	0.40	0.07	6	0.18
11H-5, 104–108	101.34	2.630	0.28			0.03
11H-5, 140–144	101.70	2.634	0.19			3.05
11H-6, 20–24	102.00	2.636	0.20			8.66
11H-6, 50–54	102.30	2.639	0.37			0.24
11H-6, 80–84	102.60	2.642	0.37			0.00
11H-6, 104–108	102.84	2.644	0.32			0.21
11H-6, 140–144	103.20	2.647	0.38			2.71
11H-7, 20–24	103.50	2.650	0.52	0.09	6	0.00
11H-7, 50–54	103.80	2.653	0.51	0.08	6	0.00
12H-1, 19–23	103.99	2.654	0.34			0.00
12H-1, 50–54	104.30	2.657	0.35			0.00
12H-1, 80–84	104.60	2.660	0.33			0.00
12H-1, 104–108	104.84	2.662	0.44	0.10	4	0.00
12H-1, 140–144	105.20	2.665	0.34			0.00
12H-2, 19–23	105.49	2.668	0.34			0.00
12H-2, 50–54	105.80	2.671	0.34			0.00
12H-2, 80–84	106.10	2.674	0.29			0.00
12H-3, 50–54	107.30	2.685	0.29			0.00
12H-3, 80–84	107.60	2.687	0.32			0.00
12H-4, 19–23	108.49	2.695	0.33			0.00
12H-4, 50–54	108.80	2.698	0.30			0.00
12H-4, 80–84	109.10	2.701	0.42	0.10	4	0.24
12H-4, 104–108	109.34	2.703	0.45	0.09	5	0.06
12H-5, 19–23	109.99	2.709	0.37			1.00
12H-5, 50–54	110.30	2.712	0.37			0.00
12H-5, 80–84	110.60	2.715	0.41	0.09	5	0.00
12H-5, 104–108	110.84	2.717	0.41	0.09	5	0.31
12H-5, 140–144	111.20	2.720	0.42	0.07	6	3.73
12H-6, 19–23	111.49	2.723	0.34			0.00
12H-6, 50–54	111.80	2.725	0.32			0.00
12H-6, 80–84	112.10	2.728	0.27			0.00
12H-6, 104–108	112.34	2.730	0.32			0.00
12H-7, 19–23	112.99	2.736	0.37			0.00
12H-7, 50–54	113.30	2.739	0.38			0.00
13H-1, 50–54	113.80	2.744	0.35			8.71
13H-1, 80–84	114.10	2.746	0.35			6.59
13H-1, 104–108	114.34	2.749	0.31			8.35
13H-1, 138–142	114.68	2.752	0.34			9.36
13H-2, 20–24	115.00	2.755	0.34			11.06
13H-2, 50–54	115.30	2.757	0.38			1.26
13H-2, 80–84	115.60	2.760	0.38			0.00
13H-2, 104–108	115.84	2.762	0.37			0.00
13H-2, 140–144	116.20	2.765	0.37			0.00
13H-3, 20–24	116.50	2.768	0.42	0.08	5	0.00
13H-3, 50–54	116.80	2.771	0.35			0.00
13H-3, 80–84	117.10	2.774	0.35			0.00
13H-3, 104–108	117.34	2.776	0.34			0.00
13H-3, 140–144	117.70	2.779	0.30			0.00
13H-4, 20–24	118.00	2.782	0.30			0.00
13H-4, 50–54	118.30	2.785	0.47	0.08	6	1.67
13H-4, 80–84	118.60	2.787	0.28			11.86
13H-4, 104–108	118.84	2.789	0.28			15.24
13H-4, 140–144	119.20	2.793	0.31			13.05
13H-5, 20–24	119.50	2.795	0.28			9.46
13H-5, 50–54	119.80	2.798	0.30			5.35
13H-5, 80–84	120.10	2.801	0.31			0.36
13H-5, 104–108	120.34	2.803	0.31			0.00
13H-5, 140–144	120.70	2.806	0.30			0.00
13H-6, 20–24	121.00	2.809	0.29			0.00
13H-6, 50–54	121.30	2.812	0.37			3.83
13H-6, 80–84	121.60	2.815	0.36			4.98
13H-6, 104–108	121.84	2.817	0.33			4.53
13H-6, 140–144	122.20	2.820	0.31			8.04
13H-7, 20–24	122.50	2.823	0.24			14.63
13H-7, 50–54	122.80	2.825	0.28			21.32
14H-1, 50–54	123.30	2.830	0.33			1.37
14H-1, 80–84	123.60	2.833	0.39			0.13
14H-1, 104–108	123.84	2.835	0.38			0.79
14H-1, 140–144	124.20	2.838	0.31			3.05
14H-2, 19–23	124.49	2.841	0.32			4.22
14H-2, 50–54	124.80	2.844	0.31			7.49
14H-2, 80–84	125.10	2.846	0.28			13.01
14H-2, 104–108	125.34	2.849	0.27			17.54
14H-2, 140–144	125.70	2.852	0.27			16.07
14H-3, 19–23	125.99	2.854	0.33			10.78
14H-3, 50–54	126.30	2.857	0.32			5.72
14H-3, 80–84	126.60	2.860	0.32			6.04
14H-3, 104–108	126.84	2.862	0.35			6.30
14H-3, 140–144	127.20	2.865	0.39			5.16
14H-4, 19–23	127.49	2.868	0.37			3.68
14H-4, 50–54	127.80	2.871	0.48	0.06	8	1.28
14H-4, 80–84	128.10	2.874	0.44	0.08	5	0.04
14H-4, 104–108	128.34	2.876	0.30			0.00
14H-4, 140–144	128.70	2.879	0.40	0.07	6	0.00
14H-5, 19–23	128.99	2.882	0.40	0.08	5	0.00
14H-5, 50–54	129.30	2.885	0.37			0.00
14H-5, 80–84	129.60	2.887	0.34			0.00
14H-5, 104–108	129.84	2.889	0.37			0.00
14H-5, 140–144	130.20	2.893	0.33			0.00
14H-6, 18–22	130.48	2.895	0.30			0.00
14H-6, 50–54	130.80	2.898	0.35			0.28
14H-6, 104–108	131.34	2.903	0.31			7.01
14H-6, 140–144	131.70	2.906	0.27			22.29
14H-7, 18–22	131.98	2.909	0.26			24.35
14H-7, 51–55	132.31	2.912	0.21			36.61
15H-1, 50–54	132.80	2.916	0.30			13.26
15H-1, 80–84	133.10	2.919	0.35			9.07
15H-1, 104–108	133.34	2.921	0.37			6.62
15H-1, 140–144	133.70	2.925	0.34			3.76
15H-2, 20–24	134.00	2.927	0.37			6.75
15H-2, 50–54	134.30	2.930	0.34			3.30
15H-2, 80–84	134.60	2.933	0.50	0.12	4	4.67
15H-2, 104–108	134.84	2.935	0.28			16.50
15H-2, 140–144	135.20	2.938	0.25			28.59
15H-3, 104–108	136.34	2.949	0.32			20.18
15H-3, 140–144	136.70	2.952	0.35			14.73
15H-4, 50–54	137.30	2.957	0.33			8.80
15H-4, 80–84	137.60	2.960	0.34			5.80
15H-4, 104–108	137.84	2.962	0.39			5.94
15H-4, 140–144	138.20	2.965	0.38			6.05
15H-5, 20–24	138.50	2.968	0.31			7.07
15H-5, 50–54	138.80	2.971	0.33			6.54
15H-5, 80–84	139.10	2.974	0.37			7.38
15H-5, 104–108	139.34	2.976	0.37			9.03
15H-5, 140–144	139.70	2.979	0.39			4.76
15H-6, 80–84	140.60	2.987	0.17			0.30
15H-6, 104–108	140.84	2.989	0.35			1.73
15H-7, 20–24	141.50	2.995	0.36			0.00

Note: $CaCO_3$ = carbonate, TOC = total organic carbon, N = total nitrogen, and TOC/N = ratio of organic carbon to nitrogen.

Table 2. Carbonate, organic carbon, and total nitrogen concentrations, and ratios of organic carbon and nitrogen, Hole 887A.

Core, section, interval (cm)	Depth (mbsf)	Age (Ma)	TOC (wt%)	N (wt%)	TOC/N	$CaCO_3$ (wt%)
145-887A-						
1H-1, 30–32	0.30	0.006	0.28			3.1
1H-1, 80–82	0.80	0.015	0.31			0.0
1H-1, 130–132	1.30	0.024	0.41	0.05	8.56	0.0
1H-2, 30–32	1.80	0.034	0.23			0.0
1H-2, 80–82	2.30	0.043	0.07			3.4
1H-2, 130–132	2.80	0.052	0.49	0.05	10.81	3.3
1H-3, 30–32	3.30	0.062	0.25			0.0
1H-3, 80–82	3.80	0.071	0.50	0.06	8.83	5.0
1H-3, 130–132	4.30	0.080	0.15			0.0
1H-4, 30–32	4.80	0.090	0.13			0.0
1H-4, 80–82	5.30	0.099	0.43	0.05	8.19	0.0
1H-4, 130–132	5.80	0.108	0.19			0.0
2H-1, 31–33	7.01	0.131	0.21			0.0
2H-1, 80–82	7.50	0.140	0.38			0.0
2H-1, 130–132	8.00	0.149	0.13			0.0
2H-2, 31–33	8.51	0.159	0.18			0.0
2H-2, 80–82	9.00	0.168	0.33			0.0
2H-2, 130–132	9.50	0.177	0.25			0.0
2H-3, 31–33	10.01	0.187	0.13			0.0
2H-3, 80–82	10.50	0.196	0.08			0.0
2H-3, 130–132	11.00	0.205	0.13			0.0
2H-4, 31–33	11.51	0.215	0.74	0.07	11.09	0.0
2H-4, 81–83	12.01	0.224	0.65	0.06	10.86	0.7
2H-4, 130–132	12.50	0.233	0.23			0.0
2H-5, 31–33	13.01	0.243	0.13			0.0
2H-5, 81–83	13.51	0.252	0.18			0.0
2H-5, 130–132	14.00	0.261	0.13			0.0
2H-6, 31–33	14.51	0.271	0.46	0.05	10.20	0.0
2H-6, 80–82	15.00	0.280	0.13			0.0
2H-6, 130–132	15.50	0.289	0.01			1.9
3H-1, 40–42	16.60	0.310	0.11			0.0
3H-1, 80–82	17.00	0.317	0.16			0.0
3H-1, 130–132	17.50	0.327	0.14			0.0
3H-2, 30–32	18.00	0.336	0.18			0.0
3H-2, 80–82	18.50	0.345	0.24			1.1
3H-2, 130–132	19.00	0.355	0.71	0.06	11.42	2.5
3H-3, 30–32	19.50	0.364	0.55	0.07	7.84	0.0
3H-3, 80–82	20.00	0.373	0.12			0.0
3H-3, 130–132	20.50	0.383	0.14			0.0
3H-4, 30–32	21.00	0.392	0.20			0.0
3H-4, 80–82	21.50	0.401	0.11			0.0
3H-4, 130–132	22.00	0.411	0.12			0.0
3H-5, 30–32	22.50	0.420	0.28			0.0
3H-5, 80–82	23.00	0.429	0.17			0.0
3H-5, 130–132	23.50	0.439	0.28			0.0
3H-6, 30–32	24.00	0.448	0.30			0.0
3H-6, 80–82	24.50	0.457	0.12			0.0
3H-6, 130–132	25.00	0.467	0.18			0.0
3H-7, 30–32	25.50	0.476	0.12			0.0
3H-7, 80–82	26.00	0.485	0.11			0.0
4H-1, 30–32	26.00	0.485	0.42	0.05	8.23	2.2
4H-1, 80–82	26.50	0.495	0.12			0.0
4H-1, 129–131	26.99	0.504	0.25			0.0
4H-2, 30–32	27.50	0.513	0.18			0.0
4H-2, 80–82	28.00	0.523	0.14			0.0
4H-2, 129–131	28.49	0.532	0.16			0.0
4H-3, 30–32	29.00	0.541	0.51	0.06	8.16	1.9
4H-3, 80–82	29.50	0.551	0.27			0.0
4H-3, 129–131	29.99	0.560	0.27			0.0
4H-4, 30–32	30.50	0.569	0.17			0.0
4H-4, 81–83	31.01	0.579	0.14			0.0
4H-4, 129–131	31.49	0.588	0.29			0.0
4H-5, 30–32	32.00	0.597	0.18			0.0
4H-5, 80–82	32.50	0.607	0.15			0.0
4H-5, 129–131	32.99	0.616	0.47	0.09	5.19	0.1
4H-6, 30–32	33.50	0.625	0.23			0.0
4H-6, 80–82	34.00	0.635	0.35			0.0
4H-6, 129–131	34.49	0.644	0.34			5.9
4H-7, 33–35	35.03	0.654	0.40	0.04	10.40	0.5
5H-1, 30–32	35.50	0.663	0.13			0.0
5H-1, 80–82	36.00	0.672	0.40			0.0
5H-1, 130–132	36.50	0.681	0.24			0.0
5H-2, 30–32	37.00	0.691	0.15			0.0
5H-2, 80–82	37.50	0.700	0.21			2.0
5H-2, 130–132	38.00	0.709	0.49	0.05	10.14	0.2
5H-3, 30–32	38.50	0.719	0.36			3.0
5H-3, 80–82	39.00	0.728	0.32			0.0
5H-3, 126–128	39.46	0.737	0.16			0.0
5H-4, 30–32	40.00	0.747	0.13			0.0
5H-4, 80–82	40.50	0.756	0.19			0.0
5H-4, 133–135	41.03	0.766	0.18			0.0
5H-5, 30–32	41.50	0.775	0.22			0.0
5H-5, 80–82	42.00	0.784	0.18			0.4
5H-5, 133–135	42.53	0.794	0.22			0.0
5H-6, 30–32	43.00	0.803	0.36			2.9
5H-6, 80–82	43.50	0.812	0.42	0.04	10.84	9.1
5H-6, 133–135	44.03	0.822	0.18			0.0
5H-7, 30–32	44.50	0.831	0.21			0.0
5H-7, 80–82	45.00	0.840	0.15			0.0
6H-1, 30–32	45.00	0.840	0.37			1.0
6H-1, 80–82	45.50	0.849	0.13			0.0
6H-1, 130–132	46.00	0.859	0.27			0.0
6H-2, 80–82	47.00	0.877	0.13			0.0
6H-2, 130–132	47.50	0.887	0.15			0.0
6H-3, 30–32	48.00	0.896	0.19			0.0
6H-3, 80–82	48.50	0.905	0.12			0.0
6H-3, 130–132	49.00	0.915	0.08			0.0
6H-4, 30–32	49.50	0.924	0.10			0.0
6H-4, 80–82	50.00	0.933	0.14			0.0
6H-4, 130–132	50.50	0.943	0.41	0.04	9.35	1.8
6H-5, 30–32	51.00	0.952	0.14			0.0
6H-5, 80–82	51.50	0.961	0.40	0.04	9.65	4.4
6H-5, 130–132	52.00	0.971	0.17			0.0
6H-6, 30–32	52.50	0.980	0.13			0.0
6H-6, 72–74	52.92	0.988	0.13			0.0
6H-6, 130–132	53.50	0.999	0.10			0.0
6H-7, 30–32	54.00	1.008	0.09			0.0
7H-1, 30–32	54.50	1.017	0.14			0.0
7H-1, 80–82	55.00	1.027	0.10			0.0
7H-1, 130–132	55.50	1.036	0.15			0.0
7H-2, 30–32	56.00	1.045	0.13			0.0
7H-2, 80–82	56.50	1.062	0.14			0.0
7H-2, 130–132	57.00	1.087	0.10			0.0
7H-3, 30–32	57.50	1.112	0.21			0.0
7H-3, 80–82	58.00	1.137	0.13			0.0
7H-3, 130–132	58.50	1.162	0.23			0.0
7H-4, 30–32	59.00	1.187	0.21			0.0
7H-4, 80–82	59.50	1.212	0.21			0.0
7H-4, 130–132	60.00	1.237	0.28			8.3
7H-5, 30–32	60.50	1.262	0.16			0.0
7H-5, 80–82	61.00	1.287	0.13			0.0
7H-5, 130–132	61.50	1.312	0.15			0.0
7H-6, 30–32	62.00	1.337	0.11			0.0
7H-6, 80–82	62.50	1.362	0.09			0.0
7H-6, 130–132	63.00	1.387	0.02			0.0
7H-7, 30–32	63.50	1.412	0.17			0.0
8H-1, 30–32	64.00	1.437	0.19			0.0
8H-1, 71–73	64.41	1.457	0.15			0.0
8H-1, 130–132	65.00	1.487	0.12			0.0
8H-2, 30–32	65.50	1.512	0.21			0.0
8H-2, 80–82	66.00	1.537	0.08			0.0
8H-2, 130–132	66.50	1.562	0.15			0.8
8H-3, 30–32	67.00	1.587	0.08			0.0
8H-3, 92–94	67.62	1.618	0.10			0.0
8H-3, 130–132	68.00	1.637	0.11			0.0
8H-4, 30–32	68.50	1.662	0.07			0.0
8H-4, 80–82	69.00	1.686	0.10			0.0
8H-4, 130–132	69.50	1.711	0.18			0.7
8H-5, 30–32	70.00	1.736	0.07			0.0
8H-5, 80–82	70.50	1.761	0.10			0.0
8H-5, 130–132	71.00	1.786	0.15			0.8
8H-6, 30–32	71.50	1.811	0.09			0.0
8H-6, 96–98	72.16	1.844	0.12			0.0
8H-6, 130–132	72.50	1.861	0.15			0.0
8H-7, 30–32	73.00	1.886	0.11			0.0
9H-1, 30–32	73.50	1.911	0.08			0.0
9H-1, 80–82	74.00	1.936	0.07			0.0
9H-1, 130–132	74.50	1.961	0.04			0.0
9H-2, 30–32	75.00	1.986	0.04			0.0
9H-2, 80–82	75.50	2.011	0.06			0.0
9H-2, 130–132	76.00	2.036	0.08			0.0
9H-3, 30–32	76.50	2.061	0.06			0.0
9H-3, 80–82	77.00	2.086	0.06			0.0
9H-3, 130–132	77.50	2.111	0.07			0.0
9H-4, 30–32	78.00	2.136	0.07			0.0
9H-4, 80–82	78.50	2.161	0.07			0.0
9H-4, 130–132	79.00	2.186	0.07			0.0
9H-5, 30–32	79.50	2.211	0.08			0.0
9H-5, 80–82	80.00	2.236	0.07			0.0
9H-5, 130–132	80.50	2.261	0.08			0.0
9H-6, 30–32	81.00	2.286	0.07			0.0
10H-1, 30–32	83.00	2.385	0.08			0.0
10H-1, 80–82	83.50	2.410	0.10			0.0
10H-1, 130–132	84.00	2.435	0.04			0.0
10H-2, 30–32	84.50	2.460	0.09			0.0
10H-2, 81–83	85.01	2.486	0.10			0.0
10H-2, 133–135	85.53	2.512	0.07			0.0
10H-3, 30–32	86.00	2.535	0.10			0.0
10H-3, 79–81	86.49	2.560	0.03			0.0
10H-3, 135–137	87.05	2.588	0.05			0.0
10H-4, 30–32	87.50	2.608	0.07			0.0
10H-4, 80–82	88.00	2.627	0.05			0.0
10H-4, 130–132	88.50	2.646	0.10			0.0
10H-5, 30–32	89.00	2.665	0.04			0.0
10H-5, 80–82	89.50	2.684	0.02			0.0
10H-5, 130–132	90.00	2.703	0.05			0.0
10H-6, 30–32	90.50	2.722	0.02			0.0

Table 2 (continued).

Core, section, interval (cm)	Depth (mbsf)	Age (Ma)	TOC (wt%)	N (wt%)	TOC/N	$CaCO_3$ (wt%)
10H-6, 80–82	91.00	2.741	0.12			0.0
10H-6, 130–132	91.50	2.760	0.11			0.0
10H-7, 30–32	92.00	2.779	0.10			0.0
11H-1, 30–32	92.50	2.798	0.08			0.0
11H-1, 80–82	93.00	2.817	0.12			0.0
11H-1, 130–132	93.50	2.836	0.08			0.0
11H-2, 30–32	94.00	2.855	0.10			0.0
11H-2, 80–82	94.50	2.874	0.40			0.0
11H-2, 130–132	95.00	2.893	0.04			0.0
11H-3, 30–32	95.50	2.912	0.25			0.7
11H-3, 80–82	96.00	2.931	0.21			0.8
11H-3, 130–132	96.50	2.950	0.25			2.1
11H-4, 30–32	97.00	2.969	0.21			6.4
11H-4, 80–82	97.50	2.988	0.25			1.8
11H-4, 130–132	98.00	3.007	0.15			0.0
11H-5, 30–32	98.50	3.026	0.10			10.7
11H-5, 80–82	99.00	3.045	0.12			9.5
12H-1, 30–32	102.00	3.160	0.21			10.6
12H-1, 80–82	102.50	3.179	0.25			3.1
12H-1, 130–132	103.00	3.198	0.13			5.7
12H-2, 30–32	103.50	3.217	0.18			3.1
12H-2, 80–82	104.00	3.236	0.15			5.3
12H-2, 130–132	104.50	3.255	0.20			5.9
12H-3, 30–32	105.00	3.274	0.15			8.6
12H-3, 80–82	105.50	3.293	0.21			19.1
12H-3, 130–132	106.00	3.312	0.33			4.1
12H-4, 30–32	106.50	3.331	0.22			1.0
12H-4, 80–82	107.00	3.350	0.18			11.5
12H-4, 130–132	107.50	3.369	0.17			1.2
12H-5, 30–32	108.00	3.388	0.15			3.4
12H-5, 80–82	108.50	3.407	0.13			5.9
12H-5, 130–132	109.00	3.426	0.13			3.1
12H-6, 30–32	109.50	3.445	0.12			5.8
12H-6, 80–82	110.00	3.464	0.05			0.0
12H-6, 130–132	110.50	3.483	0.06			0.0
12H-7, 30–32	111.00	3.502	0.17			0.0

Note: $CaCO_3$ = carbonate, TOC = total organic carbon, N = total nitrogen, and TOC/N = ratio of organic carbon to nitrogen.

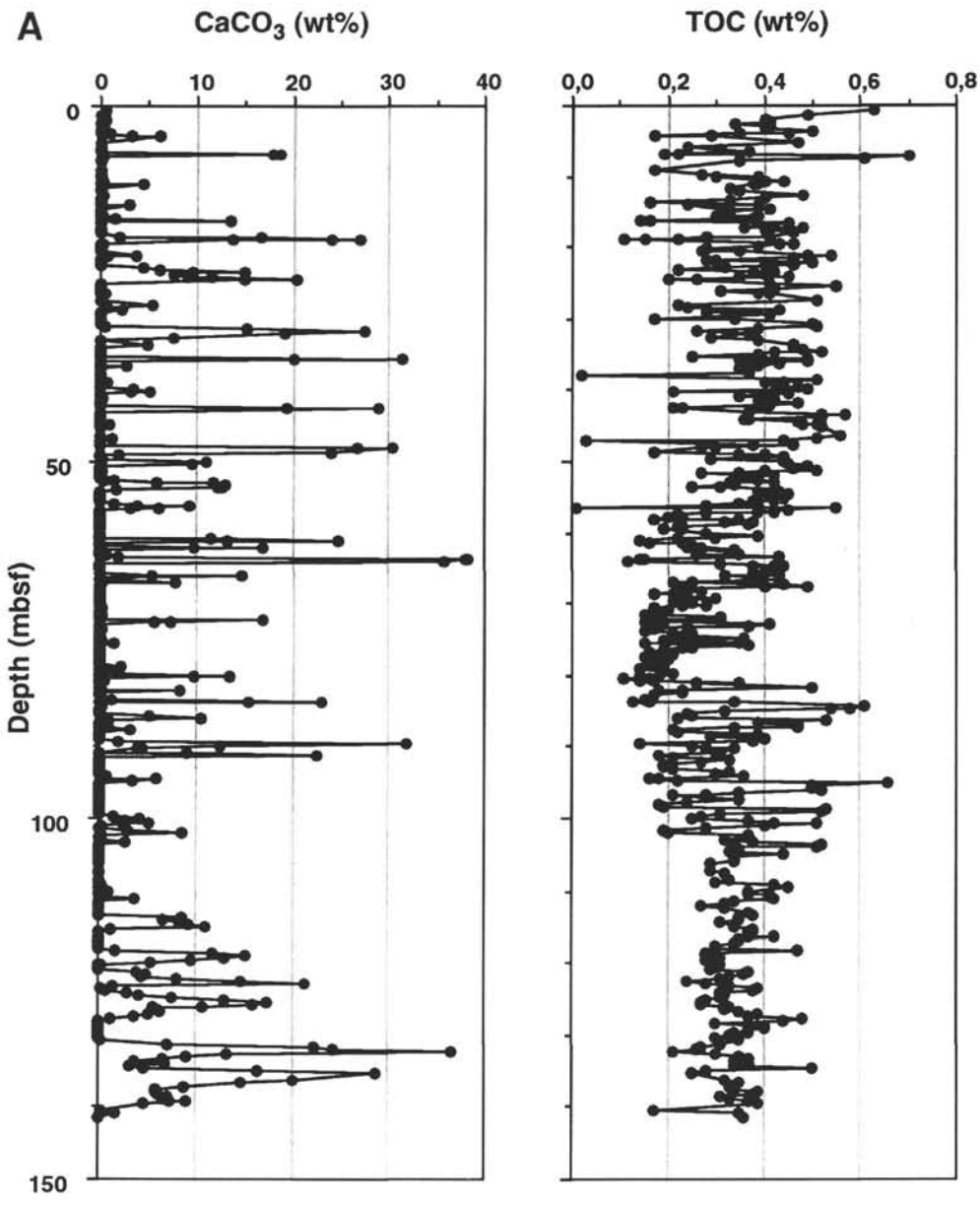

Figure 1. Carbonate and organic carbon concentrations vs. depth (**A**) and age (**B**), Hole 882A.

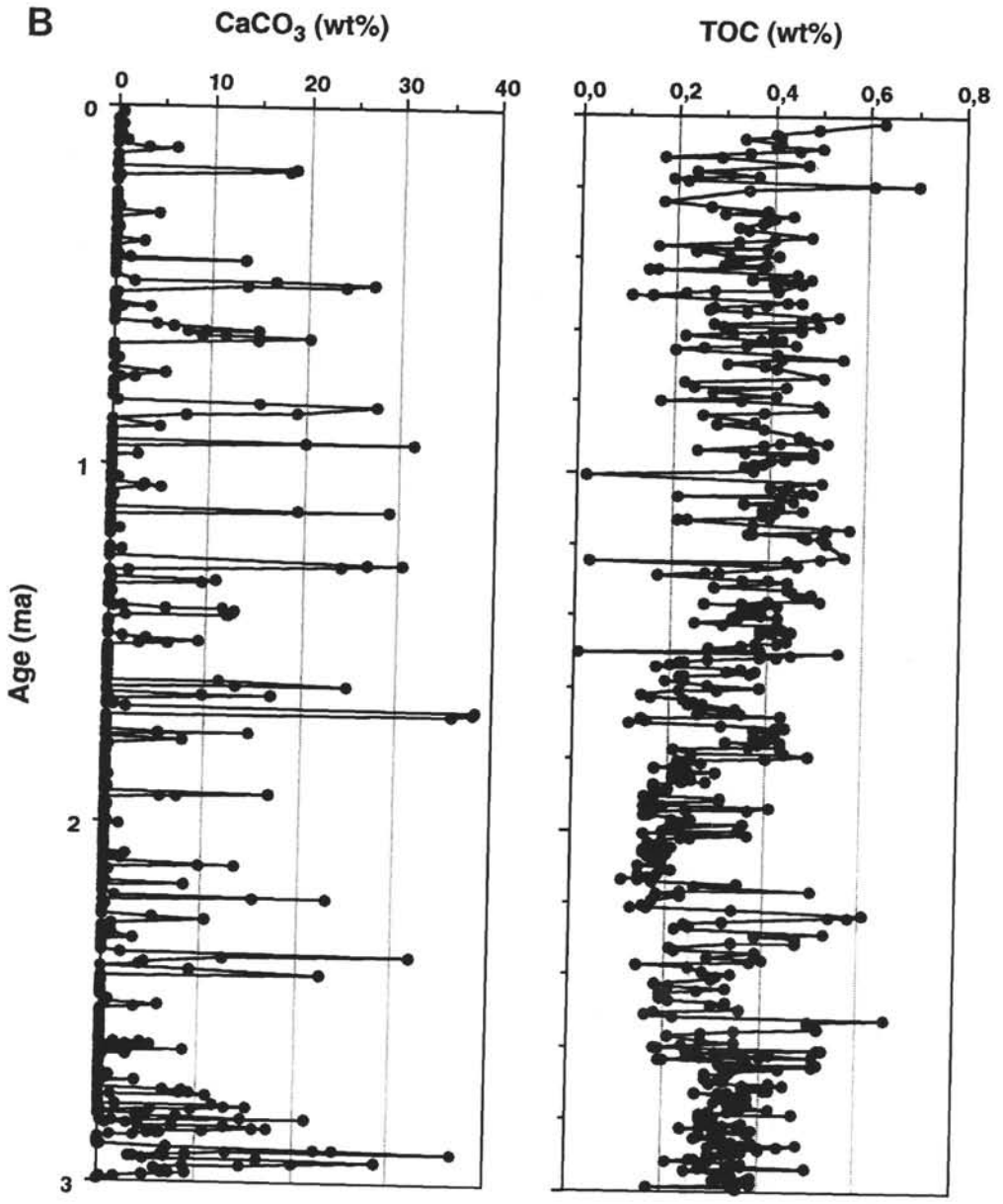

Figure 1 (continued).

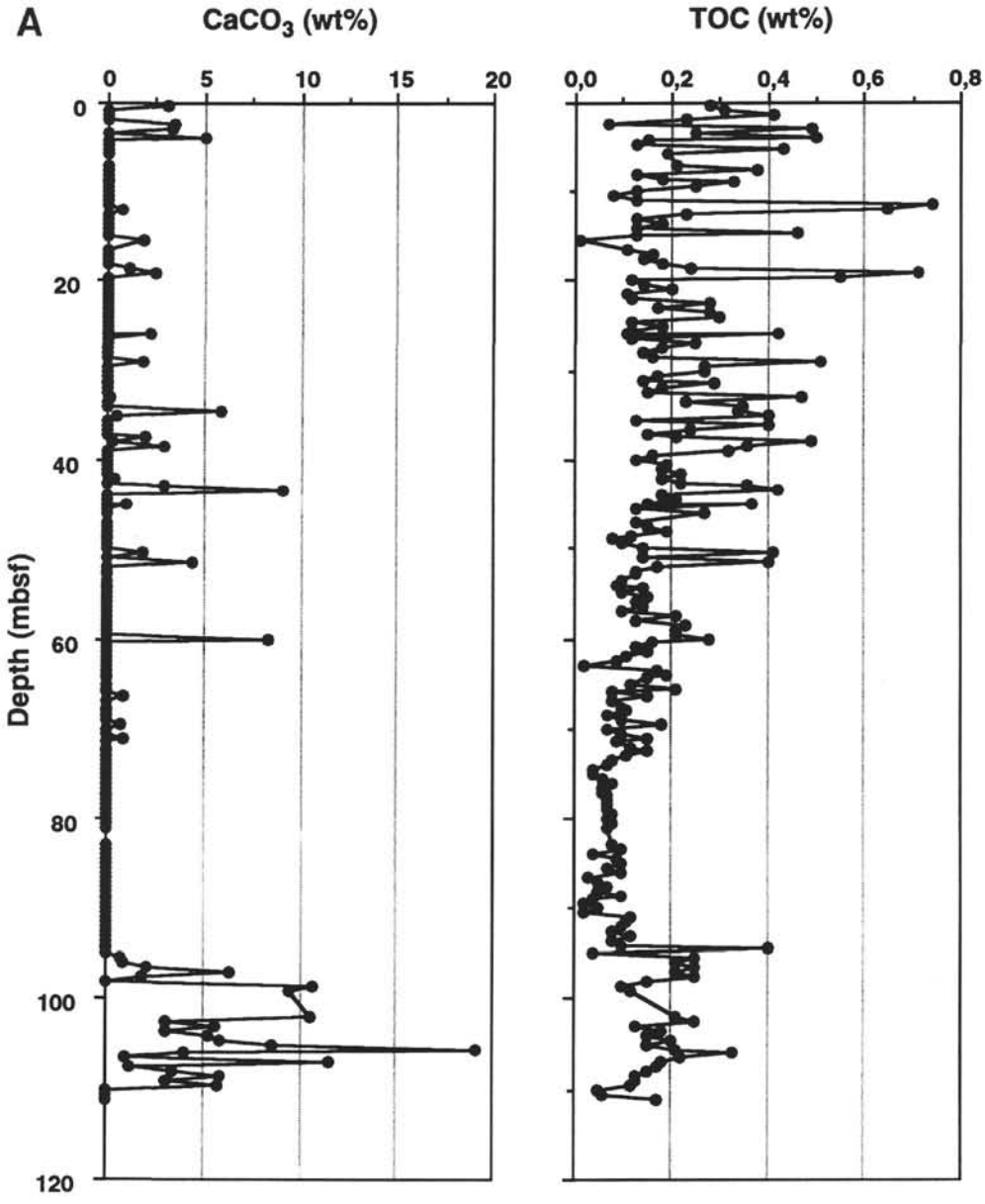

Figure 2. Carbonate and organic carbon concentrations vs. depth (**A**) and age (**B**), Hole 887A.

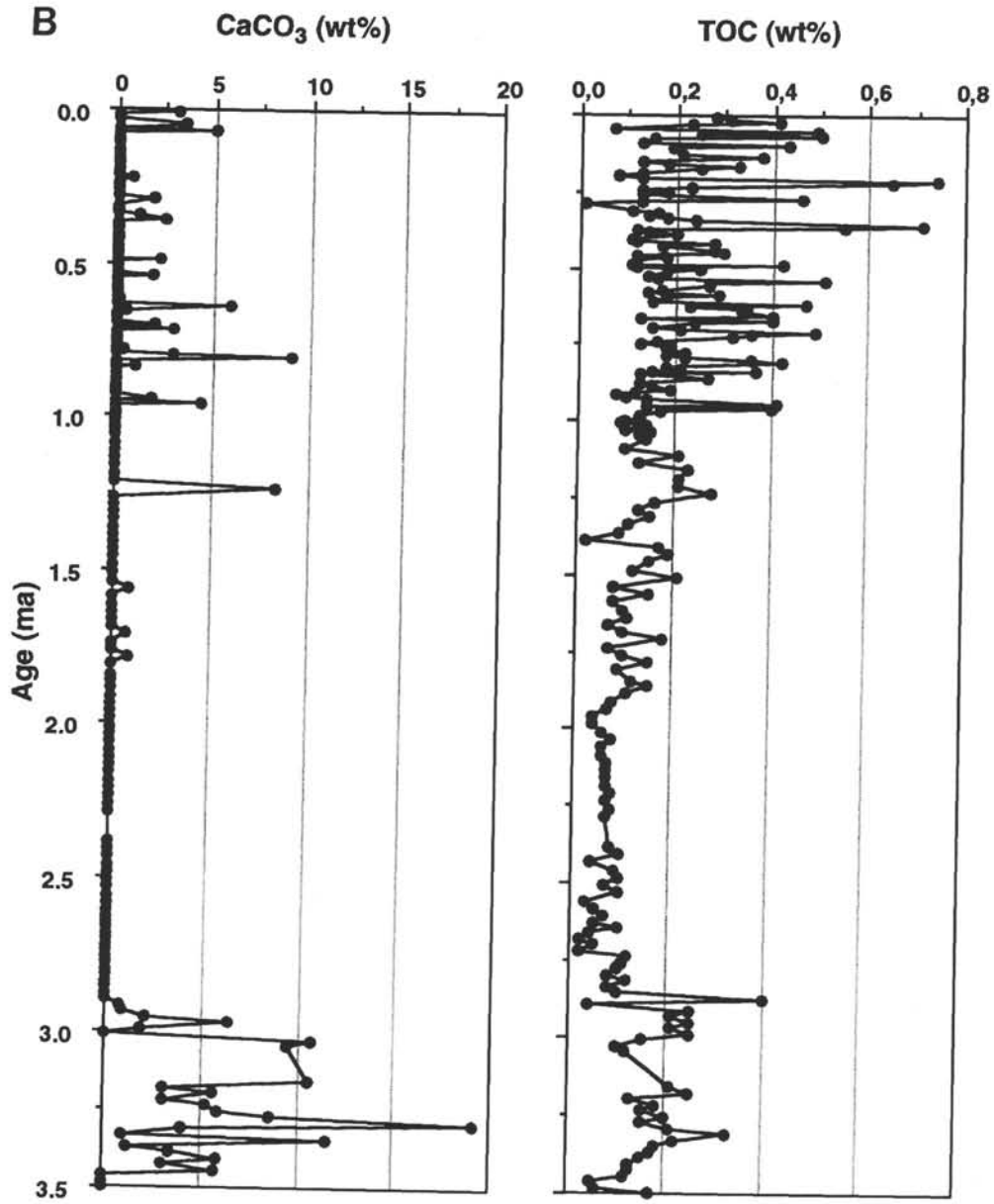

Figure 2 (continued).