Data report: magnetic properties of unconsolidated deep-sea sediments from the North Atlantic, IODP Expedition 303 Sites U1302–U1304 and U1308[1]

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Chapter contents

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Abstract

Magnetic properties were measured on unconsolidated deep-sea sediments from Integrated Ocean Drilling Program Expedition 303 Sites U1302–U1304 and U1308 in the North Atlantic. Our results indicate general correspondences between rock magnetic parameters (i.e., remanent magnetization, low-field mass specific magnetic susceptibility, anhysteretic remanent magnetization, saturation remanent magnetization, and saturation magnetization) and visual core description–based lithology. Most magnetic grains in the sediments are in the pseudosingle-domain region, whereas magnetic grains in laminated diatom ooze at Site U1304 are in the multidomain region. Results of thermomagnetometry imply that the magnetic carrier in sediments at Sites U1302 and U1303 and at 20.9 meters composite depth (mcd) at Site U1308 is constituted by magnetite. On the other hand, maghemitized magnetite constitutes the magnetic carrier in sediments at Site U1304 and the upper 20.9 mcd of Site U1308.

Introduction

Rock magnetic properties of marine sediments vary with changes in the abundance, type, and grain size of magnetic minerals. In general, magnetic minerals in marine sediments are either detrital or authigenic in origin. Stability of iron oxides and sulfides in marine sediments is susceptible to changing redox conditions in interstitial waters with burial depth. Therefore, the original magnetic signals recorded in the sediments are subject to postdepositional diagenetic alteration that could complicate paleomagnetic and paleoenvironmental interpretations (e.g., Karlin and Levi, 1983).

To test the possible effect of early diagenesis on magnetic signals in the sediments, we qualitatively identified magnetic mineral species by measuring magnetic properties in hemipelagic sediments recovered from Integrated Ocean Drilling Program (IODP) Expedition 303 Sites U1302–U1304 and U1308 in the North Atlantic (Fig. **F1**).

Materials and methods

Sediment samples from Sites U1302–U1304 and U1308 used in this study were taken aboard the *JOIDES Resolution* during Expedi-

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tion 303 using either 7 cm^3 plastic cubes or 1 cm^3 plugs (i.e., splits of the shipboard carbon samples).

One cube was collected per section for the measurements. Wet cube samples were used to measure natural remanent magnetization (NRM), low-field mass-specific magnetic susceptibility (χ), and anhysteretic remanent magnetization (ARM). NRM was measured with a 2G Model 760 superconducting rock magnetometer, and χ values were made with a Kappabridge KLY 3S at Kyoto University. Samples were given ARM in a steady direct current (DC) biasing field of 0.1 mT in a peak alternating field (AF) of 80 mT using a 2G Model 760 at the Geological Survey of Japan. ARM susceptibility (χ_{ARM}) is derived by dividing ARM by the bias magnetic field. NRM, χ, and χ_{ARM} generally indicate the concentration of magnetic minerals in samples. Upon completion of above measurements, wet cube samples were then oven-dried at 40°C and weighed to calculate dry-based mass-specific magnetic parameters (Table T1).

Splits of the 1 cm^3 plug samples (powdered) were used for magnetic hysteresis and thermomagnetic analyses. Two plug samples were collected per core (Table T2). Powder samples of 0.3–1 mg were prepared for magnetic hysteresis analysis. Each powder sample was wrapped with aluminum foil ~5 mm long. Coercivity (Hc), remanent coercivity (Hcr), saturation remanent magnetization (Mr), saturation magnetization (Ms), and high-field magnetic susceptibility (HFMS) were obtained with an alternating gradient-force magnetometer (Princeton Measurement Corporation, MicroMag. Model 2900-02) at Kyoto University. Ms and Mr indicate the concentration of magnetic minerals in samples. Hcr and Hc are reflected in magnetic grain size in the samples. Using the definition by Day et al. (1977), Hcr/Hc and Mr/Ms values are calculated and presented in Table T2. HFMS value was determined from the linear trend of the induced magnetization between 0.7 and 1.0 T and is influenced by paramagnetic, diamagnetic, and antiferromagnetic signals in samples. In order to diagnose for magnetic minerals, high- and low-temperature magnetometry were performed. To measure low-temperature magnetometry, ~20 mg of powder sample was wrapped with plastic film. Isothermal remanent magnetization (IRM) was imparted at 5 K in a DC field of 1.0 T, and changes in the IRM were measured after each heating step of 1 K up to 300 K using a Quantum Design MPMS XL5 at Okayama University of Science (samples from Sites U1302 and U1303) and the Center for Advanced Marine Core Research in Kochi University (samples from Sites U1304 and U1308). To measure high-temperature magnetometry, a sediment sample from Site U1308 was heated from room temperature to 600°C and cooled in air at a rate of ~8°C/min in an applied field of 0.4 T using a thermomagnetic balance at Doshisha University.

Results

Sites U1302 and U1303

Downcore variations of rock magnetic parameters are shown in Figure F2. NRM variations show similar trends with χ, χ_{ARM}, Mr, Ms, and HFMS. Decreases of NRM, χ, and χ_{ARM} values are found below 115 meters composite depth (mcd). The lithology changes from nannofossil silty clay to matrix-supported intraclast conglomerate downward (Tables T1, T2). Hcr/Hc and Ms/Mr ratios suggest that most magnetic grains in the samples are in the pseudosingle-domain (PSD) region (Day et al., 1977). At 59 and 78–83 mcd, a decrease in these ratios is found and lithology changes from clayey silt nannofossil ooze to slity clay (Table T2).

Site U1304

Rock magnetic parameters are shown in Figure F3. NRM, χ, χ_{ARM}, Ms, and HFMS values fluctuate considerably and show similar downcore patterns. Extremely low values of NRM, χ, and χ_{ARM} are observed at 46–47, 57–58, and 95–105 mcd. The Hcr/Hc ratio is characterized by two maxima, and minima of Mr/Ms are recognized at these intervals. These values show that magnetic grains are possibly in the multidomain region. Except for these depths, Hcr/Hc and Ms/Mr ratios indicate that magnetic grains in the samples are in the PSD region (Day et al., 1977). The laminated diatom ooze is recognized in these intervals (Tables T1, T2).

Site U1308

Downcore rock magnetic parameters are shown in Figure F4. NRM shows that relatively high values are found between 140 and 145 mcd. However, no notable change is observed in lithology at that depth interval (Tables T1, T2). The value of χ gradually increases downhole and is similar in overall trends to χ_{ARM} and Mr. The lithology gradually changes from nannofossil ooze silty clay to nannofossil ooze with depth (Tables T1, T2). Hcr/Hc and Mr/Ms values show that most magnetic grains in the samples are in the PSD region (Day et al., 1977).

Thermomagnetometry

Low-temperature magnetometry results are shown in Figure F5. Samples were mainly selected from the upper sediments. The Verwey transition suggesting the

presence of magnetite (110–120 K) (Verwey, 1939) is clear in Site U1302 and U1303 samples (Fig. F5A–F5E). Low-temperature magnetometry results from Site U1304 sediments are shown in Figure F5F–F5I. We can observe the unclear Verwey transition, which is indicative of the occurrence of maghemitization (Özdermir et al., 1993).

The thermomagnetic curve of the topmost sediments from Site U1308 is shown in Figure F6. The Curie point of magnetite (at 580°C) is not clearly defined in the heating curve; it only appears on the cooling curve. In low-temperature magnetometry results for Site U1308 samples, the shape of the Verwey transition of Figure F5J–F5M is much more pronounced compared to that in Figure F5N. Verwey transitions are invisible above 7.5 mcd (Fig. F5J–F5K), but they are slightly evident below 11.0 mcd (Fig. F5L–F5N).

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Figure F1. Location map of Expedition 303 sites.

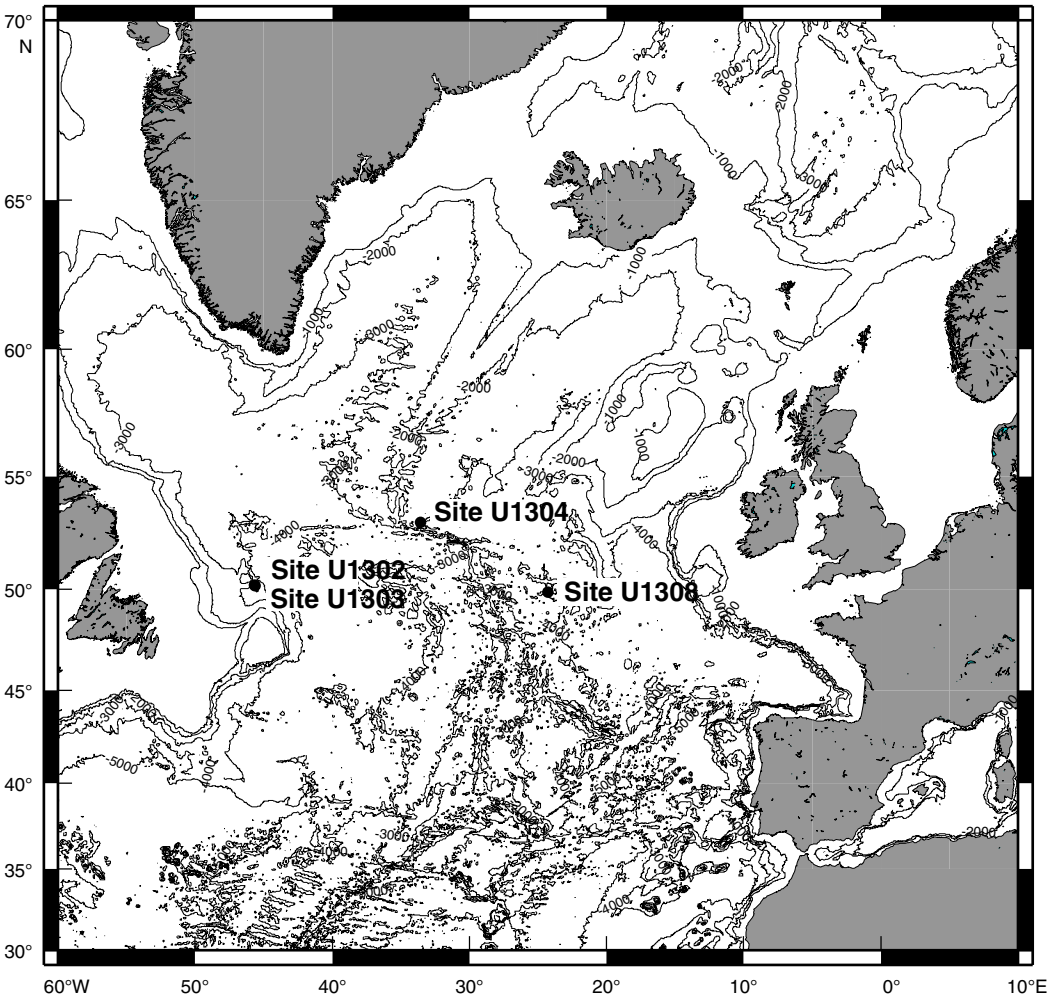

Figure F2. Rock magnetic parameters, Sites U1302 and U1303. NRM = natural remanent magnetization, χ = low-field magnetic susceptibility, χ_{ARM} = susceptibility of anhysteretic remanent magnetization (ARM), HFMS = high-field magnetic susceptibility, Mr = isothermal remanent magnetization, Ms = saturated magnetization, Hc = coercivity, Hcr = remanent coercivity. mcd = meters composite depth.

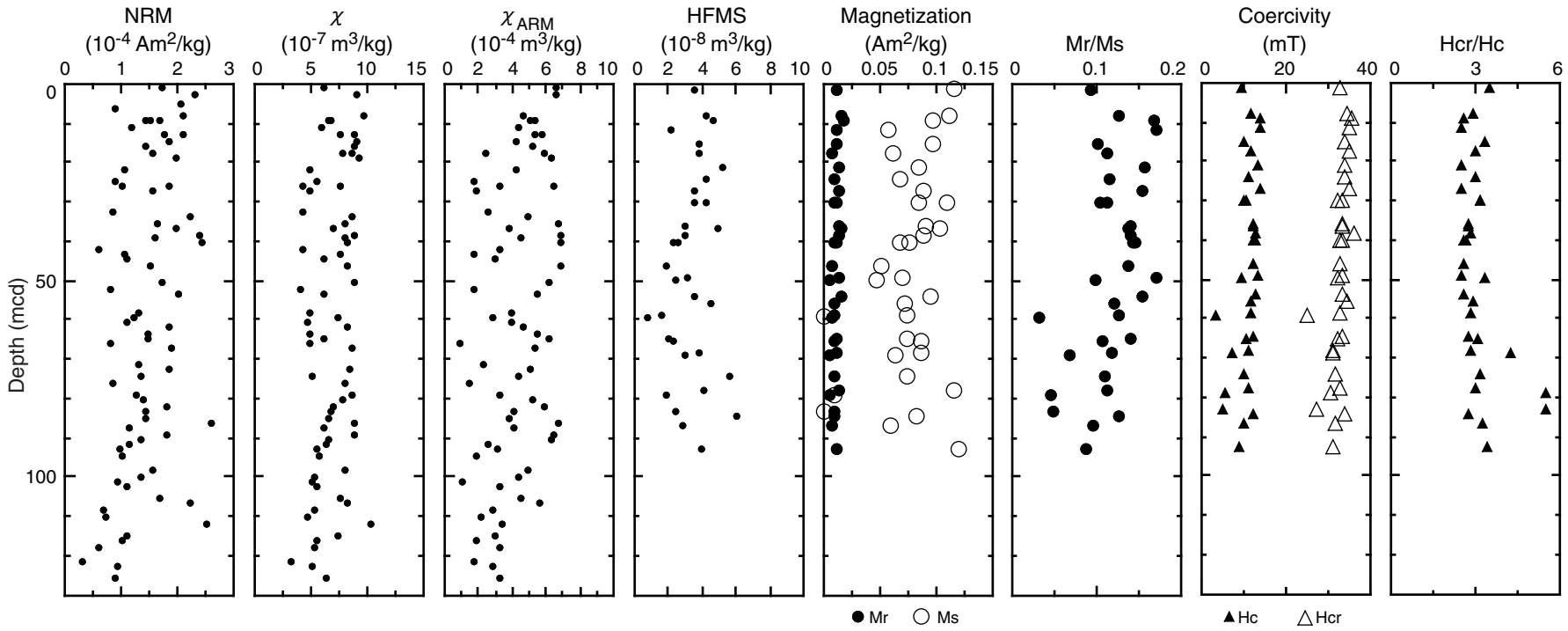

Figure F3. Rock magnetic parameters, Site U1304. NRM = natural remanent magnetization, χ = low-field magnetic susceptibility, χ_{ARM} = susceptibility of anhysteretic remanent magnetization (ARM), HFMS = high-field magnetic susceptibility, Mr = isothermal remanent magnetization, Ms = saturated magnetization, Hc = coercivity, Hcr = remanent coercivity. mcd = meters composite depth.

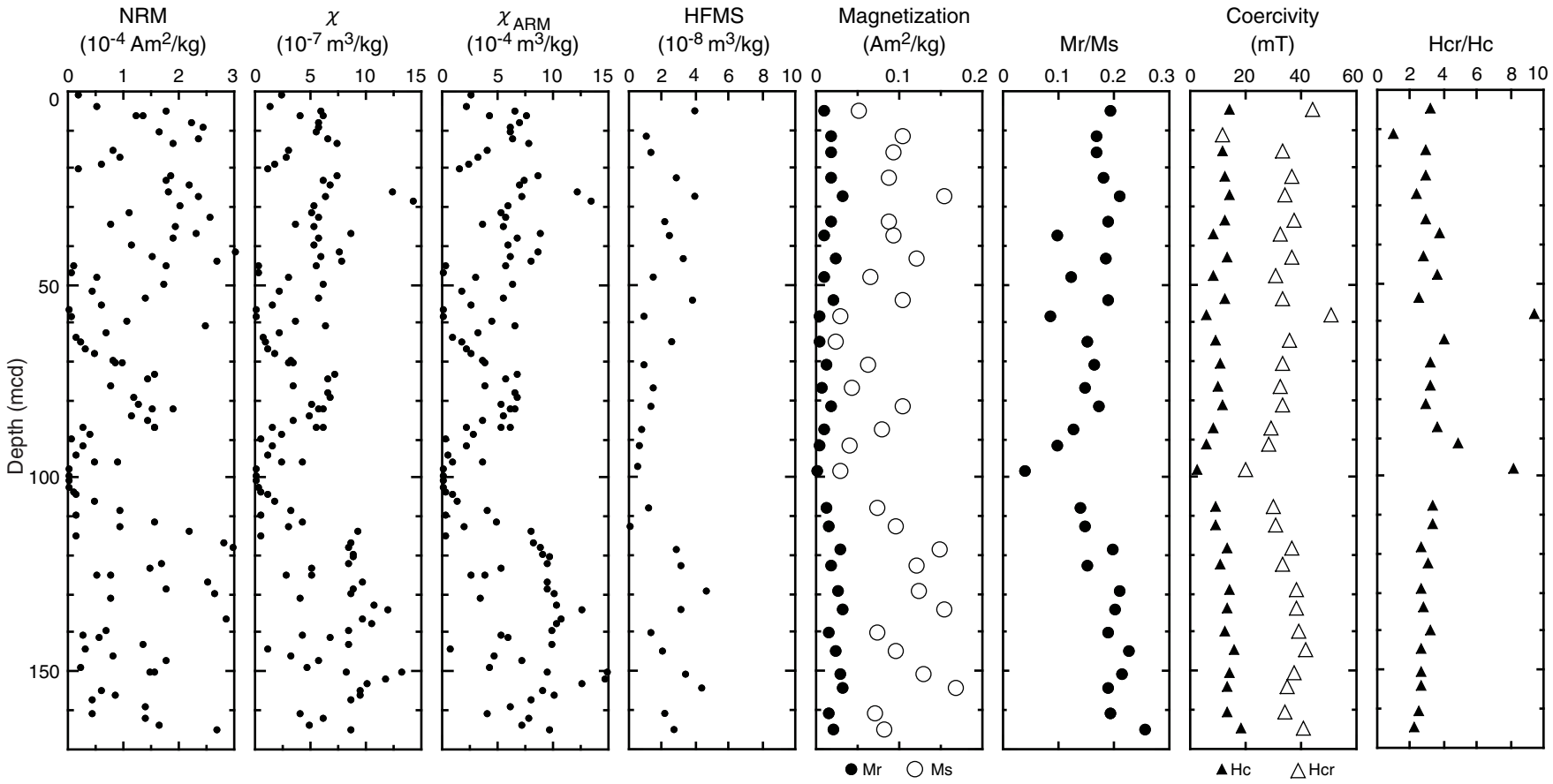

Figure F4. Rock magnetic parameters, Site U1308. NRM = natural remanent magnetization, χ = low-field magnetic susceptibility, χ_{ARM} = susceptibility of anhysteretic remanent magnetization (ARM), HFMS = high-field magnetic susceptibility, Mr = isothermal remanent magnetization, Ms = saturated magnetization, Hc = coercivity, Hcr = remanent coercivity. mcd = meters composite depth.

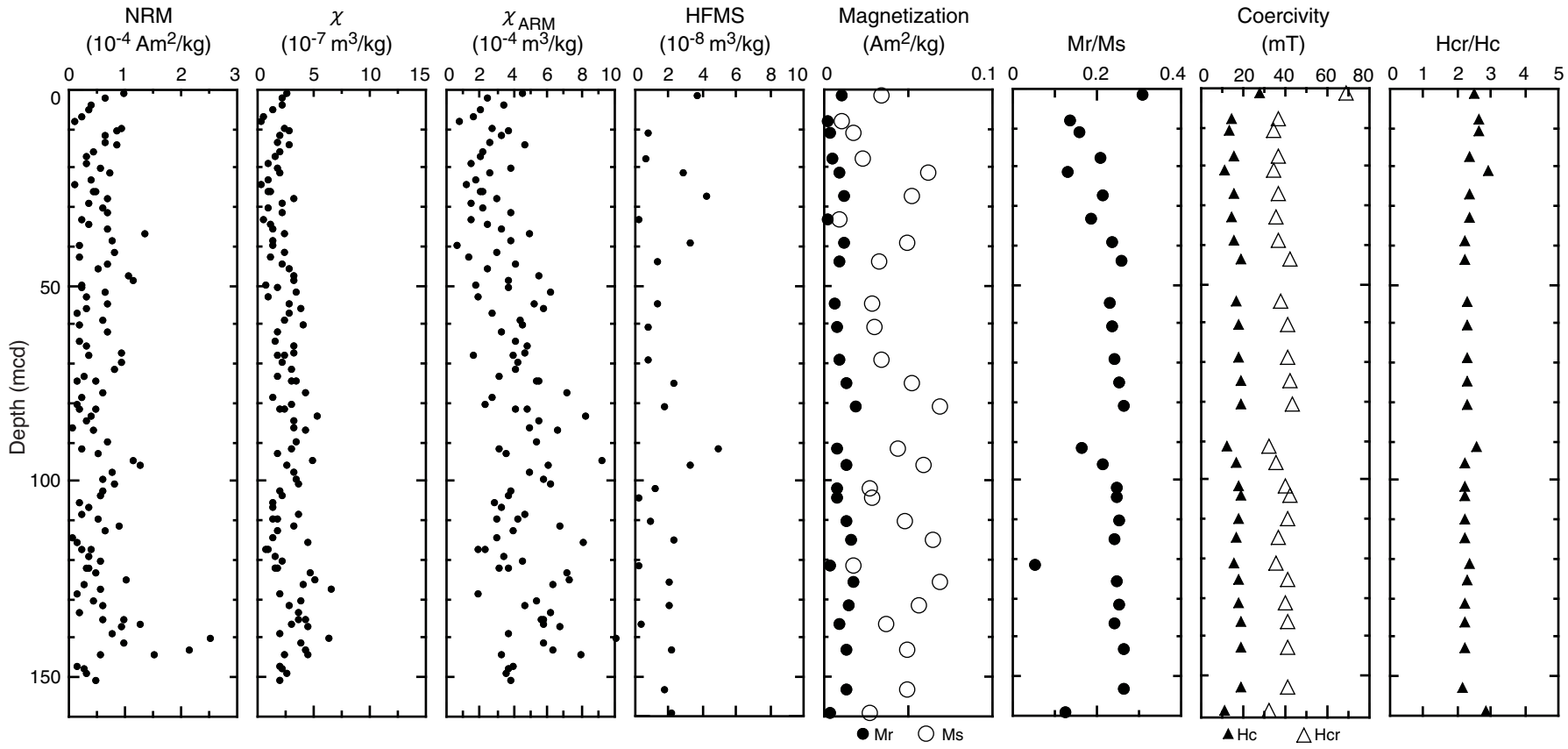

Figure F5. Results of low-temperature magnetometry. IRM = isothermal remanent magnetization.

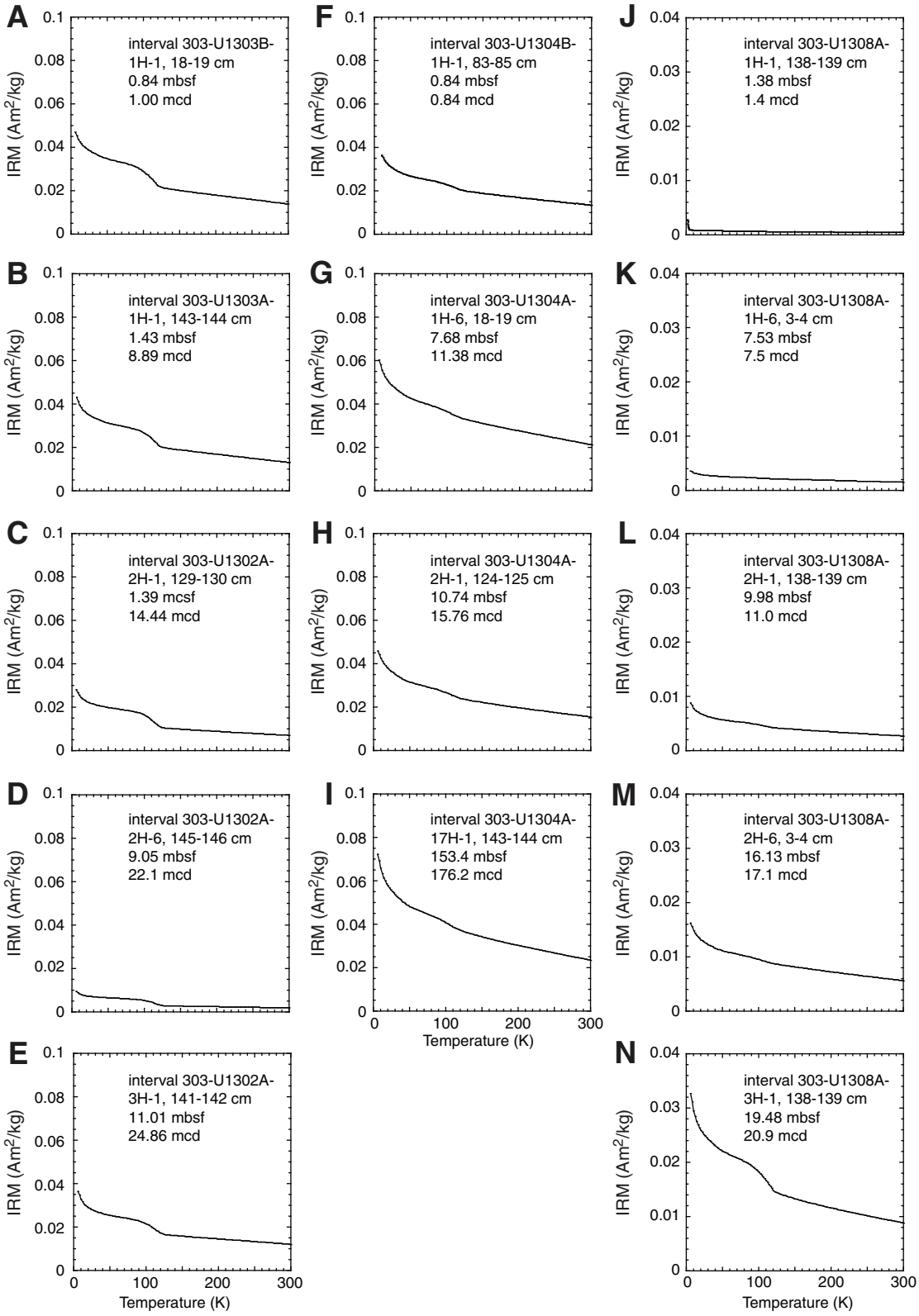

Figure F6. Results of high-temperature magnetometry.

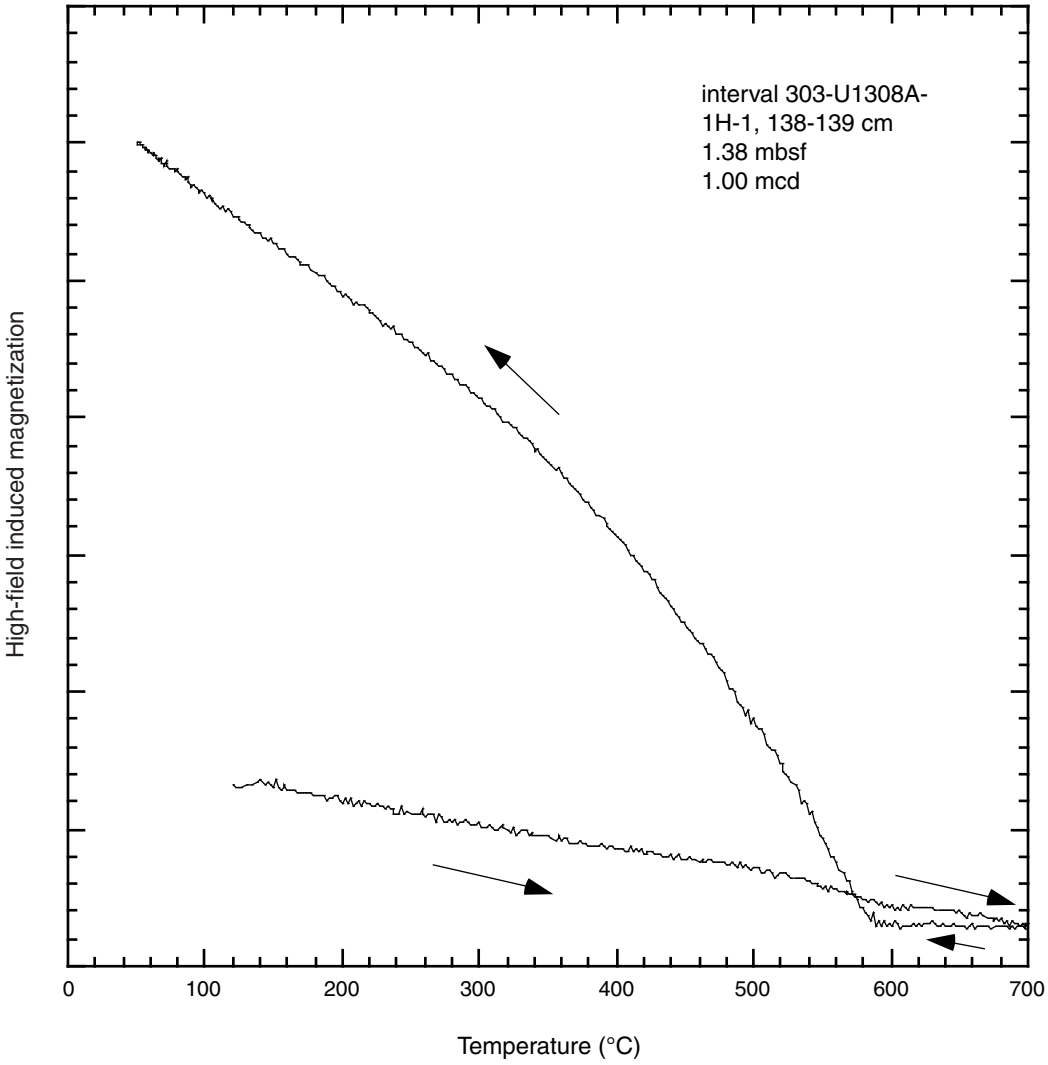

Table T1. Rock magnetic parameters and lithology, Sites U1302–U1304 and U1308. (See table notes.) (Continued on next four pages.)

Core, section, interval (cm)	Depth (mbsf)	Depth (mcd)	Sample weight (g)	NRM (Am^2/kg)	χ (m^3/kg)	χ_{ARM} (m^3/kg)	Lithology
303-U1302A-							
4H-3, 78–80	22.89	38.72	8.86	1.59.E–04	7.96E–07	4.52E–04	Foraminifer silty sand
4H-4, 74–76	24.35	40.18	7.40	2.43.E–04	8.19E–07	6.75E–04	Silty clay
4H-5, 74–76	25.85	41.68	8.52	5.86.E–05	4.16E–07	3.18E–04	Foraminifer sand
6H-3, 74–77	41.85	60.17	7.62	1.09.E–04	4.50E–07	3.88E–04	Nannofossil silty clay
6H-4, 74–78	43.35	61.67	8.48	1.84.E–04	8.23E–07	4.61E–04	Nannofossil silty clay
6H-5, 74–79	44.85	63.17	7.04	1.48.E–04	4.83E–07	5.45E–04	Silty clay nannofossil ooze
6H-6, 74–78	46.35	64.67	8.14	1.45.E–04	6.09E–07	6.13E–04	Silty clay nannofossil ooze
10H-2, 74–79	78.35	102.03	9.40	1.09.E–04	5.47E–07	3.24E–04	Silty clay
10H-4, 74–79	81.35	105.03	10.11	1.68.E–04	7.52E–07	4.46E–04	Silty clay
10H-5, 74–80	82.85	106.53	9.52	2.22.E–04	8.21E–07	5.63E–04	Nannofossil clay
10H-6, 74–80	84.35	108.03	10.03	6.79.E–05	5.32E–07	2.83E–04	Matrix-supported interaclast conglomerate
11H-1, 74–81	86.35	110.03	9.34	7.01.E–05	4.54E–07	2.14E–04	Matrix-supported interaclast conglomerate
11H-2, 74–81	87.85	111.53	11.13	2.48.E–04	1.03E–06	3.34E–04	Matrix-supported interaclast conglomerate
11H-4, 74–82	90.85	114.53	10.98	1.10.E–04	7.20E–07	2.91E–04	Matrix-supported interaclast conglomerate
11H-5, 74–82	92.35	116.03	10.62	1.01.E–04	5.34E–07	1.77E–04	Silty clay
11H-6, 74–83	93.85	117.53	10.64	5.77.E–05	5.17E–07	3.16E–04	Calcareous ooze
12H-2, 74–83	97.35	121.03	10.73	2.74.E–05	3.06E–07	1.73E–04	Matrix-supported interaclast conglomerate
12H-3, 74–84	98.85	122.53	10.87	9.38.E–05	5.10E–07	2.73E–04	Matrix-supported interaclast conglomerate
12H-5, 74–84	101.85	125.53	8.88	8.56.E–05	6.19E–07	3.14E–04	Matrix-supported interaclast conglomerate
303-U1302B-							
1H-3, 74–76	3.75	12.65	7.57	2.09.E–04	8.72E–07	5.68E–04	Nannofossil ooze silt
1H-4, 74–76	5.25	14.15	7.79	1.83.E–04	8.89E–07	4.20E–04	Nannofossil ooze silt
1H-4, 74–76	6.75	15.65	9.03	1.43.E–04	8.69E–07	5.20E–04	Nannofossil ooze silt
2H-4, 74–76	14.95	24.39	11.42	8.70.E–05	5.33E–07	1.65E–04	Silty clay
2H-5, 74–76	16.45	25.89	9.27	1.00.E–04	4.13E–07	3.24E–04	Silty clay
3H-2, 74–76	21.45	32.00	9.11	8.40.E–05	4.24E–07	2.46E–04	Silty clay nannofossil ooze
3H-3, 74–76	22.95	33.50	7.78	2.22.E–04	8.62E–07	4.81E–04	Nannofossil silty clay
3H-4, 74–76	24.45	35.00	7.23	1.64.E–04	7.85E–07	6.71E–04	Nannofossil silty clay
3H-5, 74–76	25.95	36.50	6.68	1.97.E–04	6.80E–07	3.79E–04	Silty clay
3H-6, 74–76	27.45	38.00	6.63	2.38.E–04	8.73E–07	6.86E–04	Silty clay
4H-2, 74–76	30.95	42.72	10.26	1.05.E–04	7.54E–07	1.61E–04	Nannofossil silty clay
4H-3, 74–76	32.45	44.22	10.34	1.08.E–04	6.13E–07	2.96E–04	Silty clay
4H-4, 74–76	33.95	45.72	7.42	1.51.E–04	8.14E–07	6.77E–04	Nannofossil ooze silt
5H-4, 74–76	43.45	57.93	8.53	1.31.E–04	4.82E–07	3.85E–04	Nannofossil ooze with silty clay
5H-5, 70–72	44.95	59.43	10.40	1.21.E–04	7.36E–07	2.76E–04	Nannofossil ooze with silty clay
6H-3, 74–76	51.45	65.59	12.17	7.84.E–05	4.76E–07	8.25E–05	Silty clay
6H-4, 74–76	52.95	67.09	9.63	1.90.E–04	8.51E–07	5.35E–04	Silty clay
7H-3, 74–76	60.95	75.68	11.29	8.52.E–05	7.88E–07	1.43E–04	Sandy clay calcareous ooze
7H-5, 74–76	63.95	78.68	9.35	1.25.E–04	8.61E–07	3.14E–04	Clay
8H-2, 74–76	68.95	85.74	7.55	2.57.E–04	8.83E–07	6.69E–04	Silty clay
8H-3, 74–76	70.45	87.24	9.47	1.11.E–04	5.97E–07	4.09E–04	Silty clay
8H-4, 74–76	71.95	88.74	9.30	1.80.E–04	8.74E–07	6.33E–04	Silty clay
8H-5, 74–76	73.45	90.24	9.69	1.35.E–04	6.41E–07	6.31E–04	Clay with foraminifers
9H-3, 74–76	79.95	98.03	10.57	1.54.E–04	7.83E–07	4.88E–04	Clay
9H-4, 74–76	81.45	99.53	9.50	1.32.E–04	5.31E–07	4.25E–04	Silty clay
9H-5, 74–76	82.95	101.03	12.89	9.04.E–05	5.06E–07	9.23E–05	Silty clay
303-U1302C-							
1H-4, 74–76	5.25	9.27	7.65	1.40.E–04	6.44E–07	4.94E–04	Silty clay
1H-5, 74–76	6.75	10.77	8.62	1.16.E–04	5.88E–07	4.28E–04	Silty clay
1H-6, 74–76	8.25	12.27	7.72	1.74.E–04	7.49E–07	5.23E–04	Silty clay
2H-4, 74–76	14.75	18.81	7.35	1.95.E–04	9.14E–07	6.32E–04	Silty clay
2H-6, 74–76	17.75	21.81	8.16	1.05.E–04	4.89E–07	4.24E–04	Silty clay foraminifers
3H-2, 74–76	21.25	25.49	8.23	1.85.E–04	7.56E–07	6.43E–04	Silty clay
3H-2, 74–76	22.75	26.99	8.49	1.55.E–04	4.86E–07	1.86E–04	Silty clay
7H-3, 74–76	60.75	71.04	10.33	1.29.E–04	2.59E–06	2.25E–04	Silty clay nannofossil ooze
7H-4, 74–76	62.25	72.54	8.33	1.83.E–04	8.39E–07	5.01E–04	Silty clay nannofossil ooze
7H-5, 74–76	63.75	74.04	7.37	1.33.E–04	4.99E–07	4.30E–04	Silty clay nannofossil ooze
8H-2, 74–76	68.75	80.10	8.84	1.39.E–04	7.73E–07	5.14E–04	Silty clay nannofossil ooze
8H-3, 74–76	70.25	81.60	8.10	1.78.E–04	6.98E–07	5.81E–04	Silty clay nannofossil ooze
8H-4, 74–76	71.75	83.10	9.01	1.40.E–04	6.73E–07	3.97E–04	Silty clay nannofossil ooze
8H-5, 74–75	73.25	84.60	10.42	1.43.E–04	6.54E–07	3.77E–04	Silty clay nannofossil ooze
9H-2, 74–76	78.25	91.14	10.99	1.14.E–04	6.28E–07	2.52E–04	Silty clay nannofossil ooze
9H-3, 74–76	79.75	92.64	10.33	9.73.E–05	5.41E–07	3.02E–04	Silty clay nannofossil ooze
9H-4, 74–76	81.25	94.14	11.44	1.00.E–04	5.59E–07	1.77E–04	Clay

Table T1 (continued). (Continued on next page.)

Core, section, interval (cm)	Depth (mbsf)	Depth (mcd)	Sample weight (g)	NRM (Am^2/kg)	χ (m^3/kg)	χ_{ARM} (m^3/kg)	Lithology
303-U1302D-							
1H-1, 84–86	0.85	0.85	6.12	1.71.E–04	6.05E–07	6.52E–04	Nannofossil ooze with clay
1H-2, 74–76	2.35	2.35	7.34	2.30.E–04	8.99E–07	6.50E–04	Silty clay
303-1303A-							
5H-2, 74–76	39.15	50.28	8.38	1.73.E–04	8.66E–07	6.13E–04	Silty nannofossil ooze
5H-3, 74–76	40.65	51.78	10.84	7.87.E–05	4.00E–07	1.73E–04	Silty nannofossil ooze
5H-4, 74–76	42.15	53.28	7.33	2.00.E–04	6.01E–07	5.47E–04	Silty nannofossil ooze
303-1303B-							
1H-5, 74–76	6.75	7.57	8.86	2.10.E–04	9.56E–07	4.54E–04	Silty nannofossil ooze
1H-6, 74–76	8.25	9.07	7.05	1.49.E–04	6.70E–07	5.23E–04	Silty nannofossil ooze
303-1304A-							
1H-1, 83–85	0.84	4.54	5.06	1.77.E–04	5.95.E–07	6.47.E–04	Nannofossil ooze
1H-3, 83–85	3.84	7.54	5.55	2.19.E–04	5.71.E–07	6.81.E–04	Nannofossil ooze
1H-4, 83–85	5.34	9.04	5.70	2.42.E–04	5.62.E–07	6.11.E–04	Diatom nannofossil ooze
2H-2, 83–85	11.84	16.86	6.12	9.11.E–05	2.67.E–07	3.06.E–04	Diatom nannofossil ooze
2H-3, 83–85	13.34	18.36	6.43	5.76.E–05	1.67.E–07	2.26.E–04	Diatom nannofossil ooze
2H-4, 83–85	14.84	19.86	4.25	1.67.E–05	9.64.E–08	1.37.E–04	Diatom ooze
2H-5, 83–85	16.34	21.36	5.61	1.83.E–04	7.25.E–07	8.46.E–04	Diatom nannofossil ooze
2H-6, 83–85	17.84	22.86	6.03	1.77.E–04	6.12.E–07	7.28.E–04	Diatom nannofossil ooze
3H-2, 83–85	21.34	28.03	4.93	4.30.E–04	1.41.E–06	1.34.E–03	Nannofossil ooze
3H-3, 83–85	22.84	29.53	6.20	1.99.E–04	5.28.E–07	5.82.E–04	Nannofossil ooze
3H-4, 83–85	24.34	31.03	7.83	1.07.E–04	5.10.E–07	5.23.E–04	Nannofossil ooze
3H-5, 83–85	25.84	32.53	8.02	2.55.E–04	5.67.E–07	5.62.E–04	Nannofossil ooze
3H-6, 83–85	27.34	34.03	6.73	7.64.E–05	3.60.E–07	3.54.E–04	Nannofossil ooze
4H-3, 83–85	32.34	39.54	7.13	1.12.E–04	5.21.E–07	5.86.E–04	Nannofossil ooze
4H-4, 83–85	33.84	41.04	7.17	3.00.E–04	7.51.E–07	8.50.E–04	Nannofossil ooze
4H-5, 83–85	35.34	42.54	7.98	1.52.E–04	5.82.E–07	5.95.E–04	Nannofossil ooze
5H-4, 83–85	43.34	51.60	5.63	4.03.E–05	2.10.E–07	1.75.E–04	Diatom ooze
5H-5, 83–85	44.84	53.10	7.41	1.38.E–04	5.58.E–07	5.37.E–04	Nannofossil ooze
6H-3, 83–85	51.34	60.54	5.59	2.48.E–04	6.19.E–07	6.38.E–04	Diatom nannofossil ooze
6H-4, 83–85	52.84	62.04	6.15	6.68.E–05	2.04.E–07	3.07.E–04	Diatom nannofossil ooze
6H-5, 83–85	54.34	63.54	7.13	1.47.E–05	6.00.E–08	8.38.E–05	Diatom nannofossil ooze
7H-1, 83–85	57.84	69.60	8.89	9.71.E–05	3.37.E–07	3.72.E–04	Nannofossil ooze
7H-2, 83–85	57.84	69.60	8.79	8.27.E–05	3.02.E–07	3.79.E–04	Nannofossil ooze
7H-3, 83–85	60.84	72.60	8.19	1.55.E–04	7.16.E–07	6.71.E–04	Silty clay nannofossil ooze
7H-5, 83–85	62.34	74.10	8.07	1.42.E–04	6.39.E–07	5.66.E–04	Silty clay nannofossil ooze
8H-2, 83–85	68.84	81.94	7.35	1.88.E–04	6.04.E–07	6.41.E–04	Nannofossil ooze
8H-3, 83–85	70.34	83.44	7.29	1.11.E–04	4.79.E–07	5.46.E–04	Diatom nannofossil ooze
8H-4, 83–85	71.84	84.94	5.08	1.41.E–04	3.40.E–07	3.65.E–04	Diatom nannofossil ooze
8H-5, 83–85	73.34	86.44	6.23	1.53.E–04	6.07.E–07	5.95.E–04	Nannofossil ooze
9H-3, 83–85	79.84	93.99	8.91	1.21.E–05	1.00.E–07	5.02.E–05	Diatom nannofossil ooze
9H-4, 83–85	81.34	95.49	8.02	8.66.E–05	4.14.E–07	3.46.E–04	Nannofossil diatom ooze
10H-3, 83–85	89.36	104.02	7.03	1.20.E–05	1.07.E–07	7.57.E–05	Nannofossil diatom ooze
10H-4, 83–85	90.88	105.54	10.31	4.67.E–05	1.58.E–07	1.28.E–04	Nannofossil diatom ooze
11H-2, 83–85	97.34	113.26	8.25	2.17.E–04	9.23.E–07	7.94.E–04	Clay
11H-3, 83–85	98.84	114.76	5.64	1.17.E–05	4.02.E–08	2.23.E–05	Diatom ooze
11H-4, 83–85	100.34	116.26	8.15	2.78.E–04	8.56.E–07	8.09.E–04	Diatom nannofossil ooze
11H-5, 83–85	101.84	117.76	6.44	2.95.E–04	8.45.E–07	8.82.E–04	Nannofossil ooze
11H-6, 83–85	103.34	119.26	6.06	3.27.E–04	8.75.E–07	8.90.E–04	Clay
12H-3, 83–85	108.34	125.09	8.81	4.98.E–05	2.76.E–07	2.47.E–04	Nannofossil ooze
12H-4, 83–85	109.84	126.59	7.43	2.49.E–04	9.51.E–07	9.41.E–04	Clay
12H-5, 83–85	111.34	128.09	7.81	1.77.E–04	8.82.E–07	9.37.E–04	Clay
13H-3, 83–85	117.84	135.96	7.82	2.84.E–04	9.50.E–07	1.05.E–03	Nannofossil ooze
13H-4, 83–85	119.34	137.46	8.29	3.76.E–04	1.04.E–06	1.02.E–03	Nannofossil ooze
13H-5, 83–85	120.84	138.96	6.15	6.71.E–05	8.41.E–07	9.78.E–04	Nannofossil ooze
13H-6, 83–85	122.34	140.46	8.89	2.36.E–05	4.27.E–07	5.19.E–04	Clay
14H-2, 83–85	125.84	145.44	7.80	7.80.E–05	3.09.E–07	4.57.E–04	Nannofossil ooze
14H-3, 83–85	127.34	146.94	7.24	1.75.E–04	5.62.E–07	7.01.E–04	Nannofossil ooze
14H-4, 83–85	128.84	148.44	6.72	2.12.E–05	4.57.E–07	4.28.E–04	Diatom ooze
14H-5, 83–85	130.34	149.94	7.60	1.54.E–04	8.13.E–07	9.36.E–04	Silty clay nannofossil ooze
15H-3, 83–85	136.84	156.80	8.54	4.31.E–05	8.51.E–07	7.97.E–04	Silty clay nannofossil ooze
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1H-1, 83–85	0.84	0.84	6.29	1.57.E–05	2.29.E–07	2.57.E–04	Nannofossil ooze
1H-3, 83–85	3.84	3.84	4.75	5.02.E–05	1.25.E–07	2.11.E–04	Silty clay
2H-2, 83–85	10.54	10.36	6.94	1.63.E–04	5.39.E–07	6.10.E–04	Nannofossil ooze
2H-3, 83–85	12.04	11.86	7.09	2.32.E–04	6.39.E–07	6.34.E–04	Silty clay
2H-4, 83–85	13.54	13.36	6.89	1.86.E–04	7.29.E–07	7.74.E–04	Nannofossil ooze

Table T1 (continued). (Continued on next page.)

Core, section, interval (cm)	Depth (mbsf)	Depth (mcd)	Sample weight (g)	NRM (Am^2/kg)	χ (m^3/kg)	χ_{ARM} (m^3/kg)	Lithology
2H-5, 83–85	15.04	14.86	6.30	7.77.E–05	2.86.E–07	4.03.E–04	Nannofossil ooze
3H-4, 83–85	23.04	23.91	6.86	2.16.E–04	6.65.E–07	6.85.E–04	Nannofossil ooze
3H-5, 83–85	24.54	25.41	5.87	1.80.E–04	1.22.E–06	1.21.E–03	Diatom nannofossil ooze
3H-6, 83–85	26.04	26.91	6.52	2.35.E–04	6.33.E–07	7.04.E–04	Nannofossil ooze
4H-4, 83–85	32.53	34.83	6.74	1.93.E–04	5.13.E–07	5.41.E–04	Diatom silty clay
4H-5, 83–85	34.03	36.33	7.03	2.28.E–04	8.65.E–07	8.70.E–04	Diatom nannofossil ooze
4H-6, 83–85	35.53	37.83	8.00	1.87.E–04	5.61.E–07	6.68.E–04	Nannofossil ooze
5H-2, 83–85	39.04	43.47	7.13	2.68.E–04	7.80.E–07	7.85.E–04	Nannofossil diatom ooze
5H-4, 83–85	42.04	46.47	6.19	4.99.E–06	1.47.E–08	8.98.E–06	Clay diatom ooze
5H-5, 83–85	43.54	47.97	5.53	5.18.E–05	2.90.E–07	2.92.E–04	Diatom silty clay
5H-6, 83–85	45.04	49.47	6.77	1.70.E–04	5.98.E–07	6.25.E–04	Diatom nannofossil ooze
6H-3, 83–85	50.04	54.93	4.89	5.84.E–05	1.47.E–07	2.43.E–04	Diatom nannofossil ooze
6H-4, 83–85	51.54	56.43	4.94	9.80.E–07	3.36.E–09	3.48.E–06	Nannofossil diatom ooze
6H-5, 83–85	53.04	57.93	6.48	2.33.E–06	1.12.E–08	5.97.E–06	Nannofossil diatom ooze
6H-6, 83–85	54.54	59.43	5.90	1.05.E–04	3.63.E–07	4.37.E–04	Nannofossil ooze
7H-3, 83–85	59.54	64.64	7.52	2.03.E–05	8.12.E–08	1.66.E–04	Nannofossil diatom ooze
7H-4, 83–85	61.03	66.13	8.42	3.13.E–05	1.14.E–07	2.09.E–04	Nannofossil diatom ooze
7H-5, 83–85	62.52	67.62	7.83	4.57.E–05	1.77.E–07	2.42.E–04	Nannofossil diatom ooze
7H-6, 83–85	64.01	69.11	7.42	7.91.E–05	3.04.E–07	3.47.E–04	Nannofossil ooze
8H-2, 83–85	67.54	75.96	7.72	7.57.E–05	3.28.E–07	3.78.E–04	Diatom nannofossil ooze
8H-3, 83–85	69.04	77.46	6.11	3.88.E–04	6.43.E–07	6.41.E–04	Nannofossil ooze
8H-4, 83–85	70.54	78.96	6.35	1.18.E–04	6.65.E–07	6.74.E–04	Nannofossil ooze
8H-5, 83–85	72.04	80.46	7.49	1.24.E–04	5.04.E–07	5.22.E–04	Nannofossil ooze
8H-6, 83–85	73.54	81.96	6.89	1.50.E–04	5.69.E–07	6.02.E–04	Nannofossil ooze
9H-3, 83–85	78.53	88.15	7.45	3.95.E–05	2.24.E–07	2.75.E–04	Nannofossil ooze
9H-4, 83–85	80.02	89.64	7.50	4.97.E–06	3.85.E–08	3.13.E–05	Diatom nannofossil ooze
9H-5, 83–85	81.51	91.13	6.88	2.49.E–05	1.41.E–07	2.08.E–04	Nannofossil ooze
10H-1, 83–85	85.04	95.84	8.25	4.51.E–05	2.30.E–07	8.76.E–05	Nannofossil ooze
10H-2, 83–85	86.54	97.34	4.03	8.72.E–07	3.80.E–09	5.49.E–06	Nannofossil diatom ooze
10H-3, 83–85	88.04	98.84	4.14	1.24.E–06	2.60.E–10	4.77.E–06	Nannofossil diatom ooze
10H-4, 83–85	89.55	100.35	4.36	7.43.E–07	3.96.E–09	3.68.E–06	Nannofossil diatom ooze
10H-5, 83–85	91.05	101.85	5.03	1.52.E–06	1.30.E–08	5.14.E–06	Nannofossil diatom ooze
10H-6, 83–85	92.54	103.34	5.56	6.47.E–06	4.93.E–08	1.45.E–05	Nannofossil diatom ooze
11H-2, 83–85	96.04	108.03	4.23	9.21.E–05	3.05.E–07	3.87.E–04	Diatom nannofossil ooze
11H-3, 83–85	97.54	109.53	5.68	1.32.E–05	5.02.E–08	1.98.E–05	Nannofossil diatom ooze
11H-4, 83–85	99.04	111.03	4.37	1.52.E–04	4.24.E–07	4.89.E–04	Nannofossil and diatom ooze
11H-5, 83–85	100.55	112.54	4.93	9.27.E–05	3.00.E–07	1.86.E–04	Diatom nannofossil ooze
12H-3, 83–85	107.04	120.25	6.19	3.15.E–04	8.77.E–07	9.69.E–04	Diatom nannofossil ooze
12H-4, 83–85	108.53	121.74	7.00	1.69.E–04	8.33.E–07	9.31.E–04	Diatom nannofossil ooze
12H-5, 83–85	110.03	123.24	7.41	1.46.E–04	5.02.E–07	5.18.E–04	Diatom nannofossil ooze
12H-6, 83–85	111.53	124.74	8.41	7.50.E–05	4.99.E–07	3.69.E–04	Diatom nannofossil ooze
13H-2, 83–85	115.04	129.42	5.82	2.62.E–04	8.60.E–07	9.97.E–04	Nannofossil ooze
13H-3, 83–85	116.53	130.91	7.49	7.41.E–05	3.90.E–07	3.25.E–04	Nannofossil ooze
13H-4, 83–85	118.02	132.40	6.59	3.48.E–04	1.07.E–06	1.02.E–03	Nannofossil silty clay
13H-5, 83–85	119.51	133.89	6.33	3.26.E–04	1.18.E–06	1.24.E–03	Nannofossil ooze
14H-3, 83–85	126.03	141.11	7.36	5.53.E–05	6.64.E–07	5.88.E–04	Diatom nannofossil ooze
14H-4, 83–85	127.52	142.60	6.15	1.31.E–04	8.31.E–07	9.86.E–04	Nannofossil ooze
14H-5, 83–85	129.02	144.10	4.86	2.79.E–05	10.00.E–08	7.27.E–05	Nannofossil ooze
15H-2, 83–85	134.04	150.14	5.98	1.46.E–04	1.31.E–06	1.48.E–03	Nannofossil ooze
15H-3, 83–85	135.53	151.63	5.95	3.37.E–04	1.17.E–06	1.45.E–03	Nannofossil ooze
15H-4, 83–85	137.02	153.12	6.26	3.35.E–04	1.01.E–06	1.24.E–03	Nannofossil ooze
15H-5, 83–85	138.52	154.62	7.93	5.65.E–05	9.28.E–07	8.95.E–04	Diatom nannofossil ooze
15H-6, 83–85	140.02	156.12	7.38	8.55.E–05	9.39.E–07	1.01.E–03	Nannofossil ooze
16H-1, 83–85	142.04	158.95	4.91	1.38.E–04	4.04.E–06	5.97.E–04	Diatom nannofossil ooze
16H-2, 83–85	143.54	160.45	6.05	4.08.E–05	3.87.E–07	4.07.E–04	Nannofossil diatom ooze
16H-3, 83–85	145.05	161.96	6.71	1.39.E–04	6.14.E–07	7.68.E–04	Nannofossil ooze
16H-4, 83–85	146.55	163.46	4.36	1.65.E–04	4.74.E–07	7.00.E–04	Diatom nannofossil ooze
16H-5, 83–85	148.06	164.97	5.35	2.66.E–04	8.52.E–07	9.61.E–04	Nannofossil diatom ooze
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4H-3, 58–60	31.19	35.13	6.04	6.54E–05	1.30E–07	3.15.E–04	Nannofossil ooze
4H-4, 58–60	32.69	36.63	6.43	1.33E–04	2.38E–07	4.81.E–04	Nannofossil silty clay
4H-5, 58–60	34.19	38.13	5.67	7.71E–05	1.27E–07	3.69.E–04	Nannofossil ooze
5H-3, 58–60	40.67	45.51	7.43	5.06E–05	2.64E–07	2.35.E–04	Silty clay
5H-4, 58–60	42.17	47.01	6.87	1.03E–04	3.16E–07	5.47.E–04	Nannofossil silty clay
5H-5, 58–60	43.67	48.51	7.87	1.12E–04	3.18E–07	3.62.E–04	Silty clay
5H-6, 58–60	45.17	50.01	7.04	2.08E–05	1.77E–07	3.65.E–04	Nannofossil ooze
8H-4, 58–60	70.69	78.37	7.42	2.11E–05	1.18E–07	2.63.E–04	Nannofossil ooze
8H-5, 58–60	72.19	79.87	9.00	1.47E–05	2.99E–07	2.18.E–04	Silty clay

Table T1 (continued). (Continued on next page.)

Core, section, interval (cm)	Depth (mbsf)	Depth (mcd)	Sample weight (g)	NRM (Am^2/kg)	χ (m^3/kg)	χ_{ARM} (m^3/kg)	Lithology
8H-6, 58–60	73.69	81.37	7.98	4.41E–05	2.34E–07	4.78.E–04	Nannofossil ooze
10H-3, 58–60	88.19	97.41	7.95	7.73E–05	3.03E–07	4.92.E–04	Nannofossil ooze
10H-4, 58–60	89.69	98.91	8.45	5.92E–05	3.33E–07	5.64.E–04	Nannofossil ooze
10H-5, 58–60	91.19	100.41	8.58	7.78E–05	3.46E–07	6.13.E–04	Nannofossil ooze
10H-6, 58–60	92.69	101.91	8.90	5.85E–05	1.83E–07	3.72.E–04	Nannofossil ooze
12H-3, 58–60	107.19	117.10	9.55	1.94E–05	7.32E–08	1.88.E–04	Nannofossil ooze
12H-4, 58–60	108.69	118.60	8.47	3.37E–05	1.39E–07	3.27.E–04	Nannofossil ooze
12H-5, 58–60	110.19	120.10	7.32	5.60E–05	2.13E–07	4.43.E–04	Nannofossil ooze
12H-6, 58–60	111.69	121.60	8.46	3.02E–05	1.41E–07	3.06.E–04	Nannofossil ooze
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4H-3, 58–60	26.59	29.75	6.71	5.77E–05	7.80E–08	2.15.E–04	Nannofossil ooze
4H-4, 58–60	28.09	31.25	7.87	6.58E–05	2.06E–07	3.73.E–04	Nannofossil ooze
4H-5, 58–60	29.59	32.75	7.63	2.19E–05	4.20E–08	1.33.E–04	Nannofossil ooze
4H-6, 58–60	31.09	34.25	7.57	3.20E–05	1.15E–07	2.36.E–04	Nannofossil ooze
7H-4, 58–60	56.59	63.84	6.44	1.89E–05	1.51E–07	3.97.E–04	Nannofossil ooze
7H-5, 58–60	58.09	65.34	8.88	2.74E–05	3.22E–07	4.71.E–04	Nannofossil ooze
7H-6, 58–60	59.59	66.84	8.83	9.10E–05	3.10E–07	4.59.E–04	Silty clay
8H-4, 58–60	66.09	72.90	8.37	2.63E–05	1.58E–07	3.06.E–04	Nannofossil ooze
9H-2, 58–60	72.59	81.35	7.45	1.79E–05	1.88E–07	4.07.E–04	Nannofossil ooze
9H-3, 58–60	74.09	82.85	6.56	3.82E–05	5.14E–07	8.17.E–04	Nannofossil ooze
9H-4, 58–60	75.59	84.35	8.83	2.77E–05	3.13E–07	5.42.E–04	Nannofossil ooze
9H-5, 58–60	77.09	85.85	8.90	6.01E–06	3.11E–07	4.94.E–04	Silty clay nannofossil ooze
11H-2, 58–60	91.59	103.43	7.83	5.38E–05	2.00E–07	3.65.E–04	Nannofossil ooze
11H-3, 58–60	93.09	104.93	8.69	1.64E–05	1.29E–07	2.79.E–04	Nannofossil ooze
11H-4, 58–60	94.59	106.43	7.51	3.22E–05	1.35E–07	3.27.E–04	Nannofossil ooze
11H-5, 58–60	96.09	107.93	8.42	2.11E–05	3.64E–07	4.53.E–04	Nannofossil ooze
14H-3, 58–60	121.59	136.86	8.21	9.01E–05	4.30E–07	6.70.E–04	Nannofossil clay
14H-4, 58–60	123.11	138.38	8.30	7.32E–05	1.98E–07	3.67.E–04	Nannofossil ooze
14H-5, 58–60	124.61	139.88	6.50	2.49E–04	6.36E–07	9.97.E–04	Nannofossil ooze
303-U1308C-							
1H-1, 58–60	0.59	0.59	5.59	9.40E–05	2.46E–07	4.42.E–04	Silty clay
1H-2, 58–60	2.09	2.09	7.67	6.10E–05	2.12E–07	2.30.E–04	Silty clay
2H-3, 58–60	8	9.89	7.09	8.46E–05	2.65E–07	3.69.E–04	Nannofossil ooze
2H-4, 58–60	9.5	11.39	8.11	6.41E–05	1.84E–07	3.13.E–04	Nannofossil ooze
2H-5, 58–60	11	12.89	8.30	6.25E–05	1.61E–07	2.57.E–04	Nannofossil ooze
3H-3, 58–60	17.5	21.20	7.90	7.09E–05	1.89E–07	2.48.E–04	Silty clay
3H-4, 58–60	19	22.70	8.26	3.88E–05	7.53E–08	1.65.E–04	Nannofossil ooze
3H-5, 58–60	20.5	24.20	8.47	9.74E–06	2.49E–08	1.05.E–04	Nannofossil ooze
3H-6, 58–60	22	25.70	6.55	4.08E–05	1.09E–07	2.15.E–04	Nannofossil ooze
5H-2, 58–60	34.99	39.67	9.23	1.50E–05	1.22E–07	6.13.E–05	Silty clay
5H-3, 58–60	36.49	41.17	7.56	8.13E–05	2.21E–07	2.97.E–04	Nannofossil clay
5H-4, 58–60	37.99	42.67	9.37	1.77E–05	1.11E–07	1.19.E–04	Silty clay
5H-5, 58–60	39.49	44.17	8.21	6.87E–05	2.18E–07	3.99.E–04	Nannofossil ooze
6H-1, 58–60	42.99	49.64	7.69	2.21E–05	7.30E–08	1.73.E–04	Nannofossil ooze
6H-2, 58–60	44.49	51.14	6.63	6.43E–05	3.44E–07	6.05.E–04	Nannofossil silty clay
6H-3, 58–60	45.97	52.62	8.55	2.80E–05	8.56E–08	1.86.E–04	Nannofossil ooze
6H-4, 58–60	47.46	54.11	7.30	6.69E–05	2.78E–07	5.10.E–04	Nannofossil ooze
6H-5, 58–60	48.96	55.61	8.07	3.00E–05	3.71E–07	5.72.E–04	Nannofossil ooze
8H-3, 58–60	64.99	74.23	6.78	4.71E–05	2.99E–07	5.27.E–04	Diatom nannofossil ooze
8H-5, 58–60	67.99	77.23	6.71	5.80E–05	4.18E–07	7.14.E–04	Diatom nannofossil ooze
13H-3, 58–60	112.49	126.90	6.08	5.34E–05	6.48E–07	1.02.E–03	Nannofossil ooze
13H-4, 58–60	113.99	128.40	8.69	1.10E–05	1.89E–07	1.84.E–04	Nannofossil ooze
13H-5, 58–60	115.49	129.90	7.39	4.33E–05	3.66E–07	5.28.E–04	Silty clay
13H-6, 58–60	116.99	131.40	7.40	5.79E–05	2.67E–07	4.54.E–04	Nannofossil ooze
15H-3, 58–60	131.49	147.43	9.35	2.33E–05	2.09E–07	3.55.E–04	Nannofossil ooze
15H-4, 58–60	132.99	148.93	9.37	3.13E–05	2.56E–07	3.48.E–04	Nannofossil ooze
15H-5, 58–60	134.49	150.43	7.23	4.70E–05	1.88E–07	3.81.E–04	Nannofossil ooze
303-U1308E-							
1H-2, 58–60	2.09	3.41	4.77	3.82E–05	2.07E–07	3.32.E–04	Nannofossil ooze
1H-3, 58–60	3.59	4.91	7.36	3.52E–05	1.28E–07	2.01.E–04	Nannofossil silty clay
1H-4, 58–60	5.09	6.41	7.06	2.28E–05	4.03E–08	1.51.E–04	Nannofossil ooze
1H-5, 58–60	6.59	7.91	6.45	8.48E–06	1.70E–08	7.26.E–05	Nannofossil ooze
1H-6, 58–60	8.09	9.41	7.40	9.16E–05	2.38E–07	2.70.E–04	Nannofossil ooze
2H-2, 58–60	11.59	13.77	7.46	8.15E–05	2.72E–07	4.53.E–04	Nannofossil silty clay
2H-3, 58–60	13.09	15.27	8.09	4.14E–05	1.78E–07	2.04.E–04	Silty clay
2H-4, 58–60	14.59	16.77	9.09	2.85E–05	1.39E–07	1.92.E–04	Nannofossil ooze
2H-5, 58–60	16.09	18.27	8.41	2.77E–05	7.90E–08	1.46.E–04	Nannofossil ooze

Table T1 (continued).

Core, section, interval (cm)	Depth (mbsf)	Depth (mcd)	Sample weight (g)	NRM (Am^2/kg)	χ (m^3/kg)	χ_{ARM} (m^3/kg)	Lithology
2H-6, 58–60	17.59	19.77	7.31	5.43E–05	1.77E–07	3.69.E–04	Nannofossil ooze
3H-2, 58–60	21.09	25.73	6.47	4.47E–05	8.54E–08	1.92.E–04	Silty clay
3H-3, 58–60	22.59	27.23	8.25	6.88E–05	3.10E–07	2.98.E–04	Nannofossil ooze
3H-4, 58–60	24.09	28.73	9.01	3.37E–05	2.01E–07	1.34.E–04	Nannofossil ooze
9H-2, 58–60	81.09	86.56	6.74	4.35E–05	4.14E–07	6.48.E–04	Silty clay
9H-4, 58–60	84.09	89.56	8.04	6.79E–05	3.27E–07	5.33.E–04	Nannofossil ooze
12H-2, 58–60	108.59	121.66	8.52	3.32E–05	1.72E–07	3.62.E–04	Nannofossil ooze
12H-3, 58–60	110.09	123.16	8.71	4.41E–05	4.63E–07	7.10.E–04	Silty clay nannofossil ooze
12H-4, 61–63	111.62	124.69	8.15	9.94E–05	4.99E–07	7.24.E–04	Silty clay nannofossil ooze
12H-5, 58–60	113.09	126.16	8.58	2.68E–05	4.05E–07	6.22.E–04	Silty clay nannofossil ooze
12H-3, 58–60	119.59	134.72	7.44	5.81E–05	3.50E–07	5.62.E–04	Silty clay nannofossil ooze
303-U1308F-							
6H-3, 58–60	50.52	56.96	7.38	1.29E–05	2.70E–07	2.70.E–04	Silty clay
6H-4, 58–60	52.02	58.46	7.43	5.69E–05	2.38E–07	4.36.E–04	Nannofossil ooze
6H-5, 58–60	53.52	59.96	7.40	1.82E–05	3.88E–07	4.45.E–04	Nannofossil ooze
6H-6, 58–60	55.02	61.46	6.95	6.62E–05	1.58E–07	3.26.E–04	Nannofossil ooze
7H-3, 58–60	60.59	69.32	8.26	9.19E–05	2.10E–07	4.11.E–04	Nannofossil ooze
7H-4, 58–60	62.09	70.82	8.33	7.90E–05	3.00E–07	4.06.E–04	Silty clay
7H-6, 58–60	65.09	73.82	7.82	1.23E–05	3.37E–07	5.47.E–04	Nannofossil ooze
9H-3, 58–60	79.59	91.29	8.62	1.98E–05	2.88E–07	3.10.E–04	Nannofossil silty clay
9H-4, 58–60	81.09	92.79	7.85	4.91E–05	1.72E–07	3.46.E–04	Nannofossil ooze
9H-5, 58–60	82.59	94.29	5.79	1.12E–04	4.70E–07	9.12.E–04	Nannofossil ooze
9H-6, 58–60	84.09	95.79	5.08	1.26E–04	2.55E–07	5.93.E–04	Nannofossil ooze
11H-1, 58–60	94.59	109.50	6.23	4.95E–05	1.65E–07	4.11.E–04	Nannofossil ooze
11H-2, 58–60	96.09	111.00	5.48	8.85E–05	3.13E–07	6.63.E–04	Nannofossil ooze
11H-3, 58–60	97.59	112.50	5.96	6.18E–05	1.75E–07	3.89.E–04	Nannofossil silty clay
11H-4, 58–60	99.09	114.00	7.64	2.93E–06	1.23E–07	2.86.E–04	Nannofossil ooze
11H-5, 58–60	100.59	115.50	5.84	1.31E–05	4.36E–07	8.00.E–04	Nannofossil ooze
11H-6, 58–60	102.09	117.00	6.21	3.77E–05	7.42E–08	2.21.E–04	Nannofossil ooze
13H-4, 58–60	118.12	133.36	6.46	1.49E–05	3.60E–07	6.08.E–04	Nannofossil ooze
13H-5, 58–60	119.62	134.86	7.21	9.60E–05	4.11E–07	5.76.E–04	Nannofossil ooze
13H-6, 58–60	121.12	136.36	6.64	1.27E–04	3.00E–07	5.64.E–04	Nannofossil ooze
14H-2, 58–60	124.59	141.00	6.68	9.70E–05	3.84E–07	5.73.E–04	Nannofossil ooze
14H-3, 58–60	126.09	142.50	6.61	2.14E–04	4.11E–07	6.21.E–04	Nannofossil ooze
14H-6, 58–60	130.59	147.00	6.52	1.08E–05	1.90E–07	3.88.E–04	Nannofossil ooze

Notes: NRM = natural remanent magnetization, χ = low-field magnetic susceptibility, χ_{ARM} = susceptibility of anhysteretic remanent magnetization (ARM). mcd = meters composite depth.

Table T2. Magnetic hysteresis parameters and lithology, Sites U1302–U1304 and U1308. (See table notes.) (Continued on next page.)

Core, section, interval (cm)	Depth (msbf)	Depth (mcd)	Sample weight (g)	Hcr (mT)	Hc (mT)	Hcr/Hc	Mr (Am^2/kg)	Ms (Am^2/kg)	Mr/Ms	HFMS (m^3/kg)	Lithology
303-U1302B-											
1H-1, 125–126	1.25	1.25	0.93	32.6	9.24	3.53	1.07.E–02	1.15.E–01	0.09	3.50E–08	Silty clay
1H-6, 2–3	7.52	7.52	0.73	34.37	11.85	2.90	1.40.E–02	1.11.E–01	0.13	4.13E–08	Silty clay nannofossil ooze
2H-1,146–147	11.16	11.16	0.49	35.16	13.93	2.52	9.50.E–03	5.61.E–02	0.17	2.03E–08	Silty clay
2H-6, 2–3	17.22	17.22	0.47	34.94	11.71	2.98	6.76.E–03	6.12.E–02	0.11	3.80E–08	Silty clay
3H-1,145–146	20.65	20.65	0.57	33.84	13.52	2.50	1.28.E–02	8.29.E–02	0.15	5.16E–08	Silty clay nannofossil ooze
3H-6, 3–4	26.73	26.73	0.58	34.85	13.71	2.54	1.36.E–02	8.76.E–02	0.15	3.49E–08	Silty clay
4H-1, 147–148	30.17	30.17	0.72	32.35	10.10	3.20	1.13.E–02	1.09.E–01	0.10	3.43E–08	Silty clay
4H-6, 2–3	36.22	36.22	0.68	33.62	12.24	2.75	1.40.E–02	1.03.E–01	0.14	4.84E–08	Silty clay nannofossil
5H-1, 8–9	38.28	38.28	0.68	35.87	12.78	2.81	1.21.E–02	8.66.E–02	0.14	2.92E–08	Nannofossil ooze with silty clay
5H-6, 8–9	45.78	45.78	0.53	32.74	12.49	2.62	6.92.E–03	5.05.E–02	0.14	1.78E–08	Nannofossil ooze with silty clay
6H-1, 128–129	48.98	48.98	0.68	33.14	13.37	2.48	1.16.E–02	6.83.E–02	0.17	3.01E–08	Silty clay
6H-6, 8–9	55.28	55.28	0.61	34.57	11.76	2.94	8.50.E–03	7.13.E–02	0.12	4.47E–08	Silty clay
7H-1, 123–124	58.43	58.43	0.41	32.81	11.58	2.83	9.09.E–03	7.27.E–02	0.12	1.60E–08	Clay with nannofossil ooze
7H-6, 8–9	64.78	64.78	0.53	33.16	12.02	2.76	1.01.E–02	7.34.E–02	0.14	1.93E–08	Clay with nannofossil ooze
8H-1, 128–129	67.98	67.98	0.72	31.38	10.93	2.87	1.01.E–02	8.55.E–02	0.12	3.72E–08	Silty clay
8H-6, 8–9	74.28	74.28	0.96	31.93	10.20	3.13	7.74.E–03	7.23.E–02	0.11	5.56E–08	Clay with nannofossil ooze
9H-1, 118–119	77.38	77.38	0.47	32.75	10.86	3.02	1.28.E–02	1.14.E–01	0.11	4.04E–08	Clay with nannofossil ooze
9H-6, 18–19	83.91	83.91	0.69	34.17	12.37	2.76	9.15.E–03	8.15.E–02	0.13	5.98E–08	Silty clay
10H-1, 119–120	86.89	86.89	0.68	31.52	9.75	3.23	5.58.E–03	5.84.E–02	0.10	2.79E–08	Silty clay
303-U1303A-											
1H-1, 143–144	1.43	8.89	0.51	35.38	13.75	2.57	1.61.E–02	9.59.E–02	0.17	4.55E–08	Clay with nannofossil ooze
1H-6, 0–1	7.5	14.96	0.75	33.73	10.05	3.36	9.57.E–03	9.64.E–02	0.10	3.74E–08	Clay with nannofossil ooze
2H-6, 8–9	15.98	23.79	0.77	33.74	11.26	3.00	7.74.E–03	6.78.E–02	0.11	4.17E–08	Nannofossil clay
3H-1, 143–144	19.33	29.86	0.82	33.11	10.58	3.13	9.42.E–03	8.40.E–02	0.11	4.19E–08	Silty clay nannofossil ooze
3H-6, 1–2	25.41	35.94	0.68	33.57	12.24	2.74	1.26.E–02	9.01.E–02	0.14	2.94E–08	Silty clay nannofossil ooze
4H-1, 120–121	28.6	40.04	0.61	33.24	12.50	2.66	9.40.E–03	6.58.E–02	0.14	2.27E–08	Sand slit clay nannofossil
4H-2, 147–248	28.72	40.16	0.60	33.05	12.59	2.63	1.10.E–02	7.56.E–02	0.15	2.48E–08	Sand silt clay nannofossil
5H-1, 147–248	38.37	49.5	0.67	32.15	9.69	3.32	4.54.E–03	4.63.E–02	0.10	2.31E–08	Silty nannofossil ooze
5H-5, 1–2	42.91	54.04	0.62	33.4	13.00	2.57	1.44.E–02	9.47.E–02	0.15	3.53E–08	Clayey silt nannofossil ooze
6H-1, 143–144	47.83	59.32	0.52	25.29	3.52	7.19	6.36.E–03	2.09.E–04	0.03	7.70E–09	Clayey nannofossil ooze
6H-6, 1–2	53.86	65.35	0.76	32.25	10.42	3.10	9.14.E–03	8.60.E–02	0.11	2.29E–08	Silty clay nannofossil ooze
7H-1, 118–119	57.08	68.59	0.64	31.28	7.30	4.28	4.18.E–03	6.36.E–02	0.07	2.91E–08	Clayey nannofossil ooze
8H-3, 118–119	69.58	78.9	0.74	30.68	5.54	5.54	5.28.E–03	8.27.E–03	0.05	1.78E–08	Sand silt clay nannofossil
9H-1, 116–117	76.06	83	0.69	27.32	4.98	5.48	8.72.E–03	1.88.E–04	0.05	2.37E–08	Silty clay nannofossil ooze
10H-2, 18–19	86.08	92.81	0.81	30.9	9.04	3.42	1.03.E–02	1.19.E–01	0.09	3.86E–08	Clay with nannofossil ooze
303-U1304A-											
1H-1, 108–109	1.08	4.78	0.75	44.18	14.06	3.14	9.49.E–03	4.95.E–02	0.19	3.86E–08	Nannofossil ooze with clay
1H-6, 18–19	7.68	11.38	0.36	11.35	11.66	0.97	1.70.E–02	1.02.E–01	0.17	9.61E–09	Nannofossil ooze
2H-1, 124–125	10.74	15.76	0.55	33.59	11.59	2.90	1.55.E–02	9.26.E–02	0.17	1.30E–08	Diatom ooze
2H-6, 18–19	17.18	22.2	0.47	36.56	12.37	2.96	1.55.E–02	8.59.E–02	0.18	2.74E–08	Diatom nannofossil ooze
3H-1, 141–-142	20.41	27.1	0.62	34.14	14.58	2.34	3.18.E–02	1.52.E–01	0.21	3.94E–08	Diatom nannofossil ooze
3H-6, 8–9	26.58	33.27	0.50	37.46	12.82	2.92	1.61.E–02	8.56.E–02	0.19	2.05E–08	Nannofossil ooze
4H-1, 143–144	29.93	37.13	0.69	32.22	8.63	3.73	9.04.E–03	9.27.E–02	0.10	2.40E–08	Silty clay nannofossil ooze
4H-6, 1–2	36.01	43.21	0.43	36.77	13.05	2.82	2.17.E–02	1.19.E–01	0.18	3.26E–08	Nannofossil ooze
5H-1, 144–145	39.44	47.7	0.48	30.93	8.52	3.63	7.81.E–03	6.41.E–02	0.12	1.40E–08	Diatom ooze
5H-6, 1–2	45.51	53.77	0.70	33.24	12.93	2.57	1.90.E–02	1.02.E–01	0.19	3.72E–08	Diatom nannofossil ooze
6H-1, 143–144	48.93	58.13	0.48	51.26	5.46	9.38	2.27.E–03	2.75.E–02	0.08	8.48E–09	Diatom ooze
6H-6, 1–2	55.01	64.21	0.89	36	8.79	4.10	3.52.E–03	2.36.E–02	0.15	2.50E–08	Diatom nannofossil ooze
7H-1, 149–150	58.49	70.25	0.55	33.4	10.60	3.15	1.00.E–02	6.18.E–02	0.16	8.81E–09	Nannofossil ooze
7H-6, 1–1	64.51	76.27	0.65	32.18	9.85	3.27	6.12.E–03	4.15.E–02	0.15	1.35E–08	Nannofossil ooze
8H-1, 148–149	67.98	81.08	0.45	33.49	11.54	2.90	1.76.E–02	1.03.E–01	0.17	1.30E–08	Nannofossil ooze
8H-6, 1–2	74.01	87.11	0.41	29.14	8.17	3.57	9.84.E–03	7.76.E–02	0.13	6.49E–09	Nannofossil ooze
9H-1, 142–143	77.42	91.57	0.45	28.33	5.84	4.86	3.60.E–03	3.83.E–02	0.09	6.27E–09	Diatom nannofossil ooze
9H-6, 1–2	83.54	97.69	0.37	20.29	2.48	8.17	1.16.E–03	2.92.E–02	0.04	6.92E–09	Nannofossil diatom ooze
10H-6, 3–4	93.11	107.77	0.45	30.27	9.08	3.33	1.01.E–02	7.34.E–02	0.14	1.15E–08	Nannofossil diatom ooze
11H-1, 133–134	96.33	112.25	0.31	31.2	9.47	3.29	1.38.E–02	9.57.E–02	0.14	4.22E–10	Nannofossil diatom ooze
11H-6, 3–4	102.53	118.45	0.40	36.81	13.62	2.70	2.90.E–02	1.47.E–01	0.20	2.75E–08	Clay
12H-1, 141–142	105.91	122.66	0.53	33.08	10.65	3.11	1.77.E–02	1.19.E–01	0.15	3.04E–08	Diatom silty clay
12H-6, 3–4	112.03	128.78	0.46	38.5	14.26	2.70	2.53.E–02	1.22.E–01	0.21	4.54E–08	Clay
13H-1, 146–147	115.46	133.58	0.36	38.21	13.73	2.78	3.04.E–02	1.52.E–01	0.20	3.06E–08	Nannofossil ooze
13H-6, 3–4	121.53	139.65	0.39	39.55	12.53	3.16	1.35.E–02	7.26.E–02	0.19	1.27E–08	Clay
14H-1, 146–147	124.96	144.56	0.58	41.87	15.56	2.69	2.13.E–02	9.40.E–02	0.23	1.89E–08	Nannofossil ooze
14H-6, 3–4	131.04	150.64	0.56	37.14	14.24	2.61	2.72.E–02	1.29.E–01	0.21	3.37E–08	Silty clay nannofossil ooze
15H-1, 138–139	134.38	154.34	0.47	35.11	13.47	2.61	3.10.E–02	1.67.E–01	0.19	4.33E–08	Diatom nannofossil ooze
15H-6, 1–2	140.51	160.47	0.48	33.98	13.43	2.53	1.31.E–02	6.88.E–02	0.19	2.10E–08	Diatom nannofossil ooze

Table T2 (continued).

Core, section, interval (cm)	Depth (msbf)	Depth (mcd)	Sample weight (g)	Hcr (mT)	Hc (mT)	Hcr/Hc	Mr (Am^2/kg)	Ms (Am^2/kg)	Mr/Ms	HFMS (m^3/kg)	Lithology
16H-1, 142–143	143.92	164.94	0.52	41.15	18.26	2.25	2.08.E–02	8.14.E–02	0.25	2.70E–08	Diatom nannofossil ooze
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1H-1, 138–139	1.38	1.38	0.56	68.73	27.73	2.48	1.02.E–02	3.36.E–02	0.30	3.69E–08	Nannofossil ooze
1H-6, 3–4	7.53	7.53	0.40	37.18	14.00	2.66	1.24.E–03	9.12.E–03	0.14	7.82E–09	Nannofossil silty clay
2H-1, 138–139	9.98	10.96	0.38	35.03	13.39	2.62	2.65.E–03	1.72.E–02	0.15	6.61E–09	Silty clay
2H-6, 3–4	16.13	17.11	0.48	37.18	15.85	2.35	4.61.E–03	2.22.E–02	0.21	6.08E–09	Nannofossil ooze
3H-1, 138–139	19.48	20.9	0.57	33.95	11.59	2.93	7.78.E–03	6.09.E–02	0.13	2.79E–08	Nannofossil ooze
3H-6, 3–4	25.63	27.05	0.78	36.9	15.46	2.39	1.08.E–02	5.14.E–02	0.21	4.24E–08	Nannofossil silty clay
4H-1, 138–139	28.98	32.92	0.62	35.53	14.86	2.39	1.56.E–03	8.55.E–03	0.18	1.54E–09	Nannofossil ooze
4H-6, 3–4	35.13	39.07	0.81	36.36	16.11	2.26	1.15.E–02	4.89.E–02	0.23	3.26E–08	Silty clay
5H-1, 144–145	38.54	43.38	0.65	42.15	18.77	2.25	8.23.E–03	3.24.E–02	0.25	1.21E–08	Nannofossil ooze
6H-1, 144–145	48.04	54.13	0.54	37.76	16.61	2.27	6.15.E–03	2.71.E–02	0.23	1.19E–08	Nannofossil ooze
6H-6, 1–2	54.11	60.2	0.56	41.3	18.03	2.29	6.87.E–03	2.92.E–02	0.24	7.02E–09	Nannofossil ooze
7H-4, 1–2	60.61	68.52	0.50	40.72	17.95	2.27	8.06.E–03	3.35.E–02	0.24	7.66E–09	Nannofossil ooze
8H-1, 147–248	67.07	74.75	0.55	42.35	18.48	2.29	1.28.E–02	5.16.E–02	0.25	2.24E–08	Nannofossil ooze
8H-6, 0–1	73.1	80.78	0.40	43.74	19.23	2.27	1.78.E–02	6.81.E–02	0.26	1.62E–08	Nannofossil ooze
9H-6, 0–1	82.6	91.66	0.85	32.06	12.41	2.58	6.80.E–03	4.28.E–02	0.16	4.93E–08	Nannofossil silty clay
10H-1, 144–145	86.04	95.26	0.58	35.99	16.18	2.22	1.25.E–02	5.89.E–02	0.21	3.14E–08	Nannofossil ooze
10H-6, 1–2	92.11	101.33	0.58	39.74	17.91	2.22	6.32.E–03	2.60.E–02	0.24	1.08E–08	Nannofossil ooze
11H-2, 3–4	95.63	104.02	0.40	42.11	18.79	2.24	6.76.E–03	2.78.E–02	0.24	1.53E–09	Silty clay nannofossil ooze
11H-6, 3–4	101.63	110.02	0.42	41.13	18.37	2.24	1.19.E–02	4.78.E–02	0.25	8.67E–09	Clay nannofossil ooze
12H-1, 138–139	104.98	114.89	0.55	36.75	16.45	2.23	1.54.E–02	6.42.E–02	0.24	2.18E–08	Nannofossil silty clay
12H-6, 3–4	111.13	121.04	0.42	35.67	15.25	2.34	3.18.E–03	1.65.E–02	0.05	9.45E–10	Nannofossil ooze
13H-1, 138–139	114.48	125.56	0.40	40.87	17.85	2.29	1.67.E–02	6.75.E–02	0.25	1.99E–08	Nannofossil ooze
13H-6, 3–4	120.58	131.66	0.48	39.52	17.74	2.23	1.38.E–02	5.58.E–02	0.25	1.90E–08	Nannofossil ooze
14H-1, 138–139	123.98	136.38	0.35	40.89	18.40	2.22	8.74.E–03	3.62.E–02	0.24	2.30E–09	Nannofossil ooze
14H-6, 3–4	130.13	142.53	0.63	41.65	18.93	2.20	1.26.E–02	4.80.E–02	0.26	2.15E–08	Nannofossil ooze
15H-6, 3–4	139.63	153.09	0.61	41.45	19.02	2.18	1.27.E–02	4.83.E–02	0.26	1.63E–08	Nannofossil ooze
16H-1, 138–139	142.98	158.88	0.60	32.01	11.18	2.86	3.20.E–03	2.67.E–02	0.12	2.12E–08	Nannofossil ooze

Notes: Hcr = remanent coercivity, Hc = coercivity, Mr = isothermal remanent magnetization, Ms = saturated magnetization, HFMS = high-field magnetic susceptibility. mcd = meters composite depth.