Table T1. Characteristic directions and polarity ratings and polarity chron assignments, Holes 1049A and 1049C. (**See table notes.** Continued on next three pages.)

Position, age, facies/Core, section, interval (cm)	Run name	Depth (mbsf)	Characteristic magnetization and polarity							Polarity chron assignment	Comments
			Interval (°C)	Characteristic direction			Polarity rating	Polarity column			
				Declination	Inclination	MAD		Schematic	Generalized		
middle Eocene											
Lemon yellow ooze-chalk											
171-1049A-											
3H-1, 30-32	31-30	20.90	200-420	271.3	84.4	12.0	NPP				
3H-1, 120-122	31-120	21.80	150-origin	292.0	48.1	16.9	NP				
3H-2, 30-32	32-30	22.40	200-300	312.3	30.4	10.4	NP				
3H-2, 120-122	32-120	23.30	200-origin	257.2	33.1	11.4	NP				
3H-3, 30-32	33-30	23.90	150-200	263.4	19.4	10.7	NPP			C19n	
3H-3, 120-122	33-120	24.80	200-200	264.8	40.3	3.5	NPP				
3H-4, 30-32	34-30	25.40	200-300	180.0	–70.7	7.2	INT				
3H-4, 120-122	34-120	26.30	200-250	240.6	38.8	9.0	NPP				
3H-5, 24-26	35-24	26.84	100-200	58.5	66.4	14.6	NPP				
3H-5, 120-122	35-120	27.80	250-300	67.8	–32.4	5.6	RP				
3H-6, 30-32	36-30	28.40	200-240	149.0	28.3	34.6	R??			C19r	
3H-6, 120-122	36-120	29.30	250-500	82.9	3.6	12.8	RPP				
3H-7, 30-32	37-30	29.90	200-250	299.9	46.9	32.8	NPP				
4H-1, 30-32	41-30	30.40	270-300	355.0	66.6	8.1	NPP				
4H-1, 120-122	41-120	31.30	150-300	72.0	29.1	34.7	NPP				
4H-2, 30-32	42-30	31.90	140-280	49.9	16.7	15.8	NPP				
4H-2, 120-122	42-120	32.80	150-200	72.2	30.6	35.6	NPP				During demagnetization, this NPP suite remains at a weak 10^{-2} mA/m intensity with no decay.
4H-3, 30-32	43-30	33.40	270-310	43.7	45.7	13.9	NPP				
4H-3, 120-122	43-120	34.30	150-origin	37.6	56.9	16.1	NPP			C20n	
4H-4, 30-32	44-30	34.90	150-450	23.6	22.5	46.4	NPP				
4H-4, 120-122	44-120	35.80	250-350	29.5	48.0	3.3	NPP				
4H-5, 30-32	45-30	36.40	270-310	358.5	47.0	6.0	NPP				
4H-5, 120-122	45-120	37.30	200-300	29.6	32.6	7.5	NPP				
4H-6, 30-32	46-30	37.90	140-420	56.0	0.3	14.7	N??				Sharp magnetic intensity drop coincides with polarity change. Underlying C20r has almost an order of magnitude stronger intensity than C20n.
4H-6, 120-122	46-120	38.80	160-370	207.0	–39.9	1.8	R				
4H-6, 120-122	46-120	38.80	200-origin	207.0	–39.9	1.8	R				
4H-7, 30-32	47-30	39.40	160-370	195.8	–38.7	4.3	R				
5H-1, 30-32	51-30	39.90	400-550	258.2	–22.1	1.6	RP				
5H-1, 120-122	51-120	40.80	200-450	244.2	–38.6	6.5	R				
5H-2, 30-32	52-30	41.40	160-370	213.7	–32.2	3.9	R				
5H-2, 120-122	52-120	42.30	200-450	231.3	–40.6	9.2	R				
5H-3, 30-32	53-30	42.90	370-420	241.0	–49.9	1.7	RP				
5H-3, 120-122	53-120	43.80	150-450	245.7	–36	7.1	RP				
Greenish to vanilla-colored ooze-chalk											
5H-4, 30-32	54-30	44.40	200-370	231.1	–32.2	3.0	R				
5H-4, 120-122	54-120	45.30	150-450	230.9	–42.7	7.5	R				
5H-5, 33-35	55-33	45.93	150-550	235.7	–41.3	5.1	R				
5H-5, 120-122	55-120	46.80	250-400	229.1	–49.8	9.9	RP			C20r	
5H-6, 30-32	56-30	47.40	160-310	188.6	–62.3	30.7	RPP				
5H-6, 120-122	56-120	48.30	200-300	228.9	–28.7	8.2	RPP				
5H-7, 30-32	57-030	48.90	140-420	241.0	–40.0	13.9	R				

Table T1 (continued).

Position, age, facies/Core, section, interval (cm)	Run name	Depth (mbsf)	Characteristic magnetization and polarity						Polarity chron assignment	Comments
			Interval (°C)	Characteristic direction			Polarity rating	Polarity column		
				Declination	Inclination	MAD		Schematic Generalized		
6H-1, 30-32	61-30	49.40	160-240	268.9	–3.9	8.0	RPP			
6H-1, 120-122	61-120	50.30	300-origin	287.9	–38.1	16.2	RP			
6H-2, 30-32	62-30	50.90	150-origin	296.6	–42.4	4.8	R			
6H-2, 120-122	62-120	51.80	200-350	296.0	–36.2	9.6	R			
6H-3, 30-32	63-030	52.40	160-310	311.6	27.9	47.7	RPP			
6H-3, 120-122	63-120	53.30	250-400	307.2	–25.3	14.8	RP			
6H-4, 30-32	64-30	53.90	200-320	265.3	–39.5	7.9	RP			
6H-4, 120-122	64-120	54.80	250-origin	304.6	–23	16.4	RP			
6H-5, 30-32	65-30	55.40	160-310	286.9	–19.8	36.3	RPP			
6H-5, 120-122	65-120	56.30	150-400	294.1	–37.3	12.5	RP			
6H-6, 30-32	66-36	56.90	150-400	292.2	–24.3	11.2	RP			
6H-6, 120-122	66-120	57.80	200-400	318.4	–20.4	6.7	RP		C21r?	Below hiatus
6H-7, 30-32	67-30	58.40	160-370	278.8	–29.4	9.4	R			
early Eocene										
7H-1, 30-32	71-30	58.90	140-420	301.3	86.2	7.0	N??			
9H-1, 56-58	91-56	62.46	200-370	14.0	71.1	8.9	NPP			
9H-1, 120-122	91-120	63.10	300-origin	224.9	35.6	3.2	N			
9H-2, 30-32	92-30	63.70	140-420	230.7	44.3	3.9	N			
9H-2, 120-122	92-120	64.60	200-550	237.5	33.9	3.4	N			
9H-3, 35-37	93-35	65.25	160-370	228.5	40.2	3.2	N		C22n	
9H-3, 120-122	93-120	66.10	150-300	225.4	39.6	8.1	NP			
9H-4, 23-25	94-23	66.63	200-420	234.9	37.0	3.6	N			
9H-4, 120-122	94-120	67.60	300-550	222.7	42.4	8.6	N			
9H-5, 30-32	95-30	68.20	160-370	312.4	13.5	6.2	NPP			Biostratigraphy indicates a hiatus between C22n and C23n.
9H-5, 120-122	95-120	69.10	150-450	334.9	40.3	5.6	N			Polarity Zone C22r (assigned to lowest Core 171B-1049A-9H in shipboard cryogenic analyses) was not observed in discrete sample suite.
Light tan chalk; some chert layers										
10X-1, 25-27	10125	69.65	370-420	134.2	50.4	4.9	NP		C23n	
10X-1, 120-122	101-120	70.60	200-origin	126.0	68.0	2.6	NP			
10X-2, 27-29	102-27	71.17	200-370	325.9	45.9	3.8	N			
10X-3, 29-32	103-29	72.69	200-370	307.2	49.2	4.0	N			
13-m gap in recovery										
Light greenish brown										
12X-1, 30-32	121-30	86.40	160-370	287.4	55.2	3.4	N			
12X-1, 120-122	121-120	87.30	350-550	196.6	59.9	4.0	N		C24n	
12X-2, 30-32	122-30	87.90	140-420	279.1	72.8	5.8	N			
8-m gap in recovery										
Paleocene										
Grayish brown clayey siliceous limestone										
13H-1, 30-32	131-30	96.00	160-370	274.8	63.3	2.0	N		C26n?	
13H-1, 120-123	131-120	96.90	200-450	29.1	7.0	6.9	INT			Upward transition R→N.
13H-2, 30-32	132-30	97.50	240-420	43.0	–14.6	2.9	R		C26r?	
13H-2, 121-123	132-121	98.41	180-480	23.6	–41.1	2.4	R			
13H-3, 119-122	133-119	99.89	210-480	338.4	30.7	1.9	N??		C27n?	
14X-CC, 4-7	149-4	100.14	160-370	233.4	–45.6	1.1	R		C27r?	Chron assignment based on biostratigraphy.
15X-1, 23-25	151-23	105.53	180-420	201.0	37.0	2.8	N			

Table T1 (continued).

Position, age, facies/Core, section, interval (cm)	Run name	Depth (mbsf)	Characteristic magnetization and polarity						Polarity chron assignment	Comments
			Interval (°C)	Characteristic direction			Polarity rating	Polarity column		
				Declination	Inclination	MAD		Schematic Generalized		
15X-CC, 3-5	159-3	105.83	210-480	151.8	36.6	2.7	N		C28n	
Gray marl to cream chalk										
16X-1, 30-32	161-30	115.30	160-310	27.6	58.0	23.9	NPP			
16X-1, 118-120	161-118	116.18	200-310	143.4	58.0	23.9	NPP			
16X-2, 30-32	162-30	116.80	240-420	214.4	48.0	6.0	N			
16X-2, 120-122	162-120	117.70	180-270	267.6	–28.9	4.6	R		C28r?	
16X-3, 30-32	163-30	118.30	200-310	244.2	–48.5	18.6	RPP			
16X-3, 114-116	163-114	119.14	180-300	224.2	24.6	1.4	NP		C29n	
16X-4, 38-40	164-38	119.88	140-200	134.2	28.3	19.8	NPP			
16X-4, 109-111	164-109	120.59	140-300	175.6	65.7	37.6	INT			
16X-5, 28-30	165-28	121.28	200-270	138.8	–14.4	15.4	RPP		C29r	
16X-5, 113-115	165-113	122.13	000-100	178.3	61.1	6.1	INT			
14-m gap in sampling										
Maastrichtian										
White chalk										
18X-2, 30-32	182-30	136.10	180-origin	245.5	13.9	12.3	NPP		C30n	If N, then polarity chron is assigned as C30n.
18X-2, 120-122	182-120	137.00	210-origin	158.9	–23.9	13.5	RP		C30r?	
18X-3, 22-24	183-30	137.52	200-origin	160.6	5.6	20.3	INT			
18X-3, 120-122	183-120	138.50	180-270	64.1	–6.0	33.3	INT			
18X-4, 26-28	184-22	139.06	180-origin	164.5	–31.3	6.6	RP			
18X-4, 120-122	184-120	140.00	210-origin	189.2	27.7	9.7	NPP			Maastrichtian polarity chron assignments are difficult because of condensation.
18X-5, 31-33	185-31	140.61	240-origin	351.2	53.7	6.4	N		C32n	
18X-5, 120-122	185-120	141.50	180-300	128.9	54.8	11.4	NP			
late Campanian										Foraminifer biostratigraphy indicates hiatus in lowest Core 171B-1049A-18X.
18X-6, 31-33	186-31	142.11	220-origin	3.6	36.2	3.8	N		C33n	
19X-1, 38-40	191-38	144.28	200-200	281.8	–25.8	2.9	NPP			
early Albian										
Red-white cycles										
19X-1, 140-142	191-140	145.30	240-origin	186.8	22.6	5.9	NP		C34n	
19X-2, 31-33	192-31	145.71	180-origin	64.3	39.8	4.0	N			
19X-2, 103-105	192-103	146.43	180-origin	277.8	–30.3	4.8	R		M-2	
19X-3, 30-32	193-30	147.20	270-330	265.1	16.1	42.9	NPP			
19X-3, 123-125	193-123	148.13	140-300	260.4	44.5	9.8	NP		C34n	
19X-4, 121-123	194-12	148.52	180-origin	231.2	51.5	3.2	N			
19X-4, 31-33	194-31	148.71	180-origin	194.5	58.8	4.5	N			
19X-5, 33-35	195-33	150.23	300-origin	226.3	58.0	2.5	NP			
19X-CC, 26-28	199-26	150.84	180-origin	180.7	64.3	3.5	N			
20X-1, 49-51	201-49	153.99	240-origin	222.6	87.6	7.5	NPP			
20X-1, 121-123	201-121	154.71	210-origin	40.3	–41.3	13.9	RPP			Diagenetic artifact above black shale.
late Aptian (below organic-rich shale)										
20X-2, 30-32	202-30	155.30	220-260	120.8	53.7	1.6	NPP			
20X-2, 114-116	202-114	156.14	210-400	50.6	42.7	26.3	NPP			
20X-3, 44-46	203-44	156.94	200-origin	218.9	–6	18.3	INT			

Table T1 (continued).

Position, age, facies/Core, section, interval (cm)	Run name	Depth (mbsf)	Characteristic magnetization and polarity						Polarity chron assignment	Comments
			Interval (°C)	Characteristic direction			Polarity rating	Polarity column		
				Declination	Inclination	MAD		Schematic Generalized		
20X-3, 120-122	203-20	157.70	100-400	303.1	40.4	31.8	NPP			
20X-4, 40-42	204-40	158.40	180-origin	300.8	50.9	15.5	NPP			
20X-5, 30-32	205-30	159.80	200-origin	30.1	59.1	4.7	N		C34n	
20X-6, 27-29	206-27	160.77	140-350	319.4	39.9	4.8	NPP			
Red-white cycles										
21X-1, 30-32	211-30	163.40	260-origin	101.3	62.8	11.1	NP			
21X-1, 119-121	211-119	164.29	150-400	134.6	72.5	5.0	NPP			
21X-2, 19-21	212-19	164.79	200-origin	191.1	57.5	3.0	N			
21X-2, 129-131	212-129	165.89	180-origin	256.6	57.4	3.2	N			
21X-3, 35-37	213-35	166.45	180-origin	263.2	42.1	5.6	N			
22X-1, 30-32	221-30	173.00	200-330	221.8	26.6	11.8	NP			
22X-2, 30-32	222-30	173.75	180-origin	178.7	61.7	6.8	N			
early Paleocene										
K/T boundary interval										
171B-1049C-										
8X-1, 97		107.07					INT			
8X-2, 87		108.47					R??			
8X-3, 66		109.76					INT			
8X-4, 56		111.16					R??		C29r	
8X-5, 22		112.32					INT			
late Maastrichtian		113.00								K/T = interval 171B-1049C-8X-5, 90cm.
White chalk									C29r	
8X-6, 28		113.88					R??			
8X-7, 14		115.24					NPP			
9X-1, 75		116.45					INT			
9X-2, 75		117.95					N??			
9X-3, 75		119.45					R??			← R?? apparent polarity is considered anomalous.
9X-4, 65		120.85					NPP			
10X-1, 75		120.95					NP		C30n	
10X-2, 75		122.45					N??			Maastrichtian polarity chron assignments are difficult because of condensation.
10X-3, 75		123.95					NP			
10X-4, 75		125.45					NPP			
10X-5, 75		126.95					N		C32n	
10X-6, 75		128.45					N			

Notes: Sediment facies are generalized color-texture descriptions from shipboard observations, and the lithologic units for each hole are displayed on the associated magnetostratigraphic figure. Interval (°C) indicates the demagnetization range that was used to compute the characteristic direction and polarity of magnetization for each sample. Declination and inclination are in degrees. MAD (mean angular dispersion) values indicate the precision of the three-dimensional line fit of these paleomagnetic vectors to obtain the characteristic direction. The polarity rating system (R, RP, RPP, R??, INT, N??, NPP, NP, N) is explained in the text. Two polarity columns are shown with the shades of gray or hatchure fill in the schematic column reflecting the polarity rating of individual samples and the generalized column indicating the main polarity intervals. Polarity chron assignments are based on the polarity pattern and biostratigraphic constraints in correlating to the reference magnetic polarity time scale.