

1051A-1H NO RECOVERY

1051A-2H

SITE 1051 HOLE A CORE 2H CORED 5.8-15.3 mbsf

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1											
2											
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8											

NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS and ZEOLITE NANNOFOSSIL OOZE

Dominantly pale yellow (5Y 8/2 to 2.5 Y 8/2) NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS to minor SILICEOUS NANNOFOSSIL OOZE with blebs, diffuse patches, and streaks of gray material containing an ASH component throughout. Otherwise, sediment is extremely homogeneous. Core also contains cm-scale oval CLAY patches interpreted as burrows at two levels as noted.

Drilling slurry of yellow ooze (5Y 8/2) with Mn nodules and large (medium to coarse sand size), discolored foraminifers, from Section 1, 0 cm to Section 2, 116 cm

130 cm- olive (5Y 4/4) oval patch, 5 x 2.5 cm, elongate along core, seems undisturbed, filled with clay, tentatively interpreted as a large burrow

31 cm- olive (5Y 4/4) bleb ~1 cm in diameter

SS

XRD

SS

SS

Pho

IW

SS

SS

SS

SS

SS

SS

SS

PAL


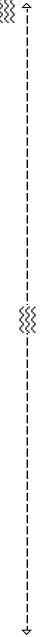


middle Eocene

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											<p>SILICEOUS NANNOFOSSIL OOZE</p> <p>General description: Entire core is composed of homogeneous, pale yellow (5Y 8/2 to 2.5Y 8/2) SILICEOUS NANNOFOSSIL OOZE with gray patches and rare streaks throughout.</p> <p>Gray areas associated with an ash component</p> <p>Olive (5Y 4/4) blebs, ~ 1 cm</p> <p>Small olive (5Y 4/4) blebs</p>
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4								SS			
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SITE 1051 HOLE A CORE 4H

CORED 24.8-34.3 mbsf

1051A-4H





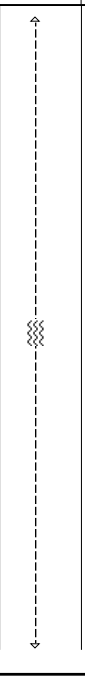

METRES	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOINFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0 1 2 3 4 5 6 7 8				GI				middle Eocene — SS — IW — SS — SS	— SS pal YE — SS	pal YE	<p>REMARKS</p> <p>— SILICEOUS NANNOFOSSIL OOZE</p> <p>Generally homogeneous, pale yellow (2.5Y 8/1 to 5Y 8/2) SILICEOUS NANNOFOSSIL OOZE;</p> <p>Vague burrow mottling occurs throughout indicating heavy bioturbation.</p> <p>There are several rare olive blebs.</p>    <p>— ASH, mottled gray, Section 4, 93 cm minor lithology: SILICEOUS NANNOFOSSIL OOZE WITH CLAY, slightly darker color.</p>

SITE 1051 HOLE A CORE 5H

CORED 34.3-43.8 mbsf

1051A-5H

METRES	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOINFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								middle Eocene — IW — SS — PAL		pal YE	<p>SILICEOUS NANNOFOSSIL OOZE</p> <p>General description: Entire core is a largely homogeneous, pale yellow (2.5Y 8/2) SILICEOUS NANNOFOSSIL OOZE to NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS AND FORAMINIFERS. Bioturbation is heavy but faintly visible except for a few dark (Mn?) burrows. Drilling disturbance is very slight except in Section 1, 0-26 cm, which contains a slurry of sediment mixed with downhole cavings of Mn/phosphate nodules. The largest nodule is 5 cm across.</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p data-bbox="653 609 688 698">middle Eocene</p>	<p data-bbox="688 414 743 446">SS SS</p> <p data-bbox="688 657 743 673">IW</p> <p data-bbox="688 998 743 1015">PAL</p>	<p data-bbox="743 682 810 706">pal YE</p>	<p data-bbox="934 357 1018 373">SILICEOUS NANNOFOSSIL OOZE</p> <p data-bbox="840 397 1123 462">Pale yellow (2.5Y 8/2 to 5Y 8/2), homogeneous SILICEOUS NANNOFOSSIL OOZE occurs throughout core. A single ASH bleb (~1 cm diameter) occurs in Section 1, 72-73 cm.</p> <p data-bbox="840 470 1123 519">SM, Section 1, 72 cm: ASH-volcanic glass in a NANNOFOSSIL OOZE matrix</p> <p data-bbox="840 503 871 527">SD</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>SS IW PAL</p>	<p>pal YE</p>	<p>SILICEOUS NANNOFOSSIL OOZE WITH FORAMINIFERS</p> <p>General description: Entire core is a generally homogeneous, pale yellow (2.5Y 8/2) SILICEOUS NANNOFOSSIL OOZE WITH FORAMINIFERS with some black blebs throughout.</p>

METERS	CORE AND SECTION LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
						<p>middle Eocene</p>	<p>SS XRF XRF SS</p> <p>SS</p> <p>PAL</p>	<p>pal YE</p> <p>lt gn GY</p>	<p>SILICEOUS NANNOFOSSIL OOZE WITH FORAMINIFERS</p> <p>Homogeneous SILICEOUS NANNOFOSSIL OOZE with Mn flecks scattered throughout. The color is pale yellow (5Y 8/1 to 5Y 8/2) from the top of Section 1 to Section 2, 55 cm, where there is a sharp color change to light greenish gray (5G 8/1) below.</p> <p>SM Section 3, 90 cm: 1 cm thick brownish interval-no glass</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1								SS		NANNOFOSSIL OOZE WITH SPICULES  General description: Core contains homogeneous, light greenish gray (5G 8/1) NANNOFOSSIL OOZE WITH SPICULES with a thin, bioturbated ASH as noted.
2	2								SS		Section 3, 7 cm: Faint, pale brown, bioturbated ASH WITH SILICEOUS MICROFOSSILS AND NANNOS.
3	3									lt gn GY	
4	4										
5	5										
6	6										void: Section 6, 61-63 cm
7	7								SS PAL		Section 6, 119-120 cm: Pale brown altered ASH layer



METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHIKOFOSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS	
0	1								SS		NANNOFOSSIL OOZE WITH SPICULES	
2											General description: Core contains light greenish gray (5G 8/1) NANNOFOSSIL OOZE WITH SPICULES with rare black flecks scattered throughout.	
3												
4										IW	lt gn GY	Section 4, 61-62 cm: ASH layer
5												
6												
7										SS		SM Section 6, 76 cm: NANNOFOSSIL OOZE W/ ASH
									PAL			

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>SS</p>	<p>lt gn GY</p>	<p>SILICEOUS NANNOFOSSIL OOZE</p> <p>General description: Entire core is composed of homogeneous, light greenish gray (10GY 8/1) SILICEOUS NANNOFOSSIL OOZE with scarce pyrite blebs throughout.</p> <p>0-115 cm: drilling disturbance (flow-in) 5-8 cm: Mn oxide nodule (downhole contamination)</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0	1										<p>SILICEOUS NANNOFOSSIL OOZE</p> <p>General description: Core is dominantly composed of homogeneous, light greenish gray (5G 8/1) SILICEOUS NANNOFOSSIL OOZE. Sediment becomes slightly darker through Section 5 but is still light greenish gray (10GY 8/1) and of the same composition. There are two dark intervals (Section 5, 96-97 cm and Section 6, 9-10 cm) but these too have the same composition based on smear slides.</p> <p>SD, Section 1, 56 cm</p> <p>SM Section 5, 97 cm</p> <p>SM Section 6, 9 cm</p>
0.2	2										
0.4	3										
0.6	4										
0.8	5										
1.0	6										
1.2	7										
								middle Eocene		lt gn GY	
									SS		
									SS		
									PAL		

METRES	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1										<p>CLAYEY CALCAREOUS OOZE WITH NANNOFOSSIL AND SPICULES</p> <p>General description: Entire core contains homogeneous and generally structureless CLAYEY CALCAREOUS OOZE WITH NANNOFOSSIL AND SILICEOUS SPICULES. Flecks of pyrite occur throughout. Sections 3 and 5 contain very faint, thin laminae (pyrite). Color is light greenish gray (10GY 8/1).</p> <p>Section 3, 127 cm: faint dark lamina of pyrite?</p> <p>Section 3, 35 and 40 cm: very faint, dark laminae (pyrite?)</p> <p>Section 6, 126 cm: small (~1 cm) dark spot of PYRITE WITH CARBONATE GRAINS</p>
1	2							SS			
2	3							IW			
3	4								lt gn GY		
4	5										
5	6										
6	7							SS			
7									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1											
2				Py							
3				Py							
4											
5				Py							
6											
7											
8											
9											
10				Py							

CLAYEY CHALK WITH SILICEOUS MICROFOSSILS

General description: The entire core consists of monotonous, structureless light greenish gray (10GY 8/1) CLAYEY CHALK WITH SILICEOUS MICROFOSSILS. Dark (pyrite?) spots occur throughout this undisturbed core.

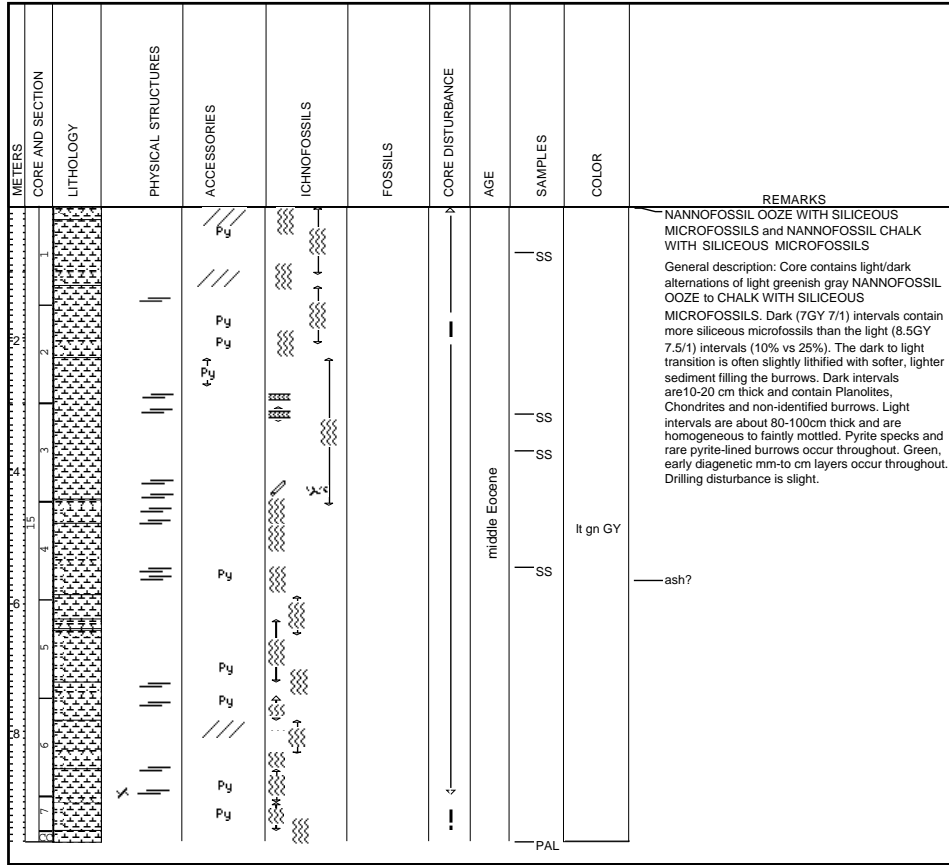
— Faint, slightly darker (5Y 7/1) layer

lt gn GY

— Faint, slightly darker, light greenish gray (5G 8/1) layer

middle Eocene

PAL



METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS		
0											<p>NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS to CALCAREOUS NANNOFOSSIL CHALK</p> <p>General description: Core contains alternating dark and light intervals of light greenish gray to greenish gray (7GY 7/1 to 5 GY 6/1) NANNOFOSSIL Ooze WITH SILICEOUS MICROFOSSILS to CALCAREOUS NANNOFOSSIL CHALK. Tops of dark intervals are often a burrowed firmground, with lighter, softer sediment filling burrows. Bioturbation is heavy with discrete traces logged as Chodrites, Planolites, or unidentified burrows. Dark burrows, often with fine grained pyrite lining, are scattered throughout core.</p>		
1				P <sub>y</sub>					SS SS	lt gn GY .. gn GY			
2				P <sub>y</sub> P <sub>y</sub> P <sub>y</sub>						lt gn GY gn GY lt gn GY ..			
3				P <sub>y</sub>						lt gn GY ..			
4				P <sub>y</sub>						gn GY lt gn GY gn GY			
5				P <sub>y</sub>						gn GY lt gn GY lt gn GY			
6				P <sub>y</sub>						gn GY ..			
7				P <sub>y</sub>						gn GY ..			
8				P <sub>y</sub>						gn GY ..			
9				P <sub>y</sub>						gn GY lt gn GY gn GY lt gn GY gn GY			
10				P <sub>y</sub>						lt gn GY gn GY			
										SS		gn GY ..	
												gn GY ..	
												gn GY lt gn GY gn GY lt gn GY gn GY	
												lt gn GY gn GY	
												PAL	gn GY





METRES	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
1		[Lithology pattern]						— SS		<p><b>NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS AND FORAMINIFERS to SILICEOUS NANNOFOSSIL CHALK</b></p> <p>General Description: Entire core contains light greenish gray (10GY 8/1) NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS and FORAMINIFERS to SILICEOUS NANNOFOSSIL CHALK, alternating lighter and slightly darker intervals. The darker intervals are slightly richer in siliceous microfossils.</p>
2		[Lithology pattern]						— SS		
3		[Lithology pattern]								
4		[Lithology pattern]		[Fossil symbols]					lt gn GY	
5		[Lithology pattern]		[Fossil symbols]				— SS		
6		[Lithology pattern]		[Fossil symbols]						
7		[Lithology pattern]		[Fossil symbols]						
								— PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1			///	← 1.2 ←				gn GY		<p>NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS and NANNO-CALCAREOUS CHALK WITH SILICEOUS MICROFOSSILS</p> <p>General Description: Core consists of alternating bands of dark and light greenish gray (7GY 8/1) NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS and NANNO-CALCAREOUS CHALK WITH SILICEOUS MICROFOSSILS. The entire core is moderately to slightly bioturbated. Pyrite is common as both burrow linings and as specks scattered throughout the core.</p>
1	2			///	← 1.2 ←				lt gn GY		
2	3			///					lt gn GY		
3	4			///					SS		
4	5			///					W		
5	6			///					lt gn GY		
6	7			///					gn GY		
7	8			///					lt gn GY		
8	9			///					gn GY		
9	10			///					lt gn GY		
									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1										<p>SILICEOUS NANNOFOSSIL CHALK</p> <p>Alternating slightly darker and lighter shades of light greenish gray (10GY 8/1 to 10GY 7/2) SILICEOUS NANNOFOSSIL CHALK.</p> <p>Bioturbation is moderate throughout; pyrite occurs as blebs, burrow linings, or in the Zoophycos spreiten in the lower part of the core.</p> <p>A conspicuous dark gray (3 G 7/2) VITRIC ASH WITH QUARTZ AND BIOTITE occurs at Section 7, 35 cm. This ash can be traced to an ash of similar thickness in Sections 1050A-1H and 1050B-1H.</p>
2	2										
3	3										
4	4										
5	5										
6	6										
7	7										<p>34-37 cm: 2 cm dark gray VITRIC ASH WITH QUARTZ AND BIOTITE</p>
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METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0 1 2 3 4 5 6 7 8	21 2 3 4 5 6 7					middle Eocene		SS SS  SS	lt gy GN	<p>SILICEOUS NANNOFOSSIL CHALK</p> <p>General Description: The core consists of moderately to highly bioturbated, burrow mottled, light greenish gray (5G 8/1) SILICEOUS NANNOFOSSIL CHALK.</p> <p>In Sections 2, 90-110 cm and 3, 83-108, brownish layers with the same lithology occur.</p> <p>Pyrite blebs are scattered throughout the core.</p> <p>The entire core is biscuited, with biscuits fractured.</p>

SITE 1051 HOLE A CORE 22X

CORED 196.6-206.2 mbsf

1051A-22X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0 0.2 0.4 0.6	1 2 3 4							middle Eocene	SS pal gy GN IW PAL		<p>SILICEOUS NANNOFOSSIL CHALK WITH CARBONATE GRAINS</p> <p>Strongly burrowed, light greenish gray (5G 8/1) SILICEOUS NANNOFOSSIL CHALK WITH CARBONATE GRAINS with dark flecks (pyrite) throughout.</p> <p>Section 2, 50-55 cm and 110-120 cm: Zoophycos burrows</p> <p>Section 4, 96-102 cm: Zoophycos burrows</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>SS SS</p>	<p>lt gy GN</p>	<p>SILICEOUS NANNOFOSSIL CHALK</p> <p>General Description: The core consists of moderately bioturbated and burrow mottled, light greenish gray (5G 8/2) SILICEOUS NANNOFOSSIL CHALK. Dark blebs (Mn-oxide or pyrite) occur throughout the core. Drilling has produced slightly fractured biscuits throughout core.</p>

SITE 1051 HOLE A CORE 24X

CORED 215.8-225.4 mbsf

1051A-24X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
							<p>middle Eocene</p>	<p>SS</p> <p>SS</p> <p>PAL</p>	<p>pal gy GN</p>	<p>NANNOFOSSIL CHALK WITH SPONGE SPICULES</p> <p>Section 1, 0-1 cm: chert bits</p> <p>light greenish gray (5G 8/1) NANNOFOSSIL CHALK WITH SPONGE SPICULES containing burrows (including Zoophycos), pyrite flecks, and biscuiting throughout. Some burrows are filled with a brownish (2.5Y 5/1) NANNOFOSSIL CHALK WITH SPONGE SPICULES.</p> <p>SM Section 6, 110 cm</p> <p>Section 7, 4 cm: pyritized burrow</p>	

SITE 1051 HOLE A CORE 25X

CORED 225.4-235.0 mbsf

1051A-25X

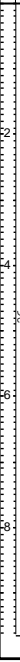

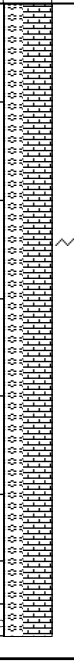


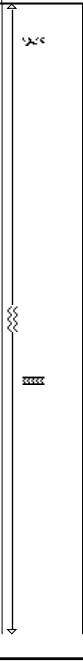


METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1								SS	lt gn GY	<p>SILICEOUS NANNOFOSSIL CHALK</p> <p>General Description: The Core consists of light greenish gray (5G 8/1), moderately bioturbated SILICEOUS NANNOFOSSIL CHALK. Small burrows are filled with pyrite (?). Larger burrows have alteration haloes. Entire core is biscuitied with 5-10 cm biscuits.</p>
2	3							middle Eocene	IW	lt gn GY	
4	5										
6	7										
									PAL		



SITE 1051 HOLE A CORE 26X

CORED 235.0-244.6 mbsf

1051A-26X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p data-bbox="661 649 682 698">middle Eocene</p>	<p data-bbox="703 503 724 519">SS</p> <p data-bbox="703 600 724 617">SS</p> <p data-bbox="703 990 724 1006">PAL</p>	<p data-bbox="745 487 787 503">lt gy GN</p>	<p data-bbox="829 365 1050 381">SILICEOUS NANNOFOSSIL CHALK</p> <p data-bbox="829 389 1123 535">General description: The entire core consists of homogeneous light greenish gray (5G 8/2) SILICEOUS NANNOFOSSIL CHALK. Some lighter or darker burrow fills occur. The core is moderately bioturbated (Chondrites, Planolites, Zoophycos, and unidentified burrows). Dark spots (pyrite) are scattered throughout and some burrows are lined with fine-grained pyrite. The core is biscuited and some biscuits are slightly fractured.</p> <p data-bbox="829 600 1123 633">Section 3, 62-62.5: thin layer of dark gray (7.5G 3/1) ASH WITH PYRITE</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											CLAYEY CHALK WITH NANNOFOSSILS, RADIOLARIA, & SPONGE SPICULES
1									SS	it gn GY	General description: The entire core consists of monotonous light greenish gray (5GY 8/1 to 5G 8/1) CLAYEY CHALK WITH NANNOFOSSILS, RADIOLARIA, & SPONGE SPICULES. Black spots and elongate streaks (unspecific borrows) are abundant throughout. Larger borrows are filled with light olive gray (5Y 6/1) NANNOFOSSIL CHALK WITH RADIOLARIANS AND CLAY that is coarser-grained than the surrounding sediment. Drilling disturbance due to biscuiting is moderate with biscuits typically longer than 10 cm.
2											
3											
4											115 cm: 2 mm thick greenish gray (5G 6/1) layer, magnetic susceptibility peak
5									SS		56 cm: burrow filled with coarser-grained NANNOFOSSIL CHALK WITH RADIOLARIANS AND CLAY.
6											
7											27-29 cm: faint lamination
8									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1								SS		<p>NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS</p> <p>General Description: Light greenish gray (5G 8/1) NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS. Faint color banding from light to very light green is apparent. The entire core is moderately bioturbated with Zoophycus, Chondrites and unidentified burrows. Small burrows are filled with dark material (pyrite), larger burrows with olive green SILICEOUS NANNOFOSSIL CHALK WITH CLAY. Biscuiting is pervasive, with the average size of biscuits ~10 cm.</p> <p>94 cm: 1 cm diameter pyrite nodule</p>
1	2							SS			
2	3										
3	4										
4	5							IW	pal gy GN		
5	6										
6	7										
									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>SS SS PAL</p>	<p>lt gn GY</p>	<p>NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS</p> <p>General Description: The entire core consists of light greenish gray (10GY 8/2) NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS. Siliceous microfossil content increases downcore (Section 6, 116-118). Tiny black (pyrite) burrows are scattered throughout the core. Larger burrows are brownish gray. Biscuiting is pervasive with an average size of ~10 cm.</p> <p>60 cm: faint dark interval, disturbed by drilling</p> <p>116-118 cm: faint dark interval, heavily disturbed by drilling</p> <p>19-20 cm: slightly laminated interval</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNOFOSSELS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											SILICEOUS NANNOFOSSIL CHALK
1											<p>General Description: The core consists of greenish gray (5G 7/1 to 5G7/1), burrow mottled SILICEOUS NANNOFOSSIL CHALK, with scattered dark specks and burrow fillings throughout. The core is severely drilling biscuitied throughout. Green laminae, probably of early diagenetic origin, occur in several horizons.</p>
2									gn GY		
3											
4											93 cm: grayish interval of SILICEOUS NANNOFOSSIL CHALK WITH VITRIC ASH
5											
6											65 cm: black pyritic lamina
									PAL		

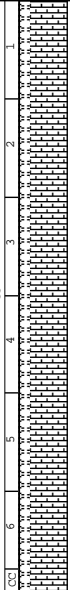
METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											— SILICEOUS NANNOFOSSIL CHALK
1									SS	pal GN	— Homogeneous SILICEOUS NANNOFOSSIL CHALK, severely bioturbated throughout and burrow mottled with dark specks (probably fine pyrite) throughout the core. The color is pale green (5G 7/1 to 5G 7/1). The entire core is severely drilling biscuited throughout, containing 2 cm biscuits every 7 cm on average.
2											
3											
4									IW		
5								middle Eocene			
6										pal GN	
7											
8											
									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1											NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS
2									SS		NANNOFOSSIL CHALK WITH SILICEOUS NANNOFOSSILS. Dark specks (pyrite) to Section 3, 35 cm. Homogeneous and drilling-biscuted throughout.
3								middle Eocene		pal GN	
4									SS		Lamina of 2 mm pyrite aggregates, scattered.
5									SS		VITRIC ASH Gray graded layer of VITRIC ASH; sharp lower, with gradational upper, burrow-mottled boundary.
6									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1											
2											
3											
4											
5											
6											
7											
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9											
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98											
99											
100											



METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS
1									SS		General description: Light greenish gray (5G 8/1) bioturbated NANNOFOSSIL CHALK with a few ASH layers. The core is drilling-biscuitted throughout, with 2-3 cm biscuits every 7/8 cm. Some rare faint, probably early diagenetic, green bands and laminae occur.
2									SS		
3									IW	lt gn GY	
4									SS		
5											
6									SS		VITRIC ASH WITH NANNOFOSSILS, 118 cm.
7									SS		VITRIC ASH WITH CARBONATE GRAINS, 9 cm
8									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0-6	CC								SS		NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS AND CLAY
								middle Eocene		lt gn GY	Moderately bioturbated, light greenish gray (5G 8/1) NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS AND CLAY The core is slightly disturbed from Section 1, 1 to 110 cm, and severely drilling-biscuted from Section 1, 110 to CC, 33 cm.
									SS		SM: 109 cm ash component in SILICEOUS NANNOFOSSIL CHALK
									PAL		



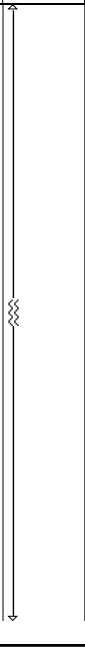



METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>SS</p>	<p>lt gn GY</p>	<p>SILICEOUS NANNOFOSSIL CHALK WITH FORAMINIFERS</p> <p>General description: The entire core consists of SILICEOUS NANNOFOSSIL CHALK WITH FORAMINIFERS. The color is light greenish gray (10GY 8/2) throughout. Tiny darkish flecks and burrows are stained with pyrite. The entire core is severely biscuitted.</p> <p>Section 6, 7-10 cm dark, Pyrite-stained burrows</p>

SITE 1051 HOLE A CORE 37X

CORED 340.7-350.4 mbsf

1051A-37X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1										<p>SILICEOUS NANNOFOSSIL CHALK</p> <p>light greenish gray (10GY 8/2) homogeneous SILICEOUS NANNOFOSSIL CHALK</p> <p>Bioturbation is minor as demonstrated by laminations that are particularly visible in Section 4, 120 to 140 cm.</p> <p>A firmground developed on top of a darker (5G 7/2) interval in Section 5, 24 to 18 cm.</p> <p>Drilling disturbance is slight in Section 1, 0-48 cm and from Section 4, 120 cm Section 5, 24 cm.</p> <p>Drilling disturbance is severe (1-2 cm thick drilling biscuits every 5 cm) from Section 1, 48 cm to Section 4, 120 cm.</p>
1	2								SS		
2	3							middle Eocene		lt gn GY	
3	4								IW		
4	5								SS		
5	6								SS		
6									PAL		<p>120 cm burrowed firmground</p> <p>dark lithology (5G 7/2) SILICEOUS NANNOFOSSIL CHALK</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0 1 2 3 4 5 6								middle Eocene	 SS	gn GY	<p data-bbox="924 365 1050 389">SILICEOUS NANNOFOSSIL CHALK</p> <p data-bbox="840 446 1134 584">Homogeneous greenish gray (5GY 5/1) SILICEOUS NANNOFOSSIL CHALK with diatoms, radiolaria and sponge spicules, moderately to slightly bioturbated.</p> <p data-bbox="840 519 1134 560">Rare to common pyrite occurs as specks, blebs, and burrow linings.</p> <p data-bbox="840 560 1134 584">Severe drilling disturbance (biscuiting) throughout.</p>


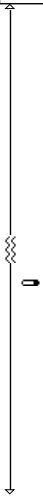

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											<p>NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS AND CLAY</p> <p>General description: The entire core consists of monotonous light greenish gray (5G 8/1) NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS AND CLAY. Due to the strong drilling disturbance with alternating, 3 cm thick intervals of broken drilling biscuits and slurry, structures are difficult to discern. The lack of bedding in most biscuits suggests intense bioturbation.</p> <p>98 cm: two faint, slightly darker layers</p> <p>lt gn GY</p> <p>SS</p> <p>Zoophycos</p>
1											
2											
3											
4											
5											
6											
7											
											PAL

SITE 1051 HOLE A CORE 40X

CORED 369.7-379.3 mbsf



1051A-40X

1051A-41X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0-6	1-5							middle Eocene	SS IW SS SS PAL	lt gn GY vt gn GY lt gn GY	<p>SILICEOUS NANNOFOSSIL CHALK WITH CARBONATE GRAINS TO SILICEOUS CHALK WITH NANNOFOSSILS AND CARBONATE GRAINS</p> <p>General description: The main lithology is a SILICEOUS NANNOFOSSIL CHALK WITH CARBONATE GRAINS that grades into a SILICEOUS CHALK WITH NANNOFOSSILS AND CARBONATE GRAINS downcore. Siliceous microfossils increase downcore. Moderate bioturbation in the entire core. The core is biscuited throughout and biscuits are slightly fractured except in Section 1 and Section 4 (80-127 cm), where fracturing is moderate to high. The color is light greenish gray (10GY 8/1) and slightly lighter (10GY 8/1) in Section 4 from 80 to 127 cm. In this interval, siliceous fossils start to be more abundant. In the CC, a biscuit of white (2.5Y 8/1) limestone with greenish gray (10Y 6/2) chert is at 31-35 cm.</p>

SITE 1051 HOLE A CORE 41X

CORED 379.3-381.6 mbsf

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0-1	1							mic Eocene	SS SS SS PAL	WH	<p>LIMESTONE WITH NANNOFOSSILS</p> <p>General Description: This core consists of a white (2.5Y 8/1) LIMESTONE WITH NANNOFOSSILS with burrows and biscuiting throughout. In Section 1, 75-78 cm, there is a thin, gray (5YR 6/1) layer of CLAY WITH FE-OXIDE that may be an altered ASH layer. This layer is bracketed above and below by 1 cm of white (10Y 8/1) LIMESTONE WITH ZEOLITE that has a greenish tone to the color.</p> <p>SM Section 1, 75 cm: LIMESTONE WITH ZEOLITE</p> <p>Section 1, 75 cm, CLAY WITH FE-OXIDE</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0										<p>SILICEOUS NANNOFOSSIL CHALK WITH CLAY</p> <p>General description: Entire core is light greenish gray (5G 8/1 to 5G 7/1) SILICEOUS NANNOFOSSIL CHALK WITH CLAY. Core is bioturbated throughout with Zoophycus, Chondrites, and unidentified burrows. Moderate drilling disturbance has produced biscuits of ~10cm average length, as well as some fractures. From Section 5 on downcore, light/dark color banding is apparent.</p>
1								SS		
2									lt gn GY	
3									gn GY	
4									lt gn GY	
5									..	
6									lt gn GY	
7									gn GY	
8										PAL



METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1								SS	lt gn GY	<p>SILICEOUS NANNOFOSSIL CHALK                      General description: This core consists of light greenish gray (5GY 8/1) SILICEOUS NANNOFOSSIL CHALK that is bioturbated and biscuitated throughout. Three ASH layers were identified.</p> <p>SD Section 1, 57 cm                      Section 1, 132-133 cm: greenish gray (5GY 6/1) VITRIC ASH WITH CARBONATE GRAINS</p>
1	2								SS		
2	3								SS		
3	4										Section 3, 51-53 cm: light brownish gray (5YR 6/1) vitric ASH WITH BIOTITE
4	5							early Eocene			
5	6								IW	lt gn GY	
6	7								SS		Section 6, 120-122 cm: greenish gray (5GY 6/1) VITRIC ASH
7										lt gn GY	
									PAL		

SITE 1051 HOLE A CORE 44X

CORED 409.1-418.7 mbsf

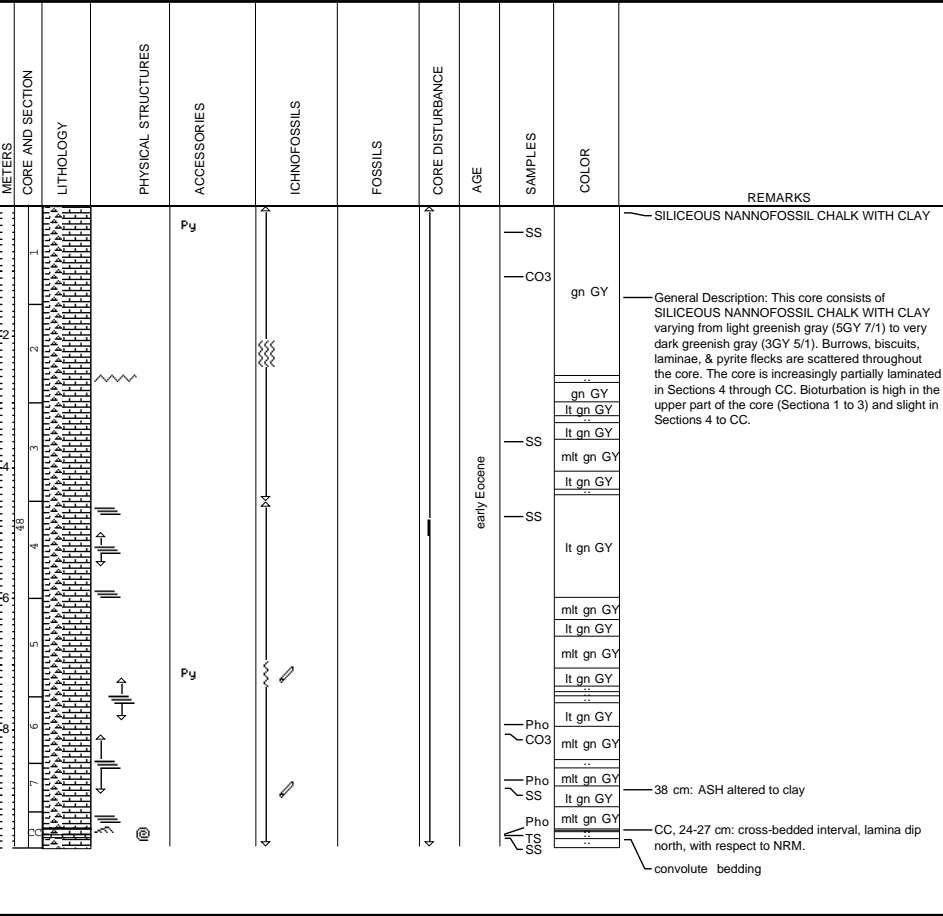
1051A-44X

METERS	CORE AND SECTION LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
						early Eocene	SS  SS	lt gn GY	<p>SILICEOUS NANNOFOSSIL CHALK</p> <p>General description: The core is dominantly light greenish gray (10GY 7/2) SILICEOUS NANNOFOSSIL CHALK except for darker or lighter burrow infillings that contain SILICEOUS NANNOFOSSIL CHALK WITH CLAY. The core is biscuited throughout, biscuits are 10 to 20 cm or longer in Section 1, with only slight fracturing throughout. Bioturbation is moderate; Planolites are abundant. Pyrite blebs are abundant from Section 3, 57 cm to Section 4, 60 cm.</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	0										<p>— PORCELLANITE WITH CLAY AND NANNOFOSSIL</p> <p>— General Description: Entire core is homogeneous and generally structureless, consisting of light greenish gray (10GY 7/1) PORCELLANITE WITH CLAY AND NANNOFOSSIL. Bioturbation is moderate throughout. Small burrows are filled with pyrite (?). Core disturbance is moderate in Sections 1-4, with biscuits of ~10-15 cm. Biscuiting is more severe from Section 5, 0 cm to Section 7, 31 cm.</p>
1	1										
2	2										
3	3										
4	4										
5	5										
6	6										
7	7										
								early Eocene			
									SS		
										lt gn GY	
										PAL	

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											<p>SILICEOUS NANNOFOSSIL CHALK WITH CLAY AND CARBONATE GRAINS</p> <p>General Description: This core consists of SILICEOUS NANNOFOSSIL CHALK WITH CLAY AND CARBONATE GRAINS light greenish gray (5G 8/1). Burrows, drilling biscuits, laminae, and pyrite flecks are scattered throughout the core. The biscuit are larger than 20 cm on average.</p>
1											
2									lt gn GY		
3								SS			
4								IW			
5									lt gn GY		
6											
7										lt gn GY	
8											PAL

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1										<p>SILICEOUS CHALK WITH CLAY</p> <p>General Description: This core consists of SILICEOUS CHALK WITH CLAY varying from light greenish gray (5G 7/1) to greenish gray (5G 6/1). Burrows, biscuits, laminae, and pyrite flecks are scattered throughout the core.</p> <p>SD Section 2, 80 cm</p>
1	lt gn GY										
2	lt gn GY										
3	lt gn GY										
4	gn GY										
4.7	lt gn GY										
5	gn GY										
6	lt gn GY										
7	gn GY										
8	lt gn GY										
9	gn GY										
10	gn GY										



METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
1								early Eocene	Pho	dk gn GY	SILICEOUS NANNOFOSSIL CHALK Zoophycos burrows postdate (cross-cut) soft-sediment deformation
2									SS IW dk gn GY SS vdk gn GY dk gn GY	vdk gn GY dk gn GY	SILICEOUS CARBONATE CHALK WITH NANNOFOSSIL varying from dark greenish gray (4GY 1/1) to very dark greenish gray (2GY 6/1). In places the sediments are laminated, and sometimes slumped (CC). Bioturbation intensity from dominantly moderate to light where sediments are laminated. The drilling disturbance is generally slight; drilling biscuits occur about every 20 cm.
3									SS Pho TS PAL	mdk gn GY	SM: SPICULAR SILTSTONE WITH SILICEOUS MICROFOSSILS TS: SILICIFIED FORAMINIFER PORCELLANITE barely gives a reaction to HCl. All foraminifers partly to wholly replaced by opal. Highly porous, with some opal cement encircling foraminifers.

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0			X						SS	it gn GY	<p>SILICEOUS NANNOFOSSIL CHALK WITH CARBONATE AND CLAY</p> <p>Section 1, 0-10cm, is laminated coarse (fine sand) sediment deformed by a small thrust fault. Offset of laminae is on the mm scale.</p> <p>General Description: The core consists of alternating light and dark layers of SILICEOUS NANNOFOSSIL CHALK WITH CARBONATE AND CLAY, moderately bioturbated, with some discrete Zoophycus and Chondrites burrows. Color ranges from light greenish gray to darker greenish gray (7GY 6/1 to 5GY 6/1) The core is drilling-biscuited, with 5 cm slurry between on average 12 cm-long biscuits</p>
1				///					gn GY	gn GY	
2				↑ /// ↓					it gn GY	gn GY	
3				↑ /// ↓					gn GY	it gn GY	
4				↑ /// ↓					it gn GY	gn GY	
5				///					gn GY	gn GY	
6				///					it gn GY	gn GY	
7				///					gn GY	it gn GY	
8				///					it gn GY	gn GY	
9				///					SS	it gn GY	
10				///					PAL	gn GY	
11				///						it gn GY	





METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1									mdk gy GN		<p>SILICEOUS NANNOFOSSIL CHALK</p> <p>General description: The core is dominantly SILICEOUS NANNOFOSSIL CHALK of a grayish green color (5GY 6/1 to 7GY 6/1). Cyclic light and dark alternations are observed. Lighter color appears to derive from enhanced diagenesis. There are fewer nannofossils and more carbonate grains in the lighter intervals. The core is slightly bioturbated throughout. Drilling biscuits are well formed and hardly disturbed. Convolute bedding in Sect. 6.</p> <p>SM: lighter color, SILICEOUS NANNOFOSSIL CHALK WITH CARBONATE GRAINS</p> <p>SM: SILICEOUS NANNOFOSSIL CHALK WITH CARBONATE GRAINS</p> <p>CC, 25 - 28 cm: dark MnO (?) flecks</p>
2								mt gy GN			
3								mdk gy GN			
4								mt gy GN	SS		
5								mdk gy GN			
6								mt gy GN			
7								mdk gy GN			
8								mt gy GN			
9								mdk gy GN			
10								mt gy GN	SS		
11								mdk gy GN			
12								mt gy GN			
13								mdk gy GN			
14								mt gy GN			
15								mdk gy GN			
16								mt gy GN			
17								mdk gy GN			
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39								mdk gy GN			
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41								mdk gy GN			
42								mt gy GN			
43								mdk gy GN			
44								mt gy GN			
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99								mdk gy GN			
100								mt gy GN			
PAL											

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0											
1.0											
2.0											
3.0											
4.0											
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99.0											
100.0											

SITE 1051 HOLE A CORE 53X

CORED 486.1-495.7 mbsf

1051A-53X


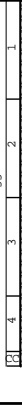
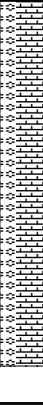

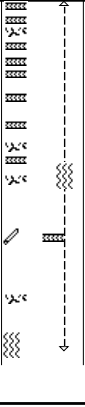

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1	[Lithology pattern]						early Eocene	gn GY	gn GY	<p>SILICEOUS NANNOFOSSIL CHALK</p> <p>General Description: Core contains dominantly light greenish gray (5GY 7/1) to greenish gray (5GY 6/1) SILICEOUS NANNOFOSSIL CHALK. Meter scale light/dark alternations occur throughout. These are very subtle in places and generally have gradational contacts. Alternations are considerably thinner (20-50 cm) and generally have sharp contacts between dark (below) and light (above) intervals in Section 6. Background lithology is homogeneous with discrete burrows including Chondrites (often concentrated in larger burrows), Teichichnus, Planolites, and Zoophyus. Burrows are slightly larger from Section 3, 122 cm to the base of Section 5; discrete burrows are relatively rare from Section 6 to base of core. Bioturbation is interpreted as heavy throughout. Pyrite flecks, often concentrated in burrows, occur throughout but are more common in Section 2, 10-60 cm and in Sections 3-5; they are rare in Sections 6-CC. Drilling disturbance is slight.</p> <p>115 cm- burrow with diagenetic halo</p> <p>68-70 cm- gray interval: SM: SILICEOUS CHALK WITH NANNOFOSSILS AND CARBONATE GRAINS</p> <p>104-110 cm- vertical burrow</p> <p>112 cm- pyrite, ~1 mm layer at base of biscuit</p> <p>12-17 cm- convoluted, diffuse, gray ?diagenetic stain</p> <p>16 cm- diffuse, gray ?diagenetic stain</p>
1	2	[Lithology pattern]						SS	lt gn GY	lt gn GY	
2	3	[Lithology pattern]						SS	gn GY	gn GY	
3	4	[Lithology pattern]						SS	lt gn GY	lt gn GY	
4	5	[Lithology pattern]						SS	gn GY	gn GY	
5	6	[Lithology pattern]						IW	lt gn GY	lt gn GY	
6	7	[Lithology pattern]						SS	gn GY	gn GY	
7	8	[Lithology pattern]						SS	lt gn GY	lt gn GY	
8	9	[Lithology pattern]							gn GY	gn GY	
9	10	[Lithology pattern]							lt gn GY	lt gn GY	
10	11	[Lithology pattern]							gn GY	gn GY	
11	12	[Lithology pattern]							lt gn GY	lt gn GY	
12	13	[Lithology pattern]							gn GY	gn GY	
13	14	[Lithology pattern]							lt gn GY	lt gn GY	
14	15	[Lithology pattern]						PAL	gn GY	gn GY	

SITE 1051 HOLE A CORE 54X

CORED 495.7-505.3 mbsf

1051A-54X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											<p>SILICEOUS CARBONATE CHALK WITH NANNOFOSSILS</p> <p>Cyclic alternation of grayish green (5GY 6/1) and light greenish gray (5GY 8/1) SILICEOUS CARBONATE CHALK WITH NANNOFOSSILS and minor CARBONATE CHALK WITH SILICEOUS MICROFOSSILS. Light intervals are slightly enriched in carbonate grains in comparison to darker intervals, which are slightly more siliceous.</p> <p>Moderate bioturbation occurs throughout.</p>
1									lt gn GY		
2									gn GY		
3									lt gn GY		
4									gn GY		
5									lt gn GY		
6									gn GY		
7									lt gn GY		
8									gn GY		
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13									lt gn GY		
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91									lt gn GY		
92									gn GY		
93									lt gn GY		
94									gn GY		
95									lt gn GY		
96									gn GY		
97									lt gn GY		
98									gn GY		
99									lt gn GY		
100									gn GY		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								early Eocene	SS SS PAL	pal GN pal ye GN pal GN pal ye GN	<p>SILICEOUS NANNOFOSSIL CHALK</p> <p>Pale green (5G 7/2) to pale yellowish green (10GY 7/2) alternations, slightly to moderately bioturbated with Chondrites, Planolites, and unidentified burrows.</p> <p>Moderately to severely drilling-biscuted</p> <p>Wavy laminae with burrowed fabric                      SS: 12 cm SILICEOUS NANNOFOSSIL CHALK WITH FORAMINIFERS</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
1										lt gn GY	<p>SILICEOUS CARBONATE CHALK WITH NANNOFOSSILS and SILICEOUS NANNOFOSSIL CHALK WITH CARBONATE</p> <p>light greenish gray (5GY 8/1) to greenish gray (5GY 7/1) SILICEOUS CARBONATE CHALK WITH NANNOFOSSILS with gradational contacts between dark and light intervals. Siliceous microfossil abundance increases down core, particularly in darker intervals.</p> <p>Bioturbation is moderate to heavy throughout core. Burrows include Chondrites and Planolites.</p> <p>Drilling disturbance is slight, with some fractures throughout core.</p> <p>Some laminations observed (Section 1, 11-18 cm and 102-106 cm)</p>
2									lt gn GY		
3									lt gn GY		
4									lt gn GY		
5									SS lt gn GY		
6									lt gn GY		
7									gn GY		
8									SS lt gn GY		
9									SS late Paleocene lt gn GY		
10									SS lt gn GY		
11									IW gn GY		
12									SS lt gn GY		
13									PAL lt gn GY		
14										lt gn GY	SD: dark interval, 130 cm: SILICEOUS CHALK WITH NANNOFOSSILS AND CARBONATE

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1								SS	lt gn GY	<p>SILICEOUS CARBONATE CHALK WITH NANNOFOSSILS</p> <p>General Description: This core consists of bioturbated SILICEOUS CARBONATE CHALK WITH NANNOFOSSILS that varies from light greenish gray (5GY 8/1) to greenish gray (5GY 7/1). There is very little biscuiting, generally limited to large pieces with very little slurry in between.</p>
1	2							SS	gn GY		
2	3								lt gn GY		
3	4								gn GY		
4	5								lt gn GY		
5	6								gn GY		
6	7								lt gn GY		
7	8								gn GY		
8	9								lt gn GY		
9	10								gn GY		
10	11								lt gn GY		
11	12								gn GY		
12	13								lt gn GY		
									PAL	lt gn GY	

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
1									lt gn GY	<p>CLAYEY CHALK WITH NANNOFOSSILS and CLAYEY NANNOFOSSIL CHALK WITH SPICULES AND CARBONATE GRAINS</p> <p>bioturbated NANNOFOSSIL CLAYSTONE becomes more siliceous downcore to SILICEOUS NANNOFOSSIL CARBONATE CLAYSTONE and SILICEOUS NANNOFOSSIL CHALK WITH CARBONATE. The color ranges from light greenish gray (5GY 8/1) to greenish gray (5GY 7/1).</p> <p>Black (pyrite?) flecks and infilled burrows scattered through the core. Drilling disturbance is minimal, with large biscuits and very little slurry.</p> <p>SD Section 2, 70 cm: CLAYEY CHALK WITH NANNOFOSSIL</p> <p>SM Section 3, 16 cm: CLAYEY CHALK WITH RADIOLARIA AND SPICULES. At 16-17 cm, there is a brownish tinge to the sediment.</p> <p>SD Section 6, 60 cm: CLAYEY GRAINS AND SPICULES NANNOFOSSIL CHALK WITH CARBONATE</p>
2								gn GY		
3							SS	lt gn GY		
4								gn GY		
5								lt gn GY		
6								gn GY		
7								lt gn GY		
8								gn GY		
9								lt gn GY		
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11								lt gn GY		
12								gn GY		
13								lt gn GY		
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15								lt gn GY		
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17								lt gn GY		
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42								gn GY		
43								lt gn GY		
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49								lt gn GY		
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92								gn GY		
93								lt gn GY		
94								gn GY		
95								lt gn GY		
96								gn GY		
97								lt gn GY		
98								gn GY		
99								lt gn GY		
100								gn GY		

late Paleocene

SS

SS

SS

PAL



METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											SILICEOUS CLAYEY NANNOFOSSIL CHALK Light greenish gray (5GY 7/1) to greenish gray (5GY 6/1) SILICEOUS CLAYEY NANNOFOSSIL CHALK, grading into medium yellowish green (7.5GY 5/2) downcore. Core is moderately bioturbated throughout with Zoophycus and unidentified burrows. Numerous small burrows are filled with pyrite.
1									lt gn GY		
2								SS	lt gn GY		
3									lt gn GY		
4									lt gn GY		
5									lt gn GY		
5.5								IW	gn GY		
6									gn GY		
6.5									gn GY		
7								PAL	gn GY		

SITE 1051 HOLE A CORE 60X

CORED 553.3-556.4 mbsf

1051A-60X

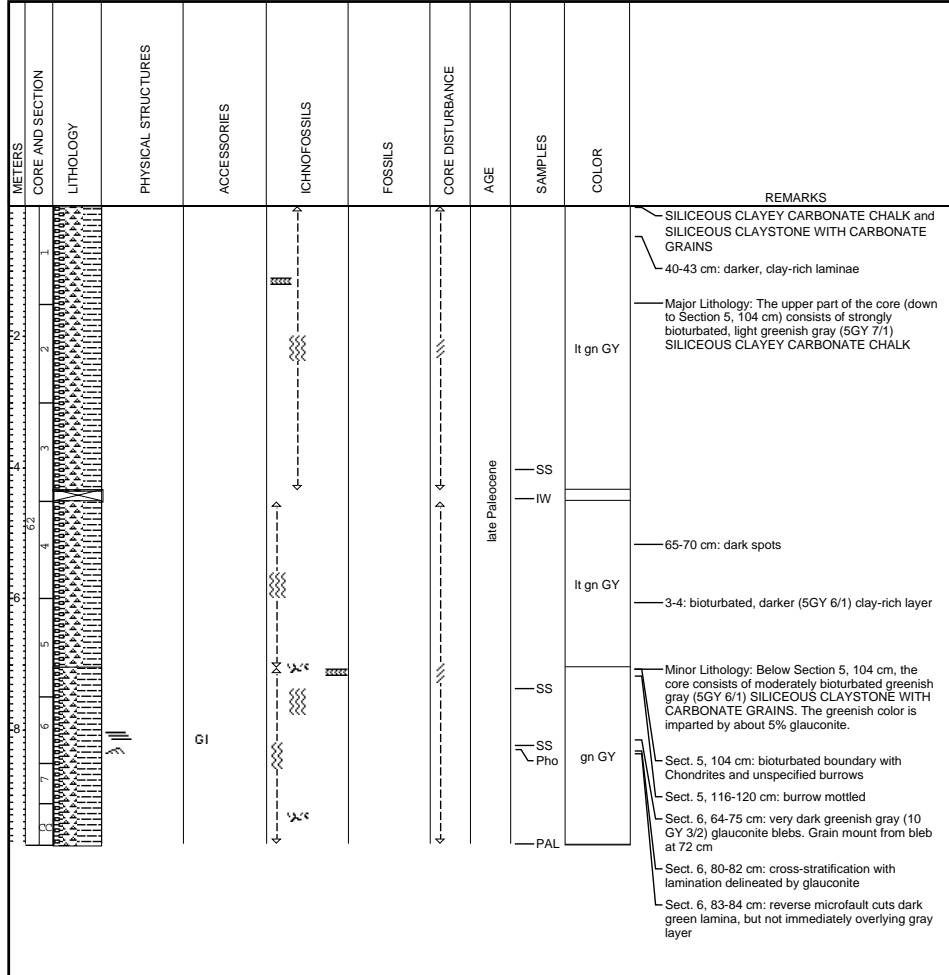
1051A-61X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0-2	1-2	Vertical column with lithological patterns			Vertical column with wavy patterns			late Paleocene	SS	gn GY	<p>SILICEOUS CLAYEY NANNOFOSSIL CHALK</p> <p>General Description: This core consists of bioturbated greenish gray (5GY 6/1) SILICEOUS CLAYEY NANNOFOSSIL CHALK.</p> <p>Zoophycos burrows were found in Section 2 at 48, 51, 53, 56, and 78 cm.</p>

SITE 1051 HOLE A CORE 61X

CORED 556.4-562.9 mbsf

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0-4	1-4	Vertical column with lithological patterns			Vertical column with wavy patterns			late Paleocene	SS	lt gn GY	<p>SILICEOUS CLAYEY NANNOFOSSIL CHALK</p> <p>General Description: The entire core consists of light greenish gray (10GY 7/2) SILICEOUS CLAYEY NANNOFOSSIL CHALK moderately bioturbated throughout. Biscuits (5 to 10 cm) throughout core.</p>



METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1								gn GY		<p>SILICEOUS CLAYEY CHALK and CLAYEY SILICEOUS CHALK</p> <p>General Description: Core consists of alternating layers of light grayish green to medium grayish green (10GY 7/1 to 10GY 5/1) CLAYEY SILICEOUS CHALK and CLAYEY CHALK WITH SILICEOUS MICROFOSSILS. Darker layers are more clay-rich. Core is moderately bioturbated throughout, although there are occasional mm-scale green laminae. In Section 1, contacts between dark/light layers are angular. Microfaulting is common. Glauconite-rich intervals occur throughout the core.</p> <p>34 cm: Burrows truncated along faint laminations.</p> <p>SM: 17 cm SILICEOUS CALCAREOUS CLAYSTONE</p>
1	2							SS	lt gn GY		
2	3								gn GY		
3	4								gn GY		
4	5							SS	med gn GY		
5	6								gn GY		
6	7								med gn GY		
7	8								gn GY		
8	9							SS	gn GY		
9	10							PAL	med gn GY		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
1								SS		<p>SILICEOUS CLAYSTONE and SILICEOUS CLAYSTONE WITH NANNOFOSSILS</p> <p>General Description: The entire core is dark greenish gray (10GY 5/1) except for darker or lighter burrow infillings and a slightly lighter interval (10GY 6/1) in Section 4, 16-41 cm.</p> <p>Bioturbation is moderate to heavy throughout the core with abundant Planolites and Chondrites. Very thin glauconite-rich layers are observed throughout. Drilling disturbance is moderate, and the core is slightly biscuitied and moderately fractured.</p>
2								SS	dk gy GY	
3										
4										
4.4									med gy GY	
5										
6									dk gy GY	
7										
8										
9										
10										
										PAL

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1											<p>CARBONATE SILICEOUS CLAYSTONE AND NANNOFOSSILS and SILICEOUS NANNOFOSSIL CHALK</p> <p>Alternating gray (10GY 6/1) and greenish gray (5GY 5/1) CARBONATE SILICEOUS CLAYSTONE NANNOFOSSILS. Light intervals (gray) are SILICEOUS NANNOFOSSIL CHALK. The entire core is slightly to moderately bioturbated. Burrows often show dark clay-rich fillings.</p> <p>Moderate drilling disturbance in Section 1, 0 to 78 cm and in the core catcher.</p> <p>Section 2, 133-150: convolute bedding with burrows cross-cutting the deformation.</p> <p>TS: Section 3, 69 cm CLAYSTONE</p> <p>Section 3, 82-128 cm: large scale cross bedding, possible slump</p>
1				Py						GY	
1										gn GY	
1										mit gn GY	
1										GY	
1										gn GY	
1										mit gn GY	
1										gn GY	
1										mit gn GY	
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1										mit gn GY	
1										GY	
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METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	PORE TYPE	AGE	SAMPLES	COLOR	REMARKS
0												
1										SS	dk GY	CLAYEY RADIOLARITE WITH SPICULES AND DIATOMS and SILICEOUS CLAYSTONE WITH CARBONATE AND NANNOFOSSILS
											gn GY	
2										Pho	gn GY	Alternating darker (more siliceous, dark gray, 9Y 4/1) and lighter (more calcareous, greenish gray, 10Y 6/1) CLAYEY RADIOLARITE WITH SPICULES AND DIATOMS and SILICEOUS CLAYSTONE WITH CARBONATE AND NANNOFOSSILS. Most contacts are gradational.
											gn GY	
3										SS	dk GY	Moderately bioturbated. Most burrows are filled with or replaced by black pyrite. Phycoides, Zoophycos, and burrows with fecal pellets occur throughout.
											gn GY	
4											gy GY	
5				Py							dk GY	— 32 cm: brassy pyrite-replaced burrow
6											gy GY	— 40-115 cm: beds dipping 5 degrees
7											dk GY	
											gy GY	
											dk GY	— weakly laminated in CC
										PAL		

SITE 1051 HOLE A CORE 67X

CORED 611.1 - 620.7 mbsf

1051A-67X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS	
0	1									gn GY	CLAYEY SPICULITE WITH CARBONATE GRAINS Alternating greenish gray (5 G 5/1) and light greenish gray (5 G 7/1) CLAYEY SPICULITE WITH CARBONATE GRAINS Faint green bands are common throughout the core.	
2										..		
3												
4												
5												gn GY
6												
7												
8												
9												
10												
11												
12												
											PAL	



SITE 1051 HOLE A CORE 68X

CORED 620.7-624.3 mbsf

1051A-68X

1051A-69X

1051A-70X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.5 1 2 3	1 2 3							early Paleocene	SS IW SS	gn GY	<p>SILICEOUS CLAYSTONE WITH NANNOFOSSILS AND CARBONATE GRAINS</p> <p>SILICEOUS CLAYSTONE WITH NANNOFOSSILS AND CARBONATE GRAINS greenish gray (5GY 6/1). Slight to moderate bioturbation throughout. The burrows are filled with dark NANNOFOSSIL CLAYSTONE (as in smear slide, Section 2, 106 cm).</p> <p>Section 2, 140-150 cm, slightly cross-laminated</p> <p>Section 3, 0-5 cm has convolute bedding</p>

SITE 1051 HOLE A CORE 69X

CORED 624.3-630.4 mbsf

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.5 1	1							early Paleocene	PAL	gn GY	<p>SILICEOUS CLAYEY CHALK</p> <p>Greenish gray (2.5 GY 4/1) SILICEOUS CLAYEY CHALK; the carbonate components are nannofossils and silt-sized carbonate grains that are probably derived from nannofossils.</p> <p>Fabric includes weak, dipping and horizontal laminations and slight burrow mottling with some pyrite-filled and pyrite lined burrows. Disseminated pyrite flecks also occur.</p> <p>57 cm-large foraminifers up to 2 mm wide occur as flattened, white, ovoid specks along bedding planes.</p>

SITE 1051 HOLE A CORE 70X

CORED 630.4-634.5 mbsf

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.5 1	1							early Paleocene	PAL	gn GY	<p>CLAYEY CHALK WITH CARBONATE</p> <p>Greenish gray (5G 5/1) CLAYEY CHALK WITH CARBONATE, slightly-moderately bioturbated.</p>

SITE 1051 HOLE A CORE 71X

CORED 634.5-640.0 mbsf

1051A-71X

1051A-72X

1051A-73X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNOFOSSELS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.5 1.0 1.5 2.0								early Paleocene SS PAL			CARBONATE CLAYSTONE Greenish gray (5G 5/1) CARBONATE CLAYSTONE Faint lamination occurs throughout core. Larger burrows show black pyritic fillings.

SITE 1051 HOLE A CORE 72X

CORED 640.0-641.6 mbsf

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNOFOSSELS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.5 1.0 1.5 2.0								early Paleocene SS PAL	gn GY gn GY		CLAYSTONE WITH SPONGE SPICULES Slightly bioturbated, alternating greenish gray (5G 5/1) to light greenish gray (5G 7/1) CLAYSTONE WITH SPONGE SPICULES. Section 1, 50-97 cm weakly laminated

SITE 1051 HOLE A CORE 73X

CORED 641.6-644.6 mbsf

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNOFOSSELS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.5 1.0 1.5 2.0								early Paleocene SS PAL	gn GY lt gn GY gn GY lt gn GY gn GY lt gn GY		SILICEOUS CLAYSTONE WITH CARBONATE GRAINS Alternating greenish gray (5G 5/1) to light greenish gray (5G 7/1) intervals Slight bioturbation, with two intervals intensely bioturbated; burrows are infilled with darker material Strong hydrocarbon-like odor from base of core

SITE 1051 HOLE B CORE 2H

CORED 4.8-14.3 mbsf

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											<p>NANNOFOSSIL OOZE</p> <p>General Description: Core is dominantly a pale yellow (2.5Y 8/2 to 5Y 8/2) NANNOFOSSIL OOZE with blebs, diffuse patches, and streaks of gray material containing an ASH component throughout. A bioturbated ASH layer occurs in Section 3. Otherwise, sediment is extremely homogeneous. Core also contains rare black (MnO) flecks throughout and olive blebs (burrows?) as noted.</p> <p>61-63 cm- faint gray patches</p> <p>14-25 cm black (MnO) streak</p> <p>72-79 cm- black (MnO) streaks</p> <p>64-67 cm- gray bioturbated ASH WITH SILICEOUS MICROFOSSILS with clear and brown glass shards up to medium sand</p> <p>21-29 cm- several &lt;0.5 cm olive (5Y 4/3) blebs</p> <p>116 cm- olive (5Y 4/3) bleb</p> <p>21 cm- 0.5 cm olive (5Y 4/3) bleb</p>
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
								late Eocene		pal YE	
									SS		
									SS		
									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0 1 2 3 4 5 6 7 8							<p>late Eocene</p>	<p>SS SS  SS</p>	<p>pal YE</p>	<p>NANNOFOSSIL OOZE</p> <p>General Description: core is dominantly composed of pale yellow (2.5Y 8/2 to 5Y 8/2) homogeneous to very subtly burrow-mottled NANNOFOSSIL OOZE that contains almost 10% siliceous sponge spicules as well as rare black flecks and patches, gray (ash component?) burrow fill and olive (smectite?) blebs. Sediment is slightly greener in Sections 5-CC.</p> <p>Void</p> <p>Section 1, 0 cm to Section 2, 140 cm- soupy +/- flow-in, vertical pseudobedding in much of Section 2.</p> <p>vague burrow mottling 0-75 cm</p> <p>100-106 cm light brown burrow mottles</p> <p>78 cm- 0.5 cm olive (5Y 4/4) bleb</p> <p>79 cm- gray burrow NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS</p> <p>87 cm- 1 cm olive (5Y 4/4) bleb</p> <p>138 cm- 0.5 cm olive (5Y 4/4) bleb</p> <p>0-35 cm- vague burrow mottles</p> <p>15-18 cm- 3 black 0.5 cm blebs</p> <p>3 cm- 0.5 cm olive (5Y 4/4) bleb</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											<p>NANNOFOSSIL OOZE</p> <p>General description:                      White (5Y 8/2) NANNOFOSSIL OOZE. Darker intervals consist of pale yellow (5Y 8/3) NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS. Large gray black flakes contain SILICEOUS NANNOFOSSIL OOZE WITH FORAMINIFERS. The entire core is intensively bioturbated. Darker intervals show visible burrows.</p>
1				Py						WH	
2				Py						WH	
3				Py						WH	
4				Py						WH	
5										pal YE	
5.5									SS	WH	
6										pal YE	
6.5										WH	
7				Py						WH	
7.5										SS	
8										PAL	


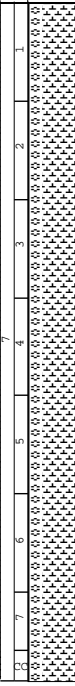

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											<p>NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS</p> <p>General description: The entire core is dominantly homogeneous pale yellow (2.5Y 8/2) NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS. The core is bioturbated and only slightly disturbed. Some Mn flecks throughout, one limonitic speck on top and ash patches in Section 1.</p> <p>117-124 cm: three ash patches with siliceous microfossils</p>
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

METERS	CORE AND SECTION LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
							<p>middle Eocene</p>	<p>SS</p> <p>PAL</p>	<p>pal YE</p>	<p>NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS</p> <p>General Description: Entire core consists of homogeneous pale yellow (2.5Y 8/2) structureless NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS.</p> <p>Section 3, 30 cm: large (0.5 cm) echinoderm fragment.</p>

SITE 1051 HOLE B CORE 7H

CORED 52.3-61.8 mbsf

1051B-7H

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOINFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>SS</p> <p>SS</p>	<p>pal YE</p> <p>pal YE</p>	<p>SILICEOUS NANNOFOSSIL OOZE WITH FORAMINIFERS</p> <p>General Description: This core consists of pale yellow (2.5Y 8/2), homogeneous SILICEOUS NANNOFOSSIL OOZE WITH FORAMINIFERS with pyrite flecks scattered throughout the core. There are soupy intervals at Section 1, 6-9 cm, Section 2, 12-16 cm, and</p> <p>SD Section 1, 90 cm</p> <p>SM Section 2, 120 cm</p> <p>SILICEOUS NANNOFOSSIL OOZE WITH FORAMINIFERS</p>



METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0										
1								SS		<p>SILICEOUS NANNOFOSSIL OOZE</p> <p>General Description: This core consists of homogeneous SILICEOUS NANNOFOSSIL OOZE with pyrite flecks scattered throughout. A sharp color change from pale yellow (2.5y 8/2) to light greenish gray (10G 8/1) occurs at Section 5, 95 cm. There is a LIMONITE-rich 0.5 cm diameter bleb at Section 3, 123 cm. There is no compositional change at the color change.</p> <p>SD Section 1, 80 cm</p> <p>SM Section 3, 123 cm: LIMONITE in a SILICEOUS NANNOFOSSIL OOZE</p> <p>SM Section 5, 95 cm: SILICEOUS NANNOFOSSIL OOZE, 68.75 mbsf</p> <p>SD Section 6, 60 cm</p>
2										
3								pal YE		
4								SS		
5							middle Eocene			
6								SS		
7								SS	lt gn GY	
8								PAL		

SITE 1051 HOLE B CORE 9H

CORED 71.3-80.8 mbsf

1051B-9H

METERS	CORE AND SECTION LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
1 2 3 4 5 6 7 8 9 10						← → ← → ← →	middle Eocene SS PAL	Lt gn GY	NANNOFOSSIL OOZE WITH SPICULES General Description: The entire core consists of light greenish gray (10GY 8/1) NANNOFOSSIL OOZE WITH SPICULES. The lithology is homogeneous throughout and the core is only slightly disturbed.	

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0	1						↑				<p>NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS</p> <p>General Description: This core consists of light greenish gray (10G 8/1) NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS. Intervals within Sections 1-3 are soupy. Section 3, 111-113 cm contains an ASH layer. Darker intervals within Section 6, between 23-60 cm contain abundant siliceous microfossils.</p> <p>— SM Section 4, 112 cm VITRIC ASH WITH NANNOFOSSILS</p> <p>— SD Section 5, 50 cm</p> <p>— SM Section 6, 55 cm SILICEOUS OOZE WITH NANNOFOSSILS</p>
1.0	2					↑					
2.0	3					↑					
3.0	4										
4.0	5										
5.0	6										
6.0	7										
								middle Eocene	SS	lt gn GY	
									SS		
									SS		
									PAL		

METRES	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1										<p>SILICEOUS NANNOFOSSIL OOZE</p> <p>The entire core consists of light greenish gray (10GY 8/2) SILICEOUS NANNOFOSSIL OOZE. The lithology is homogeneous with some black blebs (pyrite?) throughout. There is an ASH patch Section 2, 40-41 cm. The core is slightly disturbed, from Section 1, 0 to 20 cm is soupy with some yellowish patches.</p> <p>SM: Section 2, 40 cm VITRIC ASH</p>
1	2		~						SS		
2	3										
3	4										
4	5										
5	6										
6	7										
										lt gn GY	
											PAL

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0	1										<p>SILICEOUS NANNOFOSSIL OOZE</p> <p>homogeneous, generally structureless light greenish gray (10GY 8/1) SILICEOUS NANNOFOSSIL OOZE. Black flecks (pyrite?) are scattered throughout.</p> <p>Pale brown layers occur at Section 4, 115 cm and Section 5, 76 cm. These layers are slightly more siliceous than the dominant lithology.</p>
1.0	2							SS			
2.0	3										
3.0	4										
4.0	5								SS		
5.0	6										
6.0									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1									SS		NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS
2									SS		0-16 cm: soupy interval with pieces of yellowish lithology (downhole contamination)
3											134-136 cm: dark layer of SILICEOUS NANNOFOSSIL OOZE
4											General Description: The core consists of monotonous and structureless, light greenish gray (10GY 8/1) NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS. Rare dark blebs are scattered over the core. Bioturbation is not visible, but presumably pervasive and intense.
5										lt gn GY	
6											108-109 cm: dark layer SILICEOUS NANNOFOSSIL OOZE?
7											Below Sect. 7, 24 cm, the core is heavily disturbed and half of the material is missing
8									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>SS</p> <p>SS</p> <p>SS</p> <p>PAL</p>	<p>lt gn GY</p>	<p>NANNOFOSSIL OOZE WITH SPONGE SPICULES</p> <p>General Description: Core consists of monotonous, structureless, light greenish gray (10GY 8/1) NANNOFOSSIL OOZE WITH SPONGE SPICULES</p> <p>39-40 cm: brownish layer of CLAYEY CALCAREOUS OOZE WITH SILICEOUS MICROFOSSILS</p> <p>33-45 cm: brownish layer of SILICEOUS CALCAREOUS OOZE WITH CLAY</p> <p>66-68 cm: gray layer</p> <p>134-138 cm: white (N9) layer of CALCAREOUS OOZE WITH SPONGE SPICULES</p>

SITE 1051 HOLE B CORE 15H

CORED 125.3-134.8 mbsf

1051B-15H

METERS	CORE AND SECTION LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHIKNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
1.0							middle Eocene PAL	lt gn GY	NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS TO NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS  Core contains meter-scale light/dark alternations of slightly more siliceous (dark) and less siliceous (light), light greenish gray (7.5GY 8/2 to 7.5GY 8/1) NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS TO NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS. Sediment is generally heavily burrow-mottled but is homogeneous in places. Only Zoophycos was identified. Burrows are most apparent at sudden color transitions where material of a contrasting shade is piped downwards. These sharp contacts are interpreted as firmgrounds and seem more common on dark intervals but are developed on light intervals at two horizons. Green bands attributed to diagenesis and dark flecks (pyrite?) occur throughout. With the exception of flow-in in the Core Catcher and minor microfaults as noted, core is not disturbed by drilling.  Zoophycos cut by microfaults. Green layer cut by microfault	
1.5								vlt gn GY		
2.0								lt gn GY		
2.5								vlt gn GY		
3.0								lt gn GY		
3.5								vlt gn GY		
4.0								lt gn GY		
4.5								vlt gn GY		
5.0								lt gn GY		
5.5								vlt gn GY		
6.0								lt gn GY		
6.5								vlt gn GY		
7.0								lt gn GY		
7.5								vlt gn GY		
8.0	lt gn GY	Core Catcher mostly contains flow-in.								



METRES	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
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SILICEOUS NANNOFOSSIL CHALK

General Description: The entire core is dominantly alternating light and dark layers of SILICEOUS NANNOFOSSIL CHALK. The top of the dark layers are often sharp, forming incipient firmgrounds, and conspicuously burrowed (piped) with light burrows. The downhole transition from dark to light is often more gradual, but not always, and then also piped with dark burrows. Dark specks occur throughout the core, often lining burrows and forming halos around the burrows. Color varies from pale green (5G 7/2) to very pale yellowish green (10GY 8/1). The core is strongly to moderately bioturbated. The entire core is moderately drilling-biscuited, with biscuits of 5-10 cm.

SM: lighter interval enriched in foraminifers  
SILICEOUS NANNOFOSSIL CHALK WITH FORAMINIFERS

SITE 1051 HOLE B CORE 17X

CORED 143.3-152.9 mbsf

1051B-17X

METERS	CORE AND SECTION LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
							<p>middle Eocene</p>	<p>SS</p>	<p>lt gn GY</p>	<p>NANNOFOSSIL CHALK WITH SPONGE SPICULES AND FORAMINIFERS</p> <p>Entire core consists of light greenish gray (5G 8/1) NANNOFOSSIL CHALK WITH SPONGE SPICULES AND FORAMINIFERS. Darkening upward cycles occur throughout and probably represent a slight increase in biogenic silica. There is a burrowed firmground at the top of each cycle. Burrows are filled with light sediment from overlying lithology. Moderate bioturbation occurs throughout. This core is moderately biscuited. Dark specks (pyrite?) were observed throughout.</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0										lt ye GN	<p>NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS AND FORAMINIFERS and SILICEOUS NANNOFOSSIL CHALK</p> <p>— Alternating light and dark NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS AND FORAMINIFERS, from light greenish gray (5G 7/1) in dark to light yellowish green (8GY 8/1) in light intervals. Lighter intervals are slightly enriched in foraminifers; darker intervals are slightly enriched in siliceous microfossils. The core is moderately to slightly bioturbated, and contains some Zoophycos and Phycoides burrows. The core is drilling-biscuitated throughout.</p>
0.5									..		
1.0									SS	lt ye GN	
1.5										..	
2.0										lt ye GN	
2.5									SS	lt gn GY	
3.0									SS	lt ye GN	
3.5										lt gn GY	
4.0											
4.5											
5.0											
5.5											
6.0											
6.5											
7.0											
											lt ye GN
											PAL

SITE 1051 HOLE B CORE 19X

CORED 162.5-172.1 mbsf

1051B-19X

METERS	CORE AND SECTION LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
							middle Eocene PAL	SS	lt gn GY	<p>NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS</p> <p>Phosphate/Mn nodule at the top of Section 1 in drilling-disturbed interval (downhole contamination).</p> <p>Entire core consists of light greenish gray (5G 8/1) NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS. Darker intervals occur throughout that probably represent a slight increase in biogenic silica (NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS). At the top of each dark interval, there is a burrowed firmground. Burrows are filled with light sediment from overlying lithology. Moderate bioturbation occurs throughout. Core 19X is moderately biscuited. Dark specks (pyrite?) observed throughout.</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>— SS — SS</p>	<p>lt gn GY</p>	<p>NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS</p> <p>General Description: The core contains alternating light and dark intervals of NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS. The dark intervals contain more clay and fewer foraminifers. The top of the darker layer is often developed as a burrowed and bored incipient firmground. Core contains several Zoophycos spreiten and Chondrites, and is moderately burrowed. Light intervals are light greenish gray, darker intervals are less light greenish gray.</p>

SITE 1051 HOLE B CORE 21X

CORED 181.7-191.2 mbsf

1051B-21X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
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1											
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SITE 1051 HOLE B CORE 22X

CORED 191.2-200.8 mbsf

1051B-22X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0 1 2 3 4 5 6 7	22						middle Eocene	SS  PAL	vt ye GN	<p>— NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS</p> <p>— Alternating dark and light intervals (5G 8/1) of very light green and light green NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS. The top of the dark interval contains burrows with light sediment piped into underlying dark sediment. The transition from light to dark is often sharp, as for a nascent firmground. The core is slightly to moderately bioturbated.</p>





SITE 1051 HOLE B CORE 24X

CORED 210.5-220.1 mbsf

1051B-24X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
							<p>middle Eocene</p>	<p>— SS</p> <p>— PAL</p>	<p>lt gn GY</p>	<p>NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS</p> <p>light greenish gray (5G 8/1) NANNOFOSSIL Ooze WITH SILICEOUS MICROFOSSILS burrows, biscuiting, and pyrite flecks throughout core</p> <p>Zoophycos burrows, Section 2, 92 &amp; 94 cm</p> <p>SD Section 3, 100 cm</p> <p>Zoophycos burrows, Section 4, 71-84 cm</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>SS</p>		<p>SILICEOUS NANNOFOSSIL CHALK                      Light greenish gray (5G 7/1) SILICEOUS NANNOFOSSIL CHALK.                      Bioturbated throughout with small pyrite-filled burrows. Occasional larger burrows with pale brown infilling.                      Biscuited throughout with 3-4 cm biscuits.</p>

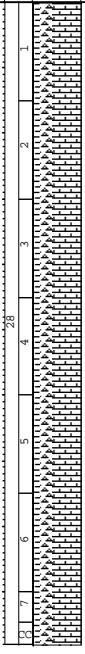

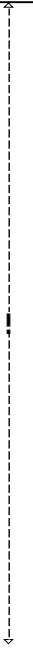
METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>SS</p>	<p>lt gn GY</p>	<p>CLAYEY NANNOFOSSIL CHALK WITH SPICULES</p> <p>The core is light greenish gray (5G 8/1) except for darker burrow infillings. Bioturbation is moderate and pyrite flecks are observed throughout.</p> <p>The entire core is biscuited and the biscuits are moderately fractured.</p> <p>Section 7, 7-8 cm: Dark gray (7.5G 3/1) ASH layer between biscuits with pyrite and volcanic glass.</p>



SITE 1051 HOLE B CORE 28X

CORED 249.0-258.6 mbsf

1051B-28X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0-7								middle Eocene PAL	SS SS	lt gn GY	<p>SILICEOUS NANNOFOSSIL CHALK WITH CLAY</p> <p>The core is light greenish gray (5G 8/1) except for darker burrow infillings. Moderate bioturbation and pyrite flecks throughout.</p> <p>The entire core is biscuited and biscuits are slightly fractured in Sections 1, 2, 3, and 4 and moderately fractured in Sections 5, 6, 7, and the CC.</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.00	1								SS		<p>NANNOFOSSIL CHALK WITH SPICULES</p> <p>Light greenish gray (5G 7/1) NANNOFOSSIL CHALK WITH SPICULES. Pyrite throughout as burrow filling.</p> <p>Biscuited throughout with biscuits ~10 cm long.</p>
0.25	2										
0.50	3										
0.75	4										
1.00	5										
1.25	6										
1.50	7								SS		Section 6, 144 cm: Pale brown discontinuous layer of SILICEOUS NANNOFOSSIL CHALK.
1.75									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>SS</p>	<p>PAL</p>	<p>SILICEOUS NANNOFOSSIL CHALK                      SD Section 1, 50 cm                      Light greenish gray (10G 8/1-7/1) mottled SILICEOUS NANNOFOSSIL CHALK biscuits, burrows, and pyrite flecks throughout core.</p>





SITE 1051 HOLE B CORE 32X

CORED 287.4-293.6 mbsf

1051B-32X

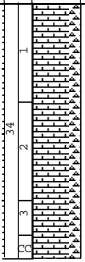


METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>		<p>lt gn GY</p>	<p>SILICEOUS NANNOFOSSIL CHALK                      Monotonous, structureless, light greenish gray (10GY 8/1 to 10GY 7/1) SILICEOUS NANNOFOSSIL CHALK with common black pyrite-rich flecks and streaks throughout. Some larger burrows are filled with brownish sediment.</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1										SILICEOUS NANNOFOSSIL OOZE
1	2								SS		Light greenish gray (10G 8/1) SILICEOUS NANNOFOSSIL OOZE, moderately bioturbated throughout. The entire core is biscuted, and biscuits are moderately to heavily fractured. Pyrite flecks throughout.
2	3									lt gn GY	
3	4							middle Eocene			
4	5										
5	6								SS		Section 6, 109-11 cm: Gray (2.5G 6/2) vitric ASH layer, slightly disturbed between biscuits.
6	7									lt gn GY	
7									PAL		

SITE 1051 HOLE B CORE 34X

CORED 303.2-308.9 mbsf

1051B-34X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1								SS		NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS
1	2							Middle Eocene		lt gn GY	Homogeneous light greenish gray (10GY 8/1) throughout. Entire core is very disturbed (split core liner). Very few biscuits are present.
2	3								SS		Section 2, ~139-140 cm: pale gray VITRIC ASH WITH NANNOFOSSILS
3									PAL		

SITE 1051 HOLE B CORE 35X

CORED 308.9-312.9 mbsf

1051B-35X

	<p>METERS</p>	<p>CORE AND SECTION</p>	<p>LITHOLOGY</p>	<p>PHYSICAL STRUCTURES</p>	<p>ACCESSORIES</p>	<p>ICHOFOSSILS</p>	<p>FOSSILS</p>	<p>CORE DISTURBANCE</p>	<p>AGE</p> <p style="text-align: center;">middle Eocene</p>	<p>SAMPLES</p>	<p>COLOR</p> <p style="text-align: center;">lt gn GY</p>	<p>REMARKS</p> <p>SILICEOUS NANNOFOSSIL CHALK</p> <p>Monotonous, structureless, light greenish gray (10GY 8/1) SILICEOUS NANNOFOSSIL CHALK. Drilling biscuits generally shorter than 5 cm. Slightly longer in Section 4.</p>
<p>—PAL</p>												

SITE 1051 HOLE B CORE 36X

CORED 312.9-322.5 mbsf

1051B-36X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0											
1.0									SS		SILICEOUS NANNOFOSSIL CHALK Bioturbated, light greenish gray (10GY 8/1) SILICEOUS NANNOFOSSIL CHALK with pyrite flecks throughout core. Severe biscuiting; biscuits are fractured. SD Section 1, 80 cm
2.0											
3.0											ASH layer, Section 3, 126-128 cm
4.0								middle Eocene		lt gn GY	
5.0									SS		SM Section 4, 116 cm: ASH layer, 116-117 cm
6.0											
7.0									PAL		

SITE 1051 HOLE B CORE 37X

CORED 322.5-332.1 mbsf


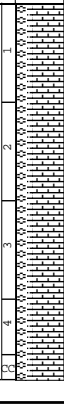
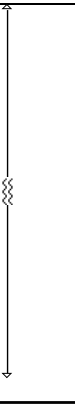

1051B-37X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>SS PAL</p>	<p>lt gn GY</p>	<p>SILICEOUS NANNOFOSSIL CHALK                      Light greenish gray (10GY 8/1) homogeneous SILICEOUS NANNOFOSSIL CHALK. Entire core is highly biscuited, with small (&lt;5 cm) fractured biscuits.</p> <p>Section 3, 75-78 cm. Pale gray layer of NANNOFOSSIL CHALK WITH ASH.</p>

SITE 1051 HOLE B CORE 38X

CORED 332.1-341.7 mbsf

1051B-38X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>SS</p>	<p>lt gn GY</p>	<p>NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS</p> <p>The entire core is severely drilling-biscuted. homogenous throughout, few dark specks visible. dominant color light greenish gray (10GY 8/1). bioturbation is moderate, sediments are faintly burrow-mottled.</p>

SITE 1051 HOLE B CORE 39X

CORED 341.7-351.3 mbsf

1051B-39X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1											SILICEOUS NANNOFOSSIL CHALK
2											Homogeneous throughout, light greenish gray (10GY 8/1). severely drilling biscuitied (fractured). bioturbation moderate, sediments are faintly burrow mottled.
3											VITRIC ASH layer at Section 4, 101-103 cm., with biotite; well preserved diatoms are mixed in the ASH.
4											A few Zoophycos spreiten occur.
5											
6											
7											
8											
								middle Eocene			
									SS	lt gn GY	ASH, 2 cm thick
									SS		
									PAL		



METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
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METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
							<p>middle Eocene</p>	<p>SS</p>	<p>lt gn GY</p>	<p>SILICEOUS NANNOFOSSIL CHALK WITH CLAY</p> <p>Burrow mottled, light greenish gray (10GY 8/2) SILICEOUS NANNOFOSSIL CHALK WITH CLAY pyrite specks throughout, severely drilling biscuited (fractured).</p>



SITE 1051 HOLE B CORE 44X

CORED 380.1-382.7 mbsf

1051B-44X

1051B-45X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	AGE	SAMPLES	COLOR	REMARKS
44	1						middle Eocene	TS SS SS SS Pho PAL	ye GY ye GY	<p>SILICIFIED FORAMINIFER PORCELLANITE WITH QUARTZ PORCELLANITE WITH CLAY, CLAYSTONE WITH CARBONATE GRAINS and CHERT</p> <p>Yellowish gray (5Y 8/1) SILICIFIED FORAMINIFER PORCELLANITE WITH QUARTZ. Moderately bioturbated throughout</p> <p>Sharp contacts between the upper 3 lithologies. PORCELLANITE WITH CLAY AND CARBONATE GRAINS varies in color between grayish green (5G 5/2) and brown and exhibits wavy lamination. CLAYSTONE WITH CARBONATE GRAINS is light greenish gray (5GY 8/1). Base of section has light olive gray (5Y 5/2) CHERT.</p>

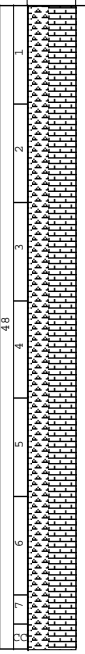
SITE 1051 HOLE B CORE 45X

CORED 382.7-389.7 mbsf

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
45	1 2							early to middle Eocene	Pho It gn GY or PK SS SS or PK SS or PK It gn GY SS PAL	.. It gn GY or PK It gn GY or PK or PK It gn GY ..	<p>SILICEOUS CARBONATE CHALK</p> <p>Homogeneous to vaguely burrow mottled</p> <p>Light greenish gray (5GY 8/1) intermixed with grayish orange pink (10YR 8/2), an apparent overprint; color shifts gradational, seems parallel to bedding.</p> <p>0-20 cm: pebbles of pale yellowish brown porcellanite and mottled foraminiferal packstone.</p> <p>28 cm: 1 cm pale brown (5YR 5/2) CLAY</p>



METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											SILICEOUS NANNOFOSSIL CHALK WITH CLAY
1									SS		Light grayish green (10GY 7/1) SILICEOUS NANNOFOSSIL CHALK WITH CLAY. Moderately bioturbated. Biscuitated throughout with ~5 cm biscuits separated by ~2 cm of slurry. Many of the biscuits are fractured.
2									SS		Section 2, 84-85 cm: grayish brown, bioturbated VITRIC ASH.
3									SS		Section 3, 96 cm: 0.5 cm grayish brown, bioturbated VITRIC ASH WITH NANNOFOSSILS.
4								early Eocene	SS	lt gy GN	Section 4, 73-75 cm: Brownish gray VITRIC ASH layer. Upper contact of layer is bioturbated.
5											
6											
7											
8											
									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0 1 2 3 4 5 6	48B							early Eocene	SS	lt gn GY	<p>SILICEOUS CARBONATE CHALK WITH CLAY</p> <p>Light greenish gray (10GY 7/1) SILICEOUS CARBONATE CHALK WITH CLAY. Pyrite flecks scattered throughout, and concentrated in Sections 4, 60 cm to Section 5, 65 cm. Minor biscuiting through most of the core, with moderate biscuiting and fractured biscuits in the same interval as the increased pyrite concentration.</p> <p>SD Section 2, 120 cm</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
							<p>early Eocene</p>	<p>SS</p>	<p>PAL</p>	<p>SILICEOUS NANNOFOSSIL CHALK WITH CLAY</p> <p>Light greenish gray (10GY 7/2) SILICEOUS NANNOFOSSIL CHALK WITH CLAY slightly to moderately bioturbated. The entire core is biscuitied throughout and biscuits are slightly fractured.</p>



SITE 1051 HOLE B CORE 50X

CORED 428.3-437.9 mbsf

1051B-50X

MEETERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											<p>SILICEOUS CHALK WITH CARBONATE GRAINS AND NANNOFOSSILS</p> <p>Light greenish gray (10GY 7/1), homogeneous, moderately bioturbated SILICEOUS CHALK WITH CARBONATE GRAINS AND NANNOFOSSILS. Biscuiting is severe in Sections 1 through 4 (small biscuits with large amounts of slurry between). Biscuiting is not as severe in Sections 5-CC.</p>
1											
2											
3											
4											
5											
6											
7											
								early Eocene	SS	lt gn GY	
									PAL		

SITE 1051 HOLE B CORE 51X

CORED 437.9-447.6 mbsf

1051B-51X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0											<p>CARBONATE SILICEOUS SLAYSTONE</p> <p>Monotonous, light greenish gray (10GY 7/1) CARBONATE SILICEOUS CLAYSTONE throughout the core. Bioturbation is strong and pervasive except for thin, laminated intervals. Only pyrite (?) -lined, dark burrows are easy to recognize.</p> <p>124 cm: darker laminae at top of biscuit comprise SILICEOUS CARBONATE CHALK WITH VOLCANIC GLASS BIOTITE AND NANNOFOSSILS</p> <p>98-100 cm: dark, faint laminae</p>
1									SS		
2									SS		
3									lt gn GY		
4									lt gn GY		
5									lt gn GY		
6									lt gn GY		
7											PAL

SITE 1051 HOLE B CORE 52X

CORED 447.6-457.3 mbsf

1051B-52X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHMFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>early Eocene</p>	<p>SS</p>	<p>lt gn GY</p>	<p>CLAYEY CARBONATE CHALK WITH SILICEOUS MICROFOSSILS</p> <p>Light greenish gray (10GY 8/1-7/1) CLAYEY CARBONATE CHALK WITH SILICEOUS MICROFOSSILS with greenish gray (10GY 6/1) intervals. Burrows and pyrite flecks throughout core. There are some laminated intervals with minimal bioturbation. Biscuiting is minor to moderate.</p> <p>SD Section 1, 130 cm</p>

SITE 1051 HOLE B CORE 53X

CORED 457.3-466.9 mbsf

1051B-53X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
2.3								early Eocene	SS SS PAL	lt gn GY ..	SILICEOUS CARBONATE CHALK and LIMESTONE  Light greenish gray (10GY 6/2) moderately bioturbated SILICEOUS CARBONATE CHALK. The core is moderate to heavily fractured. In the CC from 30 cm downward, the lithology changes to LIMESTONE (10GY 6/2).

MEETERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0										lt gn GY	SILICEOUS NANNOFOSSIL CHALK WITH CLAY
1									SS	gn GY	Burrow mottled throughout
2										lt gn GY	Pyrite, disseminated and concentrated in burrows throughout
3										gn GY	Meter-scale, gradational alternations of light greenish gray (5GY 7/1) and greenish gray (5GY 6/1) SILICEOUS NANNOFOSSIL CHALK WITH CLAY
4									SS	lt gn GY	Darker intervals slightly more silica- and clay-rich
5									SS	gn GY	84 cm: burrow filled with brown SILICEOUS CARBONATE CHALK containing trace amounts of ASH
6										lt gn GY	
7										gn GY	
8										lt gn GY	
9										gn GY	
10										lt gn GY	
11										gn GY	
12									SS	lt gn GY	70 cm- Phycodes
13										gn GY	Burrow with pryrite along edge
14										lt gn GY	SILICEOUS CARBONATE CHALK WITH OPAQUES
15											Harder, coarser Section 7, 35 cm to base of core, same colors

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0										lt gn GY	<p>SILICEOUS CARBONATE CHALK WITH NANNOFOSSILS AND CLAY to SILICEOUS CLAYSTONE WITH CARBONATE AND NANNOFOSSILS</p> <p>Light greenish gray (5GY 7/2) with light and dark alternations as indicated. Lighter intervals enriched in carbonate; darker intervals enriched in biogenic silica.</p> <p>Moderately bioturbated throughout with Phycoides and Zoophycos identified</p> <p>Dark, diagenetic pseudolaminations occur in several intervals</p> <p>Biscuited throughout but particularly heavy in Section 4, 32-110 cm</p> <p>Burrow filled with brown, more siliceous sediment with ASH component</p> <p>Gray layer in slurry, contains fine silt-sized glass</p>
1										..	
1										..	
1										lt gn GY	
1										gn GY	
2										lt gn GY	
2										gn GY	
2										lt gn GY	
3										gn GY	
3										lt gn GY	
3										gn GY	
4										lt gn GY	
4										gn GY	
4										lt gn GY	
5										gn GY	
5										lt gn GY	
5										gn GY	
5										lt gn GY	
6										gn GY	
6										lt gn GY	
7										gn GY	
7										lt gn GY	

early Eocene

SS

SS

SS

PAL

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	AGE	SAMPLES	COLOR	REMARKS
0										<p>CLAYEY SILICEOUS NANNOFOSSIL CHALK</p> <p>Core is burrow mottled throughout. Dark Zoophycos, Chondrites and Teichichnus burrows are common. Color changes from light greenish gray (5GY 7/1) to greenish gray (5GY 6/1) CLAYEY SILICEOUS NANNOFOSSIL CHALK are gradational.</p>
1								gn GY		
1								lt gn GY		
2								gn GY		
2								mt gn GY		
2								gn GY		
3								mt gn GY		
3								gn GY		
4								mt gn GY		
4								gn GY		
5								mt gn GY		
5								gn GY		
6								mt gn GY		
6								gn GY		
7								lt gn GY		
7								gn GY		
7								mt gn GY		





SITE 1051 HOLE B CORE 58X

CORED 502.3-506.3 mbsf

1051B-58X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0										gn GY	<p>SILICEOUS CLAYSTONE WITH CARBONATE GRAINS AND NANNOFOSSILS</p> <p>With gradational color alternations from greenish gray (5GY 6/1) to moderate light greenish gray (5GY 7/1). Entire core consists of SILICEOUS CLAYSTONE WITH CARBONATE GRAINS AND NANNOFOSSILS and is slightly burrow mottled throughout.</p>
1									gn GY		
2				P <sub>y</sub>					SS	mlt gn GY	
3								early Eocene		gn GY	
4										mlt gn GY	
5										gn GY	
6										mlt gn GY	
										gn GY	
											PAL

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1			///					SS	gn GY	<p>SILICEOUS CLAYEY NANNOFOSSIL CHALK to SILICEOUS NANNOFOSSIL CHALK WITH CLAY</p> <p>Light greenish gray with alternations between lighter (5GY 7/1) and darker (7.5GY 7/2) intervals, transitions gradational.</p> <p>Burrow mottled throughout.</p> <p>Pryrite (disseminated and concentrated in burrows) throughout.</p> <p>Core biscuited (5-10 cm pieces) with little slurry except Section 1, 30-150 cm where biscuits are 1-4 cm long with 1-3 cm of slurry between.</p>
1	2			///				early Eocene	lt gn GY	gn GY	
2	3			///					gn GY	lt gn GY	
3	4			///					lt gn GY	gn GY	
4	5			///					gn GY	lt gn GY	
5	6			///					lt gn GY	gn GY	
6	7			///					gn GY	lt gn GY	
7	8			///					lt gn GY	gn GY	
8	9			///					gn GY	lt gn GY	
9	10			///					lt gn GY	gn GY	
10	11			///					gn GY	lt gn GY	
11	12			///					lt gn GY	gn GY	
12	13			///					gn GY	lt gn GY	
13	14			///					lt gn GY	gn GY	
14	15			///					gn GY	lt gn GY	
15	16			///					lt gn GY	gn GY	
16	17			///					gn GY	lt gn GY	
17	18			///					lt gn GY	gn GY	
18	19			///					gn GY	lt gn GY	
19	20			///					lt gn GY	gn GY	
20	21			///					gn GY	lt gn GY	
21	22			///					lt gn GY	gn GY	
22	23			///					gn GY	lt gn GY	
23	24			///					lt gn GY	gn GY	
24	25			///					gn GY	lt gn GY	
25	26			///					lt gn GY	gn GY	
26	27			///					gn GY	lt gn GY	
27	28			///					lt gn GY	gn GY	
28	29			///					gn GY	lt gn GY	
29	30			///					lt gn GY	gn GY	
30	31			///					gn GY	lt gn GY	
31	32			///					lt gn GY	gn GY	
32	33			///					gn GY	lt gn GY	
33	34			///					lt gn GY	gn GY	
34	35			///					gn GY	lt gn GY	
35	36			///					lt gn GY	gn GY	
36	37			///					gn GY	lt gn GY	
37	38			///					lt gn GY	gn GY	
38	39			///					gn GY	lt gn GY	
39	40			///					lt gn GY	gn GY	
40	41			///					gn GY	lt gn GY	
41	42			///					lt gn GY	gn GY	
42	43			///					gn GY	lt gn GY	
43	44			///					lt gn GY	gn GY	
44	45			///					gn GY	lt gn GY	
45	46			///					lt gn GY	gn GY	
46	47			///					gn GY	lt gn GY	
47	48			///					lt gn GY	gn GY	
48	49			///					gn GY	lt gn GY	
49	50			///					lt gn GY	gn GY	
50	51			///					gn GY	lt gn GY	
51	52			///					lt gn GY	gn GY	
52	53			///					gn GY	lt gn GY	
53	54			///					lt gn GY	gn GY	
54	55			///					gn GY	lt gn GY	
55	56			///					lt gn GY	gn GY	
56	57			///					gn GY	lt gn GY	
57	58			///					lt gn GY	gn GY	
58	59			///					gn GY	lt gn GY	
59	60			///					lt gn GY	gn GY	
60	61			///					gn GY	lt gn GY	
61	62			///					lt gn GY	gn GY	
62	63			///					gn GY	lt gn GY	
63	64			///					lt gn GY	gn GY	
64	65			///					gn GY	lt gn GY	
65	66			///					lt gn GY	gn GY	
66	67			///					gn GY	lt gn GY	
67	68			///					lt gn GY	gn GY	
68	69			///					gn GY	lt gn GY	
69	70			///					lt gn GY	gn GY	
70	71			///					gn GY	lt gn GY	
71	72			///					lt gn GY	gn GY	
72	73			///					gn GY	lt gn GY	
73	74			///					lt gn GY	gn GY	
74	75			///					gn GY	lt gn GY	
75	76			///					lt gn GY	gn GY	
76	77			///					gn GY	lt gn GY	
77	78			///					lt gn GY	gn GY	
78	79			///					gn GY	lt gn GY	
79	80			///					lt gn GY	gn GY	
80	81			///					gn GY	lt gn GY	
81	82			///					lt gn GY	gn GY	
82	83			///					gn GY	lt gn GY	
83	84			///					lt gn GY	gn GY	
84	85			///					gn GY	lt gn GY	
85	86			///					lt gn GY	gn GY	
86	87			///					gn GY	lt gn GY	
87	88			///					lt gn GY	gn GY	
88	89			///					gn GY	lt gn GY	
89	90			///					lt gn GY	gn GY	
90	91			///					gn GY	lt gn GY	
91	92			///					lt gn GY	gn GY	
92	93			///					gn GY	lt gn GY	
93	94			///					lt gn GY	gn GY	
94	95			///					gn GY	lt gn GY	
95	96			///					lt gn GY	gn GY	
96	97			///					gn GY	lt gn GY	
97	98			///					lt gn GY	gn GY	
98	99			///					gn GY	lt gn GY	
99	100			///					lt gn GY	gn GY	
100	101			///					gn GY	lt gn GY	
101	102			///							

SITE 1051 HOLE B CORE 60X

CORED 510.9-516.9 mbsf

1051B-60X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0 - 6.0								early Eocene late Paleocene	SS Pho SS Pho Pho PAL	gn GY	SILICEOUS CLAYEY CARBONATE CHALK and SILICEOUS CARBONATE CHALK WITH CLAY Alternation of darker greenish gray (7.5 GY 5/2 to 5GY 6/1) SILICEOUS CLAYEY CARBONATE CHALK and lighter greenish gray (5GY 7/1) SILICEOUS CARBONATE CHALK WITH CLAY. Contacts are generally strongly bioturbated or otherwise gradational. Flaser texture probably due to intense bioturbation of formerly laminated sediment. Zoophycos cuts across flasers. 42-65 cm: intraformational mud clast horizon with differently colored clasts up to 5 cm across. Oblique erosional (?) surface at base of mud clasts. 99-125 cm: two color cycles with sediment becoming lighter upcore. Cycles have sharp lower contacts. Sect. 4, 0-118 cm: alternation of burrow-homogenized sediment and laminated intervals.

SITE 1051 HOLE B CORE 61X

CORED 516.9-526.6 mbsf

1051B-61X

METERS	CORE AND SECTION LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0										
1								SS		CLAYEY CARBONATE CHALK WITH SILICEOUS MICROFOSSILS and SILICEOUS CARBONATE CHALK WITH CLAY Alternation of darker greenish gray (5GY 6/1) CLAYEY CARBONATE CHALK WITH SILICEOUS MICROFOSSILS and lighter greenish gray (5GY 7/1) SILICEOUS CARBONATE CHALK WITH CLAY. Transitions from dark to light lithologies are gradational and strongly bioturbated with unspecific burrows. No lamination throughout core.
2								SS		
3										
4										
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